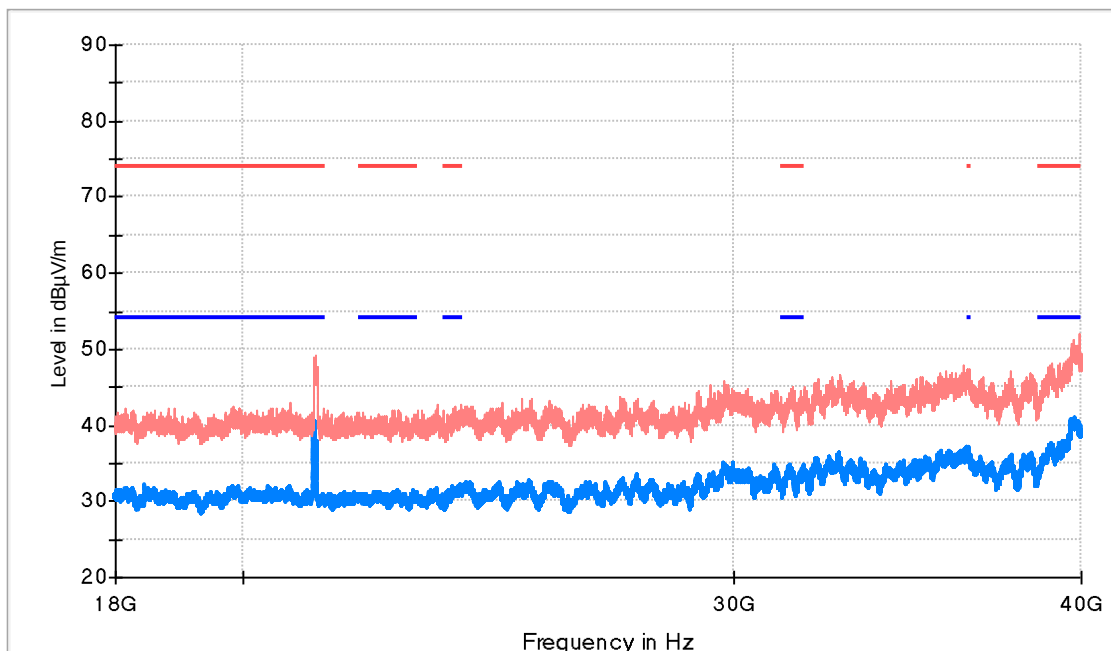


**TEST RESULTS (Cont.)**

**18 GHz – 40 GHz**

**High Channel**



- AVG\_MAXH
- PK+\_MAXH
- TX limits to Spurious Emission FCC1 5.407 (1 GHz to 40 GHz) Restricted Bands PK Limit
- TX limits to Spurious Emission FCC1 5.407 (1 GHz to 40 GHz) Restricted Bands AVG Limit

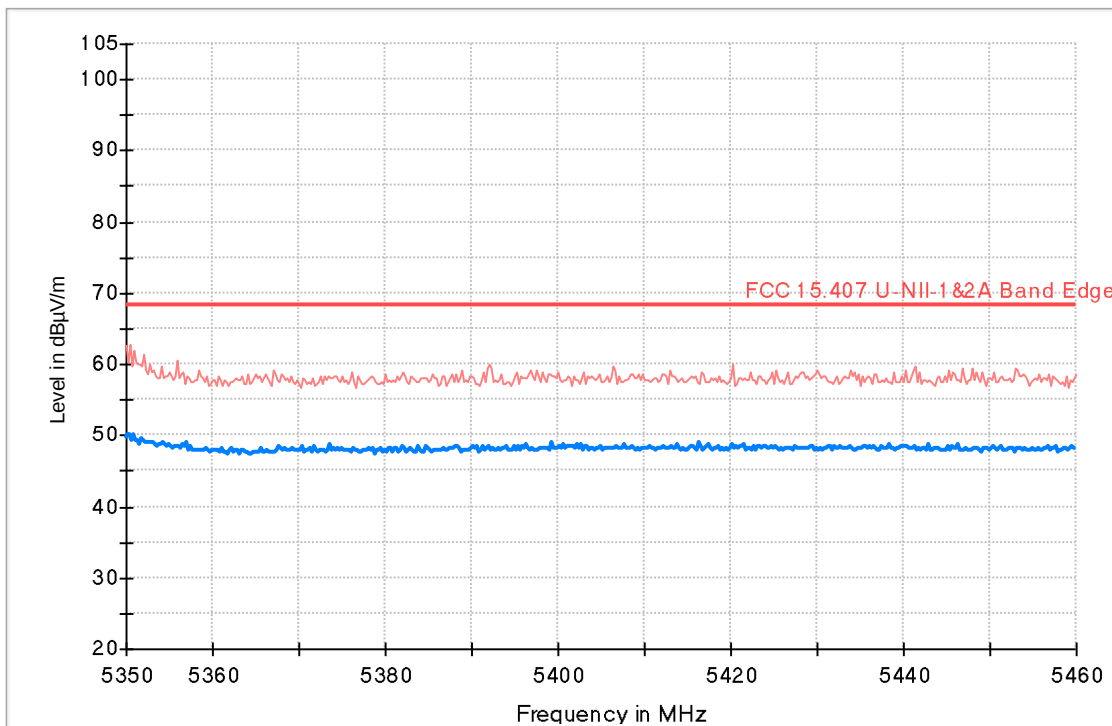
**Maximizations**

| Frequency<br>(MHz) | PK+_MAXH<br>(dBμV/m) | AVG_MAXH<br>(dBμV/m) | Pol |
|--------------------|----------------------|----------------------|-----|
| 21239.500000       | 49.1                 | 40.4                 | H   |

**RESTRICTED BANDS**

**5.35 GHz – 5.46 GHz**

**High Channel**



— AVG\_MAXH — PK+\_MAXH — FCC 15.407 U-NII-1&2A Band Edge

## Appendix D:

### Test results 5.47 GHz – 5.725 GHz Band

# Appendix D Content

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## DESCRIPTION OF TEST CONDITIONS

| TEST CONDITIONS                  | DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                           |
|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TC#01 <sup>(1)</sup><br>(a mode) | <u>Power supply (V):</u><br>$V_{\text{nominal}} = 13.5 \text{ Vdc}$<br><u>Test Frequencies for Conducted/Radiated tests (20 MHz):</u><br>Lowest channel: 5500 MHz<br>Middle channel: 5580 MHz<br>Highest channel: 5700 MHz                                                                                                                                                            |
| TC#02 <sup>(1)</sup><br>(n mode) | <u>Power supply (V):</u><br>$V_{\text{nominal}} = 13.5 \text{ Vdc}$<br><u>Test Frequencies for Conducted/Radiated tests (20 MHz):</u><br>Lowest channel: 5500 MHz<br>Middle channel: 5580 MHz<br>Highest channel: 5700 MHz<br><br><u>Test Frequencies for Conducted/Radiated tests (40 MHz):</u><br>Lowest channel: 5510 MHz<br>Middle channel: 5550 MHz<br>Highest channel: 5670 MHz |

Note (1): For spurious emissions for OFDM modes 802.11a, 802.11n20 and 802.11n40 a preliminary scan was performed to determine the worst case.

The data rates of 6Mb/s for 802.11a and MCS0 for 802.11n40 were selected based on preliminary testing that identified those rates corresponding to the worst cases.

## TEST D.1: 26DB EMISSION BANDWIDTH AND OCCUPIED BANDWIDTH

### LIMITS:

Product standard:

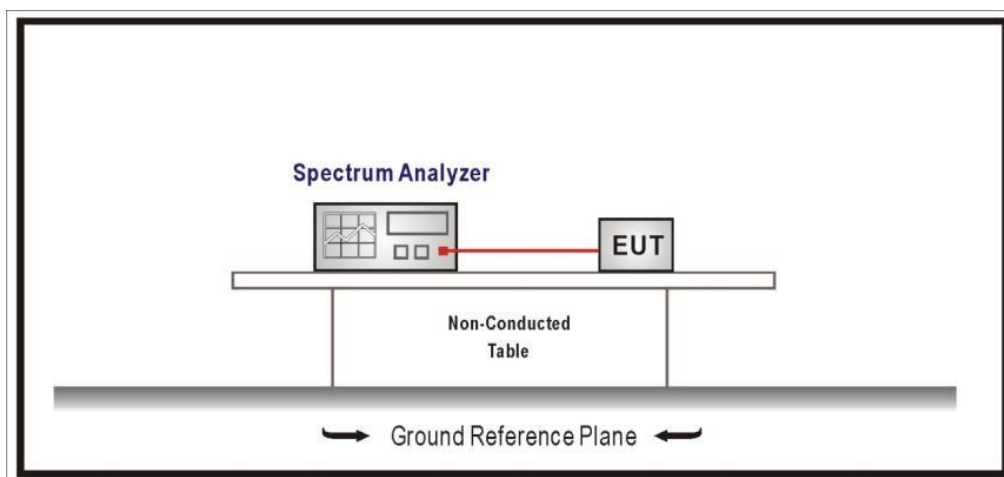
Part 15 Subpart C §15.403 and RSS-247

Test standard:

Part 15 Subpart C §15.403 and RSS-247 6.2.3

No requirements requested

### TEST SETUP:



### TESTED SAMPLES:

S/01

### TESTED CONDITIONS MODES:

TC#01 (a mode)

### TEST RESULTS:

PASS

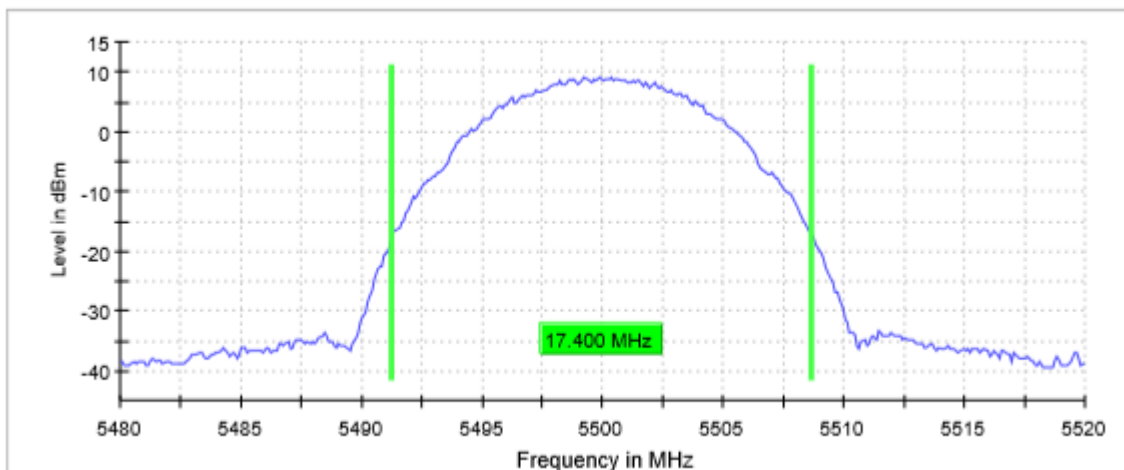
### Bandwidth: 20 MHz

|                               | Lowest frequency<br>5500 MHz | Middle frequency<br>5580 MHz | Highest frequency<br>5700 MHz |
|-------------------------------|------------------------------|------------------------------|-------------------------------|
| 26dB Bandwidth (MHz)          | 17.400                       | 17.400                       | 17.400                        |
| Occupied bandwidth (MHz)      | 13.000                       | 13.100                       | 13.100                        |
| Measurement uncertainty (kHz) | <± 8.33                      |                              |                               |

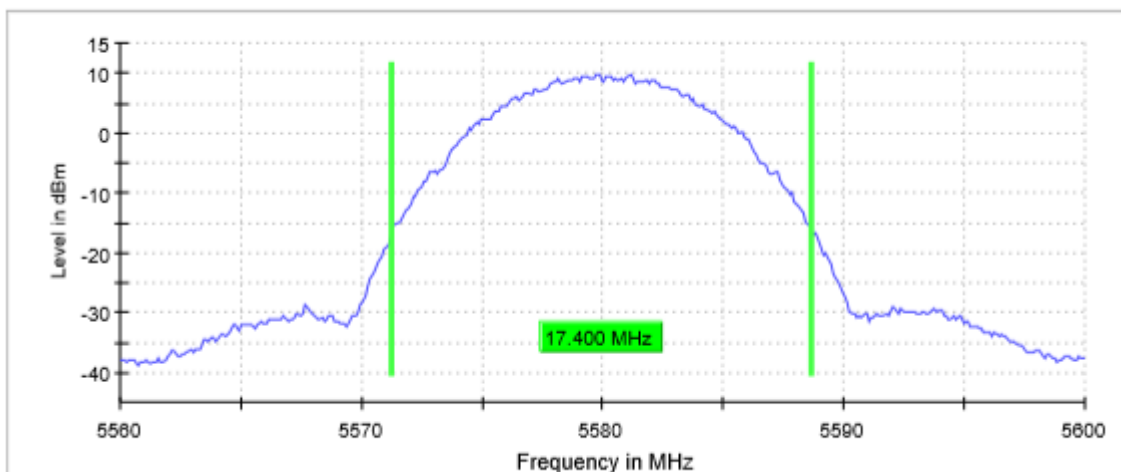
**TEST RESULTS (Cont.):**

**26 dB BANDWIDTH**

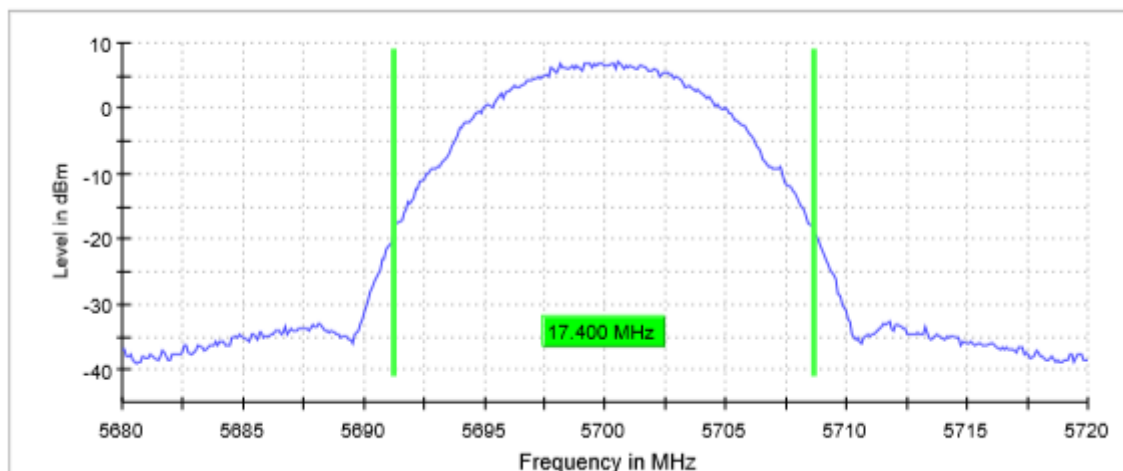
**Lowest Channel**



**Middle Channel**



**Highest Channel**



## TEST RESULTS (Cont.)

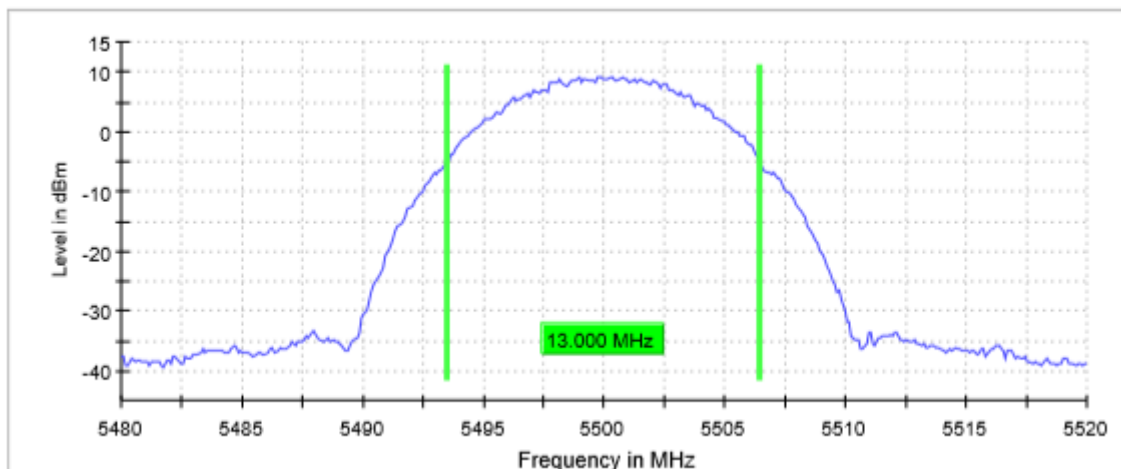
### Measurement

| Setting               | Instrument Value | Instrument Value | Instrument Value |
|-----------------------|------------------|------------------|------------------|
| Start Frequency       | 5.48000 GHz      | 5.56000 GHz      | 5.68000 GHz      |
| Stop Frequency        | 5.52000 GHz      | 5.60000 GHz      | 5.72000 GHz      |
| Span                  | 40.000 MHz       | 40.000 MHz       | 40.000 MHz       |
| RBW                   | 200.000 kHz      | 200.000 kHz      | 200.000 kHz      |
| VBW                   | 1.000 MHz        | 1.000 MHz        | 1.000 MHz        |
| SweepPoints           | 400              | 400              | 400              |
| Sweeptime             | 28.477 $\mu$ s   | 28.477 $\mu$ s   | 28.477 $\mu$ s   |
| Reference Level       | 20.000 dBm       | 20.000 dBm       | 20.000 dBm       |
| Attenuation           | 40.000 dB        | 40.000 dB        | 40.000 dB        |
| Detector              | MaxPeak          | MaxPeak          | MaxPeak          |
| SweepCount            | 200              | 200              | 200              |
| Filter                | 3 dB             | 3 dB             | 3 dB             |
| Trace Mode            | Max Hold         | Max Hold         | Max Hold         |
| Sweeptype             | FFT              | FFT              | FFT              |
| Preamp                | Off              | Off              | off              |
| Stablemode            | Trace            | Trace            | Trace            |
| Stablevalue           | 0.30 dB          | 0.30 dB          | 0.30 dB          |
| Run                   | 51 / max. 150    | 75 / max. 150    | 86 / max. 150    |
| Stable                | 5 / 5            | 5 / 5            | 5 / 5            |
| Max Stable Difference | 0.19 dB          | 0.00 dB          | 0.28 dB          |

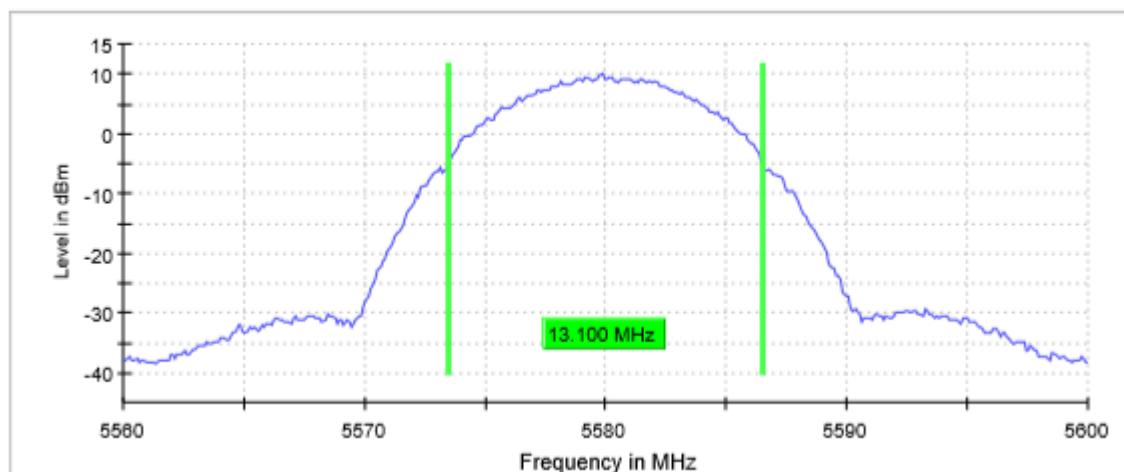
**TEST RESULTS (Cont.):**

**OCCUPIED BANDWIDTH**

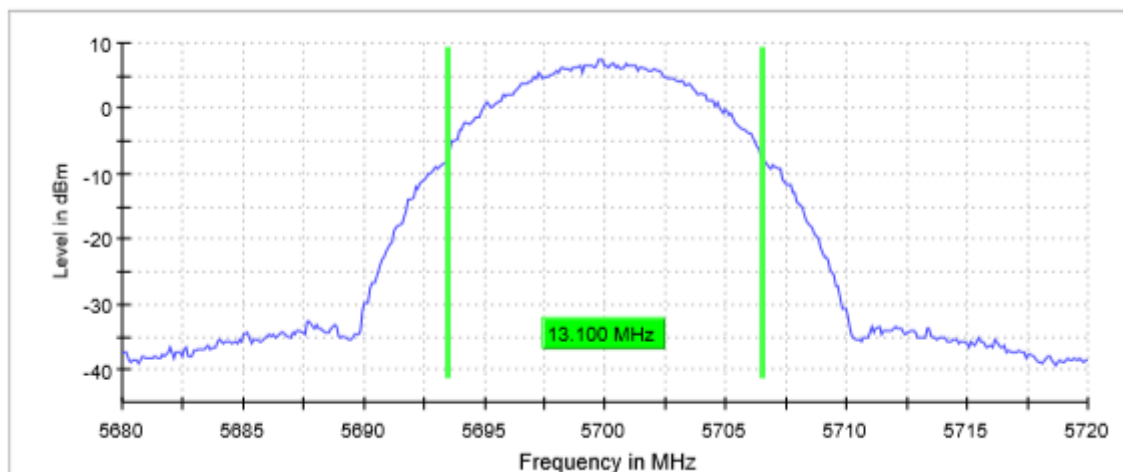
**Lowest Channel**



**Middle Channel**



**Highest Channel**



| TEST RESULTS (Cont.)  |                  |                  |                  |
|-----------------------|------------------|------------------|------------------|
| Measurement           |                  |                  |                  |
| Setting               | Instrument Value | Instrument Value | Instrument Value |
| Start Frequency       | 5.48000 GHz      | 5.56000 GHz      | 5.68000 GHz      |
| Stop Frequency        | 5.52000 GHz      | 5.60000 GHz      | 5.72000 GHz      |
| Span                  | 40.000 MHz       | 40.000 MHz       | 40.000 MHz       |
| RBW                   | 200.000 kHz      | 200.000 KHz      | 200.000 kHz      |
| VBW                   | 1.000 MHz        | 1.000 MHz        | 1.000 MHz        |
| SweepPoints           | 400              | 400              | 400              |
| Sweeptime             | 28.477 μs        | 28.477 μs        | 28.477 μs        |
| Reference Level       | 20.000 dBm       | 20.000 dBm       | 20.000 dBm       |
| Attenuation           | 40.000 dB        | 40.000 dB        | 40.000 dB        |
| Detector              | MaxPeak          | MaxPeak          | MaxPeak          |
| SweepCount            | 200              | 200              | 200              |
| Filter                | 3 dB             | 3 dB             | 3 dB             |
| Trace Mode            | Max Hold         | Max Hold         | Max Hold         |
| SweepType             | FFT              | FFT              | FFT              |
| Preamp                | Off              | Off              | Off              |
| Stablemode            | Trace            | Trace            | Trace            |
| Stablevalue           | 0.30 dB          | 0.30 dB          | 0.30 dB          |
| Run                   | 78 / max. 150    | 71 / max. 150    | 57 / max. 150    |
| Stable                | 5 / 5            | 5 / 5            | 5 / 5            |
| Max Stable Difference | 0.17 dB          | 0.04 dB          | 0.17 dB          |

|                          |                       |
|--------------------------|-----------------------|
| TESTED SAMPLES:          | S/01                  |
| TESTED CONDITIONS MODES: | TC#02 (n Mode 20 MHz) |
| TEST RESULTS:            | PASS                  |

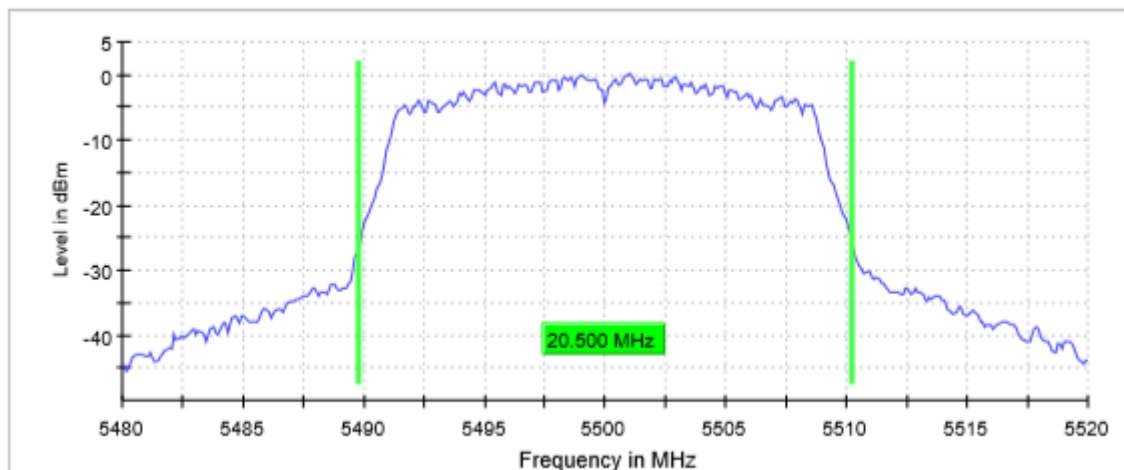
Bandwidth: 20 MHz

|                               |                  |                  |                   |
|-------------------------------|------------------|------------------|-------------------|
|                               | Lowest frequency | Middle frequency | Highest frequency |
|                               | 5500 MHz         | 5580 MHz         | 5700 MHz          |
| 26dB bandwidth (MHz)          | 20.500           | 20.600           | 20.600            |
| Occupied bandwidth (MHz)      | 17.700           | 17.700           | 17.700            |
| Measurement uncertainty (kHz) | <± 8.33          |                  |                   |

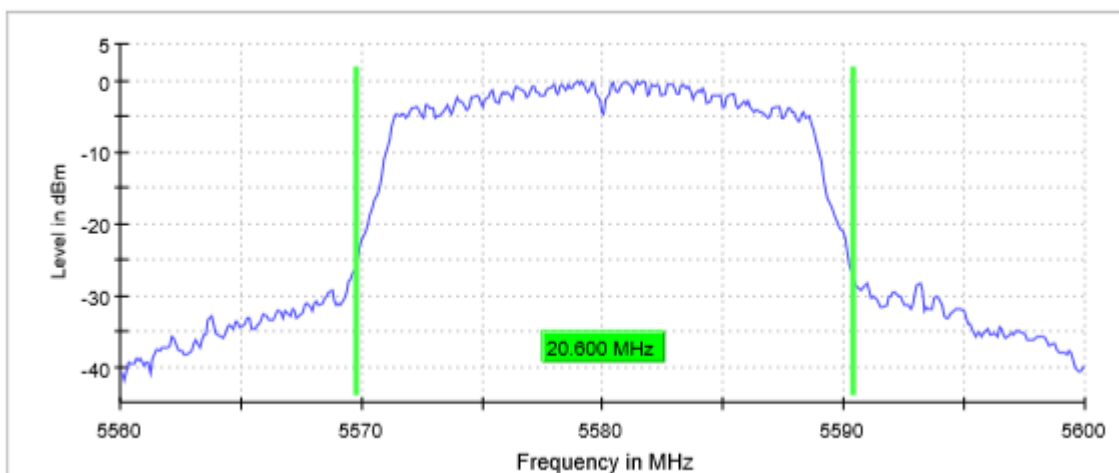
**TEST RESULTS (Cont.):**

**26 dB BANDWIDTH**

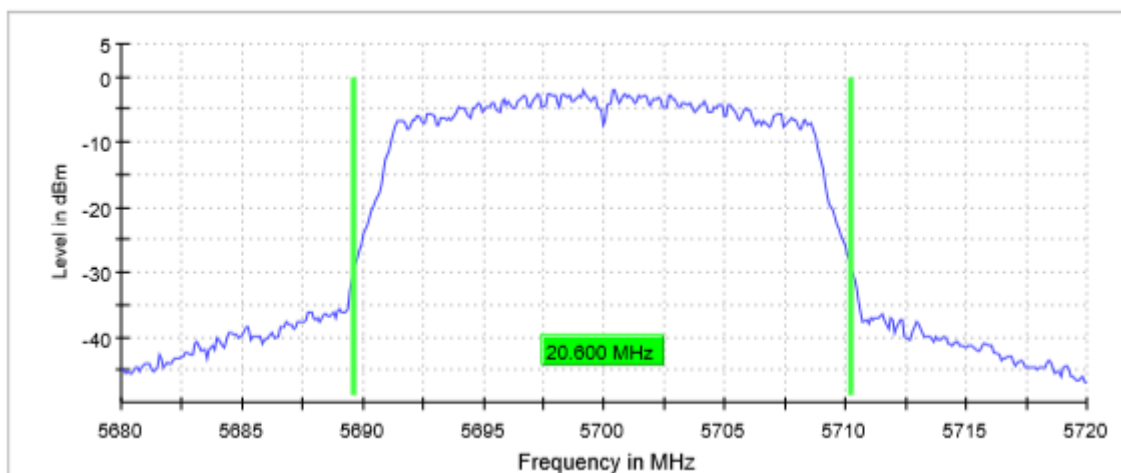
**Lowest Channel**



**Middle Channel**



**Highest Channel**



## TEST RESULTS (Cont.):

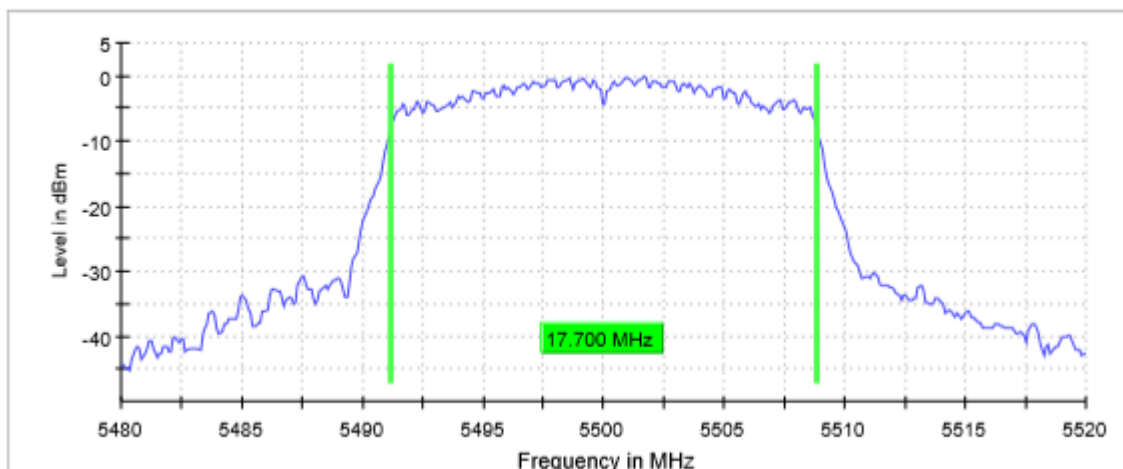
### Measurement

| Setting               | Instrument Value | Instrument Value | Instrument Value |
|-----------------------|------------------|------------------|------------------|
| Start Frequency       | 5.48000 GHz      | 5.56000 GHz      | 5.68000 GHz      |
| Stop Frequency        | 5.52000 GHz      | 5.60000 GHz      | 5.72000 GHz      |
| Span                  | 40.000 MHz       | 40.000 MHz       | 40.000 MHz       |
| RBW                   | 200.000 kHz      | 200.000 kHz      | 200.000 kHz      |
| VBW                   | 1.000 MHz        | 1.000 MHz        | 1.000 MHz        |
| SweepPoints           | 400              | 400              | 400              |
| Sweeptime             | 28.477 $\mu$ s   | 28.477 $\mu$ s   | 28.477 $\mu$ s   |
| Reference Level       | 10.000 dBm       | 10.000 dBm       | 10.000 dBm       |
| Attenuation           | 30.000 dB        | 30.000 dB        | 30.000 dB        |
| Detector              | MaxPeak          | MaxPeak          | MaxPeak          |
| SweepCount            | 200              | 200              | 200              |
| Filter                | 3 dB             | 3 dB             | 3 dB             |
| Trace Mode            | Max Hold         | Max Hold         | Max Hold         |
| Sweeptype             | FFT              | FFT              | FFT              |
| Preamplifier          | Off              | Off              | off              |
| Stablemode            | Trace            | Trace            | Trace            |
| Stablevalue           | 0.30 dB          | 0.30 dB          | 0.30 dB          |
| Run                   | 84 / max. 150    | 51 / max. 150    | 46 / max. 150    |
| Stable                | 5 / 5            | 5 / 5            | 5 / 5            |
| Max Stable Difference | 0.07 dB          | 0.20 dB          | 0.07 dB          |

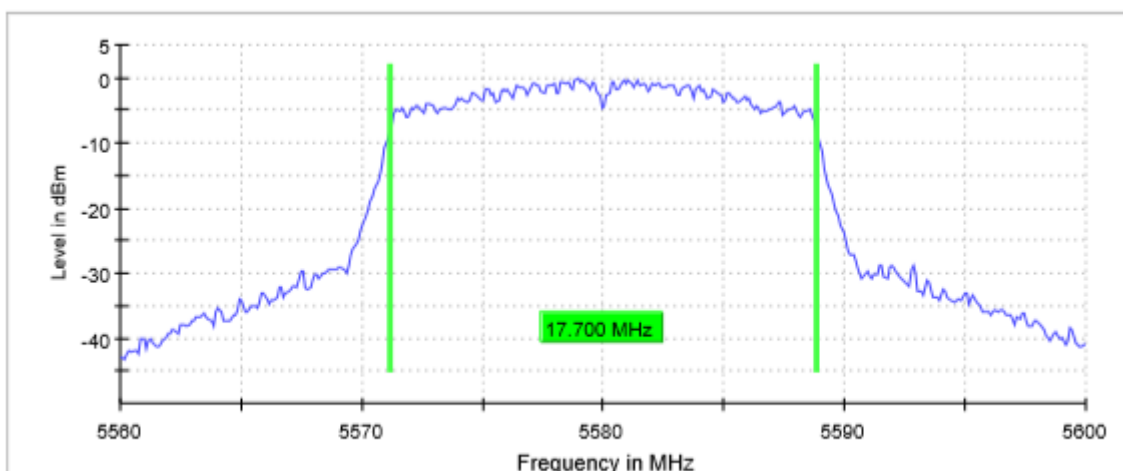
**TEST RESULTS (Cont.):**

**OCCUPIED BANDWIDTH**

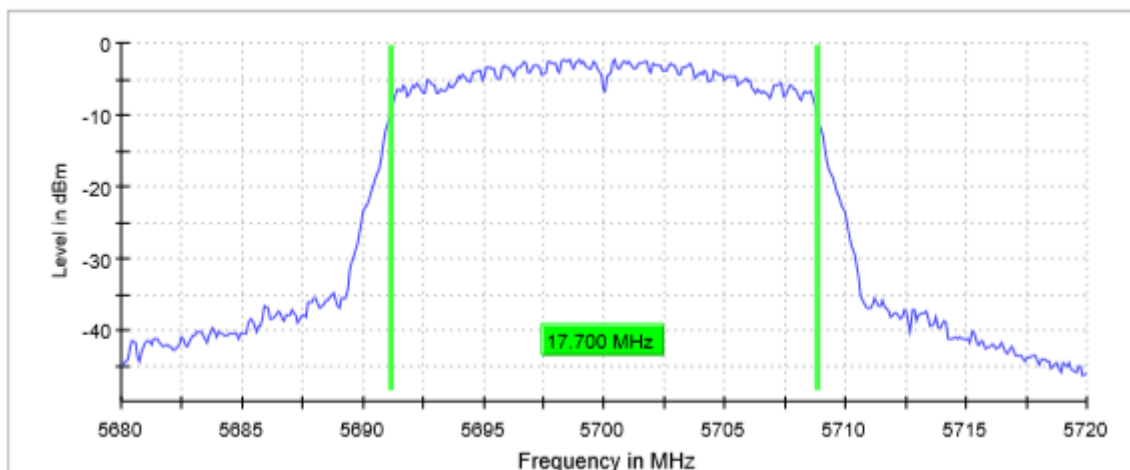
**Lowest Channel**



**Middle Channel**



**Highest Channel**



## TEST RESULTS (Cont.):

### Measurement

| Setting               | Instrument Value | Instrument Value | Instrument Value |
|-----------------------|------------------|------------------|------------------|
| Start Frequency       | 5.48000 GHz      | 5.56000 GHz      | 5.68000 GHz      |
| Stop Frequency        | 5.52000 GHz      | 5.60000 GHz      | 5.72000 GHz      |
| Span                  | 40.000 MHz       | 40.000 MHz       | 40.000 MHz       |
| RBW                   | 200.000 kHz      | 200.000 KHz      | 200.000 kHz      |
| VBW                   | 1.000 MHz        | 1.000 MHz        | 1.000 MHz        |
| SweepPoints           | 400              | 400              | 400              |
| Sweeptime             | 28.477 $\mu$ s   | 28.477 $\mu$ s   | 28.477 $\mu$ s   |
| Reference Level       | 10.000 dBm       | 10.000 dBm       | 10.000 dBm       |
| Attenuation           | 30.000 dB        | 30.000 dB        | 30.000 dB        |
| Detector              | MaxPeak          | MaxPeak          | MaxPeak          |
| SweepCount            | 200              | 200              | 200              |
| Filter                | 3 dB             | 3 dB             | 3 dB             |
| Trace Mode            | Max Hold         | Max Hold         | Max Hold         |
| Sweeptype             | FFT              | FFT              | FFT              |
| Preampl               | Off              | Off              | Off              |
| Stablemode            | Trace            | Trace            | Trace            |
| Stablevalue           | 0.30 dB          | 0.30 dB          | 0.30 dB          |
| Run                   | 82 / max. 150    | 34 / max. 150    | 77 / max. 150    |
| Stable                | 5 / 5            | 5 / 5            | 5 / 5            |
| Max Stable Difference | 0.27 dB          | 0.00 dB          | 0.08 dB          |

### TESTED SAMPLES:

S/01

### TESTED CONDITIONS MODES:

TC#02 (n Mode 40 MHz)

### TEST RESULTS:

PASS

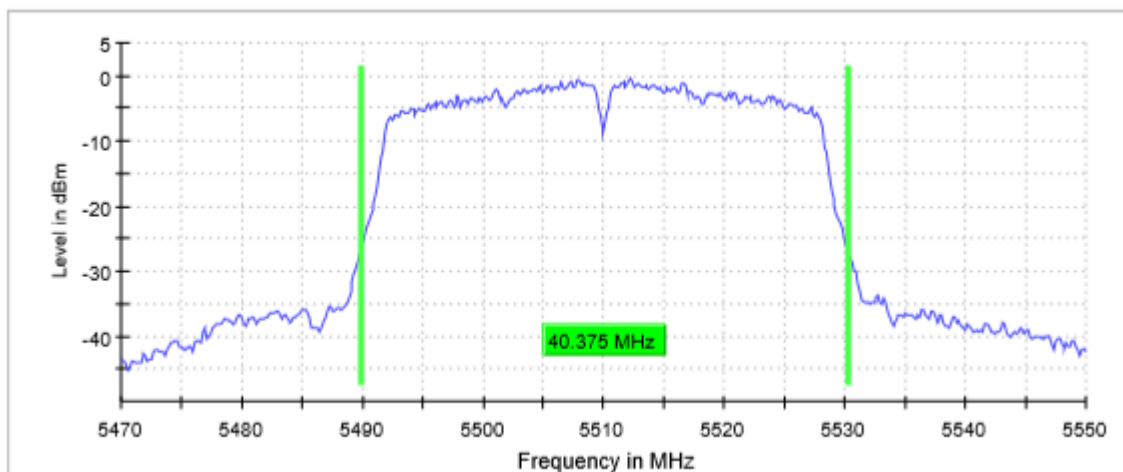
### Bandwidth: 40 MHz

|                               | Lowest frequency<br>5510 MHz | Middle frequency<br>5550 MHz | Highest frequency<br>5670 MHz |
|-------------------------------|------------------------------|------------------------------|-------------------------------|
| 26dB bandwidth (MHz)          | 40.375                       | 40.525                       | 40.375                        |
| Occupied bandwidth (MHz)      | 36.250                       | 36.250                       | 36.250                        |
| Measurement uncertainty (kHz) | < $\pm$ 8.33                 |                              |                               |

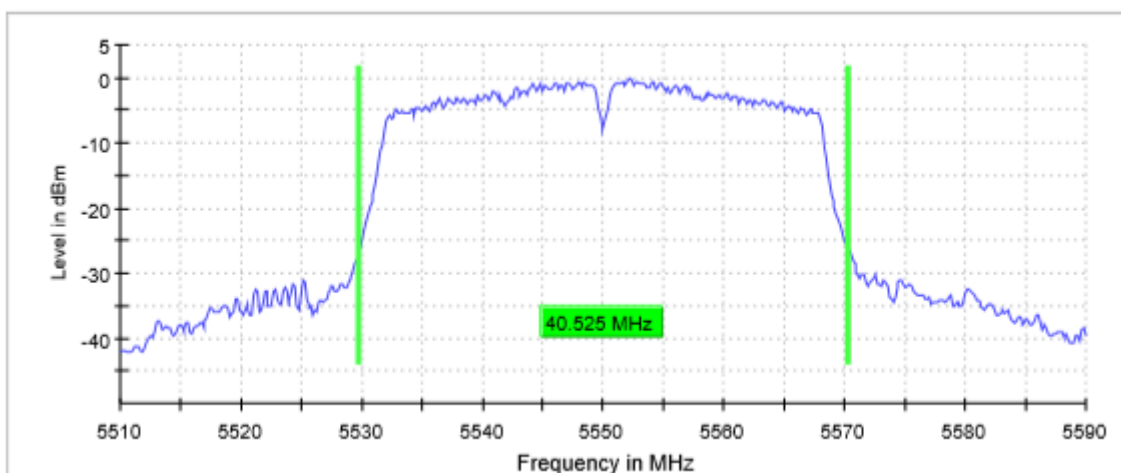
**TEST RESULTS (Cont.):**

**26 dB BANDWIDTH**

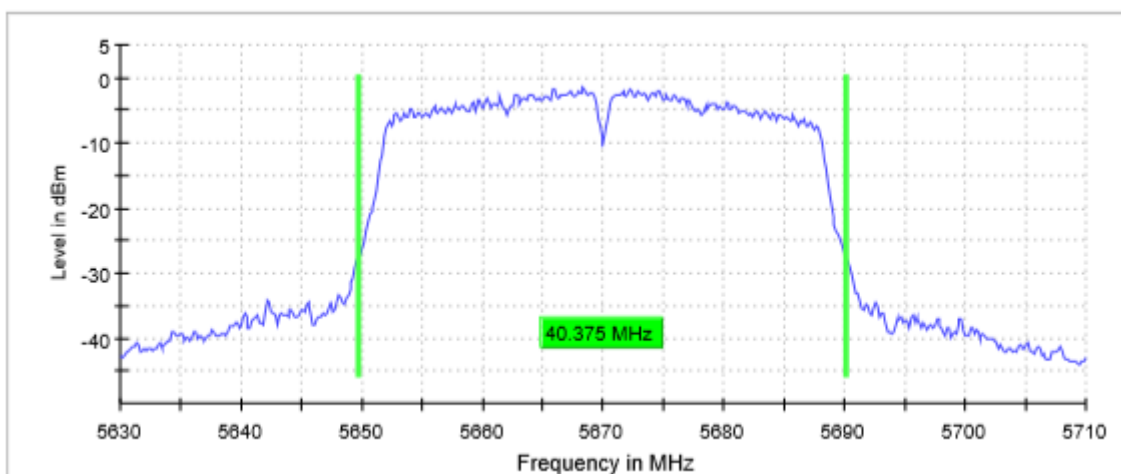
**Lowest Channel**



**Middle Channel**



**Highest Channel**



## TEST RESULTS (Cont.):

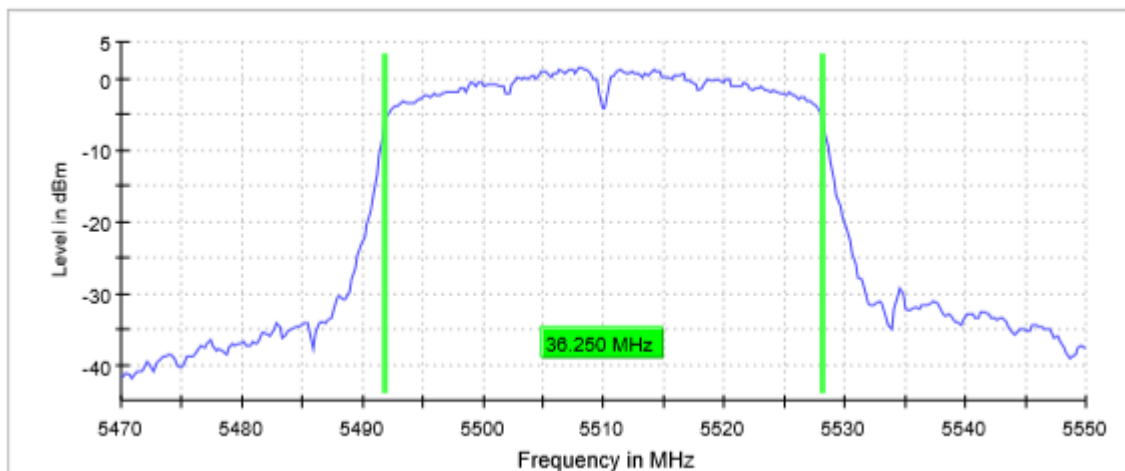
### Measurement

| Setting               | Instrument Value | Instrument Value | Instrument Value |
|-----------------------|------------------|------------------|------------------|
| Start Frequency       | 5.47000 GHz      | 5.51000 GHz      | 5.63000 GHz      |
| Stop Frequency        | 5.55000 GHz      | 5.59000 GHz      | 5.71000 GHz      |
| Span                  | 80.000 MHz       | 80.000 MHz       | 80.000 MHz       |
| RBW                   | 300.000 kHz      | 300.000 kHz      | 300.000 kHz      |
| VBW                   | 1.000 MHz        | 1.000 MHz        | 1.000 MHz        |
| SweepPoints           | 533              | 533              | 533              |
| Sweeptime             | 31.621 $\mu$ s   | 31.621 $\mu$ s   | 31.621 $\mu$ s   |
| Reference Level       | 10.000 dBm       | 10.000 dBm       | 10.000 dBm       |
| Attenuation           | 30.000 dB        | 30.000 dB        | 30.000 dB        |
| Detector              | MaxPeak          | MaxPeak          | MaxPeak          |
| SweepCount            | 200              | 200              | 200              |
| Filter                | 3 dB             | 3 dB             | 3 dB             |
| Trace Mode            | Max Hold         | Max Hold         | Max Hold         |
| Sweeptype             | FFT              | FFT              | FFT              |
| Preampl               | Off              | Off              | Off              |
| Stablemode            | Trace            | Trace            | Trace            |
| Stablevalue           | 0.30 dB          | 0.30 dB          | 0.30 dB          |
| Run                   | 72 / max. 150    | 94 / max. 150    | 81 / max. 150    |
| Stable                | 5 / 5            | 5 / 5            | 5 / 5            |
| Max Stable Difference | 0.00 dB          | 0.22 dB          | 0.19 dB          |

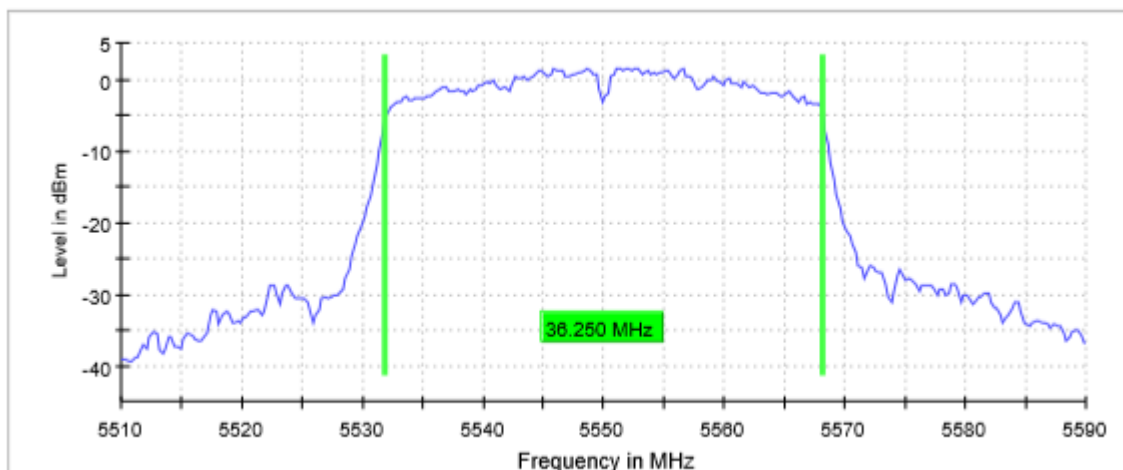
**TEST RESULTS (Cont.):**

**OCCUPIED BANDWIDTH**

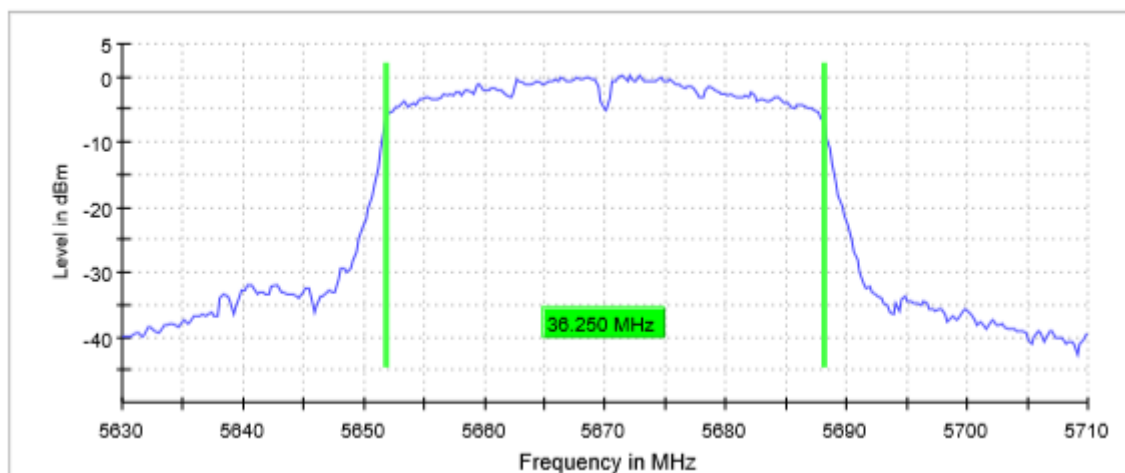
**Lowest Channel**



**Middle Channel**



**Highest Channel**



## TEST RESULTS (Cont.):

### Measurement

| Setting               | Instrument Value | Instrument Value | Instrument Value |
|-----------------------|------------------|------------------|------------------|
| Start Frequency       | 5.47000 GHz      | 5.51000 GHz      | 5.63000 GHz      |
| Stop Frequency        | 5.55000 GHz      | 5.59000 GHz      | 5.71000 GHz      |
| Span                  | 80.000 MHz       | 80.000 MHz       | 80.000 MHz       |
| RBW                   | 500.000 kHz      | 500.000 kHz      | 500.000 kHz      |
| VBW                   | 2.000 MHz        | 2.000 MHz        | 2.000 MHz        |
| SweepPoints           | 320              | 320              | 320              |
| Sweeptime             | 18.906 $\mu$ s   | 18.906 $\mu$ s   | 18.906 $\mu$ s   |
| Reference Level       | 10.000 dBm       | 10.000 dBm       | 10.000 dBm       |
| Attenuation           | 30.000 dB        | 30.000 dB        | 30.000 dB        |
| Detector              | MaxPeak          | MaxPeak          | MaxPeak          |
| SweepCount            | 200              | 200              | 200              |
| Filter                | 3 dB             | 3 dB             | 3 dB             |
| Trace Mode            | Max Hold         | Max Hold         | Max Hold         |
| Sweeptype             | FFT              | FFT              | FFT              |
| Preamplifier          | Off              | Off              | Off              |
| Stablemode            | Trace            | Trace            | Trace            |
| Stablevalue           | 0.30 dB          | 0.30 dB          | 0.30 dB          |
| Run                   | 103 / max. 150   | 76 / max. 150    | 56 / max. 150    |
| Stable                | 5 / 5            | 5 / 5            | 5 / 5            |
| Max Stable Difference | 0.07 dB          | 0.14 dB          | 0.00 dB          |

## TEST D.2: POWER LIMITS. MAXIMUM OUTPUT POWER

|                |                   |                                                          |
|----------------|-------------------|----------------------------------------------------------|
| <b>LIMITS:</b> | Product standard: | Part 15 Subpart C §15.407 and RSS-247                    |
|                | Test standard:    | Part 15 Subpart C §15.407(a) (2) (4) and RSS-247 6.2.3.1 |

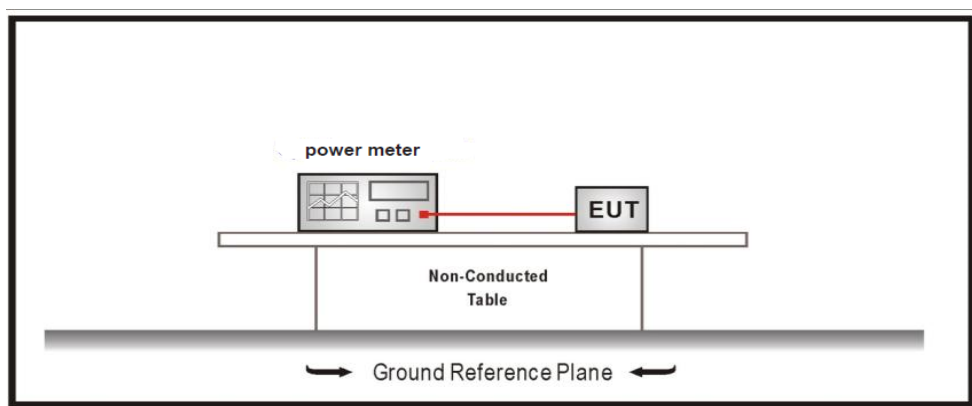
### LIMITS

In band 5.47-5.725 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

### TEST SETUP

Measured according to ANSI C63.10, Section 11.9.2.3.2 Method AVGPM-G

The EIRP power (dBm) is calculated by adding the declared maximum antenna gain to the measured conducted power



|                                 |                |
|---------------------------------|----------------|
| <b>TESTED SAMPLES:</b>          | S/01           |
| <b>TESTED CONDITIONS MODES:</b> | TC#01 (a mode) |
| <b>TEST RESULTS:</b>            | PASS           |

### Bandwidth: 20 MHz

Maximum declared antenna gain: 0 dBi

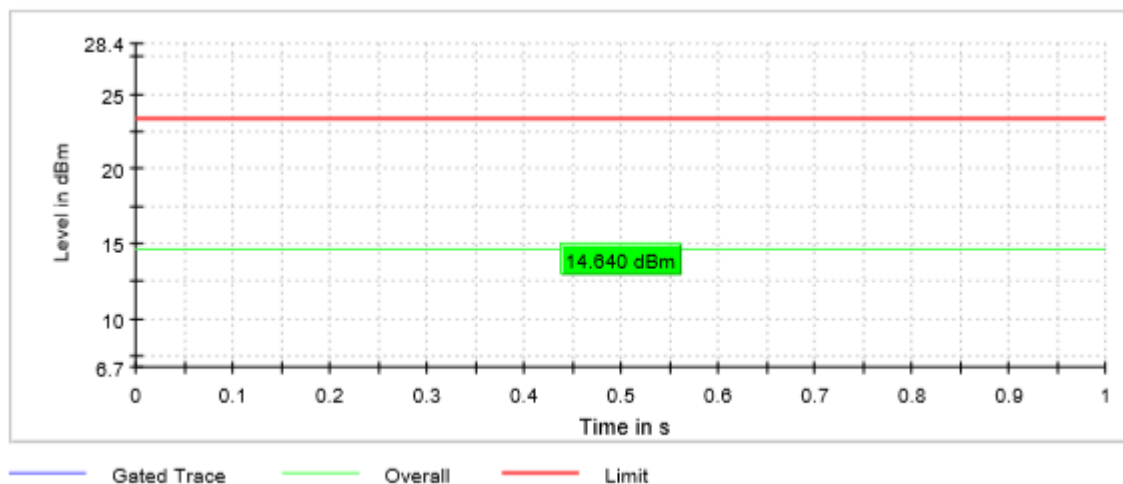
|                               | Lowest frequency<br>5500 MHz | Middle frequency<br>5580 MHz | Highest frequency<br>5700 MHz |
|-------------------------------|------------------------------|------------------------------|-------------------------------|
| Maximum conducted power (dBm) | 14.6                         | 14.9                         | 13.1                          |
| Maximum EIRP power (dBm)      | 14.6                         | 14.9                         | 13.1                          |
| Measurement uncertainty (dB)  | <±0.78                       |                              |                               |

The maximum directional gain of the antenna is less than 6 dBi and therefore the maximum output power is not required to be reduced from the stated values.

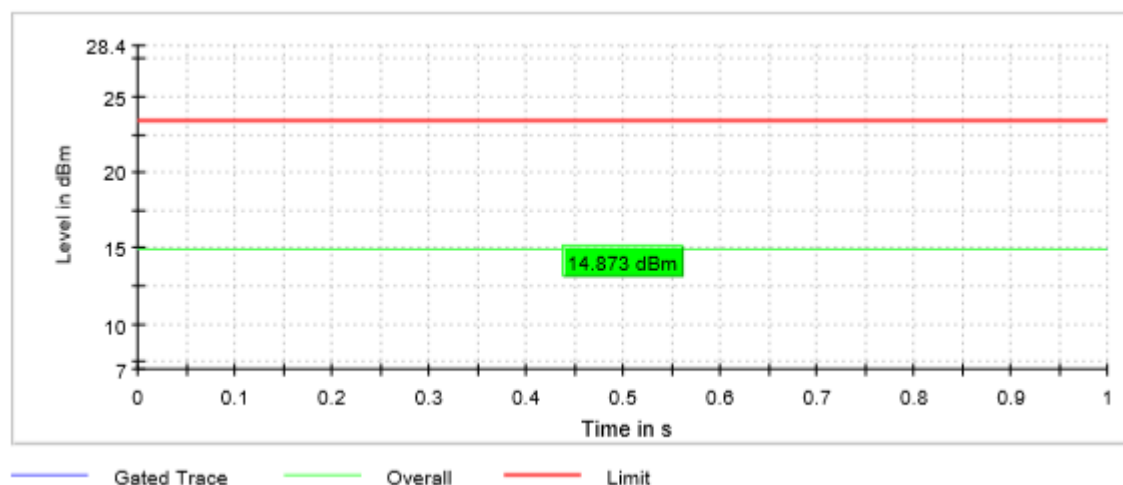
**TEST RESULTS (Cont.):**

**CONDUCTED OUTPUT POWER**

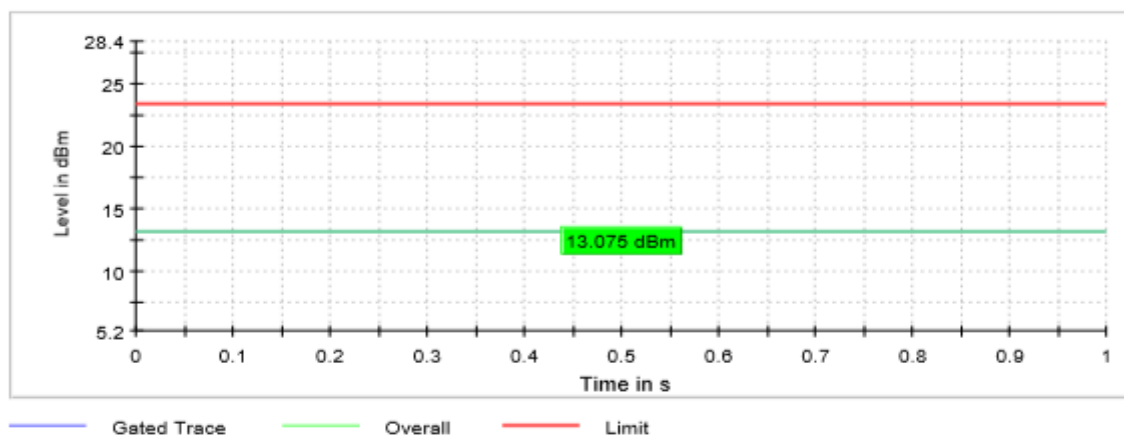
**Lowest Channel**



**Middle Channel**



**Highest Channel**



|                                 |                       |
|---------------------------------|-----------------------|
| <b>TESTED SAMPLES:</b>          | S/01                  |
| <b>TESTED CONDITIONS MODES:</b> | TC#02 (n mode 20 MHz) |
| <b>TEST RESULTS:</b>            | PASS                  |

#### Bandwidth: 20 MHz

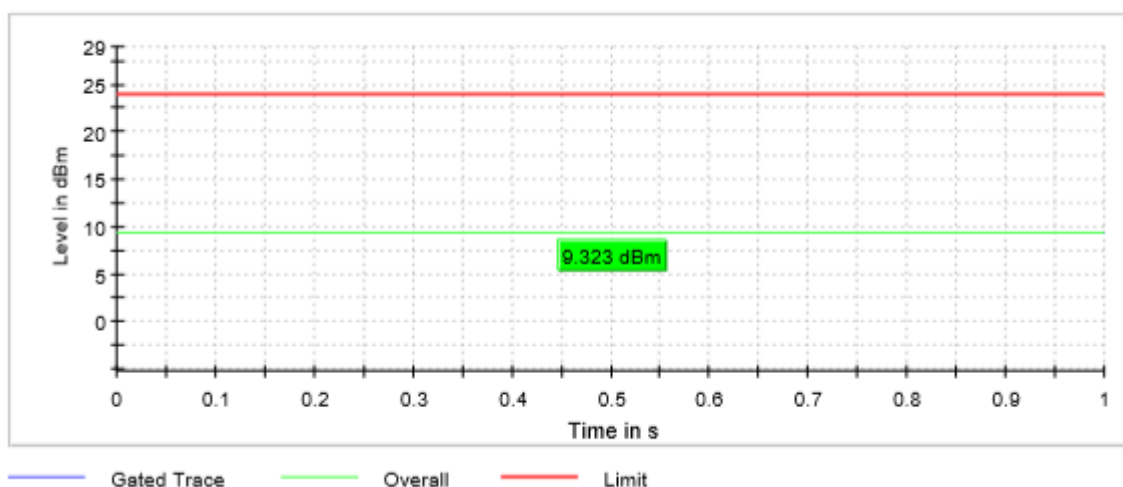
Maximum declared antenna gain: 0 dBi

|                               | Lowest frequency<br>5500 MHz | Middle frequency<br>5580 MHz | Highest frequency<br>5700 MHz |
|-------------------------------|------------------------------|------------------------------|-------------------------------|
| Maximum conducted power (dBm) | 9.3                          | 9.4                          | 7.7                           |
| Maximum EIRP power (dBm)      | 9.3                          | 9.4                          | 7.7                           |
| Measurement uncertainty (dB)  | <±0.78                       |                              |                               |

The maximum directional gain of the antenna is less than 6 dBi and therefore the maximum output power is not required to be reduced from the stated values.

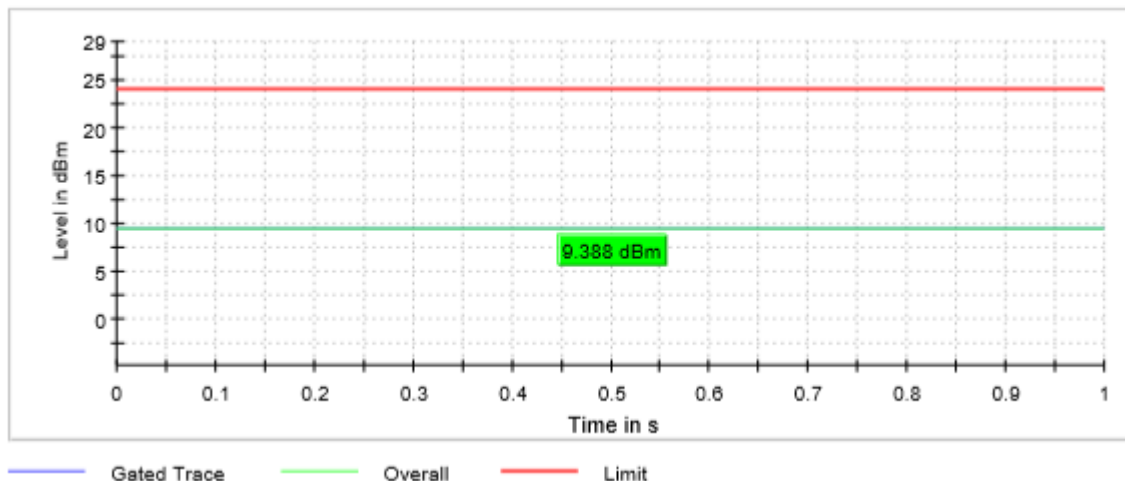
|                              |                               |
|------------------------------|-------------------------------|
| <b>TEST RESULTS (Cont.):</b> | <b>CONDUCTED OUTPUT POWER</b> |
|------------------------------|-------------------------------|

#### Lowest Channel

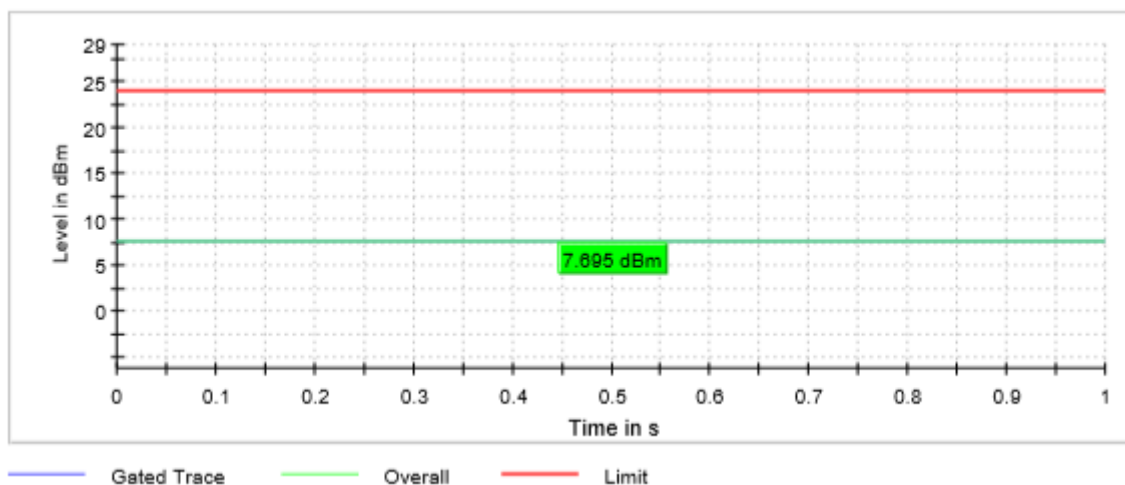


## TEST RESULTS (Cont.)

### Middle Channel



### Highest Channel



|                                 |                       |
|---------------------------------|-----------------------|
| <b>TESTED SAMPLES:</b>          | S/01                  |
| <b>TESTED CONDITIONS MODES:</b> | TC#02 (n mode 40 MHz) |
| <b>TEST RESULTS:</b>            | PASS                  |

#### Bandwidth: 40 MHz

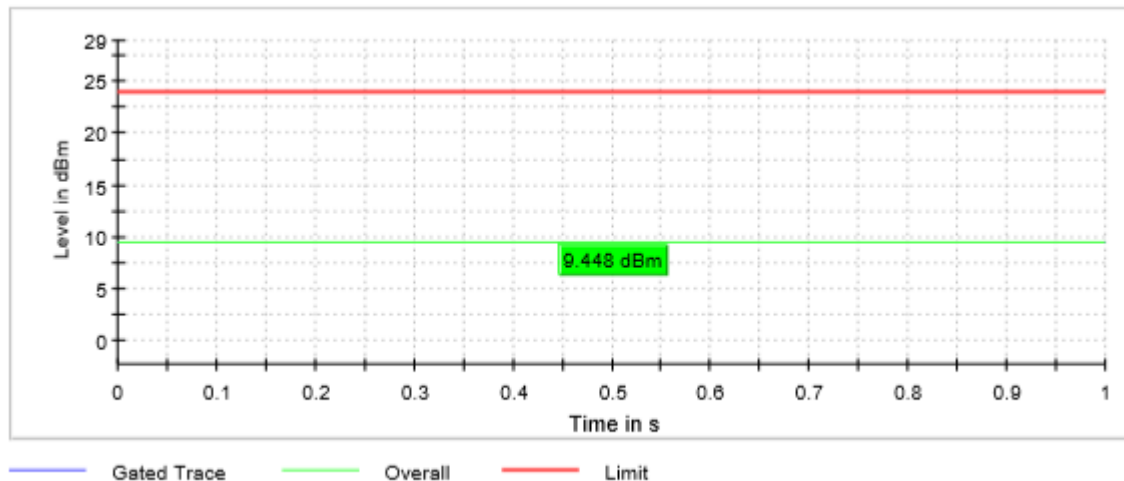
Maximum declared antenna gain: 0 dBi

|                               | Lowest frequency<br>5510 MHz | Middle frequency<br>5550 MHz | Highest frequency<br>5670 MHz |
|-------------------------------|------------------------------|------------------------------|-------------------------------|
| Maximum conducted power (dBm) | 9.4                          | 9.8                          | 8.3                           |
| Maximum EIRP power (dBm)      | 9.4                          | 9.8                          | 8.3                           |
| Measurement uncertainty (dB)  |                              | <±0.78                       |                               |

The maximum directional gain of the antenna is less than 6 dBi and therefore the maximum output power is not required to be reduced from the stated values.

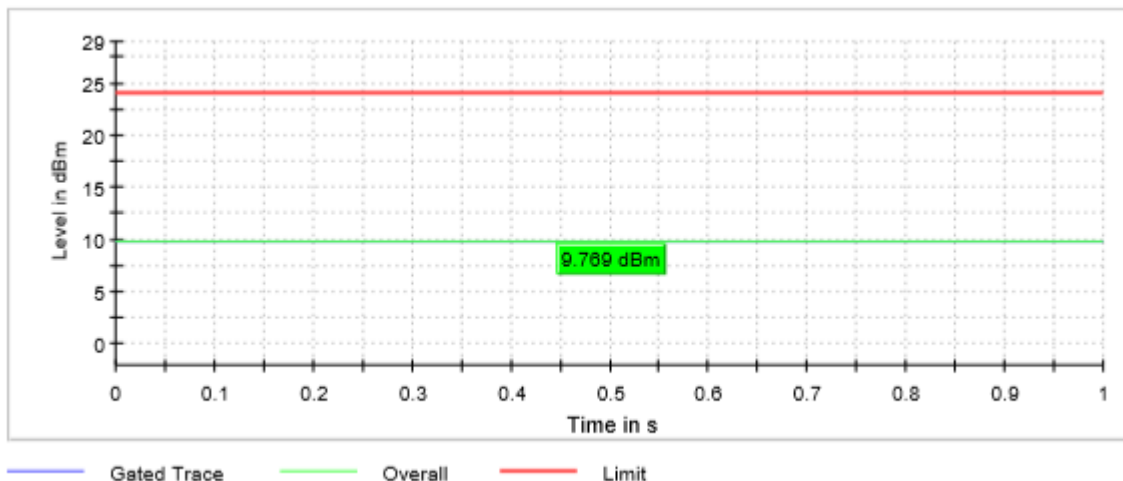
|                              |                               |
|------------------------------|-------------------------------|
| <b>TEST RESULTS (Cont.):</b> | <b>CONDUCTED OUTPUT POWER</b> |
|------------------------------|-------------------------------|

#### Lowest Channel

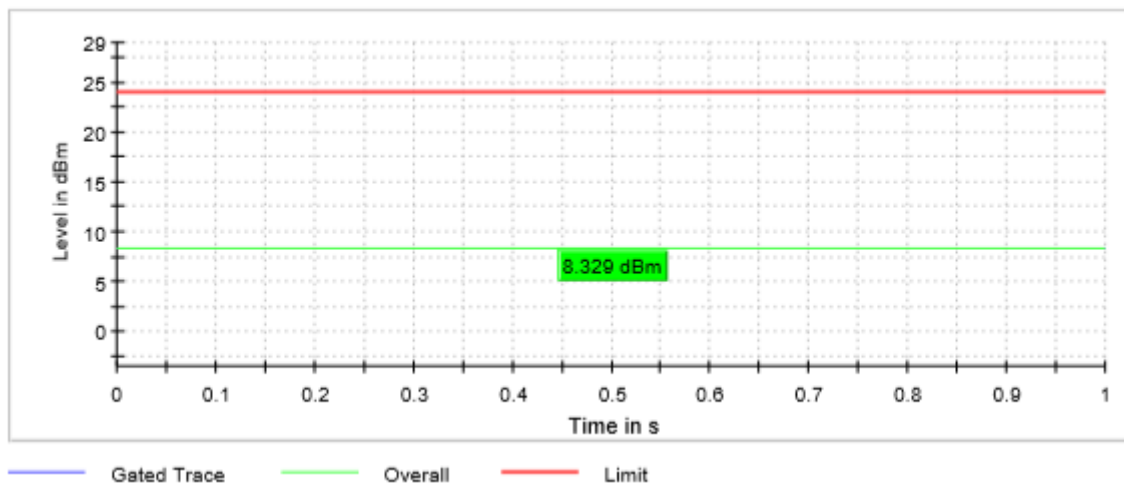


## TEST RESULTS (Cont.)

### Middle Channel



### Highest Channel



## TEST D.3: POWER SPECTRAL DENSITY

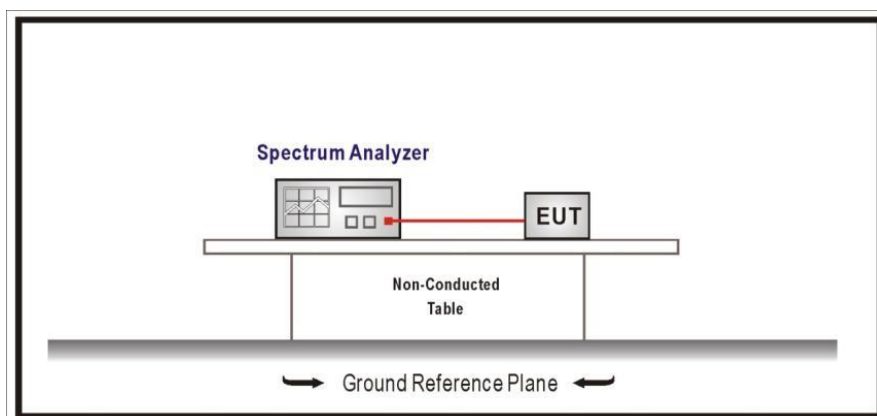
|                |                   |                                                          |
|----------------|-------------------|----------------------------------------------------------|
| <b>LIMITS:</b> | Product standard: | Part 15 Subpart C §15.407 and RSS-247                    |
|                | Test standard:    | Part 15 Subpart C §15.407(a) (2) (5) and RSS-247 6.2.3.1 |

### LIMITS

In the band 5.47-5.725 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

### TEST SETUP

For all modes, the maximum power spectral density level in the fundamental emission was measured using the method according to point F) (Method SA-1) of Guidance 789033 D02 General UNII Test Procedures New Rules v01.



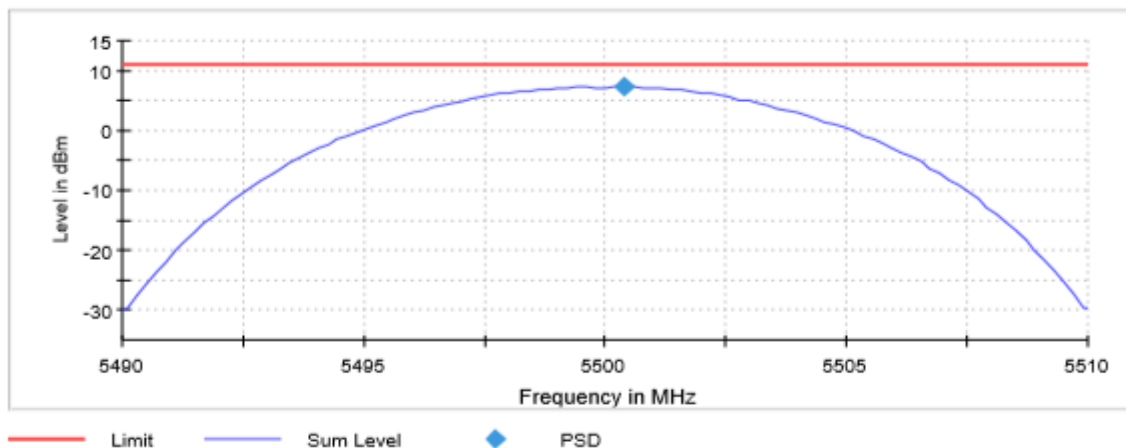
|                                 |                |
|---------------------------------|----------------|
| <b>TESTED SAMPLES:</b>          | S/01           |
| <b>TESTED CONDITIONS MODES:</b> | TC#01 (a mode) |
| <b>TEST RESULTS:</b>            | PASS           |

### Bandwidth: 20 MHz

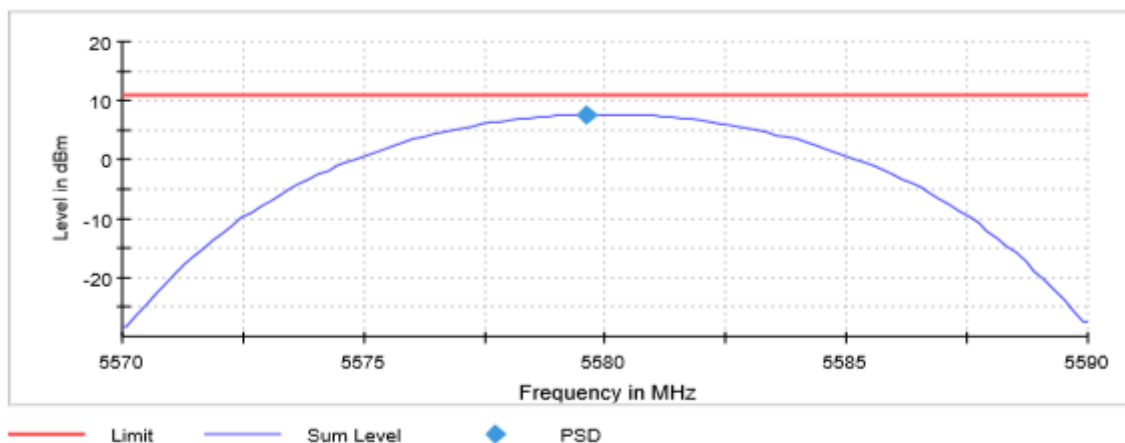
|                              | Lowest frequency<br>5500 MHz | Middle frequency<br>5580 MHz | Highest frequency<br>5700 MHz |
|------------------------------|------------------------------|------------------------------|-------------------------------|
| Power spectral density (dBm) | 7.312                        | 7.641                        | 5.128                         |
| Measurement uncertainty (dB) | <±0.78                       |                              |                               |

## TEST RESULTS (Cont.):

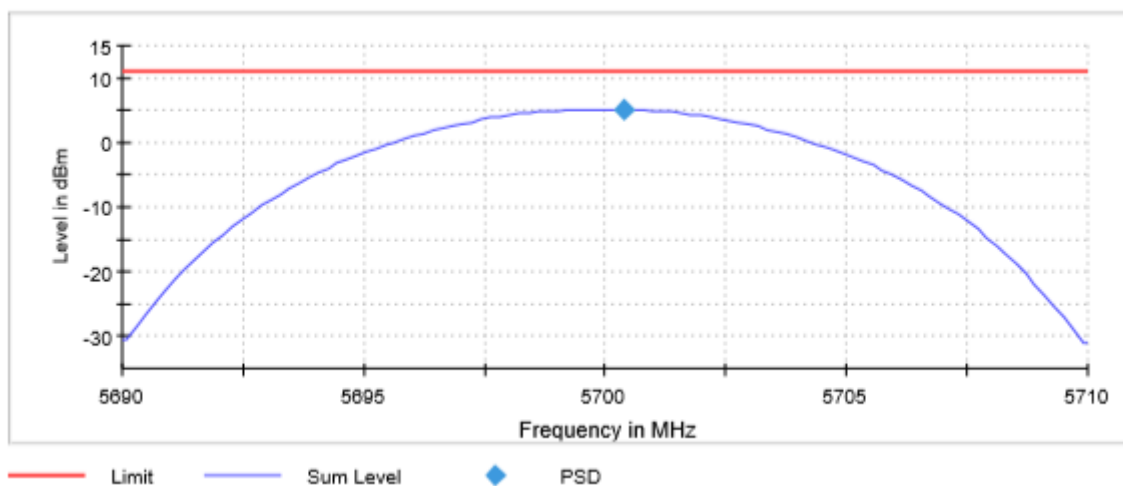
### Lowest Channel



### Middle Channel



### Highest Channel



**TEST RESULTS (Cont.):**

**Measurement**

| Setting               | Instrument Value | Instrument Value | Instrument Value |
|-----------------------|------------------|------------------|------------------|
| Start Frequency       | 5.49000 GHz      | 5.57000 GHz      | 5.69000 GHz      |
| Stop Frequency        | 5.51000 GHz      | 5.59000 GHz      | 5.71000 GHz      |
| Span                  | 20.000 MHz       | 20.000 MHz       | 20.000 MHz       |
| RBW                   | 1.000 MHz        | 1.000 MHz        | 1.000 MHz        |
| VBW                   | 3.000 MHz        | 3.000 MHz        | 3.000 MHz        |
| SweepPoints           | 101              | 101              | 101              |
| Sweeptime             | 2.020 s          | 2.020 s          | 2.020 s          |
| Reference Level       | 20.000 dBm       | 20.000 dBm       | 20.000 dBm       |
| Attenuation           | 40.000 dB        | 40.000 dB        | 40.000 dB        |
| Detector              | RMS              | RMS              | RMS              |
| SweepCount            | 29703            | 29703            | 29703            |
| Filter                | 3 dB             | 3 dB             | 3 dB             |
| Trace Mode            | Max Hold         | Max Hold         | Max Hold         |
| SweepType             | FFT              | FFT              | FFT              |
| Preampl               | Off              | Off              | Off              |
| Stablemode            | Trace            | Trace            | Trace            |
| Stablevalue           | 0.30 dB          | 0.30 dB          | 0.30 dB          |
| Run                   | 4 / max. 15      | 4 / max. 15      | 4 / max. 15      |
| Stable                | 3 / 3            | 3 / 3            | 3 / 3            |
| Max Stable Difference | 0.00 dB          | 0.00 dB          | 0.00 dB          |

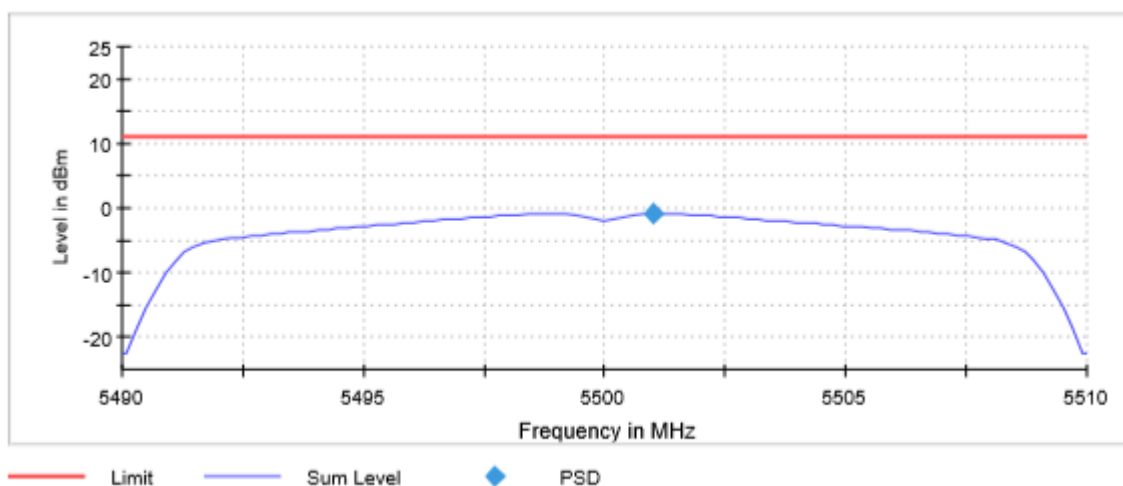
|                                 |                       |
|---------------------------------|-----------------------|
| <b>TESTED SAMPLES:</b>          | S/01                  |
| <b>TESTED CONDITIONS MODES:</b> | TC#02 (n mode 20 MHz) |
| <b>TEST RESULTS:</b>            | PASS                  |

**Bandwidth: 20 MHz**

|                              | Lowest frequency<br>5500 MHz | Middle frequency<br>5580 MHz | Highest frequency<br>5700 MHz |
|------------------------------|------------------------------|------------------------------|-------------------------------|
| Power spectral density (dBm) | -0.744                       | -0.626                       | -2.753                        |
| Measurement uncertainty (dB) | <±0.78                       |                              |                               |

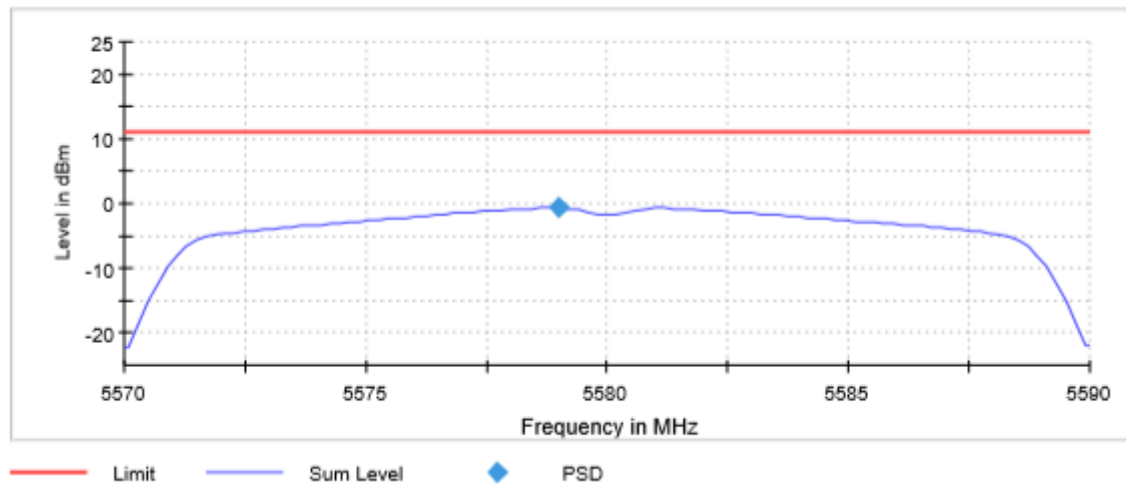
|                              |  |
|------------------------------|--|
| <b>TEST RESULTS (Cont.):</b> |  |
|------------------------------|--|

**Lowest Channel**

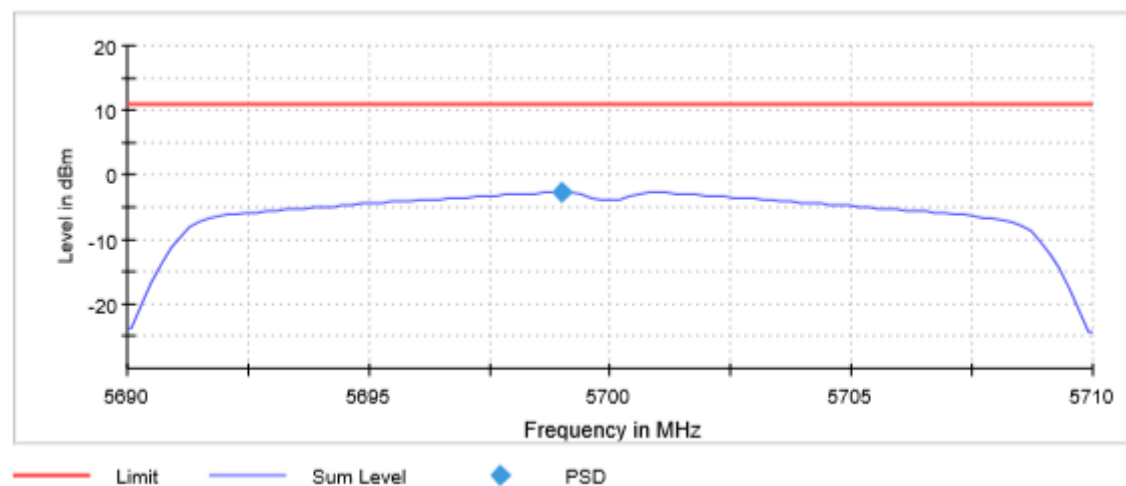


## TEST RESULTS (Cont.):

### Middle Channel



### Highest Channel



**TEST RESULTS (Cont.):**

**Measurement**

| Setting               | Instrument Value | Instrument Value | Instrument Value |
|-----------------------|------------------|------------------|------------------|
| Start Frequency       | 5.49000 GHz      | 5.57000 GHz      | 5.69000 GHz      |
| Stop Frequency        | 5.51000 GHz      | 5.59000 GHz      | 5.71000 GHz      |
| Span                  | 20.000 MHz       | 20.000 MHz       | 20.000 MHz       |
| RBW                   | 1.000 MHz kHz    | 1.000 MHz kHz    | 1.000 MHz kHz    |
| VBW                   | 3.000 MHz        | 3.000 MHz        | 3.000 MHz        |
| SweepPoints           | 101              | 101              | 101              |
| Sweeptime             | 2.020 s          | 2.020 s          | 2.020 s          |
| Reference Level       | 10.000 dBm       | 10.000 dBm       | 10.000 dBm       |
| Attenuation           | 30.000 dB        | 30.000 dB        | 30.000 dB        |
| Detector              | RMS              | RMS              | RMS              |
| SweepCount            | 29703            | 29703            | 29703            |
| Filter                | 3 dB             | 3 dB             | 3 dB             |
| Trace Mode            | Max Hold         | Max Hold         | Max Hold         |
| Sweeptype             | FFT              | FFT              | FFT              |
| Preamplifier          | off              | off              | off              |
| Stablemode            | Trace            | Trace            | Trace            |
| Stablevalue           | 0.30 dB          | 0.30 dB          | 0.30 dB          |
| Run                   | 4 / max. 15      | 4 / max. 15      | 4 / max. 15      |
| Stable                | 3 / 3            | 3 / 3            | 3 / 3            |
| Max Stable Difference | 0.01 dB          | 0.02 dB          | 0.24 dB          |

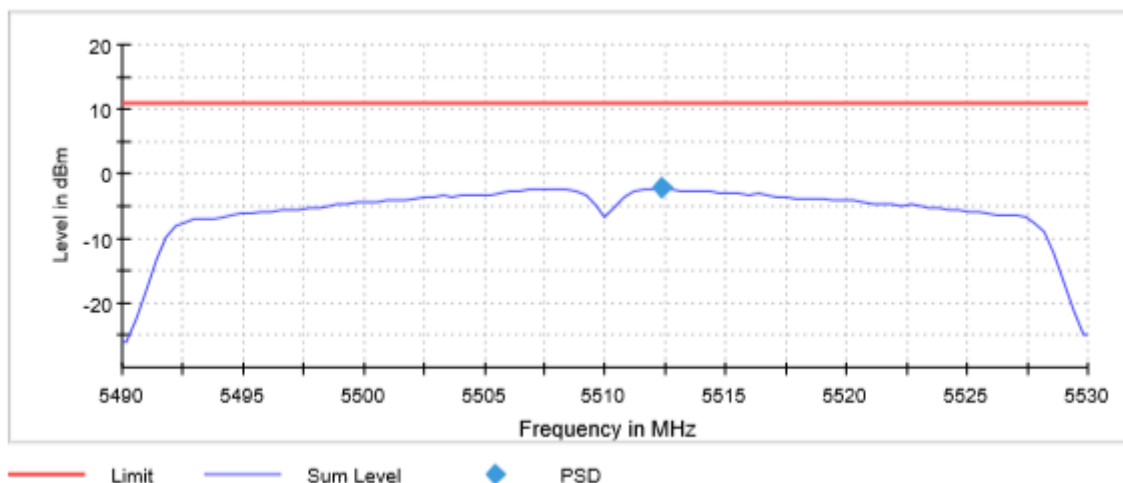
|                          |                       |
|--------------------------|-----------------------|
| TESTED SAMPLES:          | S/01                  |
| TESTED CONDITIONS MODES: | TC#02 (n mode 40 MHz) |
| TEST RESULTS:            | PASS                  |

#### Bandwidth: 40 MHz

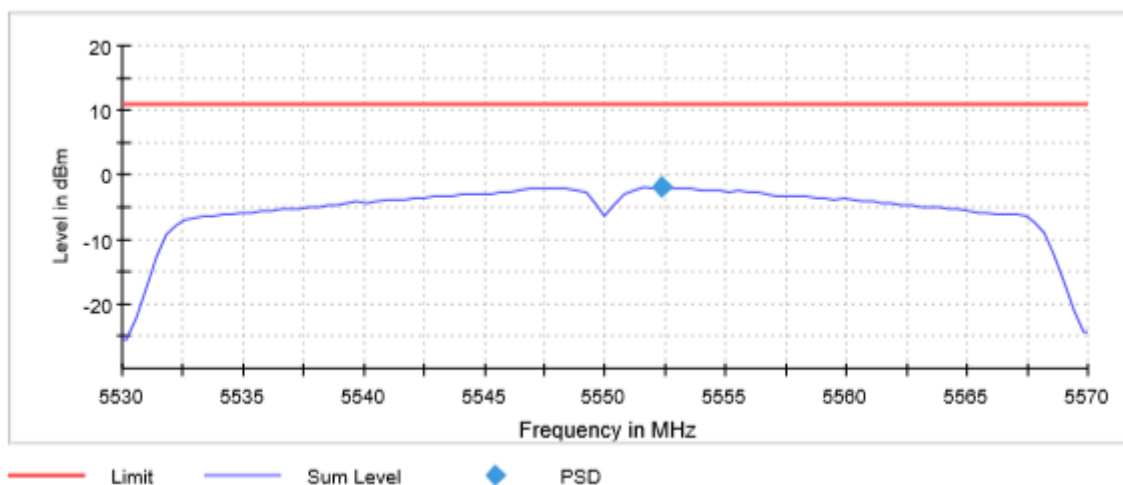
|                              |                              |                              |                               |
|------------------------------|------------------------------|------------------------------|-------------------------------|
|                              | Lowest frequency<br>5510 MHz | Middle frequency<br>5550 MHz | Highest frequency<br>5670 MHz |
| Power spectral density (dBm) | -2.150                       | -1.856                       | -3.397                        |
| Measurement uncertainty (dB) | <±0.78                       |                              |                               |

|                       |  |
|-----------------------|--|
| TEST RESULTS (Cont.): |  |
|-----------------------|--|

#### Lowest Channel

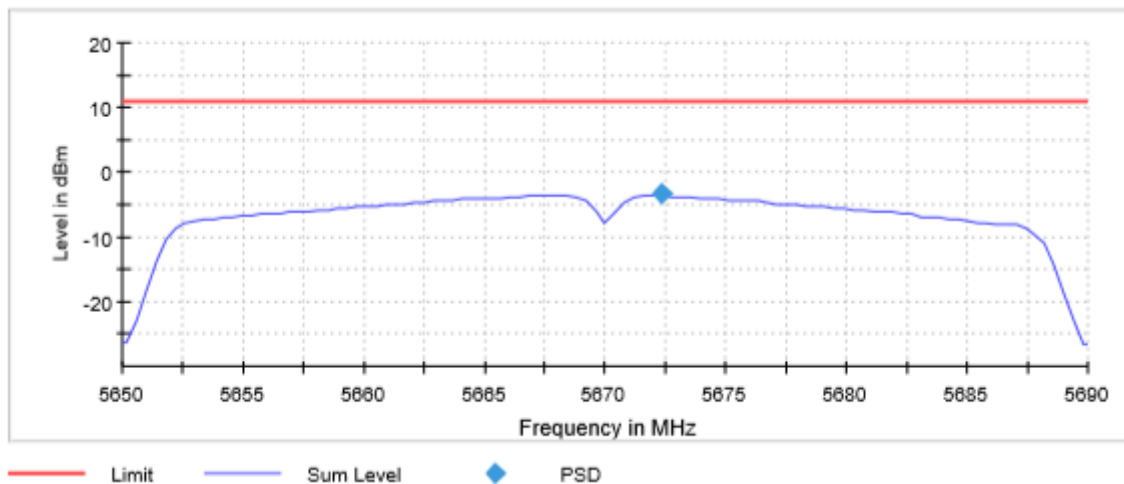


#### Mid Channel



## TEST RESULTS (Cont.):

### High Channel



### Measurement

| Setting               | Instrument Value | Instrument Value | Instrument Value |
|-----------------------|------------------|------------------|------------------|
| Start Frequency       | 5.49000 GHz      | 5.53000 GHz      | 5.65000 GHz      |
| Stop Frequency        | 5.53000 GHz      | 5.57000 GHz      | 5.69000 GHz      |
| Span                  | 40.000 MHz       | 40.000 MHz       | 40.000 MHz       |
| RBW                   | 1.000 MHz kHz    | 1.000 MHz kHz    | 1.000 MHz kHz    |
| VBW                   | 3.000 MHz        | 3.000 MHz        | 3.000 MHz        |
| SweepPoints           | 101              | 101              | 101              |
| Sweeptime             | 2.020 s          | 2.020 s          | 2.020 s          |
| Reference Level       | 10.000 dBm       | 10.000 dBm       | 10.000 dBm       |
| Attenuation           | 30.000 dB        | 30.000 dB        | 30.000 dB        |
| Detector              | RMS              | RMS              | RMS              |
| SweepCount            | 29703            | 29703            | 29703            |
| Filter                | 3 dB             | 3 dB             | 3 dB             |
| Trace Mode            | Max Hold         | Max Hold         | Max Hold         |
| Sweeptype             | FFT              | FFT              | FFT              |
| Preamplifier          | Off              | off              | Off              |
| Stablemode            | Trace            | Trace            | Trace            |
| Stablevalue           | 0.30 dB          | 0.30 dB          | 0.30 dB          |
| Run                   | 4 / max. 15      | 4 / max. 15      | 4 / max. 15      |
| Stable                | 3 / 3            | 3 / 3            | 3 / 3            |
| Max Stable Difference | 0.09 dB          | 0.17 dB          | 0.17 dB          |

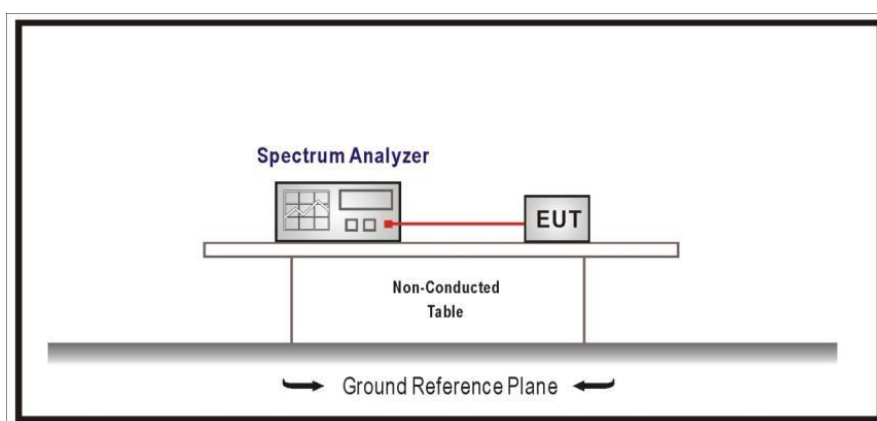
## TEST D.4: BAND-EDGE EMISSIONS COMPLIANCE (TRANSMITTER)

|                |                   |                                                     |
|----------------|-------------------|-----------------------------------------------------|
| <b>LIMITS:</b> | Product standard: | Part 15 Subpart C §15.407 and RSS-247               |
|                | Test standard:    | Part 15 Subpart C §15.407(b)(3) and RSS-247 6.2.3.2 |

### LIMITS

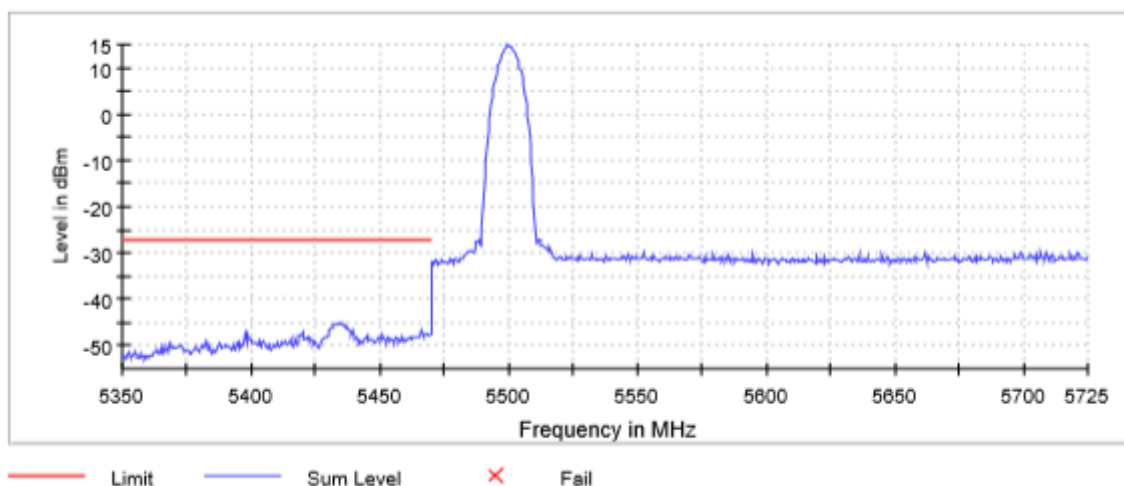
For transmitters operating in the 5.47 – 5.725 GHz band: all emissions outside the frequency band shall not exceed an EIRP of -27 dBm /MHz

### TEST SETUP



|                          |                |
|--------------------------|----------------|
| TESTED SAMPLES:          | S/01           |
| TESTED CONDITIONS MODES: | TC#01 (a mode) |
| TEST RESULTS:            | PASS           |

#### Lowest Channel

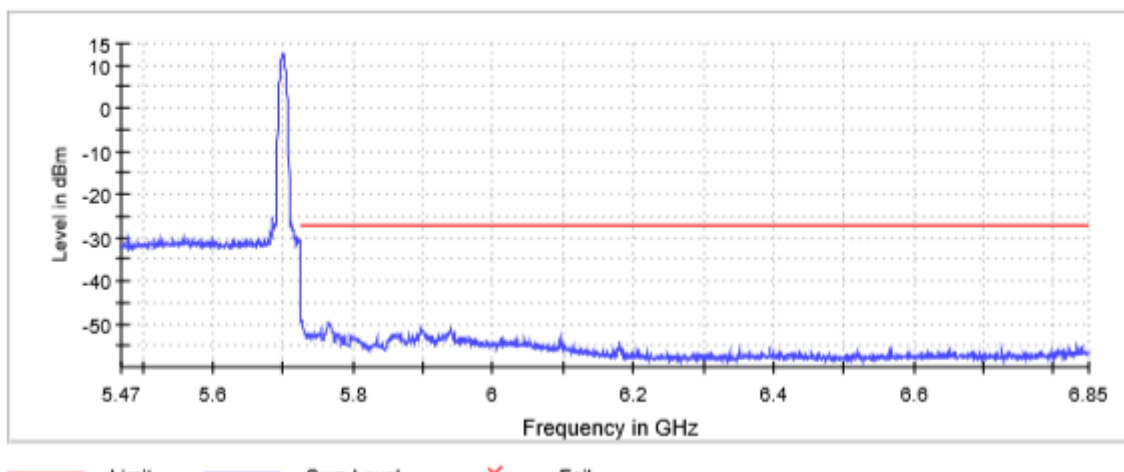


#### Measurement

| Setting               | Instrument Value | Instrument Value |
|-----------------------|------------------|------------------|
| Start Frequency       | 5.35000 GHz      | 5.47000 GHz      |
| Stop Frequency        | 5.47000 GHz      | 5.72500 GHz      |
| Span                  | 120.000 MHz      | 255.000 MHz      |
| RBW                   | 1.000 MHz        | 1.000 MHz        |
| VBW                   | 3.000 MHz        | 3.000 MHz        |
| SweepPoints           | 240              | 510              |
| Sweeptime             | 24.000 ms        | 51.000 ms        |
| Reference Level       | -10.000 dBm      | 20.000 dBm       |
| Attenuation           | 10.000 dB        | 40.000 dB        |
| Detector              | Maxpeak          | Maxpeak          |
| SweepCount            | 100              | 100              |
| Filter                | Channel          | Channel          |
| Trace Mode            | Max Hold         | Max Hold         |
| Sweeptype             | sweep            | sweep            |
| Preamplifier          | off              | off              |
| Stablemode            | Trace            | Trace            |
| Stablevalue           | 0.50 dB          | 0.50 dB          |
| Run                   | 4 / max. 150     | 8 / max. 150     |
| Stable                | 3 / 3            | 3 / 3            |
| Max Stable Difference | 0.00 dB          | 0.26 dB          |

## TEST RESULTS (Cont.):

### Highest Channel



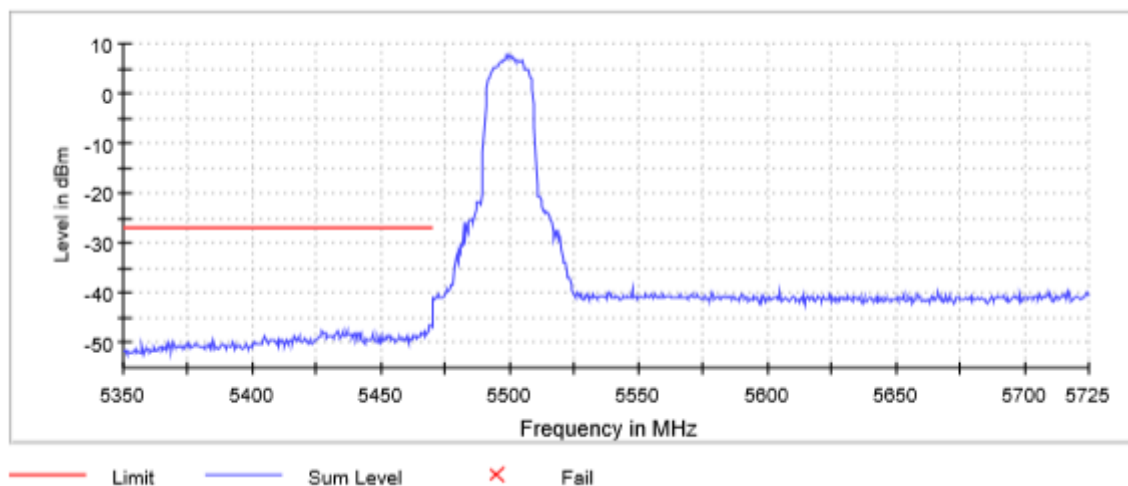
### Measurement

| Setting               | Instrument Value | Instrument Value |
|-----------------------|------------------|------------------|
| Start Frequency       | 5.47000 GHz      | 5.72500 GHz      |
| Stop Frequency        | 5.72500 GHz      | 6.85000 GHz      |
| Span                  | 255.000 MHz      | 1.125 GHz        |
| RBW                   | 1.000 MHz        | 1.000 MHz        |
| VBW                   | 3.000 MHz        | 3.000 MHz        |
| SweepPoints           | 510              | 2250             |
| Sweptime              | 51.000 ms        | 255.000 ms       |
| Reference Level       | 20.000 dBm       | -10.000 dBm      |
| Attenuation           | 40.000 dB        | 10.000 dB        |
| Detector              | Maxpeak          | Maxpeak          |
| SweepCount            | 100              | 100              |
| Filter                | Channel          | Channel          |
| Trace Mode            | Max Hold         | Max Hold         |
| SweepType             | sweep            | sweep            |
| Preamp                | off              | off              |
| Stablemode            | Trace            | Trace            |
| Stablevalue           | 0.50 dB          | 0.50 dB          |
| Run                   | 5 / max. 150     | 4 / max. 150     |
| Stable                | 3 / 3            | 3 / 3            |
| Max Stable Difference | 0.40 dB          | 0.00 dB          |

|                                 |                       |
|---------------------------------|-----------------------|
| <b>TESTED SAMPLES:</b>          | S/01                  |
| <b>TESTED CONDITIONS MODES:</b> | TC#02 (n mode 20 MHz) |
| <b>TEST RESULTS:</b>            | PASS                  |

**Bandwidth: 20 MHz**

**Lowest Channel**

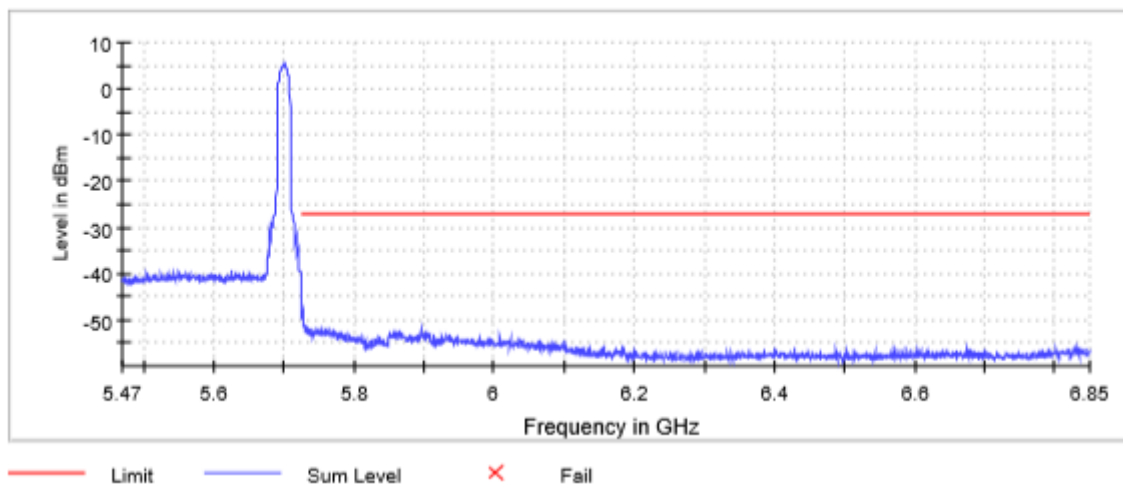


### Measurement

| Setting               | Instrument Value | Instrument Value |
|-----------------------|------------------|------------------|
| Start Frequency       | 5.35000 GHz      | 5.47000 GHz      |
| Stop Frequency        | 5.47000 GHz      | 5.72500 GHz      |
| Span                  | 120.000 MHz      | 255.000 MHz      |
| RBW                   | 1.000 MHz        | 1.000 MHz        |
| VBW                   | 3.000 MHz        | 3.000 MHz        |
| SweepPoints           | 240              | 510              |
| Sweeptime             | 24.000 ms        | 51.000 ms        |
| Reference Level       | -10.000 dBm      | 20.000 dBm       |
| Attenuation           | 10.000 dB        | 40.000 dB        |
| Detector              | Maxpeak          | Maxpeak          |
| SweepCount            | 100              | 100              |
| Filter                | Channel          | Channel          |
| Trace Mode            | Max Hold         | Max Hold         |
| Sweeptype             | sweep            | sweep            |
| Preamp                | off              | off              |
| Stablemode            | Trace            | Trace            |
| Stablevalue           | 0.50 dB          | 0.50 dB          |
| Run                   | 4 / max. 150     | 13 / max. 150    |
| Stable                | 3 / 3            | 3 / 3            |
| Max Stable Difference | 0.00 dB          | 0.43 dB          |

## TEST RESULTS (Cont.):

### Highest Channel



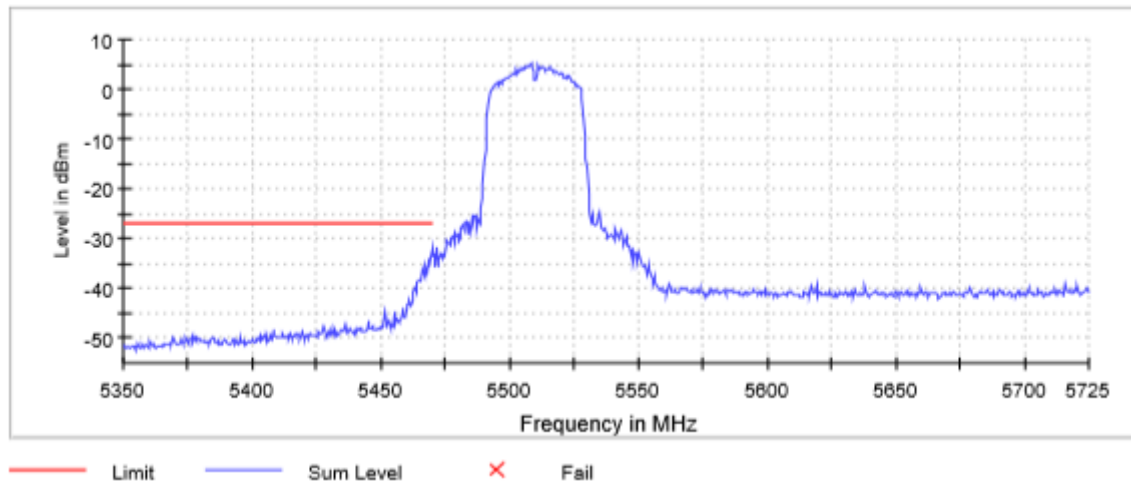
### Measurement

| Setting               | Instrument Value | Instrument Value |
|-----------------------|------------------|------------------|
| Start Frequency       | 5.47000 GHz      | 5.72500 GHz      |
| Stop Frequency        | 5.72500 GHz      | 6.85000 GHz      |
| Span                  | 255 MHz          | 1.125 GHz        |
| RBW                   | 1.000 MHz        | 1.000 MHz        |
| VBW                   | 3.000 MHz        | 3.000 MHz        |
| SweepPoints           | 510              | 2250             |
| Sweeptime             | 51.000 ms        | 255.000 ms       |
| Reference Level       | 10.000 dBm       | -10.000 dBm      |
| Attenuation           | 30.000 dB        | 10.000 dB        |
| Detector              | Maxpeak          | Maxpeak          |
| SweepCount            | 100              | 100              |
| Filter                | Channel          | Channel          |
| Trace Mode            | Max Hold         | Max Hold         |
| Sweeptype             | sweep            | sweep            |
| Preamp                | off              | off              |
| Stablemode            | Trace            | Trace            |
| Stablevalue           | 0.50 dB          | 0.50 dB          |
| Run                   | 17 / max. 150    | 4 / max. 150     |
| Stable                | 3 / 3            | 3 / 3            |
| Max Stable Difference | 0.00 dB          | 0.00 dB          |

|                          |                       |
|--------------------------|-----------------------|
| TESTED SAMPLES:          | S/01                  |
| TESTED CONDITIONS MODES: | TC#02 (n mode 40 MHz) |
| TEST RESULTS:            | PASS                  |

**Bandwidth: 40 MHz**

**Lowest Channel**

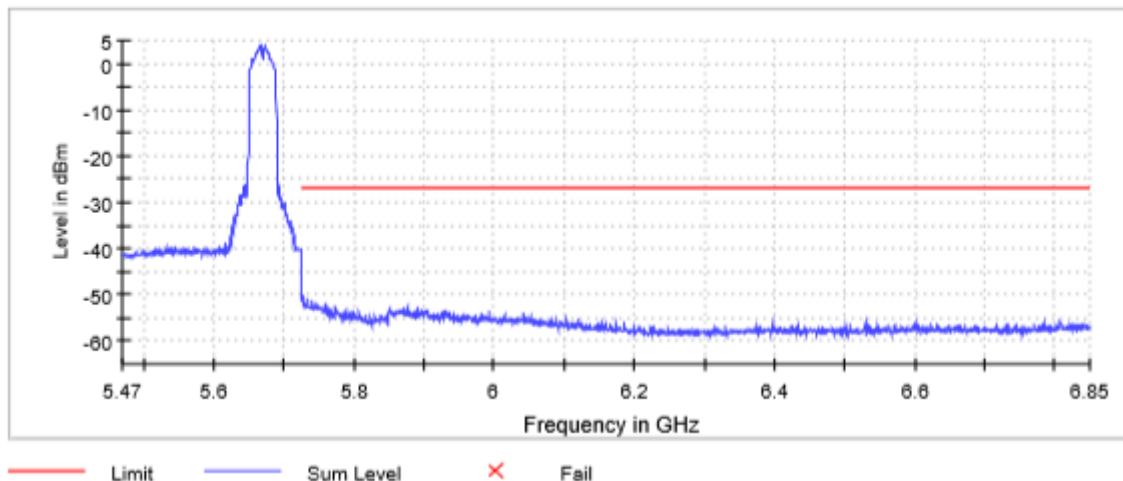


**Measurement**

| Setting               | Instrument Value | Instrument Value |
|-----------------------|------------------|------------------|
| Start Frequency       | 4.35000 GHz      | 5.47000 GHz      |
| Stop Frequency        | 5.47000 GHz      | 5.72500 GHz      |
| Span                  | 120.000 MHz      | 255.000 MHz      |
| RBW                   | 1.000 MHz        | 1.000 MHz        |
| VBW                   | 3.000 MHz        | 3.000 MHz        |
| SweepPoints           | 240              | 510              |
| Sweeptime             | 24.000 ms        | 51.000 ms        |
| Reference Level       | -10.000 dBm      | 10.000 dBm       |
| Attenuation           | 10.000 dB        | 30.000 dB        |
| Detector              | Maxpeak          | Maxpeak          |
| SweepCount            | 100              | 100              |
| Filter                | Channel          | 3 dB             |
| Trace Mode            | Max Hold         | Max Hold         |
| SweepType             | Sweep            | sweep            |
| Preamplifier          | Off              | Off              |
| Stablemode            | Trace            | Trace            |
| Stablevalue           | 0.50 dB          | 0.50 dB          |
| Run                   | 13 / max. 150    | 13 / max. 150    |
| Stable                | 3 / 3            | 3 / 3            |
| Max Stable Difference | 0.00 dB          | 0.34 dB          |

## TEST RESULTS (Cont.):

### Highest Channel



### Measurement

| Setting               | Instrument Value | Instrument Value |
|-----------------------|------------------|------------------|
| Start Frequency       | 5.47000 GHz      | 5.72500 GHz      |
| Stop Frequency        | 5.72500 GHz      | 6.85000 GHz      |
| Span                  | 255 MHz          | 1.125 GHz        |
| RBW                   | 1.000 MHz        | 1.000 MHz        |
| VBW                   | 3.000 MHz        | 3.000 MHz        |
| SweepPoints           | 510              | 2250             |
| Sweptime              | 51.000 ms        | 255.000 ms       |
| Reference Level       | 10.000 dBm       | -10.000 dBm      |
| Attenuation           | 30.000 dB        | 10.000 dB        |
| Detector              | Maxpeak          | Maxpeak          |
| SweepCount            | 100              | 100              |
| Filter                | Channel          | Channel          |
| Trace Mode            | Max Hold         | Max Hold         |
| Sweeptype             | sweep            | sweep            |
| Preamp                | off              | off              |
| Stablemode            | Trace            | Trace            |
| Stablevalue           | 0.50 dB          | 0.50 dB          |
| Run                   | 26 / max. 150    | 4 / max. 150     |
| Stable                | 3 / 3            | 3 / 3            |
| Max Stable Difference | 0.22 dB          | 0.00 dB          |

## TEST D.5: UNDESIRABLE RADIATED EMISSIONS (TRANSMITTER)

|                |                   |                                                           |
|----------------|-------------------|-----------------------------------------------------------|
| <b>LIMITS:</b> | Product standard: | Part 15 Subpart C §15.407 and RSS-247                     |
|                | Test standard:    | Part 15 Subpart C §15.407(b)(3)(6)(7) and RSS-247 6.2.3.2 |

### LIMITS

For transmitters operating in the 5.47 – 5.725 GHz band: all emissions outside of the 5.47 – 5.725 GHz band shall not exceed an EIRP of -27 dBm/MHz (68.23 dBμ V/m at 3m distance).

Radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c) / RSS-Gen):

| Frequency Range (MHz) | Field strength (μV/m) | Field strength (dBμV/m) | Measurement distance (m) |
|-----------------------|-----------------------|-------------------------|--------------------------|
| 0.009-0.490           | 2400/F(kHz)           | -                       | 300                      |
| 0.490-1.705           | 24000/F(kHz)          | -                       | 30                       |
| 1.705 - 30.0          | 30                    | -                       | 30                       |
| 30 - 88               | 100                   | 40                      | 3                        |
| 88 - 216              | 150                   | 43.5                    | 3                        |
| 216 - 960             | 200                   | 46                      | 3                        |
| 960 - 25000           | 500                   | 54                      | 3                        |

The emission limits shown in the above table are based on measurements employing CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.

For average radiated emission measurements above 1000 MHz, there is also a limit corresponding to 20 dB above the indicated values in the table is specified when measuring with peak detector function

### TEST SETUP

All radiated tests were performed in a semi-anechoic chamber. The measurement antenna is situated at 3 m for the frequency range 30-1000 MHz (Bilog antenna) and at 1m for the frequency range 1-40 GHz (1 GHz-18 GHz and 18 GHz-40 GHz Double ridge horn antennas).

For radiated emissions in the range 1-40 GHz that is performed at a distance closer than the specified distance, an inverse proportionality factor of 20 dB per decade is used to normalize the measured data for determining compliance.

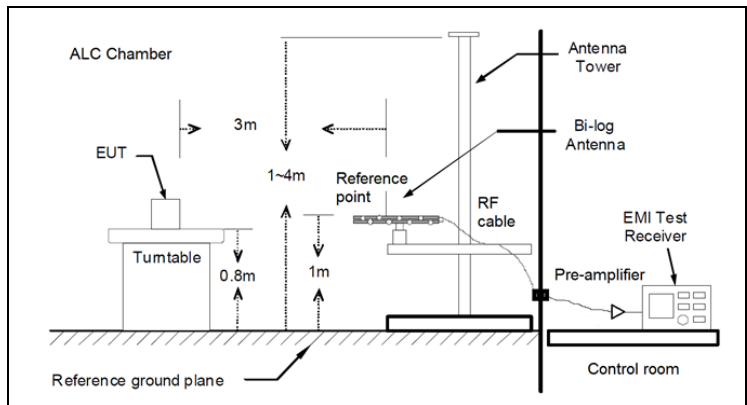
The equipment under test was set up on a non-conductive platform above the ground plane and the situation and orientation was varied to find the maximum radiated emission. It was also rotated 360° and the antenna height was varied from 1 to 4 meters to find the maximum radiated emission.

Measurements were made in both horizontal and vertical planes of polarization.

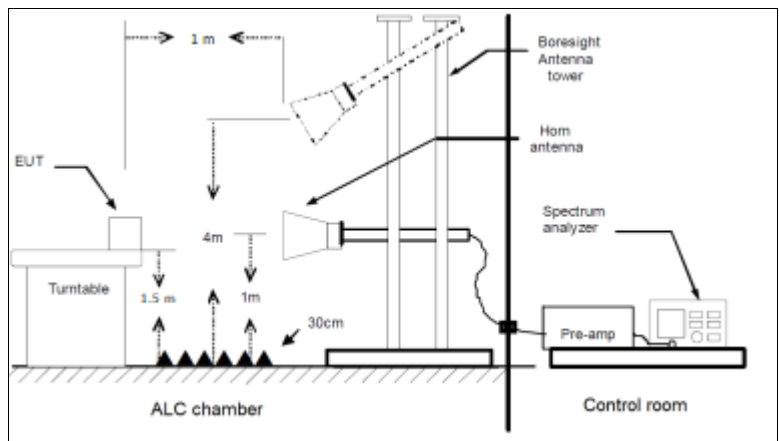
The field strength is calculated by adding correction factor to the measured level from the spectrum analyzer. This correction factor includes antenna factor, cable loss and pre-amplifiers gain.

## TEST SETUP (CONT.)

### Radiated measurements Setup $f < 1 \text{ GHz}$



### Radiated measurements setup $f > 1 \text{ GHz}$



**TESTED SAMPLES:**

S/02

**TESTED CONDITIONS MODES:**

TC#01 (a mode)

**TEST RESULTS:**

PASS

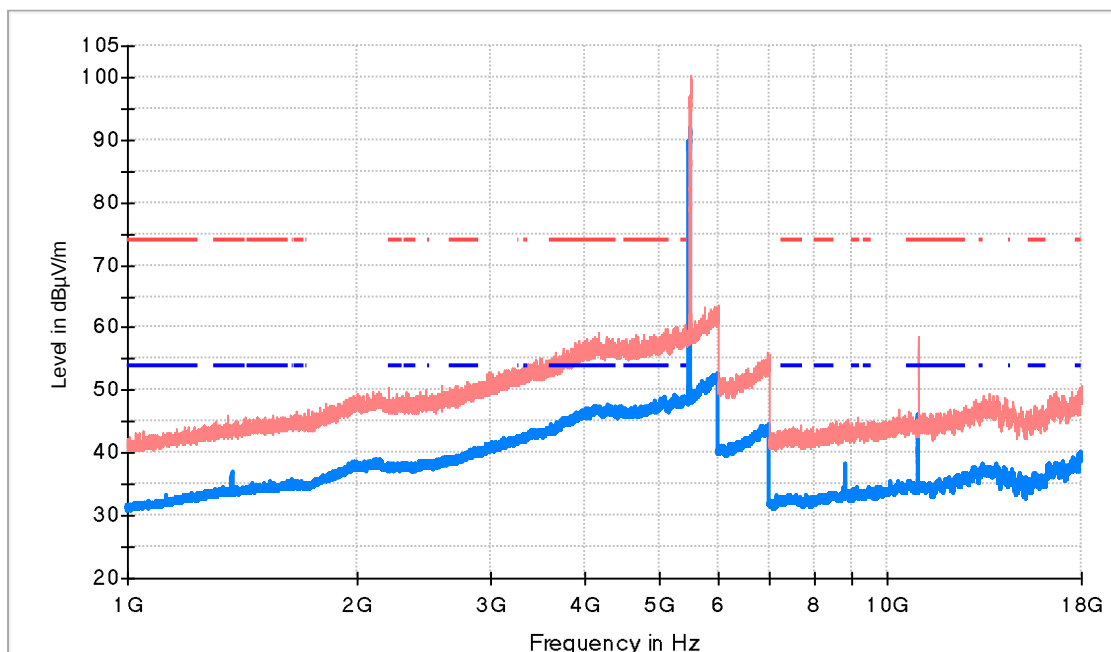
### Frequency range 1 GHz – 40 GHz

The results and plots below show the maximum measured levels in the 1- 40 GHz range.

**TEST RESULTS (Cont.)**

**1 GHz – 18 GHz**

**Low Channel**



- AVG\_MAXH
- PK+\_MAXH
- TX limits to Spurious Emission FCC15.407 (1 GHz to 40 GHz) Restricted Bands PK Limit
- TX limits to Spurious Emission FCC15.407 (1 GHz to 40 GHz) Restricted Bands AVG Limit

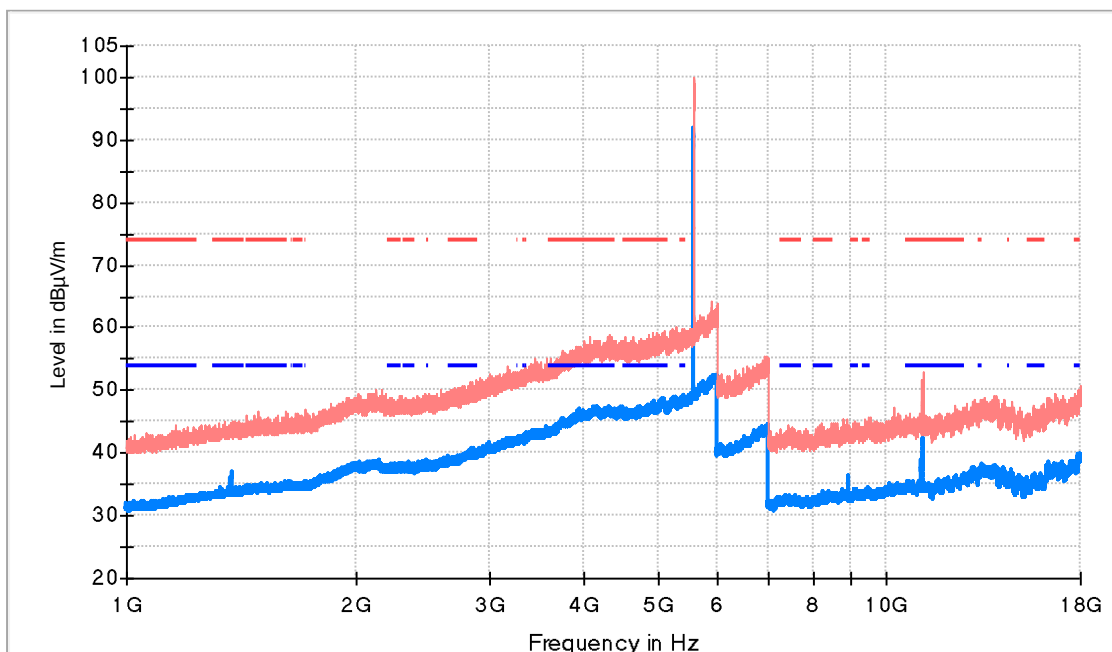
**Maximizations**

| Frequency (MHz) | PK+_MAXH (dBμV/m) | AVG_MAXH (dBμV/m) | Pol | Comment     |
|-----------------|-------------------|-------------------|-----|-------------|
| 1374.772727     | 44.7              | 37.0              | H   |             |
| 5499.090909     | 99.1              | 91.8              | H   | Fundamental |
| 8799.818182     | 44.6              | 38.0              | V   |             |
| 10999.090909    | 54.4              | 46.0              | H   |             |

TEST RESULTS (Cont.)

1 GHz – 18 GHz

Middle Channel



- AVG\_MAXH
- PK+\_MAXH
- TX limits to Spurious Emission FCC15.407 (1 GHz to 40 GHz) Restricted Bands PK Limit
- TX limits to Spurious Emission FCC15.407 (1 GHz to 40 GHz) Restricted Bands AVG Limit

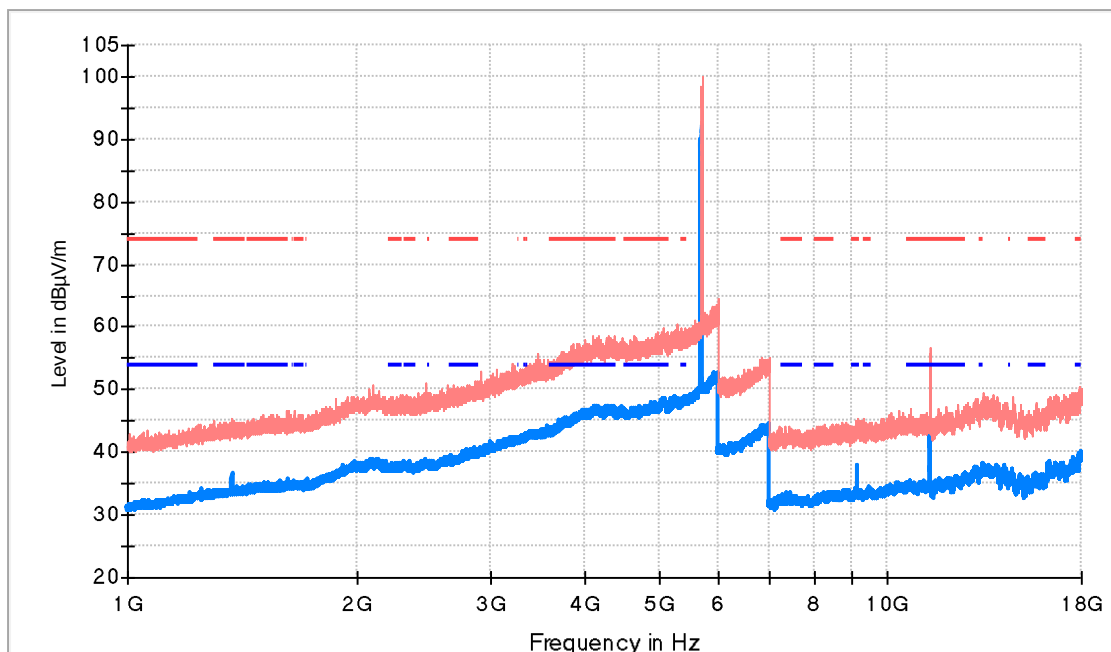
Maximizations

| Frequency (MHz) | PK+_MAXH (dBμV/m) | AVG_MAXH (dBμV/m) | Pol | Comment     |
|-----------------|-------------------|-------------------|-----|-------------|
| 1375.000000     | 44.5              | 37.0              | H   |             |
| 5578.636364     | 98.8              | 91.7              | H   | Fundamental |
| 8928.000000     | 44.1              | 36.4              | V   |             |
| 11156.727273    | 51.5              | 42.3              | H   |             |

**TEST RESULTS (Cont.)**

**1 GHz – 18 GHz**

**High Channel**



- AVG\_MAXH
- PK+\_MAXH
- TX limits to Spurious Emission FCC15.407 (1 GHz to 40 GHz) Restricted Bands PK Limit
- TX limits to Spurious Emission FCC15.407 (1 GHz to 40 GHz) Restricted Bands AVG Limit

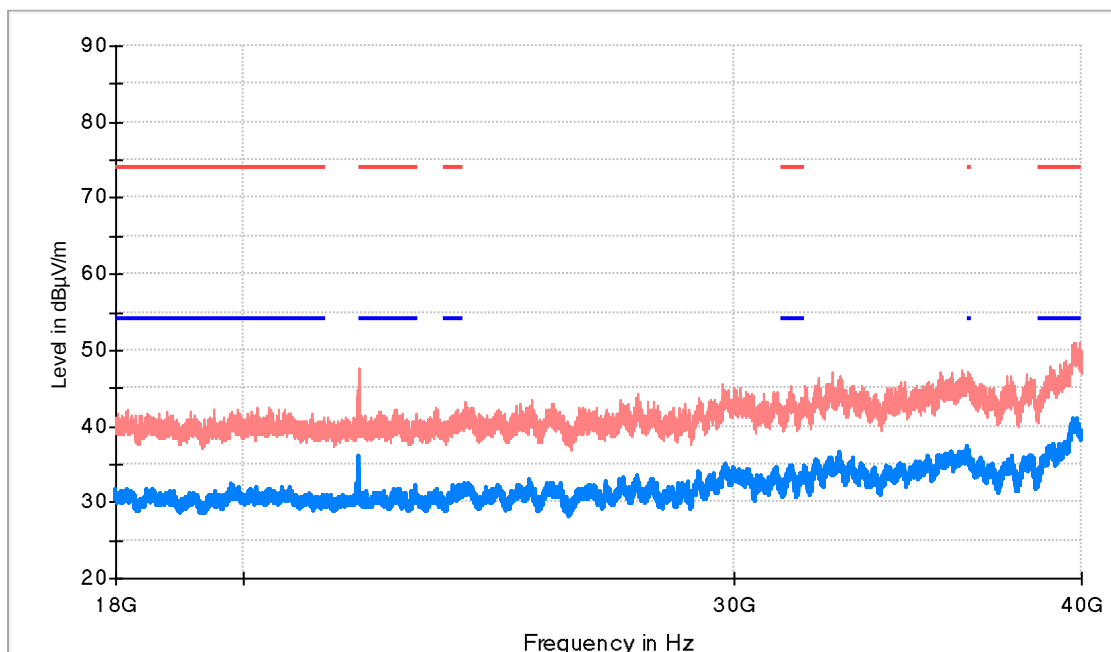
**Maximizations**

| Frequency (MHz) | PK+_MAXH (dBμV/m) | AVG_MAXH (dBμV/m) | Pol | Comment     |
|-----------------|-------------------|-------------------|-----|-------------|
| 1375.000000     | 44.4              | 36.7              | H   |             |
| 5698.863636     | 98.3              | 92.1              | H   | Fundamental |
| 9120.000000     | 45.1              | 37.7              | V   |             |
| 11396.181818    | 56.6              | 44.1              | H   |             |

**TEST RESULTS (Cont.)**

**18 – 40 GHz**

**Low Channel**



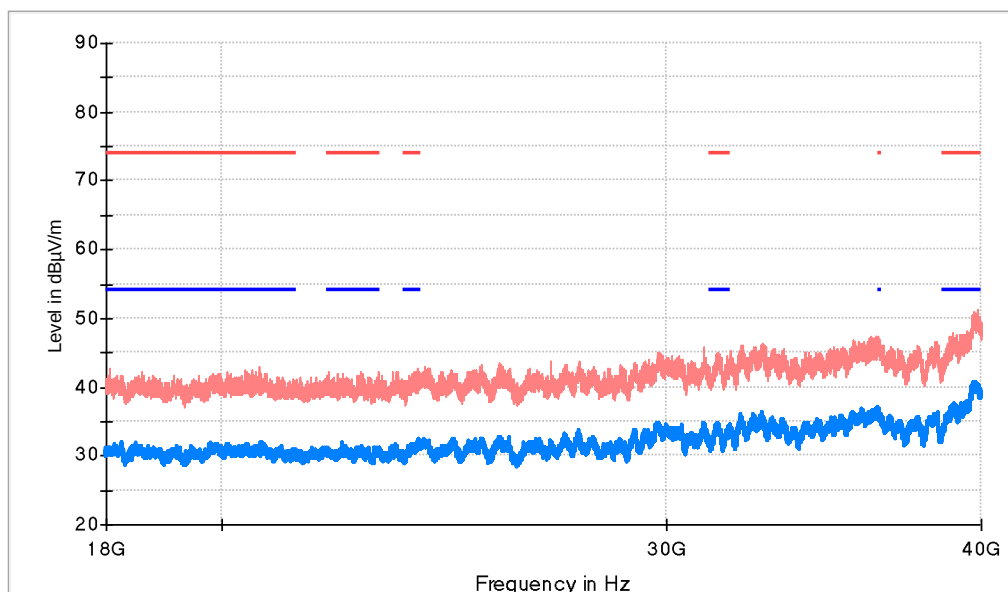
- AVG\_MAXH
- PK+\_MAXH
- TX limits to Spurious Emission FCC15.407 (1 GHz to 40 GHz) Restricted Bands PK Limit
- TX limits to Spurious Emission FCC15.407 (1 GHz to 40 GHz) Restricted Bands AVG Limit

**Maximizations**

| Frequency (MHz) | PK+_MAXH (dBμV/m) | AVG_MAXH (dBμV/m) | Pol |
|-----------------|-------------------|-------------------|-----|
| 21999.875000    | 43.0              | 35.9              | H   |

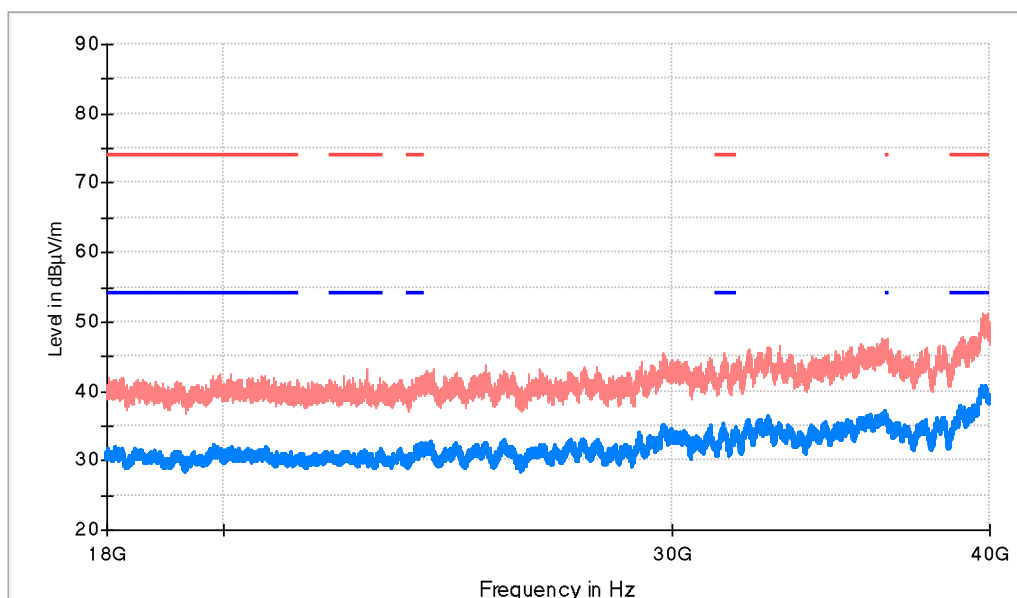
## TEST RESULTS (Cont.)

### Middle Channel



- AVG\_MAXH
- PK+\_MAXH
- TX limits to Spurious Emission FCC15.407 (1 GHz to 40 GHz) Restricted Bands PK Limit
- TX limits to Spurious Emission FCC15.407 (1 GHz to 40 GHz) Restricted Bands AVG Limit

### High Channel



- AVG\_MAXH
- PK+\_MAXH
- TX limits to Spurious Emission FCC15.407 (1 GHz to 40 GHz) Restricted Bands PK Limit
- TX limits to Spurious Emission FCC15.407 (1 GHz to 40 GHz) Restricted Bands AVG Limit

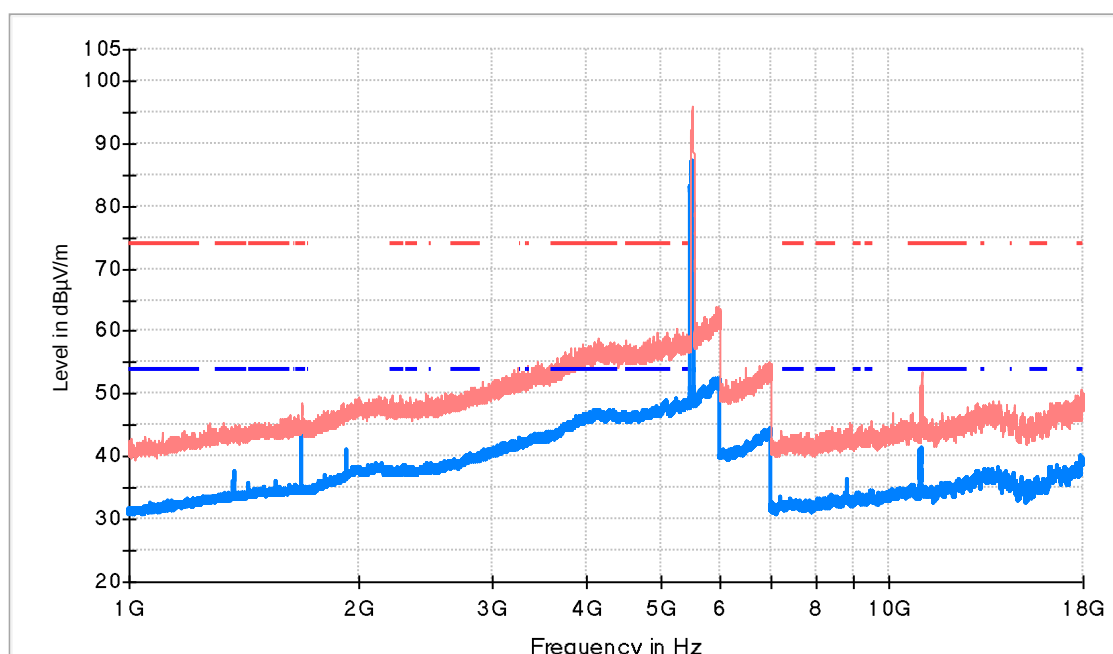
|                          |                       |
|--------------------------|-----------------------|
| TESTED SAMPLES:          | S/02                  |
| TESTED CONDITIONS MODES: | TC#02 (n mode 40 MHz) |
| TEST RESULTS:            | PASS                  |

### Frequency range 1 GHz – 40 GHz

The results and plots below show the maximum measured levels in the 1- 40 GHz range.

|                 |                |
|-----------------|----------------|
| FREQUENCY RANGE | 1 GHz – 18 GHz |
|-----------------|----------------|

### Low Channel



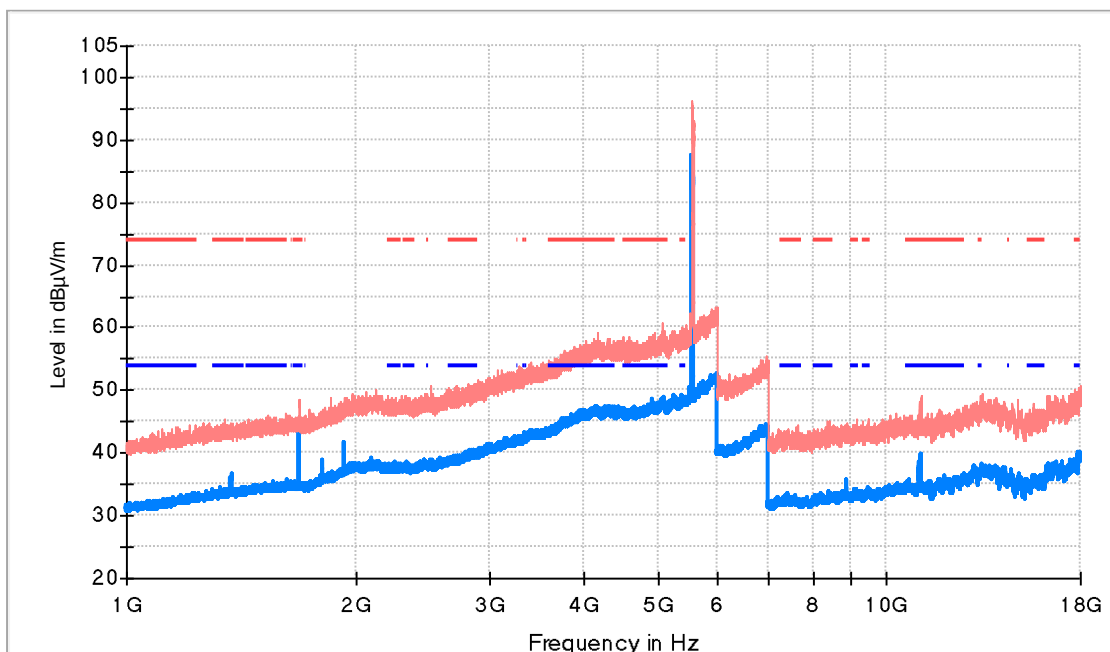
- AVG\_MAXH
- PK+\_MAXH
- TX limits to Spurious Emission FCC15.407 (1 GHz to 40 GHz) Restricted Bands PK Limit
- TX limits to Spurious Emission FCC15.407 (1 GHz to 40 GHz) Restricted Bands AVG Limit

### Maximizations

| Frequency (MHz) | PK+_MAXH (dBμV/m) | AVG_MAXH (dBμV/m) | Pol | Comment     |
|-----------------|-------------------|-------------------|-----|-------------|
| 1375.000000     | 44.0              | 37.5              | H   |             |
| 1687.500000     | 48.6              | 44.1              | V   |             |
| 1937.500000     | 48.1              | 41.1              | H   |             |
| 5507.727273     | 95.7              | 87.2              | H   | Fundamental |
| 8815.636364     | 43.5              | 36.3              | V   |             |
| 11022.000000    | 49.5              | 41.2              | H   |             |

## TEST RESULTS (Cont.)

### Middle Channel



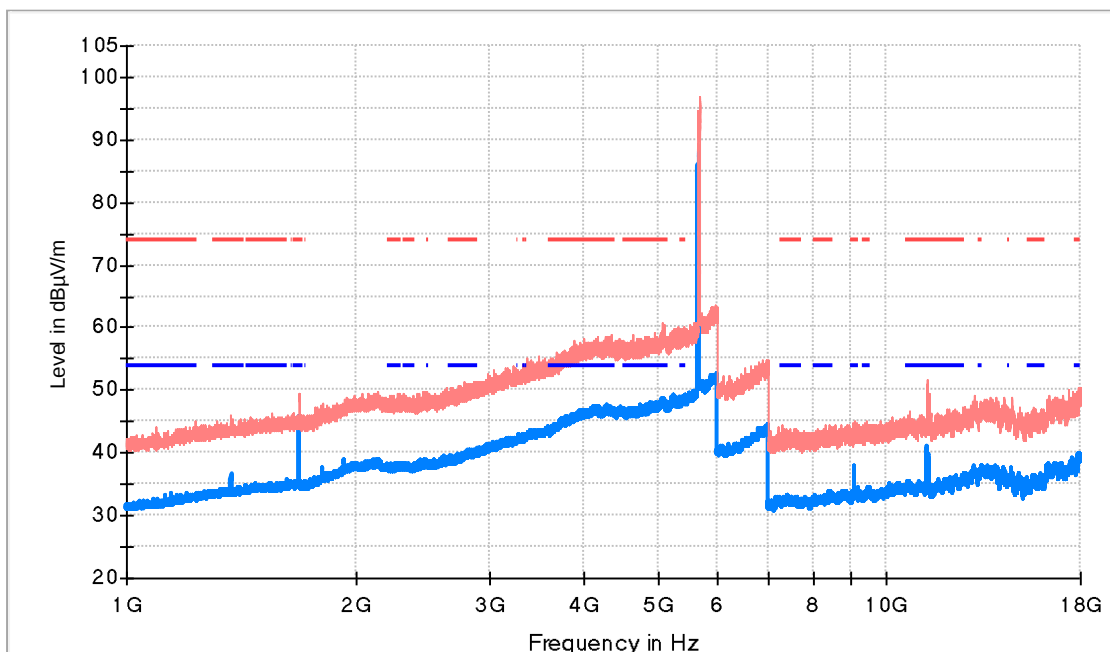
- AVG\_MAXH
- PK+\_MAXH
- TX limits to Spurious Emission FCC15.407 (1 GHz to 40 GHz) Restricted Bands PK Limit
- TX limits to Spurious Emission FCC15.407 (1 GHz to 40 GHz) Restricted Bands AVG Limit

### Maximizations

| Frequency (MHz) | PK+_MAXH (dBμV/m) | AVG_MAXH (dBμV/m) | Pol | Comment     |
|-----------------|-------------------|-------------------|-----|-------------|
| 1375.000000     | 43.6              | 36.7              | H   |             |
| 1687.500000     | 47.6              | 43.8              | H   |             |
| 1937.500000     | 48.4              | 41.8              | H   |             |
| 5551.590909     | 94.0              | 87.5              | H   | Fundamental |
| 8880.000000     | 44.2              | 35.7              | V   |             |
| 11100.545455    | 48.1              | 39.9              | H   |             |

## TEST RESULTS (Cont.)

### High Channel



- AVG\_MAXH
- PK+\_MAXH
- TX limits to Spurious Emission FCC15.407 (1 GHz to 40 GHz) Restricted Bands PK Limit
- TX limits to Spurious Emission FCC15.407 (1 GHz to 40 GHz) Restricted Bands AVG Limit

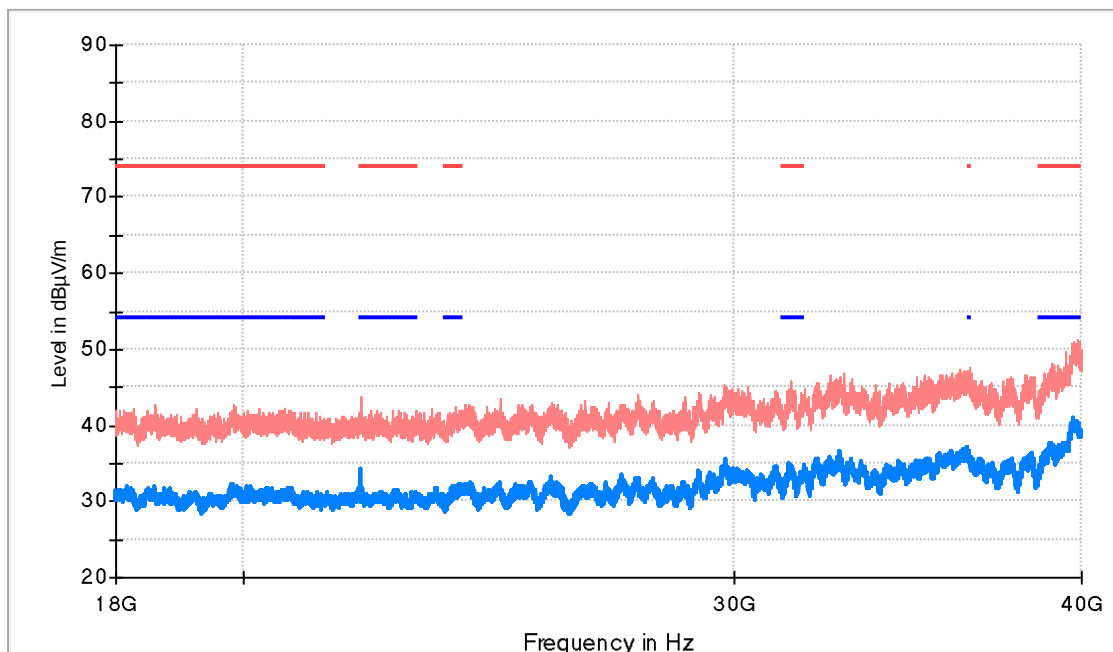
### Maximizations

| Frequency (MHz) | PK+_MAXH (dBμV/m) | AVG_MAXH (dBμV/m) | Pol | Comment     |
|-----------------|-------------------|-------------------|-----|-------------|
| 1375.000000     | 43.9              | 36.7              | H   |             |
| 1687.500000     | 49.4              | 45.8              | V   |             |
| 5671.363636     | 96.0              | 88.3              | H   | Fundamental |
| 9072.000000     | 44.4              | 37.8              | V   |             |
| 11337.818182    | 49.8              | 41.1              | H   |             |
| 1375.000000     | 43.9              | 36.7              | H   |             |

**TEST RESULTS (Cont.)**

**18 GHz – 40 GHz**

**Low Channel**



- AVG\_MAXH
- PK+\_MAXH
- TX limits to Spurious Emission FCC15.407 (1 GHz to 40 GHz) Restricted Bands PK Limit
- TX limits to Spurious Emission FCC15.407 (1 GHz to 40 GHz) Restricted Bands AVG Limit

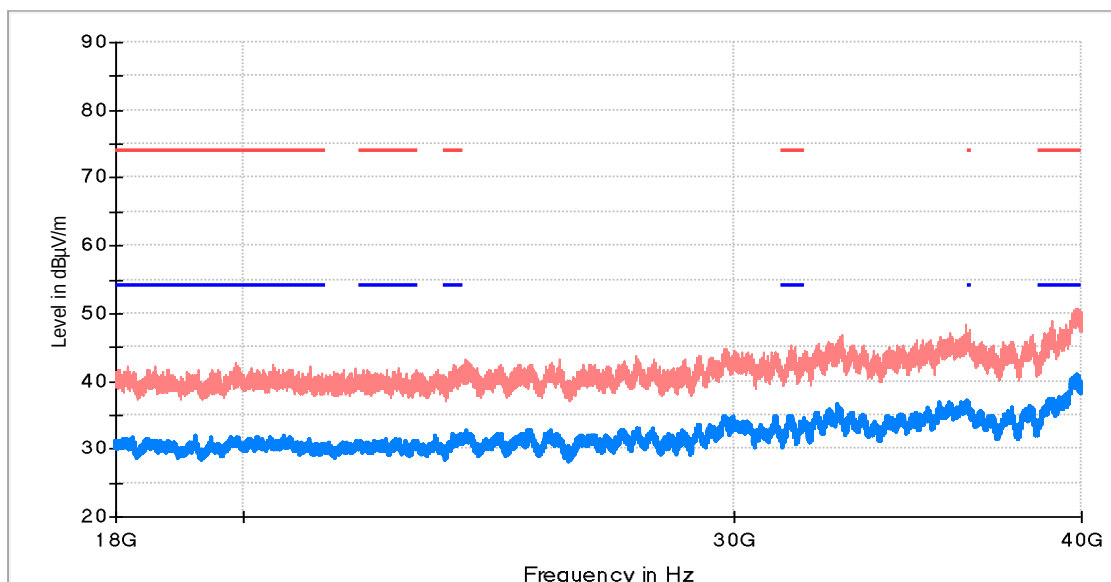
**Maximizations**

| Frequency<br>(MHz) | PK+_MAXH<br>(dBμV/m) | AVG_MAXH<br>(dBμV/m) | Pol |
|--------------------|----------------------|----------------------|-----|
| 22040.437500       | 43.8                 | 34.3                 | H   |

TEST RESULTS (Cont.)

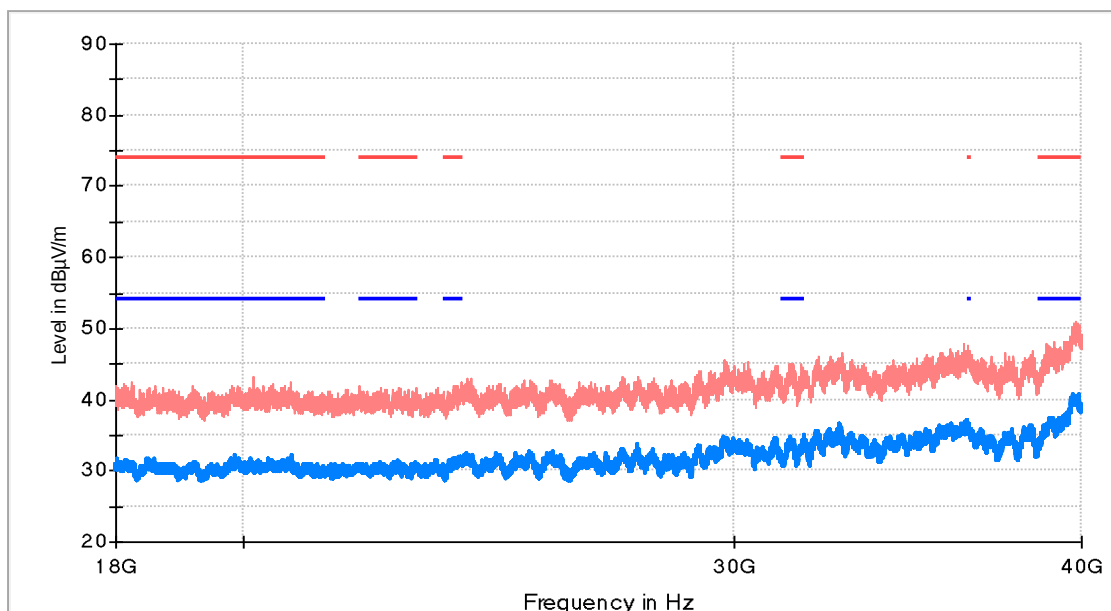
18 GHz – 40 GHz

Middle Channel



- AVG\_MAXH
- PK+\_MAXH
- TX limits to Spurious Emission FCC15.407 (1 GHz to 40 GHz) Restricted Bands PK Limit
- TX limits to Spurious Emission FCC15.407 (1 GHz to 40 GHz) Restricted Bands AVG Limit

High Channel



- AVG\_MAXH
- PK+\_MAXH
- TX limits to Spurious Emission FCC15.407 (1 GHz to 40 GHz) Restricted Bands PK Limit
- TX limits to Spurious Emission FCC15.407 (1 GHz to 40 GHz) Restricted Bands AVG Limit

## Appendix E:

### Test results 5.725 GHz – 5.85 GHz Band

# Appendix E Content

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## DESCRIPTION OF TEST CONDITIONS

| TEST CONDITIONS                  | DESCRIPTION                                                                                                                                                                                                                                                                                                                                               |
|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TC#01 <sup>(1)</sup><br>(a mode) | <u>Power supply (V):</u><br>$V_{\text{nominal}} = 13.5 \text{ Vdc}$<br><u>Test Frequencies for Conducted/Radiated tests (20 MHz):</u><br>Lowest channel: 5745 MHz<br>Middle channel: 5785 MHz<br>Highest channel: 5825 MHz                                                                                                                                |
| TC#02 <sup>(1)</sup><br>(n mode) | <u>Power supply (V):</u><br>$V_{\text{nominal}} = 13.5 \text{ Vdc}$<br><u>Test Frequencies for Conducted/Radiated tests (20 MHz):</u><br>Lowest channel: 5745 MHz<br>Middle channel: 5785 MHz<br>Highest channel: 5825 MHz<br><br><u>Test Frequencies for Conducted/Radiated tests (40 MHz):</u><br>Lowest channel: 5755 MHz<br>Highest channel: 5795 MHz |

Note (1): For spurious emissions for OFDM modes 802.11a, 802.11n20 and 802.11n40 a preliminary scan was performed to determine the worst case.

The data rates of 6Mb/s for 802.11a and MCS0 for 802.11n40 were selected based on preliminary testing that identified those rates corresponding to the worst cases.

## TEST E.1: 26DB EMISSION BANDWIDTH AND OCCUPIED BANDWIDTH

### LIMITS:

Product standard:

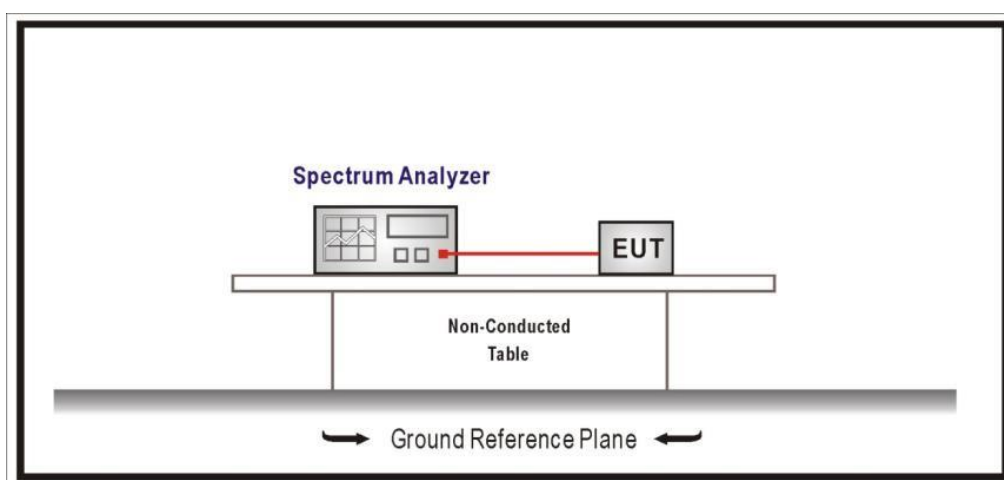
Part 15 Subpart C §15.403 and RSS-247

Test standard:

Part 15 Subpart C §15.403 and RSS-247 6.2.4

No requirements requested

### TEST SETUP:



### TESTED SAMPLES:

S/01

### TESTED CONDITIONS MODES:

TC#01 (a mode)

### TEST RESULTS:

PASS

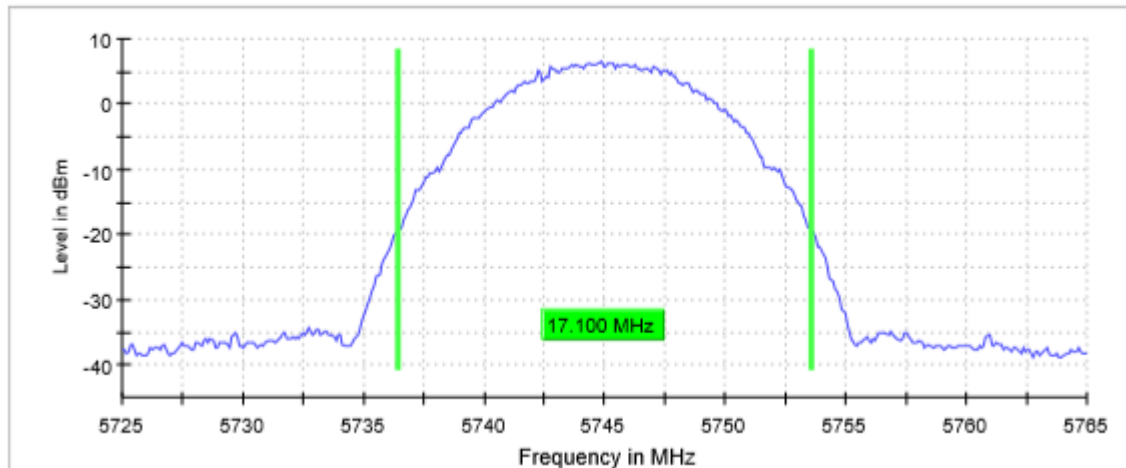
### Bandwidth: 20 MHz

|                               | Lowest frequency<br>5745 MHz | Middle frequency<br>5785 MHz | Highest frequency<br>5825 MHz |
|-------------------------------|------------------------------|------------------------------|-------------------------------|
| 26dB Bandwidth (MHz)          | 17.100                       | 17.300                       | 17.200                        |
| Occupied bandwidth (MHz)      | 12.900                       | 13.000                       | 13.100                        |
| Measurement uncertainty (kHz) | <± 8.33                      |                              |                               |

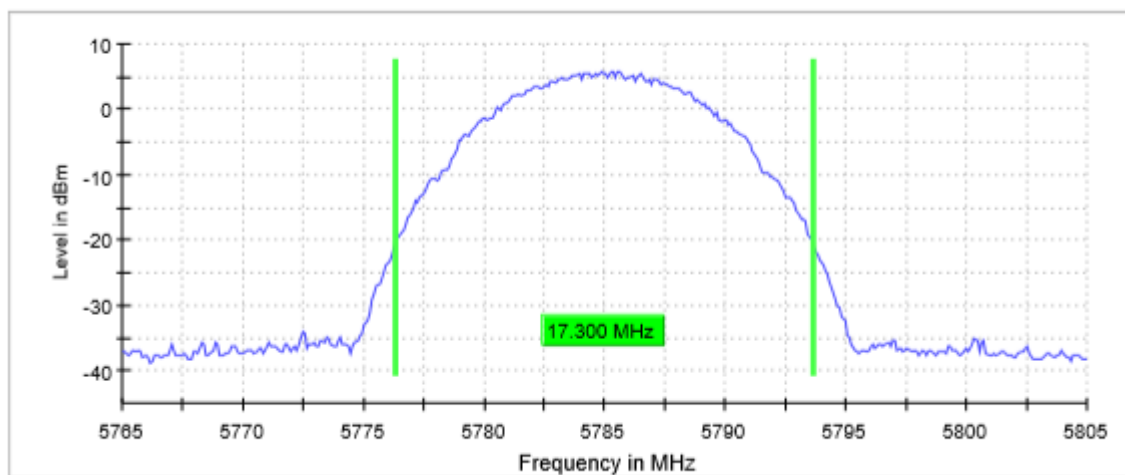
**TEST RESULTS (Cont.):**

**26 dB BANDWIDTH**

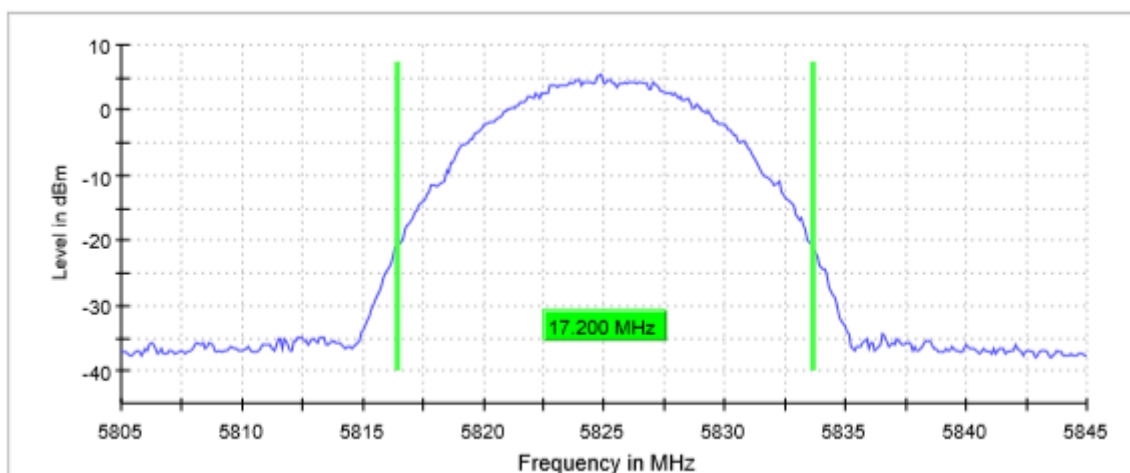
**Lowest Channel**



**Middle Channel**



**Highest Channel**



## TEST RESULTS (Cont.)

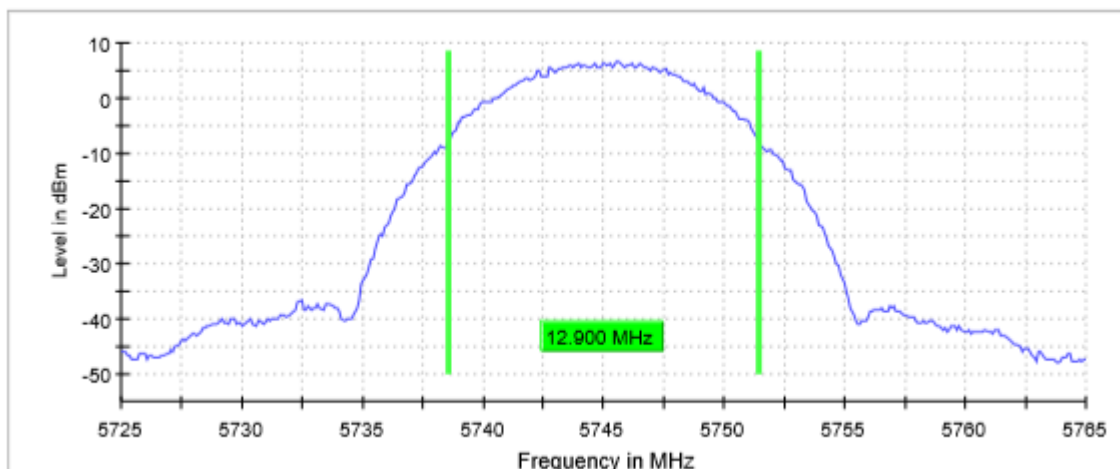
### Measurement

| Setting               | Instrument Value | Instrument Value | Instrument Value |
|-----------------------|------------------|------------------|------------------|
| Start Frequency       | 5.72500 GHz      | 5.76500 GHz      | 5.80500 GHz      |
| Stop Frequency        | 5.76500 GHz      | 5.80500 GHz      | 5.84500 GHz      |
| Span                  | 40.000 MHz       | 40.000 MHz       | 40.000 MHz       |
| RBW                   | 200.000 kHz      | 200.000 kHz      | 200.000 kHz      |
| VBW                   | 1.000 MHz        | 1.000 MHz        | 1.000 MHz        |
| SweepPoints           | 400              | 400              | 400              |
| Sweeptime             | 28.477 $\mu$ s   | 28.477 $\mu$ s   | 28.477 $\mu$ s   |
| Reference Level       | 20.000 dBm       | 20.000 dBm       | 20.000 dBm       |
| Attenuation           | 40.000 dB        | 40.000 dB        | 40.000 dB        |
| Detector              | MaxPeak          | MaxPeak          | MaxPeak          |
| SweepCount            | 200              | 200              | 200              |
| Filter                | 3 dB             | 3 dB             | 3 dB             |
| Trace Mode            | Max Hold         | Max Hold         | Max Hold         |
| Sweeptype             | FFT              | FFT              | FFT              |
| Preamp                | Off              | Off              | Off              |
| Stablemode            | Trace            | Trace            | Trace            |
| Stablevalue           | 0.30 dB          | 0.30 dB          | 0.30 dB          |
| Run                   | 45 / max. 150    | 63 / max. 150    | 77 / max. 150    |
| Stable                | 5 / 5            | 5 / 5            | 5 / 5            |
| Max Stable Difference | 0.23 dB          | 0.28 dB          | 0.00 dB          |

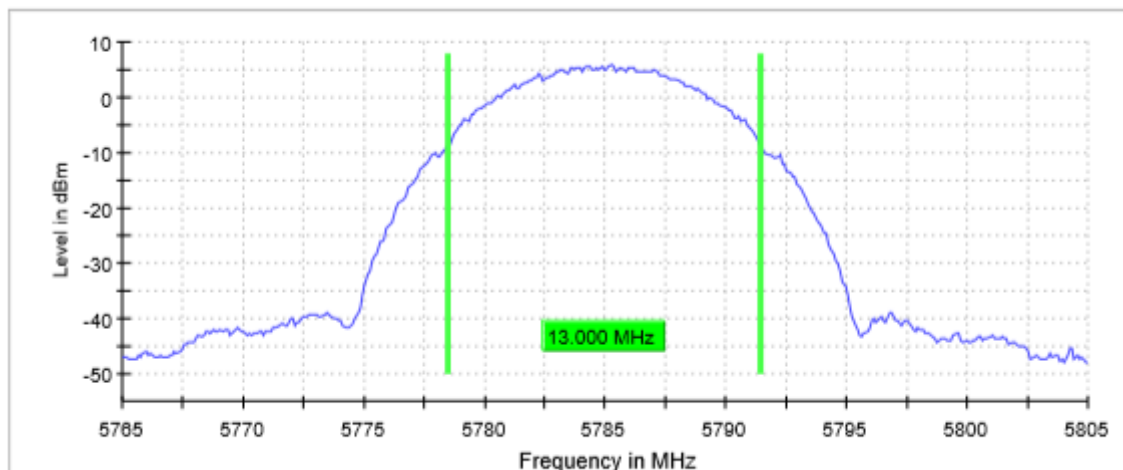
**TEST RESULTS (Cont.):**

**OCCUPIED BANDWIDTH**

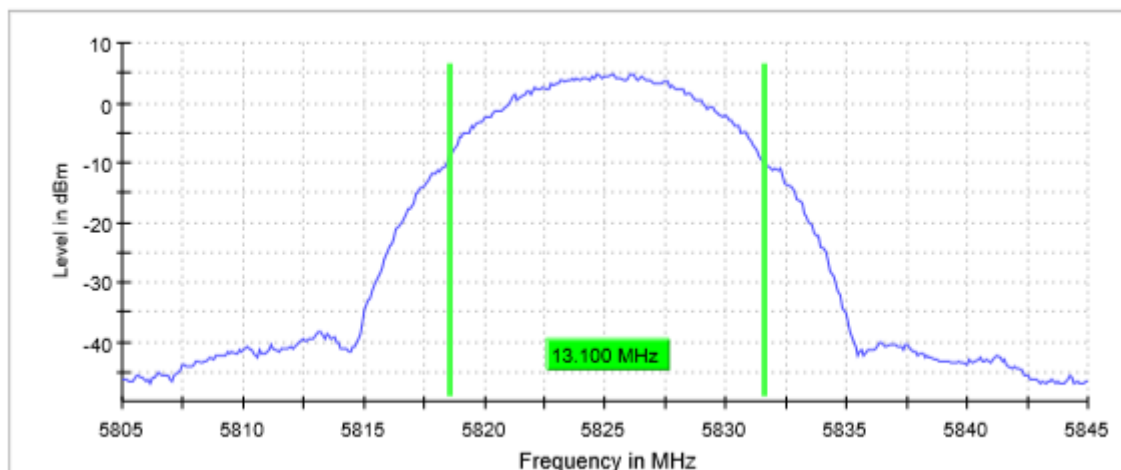
**Lowest Channel**



**Middle Channel**



**Highest Channel**



| TEST RESULTS (Cont.)  |                  |                  |                  |
|-----------------------|------------------|------------------|------------------|
| Measurement           |                  |                  |                  |
| Setting               | Instrument Value | Instrument Value | Instrument Value |
| Start Frequency       | 5.72500 GHz      | 5.76500 GHz      | 5.80500 GHz      |
| Stop Frequency        | 5.76500 GHz      | 5.80500 GHz      | 5.84500 GHz      |
| Span                  | 40.000 MHz       | 40.000 MHz       | 40.000 MHz       |
| RBW                   | 200.000 kHz      | 200.000 KHz      | 200.000 kHz      |
| VBW                   | 1.000 MHz        | 1.000 MHz        | 1.000 MHz        |
| SweepPoints           | 400              | 400              | 400              |
| SweepTime             | 28.477 μs        | 28.477 μs        | 28.477 μs        |
| Reference Level       | 10.000 dBm       | 10.000 dBm       | 10.000 dBm       |
| Attenuation           | 30.000 dB        | 30.000 dB        | 30.000 dB        |
| Detector              | MaxPeak          | MaxPeak          | MaxPeak          |
| SweepCount            | 200              | 200              | 200              |
| Filter                | 3 dB             | 3 dB             | 3 dB             |
| Trace Mode            | Max Hold         | Max Hold         | Max Hold         |
| SweepType             | FFT              | FFT              | FFT              |
| Preamp                | Off              | Off              | Off              |
| Stablemode            | Trace            | Trace            | Trace            |
| Stablevalue           | 0.30 dB          | 0.30 dB          | 0.30 dB          |
| Run                   | 70 / max. 150    | 58 / max. 150    | 87 / max. 150    |
| Stable                | 5 / 5            | 5 / 5            | 5 / 5            |
| Max Stable Difference | 0.21 dB          | 0.07 dB          | 0.28 dB          |

|                          |                       |
|--------------------------|-----------------------|
| TESTED SAMPLES:          | S/01                  |
| TESTED CONDITIONS MODES: | TC#02 (n Mode 20 MHz) |
| TEST RESULTS:            | PASS                  |

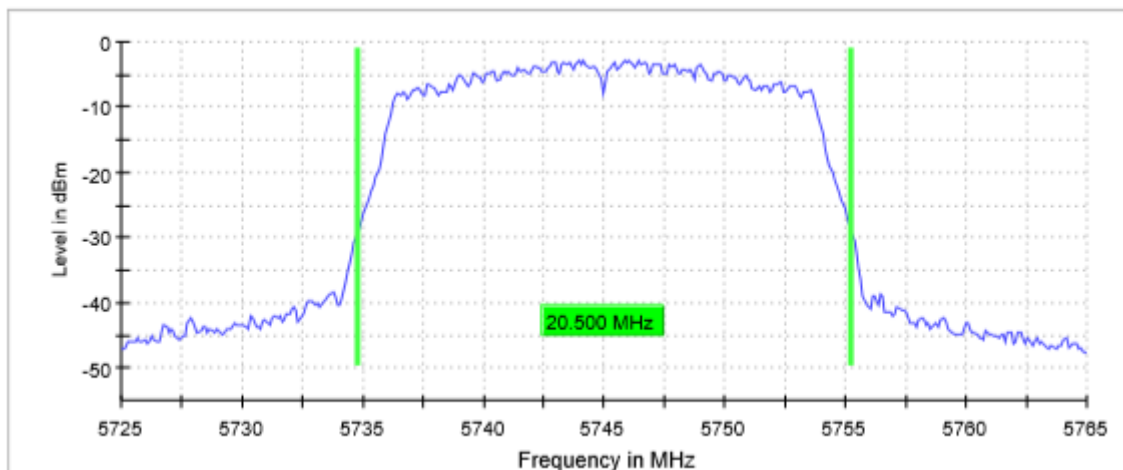
Bandwidth: 20 MHz

|                               |                  |                  |                   |
|-------------------------------|------------------|------------------|-------------------|
|                               | Lowest frequency | Middle frequency | Highest frequency |
|                               | 5745 MHz         | 5785 MHz         | 5825 MHz          |
| 26dB bandwidth (MHz)          | 20.500           | 20.500           | 20.600            |
| Occupied bandwidth (MHz)      | 17.600           | 17.700           | 17.600            |
| Measurement uncertainty (kHz) | <± 8.33          |                  |                   |

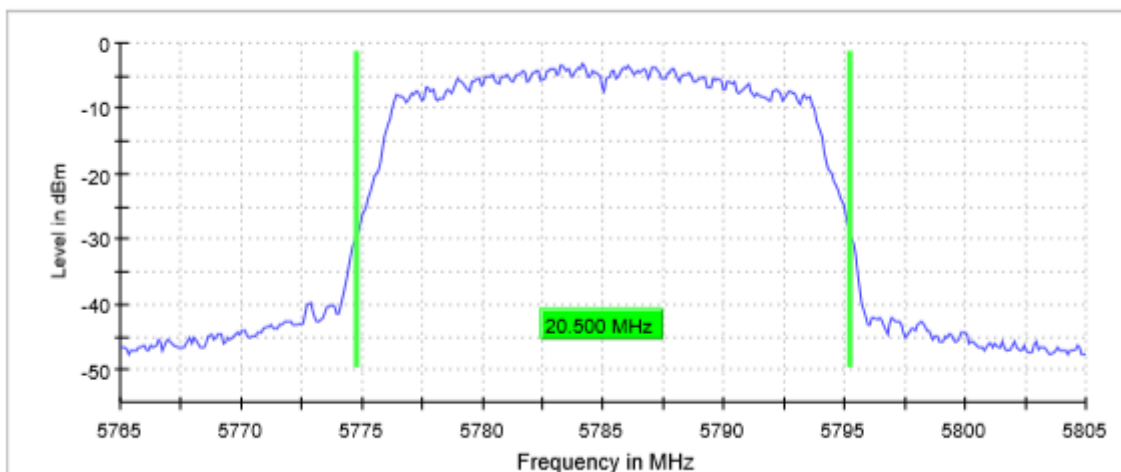
**TEST RESULTS (Cont.):**

**26 dB BANDWIDTH**

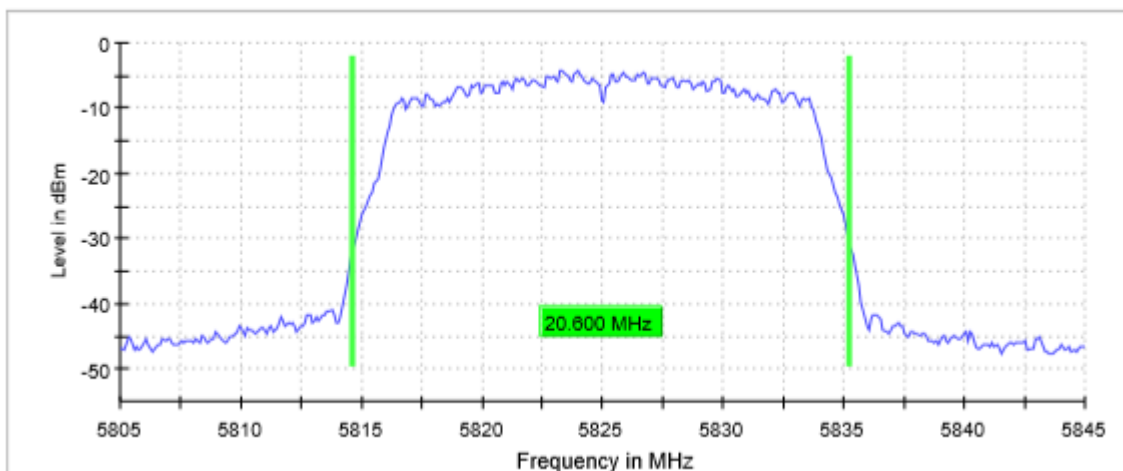
**Lowest Channel**



**Middle Channel**



**Highest Channel**



## TEST RESULTS (Cont.):

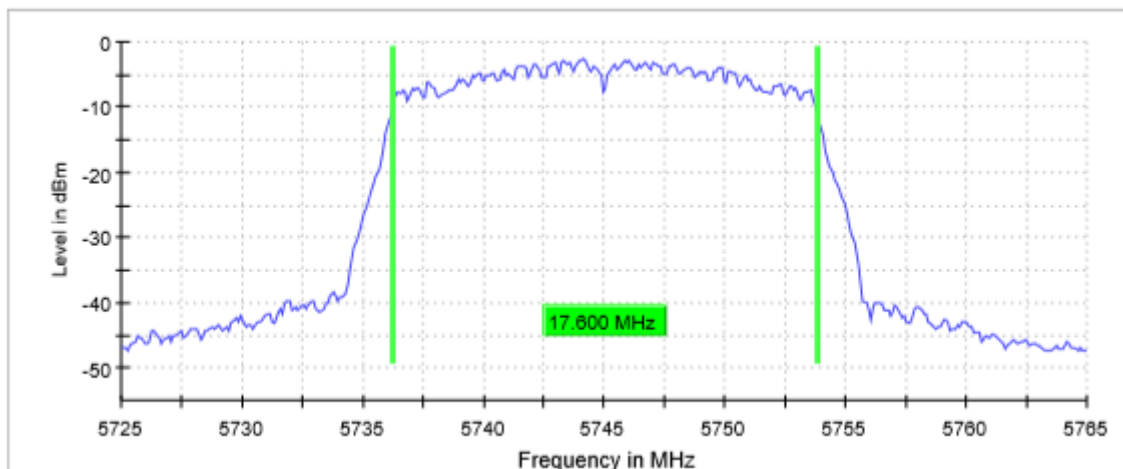
### Measurement

| Setting               | Instrument Value | Instrument Value | Instrument Value |
|-----------------------|------------------|------------------|------------------|
| Start Frequency       | 5.72500 GHz      | 5.76500 GHz      | 5.80500 GHz      |
| Stop Frequency        | 5.76500 GHz      | 5.80500 GHz      | 5.84500 GHz      |
| Span                  | 40.000 MHz       | 40.000 MHz       | 40.000 MHz       |
| RBW                   | 200.000 kHz      | 200.000 kHz      | 200.000 kHz      |
| VBW                   | 1.000 MHz        | 1.000 MHz        | 1.000 MHz        |
| SweepPoints           | 400              | 400              | 400              |
| SweepTime             | 28.477 $\mu$ s   | 28.477 $\mu$ s   | 28.477 $\mu$ s   |
| Reference Level       | 10.000 dBm       | 10.000 dBm       | 10.000 dBm       |
| Attenuation           | 30.000 dB        | 30.000 dB        | 30.000 dB        |
| Detector              | MaxPeak          | MaxPeak          | MaxPeak          |
| SweepCount            | 200              | 200              | 200              |
| Filter                | 3 dB             | 3 dB             | 3 dB             |
| Trace Mode            | Max Hold         | Max Hold         | Max Hold         |
| SweepType             | FFT              | FFT              | FFT              |
| Preamp                | Off              | Off              | off              |
| Stablemode            | Trace            | Trace            | Trace            |
| Stablevalue           | 0.30 dB          | 0.30 dB          | 0.30 dB          |
| Run                   | 55 / max. 150    | 51 / max. 150    | 34 / max. 150    |
| Stable                | 5 / 5            | 5 / 5            | 5 / 5            |
| Max Stable Difference | 0.19 dB          | 0.27 dB          | 0.00 dB          |

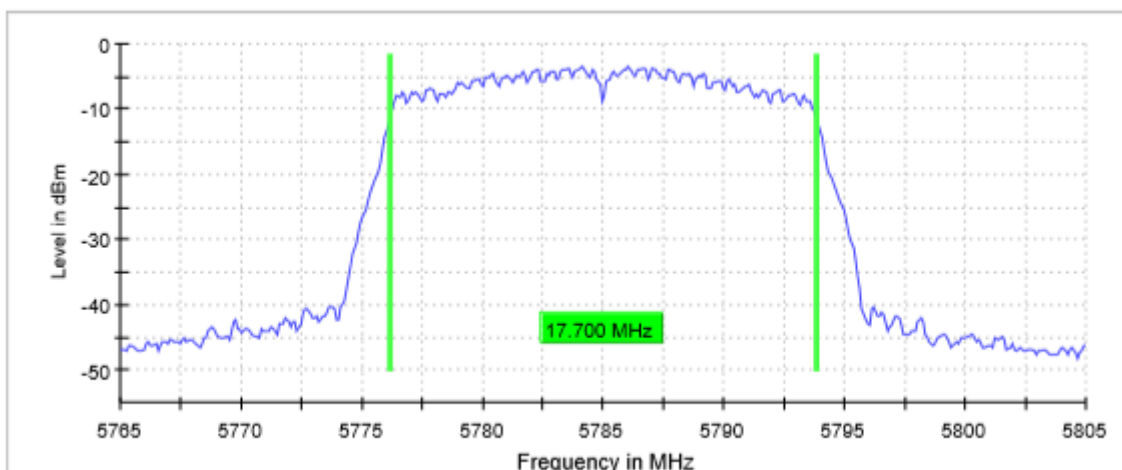
**TEST RESULTS (Cont.):**

**OCCUPIED BANDWIDTH**

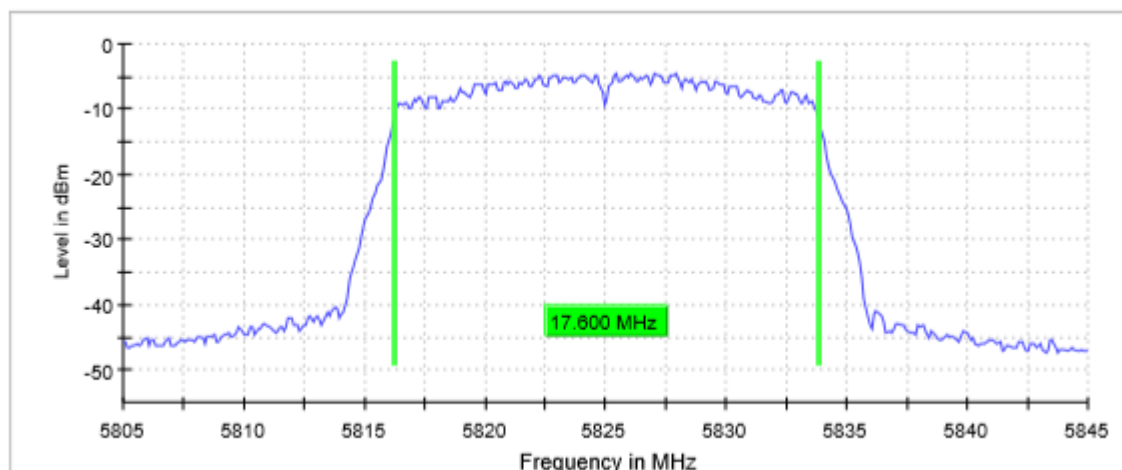
**Lowest Channel**



**Middle Channel**



**Highest Channel**



## TEST RESULTS (Cont.):

### Measurement

| Setting               | Instrument Value | Instrument Value | Instrument Value |
|-----------------------|------------------|------------------|------------------|
| Start Frequency       | 5.72500 GHz      | 5.76500 GHz      | 5.80500 GHz      |
| Stop Frequency        | 5.76500 GHz      | 5.80500 GHz      | 5.84500 GHz      |
| Span                  | 40.000 MHz       | 40.000 MHz       | 40.000 MHz       |
| RBW                   | 200.000 kHz      | 200.000 kHz      | 200.000 kHz      |
| VBW                   | 1.000 MHz        | 1.000 MHz        | 1.000 MHz        |
| SweepPoints           | 400              | 400              | 400              |
| Sweeptime             | 28.477 $\mu$ s   | 28.477 $\mu$ s   | 28.477 $\mu$ s   |
| Reference Level       | 10.000 dBm       | 10.000 dBm       | 10.000 dBm       |
| Attenuation           | 30.000 dB        | 30.000 dB        | 30.000 dB        |
| Detector              | MaxPeak          | MaxPeak          | MaxPeak          |
| SweepCount            | 200              | 200              | 200              |
| Filter                | 3 dB             | 3 dB             | 3 dB             |
| Trace Mode            | Max Hold         | Max Hold         | Max Hold         |
| Sweeptype             | FFT              | FFT              | FFT              |
| Preampl               | Off              | Off              | Off              |
| Stablemode            | Trace            | Trace            | Trace            |
| Stablevalue           | 0.30 dB          | 0.30 dB          | 0.30 dB          |
| Run                   | 55 / max. 150    | 59 / max. 150    | 73 / max. 150    |
| Stable                | 5 / 5            | 5 / 5            | 5 / 5            |
| Max Stable Difference | 0.08 dB          | 0.17 dB          | 0.11 dB          |

### TESTED SAMPLES:

S/01

### TESTED CONDITIONS MODES:

TC#02 (n Mode 40 MHz)

### TEST RESULTS:

PASS

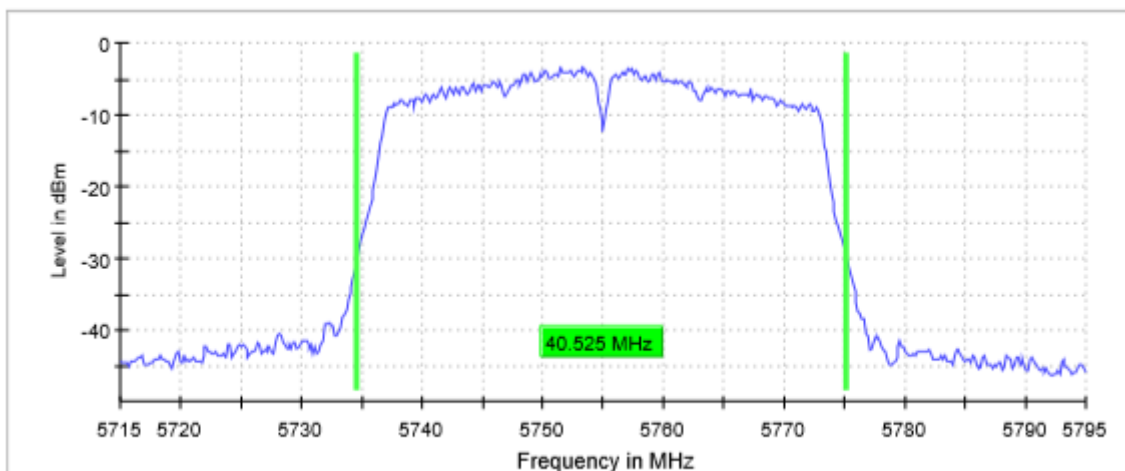
### Bandwidth: 40 MHz

|                               |                              |                               |
|-------------------------------|------------------------------|-------------------------------|
|                               | Lowest frequency<br>5755 MHz | Highest frequency<br>5795 MHz |
| 26dB bandwidth (MHz)          | 40.525                       | 40.525                        |
| Occupied bandwidth (MHz)      | 36.250                       | 36.500                        |
| Measurement uncertainty (kHz) | < $\pm$ 8.33                 |                               |

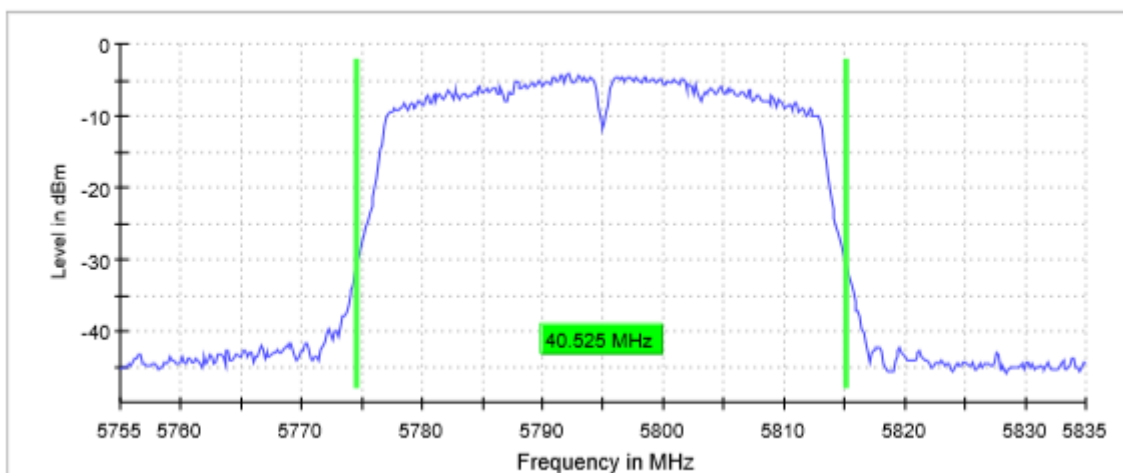
**TEST RESULTS (Cont.):**

**26 dB BANDWIDTH**

**Lowest Channel**



**Highest Channel**



# TEST RESULTS (Cont.):

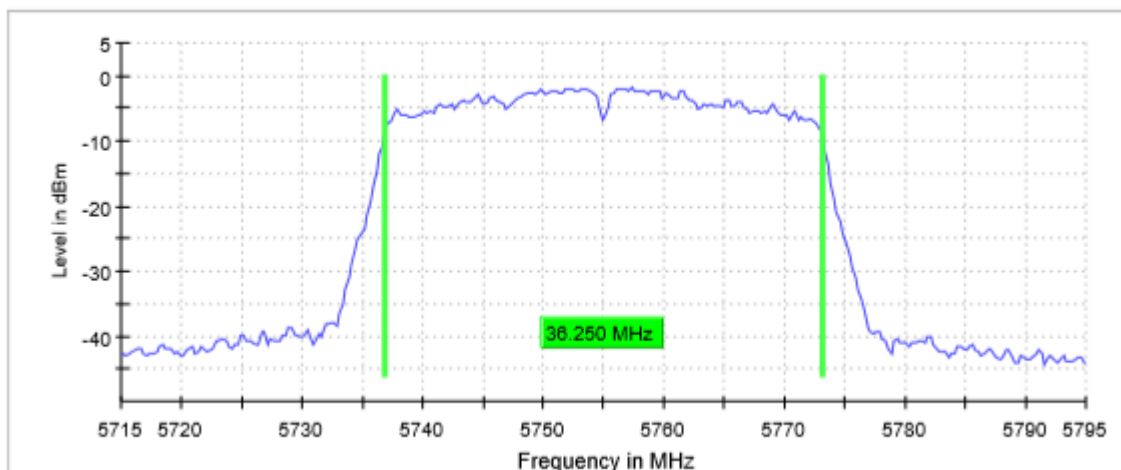
## Measurement

| Setting               | Instrument Value | Instrument Value |
|-----------------------|------------------|------------------|
| Start Frequency       | 5.71500 GHz      | 5.75500 GHz      |
| Stop Frequency        | 5.79500 GHz      | 5.83500 GHz      |
| Span                  | 80.000 MHz       | 80.000 MHz       |
| RBW                   | 300.000 kHz      | 300.000 kHz      |
| VBW                   | 1.000 MHz        | 1.000 MHz        |
| SweepPoints           | 533              | 533              |
| Sweeptime             | 31.621 $\mu$ s   | 31.621 $\mu$ s   |
| Reference Level       | 10.000 dBm       | 10.000 dBm       |
| Attenuation           | 30.000 dB        | 30.000 dB        |
| Detector              | MaxPeak          | MaxPeak          |
| SweepCount            | 200              | 200              |
| Filter                | 3 dB             | 3 dB             |
| Trace Mode            | Max Hold         | Max Hold         |
| Sweeptype             | FFT              | FFT              |
| Preamplifier          | Off              | Off              |
| Stablemode            | Trace            | Trace            |
| Stablevalue           | 0.30 dB          | 0.30 dB          |
| Run                   | 90 / max. 150    | 108 / max. 150   |
| Stable                | 5 / 5            | 5 / 5            |
| Max Stable Difference | 0.11 dB          | 0.01 dB          |

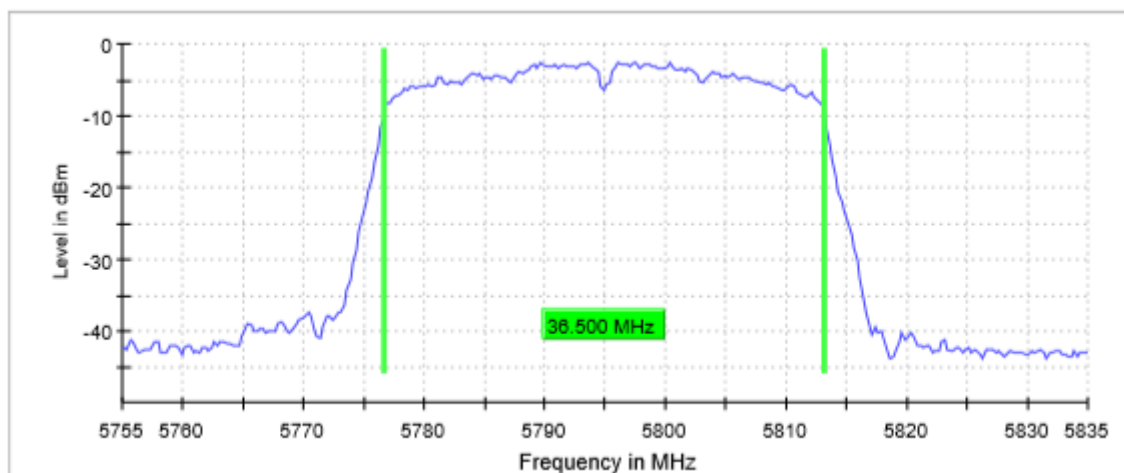
**TEST RESULTS (Cont.):**

**OCCUPIED BANDWIDTH**

**Lowest Channel**



**Highest Channel**



**TEST RESULTS (Cont.):**

**Measurement**

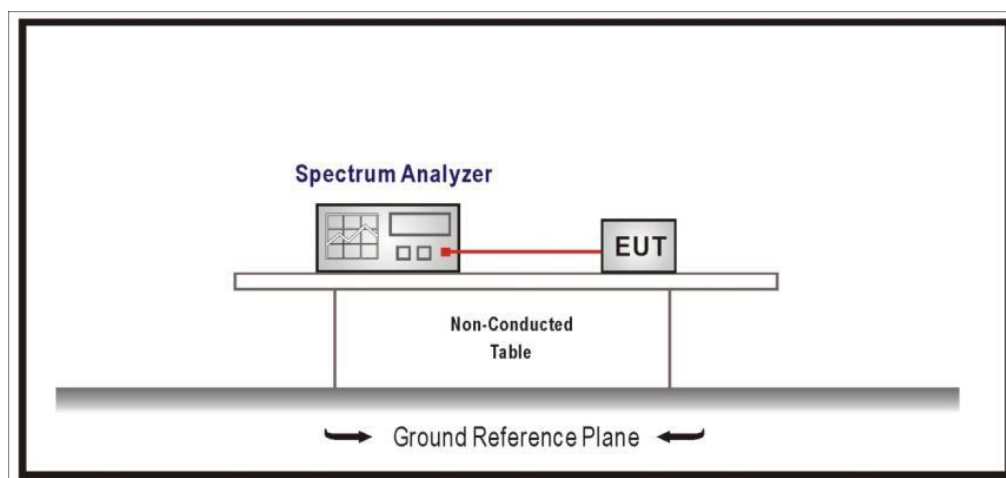
| Setting               | Instrument Value | Instrument Value |
|-----------------------|------------------|------------------|
| Start Frequency       | 5.71500 GHz      | 5.75500 GHz      |
| Stop Frequency        | 5.79500 GHz      | 5.83500 GHz      |
| Span                  | 80.000 MHz       | 80.000 MHz       |
| RBW                   | 500.000 kHz      | 500.000 kHz      |
| VBW                   | 2.000 MHz        | 2.000 MHz        |
| SweepPoints           | 320              | 320              |
| Sweeptime             | 18.906 $\mu$ s   | 18.906 $\mu$ s   |
| Reference Level       | 10.000 dBm       | 10.000 dBm       |
| Attenuation           | 30.000 dB        | 30.000 dB        |
| Detector              | MaxPeak          | MaxPeak          |
| SweepCount            | 200              | 200              |
| Filter                | 3 dB             | 3 dB             |
| Trace Mode            | Max Hold         | Max Hold         |
| Sweeptype             | FFT              | FFT              |
| Preamplifier          | Off              | Off              |
| Stablemode            | Trace            | Trace            |
| Stablevalue           | 0.30 dB          | 0.30 dB          |
| Run                   | 65 / max. 150    | 75 / max. 150    |
| Stable                | 5 / 5            | 5 / 5            |
| Max Stable Difference | 0.23 dB          | 0.11 dB          |

## TEST E.2: 6DB BANDWIDTH

|                |                   |                                                   |
|----------------|-------------------|---------------------------------------------------|
| <b>LIMITS:</b> | Product standard: | Part 15 Subpart C §15.407 and RSS-247             |
|                | Test standard:    | Part 15 Subpart C §15.407 (e) and RSS-247 6.2.4.1 |

Within the 5.725- 5.85 GHz band, the minimum 6dB bandwidth of U-NII devices shall be at least 500 kHz.

### TEST SETUP:



|                                 |                |
|---------------------------------|----------------|
| <b>TESTED SAMPLES:</b>          | S/01           |
| <b>TESTED CONDITIONS MODES:</b> | TC#01 (a mode) |
| <b>TEST RESULTS:</b>            | PASS           |

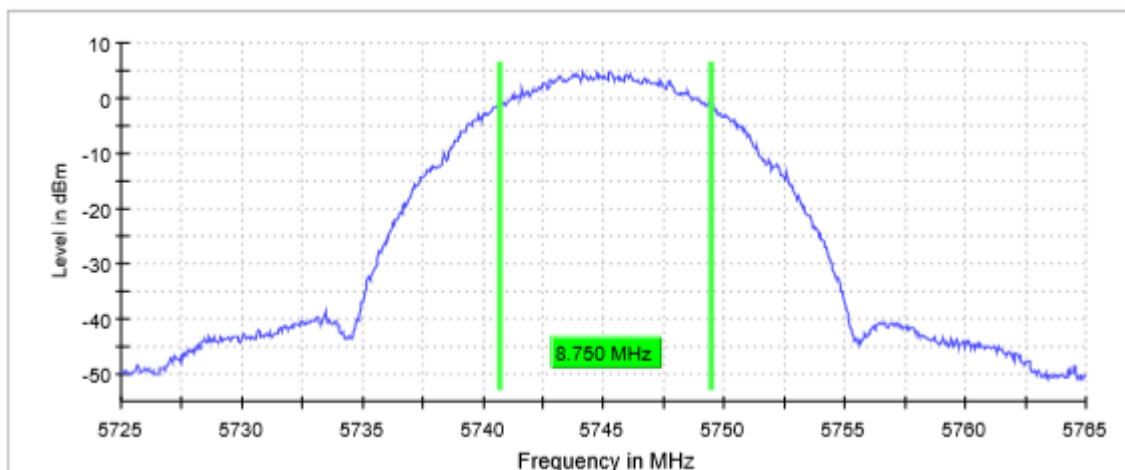
### Bandwidth: 20 MHz

|                               | Lowest frequency | Middle frequency | Highest frequency |
|-------------------------------|------------------|------------------|-------------------|
|                               | 5745 MHz         | 5785 MHz         | 5825 MHz          |
| 6dB Bandwidth (MHz)           | 8.750            | 8.850            | 8.750             |
| Measurement uncertainty (kHz) | <± 8.33          |                  |                   |

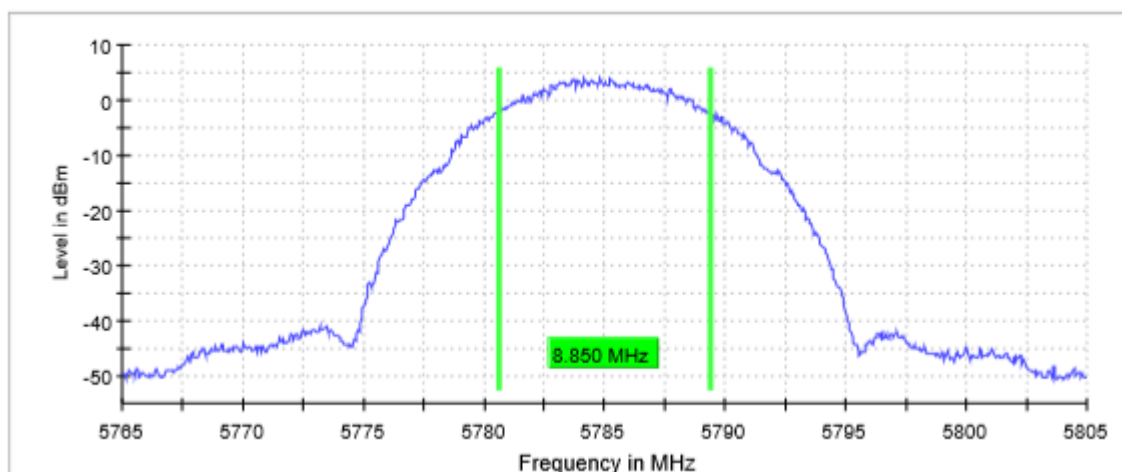
**TEST RESULTS (Cont.):**

**6 dB BANDWIDTH**

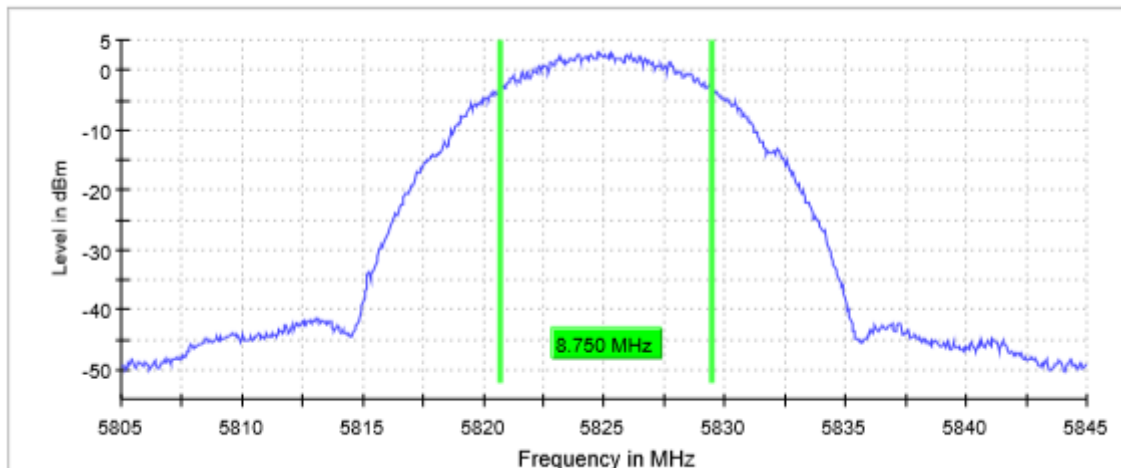
**Lowest Channel**



**Middle Channel**



**Highest Channel**



| TEST RESULTS (Cont.)  |                  |                  |                  |
|-----------------------|------------------|------------------|------------------|
| Measurement           |                  |                  |                  |
| Setting               | Instrument Value | Instrument Value | Instrument Value |
| Start Frequency       | 5.72500 GHz      | 5.76500 GHz      | 5.80500 GHz      |
| Stop Frequency        | 5.76500 GHz      | 5.80500 GHz      | 5.84500 GHz      |
| Span                  | 40.000 MHz       | 40.000 MHz       | 40.000 MHz       |
| RBW                   | 100.000 kHz      | 100.000 kHz      | 100.000 kHz      |
| VBW                   | 300.000 kHz      | 300.000 kHz      | 300.000 kHz      |
| SweepPoints           | 800              | 800              | 800              |
| Sweptime              | 56.836 μs        | 56.836 μs        | 56.836 μs        |
| Reference Level       | 10.000 dBm       | 10.000 dBm       | 10.000 dBm       |
| Attenuation           | 30.000 dB        | 30.000 dB        | 30.000 dB        |
| Detector              | MaxPeak          | MaxPeak          | MaxPeak          |
| SweepCount            | 200              | 200              | 200              |
| Filter                | 3 dB             | 3 dB             | 3 dB             |
| Trace Mode            | Max Hold         | Max Hold         | Max Hold         |
| SweepType             | FFT              | FFT              | FFT              |
| Preampl               | Off              | Off              | Off              |
| Stablemode            | Trace            | Trace            | Trace            |
| Stablevalue           | 0.30 dB          | 0.30 dB          | 0.30 dB          |
| Run                   | 104 / max. 150   | 102 / max. 150   | 108 / max. 150   |
| Stable                | 5 / 5            | 5 / 5            | 5 / 5            |
| Max Stable Difference | 0.06 dB          | 0.06 dB          | 0.00 dB          |

|                          |                       |
|--------------------------|-----------------------|
| TESTED SAMPLES:          | S/01                  |
| TESTED CONDITIONS MODES: | TC#02 (n Mode 20 MHz) |
| TEST RESULTS:            | PASS                  |

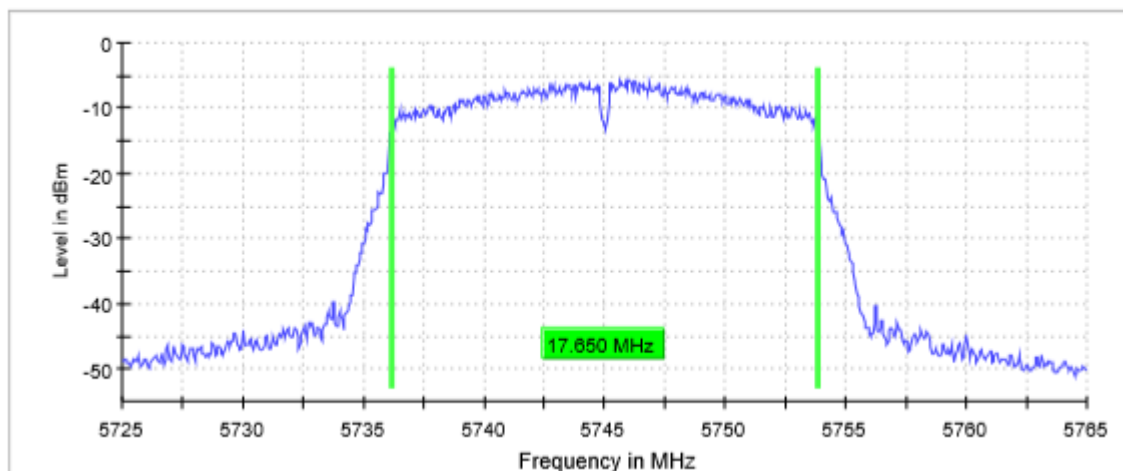
Bandwidth: 20 MHz

|                               |                  |                  |                   |
|-------------------------------|------------------|------------------|-------------------|
|                               | Lowest frequency | Middle frequency | Highest frequency |
|                               | 5745 MHz         | 5785 MHz         | 5825 MHz          |
| 6dB bandwidth (MHz)           | 17.650           | 17.650           | 17.650            |
| Measurement uncertainty (kHz) | <± 8.33          |                  |                   |

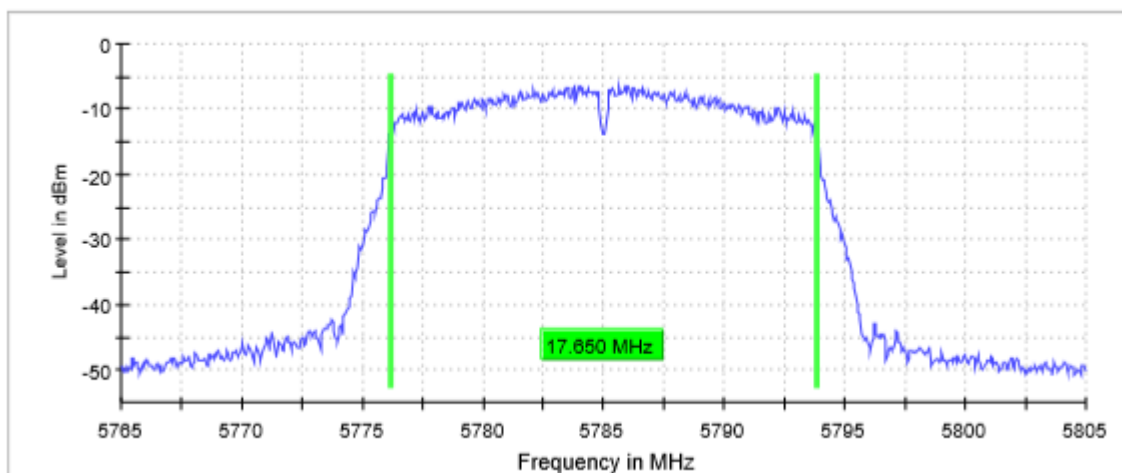
**TEST RESULTS (Cont.):**

**6 dB BANDWIDTH**

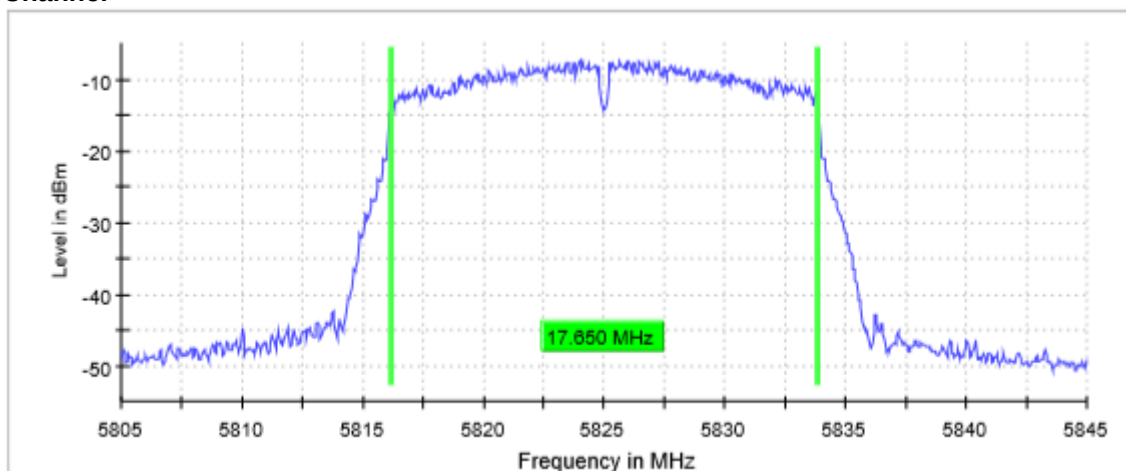
**Lowest Channel**



**Middle Channel**



**Highest Channel**



## TEST RESULTS (Cont.):

### Measurement

| Setting               | Instrument Value | Instrument Value | Instrument Value |
|-----------------------|------------------|------------------|------------------|
| Start Frequency       | 5.72500 GHz      | 5.76500 GHz      | 5.80500 GHz      |
| Stop Frequency        | 5.76500 GHz      | 5.80500 GHz      | 5.84500 GHz      |
| Span                  | 40.000 MHz       | 40.000 MHz       | 40.000 MHz       |
| RBW                   | 100.000 kHz      | 100.000 kHz      | 100.000 kHz      |
| VBW                   | 300.000 kHz      | 300.000 kHz      | 300.000 kHz      |
| SweepPoints           | 800              | 800              | 800              |
| Sweeptime             | 56.836 $\mu$ s   | 56.836 $\mu$ s   | 56.836 $\mu$ s   |
| Reference Level       | 10.000 dBm       | 10.000 dBm       | 10.000 dBm       |
| Attenuation           | 30.000 dB        | 30.000 dB        | 30.000 dB        |
| Detector              | MaxPeak          | MaxPeak          | MaxPeak          |
| SweepCount            | 200              | 200              | 200              |
| Filter                | 3 dB             | 3 dB             | 3 dB             |
| Trace Mode            | Max Hold         | Max Hold         | Max Hold         |
| Sweeptype             | FFT              | FFT              | FFT              |
| Preamp                | Off              | Off              | off              |
| Stablemode            | Trace            | Trace            | Trace            |
| Stablevalue           | 0.30 dB          | 0.30 dB          | 0.30 dB          |
| Run                   | 73 / max. 150    | 100 / max. 150   | 112 / max. 150   |
| Stable                | 5 / 5            | 5 / 5            | 5 / 5            |
| Max Stable Difference | 0.09 dB          | 0.12 dB          | 0.06 dB          |

## TESTED SAMPLES:

S/01

## TESTED CONDITIONS MODES:

TC#02 (n Mode 40 MHz)

## TEST RESULTS:

PASS

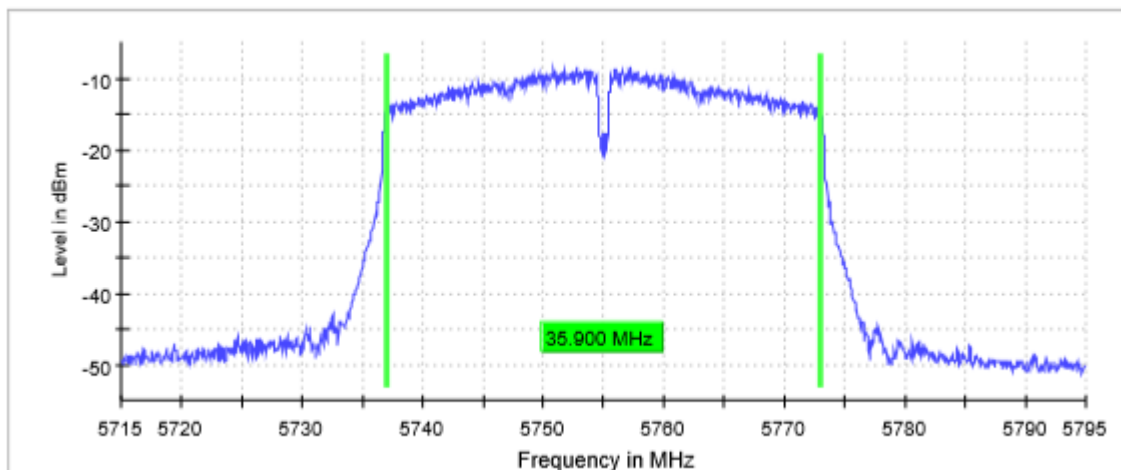
### Bandwidth: 40 MHz

|                               |                  |                   |
|-------------------------------|------------------|-------------------|
|                               | Lowest frequency | Highest frequency |
|                               | 5755 MHz         | 5795 MHz          |
| 6dB bandwidth (MHz)           | 35.900           | 36.100            |
| Measurement uncertainty (kHz) | < $\pm$ 8.33     |                   |

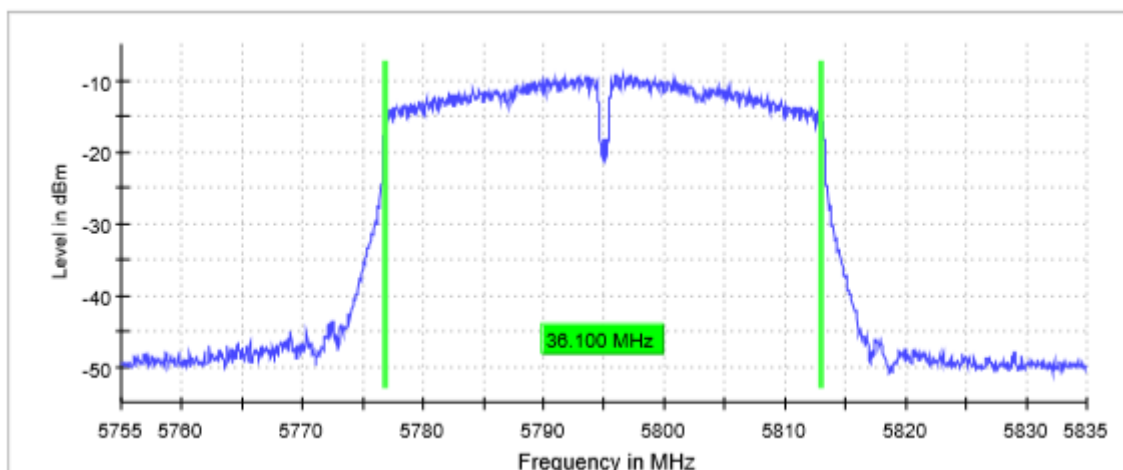
**TEST RESULTS (Cont.):**

**6 dB BANDWIDTH**

**Lowest Channel**



**Highest Channel**



# TEST RESULTS (Cont.):

## Measurement

| Setting               | Instrument Value | Instrument Value |
|-----------------------|------------------|------------------|
| Start Frequency       | 5.71500 GHz      | 5.75500 GHz      |
| Stop Frequency        | 5.79500 GHz      | 5.83500 GHz      |
| Span                  | 80.000 MHz       | 80.000 MHz       |
| RBW                   | 100.000 kHz      | 100.000 kHz      |
| VBW                   | 300.000 kHz      | 300.000 kHz      |
| SweepPoints           | 1600             | 1600             |
| Sweeptime             | 94.727 µs        | 94.727 µs        |
| Reference Level       | 10.000 dBm       | 10.000 dBm       |
| Attenuation           | 30.000 dB        | 30.000 dB        |
| Detector              | MaxPeak          | MaxPeak          |
| SweepCount            | 200              | 200              |
| Filter                | 3 dB             | 3 dB             |
| Trace Mode            | Max Hold         | Max Hold         |
| Sweeptype             | FFT              | FFT              |
| Preamplifier          | Off              | Off              |
| Stablemode            | Trace            | Trace            |
| Stablevalue           | 0.30 dB          | 0.30 dB          |
| Run                   | 124 / max. 150   | 130 / max. 150   |
| Stable                | 5 / 5            | 5 / 5            |
| Max Stable Difference | 0.16 dB          | 0.16 dB          |

## TEST E.3: POWER LIMITS. MAXIMUM OUTPUT POWER

|                |                   |                                                          |
|----------------|-------------------|----------------------------------------------------------|
| <b>LIMITS:</b> | Product standard: | Part 15 Subpart C §15.407 and RSS-247                    |
|                | Test standard:    | Part 15 Subpart C §15.407(a) (3) (4) and RSS-247 6.2.4.1 |

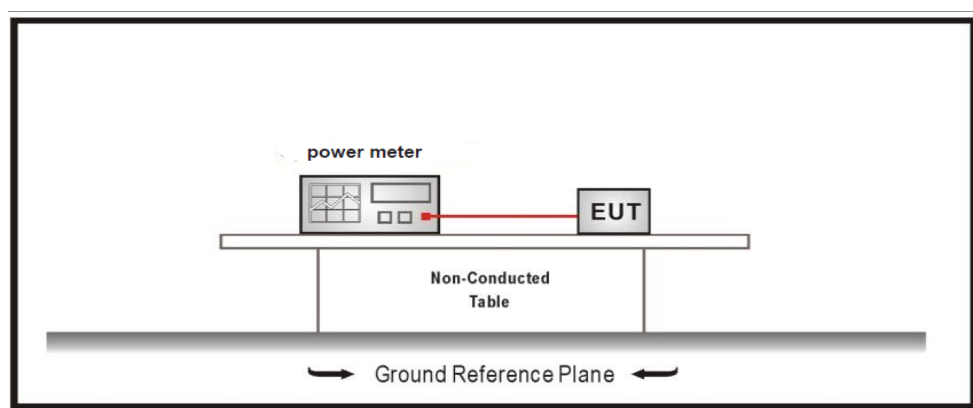
### LIMITS

In band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

### TEST SETUP

Measured according to ANSI C63.10, Section 11.9.2.3.2 Method AVGPM-G

The EIRP power (dBm) is calculated by adding the declared maximum antenna gain to the measured conducted power



|                                 |                |
|---------------------------------|----------------|
| <b>TESTED SAMPLES:</b>          | S/01           |
| <b>TESTED CONDITIONS MODES:</b> | TC#01 (a mode) |
| <b>TEST RESULTS:</b>            | PASS           |

### Bandwidth: 20 MHz

Maximum declared antenna gain: 0 dBi

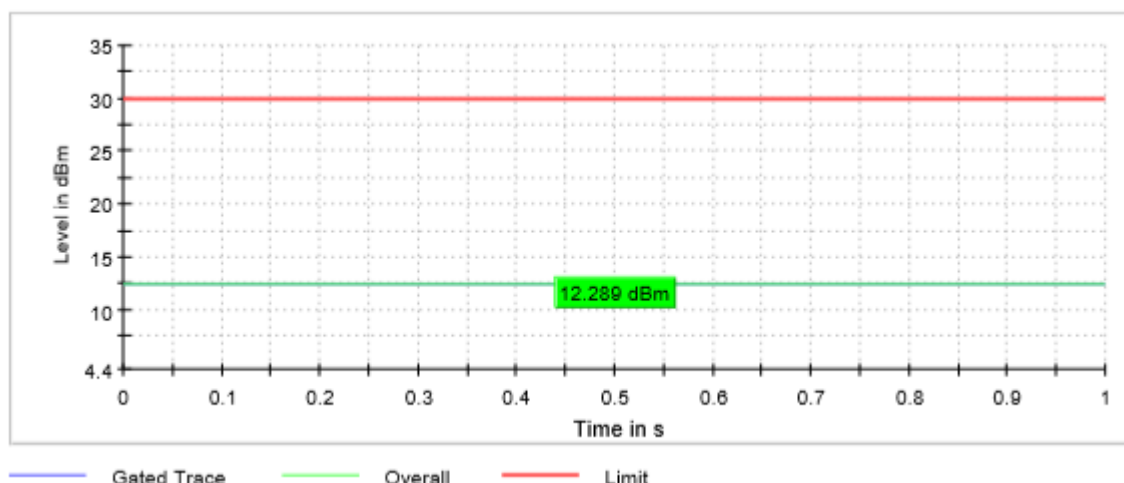
|                               | Lowest frequency<br>5745 MHz | Middle frequency<br>5785 MHz | Highest frequency<br>5825 MHz |
|-------------------------------|------------------------------|------------------------------|-------------------------------|
| Maximum conducted power (dBm) | 12.3                         | 11.3                         | 10.3                          |
| Maximum EIRP power (dBm)      | 12.3                         | 11.3                         | 10.3                          |
| Measurement uncertainty (dB)  | <±0.78                       |                              |                               |

The maximum directional gain of the antenna is less than 6 dBi and therefore the maximum output power is not required to be reduced from the stated values.

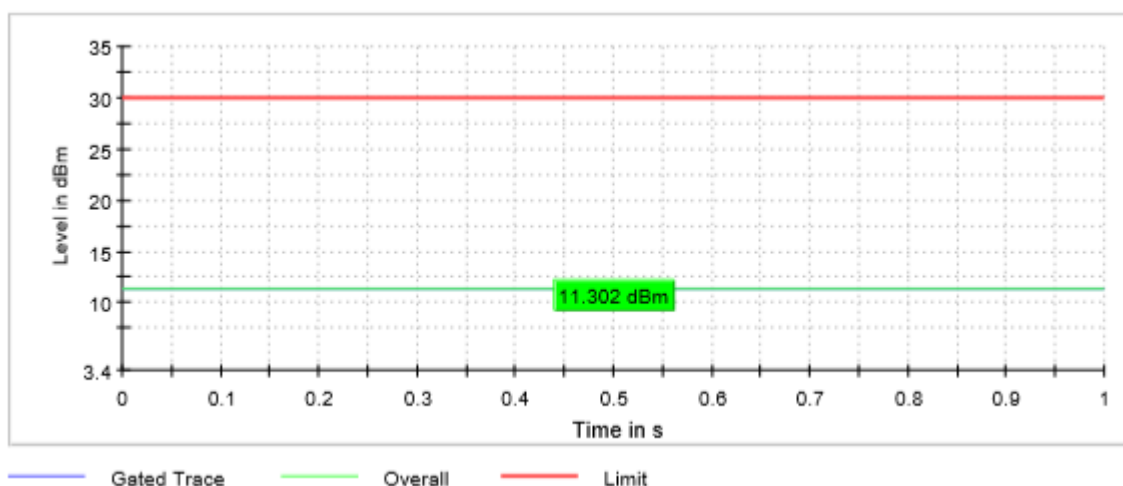
**TEST RESULTS (Cont.):**

**CONDUCTED OUTPUT POWER**

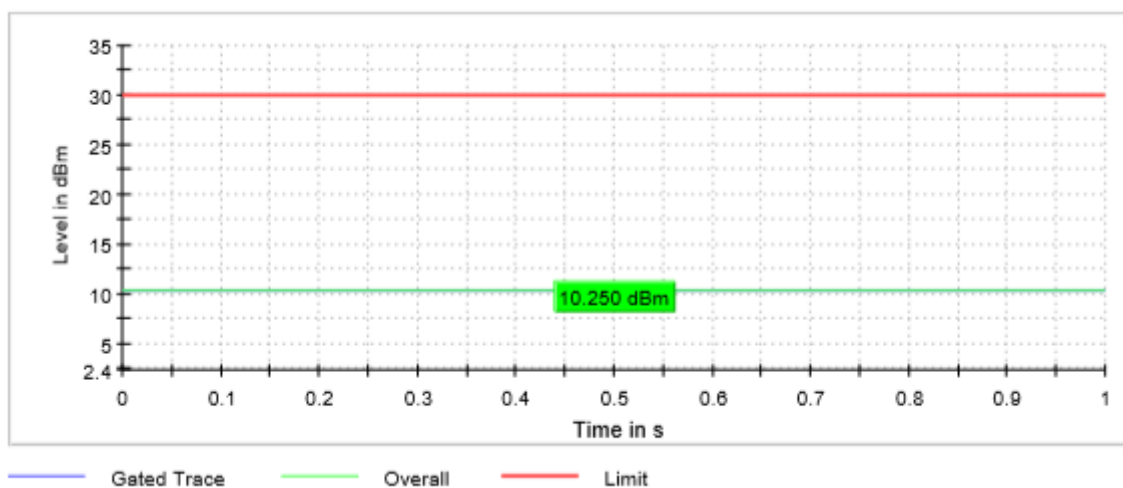
**Lowest Channel**



**Middle Channel**



**Highest Channel**



|                                 |                       |
|---------------------------------|-----------------------|
| <b>TESTED SAMPLES:</b>          | S/01                  |
| <b>TESTED CONDITIONS MODES:</b> | TC#02 (n mode 20 MHz) |
| <b>TEST RESULTS:</b>            | PASS                  |

#### Bandwidth: 20 MHz

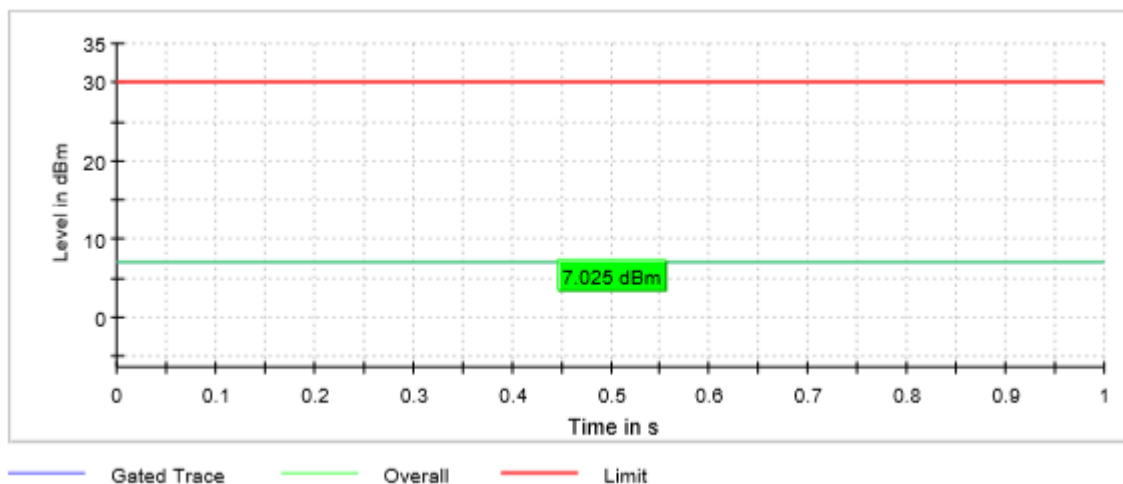
Maximum declared antenna gain: 0 dBi

|                               | Lowest frequency<br>5745 MHz | Middle frequency<br>5785 MHz | Highest frequency<br>5825 MHz |
|-------------------------------|------------------------------|------------------------------|-------------------------------|
| Maximum conducted power (dBm) | 7.0                          | 6.1                          | 5.2                           |
| Maximum EIRP power (dBm)      | 7.0                          | 6.1                          | 5.2                           |
| Measurement uncertainty (dB)  | <±0.78                       |                              |                               |

The maximum directional gain of the antenna is less than 6 dBi and therefore the maximum output power is not required to be reduced from the stated values.

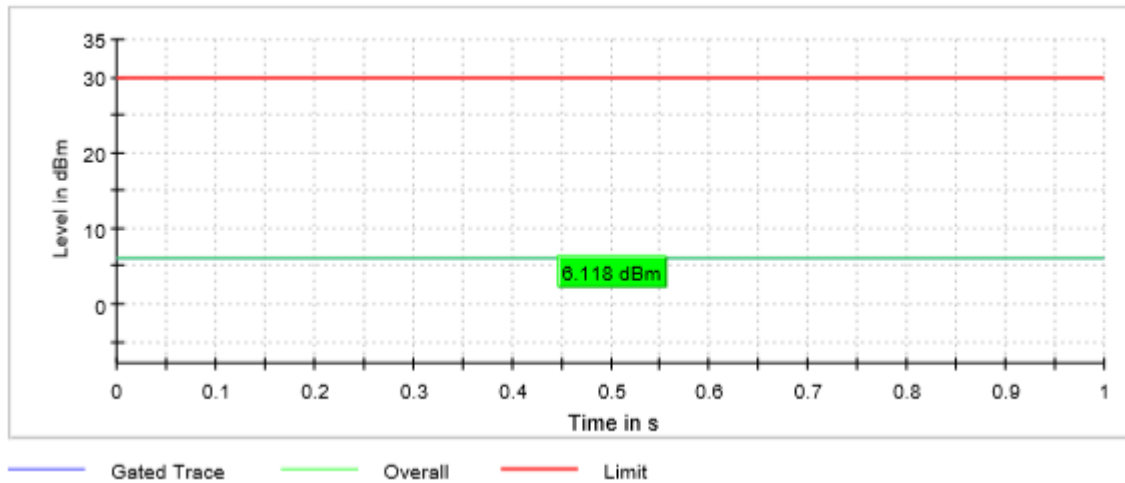
|                              |                               |
|------------------------------|-------------------------------|
| <b>TEST RESULTS (Cont.):</b> | <b>CONDUCTED OUTPUT POWER</b> |
|------------------------------|-------------------------------|

#### Lowest Channel

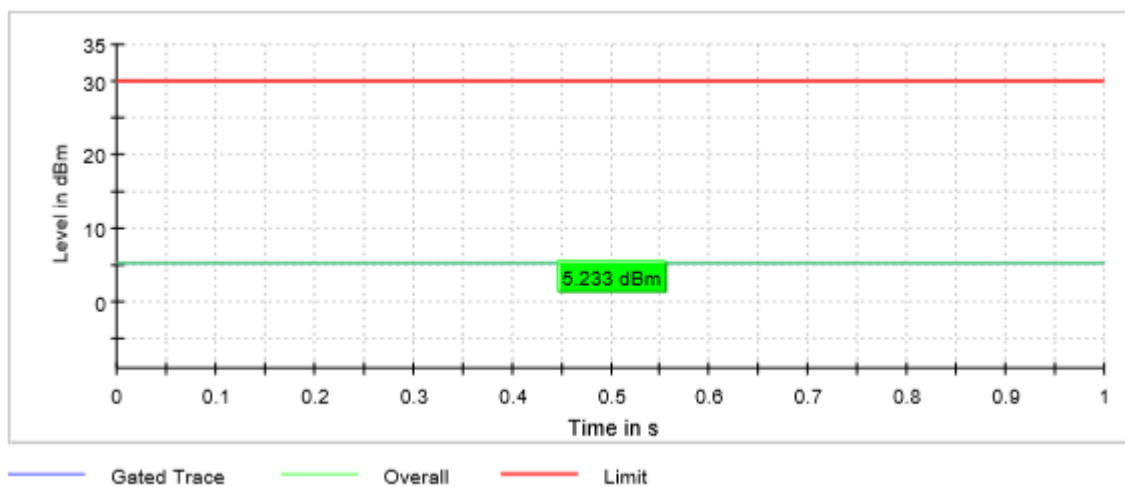


## TEST RESULTS (Cont.)

### Middle Channel



### Highest Channel



|                          |                       |
|--------------------------|-----------------------|
| TESTED SAMPLES:          | S/01                  |
| TESTED CONDITIONS MODES: | TC#02 (n mode 40 MHz) |
| TEST RESULTS:            | PASS                  |

#### Bandwidth: 40 MHz

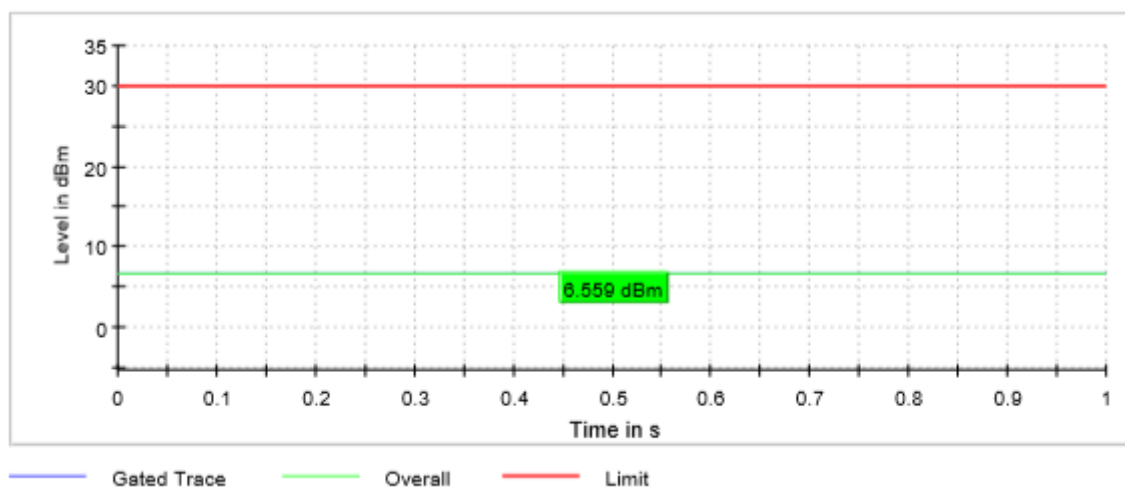
Maximum declared antenna gain: 0 dBi

|                               | Lowest frequency<br>5755 MHz | Highest frequency<br>5795 MHz |
|-------------------------------|------------------------------|-------------------------------|
| Maximum conducted power (dBm) | 6.6                          | 6.1                           |
| Maximum EIRP power (dBm)      | 6.6                          | 6.1                           |
| Measurement uncertainty (dB)  | <±0.78                       |                               |

The maximum directional gain of the antenna is less than 6 dBi and therefore the maximum output power is not required to be reduced from the stated values.

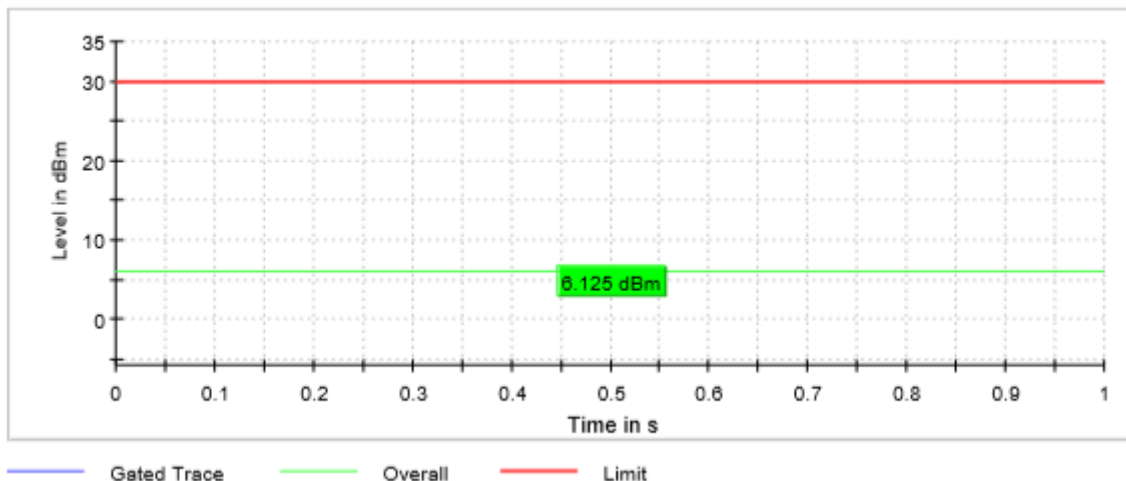
|                       |                        |
|-----------------------|------------------------|
| TEST RESULTS (Cont.): | CONDUCTED OUTPUT POWER |
|-----------------------|------------------------|

#### Lowest Channel



## TEST RESULTS (Cont.)

### Highest Channel



## TEST E.4: POWER SPECTRAL DENSITY

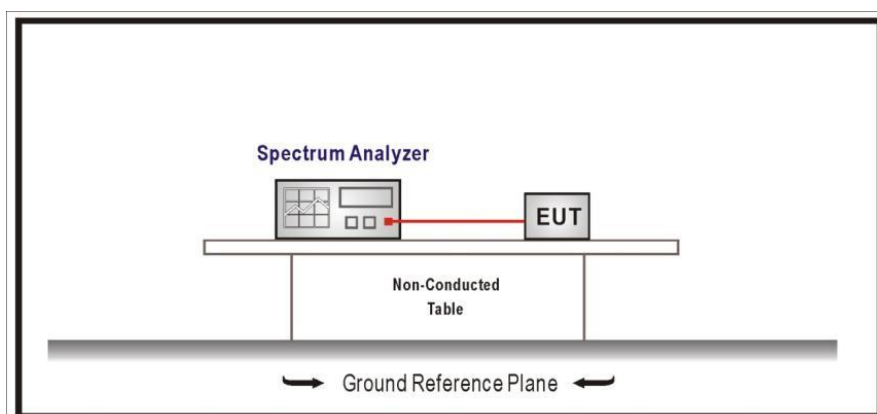
|                |                   |                                                          |
|----------------|-------------------|----------------------------------------------------------|
| <b>LIMITS:</b> | Product standard: | Part 15 Subpart C §15.407 and RSS-247                    |
|                | Test standard:    | Part 15 Subpart C §15.407(a) (3) (5) and RSS-247 6.2.4.1 |

### LIMITS

In the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

### TEST SETUP

For all modes, the maximum power spectral density level in the fundamental emission was measured using the method according to point F) (Method SA-1) of Guidance 789033 D02 General UNII Test Procedures New Rules v01.



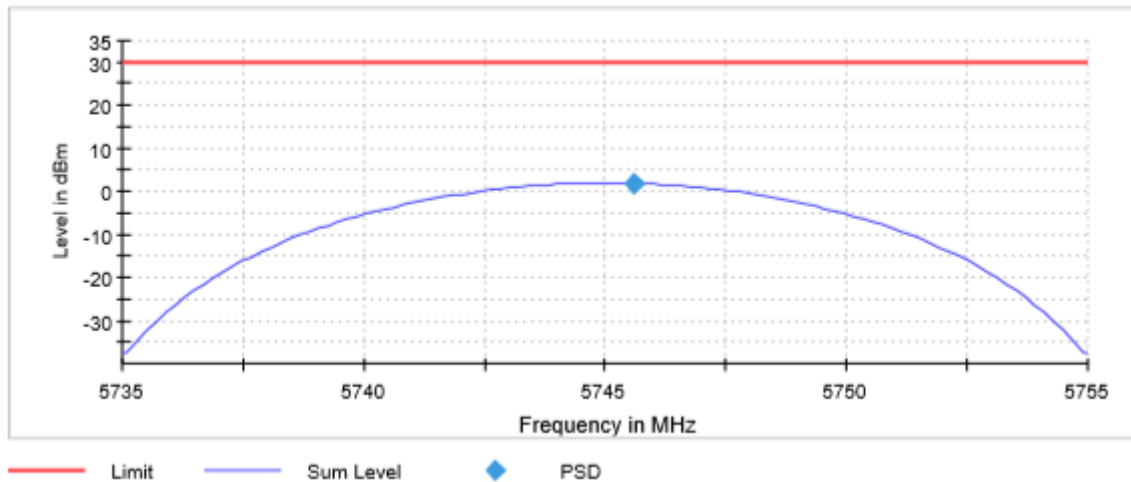
|                                 |                |
|---------------------------------|----------------|
| <b>TESTED SAMPLES:</b>          | S/01           |
| <b>TESTED CONDITIONS MODES:</b> | TC#01 (a mode) |
| <b>TEST RESULTS:</b>            | PASS           |

### Bandwidth: 20 MHz

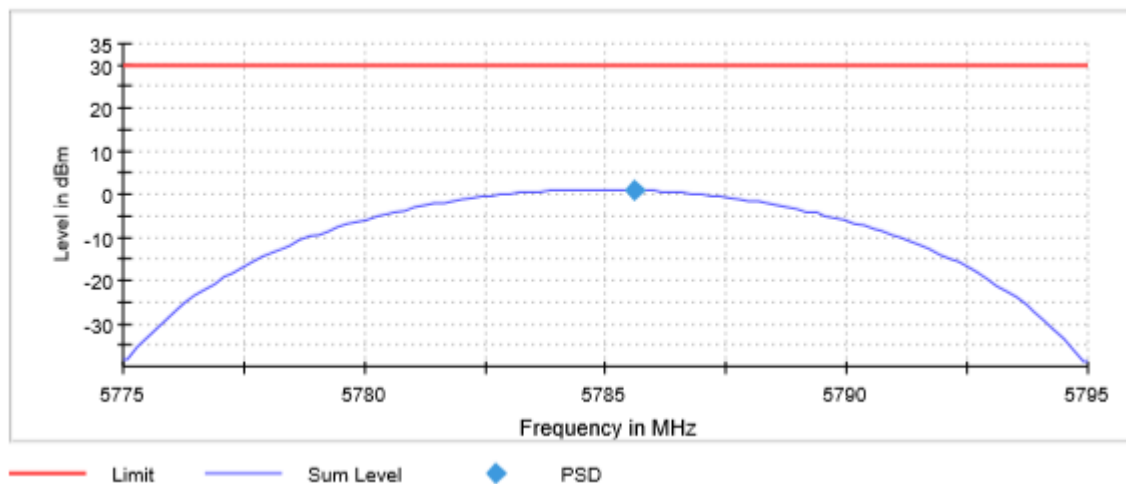
|                              | Lowest frequency<br>5745 MHz | Middle frequency<br>5785 MHz | Highest frequency<br>5825 MHz |
|------------------------------|------------------------------|------------------------------|-------------------------------|
| Power spectral density (dBm) | 1.806                        | 1.052                        | 0.105                         |
| Measurement uncertainty (dB) | <±0.78                       |                              |                               |

## TEST RESULTS (Cont.):

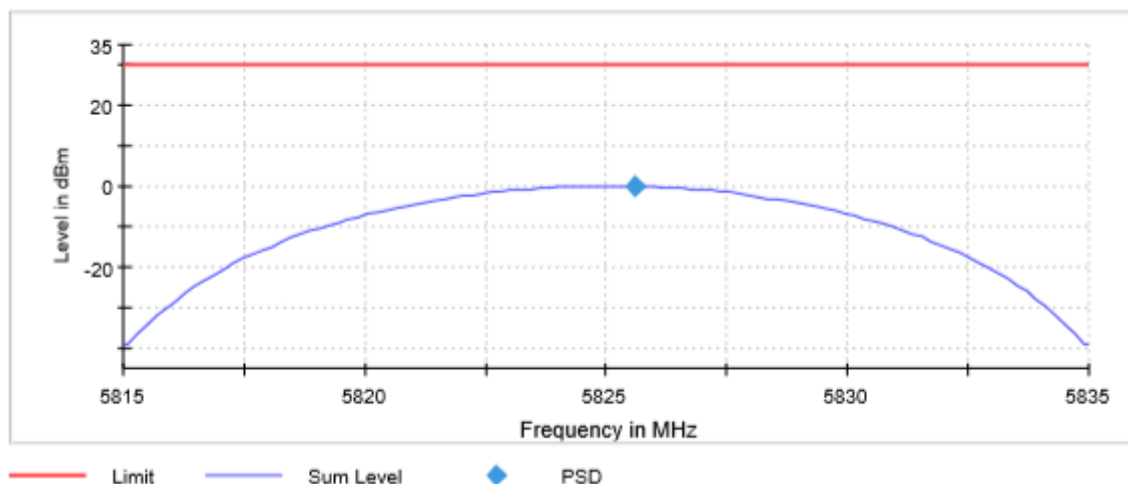
### Lowest Channel



### Middle Channel



### Highest Channel



**TEST RESULTS (Cont.):**

**Measurement**

| Setting         | Instrument Value | Instrument Value | Instrument Value |
|-----------------|------------------|------------------|------------------|
| Start Frequency | 5.73500 GHz      | 5.77500 GHz      | 5.81500 GHz      |
| Stop Frequency  | 5.75500 GHz      | 5.79500 GHz      | 5.83500 GHz      |
| Span            | 20.000 MHz       | 20.000 MHz       | 20.000 MHz       |
| RBW             | 500.000 kHz      | 500.000 kHz      | 500.000 kHz      |
| VBW             | 2.000 MHz        | 2.000 MHz        | 2.000 MHz        |
| SweepPoints     | 101              | 101              | 101              |
| Sweptime        | 2.020 s          | 2.020 s          | 2.020 s          |
| Reference Level | 10.000 dBm       | 10.000 dBm       | 10.000 dBm       |
| Attenuation     | 30.000 dB        | 30.000 dB        | 30.000 dB        |
| Detector        | RMS              | RMS              | RMS              |
| SweepCount      | 29703            | 29703            | 29703            |
| Filter          | 3 dB             | 3 dB             | 3 dB             |
| Trace Mode      | Max Hold         | Max Hold         | Max Hold         |
| SweepType       | FFT              | FFT              | FFT              |
| Preamplifier    | Off              | Off              | Off              |
| Stablemode      | Trace            | Trace            | Trace            |
| Stablevalue     | 0.30 dB          | 0.30 dB          | 0.30 dB          |
| Run             | 4 / max. 15      | 4 / max. 15      | 4 / max. 15      |
| Stable          | 3 / 3            | 3 / 3            | 3 / 3            |
| Max Stable      | 0.01 dB          | 0.01 dB          | 0.03 dB          |

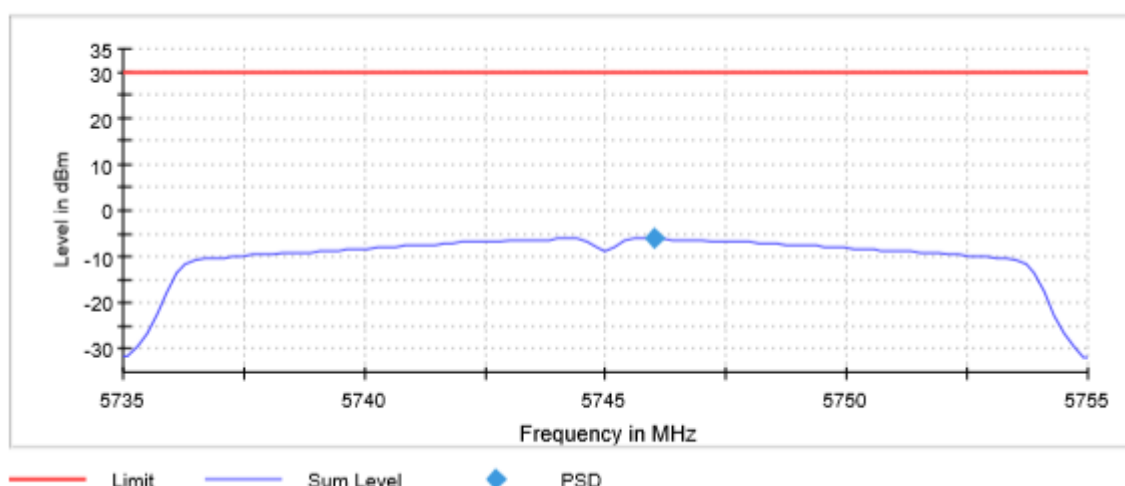
|                          |                       |
|--------------------------|-----------------------|
| TESTED SAMPLES:          | S/01                  |
| TESTED CONDITIONS MODES: | TC#02 (n mode 20 MHz) |
| TEST RESULTS:            | PASS                  |

**Bandwidth: 20 MHz**

|                              | Lowest frequency<br>5745 MHz | Middle frequency<br>5785 MHz | Highest frequency<br>5825 MHz |
|------------------------------|------------------------------|------------------------------|-------------------------------|
| Power spectral density (dBm) | -5.975                       | -6.647                       | -7.536                        |
| Measurement uncertainty (dB) | <±0.78                       |                              |                               |

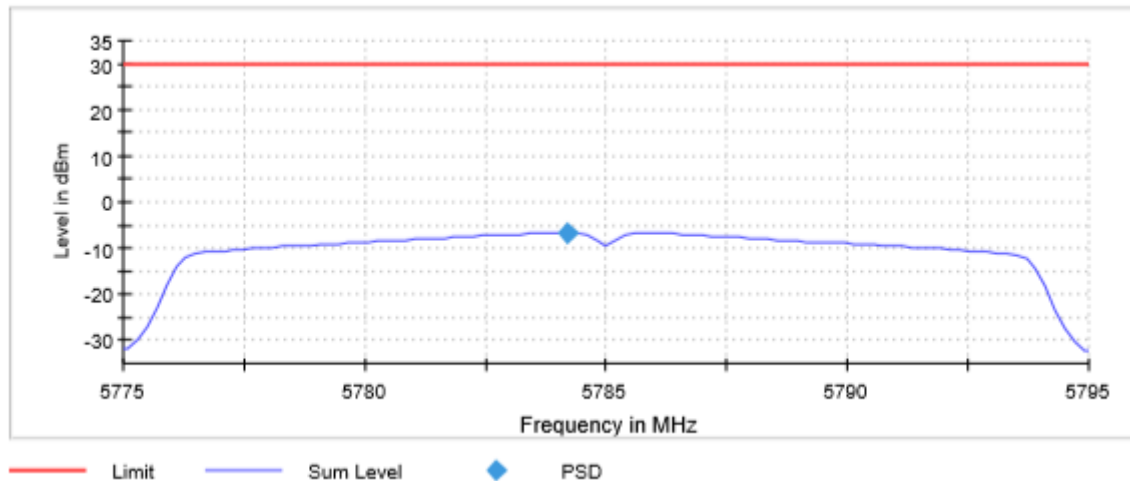
|                       |  |
|-----------------------|--|
| TEST RESULTS (Cont.): |  |
|-----------------------|--|

**Low Channel**

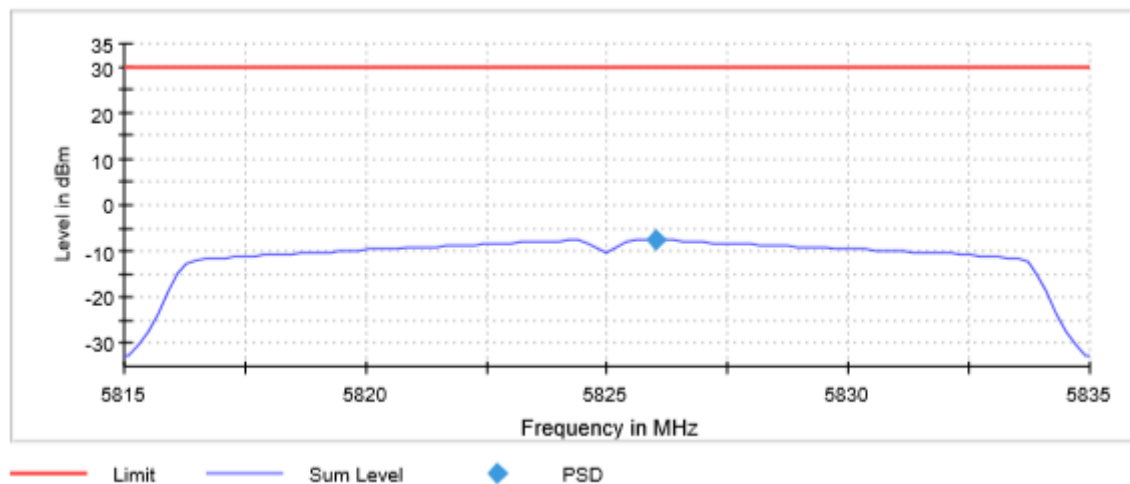


## TEST RESULTS (Cont.):

### Middle Channel



### High Channel



**TEST RESULTS (Cont.):**

**Measurement**

| Setting               | Instrument Value | Instrument Value | Instrument Value |
|-----------------------|------------------|------------------|------------------|
| Start Frequency       | 5.73500 GHz      | 5.77500 GHz      | 5.81500 GHz      |
| Stop Frequency        | 5.75500 GHz      | 5.79500 GHz      | 5.83500 GHz      |
| Span                  | 20.000 MHz       | 20.000 MHz       | 20.000 MHz       |
| RBW                   | 500.000 kHz      | 500.000 kHz      | 500.000 kHz      |
| VBW                   | 2.000 MHz        | 2.000 MHz        | 2.000 MHz        |
| SweepPoints           | 101              | 101              | 101              |
| Sweptime              | 2.020 s          | 2.020 s          | 2.020 s          |
| Reference Level       | 10.000 dBm       | 10.000 dBm       | 10.000 dBm       |
| Attenuation           | 30.000 dB        | 30.000 dB        | 30.000 dB        |
| Detector              | RMS              | RMS              | RMS              |
| SweepCount            | 29703            | 29703            | 29703            |
| Filter                | 3 dB             | 3 dB             | 3 dB             |
| Trace Mode            | Max Hold         | Max Hold         | Max Hold         |
| SweepType             | FFT              | FFT              | FFT              |
| Preamplifier          | off              | off              | Off              |
| Stablemode            | Trace            | Trace            | Trace            |
| Stablevalue           | 0.30 dB          | 0.30 dB          | 0.30 dB          |
| Run                   | 4 / max. 15      | 4 / max. 15      | 4 / max. 15      |
| Stable                | 3 / 3            | 3 / 3            | 3 / 3            |
| Max Stable Difference | 0.00 dB          | 0.04 dB          | 0.03 dB          |

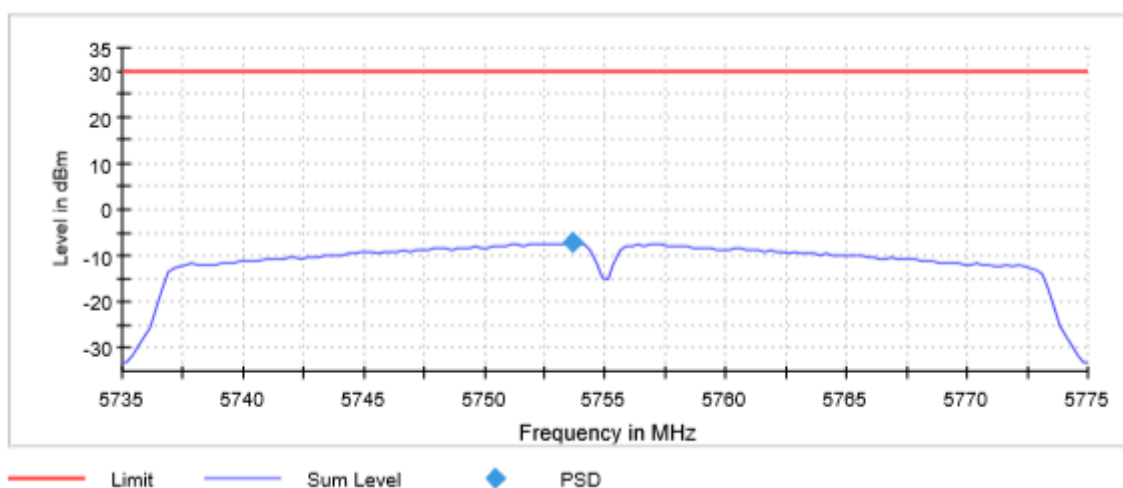
|                          |                       |
|--------------------------|-----------------------|
| TESTED SAMPLES:          | S/01                  |
| TESTED CONDITIONS MODES: | TC#02 (n mode 40 MHz) |
| TEST RESULTS:            | PASS                  |

**Bandwidth: 40 MHz**

|                              |                              |                               |
|------------------------------|------------------------------|-------------------------------|
|                              | Lowest frequency<br>5755 MHz | Highest frequency<br>5795 MHz |
| Power spectral density (dBm) | -7.276                       | -7.999                        |
| Measurement uncertainty (dB) | <±0.78                       |                               |

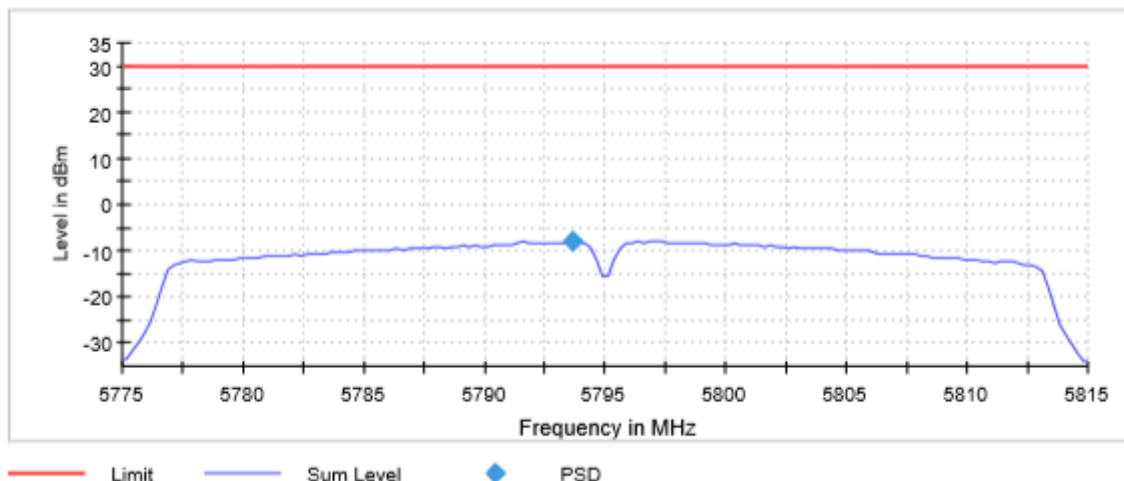
|                       |  |
|-----------------------|--|
| TEST RESULTS (Cont.): |  |
|-----------------------|--|

**Low Channel**



## TEST RESULTS (Cont.):

### High Channel



### Measurement

| Setting               | Instrument Value | Instrument Value |
|-----------------------|------------------|------------------|
| Start Frequency       | 5.73500 GHz      | 5.77500 GHz      |
| Stop Frequency        | 5.77500 GHz      | 5.81500 GHz      |
| Span                  | 40.000 MHz       | 40.000 MHz       |
| RBW                   | 500.000 kHz      | 500.000 kHz      |
| VBW                   | 2.000 MHz        | 2.000 MHz        |
| SweepPoints           | 160              | 160              |
| SweepTime             | 3.200 s          | 3.200 s          |
| Reference Level       | 10.000 dBm       | 10.000 dBm       |
| Attenuation           | 30.000 dB        | 30.000 dB        |
| Detector              | RMS              | RMS              |
| SweepCount            | 18751            | 18751            |
| Filter                | 3 dB             | 3 dB             |
| Trace Mode            | Max Hold         | Max Hold         |
| Sweeptype             | FFT              | FFT              |
| Preamplifier          | Off              | Off              |
| Stablemode            | Trace            | Trace            |
| Stablevalue           | 0.30 dB          | 0.30 dB          |
| Run                   | 6 / max. 15      | 10 / max. 15     |
| Stable                | 3 / 3            | 3 / 3            |
| Max Stable Difference | 0.26 dB          | 0.13 dB          |

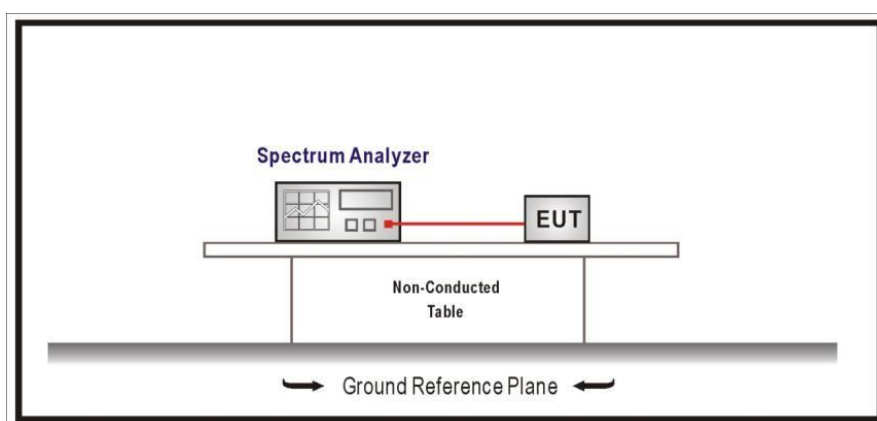
## TEST E.5: BAND-EDGE EMISSIONS COMPLIANCE (TRANSMITTER)

|                |                   |                                                     |
|----------------|-------------------|-----------------------------------------------------|
| <b>LIMITS:</b> | Product standard: | Part 15 Subpart C §15.407 and RSS-247               |
|                | Test standard:    | Part 15 Subpart C §15.407(b)(4) and RSS-247 6.2.4.2 |

### LIMITS

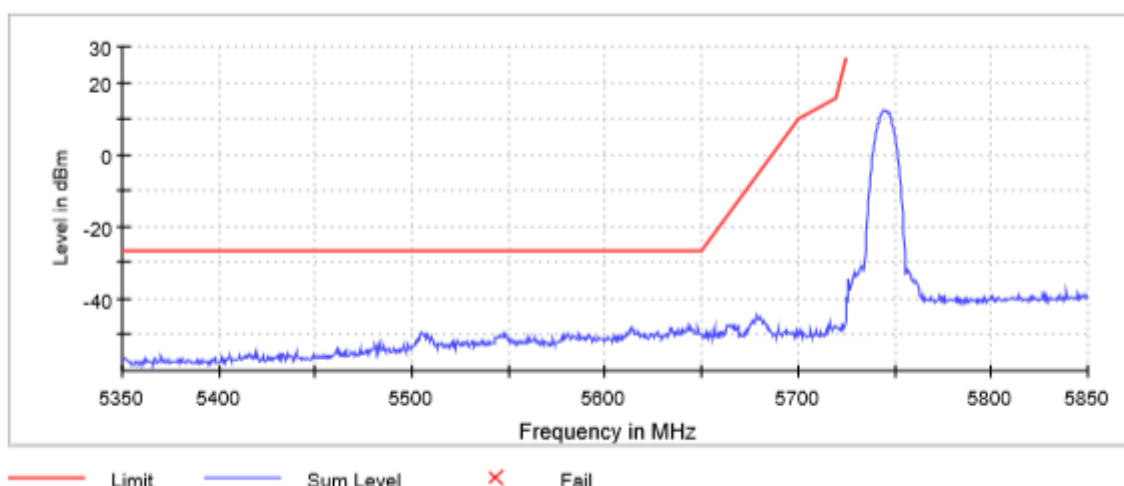
For transmitters operating in the 5.725 – 5.85 GHz band: all emissions outside the frequency band shall not exceed an EIRP of -27 dBm /MHz

### TEST SETUP



|                          |                |
|--------------------------|----------------|
| TESTED SAMPLES:          | S/01           |
| TESTED CONDITIONS MODES: | TC#01 (a mode) |
| TEST RESULTS:            | PASS           |

#### Lowest Channel

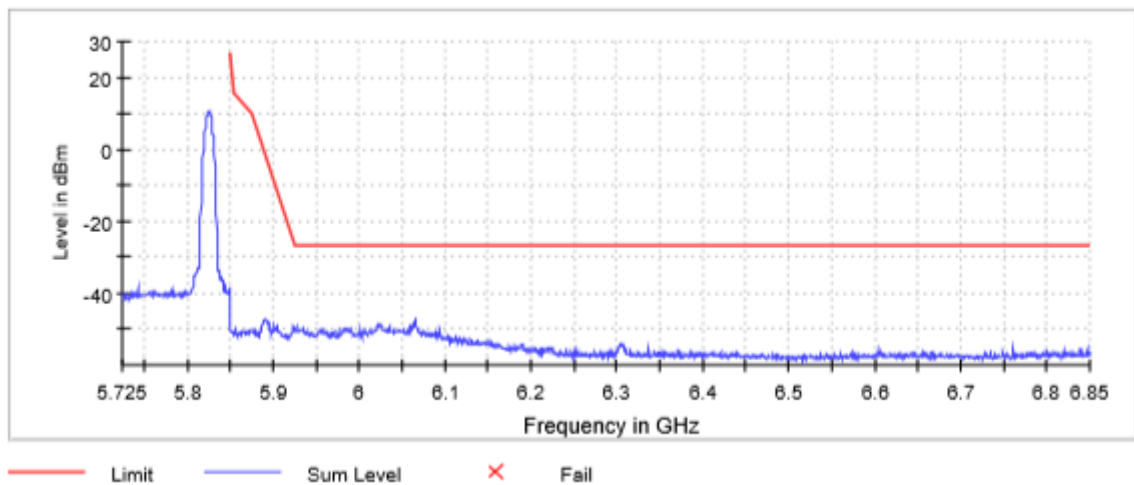


#### Measurement

| Setting               | Instrument Value | Instrument Value |
|-----------------------|------------------|------------------|
| Start Frequency       | 5.35000 GHz      | 5.72500 GHz      |
| Stop Frequency        | 5.72500 GHz      | 5.85000 GHz      |
| Span                  | 375.000 MHz      | 125.000 MHz      |
| RBW                   | 1.000 MHz        | 1.000 MHz        |
| VBW                   | 3.000 MHz        | 3.000 MHz        |
| SweepPoints           | 750              | 250              |
| Sweptime              | 75.000 ms        | 25.000 ms        |
| Reference Level       | -10.000 dBm      | 10.000 dBm       |
| Attenuation           | 10.000 dB        | 30.000 dB        |
| Detector              | Maxpeak          | Maxpeak          |
| SweepCount            | 100              | 100              |
| Filter                | Channel          | Channel          |
| Trace Mode            | Max Hold         | Max Hold         |
| Sweeptype             | sweep            | sweep            |
| Preamplifier          | off              | off              |
| Stablemode            | Trace            | Trace            |
| Stablevalue           | 0.50 dB          | 0.50 dB          |
| Run                   | 4 / max. 150     | 7 / max. 150     |
| Stable                | 3 / 3            | 3 / 3            |
| Max Stable Difference | 0.00 dB          | 0.17 dB          |

## TEST RESULTS (Cont.):

### Highest Channel



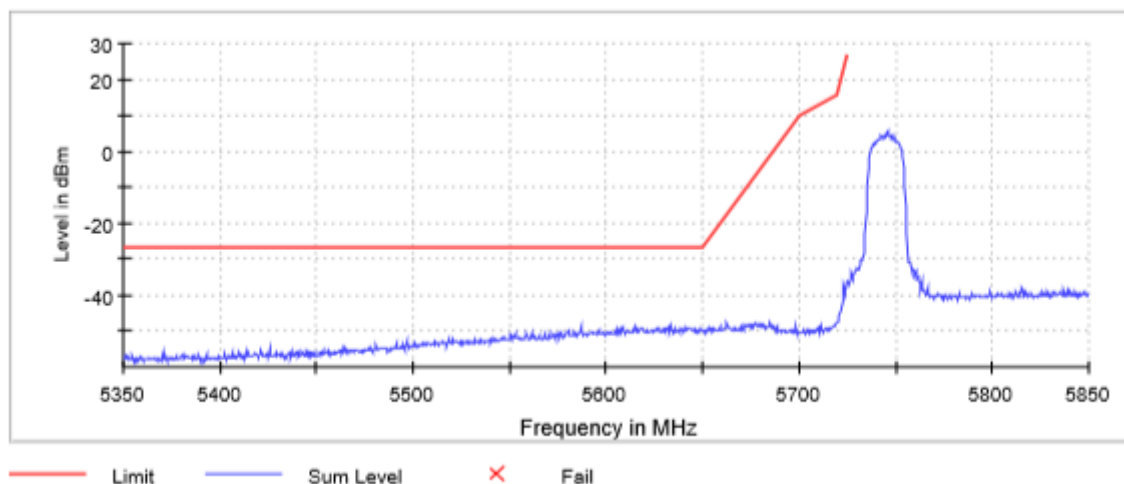
### Measurement

| Setting               | Instrument Value | Instrument Value |
|-----------------------|------------------|------------------|
| Start Frequency       | 5.72500 GHz      | 5.85000 GHz      |
| Stop Frequency        | 5.85000 GHz      | 6.85000 GHz      |
| Span                  | 125.000 MHz      | 1.000 GHz        |
| RBW                   | 1.000 MHz        | 1.000 MHz        |
| VBW                   | 3.000 MHz        | 3.000 MHz        |
| SweepPoints           | 250              | 2000             |
| Sweeptime             | 25.000 ms        | 200.000 ms       |
| Reference Level       | 10.000 dBm       | -10.000 dBm      |
| Attenuation           | 30.000 dB        | 10.000 dB        |
| Detector              | Maxpeak          | Maxpeak          |
| SweepCount            | 100              | 100              |
| Filter                | Channel          | Channel          |
| Trace Mode            | Max Hold         | Max Hold         |
| Sweeptype             | sweep            | sweep            |
| Preamplifier          | off              | off              |
| Stablemode            | Trace            | Trace            |
| Stablevalue           | 0.50 dB          | 0.50 dB          |
| Run                   | 7 / max. 150     | 4 / max. 150     |
| Stable                | 3 / 3            | 3 / 3            |
| Max Stable Difference | 0.46 dB          | 0.00 dB          |

|                          |                       |
|--------------------------|-----------------------|
| TESTED SAMPLES:          | S/01                  |
| TESTED CONDITIONS MODES: | TC#02 (n mode 20 MHz) |
| TEST RESULTS:            | PASS                  |

Bandwidth: 20 MHz

#### Lowest Channel

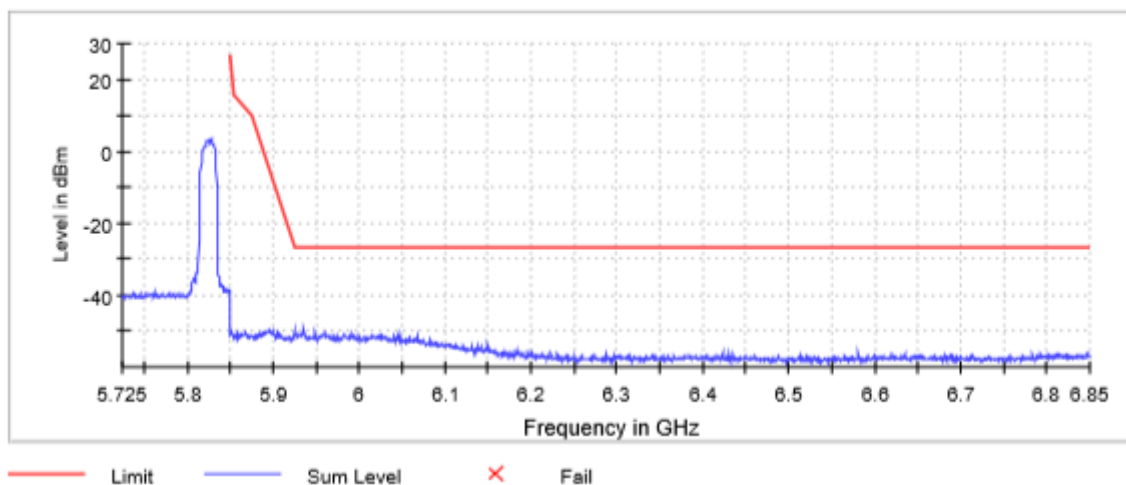


#### Measurement

| Setting               | Instrument Value | Instrument Value |
|-----------------------|------------------|------------------|
| Start Frequency       | 5.35000 GHz      | 5.72500 GHz      |
| Stop Frequency        | 5.72500 GHz      | 5.85000 GHz      |
| Span                  | 375.000 MHz      | 125.000 MHz      |
| RBW                   | 1.000 MHz        | 1.000 MHz        |
| VBW                   | 3.000 MHz        | 3.000 MHz        |
| SweepPoints           | 750              | 250              |
| SweepTime             | 75.000 ms        | 25.000 ms        |
| Reference Level       | -10.000 dBm      | 10.000 dBm       |
| Attenuation           | 10.000 dB        | 30.000 dB        |
| Detector              | Maxpeak          | Maxpeak          |
| SweepCount            | 100              | 100              |
| Filter                | Channel          | Channel          |
| Trace Mode            | Max Hold         | Max Hold         |
| Sweeptype             | sweep            | sweep            |
| Preamp                | Off              | off              |
| Stablemode            | Trace            | Trace            |
| Stablevalue           | 0.50 dB          | 0.50 dB          |
| Run                   | 8 / max. 150     | 10 / max. 150    |
| Stable                | 3 / 3            | 3 / 3            |
| Max Stable Difference | 0.00 dB          | 0.45 dB          |

## TEST RESULTS (Cont.):

### Highest Channel



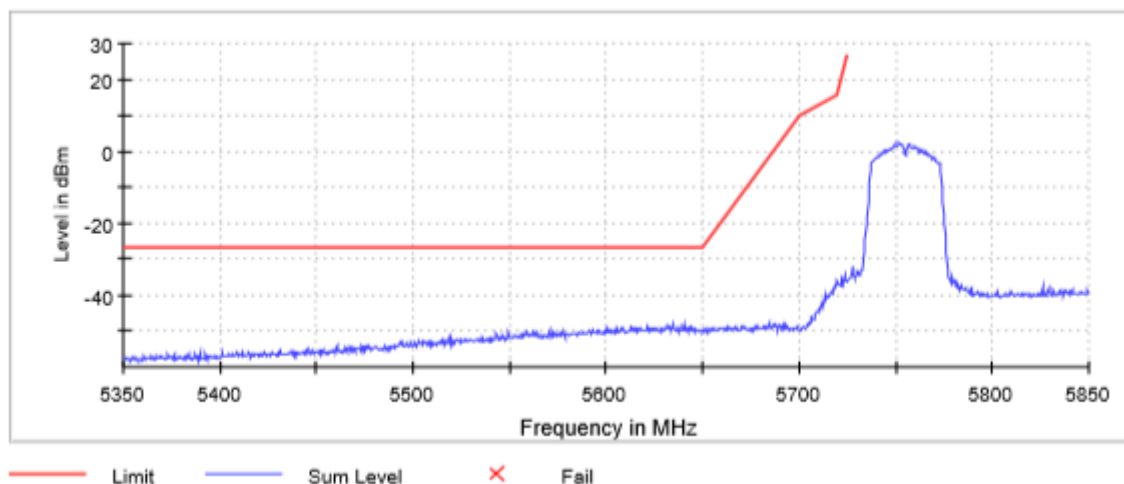
### Measurement

| Setting               | Instrument Value | Instrument Value |
|-----------------------|------------------|------------------|
| Start Frequency       | 5.72500 GHz      | 5.85000 GHz      |
| Stop Frequency        | 5.85000 GHz      | 6.85000 GHz      |
| Span                  | 125.000 MHz      | 1.000 GHz        |
| RBW                   | 1.000 MHz        | 1.000 MHz        |
| VBW                   | 3.000 MHz        | 3.000 MHz        |
| SweepPoints           | 250              | 2000             |
| Sweptime              | 25.000 ms        | 200.000 ms       |
| Reference Level       | 10.000 dBm       | -10.000 dBm      |
| Attenuation           | 30.000 dB        | 10.000 dB        |
| Detector              | Maxpeak          | Maxpeak          |
| SweepCount            | 100              | 100              |
| Filter                | Channel          | Channel          |
| Trace Mode            | Max Hold         | Max Hold         |
| SweepType             | sweep            | sweep            |
| Preamplifier          | off              | off              |
| Stablemode            | Trace            | Trace            |
| Stablevalue           | 0.50 dB          | 0.50 dB          |
| Run                   | 19 / max. 150    | 4 / max. 150     |
| Stable                | 3 / 3            | 3 / 3            |
| Max Stable Difference | 0.07 dB          | 0.00 dB          |

|                          |                       |
|--------------------------|-----------------------|
| TESTED SAMPLES:          | S/01                  |
| TESTED CONDITIONS MODES: | TC#02 (n mode 40 MHz) |
| TEST RESULTS:            | PASS                  |

Bandwidth: 40 MHz

#### Lowest Channel

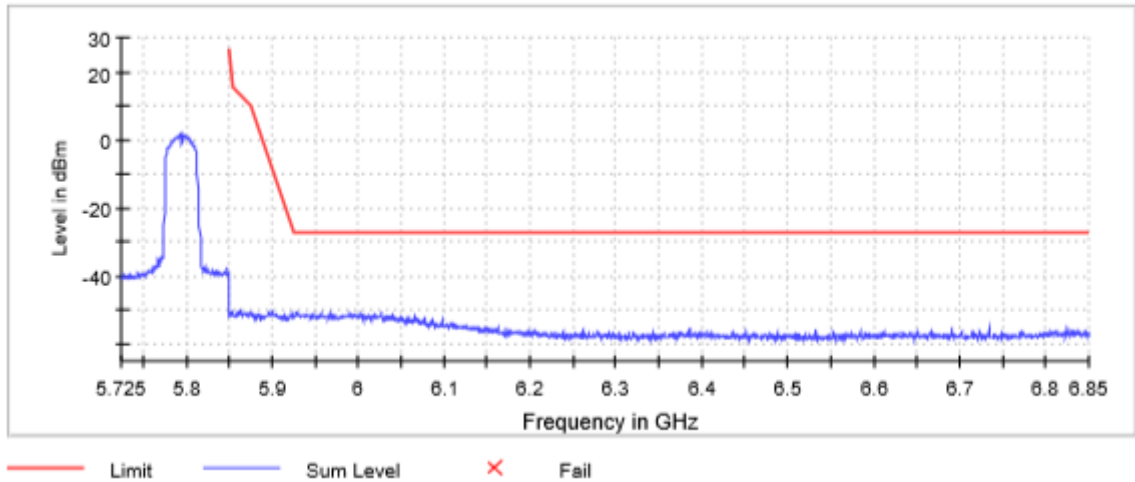


#### Measurement

| Setting               | Instrument Value | Instrument Value |
|-----------------------|------------------|------------------|
| Start Frequency       | 5.35000 GHz      | 5.72500 GHz      |
| Stop Frequency        | 5.72500 GHz      | 5.85000 GHz      |
| Span                  | 375.000 MHz      | 125.000 MHz      |
| RBW                   | 1.000 MHz        | 1.000 MHz        |
| VBW                   | 3.000 MHz        | 3.000 MHz        |
| SweepPoints           | 750              | 250              |
| Sweeptime             | 75.000 ms        | 25.000 ms        |
| Reference Level       | -10.000 dBm      | 10.000 dBm       |
| Attenuation           | 10.000 dB        | 30.000 dB        |
| Detector              | Maxpeak          | Maxpeak          |
| SweepCount            | 100              | 100              |
| Filter                | Channel          | 3 dB             |
| Trace Mode            | Max Hold         | Max Hold         |
| Sweeptype             | Sweep            | sweep            |
| Preamp                | Off              | Off              |
| Stablemode            | Trace            | Trace            |
| Stablevalue           | 0.50 dB          | 0.50 dB          |
| Run                   | 16 / max. 150    | 19 / max. 150    |
| Stable                | 3 / 3            | 3 / 3            |
| Max Stable Difference | 0.00 dB          | 0.48 dB          |

**TEST RESULTS (Cont.):**

**Highest Channel**



**Measurement**

| Setting               | Instrument Value | Instrument Value |
|-----------------------|------------------|------------------|
| Start Frequency       | 5.72500 GHz      | 5.85000 GHz      |
| Stop Frequency        | 5.85000 GHz      | 6.85000 GHz      |
| Span                  | 125.000 MHz      | 1.125 GHz        |
| RBW                   | 1.000 MHz        | 1.000 MHz        |
| VBW                   | 3.000 MHz        | 3.000 MHz        |
| SweepPoints           | 250              | 2000             |
| Sweptime              | 25.000 ms        | 200.000 ms       |
| Reference Level       | 10.000 dBm       | -10.000 dBm      |
| Attenuation           | 30.000 dB        | 10.000 dB        |
| Detector              | Maxpeak          | Maxpeak          |
| SweepCount            | 100              | 100              |
| Filter                | Channel          | Channel          |
| Trace Mode            | Max Hold         | Max Hold         |
| Sweeptype             | sweep            | sweep            |
| Preamp                | Off              | Off              |
| Stablemode            | Trace            | Trace            |
| Stablevalue           | 0.50 dB          | 0.50 dB          |
| Run                   | 21 / max. 150    | 4 / max. 150     |
| Stable                | 3 / 3            | 3 / 3            |
| Max Stable Difference | 0.22 dB          | 0.00 dB          |

## TEST E.6: UNDESIRABLE RADIATED EMISSIONS (TRANSMITTER)

|                |                   |                                                           |
|----------------|-------------------|-----------------------------------------------------------|
| <b>LIMITS:</b> | Product standard: | Part 15 Subpart C §15.407 and RSS-247                     |
|                | Test standard:    | Part 15 Subpart C §15.407(b)(4)(6)(7) and RSS-247 6.2.4.2 |

### LIMITS

For transmitters operating in the 5.725 – 5.85 GHz band: all emissions outside of the 5.725 – 5.85 GHz band shall not exceed an EIRP of -27 dBm/MHz (68.23 dBμ V/m at 3m distance).

Radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c) / RSS-Gen):

| Frequency Range (MHz) | Field strength (μV/m) | Field strength (dBμV/m) | Measurement distance (m) |
|-----------------------|-----------------------|-------------------------|--------------------------|
| 0.009-0.490           | 2400/F(kHz)           | -                       | 300                      |
| 0.490-1.705           | 24000/F(kHz)          | -                       | 30                       |
| 1.705 - 30.0          | 30                    | -                       | 30                       |
| 30 - 88               | 100                   | 40                      | 3                        |
| 88 - 216              | 150                   | 43.5                    | 3                        |
| 216 - 960             | 200                   | 46                      | 3                        |
| 960 - 25000           | 500                   | 54                      | 3                        |

The emission limits shown in the above table are based on measurements employing CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.

For average radiated emission measurements above 1000 MHz, there is also a limit corresponding to 20 dB above the indicated values in the table is specified when measuring with peak detector function

### TEST SETUP

All radiated tests were performed in a semi-anechoic chamber. The measurement antenna is situated at 3 m for the frequency range 30-1000 MHz (Bilog antenna) and at 1m for the frequency range 1-40 GHz (1 GHz-18 GHz and 18 GHz-40 GHz Double ridge horn antennas).

For radiated emissions in the range 1-40 GHz that is performed at a distance closer than the specified distance, an inverse proportionality factor of 20 dB per decade is used to normalize the measured data for determining compliance.

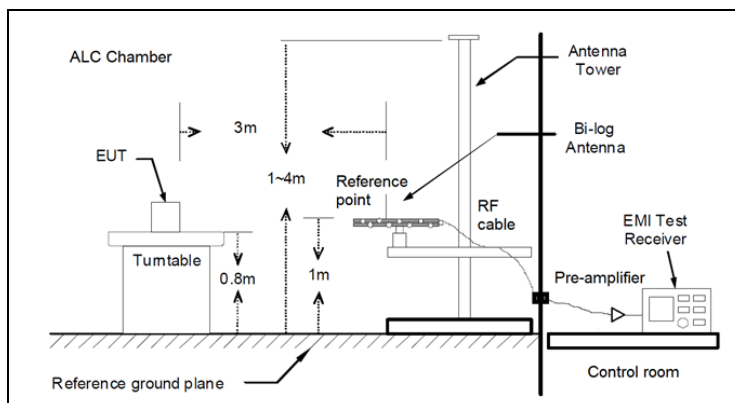
The equipment under test was set up on a non-conductive platform above the ground plane and the situation and orientation was varied to find the maximum radiated emission. It was also rotated 360° and the antenna height was varied from 1 to 4 meters to find the maximum radiated emission.

Measurements were made in both horizontal and vertical planes of polarization.

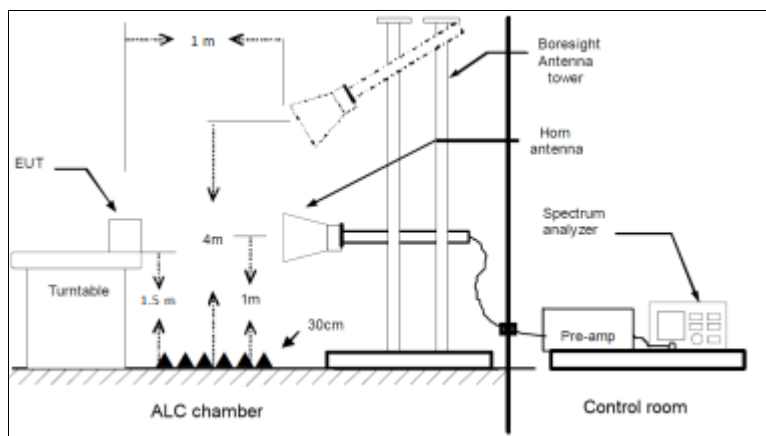
The field strength is calculated by adding correction factor to the measured level from the spectrum analyzer. This correction factor includes antenna factor, cable loss and pre-amplifiers gain.

## TEST SETUP (CONT.)

### Radiated measurements Setup $f < 1$ GHz



### Radiated measurements setup $f > 1$ GHz



TESTED SAMPLES:

S/02

TESTED CONDITIONS MODES:

TC#01 (a mode)

TEST RESULTS:

PASS

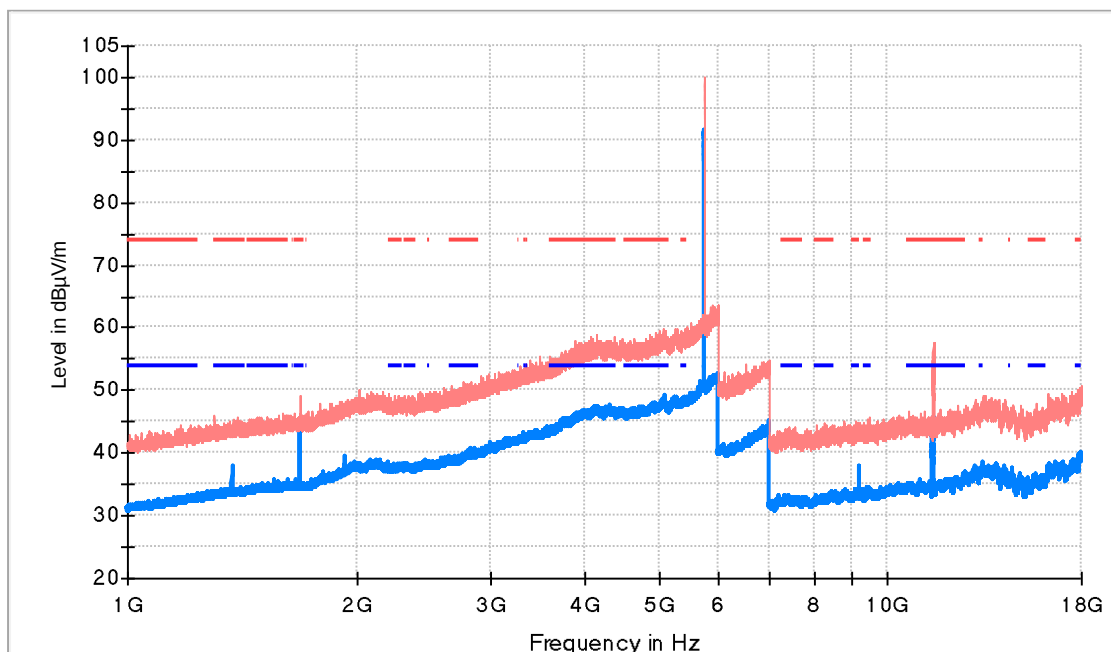
### Frequency range 1 GHz – 40 GHz

The results and plots below show the maximum measured levels in the 1- 40 GHz range.

**TEST RESULTS (Cont.)**

**1 GHz – 18 GHz**

**Low Channel**



- AVG\_MAXH
- PK+\_MAXH
- TX limits to Spurious Emission FCC15.407 (1 GHz to 40 GHz) Restricted Bands PK Limit
- TX limits to Spurious Emission FCC15.407 (1 GHz to 40 GHz) Restricted Bands AVG Limit

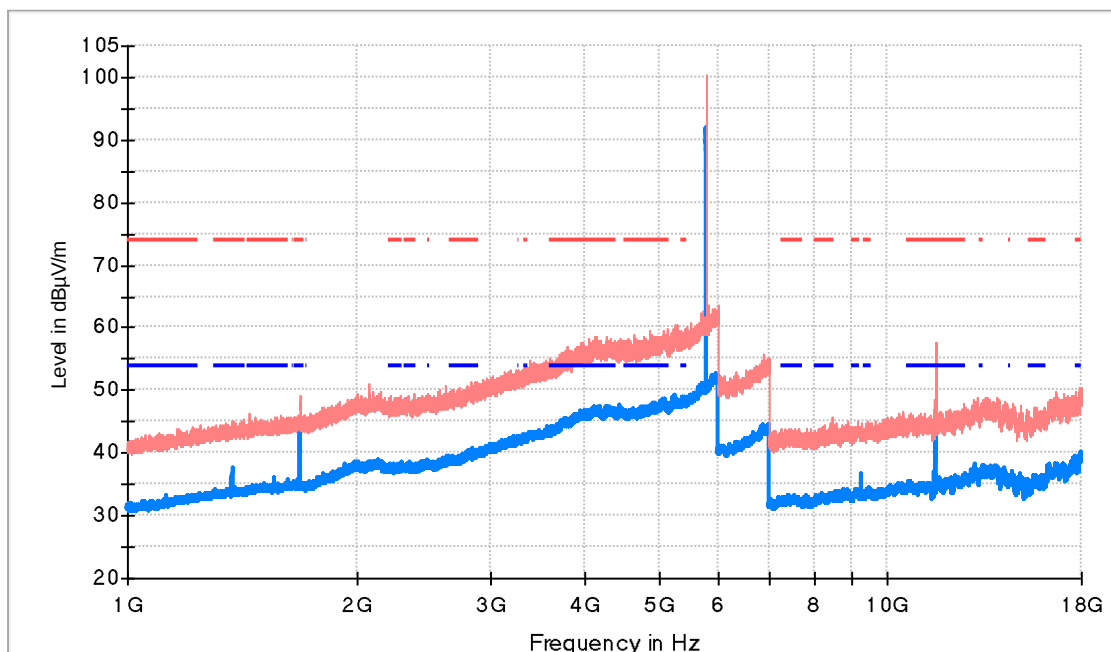
**Maximizations**

| Frequency (MHz) | PK+_MAXH (dBμV/m) | AVG_MAXH (dBμV/m) | Pol | Comment     |
|-----------------|-------------------|-------------------|-----|-------------|
| 1375.000000     | 44.6              | 38.0              | H   |             |
| 1687.500000     | 48.3              | 43.4              | V   |             |
| 1937.500000     | 47.2              | 39.5              | H   |             |
| 5745.909091     | 98.5              | 91.4              | H   | Fundamental |
| 9192.000000     | 44.9              | 37.8              | V   |             |
| 11491.090909    | 57.5              | 45.7              | H   |             |

TEST RESULTS (Cont.)

1 GHz – 18 GHz

Mid Channel



- AVG\_MAXH
- PK+\_MAXH
- TX limits to Spurious Emission FCC15.407 (1 GHz to 40 GHz) Restricted Bands PK Limit
- TX limits to Spurious Emission FCC15.407 (1 GHz to 40 GHz) Restricted Bands AVG Limit

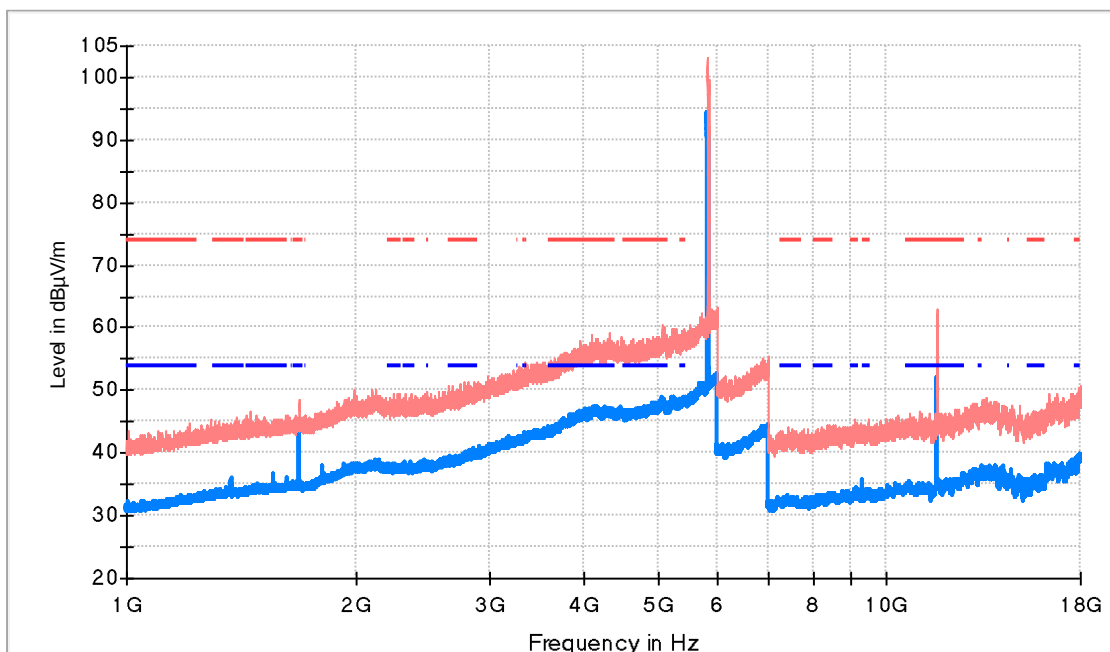
Maximizations

| Frequency (MHz) | PK+_MAXH (dBμV/m) | AVG_MAXH (dBμV/m) | Pol | Comment     |
|-----------------|-------------------|-------------------|-----|-------------|
| 1375.000000     | 45.0              | 37.5              | H   |             |
| 1687.500000     | 49.1              | 43.5              | V   |             |
| 5786.136364     | 98.7              | 91.9              | H   | Fundamental |
| 9255.818182     | 44.5              | 36.5              | V   |             |
| 11570.727273    | 53.9              | 46.1              | H   |             |
| 1375.000000     | 45.0              | 37.5              | H   |             |

**TEST RESULTS (Cont.)**

**1 GHz – 18 GHz**

**High Channel**



- AVG\_MAXH
- PK+\_MAXH
- TX limits to Spurious Emission FCC15.407 (1 GHz to 40 GHz) Restricted Bands PK Limit
- TX limits to Spurious Emission FCC15.407 (1 GHz to 40 GHz) Restricted Bands AVG Limit

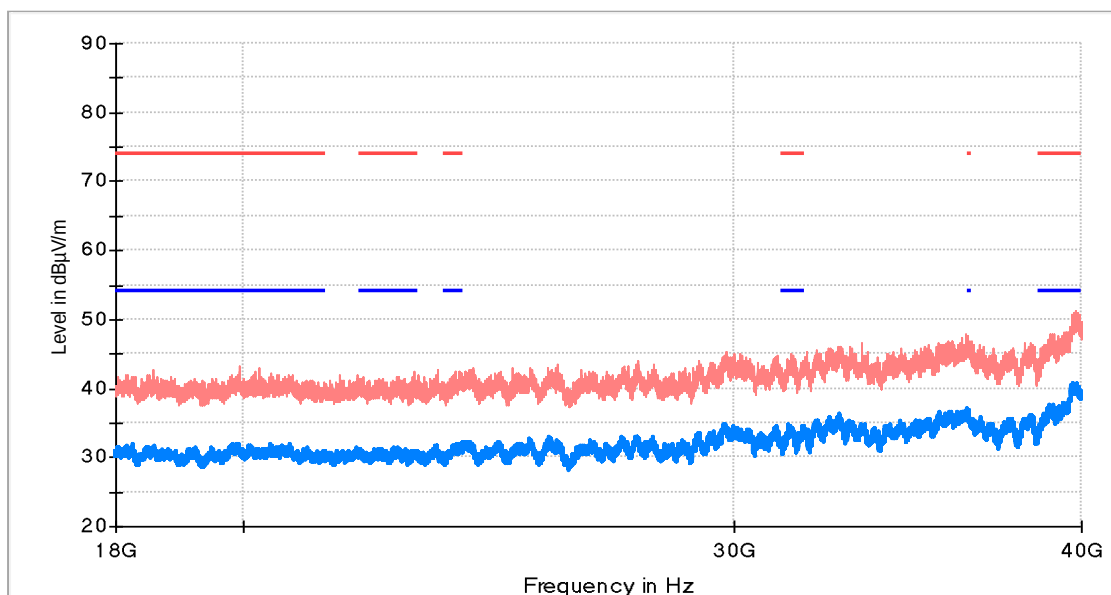
**Maximizations**

| Frequency (MHz) | PK+_MAXH (dBμV/m) | AVG_MAXH (dBμV/m) | Pol | Comment     |
|-----------------|-------------------|-------------------|-----|-------------|
| 1562.272727     | 44.4              | 36.6              | H   |             |
| 1687.500000     | 47.8              | 43.4              | V   |             |
| 1812.272727     | 45.8              | 38.0              | H   |             |
| 5825.909091     | 101.9             | 94.5              | H   | Fundamental |
| 9320.181818     | 43.8              | 35.6              | V   |             |
| 11649.272727    | 61.1              | 52.0              | H   |             |

**TEST RESULTS (Cont.)**

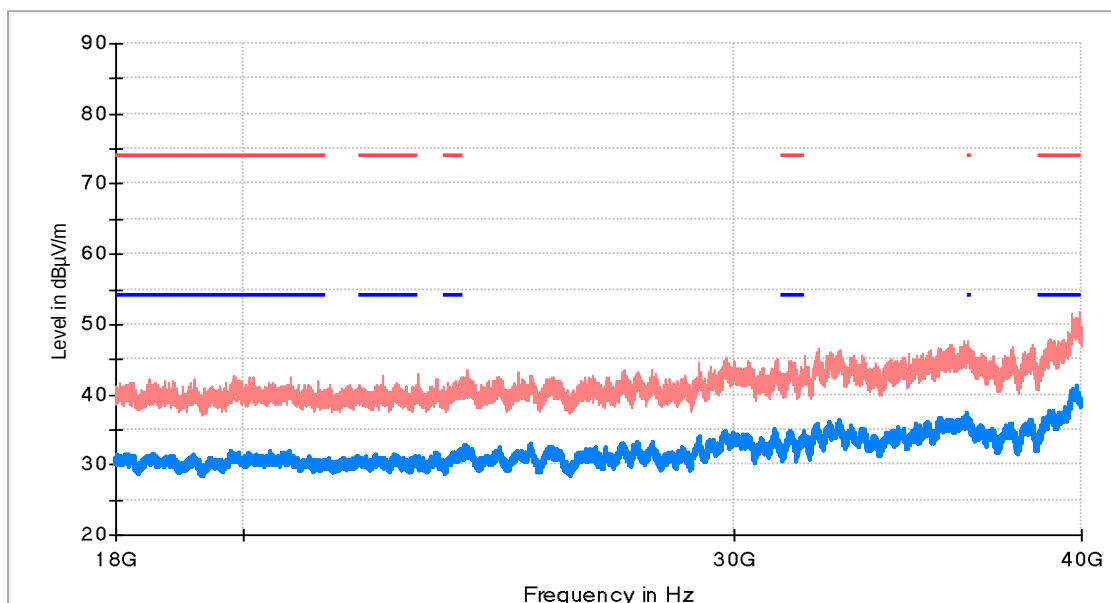
**18 – 40 GHz**

**Low Channel**



- AVG\_MAXH
- PK+\_MAXH
- TX limits to Spurious Emission FCC15.407 (1 GHz to 40 GHz) Restricted Bands PK Limit
- TX limits to Spurious Emission FCC15.407 (1 GHz to 40 GHz) Restricted Bands AVG Limit

**Middle Channel**

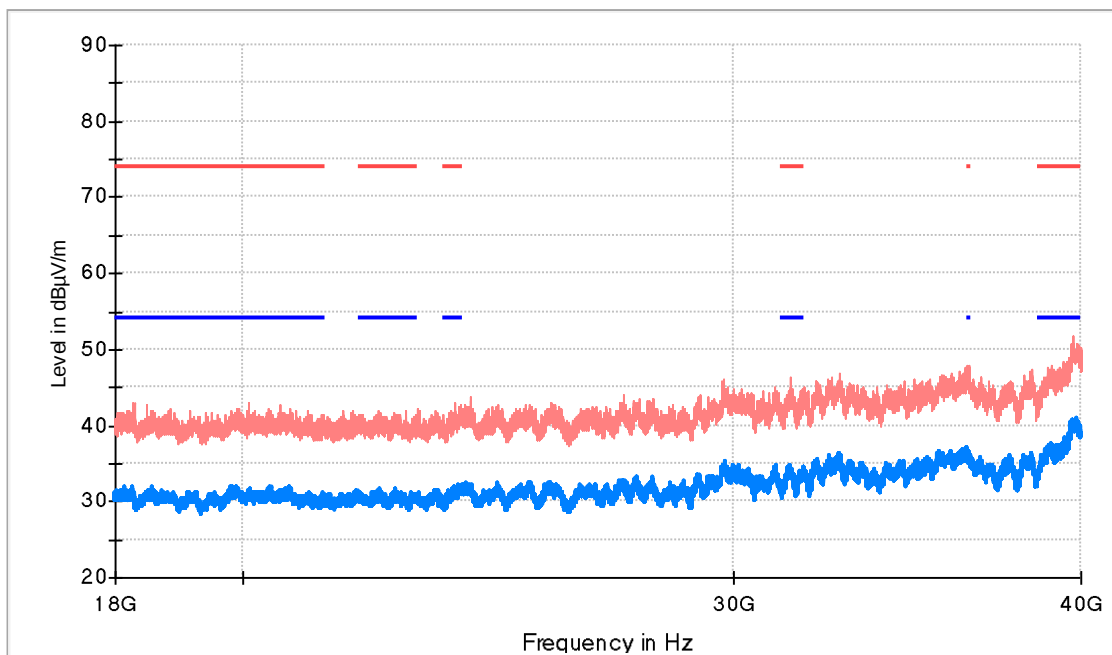


- AVG\_MAXH
- PK+\_MAXH
- TX limits to Spurious Emission FCC15.407 (1 GHz to 40 GHz) Restricted Bands PK Limit
- TX limits to Spurious Emission FCC15.407 (1 GHz to 40 GHz) Restricted Bands AVG Limit

**TEST RESULTS (Cont.)**

**18 – 40 GHz**

**High Channel**



- AVG\_MAXH
- PK+\_MAXH
- TX limits to Spurious Emission FCC15.407 (1 GHz to 40 GHz) Restricted Bands PK Limit
- TX limits to Spurious Emission FCC15.407 (1 GHz to 40 GHz) Restricted Bands AVG Limit

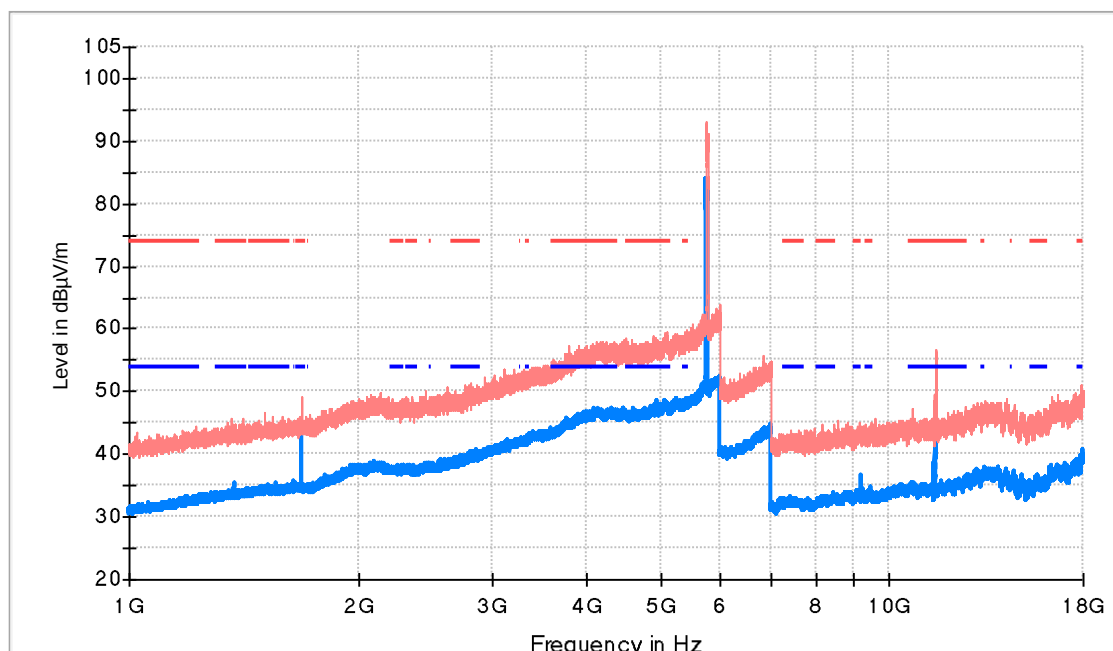
|                          |                       |
|--------------------------|-----------------------|
| TESTED SAMPLES:          | S/02                  |
| TESTED CONDITIONS MODES: | TC#02 (n mode 40 MHz) |
| TEST RESULTS:            | PASS                  |

### Frequency range 1 GHz – 40 GHz

The results and plots below show the maximum measured levels in the 1- 40 GHz range.

|                 |                |
|-----------------|----------------|
| FREQUENCY RANGE | 1 GHz – 18 GHz |
|-----------------|----------------|

### Low Channel



- AVG\_MAXH
- PK+\_MAXH
- TX limits to Spurious Emission FCC15.407 (1 GHz to 40 GHz) Restricted Bands PK Limit
- TX limits to Spurious Emission FCC15.407 (1 GHz to 40 GHz) Restricted Bands AVG Limit

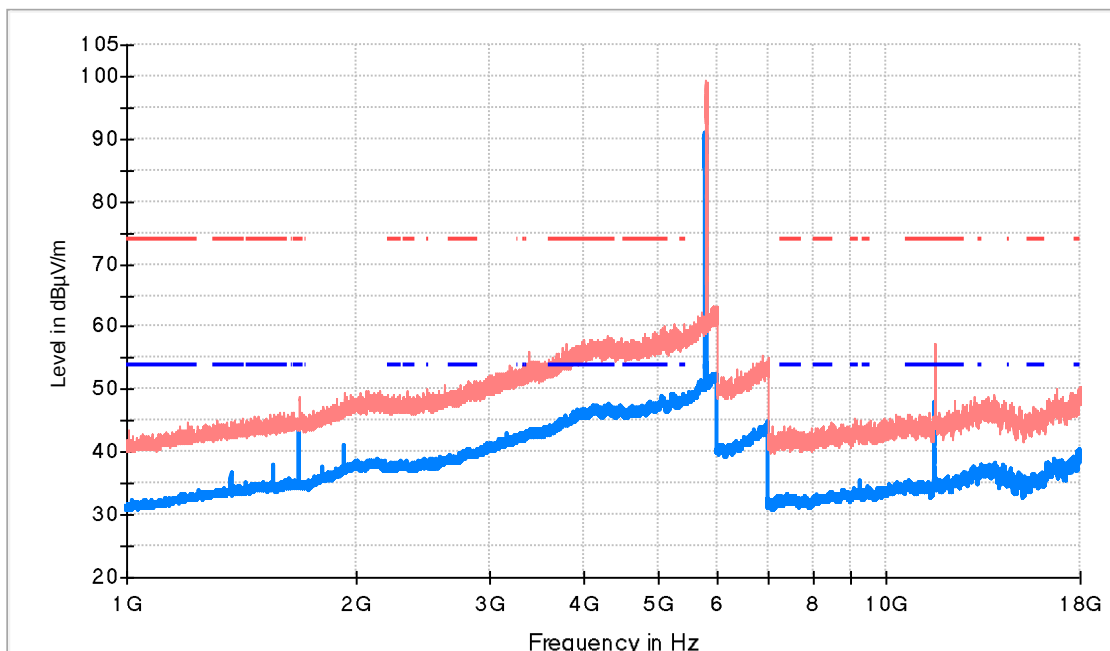
### Maximizations

| Frequency (MHz) | PK+_MAXH (dBμV/m) | AVG_MAXH (dBμV/m) | Pol | Comment     |
|-----------------|-------------------|-------------------|-----|-------------|
| 1375.000000     | 44.7              | 35.3              | V   |             |
| 1687.272727     | 49.1              | 44.8              | V   |             |
| 5756.818182     | 92.3              | 84.1              | V   | Fundamental |
| 9207.818182     | 44.5              | 36.6              | V   |             |
| 11509.636364    | 56.8              | 46.0              | H   |             |
| 1375.000000     | 44.7              | 35.3              | V   |             |

**TEST RESULTS (Cont.)**

**1 GHz – 18 GHz**

**High Channel**



- AVG\_MAXH
- PK+\_MAXH
- TX limits to Spurious Emission FCC15.407 (1 GHz to 40 GHz) Restricted Bands PK Limit
- TX limits to Spurious Emission FCC15.407 (1 GHz to 40 GHz) Restricted Bands AVG Limit

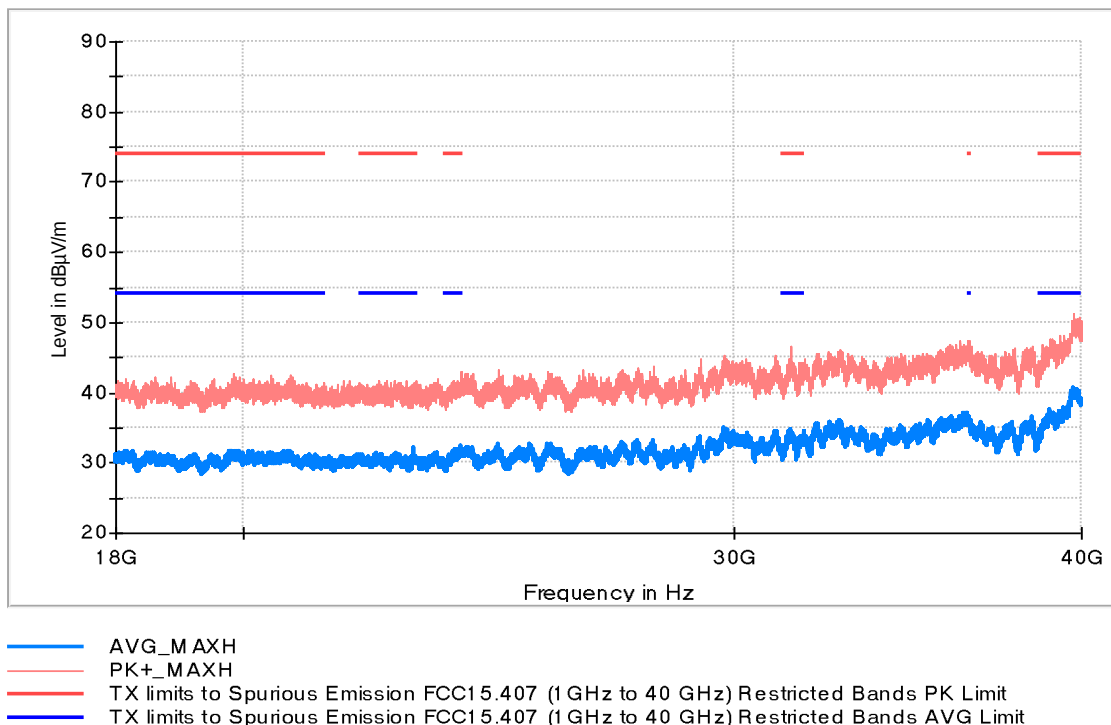
**Maximizations**

| Frequency (MHz) | PK+_MAXH (dBμV/m) | AVG_MAXH (dBμV/m) | Pol | Comment     |
|-----------------|-------------------|-------------------|-----|-------------|
| 1374.772727     | 44.8              | 36.7              | V   |             |
| 1562.272727     | 45.2              | 37.9              | H   |             |
| 1687.500000     | 48.2              | 44.7              | V   |             |
| 1937.272727     | 47.6              | 40.9              | H   |             |
| 5777.272727     | 91.2              | 85.2              | H   | Fundamental |
| 9272.181818     | 44.3              | 35.4              | V   |             |

TEST RESULTS (Cont.)

18 GHz – 40 GHz

Low Channel



High Channel

