

FCC Test Report

Equipment : 802.11abgn Wireless USB Module
Brand Name : SparkLAN
Model No. : WUBR-507N(M); WUBR-507N(MU)
FCC ID : RYK-WUBR507N
Standard : 47 CFR FCC Part 15.247
Operating Band : 5725 MHz – 5850 MHz
FCC Classification : DTS
Applicant : SparkLAN Communications, Inc.
Manufacturer : 8F., No.257, Sec. 2, Tiding Blvd., Neihu District,
Taipei City 11493, Taiwan

The product sample received on Aug 28, 2013 and completely tested on Sep. 13, 2013. We, SPORTON, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2009 and shown compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC., the test report shall not be reproduced except in full.

Reviewed by:


Wayne Hsu / Assistant Manager

Table of Contents

| | | |
|----------|---|-----------|
| 1 | GENERAL DESCRIPTION | 5 |
| 1.1 | Information..... | 5 |
| 1.2 | Support Equipment | 7 |
| 1.3 | Testing Applied Standards | 7 |
| 1.4 | Testing Location Information | 7 |
| 1.5 | Measurement Uncertainty | 7 |
| 2 | TEST CONFIGURATION OF EUT | 8 |
| 2.1 | The Worst Case Modulation Configuration | 8 |
| 2.2 | The Worst Case Measurement Configuration | 8 |
| 2.3 | Test Setup Diagram | 9 |
| 3 | TRANSMITTER TEST RESULT | 11 |
| 3.1 | AC Power-line Conducted Emissions | 11 |
| 3.2 | Transmitter Bandedge Emissions..... | 14 |
| 3.3 | Transmitter Unwanted Emissions | 17 |
| 4 | TEST EQUIPMENT AND CALIBRATION DATA..... | 38 |

APPENDIX A. TEST PHOTOS

APPENDIX B. PHOTOGRAPHS OF EUT

Summary of Test Result

| Conformance Test Specifications | | | | | |
|---------------------------------|------------------|---|--|---|----------|
| Report Clause | Ref. Std. Clause | Description | Measured | Limit | Result |
| 錯誤! 找不到參照來源。 | 15.247(b) | RF Output Power (Maximum Peak Conducted Output Power) | Power [dBm]:11.77 | Power [dBm]:30 | Complied |
| 1.1.2 | 15.203 | Antenna Requirement | Antenna connector mechanism complied | FCC 15.203 | Complied |
| 3.1 | 15.207 | AC Power-line Conducted Emissions | [dBuV]: 0.1913990MHz 51.85 (Margin 12.13dB) - QP 40.56 (Margin 13.42dB) - AV | FCC 15.207 | Complied |
| 3.1 | 15.247(c) | Transmitter Bandedge Emissions | Non-Restricted Bands: 5686.54MHz: 20.08dB | Non-Restricted Bands: > 20 dBc Restricted Bands: FCC 15.209 | Complied |
| 3.3 | 15.247(c) | Transmitter Radiated Unwanted Emissions | Restricted Bands [dBuV/m at 3m]: 31.940MHz 31.42 (Margin 8.58dB) – PK | Non-Restricted Bands: > 20 dBc Restricted Bands: FCC 15.209 | Complied |



SPORTON INTERNATIONAL INC.
TEL : 886-3-327-3456
FAX : 886-3-327-0973

1 General Description

1.1 Information

1.1.1 RF Output Power

| RF General Information | | | | | | |
|------------------------|------------------|-----------------|----------------|------------------------------------|-----------------------|-------------|
| Frequency Range (MHz) | IEEE Std. 802.11 | Ch. Freq. (MHz) | Channel Number | Transmit Chains (N _{TX}) | RF Output Power (dBm) | Co-location |
| 5725-5850 | a | 5745-5825 | 149-165 [5] | 1 | 11.76 | N/A |
| 5725-5850 | n (HT20) | 5745-5825 | 149-165 [5] | 2 | 11.77 | N/A |
| 5725-5850 | n (HT40) | 5755-5795 | 151-159 [2] | 2 | 11.68 | N/A |

Note 1: RF output power specifies that Maximum Peak Conducted Output Power.
 Note 2: 802.11a/n uses a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.
 Note 3: Co-location, Co-location is generally defined as simultaneously transmitting (co-transmitting) antennas within 20 cm of each other. (i.e., EUT has simultaneously co-transmitting that operating 2.4GHz and 5GHz.)

1.1.2 Antenna Information

| Antenna Category | |
|-------------------------------------|---|
| <input checked="" type="checkbox"/> | External antenna (dedicated antennas) |
| <input checked="" type="checkbox"/> | Single power level with corresponding antenna(s). |
| <input type="checkbox"/> | Multiple power level and corresponding antenna(s). |
| <input checked="" type="checkbox"/> | RF connector provided |
| <input checked="" type="checkbox"/> | Unique antenna connector. (e.g., MMCX, U.FL, IPX, and RP-SMA, RP-N type...) |
| <input type="checkbox"/> | Standard antenna connector. (e.g., SMA, N, BNC, and TNC type...) |

| Antenna General Information | | | |
|-----------------------------|-----------|-----------|------------|
| No. | Ant. Cat. | Ant. Type | Gain (dBi) |
| 1 | External | PIFA | 3.2 |

1.1.3 Type of EUT

| Identify EUT | |
|-------------------------------------|---|
| EUT Serial Number | N/A |
| Presentation of Equipment | <input checked="" type="checkbox"/> Production ; <input type="checkbox"/> Pre-Production ; <input type="checkbox"/> Prototype |
| Type of EUT | |
| <input checked="" type="checkbox"/> | Stand-alone |
| <input type="checkbox"/> | Combined (EUT where the radio part is fully integrated within another device) Combined Equipment - Brand Name / Model No.: ... |
| <input type="checkbox"/> | Plug-in radio (EUT intended for a variety of host systems) Host System - Brand Name / Model No.: ... |
| <input type="checkbox"/> | Other: |

1.1.4 EUT Operational Condition

| | | | |
|--------------------------|---|--|--|
| Supply Voltage | <input type="checkbox"/> AC mains | <input checked="" type="checkbox"/> DC | |
| Type of DC Source | <input type="checkbox"/> Internal DC supply | <input type="checkbox"/> External DC adapter | <input checked="" type="checkbox"/> Host |

1.2 Support Equipment

| Support Equipment | | | | |
|-------------------|----------------|------------|------------|-------------|
| No. | Equipment | Brand Name | Model Name | FCC ID |
| 1 | Notebook | DELL | E5500 | DoC |
| 2 | Printer | EPSON | C61 | N/A |
| 3 | (USB) Mouse | Microsoft | 1004 | DoC |
| 4 | AP (Remote) | ASUS | RT-AC66U | MSQ-RTAC66U |

1.3 Testing Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- ♦ 47 CFR FCC Part 15
- ♦ ANSI C63.10-2009
- ♦ FCC KDB 558074
- ♦ FCC KDB 662911
- ♦ FCC KDB 412172

1.4 Testing Location Information

| Testing Location | | | |
|-------------------------------------|--------|--|---------------|
| <input checked="" type="checkbox"/> | HWA YA | ADD : No. 52, Hwa Ya 1 st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C. | |
| | | TEL : 886-3-327-3456 FAX : 886-3-327-0973 | |
| Test Condition | | Test Site No. | Test Engineer |
| AC Conduction | | CO04-HY | Zeus |
| Radiated Emission | | 03CH02-HY | Daniel |
| | | | 24°C / 47% |
| | | | 25.6°C / 57% |

1.5 Measurement Uncertainty

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2))

| Measurement Uncertainty | | | |
|-----------------------------------|---------------|-------------|-------|
| Test Item | | Uncertainty | Limit |
| AC power-line conducted emissions | | ±2.26 dB | N/A |
| All emissions, radiated | 9 – 150 kHz | ±2.49 dB | N/A |
| | 30 – 1000 MHz | ±2.56 dB | N/A |
| | 1 – 18 GHz | ±3.59 dB | N/A |
| | 18 – 40 GHz | ±3.82 dB | N/A |
| | 40 – 200 GHz | N/A | N/A |




2 Test Configuration of EUT

2.1 The Worst Case Modulation Configuration

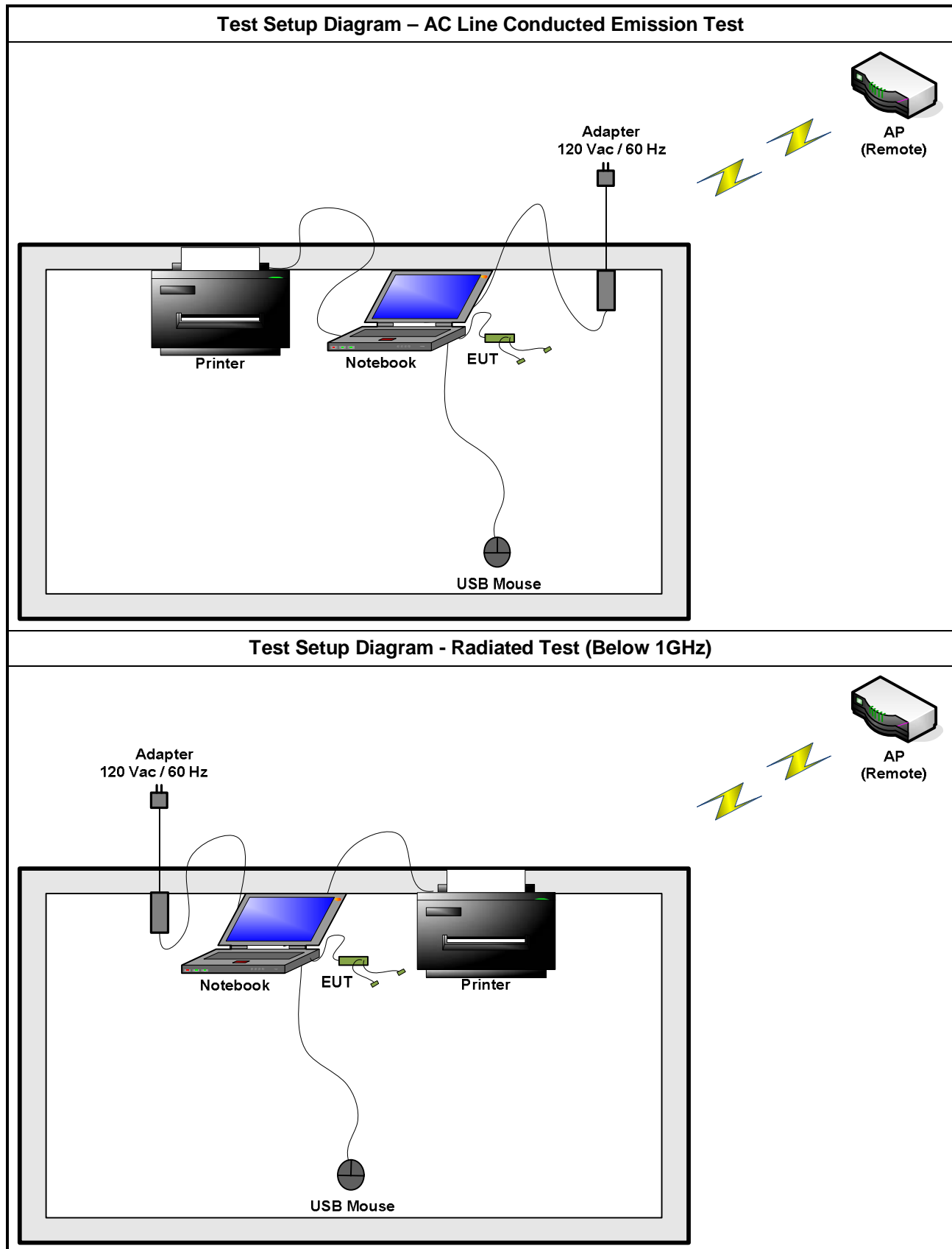
| Worst Modulation Used for Conformance Testing | | | |
|---|------------------------------------|-----------------|-----------------------|
| Modulation Mode | Transmit Chains (N _{TX}) | Data Rate / MCS | Worst Data Rate / MCS |
| 11a,6-54Mbps | 1 | 6-54 Mbps | 6 Mbps |
| HT20, M8-15 | 2 | M8-15 | MCS 8 |
| HT40, M8-15 | 2 | M8-15 | MCS 8 |

2.2 The Worst Case Measurement Configuration

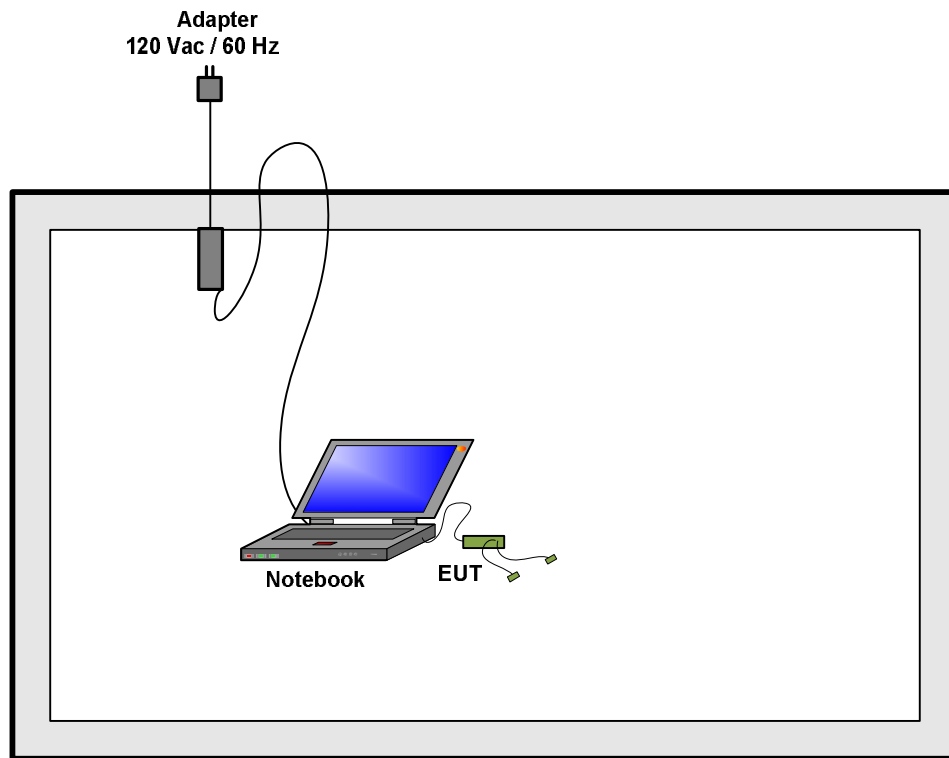
| The Worst Case Mode for Following Conformance Tests | |
|---|---|
| Tests Item | AC power-line conducted emissions |
| Condition | AC power-line conducted measurement for line and neutral Test Voltage: 120Vac / 60Hz |
| Operating Mode | Operating Mode Description |
| 1 | EUT with Notebook via USB cable (Open WLAN function) |

| The Worst Case Mode for Following Conformance Tests | | | |
|---|--|---|---|
| Tests Item | Transmitter Radiated Unwanted Emissions Transmitter Radiated Bandedge Emissions | | |
| Test Condition | Radiated measurement | | |
| User Position | <input type="checkbox"/> EUT will be placed in fixed position. | | |
| | <input checked="" type="checkbox"/> EUT will be placed in mobile position and operating multiple positions. EUT shall be performed two orthogonal planes. The worst planes is X. | | |
| | <input type="checkbox"/> EUT will be a hand-held or body-worn battery-powered devices and operating multiple positions. EUT shall be performed two or three orthogonal planes. | | |
| Operating Mode | <input checked="" type="checkbox"/> 1. EUT with Notebook via USB cable (Open WLAN function) | | |
| Modulation Mode | 11a, HT20, HT40 | | |
| Orthogonal Planes of EUT | X Plane | Y Plane | Z Plane |
| |  |  |  |

2.3 Test Setup Diagram



Test Setup Diagram - Radiated Test (Above 1GHz)



3 Transmitter Test Result

3.1 AC Power-line Conducted Emissions

3.1.1 AC Power-line Conducted Emissions Limit

| AC Power-line Conducted Emissions Limit (Class B) | | |
|---|------------|-----------|
| Frequency Emission (MHz) | Quasi-Peak | Average |
| 0.15-0.5 | 66 - 56 * | 56 - 46 * |
| 0.5-5 | 56 | 46 |
| 5-30 | 60 | 50 |

Note 1: * Decreases with the logarithm of the frequency.

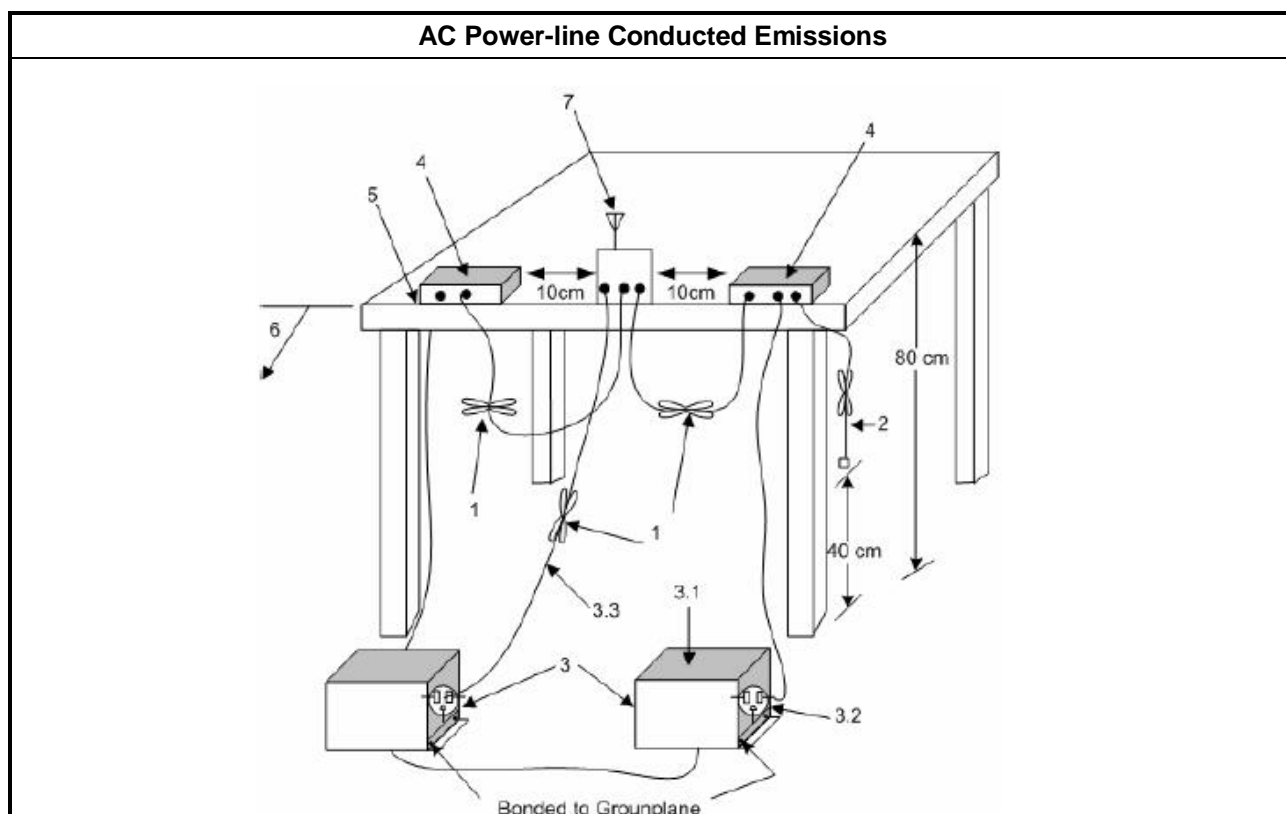
3.1.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.1.3 Test Procedures

| Test Method |
|--|
| <input checked="" type="checkbox"/> Refer as ANSI C63.10-2009, clause 6.2 for AC power-line conducted emissions. |

3.1.4 Test Setup

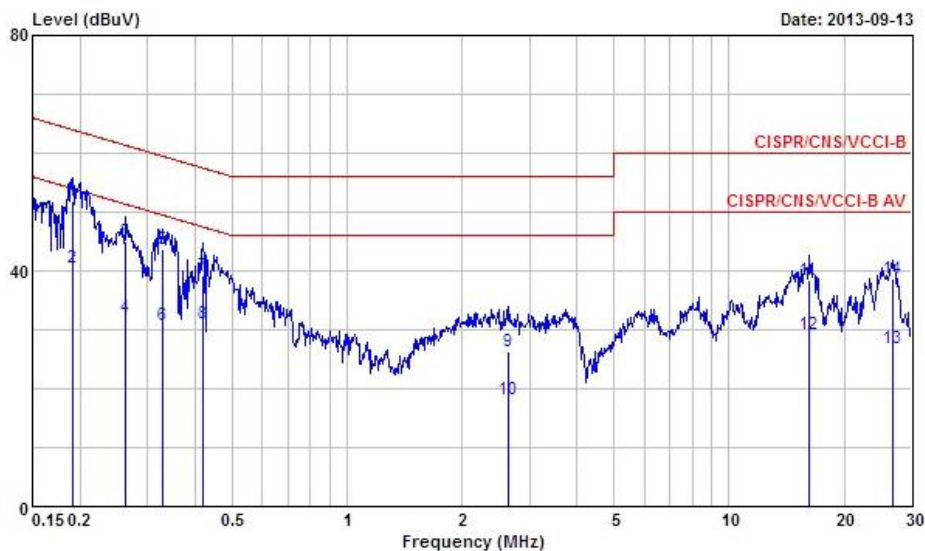


3.1.5 Test Result of AC Power-line Conducted Emissions



AC Power-line Conducted Emissions Result

| | | | |
|--------------------|--|-------------|------|
| Operating Mode | 1 | Power Phase | Line |
| Operating Function | EUT with Notebook via USB cable (Open WLAN function) | | |

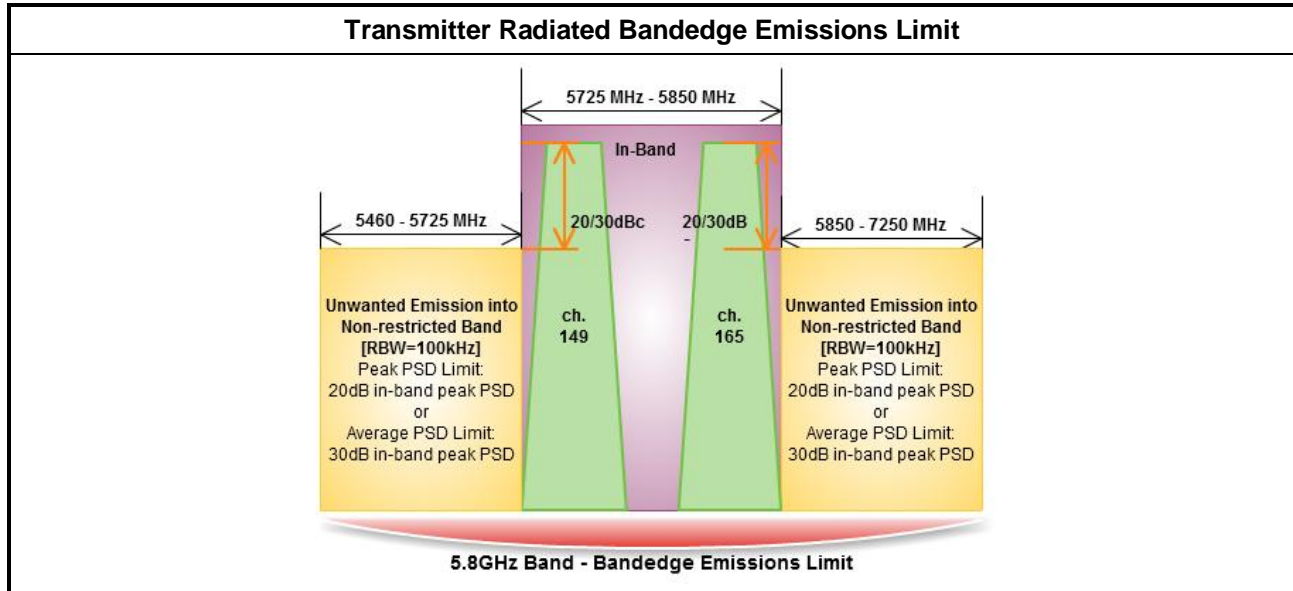


| | Freq | Level | Over | Limit | Read | LISN | Cable | |
|----|------------|-------|--------|-------|-------|--------|-------|---------|
| | MHz | dBuV | Limit | Line | Level | Factor | Loss | Remark |
| | | | dB | dBuV | dBuV | dB | dB | |
| 1 | 80.1913990 | 51.85 | -12.13 | 63.98 | 51.62 | 0.11 | 0.12 | QP |
| 2 | 0.1913990 | 40.56 | -13.42 | 53.98 | 40.33 | 0.11 | 0.12 | Average |
| 3 | 0.2630270 | 45.03 | -16.31 | 61.34 | 44.82 | 0.11 | 0.10 | QP |
| 4 | 0.2630270 | 32.05 | -19.29 | 51.34 | 31.84 | 0.11 | 0.10 | Average |
| 5 | 0.3303280 | 43.67 | -15.77 | 59.44 | 43.47 | 0.10 | 0.10 | QP |
| 6 | 0.3303280 | 30.77 | -18.67 | 49.44 | 30.57 | 0.10 | 0.10 | Average |
| 7 | 0.4192670 | 39.18 | -18.28 | 57.46 | 38.97 | 0.10 | 0.11 | QP |
| 8 | 0.4192670 | 31.09 | -16.37 | 47.46 | 30.88 | 0.10 | 0.11 | Average |
| 9 | 2.640 | 26.38 | -29.62 | 56.00 | 25.98 | 0.14 | 0.26 | QP |
| 10 | 2.640 | 18.16 | -27.84 | 46.00 | 17.76 | 0.14 | 0.26 | Average |
| 11 | 16.140 | 38.43 | -21.57 | 60.00 | 37.94 | 0.29 | 0.20 | QP |
| 12 | 16.140 | 29.10 | -20.90 | 50.00 | 28.61 | 0.29 | 0.20 | Average |
| 13 | 26.700 | 26.81 | -23.19 | 50.00 | 26.42 | 0.35 | 0.04 | Average |
| 14 | 26.700 | 38.61 | -21.39 | 60.00 | 38.22 | 0.35 | 0.04 | QP |

Note 1: ">20dB" means emission levels that exceed the level of 20 dB below the applicable limit.
 Note 2: "N/F" means Nothing Found emissions (No emissions were detected.)

3.2 Transmitter Bandedge Emissions

3.2.1 Transmitter Radiated Bandedge Emissions Limit



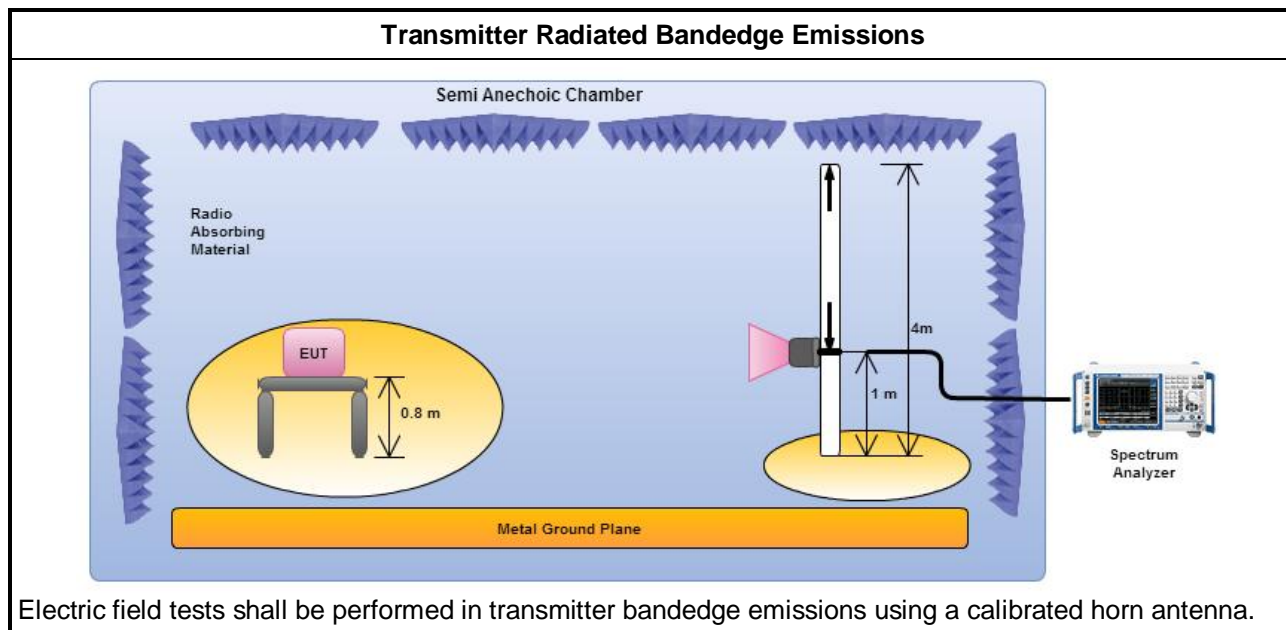
3.2.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.2.3 Test Procedures

| Test Method | |
|-------------------------------------|---|
| <input checked="" type="checkbox"/> | The average emission levels shall be measured in [duty cycle ≥ 98 or duty factor]. |
| <input checked="" type="checkbox"/> | Refer as ANSI C63.10, clause 6.9.2.2 bandedge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating band. |
| <input checked="" type="checkbox"/> | For the transmitter unwanted emissions shall be measured using following options below: |
| <input checked="" type="checkbox"/> | Refer as FCC KDB 558074, clause 11 for unwanted emissions into non-restricted bands. |
| <input checked="" type="checkbox"/> | Refer as FCC KDB 558074, clause 12 for unwanted emissions into restricted bands. |
| <input type="checkbox"/> | Refer as FCC KDB 558074, clause 12.2.5.1 Option 1 (trace averaging for duty cycle $\geq 98\%$) |
| <input type="checkbox"/> | Refer as FCC KDB 558074, clause 12.2.5.2 Option 2 (trace averaging + duty factor). |
| <input type="checkbox"/> | Refer as FCC KDB 558074, clause 12.2.5.3 Option 3 (Reduced VBW $\geq 1/T$). |
| <input checked="" type="checkbox"/> | Refer as ANSI C63.10, clause 4.2.3.2.3 (Reduced VBW). VBW $\geq 1/T$, where T is pulse time. |
| <input type="checkbox"/> | Refer as ANSI C63.10, clause 4.2.3.2.4 average value of pulsed emissions. |
| <input checked="" type="checkbox"/> | Refer as FCC KDB 558074, clause 11.3 and 12.2.4 measurement procedure peak limit. |
| <input checked="" type="checkbox"/> | For the transmitter bandedge emissions shall be measured using following options below: |
| <input type="checkbox"/> | Refer as FCC KDB 558074, clause 13.3 for narrower resolution bandwidth (100kHz) using the band power and summing the spectral levels (i.e., 1 MHz). |
| <input checked="" type="checkbox"/> | Refer as ANSI C63.10, clause 6.9.2 for band-edge testing. |
| <input type="checkbox"/> | Refer as ANSI C63.10, clause 6.9.3 for marker-delta method for band-edge measurements. |
| <input checked="" type="checkbox"/> | For radiated measurement, refer as FCC KDB 558074, clause 12.2.7. |
| <input checked="" type="checkbox"/> | Measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements). Measurements in the bandedge are typically made at a closer distance 1m, because the instrumentation noise floor is typically close to the radiated emission limit. |

3.2.4 Test Setup



3.2.5 Transmitter Radiated Bandedge Emissions

| 5710-5850MHz Transmitter Radiated Bandedge Emissions | | | | | | | | |
|--|-----------------|------------------|-------------------------------|-------------|--------------------------------|----------------|------------|------|
| Modulation | N _{TX} | Test Freq. (MHz) | In-band PSD [i] (dBuV/100kHz) | Freq. (MHz) | Out-band PSD [o] (dBuV/100kHz) | [i] – [o] (dB) | Limit (dB) | Pol. |
| 11a | 1 | 5745 | 90.10 | 5695.85 | 68.05 | 22.05 | 20 | V |
| 11a | 1 | 5825 | 89.98 | 5854.05 | 68.46 | 21.52 | 20 | V |
| HT20, M8-15 | 2 | 5745 | 88.16 | 5686.54 | 68.08 | 20.08 | 20 | V |
| HT20, M8-15 | 2 | 5825 | 88.88 | 5855.59 | 68.48 | 20.40 | 20 | V |
| HT40, M8-15 | 2 | 5755 | 83.08 | 5722.60 | 62.26 | 20.82 | 20 | V |
| HT40, M8-15 | 2 | 5795 | 82.46 | 5855.90 | 58.33 | 24.13 | 20 | V |

Note 1: Measurement worst emissions of receive antenna polarization

3.3 Transmitter Unwanted Emissions

3.3.1 Transmitter Radiated Unwanted Emissions Limit

| Restricted Band Emissions Limit | | | |
|---------------------------------|-----------------------|-------------------------|----------------------|
| Frequency Range (MHz) | Field Strength (uV/m) | Field Strength (dBuV/m) | Measure Distance (m) |
| 0.009~0.490 | 2400/F(kHz) | 48.5 - 13.8 | 300 |
| 0.490~1.705 | 24000/F(kHz) | 33.8 - 23 | 30 |
| 1.705~30.0 | 30 | 29 | 30 |
| 30~88 | 100 | 40 | 3 |
| 88~216 | 150 | 43.5 | 3 |
| 216~960 | 200 | 46 | 3 |
| Above 960 | 500 | 54 | 3 |

Note 1: Test distance for frequencies at or above 30 MHz, measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).

Note 2: Test distance for frequencies at below 30 MHz, measurements may be performed at a distance closer than the EUT limit distance; however, an attempt should be made to avoid making measurements in the near field. When performing measurements below 30 MHz at a closer distance than the limit distance, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two or more distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB/decade). The test report shall specify the extrapolation method used to determine compliance of the EUT.

| Un-restricted Band Emissions Limit | |
|------------------------------------|------------|
| RF output power procedure | Limit (dB) |
| Peak output power procedure | 20 |
| Average output power procedure | 30 |

Note 1: If the peak output power procedure is used to measure the fundamental emission power to demonstrate compliance to requirements, then the peak conducted output power measured within any 100 kHz outside the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum measured in-band peak PSD level.

Note 2: If the average output power procedure is used to measure the fundamental emission power to demonstrate compliance to requirements, then the power in any 100 kHz outside of the authorized frequency band shall be attenuated by at least 30 dB relative to the maximum measured in-band average PSD level.

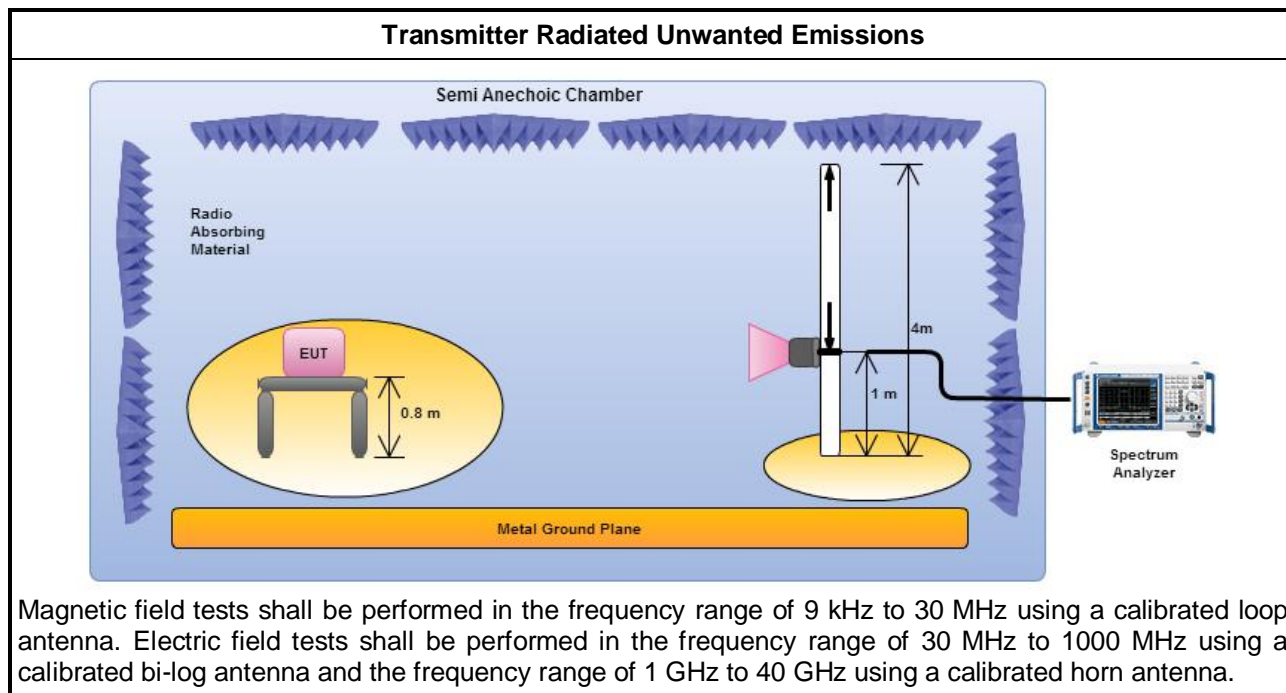
3.3.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.3.3 Test Procedures

| Test Method | |
|-------------------------------------|---|
| <input checked="" type="checkbox"/> | Measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements). |
| <input checked="" type="checkbox"/> | Measurements in the frequency range 10 GHz - 18GHz are typically made at a closer distance 1m, because the instrumentation noise floor is typically close to the radiated emission limit. |
| <input checked="" type="checkbox"/> | Measurements in the frequency range above 18 GHz - 25GHz are typically made at a closer distance 0.5m, because the instrumentation noise floor is typically close to the radiated emission limit. |
| <input checked="" type="checkbox"/> | The average emission levels shall be measured in [duty cycle \geq 98 or duty factor]. |
| <input checked="" type="checkbox"/> | For the transmitter unwanted emissions shall be measured using following options below: |
| <input checked="" type="checkbox"/> | Refer as FCC KDB 558074, clause 11 for unwanted emissions into non-restricted bands. |
| <input checked="" type="checkbox"/> | Refer as FCC KDB 558074, clause 12 for unwanted emissions into restricted bands. |
| <input type="checkbox"/> | Refer as FCC KDB 558074, clause 12.2.5.1 Option 1 (trace averaging for duty cycle \geq 98%) |
| <input type="checkbox"/> | Refer as FCC KDB 558074, clause 12.2.5.2 Option 2 (trace averaging + duty factor). |
| <input type="checkbox"/> | Refer as FCC KDB 558074, clause 12.2.5.3 Option 3 (Reduced VBW \geq 1/T). |
| <input checked="" type="checkbox"/> | Refer as ANSI C63.10, clause 4.2.3.2.3 (Reduced VBW). VBW \geq 1/T, where T is pulse time. |
| <input type="checkbox"/> | Refer as ANSI C63.10, clause 4.2.3.2.4 average value of pulsed emissions. |
| <input checked="" type="checkbox"/> | Refer as FCC KDB 558074, clause 11.3 and 12.2.4 measurement procedure peak limit. |
| <input checked="" type="checkbox"/> | Refer as FCC KDB 558074, clause 12.2.3 measurement procedure Quasi-Peak limit. |
| <input checked="" type="checkbox"/> | For radiated measurement, refer as FCC KDB 558074, clause 12.2.7. |
| <input checked="" type="checkbox"/> | Refer as ANSI C63.10, clause 6.4 for radiated emissions from below 30 MHz. |
| <input checked="" type="checkbox"/> | Refer as ANSI C63.10, clause 6.5 for radiated emissions from 30 MHz to 1000 MHz. |
| <input checked="" type="checkbox"/> | Refer as ANSI C63.10, clause 6.6 for radiated emissions from above 1 GHz. |

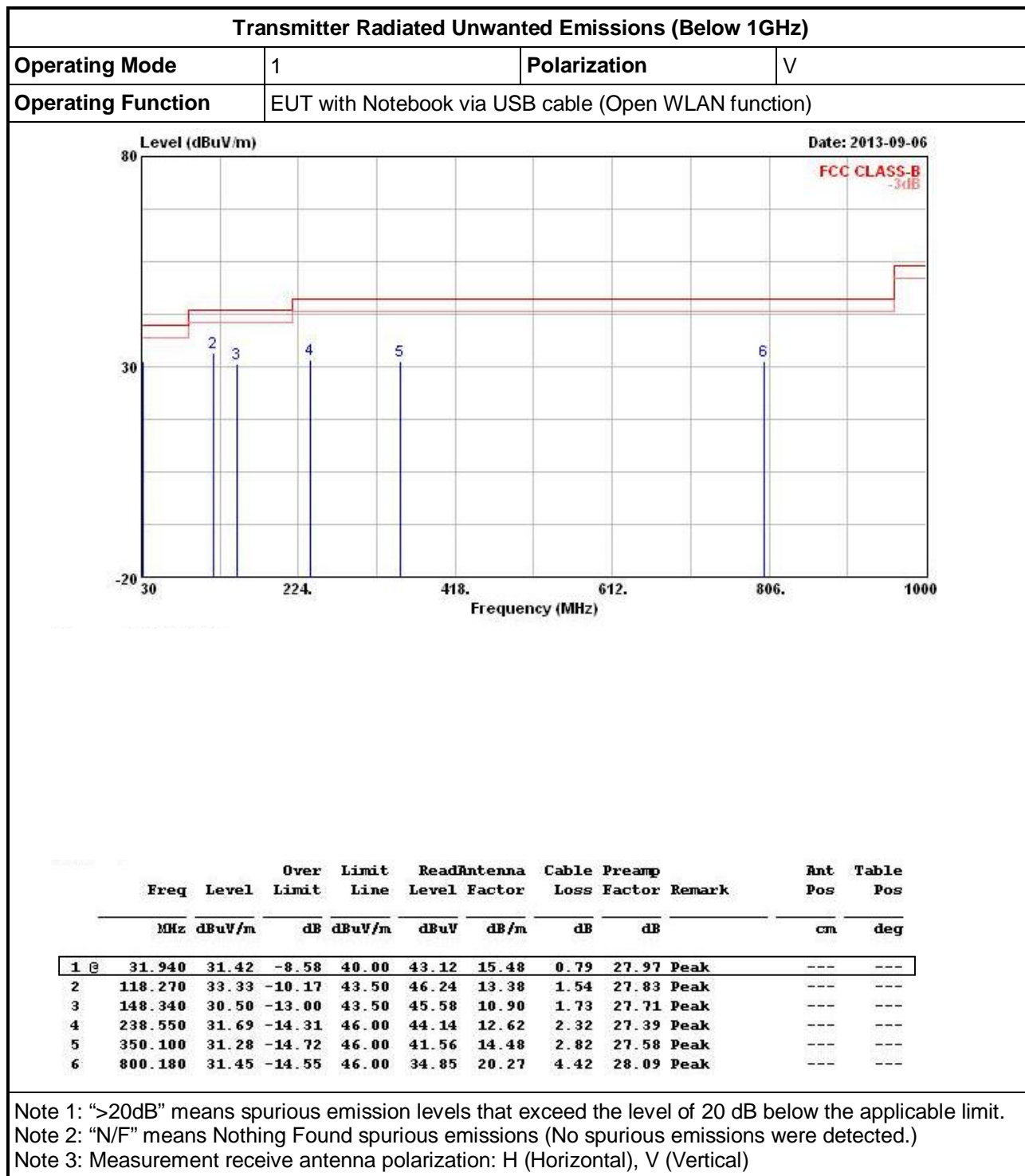
3.3.4 Test Setup



3.3.5 Transmitter Radiated Unwanted Emissions (Below 30MHz)

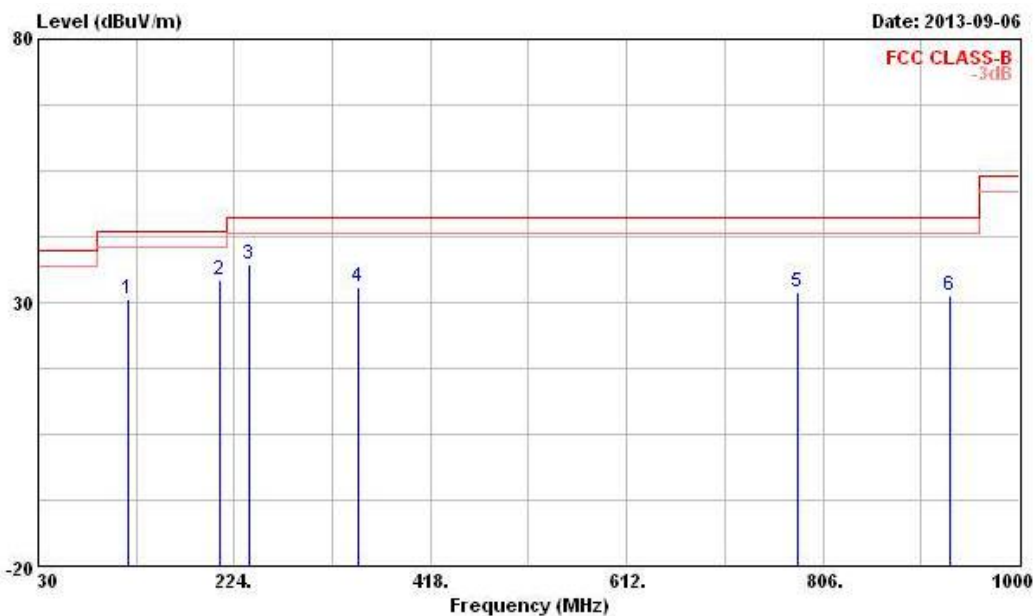
All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.

3.3.6 Transmitter Radiated Unwanted Emissions (Below 1GHz)



Transmitter Radiated Unwanted Emissions (Below 1GHz)

| | | | |
|---------------------------|--|---------------------|---|
| Operating Mode | 1 | Polarization | H |
| Operating Function | EUT with Notebook via USB cable (Open WLAN function) | | |



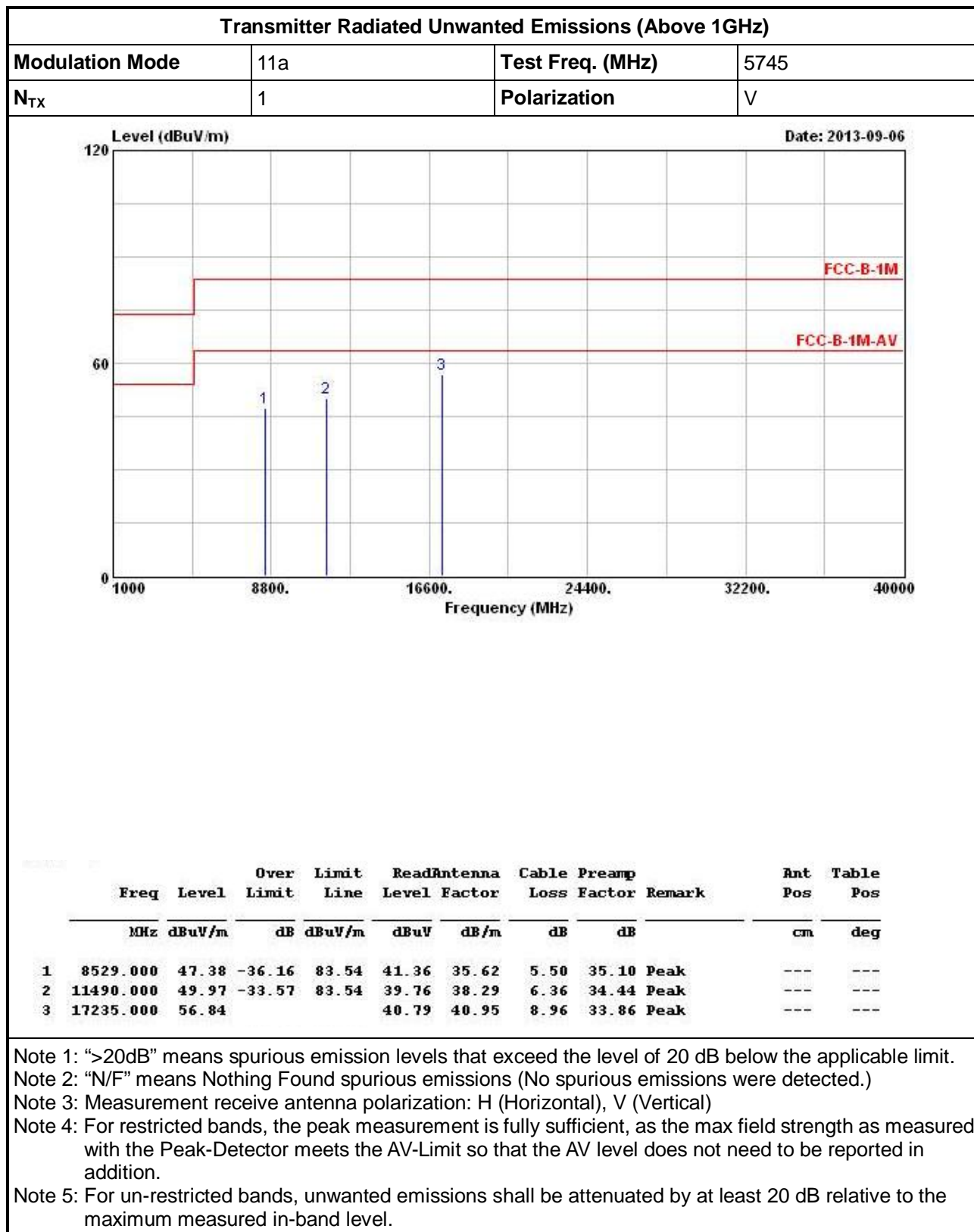
| | Freq | Level | Over Limit | Limit Line | ReadAntenna Level | Antenna Factor | Cable Loss | Preamp Factor | Remark | Ant Pos | Table Pos |
|---|---------|--------|------------|------------|-------------------|----------------|------------|---------------|--------|---------|-----------|
| | MHz | dBuV/m | dB | dBuV/m | dBuV | dB/m | dB | dB | | cm | deg |
| 1 | 118.270 | 30.72 | -12.78 | 43.50 | 43.63 | 13.38 | 1.54 | 27.83 | Peak | --- | --- |
| 2 | 210.420 | 34.31 | -9.19 | 43.50 | 47.94 | 11.70 | 2.14 | 27.47 | Peak | --- | --- |
| 3 | 238.550 | 37.11 | -8.89 | 46.00 | 49.56 | 12.62 | 2.32 | 27.39 | Peak | --- | --- |
| 4 | 347.190 | 32.99 | -13.01 | 46.00 | 43.31 | 14.43 | 2.81 | 27.56 | Peak | --- | --- |
| 5 | 780.780 | 31.94 | -14.06 | 46.00 | 35.78 | 19.99 | 4.32 | 28.15 | Peak | --- | --- |
| 6 | 932.100 | 31.33 | -14.67 | 46.00 | 33.39 | 20.82 | 4.75 | 27.63 | Peak | --- | --- |

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

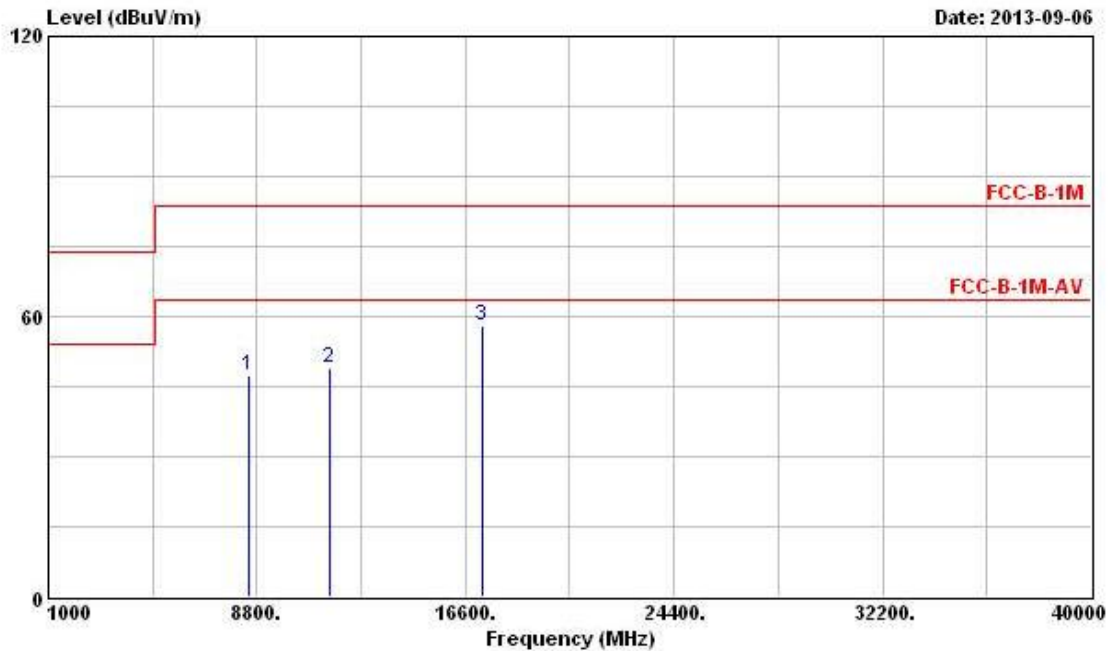
Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

3.3.7 Transmitter Radiated Unwanted Emissions (Above 1GHz)



Transmitter Radiated Unwanted Emissions (Above 1GHz)

| | | | |
|------------------------|-----|-------------------------|------|
| Modulation Mode | 11a | Test Freq. (MHz) | 5745 |
| N_{TX} | 1 | Polarization | H |



| | Freq | Level | Over Limit | Limit Line | ReadAntenna Level | Antenna Factor | Cable Loss | Preamp Factor | Remark | Ant Pos | Table Pos |
|---|-----------|--------|------------|------------|-------------------|----------------|------------|---------------|--------|---------|-----------|
| | MHz | dBuV/m | dB | dBuV/m | dBuV | dB/m | dB | dB | | cm | deg |
| 1 | 8518.000 | 47.56 | -35.98 | 83.54 | 41.55 | 35.61 | 5.50 | 35.10 | Peak | --- | --- |
| 2 | 11490.000 | 48.95 | -34.59 | 83.54 | 38.74 | 38.29 | 6.36 | 34.44 | Peak | --- | --- |
| 3 | 17235.000 | 58.08 | | | 42.03 | 40.95 | 8.96 | 33.86 | Peak | --- | --- |

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

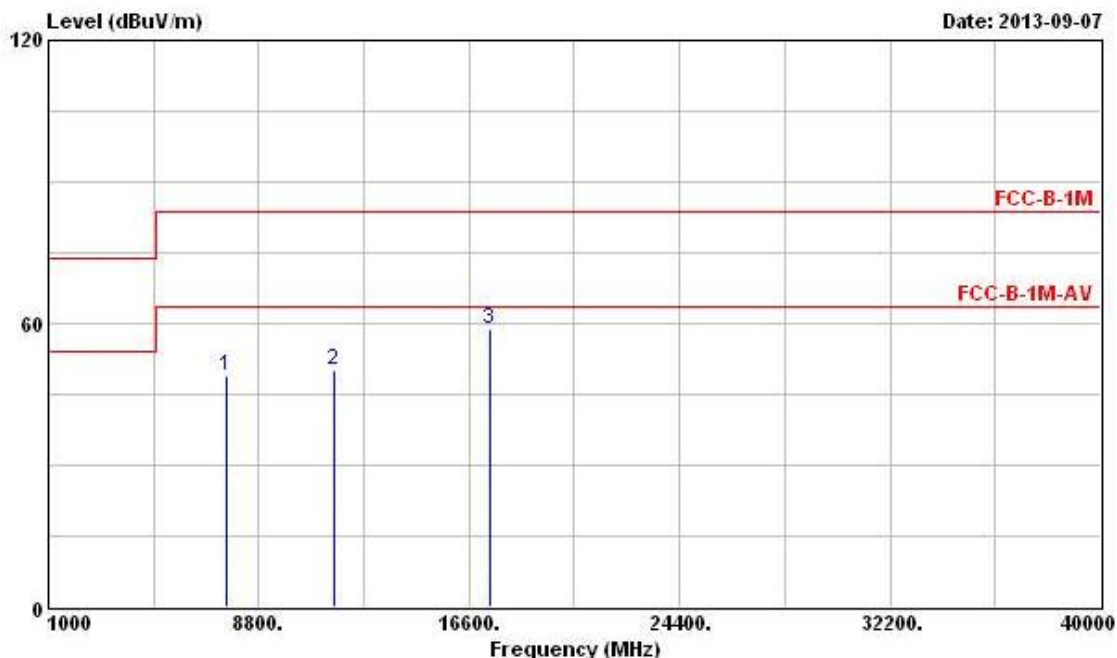
Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level.

Transmitter Radiated Unwanted Emissions (Above 1GHz)

| | | | |
|------------------------|-----|-------------------------|------|
| Modulation Mode | 11a | Test Freq. (MHz) | 5785 |
| N_{TX} | 1 | Polarization | V |



| | Freq | Level | Over Limit | Limit Line | ReadAntenna Level | Antenna Factor | Cable Loss | Preamp Factor | Remark | Ant Pos | Table Pos |
|---|-----------|--------|------------|------------|-------------------|----------------|------------|---------------|--------|---------|-----------|
| | MHz | dBuV/m | dB | dBuV/m | dBuV | dB/m | dB | dB | | cm | deg |
| 1 | 7622.000 | 49.02 | -34.52 | 83.54 | 43.14 | 35.30 | 5.61 | 35.03 | Peak | --- | --- |
| 2 | 11570.000 | 50.01 | -33.53 | 83.54 | 39.74 | 38.36 | 6.44 | 34.53 | Peak | --- | --- |
| 3 | 17355.000 | 58.84 | | | 42.74 | 40.97 | 8.94 | 33.81 | Peak | --- | --- |

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

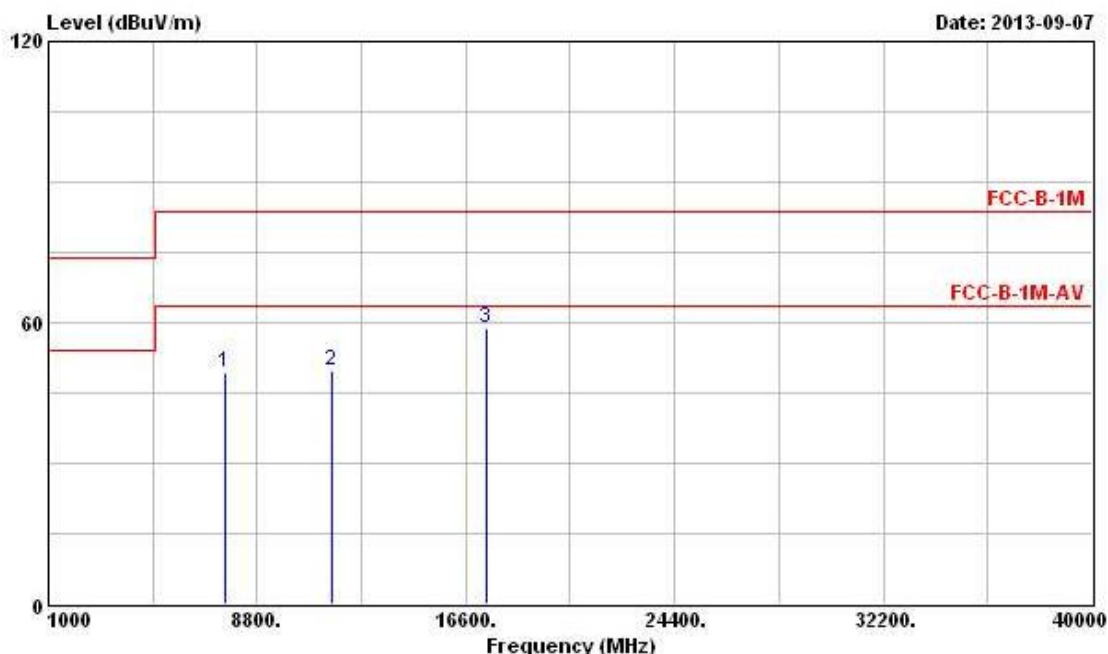
Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level.

Transmitter Radiated Unwanted Emissions (Above 1GHz)

| | | | |
|------------------------|-----|-------------------------|------|
| Modulation Mode | 11a | Test Freq. (MHz) | 5785 |
| N_{TX} | 1 | Polarization | H |



| | Freq | Level | Over Limit | Limit Line | ReadAntenna Level | Antenna Factor | Cable Loss | Preamp Factor | Remark | Ant Pos | Table Pos |
|---|-----------|--------|------------|------------|-------------------|----------------|------------|---------------|--------|---------|-----------|
| | MHz | dBuV/m | dB | dBuV/m | dBuV | dB/m | dB | dB | | cm | deg |
| 1 | 7612.000 | 49.19 | -34.35 | 83.54 | 43.30 | 35.30 | 5.61 | 35.02 | Peak | --- | --- |
| 2 | 11570.000 | 49.83 | -33.71 | 83.54 | 39.56 | 38.36 | 6.44 | 34.53 | Peak | --- | --- |
| 3 | 17355.000 | 58.90 | | | 42.80 | 40.97 | 8.94 | 33.81 | Peak | --- | --- |

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

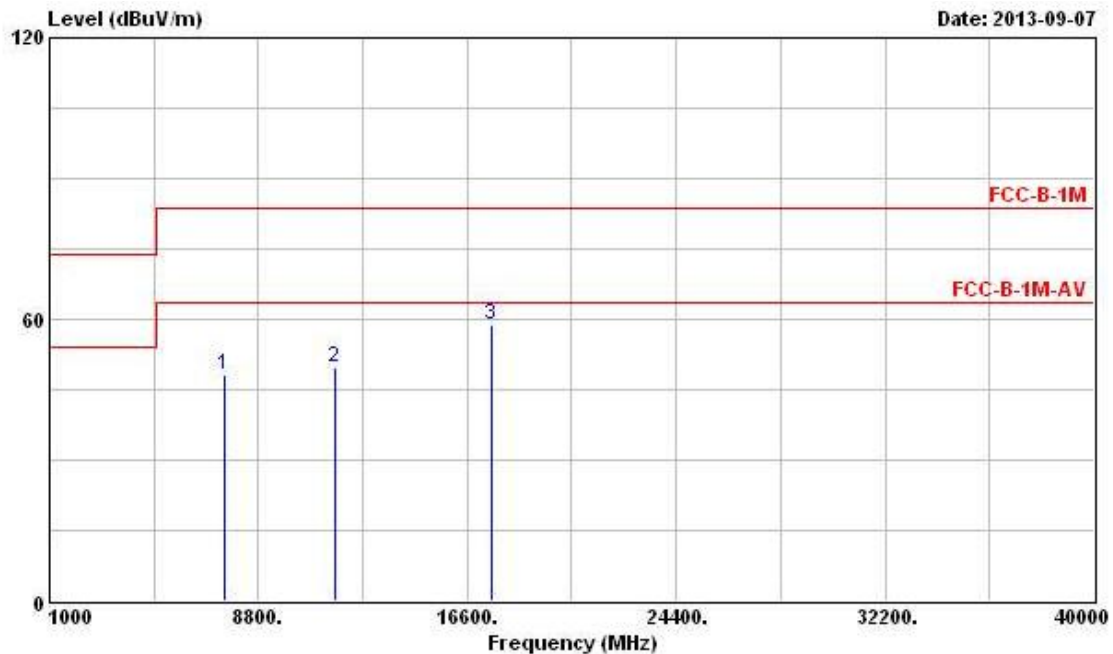
Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level.

Transmitter Radiated Unwanted Emissions (Above 1GHz)

| | | | |
|------------------------|-----|-------------------------|------|
| Modulation Mode | 11a | Test Freq. (MHz) | 5825 |
| N_{TX} | 1 | Polarization | V |



| | Freq | Level | Over Limit | Limit Line | ReadAntenna Level | Antenna Factor | Cable Loss | Preamp Factor | Remark | Ant Pos | Table Pos |
|---|-----------|--------|------------|------------|-------------------|----------------|------------|---------------|--------|---------|-----------|
| | MHz | dBuV/m | dB | dBuV/m | dBuV | dB/m | dB | dB | | cm | deg |
| 1 | 7558.000 | 48.30 | -35.24 | 83.54 | 42.33 | 35.30 | 5.68 | 35.01 | Peak | --- | --- |
| 2 | 11650.000 | 49.69 | -33.85 | 83.54 | 39.34 | 38.41 | 6.52 | 34.58 | Peak | --- | --- |
| 3 | 17475.000 | 58.93 | | | 42.77 | 40.99 | 8.92 | 33.75 | Peak | --- | --- |

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

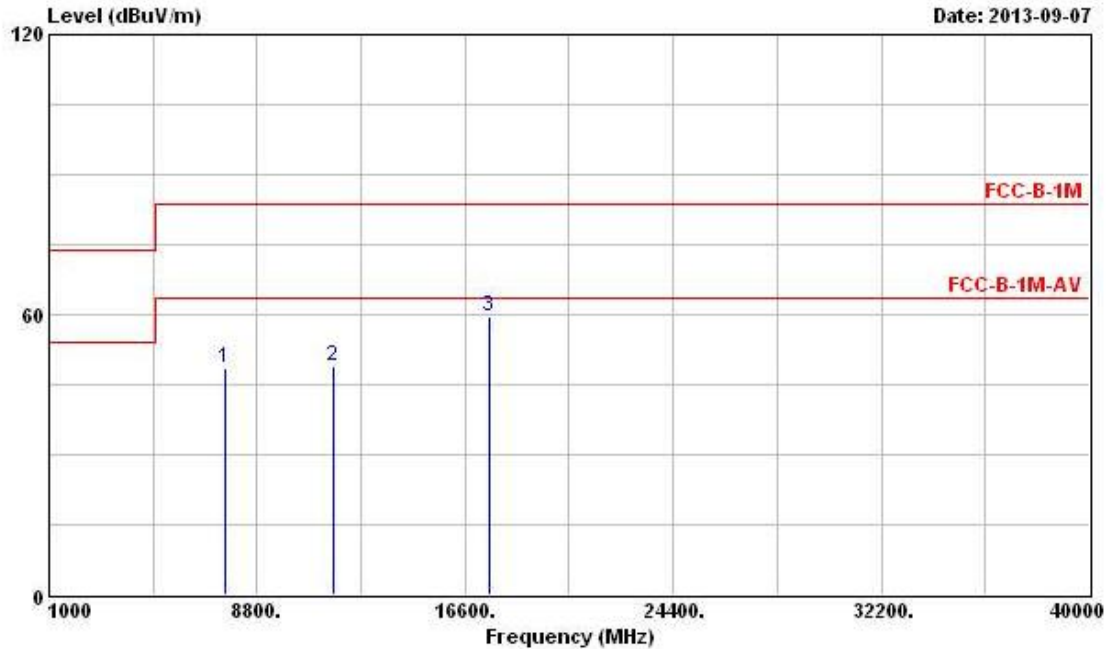
Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level.

Transmitter Radiated Unwanted Emissions (Above 1GHz)

| | | | |
|------------------------|-----|-------------------------|------|
| Modulation Mode | 11a | Test Freq. (MHz) | 5825 |
| N_{TX} | 1 | Polarization | H |



| | Freq | Level | Over Limit | Limit Line | ReadAntenna Level | Antenna Factor | Cable Loss | Preamp Factor | Remark | Ant Pos | Table Pos |
|---|-----------|--------|------------|------------|-------------------|----------------|------------|---------------|--------|---------|-----------|
| | MHz | dBuV/m | dB | dBuV/m | dBuV | dB/m | dB | dB | | cm | deg |
| 1 | 7614.000 | 48.44 | -35.10 | 83.54 | 42.55 | 35.30 | 5.61 | 35.02 | Peak | --- | --- |
| 2 | 11650.000 | 49.11 | -34.43 | 83.54 | 38.76 | 38.41 | 6.52 | 34.58 | Peak | --- | --- |
| 3 | 17475.000 | 59.45 | | | 43.29 | 40.99 | 8.92 | 33.75 | Peak | --- | --- |

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

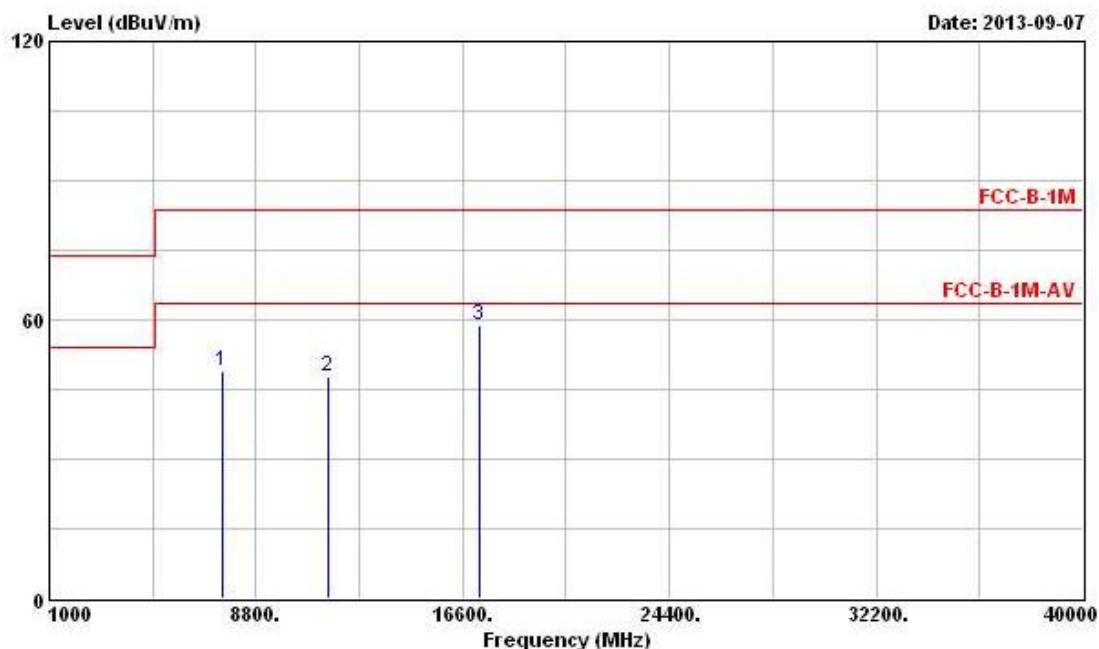
Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level.

Transmitter Radiated Unwanted Emissions (Above 1GHz)

| | | | |
|------------------------|------|-------------------------|------|
| Modulation Mode | HT20 | Test Freq. (MHz) | 5745 |
| N_{TX} | 2 | Polarization | V |



| | Freq | Level | Over Limit | Limit Line | ReadAntenna Level | Antenna Factor | Cable Loss | Preamp Factor | Remark | Ant Pos | Table Pos |
|---|-----------|--------|------------|------------|-------------------|----------------|------------|---------------|--------|---------|-----------|
| | MHz | dBuV/m | dB | dBuV/m | dBuV | dB/m | dB | dB | | cm | deg |
| 1 | 7548.000 | 48.77 | -34.77 | 83.54 | 42.80 | 35.30 | 5.68 | 35.01 | Peak | --- | --- |
| 2 | 11490.000 | 47.57 | -35.97 | 83.54 | 37.36 | 38.29 | 6.36 | 34.44 | Peak | --- | --- |
| 3 | 17235.000 | 58.85 | | | 42.80 | 40.95 | 8.96 | 33.86 | Peak | --- | --- |

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

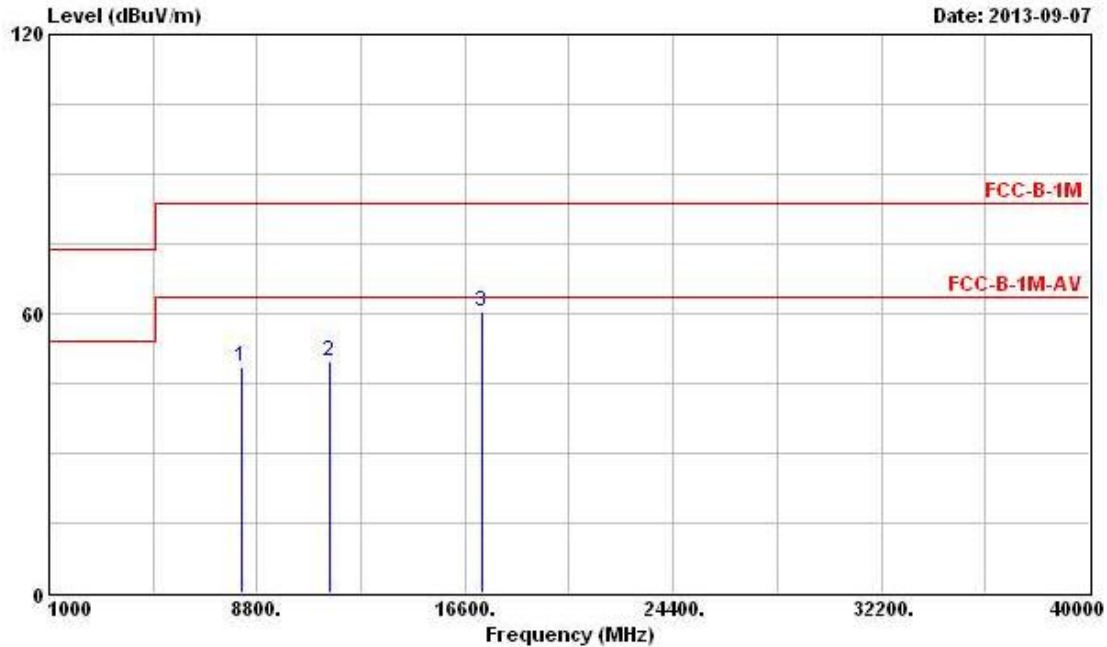
Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level.

Transmitter Radiated Unwanted Emissions (Above 1GHz)

| | | | |
|------------------------|------|-------------------------|------|
| Modulation Mode | HT20 | Test Freq. (MHz) | 5745 |
| N_{TX} | 2 | Polarization | H |



| | Freq | Level | Over Limit | Limit Line | ReadAntenna Level | Cable Preamp | Ant | Table | | |
|---|-----------|--------|------------|------------|-------------------|--------------|------|-------|--------|-----|
| | MHz | dBuV/m | dB | dBuV/m | dBuV | dB/m | dB | dB | Remark | Pos |
| | | | | | | | | | | deg |
| 1 | 8220.000 | 48.67 | -34.87 | 83.54 | 42.99 | 35.43 | 5.38 | 35.13 | Peak | --- |
| 2 | 11490.000 | 49.78 | -33.76 | 83.54 | 39.57 | 38.29 | 6.36 | 34.44 | Peak | --- |
| 3 | 17235.000 | 60.29 | | | 44.24 | 40.95 | 8.96 | 33.86 | Peak | --- |

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

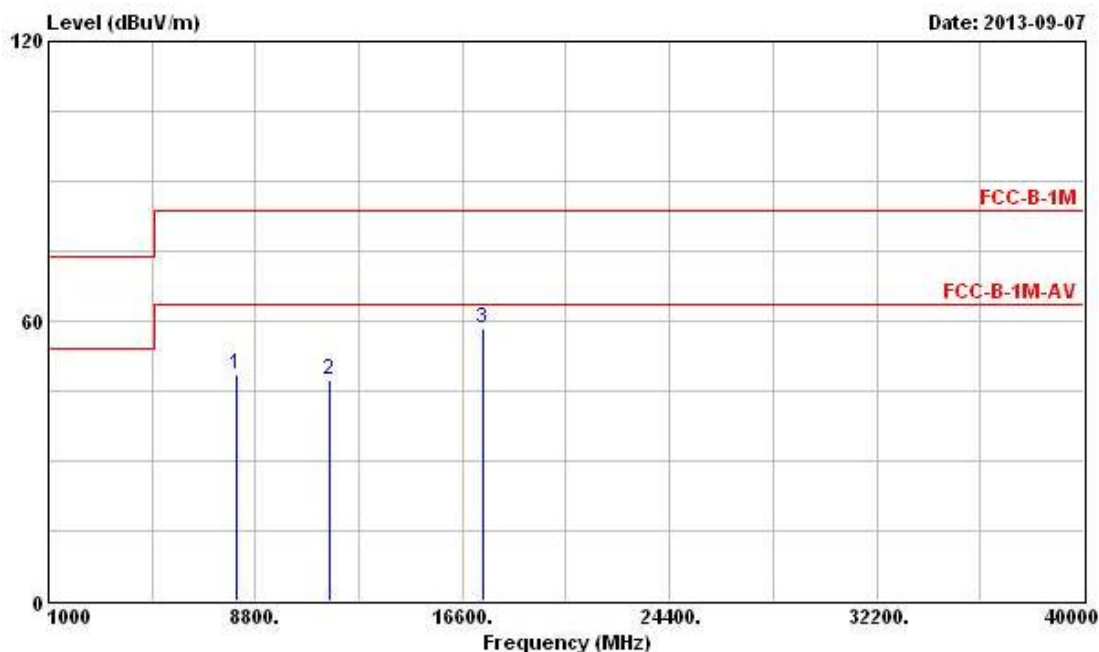
Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level.

Transmitter Radiated Unwanted Emissions (Above 1GHz)

| | | | |
|------------------------|------|-------------------------|------|
| Modulation Mode | HT20 | Test Freq. (MHz) | 5785 |
| N_{TX} | 2 | Polarization | V |



| | Freq | Level | Over Limit | Limit Line | ReadAntenna Level | Antenna Factor | Cable Loss | Preamp Factor | Remark | Ant Pos | Table Pos |
|---|-----------|--------|------------|------------|-------------------|----------------|------------|---------------|--------|---------|-----------|
| | MHz | dBuV/m | dB | dBuV/m | dBuV | dB/m | dB | dB | | cm | deg |
| 1 | 8116.000 | 48.45 | -35.09 | 83.54 | 42.88 | 35.37 | 5.35 | 35.15 | Peak | --- | --- |
| 2 | 11570.000 | 47.32 | -36.22 | 83.54 | 37.05 | 38.36 | 6.44 | 34.53 | Peak | --- | --- |
| 3 | 17355.000 | 58.50 | | | 42.40 | 40.97 | 8.94 | 33.81 | Peak | --- | --- |

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

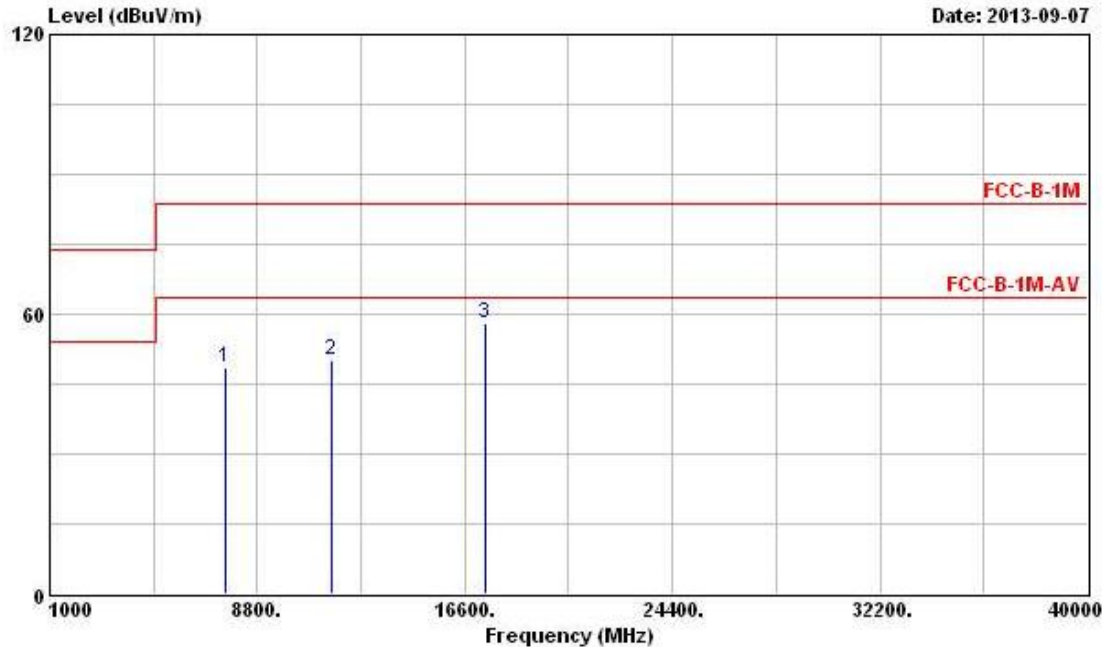
Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level.

Transmitter Radiated Unwanted Emissions (Above 1GHz)

| | | | |
|------------------------|------|-------------------------|------|
| Modulation Mode | HT20 | Test Freq. (MHz) | 5785 |
| N_{TX} | 2 | Polarization | H |



| | Freq | Level | Over Limit | Limit Line | ReadAntenna Level | Antenna Factor | Cable Loss | Preamp Factor | Remark | Ant Pos | Table Pos |
|---|-----------|--------|------------|------------|-------------------|----------------|------------|---------------|--------|---------|-----------|
| | MHz | dBuV/m | dB | dBuV/m | dBuV | dB/m | dB | dB | | cm | deg |
| 1 | 7630.000 | 48.56 | -34.98 | 83.54 | 42.68 | 35.30 | 5.61 | 35.03 | Peak | --- | --- |
| 2 | 11570.000 | 50.18 | -33.36 | 83.54 | 39.91 | 38.36 | 6.44 | 34.53 | Peak | --- | --- |
| 3 | 17355.000 | 57.99 | | | 41.89 | 40.97 | 8.94 | 33.81 | Peak | --- | --- |

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

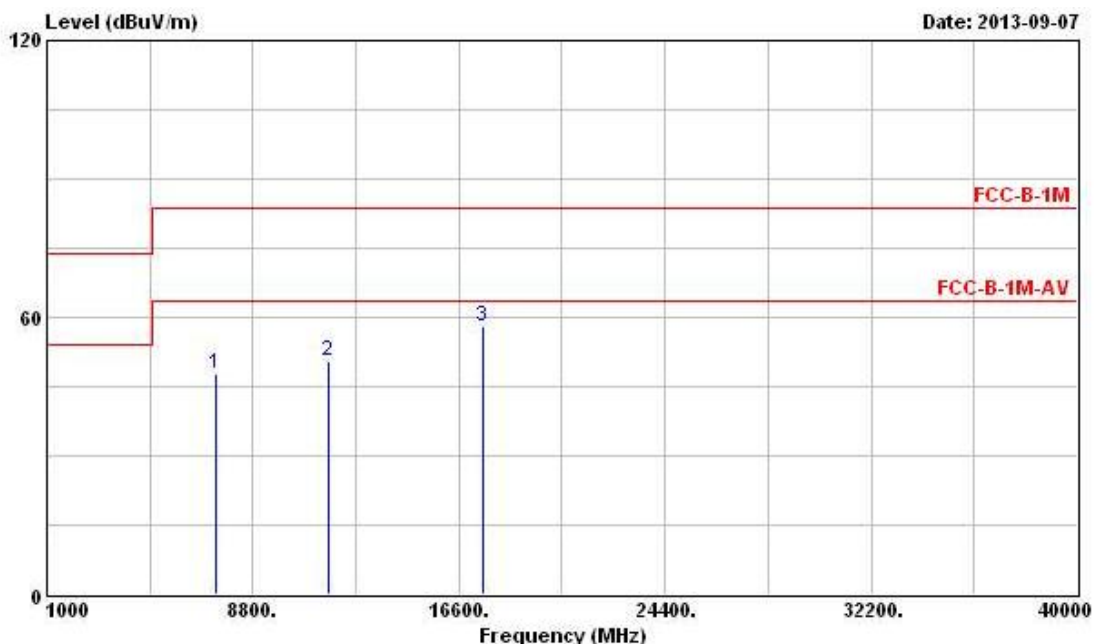
Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level.

Transmitter Radiated Unwanted Emissions (Above 1GHz)

| | | | |
|------------------------|------|-------------------------|------|
| Modulation Mode | HT20 | Test Freq. (MHz) | 5825 |
| N_{TX} | 2 | Polarization | V |



| | Freq | Level | Over Limit | Limit Line | ReadAntenna Level | Antenna Factor | Cable Loss | Preamp Factor | Remark | Ant Pos | Table Pos |
|---|-----------|--------|------------|------------|-------------------|----------------|------------|---------------|--------|---------|-----------|
| | MHz | dBuV/m | dB | dBuV/m | dBuV | dB/m | dB | dB | | cm | deg |
| 1 | 7374.000 | 47.72 | -35.82 | 83.54 | 41.87 | 35.30 | 5.52 | 34.97 | Peak | --- | --- |
| 2 | 11650.000 | 50.39 | -33.15 | 83.54 | 40.04 | 38.41 | 6.52 | 34.58 | Peak | --- | --- |
| 3 | 17475.000 | 58.15 | | | 41.99 | 40.99 | 8.92 | 33.75 | Peak | --- | --- |

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

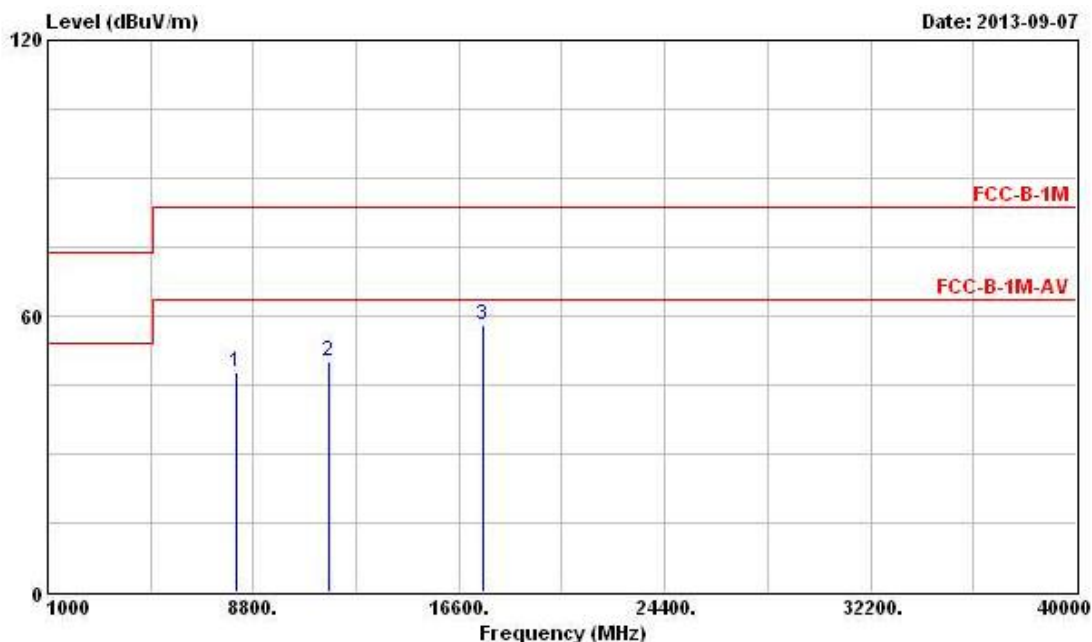
Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level.

Transmitter Radiated Unwanted Emissions (Above 1GHz)

| | | | |
|------------------------|------|-------------------------|------|
| Modulation Mode | HT20 | Test Freq. (MHz) | 5825 |
| N_{TX} | 2 | Polarization | H |



| | Freq | Level | Over Limit | Limit Line | ReadAntenna Level | Cable Factor | Preamp Loss | Preamp Factor | Remark | Ant Pos | Table Pos |
|---|-----------|--------|------------|------------|-------------------|--------------|-------------|---------------|--------|---------|-----------|
| | MHz | dBuV/m | dB | dBuV/m | dBuV | dB/m | dB | dB | | cm | deg |
| 1 | 8166.000 | 47.90 | -35.64 | 83.54 | 42.27 | 35.40 | 5.37 | 35.14 | Peak | --- | --- |
| 2 | 11650.000 | 49.98 | -33.56 | 83.54 | 39.63 | 38.41 | 6.52 | 34.58 | Peak | --- | --- |
| 3 | 17475.000 | 58.07 | | | 41.91 | 40.99 | 8.92 | 33.75 | Peak | --- | --- |

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

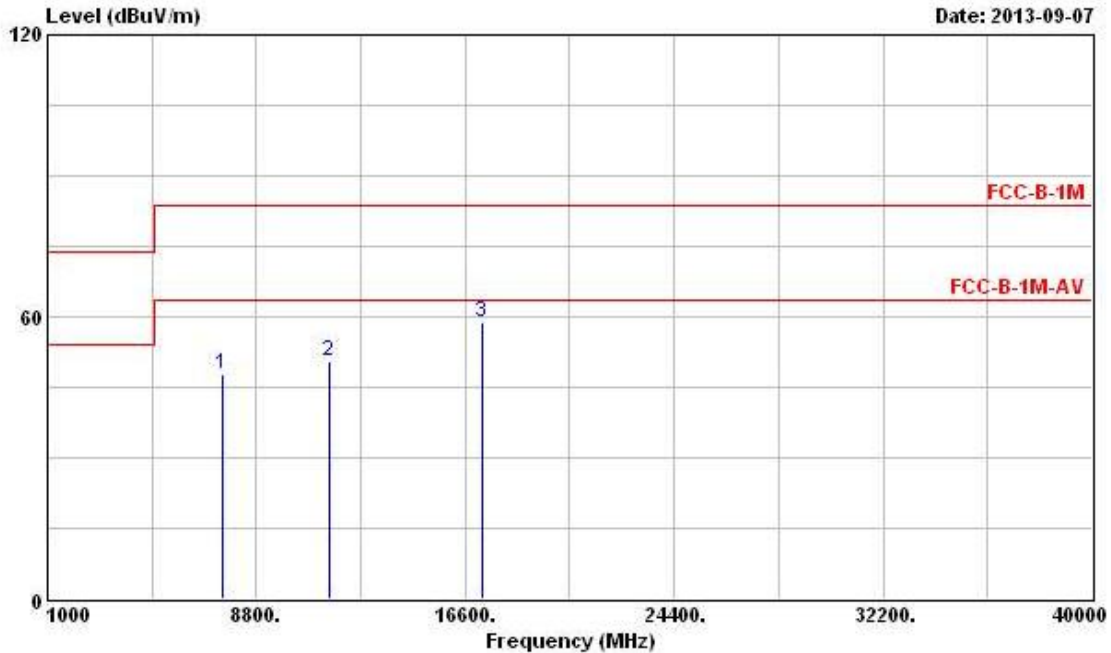
Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level.

Transmitter Radiated Unwanted Emissions (Above 1GHz)

| | | | |
|------------------------|------|-------------------------|------|
| Modulation Mode | HT40 | Test Freq. (MHz) | 5755 |
| N_{TX} | 2 | Polarization | V |



| | Freq | Level | Over Limit | Limit Line | ReadAntenna Level | Antenna Factor | Cable Loss | Preamp Factor | Remark | Ant Pos | Table Pos |
|---|-----------|--------|------------|------------|-------------------|----------------|------------|---------------|--------|---------|-----------|
| | MHz | dBuV/m | dB | dBuV/m | dBuV | dB/m | dB | dB | | cm | deg |
| 1 | 7517.000 | 47.74 | -35.80 | 83.54 | 41.73 | 35.30 | 5.71 | 35.00 | Peak | --- | --- |
| 2 | 11510.000 | 50.48 | -33.06 | 83.54 | 40.30 | 38.30 | 6.36 | 34.48 | Peak | --- | --- |
| 3 | 17265.000 | 58.66 | | | 42.60 | 40.95 | 8.95 | 33.84 | Peak | --- | --- |

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

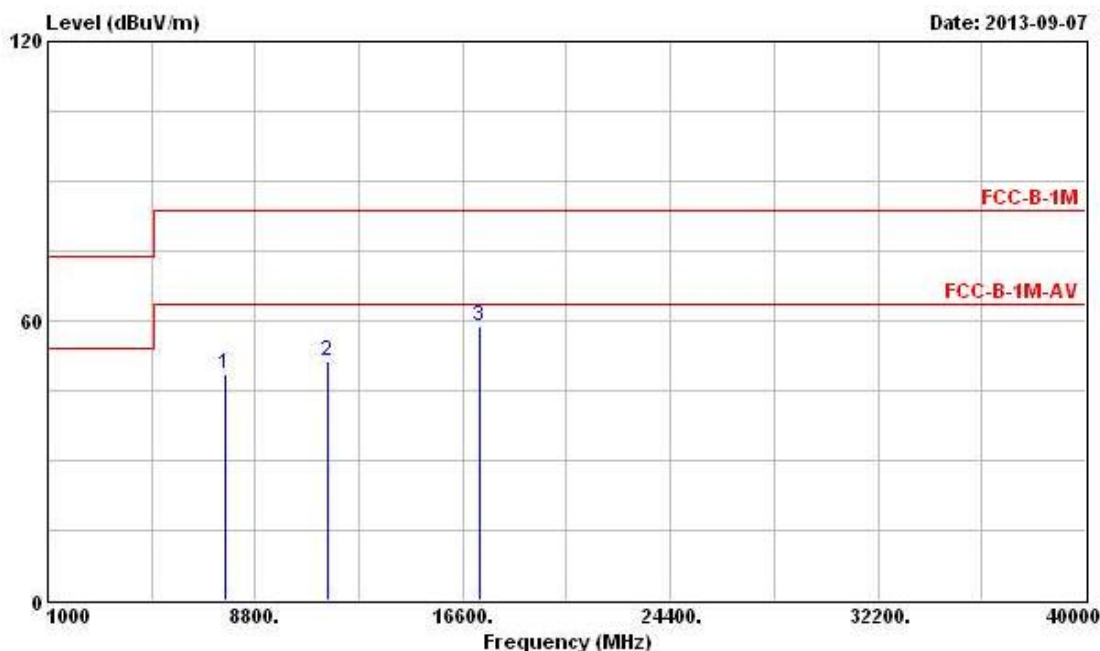
Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level.

Transmitter Radiated Unwanted Emissions (Above 1GHz)

| | | | |
|------------------------|------|-------------------------|------|
| Modulation Mode | HT40 | Test Freq. (MHz) | 5755 |
| N_{TX} | 2 | Polarization | H |



| | Freq | Level | Over Limit | Limit Line | ReadAntenna Level | Antenna Factor | Cable Loss | Preamp Factor | Remark | Ant Pos | Table Pos |
|---|-----------|--------|------------|------------|-------------------|----------------|------------|---------------|--------|---------|-----------|
| | MHz | dBuV/m | dB | dBuV/m | dBuV | dB/m | dB | dB | | cm | deg |
| 1 | 7693.000 | 48.42 | -35.12 | 83.54 | 42.63 | 35.30 | 5.54 | 35.05 | Peak | --- | --- |
| 2 | 11510.000 | 51.16 | -32.38 | 83.54 | 40.98 | 38.30 | 6.36 | 34.48 | Peak | --- | --- |
| 3 | 17265.000 | 58.69 | | | 42.63 | 40.95 | 8.95 | 33.84 | Peak | --- | --- |

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

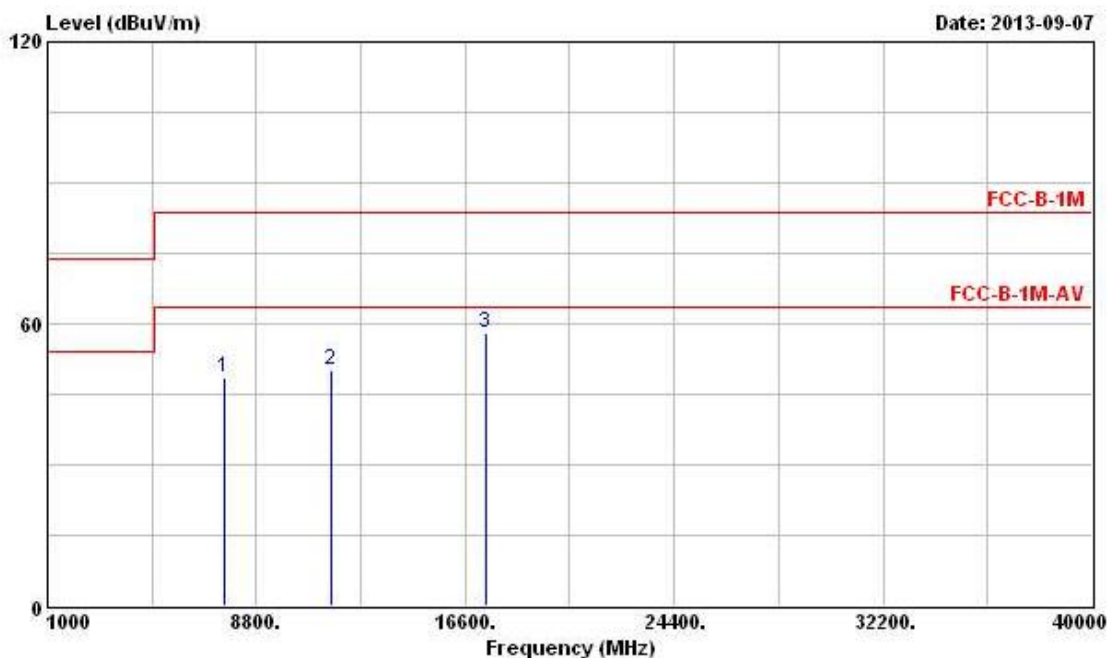
Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level.

Transmitter Radiated Unwanted Emissions (Above 1GHz)

| | | | |
|------------------------|------|-------------------------|------|
| Modulation Mode | HT40 | Test Freq. (MHz) | 5795 |
| N_{TX} | 2 | Polarization | V |



| | Freq | Level | Over Limit | Limit Line | ReadAntenna Level | Antenna Factor | Cable Loss | Preamp Factor | Remark | Ant Pos | Table Pos |
|---|-----------|--------|------------|------------|-------------------|----------------|------------|---------------|--------|---------|-----------|
| | MHz | dBuV/m | dB | dBuV/m | dBuV | dB/m | dB | dB | | cm | deg |
| 1 | 7594.000 | 48.46 | -35.08 | 83.54 | 42.54 | 35.30 | 5.64 | 35.02 | Peak | --- | --- |
| 2 | 11590.000 | 50.11 | -33.43 | 83.54 | 39.79 | 38.37 | 6.48 | 34.53 | Peak | --- | --- |
| 3 | 17385.000 | 58.09 | | | 41.97 | 40.98 | 8.93 | 33.79 | Peak | --- | --- |

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

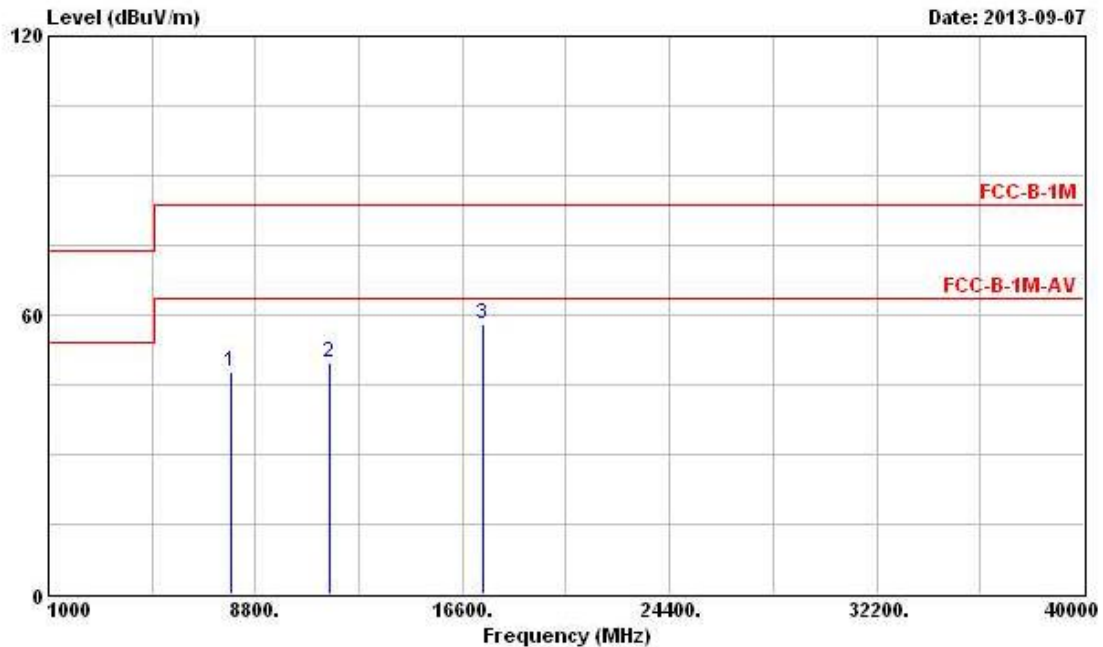
Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level.

Transmitter Radiated Unwanted Emissions (Above 1GHz)

| | | | |
|------------------------|------|-------------------------|------|
| Modulation Mode | HT40 | Test Freq. (MHz) | 5795 |
| N_{TX} | 2 | Polarization | H |



| | Freq | Level | Over Limit | Limit Line | ReadAntenna Level | Antenna Factor | Cable Loss | Preamp Factor | Remark | Ant Pos | Table Pos |
|---|-----------|--------|------------|------------|-------------------|----------------|------------|---------------|--------|---------|-----------|
| | MHz | dBuV/m | dB | dBuV/m | dBuV | dB/m | dB | dB | | cm | deg |
| 1 | 7858.000 | 47.91 | -35.63 | 83.54 | 42.31 | 35.30 | 5.41 | 35.11 | Peak | --- | --- |
| 2 | 11590.000 | 49.90 | -33.64 | 83.54 | 39.58 | 38.37 | 6.48 | 34.53 | Peak | --- | --- |
| 3 | 17385.000 | 58.05 | | | 41.93 | 40.98 | 8.93 | 33.79 | Peak | --- | --- |

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands, unwanted emissions shall be attenuated by at least 20 dB relative to the maximum measured in-band level.

4 Test Equipment and Calibration Data

| Instrument | Manufacturer | Model No. | Serial No. | Characteristics | Calibration Date | Remark |
|------------------------|--------------------------------|-----------|-----------------|-----------------|------------------|----------------------|
| EMC Receiver | R&S | ESCS 30 | 100174 | 9kHz ~ 2.75GHz | Mar. 26, 2013 | Conduction (CO04-HY) |
| LISN | SCHWARZBECK MESS-ELEKTRONIK | NSLK 8127 | 8127-477 | 9kHz ~ 30MHz | Jan. 21, 2013 | Conduction (CO04-HY) |
| LISN (Support Unit) | EMCO | 3810/2NM | 9703-1839 | 9kHz ~ 30MHz | Apr. 18, 2013 | Conduction (CO04-HY) |
| RF Cable-CON | HUBER+SUHNER | RG213/U | 7.61183201e+012 | 9kHz ~ 30MHz | Nov. 09, 2012 | Conduction (CO04-HY) |

Note: Calibration Interval of instruments listed above is one year.

| Instrument | Manufacturer | Model No. | Serial No. | Characteristics | Calibration Date | Remark |
|--------------------------|----------------------|-------------|-------------|--------------------|------------------|-----------------------|
| 3m Semi Anechoic Chamber | SIDT FRANKONIA | SAC-3M | 03CH02-HY | 30MHz ~ 1GHz 3m | May 11, 2013 | Radiation (03CH02-HY) |
| Amplifier | Agilent | 8447D | 2944A11146 | 100kHz ~ 1.3GHz | Jul. 17, 2013 | Radiation (03CH02-HY) |
| Amplifier | Agilent | 8449B | 3008A02373 | 1GHz ~ 26.5GHz | Aug. 28, 2013 | Radiation (03CH02-HY) |
| Horn Antenna | ETS-LINDGREN | 3117 | 00091920 | 1GHz ~ 18GHz | Nov. 16, 2012 | Radiation (03CH02-HY) |
| Horn Antenna | SCHWARZBECK | BBHA9170 | BBHA9170154 | 15GHz ~ 40GHz | Jan. 08, 2013 | Radiation (03CH02-HY) |
| RF Cable-R03m | Jye Bao | RG142 | CB021 | 9kHz ~ 1GHz | Nov. 10, 2012 | Radiation (03CH02-HY) |
| RF Cable-high | SUHNER | SUCOFLEX106 | 03CH02-HY | 1GHz ~ 40GHz | Mar. 05, 2013 | Radiation (03CH02-HY) |
| Bilog Antenna | SCHAFFNER | CBL61128 | 2723 | 30MHz ~ 2GHz | Oct. 22, 2012 | Radiation (03CH02-HY) |
| Turn Table | Chaintek Instruments | 3000 | MF7802058 | 0~ 360 degree | N/A | Radiation (03CH02-HY) |
| Antenna Mast | MF | MF7802 | MF780208205 | 1 ~ 4 m | N/A | Radiation (03CH02-HY) |
| Spectrum Analyzer | R&S | FSP40 | 100593 | 9kHz ~ 40GHz | Sep. 14, 2012 | Radiation (03CH02-HY) |

Note: Calibration Interval of instruments listed above is one year.

| Instrument | Manufacturer | Model No. | Serial No. | Characteristics | Calibration Date | Remark |
|-----------------------|--------------|---------------|------------|-----------------|------------------|-----------------------|
| Amplifier | MITEQ | AMF-6F-260400 | 9121372 | 26.5GHz ~ 40GHz | Apr. 19, 2013 | Radiation (03CH02-HY) |
| Magnetic Loop Antenna | Teseq GmbH | HLA 6120 | 31244 | 0.01MHz ~ 30MHz | Dec. 02, 2012 | Radiation (03CH02-HY) |

Note: Calibration Interval of instruments listed above is two year.