

TEST REPORT

ACCORDING TO: FCC part 15 subpart E and RSS-210 Issue 8, Annex 9

FOR:

RADWIN Ltd.

**Outdoor radio unit operating
in the 5.4 GHz band**

**Model: RADWIN 1000,
RADWIN 2000,
RADWIN 5000**

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1 Applicant information

Client name: RADWIN Ltd.
Address: 27 Habarzel str., Tel Aviv 69710, Israel
Telephone: +972 3766 2988
Fax: +972 3766 2902
E-mail: shlomo_weiss@radwin.com
Contact name: Mr. Shlomo Weiss

2 Equipment under test attributes

Product name: Outdoor radio unit operating in 5.4 GHz band
Product type: Point to Point and Point to Multipoint transceiver
Model(s): RADWIN 1000, RADWIN 2000, RADWIN 5000
Receipt date 11/25/2008

3 Manufacturer information

Manufacturer name: RADWIN Ltd.
Address: 27 Habarzel str., Tel Aviv 69710, Israel
Telephone: +972 3766 2988
Fax: +972 3766 2902
E-Mail: shlomo_weiss@radwin.com
Contact name: Mr. Shlomo Weiss

4 Test details

Project ID: 19241
Location: Hermon Laboratories Ltd. P.O.Box 23, Binyamina 30500, Israel
Test started: 11/25/2008
Test completed: 12/28/2008
Test specification(s): FCC part 15 subpart E;
RSS-210 Issue 8:2010, Annex 9
RSS-Gen Issue 3:2010

5 Tests summary




| Test | Status |
|---|---|
| Transmitter characteristics | |
| FCC Section 15.407(a)(3) / RSS-Gen, Section 4.6, Occupied 26 dB bandwidth | Measured |
| FCC Section 15.407(a)(3) / RSS-210, Section A9.2, Maximum peak output power | Pass |
| FCC Section 15.407(a)(3) / RSS-210, Section A9.2, Peak power spectral density | Pass |
| FCC Section 15.407(a)(6), Ratio of the peak excursion of the modulation envelope to the peak transmit power | Pass |
| FCC Section 15.407(b) / RSS-210, Section A9.2, Unwanted radiated emission | Pass |
| FCC Section 15.407(b) / RSS-210, Section A9.2, Unwanted conducted emission | Pass |
| FCC Section 15.407(b)(6), 15.207/ RSS-Gen, Section 7.2.4, Conducted emission | Pass |
| FCC Section 15.407(f), / RSS-Gen, Section 5.6, RF exposure | Provided in documentation for Application |
| FCC Section 15.407(g), Frequency stability | Pass |
| RSS-Gen, Section 6, 4.10, Receiver spurious radiated emission | Pass |
| FCC section 15.203, RSS-Gen section 7.1.2, Antenna requirement | Pass |

Note: The EUT model RADWIN 2000 with power setting that produced Maximum Output Power with maximum Antenna Gain 23.5 and 28 dBi was tested as the worst case between all RADWIN 1000,2000,5000 models. The more detailed description of RADWIN 1000,2000,5000 is provided in section 6.1 of the test report.

Testing was completed against all relevant requirements of the test standard. Results obtained indicate that the product under test complies in full with the requirements tested.

The test results relate only to the items tested. Pass/ fail decision was based on nominal values.

This test report replaces the previously issued test report identified by Doc ID "RDWRAD_FCC.19241_21882".

| | Name and Title | Date | Signature |
|---------------------|--|-------------------|---|
| Tested by: | Mr. E. Plotnichenko, test engineer | December 28, 2008 |  |
| Reviewed by: | Ms. N. Averin, certification engineer | April 17, 2011 |  |
| Approved by: | Mr. M. Nikishin, EMC and Radio group manager | April 17, 2011 |  |

6 EUT description

6.1 General information

The EUT, RADWIN 1000, RADWIN 2000, RADWIN 5000 is an outdoor unit (ODU). The power and Ethernet communication are supplied by an indoor unit (IDU) or PoE device. It has connectorized and integrated antenna configurations that can support dual pole antenna type. The RADWIN 1000 activates one RF port, RADWIN 2000 activates two RF ports for software configured Point to Point topology and RADWIN 5000 is identifier for software configured Point to Multipoint topology. For relevant output power setting versus each antenna type please refer to RADWIN 5000 Antenna List and Power Settings and RADWIN 1000/2000 Antenna List and Power Settings attached.

The EUT model RADWIN 2000 was tested as worst case representative.

6.2 Ports and lines

| Port type | Port description | Connected | | Connector type | Q-ty | Cable type | Cable length, m | Indoor / outdoor |
|-----------|------------------|---------------|---------------|----------------|------|------------|-----------------|------------------|
| | | From | To | | | | | |
| Power | -48 VDC | AC/DC adapter | IDU | Terminal block | 1 | unshielded | 1.5 | Indoor |
| Power | AC power | mains | AC/DC adapter | IEC 60320 | 1 | unshielded | 1.5 | Indoor |
| RF1 | RF1 (Antenna 1) | EUT | antenna | N-type | 1 | shielded | 1 | Outdoor* |
| RF2 | RF2 (Antenna 2) | EUT | antenna | N-type | 1 | shielded | 1 | Outdoor* |
| Signal | DC + Ethernet | IDU | EUT | RJ45 | 1 | shielded | 20 | Outdoor |
| Signal | Ethernet | IDU | Laptop | RJ45 | 1 | FTP | 1.5 | Indoor |

* - for external antenna configuration only

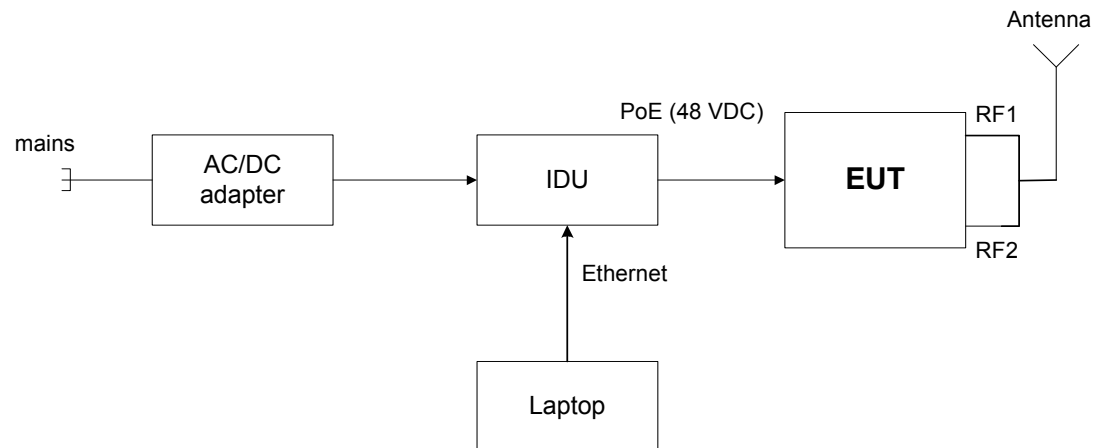
6.3 Support and test equipment

| Description | Manufacturer | Model number | Serial number |
|----------------------------------|--------------|---------------|---------------|
| Laptop | Dell | Latitude/D530 | NA |
| IDU (for configuration with ODU) | RadWin Ltd. | IDU-E | DE000201267 |
| AC/DC | YCL | WMB480042-5G | S0714002271 |

6.4 Changes made in the EUT

No changes were implemented.

6.5 Test configuration



6.6 Transmitter characteristics

| | | | |
|---|--|--|---|
| Type of equipment | | | |
| X | Stand-alone (Equipment with or without its own control provisions) | | |
| Intended use | | Condition of use | |
| X | fixed | Always at a distance more than 2 m from all people | |
| Assigned frequency range | | 5470 - 5725 MHz | |
| Operating frequency range | | 5480 - 5715 MHz | |
| Maximum rated output power | | Peak (conducted) | 7.3 dBm with 22.5 dBi antenna 6.3 dBm with 23.5 dBi antenna 1.6 dBm with 27.9 dBi antenna 7.2 dBm with 15.5 dBi antenna 7.2 dBm with 13.0 dBi antenna |
| Antenna connection | | | |
| unique coupling | X | standard connector, N-type | X with temporary RF connector without temporary RF connector |
| Antenna/s technical characteristics | | | |
| Type | Manufacturer | Model number | Gain |
| Flat Panel – Dual polarized Integrated | RADWIN Ltd. | RW-9611-4958INT | 23.5 dBi |
| Flat Panel – Dual polarized external | RADWIN Ltd. | RW-9611-4958 | 22.5 dBi (23.5 dBi with 1 dB feeder loss) |
| Dish – Dual polarized External | RADWIN Ltd. | RW-9721-5158 | 27.9 dBi (28.9 dBi with 1 dB feeder loss) |
| Flat Panel Dual Pole External | RADWIN Ltd. | RW-9061-5002 | 15.5 dBi (16.5 dBi with 1 dB feeder loss) |
| Flat Panel Dual Pole External | RADWIN Ltd. | RW-9061-5001 | 13.0 dBi (14.0 dBi with 1 dB feeder loss) |
| Transmitter 99% power bandwidth | | Transmitter aggregate data rate/s, Mbps | Type of modulation |
| 5 MHz | | 3.25 | BPSK |
| | | 32.5 | 64QAM |
| 10 MHz | | 6.5 | BPSK |
| | | 65 | 64QAM |
| 20 MHz | | 13 | BPSK |
| | | 130 | 64QAM |
| Maximum transmitter duty cycle in normal use | | 40% | |
| Transmitter duty cycle supplied for test | | 100% | |

Table 6.6.1 Measurement frequencies according to FCC part 15 subpart E requirements

| Channel bandwidth, MHz | Channel frequency, MHz | | |
|------------------------|------------------------|------------|------------|
| | Low | Mid | High |
| 5 | 5480 | 5590 | 5715 |
| 10 | 5485 | 5585 | 5710 |
| 20 | 5490 | 5580 | 5705 |
| 40 | 5500, 5505 | 5565, 5570 | 5690, 5695 |

| | | | |
|----------------------------|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | |
| Test procedure: | | FCC Public Notice DA 02-2138, Appendix A | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 11/25/2008 | | |
| Temperature: 23 °C | Air Pressure: 1012 hPa | Relative Humidity: 52 % | Power Supply: 120 VAC |
| Remarks: | | | |

7 Transmitter tests according to 47CFR part 15 subpart E and RSS-210 Annex 9 requirements

7.1 Peak output power and peak spectral power density

7.1.1 General

This test was performed to measure the maximum peak output power and the peak spectral power density at the transmitter RF antenna connector. Specification test limits are given in Table 7.1.1.

Table 7.1.1 Peak output power and peak spectral power density limits

| Assigned frequency range, MHz | Maximum peak transmit power*, dBm | Peak spectral power density*, dBm | Measurement bandwidth, MHz |
|-------------------------------|---|-----------------------------------|----------------------------|
| 5470 - 5725 | The lesser of 250 mW or 11 dBm + 10 log B** | 11.0 | 1.0 |

*Note 1: due to 22.5 dBi antenna assembly gain the limits of peak output power and peak power spectral density shall be reduced by 16.5 dB, due to 28 dBi antenna assembly gain the limits of peak output power and peak power spectral density shall be reduced by 22 dB;

**Note 2: "B" is the 26-dB emission bandwidth in MHz.

7.1.2 Test procedure

7.1.2.1 The EUT was set up as shown in Figure 7.1.1, energized and its proper operation was checked.

7.1.2.2 The EUT was set to transmit modulated carrier at maximum data rate.

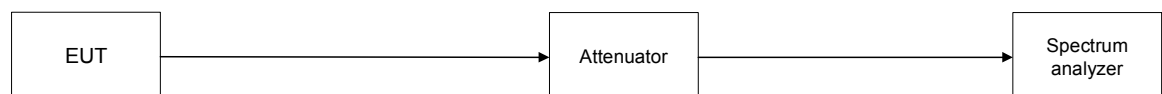
7.1.2.3 The measurements were performed in continuous transmission mode of operation for carrier (channel) frequencies at low and high edges and at the middle of the frequency range shown in Table 7.1.1. The transmitter 26 dB bandwidth was measured with spectrum analyzer as frequency delta between reference points on modulation envelope and provided in Table 7.1.2, Table 7.1.4 and associated plots.

7.1.2.4 The EUT was adjusted to produce maximum available for end user RF output power.

7.1.2.5 The peak output power measurements were performed in continuous transmission mode of operation for carrier (channel) frequency at low, mid and high edges with a sample detector. The power was computed by integrating the spectrum across the 26 dB bandwidth of the signal as provided in Table 7.1.2, Table 7.1.4 and associated plots.

7.1.2.6 The peak power spectral density was measured using a sample detector and power averaging mode to find the highest level across the emission in any 1-MHz band after 100 sweeps of averaging. The test results are provided in Table 7.1.5, Table 7.1.5 and associated plots.

Figure 7.1.1 Peak output power test setup



| | | | |
|---|---|--------------------------------|------------------------------|
| Test specification: | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | | |
| Test procedure: | FCC Public Notice DA 02-2138, Appendix A | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 11/25/2008 | | |
| Temperature: 23 °C | Air Pressure: 1012 hPa | Relative Humidity: 52 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

Table 7.1.2 Conducted output power test results

ASSIGNED FREQUENCY RANGE: 5470-5725 MHz
 MODULATING SIGNAL: OFDM
 DETECTOR USED: Peak
 RESOLUTION BANDWIDTH: 1 MHz
 VIDEO BANDWIDTH: 3 MHz
 METHOD OF POWER MEASUREMENTS: 1 (channel power across the 26 dB EBW)
 Antenna assembly GAIN: 16.5dBi
 EMISSION BANDWIDTH: 40 MHz

| Frequency, MHz | 26 dB Bandwidth, MHz | Bit Rate, MBps | Modulation | Output power | | | | Verdict |
|--|----------------------|----------------|------------|---------------|-------------------|------------|--------------|---------|
| | | | | Measured, dBm | Total power, dBm* | Limit, dBm | Margin, dB** | |
| Low channel In-Band | | | | | | | | |
| 5505 | 46.15 | 27 | BPSK | 3.04 | 6.04 | 13.5 | -7.46 | Pass |
| 5505 | 46.05 | 270 | 64QAM | 3.73 | 6.73 | 13.5 | -6.77 | Pass |
| Low channel | | | | | | | | |
| 5500 | 48.00 | 27 | BPSK | 0.45 | 3.45 | 13.5 | -10.05 | Pass |
| 5500 | 47.55 | 270 | 64QAM | 0.88 | 3.88 | 13.5 | -9.62 | Pass |
| First mid channel In-Band | | | | | | | | |
| 5565 | 46.20 | 27 | BPSK | 3.44 | 6.44 | 13.5 | -7.06 | Pass |
| 5565 | 46.05 | 270 | 64QAM | 3.48 | 6.48 | 13.5 | -7.02 | Pass |
| First mid channel | | | | | | | | |
| 5570 | 47.85 | 27 | BPSK | -0.23 | 2.77 | 13.5 | -10.73 | Pass |
| 5570 | 46.65 | 270 | 64QAM | -0.15 | 2.85 | 13.5 | -10.65 | Pass |
| Second mid channel (for IC only) In-Band | | | | | | | | |
| 5685 | 46.20 | 27 | BPSK | 1.27 | 4.27 | 13.5 | -9.23 | Pass |
| 5685 | 45.45 | 270 | 64QAM | 0.92 | 3.92 | 13.5 | -9.58 | Pass |
| Second mid channel (for IC only) | | | | | | | | |
| 5680 | 47.55 | 27 | BPSK | -1.31 | 1.69 | 13.5 | -11.81 | Pass |
| 5680 | 47.55 | 270 | 64QAM | -1.28 | 1.72 | 13.5 | -11.78 | Pass |
| High channel In-Band | | | | | | | | |
| 5690 | 46.50 | 27 | BPSK | 1.46 | 4.46 | 13.5 | -9.04 | Pass |
| 5690 | 46.75 | 270 | 64QAM | 1.71 | 4.71 | 13.5 | -8.79 | Pass |
| High channel | | | | | | | | |
| 5695 | 47.55 | 27 | BPSK | -1.66 | 1.34 | 13.5 | -12.16 | Pass |
| 5695 | 46.80 | 270 | 64QAM | -1.62 | 1.38 | 13.5 | -12.12 | Pass |

* - The total output power was calculated from the measured one by addition of 3 dB for the second Tx chain.

** - Margin = Total output power – specification limit.

| | | | |
|---|-------------------------------|--|------------------------------|
| Test specification: | | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | |
| Test procedure: | | FCC Public Notice DA 02-2138, Appendix A | |
| Test mode: | | Verdict: PASS | |
| Date: | | | |
| Temperature: 23 °C | Air Pressure: 1012 hPa | Relative Humidity: 52 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

Table 7.1.3 Conducted output power test results

ASSIGNED FREQUENCY RANGE: 5470-5725 MHz
 MODULATING SIGNAL: OFDM
 DETECTOR USED: Peak
 RESOLUTION BANDWIDTH: 1 MHz
 VIDEO BANDWIDTH: 3 MHz
 METHOD OF POWER MEASUREMENTS: 1 (channel power across the 26 dB EBW)

| Frequency, MHz | 26 dB Bandwidth | Bit Rate, MBps | Modulation | Output power | | | | Verdict |
|----------------------------------|-----------------|----------------|------------|---------------|-------------------|------------|--------------|---------|
| | | | | Measured, dBm | Total power, dBm* | Limit, dBm | Margin, dB** | |
| Low channel | | | | | | | | |
| 5490 | 23.850 | 13 | BPSK | 4.28 | 7.28 | 13.5 | -6.22 | Pass |
| 5490 | 23.400 | 130 | 64QAM | 4.17 | 7.17 | 13.5 | -6.33 | Pass |
| 5485 | 12.800 | 6.5 | BPSK | 1.31 | 4.31 | 11.6 | -7.26 | Pass |
| 5485 | 12.450 | 65 | 64QAM | 1.43 | 4.43 | 11.5 | -7.02 | Pass |
| 5480 | 6.800 | 3.25 | BPSK | -1.32 | 1.68 | 8.8 | -7.15 | Pass |
| 5480 | 7.000 | 32.5 | 64QAM | -1.63 | 1.37 | 9.0 | -7.58 | Pass |
| First mid channel | | | | | | | | |
| 5580 | 24.000 | 13 | BPSK | 3.84 | 6.84 | 13.5 | -6.66 | Pass |
| 5580 | 23.400 | 130 | 64QAM | 4.03 | 7.03 | 13.5 | -6.47 | Pass |
| 5585 | 12.950 | 6.5 | BPSK | 0.41 | 3.41 | 11.6 | -8.21 | Pass |
| 5585 | 12.300 | 65 | 64QAM | 0.38 | 3.38 | 11.4 | -8.02 | Pass |
| 5590 | 6.950 | 3.25 | BPSK | -2.46 | 0.54 | 8.9 | -8.38 | Pass |
| 5590 | 7.000 | 32.5 | 64QAM | -2.69 | 0.31 | 9.0 | -8.64 | Pass |
| Second mid channel (for IC only) | | | | | | | | |
| 5670 | 24.150 | 13 | BPSK | 2.63 | 5.63 | 13.5 | -7.87 | Pass |
| 5670 | 23.700 | 130 | 64QAM | 2.65 | 5.65 | 13.5 | -7.85 | Pass |
| 5665 | 12.750 | 6.5 | BPSK | -0.96 | 2.04 | 11.6 | -9.52 | Pass |
| 5665 | 12.650 | 65 | 64QAM | -0.58 | 2.42 | 11.5 | -9.10 | Pass |
| 5660 | 6.825 | 3.25 | BPSK | -3.64 | -0.64 | 8.8 | -9.48 | Pass |
| 5660 | 6.700 | 32.5 | 64QAM | -3.29 | -0.29 | 8.8 | -9.05 | Pass |
| High channel | | | | | | | | |
| 5705 | 23.775 | 13 | BPSK | 2.52 | 5.52 | 13.5 | -7.98 | Pass |
| 5705 | 23.625 | 130 | 64QAM | 2.01 | 5.01 | 13.5 | -8.49 | Pass |
| 5710 | 12.900 | 6.5 | BPSK | -1.31 | 1.69 | 11.6 | -9.92 | Pass |
| 5710 | 12.500 | 65 | 64QAM | -1.36 | 1.64 | 11.5 | -9.83 | Pass |
| 5715 | 7.175 | 3.25 | BPSK | -3.15 | -0.15 | 9.1 | -9.21 | Pass |
| 5715 | 7.125 | 32.5 | 64QAM | -3.09 | -0.09 | 9.0 | -9.12 | Pass |

* - The total output power was calculated from the measured one by addition of 3 dB for the second Tx chain.

** - Margin = Total output power – specification limit.

| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | |
| Test procedure: | | FCC Public Notice DA 02-2138, Appendix A | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 11/25/2008 | | |
| Temperature: 23 °C | Air Pressure: 1012 hPa | Relative Humidity: 52 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

Table 7.1.4 Peak power spectral density test results

ASSIGNED FREQUENCY RANGE: 5470-5725 MHz
 MODULATING SIGNAL: OFDM
 DETECTOR USED: Sample
 RESOLUTION BANDWIDTH: 1 MHz
 VIDEO BANDWIDTH: 3 MHz
 METHOD OF POWER DENSITY MEASUREMENTS: 2 (Sample detector and 100 power averaging)
 Antenna assembly GAIN: 16.5dBi
 EMISSION BANDWIDTH: 40 MHz

| Frequency, MHz | Bit Rate, MBps | Modulation | Peak power spectral density | | | | Verdict |
|--|-------------------|------------|-----------------------------|--|------------|--------------|---------|
| | | | Measured, dBm | Total peak power spectral density, dBm* | Limit, dBm | Margin, dB** | |
| Low channel In-Band | | | | | | | |
| 5505 | 27 | BPSK | -16.93 | -13.93 | 0.5 | -14.43 | Pass |
| 5505 | 270 | 64QAM | -16.66 | -13.66 | 0.5 | -14.16 | Pass |
| Low channel | | | | | | | |
| 5500 | 27 | BPSK | -18.84 | -15.84 | 0.5 | -16.34 | Pass |
| 5500 | 270 | 64QAM | -19.15 | -16.15 | 0.5 | -16.65 | Pass |
| First mid channel In-Band | | | | | | | |
| 5565 | 27 | BPSK | -16.82 | -13.82 | 0.5 | -14.32 | Pass |
| 5565 | 270 | 64QAM | -16.89 | -13.89 | 0.5 | -14.39 | Pass |
| First mid channel | | | | | | | |
| 5570 | 27 | BPSK | -19.96 | -16.96 | 0.5 | -17.46 | Pass |
| 5570 | 270 | 64QAM | -19.70 | -16.70 | 0.5 | -17.20 | Pass |
| Second mid channel (for IC only) In-Band | | | | | | | |
| 5685 | 27 | BPSK | -18.32 | -15.32 | 0.5 | -15.82 | Pass |
| 5685 | 270 | 64QAM | -18.79 | -15.79 | 0.5 | -16.29 | Pass |
| Second mid channel (for IC only) | | | | | | | |
| 5680 | 27 | BPSK | -20.87 | -17.87 | 0.5 | -18.37 | Pass |
| 5680 | 270 | 64QAM | -20.73 | -17.73 | 0.5 | -18.23 | Pass |
| High channel In-Band | | | | | | | |
| 5690 | 27 | BPSK | -18.59 | -15.89 | 0.5 | -16.09 | Pass |
| 5690 | 270 | 64QAM | -18.67 | -15.67 | 0.5 | -16.17 | Pass |
| High channel | | | | | | | |
| 5695 | 27 | BPSK | -21.75 | -18.75 | 0.5 | -19.25 | Pass |
| 5695 | 270 | 64QAM | -21.32 | -18.32 | 0.5 | -18.82 | Pass |

* - The total peak power spectral density was calculated from measured by addition of 3 dB for the second Tx chain.

** - Margin = Total peak power density – specification limit.

| | | | |
|---|-------------------------------|--|------------------------------|
| Test specification: | | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | |
| Test procedure: | | FCC Public Notice DA 02-2138, Appendix A | |
| Test mode: | | Verdict: PASS | |
| Date: | | | |
| Temperature: 23 °C | Air Pressure: 1012 hPa | Relative Humidity: 52 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

Table 7.1.5 Peak power spectral density test results

ASSIGNED FREQUENCY RANGE: 5470-5725 MHz
 MODULATING SIGNAL: OFDM
 DETECTOR USED: Sample
 RESOLUTION BANDWIDTH: 1 MHz
 VIDEO BANDWIDTH: 3 MHz
 METHOD OF POWER DENSITY MEASUREMENTS: 2 (Sample detector and 100 power averaging)

| Frequency, MHz | Bit Rate, MBps | Modulation | Peak power spectral density | | | | Verdict |
|----------------------------------|-------------------|------------|-----------------------------|--|------------|--------------|---------|
| | | | Measured, dBm | Total peak power spectral density, dBm* | Limit, dBm | Margin, dB** | |
| Low channel | | | | | | | |
| 5490 | 13 | BPSK | -13.00 | -10.00 | 0.5 | -10.50 | Pass |
| 5490 | 130 | 64QAM | -12.65 | -9.65 | 0.5 | -10.15 | Pass |
| 5485 | 6.5 | BPSK | -13.27 | -10.27 | 0.5 | -10.77 | Pass |
| 5485 | 65 | 64QAM | -12.98 | -9.98 | 0.5 | -10.48 | Pass |
| 5480 | 3.25 | BPSK | -12.91 | -9.91 | 0.5 | -10.41 | Pass |
| 5480 | 32.5 | 64QAM | -13.22 | -10.22 | 0.5 | -10.72 | Pass |
| First mid channel | | | | | | | |
| 5580 | 13 | BPSK | -13.18 | -10.18 | 0.5 | -10.68 | Pass |
| 5580 | 130 | 64QAM | -13.06 | -10.06 | 0.5 | -10.56 | Pass |
| 5585 | 6.5 | BPSK | -14.40 | -11.40 | 0.5 | -11.90 | Pass |
| 5585 | 65 | 64QAM | -14.23 | -11.23 | 0.5 | -11.73 | Pass |
| 5590 | 3.25 | BPSK | -14.41 | -11.41 | 0.5 | -11.91 | Pass |
| 5590 | 32.5 | 64QAM | -14.17 | -11.17 | 0.5 | -11.67 | Pass |
| Second mid channel (for IC only) | | | | | | | |
| 5670 | 13 | BPSK | -14.23 | -11.23 | 0.5 | -11.73 | Pass |
| 5670 | 130 | 64QAM | -14.38 | -11.38 | 0.5 | -11.88 | Pass |
| 5665 | 6.5 | BPSK | -15.21 | -12.21 | 0.5 | -12.71 | Pass |
| 5665 | 65 | 64QAM | -15.23 | -12.23 | 0.5 | -12.73 | Pass |
| 5660 | 3.25 | BPSK | -15.19 | -12.19 | 0.5 | -12.69 | Pass |
| 5660 | 32.5 | 64QAM | -14.90 | -11.90 | 0.5 | -12.40 | Pass |
| High channel | | | | | | | |
| 5705 | 13 | BPSK | -14.64 | -11.64 | 0.5 | -12.14 | Pass |
| 5705 | 130 | 64QAM | -15.07 | -12.07 | 0.5 | -12.57 | Pass |
| 5710 | 6.5 | BPSK | -16.00 | -13.00 | 0.5 | -13.50 | Pass |
| 5710 | 65 | 64QAM | -15.57 | -12.57 | 0.5 | -13.07 | Pass |
| 5715 | 3.25 | BPSK | -14.86 | -11.86 | 0.5 | -12.36 | Pass |
| 5715 | 32.5 | 64QAM | -14.62 | -11.62 | 0.5 | -12.12 | Pass |

* - The total peak power spectral density was calculated from measured by addition of 3 dB for the second Tx chain.

** - Margin = Total peak power density – specification limit.

Reference numbers of test equipment used

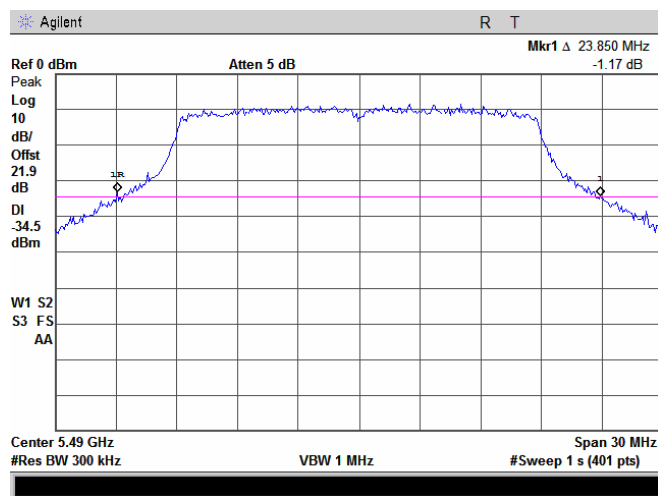
| | | | | | | | |
|--------|---------|---------|--|--|--|--|--|
| HL2909 | HL 2883 | HL 3180 | | | | | |
|--------|---------|---------|--|--|--|--|--|

Full description is given in Appendix A.

| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | |
| Test procedure: | | FCC Public Notice DA 02-2138, Appendix A | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 11/25/2008 | | |
| Temperature: 23 °C | Air Pressure: 1012 hPa | Relative Humidity: 52 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

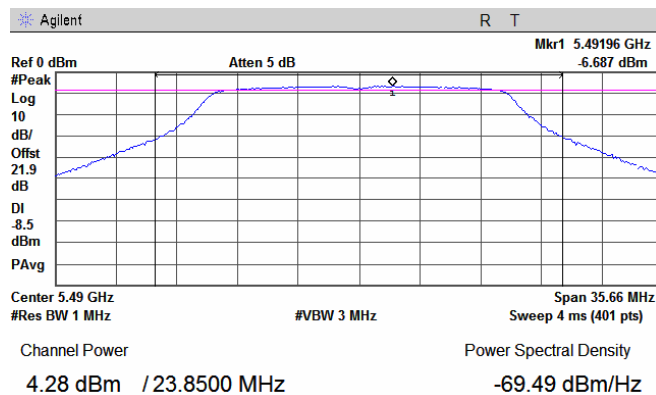
Plot 7.1.1 The 26 dB emission bandwidth

| | |
|------------------------|---------------|
| Frequency: | 5490 MHz |
| Channel BW: | 20 MHz |
| Modulation parameters: | BPSK, 13 Mbps |



Plot 7.1.2 Peak output power

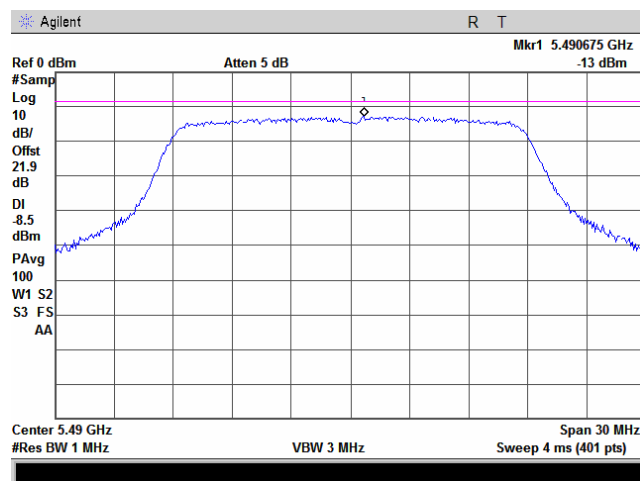
| | |
|------------------------|---------------|
| Frequency: | 5490 MHz |
| Channel BW: | 20 MHz |
| Modulation parameters: | BPSK, 13 Mbps |



| | | | |
|---|---|--------------------------------|------------------------------|
| Test specification: | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | | |
| Test procedure: | FCC Public Notice DA 02-2138, Appendix A | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 11/25/2008 | | |
| Temperature: 23 °C | Air Pressure: 1012 hPa | Relative Humidity: 52 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

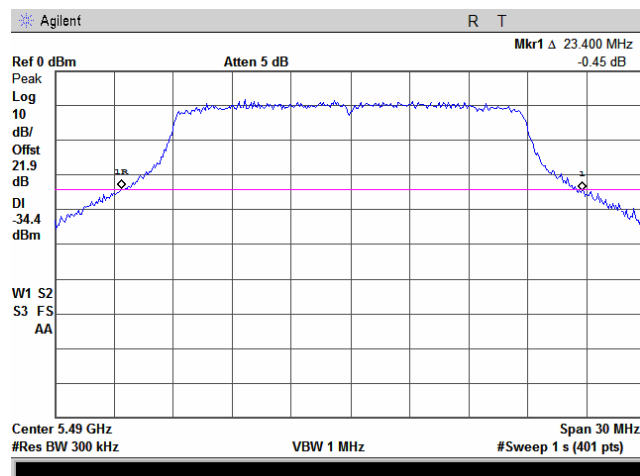
Plot 7.1.3 Peak spectral power density

| | |
|------------------------|---------------|
| Frequency: | 5490 MHz |
| Channel BW: | 20 MHz |
| Modulation parameters: | BPSK, 13 Mbps |



Plot 7.1.4 The 26 dB emission bandwidth

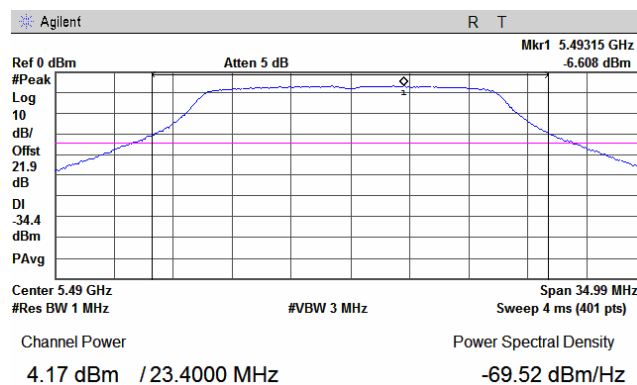
| | |
|------------------------|----------------|
| Frequency: | 5490 MHz |
| Channel BW: | 20 MHz |
| Modulation parameters: | BPSK, 130 Mbps |



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | |
| Test procedure: | | FCC Public Notice DA 02-2138, Appendix A | |
| Test mode: | | Compliance | Verdict: PASS |
| Date: | | 11/25/2008 | |
| Temperature: 23 °C | Air Pressure: 1012 hPa | Relative Humidity: 52 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

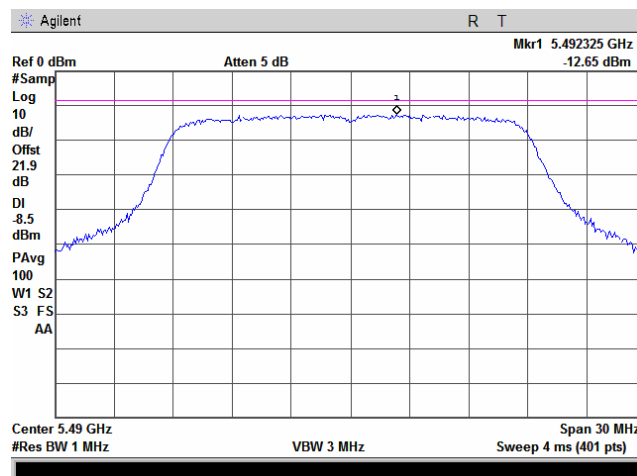
Plot 7.1.5 Peak output power

| | |
|------------------------|----------------|
| Frequency: | 5490 MHz |
| Channel BW: | 20 MHz |
| Modulation parameters: | BPSK, 130 Mbps |



Plot 7.1.6 Peak spectral power density

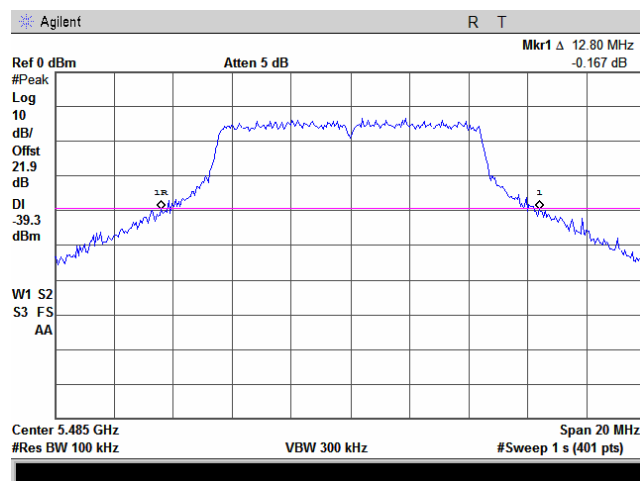
| | |
|------------------------|----------------|
| Frequency: | 5490 MHz |
| Channel BW: | 20 MHz |
| Modulation parameters: | BPSK, 130 Mbps |



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | |
| Test procedure: | | FCC Public Notice DA 02-2138, Appendix A | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 11/25/2008 | | |
| Temperature: 23 °C | Air Pressure: 1012 hPa | Relative Humidity: 52 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

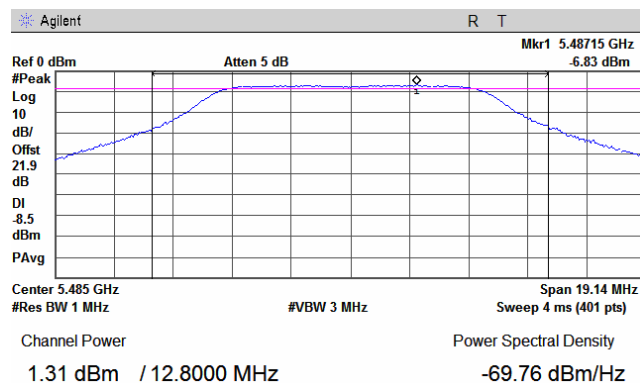
Plot 7.1.7 The 26 dB emission bandwidth

| | |
|------------------------|----------------|
| Frequency: | 5485 MHz |
| Channel BW: | 10 MHz |
| Modulation parameters: | BPSK, 6.5 Mbps |



Plot 7.1.8 Peak output power

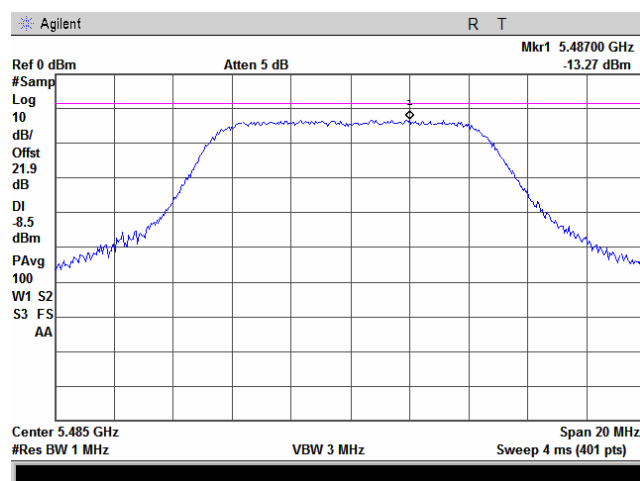
| | |
|------------------------|----------------|
| Frequency: | 5485 MHz |
| Channel BW: | 10 MHz |
| Modulation parameters: | BPSK, 6.5 Mbps |



| | | | |
|---|---|--------------------------------|------------------------------|
| Test specification: | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | | |
| Test procedure: | FCC Public Notice DA 02-2138, Appendix A | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 11/25/2008 | | |
| Temperature: 23 °C | Air Pressure: 1012 hPa | Relative Humidity: 52 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

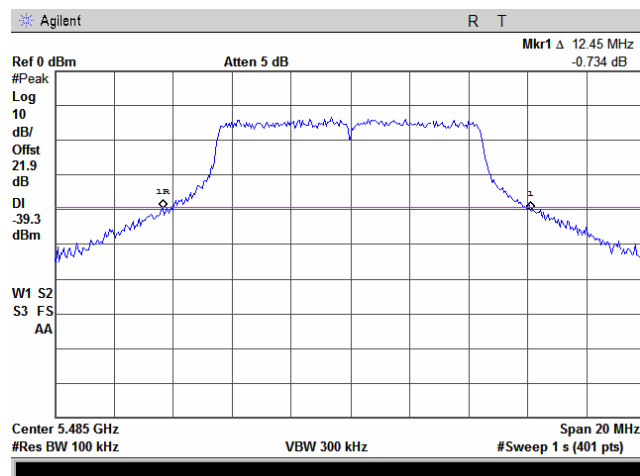
Plot 7.1.9 Peak spectral power density

| | |
|------------------------|----------------|
| Frequency: | 5485 MHz |
| Channel BW: | 10 MHz |
| Modulation parameters: | BPSK, 6.5 Mbps |



Plot 7.1.10 The 26 dB emission bandwidth

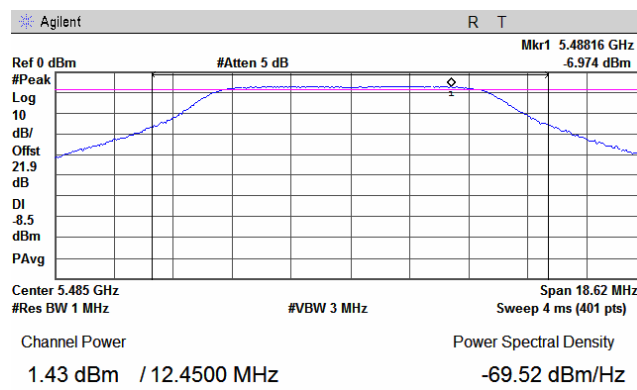
| | |
|------------------------|---------------|
| Frequency: | 5485 MHz |
| Channel BW: | 10 MHz |
| Modulation parameters: | BPSK, 65 Mbps |



| | | | |
|---|---|--------------------------------|------------------------------|
| Test specification: | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | | |
| Test procedure: | FCC Public Notice DA 02-2138, Appendix A | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 11/25/2008 | | |
| Temperature: 23 °C | Air Pressure: 1012 hPa | Relative Humidity: 52 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

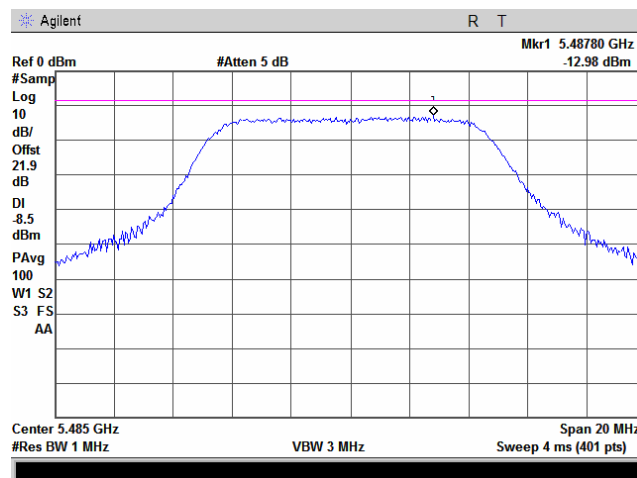
Plot 7.1.11 Peak output power

| | |
|------------------------|---------------|
| Frequency: | 5485 MHz |
| Channel BW: | 10 MHz |
| Modulation parameters: | BPSK, 65 Mbps |



Plot 7.1.12 Peak spectral power density

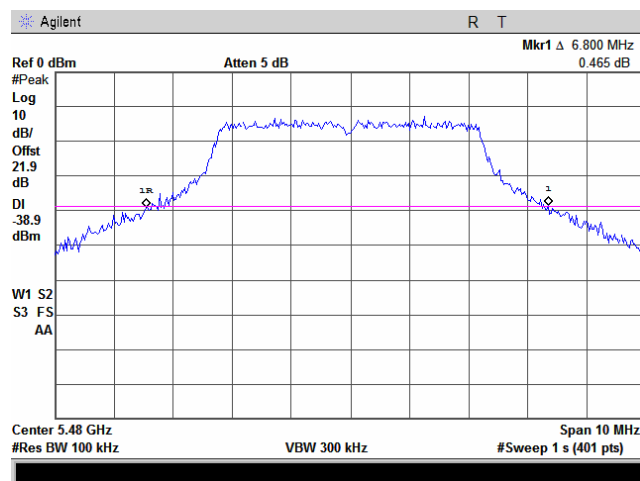
| | |
|------------------------|---------------|
| Frequency: | 5485 MHz |
| Channel BW: | 10 MHz |
| Modulation parameters: | BPSK, 65 Mbps |



| | | | |
|---|---|--------------------------------|------------------------------|
| Test specification: | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | | |
| Test procedure: | FCC Public Notice DA 02-2138, Appendix A | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 11/25/2008 | | |
| Temperature: 23 °C | Air Pressure: 1012 hPa | Relative Humidity: 52 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

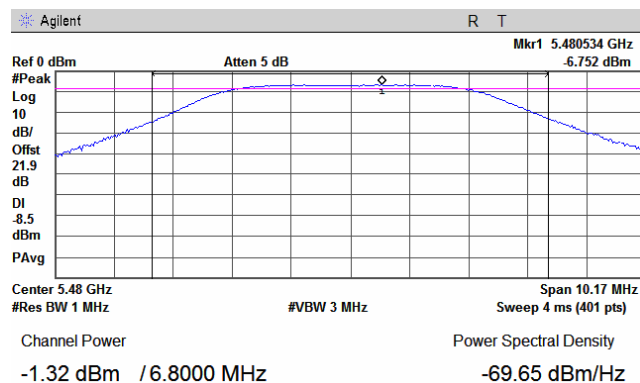
Plot 7.1.13 The 26 dB emission bandwidth

| | |
|------------------------|-----------------|
| Frequency: | 5480 MHz |
| Channel BW: | 5 MHz |
| Modulation parameters: | BPSK, 3.25 Mbps |



Plot 7.1.14 Peak output power

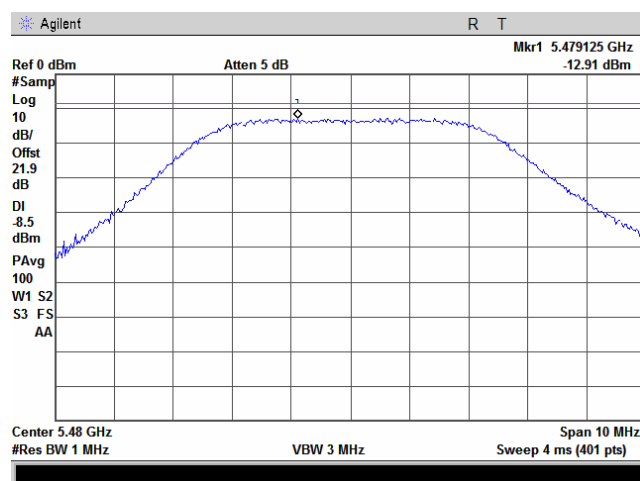
| | |
|------------------------|-----------------|
| Frequency: | 5480 MHz |
| Channel BW: | 5 MHz |
| Modulation parameters: | BPSK, 3.25 Mbps |



| | | | |
|---|---|--------------------------------|------------------------------|
| Test specification: | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | | |
| Test procedure: | FCC Public Notice DA 02-2138, Appendix A | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 11/25/2008 | | |
| Temperature: 23 °C | Air Pressure: 1012 hPa | Relative Humidity: 52 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

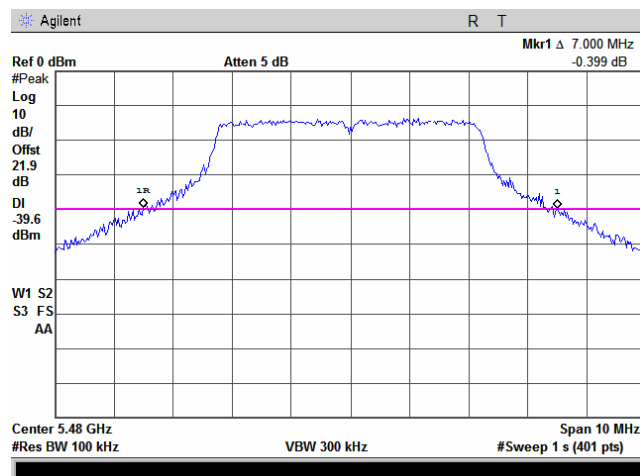
Plot 7.1.15 Peak spectral power density

| | |
|------------------------|-----------------|
| Frequency: | 5480 MHz |
| Channel BW: | 5 MHz |
| Modulation parameters: | BPSK, 3.25 Mbps |



Plot 7.1.16 The 26 dB emission bandwidth

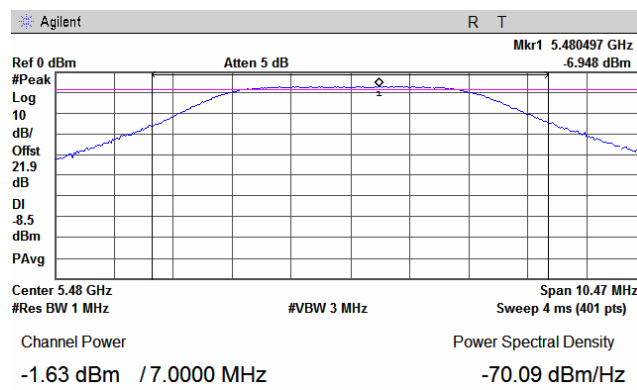
| | |
|------------------------|-----------------|
| Frequency: | 5480 MHz |
| Channel BW: | 5 MHz |
| Modulation parameters: | BPSK, 32.5 Mbps |



| | | | |
|---|---|--------------------------------|------------------------------|
| Test specification: | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | | |
| Test procedure: | FCC Public Notice DA 02-2138, Appendix A | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 11/25/2008 | | |
| Temperature: 23 °C | Air Pressure: 1012 hPa | Relative Humidity: 52 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

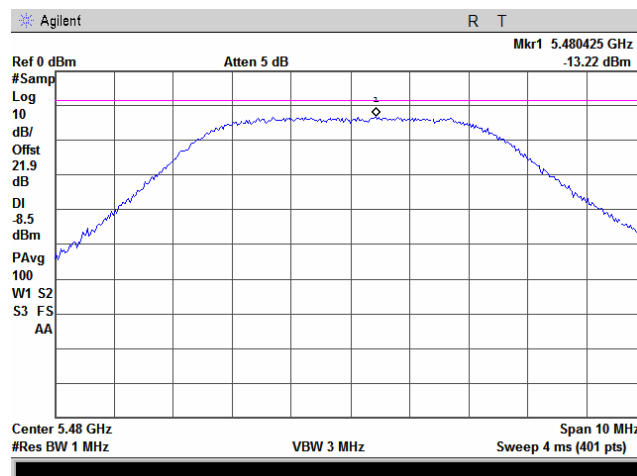
Plot 7.1.17 Peak output power

| | |
|------------------------|-----------------|
| Frequency: | 5480 MHz |
| Channel BW: | 5 MHz |
| Modulation parameters: | BPSK, 32.5 Mbps |



Plot 7.1.18 Peak spectral power density

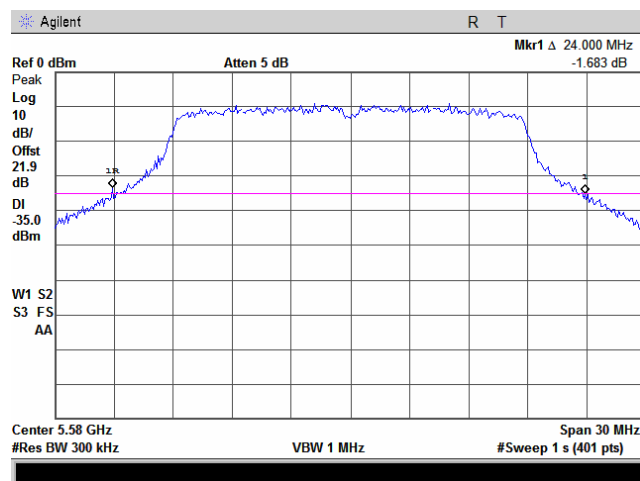
| | |
|------------------------|-----------------|
| Frequency: | 5480 MHz |
| Channel BW: | 5 MHz |
| Modulation parameters: | BPSK, 32.5 Mbps |



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | |
| Test procedure: | | FCC Public Notice DA 02-2138, Appendix A | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 11/25/2008 | | |
| Temperature: 23 °C | Air Pressure: 1012 hPa | Relative Humidity: 52 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

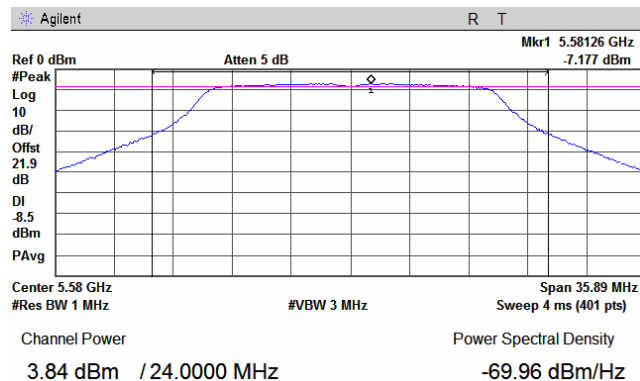
Plot 7.1.19 The 26 dB emission bandwidth

| | |
|------------------------|---------------|
| Frequency: | 5580 MHz |
| Channel BW: | 20 MHz |
| Modulation parameters: | BPSK, 13 Mbps |



Plot 7.1.20 Peak output power

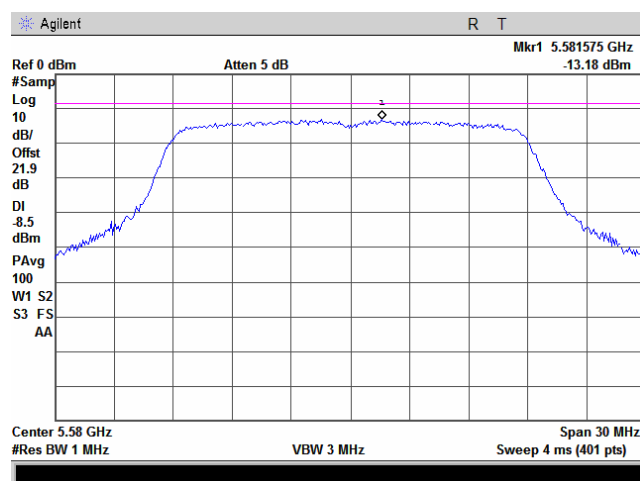
| | |
|------------------------|---------------|
| Frequency: | 5580 MHz |
| Channel BW: | 20 MHz |
| Modulation parameters: | BPSK, 13 Mbps |



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | |
| Test procedure: | | FCC Public Notice DA 02-2138, Appendix A | |
| Test mode: | | Compliance | Verdict: PASS |
| Date: | | 11/25/2008 | |
| Temperature: 23 °C | Air Pressure: 1012 hPa | Relative Humidity: 52 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

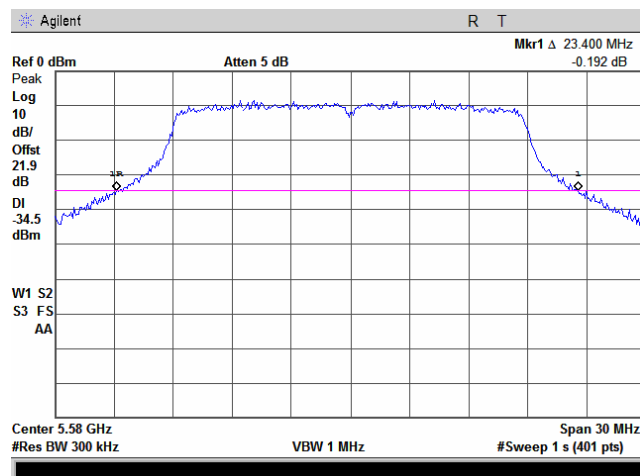
Plot 7.1.21 Peak spectral power density

| | |
|------------------------|---------------|
| Frequency: | 5580 MHz |
| Channel BW: | 20 MHz |
| Modulation parameters: | BPSK, 13 Mbps |



Plot 7.1.22 The 26 dB emission bandwidth

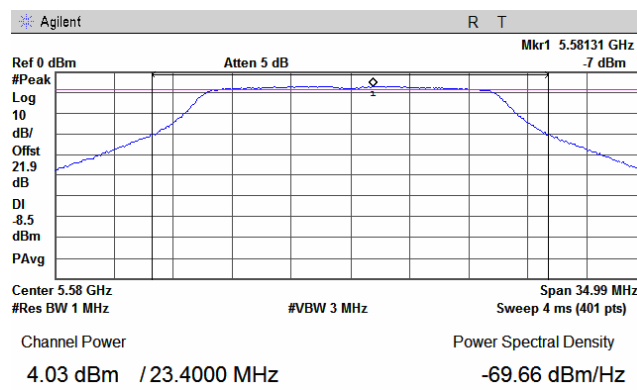
| | |
|------------------------|----------------|
| Frequency: | 5580 MHz |
| Channel BW: | 20 MHz |
| Modulation parameters: | BPSK, 130 Mbps |



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | |
| Test procedure: | | FCC Public Notice DA 02-2138, Appendix A | |
| Test mode: | | Compliance | Verdict: PASS |
| Date: | | 11/25/2008 | |
| Temperature: 23 °C | Air Pressure: 1012 hPa | Relative Humidity: 52 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

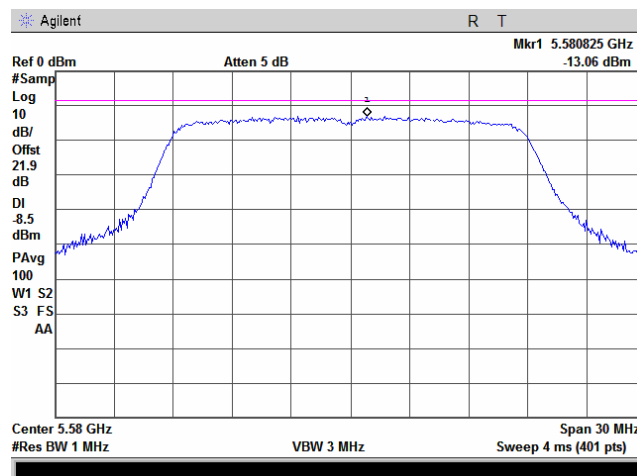
Plot 7.1.23 Peak output power

| | |
|------------------------|----------------|
| Frequency: | 5580 MHz |
| Channel BW: | 20 MHz |
| Modulation parameters: | BPSK, 130 Mbps |



Plot 7.1.24 Peak spectral power density

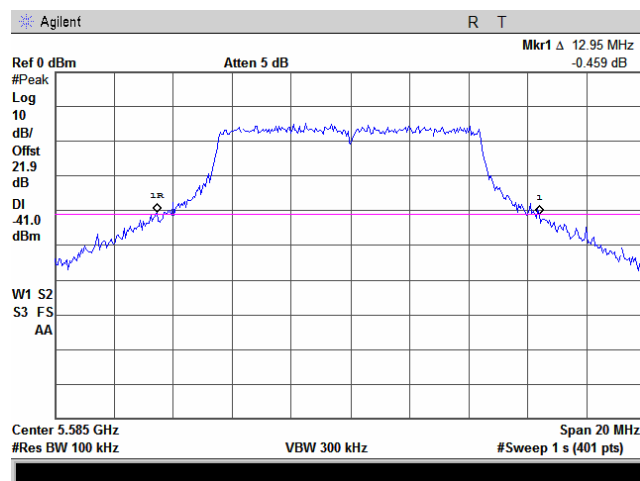
| | |
|------------------------|----------------|
| Frequency: | 5580 MHz |
| Channel BW: | 20 MHz |
| Modulation parameters: | BPSK, 130 Mbps |



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | |
| Test procedure: | | FCC Public Notice DA 02-2138, Appendix A | |
| Test mode: | | Compliance | Verdict: PASS |
| Date: | | 11/25/2008 | |
| Temperature: 23 °C | Air Pressure: 1012 hPa | Relative Humidity: 52 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

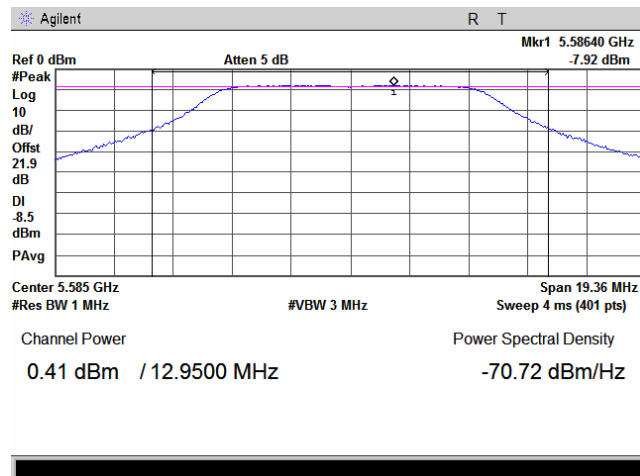
Plot 7.1.25 The 26 dB emission bandwidth

| | |
|------------------------|----------------|
| Frequency: | 5585 MHz |
| Channel BW: | 10 MHz |
| Modulation parameters: | BPSK, 6.5 Mbps |



Plot 7.1.26 Peak output power

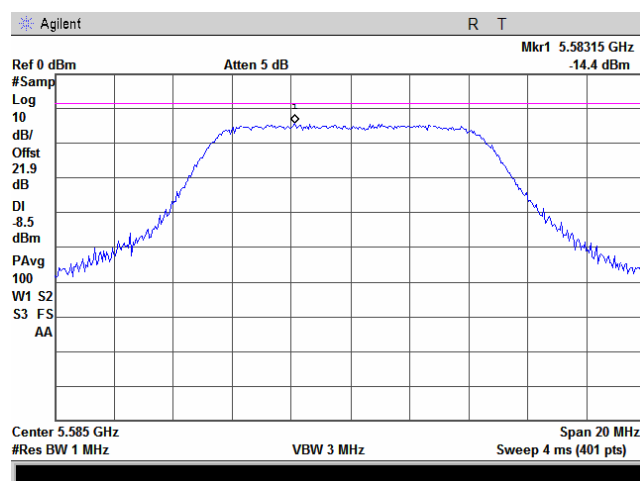
| | |
|------------------------|----------------|
| Frequency: | 5585 MHz |
| Channel BW: | 10 MHz |
| Modulation parameters: | BPSK, 6.5 Mbps |



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | |
| Test procedure: | | FCC Public Notice DA 02-2138, Appendix A | |
| Test mode: | | Compliance | Verdict: PASS |
| Date: | | 11/25/2008 | |
| Temperature: 23 °C | Air Pressure: 1012 hPa | Relative Humidity: 52 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

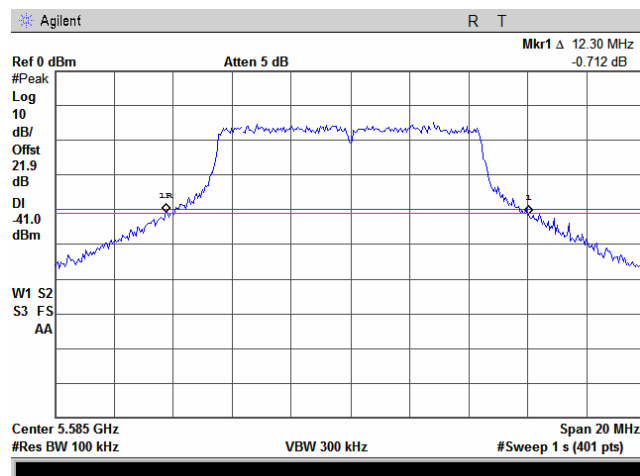
Plot 7.1.27 Peak spectral power density

| | |
|------------------------|----------------|
| Frequency: | 5585 MHz |
| Channel BW: | 10 MHz |
| Modulation parameters: | BPSK, 6.5 Mbps |



Plot 7.1.28 The 26 dB emission bandwidth

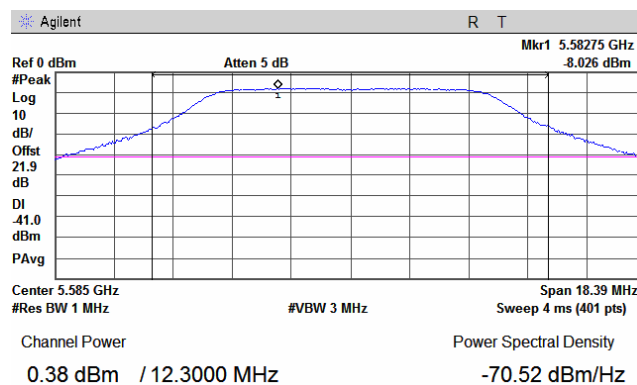
| | |
|------------------------|---------------|
| Frequency: | 5585 MHz |
| Channel BW: | 10 MHz |
| Modulation parameters: | BPSK, 65 Mbps |



| | | | |
|---|---|--------------------------------|------------------------------|
| Test specification: | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | | |
| Test procedure: | FCC Public Notice DA 02-2138, Appendix A | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 11/25/2008 | | |
| Temperature: 23 °C | Air Pressure: 1012 hPa | Relative Humidity: 52 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

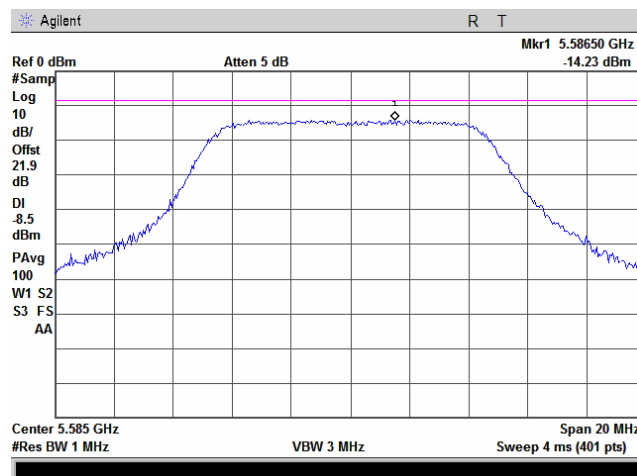
Plot 7.1.29 Peak output power

| | |
|------------------------|---------------|
| Frequency: | 5585 MHz |
| Channel BW: | 10 MHz |
| Modulation parameters: | BPSK, 65 Mbps |



Plot 7.1.30 Peak spectral power density

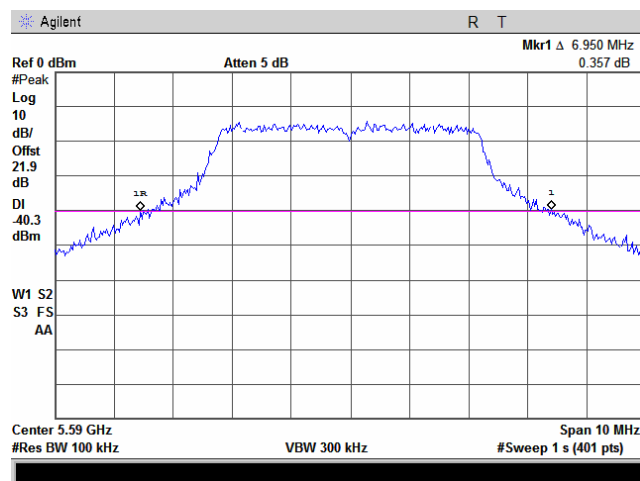
| | |
|------------------------|---------------|
| Frequency: | 5585 MHz |
| Channel BW: | 10 MHz |
| Modulation parameters: | BPSK, 65 Mbps |



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | |
| Test procedure: | | FCC Public Notice DA 02-2138, Appendix A | |
| Test mode: | | Compliance | Verdict: PASS |
| Date: | | 11/25/2008 | |
| Temperature: 23 °C | Air Pressure: 1012 hPa | Relative Humidity: 52 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

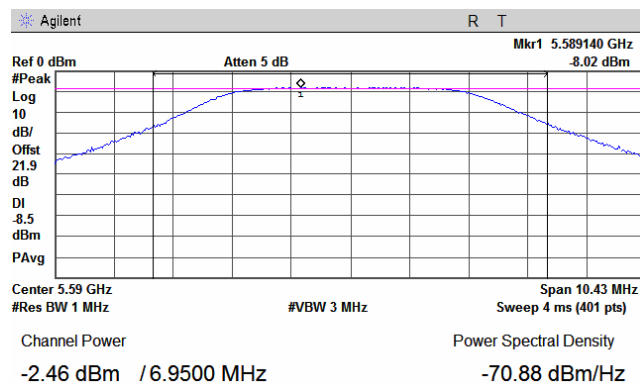
Plot 7.1.31 The 26 dB emission bandwidth

| | |
|------------------------|-----------------|
| Frequency: | 5590 MHz |
| Channel BW: | 5 MHz |
| Modulation parameters: | BPSK, 3.25 Mbps |



Plot 7.1.32 Peak output power

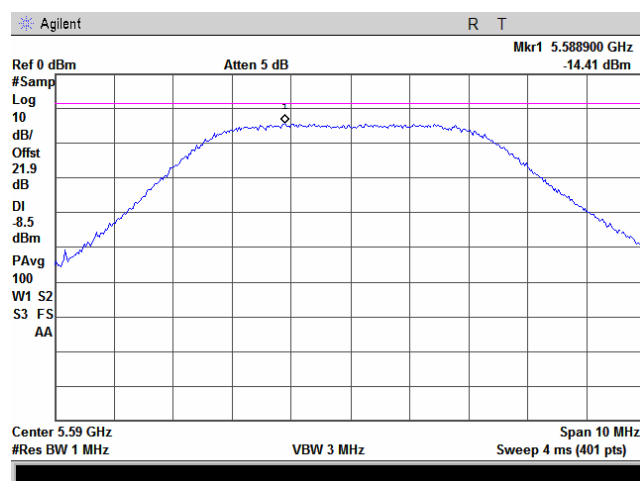
| | |
|------------------------|-----------------|
| Frequency: | 5590 MHz |
| Channel BW: | 5 MHz |
| Modulation parameters: | BPSK, 3.25 Mbps |



| | | | |
|---|---|--------------------------------|------------------------------|
| Test specification: | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | | |
| Test procedure: | FCC Public Notice DA 02-2138, Appendix A | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 11/25/2008 | | |
| Temperature: 23 °C | Air Pressure: 1012 hPa | Relative Humidity: 52 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

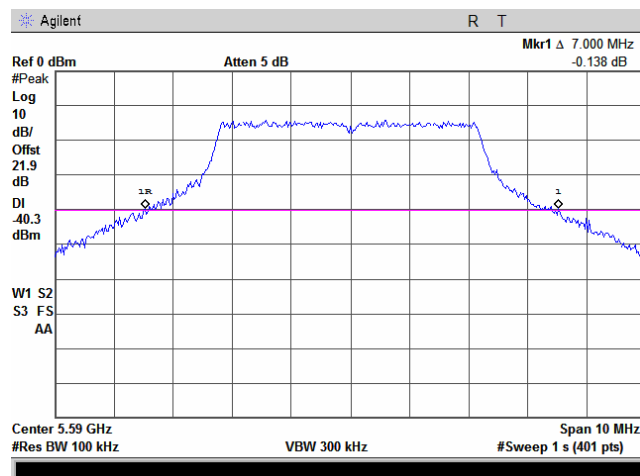
Plot 7.1.33 Peak spectral power density

| | |
|------------------------|-----------------|
| Frequency: | 5590 MHz |
| Channel BW: | 5 MHz |
| Modulation parameters: | BPSK, 3.25 Mbps |



Plot 7.1.34 The 26 dB emission bandwidth

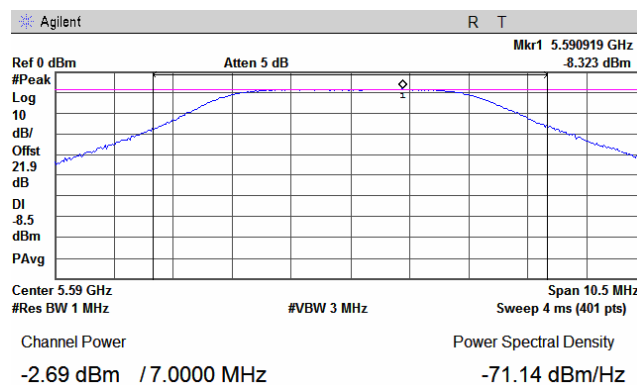
| | |
|------------------------|-----------------|
| Frequency: | 5590 MHz |
| Channel BW: | 5 MHz |
| Modulation parameters: | BPSK, 32.5 Mbps |



| | | | |
|---|---|--------------------------------|------------------------------|
| Test specification: | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | | |
| Test procedure: | FCC Public Notice DA 02-2138, Appendix A | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 11/25/2008 | | |
| Temperature: 23 °C | Air Pressure: 1012 hPa | Relative Humidity: 52 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

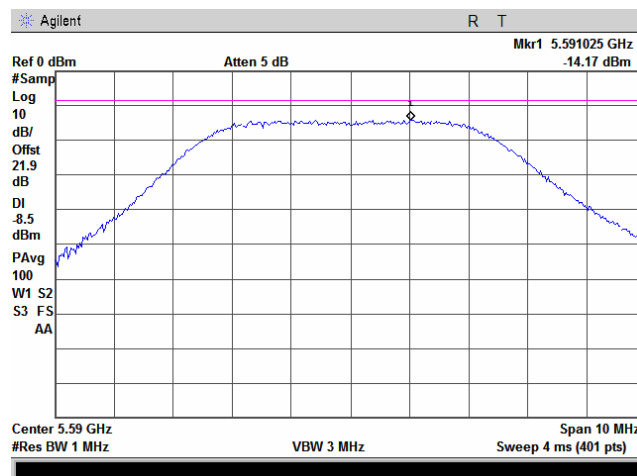
Plot 7.1.35 Peak output power

| | |
|------------------------|-----------------|
| Frequency: | 5590 MHz |
| Channel BW: | 5 MHz |
| Modulation parameters: | BPSK, 32.5 Mbps |



Plot 7.1.36 Peak spectral power density

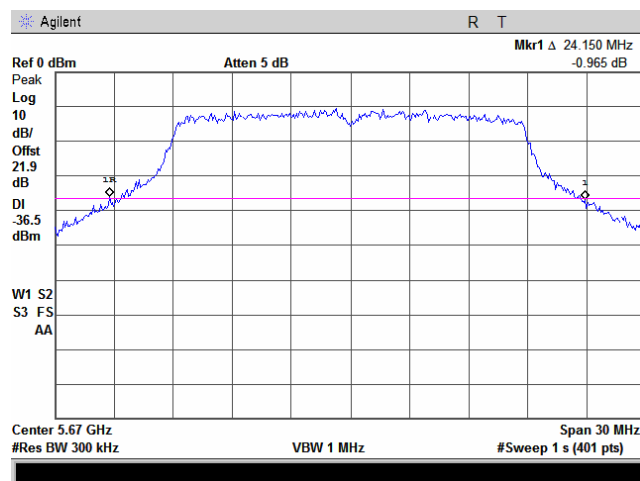
| | |
|------------------------|-----------------|
| Frequency: | 5590 MHz |
| Channel BW: | 5 MHz |
| Modulation parameters: | BPSK, 32.5 Mbps |



| | | | |
|---|---|--------------------------------|------------------------------|
| Test specification: | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | | |
| Test procedure: | FCC Public Notice DA 02-2138, Appendix A | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 11/25/2008 | | |
| Temperature: 23 °C | Air Pressure: 1012 hPa | Relative Humidity: 52 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

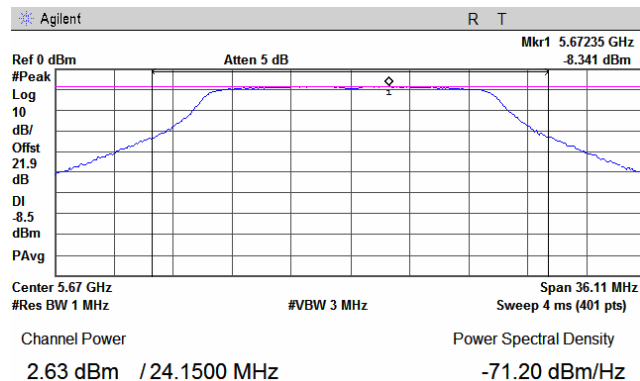
Plot 7.1.37 The 26 dB emission bandwidth

| | |
|------------------------|---------------|
| Frequency: | 5670 MHz |
| Channel BW: | 20 MHz |
| Modulation parameters: | BPSK, 13 Mbps |



Plot 7.1.38 Peak output power

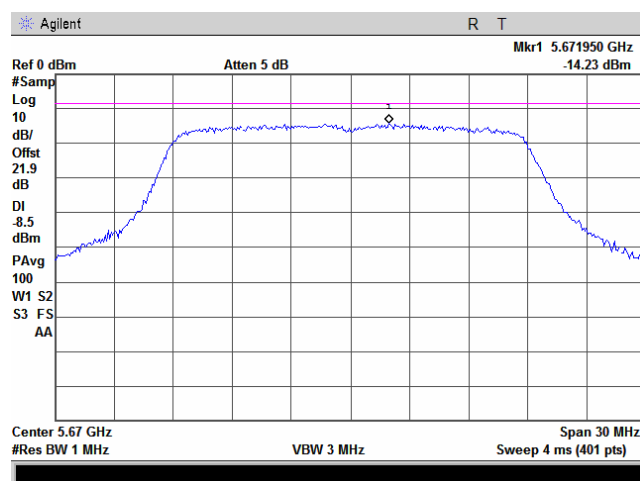
| | |
|------------------------|---------------|
| Frequency: | 5670MHz |
| Channel BW: | 20 MHz |
| Modulation parameters: | BPSK, 13 Mbps |



| | | | |
|---|---|--------------------------------|------------------------------|
| Test specification: | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | | |
| Test procedure: | FCC Public Notice DA 02-2138, Appendix A | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 11/25/2008 | | |
| Temperature: 23 °C | Air Pressure: 1012 hPa | Relative Humidity: 52 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

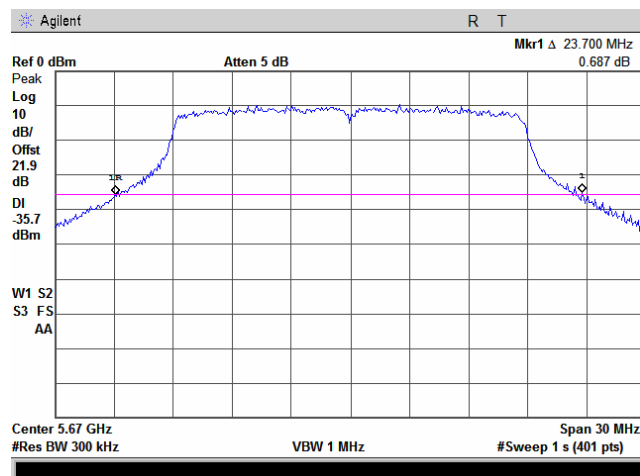
Plot 7.1.39 Peak spectral power density

| | |
|------------------------|---------------|
| Frequency: | 5670MHz |
| Channel BW: | 20 MHz |
| Modulation parameters: | BPSK, 13 Mbps |



Plot 7.1.40 The 26 dB emission bandwidth

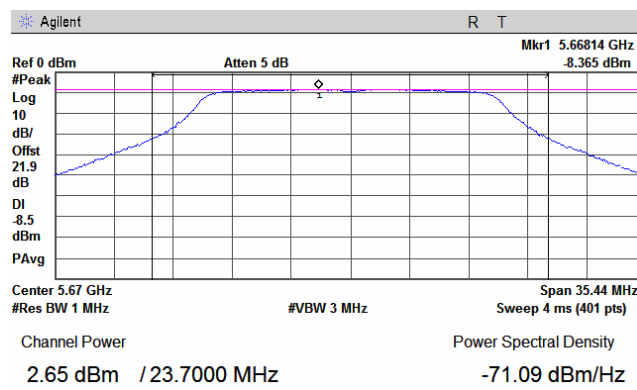
| | |
|------------------------|----------------|
| Frequency: | 5670MHz |
| Channel BW: | 20 MHz |
| Modulation parameters: | BPSK, 130 Mbps |



| | | | |
|---|---|--------------------------------|------------------------------|
| Test specification: | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | | |
| Test procedure: | FCC Public Notice DA 02-2138, Appendix A | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 11/25/2008 | | |
| Temperature: 23 °C | Air Pressure: 1012 hPa | Relative Humidity: 52 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

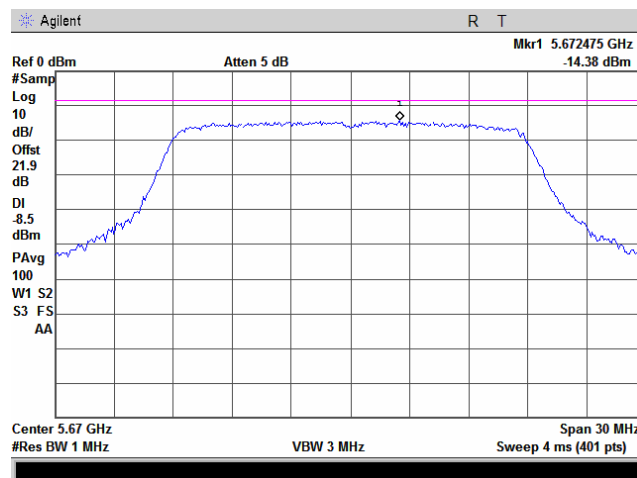
Plot 7.1.41 Peak output power

| | |
|------------------------|----------------|
| Frequency: | 5670MHz |
| Channel BW: | 20 MHz |
| Modulation parameters: | BPSK, 130 Mbps |



Plot 7.1.42 Peak spectral power density

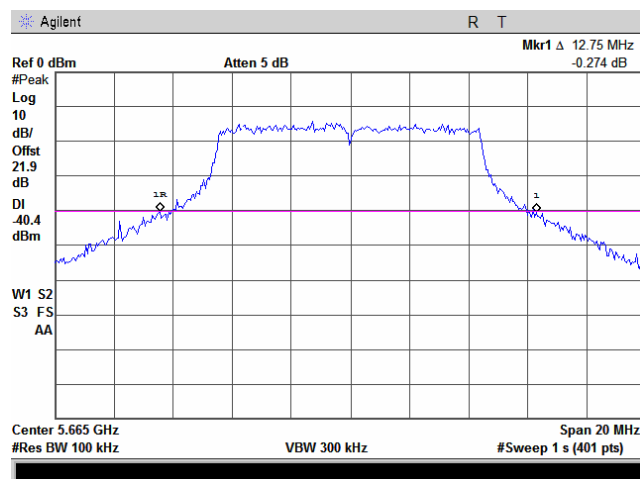
| | |
|------------------------|----------------|
| Frequency: | 5670MHz |
| Channel BW: | 20 MHz |
| Modulation parameters: | BPSK, 130 Mbps |



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | |
| Test procedure: | | FCC Public Notice DA 02-2138, Appendix A | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 11/25/2008 | | |
| Temperature: 23 °C | Air Pressure: 1012 hPa | Relative Humidity: 52 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

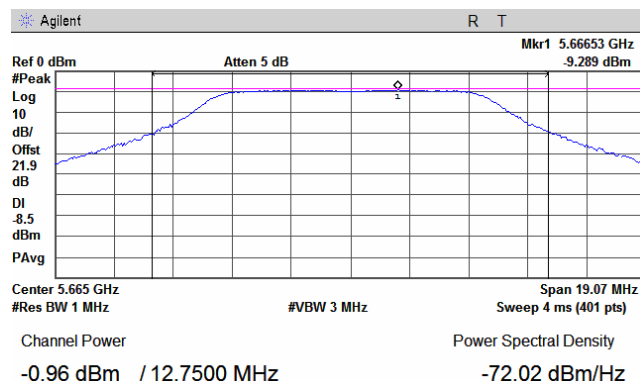
Plot 7.1.43 The 26 dB emission bandwidth

| | |
|------------------------|----------------|
| Frequency: | 5665 MHz |
| Channel BW: | 10 MHz |
| Modulation parameters: | BPSK, 6.5 Mbps |



Plot 7.1.44 Peak output power

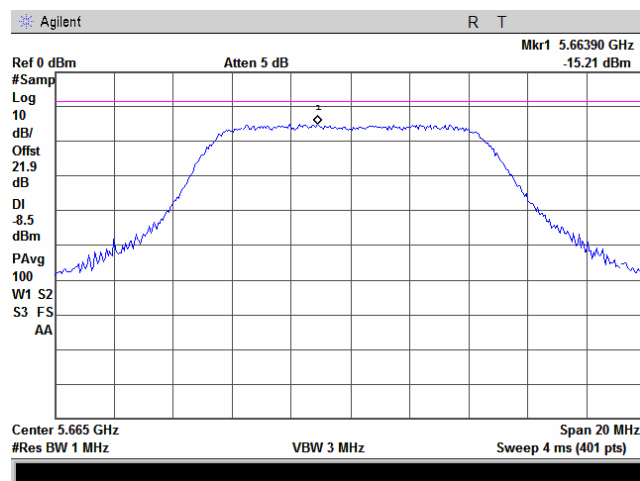
| | |
|------------------------|----------------|
| Frequency: | 5665 MHz |
| Channel BW: | 10 MHz |
| Modulation parameters: | BPSK, 6.5 Mbps |



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | |
| Test procedure: | | FCC Public Notice DA 02-2138, Appendix A | |
| Test mode: | | Compliance | Verdict: PASS |
| Date: | | 11/25/2008 | |
| Temperature: 23 °C | Air Pressure: 1012 hPa | Relative Humidity: 52 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

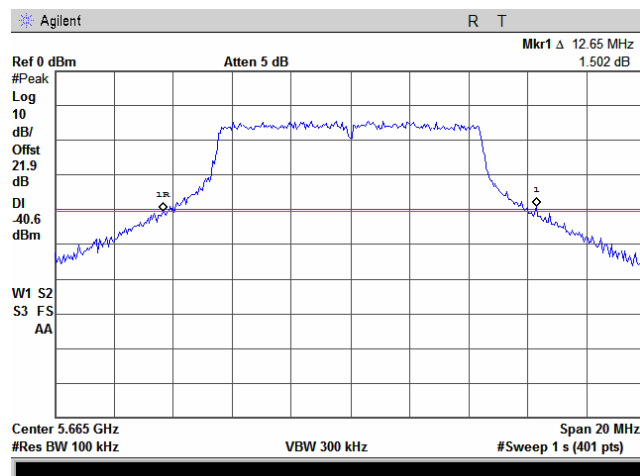
Plot 7.1.45 Peak spectral power density

| | |
|------------------------|----------------|
| Frequency: | 5665 MHz |
| Channel BW: | 10 MHz |
| Modulation parameters: | BPSK, 6.5 Mbps |



Plot 7.1.46 The 26 dB emission bandwidth

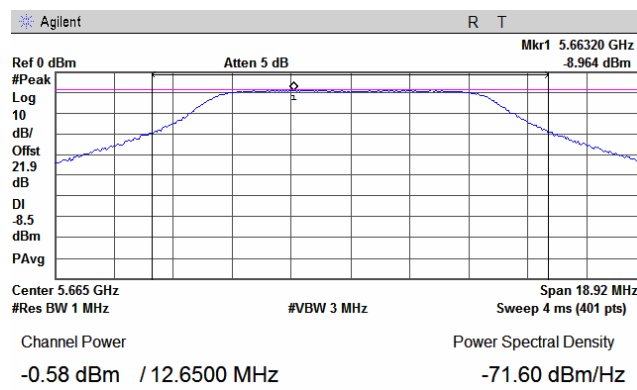
| | |
|------------------------|----------------|
| Frequency: | 5665 MHz |
| Channel BW: | 10 MHz |
| Modulation parameters: | BPSK, 6.5 Mbps |



| | | | |
|---|---|--------------------------------|------------------------------|
| Test specification: | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | | |
| Test procedure: | FCC Public Notice DA 02-2138, Appendix A | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 11/25/2008 | | |
| Temperature: 23 °C | Air Pressure: 1012 hPa | Relative Humidity: 52 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

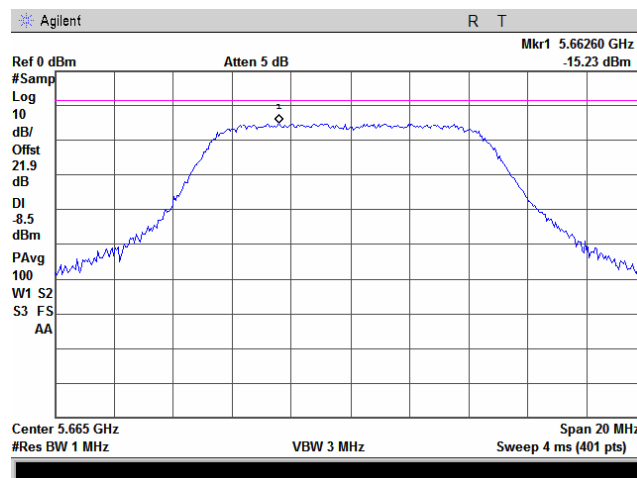
Plot 7.1.47 Peak output power

| | |
|------------------------|---------------|
| Frequency: | 5665 MHz |
| Channel BW: | 10 MHz |
| Modulation parameters: | BPSK, 65 Mbps |



Plot 7.1.48 Peak spectral power density

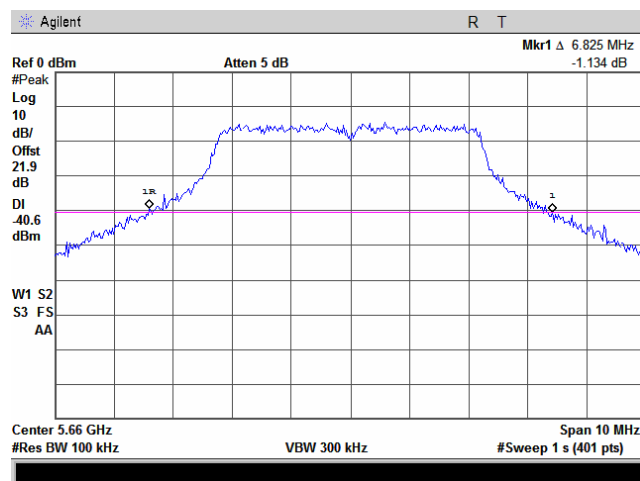
| | |
|------------------------|---------------|
| Frequency: | 5665 MHz |
| Channel BW: | 10 MHz |
| Modulation parameters: | BPSK, 65 Mbps |



| | | | |
|---|---|--------------------------------|------------------------------|
| Test specification: | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | | |
| Test procedure: | FCC Public Notice DA 02-2138, Appendix A | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 11/25/2008 | | |
| Temperature: 23 °C | Air Pressure: 1012 hPa | Relative Humidity: 52 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

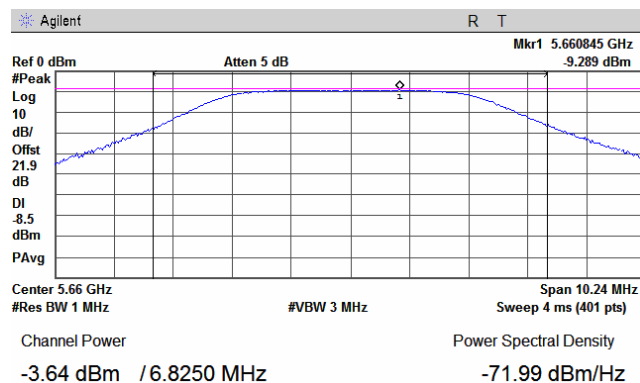
Plot 7.1.49 The 26 dB emission bandwidth

| | |
|------------------------|-----------------|
| Frequency: | 5660 MHz |
| Channel BW: | 5 MHz |
| Modulation parameters: | BPSK, 3.25 Mbps |



Plot 7.1.50 Peak output power

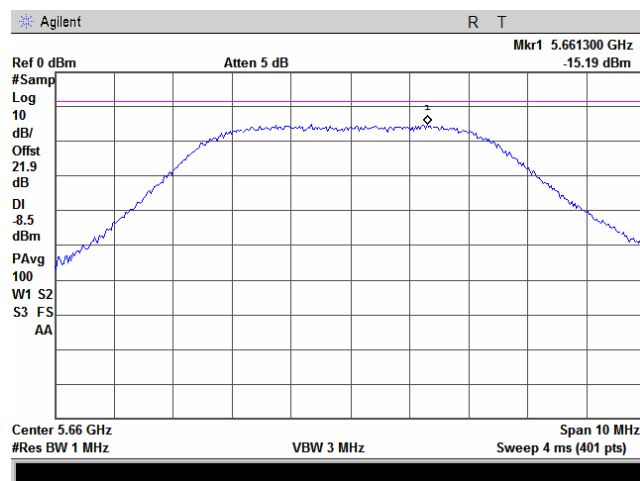
| | |
|------------------------|-----------------|
| Frequency: | 5660 MHz |
| Channel BW: | 5 MHz |
| Modulation parameters: | BPSK, 3.25 Mbps |



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | |
| Test procedure: | | FCC Public Notice DA 02-2138, Appendix A | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 11/25/2008 | | |
| Temperature: 23 °C | Air Pressure: 1012 hPa | Relative Humidity: 52 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

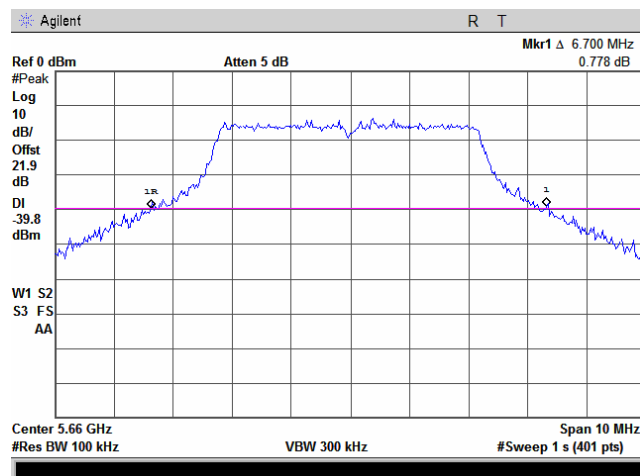
Plot 7.1.51 Peak spectral power density

| | |
|------------------------|-----------------|
| Frequency: | 5660 MHz |
| Channel BW: | 5 MHz |
| Modulation parameters: | BPSK, 3.25 Mbps |



Plot 7.1.52 The 26 dB emission bandwidth

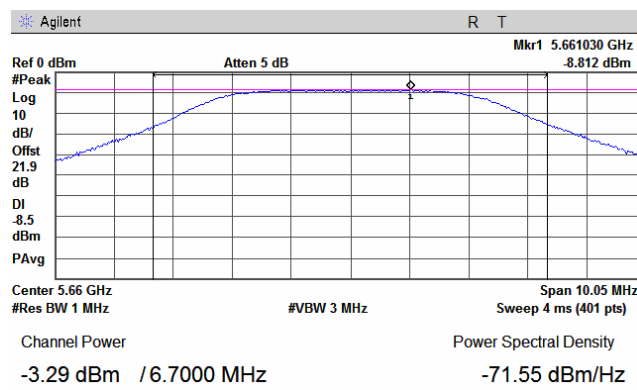
| | |
|------------------------|-----------------|
| Frequency: | 5660 MHz |
| Channel BW: | 5 MHz |
| Modulation parameters: | BPSK, 32.5 Mbps |



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | |
| Test procedure: | | FCC Public Notice DA 02-2138, Appendix A | |
| Test mode: | | Compliance | Verdict: PASS |
| Date: | | 11/25/2008 | |
| Temperature: 23 °C | Air Pressure: 1012 hPa | Relative Humidity: 52 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

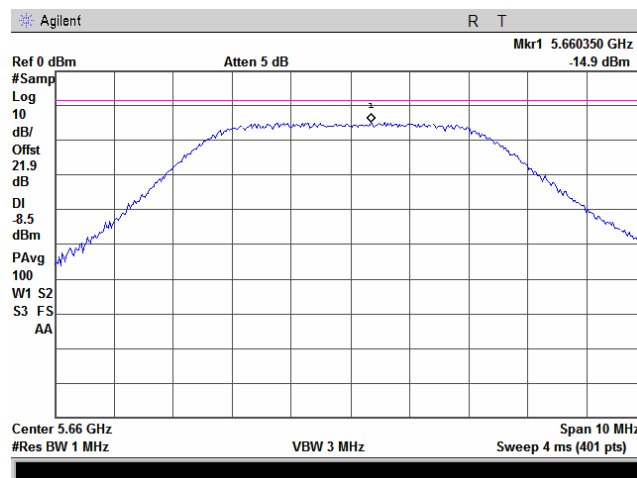
Plot 7.1.53 Peak output power

| | |
|------------------------|-----------------|
| Frequency: | 5660 MHz |
| Channel BW: | 5 MHz |
| Modulation parameters: | BPSK, 32.5 Mbps |



Plot 7.1.54 Peak spectral power density

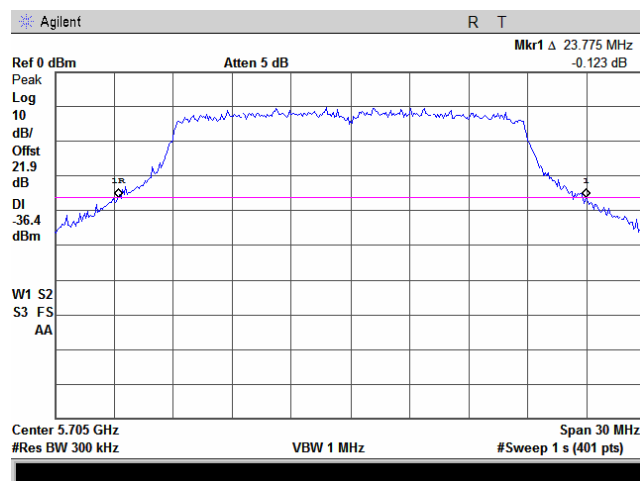
| | |
|------------------------|-----------------|
| Frequency: | 5660 MHz |
| Channel BW: | 5 MHz |
| Modulation parameters: | BPSK, 32.5 Mbps |



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | |
| Test procedure: | | FCC Public Notice DA 02-2138, Appendix A | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 11/25/2008 | | |
| Temperature: 23 °C | Air Pressure: 1012 hPa | Relative Humidity: 52 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

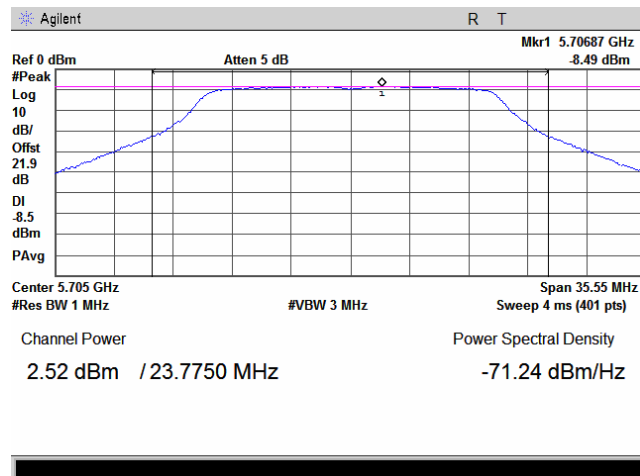
Plot 7.1.55 The 26 dB emission bandwidth

| | |
|------------------------|---------------|
| Frequency: | 5705 MHz |
| Channel BW: | 20 MHz |
| Modulation parameters: | BPSK, 13 Mbps |



Plot 7.1.56 Peak output power

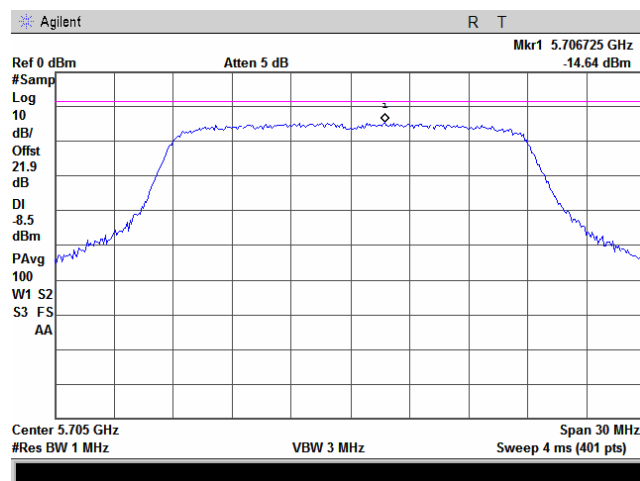
| | |
|------------------------|---------------|
| Frequency: | 5705 MHz |
| Channel BW: | 20 MHz |
| Modulation parameters: | BPSK, 13 Mbps |



| | | | |
|---|---|--------------------------------|------------------------------|
| Test specification: | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | | |
| Test procedure: | FCC Public Notice DA 02-2138, Appendix A | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 11/25/2008 | | |
| Temperature: 23 °C | Air Pressure: 1012 hPa | Relative Humidity: 52 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

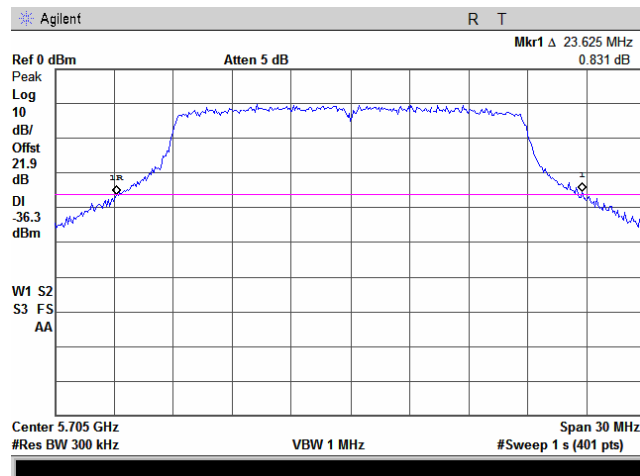
Plot 7.1.57 Peak spectral power density

| | |
|------------------------|---------------|
| Frequency: | 5705 MHz |
| Channel BW: | 20 MHz |
| Modulation parameters: | BPSK, 13 Mbps |



Plot 7.1.58 The 26 dB emission bandwidth

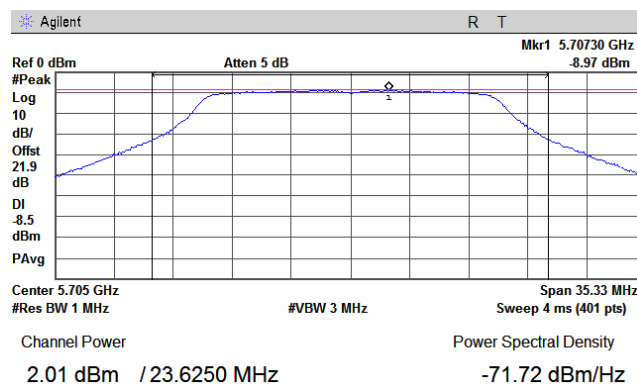
| | |
|------------------------|----------------|
| Frequency: | 5705 MHz |
| Channel BW: | 20 MHz |
| Modulation parameters: | BPSK, 130 Mbps |



| | | | |
|---|---|--------------------------------|------------------------------|
| Test specification: | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | | |
| Test procedure: | FCC Public Notice DA 02-2138, Appendix A | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 11/25/2008 | | |
| Temperature: 23 °C | Air Pressure: 1012 hPa | Relative Humidity: 52 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

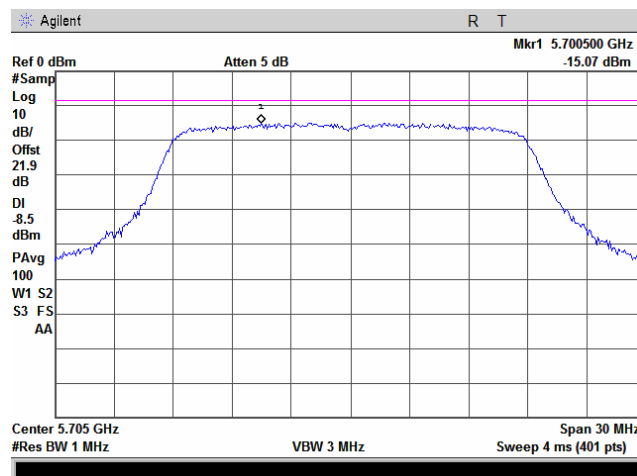
Plot 7.1.59 Peak output power

| | |
|------------------------|----------------|
| Frequency: | 5705 MHz |
| Channel BW: | 20 MHz |
| Modulation parameters: | BPSK, 130 Mbps |



Plot 7.1.60 Peak spectral power density

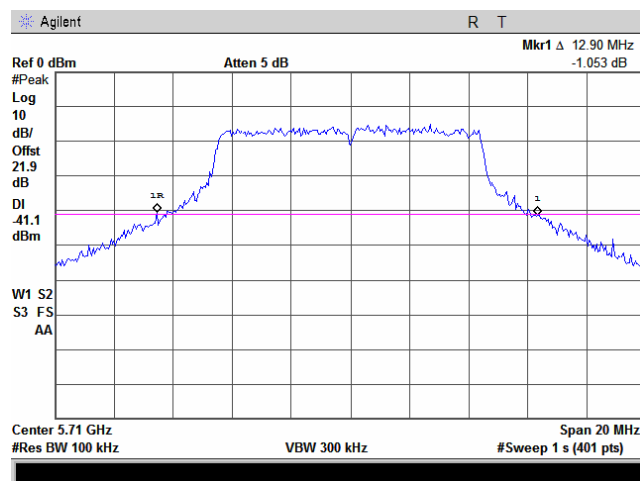
| | |
|------------------------|----------------|
| Frequency: | 5705 MHz |
| Channel BW: | 20 MHz |
| Modulation parameters: | BPSK, 130 Mbps |



| | | | |
|---|---|--------------------------------|------------------------------|
| Test specification: | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | | |
| Test procedure: | FCC Public Notice DA 02-2138, Appendix A | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 11/25/2008 | | |
| Temperature: 23 °C | Air Pressure: 1012 hPa | Relative Humidity: 52 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

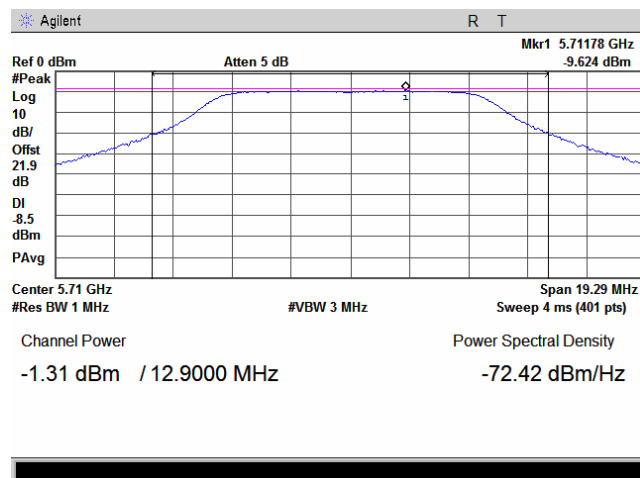
Plot 7.1.61 The 26 dB emission bandwidth

| | |
|------------------------|----------------|
| Frequency: | 5710 MHz |
| Channel BW: | 10 MHz |
| Modulation parameters: | BPSK, 6.5 Mbps |



Plot 7.1.62 Peak output power

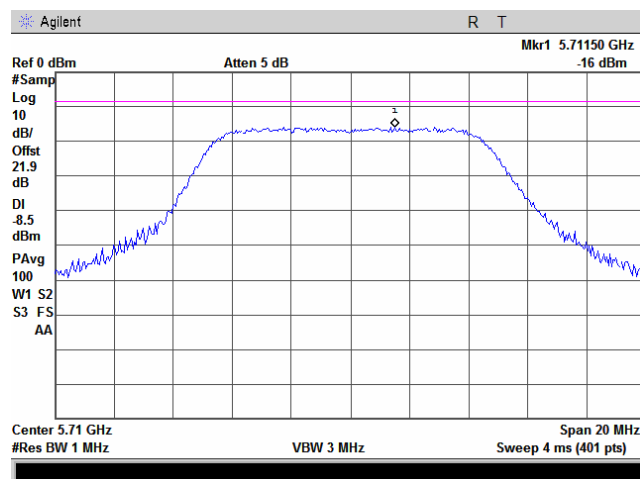
| | |
|------------------------|----------------|
| Frequency: | 5710 MHz |
| Channel BW: | 10 MHz |
| Modulation parameters: | BPSK, 6.5 Mbps |



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | |
| Test procedure: | | FCC Public Notice DA 02-2138, Appendix A | |
| Test mode: | | Compliance | Verdict: PASS |
| Date: | | 11/25/2008 | |
| Temperature: 23 °C | Air Pressure: 1012 hPa | Relative Humidity: 52 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

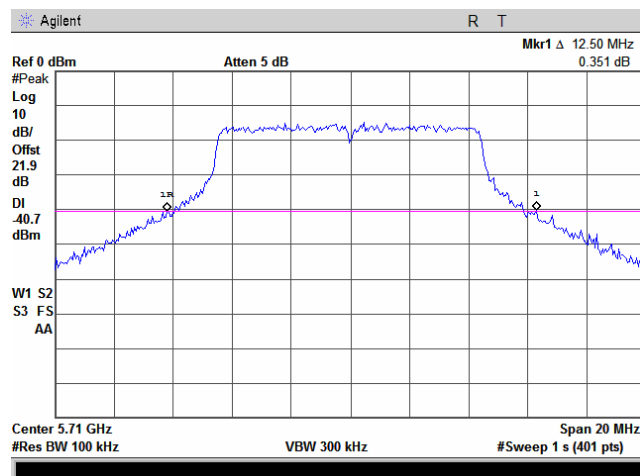
Plot 7.1.63 Peak spectral power density

| | |
|------------------------|----------------|
| Frequency: | 5710 MHz |
| Channel BW: | 10 MHz |
| Modulation parameters: | BPSK, 6.5 Mbps |



Plot 7.1.64 The 26 dB emission bandwidth

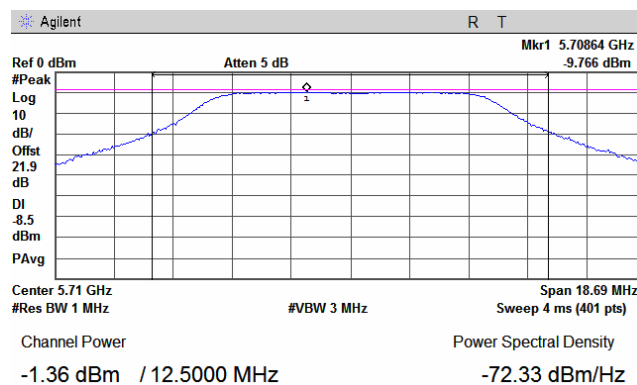
| | |
|------------------------|----------------|
| Frequency: | 5710 MHz |
| Channel BW: | 10 MHz |
| Modulation parameters: | BPSK, 6.5 Mbps |



| | | | |
|---|---|--------------------------------|------------------------------|
| Test specification: | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | | |
| Test procedure: | FCC Public Notice DA 02-2138, Appendix A | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 11/25/2008 | | |
| Temperature: 23 °C | Air Pressure: 1012 hPa | Relative Humidity: 52 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

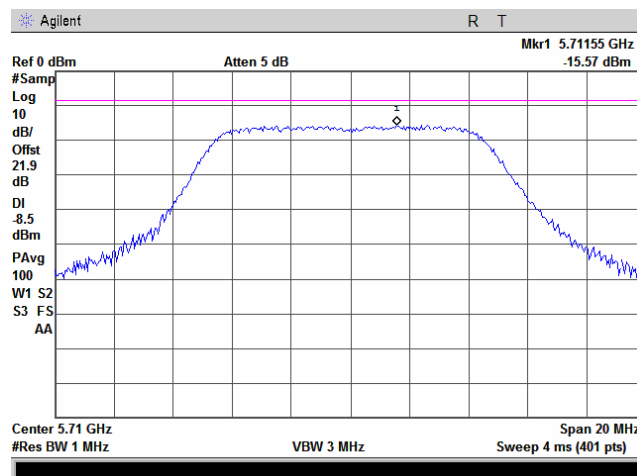
Plot 7.1.65 Peak output power

| | |
|------------------------|---------------|
| Frequency: | 5710 MHz |
| Channel BW: | 10 MHz |
| Modulation parameters: | BPSK, 65 Mbps |



Plot 7.1.66 Peak spectral power density

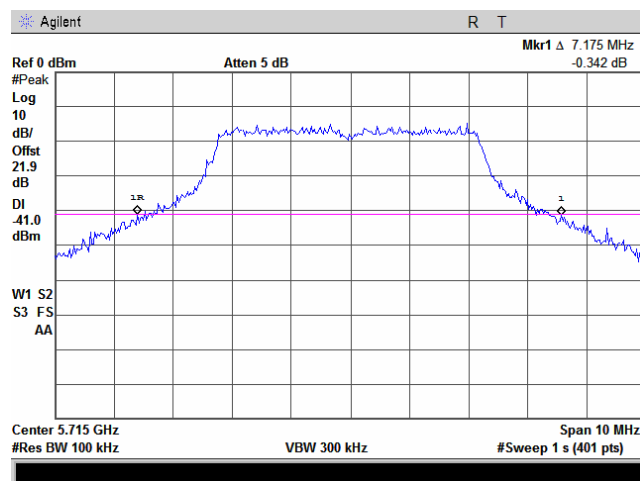
| | |
|------------------------|---------------|
| Frequency: | 5710 MHz |
| Channel BW: | 10 MHz |
| Modulation parameters: | BPSK, 65 Mbps |



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | |
| Test procedure: | | FCC Public Notice DA 02-2138, Appendix A | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 11/25/2008 | | |
| Temperature: 23 °C | Air Pressure: 1012 hPa | Relative Humidity: 52 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

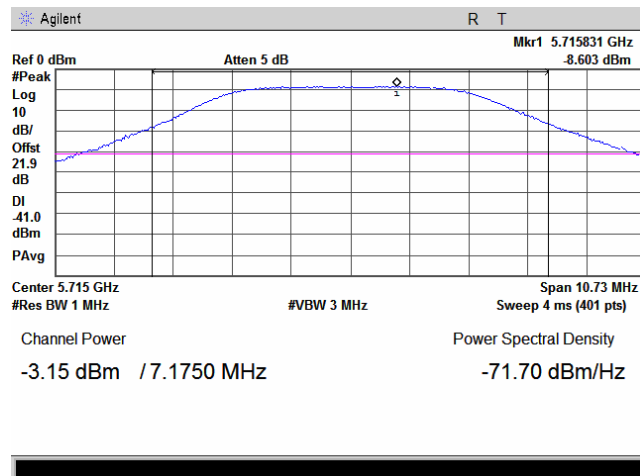
Plot 7.1.67 The 26 dB emission bandwidth

| | |
|------------------------|-----------------|
| Frequency: | 5715 MHz |
| Channel BW: | 5 MHz |
| Modulation parameters: | BPSK, 3.25 Mbps |



Plot 7.1.68 Peak output power

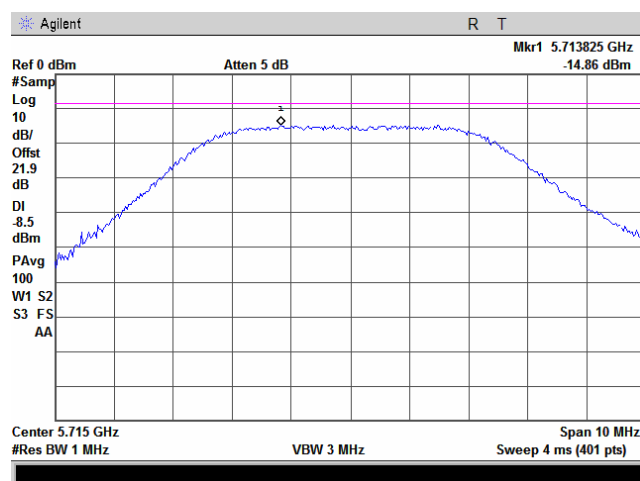
| | |
|------------------------|-----------------|
| Frequency: | 5715 MHz |
| Channel BW: | 5 MHz |
| Modulation parameters: | BPSK, 3.25 Mbps |



| | | | |
|---|---|--------------------------------|------------------------------|
| Test specification: | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | | |
| Test procedure: | FCC Public Notice DA 02-2138, Appendix A | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 11/25/2008 | | |
| Temperature: 23 °C | Air Pressure: 1012 hPa | Relative Humidity: 52 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

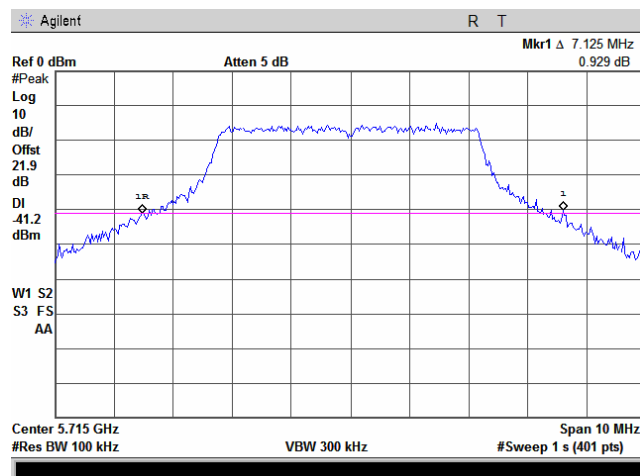
Plot 7.1.69 Peak spectral power density

| | |
|------------------------|-----------------|
| Frequency: | 5715 MHz |
| Channel BW: | 5 MHz |
| Modulation parameters: | BPSK, 3.25 Mbps |



Plot 7.1.70 The 26 dB emission bandwidth

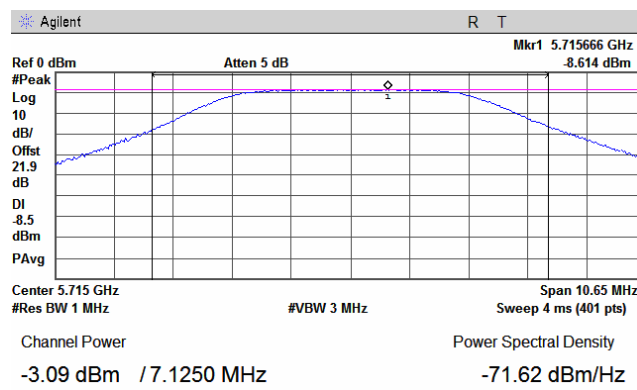
| | |
|------------------------|-----------------|
| Frequency: | 5715 MHz |
| Channel BW: | 5 MHz |
| Modulation parameters: | BPSK, 32.5 Mbps |



| | | | |
|---|---|--------------------------------|------------------------------|
| Test specification: | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | | |
| Test procedure: | FCC Public Notice DA 02-2138, Appendix A | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 11/25/2008 | | |
| Temperature: 23 °C | Air Pressure: 1012 hPa | Relative Humidity: 52 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

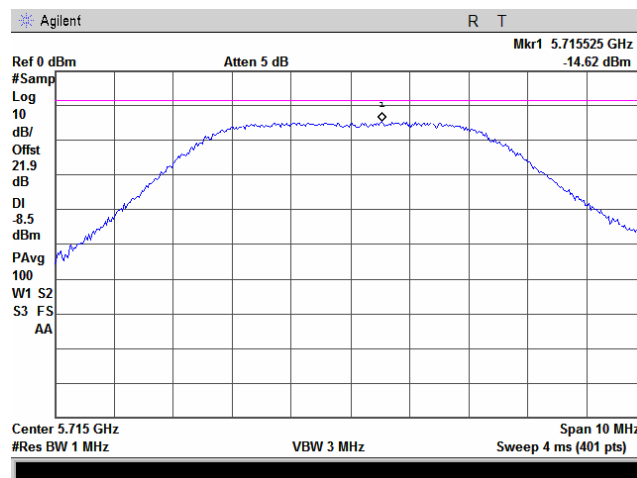
Plot 7.1.71 Peak output power

| | |
|------------------------|-----------------|
| Frequency: | 5715 MHz |
| Channel BW: | 5 MHz |
| Modulation parameters: | BPSK, 32.5 Mbps |



Plot 7.1.72 Peak spectral power density

| | |
|------------------------|-----------------|
| Frequency: | 5715 MHz |
| Channel BW: | 5 MHz |
| Modulation parameters: | BPSK, 32.5 Mbps |



| | | | |
|---|---|--------------------------------|------------------------------|
| Test specification: | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | | |
| Test procedure: | FCC Public Notice DA 02-2138, Appendix A | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 11/25/2008 | | |
| Temperature: 24°C | Air Pressure: 1010 hPa | Relative Humidity: 54 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

Table 7.1.6 Conducted output power test results

ASSIGNED FREQUENCY: 5470-5725 MHz
MODULATING SIGNAL: OFDM
TRANSMITTER OUTPUT POWER SETTINGS: "5 dBm" at 5 MHz channel bandwidth
"7.5 dBm" at 10 MHz channel bandwidth
"9.5 dBm" at 20 MHz channel bandwidth
DETECTOR USED: Peak
RESOLUTION BANDWIDTH: 1 MHz
VIDEO BANDWIDTH: 3 MHz
METHOD OF POWER MEASUREMENTS: 1 (channel power across the 26dB EBW)

| Frequency, MHz | 26 dB Bandwidth | Bit Rate, MBps | Modulation | Output power | | | | Verdict |
|----------------------------------|--------------------|-------------------|------------|------------------|----------------------|------------|-----------------|---------|
| | | | | Measured, dBm | Total power, dBm* | Limit, dBm | Margin, dB** | |
| Low channel | | | | | | | | |
| 5490 | 24.75 | 13 | BPSK | -1.98 | 1.02 | 2.00 | -0.98 | Pass |
| 5490 | 23.48 | 130 | 64QAM | -2.08 | 0.92 | 2.00 | -1.08 | Pass |
| 5485 | 12.52 | 6.5 | BPSK | -3.99 | -0.99 | -0.02 | -0.97 | Pass |
| 5485 | 12.34 | 65 | 64QAM | -4.41 | -1.41 | -0.09 | -1.32 | Pass |
| 5480 | 6.93 | 3.25 | BPSK | -7.45 | -4.45 | -2.60 | -1.85 | Pass |
| 5480 | 7.20 | 32.5 | 64QAM | -7.02 | -4.02 | -2.43 | -1.59 | Pass |
| First mid channel | | | | | | | | |
| 5580 | 24.38 | 13 | BPSK | -1.72 | 1.28 | 2.00 | -0.72 | Pass |
| 5580 | 23.78 | 130 | 64QAM | -1.66 | 1.34 | 2.00 | -0.66 | Pass |
| 5585 | 12.75 | 6.5 | BPSK | -3.18 | -0.18 | 0.06 | -0.24 | Pass |
| 5585 | 12.34 | 65 | 64QAM | -3.15 | -0.15 | -0.09 | -0.06 | Pass |
| 5590 | 6.73 | 3.25 | BPSK | -6.53 | -3.53 | -2.72 | -0.81 | Pass |
| 5590 | 6.95 | 32.5 | 64QAM | -6.34 | -3.34 | -2.58 | -0.76 | Pass |
| Second mid channel (for IC only) | | | | | | | | |
| 5670 | 23.63 | 13 | BPSK | -1.88 | 1.12 | 2.00 | -0.88 | Pass |
| 5670 | 23.63 | 130 | 64QAM | -1.42 | 1.58 | 2.00 | -0.42 | Pass |
| 5665 | 12.71 | 6.5 | BPSK | -3.51 | -0.51 | 0.04 | -0.55 | Pass |
| 5665 | 12.41 | 65 | 64QAM | -3.40 | -0.40 | -0.06 | -0.34 | Pass |
| 5660 | 7.18 | 3.25 | BPSK | -5.72 | -2.72 | -2.44 | -0.28 | Pass |
| 5660 | 6.98 | 32.5 | 64QAM | -6.04 | -3.04 | -2.56 | -0.48 | Pass |
| High channel | | | | | | | | |
| 5705 | 24.45 | 13 | BPSK | -1.77 | 1.23 | 2.00 | -0.77 | Pass |
| 5705 | 23.70 | 130 | 64QAM | -1.52 | 1.48 | 2.00 | -0.52 | Pass |
| 5710 | 12.30 | 6.5 | BPSK | -3.42 | -0.42 | -0.10 | -0.32 | Pass |
| 5710 | 12.12 | 65 | 64QAM | -3.50 | -0.50 | -0.16 | -0.34 | Pass |
| 5715 | 6.88 | 3.25 | BPSK | -5.74 | -2.74 | -2.63 | -0.11 | Pass |
| 5715 | 7.13 | 32.5 | 64QAM | -5.82 | -2.82 | -2.47 | -0.35 | Pass |

* - The total output power was calculated from the measured one by addition of 3 dB for the second Tx chain.

** - Margin = Total output power – specification limit.

| | | | |
|---|---|--------------------------------|------------------------------|
| Test specification: | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | | |
| Test procedure: | FCC Public Notice DA 02-2138, Appendix A | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 11/25/2008 | | |
| Temperature: 24°C | Air Pressure: 1010 hPa | Relative Humidity: 54 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

Table 7.1.7 Peak power spectral density test results

ASSIGNED FREQUENCY: 5470-5725 MHz
MODULATING SIGNAL: OFDM
TRANSMITTER OUTPUT POWER SETTINGS: "5 dBm" at 5 MHz channel bandwidth
"7.5 dBm" at 10 MHz channel bandwidth
"9.5 dBm" at 20 MHz channel bandwidth
DETECTOR USED: Sample
RESOLUTION BANDWIDTH: 1 MHz
VIDEO BANDWIDTH: 3 MHz
METHOD OF POWER DENSITY MEASUREMENTS: 2 (Sample detector and 100 power averaging)

| Frequency, MHz | Bit Rate, MBps | Modulation | Peak power spectral density | | | | Verdict |
|----------------------------------|-------------------|------------|-----------------------------|---|------------|--------------|---------|
| | | | Measured, dBm | Total peak power spectral density, dBm | Limit, dBm | Margin, dB** | |
| Low channel | | | | | | | |
| 5490 | 13 | BPSK | -19.71 | -16.71 | -11.00 | -5.71 | Pass |
| 5490 | 130 | 64QAM | -20.84 | -17.84 | -11.00 | -6.84 | Pass |
| 5485 | 6.5 | BPSK | -18.66 | -15.66 | -11.00 | -4.66 | Pass |
| 5485 | 65 | 64QAM | -19.97 | -16.97 | -11.00 | -5.97 | Pass |
| 5480 | 3.25 | BPSK | -18.81 | -15.81 | -11.00 | -4.81 | Pass |
| 5480 | 32.5 | 64QAM | -18.11 | -15.11 | -11.00 | -4.11 | Pass |
| First mid channel | | | | | | | |
| 5580 | 13 | BPSK | -18.72 | -15.72 | -11.00 | -4.72 | Pass |
| 5580 | 130 | 64QAM | -18.67 | -15.67 | -11.00 | -4.67 | Pass |
| 5585 | 6.5 | BPSK | -17.55 | -14.55 | -11.00 | -3.55 | Pass |
| 5585 | 65 | 64QAM | -16.90 | -13.90 | -11.00 | -2.90 | Pass |
| 5590 | 3.25 | BPSK | -17.91 | -14.91 | -11.00 | -3.91 | Pass |
| 5590 | 32.5 | 64QAM | -17.62 | -14.62 | -11.00 | -3.62 | Pass |
| Second mid channel (for IC only) | | | | | | | |
| 5670 | 13 | BPSK | -18.89 | -15.89 | -11.00 | -4.89 | Pass |
| 5670 | 130 | 64QAM | -18.10 | -15.10 | -11.00 | -4.10 | Pass |
| 5665 | 6.5 | BPSK | -18.13 | -15.13 | -11.00 | -4.13 | Pass |
| 5665 | 65 | 64QAM | -17.68 | -14.68 | -11.00 | -3.68 | Pass |
| 5660 | 3.25 | BPSK | -17.35 | -14.35 | -11.00 | -3.35 | Pass |
| 5660 | 32.5 | 64QAM | -17.40 | -14.40 | -11.00 | -3.40 | Pass |
| High channel | | | | | | | |
| 5705 | 13 | BPSK | -18.27 | -15.27 | -11.00 | -4.27 | Pass |
| 5705 | 130 | 64QAM | -18.71 | -15.71 | -11.00 | -4.71 | Pass |
| 5710 | 6.5 | BPSK | -18.03 | -15.03 | -11.00 | -4.03 | Pass |
| 5710 | 65 | 64QAM | -18.00 | -15.00 | -11.00 | -4.00 | Pass |
| 5715 | 3.25 | BPSK | -17.25 | -14.25 | -11.00 | -3.25 | Pass |
| 5715 | 32.5 | 64QAM | -17.17 | -14.17 | -11.00 | -3.17 | Pass |

* - The total peak power spectral density was calculated from measured by addition of 3 dB for the second Tx chain.

** - Margin = Total peak power density – specification limit.

Reference numbers of test equipment used

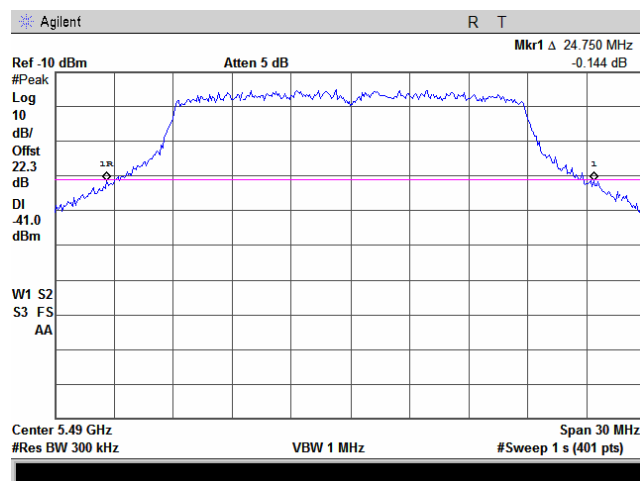
| | | | | | | | |
|---------|---------|---------|--|--|--|--|--|
| HL 2883 | HL 2909 | HL 3179 | | | | | |
|---------|---------|---------|--|--|--|--|--|

Full description is given in Appendix A.

| | | | |
|---|---|--------------------------------|------------------------------|
| Test specification: | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | | |
| Test procedure: | FCC Public Notice DA 02-2138, Appendix A | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 11/25/2008 | | |
| Temperature: 24°C | Air Pressure: 1010 hPa | Relative Humidity: 54 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

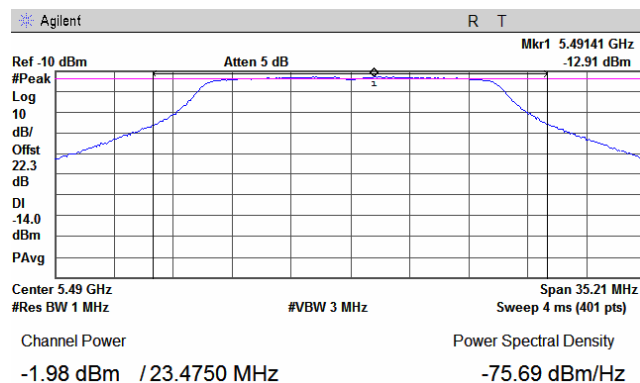
Plot 7.1.73 The 26 dB emission bandwidth

| | |
|------------------------|---------------|
| Frequency: | 5490 MHz |
| Channel BW: | 20 MHz |
| Modulation parameters: | BPSK, 13 Mbps |



Plot 7.1.74 Peak output power

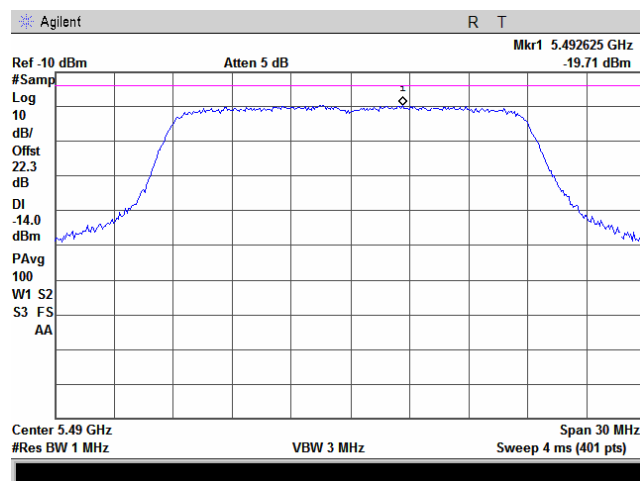
| | |
|------------------------|---------------|
| Frequency: | 5490 MHz |
| Channel BW: | 20 MHz |
| Modulation parameters: | BPSK, 13 Mbps |



| | | | |
|---|---|--------------------------------|------------------------------|
| Test specification: | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | | |
| Test procedure: | FCC Public Notice DA 02-2138, Appendix A | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 11/25/2008 | | |
| Temperature: 24°C | Air Pressure: 1010 hPa | Relative Humidity: 54 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

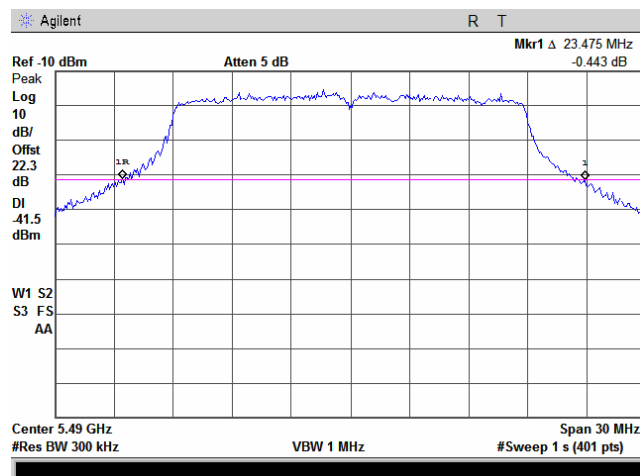
Plot 7.1.75 Peak spectral power density

| | |
|------------------------|---------------|
| Frequency: | 5490 MHz |
| Channel BW: | 20 MHz |
| Modulation parameters: | BPSK, 13 Mbps |



Plot 7.1.76 The 26 dB emission bandwidth

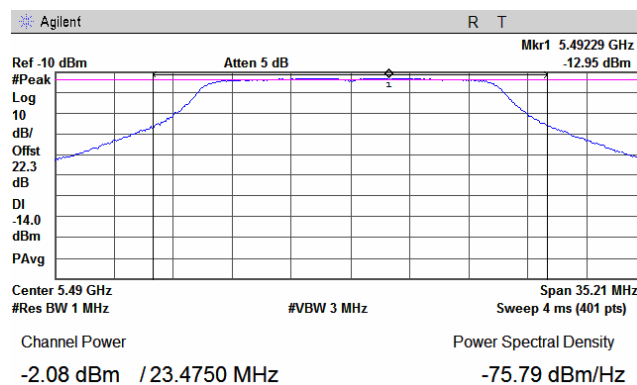
| | |
|------------------------|----------------|
| Frequency: | 5490 MHz |
| Channel BW: | 20 MHz |
| Modulation parameters: | BPSK, 130 Mbps |



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | |
| Test procedure: | | FCC Public Notice DA 02-2138, Appendix A | |
| Test mode: | | Compliance | Verdict: PASS |
| Date: | | 11/25/2008 | |
| Temperature: 24°C | Air Pressure: 1010 hPa | Relative Humidity: 54 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

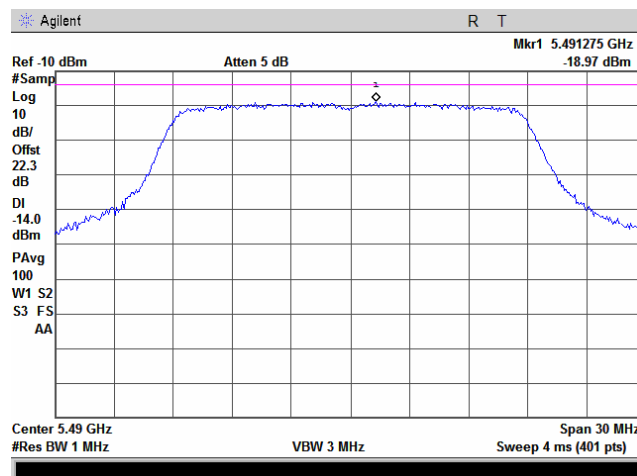
Plot 7.1.77 Peak output power

| | |
|------------------------|----------------|
| Frequency: | 5490 MHz |
| Channel BW: | 20 MHz |
| Modulation parameters: | BPSK, 130 Mbps |



Plot 7.1.78 Peak spectral power density

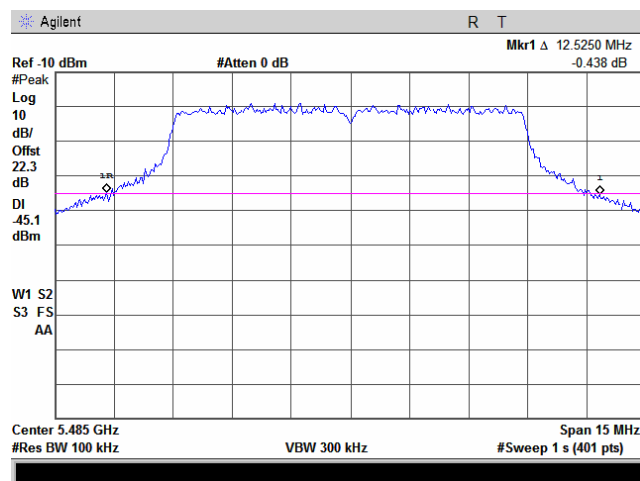
| | |
|------------------------|----------------|
| Frequency: | 5490 MHz |
| Channel BW: | 20 MHz |
| Modulation parameters: | BPSK, 130 Mbps |



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | |
| Test procedure: | | FCC Public Notice DA 02-2138, Appendix A | |
| Test mode: | | Compliance | Verdict: PASS |
| Date: | | 11/25/2008 | |
| Temperature: 24°C | Air Pressure: 1010 hPa | Relative Humidity: 54 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

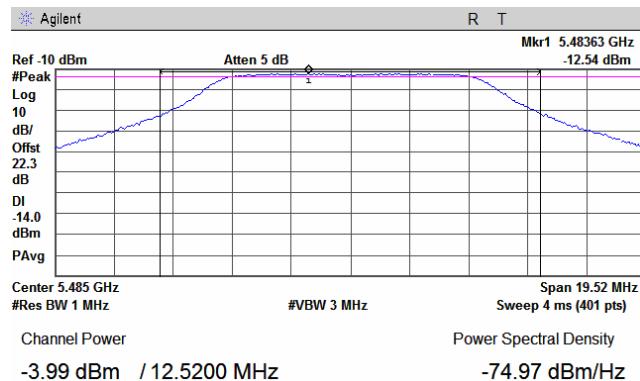
Plot 7.1.79 The 26 dB emission bandwidth

| | |
|------------------------|----------------|
| Frequency: | 5485 MHz |
| Channel BW: | 10 MHz |
| Modulation parameters: | BPSK, 6.5 Mbps |



Plot 7.1.80 Peak output power

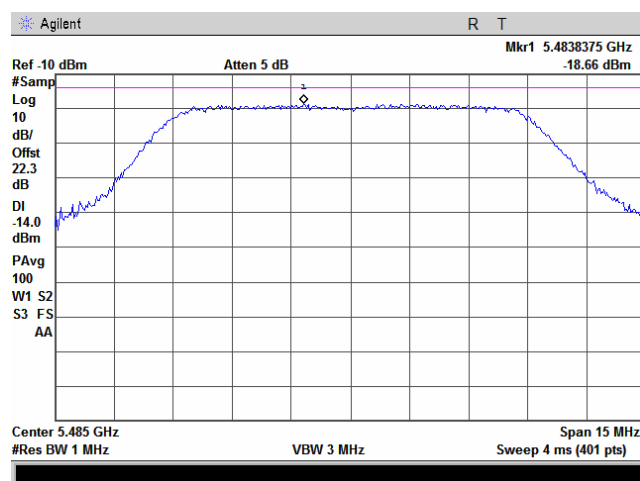
| | |
|------------------------|----------------|
| Frequency: | 5485 MHz |
| Channel BW: | 10 MHz |
| Modulation parameters: | BPSK, 6.5 Mbps |



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | |
| Test procedure: | | FCC Public Notice DA 02-2138, Appendix A | |
| Test mode: | | Compliance | Verdict: PASS |
| Date: | | 11/25/2008 | |
| Temperature: 24°C | Air Pressure: 1010 hPa | Relative Humidity: 54 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

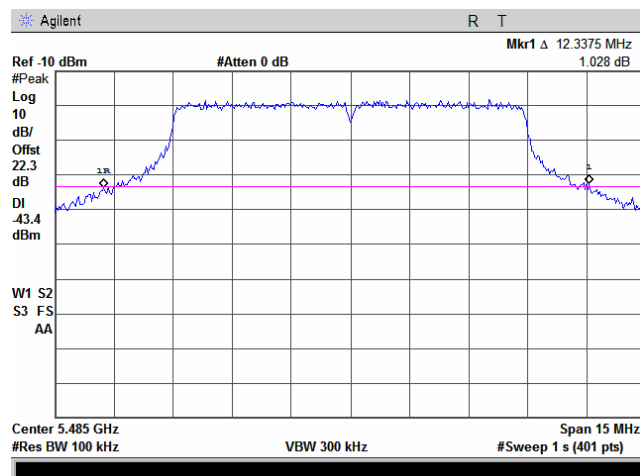
Plot 7.1.81 Peak spectral power density

| | |
|------------------------|----------------|
| Frequency: | 5485 MHz |
| Channel BW: | 10 MHz |
| Modulation parameters: | BPSK, 6.5 Mbps |



Plot 7.1.82 The 26 dB emission bandwidth

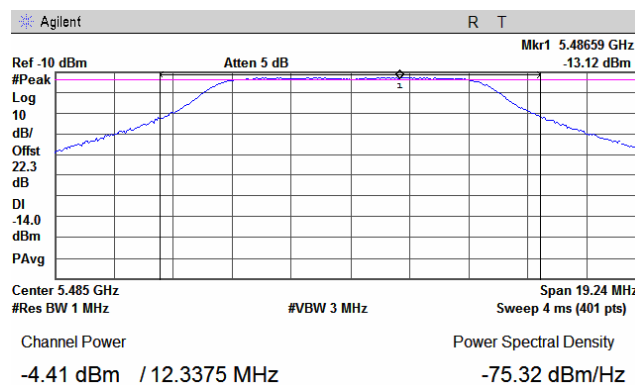
| | |
|------------------------|---------------|
| Frequency: | 5485 MHz |
| Channel BW: | 10 MHz |
| Modulation parameters: | BPSK, 65 Mbps |



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | |
| Test procedure: | | FCC Public Notice DA 02-2138, Appendix A | |
| Test mode: | | Compliance | Verdict: PASS |
| Date: | | 11/25/2008 | |
| Temperature: 24°C | Air Pressure: 1010 hPa | Relative Humidity: 54 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

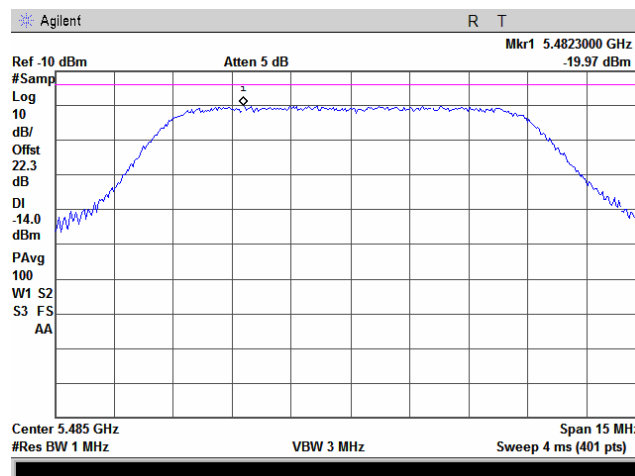
Plot 7.1.83 Peak output power

| | |
|------------------------|---------------|
| Frequency: | 5485 MHz |
| Channel BW: | 10 MHz |
| Modulation parameters: | BPSK, 65 Mbps |



Plot 7.1.84 Peak spectral power density

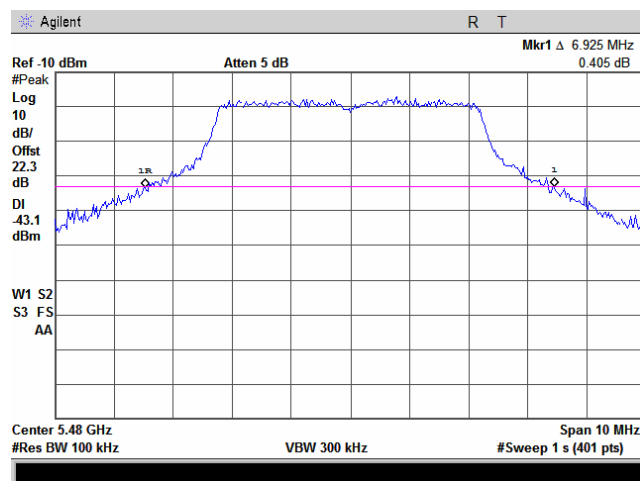
| | |
|------------------------|---------------|
| Frequency: | 5485 MHz |
| Channel BW: | 10 MHz |
| Modulation parameters: | BPSK, 65 Mbps |



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | |
| Test procedure: | | FCC Public Notice DA 02-2138, Appendix A | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 11/25/2008 | | |
| Temperature: 24°C | Air Pressure: 1010 hPa | Relative Humidity: 54 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

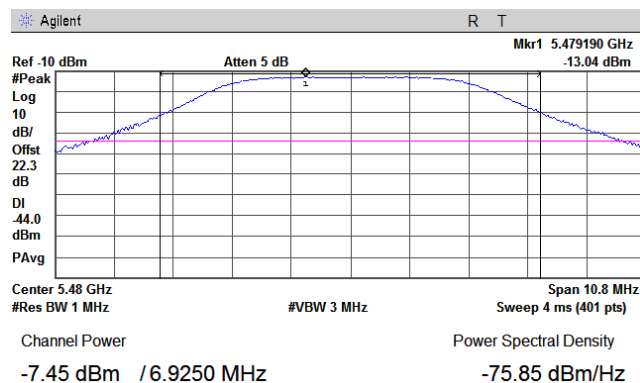
Plot 7.1.85 The 26 dB emission bandwidth

| | |
|------------------------|-----------------|
| Frequency: | 5480 MHz |
| Channel BW: | 5 MHz |
| Modulation parameters: | BPSK, 3.25 Mbps |



Plot 7.1.86 Peak output power

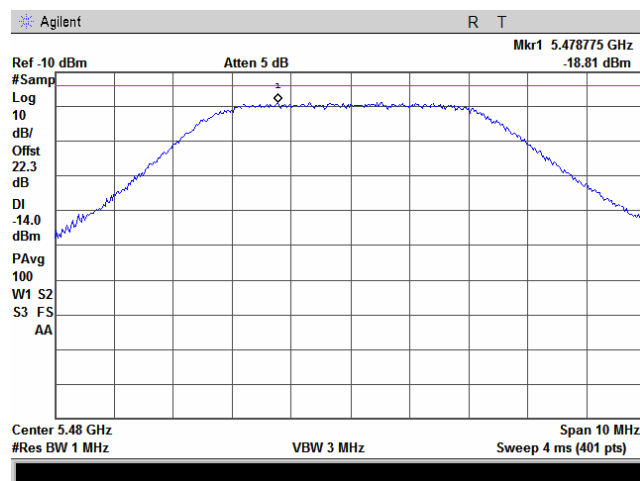
| | |
|------------------------|-----------------|
| Frequency: | 5480 MHz |
| Channel BW: | 5 MHz |
| Modulation parameters: | BPSK, 3.25 Mbps |



| | | | |
|---|---|--------------------------------|------------------------------|
| Test specification: | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | | |
| Test procedure: | FCC Public Notice DA 02-2138, Appendix A | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 11/25/2008 | | |
| Temperature: 24°C | Air Pressure: 1010 hPa | Relative Humidity: 54 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

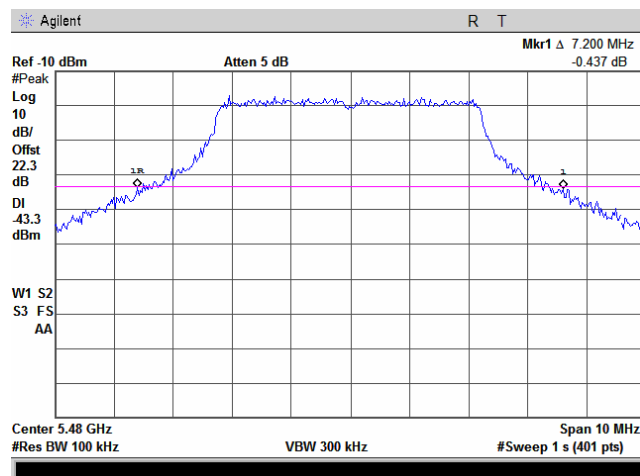
Plot 7.1.87 Peak spectral power density

| | |
|------------------------|-----------------|
| Frequency: | 5480 MHz |
| Channel BW: | 5 MHz |
| Modulation parameters: | BPSK, 3.25 Mbps |



Plot 7.1.88 The 26 dB emission bandwidth

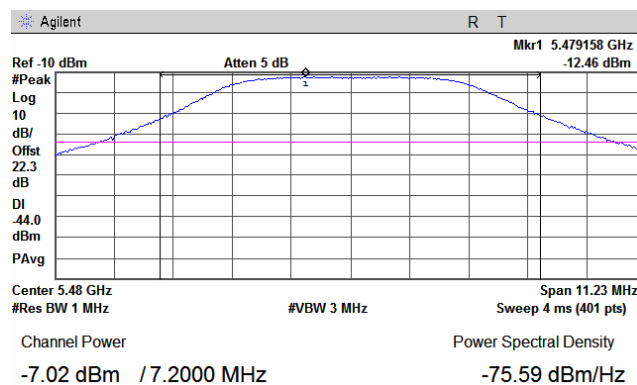
| | |
|------------------------|-----------------|
| Frequency: | 5480 MHz |
| Channel BW: | 5 MHz |
| Modulation parameters: | BPSK, 32.5 Mbps |



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | |
| Test procedure: | | FCC Public Notice DA 02-2138, Appendix A | |
| Test mode: | | Compliance | Verdict: PASS |
| Date: | | 11/25/2008 | |
| Temperature: 24°C | Air Pressure: 1010 hPa | Relative Humidity: 54 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

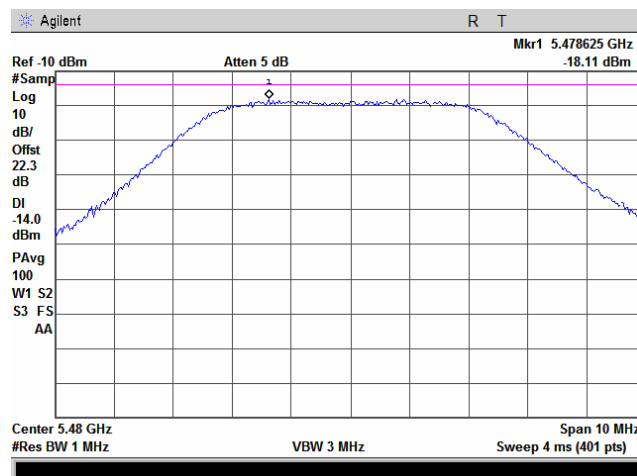
Plot 7.1.89 Peak output power

| | |
|------------------------|-----------------|
| Frequency: | 5480 MHz |
| Channel BW: | 5 MHz |
| Modulation parameters: | BPSK, 32.5 Mbps |



Plot 7.1.90 Peak spectral power density

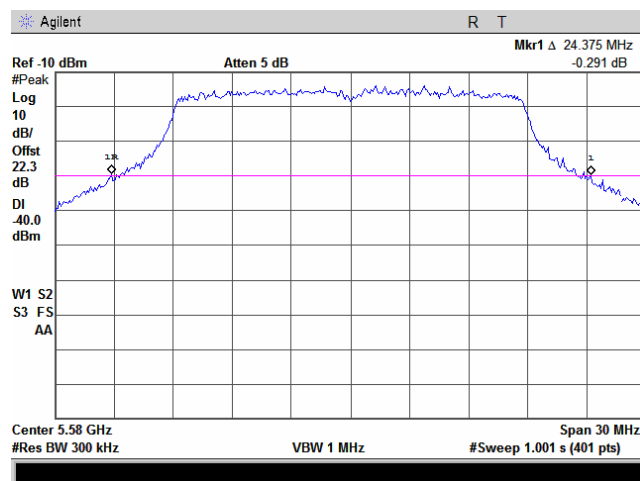
| | |
|------------------------|-----------------|
| Frequency: | 5480 MHz |
| Channel BW: | 5 MHz |
| Modulation parameters: | BPSK, 32.5 Mbps |



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | |
| Test procedure: | | FCC Public Notice DA 02-2138, Appendix A | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 11/25/2008 | | |
| Temperature: 24°C | Air Pressure: 1010 hPa | Relative Humidity: 54 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

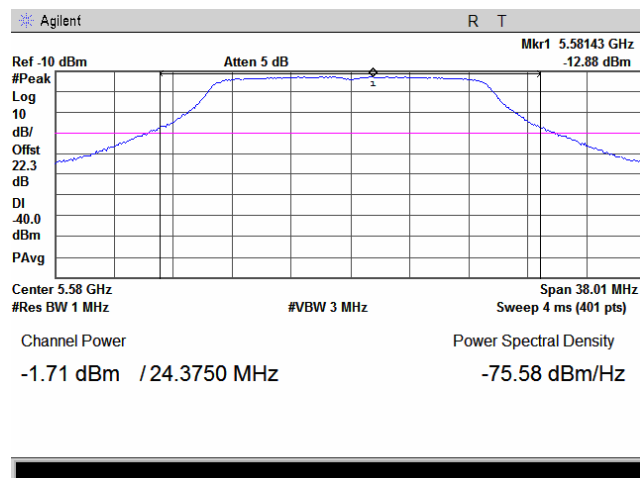
Plot 7.1.91 The 26 dB emission bandwidth

| | |
|------------------------|---------------|
| Frequency: | 5580 MHz |
| Channel BW: | 20 MHz |
| Modulation parameters: | BPSK, 13 Mbps |



Plot 7.1.92 Peak output power

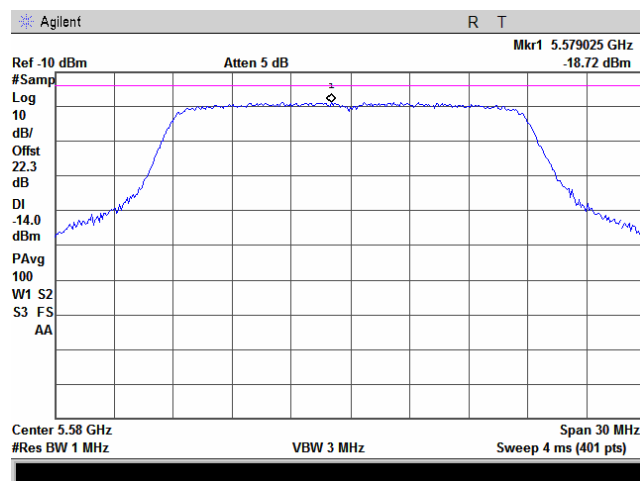
| | |
|------------------------|---------------|
| Frequency: | 5580 MHz |
| Channel BW: | 20 MHz |
| Modulation parameters: | BPSK, 13 Mbps |



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | |
| Test procedure: | | FCC Public Notice DA 02-2138, Appendix A | |
| Test mode: | | Compliance | Verdict: PASS |
| Date: | | 11/25/2008 | |
| Temperature: 24°C | Air Pressure: 1010 hPa | Relative Humidity: 54 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

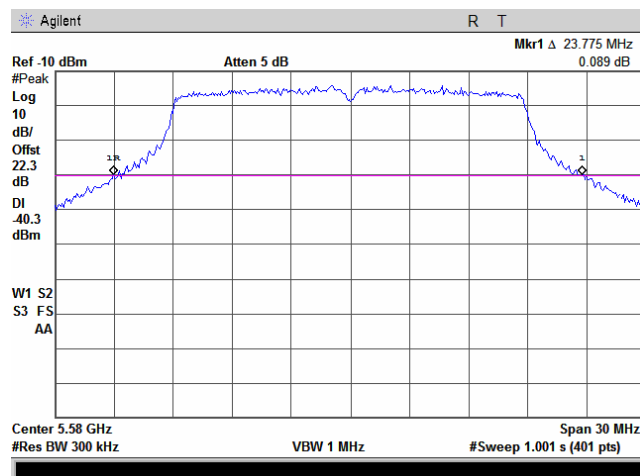
Plot 7.1.93 Peak spectral power density

| | |
|------------------------|---------------|
| Frequency: | 5580 MHz |
| Channel BW: | 20 MHz |
| Modulation parameters: | BPSK, 13 Mbps |



Plot 7.1.94 The 26 dB emission bandwidth

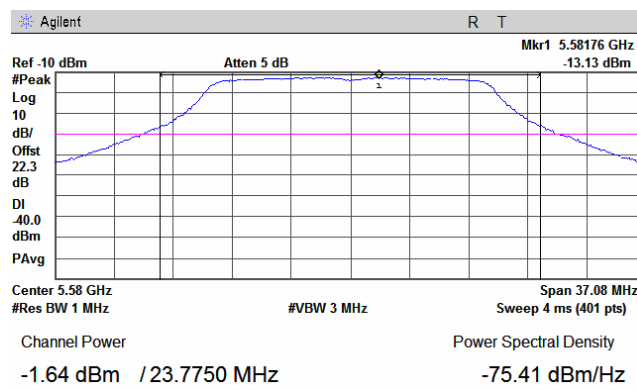
| | |
|------------------------|----------------|
| Frequency: | 5580 MHz |
| Channel BW: | 20 MHz |
| Modulation parameters: | BPSK, 130 Mbps |



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | |
| Test procedure: | | FCC Public Notice DA 02-2138, Appendix A | |
| Test mode: | | Verdict: | |
| Date: | | PASS | |
| Temperature: 24°C | Air Pressure: 1010 hPa | Relative Humidity: 54 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

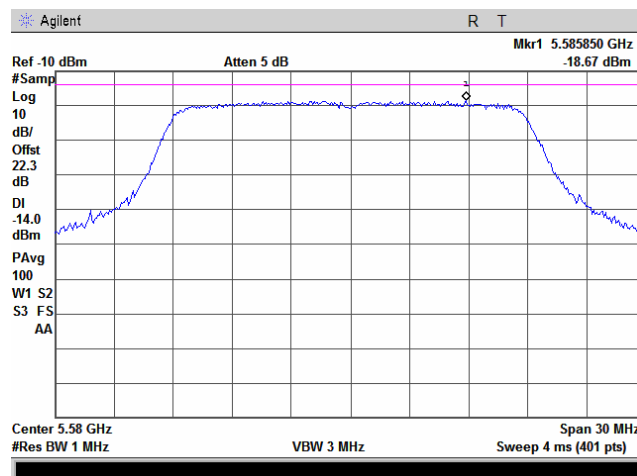
Plot 7.1.95 Peak output power

| | |
|------------------------|----------------|
| Frequency: | 5580 MHz |
| Channel BW: | 20 MHz |
| Modulation parameters: | BPSK, 130 Mbps |



Plot 7.1.96 Peak spectral power density

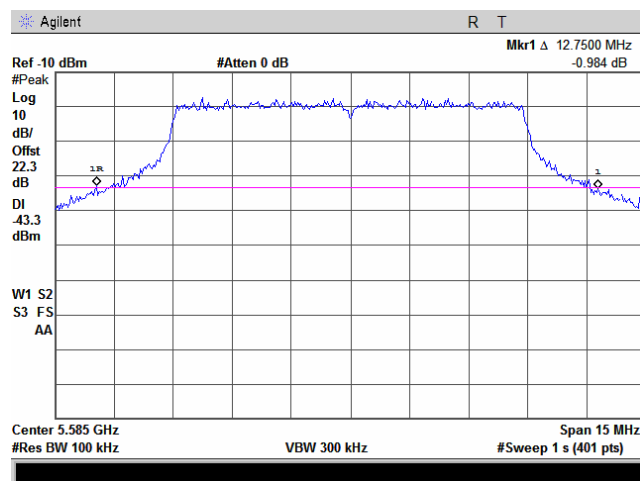
| | |
|------------------------|----------------|
| Frequency: | 5580 MHz |
| Channel BW: | 20 MHz |
| Modulation parameters: | BPSK, 130 Mbps |



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | |
| Test procedure: | | FCC Public Notice DA 02-2138, Appendix A | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 11/25/2008 | | |
| Temperature: 24°C | Air Pressure: 1010 hPa | Relative Humidity: 54 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

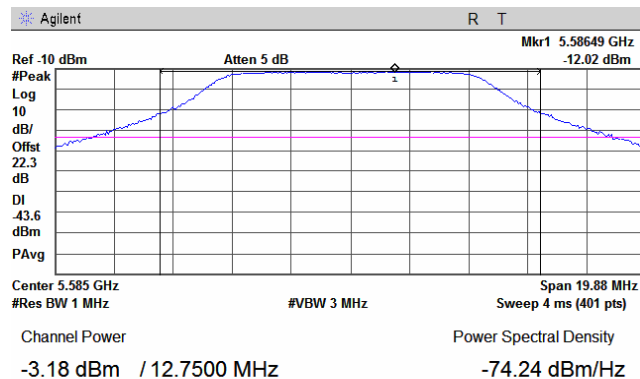
Plot 7.1.97 The 26 dB emission bandwidth

| | |
|------------------------|----------------|
| Frequency: | 5585 MHz |
| Channel BW: | 10 MHz |
| Modulation parameters: | BPSK, 6.5 Mbps |



Plot 7.1.98 Peak output power

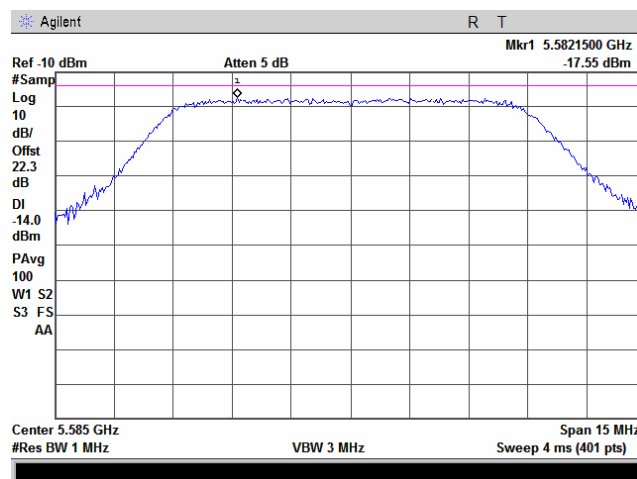
| | |
|------------------------|----------------|
| Frequency: | 5585 MHz |
| Channel BW: | 10 MHz |
| Modulation parameters: | BPSK, 6.5 Mbps |



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | |
| Test procedure: | | FCC Public Notice DA 02-2138, Appendix A | |
| Test mode: | | Compliance | Verdict: PASS |
| Date: | | 11/25/2008 | |
| Temperature: 24°C | Air Pressure: 1010 hPa | Relative Humidity: 54 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

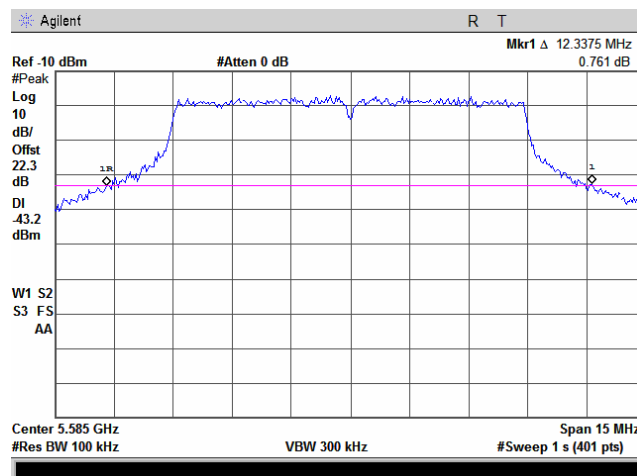
Plot 7.1.99 Peak spectral power density

| | |
|------------------------|----------------|
| Frequency: | 5585 MHz |
| Channel BW: | 10 MHz |
| Modulation parameters: | BPSK, 6.5 Mbps |



Plot 7.1.100 The 26 dB emission bandwidth

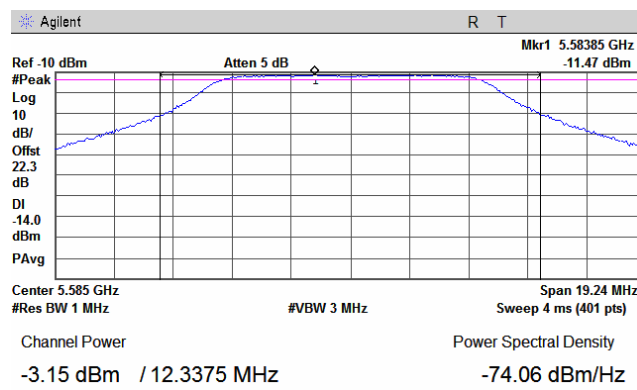
| | |
|------------------------|---------------|
| Frequency: | 5585 MHz |
| Channel BW: | 10 MHz |
| Modulation parameters: | BPSK, 65 Mbps |



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | |
| Test procedure: | | FCC Public Notice DA 02-2138, Appendix A | |
| Test mode: | | Compliance | Verdict: PASS |
| Date: | | 11/25/2008 | |
| Temperature: 24°C | Air Pressure: 1010 hPa | Relative Humidity: 54 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

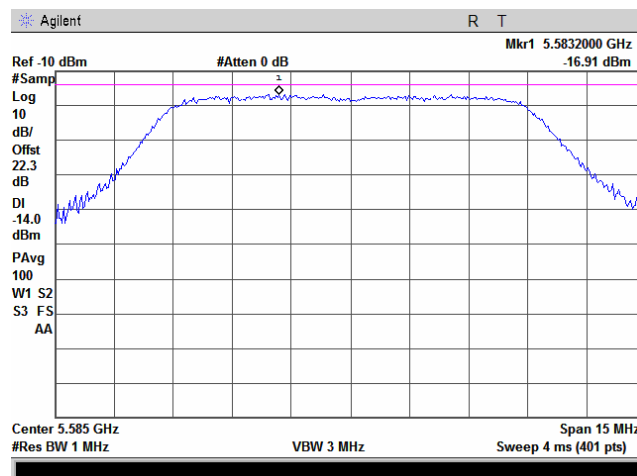
Plot 7.1.101 Peak output power

| | |
|------------------------|---------------|
| Frequency: | 5585 MHz |
| Channel BW: | 10 MHz |
| Modulation parameters: | BPSK, 65 Mbps |



Plot 7.1.102 Peak spectral power density

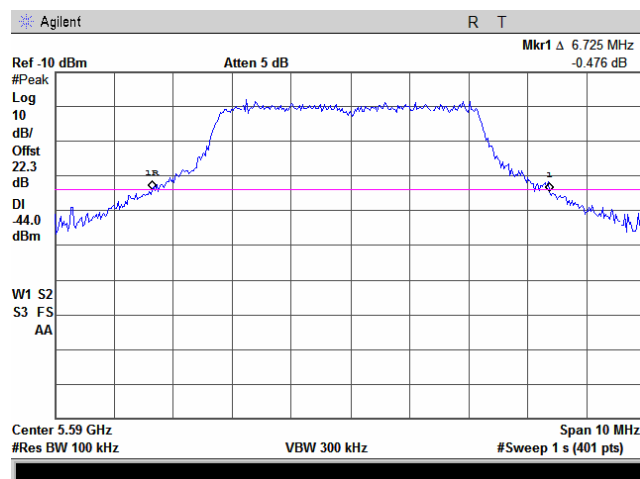
| | |
|------------------------|---------------|
| Frequency: | 5585 MHz |
| Channel BW: | 10 MHz |
| Modulation parameters: | BPSK, 65 Mbps |



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | |
| Test procedure: | | FCC Public Notice DA 02-2138, Appendix A | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 11/25/2008 | | |
| Temperature: 24°C | Air Pressure: 1010 hPa | Relative Humidity: 54 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

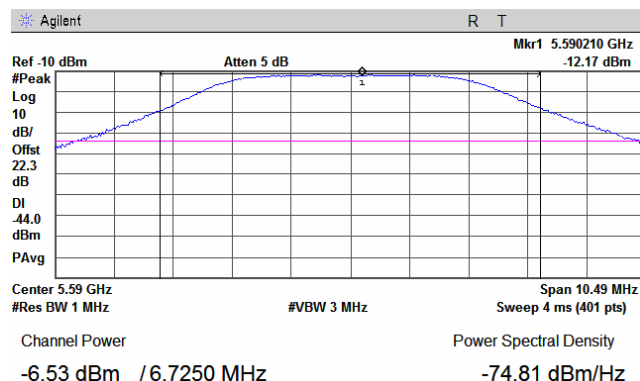
Plot 7.1.103 The 26 dB emission bandwidth

| | |
|------------------------|-----------------|
| Frequency: | 5590 MHz |
| Channel BW: | 5 MHz |
| Modulation parameters: | BPSK, 3.25 Mbps |



Plot 7.1.104 Peak output power

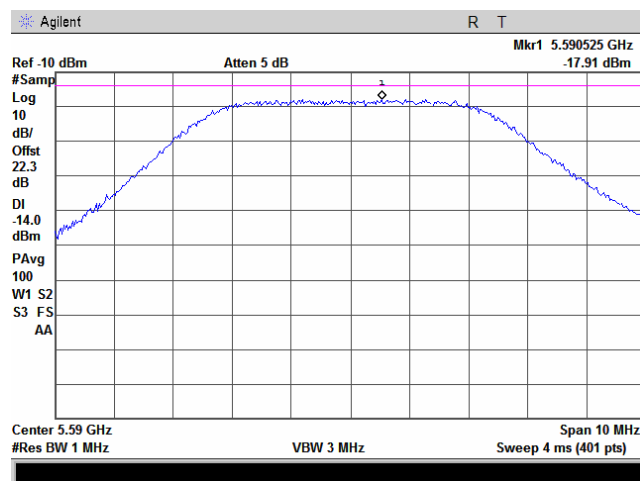
| | |
|------------------------|-----------------|
| Frequency: | 5590 MHz |
| Channel BW: | 5 MHz |
| Modulation parameters: | BPSK, 3.25 Mbps |



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | |
| Test procedure: | | FCC Public Notice DA 02-2138, Appendix A | |
| Test mode: | | Compliance | Verdict: PASS |
| Date: | | 11/25/2008 | |
| Temperature: 24°C | Air Pressure: 1010 hPa | Relative Humidity: 54 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

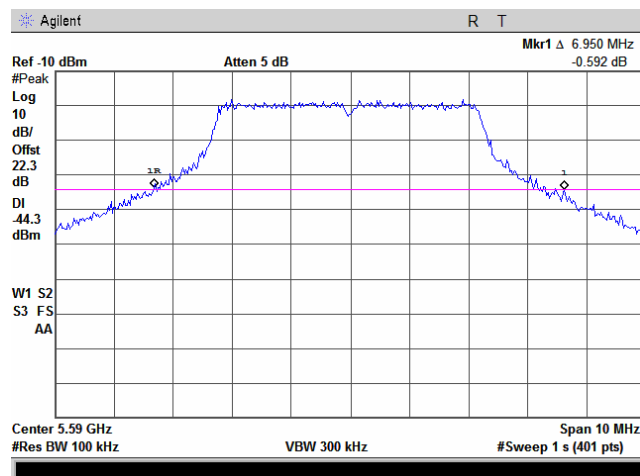
Plot 7.1.105 Peak spectral power density

| | |
|------------------------|-----------------|
| Frequency: | 5590 MHz |
| Channel BW: | 5 MHz |
| Modulation parameters: | BPSK, 3.25 Mbps |



Plot 7.1.106 The 26 dB emission bandwidth

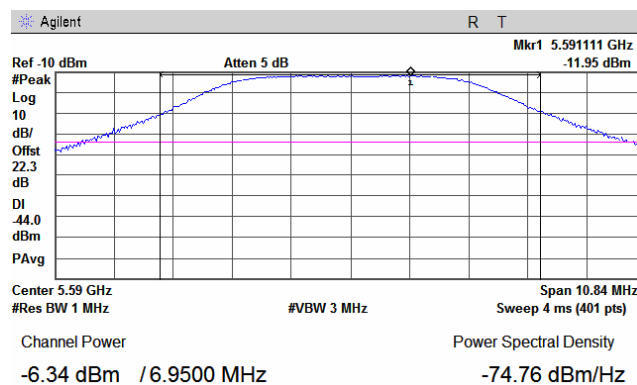
| | |
|------------------------|-----------------|
| Frequency: | 5590 MHz |
| Channel BW: | 5 MHz |
| Modulation parameters: | BPSK, 32.5 Mbps |



| | | | |
|---|---|--------------------------------|------------------------------|
| Test specification: | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | | |
| Test procedure: | FCC Public Notice DA 02-2138, Appendix A | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 11/25/2008 | | |
| Temperature: 24°C | Air Pressure: 1010 hPa | Relative Humidity: 54 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

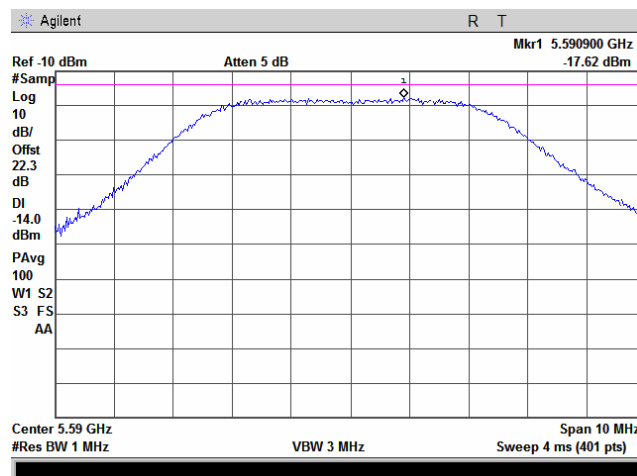
Plot 7.1.107 Peak output power

| | |
|------------------------|-----------------|
| Frequency: | 5590 MHz |
| Channel BW: | 5 MHz |
| Modulation parameters: | BPSK, 32.5 Mbps |



Plot 7.1.108 Peak spectral power density

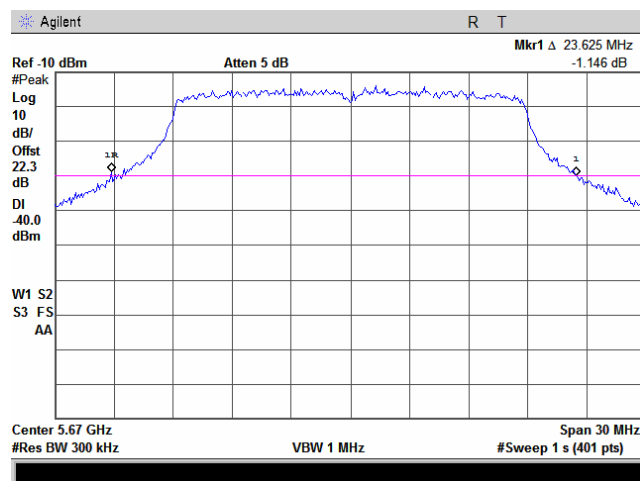
| | |
|------------------------|-----------------|
| Frequency: | 5590 MHz |
| Channel BW: | 5 MHz |
| Modulation parameters: | BPSK, 32.5 Mbps |



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | |
| Test procedure: | | FCC Public Notice DA 02-2138, Appendix A | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 11/25/2008 | | |
| Temperature: 24°C | Air Pressure: 1010 hPa | Relative Humidity: 54 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

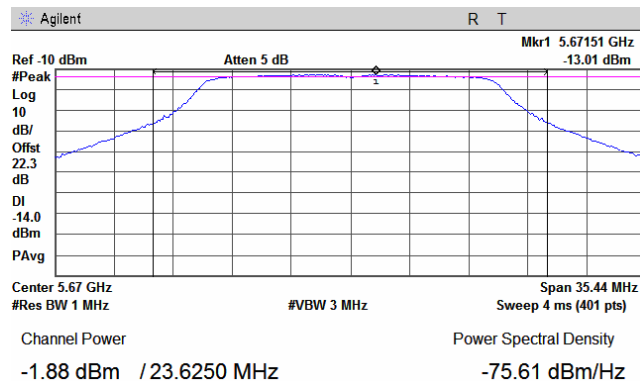
Plot 7.1.109 The 26 dB emission bandwidth

| | |
|------------------------|---------------|
| Frequency: | 5670 MHz |
| Channel BW: | 20 MHz |
| Modulation parameters: | BPSK, 13 Mbps |



Plot 7.1.110 Peak output power

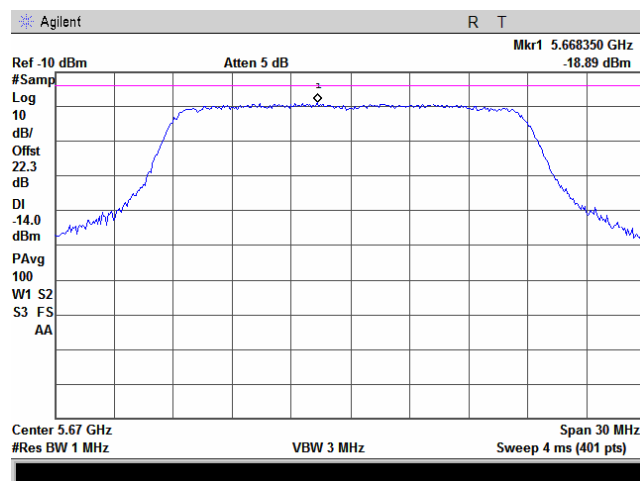
| | |
|------------------------|---------------|
| Frequency: | 5670MHz |
| Channel BW: | 20 MHz |
| Modulation parameters: | BPSK, 13 Mbps |



| | | | |
|---|---|--------------------------------|------------------------------|
| Test specification: | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | | |
| Test procedure: | FCC Public Notice DA 02-2138, Appendix A | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 11/25/2008 | | |
| Temperature: 24°C | Air Pressure: 1010 hPa | Relative Humidity: 54 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

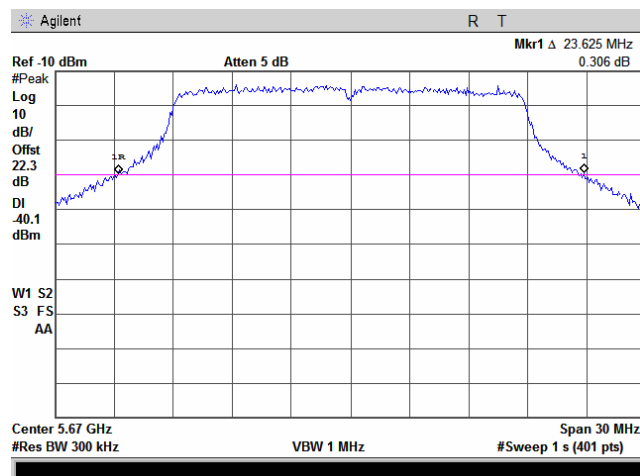
Plot 7.1.111 Peak spectral power density

| | |
|------------------------|---------------|
| Frequency: | 5670MHz |
| Channel BW: | 20 MHz |
| Modulation parameters: | BPSK, 13 Mbps |



Plot 7.1.112 The 26 dB emission bandwidth

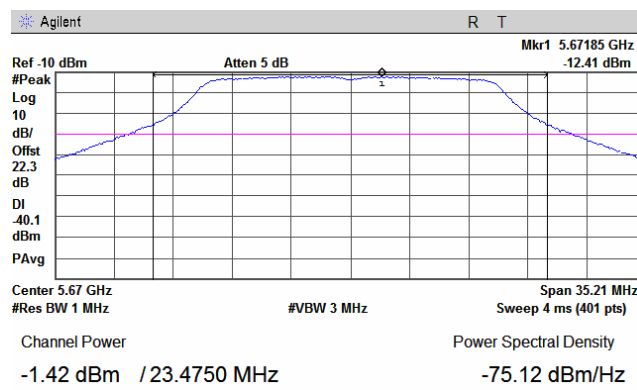
| | |
|------------------------|----------------|
| Frequency: | 5670MHz |
| Channel BW: | 20 MHz |
| Modulation parameters: | BPSK, 130 Mbps |



| | | | |
|---|---|--------------------------------|------------------------------|
| Test specification: | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | | |
| Test procedure: | FCC Public Notice DA 02-2138, Appendix A | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 11/25/2008 | | |
| Temperature: 24°C | Air Pressure: 1010 hPa | Relative Humidity: 54 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

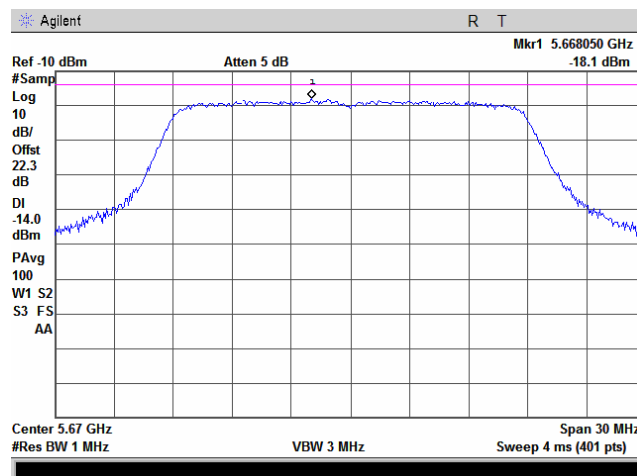
Plot 7.1.113 Peak output power

| | |
|------------------------|----------------|
| Frequency: | 5670MHz |
| Channel BW: | 20 MHz |
| Modulation parameters: | BPSK, 130 Mbps |



Plot 7.1.114 Peak spectral power density

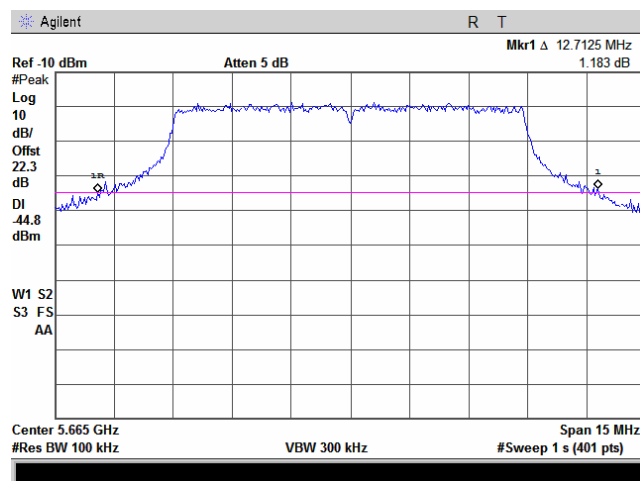
| | |
|------------------------|----------------|
| Frequency: | 5670MHz |
| Channel BW: | 20 MHz |
| Modulation parameters: | BPSK, 130 Mbps |



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | |
| Test procedure: | | FCC Public Notice DA 02-2138, Appendix A | |
| Test mode: | | Compliance | Verdict: PASS |
| Date: | | 11/25/2008 | |
| Temperature: 24°C | Air Pressure: 1010 hPa | Relative Humidity: 54 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

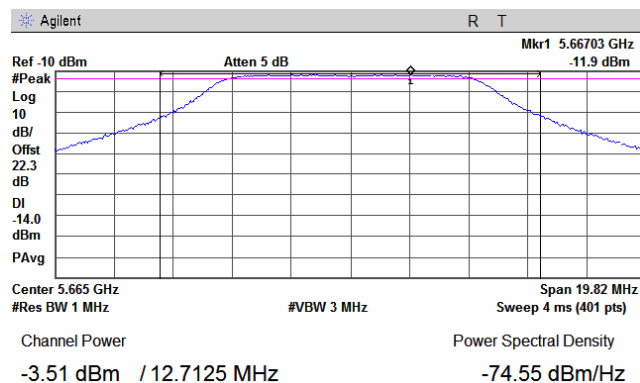
Plot 7.1.115 The 26 dB emission bandwidth

| | |
|------------------------|----------------|
| Frequency: | 5665 MHz |
| Channel BW: | 10 MHz |
| Modulation parameters: | BPSK, 6.5 Mbps |



Plot 7.1.116 Peak output power

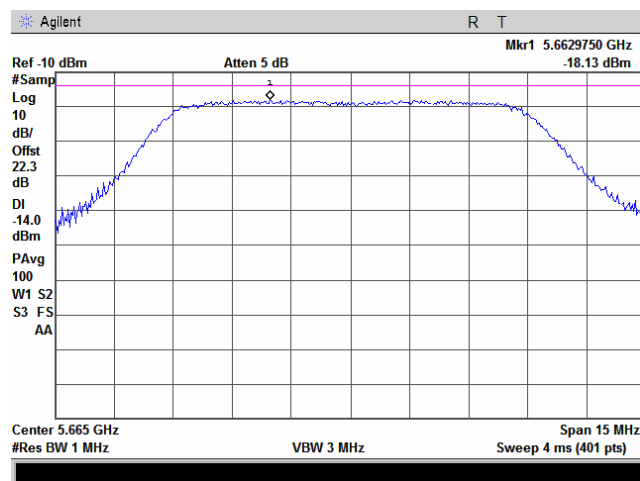
| | |
|------------------------|----------------|
| Frequency: | 5665 MHz |
| Channel BW: | 10 MHz |
| Modulation parameters: | BPSK, 6.5 Mbps |



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | |
| Test procedure: | | FCC Public Notice DA 02-2138, Appendix A | |
| Test mode: | | Compliance | Verdict: PASS |
| Date: | | 11/25/2008 | |
| Temperature: 24°C | Air Pressure: 1010 hPa | Relative Humidity: 54 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

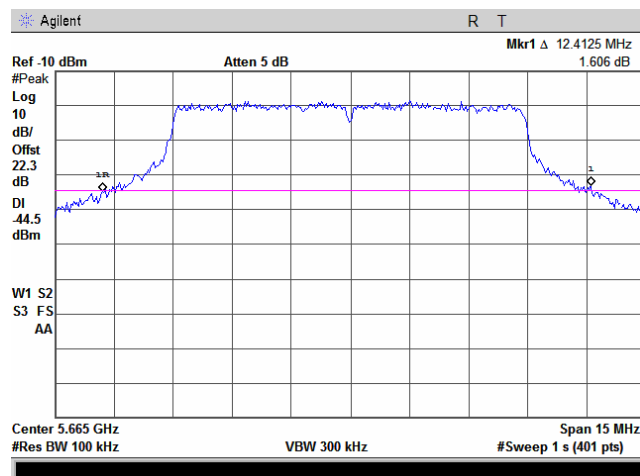
Plot 7.1.117 Peak spectral power density

| | |
|------------------------|----------------|
| Frequency: | 5665 MHz |
| Channel BW: | 10 MHz |
| Modulation parameters: | BPSK, 6.5 Mbps |



Plot 7.1.118 The 26 dB emission bandwidth

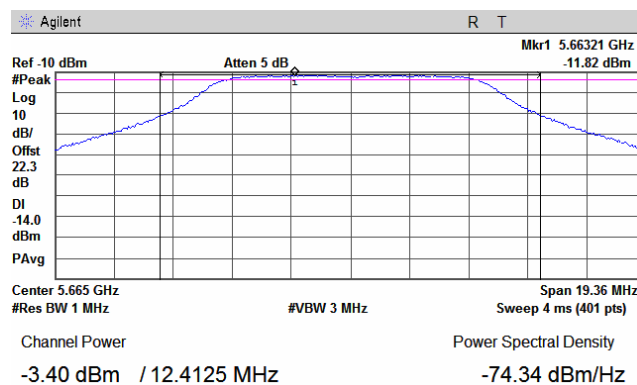
| | |
|------------------------|----------------|
| Frequency: | 5665 MHz |
| Channel BW: | 10 MHz |
| Modulation parameters: | BPSK, 6.5 Mbps |



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | |
| Test procedure: | | FCC Public Notice DA 02-2138, Appendix A | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 11/25/2008 | | |
| Temperature: 24°C | Air Pressure: 1010 hPa | Relative Humidity: 54 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

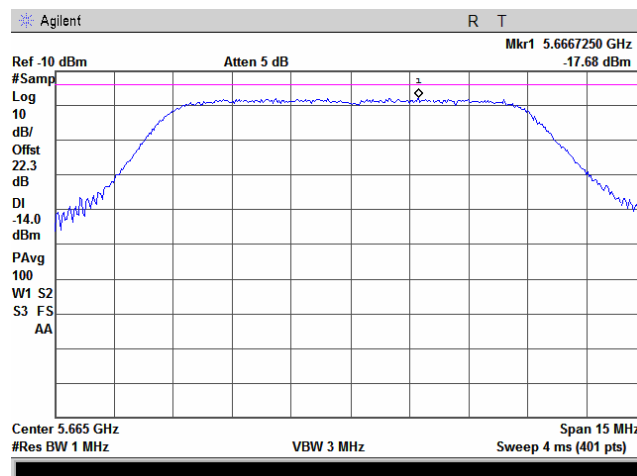
Plot 7.1.119 Peak output power

| | |
|------------------------|---------------|
| Frequency: | 5665 MHz |
| Channel BW: | 10 MHz |
| Modulation parameters: | BPSK, 65 Mbps |



Plot 7.1.120 Peak spectral power density

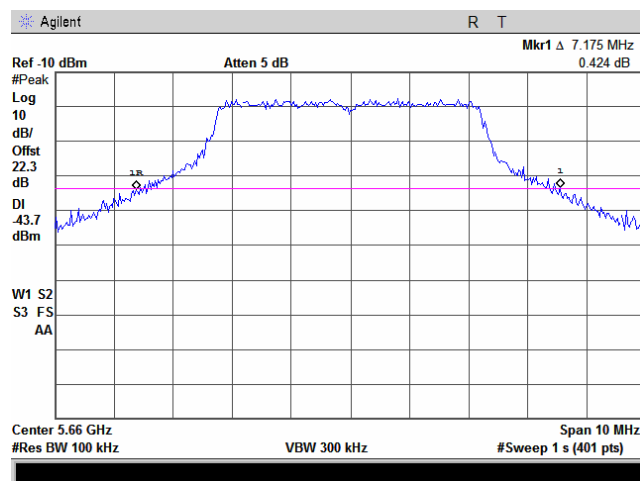
| | |
|------------------------|---------------|
| Frequency: | 5665 MHz |
| Channel BW: | 10 MHz |
| Modulation parameters: | BPSK, 65 Mbps |



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | |
| Test procedure: | | FCC Public Notice DA 02-2138, Appendix A | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 11/25/2008 | | |
| Temperature: 24°C | Air Pressure: 1010 hPa | Relative Humidity: 54 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

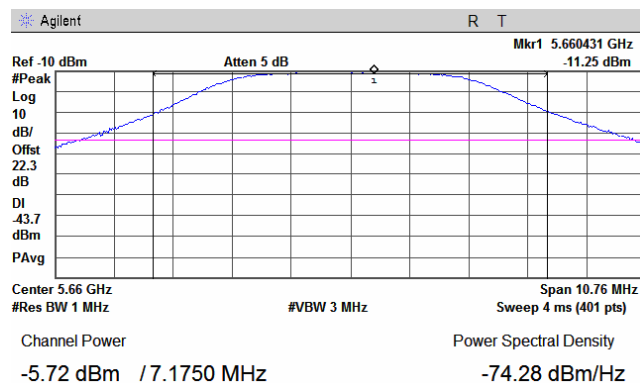
Plot 7.1.121 The 26 dB emission bandwidth

| | |
|------------------------|-----------------|
| Frequency: | 5660 MHz |
| Channel BW: | 5 MHz |
| Modulation parameters: | BPSK, 3.25 Mbps |



Plot 7.1.122 Peak output power

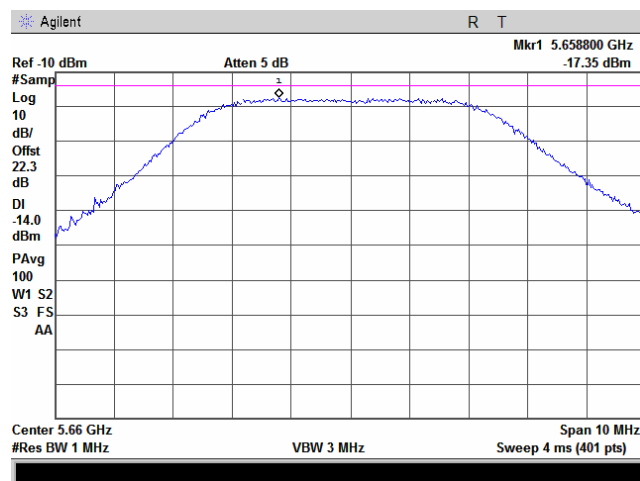
| | |
|------------------------|-----------------|
| Frequency: | 5660 MHz |
| Channel BW: | 5 MHz |
| Modulation parameters: | BPSK, 3.25 Mbps |



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | |
| Test procedure: | | FCC Public Notice DA 02-2138, Appendix A | |
| Test mode: | | Compliance | Verdict: PASS |
| Date: | | 11/25/2008 | |
| Temperature: 24°C | Air Pressure: 1010 hPa | Relative Humidity: 54 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

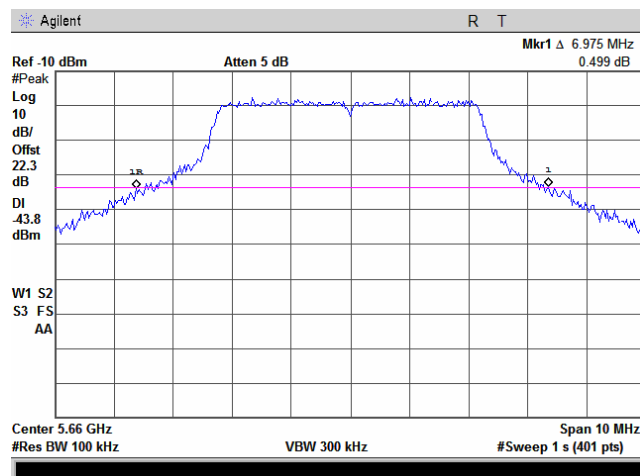
Plot 7.1.123 Peak spectral power density

| | |
|------------------------|-----------------|
| Frequency: | 5660 MHz |
| Channel BW: | 5 MHz |
| Modulation parameters: | BPSK, 3.25 Mbps |



Plot 7.1.124 The 26 dB emission bandwidth

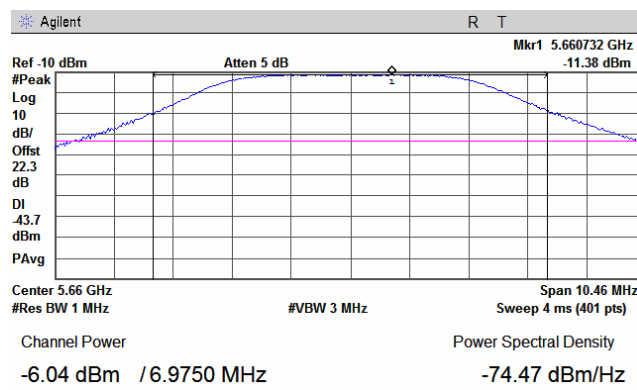
| | |
|------------------------|-----------------|
| Frequency: | 5660 MHz |
| Channel BW: | 5 MHz |
| Modulation parameters: | BPSK, 32.5 Mbps |



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | |
| Test procedure: | | FCC Public Notice DA 02-2138, Appendix A | |
| Test mode: | | Compliance | Verdict: PASS |
| Date: | | 11/25/2008 | |
| Temperature: 24°C | Air Pressure: 1010 hPa | Relative Humidity: 54 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

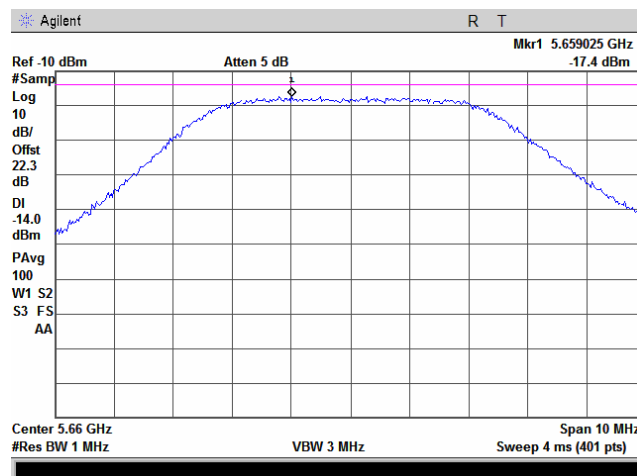
Plot 7.1.125 Peak output power

| | |
|------------------------|-----------------|
| Frequency: | 5660 MHz |
| Channel BW: | 5 MHz |
| Modulation parameters: | BPSK, 32.5 Mbps |



Plot 7.1.126 Peak spectral power density

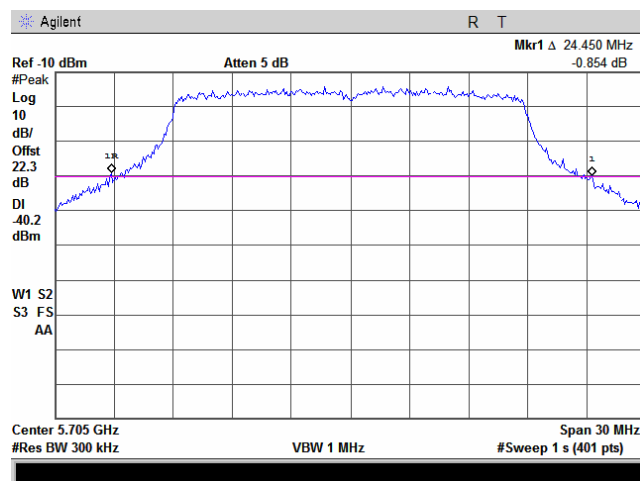
| | |
|------------------------|-----------------|
| Frequency: | 5660 MHz |
| Channel BW: | 5 MHz |
| Modulation parameters: | BPSK, 32.5 Mbps |



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | |
| Test procedure: | | FCC Public Notice DA 02-2138, Appendix A | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 11/25/2008 | | |
| Temperature: 24°C | Air Pressure: 1010 hPa | Relative Humidity: 54 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

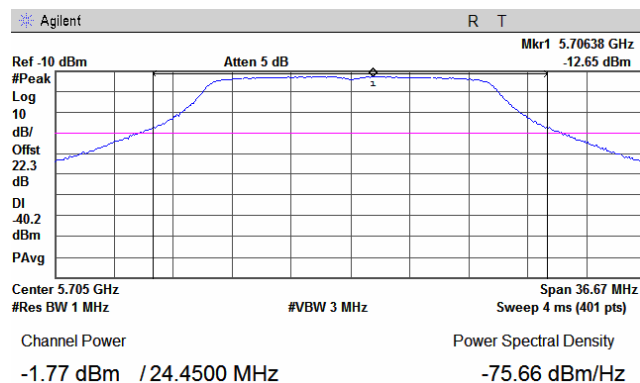
Plot 7.1.127 The 26 dB emission bandwidth

| | |
|------------------------|---------------|
| Frequency: | 5705 MHz |
| Channel BW: | 20 MHz |
| Modulation parameters: | BPSK, 13 Mbps |



Plot 7.1.128 Peak output power

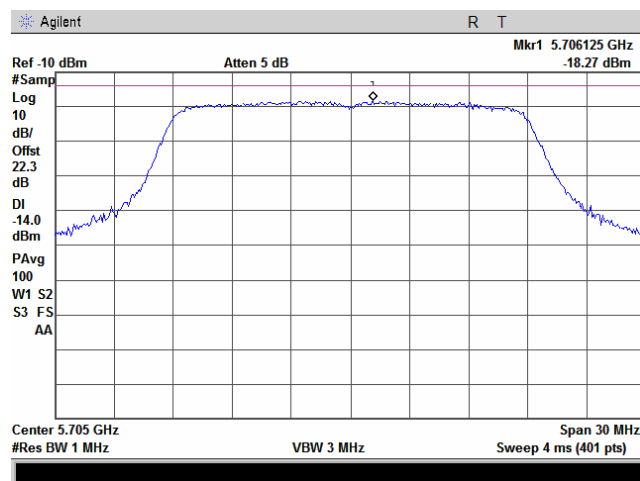
| | |
|------------------------|---------------|
| Frequency: | 5705 MHz |
| Channel BW: | 20 MHz |
| Modulation parameters: | BPSK, 13 Mbps |



| | | | |
|---|---|--------------------------------|------------------------------|
| Test specification: | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | | |
| Test procedure: | FCC Public Notice DA 02-2138, Appendix A | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 11/25/2008 | | |
| Temperature: 24°C | Air Pressure: 1010 hPa | Relative Humidity: 54 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

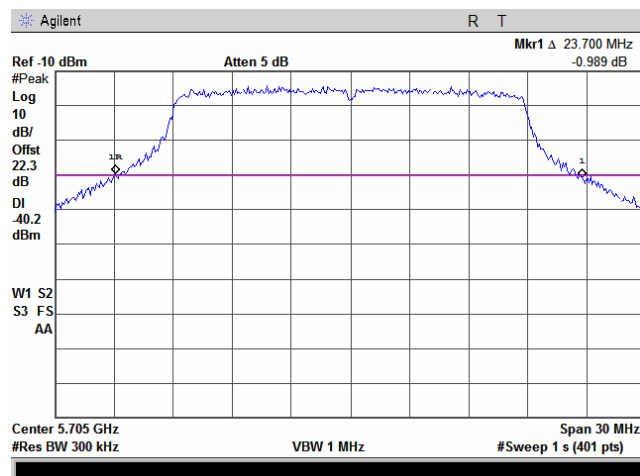
Plot 7.1.129 Peak spectral power density

| | |
|------------------------|---------------|
| Frequency: | 5705 MHz |
| Channel BW: | 20 MHz |
| Modulation parameters: | BPSK, 13 Mbps |



Plot 7.1.130 The 26 dB emission bandwidth

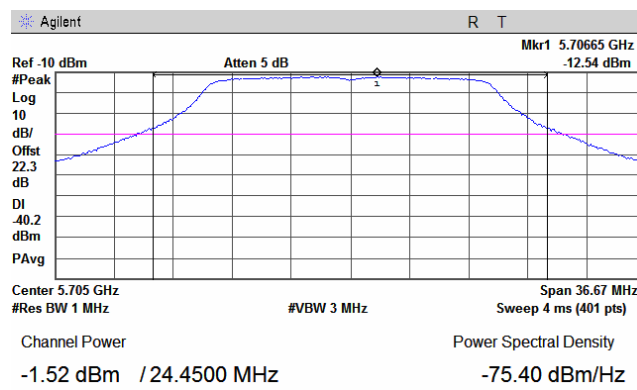
| | |
|------------------------|----------------|
| Frequency: | 5705 MHz |
| Channel BW: | 20 MHz |
| Modulation parameters: | BPSK, 130 Mbps |



| | | | |
|---|---|--------------------------------|------------------------------|
| Test specification: | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | | |
| Test procedure: | FCC Public Notice DA 02-2138, Appendix A | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 11/25/2008 | | |
| Temperature: 24°C | Air Pressure: 1010 hPa | Relative Humidity: 54 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

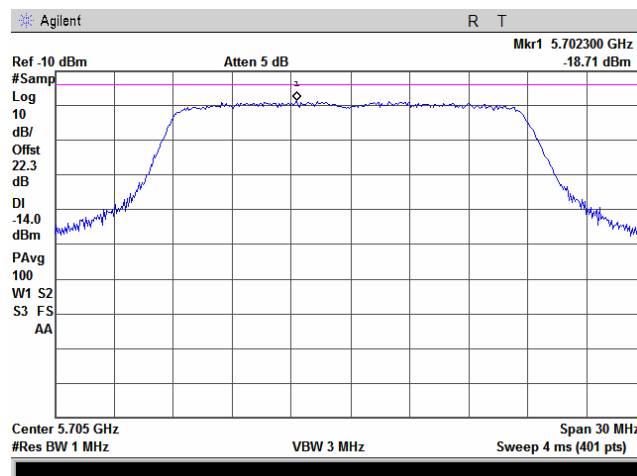
Plot 7.1.131 Peak output power

| | |
|------------------------|----------------|
| Frequency: | 5705 MHz |
| Channel BW: | 20 MHz |
| Modulation parameters: | BPSK, 130 Mbps |



Plot 7.1.132 Peak spectral power density

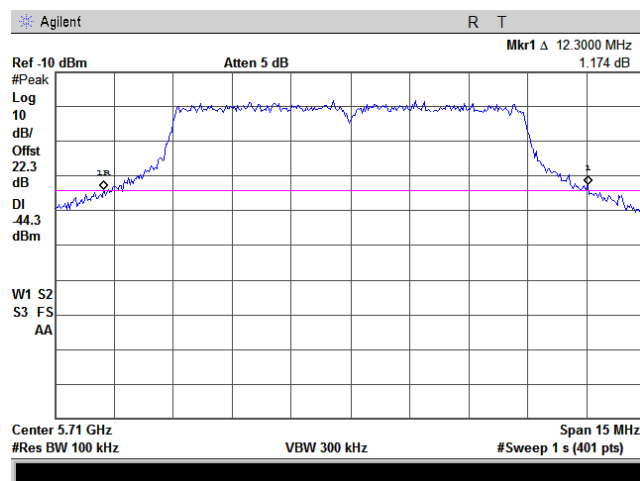
| | |
|------------------------|----------------|
| Frequency: | 5705 MHz |
| Channel BW: | 20 MHz |
| Modulation parameters: | BPSK, 130 Mbps |



| | | | |
|---|---|--------------------------------|------------------------------|
| Test specification: | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | | |
| Test procedure: | FCC Public Notice DA 02-2138, Appendix A | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 11/25/2008 | | |
| Temperature: 24°C | Air Pressure: 1010 hPa | Relative Humidity: 54 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

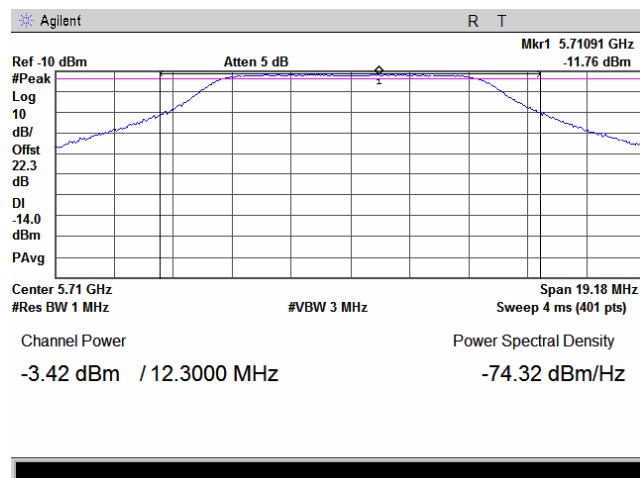
Plot 7.1.133 The 26 dB emission bandwidth

| | |
|------------------------|----------------|
| Frequency: | 5710 MHz |
| Channel BW: | 10 MHz |
| Modulation parameters: | BPSK, 6.5 Mbps |



Plot 7.1.134 Peak output power

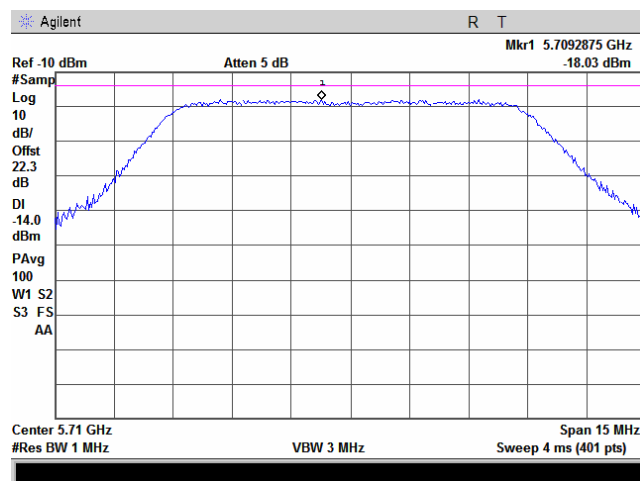
| | |
|------------------------|----------------|
| Frequency: | 5710 MHz |
| Channel BW: | 10 MHz |
| Modulation parameters: | BPSK, 6.5 Mbps |



| | | | |
|---|---|--------------------------------|------------------------------|
| Test specification: | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | | |
| Test procedure: | FCC Public Notice DA 02-2138, Appendix A | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 11/25/2008 | | |
| Temperature: 24°C | Air Pressure: 1010 hPa | Relative Humidity: 54 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

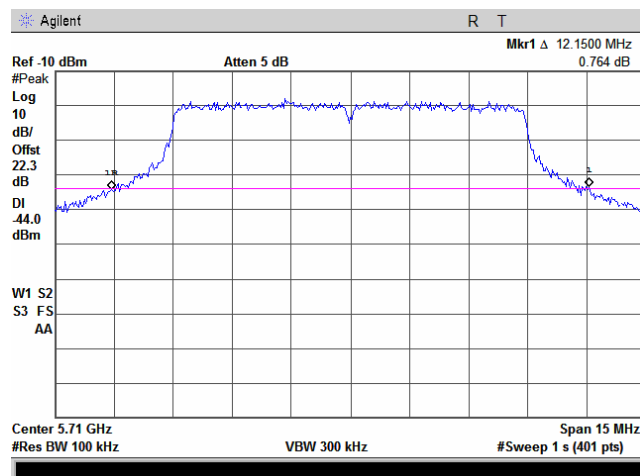
Plot 7.1.135 Peak spectral power density

| | |
|------------------------|----------------|
| Frequency: | 5710 MHz |
| Channel BW: | 10 MHz |
| Modulation parameters: | BPSK, 6.5 Mbps |



Plot 7.1.136 The 26 dB emission bandwidth

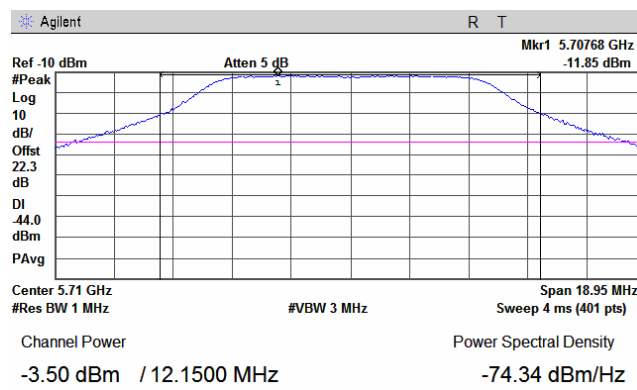
| | |
|------------------------|---------------|
| Frequency: | 5710 MHz |
| Channel BW: | 10 MHz |
| Modulation parameters: | BPSK, 65 Mbps |



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | |
| Test procedure: | | FCC Public Notice DA 02-2138, Appendix A | |
| Test mode: | | Compliance | Verdict: PASS |
| Date: | | 11/25/2008 | |
| Temperature: 24°C | Air Pressure: 1010 hPa | Relative Humidity: 54 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

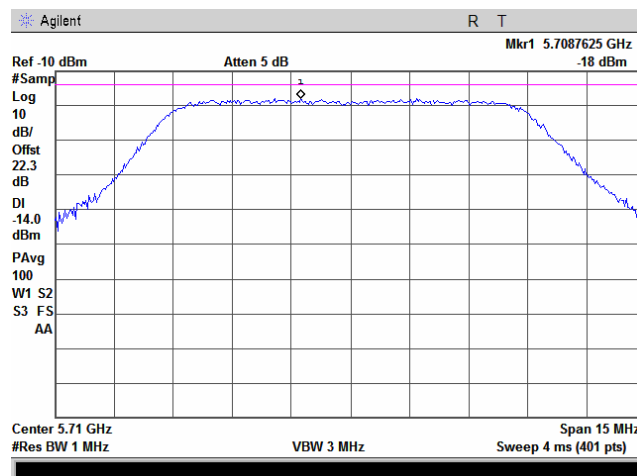
Plot 7.1.137 Peak output power

| | |
|------------------------|---------------|
| Frequency: | 5710 MHz |
| Channel BW: | 10 MHz |
| Modulation parameters: | BPSK, 65 Mbps |



Plot 7.1.138 Peak spectral power density

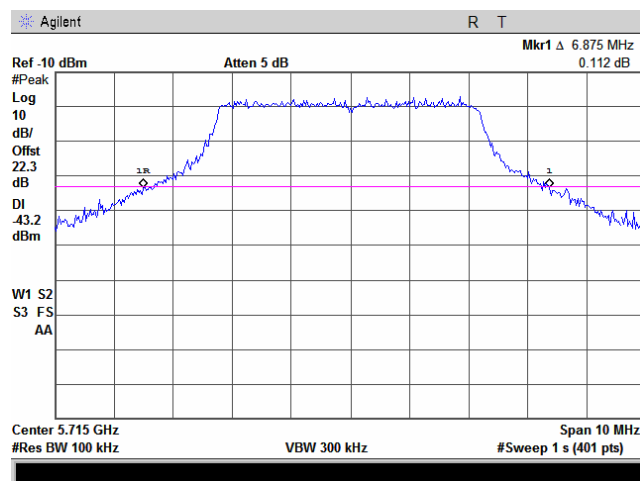
| | |
|------------------------|---------------|
| Frequency: | 5710 MHz |
| Channel BW: | 10 MHz |
| Modulation parameters: | BPSK, 65 Mbps |



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | |
| Test procedure: | | FCC Public Notice DA 02-2138, Appendix A | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 11/25/2008 | | |
| Temperature: 24°C | Air Pressure: 1010 hPa | Relative Humidity: 54 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

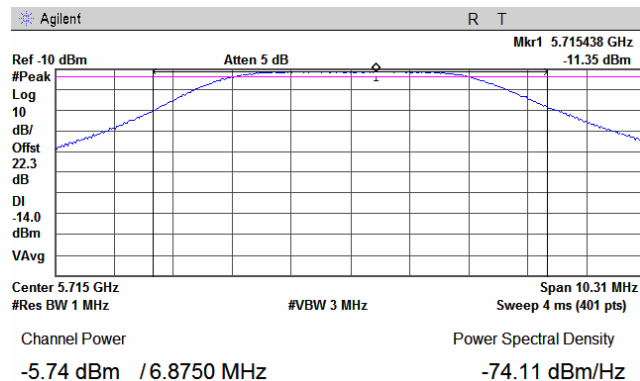
Plot 7.1.139 The 26 dB emission bandwidth

| | |
|------------------------|-----------------|
| Frequency: | 5715 MHz |
| Channel BW: | 5 MHz |
| Modulation parameters: | BPSK, 3.25 Mbps |



Plot 7.1.140 Peak output power

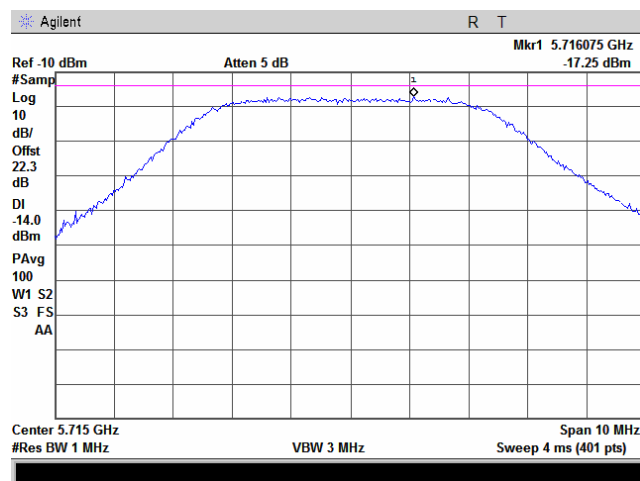
| | |
|------------------------|-----------------|
| Frequency: | 5715 MHz |
| Channel BW: | 5 MHz |
| Modulation parameters: | BPSK, 3.25 Mbps |



| | | | |
|---|---|--------------------------------|------------------------------|
| Test specification: | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | | |
| Test procedure: | FCC Public Notice DA 02-2138, Appendix A | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 11/25/2008 | | |
| Temperature: 24°C | Air Pressure: 1010 hPa | Relative Humidity: 54 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

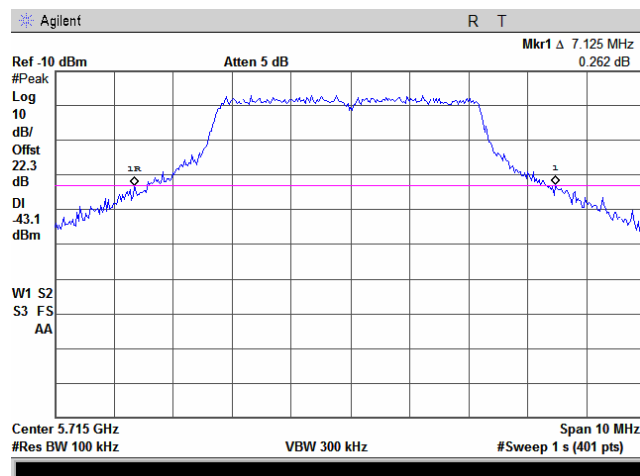
Plot 7.1.141 Peak spectral power density

| | |
|------------------------|-----------------|
| Frequency: | 5715 MHz |
| Channel BW: | 5 MHz |
| Modulation parameters: | BPSK, 3.25 Mbps |



Plot 7.1.142 The 26 dB emission bandwidth

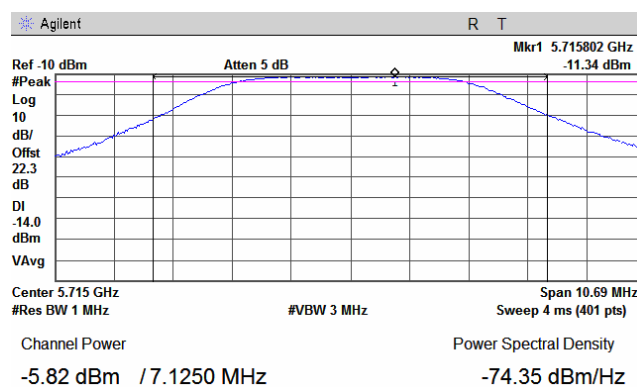
| | |
|------------------------|-----------------|
| Frequency: | 5715 MHz |
| Channel BW: | 5 MHz |
| Modulation parameters: | BPSK, 32.5 Mbps |



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density | |
| Test procedure: | | FCC Public Notice DA 02-2138, Appendix A | |
| Test mode: | | Compliance | Verdict: PASS |
| Date: | | 11/25/2008 | |
| Temperature: 24°C | Air Pressure: 1010 hPa | Relative Humidity: 54 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

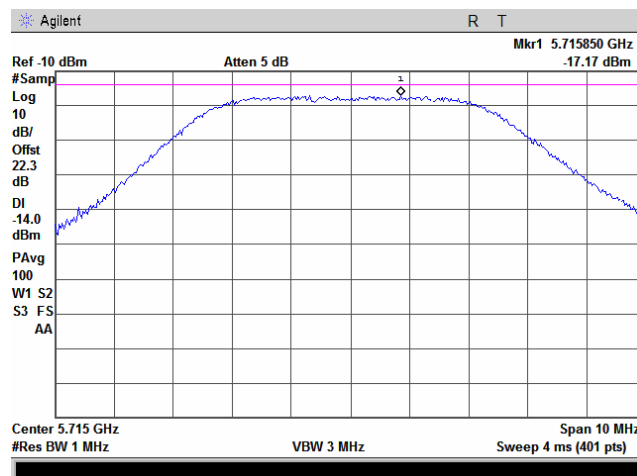
Plot 7.1.143 Peak output power

| | |
|------------------------|-----------------|
| Frequency: | 5715 MHz |
| Channel BW: | 5 MHz |
| Modulation parameters: | BPSK, 32.5 Mbps |



Plot 7.1.144 Peak spectral power density

| | |
|------------------------|-----------------|
| Frequency: | 5715 MHz |
| Channel BW: | 5 MHz |
| Modulation parameters: | BPSK, 32.5 Mbps |



| | | | |
|---------------------|------------------------|---|-----------------------|
| Test specification: | | FCC section 15.407(a)(6), Ratio of the peak excursion of the modulation envelope to the peak transmit power | |
| Test procedure: | | FCC Public Notice DA 02-2138, Appendix A | |
| Test mode: | | Verdict: PASS | |
| Date: | | | |
| Temperature: 23 °C | Air Pressure: 1012 hPa | Relative Humidity: 52 % | Power Supply: 120 VAC |
| Remarks: | | | |

7.2 Ratio of the peak excursion of the modulation envelope to the peak transmit power

7.2.1 General

This test was performed to measure the ratio of the peak excursion of the modulation envelope to the peak transmit power at RF antenna connector. Specification test limits are given in Table 7.2.1.

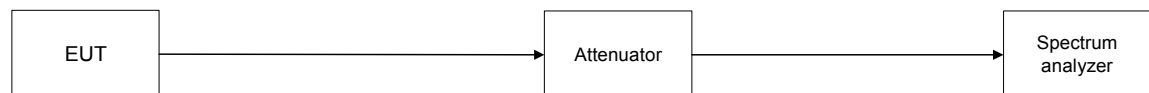
Table 7.2.1 Peak excursion limits

| Assigned frequency, MHz | Maximum peak excursion, dB/MHz |
|-------------------------|--------------------------------|
| 5470 - 5750 | 13.0 |

7.2.2 Test procedure

- 7.2.2.1 The EUT was set up as shown in Figure 7.2.1, energized and its proper operation was checked.
- 7.2.2.2 The EUT was adjusted to produce maximum available to end user RF output power.
- 7.2.2.3 The measurements were performed in continuous transmission mode of operation for carrier (channel) frequency at low and high edges and at the middle of the frequency range.
The maximum peak excursion of modulation envelope was measured as a difference between 2 traces.
- 7.2.2.4 The test results were recorded in Table 7.2.2, Table 7.2.3 and shown in the associated plots.

Figure 7.2.1 Band edge emission test setup



| | | | |
|---|--|-------------------------------|------------------------------|
| Test specification: | FCC section 15.407(a)(6), Ratio of the peak excursion of the modulation envelope to the peak transmit power | | |
| Test procedure: | FCC Public Notice DA 02-2138, Appendix A | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 12/07/2008 | | |
| Temperature: 22°C | Air Pressure: 1009 hPa | Relative Humidity: 48% | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

Table 7.2.2 Peak excursion test results

ASSIGNED FREQUENCY RANGE: 5470-5725 MHz
DETECTOR USED: 1-st trace: Peak, Max Hold
2-nd trace: Peak, 100 Power Averaging
RESOLUTION BANDWIDTH: 1 MHz
VIDEO BANDWIDTH: 3 MHz

| Frequency, MHz | Bit Rate, Mbps | 1-st trace, dBm | 2-nd trace, dBm | Peak excursion, dB | Limit, dB | Margin* dB | Verdict |
|---------------------------|----------------|-----------------|-----------------|--------------------|-----------|------------|---------|
| Low channel | | | | | | | |
| 5490 | 13 | -1.840 | -6.816 | 4.976 | 13 | -8.024 | Pass |
| 5490 | 130 | -1.462 | -7.362 | 5.900 | 13 | -7.100 | Pass |
| 5485 | 6.5 | -2.816 | -8.022 | 5.206 | 13 | -7.794 | Pass |
| 5485 | 65 | -2.893 | -7.455 | 4.562 | 13 | -8.438 | Pass |
| 5480 | 3.25 | -2.142 | -7.300 | 5.158 | 13 | -7.842 | Pass |
| 5480 | 32.5 | -1.829 | -7.017 | 5.188 | 13 | -7.812 | Pass |
| First mid channel | | | | | | | |
| 5580 | 13 | -2.774 | -7.528 | 4.754 | 13 | -8.246 | Pass |
| 5580 | 130 | -1.931 | -7.461 | 5.530 | 13 | -7.470 | Pass |
| 5585 | 6.5 | -3.700 | -9.146 | 5.446 | 13 | -7.554 | Pass |
| 5585 | 65 | -4.022 | -9.308 | 5.286 | 13 | -7.714 | Pass |
| 5590 | 3.25 | -3.694 | -8.885 | 5.191 | 13 | -7.809 | Pass |
| 5590 | 32.5 | -2.822 | -7.975 | 5.153 | 13 | -7.847 | Pass |
| Second mid channel | | | | | | | |
| 5670 | 13 | -3.218 | -8.326 | 5.108 | 13 | -7.892 | Pass |
| 5670 | 130 | -3.330 | -9.210 | 5.880 | 13 | -7.120 | Pass |
| 5665 | 6.5 | -4.328 | -9.584 | 5.256 | 13 | -7.744 | Pass |
| 5665 | 65 | -4.425 | -10.12 | 5.695 | 13 | -7.305 | Pass |
| 5660 | 3.25 | -4.599 | -10.060 | 5.461 | 13 | -7.539 | Pass |
| 5660 | 32.5 | -4.363 | -9.761 | 5.398 | 13 | -7.602 | Pass |
| High channel | | | | | | | |
| 5705 | 13 | -4.448 | -9.392 | 4.944 | 13 | -8.056 | Pass |
| 5705 | 130 | -4.243 | -9.862 | 5.619 | 13 | -7.381 | Pass |
| 5710 | 6.5 | -4.941 | -10.390 | 5.449 | 13 | -7.551 | Pass |
| 5710 | 65 | -4.755 | -9.778 | 5.023 | 13 | -7.977 | Pass |
| 5715 | 3.25 | -5.338 | -10.910 | 5.572 | 13 | -7.428 | Pass |
| 5715 | 32.5 | -5.078 | -10.810 | 5.732 | 13 | -7.268 | Pass |

* - Margin = Peak excursion – specification limit.

Reference numbers of test equipment used

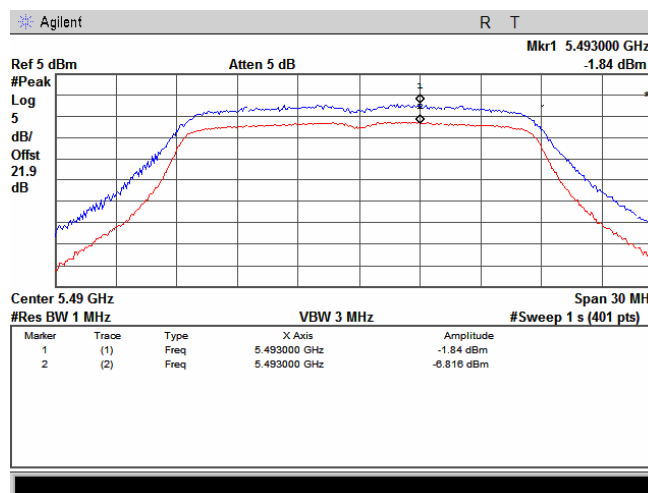
| | | | | | | |
|---------|---------|---------|--|--|--|--|
| HL 2780 | HL 2883 | HL 3180 | | | | |
|---------|---------|---------|--|--|--|--|

Full description is given in Appendix A.

| | | | |
|---|--|-------------------------------|------------------------------|
| Test specification: | FCC section 15.407(a)(6), Ratio of the peak excursion of the modulation envelope to the peak transmit power | | |
| Test procedure: | FCC Public Notice DA 02-2138, Appendix A | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 12/07/2008 | | |
| Temperature: 22°C | Air Pressure: 1009 hPa | Relative Humidity: 48% | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

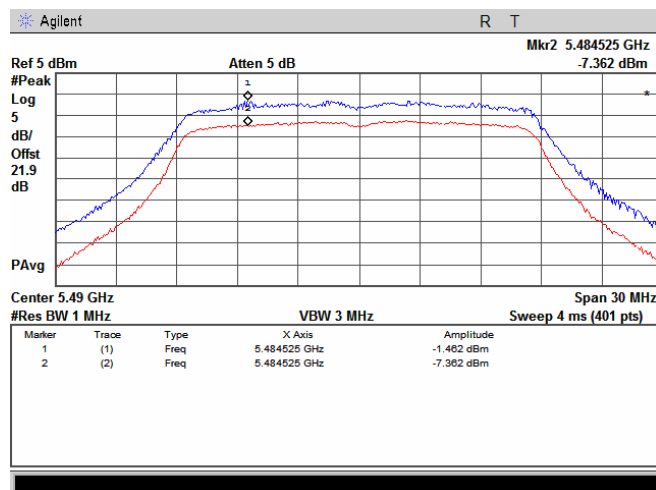
Plot.7.2.1 Peak excursion measurement

Frequency: 5490MHz
Channel BW: 20 MHz
Modulation parameters: BPSK; 13 MBps



Plot.7.2.2 Peak excursion measurement

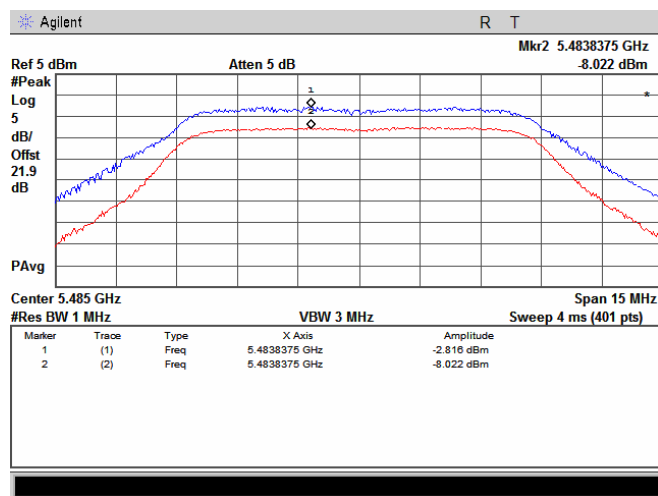
Frequency: 5490 MHz
Channel BW: 20 MHz
Modulation parameters: QPSK; 130 MBps



| | | | |
|--|---|------------------------|-----------------------|
| Test specification: | FCC section 15.407(a)(6), Ratio of the peak excursion of the modulation envelope to the peak transmit power | | |
| Test procedure: | FCC Public Notice DA 02-2138, Appendix A | | |
| Test mode: | Compliance | Verdict: PASS | |
| Date: | 12/07/2008 | | |
| Temperature: 22°C | Air Pressure: 1009 hPa | Relative Humidity: 48% | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

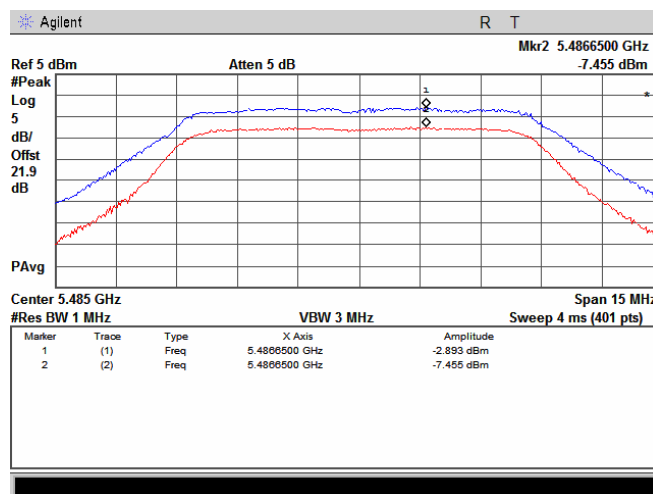
Plot 7.2.3 Peak excursion measurement

| | |
|------------------------|----------------|
| Frequency: | 5485 MHz |
| Channel BW: | 10 MHz |
| Modulation parameters: | BPSK; 6.5 MBps |



Plot 7.2.4 Peak excursion measurement

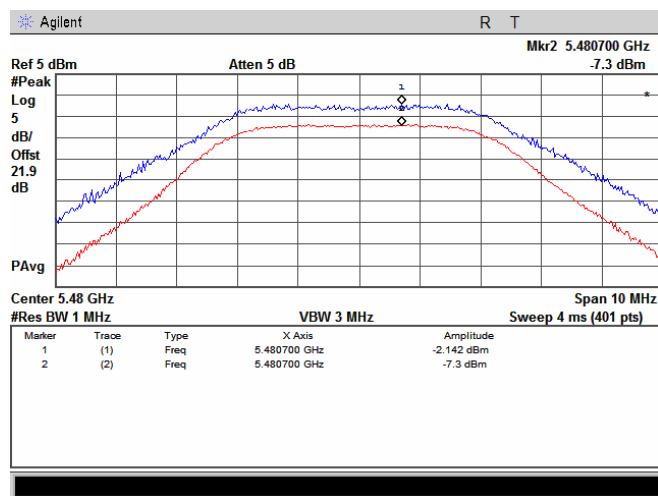
| | |
|------------------------|---------------|
| Frequency: | 5485 MHz |
| Channel BW: | 10 MHz |
| Modulation parameters: | QPSK; 65 MBps |



| | | | |
|---|--|-------------------------------|------------------------------|
| Test specification: | FCC section 15.407(a)(6), Ratio of the peak excursion of the modulation envelope to the peak transmit power | | |
| Test procedure: | FCC Public Notice DA 02-2138, Appendix A | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 12/07/2008 | | |
| Temperature: 22°C | Air Pressure: 1009 hPa | Relative Humidity: 48% | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

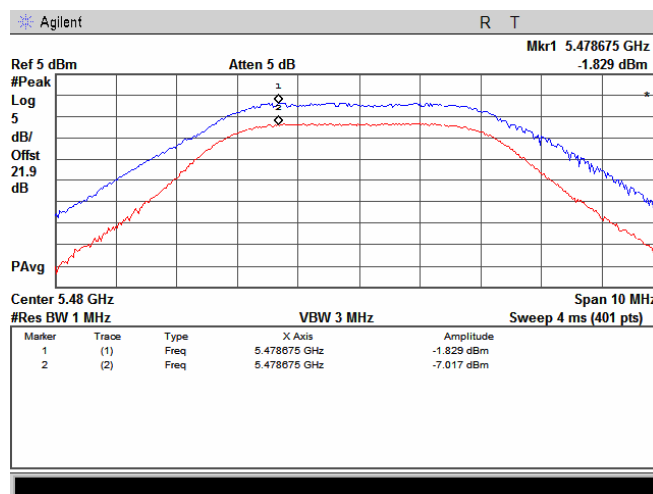
Plot 7.2.5 Peak excursion measurement

| | |
|------------------------|-----------------|
| Frequency: | 5480 MHz |
| Channel BW: | 5 MHz |
| Modulation parameters: | BPSK; 3.25 MBps |



Plot 7.2.6 Peak excursion measurement

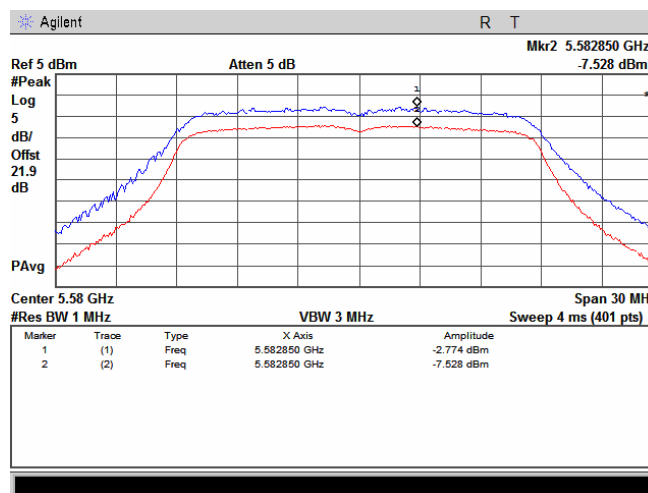
| | |
|------------------------|------------------|
| Frequency: | 5480 MHz |
| Channel BW: | 5 MHz |
| Modulation parameters: | 64QAM; 32.5 MBps |



| | | | |
|---|--|-------------------------------|------------------------------|
| Test specification: | FCC section 15.407(a)(6), Ratio of the peak excursion of the modulation envelope to the peak transmit power | | |
| Test procedure: | FCC Public Notice DA 02-2138, Appendix A | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 12/07/2008 | | |
| Temperature: 22°C | Air Pressure: 1009 hPa | Relative Humidity: 48% | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

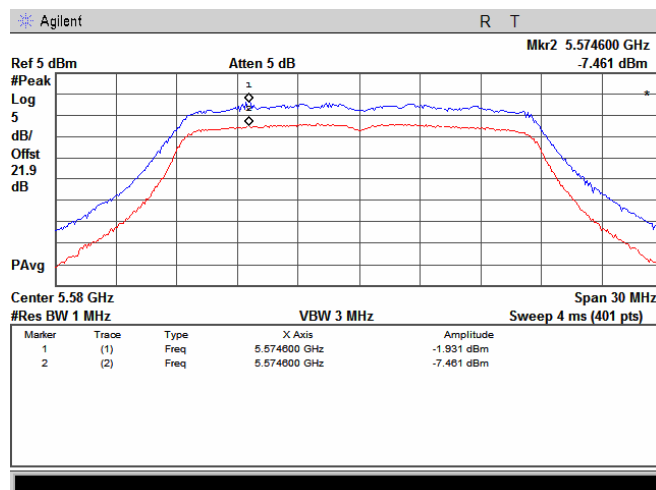
Plot.7.2.7 Peak excursion measurement

Frequency: 5580MHz
Channel BW: 20 MHz
Modulation parameters: BPSK; 13 MBps



Plot.7.2.8 Peak excursion measurement

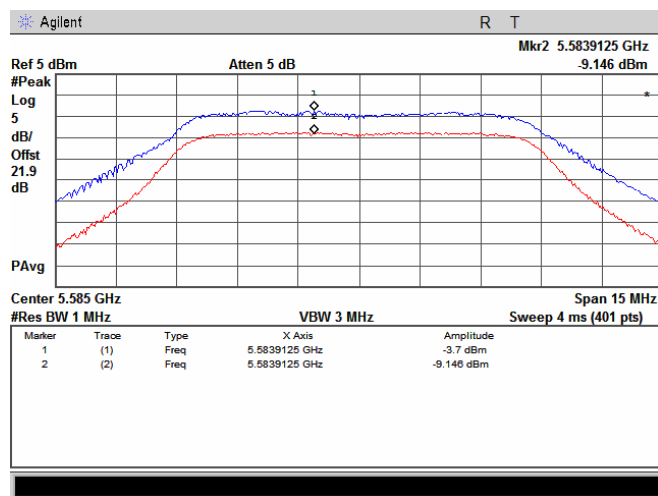
Frequency: 5580 MHz
Channel BW: 20 MHz
Modulation parameters: QPSK; 130 MBps



| | | | |
|---|--|-------------------------------|------------------------------|
| Test specification: | FCC section 15.407(a)(6), Ratio of the peak excursion of the modulation envelope to the peak transmit power | | |
| Test procedure: | FCC Public Notice DA 02-2138, Appendix A | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 12/07/2008 | | |
| Temperature: 22°C | Air Pressure: 1009 hPa | Relative Humidity: 48% | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

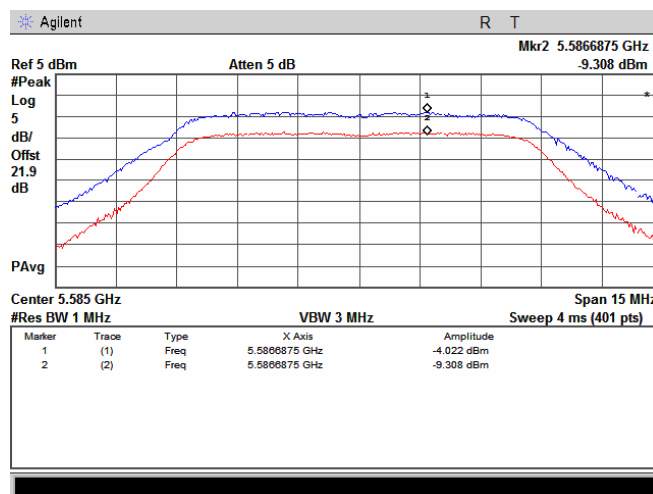
Plot 7.2.9 Peak excursion measurement

| | |
|------------------------|----------------|
| Frequency: | 5585 MHz |
| Channel BW: | 10 MHz |
| Modulation parameters: | BPSK; 6.5 MBps |



Plot 7.2.10 Peak excursion measurement

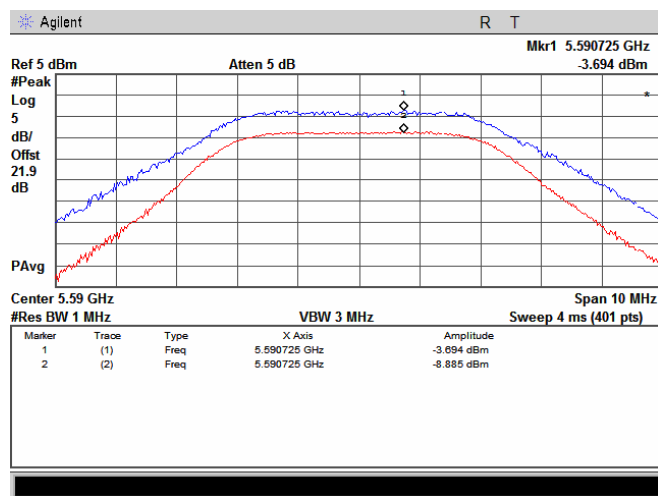
| | |
|------------------------|---------------|
| Frequency: | 5585 MHz |
| Channel BW: | 10 MHz |
| Modulation parameters: | QPSK; 65 MBps |



| | | | |
|---|--|-------------------------------|------------------------------|
| Test specification: | FCC section 15.407(a)(6), Ratio of the peak excursion of the modulation envelope to the peak transmit power | | |
| Test procedure: | FCC Public Notice DA 02-2138, Appendix A | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 12/07/2008 | | |
| Temperature: 22°C | Air Pressure: 1009 hPa | Relative Humidity: 48% | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

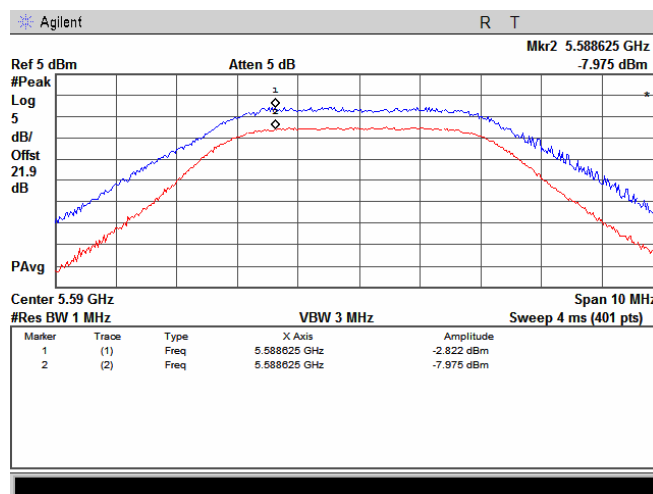
Plot 7.2.11 Peak excursion measurement

| | |
|------------------------|-----------------|
| Frequency: | 5590 MHz |
| Channel BW: | 5 MHz |
| Modulation parameters: | BPSK; 3.25 MBps |



Plot 7.2.12 Peak excursion measurement

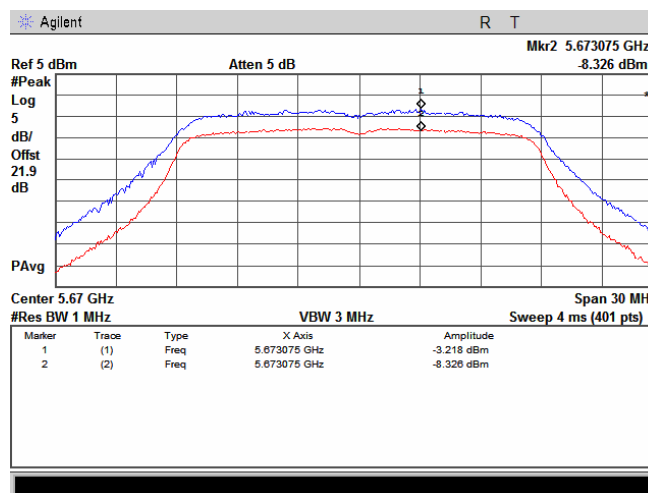
| | |
|------------------------|------------------|
| Frequency: | 5590 MHz |
| Channel BW: | 5 MHz |
| Modulation parameters: | 64QAM; 32.5 MBps |



| | | | |
|---|-------------------------------|--|------------------------------|
| Test specification: | | FCC section 15.407(a)(6), Ratio of the peak excursion of the modulation envelope to the peak transmit power | |
| Test procedure: | | FCC Public Notice DA 02-2138, Appendix A | |
| Test mode: | | Compliance | Verdict: PASS |
| Date: | | 12/07/2008 | |
| Temperature: 22°C | Air Pressure: 1009 hPa | Relative Humidity: 48% | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

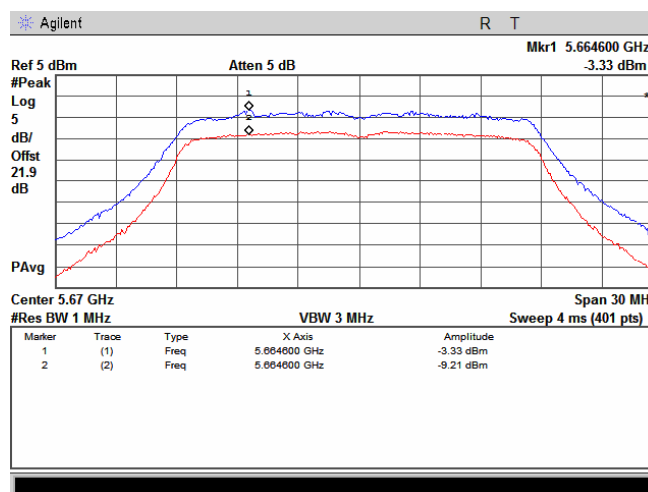
Plot.7.2.13 Peak excursion measurement

Frequency: 5670MHz
Channel BW: 20 MHz
Modulation parameters: BPSK; 13 MBps



Plot.7.2.14 Peak excursion measurement

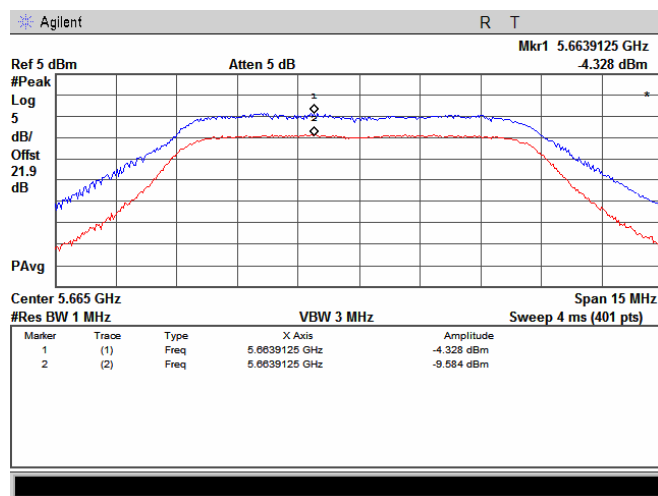
Frequency: 5670 MHz
Channel BW: 20 MHz
Modulation parameters: QPSK; 130 MBps



| | | | |
|---|--|-------------------------------|------------------------------|
| Test specification: | FCC section 15.407(a)(6), Ratio of the peak excursion of the modulation envelope to the peak transmit power | | |
| Test procedure: | FCC Public Notice DA 02-2138, Appendix A | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 12/07/2008 | | |
| Temperature: 22°C | Air Pressure: 1009 hPa | Relative Humidity: 48% | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

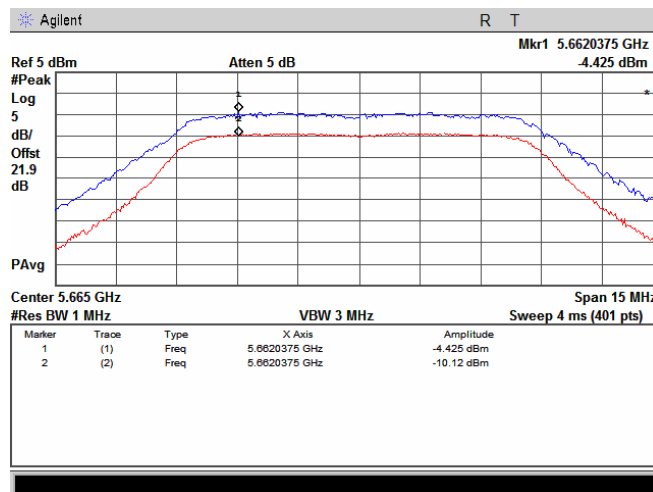
Plot 7.2.15 Peak excursion measurement

| | |
|------------------------|----------------|
| Frequency: | 5665 MHz |
| Channel BW: | 10 MHz |
| Modulation parameters: | BPSK; 6.5 MBps |



Plot 7.2.16 Peak excursion measurement

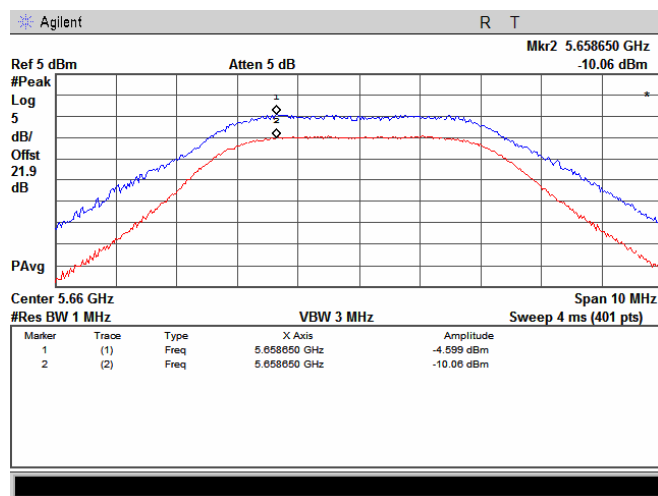
| | |
|------------------------|---------------|
| Frequency: | 5665 MHz |
| Channel BW: | 10 MHz |
| Modulation parameters: | QPSK; 65 MBps |



| | | | |
|---|--|-------------------------------|------------------------------|
| Test specification: | FCC section 15.407(a)(6), Ratio of the peak excursion of the modulation envelope to the peak transmit power | | |
| Test procedure: | FCC Public Notice DA 02-2138, Appendix A | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 12/07/2008 | | |
| Temperature: 22°C | Air Pressure: 1009 hPa | Relative Humidity: 48% | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

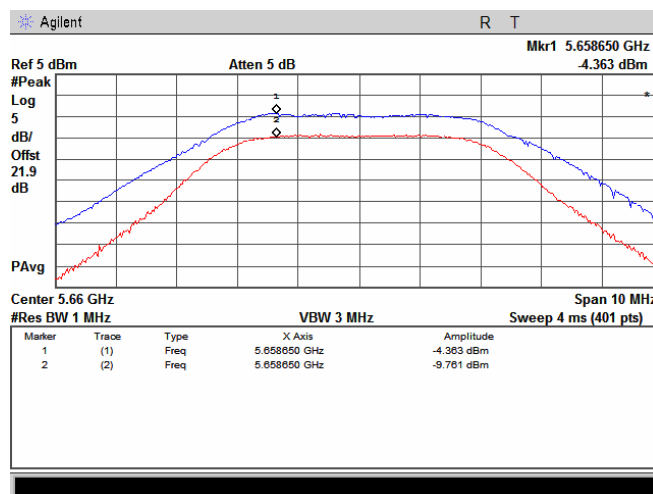
Plot 7.2.17 Peak excursion measurement

| | |
|------------------------|-----------------|
| Frequency: | 5660 MHz |
| Channel BW: | 5 MHz |
| Modulation parameters: | BPSK; 3.25 MBps |



Plot 7.2.18 Peak excursion measurement

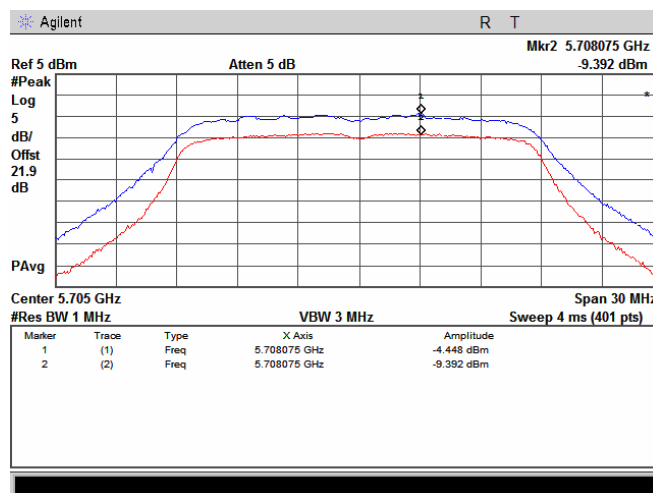
| | |
|------------------------|------------------|
| Frequency: | 5660 MHz |
| Channel BW: | 5 MHz |
| Modulation parameters: | 64QAM; 32.5 MBps |



| | | | |
|---|--|-------------------------------|------------------------------|
| Test specification: | FCC section 15.407(a)(6), Ratio of the peak excursion of the modulation envelope to the peak transmit power | | |
| Test procedure: | FCC Public Notice DA 02-2138, Appendix A | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 12/07/2008 | | |
| Temperature: 22°C | Air Pressure: 1009 hPa | Relative Humidity: 48% | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

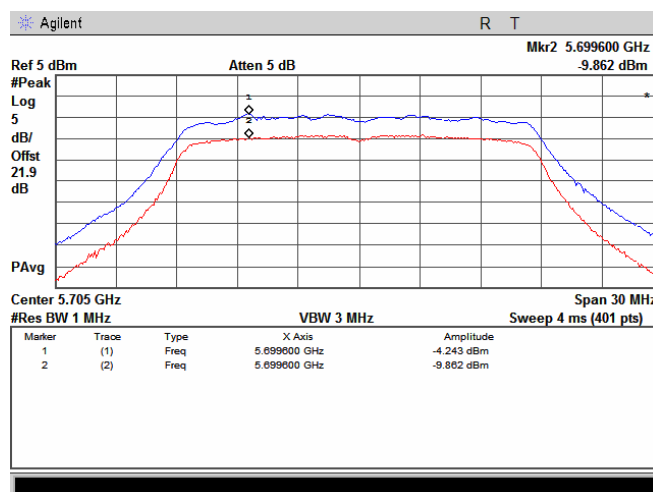
Plot.7.2.19 Peak excursion measurement

Frequency: 5705MHz
Channel BW: 20 MHz
Modulation parameters: BPSK; 13 MBps



Plot.7.2.20 Peak excursion measurement

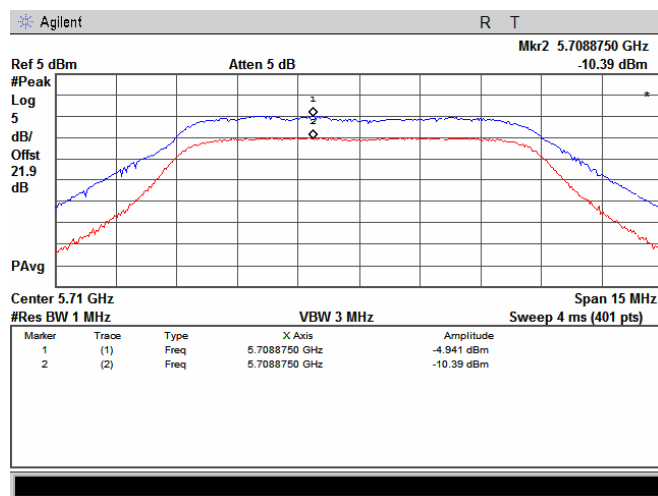
Frequency: 5705 MHz
Channel BW: 20 MHz
Modulation parameters: QPSK; 130 MBps



| | | | |
|---|--|-------------------------------|------------------------------|
| Test specification: | FCC section 15.407(a)(6), Ratio of the peak excursion of the modulation envelope to the peak transmit power | | |
| Test procedure: | FCC Public Notice DA 02-2138, Appendix A | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 12/07/2008 | | |
| Temperature: 22°C | Air Pressure: 1009 hPa | Relative Humidity: 48% | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

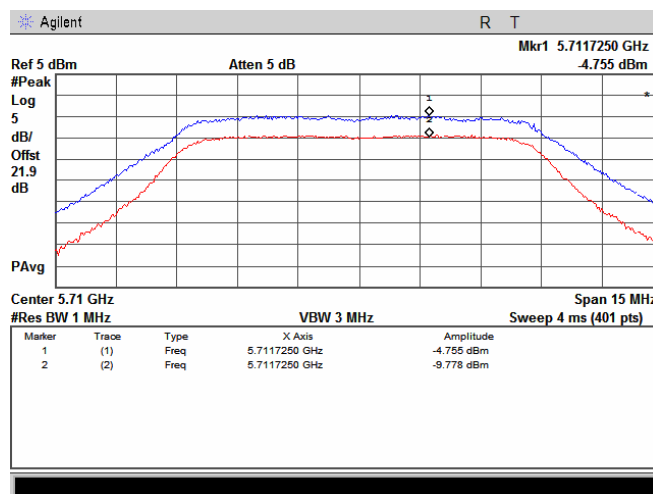
Plot 7.2.21 Peak excursion measurement

| | |
|------------------------|----------------|
| Frequency: | 5710 MHz |
| Channel BW: | 10 MHz |
| Modulation parameters: | BPSK; 6.5 MBps |



Plot 7.2.22 Peak excursion measurement

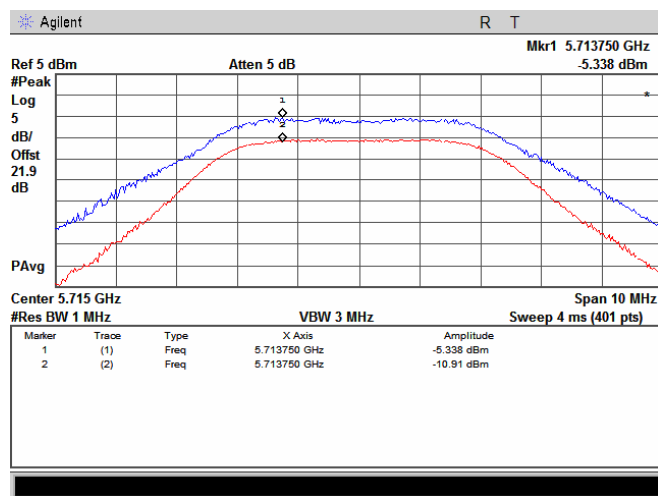
| | |
|------------------------|---------------|
| Frequency: | 5710 MHz |
| Channel BW: | 10 MHz |
| Modulation parameters: | QPSK; 65 MBps |



| | | | |
|---|--|-------------------------------|------------------------------|
| Test specification: | FCC section 15.407(a)(6), Ratio of the peak excursion of the modulation envelope to the peak transmit power | | |
| Test procedure: | FCC Public Notice DA 02-2138, Appendix A | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 12/07/2008 | | |
| Temperature: 22°C | Air Pressure: 1009 hPa | Relative Humidity: 48% | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

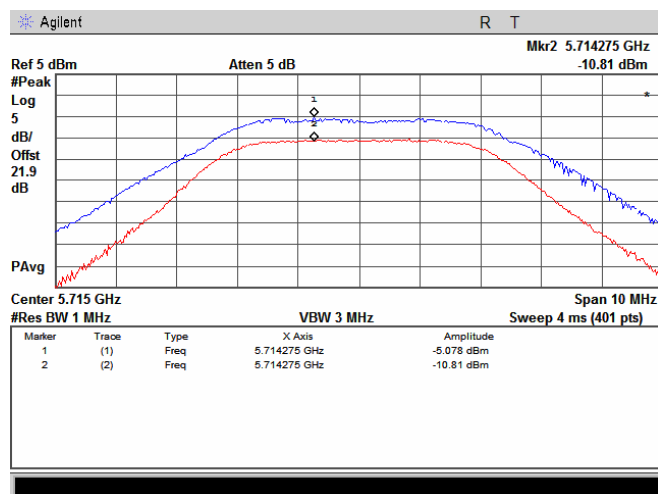
Plot 7.2.23 Peak excursion measurement

| | |
|------------------------|-----------------|
| Frequency: | 5715 MHz |
| Channel BW: | 5 MHz |
| Modulation parameters: | BPSK; 3.25 MBps |



Plot 7.2.24 Peak excursion measurement

| | |
|------------------------|------------------|
| Frequency: | 5715 MHz |
| Channel BW: | 5 MHz |
| Modulation parameters: | 64QAM; 32.5 MBps |



| | | | |
|---|--|--------------------------------|------------------------------|
| Test specification: | FCC section 15.407(a)(6), Ratio of the peak excursion of the modulation envelope to the peak transmit power | | |
| Test procedure: | FCC Public Notice DA 02-2138, Appendix A | | |
| Test mode: | Compliance | Verdict: PASS | |
| Date: | 11/25/2008 | | |
| Temperature: 23°C | Air Pressure: 1012 hPa | Relative Humidity: 52 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

Table 7.2.3 Peak excursion test results

ASSIGNED FREQUENCY RANGE: 5470-5725 MHz
DETECTOR USED: 1-st trace: Peak, Max Hold
2-nd trace: Peak, 100 Power Averaging
RESOLUTION BANDWIDTH: 1 MHz
VIDEO BANDWIDTH: 3 MHz

| Frequency, MHz | Bit Rate, MBps | 1-st trace, dBm | 2-nd trace, dBm | Peak excursion, dB | Limit, dB | Margin*, dB | Verdict |
|------------------------------|----------------|-----------------|-----------------|--------------------|-----------|-------------|---------|
| Low channel | | | | | | | |
| 5490 | 13 | -9.687 | -13.190 | 3.503 | 13 | -9.497 | Pass |
| 5490 | 130 | -9.133 | -13.670 | 4.537 | 13 | -8.463 | Pass |
| 5485 | 6.5 | -7.600 | -13.390 | 5.790 | 13 | -7.210 | Pass |
| 5485 | 65 | -7.773 | -13.230 | 5.457 | 13 | -7.543 | Pass |
| 5480 | 3.25 | -7.787 | -14.160 | 6.373 | 13 | -6.627 | Pass |
| 5480 | 32.5 | -7.640 | -13.010 | 5.370 | 13 | -7.630 | Pass |
| Mid channel | | | | | | | |
| 5580 | 13 | -8.822 | -12.330 | 3.508 | 13 | -9.492 | Pass |
| 5580 | 130 | -7.823 | -12.350 | 4.527 | 13 | -8.473 | Pass |
| 5585 | 6.5 | -6.286 | -11.890 | 5.604 | 13 | -7.396 | Pass |
| 5585 | 65 | -6.741 | -11.830 | 5.089 | 13 | -7.911 | Pass |
| 5590 | 3.25 | -5.887 | -11.730 | 5.843 | 13 | -7.157 | Pass |
| 5590 | 32.5 | -6.651 | -12.130 | 5.479 | 13 | -7.521 | Pass |
| Mid channel (IC only) | | | | | | | |
| 5670 | 13 | -9.524 | -13.190 | 3.666 | 13 | -9.334 | Pass |
| 5670 | 130 | -8.485 | -13.210 | 4.725 | 13 | -8.275 | Pass |
| 5665 | 6.5 | -6.413 | -12.030 | 5.617 | 13 | -7.383 | Pass |
| 5665 | 65 | -6.603 | -11.930 | 5.327 | 13 | -7.673 | Pass |
| 5660 | 3.25 | -6.003 | -12.270 | 6.267 | 13 | -6.733 | Pass |
| 5660 | 32.5 | -6.145 | -12.000 | 5.855 | 13 | -7.145 | Pass |
| High channel | | | | | | | |
| 5705 | 13 | -9.819 | -12.910 | 3.091 | 13 | -9.909 | Pass |
| 5705 | 130 | -7.913 | -12.390 | 4.477 | 13 | -8.523 | Pass |
| 5710 | 6.5 | -6.546 | -12.050 | 5.504 | 13 | -7.496 | Pass |
| 5710 | 65 | -6.660 | -12.020 | 5.360 | 13 | -7.640 | Pass |
| 5715 | 3.25 | -5.494 | -10.920 | 5.426 | 13 | -7.574 | Pass |
| 5715 | 32.5 | -5.450 | -11.140 | 5.690 | 13 | -7.310 | Pass |

* - Margin = Peak excursion – specification limit.

Reference numbers of test equipment used

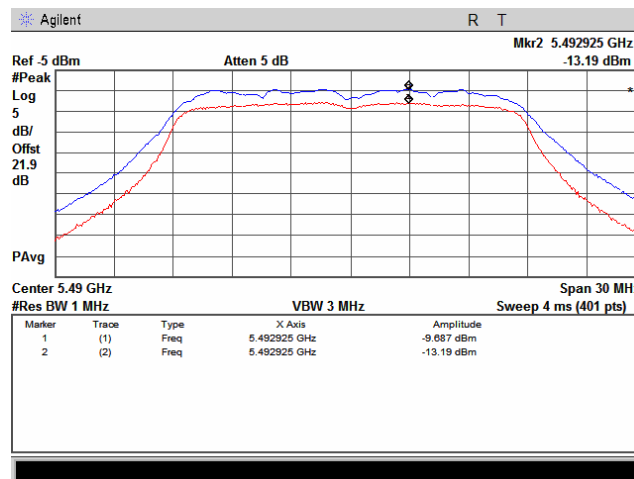
| | | | | | | | |
|---------|---------|---------|--|--|--|--|--|
| HL 2780 | HL 2883 | HL 3180 | | | | | |
|---------|---------|---------|--|--|--|--|--|

Full description is given in Appendix A.

| | | | |
|---|--|--------------------------------|------------------------------|
| Test specification: | FCC section 15.407(a)(6), Ratio of the peak excursion of the modulation envelope to the peak transmit power | | |
| Test procedure: | FCC Public Notice DA 02-2138, Appendix A | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 11/25/2008 | | |
| Temperature: 23°C | Air Pressure: 1012 hPa | Relative Humidity: 52 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

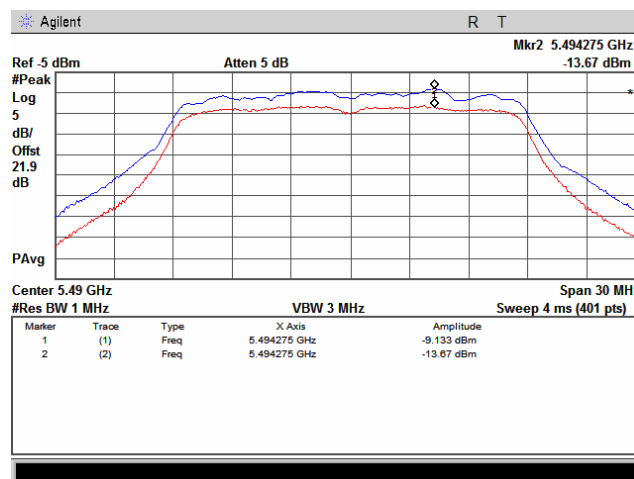
Plot.7.2.25 Peak excursion measurement

Frequency: 5490MHz
Channel BW: 20 MHz
Modulation parameters: BPSK; 13 MBps



Plot.7.2.26 Peak excursion measurement

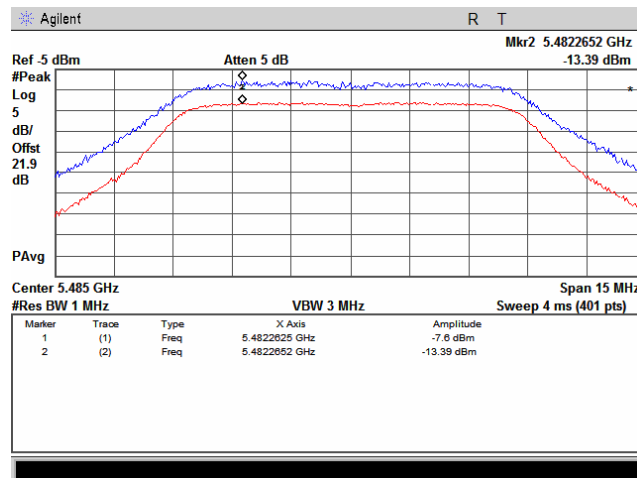
Frequency: 5490 MHz
Channel BW: 20 MHz
Modulation parameters: QPSK; 130 MBps



| | | | |
|---|--|--------------------------------|------------------------------|
| Test specification: | FCC section 15.407(a)(6), Ratio of the peak excursion of the modulation envelope to the peak transmit power | | |
| Test procedure: | FCC Public Notice DA 02-2138, Appendix A | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 11/25/2008 | | |
| Temperature: 23°C | Air Pressure: 1012 hPa | Relative Humidity: 52 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

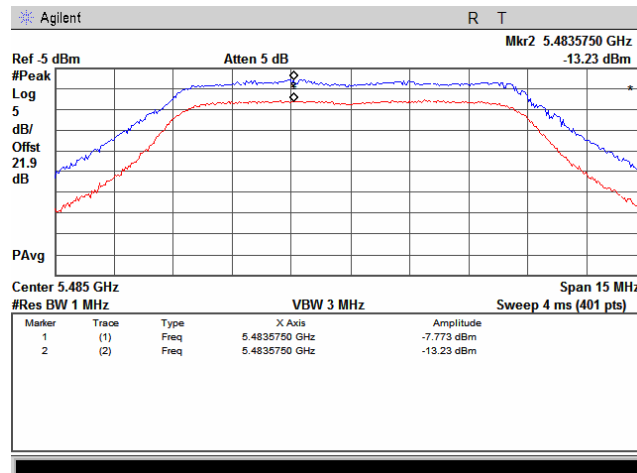
Plot 7.2.27 Peak excursion measurement

| | |
|------------------------|----------------|
| Frequency: | 5485 MHz |
| Channel BW: | 10 MHz |
| Modulation parameters: | BPSK; 6.5 MBps |



Plot 7.2.28 Peak excursion measurement

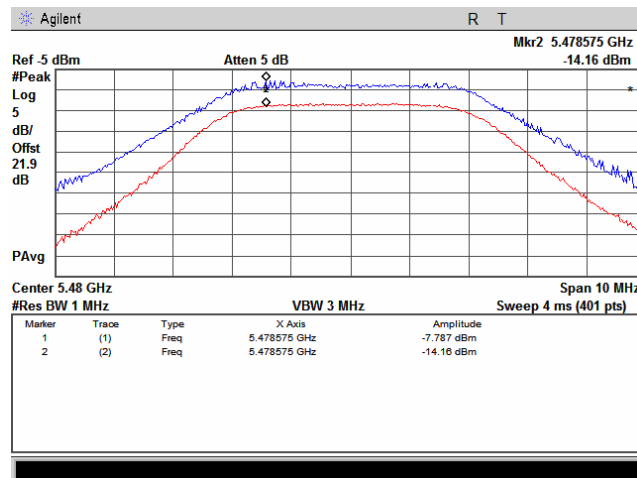
| | |
|------------------------|---------------|
| Frequency: | 5485 MHz |
| Channel BW: | 10 MHz |
| Modulation parameters: | QPSK; 65 MBps |



| | | | |
|---|--|--------------------------------|------------------------------|
| Test specification: | FCC section 15.407(a)(6), Ratio of the peak excursion of the modulation envelope to the peak transmit power | | |
| Test procedure: | FCC Public Notice DA 02-2138, Appendix A | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 11/25/2008 | | |
| Temperature: 23°C | Air Pressure: 1012 hPa | Relative Humidity: 52 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

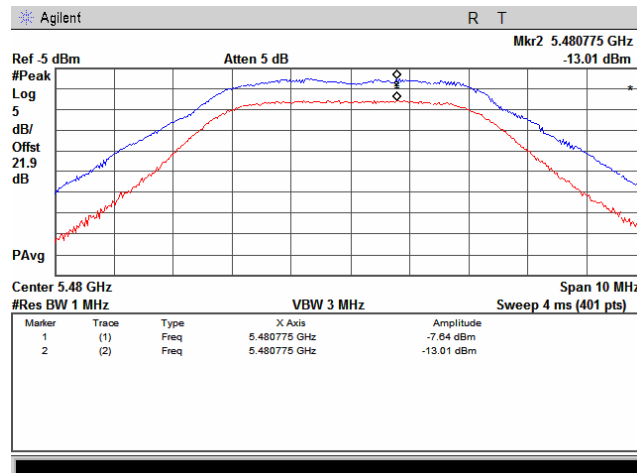
Plot 7.2.29 Peak excursion measurement

| | |
|------------------------|-----------------|
| Frequency: | 5480 MHz |
| Channel BW: | 5 MHz |
| Modulation parameters: | BPSK; 3.25 MBps |



Plot 7.2.30 Peak excursion measurement

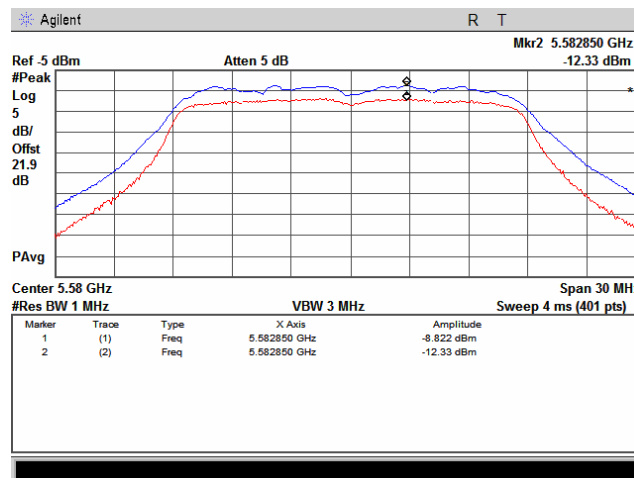
| | |
|------------------------|------------------|
| Frequency: | 5480 MHz |
| Channel BW: | 5 MHz |
| Modulation parameters: | 64QAM; 32.5 MBps |



| | | | |
|---|--|--------------------------------|------------------------------|
| Test specification: | FCC section 15.407(a)(6), Ratio of the peak excursion of the modulation envelope to the peak transmit power | | |
| Test procedure: | FCC Public Notice DA 02-2138, Appendix A | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 11/25/2008 | | |
| Temperature: 23°C | Air Pressure: 1012 hPa | Relative Humidity: 52 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

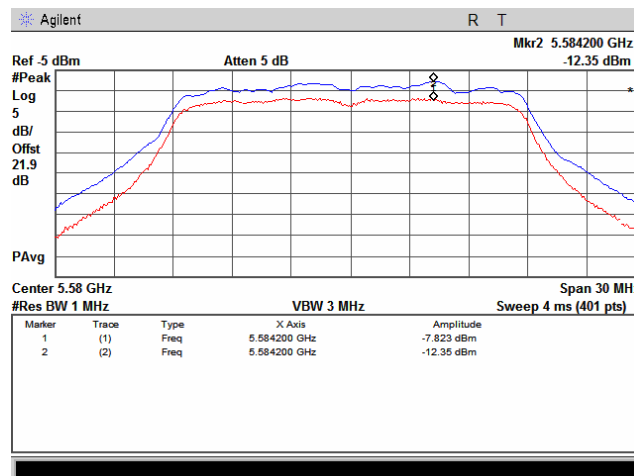
Plot.7.2.31 Peak excursion measurement

Frequency: 5580MHz
Channel BW: 20 MHz
Modulation parameters: BPSK; 13 MBps



Plot.7.2.32 Peak excursion measurement

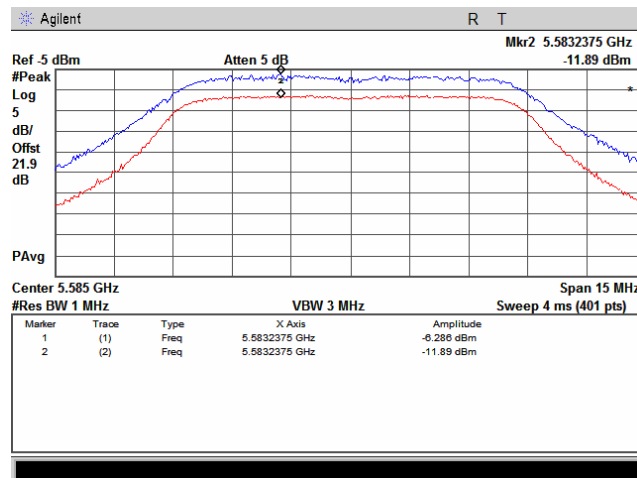
Frequency: 5580 MHz
Channel BW: 20 MHz
Modulation parameters: QPSK; 130 MBps



| | | | |
|---|--|--------------------------------|------------------------------|
| Test specification: | FCC section 15.407(a)(6), Ratio of the peak excursion of the modulation envelope to the peak transmit power | | |
| Test procedure: | FCC Public Notice DA 02-2138, Appendix A | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 11/25/2008 | | |
| Temperature: 23°C | Air Pressure: 1012 hPa | Relative Humidity: 52 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

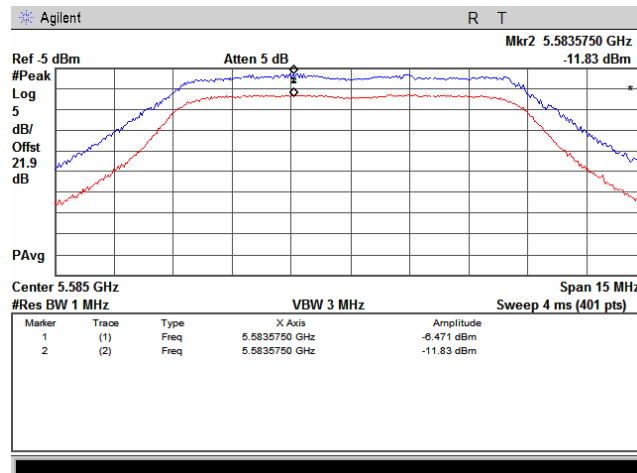
Plot 7.2.33 Peak excursion measurement

| | |
|------------------------|----------------|
| Frequency: | 5585 MHz |
| Channel BW: | 10 MHz |
| Modulation parameters: | BPSK; 6.5 MBps |



Plot 7.2.34 Peak excursion measurement

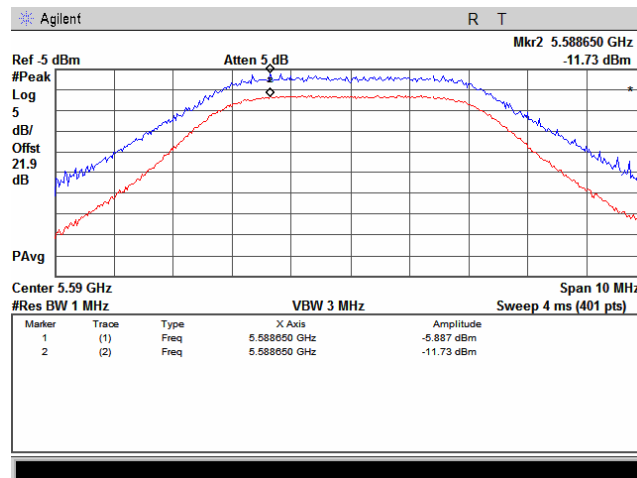
| | |
|------------------------|---------------|
| Frequency: | 5585 MHz |
| Channel BW: | 10 MHz |
| Modulation parameters: | QPSK; 65 MBps |



| | | | |
|---|--|--------------------------------|------------------------------|
| Test specification: | FCC section 15.407(a)(6), Ratio of the peak excursion of the modulation envelope to the peak transmit power | | |
| Test procedure: | FCC Public Notice DA 02-2138, Appendix A | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 11/25/2008 | | |
| Temperature: 23°C | Air Pressure: 1012 hPa | Relative Humidity: 52 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

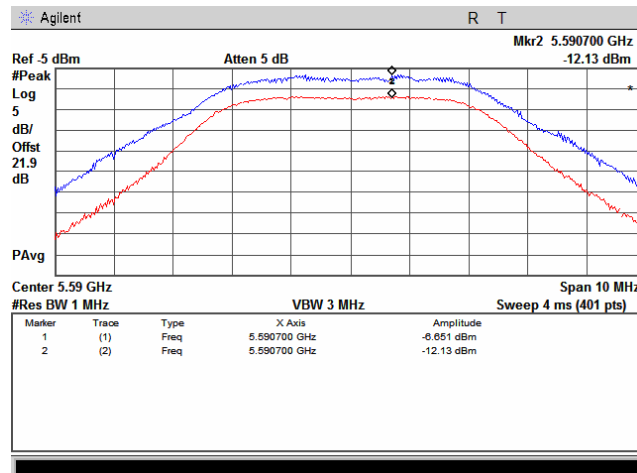
Plot 7.2.35 Peak excursion measurement

| | |
|------------------------|-----------------|
| Frequency: | 5590 MHz |
| Channel BW: | 5 MHz |
| Modulation parameters: | BPSK; 3.25 MBps |



Plot 7.2.36 Peak excursion measurement

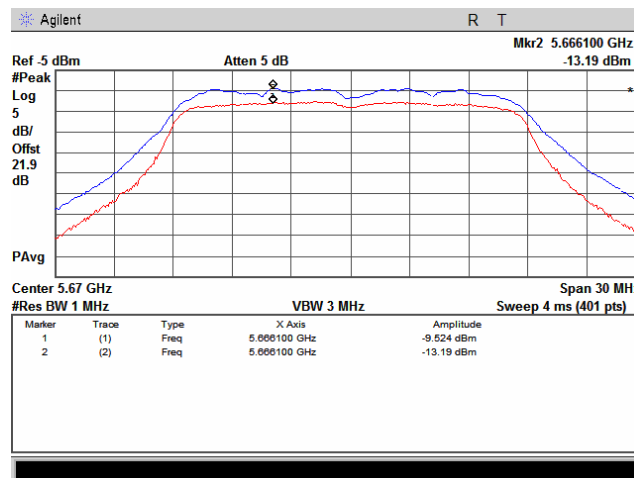
| | |
|------------------------|------------------|
| Frequency: | 5590 MHz |
| Channel BW: | 5 MHz |
| Modulation parameters: | 64QAM; 32.5 MBps |



| | | | |
|---|--|--------------------------------|------------------------------|
| Test specification: | FCC section 15.407(a)(6), Ratio of the peak excursion of the modulation envelope to the peak transmit power | | |
| Test procedure: | FCC Public Notice DA 02-2138, Appendix A | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 11/25/2008 | | |
| Temperature: 23°C | Air Pressure: 1012 hPa | Relative Humidity: 52 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

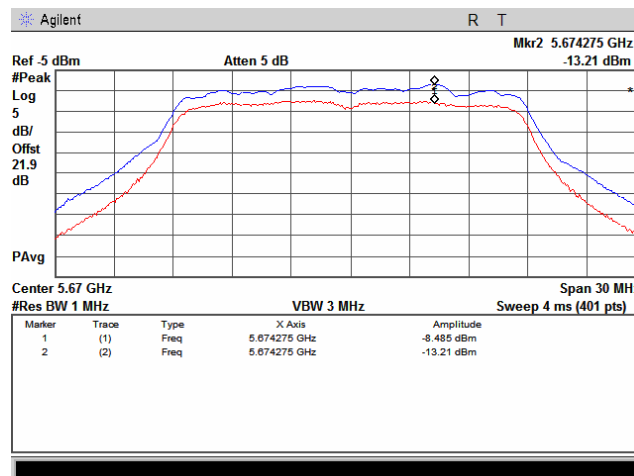
Plot.7.2.37 Peak excursion measurement

Frequency: 5670MHz
Channel BW: 20 MHz
Modulation parameters: BPSK; 13 MBps



Plot.7.2.38 Peak excursion measurement

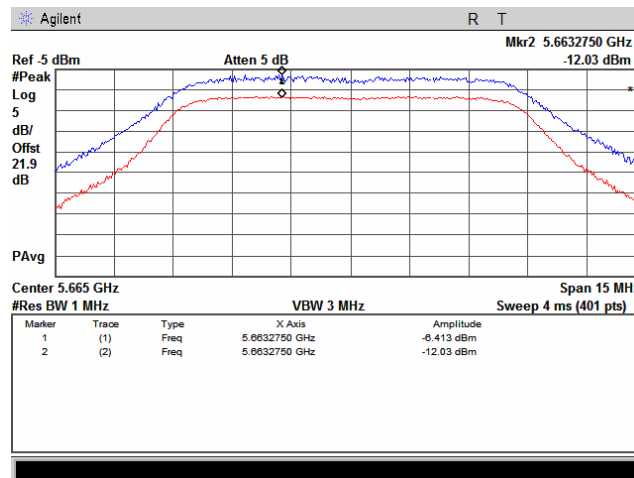
Frequency: 5670 MHz
Channel BW: 20 MHz
Modulation parameters: QPSK; 130 MBps



| | | | |
|---|--|--------------------------------|------------------------------|
| Test specification: | FCC section 15.407(a)(6), Ratio of the peak excursion of the modulation envelope to the peak transmit power | | |
| Test procedure: | FCC Public Notice DA 02-2138, Appendix A | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 11/25/2008 | | |
| Temperature: 23°C | Air Pressure: 1012 hPa | Relative Humidity: 52 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

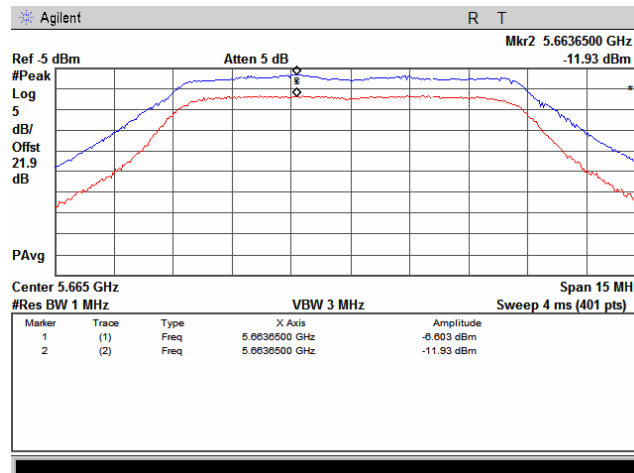
Plot 7.2.39 Peak excursion measurement

| | |
|------------------------|----------------|
| Frequency: | 5665 MHz |
| Channel BW: | 10 MHz |
| Modulation parameters: | BPSK; 6.5 MBps |



Plot 7.2.40 Peak excursion measurement

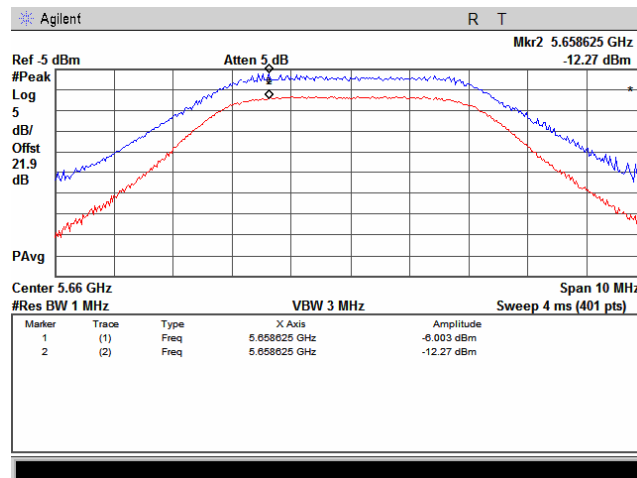
| | |
|------------------------|---------------|
| Frequency: | 5665 MHz |
| Channel BW: | 10 MHz |
| Modulation parameters: | QPSK; 65 MBps |



| | | | |
|---|--|--------------------------------|------------------------------|
| Test specification: | FCC section 15.407(a)(6), Ratio of the peak excursion of the modulation envelope to the peak transmit power | | |
| Test procedure: | FCC Public Notice DA 02-2138, Appendix A | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 11/25/2008 | | |
| Temperature: 23°C | Air Pressure: 1012 hPa | Relative Humidity: 52 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

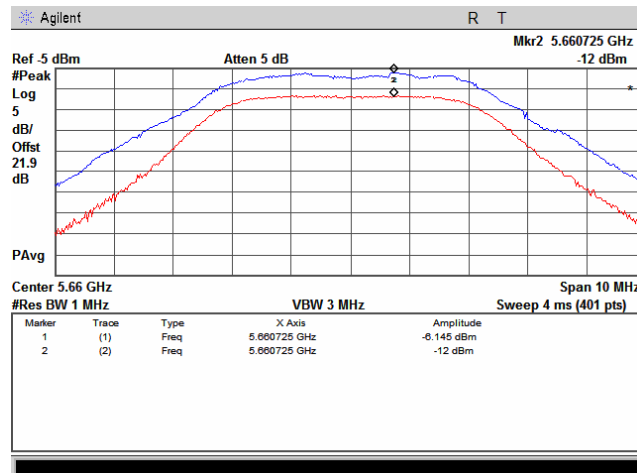
Plot 7.2.41 Peak excursion measurement

| | |
|------------------------|-----------------|
| Frequency: | 5660 MHz |
| Channel BW: | 5 MHz |
| Modulation parameters: | BPSK; 3.25 MBps |



Plot 7.2.42 Peak excursion measurement

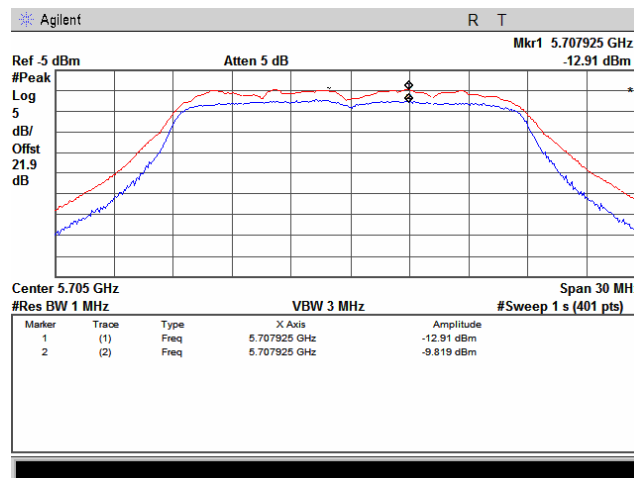
| | |
|------------------------|------------------|
| Frequency: | 5660 MHz |
| Channel BW: | 5 MHz |
| Modulation parameters: | 64QAM; 32.5 MBps |



| | | | |
|---|--|--------------------------------|------------------------------|
| Test specification: | FCC section 15.407(a)(6), Ratio of the peak excursion of the modulation envelope to the peak transmit power | | |
| Test procedure: | FCC Public Notice DA 02-2138, Appendix A | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 11/25/2008 | | |
| Temperature: 23°C | Air Pressure: 1012 hPa | Relative Humidity: 52 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

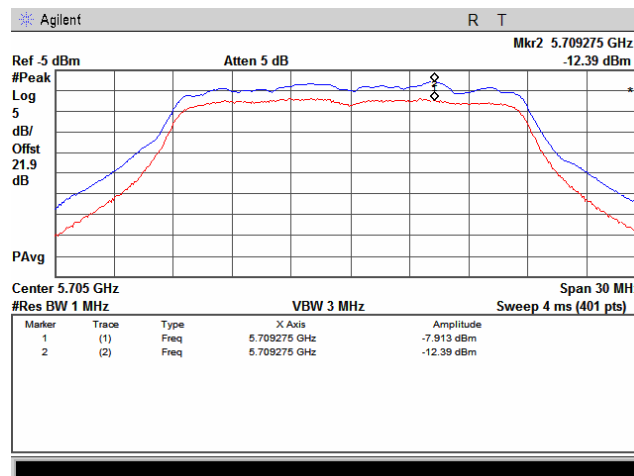
Plot.7.2.43 Peak excursion measurement

Frequency: 5705MHz
Channel BW: 20 MHz
Modulation parameters: BPSK; 13 MBps



Plot.7.2.44 Peak excursion measurement

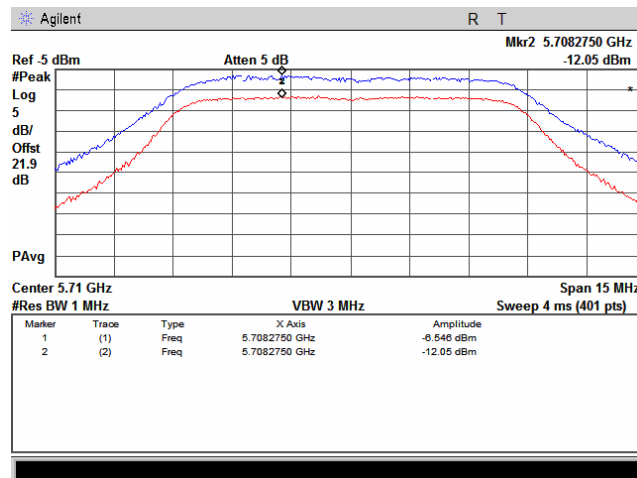
Frequency: 5705 MHz
Channel BW: 20 MHz
Modulation parameters: QPSK; 130 MBps



| | | | |
|---|--|--------------------------------|------------------------------|
| Test specification: | FCC section 15.407(a)(6), Ratio of the peak excursion of the modulation envelope to the peak transmit power | | |
| Test procedure: | FCC Public Notice DA 02-2138, Appendix A | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 11/25/2008 | | |
| Temperature: 23°C | Air Pressure: 1012 hPa | Relative Humidity: 52 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

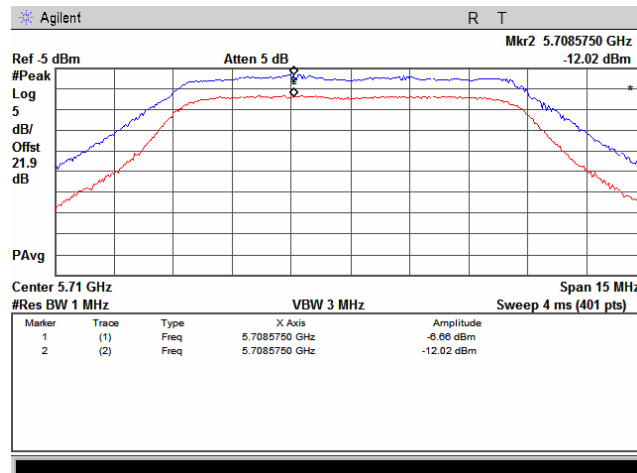
Plot 7.2.45 Peak excursion measurement

| | |
|------------------------|----------------|
| Frequency: | 5710 MHz |
| Channel BW: | 10 MHz |
| Modulation parameters: | BPSK; 6.5 MBps |



Plot 7.2.46 Peak excursion measurement

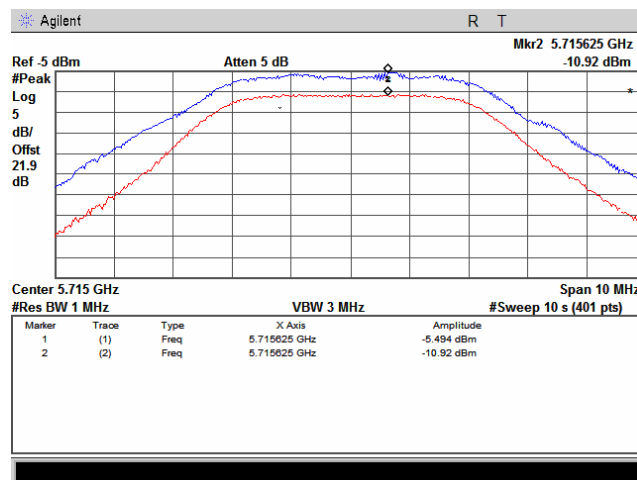
| | |
|------------------------|---------------|
| Frequency: | 5710 MHz |
| Channel BW: | 10 MHz |
| Modulation parameters: | QPSK; 65 MBps |



| | | | |
|---|--|--------------------------------|------------------------------|
| Test specification: | FCC section 15.407(a)(6), Ratio of the peak excursion of the modulation envelope to the peak transmit power | | |
| Test procedure: | FCC Public Notice DA 02-2138, Appendix A | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 11/25/2008 | | |
| Temperature: 23°C | Air Pressure: 1012 hPa | Relative Humidity: 52 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

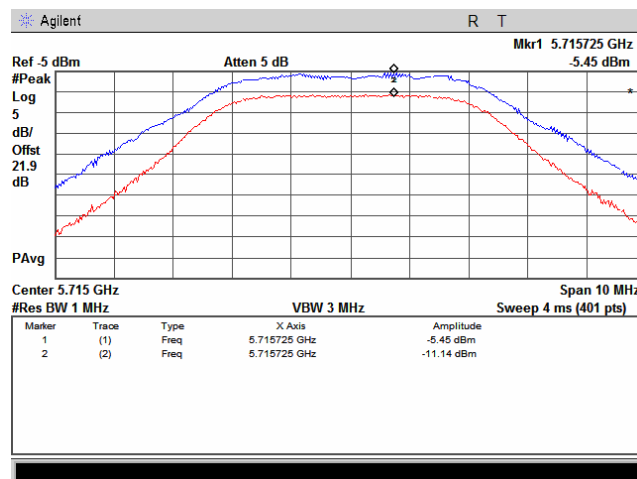
Plot 7.2.47 Peak excursion measurement

| | |
|------------------------|-----------------|
| Frequency: | 5715 MHz |
| Channel BW: | 5 MHz |
| Modulation parameters: | BPSK; 3.25 MBps |



Plot 7.2.48 Peak excursion measurement

| | |
|------------------------|------------------|
| Frequency: | 5715 MHz |
| Channel BW: | 5 MHz |
| Modulation parameters: | 64QAM; 32.5 MBps |



| | | | |
|----------------------------|---|--------------------------------|------------------------------|
| Test specification: | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions | | |
| Test procedure: | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 12/04/2008 | | |
| Temperature: 23°C | Air Pressure: 1011 hPa | Relative Humidity: 45 % | Power Supply: 120 VAC |
| Remarks: | | | |

7.3 Field strength of spurious emissions

7.3.1 General

This test was performed to measure field strength of spurious emissions from the EUT. Specification test limits are given in Table 7.3.1, Table 7.3.2.

Table 7.3.1 Radiated spurious emissions limits below 1 GHz and within restricted bands above 1 GHz

| Frequency, MHz | Field strength at 3 m, dB(μV/m)*** | | |
|----------------|------------------------------------|----------------|---------|
| | Peak | Quasi Peak | Average |
| 0.009 – 0.490* | NA | 128.5 – 93.8** | NA |
| 0.490 – 1.705* | | 73.8 – 63.0** | |
| 1.705 – 30.0* | | 69.5** | |
| 30 – 88 | | 40.0 | |
| 88 – 216 | | 43.5 | |
| 216 – 960 | | 46.0 | |
| 960 - 1000 | | 54.0 | |
| Above 1000 | 74.0 | NA | 54.0 |

*- The limit for 3 m test distance was calculated using the inverse square distance extrapolation factor as follows:

$$\text{LimS2} = \text{LimS1} + 40 \log (S1/S2),$$

where S1 and S2 – standard defined and test distance respectively in meters.

** - The limit decreases linearly with the logarithm of frequency.

*** - The field strength limits applied from the lowest radio frequency generated in the device, without going below 9 kHz up to the tenth harmonic of the highest fundamental frequency.

Table 7.3.2 EIRP of undesirable emissions limits outside restricted bands (above 1 GHz)

| Frequency band, GHz | Out of band EIRP, dBm/MHz | Field strength at 3 m, dB(μV/m) |
|---------------------|---------------------------|---------------------------------|
| 5.47 – 5.725 | -27 | 68.23 |

7.3.2 Test procedure for spurious emission field strength measurements in 9 kHz to 30 MHz band

7.3.2.1 The EUT was set up as shown in Figure 7.3.1, energized and the performance check was conducted.

7.3.2.2 The specified frequency range was investigated with antenna connected to spectrum analyzer/ EMI receiver. To find maximum radiation the turntable was rotated 360° and the measuring antenna was rotated around its vertical axis.

7.3.2.3 The worst test results (the lowest margins) were recorded and shown in the associated plots.

7.3.3 Test procedure for spurious emission field strength measurements above 30 MHz

7.3.3.1 The EUT was set up as shown in Figure 7.3.2, energized and the performance check was conducted.

7.3.3.2 The specified frequency range was investigated with antenna connected to spectrum analyzer/ EMI receiver. To find maximum radiation the turntable was rotated 360°, the measuring antenna height was changed from 1 to 4 m, its polarization was switched from vertical to horizontal.

7.3.3.3 The worst test results (the lowest margins) were recorded and shown in the associated plots.

| | | | |
|----------------------------|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions | |
| Test procedure: | | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | |
| Test mode: | Compliance | Verdict: PASS | |
| Date: | 12/04/2008 | | |
| Temperature: 23°C | Air Pressure: 1011 hPa | Relative Humidity: 45 % | Power Supply: 120 VAC |
| Remarks: | | | |

Figure 7.3.1 Setup for spurious emission field strength measurements below 30 MHz

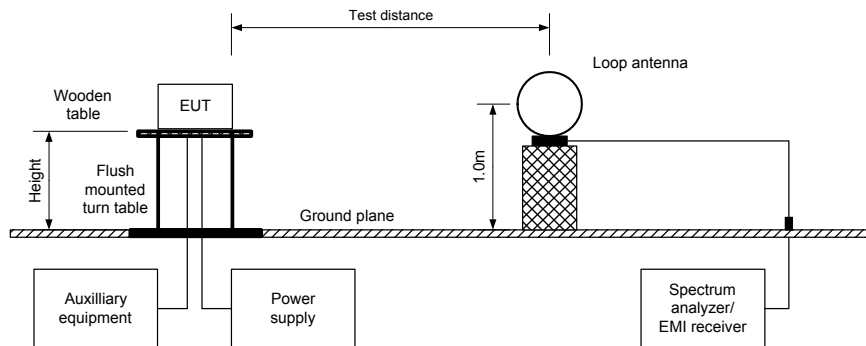
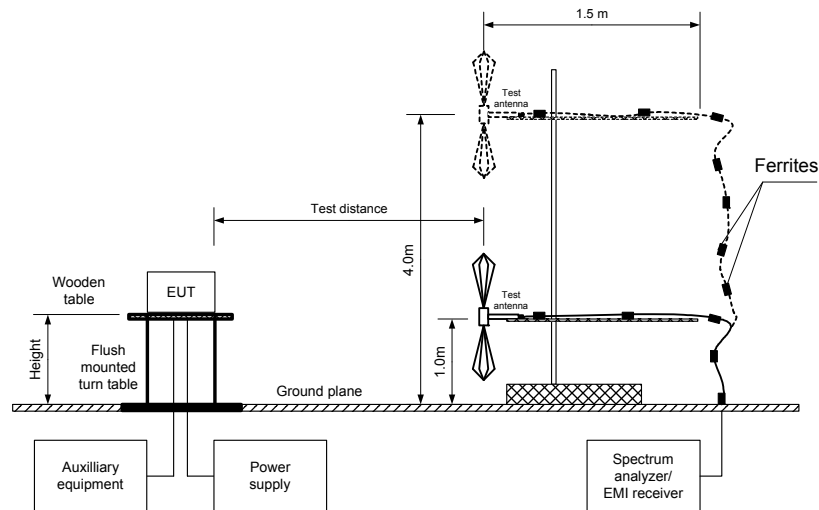


Figure 7.3.2 Setup for spurious emission field strength measurements above 30 MHz



| | | | |
|---|---|--------------------------------|------------------------------|
| Test specification: | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions | | |
| Test procedure: | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 6/22/2008 | | |
| Temperature: 24°C | Air Pressure: 1009 hPa | Relative Humidity: 58 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

Table 7.3.3 Field strength of spurious emissions below 1 GHz within restricted bands

ASSIGNED FREQUENCY RANGE: 5470 - 5725 MHz
 INVESTIGATED FREQUENCY RANGE: 0.009 - 1000 MHz
 TEST SITE: Semi Anechoic Chamber
 TEST DISTANCE: 3 m
 MODULATION: OFDM, 64QAM
 BIT RATE: 32.5 Mbps
 DUTY CYCLE: 100 %
 TRANSMITTER OUTPUT POWER: Maximum
 RESOLUTION BANDWIDTH: 1.0 kHz (9 kHz – 150 kHz)
 9.0 kHz (150 kHz – 30 MHz)
 120 kHz (30 MHz – 1000 MHz)
 VIDEO BANDWIDTH: > Resolution bandwidth
 TEST ANTENNA TYPE: Active loop (9 kHz – 30 MHz)
 Biconilog (30 MHz – 1000 MHz)
 Double ridged guide (above 1000 MHz)

| Double rugged grade (above 1000 MHz) | | | | | | | | | |
|--------------------------------------|----------------|-----------------------------|-----------------|-------------|------------------|-------------------|-------------------------------|---------|--|
| Frequency, MHz | Peak, dB(μV/m) | Quasi-peak dB(μV/m) | | | Antenna polariz. | Antenna height, m | Turntable position**, degrees | Verdict | |
| | | Measured emission, dB(μV/m) | Limit, dB(μV/m) | Margin, dB* | | | | | |
| Low channel (5490 MHz) | | | | | | | | | |
| 87.45 | 24.80 | 20.80 | 40.00 | -19.20 | Vertical | 1.0 | 45 | Pass | |
| 800.00 | 39.80 | 35.90 | 46.00 | -10.10 | Vertical | 1.5 | 90 | | |
| 933.33 | 37.90 | 35.90 | 46.00 | -10.10 | Vertical | 1.3 | 90 | | |
| First mid channel (5580 MHz) | | | | | | | | | |
| 87.65 | 27.85 | 20.80 | 40.00 | -19.20 | Vertical | 1.0 | 45 | | |
| 800.00 | 38.40 | 35.80 | 46.00 | -10.20 | Vertical | 1.5 | 90 | | |
| 933.33 | 38.50 | 36.10 | 46.00 | -9.90 | Vertical | 1.3 | 90 | | |
| Second mid channel (5670 MHz) | | | | | | | | | |
| 87.62 | 28.30 | 20.90 | 40.00 | -19.10 | Vertical | 1.0 | 45 | | |
| 800.00 | 39.70 | 35.50 | 46.00 | -8.50 | Vertical | 1.5 | 90 | | |
| 933.33 | 38.20 | 36.20 | 46.00 | -9.80 | Vertical | 1.3 | 90 | | |
| High channel (5705 MHz) | | | | | | | | | |
| 87.44 | 26.45 | 21.10 | 40.00 | -18.90 | Vertical | 1.0 | 45 | | |
| 800.00 | 38.90 | 35.90 | 46.00 | -10.10 | Vertical | 1.5 | 90 | | |
| 933.33 | 38.00 | 36.10 | 46.00 | -9.90 | Vertical | 1.3 | 90 | | |

*- Margin = Measured emission – specification limit.

** - EUT front panel refers to 0 degrees position of turntable.

Reference numbers of test equipment used

| | | | | | | | |
|---------|---------|---------|---------|---------|---------|---------|---------|
| HL 0446 | HL 0521 | HL 0589 | HL 0604 | HL 1425 | HL 1556 | HL 1984 | HL 1947 |
| HL 2009 | HL 2909 | | | | | | |

Full description is given in Appendix A.

| | | | |
|---|---|--------------------------------|------------------------------|
| Test specification: | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions | | |
| Test procedure: | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 6/22/2008 | | |
| Temperature: 24°C | Air Pressure: 1009 hPa | Relative Humidity: 58 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

Table 7.3.4 Field strength of spurious emissions above 1 GHz within restricted bands

ASSIGNED FREQUENCY RANGE: 5470 - 5725 MHz
 INVESTIGATED FREQUENCY RANGE: 0.009 - 40000 MHz
 TEST SITE: Semi Anechoic Chamber
 TEST DISTANCE: 3 m
 MODULATION: OFDM, 64QAM
 BIT RATE: 32.5 Mbps
 DUTY CYCLE: 100 %
 TRANSMITTER OUTPUT POWER: Maximum
 RESOLUTION BANDWIDTH: 1000 kHz
 VIDEO BANDWIDTH: > Resolution bandwidth
 TEST ANTENNA TYPE: Double ridged guide (above 1000 MHz)

| Peak, dB(μV/m) | | | | Average dB(μV/m) | | | Ant. polariz. | Ant. height, m | Turntable position**, degrees | Verdict | |
|-------------------------------|-----------------------------|-----------------|-------------|-----------------------------|-----------------|-------------|---------------|----------------|-------------------------------|---------|--|
| Frequency, MHz | Measured emission, dB(μV/m) | Limit, dB(μV/m) | Margin, dB* | Measured emission, dB(μV/m) | Limit, dB(μV/m) | Margin, dB* | | | | | |
| Low channel (5490 MHz) | | | | | | | | | | | |
| 1001.00 | 51.86 | 74.00 | -22.14 | 46.02 | 54.00 | -7.98 | Vertical | 2.0 | 45 | Pass | |
| 1066.66 | 56.20 | 74.00 | -17.80 | 48.72 | 54.00 | -5.28 | Vertical | 1.0 | 270 | | |
| 1200.00 | 54.88 | 74.00 | -19.12 | 51.23 | 54.00 | -2.77 | Vertical | 1.0 | 0 | | |
| 5149.6 | 59.30 | 74.00 | -14.70 | 45.91 | 54.00 | -8.09 | Vertical | 1.0 | 0 | | |
| First mid channel (5580 MHz) | | | | | | | | | | | |
| 1001.0 | 52.15 | 74.00 | -21.85 | 46.09 | 54.00 | -7.91 | Vertical | 2.0 | 45 | | |
| 1066.66 | 56.80 | 74.00 | -17.20 | 48.75 | 54.00 | -5.25 | Vertical | 1.0 | 270 | | |
| 1200.00 | 55.01 | 74.00 | -18.99 | 51.19 | 54.00 | -2.81 | Vertical | 1.1 | 0 | | |
| 5147.95 | 57.00 | 74.00 | -17.00 | 43.19 | 54.00 | -10.81 | Vertical | 1.0 | 0 | | |
| Second mid channel (5670 MHz) | | | | | | | | | | | |
| 1001.0 | 56.50 | 74.00 | -17.50 | 45.95 | 54.00 | -8.05 | Vertical | 1.0 | 45 | | |
| 1066.66 | 56.12 | 74.00 | -17.88 | 48.70 | 54.00 | -5.30 | Vertical | 1.0 | 270 | | |
| 1200.0 | 55.20 | 74.00 | -18.80 | 51.28 | 54.00 | -2.72 | Vertical | 1.1 | 0 | | |
| 5147.25 | 56.85 | 74.00 | -17.15 | 43.10 | 54.00 | -10.90 | Vertical | 1.0 | 0 | | |
| High channel (5705 MHz) | | | | | | | | | | | |
| 1001.0 | 56.95 | 74.00 | -17.05 | 46.05 | 54.00 | -7.95 | Vertical | 1.0 | 45 | | |
| 1066.66 | 56.30 | 74.00 | -17.70 | 48.74 | 54.00 | -5.26 | Vertical | 1.0 | 270 | | |
| 1200.0 | 54.90 | 74.00 | -19.10 | 51.33 | 54.00 | -2.67 | Vertical | 1.1 | 0 | | |
| 5148.38 | 56.90 | 74.00 | -17.10 | 43.09 | 54.00 | -10.91 | Vertical | 1.0 | 0 | | |

*- Margin = Measured emission – specification limit.

** - EUT front panel refers to 0 degrees position of turntable.

Reference numbers of test equipment used

| | | | | | | | |
|---------|---------|---------|---------|---------|---------|---------|---------|
| HL 0446 | HL 0521 | HL 0589 | HL 0604 | HL 1425 | HL 1556 | HL 1984 | HL 1947 |
| HL 2009 | HL 2909 | | | | | | |

Full description is given in Appendix A.

| | | | |
|--|---|-------------------------|-----------------------|
| Test specification: | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions | | |
| Test procedure: | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | | |
| Test mode: | Compliance | Verdict: PASS | |
| Date: | 6/22/2008 | | |
| Temperature: 24°C | Air Pressure: 1009 hPa | Relative Humidity: 58 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

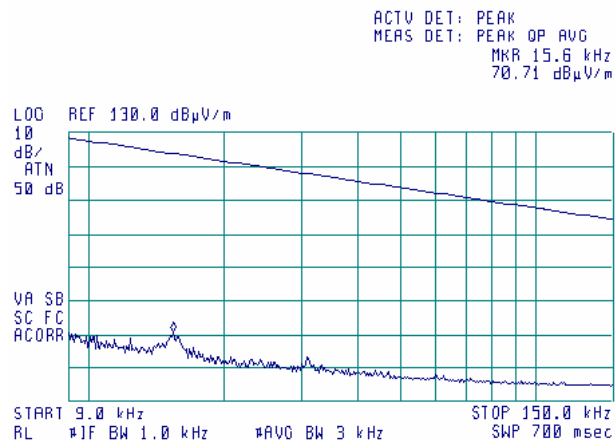
Table 7.3.5 Restricted bands

| MHz | MHz | MHz | MHz | MHz | GHz |
|-------------------|---------------------|-----------------------|-----------------|---------------|---------------|
| 0.09 - 0.11 | 8.37625 - 8.38675 | 73 - 74.6 | 399.9 - 410 | 2690 - 2900 | 10.6 - 12.7 |
| 0.495 - 0.505 | 8.41425 - 8.41475 | 74.8 - 75.2 | 608 - 614 | 3260 - 3267 | 13.25 - 13.4 |
| 2.1735 - 2.1905 | 12.29 - 12.293 | 108 - 121.94 | 960 - 1240 | 3332 - 3339 | 14.47 - 14.5 |
| 4.125 - 4.128 | 12.51975 - 12.52025 | 123 - 138 | 1300 - 1427 | 3345.8 - 3358 | 15.35 - 16.2 |
| 4.17725 - 4.17775 | 12.57675 - 12.57725 | 149.9 - 150.05 | 1435 - 1626.5 | 3600 - 4400 | 17.7 - 21.4 |
| 4.20725 - 4.20775 | 13.36 - 13.41 | 156.52475 - 156.52525 | 1645.5 - 1646.5 | 4500 - 5150 | 22.01 - 23.12 |
| 6.215 - 6.218 | 16.42 - 16.423 | 156.7 - 156.9 | 1660 - 1710 | 5350 - 5460 | 23.6 - 24 |
| 6.26775 - 6.26825 | 16.69475 - 16.69525 | 162.0125 - 167.17 | 1718.8 - 1722.2 | 7250 - 7750 | 31.2 - 31.8 |
| 6.31175 - 6.31225 | 16.80425 - 16.80475 | 167.72 - 173.2 | 2200 - 2300 | 8025 - 8500 | 36.43 - 36.5 |
| 8.291 - 8.294 | 25.5 - 25.67 | 240 - 285 | 2310 - 2390 | 9000 - 9200 | Above 38.6 |
| 8.362 - 8.366 | 37.5 - 38.25 | 322 - 335.4 | 2483.5 - 2500 | 9300 - 9500 | |

| | | | |
|--|---|-------------------------|-----------------------|
| Test specification: | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions | | |
| Test procedure: | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 6/22/2008 | | |
| Temperature: 24°C | Air Pressure: 1009 hPa | Relative Humidity: 58 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

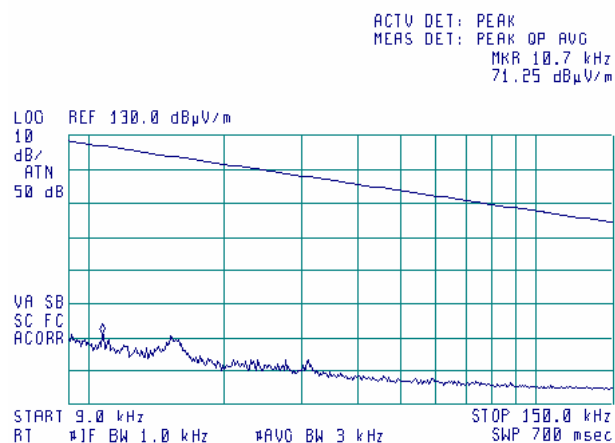
Plot 7.3.1 Radiated emission measurements from 9 to 150 kHz at the low carrier frequency

TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal



Plot 7.3.2 Radiated emission measurements from 9 to 150 kHz at the first mid carrier frequency

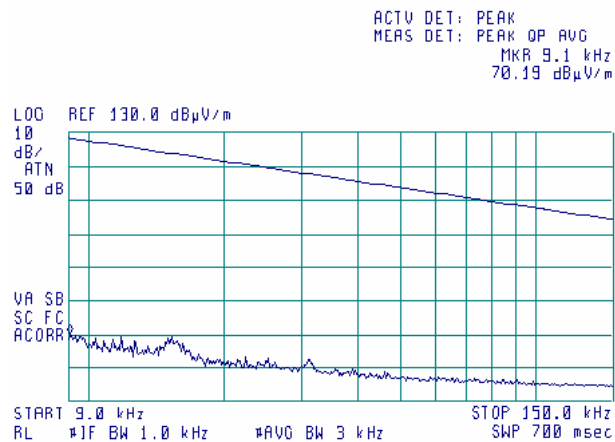
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal



| | | | |
|--|---|-------------------------|-----------------------|
| Test specification: | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions | | |
| Test procedure: | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 6/22/2008 | | |
| Temperature: 24°C | Air Pressure: 1009 hPa | Relative Humidity: 58 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

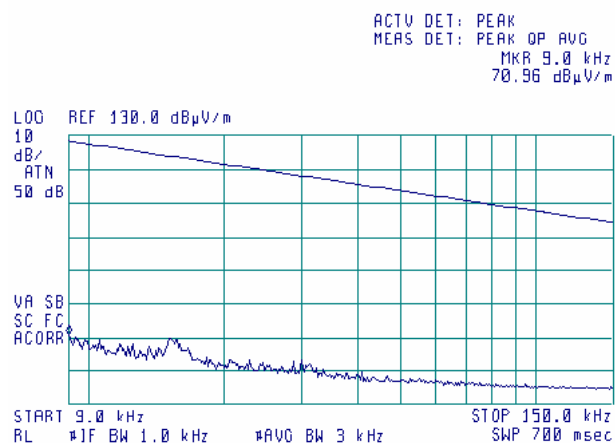
Plot 7.3.3 Radiated emission measurements from 9 to 150 kHz at the second mid carrier frequency

TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal



Plot 7.3.4 Radiated emission measurements from 9 to 150 kHz at the high carrier frequency

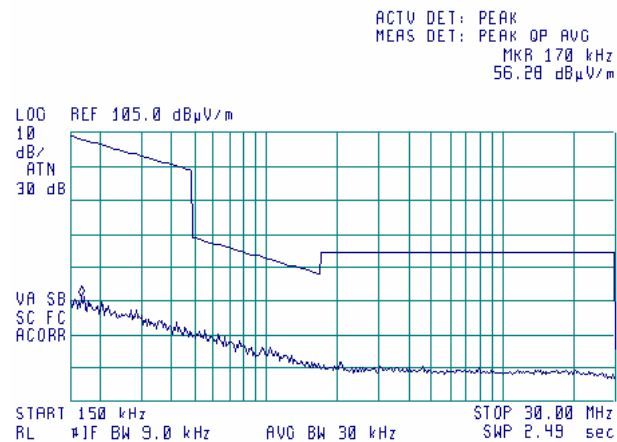
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal



| | | | |
|--|---|-------------------------|-----------------------|
| Test specification: | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions | | |
| Test procedure: | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 6/22/2008 | | |
| Temperature: 24°C | Air Pressure: 1009 hPa | Relative Humidity: 58 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

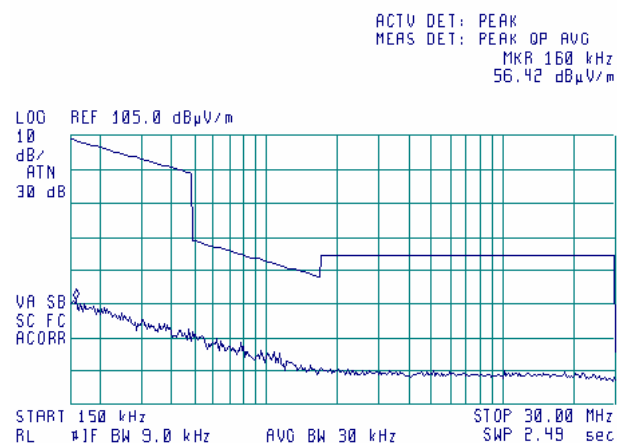
Plot 7.3.5 Radiated emission measurements from 0.15 MHz to 30 MHz at the low carrier frequency

TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal



Plot 7.3.6 Radiated emission measurements from 0.15 MHz to 30 MHz at the first mid carrier frequency

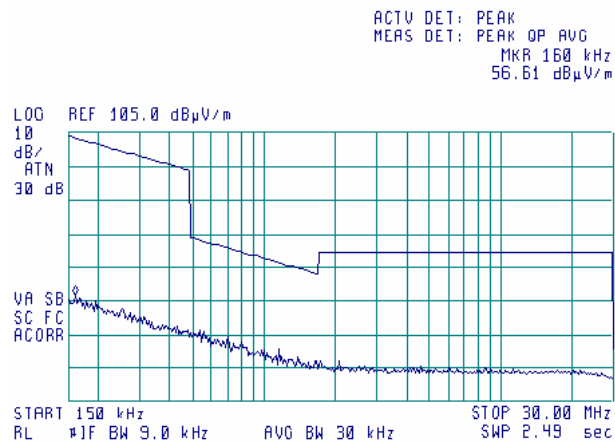
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal



| | | | |
|--|---|-------------------------|-----------------------|
| Test specification: | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions | | |
| Test procedure: | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | | |
| Test mode: | Compliance | Verdict: PASS | |
| Date: | 6/22/2008 | | |
| Temperature: 24°C | Air Pressure: 1009 hPa | Relative Humidity: 58 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

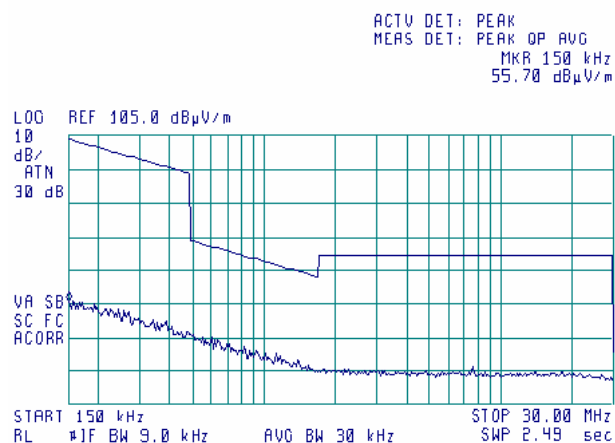
Plot 7.3.7 Radiated emission measurements from 0.15 MHz to 30 MHz at the second mid carrier frequency

TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal



Plot 7.3.8 Radiated emission measurements from 0.15 MHz to 30 MHz at the high carrier frequency

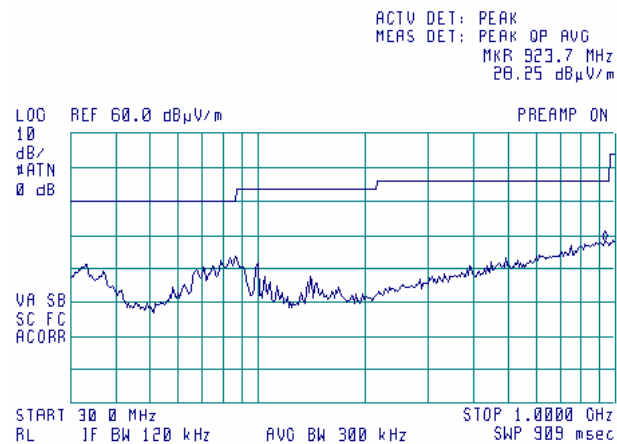
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal



| | | | |
|--|---|-------------------------|-----------------------|
| Test specification: | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions | | |
| Test procedure: | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | | |
| Test mode: | Compliance | Verdict: PASS | |
| Date: | 6/22/2008 | | |
| Temperature: 24°C | Air Pressure: 1009 hPa | Relative Humidity: 58 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

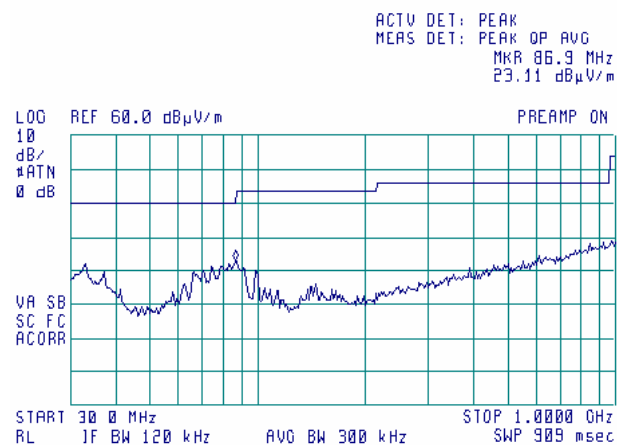
Plot 7.3.9 Radiated emission measurements from 30 MHz to 1000 MHz at the low carrier frequency

TEST SITE: Semi Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal



Plot 7.3.10 Radiated emission measurements from 30 MHz to 1000 MHz at the first mid carrier frequency

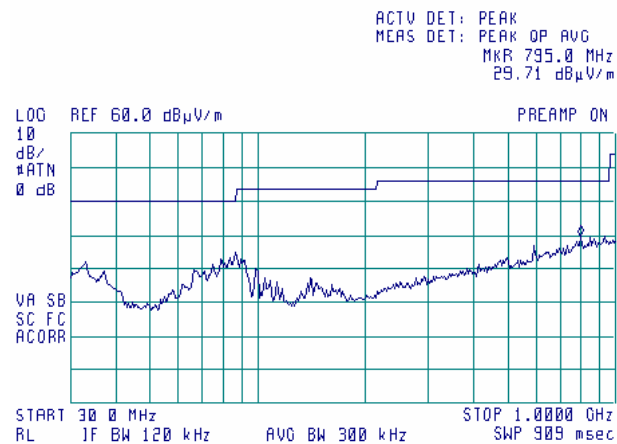
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal



| | | | |
|--|---|-------------------------|-----------------------|
| Test specification: | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions | | |
| Test procedure: | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 6/22/2008 | | |
| Temperature: 24°C | Air Pressure: 1009 hPa | Relative Humidity: 58 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

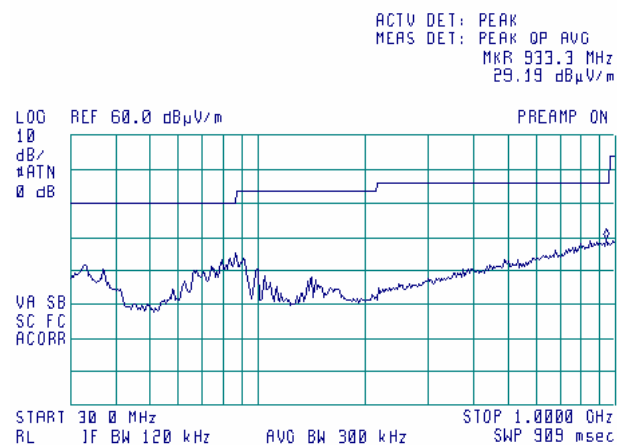
Plot 7.3.11 Radiated emission measurements from 30 MHz to 1000 MHz at the second mid carrier frequency

TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal



Plot 7.3.12 Radiated emission measurements from 30 MHz to 1000 MHz at the high carrier frequency

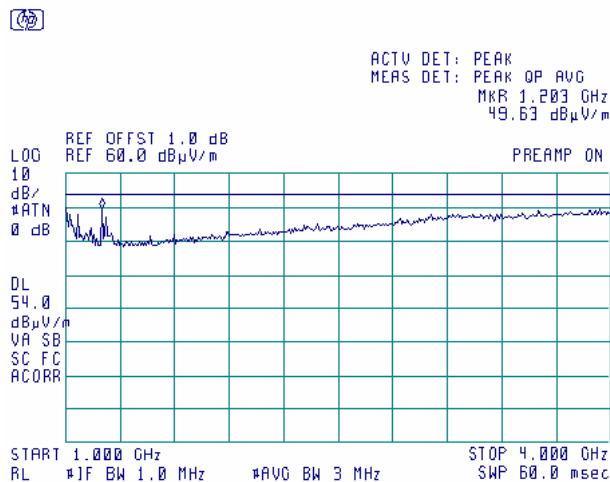
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal



| | | | |
|--|---|-------------------------|-----------------------|
| Test specification: | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions | | |
| Test procedure: | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | | |
| Test mode: | Compliance | Verdict: PASS | |
| Date: | 6/22/2008 | | |
| Temperature: 24°C | Air Pressure: 1009 hPa | Relative Humidity: 58 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

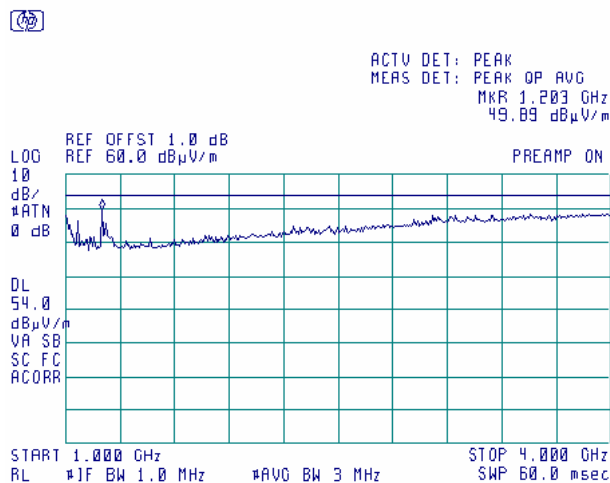
Plot 7.3.13 Radiated emission measurements from 1.0 to 4.0 GHz at the low carrier frequency

TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Peak under average limit



Plot 7.3.14 Radiated emission measurements from 1.0 to 4.0 GHz at the first mid carrier frequency

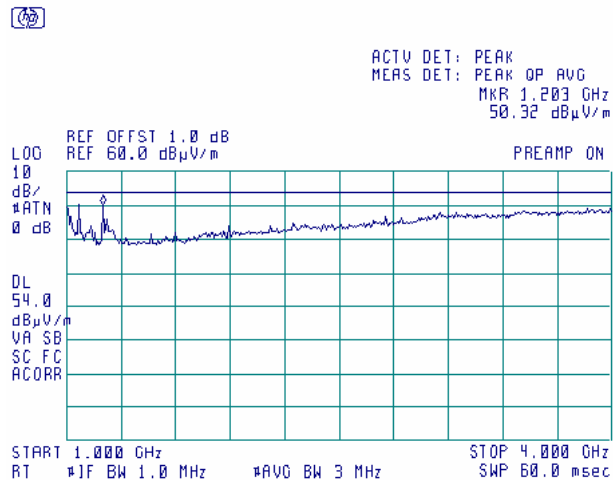
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Peak under average limit



| | | | |
|--|---|-------------------------|-----------------------|
| Test specification: | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions | | |
| Test procedure: | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 6/22/2008 | | |
| Temperature: 24°C | Air Pressure: 1009 hPa | Relative Humidity: 58 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

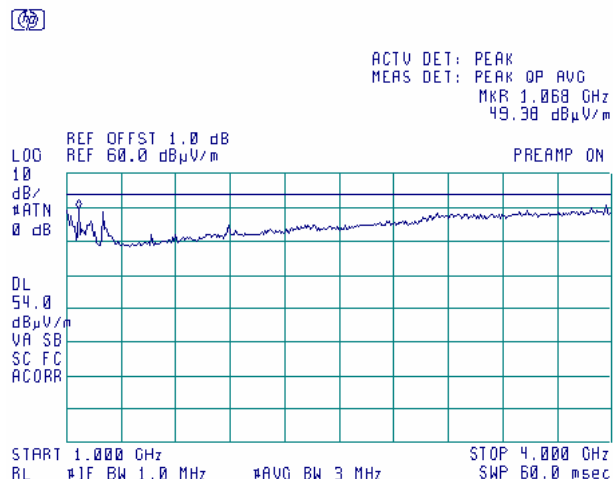
Plot 7.3.15 Radiated emission measurements from 1.0 to 4.0 GHz at the second mid carrier frequency

TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Peak under average limit



Plot 7.3.16 Radiated emission measurements from 1.0 to 4.0 GHz at the high carrier frequency

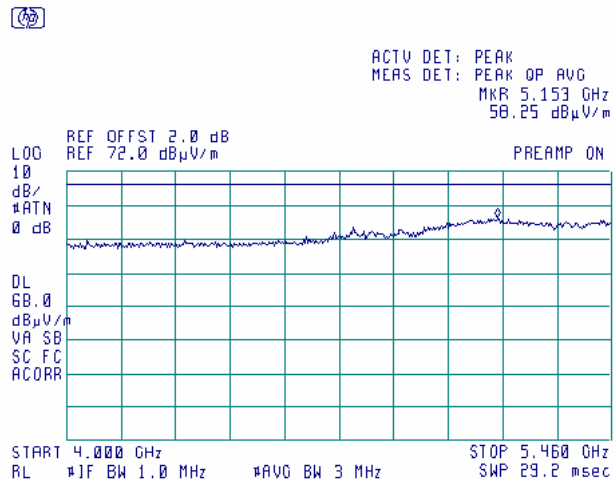
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Peak under average limit



| | | | |
|--|---|-------------------------|-----------------------|
| Test specification: | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions | | |
| Test procedure: | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | | |
| Test mode: | Compliance | Verdict: PASS | |
| Date: | 6/22/2008 | | |
| Temperature: 24°C | Air Pressure: 1009 hPa | Relative Humidity: 58 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

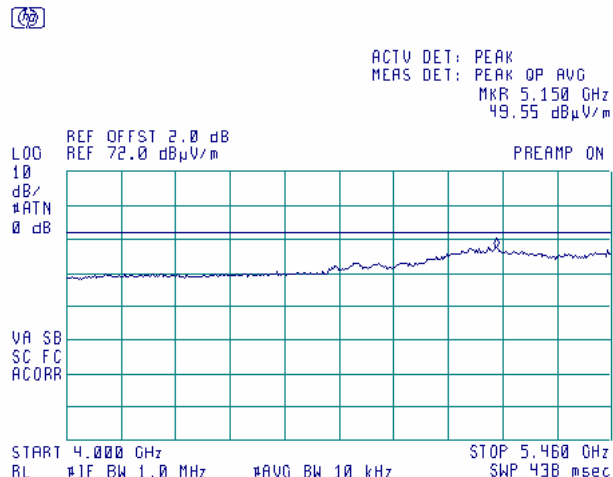
Plot 7.3.17 Radiated emission measurements from 4.0 to 5.46 GHz at the low carrier frequency

TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Peak



Plot 7.3.18 Radiated emission measurements from 4.0 to 5.46 GHz at the low carrier frequency

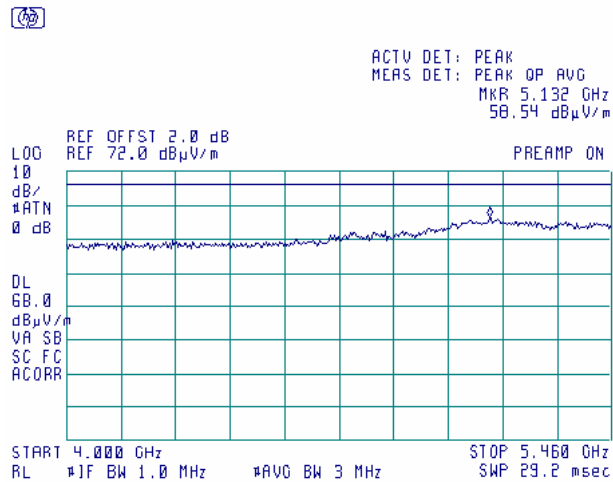
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Average



| | | | |
|--|---|-------------------------|-----------------------|
| Test specification: | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions | | |
| Test procedure: | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 6/22/2008 | | |
| Temperature: 24°C | Air Pressure: 1009 hPa | Relative Humidity: 58 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

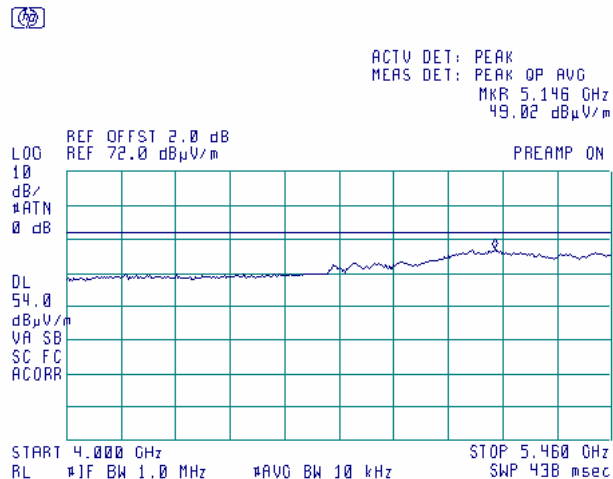
Plot 7.3.19 Radiated emission measurements from 4.0 to 5.46 GHz at the first mid carrier frequency

TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Peak



Plot 7.3.20 Radiated emission measurements from 4.0 to 5.46 GHz at the first mid carrier frequency

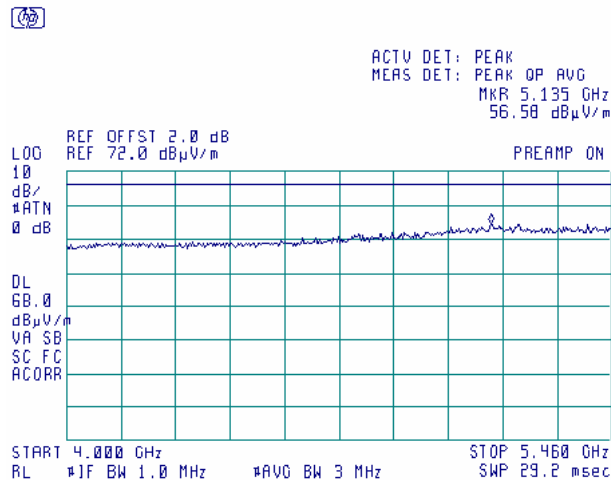
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Average



| | | | |
|--|---|-------------------------|-----------------------|
| Test specification: | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions | | |
| Test procedure: | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 6/22/2008 | | |
| Temperature: 24°C | Air Pressure: 1009 hPa | Relative Humidity: 58 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

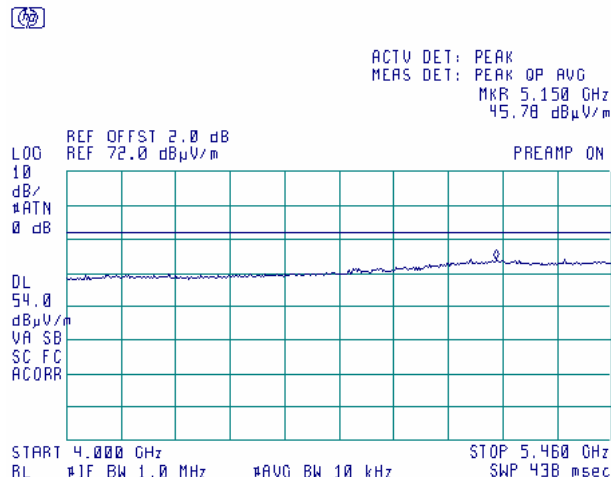
Plot 7.3.21 Radiated emission measurements from 4.0 to 5.46 GHz at the second mid carrier frequency

TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Peak



Plot 7.3.22 Radiated emission measurements from 4.0 to 5.46 GHz at the second mid carrier frequency

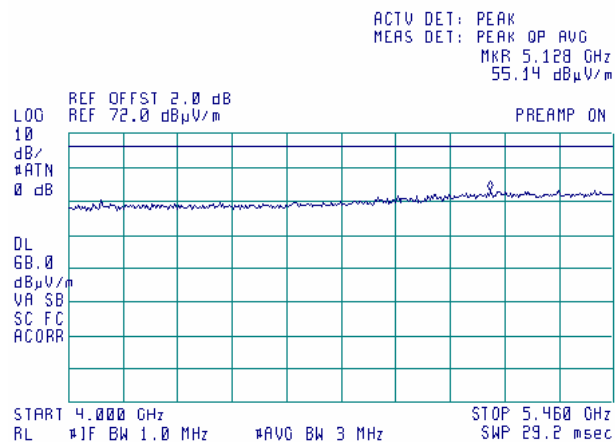
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Average



| | | | |
|--|---|-------------------------|-----------------------|
| Test specification: | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions | | |
| Test procedure: | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | | |
| Test mode: | Compliance | Verdict: PASS | |
| Date: | 6/22/2008 | | |
| Temperature: 24°C | Air Pressure: 1009 hPa | Relative Humidity: 58 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

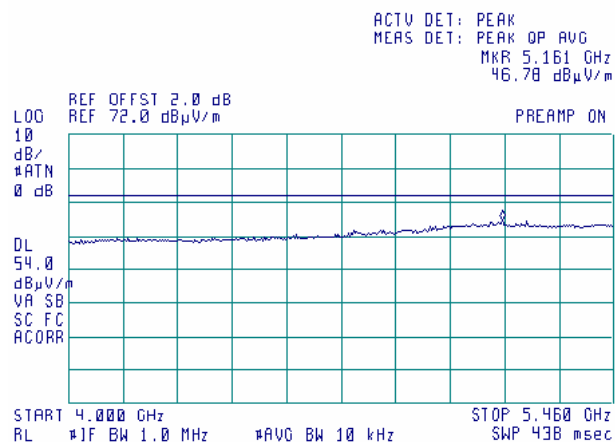
Plot 7.3.23 Radiated emission measurements from 4.0 to 5.46 GHz at the high carrier frequency

TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Peak



Plot 7.3.24 Radiated emission measurements from 4.0 to 5.46 GHz at the high carrier frequency

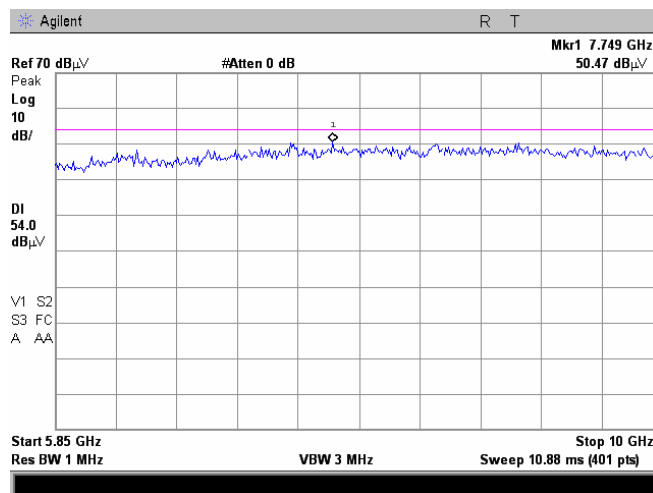
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Average



| | | | |
|--|------------------------|---|-----------------------|
| Test specification: | | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions | |
| Test procedure: | | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | |
| Test mode: | | Verdict: PASS | |
| Date: | | | |
| Temperature: 24°C | Air Pressure: 1009 hPa | Relative Humidity: 58 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

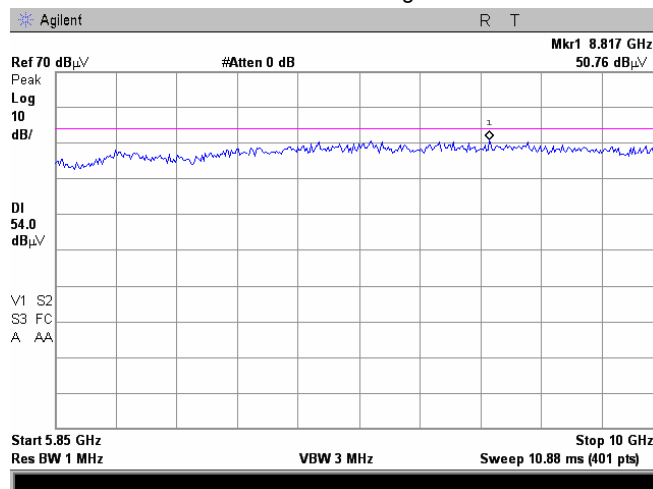
Plot 7.3.25 Radiated emission measurements from 5.85 to 10 GHz at the low carrier frequency

TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Peak



Plot 7.3.26 Radiated emission measurements from 5.85 to 10 GHz at the first mid carrier frequency

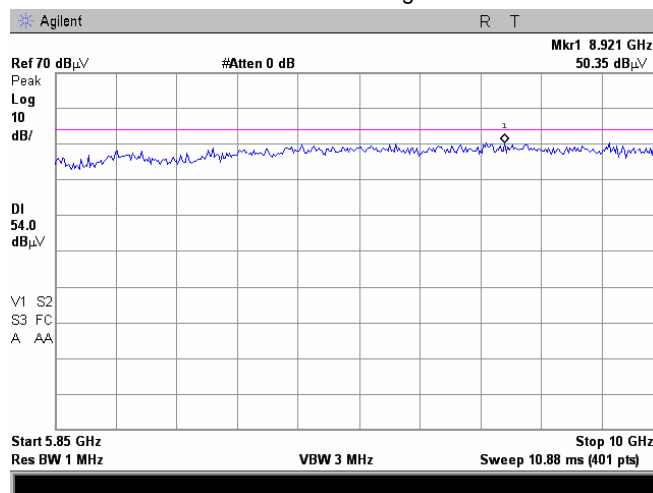
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Peak under average limit



| | | | |
|--|---|-------------------------|-----------------------|
| Test specification: | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions | | |
| Test procedure: | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | | |
| Test mode: | Compliance | Verdict: PASS | |
| Date: | 6/22/2008 | | |
| Temperature: 24°C | Air Pressure: 1009 hPa | Relative Humidity: 58 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

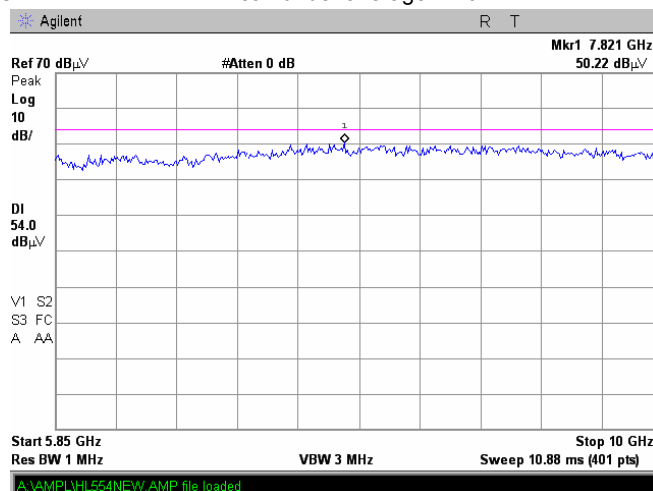
Plot 7.3.27 Radiated emission measurements from 5.85 to 10 GHz at the second mid carrier frequency

TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Peak under average limit



Plot 7.3.28 Radiated emission measurements from 5.85 to 10 GHz at the high carrier frequency

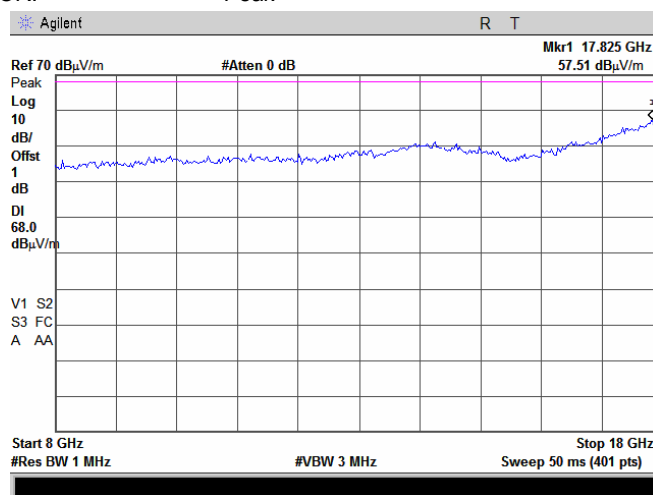
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Peak under average limit



| | | | |
|--|---|-------------------------|-----------------------|
| Test specification: | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions | | |
| Test procedure: | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 6/22/2008 | | |
| Temperature: 24°C | Air Pressure: 1009 hPa | Relative Humidity: 58 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

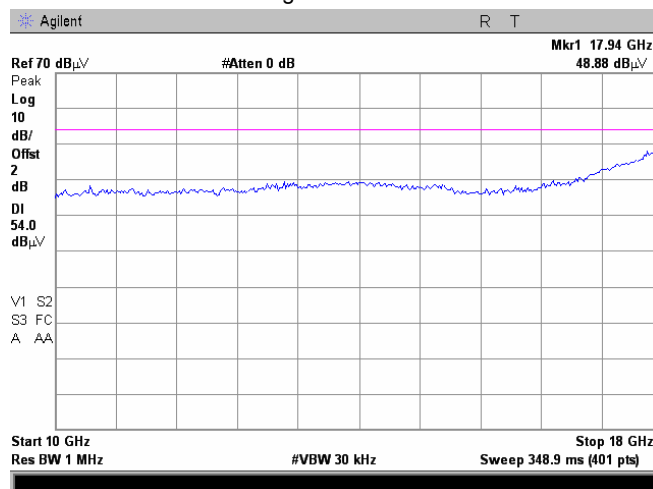
Plot 7.3.29 Radiated emission measurements from 10 to 18 GHz at the low carrier frequency

TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Peak



Plot 7.3.30 Radiated emission measurements from 10 to 18 GHz at the low carrier frequency

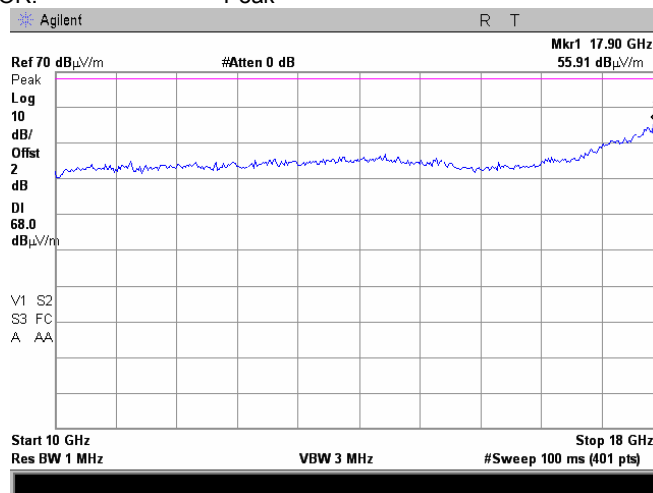
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Average



| | | | |
|--|---|-------------------------|-----------------------|
| Test specification: | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions | | |
| Test procedure: | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | | |
| Test mode: | Compliance | Verdict: PASS | |
| Date: | 6/22/2008 | | |
| Temperature: 24°C | Air Pressure: 1009 hPa | Relative Humidity: 58 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

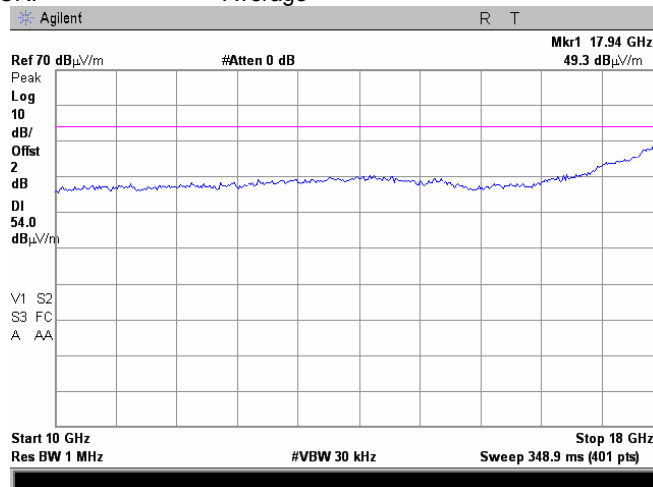
Plot 7.3.31 Radiated emission measurements from 10 to 18 GHz at the first mid carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Peak



Plot 7.3.32 Radiated emission measurements from 10 to 18 GHz at the first mid carrier frequency

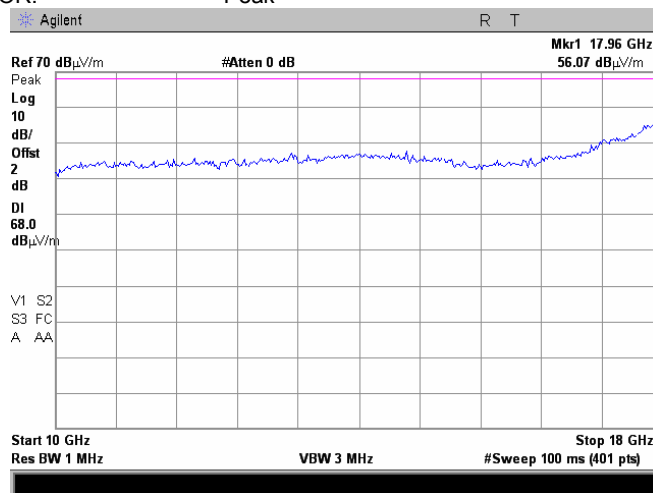
TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Average



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions | |
| Test procedure: | | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | |
| Test mode: | | Compliance | Verdict: PASS |
| Date: | | 6/22/2008 | |
| Temperature: 24°C | Air Pressure: 1009 hPa | Relative Humidity: 58 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

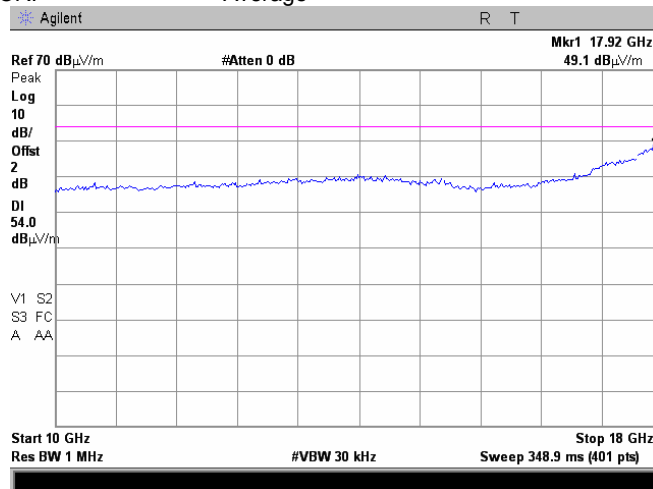
Plot 7.3.33 Radiated emission measurements from 10 to 18 GHz at the second mid carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Peak



Plot 7.3.34 Radiated emission measurements from 10 to 18 GHz at the second mid carrier frequency

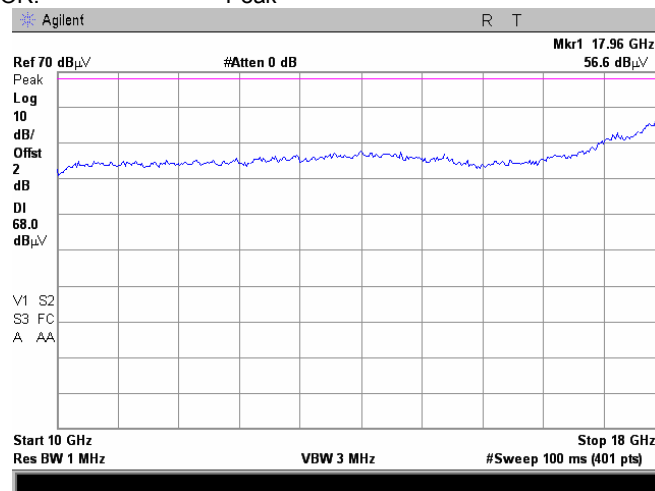
TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Average



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions | |
| Test procedure: | | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | |
| Test mode: | | Compliance | Verdict: PASS |
| Date: | | 6/22/2008 | |
| Temperature: 24°C | Air Pressure: 1009 hPa | Relative Humidity: 58 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

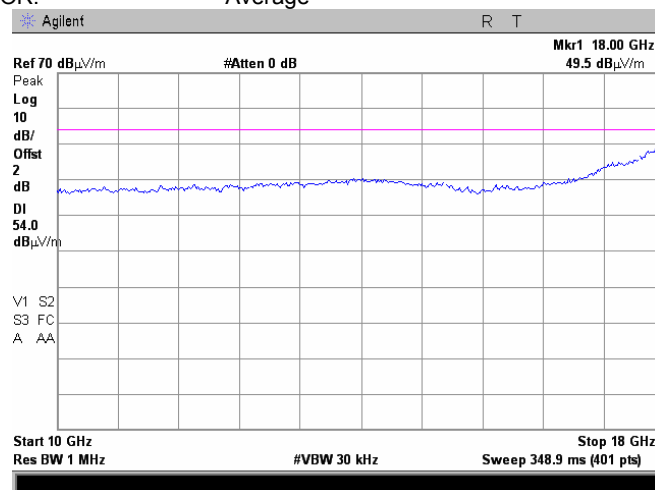
Plot 7.3.35 Radiated emission measurements from 10 to 18 GHz at the high carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Peak



Plot 7.3.36 Radiated emission measurements from 8 to 18 GHz at the high carrier frequency

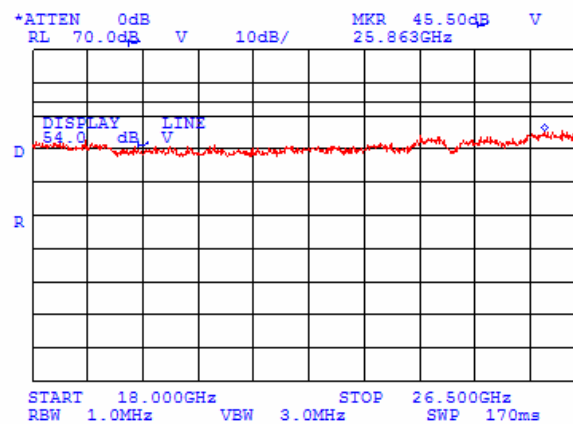
TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Average



| | | | |
|--|------------------------|---|-----------------------|
| Test specification: | | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions | |
| Test procedure: | | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | |
| Test mode: | | Verdict: PASS | |
| Date: | | | |
| Temperature: 24°C | Air Pressure: 1009 hPa | Relative Humidity: 58 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

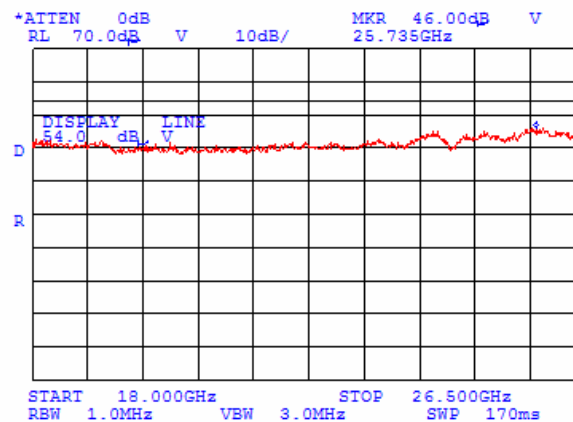
Plot 7.3.37 Radiated emission measurements from 18 to 26.5 GHz at the low carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Peak under average limit



Plot 7.3.38 Radiated emission measurements from 18 to 26.5 GHz at the first mid carrier frequency

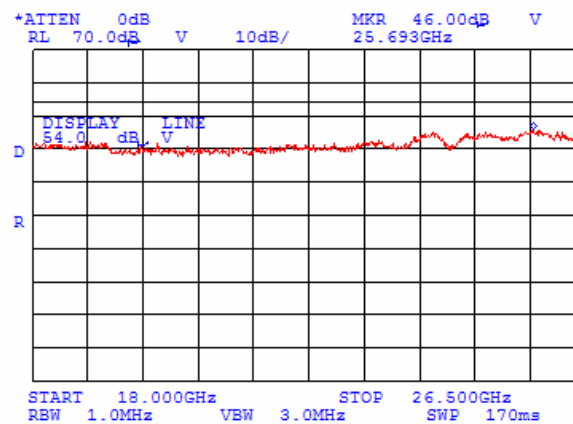
TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Peak under average limit



| | | | |
|--|---|-------------------------|-----------------------|
| Test specification: | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions | | |
| Test procedure: | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | | |
| Test mode: | Compliance | Verdict: PASS | |
| Date: | 6/22/2008 | | |
| Temperature: 24°C | Air Pressure: 1009 hPa | Relative Humidity: 58 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

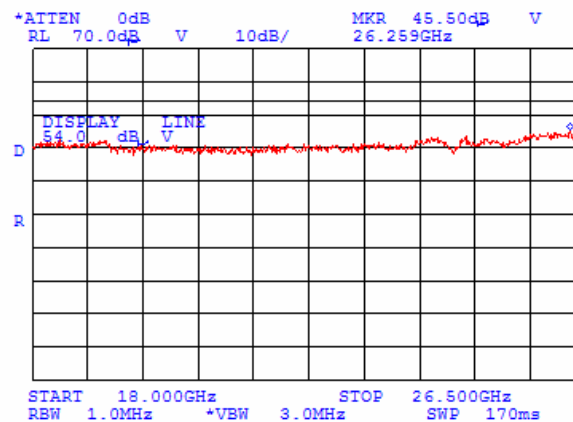
Plot 7.3.39 Radiated emission measurements from 18 to 26.5 GHz at the second mid carrier frequency (5485MHz)

TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Peak under average limit



. Plot 7.3.40 Radiated emission measurements from 18 to 26.5 GHz at the high carrier frequency (5485MHz)

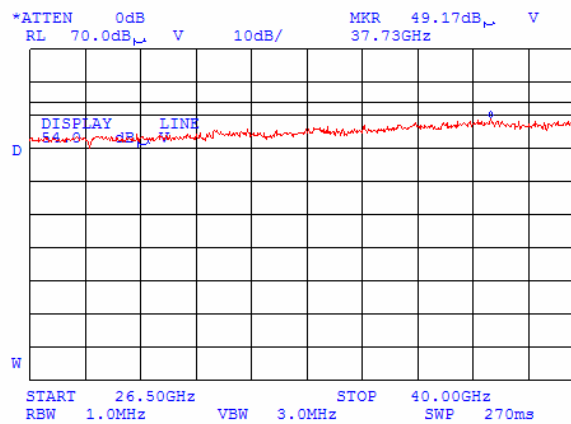
TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Peak under average limit



| | | | |
|--|---|-------------------------|-----------------------|
| Test specification: | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions | | |
| Test procedure: | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 6/22/2008 | | |
| Temperature: 24°C | Air Pressure: 1009 hPa | Relative Humidity: 58 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

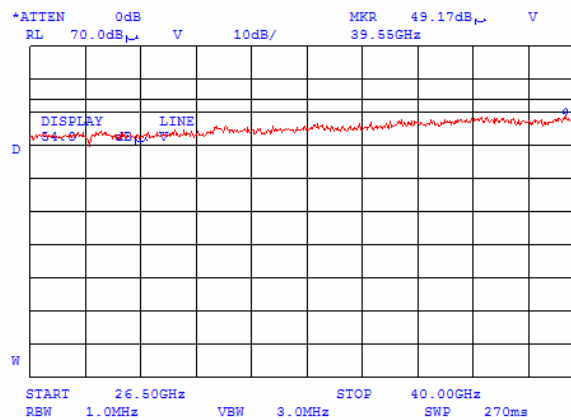
Plot 7.3.41 Radiated emission measurements from 26.5 to 40 GHz at the low carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Peak under average limit



Plot 7.3.42 Radiated emission measurements from 26.5 to 40 GHz at the first mid carrier frequency

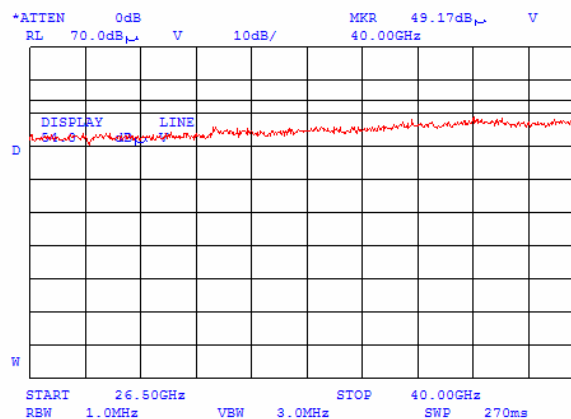
TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Peak under average limit



| | | | |
|--|------------------------|---|-----------------------|
| Test specification: | | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions | |
| Test procedure: | | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | |
| Test mode: | | Verdict: PASS | |
| Date: | | | |
| Temperature: 24°C | Air Pressure: 1009 hPa | Relative Humidity: 58 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

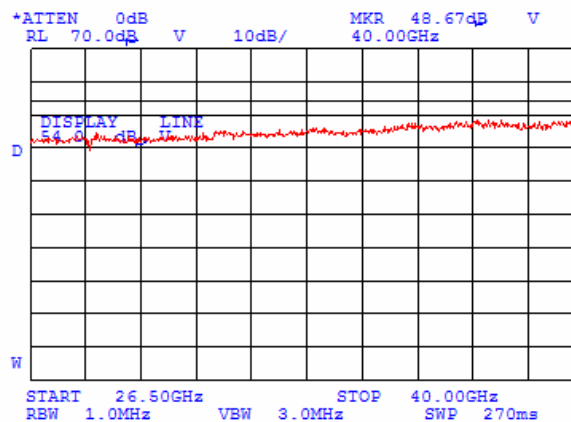
Plot 7.3.43 Radiated emission measurements from 26.5 to 40 GHz at the second mid carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Peak under average limit



Plot 7.3.44 Radiated emission measurements from 26.5 to 40 GHz at the high carrier frequency (5475MHz)

TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Peak under average limit



| | | | |
|---|---|--------------------------------|------------------------------|
| Test specification: | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions | | |
| Test procedure: | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 6/22/2008 | | |
| Temperature: 24°C | Air Pressure: 1009 hPa | Relative Humidity: 58 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

Table 7.3.6 Field strength of spurious emissions below 1 GHz within restricted bands

ASSIGNED FREQUENCY RANGE: 5470 - 5725 MHz
 INVESTIGATED FREQUENCY RANGE: 0.009 - 1000 MHz
 TEST SITE: Semi Anechoic Chamber
 TEST DISTANCE: 3 m
 MODULATION: OFDM 64QAM
 BIT RATE: 32.5 Mbps
 DUTY CYCLE: 100 %
 TRANSMITTER OUTPUT POWER: Maximum
 RESOLUTION BANDWIDTH: 1.0 kHz (9 kHz – 150 kHz)
 9.0 kHz (150 kHz – 30 MHz)
 120 kHz (30 MHz – 1000 MHz)
 VIDEO BANDWIDTH: > Resolution bandwidth
 TEST ANTENNA TYPE: Active loop (9 kHz – 30 MHz)
 Biconilog (30 MHz – 1000 MHz)
 Double ridged guide (above 1000 MHz)

| Double ridge guide (above 1000 MHz) | | | | | | | | | |
|-------------------------------------|----------------|-----------------------------|-----------------|-------------|------------------|-------------------|-------------------------------|---------|--|
| Frequency, MHz | Peak, dB(μV/m) | Quasi-peak dB(μV/m) | | | Antenna polariz. | Antenna height, m | Turntable position**, degrees | Verdict | |
| | | Measured emission, dB(μV/m) | Limit, dB(μV/m) | Margin, dB* | | | | | |
| Low channel (5490 MHz) | | | | | | | | | |
| 800.0 | 36.90 | 34.00 | 46.00 | -12.00 | Vertical | 1.6 | 0 | Pass | |
| 892.0 | 39.70 | 37.20 | 46.00 | -8.80 | Vertical | 1.4 | 120 | | |
| 933.3 | 39.50 | 37.50 | 46.00 | -8.50 | Vertical | 1.2 | 120 | | |
| First mid channel (5580 MHz) | | | | | | | | | |
| 800.0 | 37.30 | 34.10 | 46.00 | -11.90 | Vertical | 1.6 | 0 | | |
| 892.0 | 39.90 | 37.10 | 46.00 | -8.90 | Vertical | 1.4 | 120 | | |
| 933.3 | 39.30 | 37.60 | 46.00 | -8.40 | Vertical | 1.2 | 120 | | |
| Second mid channel (5670 MHz) | | | | | | | | | |
| 800.0 | 37.50 | 34.00 | 46.00 | -12.00 | Vertical | 1.6 | 0 | | |
| 892.0 | 39.50 | 36.90 | 46.00 | -9.10 | Vertical | 1.4 | 120 | | |
| 933.3 | 39.40 | 37.50 | 46.00 | -8.50 | Vertical | 1.2 | 120 | | |
| High channel (5705 MHz) | | | | | | | | | |
| 800.0 | 37.90 | 34.00 | 46.00 | -12.00 | Vertical | 1.6 | 0 | | |
| 892.0 | 40.30 | 36.90 | 46.00 | -9.10 | Vertical | 1.4 | 120 | | |
| 933.3 | 39.30 | 37.50 | 46.00 | -8.50 | Vertical | 1.2 | 120 | | |

*- Margin = Measured emission – specification limit.

** - EUT front panel refers to 0 degrees position of turntable.

Reference numbers of test equipment used

| | | | | | | | |
|---------|---------|---------|---------|---------|---------|---------|---------|
| HL 0446 | HL 0521 | HL 0589 | HL 0604 | HL 1425 | HL 1556 | HL 1947 | HL 1984 |
| HL 2009 | HL 2909 | | | | | | |

Full description is given in Appendix A.

| | | | |
|---|---|--------------------------------|------------------------------|
| Test specification: | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions | | |
| Test procedure: | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 6/22/2008 | | |
| Temperature: 24°C | Air Pressure: 1009 hPa | Relative Humidity: 58 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

Table 7.3.7 Field strength of spurious emissions above 1 GHz within restricted bands

ASSIGNED FREQUENCY RANGE: 5470 - 5725 MHz
 INVESTIGATED FREQUENCY RANGE: 0.009 - 40000 MHz
 TEST SITE: Semi Anechoic Chamber
 TEST DISTANCE: 3 m
 MODULATION: OFDM, 64QAM
 BIT RATE: 32.5 Mbps
 DUTY CYCLE: 100 %
 TRANSMITTER OUTPUT POWER: Maximum
 RESOLUTION BANDWIDTH: 1000 kHz
 VIDEO BANDWIDTH: > Resolution bandwidth
 TEST ANTENNA TYPE: Double ridged guide

| Frequency, MHz | Peak, dB(μV/m) | | | Average dB(μV/m) | | | Ant. polarization | Ant. height, m | Turntable position**, degrees | Verdict | |
|-------------------------------|-----------------------------------|--------------------|----------------|-----------------------------------|--------------------|----------------|----------------------|----------------------|-------------------------------------|---------|--|
| | Measured emission, dB(μV/m) | Limit, dB(μV/m) | Margin, dB* | Measured emission, dB(μV/m) | Limit, dB(μV/m) | Margin, dB* | | | | | |
| Low channel (5490 MHz) | | | | | | | | | | | |
| 1025.3 | 46.50 | 74.00 | -27.50 | 40.65 | 54.00 | -13.35 | Vertical | 1.0 | 0 | Pass | |
| 1066.6 | 54.75 | 74.00 | -19.25 | 47.66 | 54.00 | -6.34 | Vertical | 1.0 | 0 | | |
| 1200.0 | 57.20 | 74.00 | -16.80 | 53.33 | 54.00 | -0.67 | Vertical | 1.0 | 0 | | |
| 1466.6 | 41.04 | 74.00 | -32.96 | 31.61 | 54.00 | -22.39 | Vertical | 1.0 | 0 | | |
| 5149.0 | 54.31 | 74.00 | -19.69 | 41.50 | 54.00 | -12.50 | Vertical | 1.0 | 0 | | |
| First mid channel (5580 MHz) | | | | | | | | | | | |
| 1066.6 | 46.35 | 74.00 | -27.65 | 40.55 | 54.00 | -13.45 | Vertical | 1.0 | 0 | | |
| 1200.0 | 56.90 | 74.00 | -17.10 | 53.17 | 54.00 | -0.83 | Vertical | 1.0 | 0 | | |
| Second mid channel (5670 MHz) | | | | | | | | | | | |
| 1066.6 | 46.20 | 74.00 | -27.80 | 40.45 | 54.00 | -13.55 | Vertical | 1.0 | 0 | | |
| 1200.0 | 57.30 | 74.00 | -16.70 | 53.15 | 54.00 | -0.85 | Vertical | 1.0 | 0 | | |
| High channel (5705 MHz) | | | | | | | | | | | |
| 1066.6 | 46.40 | 74.00 | -27.60 | 40.50 | 54.00 | -13.50 | Vertical | 1.0 | 0 | | |
| 1200.0 | 57.49 | 74.00 | -16.51 | 53.31 | 54.00 | -0.69 | Vertical | 1.0 | 0 | | |
| 5149.0 | 54.04 | 74.00 | -19.96 | 41.04 | 54.00 | -12.96 | Vertical | 1.0 | 0 | | |

*- Margin = Measured emission – specification limit.

** - EUT front panel refers to 0 degrees position of turntable.

Reference numbers of test equipment used

| | | | | | | | |
|---------|---------|---------|---------|---------|---------|---------|---------|
| HL 0446 | HL 0521 | HL 0589 | HL 0604 | HL 1425 | HL 1556 | HL 1947 | HL 1984 |
| HL 2009 | HL 2909 | | | | | | |

Full description is given in Appendix A.

| | | | |
|--|--|---|-------------------------|
| Test specification: | | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions | |
| Test procedure: | | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | |
| Test mode: | | Verdict: PASS | |
| Date: | | | |
| Temperature: 24°C | | Air Pressure: 1009 hPa | Relative Humidity: 58 % |
| | | | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

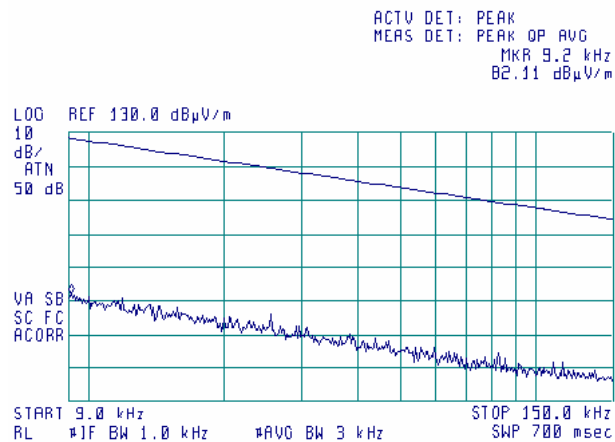
Table 7.3.8 Restricted bands

| MHz | MHz | MHz | MHz | MHz | GHz |
|-------------------|---------------------|-----------------------|-----------------|---------------|---------------|
| 0.09 - 0.11 | 8.37625 - 8.38675 | 73 - 74.6 | 399.9 - 410 | 2690 - 2900 | 10.6 - 12.7 |
| 0.495 - 0.505 | 8.41425 - 8.41475 | 74.8 - 75.2 | 608 - 614 | 3260 - 3267 | 13.25 - 13.4 |
| 2.1735 - 2.1905 | 12.29 - 12.293 | 108 - 121.94 | 960 - 1240 | 3332 - 3339 | 14.47 - 14.5 |
| 4.125 - 4.128 | 12.51975 - 12.52025 | 123 - 138 | 1300 - 1427 | 3345.8 - 3358 | 15.35 - 16.2 |
| 4.17725 - 4.17775 | 12.57675 - 12.57725 | 149.9 - 150.05 | 1435 - 1626.5 | 3600 - 4400 | 17.7 - 21.4 |
| 4.20725 - 4.20775 | 13.36 - 13.41 | 156.52475 - 156.52525 | 1645.5 - 1646.5 | 4500 - 5150 | 22.01 - 23.12 |
| 6.215 - 6.218 | 16.42 - 16.423 | 156.7 - 156.9 | 1660 - 1710 | 5350 - 5460 | 23.6 - 24 |
| 6.26775 - 6.26825 | 16.69475 - 16.69525 | 162.0125 - 167.17 | 1718.8 - 1722.2 | 7250 - 7750 | 31.2 - 31.8 |
| 6.31175 - 6.31225 | 16.80425 - 16.80475 | 167.72 - 173.2 | 2200 - 2300 | 8025 - 8500 | 36.43 - 36.5 |
| 8.291 - 8.294 | 25.5 - 25.67 | 240 - 285 | 2310 - 2390 | 9000 - 9200 | Above 38.6 |
| 8.362 - 8.366 | 37.5 - 38.25 | 322 - 335.4 | 2483.5 - 2500 | 9300 - 9500 | |

| | | | |
|--|---|-------------------------|-----------------------|
| Test specification: | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions | | |
| Test procedure: | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 6/22/2008 | | |
| Temperature: 24°C | Air Pressure: 1009 hPa | Relative Humidity: 58 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

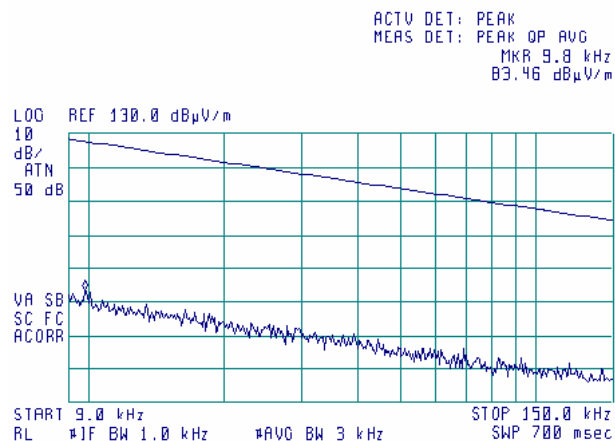
Plot 7.3.45 Radiated emission measurements from 9 to 150 kHz at the low carrier frequency

TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal



Plot 7.3.46 Radiated emission measurements from 9 to 150 kHz at the first mid carrier frequency

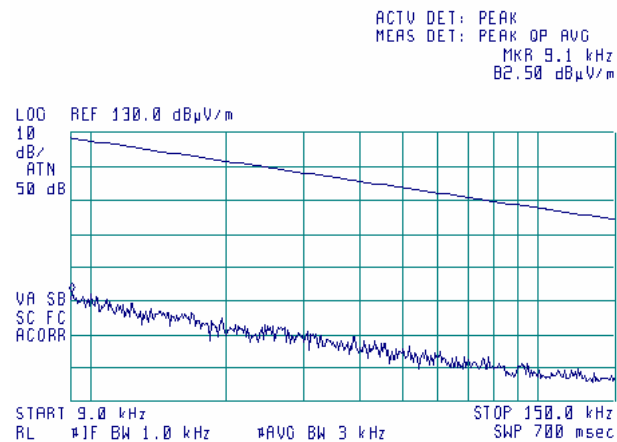
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal



| | | | |
|--|---|-------------------------|-----------------------|
| Test specification: | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions | | |
| Test procedure: | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | | |
| Test mode: | Compliance | Verdict: PASS | |
| Date: | 6/22/2008 | | |
| Temperature: 24°C | Air Pressure: 1009 hPa | Relative Humidity: 58 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

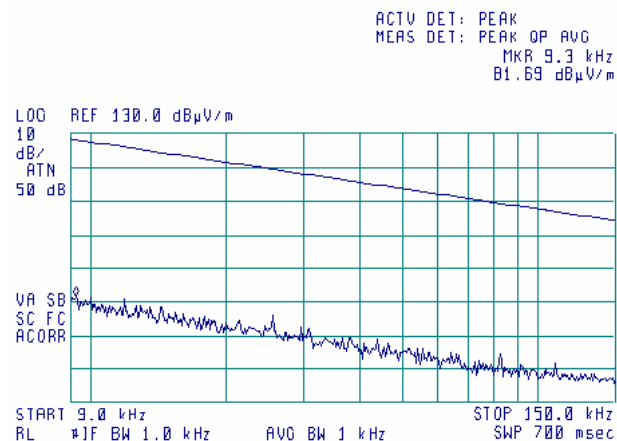
Plot 7.3.47 Radiated emission measurements from 9 to 150 kHz at the second mid carrier frequency

TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal



Plot 7.3.48 Radiated emission measurements from 9 to 150 kHz at the high carrier frequency

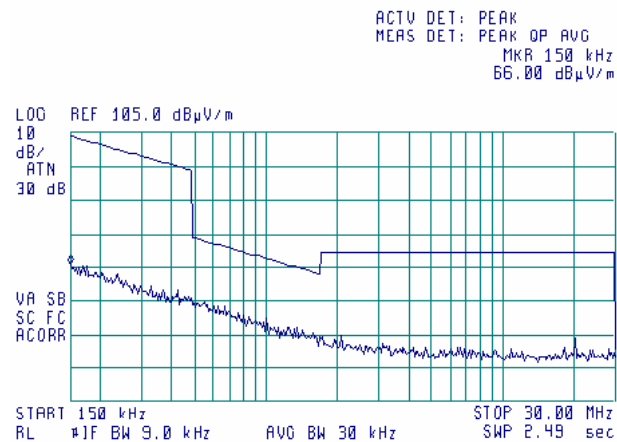
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal



| | | | |
|--|---|-------------------------|-----------------------|
| Test specification: | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions | | |
| Test procedure: | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 6/22/2008 | | |
| Temperature: 24°C | Air Pressure: 1009 hPa | Relative Humidity: 58 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

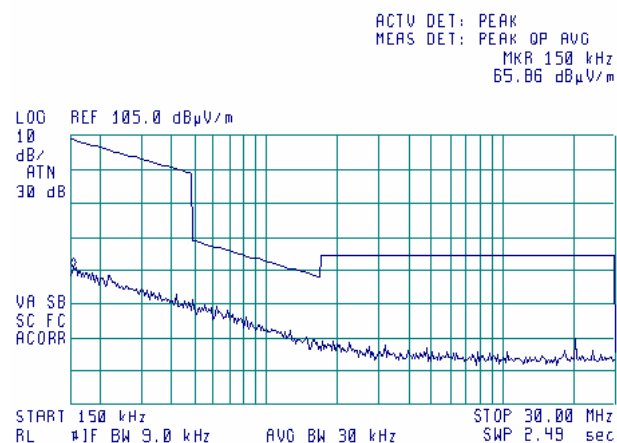
Plot 7.3.49 Radiated emission measurements from 0.15 MHz to 30 MHz at the low carrier frequency

TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal



Plot 7.3.50 Radiated emission measurements from 0.15 MHz to 30 MHz at the first mid carrier frequency

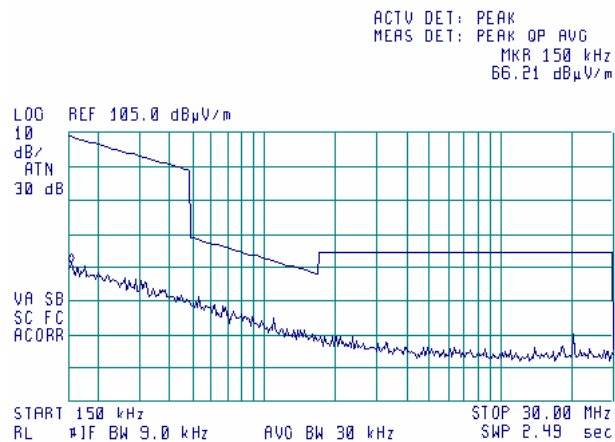
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal



| | | | |
|--|---|-------------------------|-----------------------|
| Test specification: | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions | | |
| Test procedure: | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 6/22/2008 | | |
| Temperature: 24°C | Air Pressure: 1009 hPa | Relative Humidity: 58 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

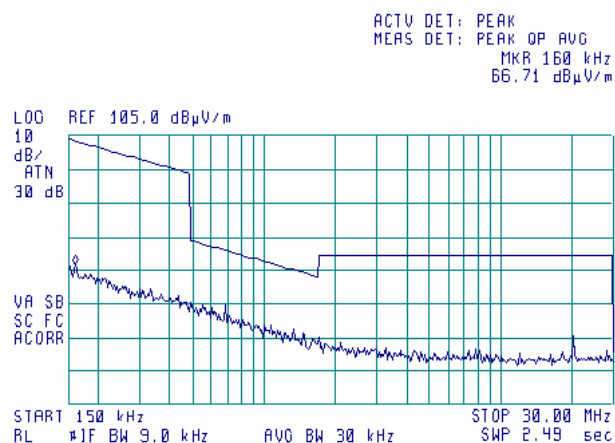
Plot 7.3.51 Radiated emission measurements from 0.15 MHz to 30 MHz at the second mid carrier frequency

TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal



Plot 7.3.52 Radiated emission measurements from 0.15 MHz to 30 MHz at the high carrier frequency

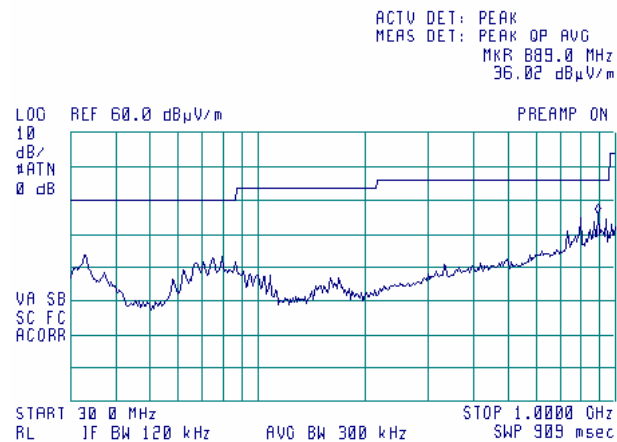
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal



| | | | |
|--|---|-------------------------|-----------------------|
| Test specification: | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions | | |
| Test procedure: | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | | |
| Test mode: | Compliance | Verdict: PASS | |
| Date: | 6/22/2008 | | |
| Temperature: 24°C | Air Pressure: 1009 hPa | Relative Humidity: 58 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

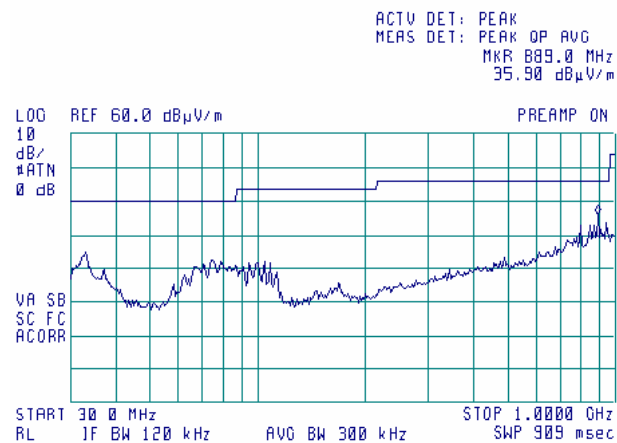
Plot 7.3.53 Radiated emission measurements from 30 MHz to 1000 MHz at the low carrier frequency

TEST SITE: Semi Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal



Plot 7.3.54 Radiated emission measurements from 30 MHz to 1000 MHz at the first mid carrier frequency

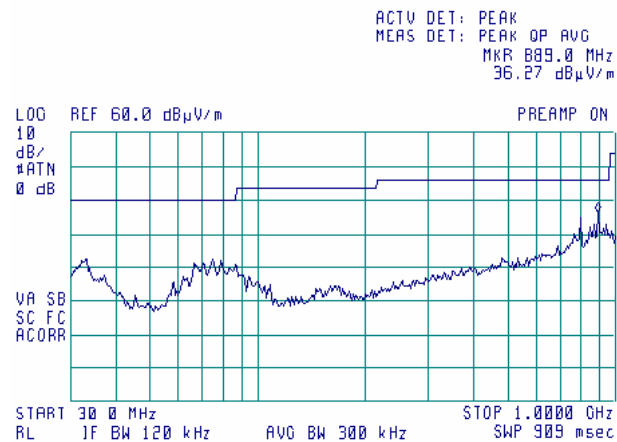
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal



| | | | |
|--|---|-------------------------|-----------------------|
| Test specification: | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions | | |
| Test procedure: | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 6/22/2008 | | |
| Temperature: 24°C | Air Pressure: 1009 hPa | Relative Humidity: 58 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

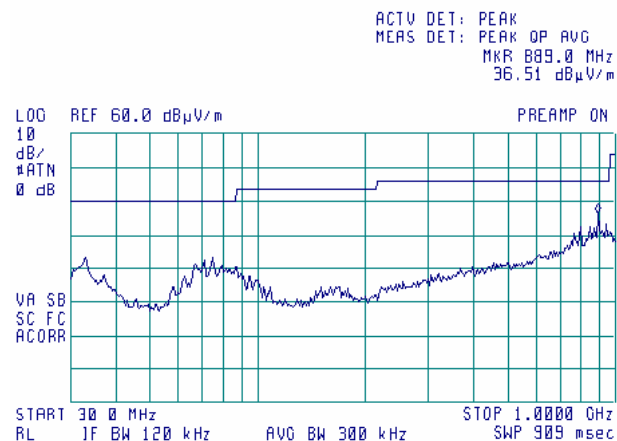
Plot 7.3.55 Radiated emission measurements from 30 MHz to 1000 MHz at the second mid carrier frequency

TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal



Plot 7.3.56 Radiated emission measurements from 30 MHz to 1000 MHz at the high carrier frequency

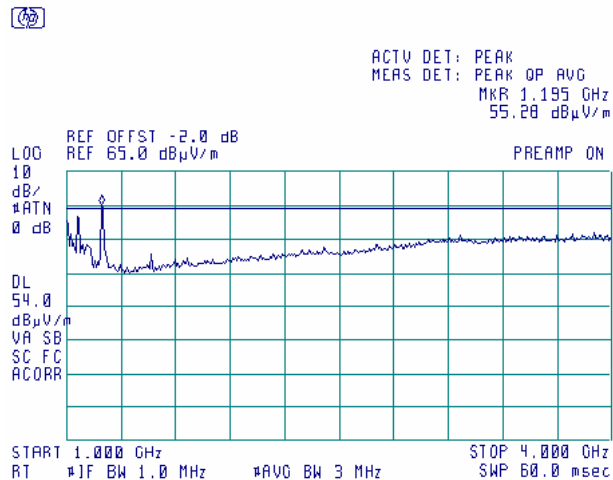
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal



| | | | |
|--|---|-------------------------|-----------------------|
| Test specification: | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions | | |
| Test procedure: | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 6/22/2008 | | |
| Temperature: 24°C | Air Pressure: 1009 hPa | Relative Humidity: 58 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

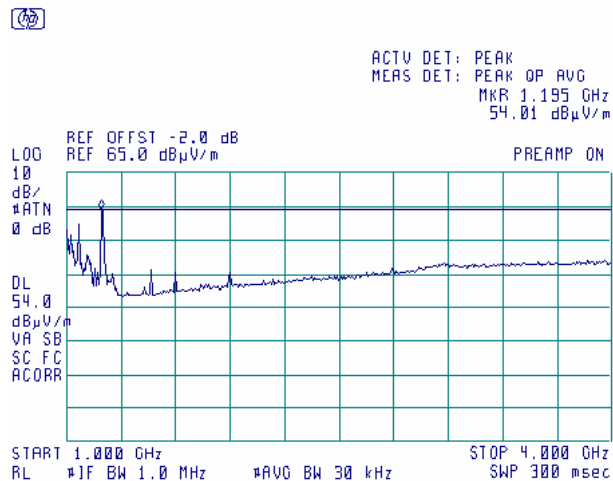
Plot 7.3.57 Radiated emission measurements from 1.0 to 4.0 GHz at the low carrier frequency

TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Peak



Plot 7.3.58 Radiated emission measurements from 1.0 to 4.0 GHz at the low carrier frequency

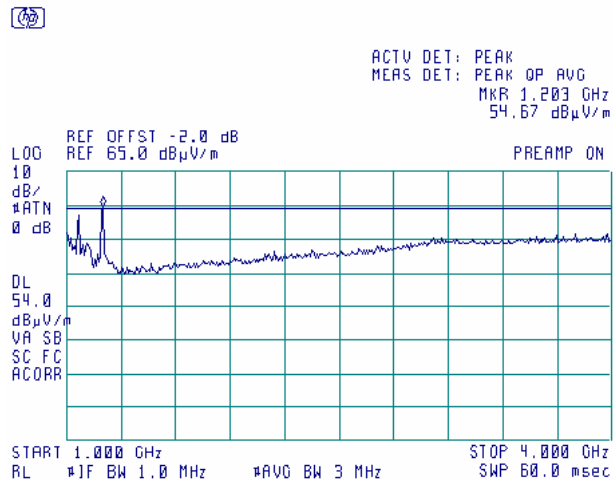
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Average



| | | | |
|--|---|-------------------------|-----------------------|
| Test specification: | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions | | |
| Test procedure: | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | | |
| Test mode: | Compliance | Verdict: PASS | |
| Date: | 6/22/2008 | | |
| Temperature: 24°C | Air Pressure: 1009 hPa | Relative Humidity: 58 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

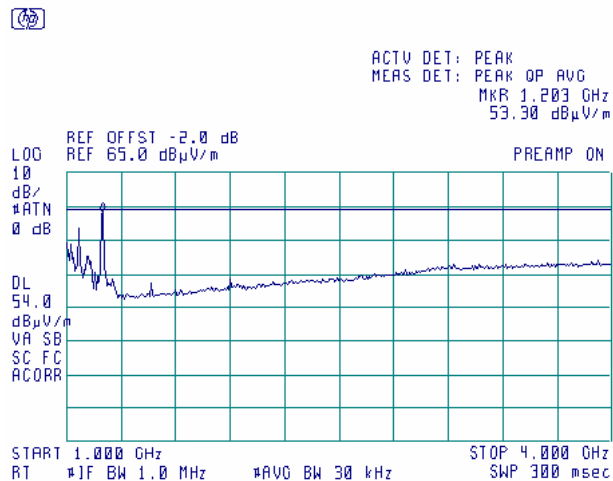
Plot 7.3.59 Radiated emission measurements from 1.0 to 4.0 GHz at the first mid carrier frequency

TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Peak



Plot 7.3.60 Radiated emission measurements from 1.0 to 4.0 GHz at the first mid carrier frequency

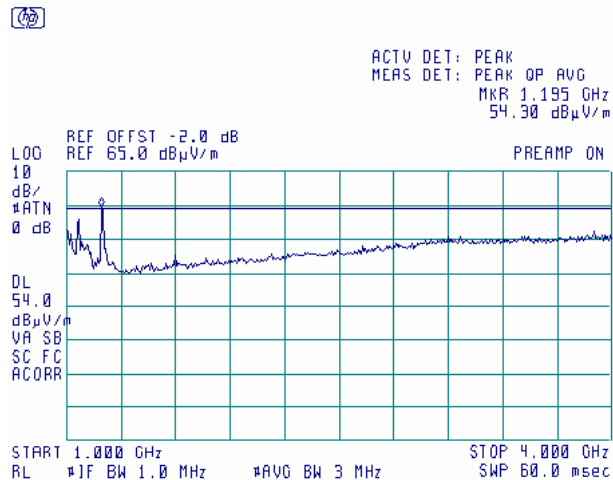
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Average



| | | | |
|--|---|-------------------------|-----------------------|
| Test specification: | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions | | |
| Test procedure: | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 6/22/2008 | | |
| Temperature: 24°C | Air Pressure: 1009 hPa | Relative Humidity: 58 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

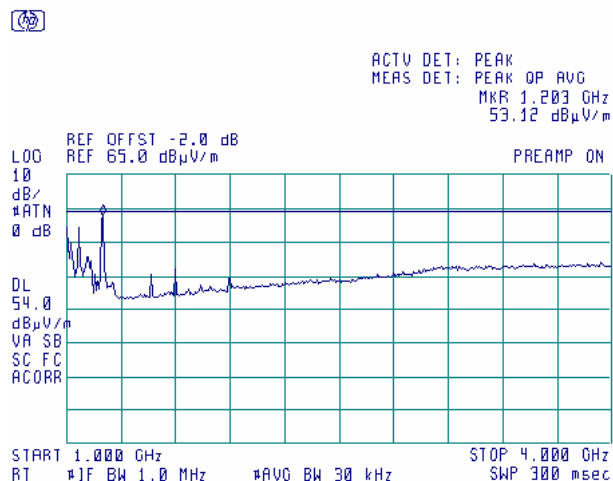
Plot 7.3.61 Radiated emission measurements from 1.0 to 4.0 GHz at the second mid carrier frequency

TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Peak



Plot 7.3.62 Radiated emission measurements from 1.0 to 4.0 GHz at the second mid carrier frequency

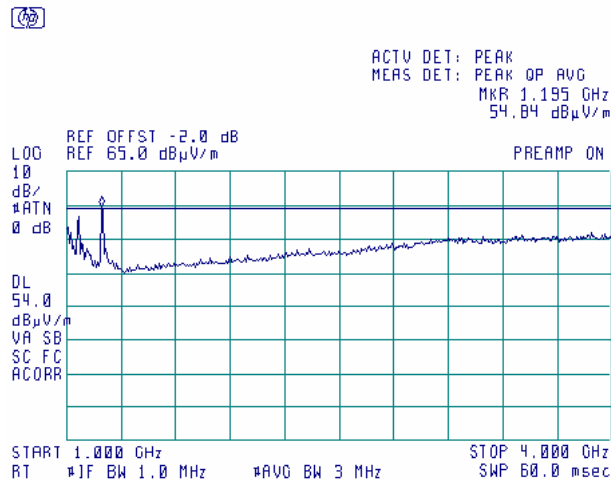
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Average



| | | | |
|--|---|-------------------------|-----------------------|
| Test specification: | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions | | |
| Test procedure: | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 6/22/2008 | | |
| Temperature: 24°C | Air Pressure: 1009 hPa | Relative Humidity: 58 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

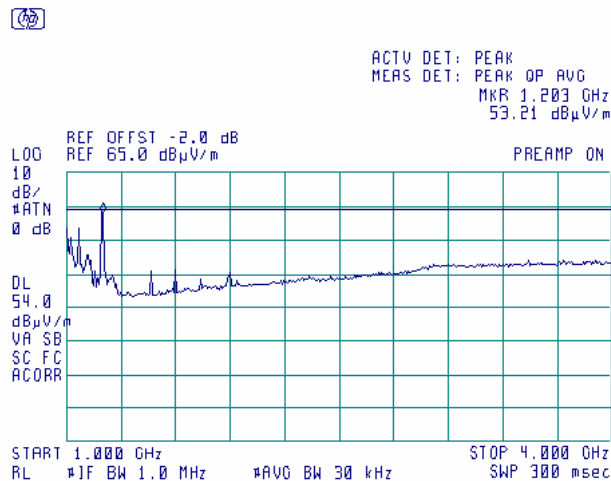
Plot 7.3.63 Radiated emission measurements from 1.0 to 4.0 GHz at the high carrier frequency

TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Peak



Plot 7.3.64 Radiated emission measurements from 1.0 to 4.0 GHz at the high carrier frequency

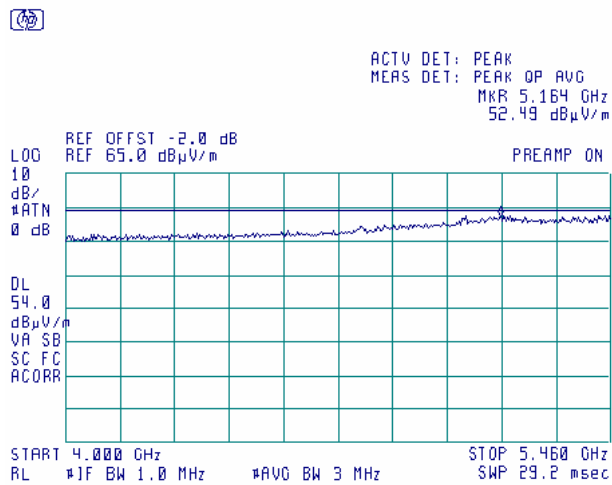
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Average



| | | | |
|--|---|-------------------------|-----------------------|
| Test specification: | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions | | |
| Test procedure: | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | | |
| Test mode: | Compliance | Verdict: PASS | |
| Date: | 6/22/2008 | | |
| Temperature: 24°C | Air Pressure: 1009 hPa | Relative Humidity: 58 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

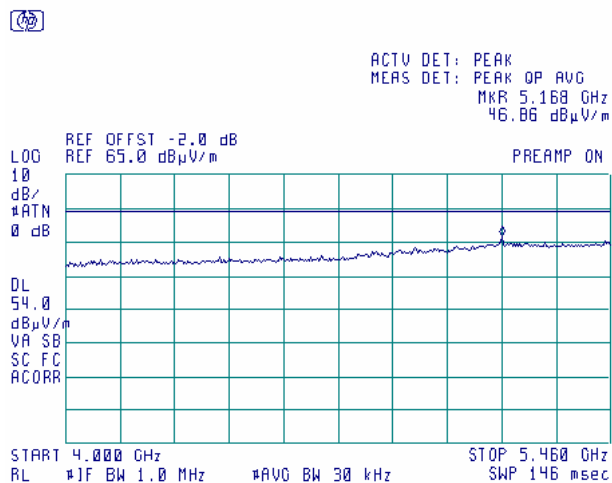
Plot 7.3.65 Radiated emission measurements from 4.0 to 5.46 GHz at the low carrier frequency

TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Peak



Plot 7.3.66 Radiated emission measurements from 4.0 to 5.46 GHz at the low carrier frequency

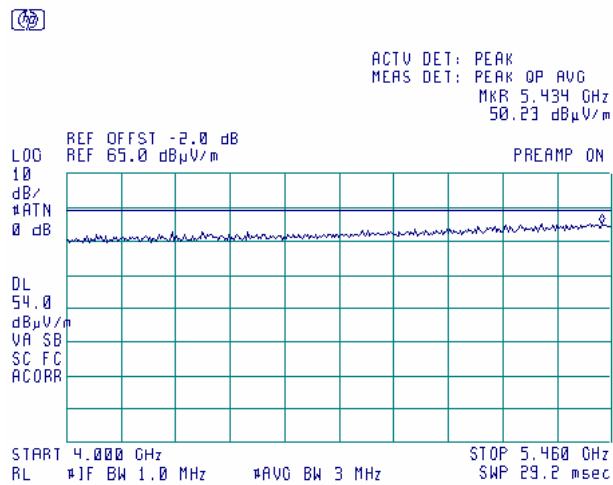
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Average



| | | | |
|--|---|-------------------------|-----------------------|
| Test specification: | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions | | |
| Test procedure: | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 6/22/2008 | | |
| Temperature: 24°C | Air Pressure: 1009 hPa | Relative Humidity: 58 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

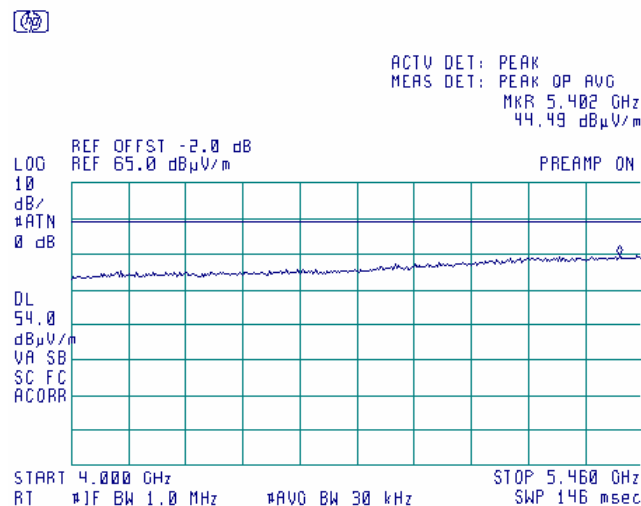
Plot 7.3.67 Radiated emission measurements from 4.0 to 5.46 GHz at the first mid carrier frequency

TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Peak



Plot 7.3.68 Radiated emission measurements from 4.0 to 5.46 GHz at the first mid carrier frequency

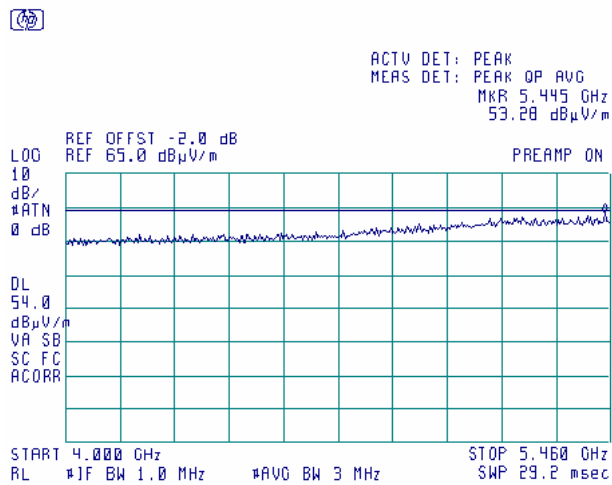
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Average



| | | | |
|--|---|-------------------------|-----------------------|
| Test specification: | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions | | |
| Test procedure: | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | | |
| Test mode: | Compliance | Verdict: PASS | |
| Date: | 6/22/2008 | | |
| Temperature: 24°C | Air Pressure: 1009 hPa | Relative Humidity: 58 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

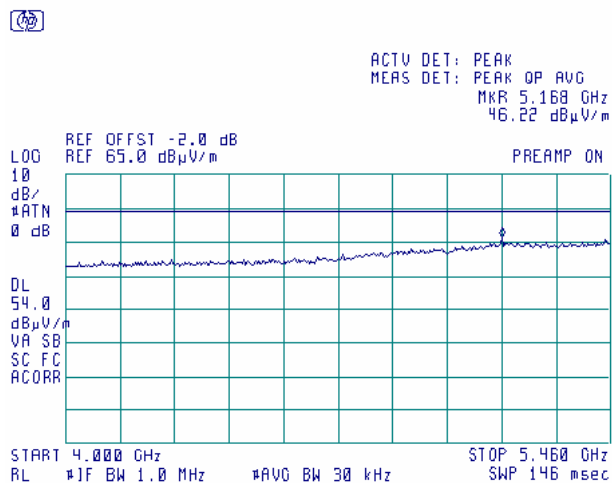
Plot 7.3.69 Radiated emission measurements from 4.0 to 5.46 GHz at the second mid carrier frequency

TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Peak



Plot 7.3.70 Radiated emission measurements from 4.0 to 5.46 GHz at the second mid carrier frequency

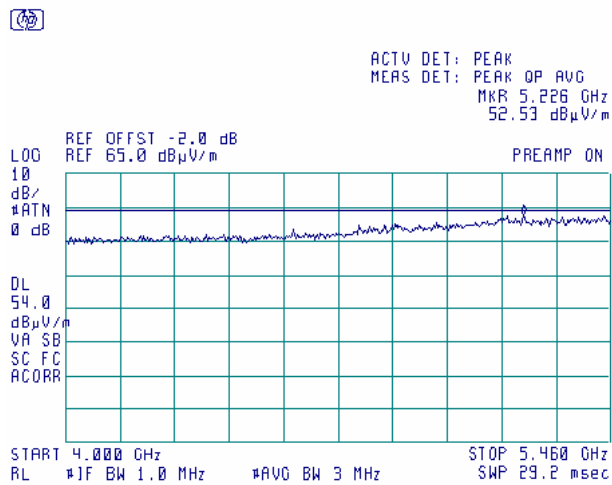
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Average



| | | | |
|--|---|-------------------------|-----------------------|
| Test specification: | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions | | |
| Test procedure: | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 6/22/2008 | | |
| Temperature: 24°C | Air Pressure: 1009 hPa | Relative Humidity: 58 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

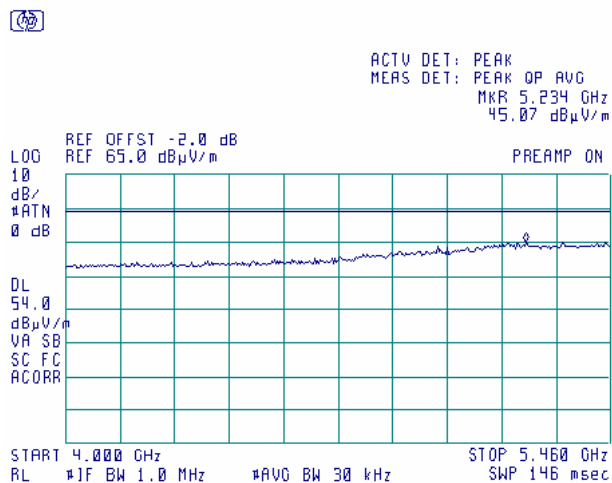
Plot 7.3.71 Radiated emission measurements from 4.0 to 5.46 GHz at the high carrier frequency

TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Peak



Plot 7.3.72 Radiated emission measurements from 4.0 to 5.46 GHz at the high carrier frequency

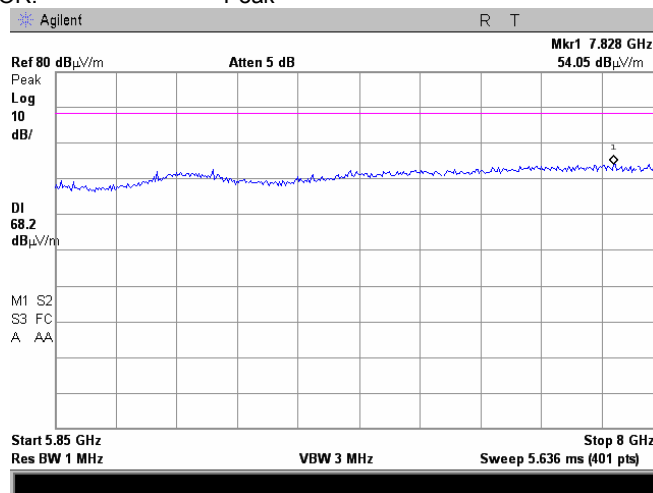
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Average



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions | |
| Test procedure: | | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | |
| Test mode: | | Compliance | Verdict: PASS |
| Date: | | 6/22/2008 | |
| Temperature: 24°C | Air Pressure: 1009 hPa | Relative Humidity: 58 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

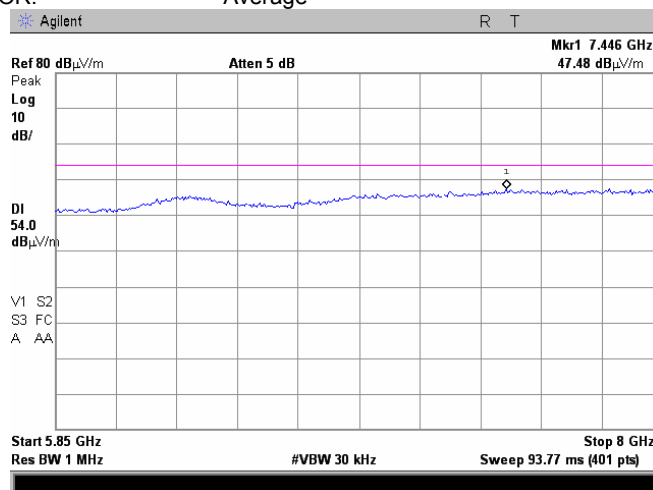
Plot 7.3.73 Radiated emission measurements from 5.85 to 8.0 GHz at the low carrier frequency

TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Peak



Plot 7.3.74 Radiated emission measurements from 5.85 to 8.0 GHz at the low carrier frequency

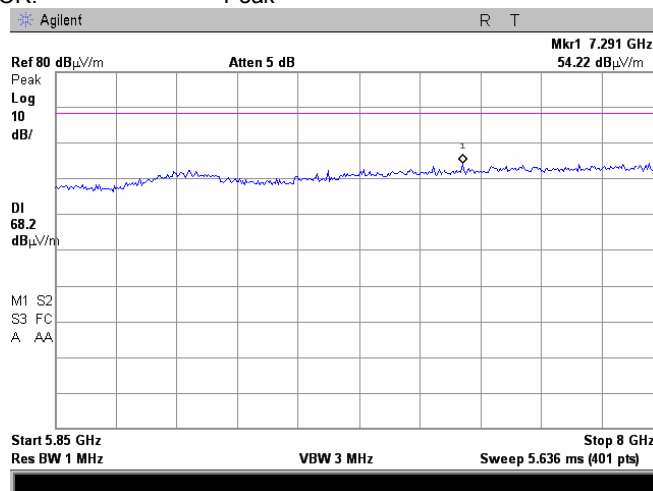
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Average



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions | |
| Test procedure: | | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | |
| Test mode: | | Compliance | Verdict: PASS |
| Date: | | 6/22/2008 | |
| Temperature: 24°C | Air Pressure: 1009 hPa | Relative Humidity: 58 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

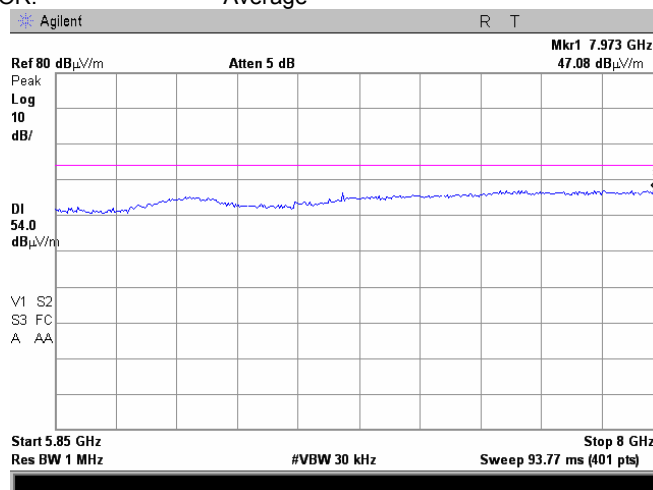
Plot 7.3.75 Radiated emission measurements from 5.85 to 8.0 GHz at the first mid carrier frequency

TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Peak



Plot 7.3.76 Radiated emission measurements from 5.85 to 8.0 GHz at the first mid carrier frequency

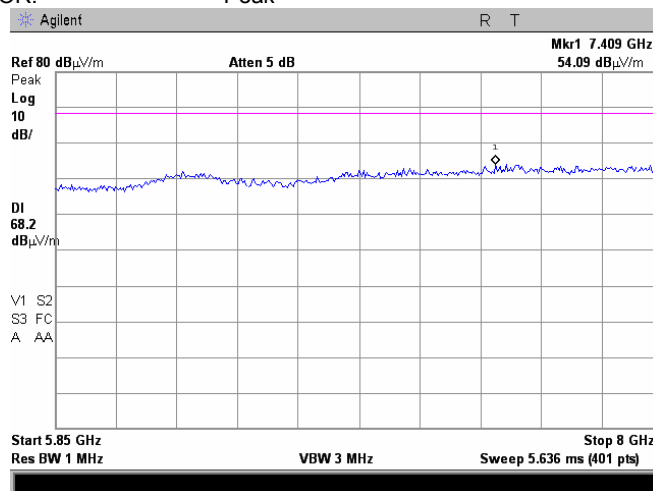
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Average



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions | |
| Test procedure: | | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | |
| Test mode: | | Compliance | Verdict: PASS |
| Date: | | 6/22/2008 | |
| Temperature: 24°C | Air Pressure: 1009 hPa | Relative Humidity: 58 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

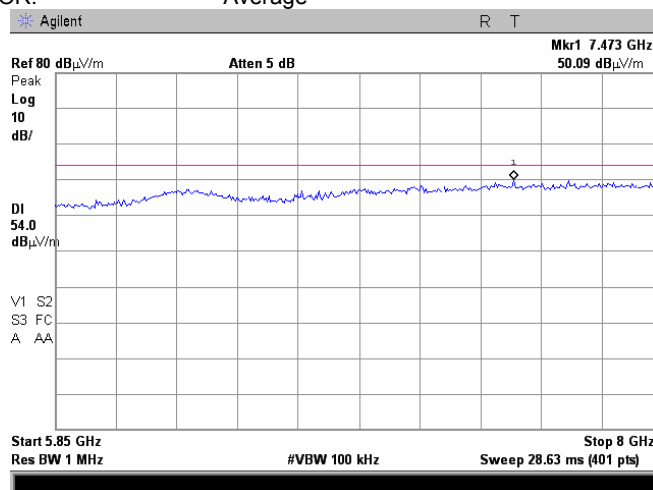
Plot 7.3.77 Radiated emission measurements from 5.85 to 8.0 GHz at the second mid carrier frequency

TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Peak



Plot 7.3.78 Radiated emission measurements from 5.85 to 8.0 GHz at the second mid carrier frequency

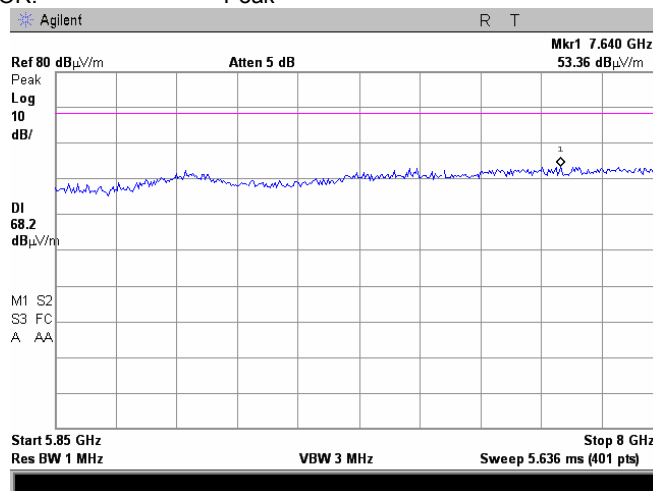
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Average



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions | |
| Test procedure: | | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | |
| Test mode: | | Compliance | Verdict: PASS |
| Date: | | 6/22/2008 | |
| Temperature: 24°C | Air Pressure: 1009 hPa | Relative Humidity: 58 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

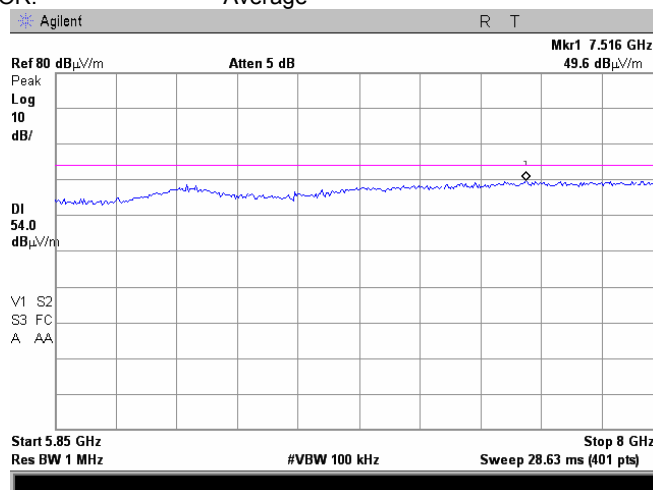
Plot 7.3.79 Radiated emission measurements from 5.85 to 8.0 GHz at the high carrier frequency

TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Peak



Plot 7.3.80 Radiated emission measurements from 5.85 to 8.0 GHz at the high carrier frequency

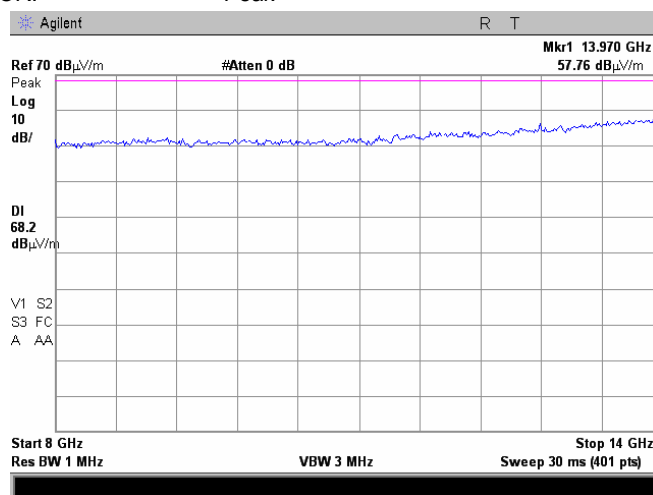
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Average



| | | | |
|--|---|-------------------------|-----------------------|
| Test specification: | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions | | |
| Test procedure: | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 6/22/2008 | | |
| Temperature: 24°C | Air Pressure: 1009 hPa | Relative Humidity: 58 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

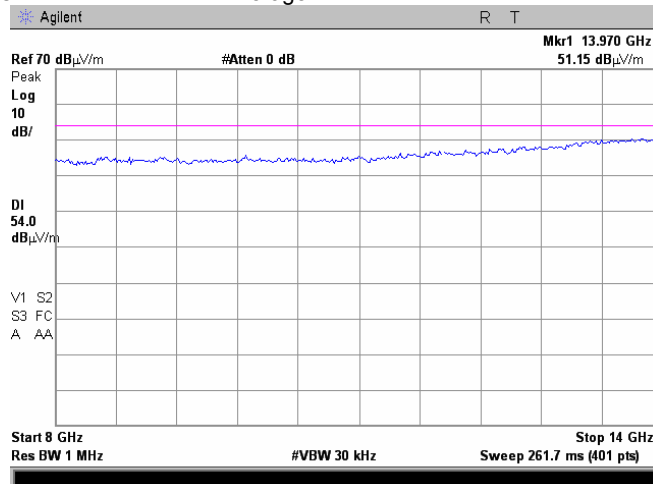
Plot 7.3.81 Radiated emission measurements from 8 to 14 GHz at the low carrier frequency

TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Peak



Plot 7.3.82 Radiated emission measurements from 8 to 14 GHz at the low carrier frequency

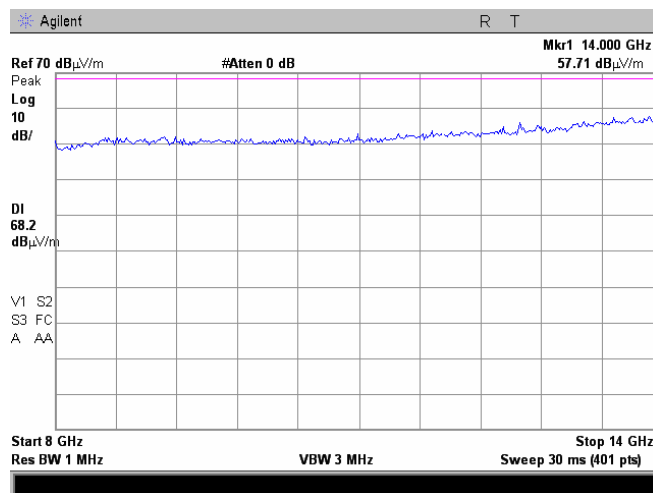
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Average



| | | | |
|---|---|--------------------------------|------------------------------|
| Test specification: | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions | | |
| Test procedure: | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 6/22/2008 | | |
| Temperature: 24°C | Air Pressure: 1009 hPa | Relative Humidity: 58 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

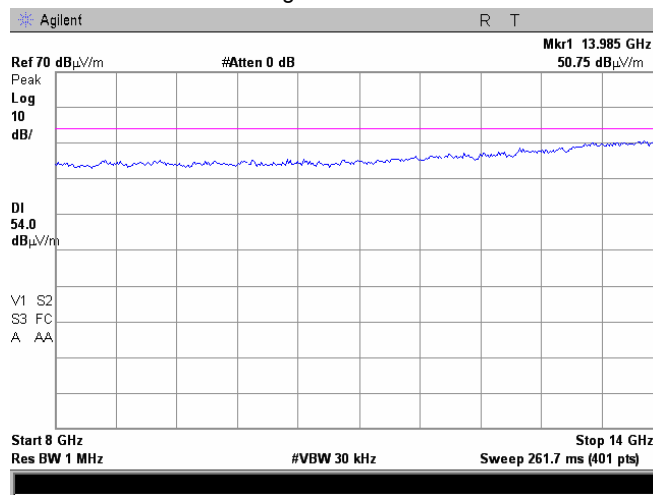
Plot 7.3.83 Radiated emission measurements from 8 to 14 GHz at the first mid carrier frequency

TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Peak



Plot 7.3.84 Radiated emission measurements from 8 to 14 GHz at the first mid carrier frequency

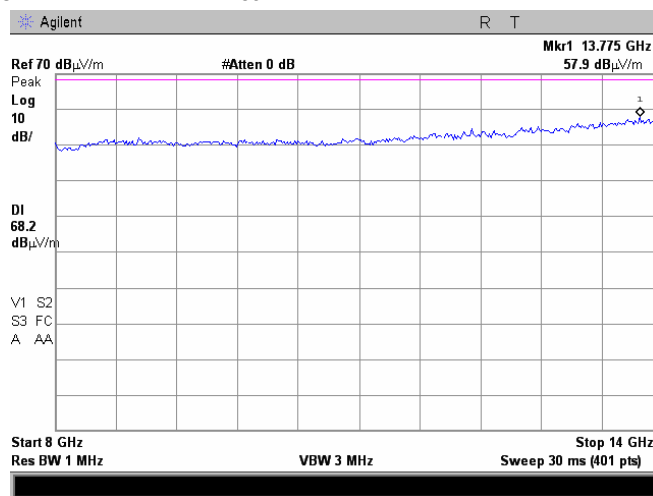
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Average



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions | |
| Test procedure: | | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | |
| Test mode: | | Compliance | Verdict: PASS |
| Date: | | 6/22/2008 | |
| Temperature: 24°C | Air Pressure: 1009 hPa | Relative Humidity: 58 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

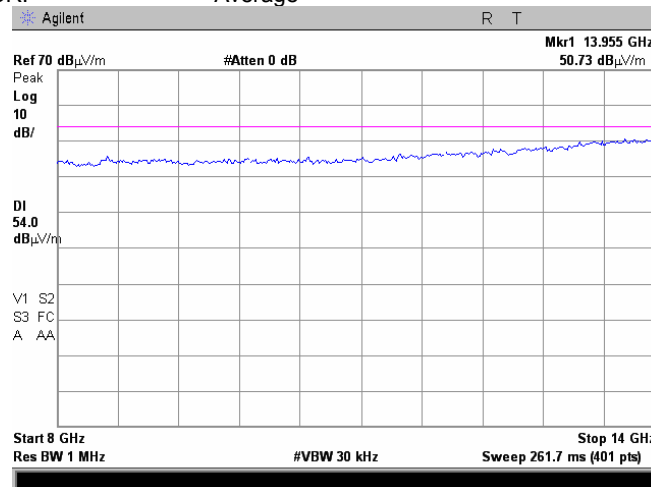
Plot 7.3.85 Radiated emission measurements from 8 to 14 GHz at the second mid carrier frequency

TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Peak



Plot 7.3.86 Radiated emission measurements from 8 to 14 GHz at the second mid carrier frequency

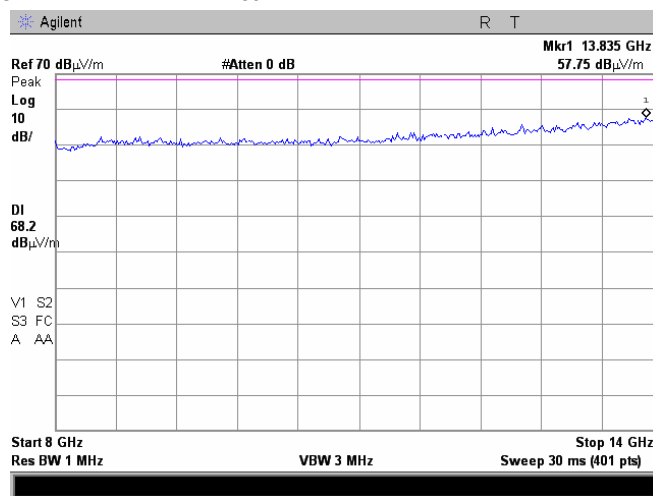
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Average



| | | | |
|--|---|-------------------------|-----------------------|
| Test specification: | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions | | |
| Test procedure: | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | | |
| Test mode: | Compliance | Verdict: PASS | |
| Date: | 6/22/2008 | | |
| Temperature: 24°C | Air Pressure: 1009 hPa | Relative Humidity: 58 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

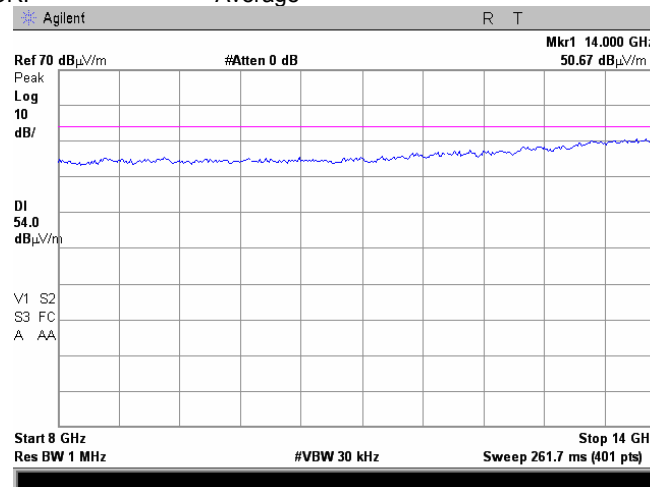
Plot 7.3.87 Radiated emission measurements from 8 to 14 GHz at the high carrier frequency

TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Peak



Plot 7.3.88 Radiated emission measurements from 8 to 14 GHz at the high carrier frequency

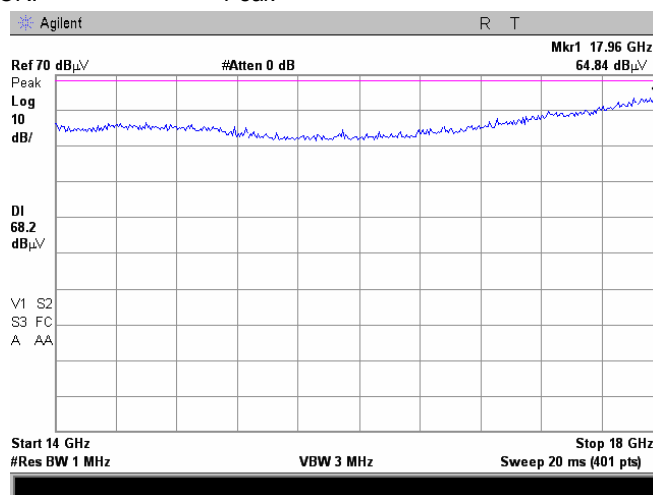
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Average



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions | |
| Test procedure: | | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | |
| Test mode: | | Compliance | Verdict: PASS |
| Date: | | 6/22/2008 | |
| Temperature: 24°C | Air Pressure: 1009 hPa | Relative Humidity: 58 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

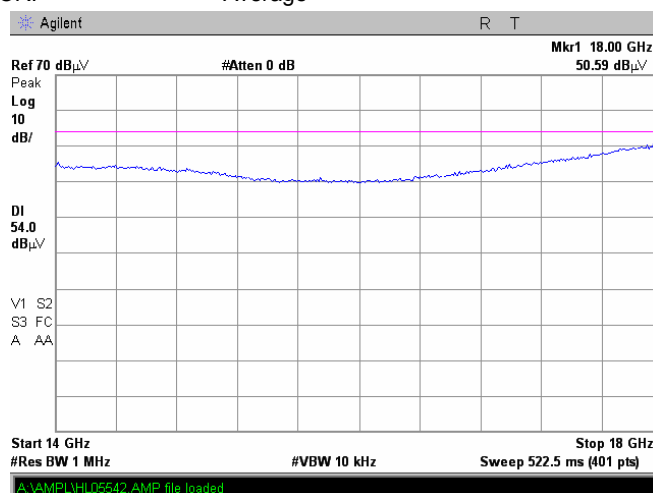
Plot 7.3.89 Radiated emission measurements from 14 to 18 GHz at the low carrier frequency

TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Peak



Plot 7.3.90 Radiated emission measurements from 14 to 18 GHz at the low carrier frequency

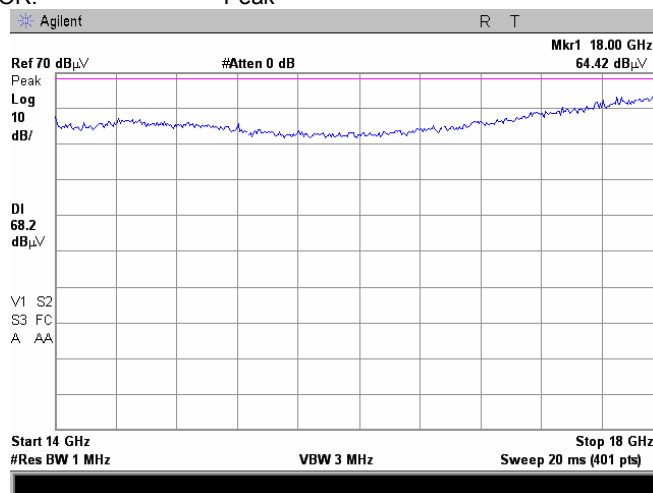
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Average



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions | |
| Test procedure: | | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | |
| Test mode: | | Compliance | Verdict: PASS |
| Date: | | 6/22/2008 | |
| Temperature: 24°C | Air Pressure: 1009 hPa | Relative Humidity: 58 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

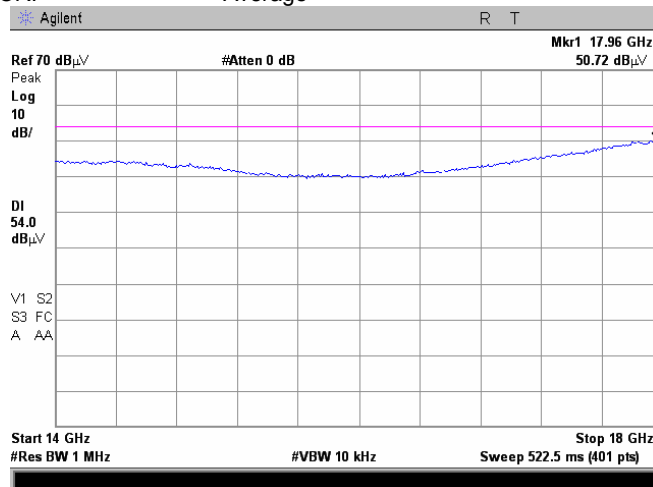
Plot 7.3.91 Radiated emission measurements from 14 to 18 GHz at the first mid carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Peak



Plot 7.3.92 Radiated emission measurements from 14 to 18 GHz at the first mid carrier frequency

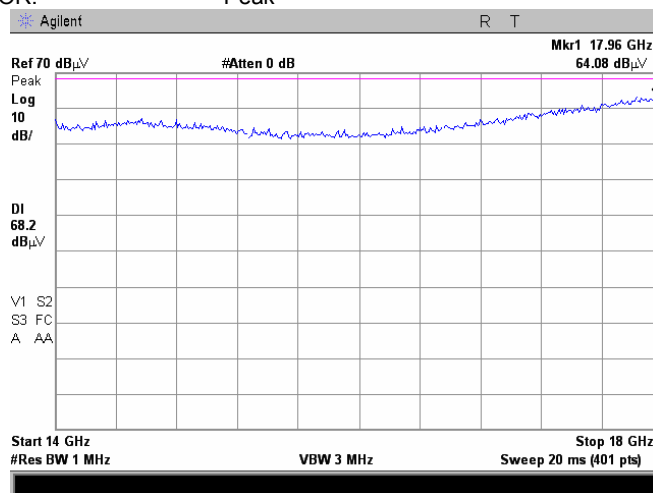
TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Average



| | | | |
|--|---|-------------------------|-----------------------|
| Test specification: | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions | | |
| Test procedure: | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 6/22/2008 | | |
| Temperature: 24°C | Air Pressure: 1009 hPa | Relative Humidity: 58 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

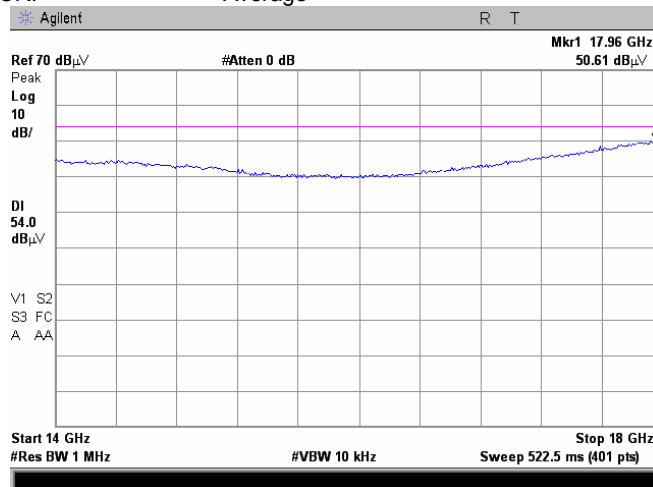
Plot 7.3.93 Radiated emission measurements from 14 to 18 GHz at the second mid carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Peak



Plot 7.3.94 Radiated emission measurements from 14 to 18 GHz at the second mid carrier frequency

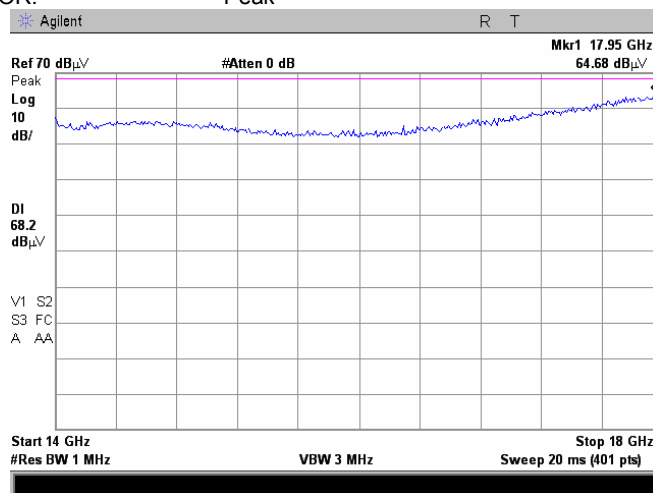
TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Average



| | | | |
|--|---|-------------------------|-----------------------|
| Test specification: | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions | | |
| Test procedure: | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 6/22/2008 | | |
| Temperature: 24°C | Air Pressure: 1009 hPa | Relative Humidity: 58 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

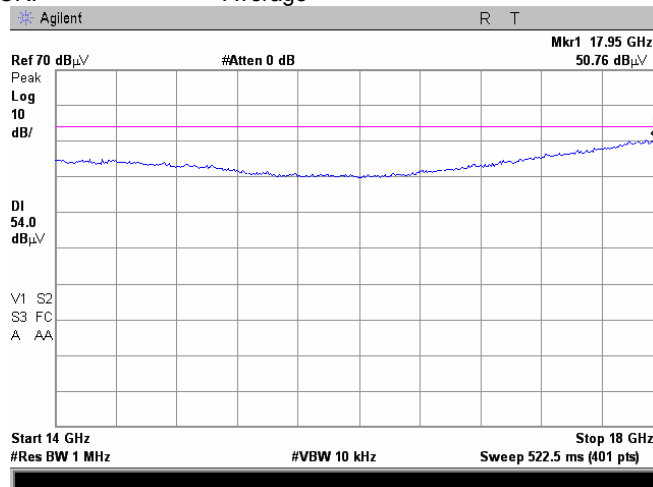
Plot 7.3.95 Radiated emission measurements from 14 to 18 GHz at the high carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Peak



Plot 7.3.96 Radiated emission measurements from 14 to 18 GHz at the high carrier frequency

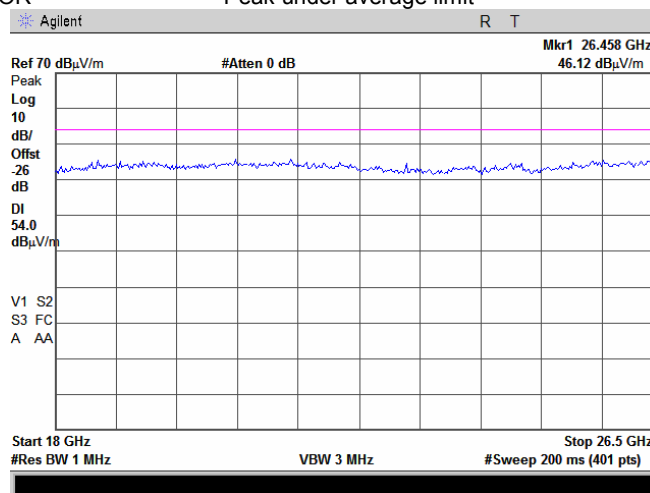
TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Average



| | | | |
|--|---|-------------------------|-----------------------|
| Test specification: | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions | | |
| Test procedure: | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 6/22/2008 | | |
| Temperature: 24°C | Air Pressure: 1009 hPa | Relative Humidity: 58 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

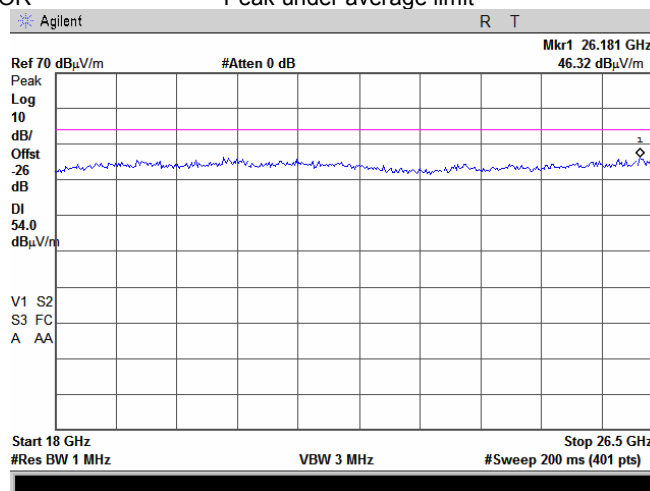
Plot 7.3.97 Radiated emission measurements from 18 to 26.5 GHz at the low carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Peak under average limit



Plot 7.3.98 Radiated emission measurements from 18 to 26.5 GHz at the first mid carrier frequency

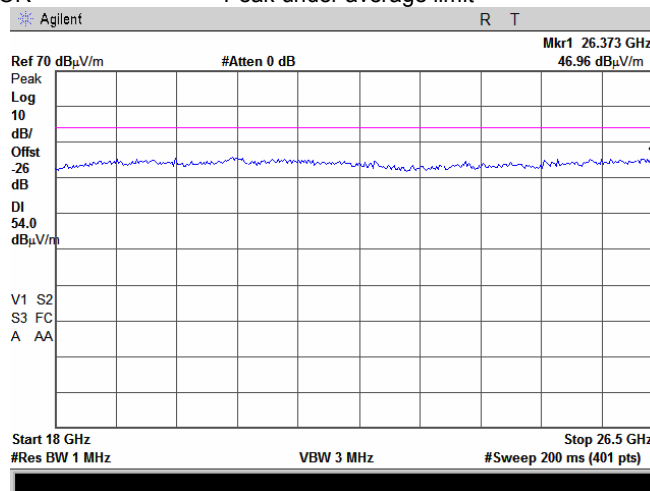
TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Peak under average limit



| | | | |
|--|---|-------------------------|-----------------------|
| Test specification: | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions | | |
| Test procedure: | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 6/22/2008 | | |
| Temperature: 24°C | Air Pressure: 1009 hPa | Relative Humidity: 58 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

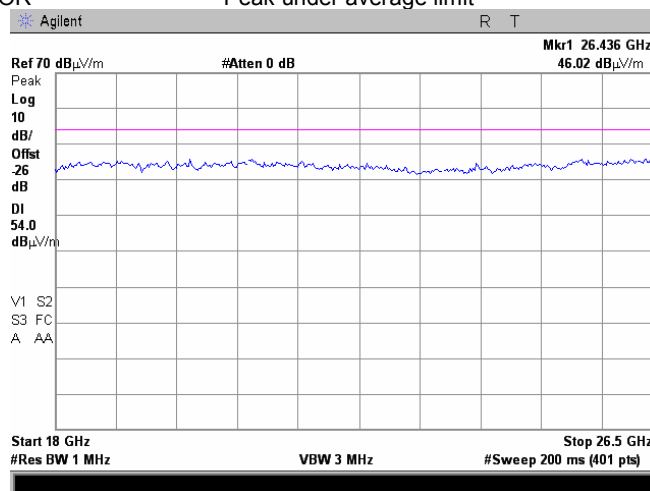
Plot 7.3.99 Radiated emission measurements from 18 to 26.5 GHz at the second mid carrier frequency (5485MHz)

TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Peak under average limit



. Plot 7.3.100 Radiated emission measurements from 18 to 26.5 GHz at the high carrier frequency (5485MHz)

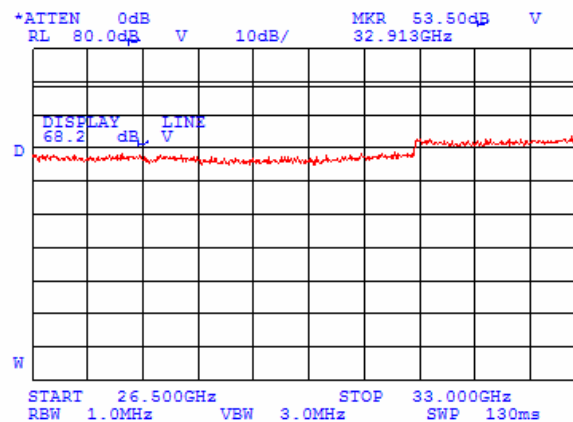
TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Peak under average limit



| | | | |
|--|---|-------------------------|-----------------------|
| Test specification: | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions | | |
| Test procedure: | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 6/22/2008 | | |
| Temperature: 24°C | Air Pressure: 1009 hPa | Relative Humidity: 58 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

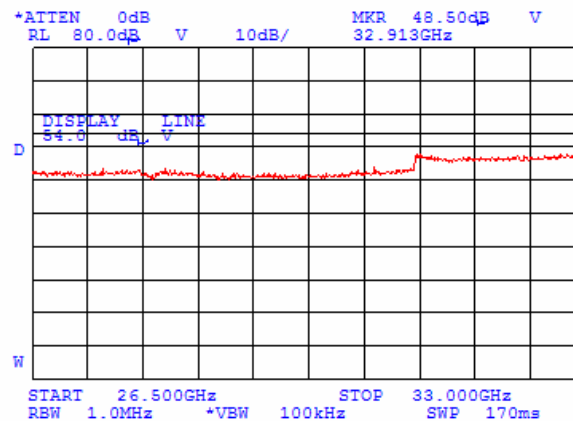
Plot 7.3.101 Radiated emission measurements from 26.5 to 33 GHz at the low carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR Peak



Plot 7.3.102 Radiated emission measurements from 26.5 to 33 GHz at the low carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR Average





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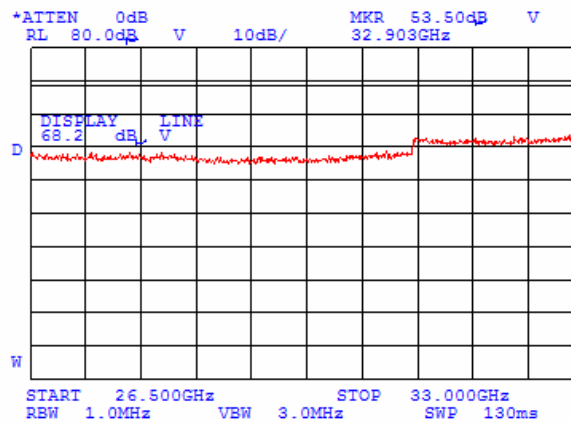
Report ID: RDWRAD_FCC.19241_21882_rev1.doc

Date of Issue: April 2011

| | | | |
|--|---|-------------------------|-----------------------|
| Test specification: | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions | | |
| Test procedure: | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 6/22/2008 | | |
| Temperature: 24°C | Air Pressure: 1009 hPa | Relative Humidity: 58 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

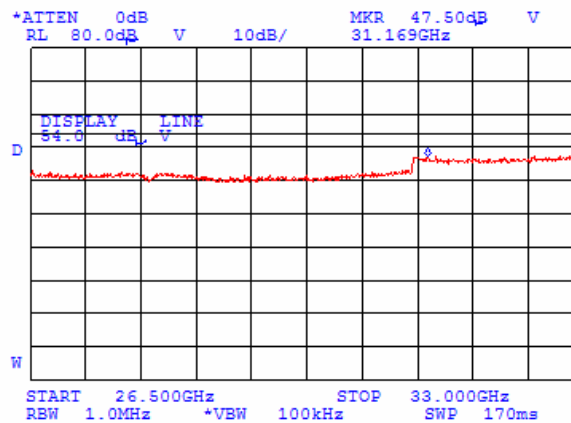
Plot 7.3.103 Radiated emission measurements from 26.5 to 33 GHz at the first mid carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR Peak



Plot 7.3.104 Radiated emission measurements from 26.5 to 33 GHz at the first mid carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR Average





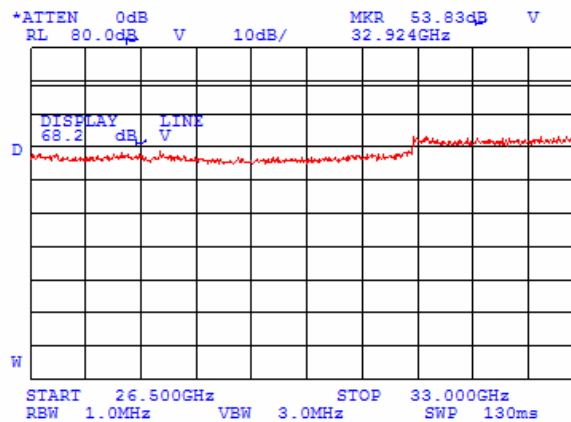
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Report ID: RDWRAD_FCC.19241_21882_rev1.doc
Date of Issue: April 2011

| | | | |
|--|---|-------------------------|-----------------------|
| Test specification: | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions | | |
| Test procedure: | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 6/22/2008 | | |
| Temperature: 24°C | Air Pressure: 1009 hPa | Relative Humidity: 58 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

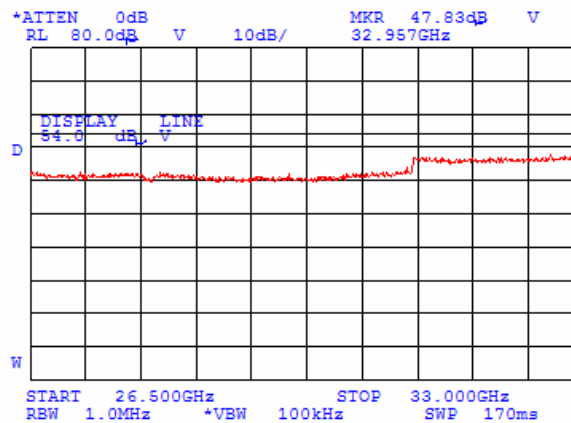
Plot 7.3.105 Radiated emission measurements from 26.5 to 33 GHz at the second mid carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR Peak



Plot 7.3.106 Radiated emission measurements from 26.5 to 33 GHz at the second mid carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR Average





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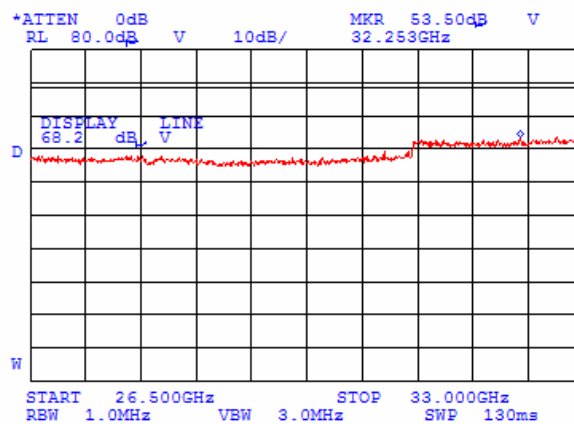
Report ID: RDWRAD_FCC.19241_21882_rev1.doc

Date of Issue: April 2011

| | | | |
|--|--|---|-------------------------|
| Test specification: | | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions | |
| Test procedure: | | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | |
| Test mode: | | Verdict: PASS | |
| Date: | | | |
| Temperature: 24°C | | Air Pressure: 1009 hPa | Relative Humidity: 58 % |
| | | Power Supply: 120 VAC | |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

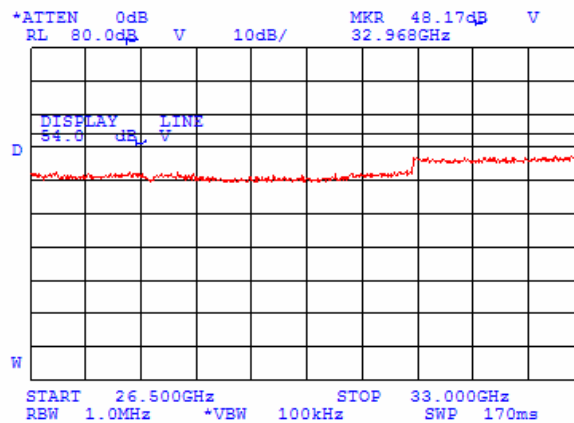
Plot 7.3.107 Radiated emission measurements from 26.5 to 33 GHz at the high carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR Peak



Plot 7.3.108 Radiated emission measurements from 26.5 to 33 GHz at the high carrier frequency

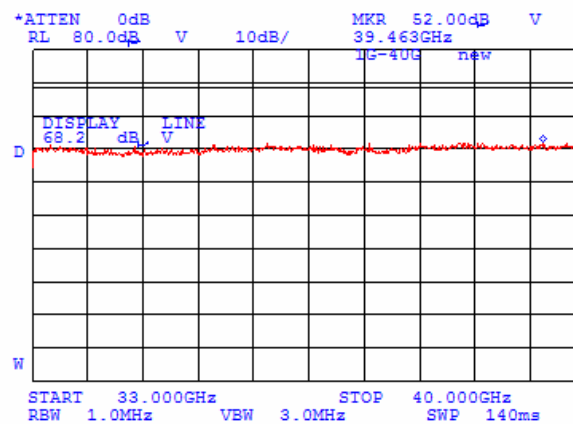
TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR Average



| | | | |
|--|---|-------------------------|-----------------------|
| Test specification: | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions | | |
| Test procedure: | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 6/22/2008 | | |
| Temperature: 24°C | Air Pressure: 1009 hPa | Relative Humidity: 58 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

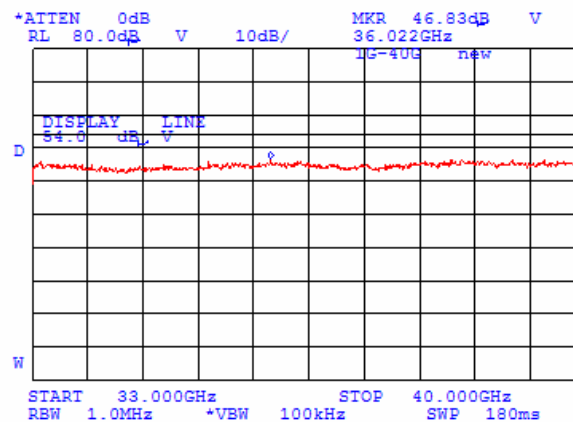
Plot 7.3.109 Radiated emission measurements from 33 to 40 GHz at the low carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR Peak



Plot 7.3.110 Radiated emission measurements from 33 to 40 GHz at the low carrier frequency

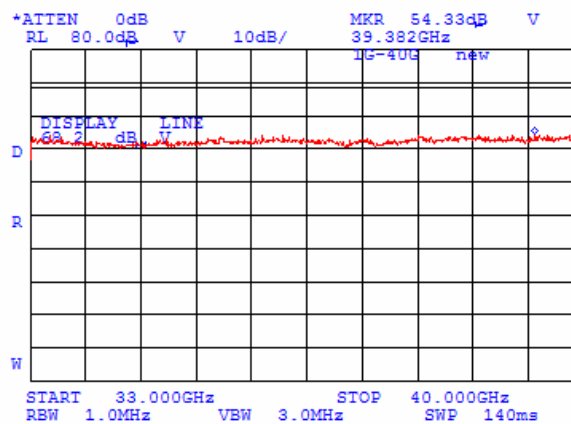
TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR Average



| | | | |
|--|---|-------------------------|-----------------------|
| Test specification: | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions | | |
| Test procedure: | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 6/22/2008 | | |
| Temperature: 24°C | Air Pressure: 1009 hPa | Relative Humidity: 58 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

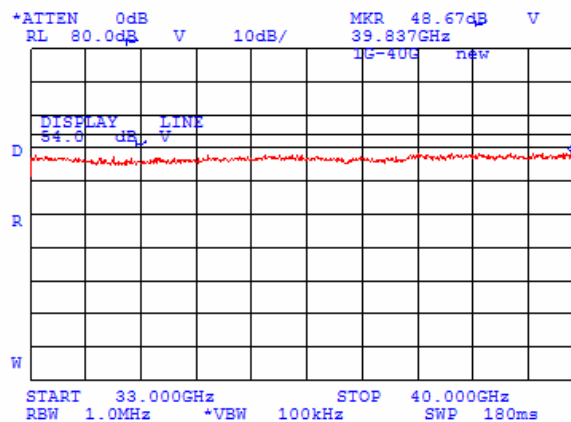
Plot 7.3.111 Radiated emission measurements from 33 to 40 GHz at the first mid carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Peak



Plot 7.3.112 Radiated emission measurements from 33 to 40 GHz at the first mid carrier frequency

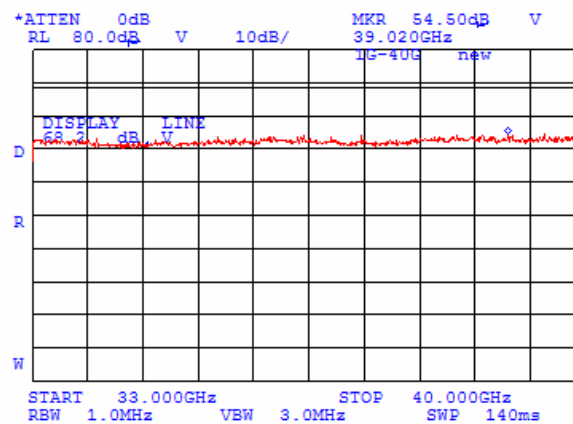
TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Average



| | | | |
|--|---|-------------------------|-----------------------|
| Test specification: | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions | | |
| Test procedure: | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 6/22/2008 | | |
| Temperature: 24°C | Air Pressure: 1009 hPa | Relative Humidity: 58 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

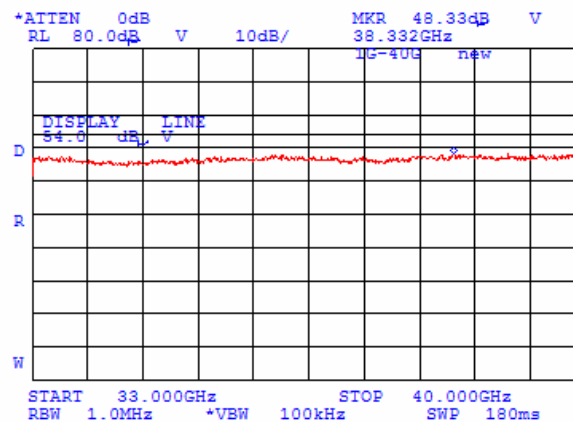
Plot 7.3.113 Radiated emission measurements from 33 to 40 GHz at the second mid carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Peak



Plot 7.3.114 Radiated emission measurements from 33 to 40 GHz at the second mid carrier frequency

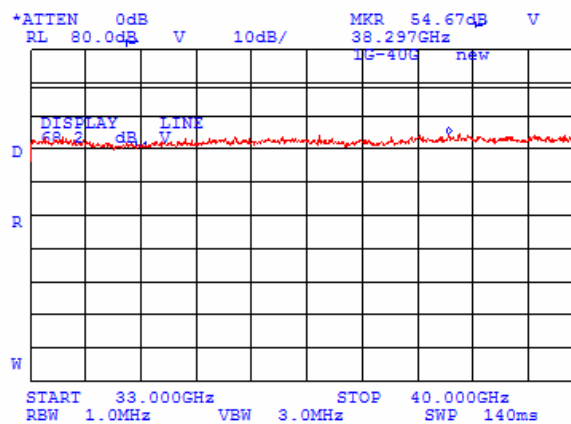
TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Average



| | | | |
|--|---|-------------------------|-----------------------|
| Test specification: | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions | | |
| Test procedure: | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 6/22/2008 | | |
| Temperature: 24°C | Air Pressure: 1009 hPa | Relative Humidity: 58 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

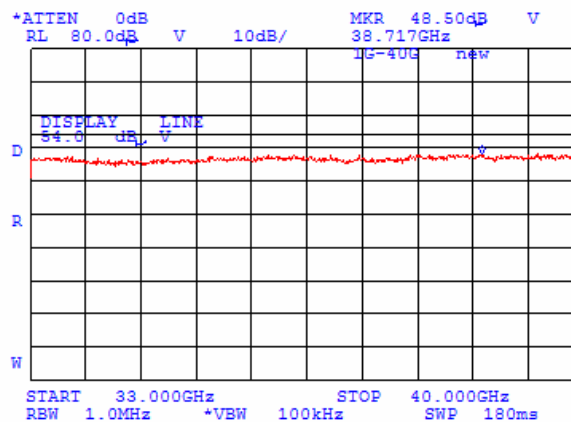
Plot 7.3.115 Radiated emission measurements from 33 to 40 GHz at the high carrier frequency (5475MHz)

TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Peak



Plot 7.3.116 Radiated emission measurements from 33 to 40 GHz at the high carrier frequency (5480MHz)

TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Average



| | | | |
|----------------------------|---|--------------------------------|------------------------------|
| Test specification: | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges | | |
| Test procedure: | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 11/23/2008 | | |
| Temperature: 22°C | Air Pressure: 1007 hPa | Relative Humidity: 42 % | Power Supply: 120 VAC |
| Remarks: | | | |

7.4 Conducted spurious emission measurements at band edges

7.4.1 General

This test was performed to measure conducted spurious emissions from the EUT near the band edges and within the pass band of the antenna. Specification test limits are given in Table 7.4.1.

Table 7.4.1 Spurious emission test limits

| Assigned frequency range, MHz | EIRP of spurious, dBm/MHz | Antenna assembly gain, dBi | Resolution bandwidth, kHz |
|-------------------------------|---------------------------|----------------------------|---------------------------|
| 5470 - 5725 | -27 | 22.5 | 1000 |
| 5470 - 5725 | -27 | 28 | 1000 |

7.4.2 Test procedure

- 7.4.2.1 The EUT was set up as shown in Figure 7.4.1, energized normally modulated at the maximum data rate and its proper operation was checked.
- 7.4.2.2 The EUT was adjusted to produce maximum available to end user RF output power at the lowest carrier frequency.
- 7.4.2.3 The spectrum analyzer span was set to capture the carrier frequency and associated modulation products. The resolution bandwidth was set to 1 MHz.
- 7.4.2.4 The spectrum analyzer was set in max hold mode and allowed trace to stabilize. The highest emission level within the authorized band was measured.
- 7.4.2.5 The maximum band edge emission and modulation product outside of the band were measured as provided in Table 7.4.2, Table 7.4.3 and associated plots and referenced to the highest emission level measured within the authorized band.
- 7.4.2.6 The above procedure was repeated with the EUT adjusted to produce maximum RF output power at the mid and highest carrier frequencies.

Figure 7.4.1 Setup for conducted spurious emissions



Reference numbers of test equipment used

| | | | | | | | |
|---------|---------|---------|--|--|--|--|--|
| HL 2780 | HL 2883 | HL 3176 | | | | | |
|---------|---------|---------|--|--|--|--|--|

Full description is given in Appendix A.

| | | | | | |
|--|--|---|--|-------------------------|--|
| Test specification: | | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges | | | |
| Test procedure: | | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | | | |
| Test mode: | | Compliance | | Verdict: PASS | |
| Date: | | 11/23/2008 | | | |
| Temperature: 22°C | | Air Pressure: 1007 hPa | | Relative Humidity: 42 % | |
| | | | | Power Supply: 120 VAC | |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | | | |

Table 7.4.2 Conducted spurious emission test results

ASSIGNED FREQUENCY RANGE: 5470 – 5725 MHz
DETECTOR USED: Peak
RESOLUTION BANDWIDTH: 1000 kHz
VIDEO BANDWIDTH: 3000 kHz

| Frequency, MHz | | Modulation | Bit rate, Mbps | CBW, MHz | SA reading, dBm | Limit*, dBm/MHz | Antenna assembly gain, dBi | EIRP, dBm/MHz | Margin**, dB | Verdict | | | | |
|----------------|---------|------------|----------------|----------|-----------------|-----------------|----------------------------|---------------|--------------|---------|--------|--------|--------|------|
| Edge | Channel | | | | | | | | | | | | | |
| 5469.975 | 5490 | BPSK | 13 | 20 | -52.93 | -27 | 22.5 | -30.43 | -3.43 | Pass | | | | |
| 5469.925 | | 64QAM | 130 | | -52.98 | -27 | 22.5 | -30.48 | -3.48 | Pass | | | | |
| 5469.975 | 5485 | BPSK | 6.5 | 10 | -65.2 | -27 | 22.5 | -42.70 | -15.70 | Pass | | | | |
| 5470.000 | | 64QAM | 65 | | -66.14 | -27 | 22.5 | -43.64 | -16.64 | Pass | | | | |
| 5469.950 | 5480 | BPSK | 3.25 | 5 | -65.95 | -27 | 22.5 | -43.45 | -16.45 | Pass | | | | |
| 5470.000 | | BPSK | 3.25 | | -67.11 | -27 | 22.5 | -44.61 | -17.61 | Pass | | | | |
| 5600.000 | 5580 | BPSK | 13 | 20 | -54.38 | -27 | 22.5 | -31.88 | -4.88 | Pass | | | | |
| 5600.000 | | 64QAM | 130 | | -53.52 | -27 | 22.5 | -31.02 | -4.02 | Pass | | | | |
| 5600.000 | 5585 | BPSK | 6.5 | 10 | -66.70 | -27 | 22.5 | -44.20 | -17.20 | Pass | | | | |
| 5625.000 | | | | | -68.76 | -27 | 22.5 | -46.26 | -19.26 | Pass | | | | |
| 5600.000 | | 64QAM | 65 | | -66.89 | -27 | 22.5 | -44.39 | -17.39 | Pass | | | | |
| 5624.875 | | | | | -68.91 | -27 | 22.5 | -46.41 | -19.41 | Pass | | | | |
| 5600.000 | 5590 | BPSK | 3.25 | 5 | -68.58 | -27 | 22.5 | -46.08 | -19.08 | Pass | | | | |
| 5628.250 | | | | | -63.53 | -27 | 22.5 | -41.03 | -14.03 | Pass | | | | |
| 5631.875 | | | | | -65.71 | -27 | 22.5 | -43.21 | -16.21 | Pass | | | | |
| 5600.000 | | 64QAM | 32.5 | 5 | -68.72 | -27 | 22.5 | -46.22 | -19.22 | Pass | | | | |
| 5628.125 | | | | | -63.71 | -27 | 22.5 | -41.21 | -14.21 | Pass | | | | |
| 5631.750 | | | | | -65.19 | -27 | 22.5 | -42.69 | -15.69 | Pass | | | | |
| 5630.250 | 5670 | BPSK | 13 | 20 | -67.58 | -27 | 22.5 | -45.08 | -18.08 | Pass | | | | |
| 5650.000 | | | | | -55.13 | -27 | 22.5 | -32.63 | -5.63 | Pass | | | | |
| 5630.250 | | 64QAM | 130 | | -67.80 | -27 | 22.5 | -45.30 | -18.30 | Pass | | | | |
| 5650.000 | | | | | -54.64 | -27 | 22.5 | -32.14 | -5.14 | Pass | | | | |
| 5625.000 | 5665 | BPSK | 6.5 | 10 | -68.91 | -27 | 22.5 | -46.41 | -19.41 | Pass | | | | |
| 5650.000 | | | | | -67.02 | -27 | 22.5 | -44.52 | -17.52 | Pass | | | | |
| 5625.125 | | 64QAM | 65 | | -68.75 | -27 | 22.5 | -46.25 | -19.25 | Pass | | | | |
| 5650.000 | | | | | -67.04 | -27 | 22.5 | -44.54 | -17.54 | Pass | | | | |
| 5618.250 | 5660 | BPSK | 3.25 | 5 | -65.69 | -27 | 22.5 | -43.19 | -16.19 | Pass | | | | |
| 5621.875 | | | | | -63.70 | -27 | 22.5 | -41.20 | -14.20 | Pass | | | | |
| 5650.000 | | | | | -68.24 | -27 | 22.5 | -45.74 | -18.74 | Pass | | | | |
| 5618.500 | | | | | -65.46 | -27 | 22.5 | -42.96 | -15.96 | Pass | | | | |
| 5621.875 | | 64QAM | 32.5 | | -63.79 | -27 | 22.5 | -41.29 | -14.29 | Pass | | | | |
| 5650.000 | | | | | -68.39 | -27 | 22.5 | -45.89 | -18.89 | Pass | | | | |
| 5725.000 | | | | | 5705 | BPSK | 13 | 20 | -56.03 | -27 | 22.5 | -33.53 | -6.53 | Pass |
| 5745.060 | | | | | | | | | -67.89 | -27 | 22.5 | -45.39 | -18.39 | Pass |
| 5725.000 | 64QAM | 130 | -55.33 | -27 | 22.5 | -32.83 | -5.83 | | Pass | | | | | |
| 5745.350 | | | -68.01 | -27 | 22.5 | -45.51 | -18.51 | | Pass | | | | | |
| 5725.025 | 5710 | BPSK | 6.5 | 10 | -66.98 | -27 | 22.5 | -44.48 | -17.48 | Pass | | | | |
| 5786.460 | | | | | -68.84 | -27 | 22.5 | -46.34 | -19.34 | Pass | | | | |
| 5725.025 | | 64QAM | 65 | | -66.86 | -27 | 22.5 | -44.36 | -17.36 | Pass | | | | |
| 5785.890 | | | | | -68.85 | -27 | 22.5 | -46.35 | -19.35 | Pass | | | | |
| 5725.000 | | | | | -68.27 | -27 | 22.5 | -45.77 | -18.77 | Pass | | | | |
| 5753.110 | 5715 | BPSK | 3.25 | 5 | -64.51 | -27 | 22.5 | -42.01 | -15.01 | Pass | | | | |
| 5756.850 | | | | | -66.27 | -27 | 22.5 | -43.77 | -16.77 | Pass | | | | |
| 5725.000 | | | | | 64QAM | 32.5 | -68.20 | -27 | 22.5 | -45.70 | -18.70 | Pass | | |
| 5753.110 | | -64.61 | -27 | | | | 22.5 | -42.11 | -15.11 | Pass | | | | |
| 5756.850 | | -66.34 | -27 | | | | 22.5 | -43.84 | -16.84 | Pass | | | | |

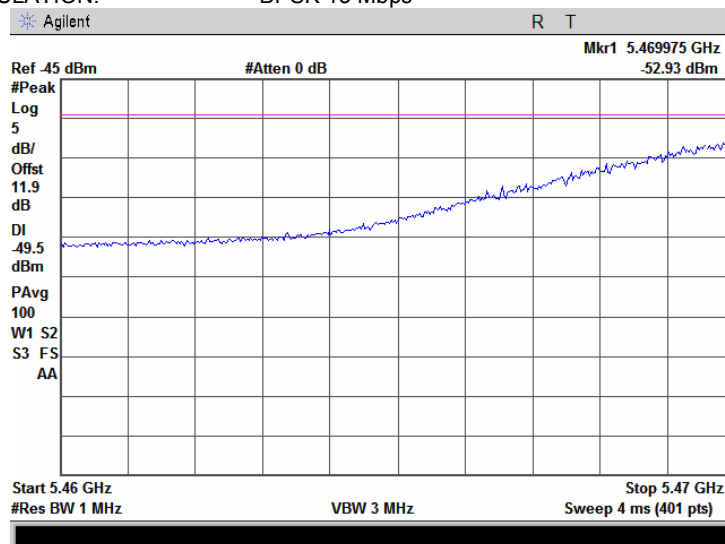
* - EIRP = SA reading (dBm) + Antenna assembly gain;

** - Margin = EIRP of spurious – specified limit.

| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges | |
| Test procedure: | | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | |
| Test mode: | | Compliance | Verdict: PASS |
| Date: | | 11/23/2008 | |
| Temperature: 22°C | Air Pressure: 1007 hPa | Relative Humidity: 42 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

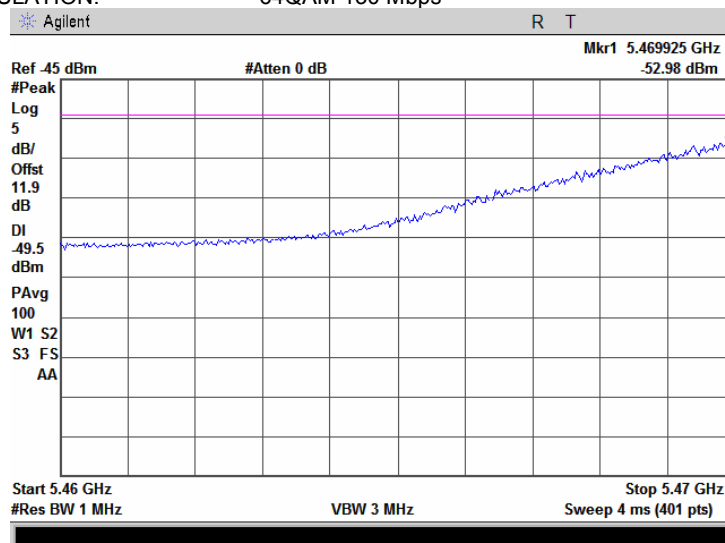
Plot 7.4.1 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5490 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: BPSK 13 Mbps



Plot 7.4.2 Conducted spurious emission measurements at the band edges

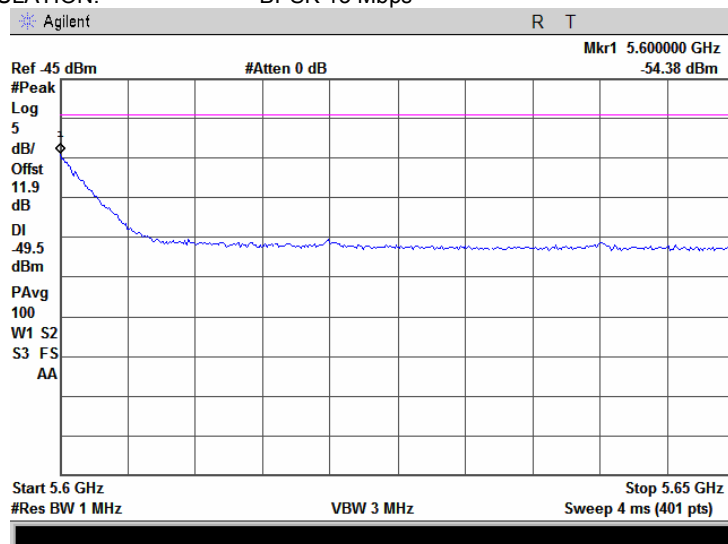
CARRIER FREQUENCY 5490 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: 64QAM 130 Mbps



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges | |
| Test procedure: | | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | |
| Test mode: | | Compliance | Verdict: PASS |
| Date: | | 11/23/2008 | |
| Temperature: 22°C | Air Pressure: 1007 hPa | Relative Humidity: 42 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

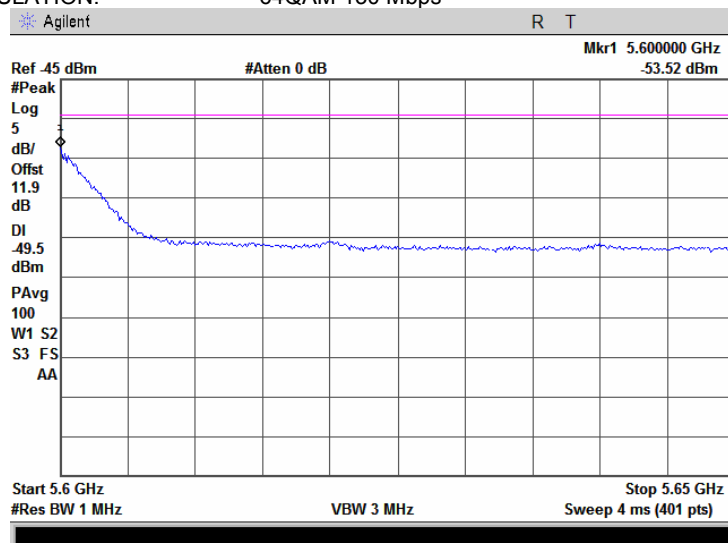
Plot 7.4.3 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5580 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: BPSK 13 Mbps



Plot 7.4.4 Conducted spurious emission measurements at the band edges

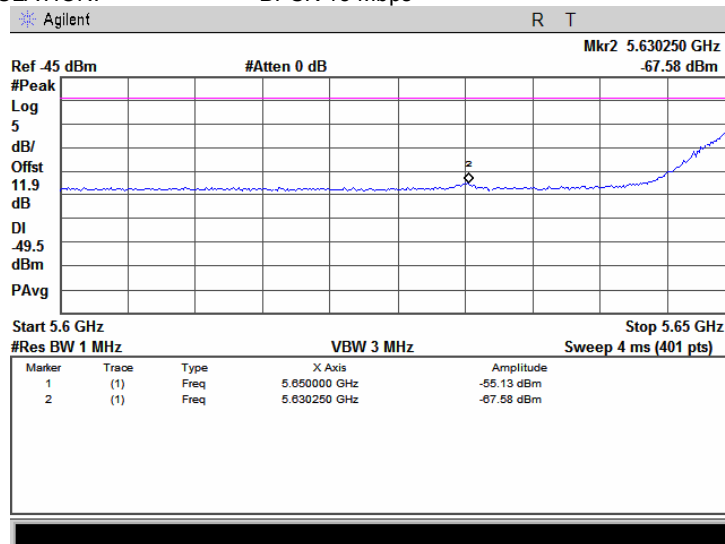
CARRIER FREQUENCY 5580 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: 64QAM 130 Mbps



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges | |
| Test procedure: | | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | |
| Test mode: | | Compliance | Verdict: PASS |
| Date: | | 11/23/2008 | |
| Temperature: 22°C | Air Pressure: 1007 hPa | Relative Humidity: 42 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

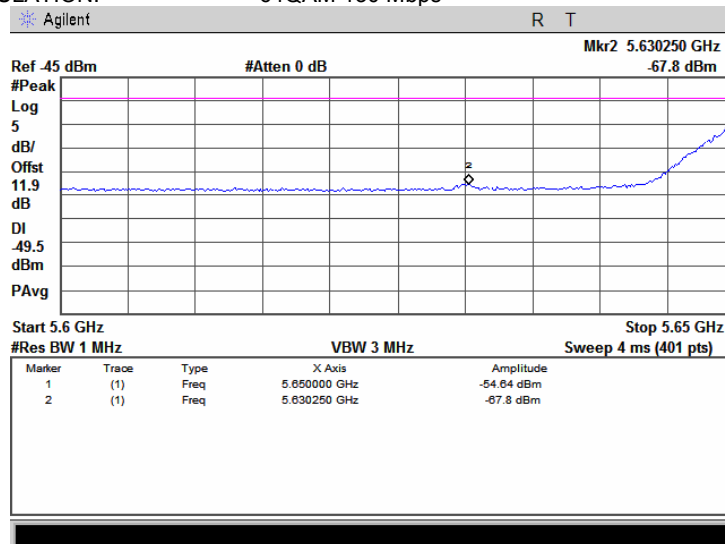
Plot 7.4.5 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5670 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: BPSK 13 Mbps



Plot 7.4.6 Conducted spurious emission measurements at the band edges

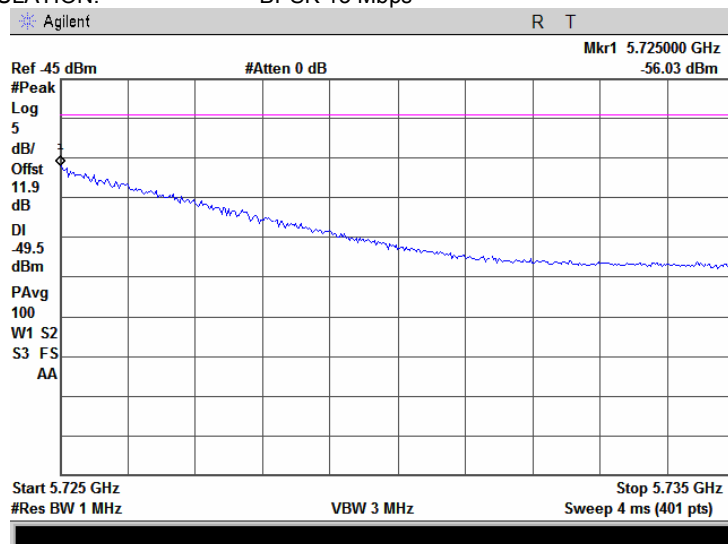
CARRIER FREQUENCY 5670 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: 64QAM 130 Mbps



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges | |
| Test procedure: | | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | |
| Test mode: | | Compliance | Verdict: PASS |
| Date: | | 11/23/2008 | |
| Temperature: 22°C | Air Pressure: 1007 hPa | Relative Humidity: 42 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

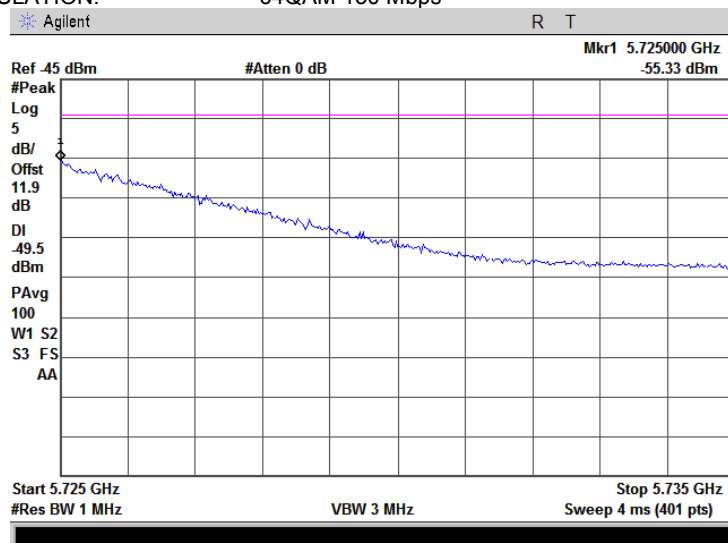
Plot 7.4.7 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5705 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: BPSK 13 Mbps



Plot 7.4.8 Conducted spurious emission measurements at the band edges

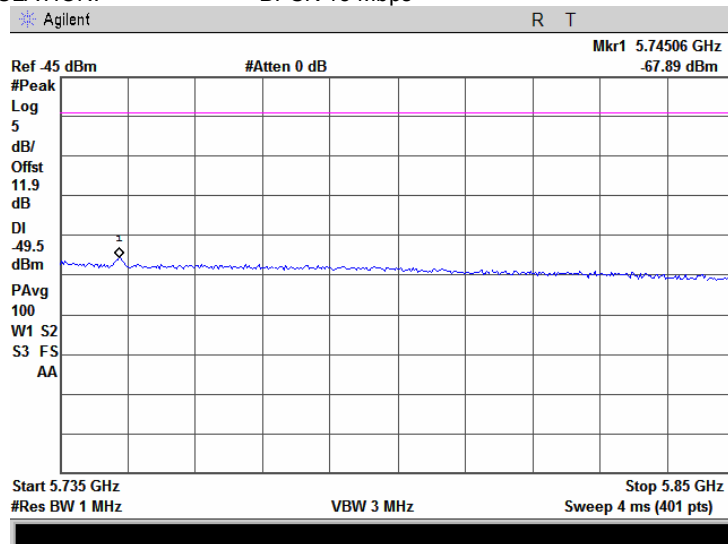
CARRIER FREQUENCY 5705 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: 64QAM 130 Mbps



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges | |
| Test procedure: | | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | |
| Test mode: | | Compliance | Verdict: PASS |
| Date: | | 11/23/2008 | |
| Temperature: 22°C | Air Pressure: 1007 hPa | Relative Humidity: 42 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

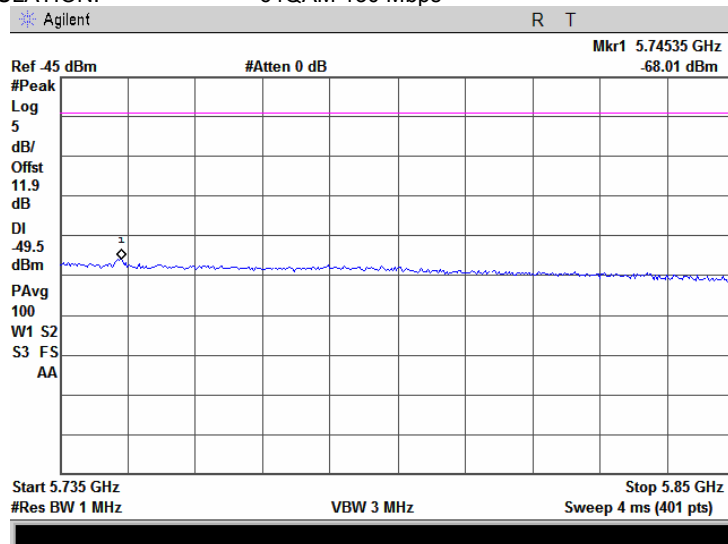
Plot 7.4.9 Conducted spurious emission measurements in the frequency range 5735 – 5850 MHz

CARRIER FREQUENCY 5705 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: BPSK 13 Mbps



Plot 7.4.10 Conducted spurious emission measurements in the frequency range 5735 – 5850 MHz

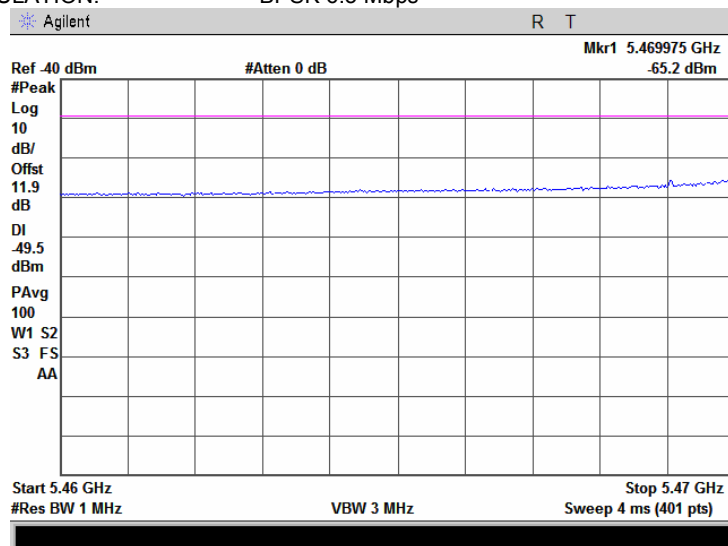
CARRIER FREQUENCY 5705 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: 64QAM 130 Mbps



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 | |
| | | Conducted emissions at band edges | |
| Test procedure: | | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | |
| Test mode: | | Compliance | Verdict: PASS |
| Date: | | 11/23/2008 | |
| Temperature: 22°C | Air Pressure: 1007 hPa | Relative Humidity: 42 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

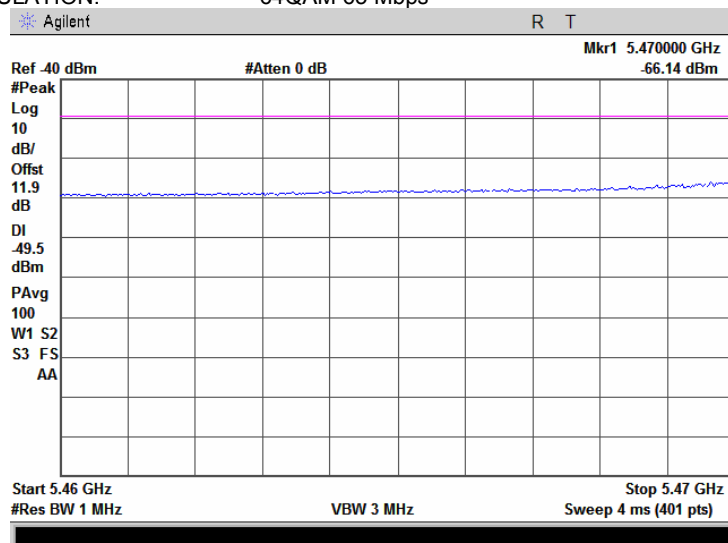
Plot 7.4.11 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5485 MHz
CHANNEL BANDWIDTH 10 MHz
MODULATION: BPSK 6.5 Mbps



Plot 7.4.12 Conducted spurious emission measurements at the band edges

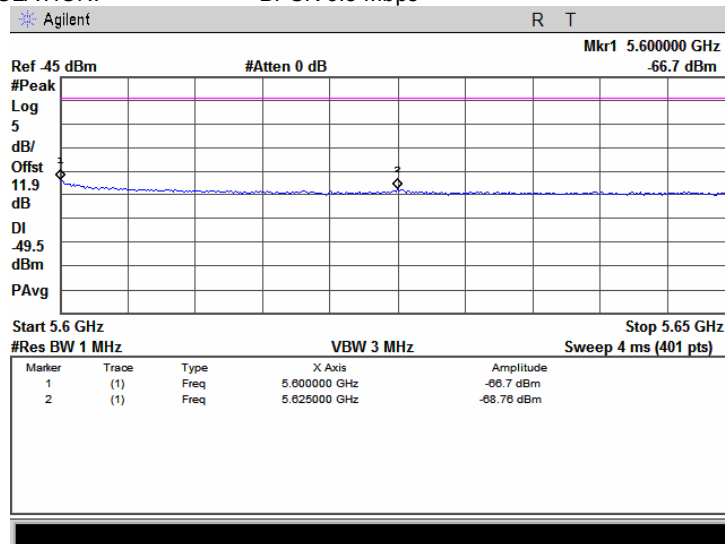
CARRIER FREQUENCY 5485 MHz
CHANNEL BANDWIDTH 10 MHz
MODULATION: 64QAM 65 Mbps



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges | |
| Test procedure: | | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | |
| Test mode: | | Compliance | Verdict: PASS |
| Date: | | 11/23/2008 | |
| Temperature: 22°C | Air Pressure: 1007 hPa | Relative Humidity: 42 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

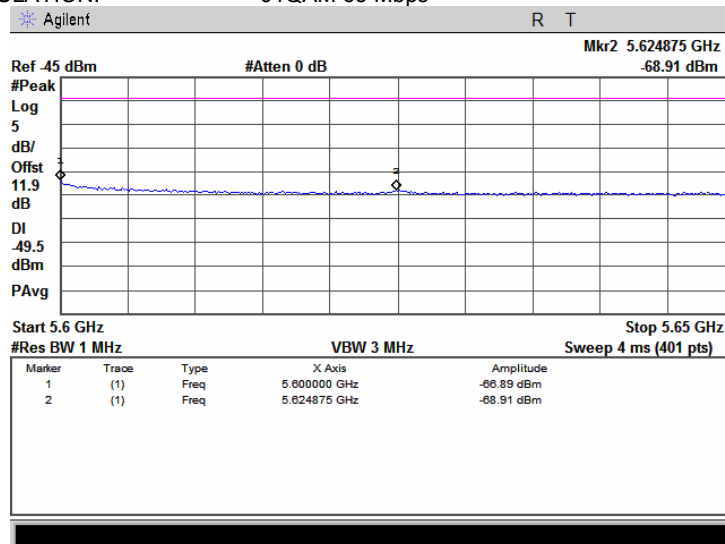
Plot 7.4.13 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5585 MHz
CHANNEL BANDWIDTH 10 MHz
MODULATION: BPSK 6.5 Mbps



Plot 7.4.14 Conducted spurious emission measurements at the band edges

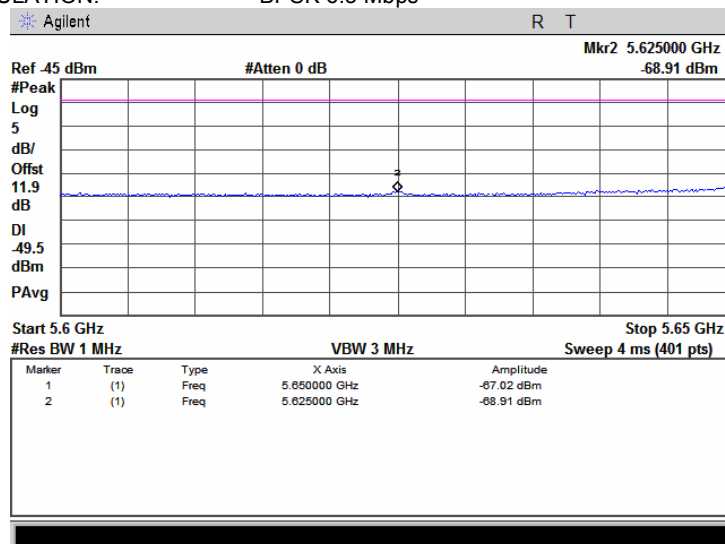
CARRIER FREQUENCY 5585 MHz
CHANNEL BANDWIDTH 10 MHz
MODULATION: 64QAM 65 Mbps



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 | |
| | | Conducted emissions at band edges | |
| Test procedure: | | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | |
| Test mode: | | Compliance | Verdict: PASS |
| Date: | | 11/23/2008 | |
| Temperature: 22°C | Air Pressure: 1007 hPa | Relative Humidity: 42 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

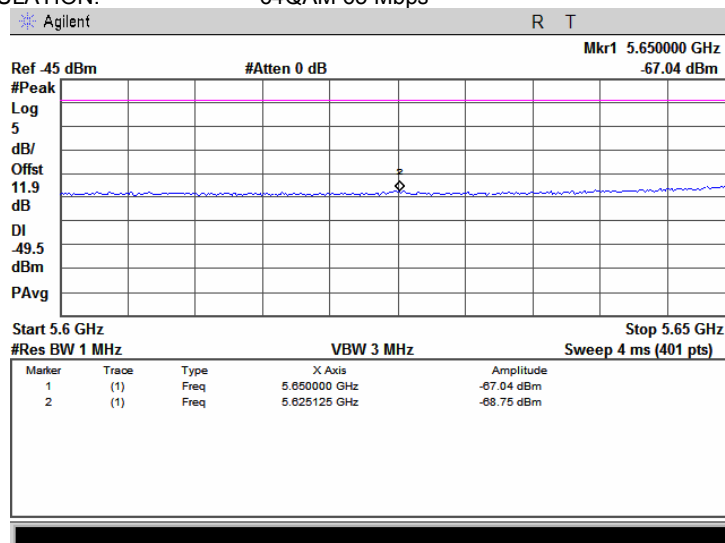
Plot 7.4.15 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5665 MHz
CHANNEL BANDWIDTH 10 MHz
MODULATION: BPSK 6.5 Mbps



Plot 7.4.16 Conducted spurious emission measurements at the band edges

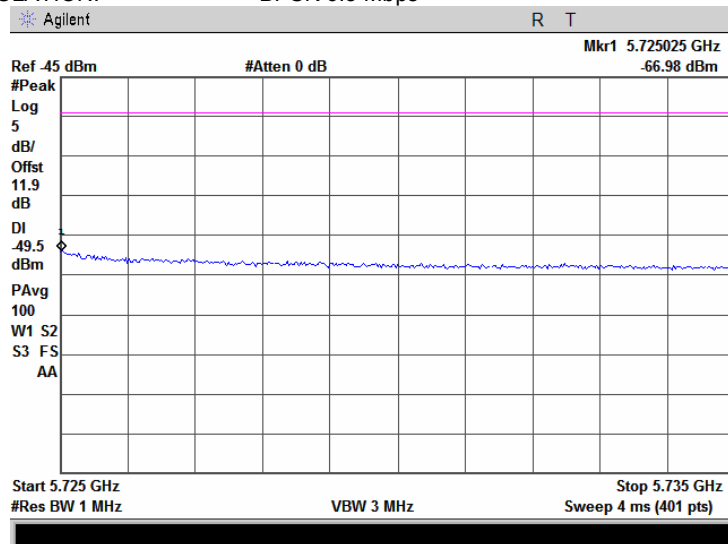
CARRIER FREQUENCY 5665 MHz
CHANNEL BANDWIDTH 10 MHz
MODULATION: 64QAM 65 Mbps



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 | |
| | | Conducted emissions at band edges | |
| Test procedure: | | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | |
| Test mode: | | Compliance | Verdict: PASS |
| Date: | | 11/23/2008 | |
| Temperature: 22°C | Air Pressure: 1007 hPa | Relative Humidity: 42 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

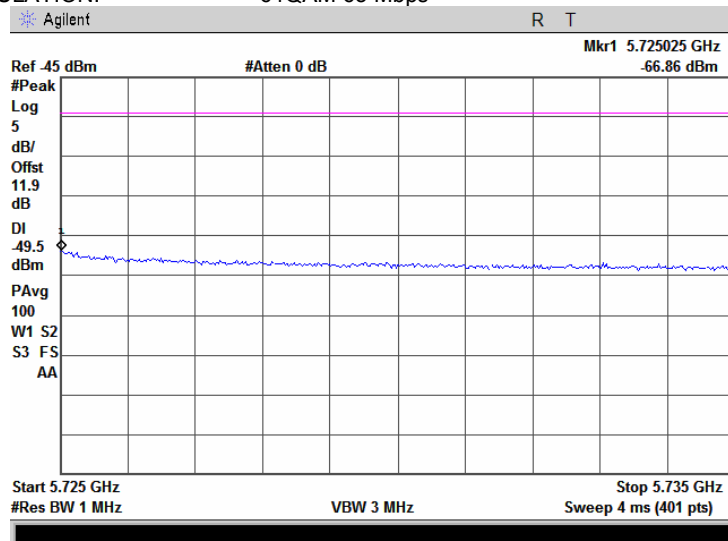
Plot 7.4.17 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5710 MHz
CHANNEL BANDWIDTH 10 MHz
MODULATION: BPSK 6.5 Mbps



Plot 7.4.18 Conducted spurious emission measurements at the band edges

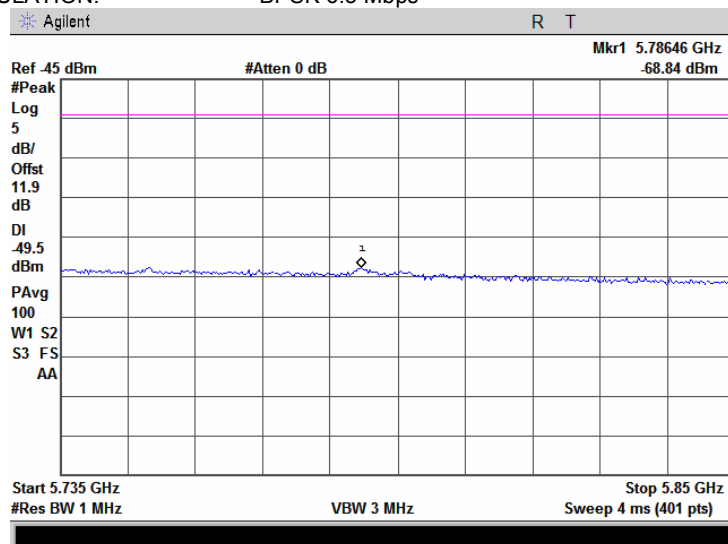
CARRIER FREQUENCY 5710 MHz
CHANNEL BANDWIDTH 10 MHz
MODULATION: 64QAM 65 Mbps



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 | |
| | | Conducted emissions at band edges | |
| Test procedure: | | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | |
| Test mode: | | Compliance | Verdict: PASS |
| Date: | | 11/23/2008 | |
| Temperature: 22°C | Air Pressure: 1007 hPa | Relative Humidity: 42 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

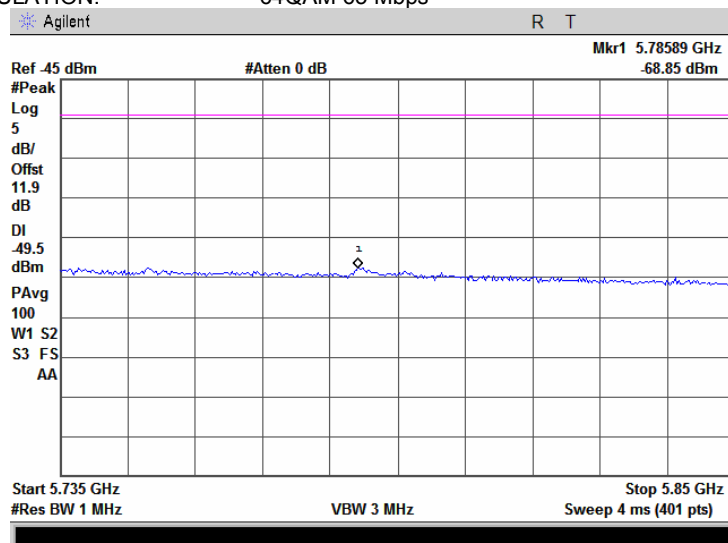
Plot 7.4.19 Conducted spurious emission measurements in the frequency range 5735 – 5850 MHz

CARRIER FREQUENCY 5710 MHz
CHANNEL BANDWIDTH 10 MHz
MODULATION: BPSK 6.5 Mbps



Plot 7.4.20 Conducted spurious emission measurements in the frequency range 5735 – 5850 MHz

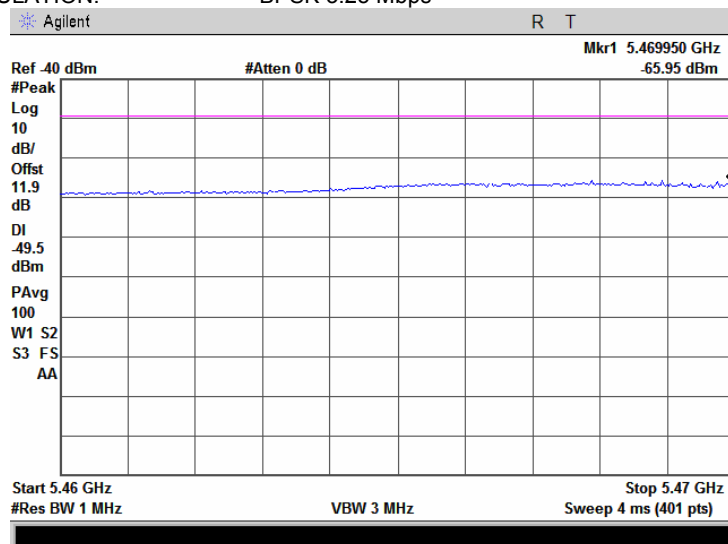
CARRIER FREQUENCY 5710 MHz
CHANNEL BANDWIDTH 10 MHz
MODULATION: 64QAM 65 Mbps



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges | |
| Test procedure: | | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | |
| Test mode: | | Compliance | Verdict: PASS |
| Date: | | 11/23/2008 | |
| Temperature: 22°C | Air Pressure: 1007 hPa | Relative Humidity: 42 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

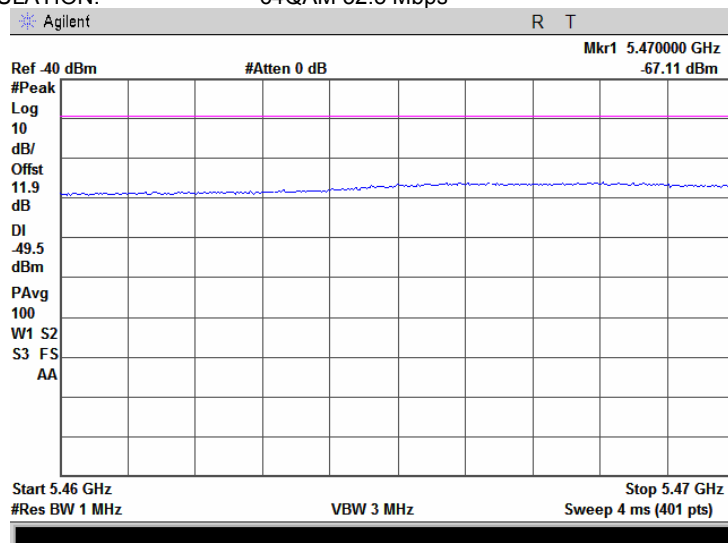
Plot 7.4.21 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5480 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: BPSK 3.25 Mbps



Plot 7.4.22 Conducted spurious emission measurements at the band edges

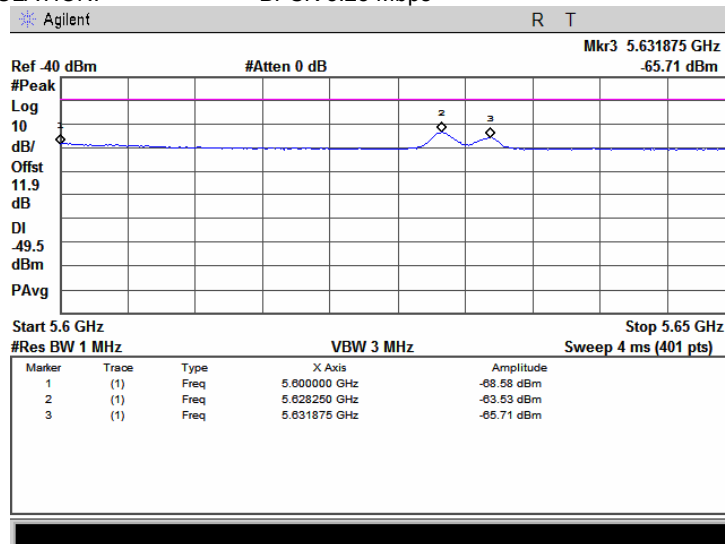
CARRIER FREQUENCY 5480 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: 64QAM 32.5 Mbps



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 | |
| | | Conducted emissions at band edges | |
| Test procedure: | | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | |
| Test mode: | | Compliance | Verdict: PASS |
| Date: | | 11/23/2008 | |
| Temperature: 22°C | Air Pressure: 1007 hPa | Relative Humidity: 42 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

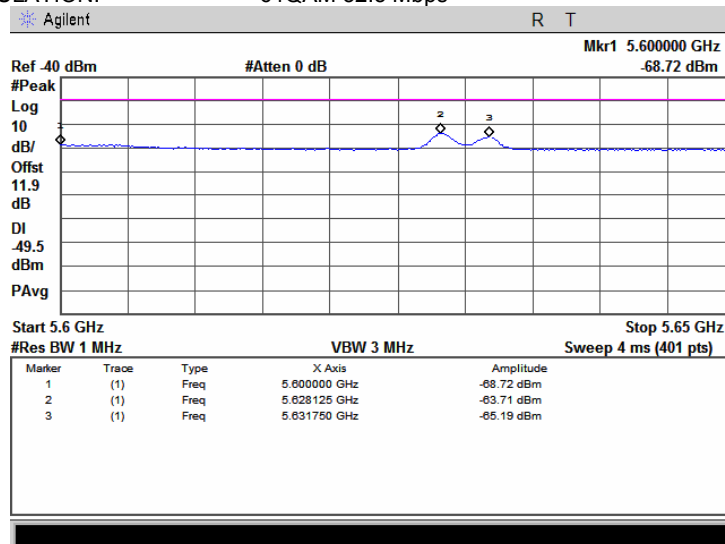
Plot 7.4.23 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5590 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: BPSK 3.25 Mbps



Plot 7.4.24 Conducted spurious emission measurements at the band edges

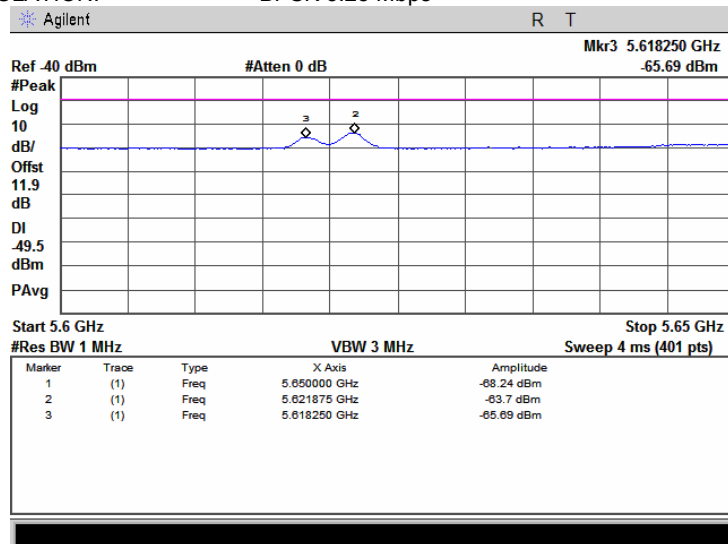
CARRIER FREQUENCY 5590 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: 64QAM 32.5 Mbps



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 | |
| | | Conducted emissions at band edges | |
| Test procedure: | | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | |
| Test mode: | | Compliance | Verdict: PASS |
| Date: | | 11/23/2008 | |
| Temperature: 22°C | Air Pressure: 1007 hPa | Relative Humidity: 42 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

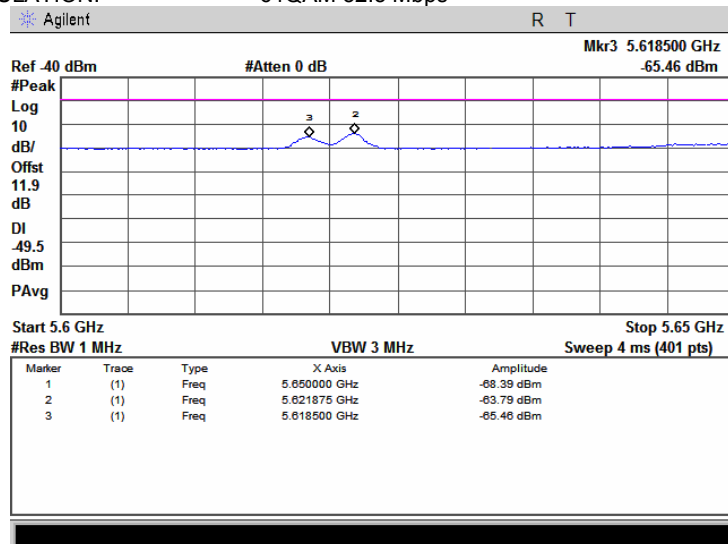
Plot 7.4.25 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5660 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: BPSK 3.25 Mbps



Plot 7.4.26 Conducted spurious emission measurements at the band edges

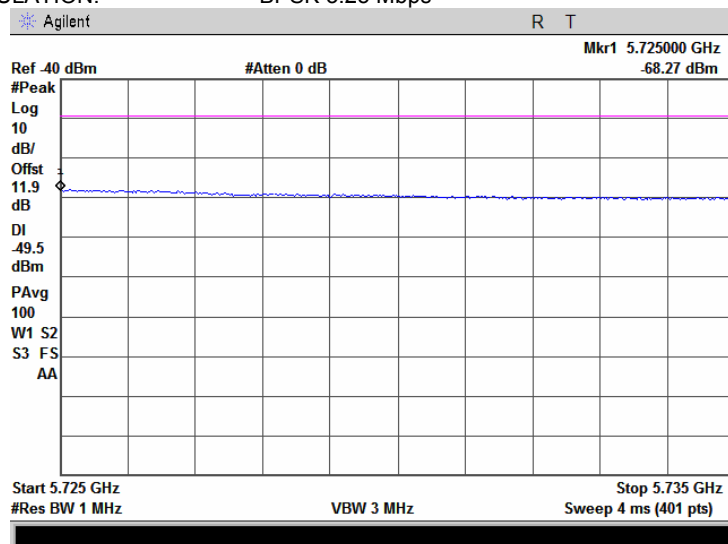
CARRIER FREQUENCY 5660 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: 64QAM 32.5 Mbps



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges | |
| Test procedure: | | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | |
| Test mode: | | Compliance | Verdict: PASS |
| Date: | | 11/23/2008 | |
| Temperature: 22°C | Air Pressure: 1007 hPa | Relative Humidity: 42 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

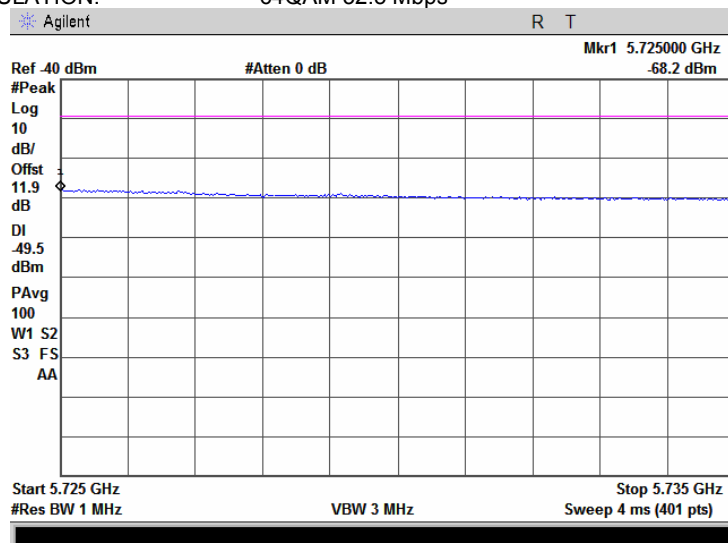
Plot 7.4.27 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5715 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: BPSK 3.25 Mbps



Plot 7.4.28 Conducted spurious emission measurements at the band edges

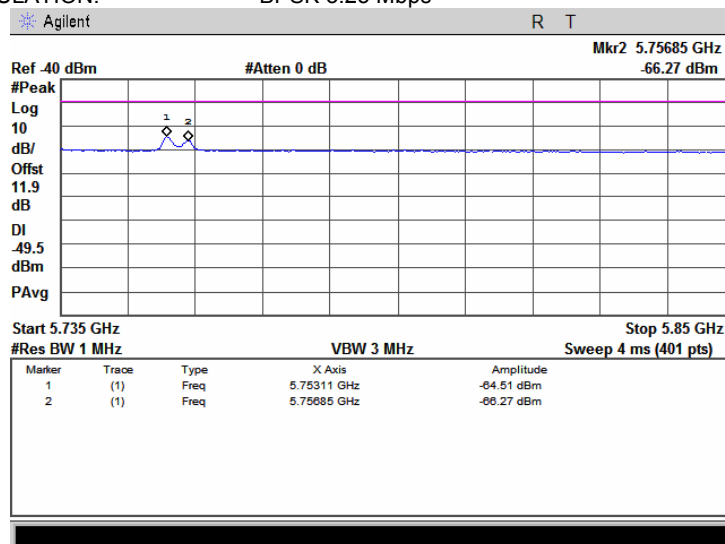
CARRIER FREQUENCY 5715 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: 64QAM 32.5 Mbps



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 | |
| | | Conducted emissions at band edges | |
| Test procedure: | | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | |
| Test mode: | | Compliance | Verdict: PASS |
| Date: | | 11/23/2008 | |
| Temperature: 22°C | Air Pressure: 1007 hPa | Relative Humidity: 42 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

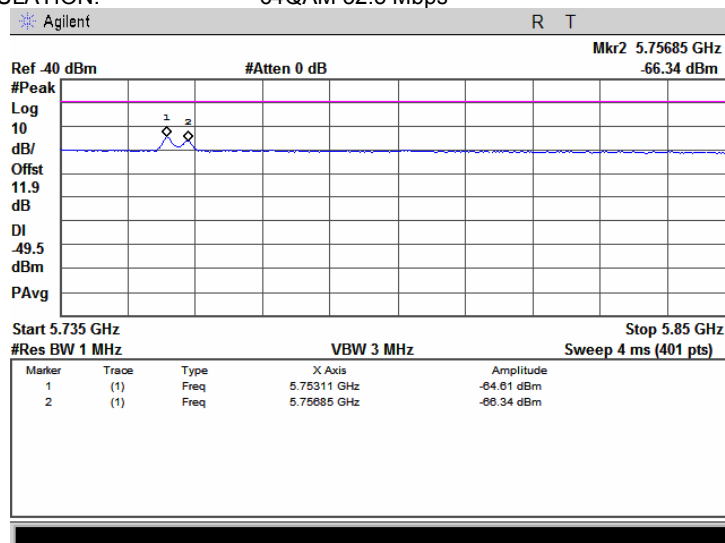
Plot 7.4.29 Conducted spurious emission measurements in the frequency range 5735 – 5850 MHz

CARRIER FREQUENCY 5715 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: BPSK 3.25 Mbps



Plot 7.4.30 Conducted spurious emission measurements in the frequency range 5735 – 5850 MHz

CARRIER FREQUENCY 5715 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: 64QAM 32.5 Mbps



| | | | | |
|--|---|-------------------------|-----------------------|------|
| Test specification: | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges | | | |
| Test procedure: | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | | | |
| Test mode: | Compliance | Verdict: | | PASS |
| Date: | 12/04/2008 | | | |
| Temperature: 22°C | Air Pressure: 1013 hPa | Relative Humidity: 48 % | Power Supply: 120 VAC | |
| Remarks: EUT with 28 dBi antenna assembly gain | | | | |

Table 7.4.3 Conducted spurious emission test results

ASSIGNED FREQUENCY RANGE: 5470 – 5725 MHz
DETECTOR USED: Peak
RESOLUTION BANDWIDTH: 1000 kHz
VIDEO BANDWIDTH: 3000 kHz

| Frequency, MHz | | Modulation | Bit rate, Mbps | CBW, MHz | SA reading, dBm | Limit, dBm/MHz | Antenna assembly gain, dBi | EIRP, dBm/MHz | Margin*, dB | Verdict |
|----------------|---------|------------|----------------|----------|-------------------------|----------------|----------------------------|---------------|-------------|---------|
| Edge | Channel | | | | | | | | | |
| 5470 | 5490 | BPSK | 13 | 20 | -64.03 | -27 | 28 | -36.03 | -9.03 | Pass |
| 5470 | | 64QAM | 130 | | -64.06 | -27 | 28 | -36.06 | -9.06 | Pass |
| 5470 | 5485 | BPSK | 6.5 | 10 | No emissions were found | | | | | Pass |
| 5470 | | 64QAM | 65 | | | | | | | |
| 5470 | 5480 | BPSK | 3.25 | 5 | | | | | | |
| 5470 | | 64QAM | 32.5 | | | | | | | |
| 5470 | | | | | | | | | | |
| 5600 | 5580 | BPSK | 13 | 20 | -63.87 | -27 | 28 | -35.87 | -8.87 | Pass |
| 5600 | | 64QAM | 130 | | -63.70 | -27 | 28 | -35.70 | -8.70 | Pass |
| 5600 | 5585 | BPSK | 6.5 | 10 | No emissions were found | | | | | Pass |
| 5600 | | 64QAM | 65 | | | | | | | |
| 5628.125 | 5590 | BPSK | 3.25 | 5 | -66.59 | -27 | 28 | -38.59 | -11.59 | Pass |
| 5631.750 | | | | | -68.21 | -27 | 28 | -40.21 | -13.21 | Pass |
| 5628.000 | | 64QAM | 32.5 | | -67.01 | -27 | 28 | -39.01 | -12.01 | Pass |
| 5631.625 | | | | | -68.52 | -27 | 28 | -40.52 | -13.52 | Pass |
| 5650 | 5670 | BPSK | 13 | 20 | -63.51 | -27 | 28 | -35.51 | -8.51 | Pass |
| 5650 | | 64QAM | 130 | | -64.20 | -27 | 28 | -36.20 | -9.20 | Pass |
| 5650 | 5665 | BPSK | 6.5 | 10 | No emissions were found | | | | | Pass |
| 5650 | | 64QAM | 65 | | | | | | | |
| 5618.375 | 5660 | BPSK | 3.25 | 5 | -68.44 | -27 | 28 | -40.44 | -13.44 | Pass |
| 5621.875 | | | | | -67.25 | -27 | 28 | -39.25 | -12.25 | Pass |
| 5618.125 | | 64QAM | 32.5 | | -68.05 | -27 | 28 | -40.05 | -13.05 | Pass |
| 5621.875 | | | | | -66.74 | -27 | 28 | -38.74 | -11.74 | Pass |
| 5725 | 5705 | BPSK | 13 | 20 | -64.24 | -27 | 28 | -36.24 | -9.24 | Pass |
| 5725 | | 64QAM | 130 | | -64.62 | -27 | 28 | -36.62 | -9.62 | Pass |
| 5725 | 5710 | BPSK | 6.5 | 10 | No emissions were found | | | | | Pass |
| 5725 | | 64QAM | 65 | | | | | | | |
| 5753.40 | 5715 | BPSK | 3.25 | 5 | -67.50 | -27 | 28 | -39.5 | -12.5 | Pass |
| 5756.85 | | | | | -69.03 | -27 | 28 | -41.03 | -14.03 | Pass |
| 5753.40 | | 64QAM | 32.5 | | -67.88 | -27 | 28 | -39.88 | -12.88 | Pass |
| 5756.85 | | | | | -69.06 | -27 | 28 | -41.06 | -14.06 | Pass |

*- Margin = Field strength of spurious – calculated field strength limit.

Reference numbers of test equipment used

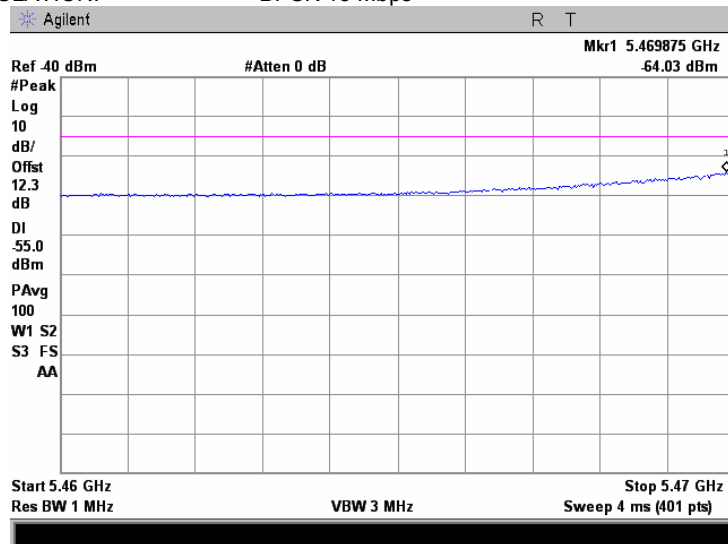
| | | | | | | | |
|---------|---------|---------|--|--|--|--|--|
| HL 2780 | HL 2883 | HL 3176 | | | | | |
|---------|---------|---------|--|--|--|--|--|

Full description is given in Appendix A.

| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges | |
| Test procedure: | | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | |
| Test mode: | | Compliance | Verdict: PASS |
| Date: | | 12/04/2008 | |
| Temperature: 22°C | Air Pressure: 1013 hPa | Relative Humidity: 48 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

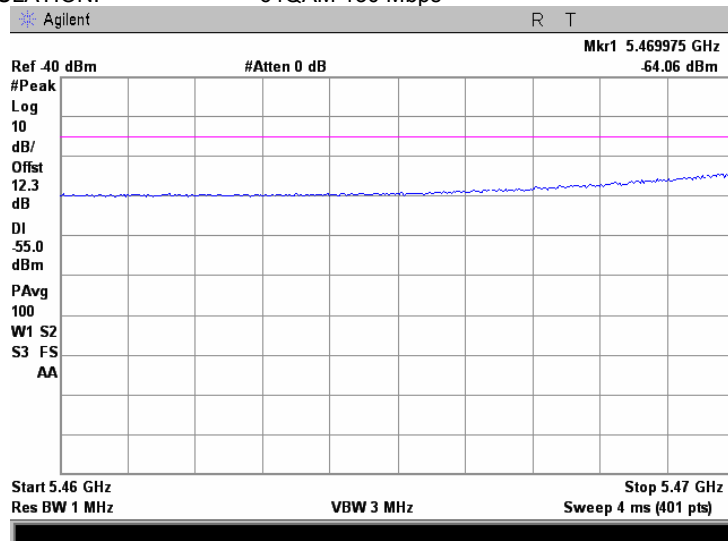
Plot 7.4.31 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5490 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: BPSK 13 Mbps



Plot 7.4.32 Conducted spurious emission measurements at the band edges

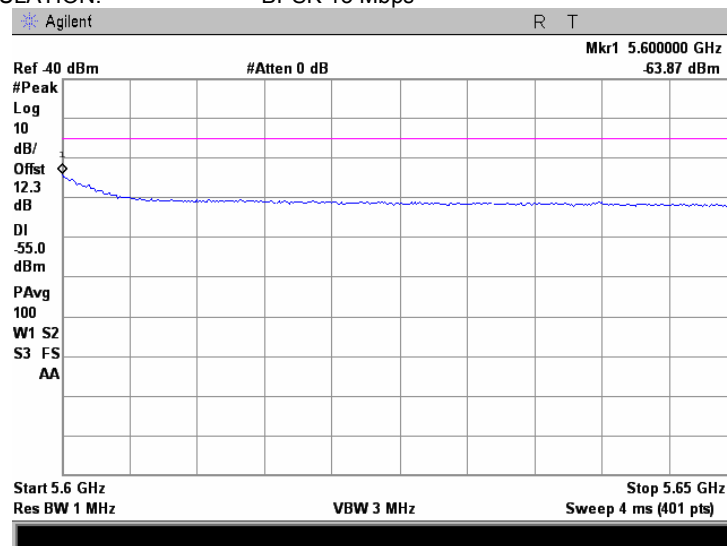
CARRIER FREQUENCY 5490 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: 64QAM 130 Mbps



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges | |
| Test procedure: | | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | |
| Test mode: | | Compliance | Verdict: PASS |
| Date: | | 12/04/2008 | |
| Temperature: 22°C | Air Pressure: 1013 hPa | Relative Humidity: 48 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

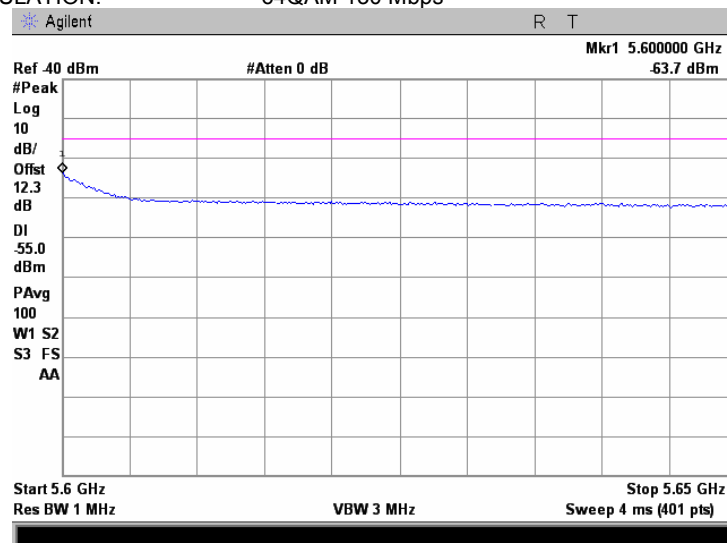
Plot 7.4.33 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5580 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: BPSK 13 Mbps



Plot 7.4.34 Conducted spurious emission measurements at the band edges

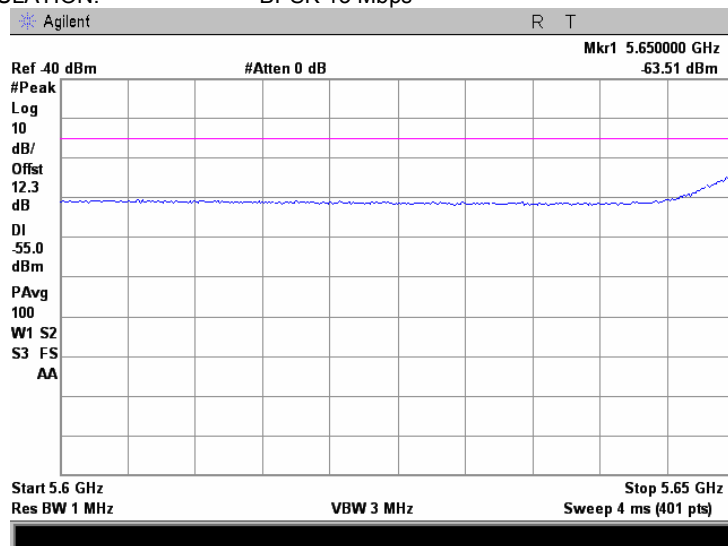
CARRIER FREQUENCY 5580 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: 64QAM 130 Mbps



| | | | |
|---|--|---|--|
| Test specification: | | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges | |
| Test procedure: | | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | |
| Test mode: | | Verdict: PASS | |
| Date: | | | |
| Temperature: 22°C | | Relative Humidity: 48 % | |
| Air Pressure: 1013 hPa | | Power Supply: 120 VAC | |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

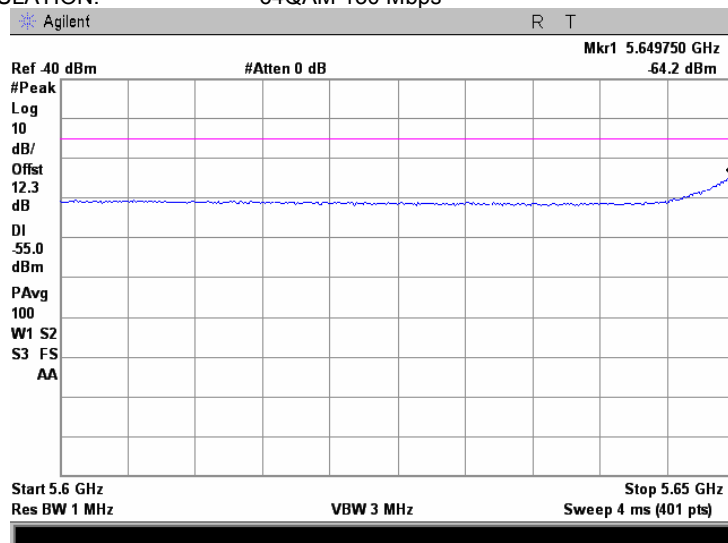
Plot 7.4.35 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5670 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: BPSK 13 Mbps



Plot 7.4.36 Conducted spurious emission measurements at the band edges

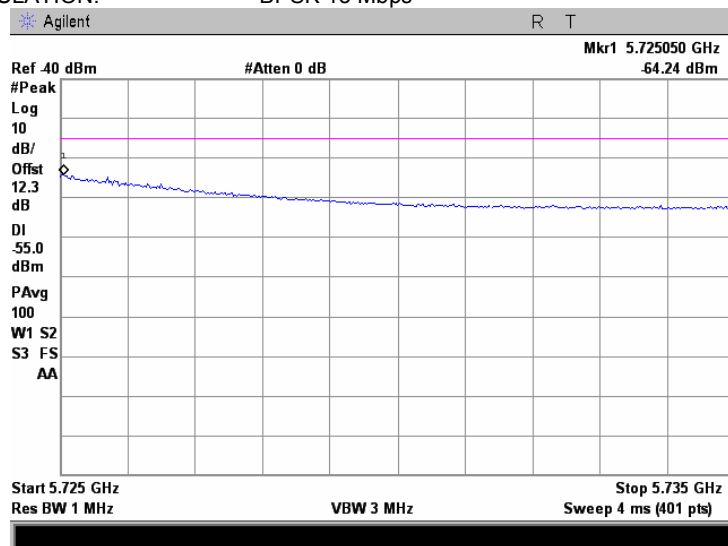
CARRIER FREQUENCY 5670 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: 64QAM 130 Mbps



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges | |
| Test procedure: | | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | |
| Test mode: | | Compliance | Verdict: PASS |
| Date: | | 12/04/2008 | |
| Temperature: 22°C | Air Pressure: 1013 hPa | Relative Humidity: 48 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

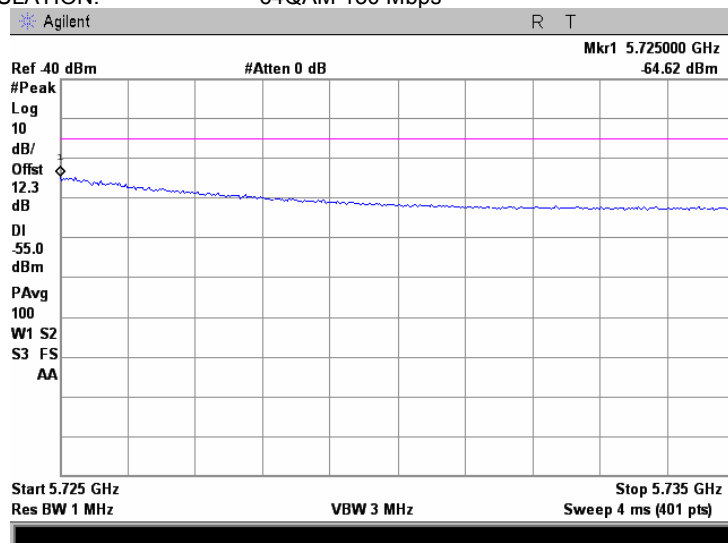
Plot 7.4.37 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5705 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: BPSK 13 Mbps



Plot 7.4.38 Conducted spurious emission measurements at the band edges

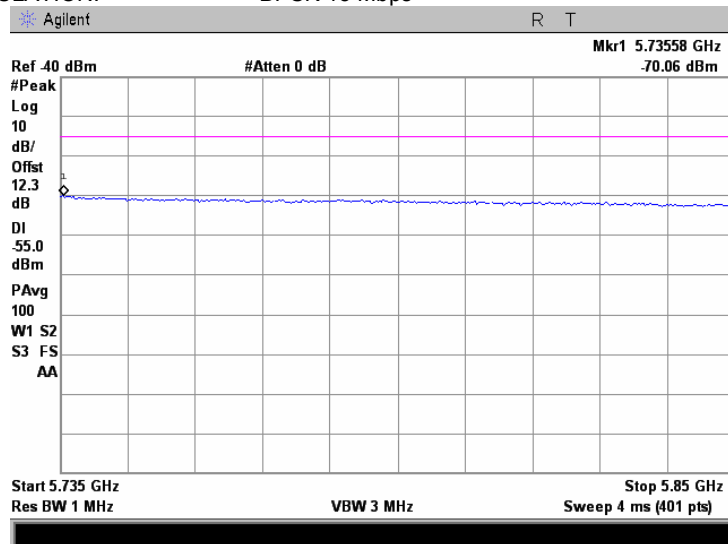
CARRIER FREQUENCY 5705 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: 64QAM 130 Mbps



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges | |
| Test procedure: | | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | |
| Test mode: | | Compliance | Verdict: PASS |
| Date: | | 12/04/2008 | |
| Temperature: 22°C | Air Pressure: 1013 hPa | Relative Humidity: 48 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

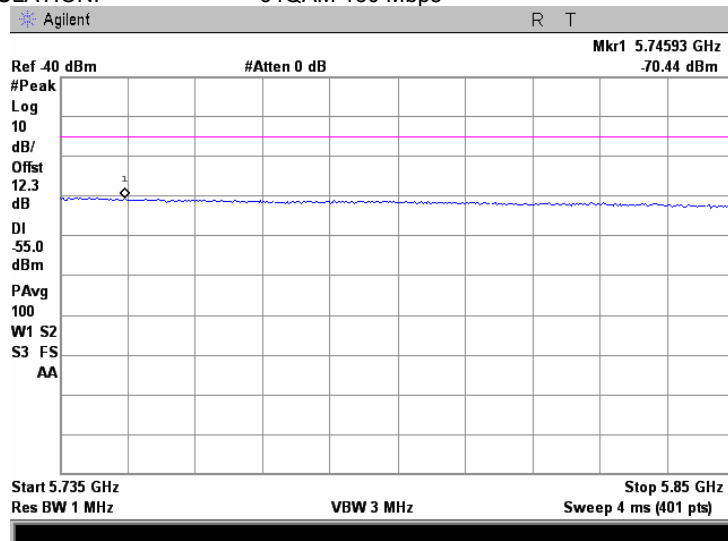
Plot 7.4.39 Conducted spurious emission measurements in the frequency range 5735 – 5850 MHz

CARRIER FREQUENCY 5705 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: BPSK 13 Mbps



Plot 7.4.40 Conducted spurious emission measurements in the frequency range 5735 – 5850 MHz

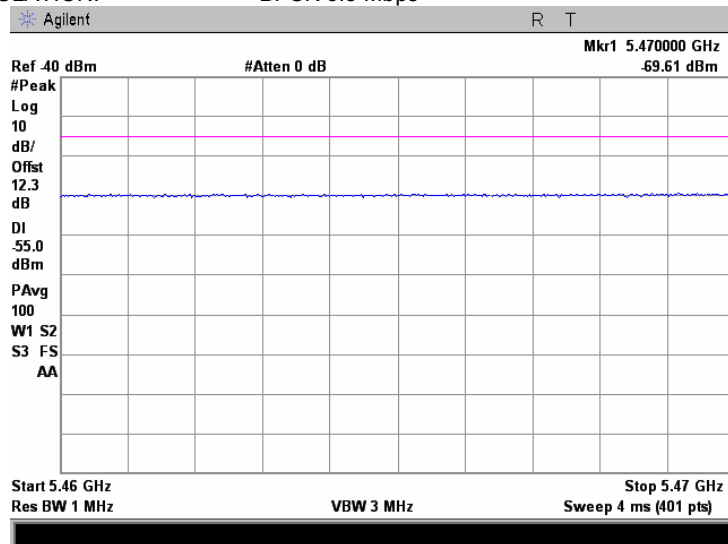
CARRIER FREQUENCY 5705 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: 64QAM 130 Mbps



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges | |
| Test procedure: | | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | |
| Test mode: | | Verdict: | |
| Date: | | PASS | |
| Temperature: 22°C | Air Pressure: 1013 hPa | Relative Humidity: 48 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

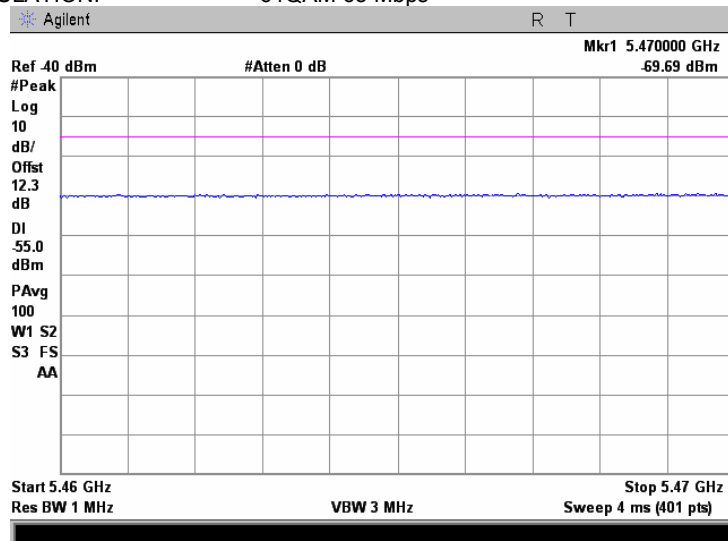
Plot 7.4.41 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5485 MHz
CHANNEL BANDWIDTH 10 MHz
MODULATION: BPSK 6.5 Mbps



Plot 7.4.42 Conducted spurious emission measurements at the band edges

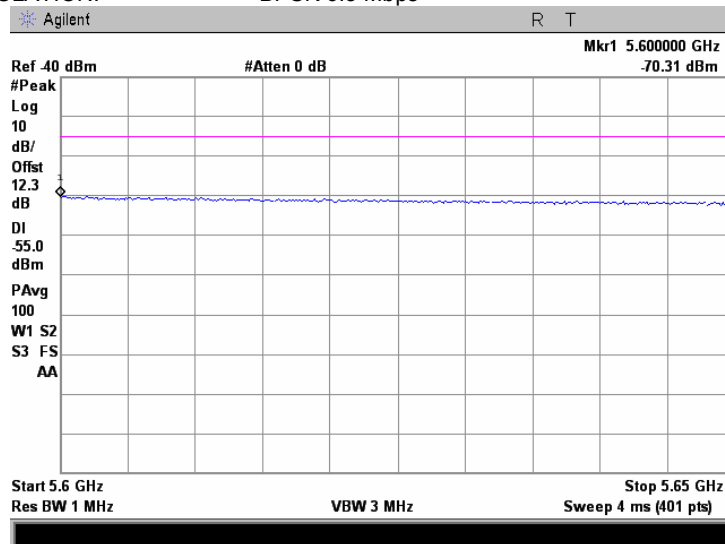
CARRIER FREQUENCY 5485 MHz
CHANNEL BANDWIDTH 10 MHz
MODULATION: 64QAM 65 Mbps



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges | |
| Test procedure: | | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | |
| Test mode: | | Compliance | Verdict: PASS |
| Date: | | 12/04/2008 | |
| Temperature: 22°C | Air Pressure: 1013 hPa | Relative Humidity: 48 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

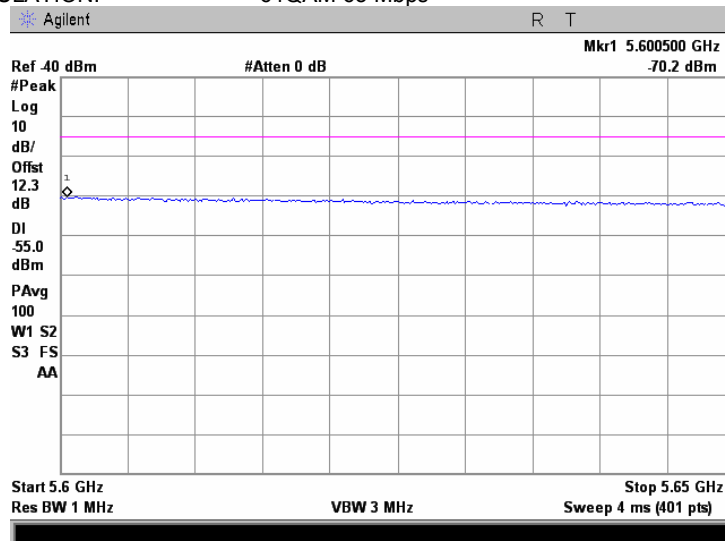
Plot 7.4.43 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5585 MHz
CHANNEL BANDWIDTH 10 MHz
MODULATION: BPSK 6.5 Mbps



Plot 7.4.44 Conducted spurious emission measurements at the band edges

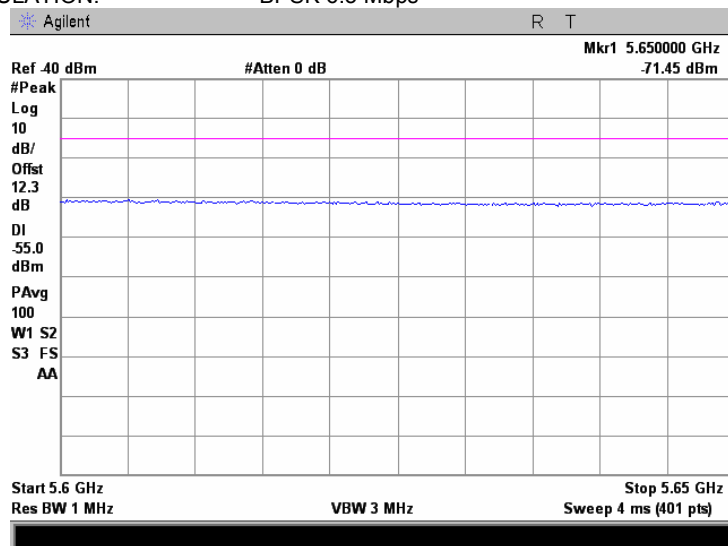
CARRIER FREQUENCY 5585 MHz
CHANNEL BANDWIDTH 10 MHz
MODULATION: 64QAM 65 Mbps



| | | | |
|---|--|---|--|
| Test specification: | | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges | |
| Test procedure: | | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | |
| Test mode: | | Verdict: PASS | |
| Date: | | | |
| Temperature: 22°C | | Relative Humidity: 48 % | |
| Air Pressure: 1013 hPa | | Power Supply: 120 VAC | |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

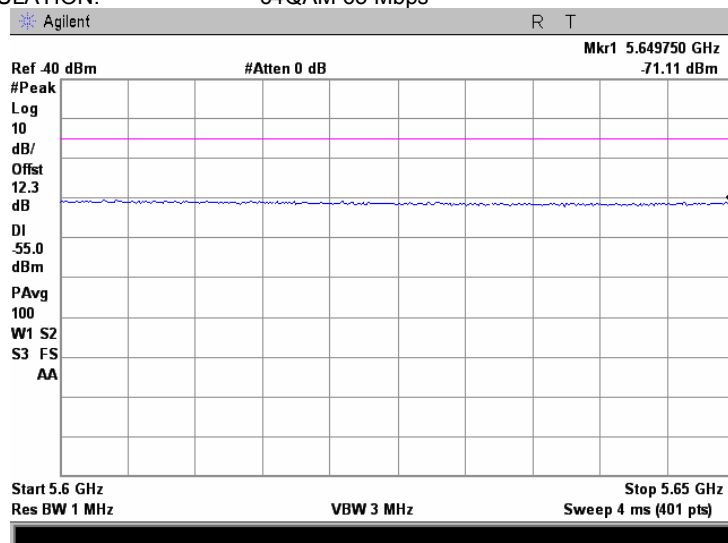
Plot 7.4.45 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5665 MHz
CHANNEL BANDWIDTH 10 MHz
MODULATION: BPSK 6.5 Mbps



Plot 7.4.46 Conducted spurious emission measurements at the band edges

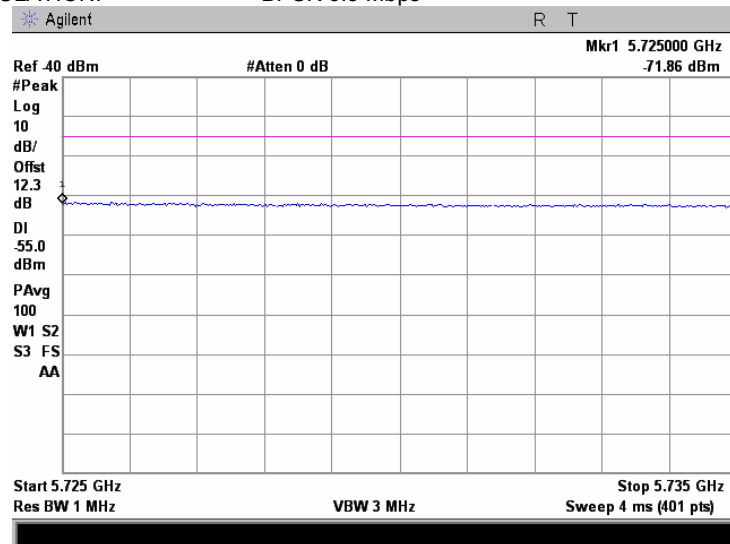
CARRIER FREQUENCY 5665 MHz
CHANNEL BANDWIDTH 10 MHz
MODULATION: 64QAM 65 Mbps



| | | | |
|--|---|-------------------------|-----------------------|
| Test specification: | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges | | |
| Test procedure: | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 12/04/2008 | | |
| Temperature: 22°C | Air Pressure: 1013 hPa | Relative Humidity: 48 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

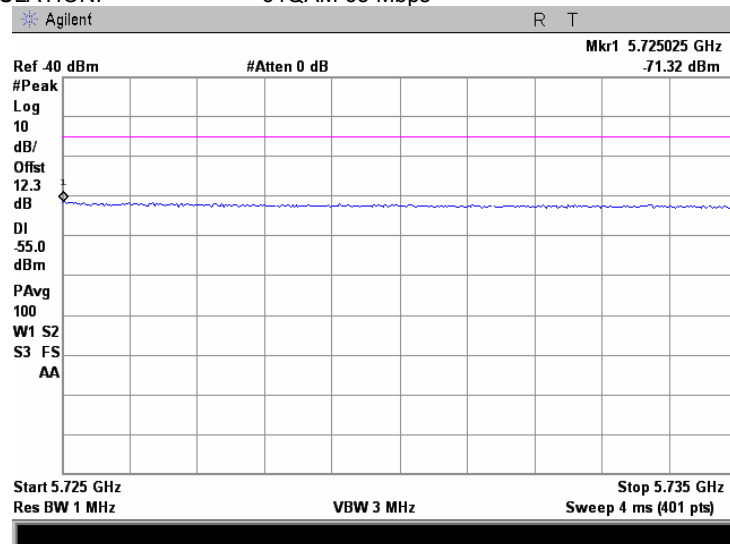
Plot 7.4.47 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5710 MHz
CHANNEL BANDWIDTH 10 MHz
MODULATION: BPSK 6.5 Mbps



Plot 7.4.48 Conducted spurious emission measurements at the band edges

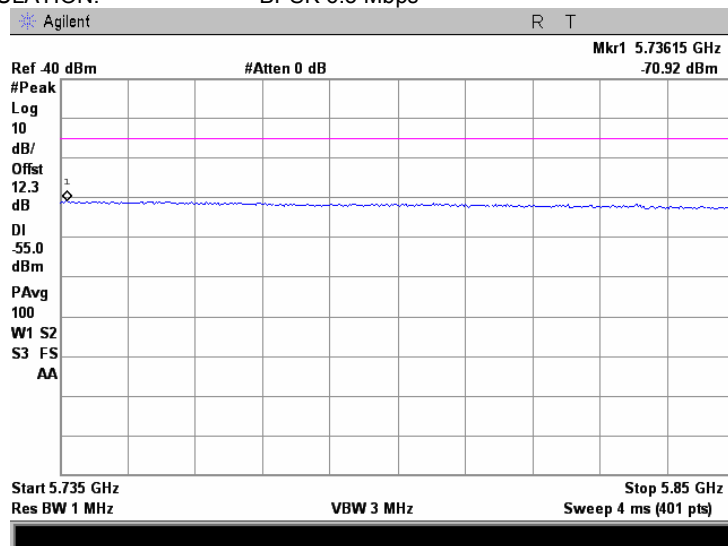
CARRIER FREQUENCY 5710 MHz
CHANNEL BANDWIDTH 10 MHz
MODULATION: 64QAM 65 Mbps



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges | |
| Test procedure: | | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | |
| Test mode: | | Compliance | Verdict: PASS |
| Date: | | 12/04/2008 | |
| Temperature: 22°C | Air Pressure: 1013 hPa | Relative Humidity: 48 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

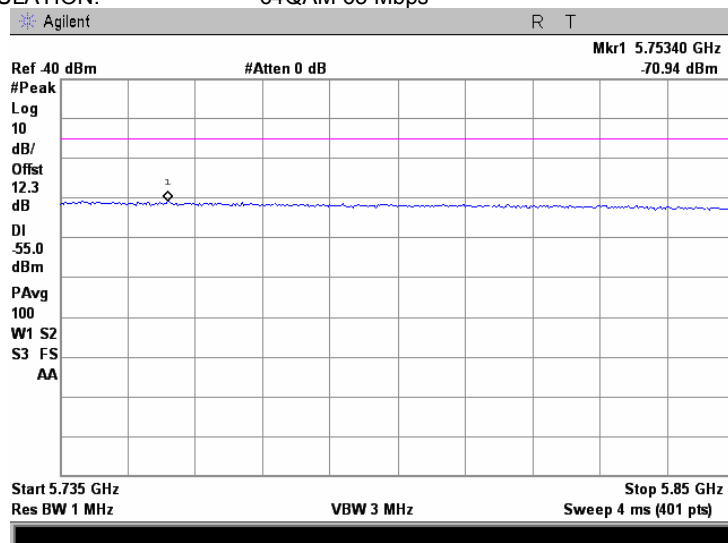
Plot 7.4.49 Conducted spurious emission measurements in the frequency range 5735 – 5850 MHz

CARRIER FREQUENCY 5710 MHz
CHANNEL BANDWIDTH 10 MHz
MODULATION: BPSK 6.5 Mbps



Plot 7.4.50 Conducted spurious emission measurements in the frequency range 5735 – 5850 MHz

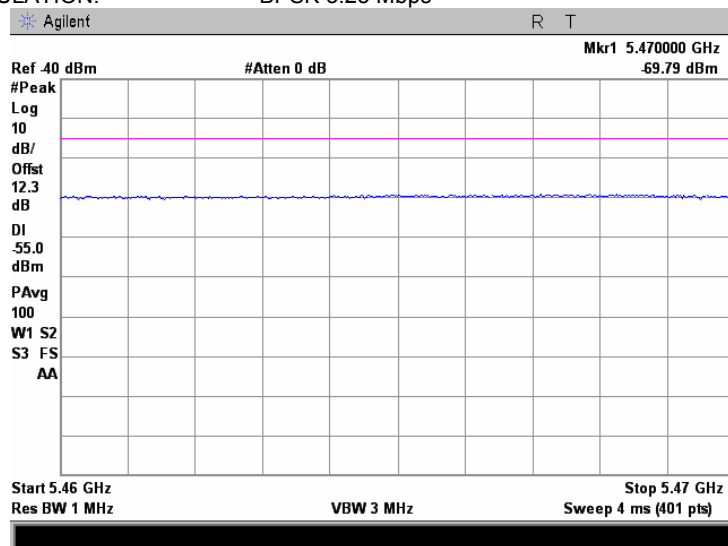
CARRIER FREQUENCY 5710 MHz
CHANNEL BANDWIDTH 10 MHz
MODULATION: 64QAM 65 Mbps



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges | |
| Test procedure: | | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | |
| Test mode: | | Compliance | Verdict: PASS |
| Date: | | 12/04/2008 | |
| Temperature: 22°C | Air Pressure: 1013 hPa | Relative Humidity: 48 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

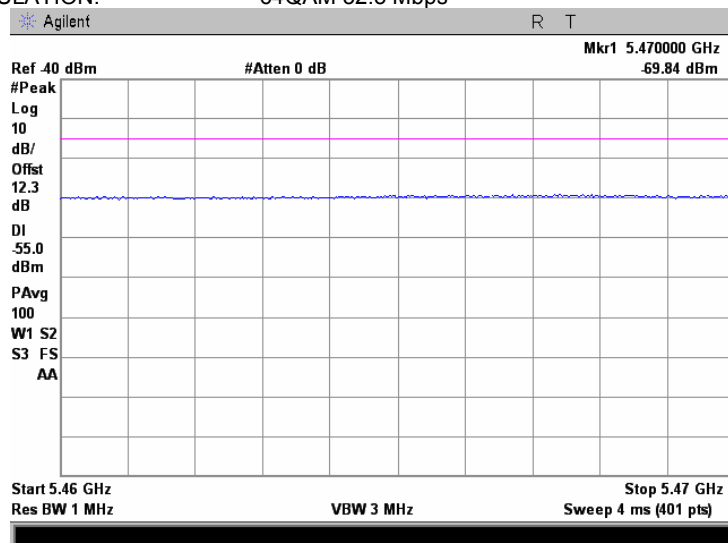
Plot 7.4.51 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5480 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: BPSK 3.25 Mbps



Plot 7.4.52 Conducted spurious emission measurements at the band edges

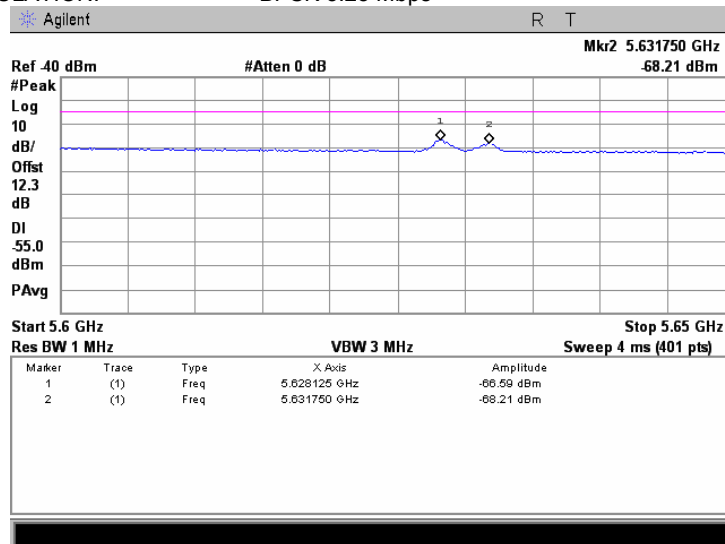
CARRIER FREQUENCY 5480 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: 64QAM 32.5 Mbps



| | | | |
|---|---|--------------------------------|------------------------------|
| Test specification: | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges | | |
| Test procedure: | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 12/04/2008 | | |
| Temperature: 22°C | Air Pressure: 1013 hPa | Relative Humidity: 48 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

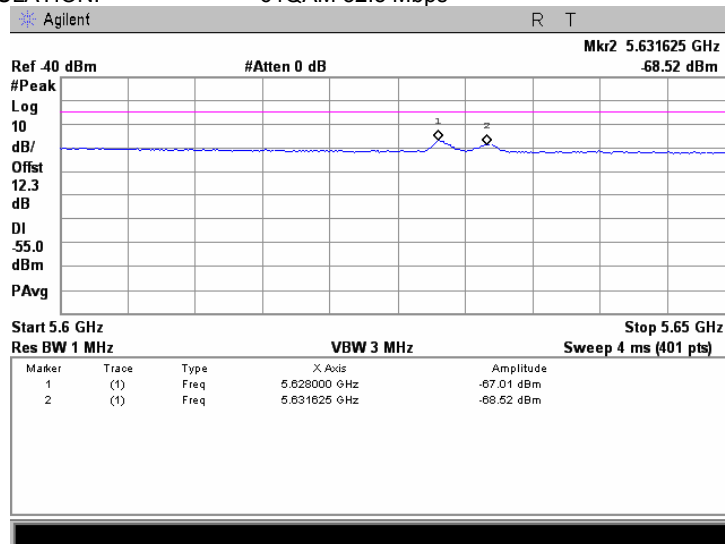
Plot 7.4.53 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5590 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: BPSK 3.25 Mbps



Plot 7.4.54 Conducted spurious emission measurements at the band edges

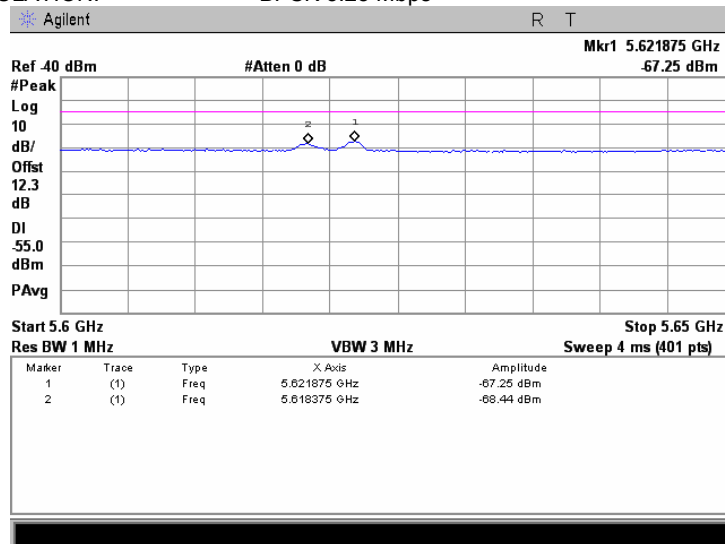
CARRIER FREQUENCY 5590 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: 64QAM 32.5 Mbps



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 | |
| | | Conducted emissions at band edges | |
| Test procedure: | | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | |
| Test mode: | | Compliance | Verdict: PASS |
| Date: | | 12/04/2008 | |
| Temperature: 22°C | Air Pressure: 1013 hPa | Relative Humidity: 48 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

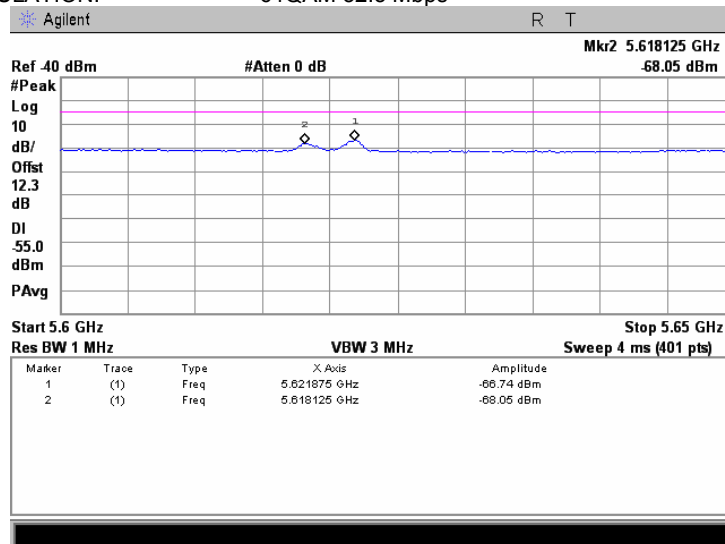
Plot 7.4.55 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5660 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: BPSK 3.25 Mbps



Plot 7.4.56 Conducted spurious emission measurements at the band edges

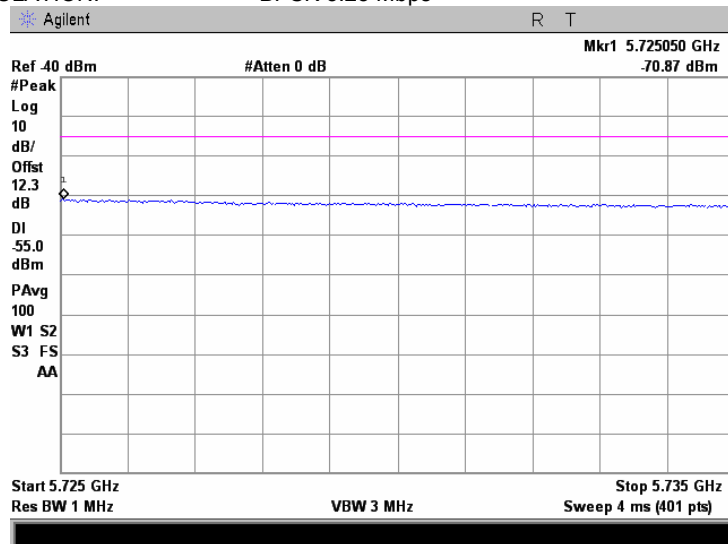
CARRIER FREQUENCY 5660 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: 64QAM 32.5 Mbps



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 | |
| | | Conducted emissions at band edges | |
| Test procedure: | | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | |
| Test mode: | | Compliance | Verdict: PASS |
| Date: | | 12/04/2008 | |
| Temperature: 22°C | Air Pressure: 1013 hPa | Relative Humidity: 48 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

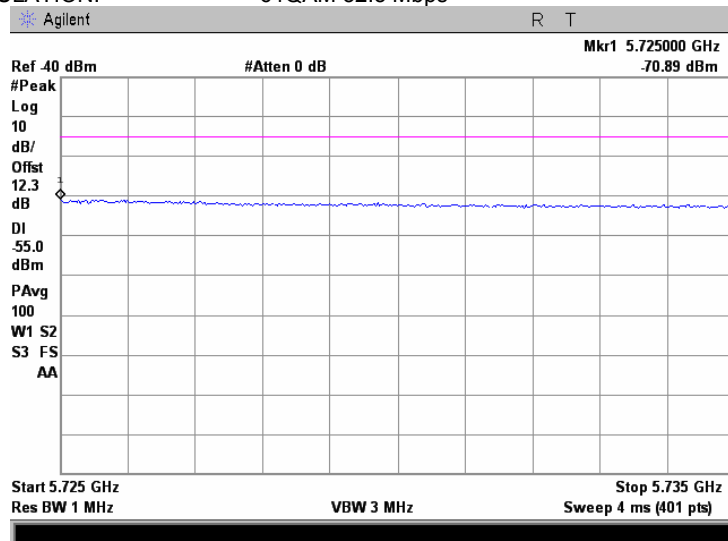
Plot 7.4.57 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5715 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: BPSK 3.25 Mbps



Plot 7.4.58 Conducted spurious emission measurements at the band edges

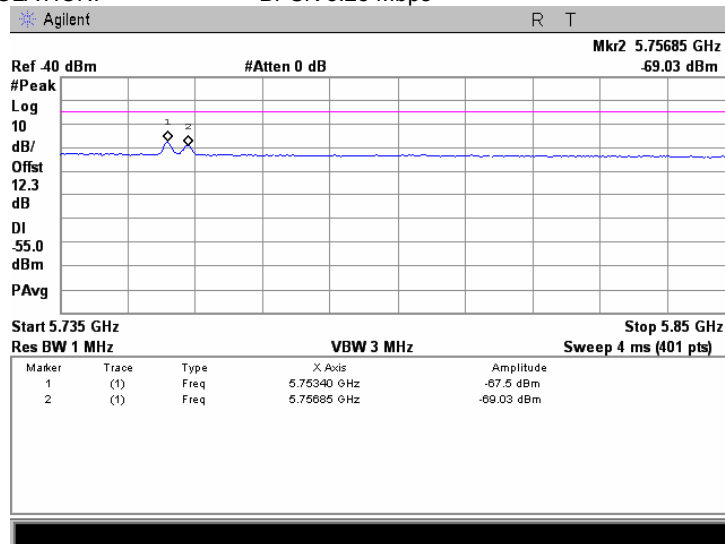
CARRIER FREQUENCY 5715 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: 64QAM 32.5 Mbps



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges | |
| Test procedure: | | Public notice DA 00-705 / ANSI C63.4, Section 13.1.4 | |
| Test mode: | | Compliance | Verdict: PASS |
| Date: | | 12/04/2008 | |
| Temperature: 22°C | Air Pressure: 1013 hPa | Relative Humidity: 48 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

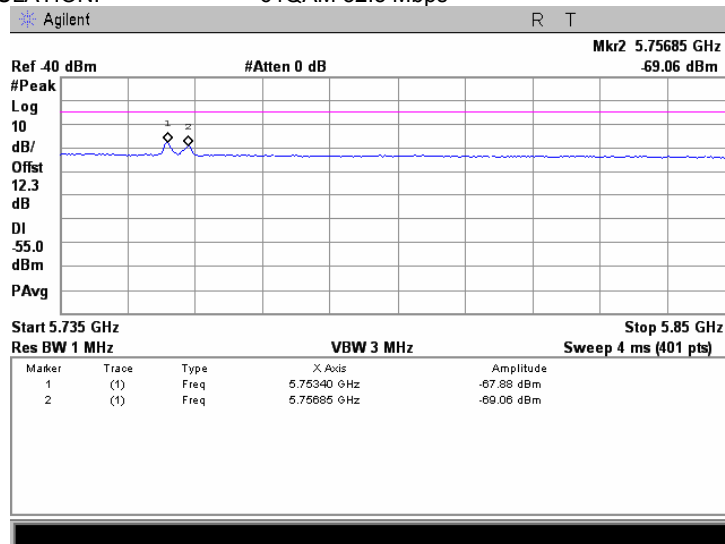
Plot 7.4.59 Conducted spurious emission measurements in the frequency range 5735 – 5850 MHz

CARRIER FREQUENCY 5715 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: BPSK 3.25 Mbps



Plot 7.4.60 Conducted spurious emission measurements in the frequency range 5735 – 5850 MHz

CARRIER FREQUENCY 5715 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: 64QAM 32.5 Mbps



| | | | |
|---|-------------------------------|--------------------------------|------------------------------|
| Test specification: FCC section 15.407(g), Frequency stability | | | |
| Test procedure: Section 2.1055 | | | |
| Test mode: | Compliance | Verdict: PASS | |
| Date: | 12/10/2008 | | |
| Temperature: 22°C | Air Pressure: 1013 hPa | Relative Humidity: 60 % | Power Supply: 120 VAC |
| Remarks: | | | |

7.5 Frequency stability test

7.5.1 General

This test was performed to measure frequency stability of transmitter RF carrier. Specification test limits are given in Table 7.5.1.

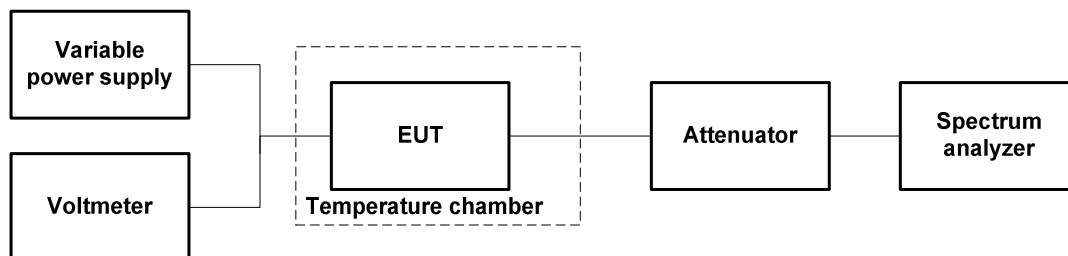
Table 7.5.1 Frequency stability limits

| Assigned frequency band, MHz | Maximum allowed frequency displacement |
|------------------------------|--|
| 5470 - 5725 | Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the users manual |

7.5.2 Test procedure

- 7.5.2.1 The EUT was set up as shown in Figure 7.5.1, energized and its proper operation was checked.
- 7.5.2.2 The EUT power was turned off. Temperature within test chamber was set to the required one and a period of time sufficient to stabilize all of the oscillator circuit components was allowed.
- 7.5.2.3 The EUT was powered on and carrier frequency was measured on the modulation slope at -27 dBm level at start up moment and then after 2, 5 and 10 minutes. The EUT was powered off.
- 7.5.2.4 The above procedure was repeated at the rest of the test temperatures and voltages as provided in Table 7.5.2, Table 7.5.3.
- 7.5.2.5 Frequency displacement was calculated and compared with the limit as provided in Table 7.5.2, Table 7.5.3.

Figure 7.5.1 Frequency stability test setup



| | | | |
|---|-------------------------------|--------------------------------|------------------------------|
| Test specification: FCC section 15.407(g), Frequency stability | | | |
| Test procedure: Section 2.1055 | | | |
| Test mode: | Compliance | Verdict: PASS | |
| Date: | 12/10/2008 | | |
| Temperature: 22°C | Air Pressure: 1013 hPa | Relative Humidity: 60 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

Table 7.5.2 Frequency stability test results

ASSIGNID FREQUENCY BAND: 5470 - 5725 MHz
 NOMINAL POWER VOLTAGE: 120 VAC
 TEMPERATURE STABILIZATION PERIOD: 20 min
 POWER DURING TEMPERATURE TRANSITION: Off
 SPECTRUM ANALYZER MODE: Peak 100 Power averaging
 RESOLUTION BANDWIDTH: 1000 kHz
 VIDEO BANDWIDTH: 3000 kHz
 CHANNEL BANDWIDTH / MODULATION: 20 MHz / 64QAM, 130Mbps (as worst case at normal steady state condition)

| Temperature, °C | Voltage, V | Frequency, MHz | | | | Band edge limit, MHz | Margin, MHz* | Verdict |
|---------------------------------|--------------|----------------|---------------------|---------------------|----------------------|----------------------|--------------|---------|
| | | Start up | 2 nd min | 5 th min | 10 th min | | | |
| Low frequency: | | | | | | | | |
| -35 | Nominal | 5471.1750 | 5471.6000 | 5471.5125 | 5471.4250 | 5470 | 1.1750 | Pass |
| 20 | Nominal +15% | 5470.9000 | 5471.1375 | 5471.1500 | 5471.2250 | | 0.9000 | |
| 20 | Nominal | 5470.9250 | 5471.2580 | 5471.3500 | 5471.4625 | | 0.9250 | |
| 20 | Nominal -15% | 5470.8250 | 5470.9875 | 5471.1250 | 5471.2375 | | 0.8250 | |
| 60 | Nominal | 5472.0000 | 5472.3500 | 5472.6500 | 5472.9875 | | 2.0000 | |
| Mid first frequency: | | | | | | | | |
| -35 | Nominal | 5598.9875 | 5598.9000 | 5599.0000 | 5595.9625 | 5600 | 1.0000 | Pass |
| 20 | Nominal +15% | 5598.3500 | 5598.1875 | 5598.1875 | 5598.1625 | | 1.6500 | |
| 20 | Nominal | 5598.1250 | 5598.4250 | 5598.5320 | 5598.5750 | | 1.4250 | |
| 20 | Nominal -15% | 5598.5000 | 5598.5375 | 5598.6000 | 5598.6500 | | 1.3500 | |
| 60 | Nominal | 5598.1000 | 5597.9125 | 5597.8750 | 5597.7625 | | 1.9000 | |
| Mid second frequency (IC only): | | | | | | | | |
| -35 | Nominal | 5650.8625 | 5650.9500 | 5650.8500 | 5650.8125 | 5650 | 0.8125 | Pass |
| 20 | Nominal +15% | 5651.2250 | 5651.2625 | 5651.3750 | 5651.2875 | | 1.2250 | |
| 20 | Nominal | 5650.9500 | 5651.1520 | 5651.2350 | 5651.2500 | | 0.9500 | |
| 20 | Nominal -15% | 5651.2125 | 5651.2375 | 5651.3875 | 5651.3975 | | 1.2125 | |
| 60 | Nominal | 5651.5250 | 5651.6375 | 5651.7500 | 5651.8500 | | 1.5250 | |
| High frequency: | | | | | | | | |
| -35 | Nominal | 5723.6000 | 5723.5875 | 5723.6625 | 5723.7500 | 5725 | 1.2500 | Pass |
| 20 | Nominal +15% | 5723.4625 | 5723.0625 | 5723.1375 | 5723.1750 | | 1.5375 | |
| 20 | Nominal | 5723.2500 | 5723.4850 | 5723.5100 | 5723.5250 | | 1.4750 | |
| 20 | Nominal -15% | 5723.4500 | 5723.3000 | 5723.5250 | 5723.3375 | | 1.4750 | |
| 60 | Nominal | 5722.7750 | 5722.6875 | 5722.7125 | 5722.6755 | | 2.2250 | |

* - Margin is an absolute frequency delta between the edge of assigned frequency band and frequency in which the spurious emissions drops below the limit -27 dBm/MHz

Reference numbers of test equipment used

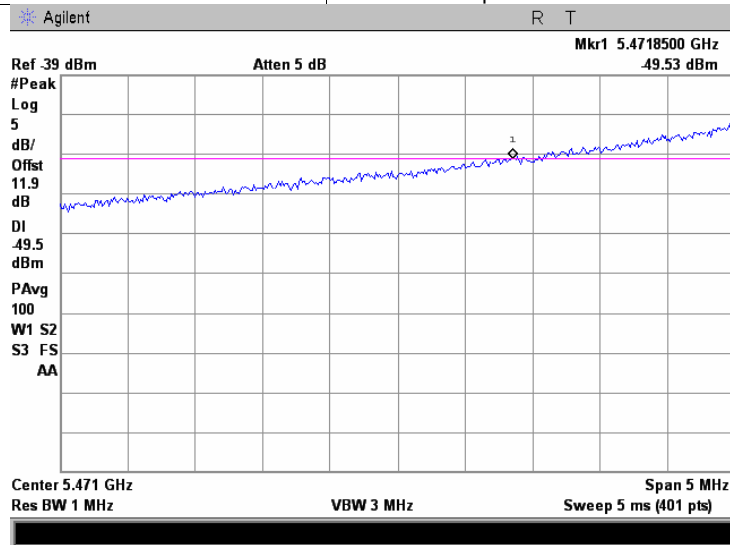
| | | | | | | | |
|---------|---------|---------|---------|---------|---------|--|--|
| HL 0493 | HL 1194 | HL 2780 | HL 3175 | HL 3233 | HL 3286 | | |
|---------|---------|---------|---------|---------|---------|--|--|

Full description is given in Appendix A.

| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15.407(g), Frequency stability | |
| Test procedure: | | Section 2.1055 | |
| Test mode: | Compliance | Verdict: PASS | |
| Date: | 12/10/2008 | | |
| Temperature: 22°C | Air Pressure: 1013 hPa | Relative Humidity: 60 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

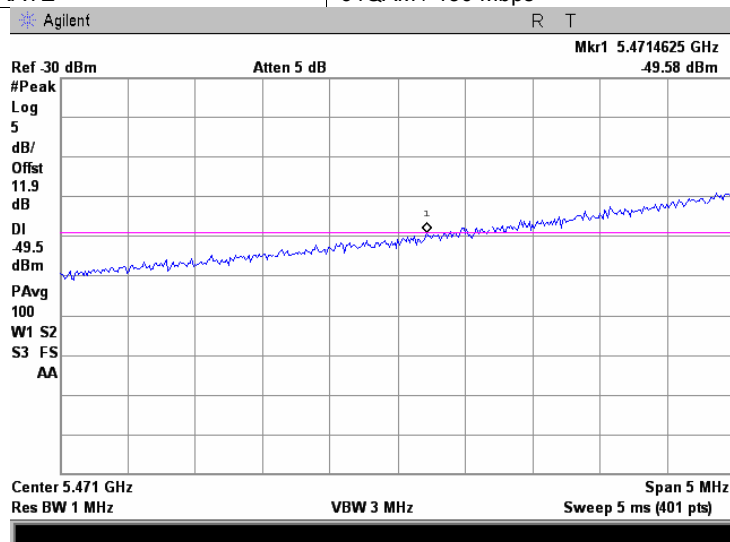
Plot 7.5.1 Band edge emissions at normal conditions at 10th minute

| | |
|-----------------------|----------------|
| FREQUENCY EDGE | 5470 |
| CHANNEL BANDWIDTH | 20 MHz |
| MODULATION / BIT RATE | BPSK / 13 Mbps |



Plot 7.5.2. Band edge emissions at normal conditions at 10th minute

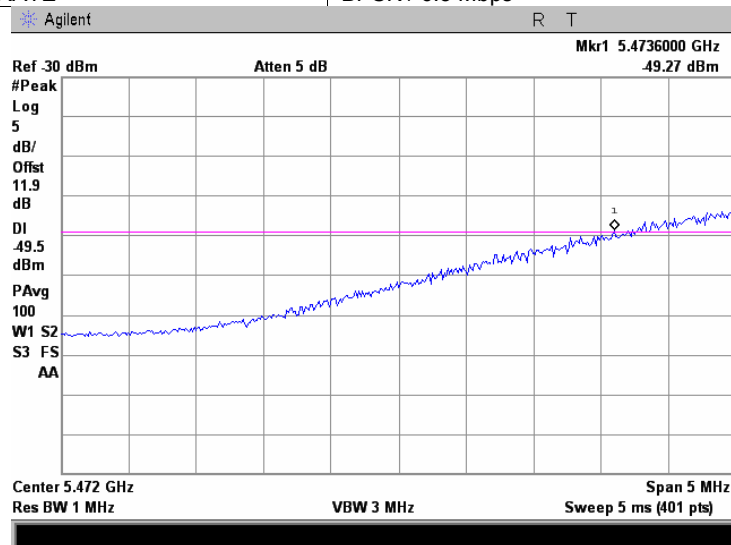
| | |
|-----------------------|------------------|
| FREQUENCY EDGE | 5470 |
| CHANNEL BANDWIDTH | 20 MHz |
| MODULATION / BIT RATE | 64QAM / 130 Mbps |



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15.407(g), Frequency stability | |
| Test procedure: | | Section 2.1055 | |
| Test mode: | Compliance | Verdict: PASS | |
| Date: | 12/10/2008 | | |
| Temperature: 22°C | Air Pressure: 1013 hPa | Relative Humidity: 60 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

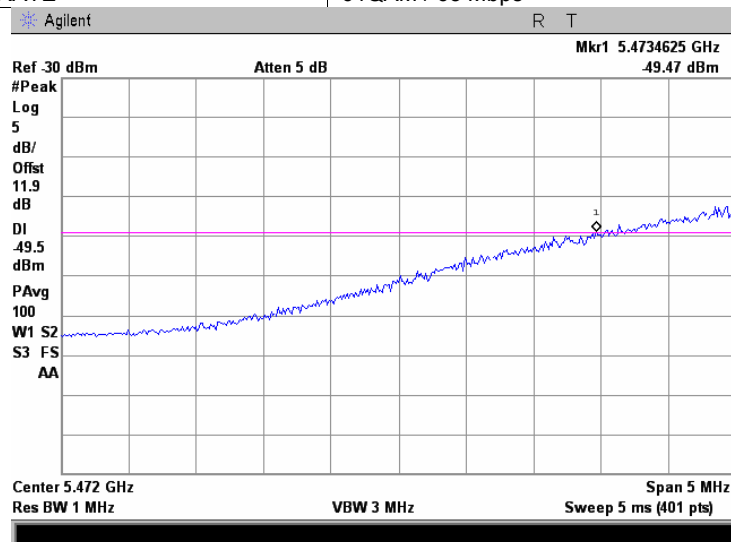
Plot 7.5.3. Band edge emissions at normal conditions at 10th minute

| | |
|-----------------------|-----------------|
| FREQUENCY EDGE | 5470 |
| CHANNEL BANDWIDTH | 10 MHz |
| MODULATION / BIT RATE | BPSK / 6.5 Mbps |



Plot 7.5.4. Band edge emissions at normal conditions at 10th minute

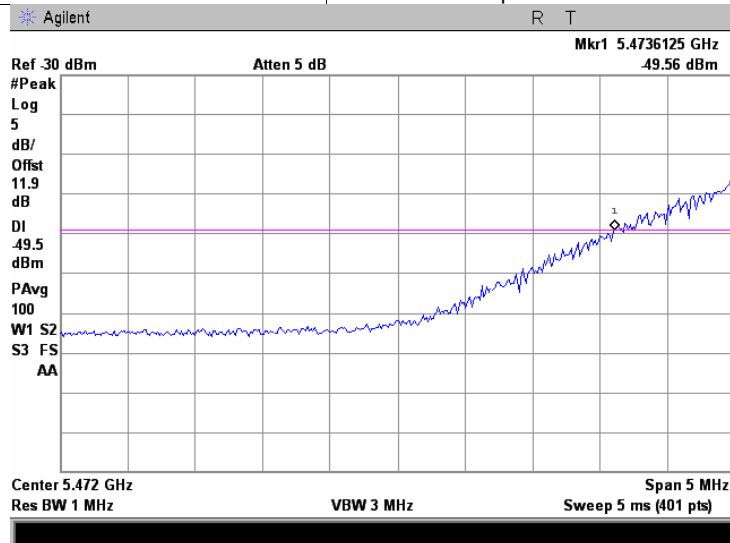
| | |
|-----------------------|-----------------|
| FREQUENCY EDGE | 5470 |
| CHANNEL BANDWIDTH | 10 MHz |
| MODULATION / BIT RATE | 64QAM / 65 Mbps |



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15.407(g), Frequency stability | |
| Test procedure: | | Section 2.1055 | |
| Test mode: | Compliance | Verdict: PASS | |
| Date: | 12/10/2008 | | |
| Temperature: 22°C | Air Pressure: 1013 hPa | Relative Humidity: 60 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

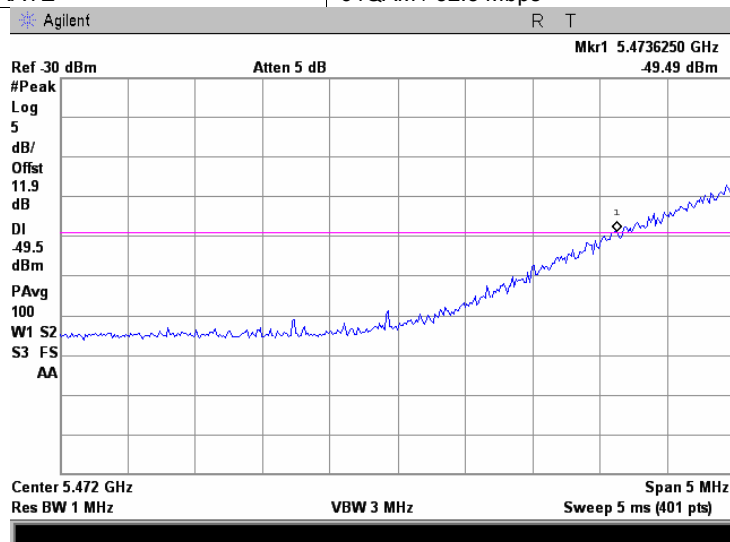
Plot 7.5.5. Band edge emissions at normal conditions at 10th minute

| | |
|-----------------------|------------------|
| FREQUENCY EDGE | 5470 |
| CHANNEL BANDWIDTH | 5 MHz |
| MODULATION / BIT RATE | BPSK / 3.25 Mbps |



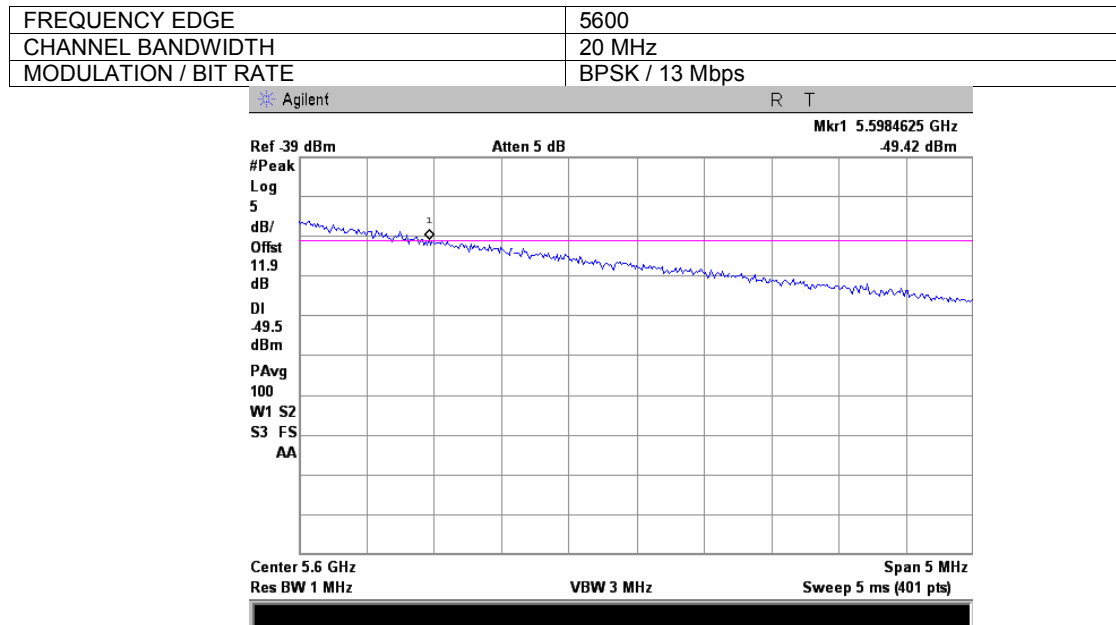
Plot 7.5.6. Band edge emissions at normal conditions at 10th minute

| | |
|-----------------------|-------------------|
| FREQUENCY EDGE | 5470 |
| CHANNEL BANDWIDTH | 5 MHz |
| MODULATION / BIT RATE | 64QAM / 32.5 Mbps |

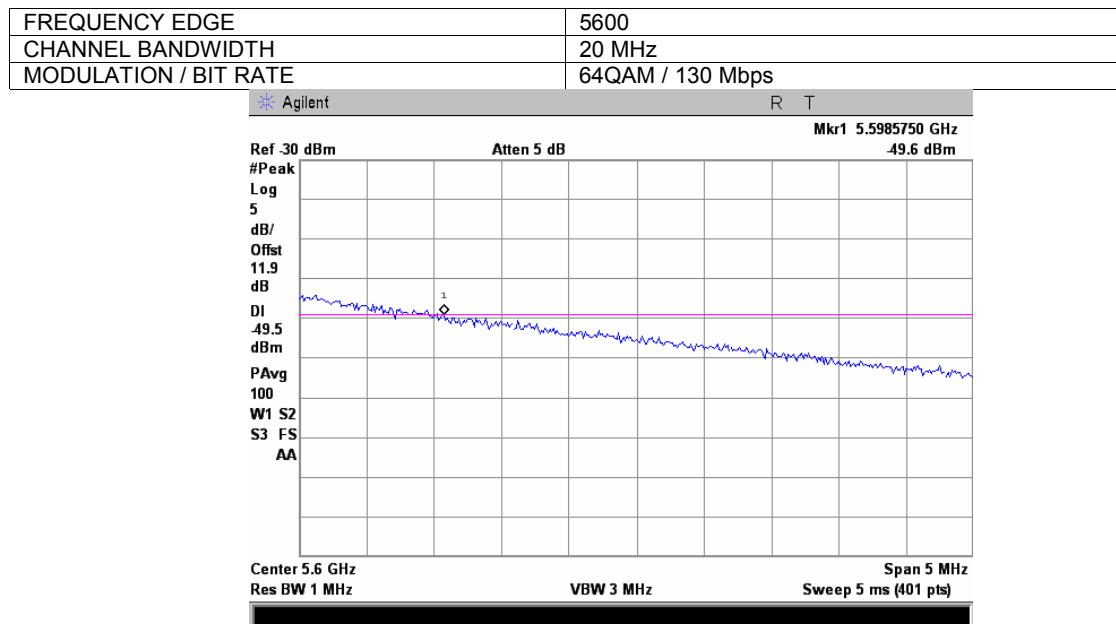


| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15.407(g), Frequency stability | |
| Test procedure: | | Section 2.1055 | |
| Test mode: | Compliance | Verdict: PASS | |
| Date: | 12/10/2008 | | |
| Temperature: 22°C | Air Pressure: 1013 hPa | Relative Humidity: 60 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

Plot 7.5.7. Band edge emissions at normal conditions at 10th minute

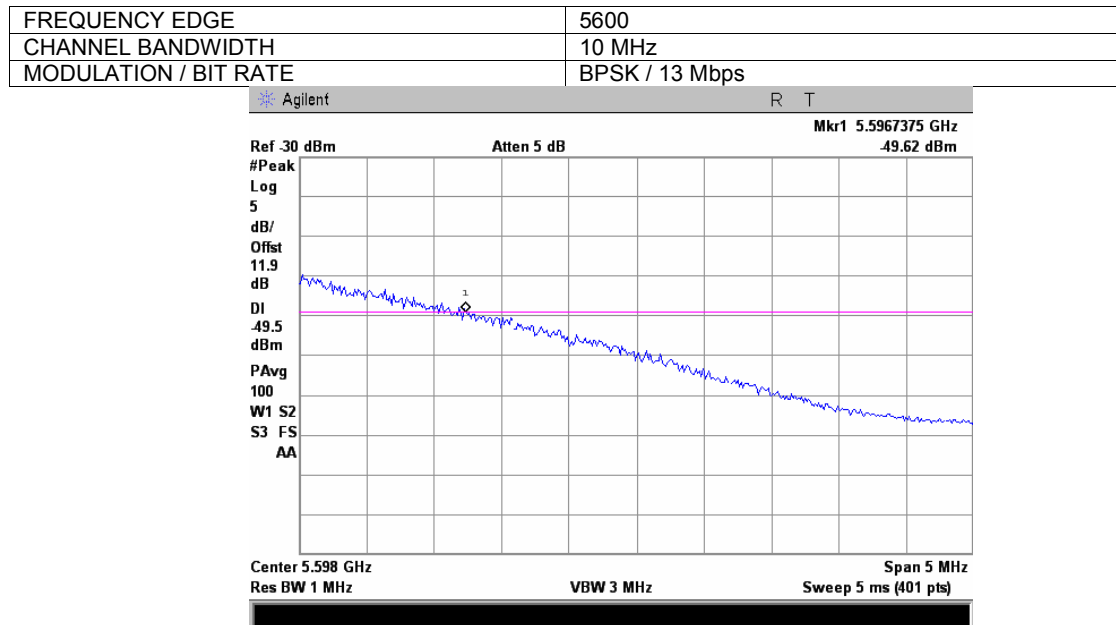


Plot 7.5.8. Band edge emissions at normal conditions at 10th minute

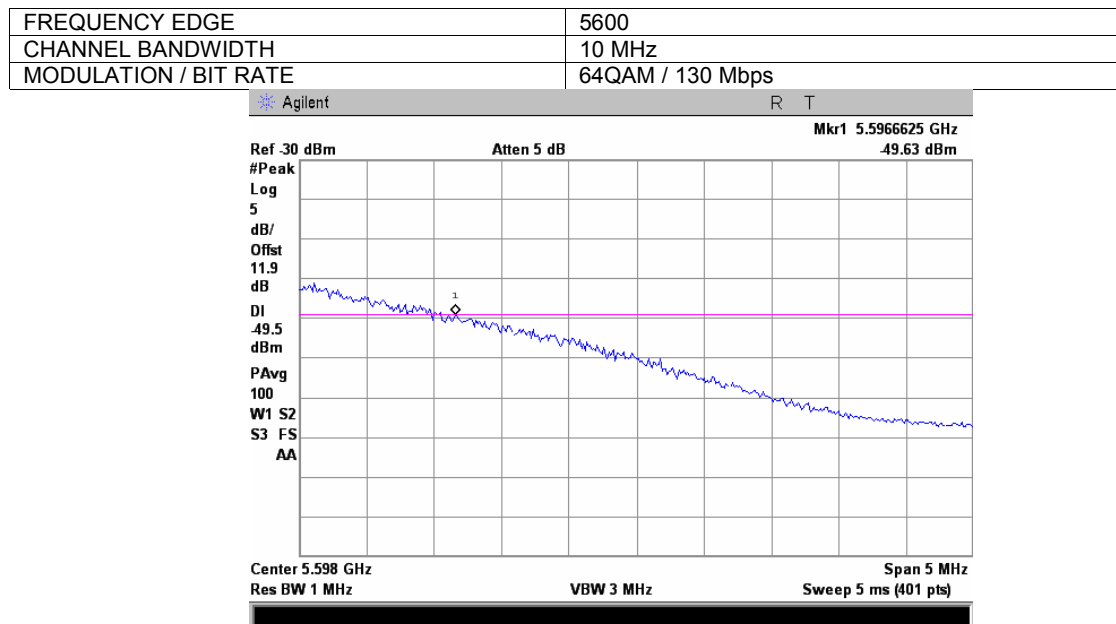


| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15.407(g), Frequency stability | |
| Test procedure: | | Section 2.1055 | |
| Test mode: | Compliance | Verdict: PASS | |
| Date: | 12/10/2008 | | |
| Temperature: 22°C | Air Pressure: 1013 hPa | Relative Humidity: 60 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

Plot 7.5.9. Band edge emissions at normal conditions at 10th minute



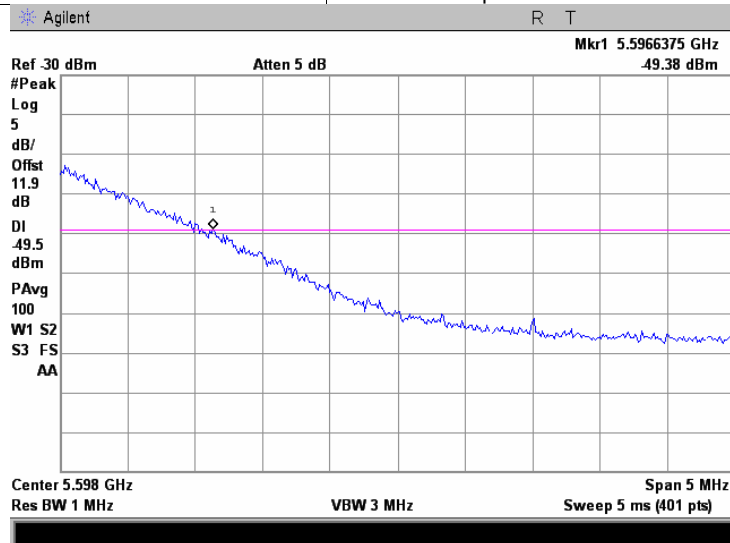
Plot 7.5.10. Band edge emissions at normal conditions at 10th minute



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15.407(g), Frequency stability | |
| Test procedure: | | Section 2.1055 | |
| Test mode: | Compliance | Verdict: PASS | |
| Date: | 12/10/2008 | | |
| Temperature: 22°C | Air Pressure: 1013 hPa | Relative Humidity: 60 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

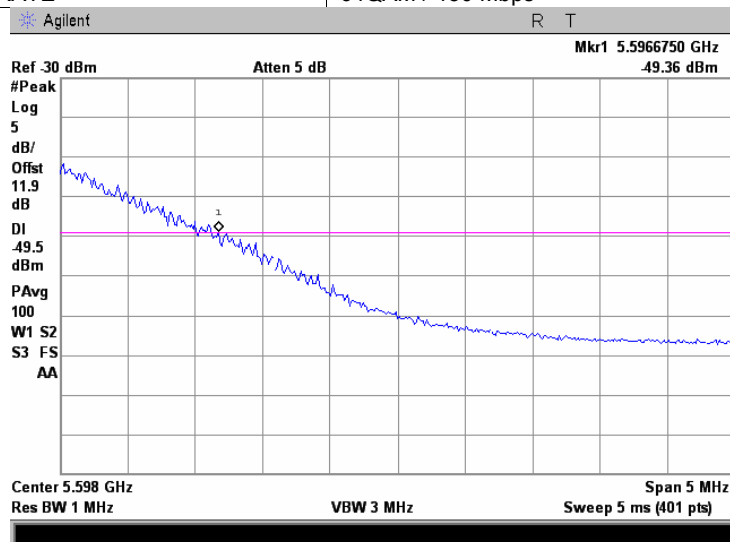
Plot 7.5.11. Band edge emissions at normal conditions at 10th minute

| | |
|-----------------------|----------------|
| FREQUENCY EDGE | 5600 |
| CHANNEL BANDWIDTH | 5 MHz |
| MODULATION / BIT RATE | BPSK / 13 Mbps |



Plot 7.5.12. Band edge emissions at normal conditions at 10th minute

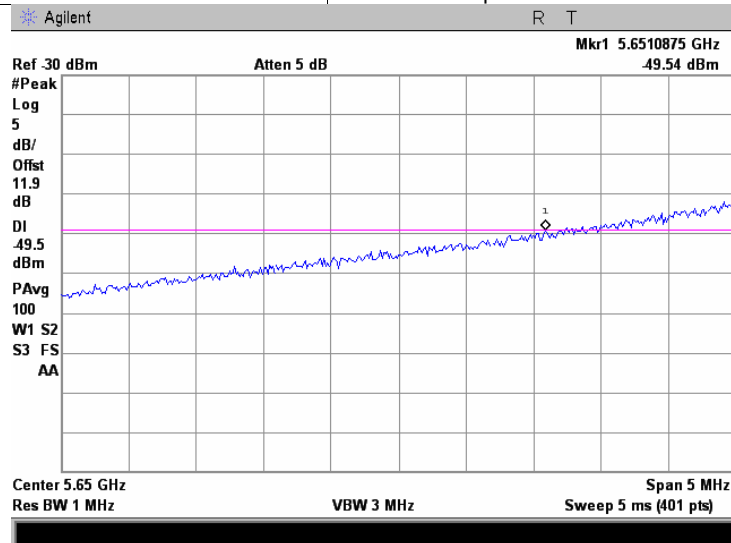
| | |
|-----------------------|------------------|
| FREQUENCY EDGE | 5600 |
| CHANNEL BANDWIDTH | 5 MHz |
| MODULATION / BIT RATE | 64QAM / 130 Mbps |



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15.407(g), Frequency stability | |
| Test procedure: | | Section 2.1055 | |
| Test mode: | | Verdict: PASS | |
| Date: | | | |
| 12/10/2008 | | | |
| Temperature: 22°C | Air Pressure: 1013 hPa | Relative Humidity: 60 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

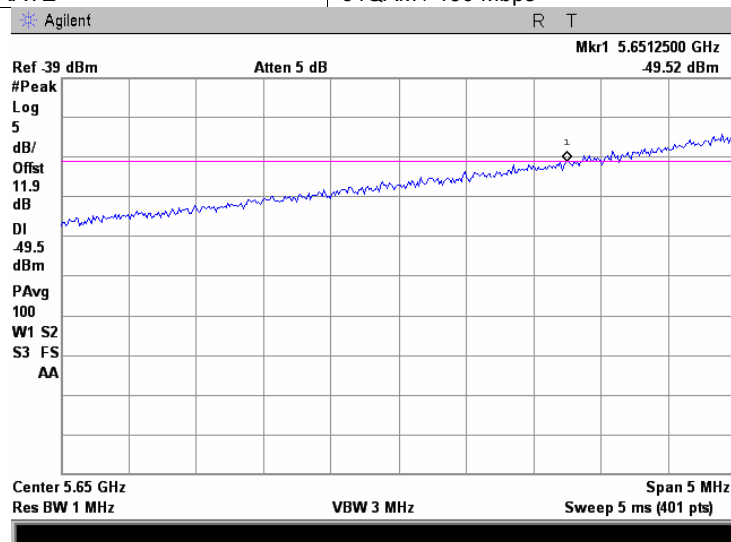
Plot 7.5.13. Band edge emissions at normal conditions at 10th minute

| | |
|-----------------------|----------------|
| FREQUENCY EDGE | 5650 |
| CHANNEL BANDWIDTH | 20 MHz |
| MODULATION / BIT RATE | BPSK / 13 Mbps |



Plot 7.5.14. Band edge emissions at normal conditions at 10th minute

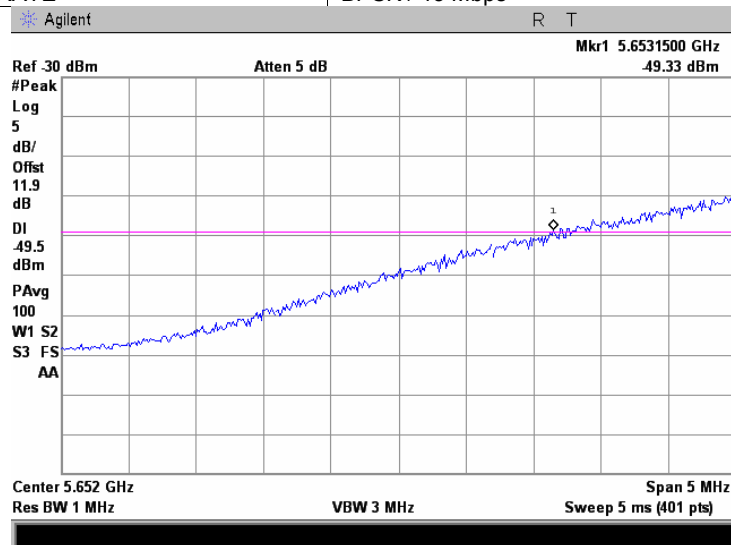
| | |
|-----------------------|------------------|
| FREQUENCY EDGE | 5650 |
| CHANNEL BANDWIDTH | 20 MHz |
| MODULATION / BIT RATE | 64QAM / 130 Mbps |



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15.407(g), Frequency stability | |
| Test procedure: | | Section 2.1055 | |
| Test mode: | Compliance | Verdict: PASS | |
| Date: | 12/10/2008 | | |
| Temperature: 22°C | Air Pressure: 1013 hPa | Relative Humidity: 60 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

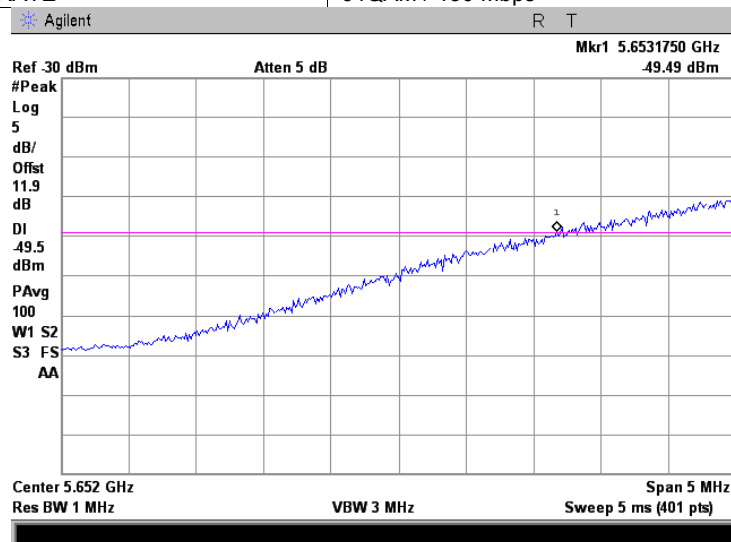
Plot 7.5.15. Band edge emissions at normal conditions at 10th minute

| | |
|-----------------------|----------------|
| FREQUENCY EDGE | 5650 |
| CHANNEL BANDWIDTH | 10 MHz |
| MODULATION / BIT RATE | BPSK / 13 Mbps |



Plot 7.5.16. Band edge emissions at normal conditions at 10th minute

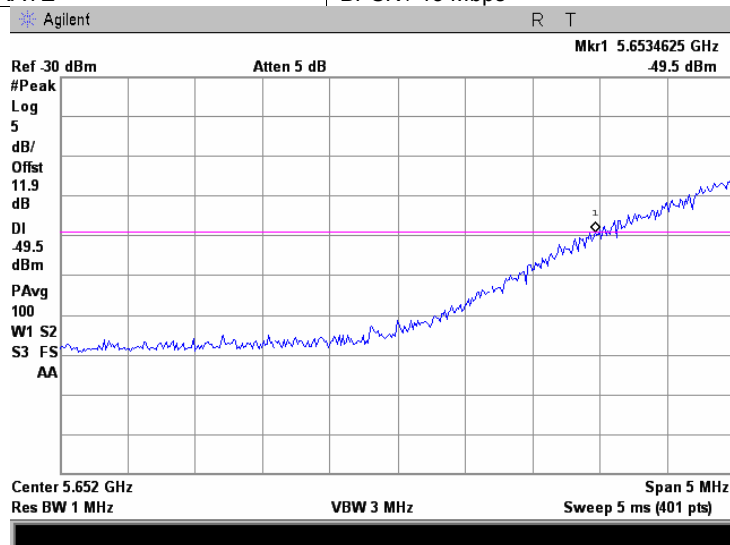
| | |
|-----------------------|------------------|
| FREQUENCY EDGE | 5650 |
| CHANNEL BANDWIDTH | 10 MHz |
| MODULATION / BIT RATE | 64QAM / 130 Mbps |



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15.407(g), Frequency stability | |
| Test procedure: | | Section 2.1055 | |
| Test mode: | Compliance | Verdict: PASS | |
| Date: | 12/10/2008 | | |
| Temperature: 22°C | Air Pressure: 1013 hPa | Relative Humidity: 60 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

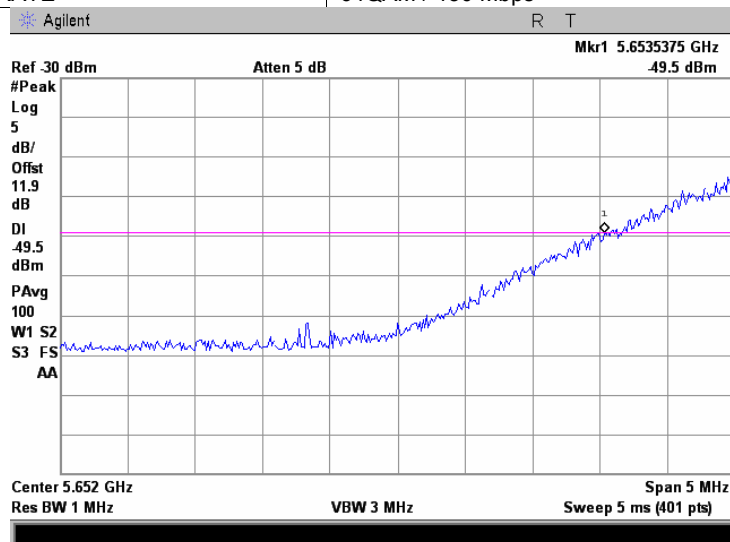
Plot 7.5.17. Band edge emissions at normal conditions at 10th minute

| | |
|-----------------------|----------------|
| FREQUENCY EDGE | 5650 |
| CHANNEL BANDWIDTH | 5 MHz |
| MODULATION / BIT RATE | BPSK / 13 Mbps |



Plot 7.5.18. Band edge emissions at normal conditions at 10th minute

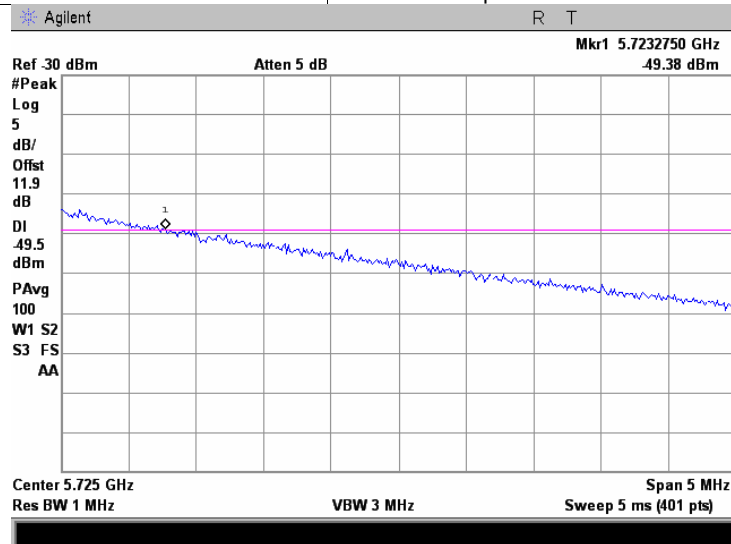
| | |
|-----------------------|------------------|
| FREQUENCY EDGE | 5650 |
| CHANNEL BANDWIDTH | 5 MHz |
| MODULATION / BIT RATE | 64QAM / 130 Mbps |



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15.407(g), Frequency stability | |
| Test procedure: | | Section 2.1055 | |
| Test mode: | Compliance | Verdict: PASS | |
| Date: | 12/10/2008 | | |
| Temperature: 22°C | Air Pressure: 1013 hPa | Relative Humidity: 60 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

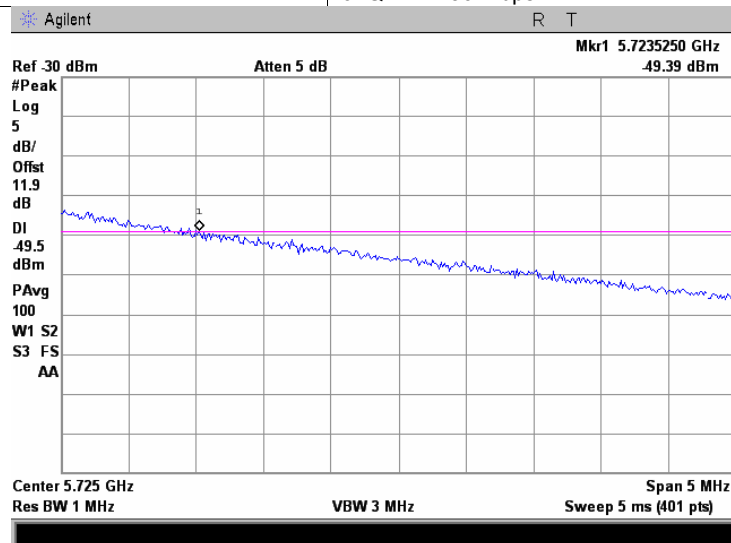
Plot 7.5.19. Band edge emissions at normal conditions at 10th minute

| | |
|-----------------------|----------------|
| FREQUENCY EDGE | 5725 |
| CHANNEL BANDWIDTH | 20 MHz |
| MODULATION / BIT RATE | BPSK / 13 Mbps |



Plot 7.5.20. Band edge emissions at normal conditions at 10th minute

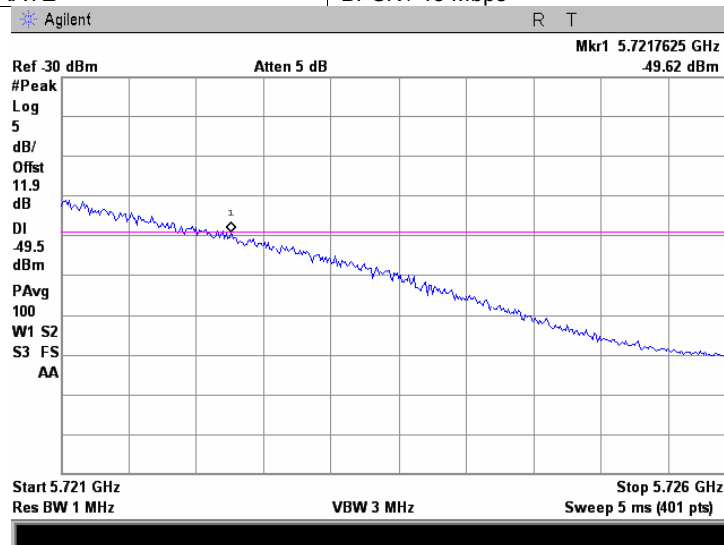
| | |
|-----------------------|------------------|
| FREQUENCY EDGE | 5725 |
| CHANNEL BANDWIDTH | 20 MHz |
| MODULATION / BIT RATE | 64QAM / 130 Mbps |



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15.407(g), Frequency stability | |
| Test procedure: | | Section 2.1055 | |
| Test mode: | Compliance | Verdict: PASS | |
| Date: | 12/10/2008 | | |
| Temperature: 22°C | Air Pressure: 1013 hPa | Relative Humidity: 60 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

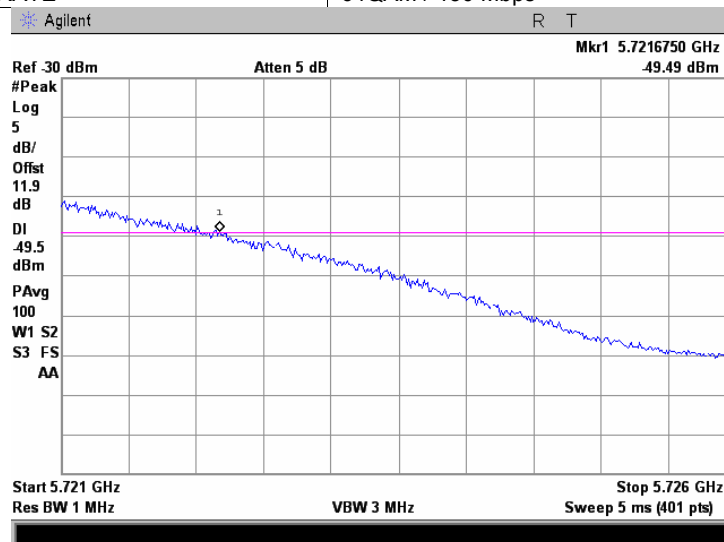
Plot 7.5.21. Band edge emissions at normal conditions at 10th minute

| | |
|-----------------------|----------------|
| FREQUENCY EDGE | 5725 |
| CHANNEL BANDWIDTH | 10 MHz |
| MODULATION / BIT RATE | BPSK / 13 Mbps |



Plot 7.5.22. Band edge emissions at normal conditions at 10th minute

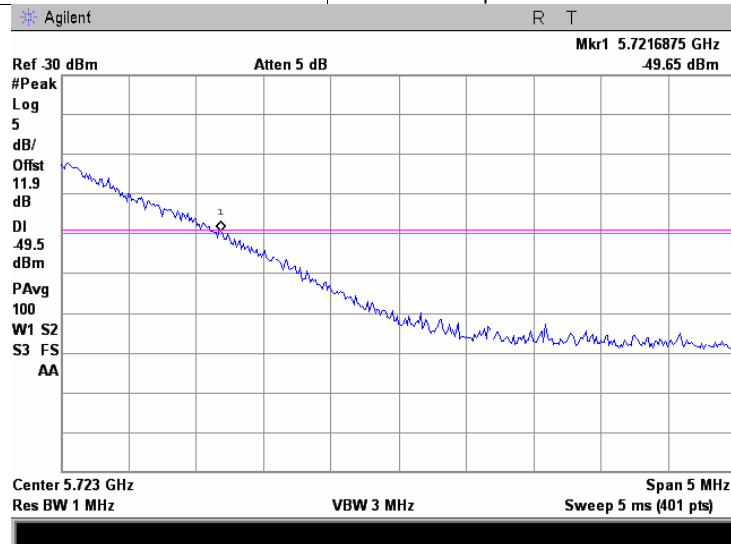
| | |
|-----------------------|------------------|
| FREQUENCY EDGE | 5725 |
| CHANNEL BANDWIDTH | 10 MHz |
| MODULATION / BIT RATE | 64QAM / 130 Mbps |



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15.407(g), Frequency stability | |
| Test procedure: | | Section 2.1055 | |
| Test mode: | | Verdict: PASS | |
| Date: | | | |
| 12/10/2008 | | | |
| Temperature: 22°C | Air Pressure: 1013 hPa | Relative Humidity: 60 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

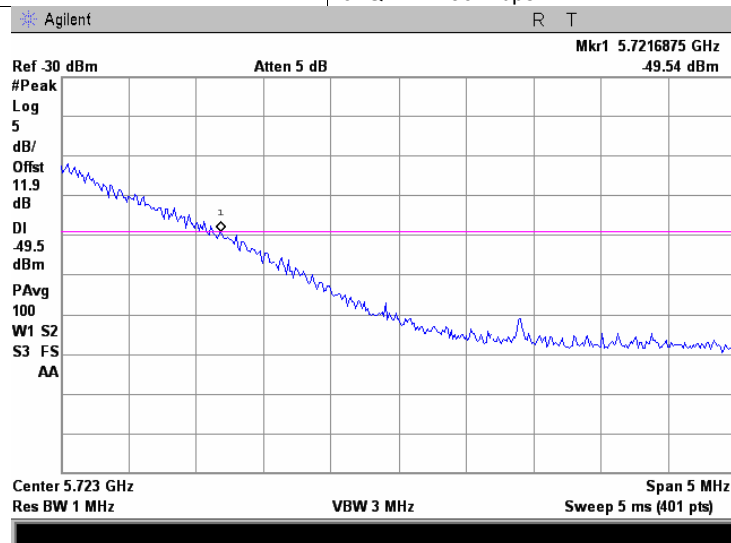
Plot 7.5.23. Band edge emissions at normal conditions at 10th minute

| | |
|-----------------------|----------------|
| FREQUENCY EDGE | 5725 |
| CHANNEL BANDWIDTH | 5 MHz |
| MODULATION / BIT RATE | BPSK / 13 Mbps |



Plot 7.5.24. Band edge emissions at normal conditions at 10th minute

| | |
|-----------------------|------------------|
| FREQUENCY EDGE | 5725 |
| CHANNEL BANDWIDTH | 5 MHz |
| MODULATION / BIT RATE | 64QAM / 130 Mbps |



| | | | |
|---|-------------------------------|--------------------------------|------------------------------|
| Test specification: FCC section 15.407(g), Frequency stability | | | |
| Test procedure: Section 2.1055 | | | |
| Test mode: | Compliance | Verdict: PASS | |
| Date: | 12/10/2008 | | |
| Temperature: 22°C | Air Pressure: 1013 hPa | Relative Humidity: 60 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

Table 7.5.3 Frequency stability test results

ASSIGNID FREQUENCY BAND: 5470 - 5725 MHz
 NOMINAL POWER VOLTAGE: 120 VAC
 TEMPERATURE STABILIZATION PERIOD: 20 min
 POWER DURING TEMPERATURE TRANSITION: Off
 SPECTRUM ANALYZER MODE: Peak 100 Power averaging
 RESOLUTION BANDWIDTH: 1000 kHz
 VIDEO BANDWIDTH: 3000 kHz
 CHANNEL BANDWIDTH / MODULATION: 20 MHz / 64QAM, 130Mbps (as worst case at normal steady state condition)

| Temperature, °C | Voltage, V | Frequency, MHz | | | | Band edge limit, MHz | Margin, MHz | Verdict |
|-----------------|--------------|----------------|---------------------|---------------------|----------------------|----------------------|-------------|---------|
| | | Start up | 2 nd min | 5 th min | 10 th min | | | |
| Low frequency: | | | | | | | | |
| -35 | Nominal | 5472.2820 | 5471.7170 | 5471.8070 | 5471.8020 | 5470 | 1.7170 | Pass |
| 20 | Nominal +15% | 5472.0670 | 5472.0420 | 5472.0620 | 5472.0720 | | 2.0420 | |
| 20 | Nominal | 5471.9625 | 5472.2500 | 5472.2000 | 5471.9375 | | 1.9375 | |
| 20 | Nominal -15% | 5471.9570 | 5472.1170 | 5472.0570 | 5472.0920 | | 1.9570 | |
| 60 | Nominal | 5472.6170 | 5472.8870 | 5473.0420 | 5473.1920 | | 2.6170 | |
| Mid frequency: | | | | | | | | |
| -35 | Nominal | 5598.8670 | 5598.8370 | 5598.8760 | 5598.9070 | 5600 | 1.0930 | Pass |
| 20 | Nominal +15% | 5598.2720 | 5598.1670 | 5598.1570 | 5598.1670 | | 1.7280 | |
| 20 | Nominal | 5598.6820 | 5598.6720 | 5598.5320 | 5598.5125 | | 1.3180 | |
| 20 | Nominal -15% | 5598.4920 | 5598.4170 | 5598.3270 | 5598.4420 | | 1.5080 | |
| 60 | Nominal | 5598.4470 | 5598.2670 | 5598.1470 | 5598.0770 | | 1.5530 | |
| Mid frequency: | | | | | | | | |
| -35 | Nominal | 5651.1120 | 5651.1570 | 5651.1370 | 5651.2120 | 5650 | 1.1120 | Pass |
| 20 | Nominal +15% | 5651.1672 | 5651.7320 | 5651.7920 | 5651.7720 | | 1.1672 | |
| 20 | Nominal | 5651.4370 | 5651.5270 | 5651.5920 | 5651.5375 | | 1.4370 | |
| 20 | Nominal -15% | 5651.4920 | 5651.5520 | 5651.5770 | 5651.5720 | | 1.4920 | |
| 60 | Nominal | 5651.8070 | 5651.9070 | 5652.0120 | 5652.0370 | | 1.8070 | |
| High frequency: | | | | | | | | |
| -35 | Nominal | 5723.8070 | 5723.6700 | 5723.7120 | 5723.7270 | 5725 | 1.1930 | Pass |
| 20 | Nominal +15% | 5723.1020 | 5723.1470 | 5723.0570 | 5723.0770 | | 1.8530 | |
| 20 | Nominal | 5723.0770 | 5723.1820 | 5723.2670 | 5723.2625 | | 1.7330 | |
| 20 | Nominal -15% | 5723.1320 | 5723.0220 | 5723.0420 | 5723.0620 | | 1.8680 | |
| 60 | Nominal | 5722.6670 | 5722.6070 | 5722.6520 | 5722.5950 | | 2.3330 | |

* - Margin is an absolute frequency delta between the edge of assigned frequency band and frequency in which the spurious emissions drops below the limit -27 dBm/MHz

Reference numbers of test equipment used

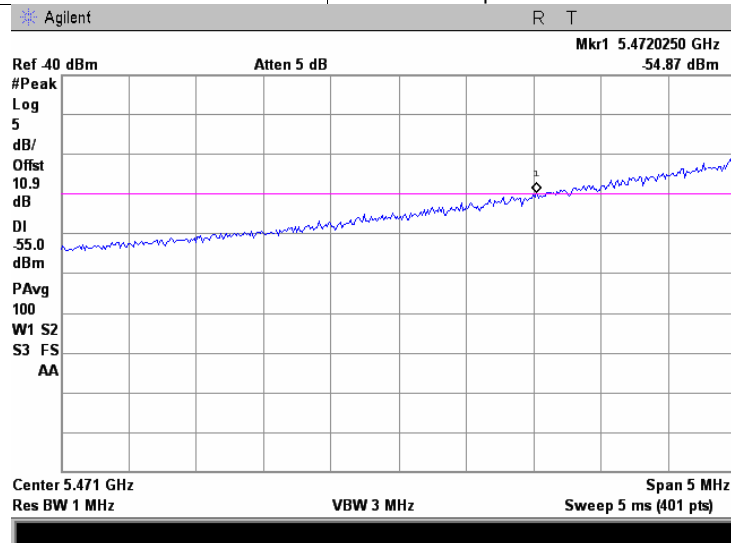
| | | | | | | | |
|---------|---------|---------|---------|---------|---------|--|--|
| HL 0493 | HL 1194 | HL 2780 | HL 3175 | HL 3233 | HL 3286 | | |
|---------|---------|---------|---------|---------|---------|--|--|

Full description is given in Appendix A.

| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15.407(g), Frequency stability | |
| Test procedure: | | Section 2.1055 | |
| Test mode: | Compliance | Verdict: PASS | |
| Date: | 12/10/2008 | | |
| Temperature: 22°C | Air Pressure: 1013 hPa | Relative Humidity: 60 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

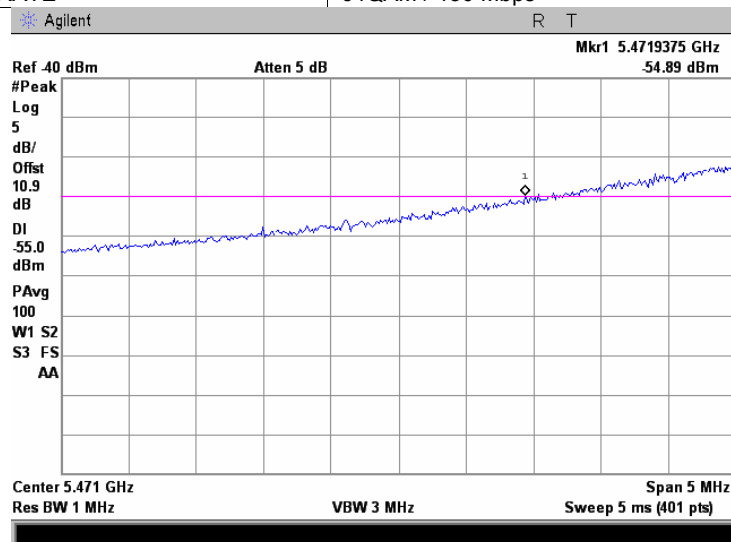
Plot 7.5.25 Band edge emissions at normal conditions at 10th minute

| | |
|-----------------------|----------------|
| FREQUENCY EDGE | 5470 |
| CHANNEL BANDWIDTH | 20 MHz |
| MODULATION / BIT RATE | BPSK / 13 Mbps |



Plot 7.5.26. Band edge emissions at normal conditions at 10th minute

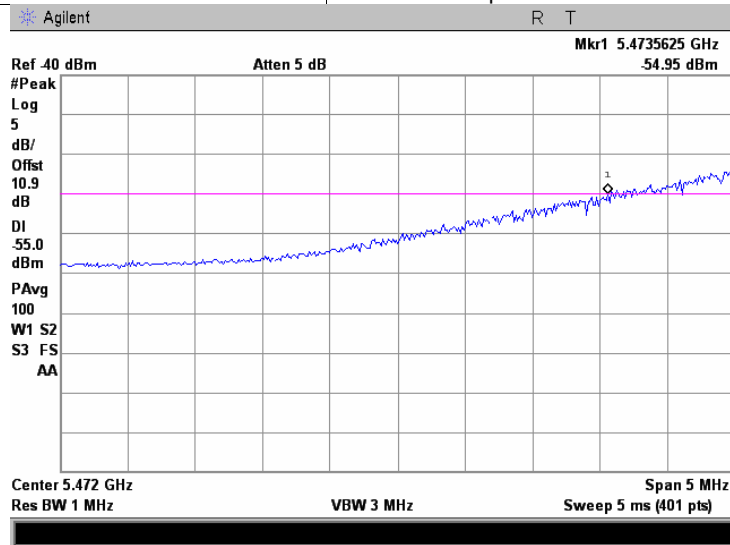
| | |
|-----------------------|------------------|
| FREQUENCY EDGE | 5470 |
| CHANNEL BANDWIDTH | 20 MHz |
| MODULATION / BIT RATE | 64QAM / 130 Mbps |



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15.407(g), Frequency stability | |
| Test procedure: | | Section 2.1055 | |
| Test mode: | Compliance | Verdict: PASS | |
| Date: | 12/10/2008 | | |
| Temperature: 22°C | Air Pressure: 1013 hPa | Relative Humidity: 60 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

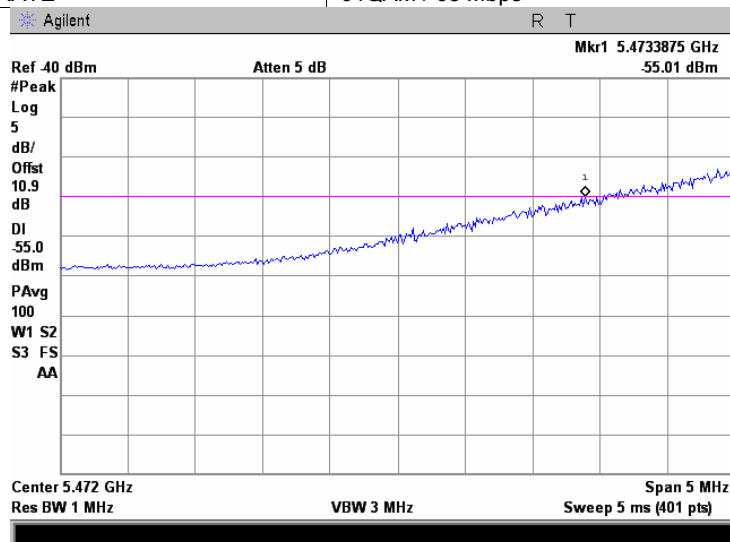
Plot 7.5.27. Band edge emissions at normal conditions at 10th minute

| | |
|-----------------------|-----------------|
| FREQUENCY EDGE | 5470 |
| CHANNEL BANDWIDTH | 10 MHz |
| MODULATION / BIT RATE | BPSK / 6.5 Mbps |



Plot 7.5.28. Band edge emissions at normal conditions at 10th minute

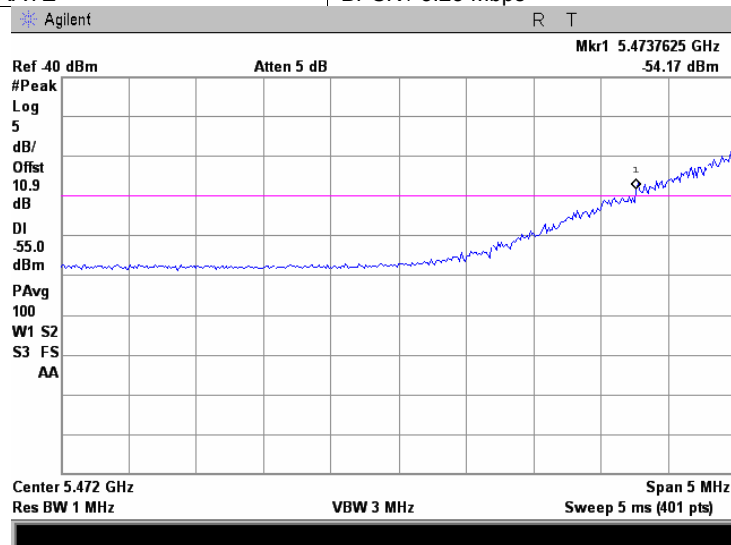
| | |
|-----------------------|-----------------|
| FREQUENCY EDGE | 5470 |
| CHANNEL BANDWIDTH | 10 MHz |
| MODULATION / BIT RATE | 64QAM / 65 Mbps |



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15.407(g), Frequency stability | |
| Test procedure: | | Section 2.1055 | |
| Test mode: | Compliance | Verdict: PASS | |
| Date: | 12/10/2008 | | |
| Temperature: 22°C | Air Pressure: 1013 hPa | Relative Humidity: 60 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

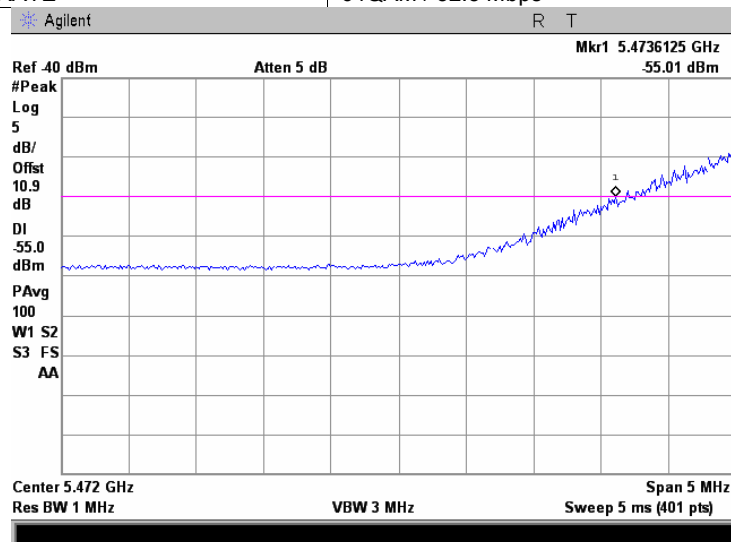
Plot 7.5.29. Band edge emissions at normal conditions at 10th minute

| | |
|-----------------------|------------------|
| FREQUENCY EDGE | 5470 |
| CHANNEL BANDWIDTH | 5 MHz |
| MODULATION / BIT RATE | BPSK / 3.25 Mbps |



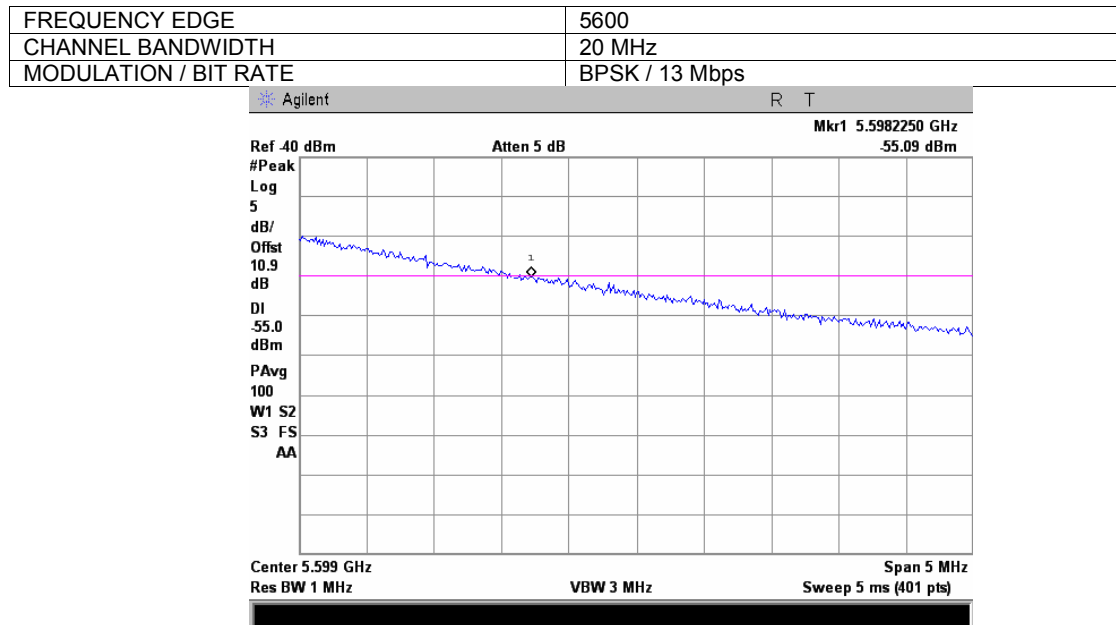
Plot 7.5.30. Band edge emissions at normal conditions at 10th minute

| | |
|-----------------------|-------------------|
| FREQUENCY EDGE | 5470 |
| CHANNEL BANDWIDTH | 5 MHz |
| MODULATION / BIT RATE | 64QAM / 32.5 Mbps |

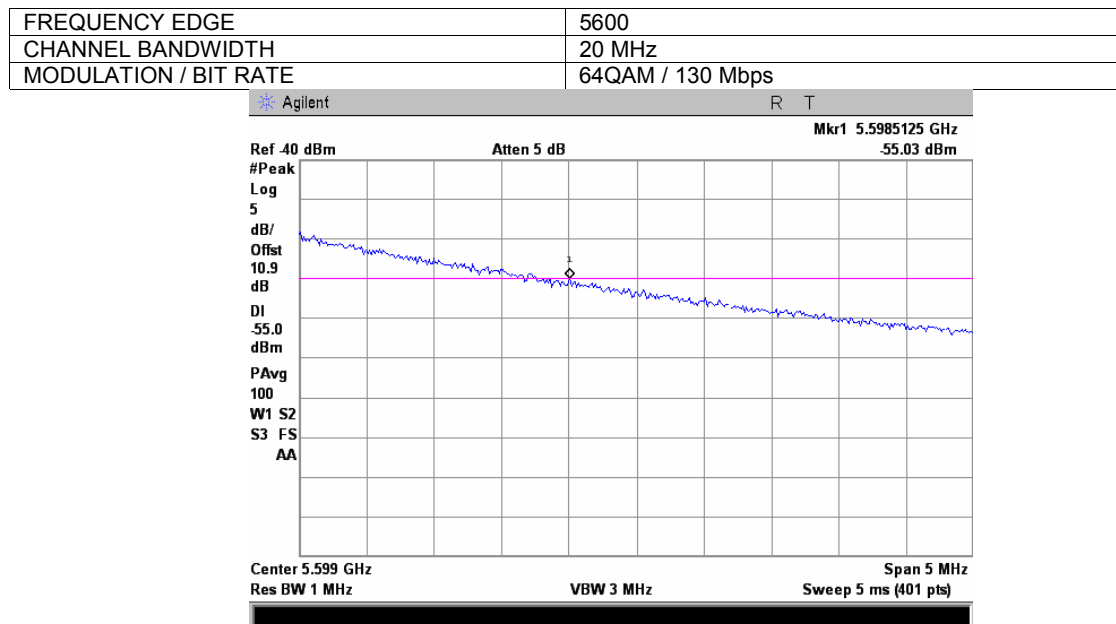


| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15.407(g), Frequency stability | |
| Test procedure: | | Section 2.1055 | |
| Test mode: | Compliance | Verdict: PASS | |
| Date: | 12/10/2008 | | |
| Temperature: 22°C | Air Pressure: 1013 hPa | Relative Humidity: 60 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

Plot 7.5.31. Band edge emissions at normal conditions at at 10th minute



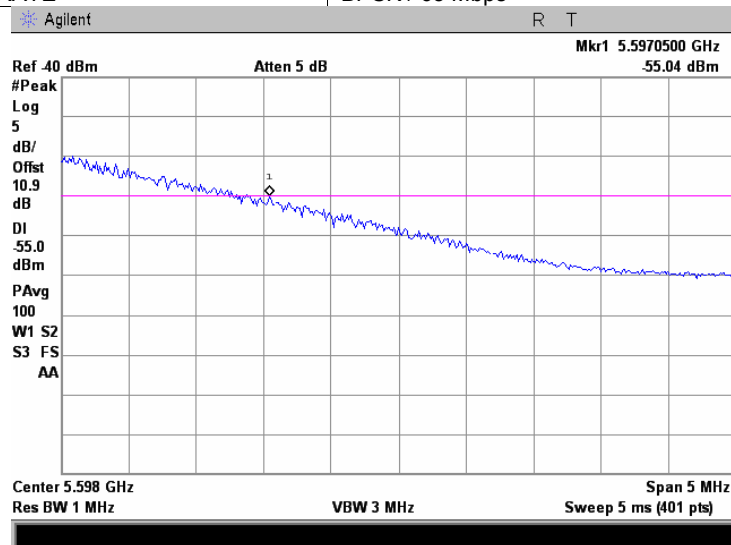
Plot 7.5.32. Band edge emissions at normal conditions at 10th minute



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15.407(g), Frequency stability | |
| Test procedure: | | Section 2.1055 | |
| Test mode: | Compliance | Verdict: PASS | |
| Date: | 12/10/2008 | | |
| Temperature: 22°C | Air Pressure: 1013 hPa | Relative Humidity: 60 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

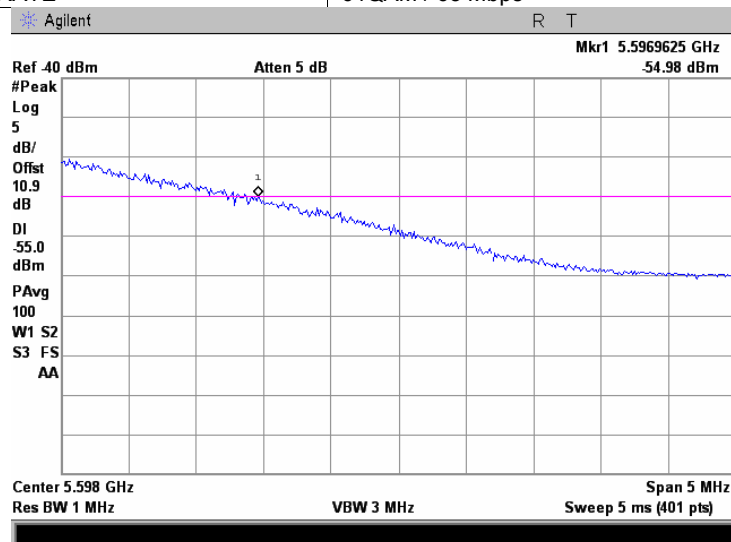
Plot 7.5.33. Band edge emissions at normal conditions at 10th minute

| | |
|-----------------------|----------------|
| FREQUENCY EDGE | 5600 |
| CHANNEL BANDWIDTH | 10 MHz |
| MODULATION / BIT RATE | BPSK / 65 Mbps |



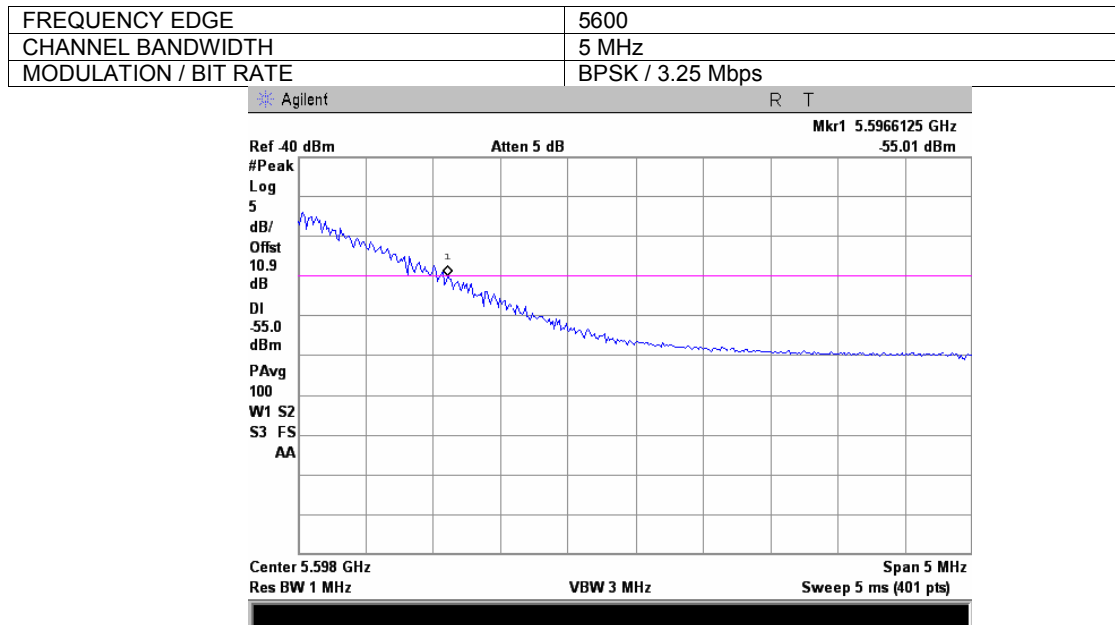
Plot 7.5.34. Band edge emissions at normal conditions at 10th minute

| | |
|-----------------------|-----------------|
| FREQUENCY EDGE | 5600 |
| CHANNEL BANDWIDTH | 10 MHz |
| MODULATION / BIT RATE | 64QAM / 65 Mbps |

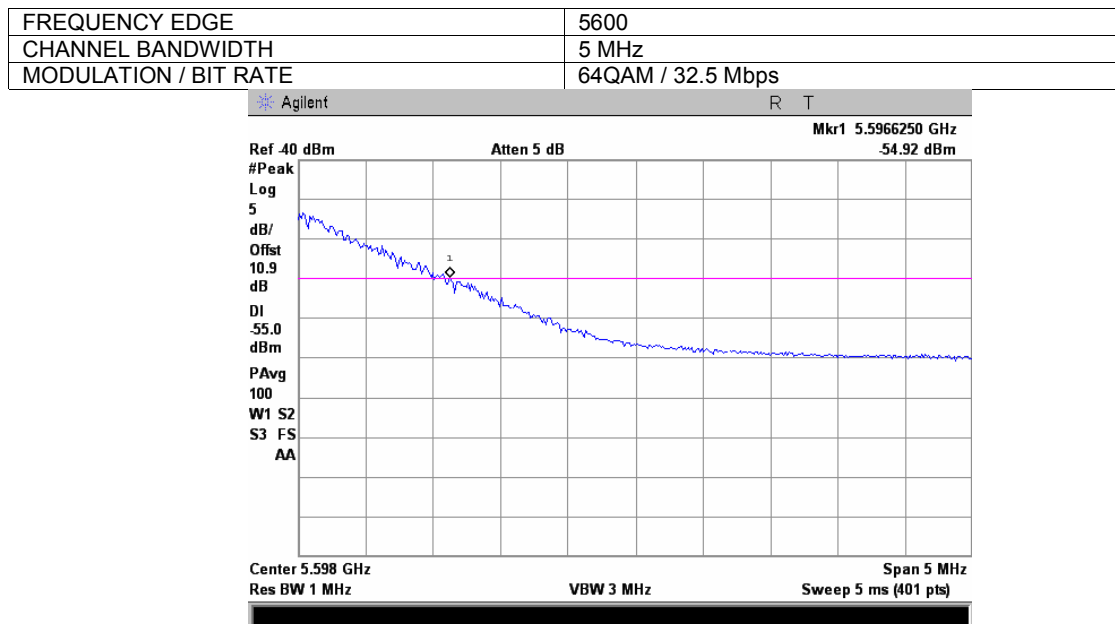


| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15.407(g), Frequency stability | |
| Test procedure: | | Section 2.1055 | |
| Test mode: | Compliance | Verdict: PASS | |
| Date: | 12/10/2008 | | |
| Temperature: 22°C | Air Pressure: 1013 hPa | Relative Humidity: 60 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

Plot 7.5.35. Band edge emissions at normal conditions at 10th minute



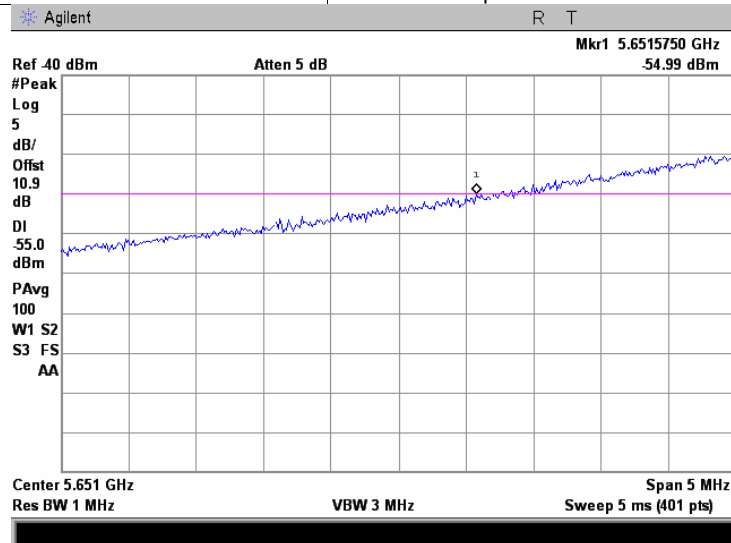
Plot 7.5.36. Band edge emissions at normal conditions at 10th minute



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15.407(g), Frequency stability | |
| Test procedure: | | Section 2.1055 | |
| Test mode: | Compliance | Verdict: PASS | |
| Date: | 12/10/2008 | | |
| Temperature: 22°C | Air Pressure: 1013 hPa | Relative Humidity: 60 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

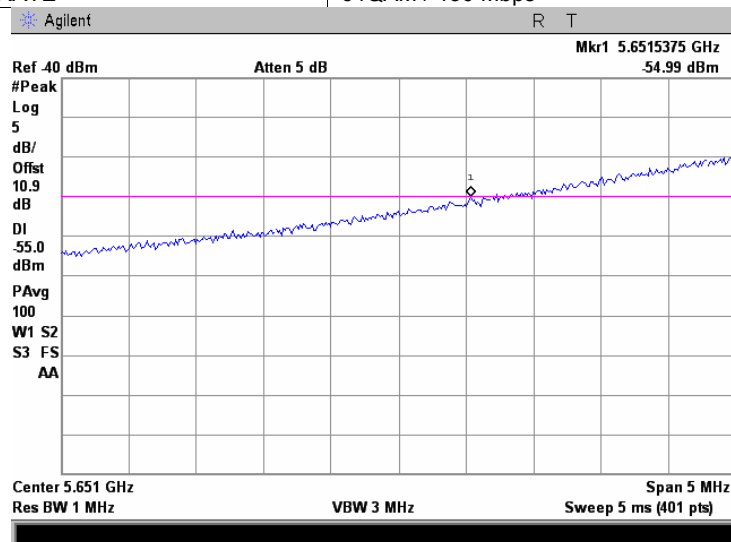
Plot 7.5.37. Band edge emissions at normal conditions at at 10th minute

| | |
|-----------------------|----------------|
| FREQUENCY EDGE | 5650 |
| CHANNEL BANDWIDTH | 20 MHz |
| MODULATION / BIT RATE | BPSK / 13 Mbps |



Plot 7.5.38. Band edge emissions at normal conditions at 10th minute

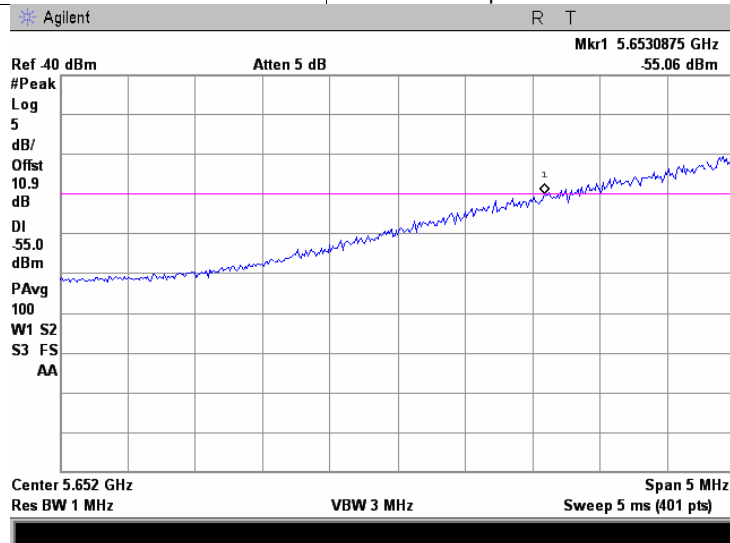
| | |
|-----------------------|------------------|
| FREQUENCY EDGE | 5650 |
| CHANNEL BANDWIDTH | 20 MHz |
| MODULATION / BIT RATE | 64QAM / 130 Mbps |



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15.407(g), Frequency stability | |
| Test procedure: | | Section 2.1055 | |
| Test mode: | Compliance | Verdict: PASS | |
| Date: | 12/10/2008 | | |
| Temperature: 22°C | Air Pressure: 1013 hPa | Relative Humidity: 60 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

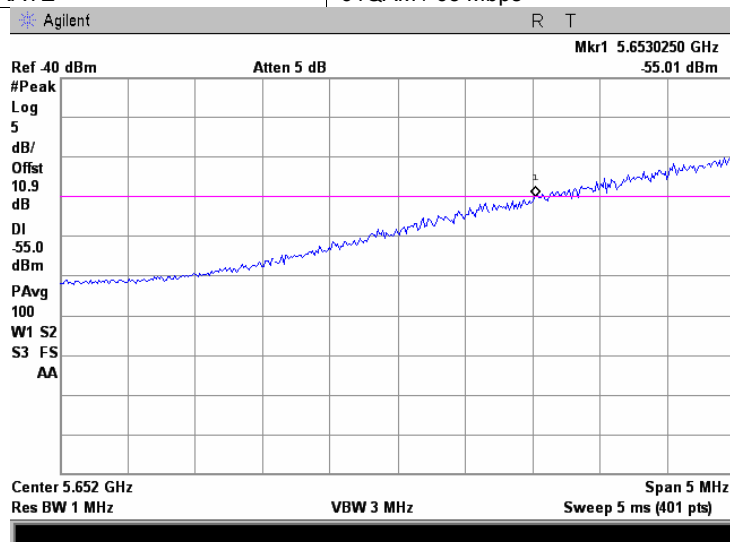
Plot 7.5.39. Band edge emissions at normal conditions at 10th minute

| | |
|-----------------------|-----------------|
| FREQUENCY EDGE | 5650 |
| CHANNEL BANDWIDTH | 10 MHz |
| MODULATION / BIT RATE | BPSK / 6.5 Mbps |



Plot 7.5.40. Band edge emissions at normal conditions at 10th minute

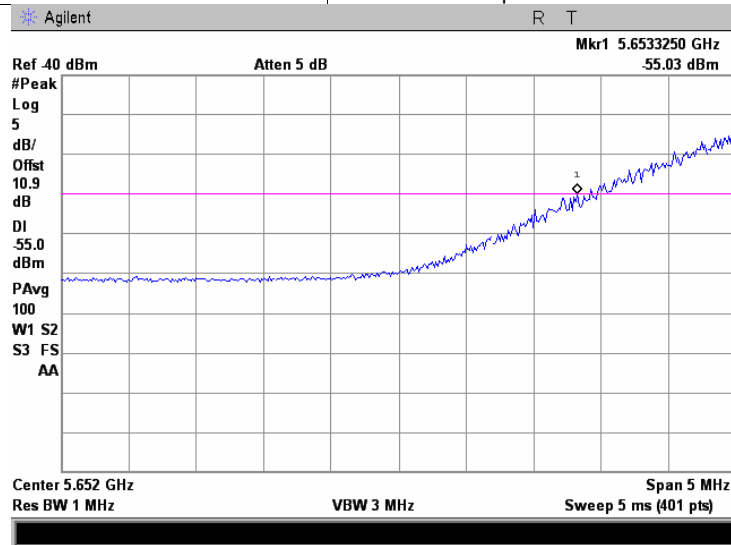
| | |
|-----------------------|-----------------|
| FREQUENCY EDGE | 5650 |
| CHANNEL BANDWIDTH | 10 MHz |
| MODULATION / BIT RATE | 64QAM / 65 Mbps |



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15.407(g), Frequency stability | |
| Test procedure: | | Section 2.1055 | |
| Test mode: | Compliance | Verdict: PASS | |
| Date: | 12/10/2008 | | |
| Temperature: 22°C | Air Pressure: 1013 hPa | Relative Humidity: 60 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

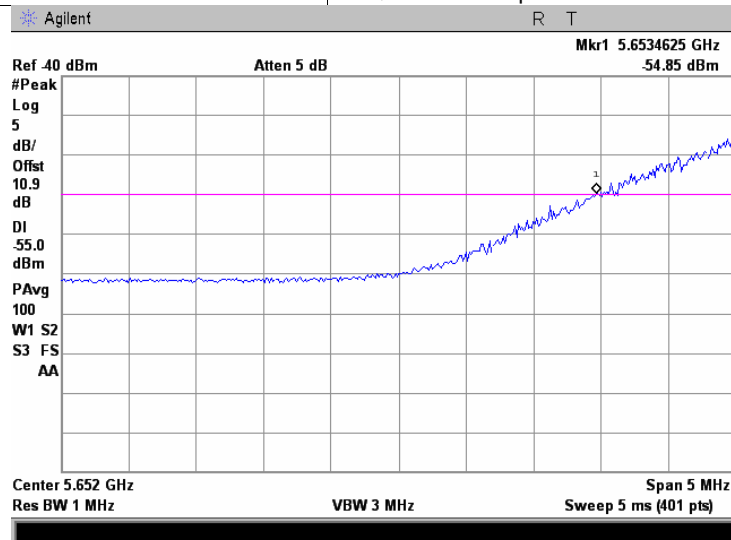
Plot 7.5.41. Band edge emissions at normal conditions at 10th minute

| | |
|-----------------------|------------------|
| FREQUENCY EDGE | 5650 |
| CHANNEL BANDWIDTH | 5 MHz |
| MODULATION / BIT RATE | BPSK / 3.25 Mbps |



Plot 7.5.42. Band edge emissions at normal conditions at 10th minute

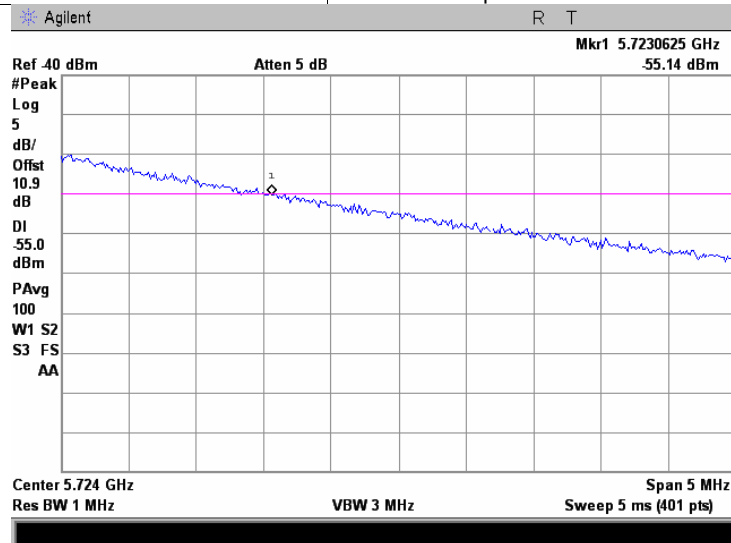
| | |
|-----------------------|-------------------|
| FREQUENCY EDGE | 5650 |
| CHANNEL BANDWIDTH | 5 MHz |
| MODULATION / BIT RATE | 64QAM / 32.5 Mbps |



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15.407(g), Frequency stability | |
| Test procedure: | | Section 2.1055 | |
| Test mode: | Compliance | Verdict: PASS | |
| Date: | 12/10/2008 | | |
| Temperature: 22°C | Air Pressure: 1013 hPa | Relative Humidity: 60 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

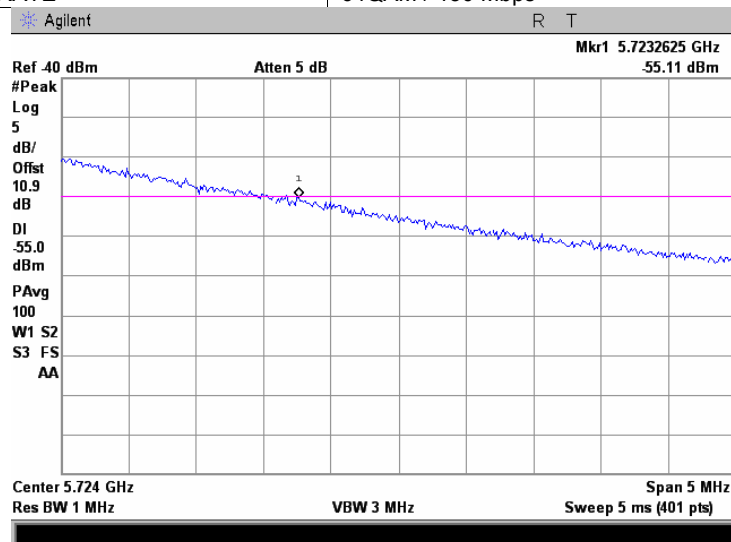
Plot 7.5.43. Band edge emissions at normal conditions at 10th minute

| | |
|-----------------------|----------------|
| FREQUENCY EDGE | 5725 |
| CHANNEL BANDWIDTH | 20 MHz |
| MODULATION / BIT RATE | BPSK / 13 Mbps |



Plot 7.5.44. Band edge emissions at normal conditions at 10th minute

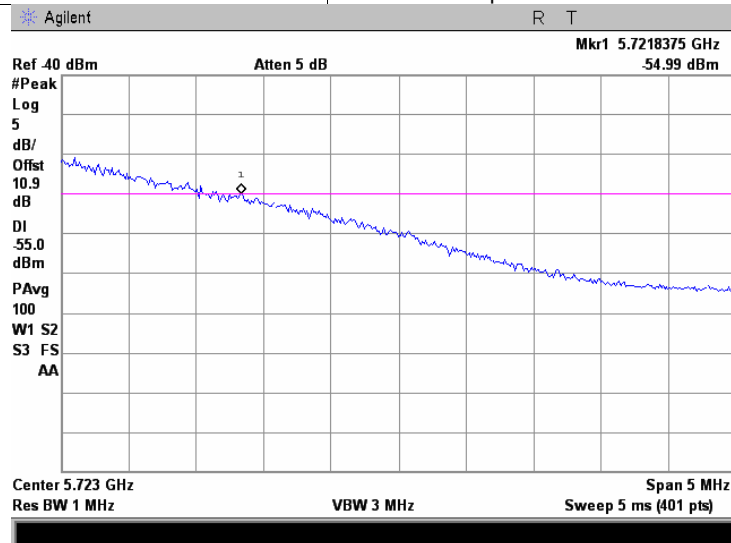
| | |
|-----------------------|------------------|
| FREQUENCY EDGE | 5725 |
| CHANNEL BANDWIDTH | 20 MHz |
| MODULATION / BIT RATE | 64QAM / 130 Mbps |



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15.407(g), Frequency stability | |
| Test procedure: | | Section 2.1055 | |
| Test mode: | Compliance | Verdict: PASS | |
| Date: | 12/10/2008 | | |
| Temperature: 22°C | Air Pressure: 1013 hPa | Relative Humidity: 60 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

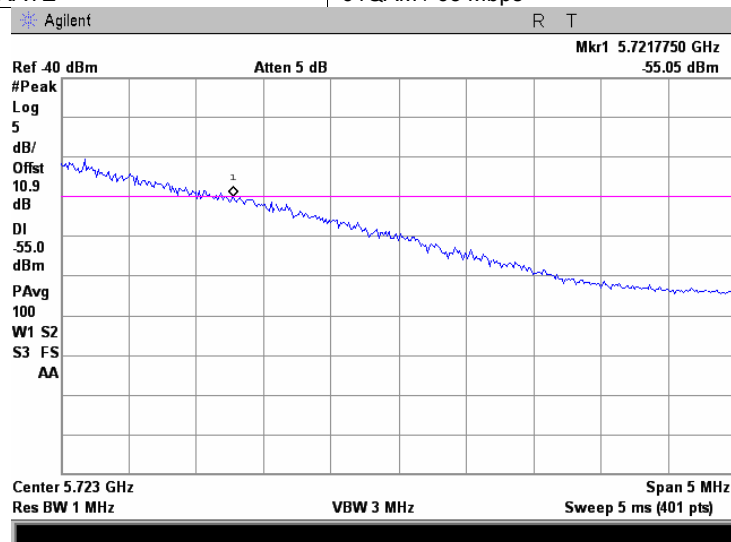
Plot 7.5.45. Band edge emissions at normal conditions at 10th minute

| | |
|-----------------------|-----------------|
| FREQUENCY EDGE | 5725 |
| CHANNEL BANDWIDTH | 10 MHz |
| MODULATION / BIT RATE | BPSK / 6.5 Mbps |



Plot 7.5.46. Band edge emissions at normal conditions at 10th minute

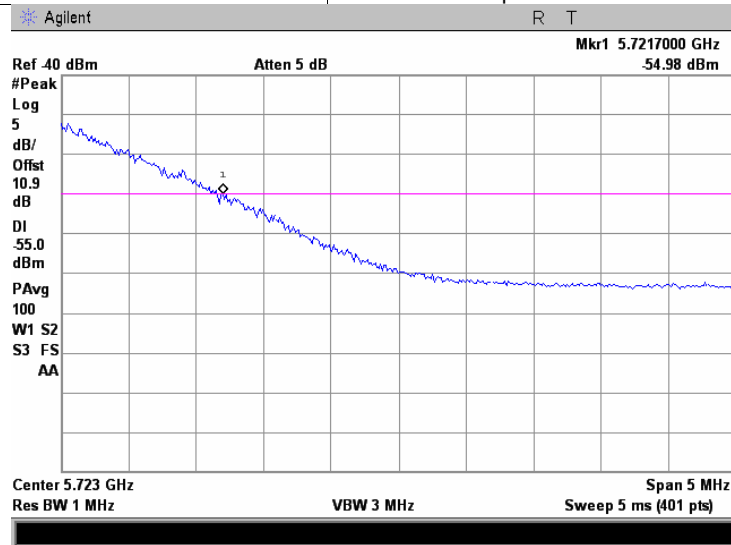
| | |
|-----------------------|-----------------|
| FREQUENCY EDGE | 5725 |
| CHANNEL BANDWIDTH | 10 MHz |
| MODULATION / BIT RATE | 64QAM / 65 Mbps |



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | FCC section 15.407(g), Frequency stability | |
| Test procedure: | | Section 2.1055 | |
| Test mode: | Compliance | Verdict: PASS | |
| Date: | 12/10/2008 | | |
| Temperature: 22°C | Air Pressure: 1013 hPa | Relative Humidity: 60 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

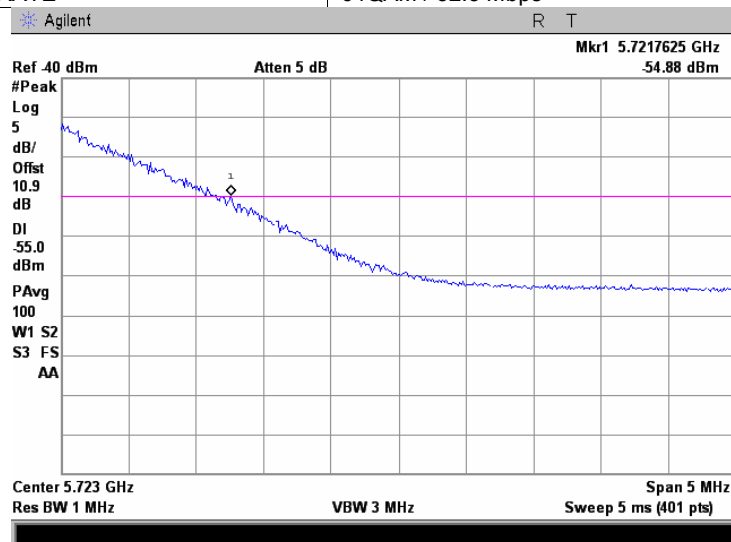
Plot 7.5.47. Band edge emissions at normal conditions at 10th minute

| | |
|-----------------------|------------------|
| FREQUENCY EDGE | 5725 |
| CHANNEL BANDWIDTH | 5 MHz |
| MODULATION / BIT RATE | BPSK / 3.25 Mbps |



Plot 7.5.48. Band edge emissions at normal conditions at 10th minute

| | |
|-----------------------|-------------------|
| FREQUENCY EDGE | 5725 |
| CHANNEL BANDWIDTH | 5 MHz |
| MODULATION / BIT RATE | 64QAM / 32.5 Mbps |





| | | | |
|----------------------------|-------------------------------|--|------------------------------|
| Test specification: | | FCC Part 15, section 203, RSS-Gen section 7.1.2, Antenna requirements | |
| Test procedure: | | Visual inspection / supplier declaration | |
| Test mode: | | Compliance | Verdict: PASS |
| Date: | | 10/08/2007 | |
| Temperature: 24°C | Air Pressure: 1012 hPa | Relative Humidity: 44 % | Power Supply: 120 VAC |
| Remarks: | | | |

7.6 Antenna requirements

The EUT was verified for compliance with antenna requirements. A transmitter shall be designed to ensure that no antenna other than that furnished by the responsible party will be used with the device. It may be either permanently attached or employs a unique antenna connector for every antenna proposed for use with the EUT. This requirement does not apply to professionally installed transmitters.

The rationale for compliance with the above requirements was either visual inspection results or supplier declaration. The summary of results is provided in Table 7.6.1.

Table 7.6.1 Antenna requirements

| Requirement | Rationale | Verdict |
|---|-------------------|---------|
| The transmitter antenna is permanently attached (integral) | Visual inspection | Comply |
| The transmitter employs a unique antenna connector | NA | |
| The transmitter requires professional installation (external) | Visual inspection | |

| | | | |
|----------------------------|-------------------------------|---|------------------------------|
| Test specification: | | FCC part 15 section 15.207(a), RSS-Gen section 7.2.4, Conducted emission | |
| Test procedure: | | ANSI C63.4, Section 13.1.3 | |
| Test mode: | Compliance | Verdict: PASS | |
| Date: | 12/28/2008 | | |
| Temperature: 21°C | Air Pressure: 1012 hPa | Relative Humidity: 44 % | Power Supply: 120 VAC |
| Remarks: | | | |

7.7 Conducted emissions

7.7.1 General

This test was performed to measure common mode conducted emissions at the power port. Specification test limits are given in Table 7.7.1.

Table 7.7.1 Limits for conducted emissions

| Frequency, MHz | Class B limit, dB(μV) | |
|----------------|-----------------------|----------|
| | QP | AVRG |
| 0.15 - 0.5 | 66 - 56* | 56 - 46* |
| 0.5 - 5.0 | 56 | 46 |
| 5.0 - 30 | 60 | 50 |

* - The limit decreases linearly with the logarithm of frequency.

7.7.2 Test procedure

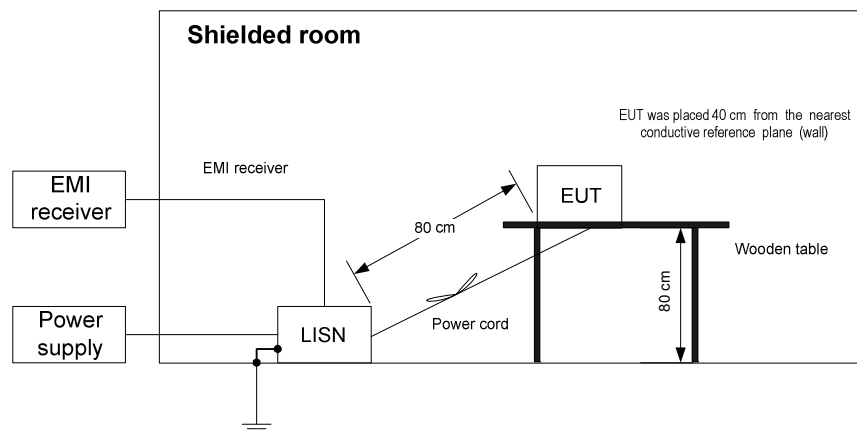
7.7.2.1 The EUT was set up as shown in Figure 7.7.1, energized and the performance check was conducted.

7.7.2.2 The measurements were performed at power terminals with the LISN, connected to a spectrum analyzer while unused coaxial connector of the LISN was terminated with 50 Ohm.

7.7.2.3 The position of the device cables was varied to determine maximum emission level.

7.7.2.4 The worst test results (the lowest margins) were recorded in Table 7.7.2 and shown in the associated plots.

Figure 7.7.1 Setup for conducted emission measurements, table-top equipment





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| | | | |
|---------------------|--|-------------------------|-----------------------|
| Test specification: | FCC part 15 section 15.207(a), RSS-Gen section 7.2.4, Conducted emission | | |
| Test procedure: | ANSI C63.4, Section 13.1.3 | | |
| Test mode: | Compliance | Verdict: PASS | |
| Date: | 12/28/2008 | | |
| Temperature: 21°C | Air Pressure: 1012 hPa | Relative Humidity: 44 % | Power Supply: 120 VAC |
| Remarks: | | | |

Table 7.7.2 Conducted emission test results

LINE: AC mains
 EUT OPERATING MODE: Transmit @5580 MHz, 20 MHz, CBW 130 Mbps at maximum power
 EUT SET UP: TABLE-TOP
 TEST SITE: SHIELDED ROOM
 FREQUENCY RANGE: 150 kHz - 30 MHz
 RESOLUTION BANDWIDTH: 9 kHz

| Frequency, MHz | Peak emission, dB(μV) | Quasi-peak | | | Average | | | Line ID | Verdict |
|----------------|-----------------------|---------------------------|---------------|-------------|---------------------------|---------------|-------------|---------|---------|
| | | Measured emission, dB(μV) | Limit, dB(μV) | Margin, dB* | Measured emission, dB(μV) | Limit, dB(μV) | Margin, dB* | | |
| 0.154650 | 43.37 | 39.31 | 65.77 | -26.46 | 36.02 | 55.77 | -19.75 | L1 | Pass |
| 0.531245 | 31.55 | 30.87 | 56.00 | -25.13 | 30.60 | 46.00 | -15.40 | | |
| 3.109260 | 33.22 | 32.06 | 56.00 | -23.94 | 31.04 | 46.00 | -14.96 | | |
| 3.791626 | 33.21 | 32.36 | 56.00 | -23.64 | 30.87 | 46.00 | -15.13 | | |
| 0.154780 | 44.36 | 39.41 | 65.77 | -26.36 | 34.66 | 55.77 | -21.11 | L2 | Pass |
| 0.530325 | 32.69 | 31.91 | 56.00 | -24.09 | 31.46 | 46.00 | -14.54 | | |
| 1.971482 | 32.37 | 31.93 | 56.00 | -24.07 | 31.25 | 46.00 | -14.75 | | |
| 3.109233 | 32.86 | 32.12 | 56.00 | -23.88 | 31.17 | 46.00 | -14.83 | | |

*- Margin = Measured emission - specification limit.

Reference numbers of test equipment used

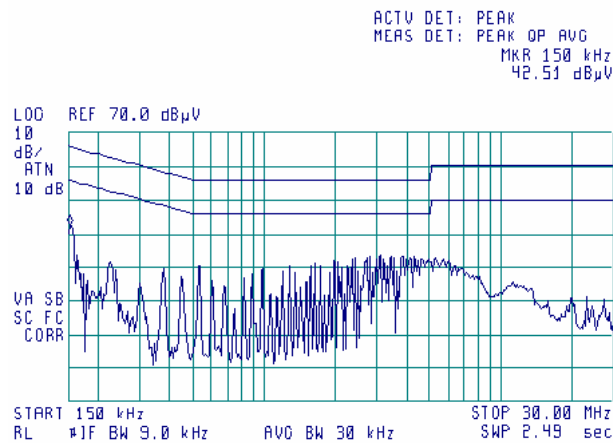
| | | | | | | | |
|---------|---------|---------|---------|---------|--|--|--|
| HL 0580 | HL 1430 | HL 1513 | HL 2888 | HL 3612 | | | |
|---------|---------|---------|---------|---------|--|--|--|

Full description is given in Appendix A.

| | | | |
|----------------------------|-------------------------------|---|------------------------------|
| Test specification: | | FCC part 15 section 15.207(a), RSS-Gen section 7.2.4, Conducted emission | |
| Test procedure: | | ANSI C63.4, Section 13.1.3 | |
| Test mode: | | Compliance | Verdict: PASS |
| Date: | | 12/28/2008 | |
| Temperature: 21°C | Air Pressure: 1012 hPa | Relative Humidity: 44 % | Power Supply: 120 VAC |
| Remarks: | | | |

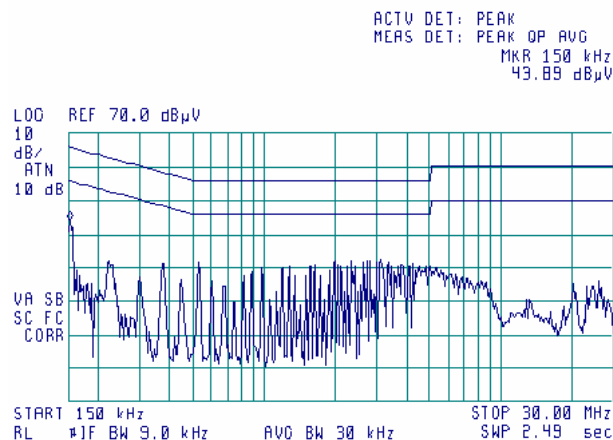
Plot 7.7.1 Conducted emission measurements

LINE: L1
EUT OPERATING MODE: Transmit
LIMIT: QUASI-PEAK, AVERAGE
DETECTOR: PEAK



Plot 7.7.2 Conducted emission measurements

LINE: L2
EUT OPERATING MODE: Transmit
LIMIT: QUASI-PEAK, AVERAGE
DETECTOR: PEAK



| | | | |
|---|-------------------------------|--------------------------------|------------------------------|
| Test specification: RSS-Gen sections 6, 4.10, spurious radiated emission | | | |
| Test procedure: ANSI C63.4, Section 13.1.3 | | | |
| Test mode: Compliance | Verdict: PASS | | |
| Date: 12/28/2008 | | | |
| Temperature: 21°C | Air Pressure: 1012 hPa | Relative Humidity: 44 % | Power Supply: 120 VAC |
| Remarks: | | | |

7.8 Receiver radiated spurious emission measurements

7.8.1 General

This test was performed to measure radiated emissions from the EUT enclosure. Specification test limits are given in Table 7.8.1.

Table 7.8.1 Radiated emission limits

| Frequency, MHz | Field strength limit at 3 m test distance, dB(μ V/m) |
|--------------------------------------|---|
| 30 - 88 | 40.0 |
| 88 - 216 | 43.5 |
| 216 - 960 | 46.0 |
| Above 960 -3 rd harmonic* | 54.0 |

* - harmonic of the highest frequency the EUT generates, uses, operates or tunes to.

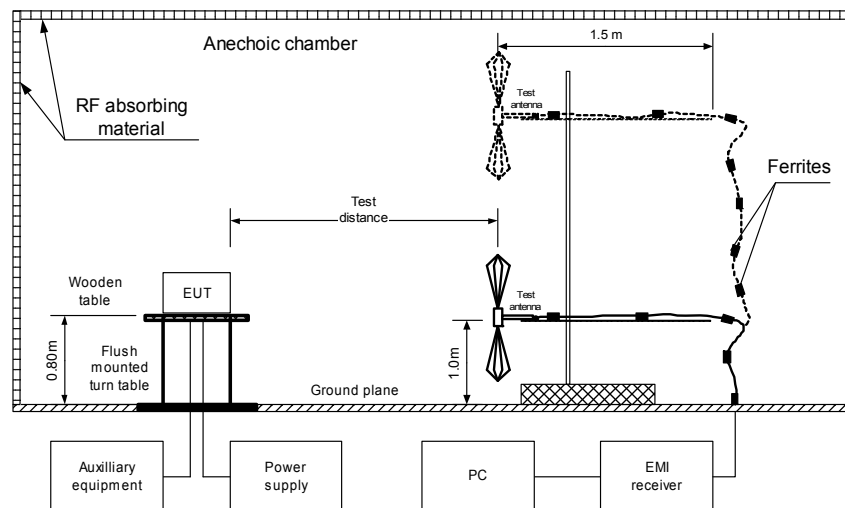
7.8.2 Test procedure

7.8.2.1 The EUT was set up as shown in Figure 7.8.1, energized and the performance check was conducted.

7.8.2.2 The specified frequency range was investigated with biconilog antenna connected to EMI receiver. To find maximum radiation the turntable was rotated 360°, the measuring antenna height was changed from 1 to 4 m, its polarization was switched from vertical to horizontal and the EUT cables position was varied.

7.8.2.3 The worst test results (the lowest margins) were provided in the associated tables and plots.

Figure 7.8.1 Setup for radiated emission measurements in anechoic chamber, table-top equipment





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| | | | |
|---|-------------------------------|--------------------------------|------------------------------|
| Test specification: RSS-Gen sections 6, 4.10, spurious radiated emission | | | |
| Test procedure: ANSI C63.4, Section 13.1.3 | | | |
| Test mode: | Compliance | Verdict: PASS | |
| Date: | 12/28/2008 | | |
| Temperature: 21°C | Air Pressure: 1012 hPa | Relative Humidity: 44 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

Table 7.8.2 Radiated emission test results

EUT SET UP: TABLE-TOP
 EUT OPERATING MODE: Receive
 TEST SITE: SEMI ANECHOIC CHAMBER
 TEST DISTANCE: 3 m
 FREQUENCY RANGE: 30 MHz – 1000 MHz
 RESOLUTION BANDWIDTH: 120 kHz

| Frequency, MHz | Peak emission, dB(μV/m) | Quasi-peak | | | Antenna polarization | Antenna height, m | Turn-table position**, degrees | Verdict |
|---------------------------|-------------------------------|-----------------------------------|--------------------|----------------|-------------------------|-------------------------|--------------------------------------|---------|
| | | Measured emission, dB(μV/m) | Limit, dB(μV/m) | Margin, dB* | | | | |
| Mid Rx channel (5580 MHz) | | | | | | | | Pass |
| No emissions were found | | | | | | | | |

TEST SITE: SEMI ANECHOIC CHAMBER
 TEST DISTANCE: 3 m
 FREQUENCY RANGE: 1000 MHz – 17500 MHz
 RESOLUTION BANDWIDTH: 1000 kHz

| Frequency, MHz | Peak emission, dB(μV/m) | Average | | | Antenna polarization | Antenna height, m | Turn-table position**, degrees | Verdict | |
|---------------------------|-------------------------------|-----------------------------------|--------------------|----------------|-------------------------|-------------------------|--------------------------------------|---------|------|
| | | Measured emission, dB(μV/m) | Limit, dB(μV/m) | Margin, dB* | | | | | |
| Mid Rx channel (5580 MHz) | | | | | | | | | Pass |
| No emissions were found | | | | | | | | | |

*- Margin = Measured emission - specification limit.

** - EUT front panel refer to 0 degrees position of turntable.

Reference numbers of test equipment used

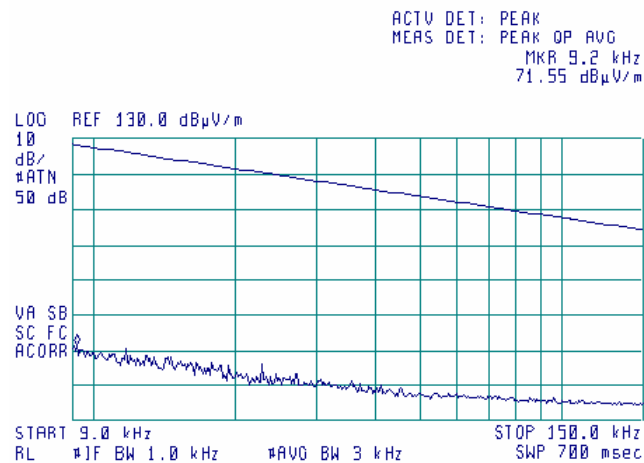
| | | | | | | | |
|---------|---------|---------|---------|---------|---------|---------|---------|
| HL 0446 | HL 0521 | HL 0589 | HL 0604 | HL 1425 | HL 1556 | HL 1947 | HL 1984 |
| HL 2009 | HL 2909 | | | | | | |

Full description is given in Appendix A.

| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | RSS-Gen sections 6, 4.10, spurious radiated emission | |
| Test procedure: | | ANSI C63.4, Section 13.1.3 | |
| Test mode: | Compliance | Verdict: PASS | |
| Date: | 12/28/2008 | | |
| Temperature: 21°C | Air Pressure: 1012 hPa | Relative Humidity: 44 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

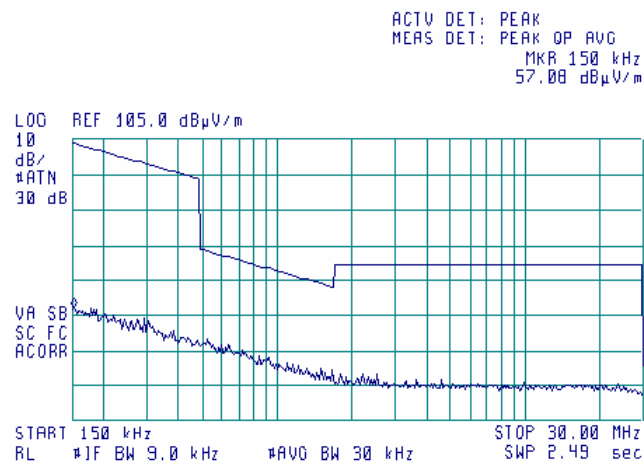
Plot 7.8.1 Radiated emission measurements from 9 to 150 kHz at the mid Rx channel frequency

TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal



Plot 7.8.2 Radiated emission measurements from 0.15 MHz to 30 MHz at the mid Rx channel frequency

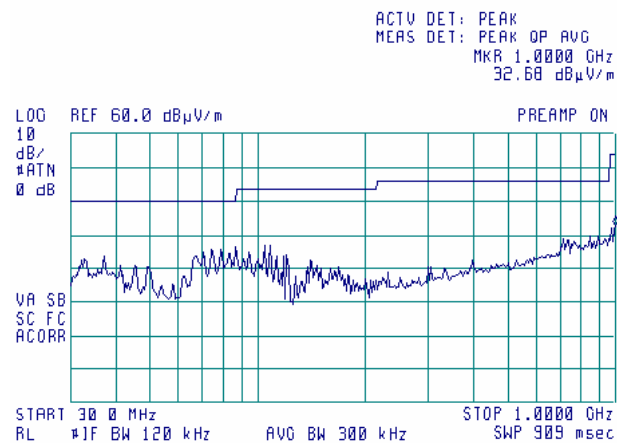
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | RSS-Gen sections 6, 4.10, spurious radiated emission | |
| Test procedure: | | ANSI C63.4, Section 13.1.3 | |
| Test mode: | | Verdict: PASS | |
| Date: | | | |
| 12/28/2008 | | | |
| Temperature: 21°C | Air Pressure: 1012 hPa | Relative Humidity: 44 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

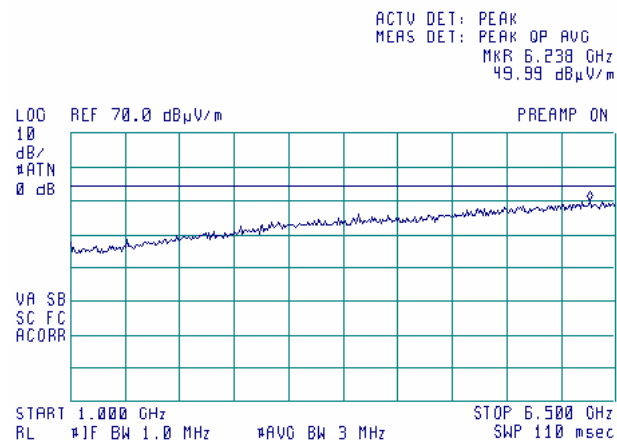
Plot 7.8.3 Radiated emission measurements from 30 MHz to 1000 MHz at the mid Rx channel frequency

TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal



Plot 7.8.4 Radiated emission measurements from 1.0 to 6.5 GHz at the mid Rx channel frequency

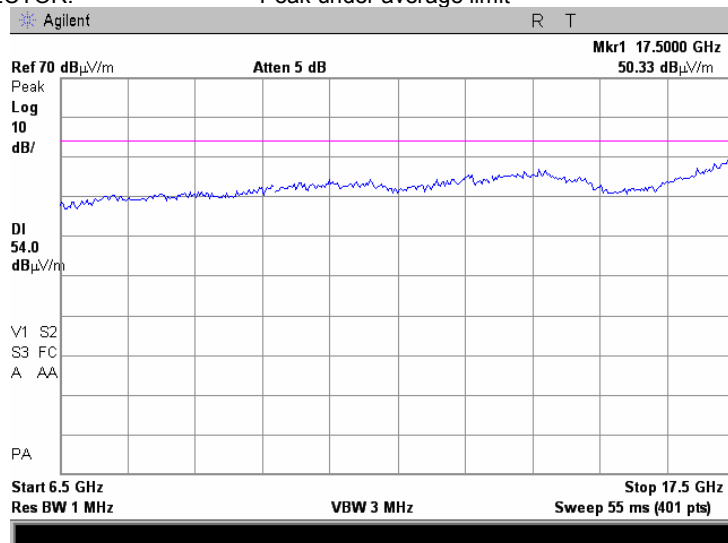
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Peak under average limit



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | RSS-Gen sections 6, 4.10, spurious radiated emission | |
| Test procedure: | | ANSI C63.4, Section 13.1.3 | |
| Test mode: | | Verdict: PASS | |
| Date: | | | |
| 12/28/2008 | | | |
| Temperature: 21°C | Air Pressure: 1012 hPa | Relative Humidity: 44 % | Power Supply: 120 VAC |
| Remarks: EUT with 22.5 dBi antenna assembly gain | | | |

Plot 7.8.5 Radiated emission measurements from 6.5 to 17.5 GHz at the mid Rx channel frequency

TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Peak under average limit





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| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | RSS-Gen sections 6, 4.10, spurious radiated emission | |
| Test procedure: | | ANSI C63.4, Section 13.1.3 | |
| Test mode: | | Verdict: PASS | |
| Date: | | | |
| 12/28/2008 | | | |
| Temperature: 21°C | Air Pressure: 1012 hPa | Relative Humidity: 44 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

Table 7.8.3 Radiated emission test results

EUT SET UP: TABLE-TOP
 EUT OPERATING MODE: Receive
 TEST SITE: SEMI ANECHOIC CHAMBER
 TEST DISTANCE: 3 m
 FREQUENCY RANGE: 30 MHz – 1000 MHz
 RESOLUTION BANDWIDTH: 120 kHz

| Frequency, MHz | Peak, dB(μV/m) | Quasi-peak dB(μV/m) | | | Antenna polariz. | Antenna height, m | Turntable position**, degrees | Verdict |
|---------------------------|-------------------|-----------------------------------|--------------------|----------------|---------------------|----------------------|-------------------------------------|---------|
| | | Measured emission, dB(μV/m) | Limit, dB(μV/m) | Margin, dB* | | | | |
| Mid Rx channel (5580 MHz) | | | | | | | | |
| 79.255 | 28.30 | 23.70 | 40.0 | -16.30 | V | 1.2 | 270 | Pass |

TEST SITE: SEMI ANECHOIC CHAMBER
 TEST DISTANCE: 3 m
 FREQUENCY RANGE: 1000 MHz – 17500 MHz
 RESOLUTION BANDWIDTH: 1000 kHz

| Frequency, MHz | Peak emission, dB(μV/m) | Average | | | Antenna polarization | Antenna height, m | Turn-table position**, degrees | Verdict |
|---------------------------|-------------------------------|-----------------------------------|--------------------|----------------|-------------------------|-------------------------|--------------------------------------|---------|
| | | Measured emission, dB(μV/m) | Limit, dB(μV/m) | Margin, dB* | | | | |
| Mid Rx channel (5580 MHz) | | | | | | | | Pass |
| 1000.930 | 42.90 | 35.60 | 54.0 | -18.40 | V | 1.2 | 090 | |

*- Margin = Measured emission - specification limit.

** - EUT front panel refer to 0 degrees position of turntable.

Reference numbers of test equipment used

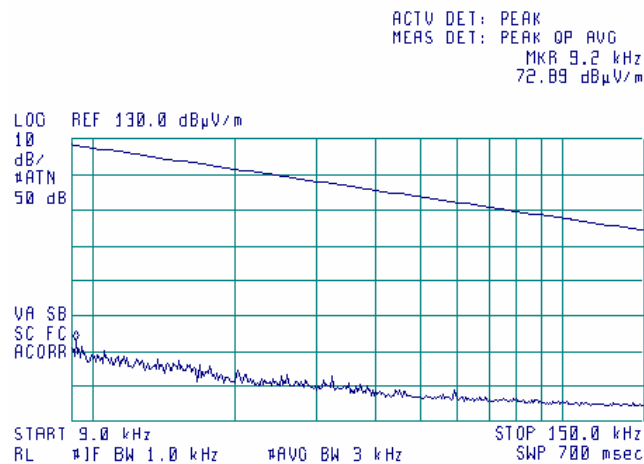
| | | | | | | | |
|---------|---------|---------|---------|---------|---------|---------|---------|
| HL 0446 | HL 0521 | HL 0589 | HL 0604 | HL 1425 | HL 1556 | HL 1947 | HL 1984 |
| HL 2009 | HL 2909 | | | | | | |

Full description is given in Appendix A.

| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | RSS-Gen sections 6, 4.10, spurious radiated emission | |
| Test procedure: | | ANSI C63.4, Section 13.1.3 | |
| Test mode: | | Verdict: PASS | |
| Date: | | | |
| 12/28/2008 | | | |
| Temperature: 21°C | Air Pressure: 1012 hPa | Relative Humidity: 44 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

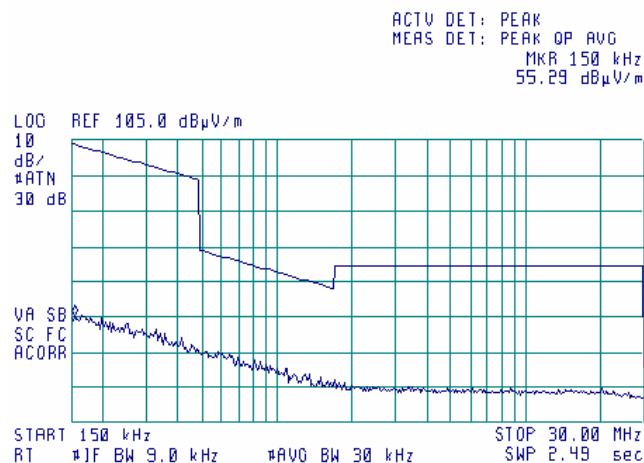
Plot 7.8.6 Radiated emission measurements from 9 to 150 kHz at the mid Rx carrier frequency

TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal



Plot 7.8.7 Radiated emission measurements from 0.15 MHz to 30 MHz at the mid Rx channel frequency

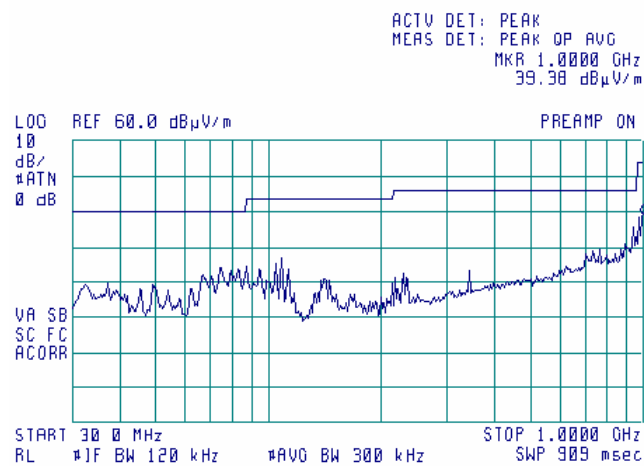
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | RSS-Gen sections 6, 4.10, spurious radiated emission | |
| Test procedure: | | ANSI C63.4, Section 13.1.3 | |
| Test mode: | | Verdict: PASS | |
| Date: | | | |
| 12/28/2008 | | | |
| Temperature: 21°C | Air Pressure: 1012 hPa | Relative Humidity: 44 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

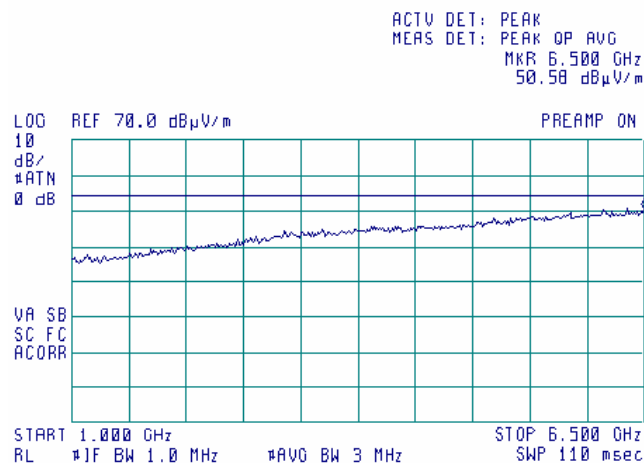
Plot 7.8.8 Radiated emission measurements from 30 MHz to 1000 MHz at the mid Rx channel frequency

TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal



Plot 7.8.9 Radiated emission measurements from 1.0 to 6.5 GHz at the mid Rx channel frequency

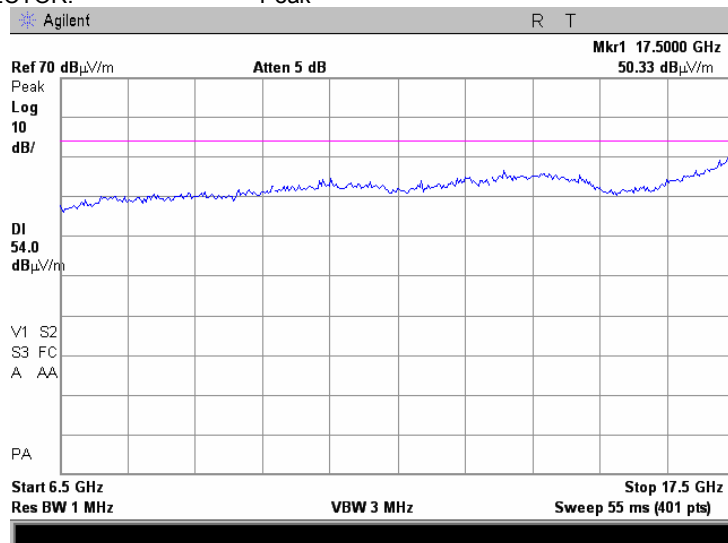
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Peak under average limit



| | | | |
|---|-------------------------------|---|------------------------------|
| Test specification: | | RSS-Gen sections 6, 4.10, spurious radiated emission | |
| Test procedure: | | ANSI C63.4, Section 13.1.3 | |
| Test mode: | | Verdict: PASS | |
| Date: | | | |
| 12/28/2008 | | | |
| Temperature: 21°C | Air Pressure: 1012 hPa | Relative Humidity: 44 % | Power Supply: 120 VAC |
| Remarks: EUT with 28 dBi antenna assembly gain | | | |

Plot 7.8.10 Radiated emission measurements from 6.5 to 17.5 GHz at the mid Rx channel frequency

TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Peak



8 APPENDIX A Test equipment and ancillaries used for tests

| HL No | Description | Manufacturer | Model | Ser. No. | Last Cal. | Due Cal. |
|-------|---|----------------------------|---------------------|--------------------------|-----------|-----------|
| 0446 | Antenna, Loop, Active, 10 kHz - 30 MHz | EMCO | 6502 | 2857 | 29-Jun-08 | 29-Jun-09 |
| 0493 | Temperature Chamber -45...175 deg C | Thermotron | S-1.2 Mini-Max | 14016 | 19-May-08 | 19-May-09 |
| 0521 | EMI Receiver (Spectrum Analyzer) with RF filter section 9 kHz-6.5 GHz | Hewlett Packard Co | 8546A | 3617A 00319, 3448A002 53 | 29-Aug-08 | 29-Aug-09 |
| 0580 | DC block adaptor 10 kHz - 2.2 GHz | Anritsu | MA8601 A | 580 | 23-Nov-08 | 23-Nov-09 |
| 0589 | Cable Coaxial, GORE A2P01POL118, 2.3 m, 6.5 GHz | Hermon Laboratories | GORE-3 | 176 | 01-Jan-08 | 01-Jan-09 |
| 0604 | Antenna BiconiLog Log-Periodic/T Bow-TIE, 26 - 2000 MHz | EMCO | 3141 | 9611-1011 | 10-Jan-08 | 10-Jan-09 |
| 1194 | Variac, 220 V/ 2.5 A | Matsunaga | | 2962 | 06-Jan-08 | 06-Jan-09 |
| 1425 | EMI Receiver, 9 kHz - 2.9 GHz, System: HL1426, HL1427 | Agilent Technologies | 8542E | 3710A002 22, 3705A002 04 | 03-Sep-08 | 03-Sep-09 |
| 1430 | EMI Receiver, 9 kHz - 2.9 GHz, System: HL1431, HL1432 | Agilent Technologies | 8542E | 3807A002 62,3705A0 0217 | 31-Aug-08 | 31-Aug-09 |
| 1513 | Cable RF, 8 m, BNC/BNC | Belden | M17/167 MIL-C-17 | 1513 | 03-Sep-08 | 03-Sep-09 |
| 1556 | Cable RF, 0.5 m | Telequis | MIL-C-17F-RG 058 CU | 1556 | 01-Jan-08 | 01-Jan-09 |
| 1947 | Cable 18GHz, 6.5 m, blue | Rhophase Microwave Limited | NPS-1803A-6500-NPS | T4974 | 01-Jan-08 | 01-Jan-09 |
| 1984 | Antenna, Double-Ridged Waveguide Horn, 1-18 GHz, 300 W | EMC Test Systems | 3115 | 9911-5964 | 03-Mar-08 | 03-Mar-09 |
| 2009 | Cable RF, 8 m | Alpha Wire | RG-214 | C-56 | 01-Jan-08 | 01-Jan-09 |
| 2780 | EMC analyzer, 100 Hz to 26.5 GHz | Agilent Technologies | E7405A | MY451024 6 | 11-Jun-07 | 11-Jun-09 |
| 2883 | Cable, 18 GHz N-type, M-F, 3 m | Bird | TC-MNFN-3.0 | 211539 003 | 07-Dec-08 | 07-Dec-09 |
| 2888 | LISN Two-line V-Network 50 Ohm / 50 uH + 5 Ohm, 16A, MIL STD 461E, CISPR 16-1 | Rolf Heine | NNB-2/16Z | 02/10018 | 09-Jul-08 | 09-Jul-09 |
| 2909 | Spectrum analyzer, ESA-E, 100 Hz to 26.5 GHz | Agilent Technologies | E4407B | MY414447 62 | 07-May-07 | 07-May-09 |
| 3175 | Attenuator, N-type, 10 dB, DC to 18 GHz, 5 W | Mini-Circuits | BW-N10W5+ | 0708 | 07-May-08 | 07-May-09 |
| 3176 | Attenuator, N-type, 10 dB, DC to 18 GHz, 5 W | Mini-Circuits | BW-N10W5+ | 0708 | 07-May-08 | 07-May-09 |
| 3179 | Attenuator, N-type, 20 dB, DC to 18 GHz, 5 W | Mini-Circuits | BW-N20W5+ | 0651 | 07-May-08 | 07-May-09 |
| 3180 | Attenuator, N-type, 20 dB, DC to 18 GHz, 5 W | Mini-Circuits | BW-N20W5+ | 0651 | 07-May-08 | 07-May-09 |
| 3233 | Multimeter | Fluke | 115C | 93771523 | 15-Jul-08 | 15-Jul-09 |
| 3286 | Temperature Chamber, (-40 to +170) °C | Thermotron | EL-8-CH-1-1-CO2 | 21-9048 | 09-Sep-08 | 09-Sep-09 |
| 3612 | Cable RF, 17.5 m, N type-N type | Teldor | RG-214/U | NA | 17-Nov-08 | 17-Nov-09 |

9 APPENDIX B Measurement uncertainties

Expanded uncertainty at 95% confidence in Hermon Labs EMC measurements

| Test description | Expanded uncertainty |
|--|--|
| Conducted carrier power at RF antenna connector | Below 12.4 GHz: ± 1.7 dB 12.4 GHz to 40 GHz: ± 2.3 dB |
| Conducted emissions at RF antenna connector | 9 kHz to 2.9 GHz: ± 2.6 dB 2.9 GHz to 6.46 GHz: ± 3.5 dB 6.46 GHz to 13.2 GHz: ± 4.3 dB 13.2 GHz to 22.0 GHz: ± 5.0 dB 22.0 GHz to 26.8 GHz: ± 5.5 dB 26.8 GHz to 40.0 GHz: ± 4.8 dB |
| Occupied bandwidth | ± 8.0 % |
| Conducted emissions with LISN | 9 kHz to 150 kHz: ± 3.9 dB 150 kHz to 30 MHz: ± 3.8 dB |
| Radiated emissions at 3 m measuring distance Horizontal polarization Vertical polarization | Biconilog antenna: ± 5.3 dB Biconical antenna: ± 5.0 dB Log periodic antenna: ± 5.3 dB Double ridged horn antenna: ± 5.3 dB Biconilog antenna: ± 6.0 dB Biconical antenna: ± 5.7 dB Log periodic antenna: ± 6.0 dB Double ridged horn antenna: ± 6.0 dB |

Hermon Laboratories is accredited by A2LA for calibration according to present requirements of ISO/IEC 17025 and NCSL Z540-1. The accreditation is granted to perform calibration of parameters that are listed in the Scope of Hermon Laboratories Accreditation.

Hermon Laboratories calibrates its reference and transfer standards by calibration laboratories accredited to ISO/IEC 17025 by a mutually recognized Accreditation Body or by a recognized national metrology institute. All reference and transfer standards used in the calibration system are traceable to national or international standards.

In-house calibration of all test and measurement equipment is performed on a regular basis according to Hermon Laboratories calibration procedures, manufacturer calibration/verification procedures or procedures defined in the relevant standards. The Hermon Laboratories test and measurement equipment is calibrated within the tolerances specified by the manufacturers and/or by the relevant standards.

10 APPENDIX C Test laboratory description

Tests were performed at Hermon Laboratories Ltd., which is a fully independent, private, EMC, safety, environmental and telecommunication testing facility.

Hermon Laboratories is listed by the Federal Communications Commission (USA) for all parts of Code of Federal Regulations 47 (CFR 47), Registration Numbers 90624 for OATS and 90623 for the anechoic chamber; by Industry Canada for electromagnetic emissions (file numbers IC 2186A-1 for OATS, IC 2186A-2 for anechoic chamber, IC 2186A-3 for full-anechoic chamber for RE measurements above 1 GHz), certified by VCCI, Japan (the registration numbers are R-808 for OATS, R-1082 for anechoic chamber, G-27 for full-anechoic chamber for RE measurements above 1 GHz, C-845 for conducted emissions site, T-1606 for conducted emissions at telecommunication ports), has a status of a Telefication - Listed Testing Laboratory, Certificate No. L138/00. The laboratory is accredited by American Association for Laboratory Accreditation (USA) according to ISO/IEC 17025 for electromagnetic compatibility, product safety, telecommunications testing and environmental simulation (for exact scope please refer to Certificate No. 839.01). The FCC Designation Number is US1003.

Address: P.O. Box 23, Binyamina 30500, Israel.
Telephone: +972 4628 8001
Fax: +972 4628 8277
e-mail: mail@hermonlabs.com
website: www.hermonlabs.com

Person for contact: Mr. Alex Usoskin, CEO.

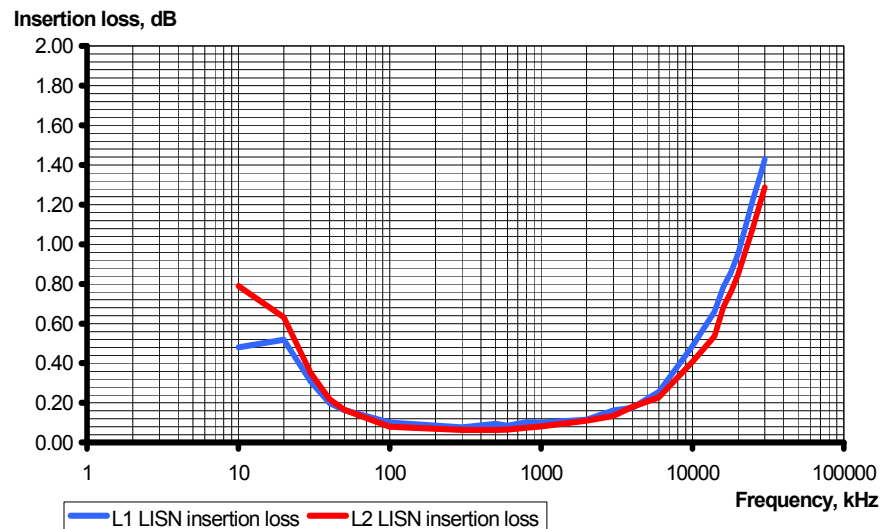
11 APPENDIX D Specification references

| | |
|---|--|
| 47CFR part 15: 2009 | Radio Frequency Devices. |
| FCC Public Notice DA 02-2138 August 30, 2002 | Measurement procedure updated for peak transmit power in U-NII bands |
| ANSI C63.2: 1996 | American National Standard for Instrumentation-Electromagnetic Noise and Field Strength, 10 kHz to 40 GHz-Specifications. |
| ANSI C63.4: 2003 | American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz. |
| RSS-210 Issue 8: 2010 | Low Power Licence- Exempt Radiocommunication Devices |
| RSS-Gen Issue 3: 2010 | General Requirements and Information for the certification of Radiocommunication Equipment |

12 APPENDIX E Test equipment correction factors

Correction factor Line impedance stabilization network Model NNB-2/16Z, Rolf Heine, HL 2888

| Frequency, kHz | Insertion loss, dB | | Measurement Uncertainty, dB |
|----------------|--------------------|------|-----------------------------|
| | L1 | N | |
| 10 | 0.48 | 0.79 | ±0.6 |
| 20 | 0.52 | 0.63 | |
| 30 | 0.31 | 0.35 | |
| 40 | 0.20 | 0.22 | |
| 50 | 0.16 | 0.17 | |
| 100 | 0.10 | 0.08 | |
| 300 | 0.08 | 0.06 | |
| 500 | 0.10 | 0.06 | |
| 600 | 0.09 | 0.07 | |
| 800 | 0.10 | 0.07 | |
| 1000 | 0.10 | 0.08 | |
| 2000 | 0.12 | 0.11 | |
| 3000 | 0.16 | 0.14 | |
| 4000 | 0.17 | 0.18 | |
| 6000 | 0.26 | 0.23 | |
| 10000 | 0.49 | 0.41 | |
| 14000 | 0.66 | 0.54 | |
| 16000 | 0.79 | 0.69 | |
| 18000 | 0.86 | 0.76 | |
| 20000 | 0.96 | 0.85 | |
| 25000 | 1.22 | 1.08 | |
| 28000 | 1.35 | 1.21 | |
| 30000 | 1.43 | 1.29 | |



Antenna Factor
Active Loop Antenna
EMC Test Systems, model 6502, serial number 2857, HL 0446

| Frequency, MHz | Magnetic Antenna Factor, dB(S/m) | Electric Antenna Factor, dB(1/m) |
|-------------------|-------------------------------------|-------------------------------------|
| 0.009 | -32.8 | 18.7 |
| 0.010 | -33.8 | 17.7 |
| 0.020 | -38.3 | 13.2 |
| 0.050 | -41.1 | 10.4 |
| 0.075 | -41.3 | 10.2 |
| 0.100 | -41.6 | 9.9 |
| 0.150 | -41.7 | 9.8 |
| 0.250 | -41.6 | 9.9 |
| 0.500 | -41.8 | 9.7 |
| 0.750 | -41.9 | 9.6 |
| 1.000 | -41.4 | 10.1 |
| 2.000 | -41.5 | 10.0 |
| 3.000 | -41.4 | 10.1 |
| 4.000 | -41.4 | 10.1 |
| 5.000 | -41.5 | 10.0 |
| 10.000 | -41.9 | 9.6 |
| 15.000 | -41.9 | 9.6 |
| 20.000 | -42.2 | 9.3 |
| 25.000 | -42.8 | 8.7 |
| 30.000 | -44.0 | 7.5 |

Antenna factor in dB(S/m) is to be added to receiver meter reading in dB(μ V) to convert it into field intensity in dB(μ A/m).

Antenna factor

Biconilog antenna EMCO, model 3141, serial number 1011, HL 0604

| Frequency, MHz | Antenna factor, dB(1/m) | Frequency, MHz | Antenna factor, dB(1/m) | Frequency, MHz | Antenna factor, dB(1/m) |
|-------------------|----------------------------|-------------------|----------------------------|-------------------|----------------------------|
| 26 | 7.8 | 560 | 19.8 | 1300 | 27.0 |
| 28 | 7.8 | 580 | 20.6 | 1320 | 27.8 |
| 30 | 7.8 | 600 | 21.3 | 1340 | 28.3 |
| 40 | 7.2 | 620 | 21.5 | 1360 | 28.2 |
| 60 | 7.1 | 640 | 21.2 | 1380 | 27.9 |
| 70 | 8.5 | 660 | 21.4 | 1400 | 27.9 |
| 80 | 9.4 | 680 | 21.9 | 1420 | 27.9 |
| 90 | 9.8 | 700 | 22.2 | 1440 | 27.8 |
| 100 | 9.7 | 720 | 22.2 | 1460 | 27.8 |
| 110 | 9.3 | 740 | 22.1 | 1480 | 28.0 |
| 120 | 8.8 | 760 | 22.3 | 1500 | 28.5 |
| 130 | 8.7 | 780 | 22.6 | 1520 | 28.9 |
| 140 | 9.2 | 800 | 22.7 | 1540 | 29.6 |
| 150 | 9.8 | 820 | 22.9 | 1560 | 29.8 |
| 160 | 10.2 | 840 | 23.1 | 1580 | 29.6 |
| 170 | 10.4 | 860 | 23.4 | 1600 | 29.5 |
| 180 | 10.4 | 880 | 23.8 | 1620 | 29.3 |
| 190 | 10.3 | 900 | 24.1 | 1640 | 29.2 |
| 200 | 10.6 | 920 | 24.1 | 1660 | 29.4 |
| 220 | 11.6 | 940 | 24.0 | 1680 | 29.6 |
| 240 | 12.4 | 960 | 24.1 | 1700 | 29.8 |
| 260 | 12.8 | 980 | 24.5 | 1720 | 30.3 |
| 280 | 13.7 | 1000 | 24.9 | 1740 | 30.8 |
| 300 | 14.7 | 1020 | 25.0 | 1760 | 31.1 |
| 320 | 15.2 | 1040 | 25.2 | 1780 | 31.0 |
| 340 | 15.4 | 1060 | 25.4 | 1800 | 30.9 |
| 360 | 16.1 | 1080 | 25.6 | 1820 | 30.7 |
| 380 | 16.4 | 1100 | 25.7 | 1840 | 30.6 |
| 400 | 16.6 | 1120 | 26.0 | 1860 | 30.6 |
| 420 | 16.7 | 1140 | 26.4 | 1880 | 30.6 |
| 440 | 17.0 | 1160 | 27.0 | 1900 | 30.6 |
| 460 | 17.7 | 1180 | 27.0 | 1920 | 30.7 |
| 480 | 18.1 | 1200 | 26.7 | 1940 | 30.9 |
| 500 | 18.5 | 1220 | 26.5 | 1960 | 31.2 |
| 520 | 19.1 | 1240 | 26.5 | 1980 | 31.6 |
| 540 | 19.5 | 1260 | 26.5 | 2000 | 32.0 |
| | | 1280 | 26.6 | | |

Antenna factor in dB(1/m) is to be added to receiver meter reading in dB(μ V) to convert it into field intensity in dB(μ V/m).

Antenna factor
Double-ridged wave guide horn antenna
EMC Test Systems, model 3115, serial no: 9911-5964, HL 1984

| Frequency, MHz | Antenna gain, dBi | Antenna factor. dB(1/m) |
|-------------------|----------------------|----------------------------|
| 1000.0 | 5.8 | 24.5 |
| 1500.0 | 9.0 | 24.8 |
| 2000.0 | 8.6 | 27.7 |
| 2500.0 | 9.5 | 28.7 |
| 3000.0 | 8.9 | 30.8 |
| 3500.0 | 8.2 | 32.9 |
| 4000.0 | 9.6 | 32.7 |
| 4500.0 | 11.2 | 32.1 |
| 5000.0 | 10.6 | 33.6 |
| 5500.0 | 9.8 | 35.3 |
| 6000.0 | 10.1 | 35.7 |
| 6500.0 | 10.7 | 35.8 |
| 7000.0 | 10.9 | 36.2 |
| 7500.0 | 10.5 | 37.2 |
| 8000.0 | 11.1 | 37.2 |
| 8500.0 | 10.8 | 38.1 |
| 9000.0 | 10.7 | 38.6 |
| 9500.0 | 11.5 | 38.3 |
| 10000.0 | 11.8 | 38.4 |
| 10500.0 | 12.3 | 38.3 |
| 11000.0 | 12.3 | 38.8 |
| 11500.0 | 11.5 | 39.9 |
| 12000.0 | 12.2 | 39.6 |
| 12500.0 | 12.6 | 39.5 |
| 13000.0 | 12.0 | 40.5 |
| 13500.0 | 11.7 | 41.1 |
| 14000.0 | 11.7 | 41.5 |
| 14500.0 | 12.7 | 40.8 |
| 15000.0 | 14.2 | 39.5 |
| 15500.0 | 16.0 | 38.1 |
| 16000.0 | 16.2 | 38.1 |
| 16500.0 | 14.5 | 40.1 |
| 17000.0 | 12.2 | 42.6 |
| 17500.0 | 9.7 | 45.4 |
| 18000.0 | 6.6 | 48.7 |

Antenna factor is to be added to receiver meter reading in dB(μ V) to convert it into field intensity in dB(μ V/m).

Cable loss
Cable Coaxial, GORE A2P01POL118, 2.3 m, model:GORE-3, HL 0589
+ Cable Coaxial, ANDREW PSWJ4, 6m, model: ANDREW-6, HL 1004

| No. | Frequency, MHz | Cable loss, dB | Tolerance (Specification), dB | Measurement uncertainty, dB |
|-----|-------------------|-------------------|-------------------------------------|-----------------------------------|
| 1 | 30 | 0.33 | ≤ 6.5 | ± 0.12 |
| 2 | 50 | 0.40 | | |
| 3 | 100 | 0.57 | | |
| 4 | 300 | 0.97 | | |
| 5 | 500 | 1.25 | | |
| 6 | 800 | 1.59 | | |
| 7 | 1000 | 1.81 | | |
| 8 | 1200 | 1.97 | | |
| 9 | 1400 | 2.15 | | |
| 10 | 1600 | 2.28 | | |
| 11 | 1800 | 2.43 | | |
| 12 | 2000 | 2.61 | | |
| 13 | 2200 | 2.75 | | |
| 14 | 2400 | 2.89 | | |
| 15 | 2600 | 2.97 | | |
| 16 | 2800 | 3.21 | ≤ 6.5 | ± 0.12 |
| 17 | 3000 | 3.32 | | ± 0.17 |
| 18 | 3300 | 3.47 | | |
| 19 | 3600 | 3.62 | | |
| 20 | 3900 | 3.84 | | |
| 21 | 4200 | 3.92 | | |
| 22 | 4500 | 4.07 | | |
| 23 | 4800 | 4.36 | | |
| 24 | 5100 | 4.62 | | |
| 25 | 5400 | 4.78 | | |
| 26 | 5700 | 5.16 | | |
| 27 | 6000 | 5.67 | | |
| 28 | 6500 | 5.99 | | |

Cable loss
Cable RF, 2m, model: Sucoflex 104PE, S/N 13094/4PE, HL 1566

| No. | Frequency, MHz | Cable loss, dB | Tolerance, dB | Measurement uncertainty, dB |
|-----|-------------------|-------------------|------------------|--------------------------------|
| 1 | 30 | 0.10 | ≤ 5.0 | ±0.12 |
| 2 | 50 | 0.13 | | |
| 3 | 100 | 0.20 | | |
| 4 | 300 | 0.33 | | |
| 5 | 500 | 0.45 | | |
| 6 | 800 | 0.60 | | |
| 7 | 1000 | 0.65 | | |
| 8 | 1500 | 0.91 | | |
| 9 | 2000 | 1.08 | | |
| 10 | 2500 | 1.19 | | |
| 11 | 3000 | 1.28 | | |
| 12 | 3500 | 1.49 | | |
| 13 | 4000 | 1.63 | ≤ 5.0 | ±0.17 |
| 14 | 4500 | 1.63 | | |
| 15 | 5000 | 1.66 | | |
| 16 | 5500 | 1.88 | | |
| 17 | 6000 | 1.96 | | |
| 18 | 6500 | 1.93 | | |
| 19 | 7000 | 2.07 | | |
| 20 | 7500 | 2.37 | | |
| 21 | 8000 | 2.34 | | |
| 22 | 8500 | 2.64 | | |
| 23 | 9000 | 2.68 | | |
| 24 | 9500 | 2.64 | | |
| 25 | 10000 | 2.70 | | |
| 26 | 10500 | 2.84 | | |
| 27 | 11000 | 2.88 | | |
| 28 | 11500 | 3.19 | | |
| 29 | 12000 | 3.15 | | |
| 30 | 12500 | 3.20 | ≤ 5.0 | ±0.26 |
| 31 | 13000 | 3.22 | | |
| 32 | 13500 | 3.47 | | |
| 33 | 14000 | 3.41 | | |
| 34 | 14500 | 3.59 | | |
| 35 | 15000 | 3.79 | | |
| 36 | 15500 | 4.24 | | |
| 37 | 16000 | 4.12 | | |
| 38 | 16500 | 4.46 | | |
| 39 | 17000 | 4.50 | | |
| 40 | 17500 | 4.49 | | |
| 41 | 18000 | 4.45 | | |

Cable loss
Cable 18 GHz, 6.5 m, blue, model: NPS-1803A-6500-NPS, S/N T4974, HL 1947

| Frequency, GHz | Cable loss, dB |
|----------------|----------------|
| 0.03 | 0.30 |
| 0.05 | 0.38 |
| 0.10 | 0.53 |
| 0.20 | 0.74 |
| 0.30 | 0.91 |
| 0.40 | 1.05 |
| 0.50 | 1.18 |
| 0.60 | 1.29 |
| 0.70 | 1.40 |
| 0.80 | 1.50 |
| 0.90 | 1.59 |
| 1.00 | 1.68 |
| 1.10 | 1.77 |
| 1.20 | 1.86 |
| 1.30 | 1.94 |
| 1.40 | 2.01 |
| 1.50 | 2.08 |
| 1.60 | 2.16 |
| 1.70 | 2.22 |
| 1.80 | 2.29 |
| 1.90 | 2.36 |
| 2.00 | 2.42 |
| 2.10 | 2.48 |
| 2.20 | 2.54 |
| 2.30 | 2.60 |
| 2.40 | 2.66 |
| 2.50 | 2.71 |
| 2.60 | 2.77 |
| 2.70 | 2.83 |
| 2.80 | 2.89 |
| 2.90 | 2.95 |
| 3.10 | 3.06 |
| 3.30 | 3.17 |
| 3.50 | 3.28 |
| 3.70 | 3.39 |
| 3.90 | 3.51 |
| 4.10 | 3.62 |
| 4.30 | 3.76 |
| 4.50 | 3.87 |
| 4.70 | 4.01 |
| 4.90 | 4.10 |
| 5.10 | 4.21 |
| 5.30 | 4.31 |
| 5.50 | 4.43 |
| 5.70 | 4.56 |
| 5.90 | 4.71 |

| Frequency, GHz | Cable loss, dB |
|----------------|----------------|
| 6.10 | 4.87 |
| 6.30 | 4.95 |
| 6.50 | 4.94 |
| 6.70 | 4.88 |
| 6.90 | 4.87 |
| 7.10 | 4.83 |
| 7.30 | 4.85 |
| 7.50 | 4.86 |
| 7.70 | 4.91 |
| 7.90 | 4.96 |
| 8.10 | 5.03 |
| 8.30 | 5.08 |
| 8.50 | 5.13 |
| 8.70 | 5.21 |
| 8.90 | 5.22 |
| 9.10 | 5.34 |
| 9.30 | 5.35 |
| 9.50 | 5.52 |
| 9.70 | 5.51 |
| 9.90 | 5.66 |
| 10.10 | 5.70 |
| 10.30 | 5.78 |
| 10.50 | 5.79 |
| 10.70 | 5.82 |
| 10.90 | 5.86 |
| 11.10 | 5.94 |
| 11.30 | 6.06 |
| 11.50 | 6.21 |
| 11.70 | 6.44 |
| 11.90 | 6.61 |
| 12.10 | 6.76 |
| 12.40 | 6.68 |
| 13.00 | 6.66 |
| 13.50 | 6.81 |
| 14.00 | 6.90 |
| 14.50 | 6.90 |
| 15.00 | 6.97 |
| 15.50 | 7.17 |
| 16.00 | 7.28 |
| 16.50 | 7.27 |
| 17.00 | 7.38 |
| 17.50 | 7.68 |
| 18.00 | 7.92 |

Cable loss
RF cable 8 m, model RG-214, HL 2009

| No. | Frequency, MHz | Cable loss, dB | Tolerance (Specification), dB | Measurement uncertainty, dB |
|-----|-------------------|-------------------|----------------------------------|--------------------------------|
| 1 | 1 | 0.10 | NA | ±0.12 |
| 2 | 10 | 0.14 | | |
| 3 | 30 | 0.25 | | |
| 4 | 50 | 0.34 | | |
| 5 | 100 | 0.53 | | |
| 6 | 300 | 0.99 | | |
| 7 | 500 | 1.31 | | |
| 8 | 800 | 1.73 | | |
| 9 | 1000 | 1.98 | | |
| 10 | 1100 | 2.11 | | |
| 11 | 1200 | 2.21 | | |
| 12 | 1300 | 2.35 | | |
| 13 | 1400 | 2.46 | | |
| 14 | 1500 | 2.55 | | |
| 15 | 1600 | 2.68 | | |
| 16 | 1700 | 2.78 | | |
| 17 | 1800 | 2.88 | | |
| 18 | 1900 | 2.98 | | |
| 19 | 2000 | 3.09 | | |

13 APPENDIX F Abbreviations and acronyms

| | |
|----------------|---|
| A | ampere |
| AC | alternating current |
| A/m | ampere per meter |
| AM | amplitude modulation |
| AVRG | average (detector) |
| cm | centimeter |
| dB | decibel |
| dBm | decibel referred to one milliwatt |
| dB(μ V) | decibel referred to one microvolt |
| dB(μ V/m) | decibel referred to one microvolt per meter |
| dB(μ A) | decibel referred to one microampere |
| dB Ω | decibel referred to one Ohm |
| DC | direct current |
| DTS | digital transmission system |
| EIRP | equivalent isotropically radiated power |
| ERP | effective radiated power |
| EUT | equipment under test |
| F | frequency |
| FHSS | frequency hopping spread spectrum |
| GHz | gigahertz |
| GND | ground |
| H | height |
| HL | Hermon laboratories |
| Hz | hertz |
| ITE | information technology equipment |
| k | kilo |
| kHz | kilohertz |
| LISN | line impedance stabilization network |
| LO | local oscillator |
| m | meter |
| MHz | megahertz |
| min | minute |
| mm | millimeter |
| ms | millisecond |
| μ s | microsecond |
| NA | not applicable |
| NT | not tested |
| OATS | open area test site |
| Ω | Ohm |
| PCB | printed circuit board |
| PM | pulse modulation |
| PS | power supply |
| ppm | part per million (10^{-6}) |
| QP | quasi-peak |
| RE | radiated emission |
| RF | radio frequency |
| rms | root mean square |
| Rx | receive |
| s | second |
| T | temperature |
| Tx | transmit |
| V | volt |
| VA | volt-ampere |

END OF TEST REPORT

14 APPENDIX G RADWIN 1000/2000 Antenna List and Power Settings

RADWIN

5470 – 5725 MHz Band

| Part Number | Type | Antenna Frequency [GHz] | Antenna Assembly Gain at 5470-5725 MHz [dBi] | Channel Frequency [MHz] | Channel Bandwidth [MHz] | Output Power [dBm] |
|-----------------|-------------------------|-------------------------|--|-------------------------|-------------------------|--------------------|
| RW-9721-5158 | Dish - Dual Pole | 4.9 - 6.06 | 28* | 5480, 5590, 5660, 5715 | 5 | -3.3 |
| | | | | 5485, 5585, 5665, 5710 | 10 | 0 |
| | | | | 5490, 5580, 5670, 5705 | 20 | 1.3 |
| | | | | 5505, 5565, 5685, 5690 | 40 | 1.7 |
| | | | | 5500, 5570, 5680, 5695 | 40 | -0.7 |
| RW-9721-5158 | Dish - Dual Pole | 4.9 - 6.06 | 6* | 5480, 5590, 5660, 5715 | 5 | 18.2 |
| | | | | 5485, 5585, 5665, 5710 | 10 | 21.9 |
| | | | | 5490, 5580, 5670, 5705 | 20 | 23.5 |
| | | | | 5505, 5565, 5685, 5690 | 40 | 23.7 |
| | | | | 5500, 5570, 5680, 5695 | 40 | 20.7 |
| RW-9611-4958INT | FP Dual Pole Integrated | 4.9 - 6.0 | 23.5 | 5480, 5590, 5660, 5715 | 5 | 0.7 |
| | | | | 5485, 5585, 5665, 5710 | 10 | 3.4 |
| | | | | 5490, 5580, 5670, 5705 | 20 | 6.3 |
| | | | | 5505, 5565, 5685, 5690 | 40 | 5.7 |
| | | | | 5500, 5570, 5680, 5695 | 40 | 2.8 |
| RW-9611-4958 | FP Dual Pole External | 5.15 - 6.09 | 22.5* | 5480, 5590, 5660, 5715 | 5 | 1.7 |
| | | | | 5485, 5585, 5665, 5710 | 10 | 4.4 |
| | | | | 5490, 5580, 5670, 5705 | 20 | 7.3 |
| | | | | 5505, 5565, 5685, 5690 | 40 | 6.7 |
| | | | | 5500, 5570, 5680, 5695 | 40 | 3.8 |
| RW-9611-4958 | FP Dual Pole External | 5.15 - 6.09 | 6* | 5480, 5590, 5660, 5715 | 5 | 18.2 |
| | | | | 5485, 5585, 5665, 5710 | 10 | 21.9 |
| | | | | 5490, 5580, 5670, 5705 | 20 | 23.5 |
| | | | | 5505, 5565, 5685, 5690 | 40 | 23.7 |
| | | | | 5500, 5570, 5680, 5695 | 40 | 20.7 |

* Antenna assembly gain = Antenna Gain - Feeder Loss

15 APPENDIX H RADWIN 5000 Antenna List and Power Settings



5470 – 5725 MHz Band

| Part Number | Type | Antenna Frequency [GHz] | Antenna Assembly Gain at 5470-5725 MHz [dBi] | Channel Frequency [MHz] | Channel Bandwidth [MHz] | Output Power [dBm] |
|--------------|-----------------------|-------------------------|--|-------------------------|-------------------------|--------------------|
| RW-9061-5001 | FP Dual Pole External | 4.9 - 5.95 | 13* | 5480, 5590, 5660, 5715 | 5 | 1.6 |
| | | | | 5485, 5585, 5665, 5710 | 10 | 4.4 |
| | | | | 5490, 5580, 5670, 5705 | 20 | 7.2 |
| | | | | 5505, 5565, 5685, 5690 | 40 | 6.7 |
| | | | | 5500, 5570, 5680, 5695 | 40 | 3.8 |
| RW-9061-5001 | FP Dual Pole External | 4.9 - 5.95 | 6* | 5480, 5590, 5660, 5715 | 5 | 18.2 |
| | | | | 5485, 5585, 5665, 5710 | 10 | 21.9 |
| | | | | 5490, 5580, 5670, 5705 | 20 | 23.5 |
| | | | | 5505, 5565, 5685, 5690 | 40 | 23.7 |
| | | | | 5500, 5570, 5680, 5695 | 40 | 20.7 |
| RW-9061-5002 | FP Dual Pole External | 4.9 - 6.06 | 15.5* | 5480, 5590, 5660, 5715 | 5 | 1.6 |
| | | | | 5485, 5585, 5665, 5710 | 10 | 4.4 |
| | | | | 5490, 5580, 5670, 5705 | 20 | 7.2 |
| | | | | 5505, 5565, 5685, 5690 | 40 | 6.7 |
| | | | | 5500, 5570, 5680, 5695 | 40 | 3.8 |
| RW-9061-5002 | FP Dual Pole External | 4.9 - 6.06 | 6* | 5480, 5590, 5660, 5715 | 5 | 18.2 |
| | | | | 5485, 5585, 5665, 5710 | 10 | 21.9 |
| | | | | 5490, 5580, 5670, 5705 | 20 | 23.5 |
| | | | | 5505, 5565, 5685, 5690 | 40 | 23.7 |
| | | | | 5500, 5570, 5680, 5695 | 40 | 20.7 |

* Antenna assembly gain = Antenna Gain - Feeder Loss