# Bradley Smoker Inc.

# TEST REPORT

**SCOPE OF WORK**
EMC TESTING–BS1120BT

**REPORT NUMBER**
240208011GZU-001

**ISSUE DATE** **[REVISED DATE]**

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# TEST REPORT

| | | |
|---|---|---|
| Applicant Name & Address | : | Bradley Smoker Inc.<br>#102,18651-52nd Avenue Surrey, BC V3S 8E5 Canada |
| Manufacturing Site | : | Guangdong Rongsheng Electric Holding Co., Ltd. kitchen branch<br>One of No.3, 2nd South Routh Road of Huatian, Huakou Community, Residents Committee High Technology Industry Area, Ronggui Street Agency, Shunde District, Foshan City, Guangdong Province |
| Intertek Report No: | | 240208011GZU-001 |
| FCC ID: | | 2BFC5-BS1120BT |

## Test standards

**47 CFR PART 15 Subpart C: 2021 section 15.247**

## Sample Description

| | | |
|---|---|---|
| Product | : | Raven Smoker |
| Model No. | : | BS1120BT |
| Electrical Rating | : | 110 - 120V, 50/60Hz, 1005-1200W |
| Serial No. | : | Not Labeled |
| Date Received | : | 08 February 2024 |
| Date Test Conducted | : | 28 February 2024-09 March 2024 |

Prepared and Checked By

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Engineer

Approved By:

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Sr. Project Engineer

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## CONTENT

**TEST REPORT**

## 1.0 TEST RESULT SUMMARY

| Test Item | Test Requirement | Test Method | Result |
|---|---|---|---|
| Antenna Requirement | FCC PART 15 C section 15.247 (c) and Section 15.203 | FCC PART 15 C section 15.247 (c) and Section 15.203 | PASS |
| 6 dB Bandwidth (DTS bandwidth) | FCC PART 15 C section 15.247 (a)(2) | ANSI C63.10: Clause 11.8 | PASS |
| Maximum Peak Conducted Output Power | FCC PART 15 C section 15.247(b)(3) | ANSI C63.10: Clause 11.9.1.2 | PASS |
| Peak Power Spectral Density | FCC PART 15 C section 15.247(e) | ANSI C63.10: Clause 11.10.2 | PASS |
| Out of Band Conducted Emissions | FCC PART 15 C section 15.209 & 15.247(d) | ANSI C63.10: Clause 11.11 | PASS |
| Out of Band Radiated Emission | FCC PART 15 C section 15.209 & 15.247(d) | ANSI C63.10: Clause 11.11, 6.4, 6.5 and 6.6 | N/A |
| Radiated Emissions in Restricted Bands | FCC PART 15 C section 15.209 & 15.247(d) | ANSI C63.10: Clause 11.12.1, 6.4, 6.5 and 6.6 | PASS |
| Band Edges Measurement | FCC PART 15 C section 15.247 (d) & 15.205 | ANSI C63.10: Clause 11.11 and 11.13 | PASS |
| Conducted Emissions at Mains Terminals | FCC PART 15 C section 15.207 | ANSI C63.10: Clause 6.2 | PASS |

**Remark:**
**N/A: not applicable. Refer to the relative section for the details.**
**EUT: In this whole report EUT means Equipment Under Test.**
**Tx: In this whole report Tx (or tx) means Transmitter.**
**Rx: In this whole report Rx (or rx) means Receiver.**
**RF: In this whole report RF means Radio Frequency.**
**ANSI C63.10: the detail version is ANSI C63.10:2013 in the whole report.**

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## 2.0 General Description

### 2.1 Product Description

Operating Frequency: 2402 MHz – 2480MHz
Type of Modulation: GFSK
Number of Channels: 40 Channels
Channel Separation: 2 MHz
Antenna Type: PCB antenna
Antenna Gain: -1.15 dBi
Speciality: Bluetooth 5.0 with BLE (Bluetooth Low Energy)
Power Supply: AC 120V 60 Hz

EUT modulation and data packet during test:

The EUT has been tested on the Modulation of GFSK with 1 Mbps and 2Mbps data rate.

EUT channels and frequencies list:

Test frequencies are lowest channel 0: 2402 MHz, middle channel 19: 2440 MHz and highest channel 39: 2480 MHz.

| Channel | Frequency (MHz) | Channel | Frequency (MHz) | Channel | Frequency (MHz) |
|---|---|---|---|---|---|
| 0 | 2402 | 14 | 2430 | 28 | 2458 |
| 1 | 2404 | 15 | 2432 | 29 | 2460 |
| 2 | 2406 | 16 | 2434 | 30 | 2462 |
| 3 | 2408 | 17 | 2436 | 31 | 2464 |
| 4 | 2410 | 18 | 2438 | 32 | 2466 |
| 5 | 2412 | 19 | 2440 | 33 | 2468 |
| 6 | 2414 | 20 | 2442 | 34 | 2470 |
| 7 | 2416 | 21 | 2444 | 35 | 2472 |
| 8 | 2418 | 22 | 2446 | 36 | 2474 |
| 9 | 2420 | 23 | 2448 | 37 | 2476 |
| 10 | 2422 | 24 | 2450 | 38 | 2478 |
| 11 | 2424 | 25 | 2452 | 39 | 2480 |
| 12 | 2426 | 26 | 2454 | / | / |
| 13 | 2428 | 27 | 2456 | / | / |

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### 2.2 Related Submittal(s) Grants

This is an application for certification of:
DTS- Part 15 Digital Transmission Systems

Remaining portions are subject to the following procedures:
1. Receiver portion of BLE: exempt from technical requirement of this Part.
2. Raven Smoker: FCC SDoC requirement.

### 2.3 Test Methodology

Both AC mains line-conducted and radiated emission measurements were performed according to the procedures in ANSI C63.10. Radiated emission measurement was performed in semi-anechoic chamber and conducted emission measurement was performed in shield room. For radiated emission measurement, preliminary scans and final tests were performed in the semi-anechoic chamber to determine the worst case modes. All radiated tests were performed at an antenna to EUT distance of 3 meters, unless stated otherwise.

### 2.4 Test Facility

All tests were performed at:
Intertek Testing Services Shenzhen Ltd. Guangzhou Branch
Room102/104, No 203, KeZhu Road, Science City, GETDD Guangzhou, China
Except Conducted Emissions was performed at:
Room101/301/401/102/202/302/402/502/602/702/802, No. 7-2, Caipin Road, Huangpu District, Guangzhou, Guangdong, China

A2LA Certificate Number 0078.10
Intertek Testing Services Shenzhen Ltd. Guangzhou Branch is accredited by A2LA and Listed in FCC website. FCC accredited test labs may perform both Certification testing under Parts 15 and 18 and Declaration of Conformity testing.

## 3.0 System Test Configuration

### 3.1 Justification

For emissions testing, the equipment under test (EUT) setup to transmit continuously to simplify the measurement methodology. Care was taken to ensure proper power supply voltages during testing. During testing, AC power line was manipulated to produce worst case emissions. It was powered by AC 120V/60Hz supply.

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The signal is maximized through rotation and placement in the three orthogonal axes. The antenna height and polarization are varied during the search for maximum signal level. The antenna height is varied from 1 to 4 meters. Radiated emissions are taken at three meters unless the signal level is too low for measurement at that distance. If necessary, a pre-amplifier is used and/or the test is conducted at a closer distance.

All readings are extrapolated back to the equivalent three meters reading using inverse scaling with distance. The spurious emissions more than 20 dB below the permissible value are not reported.

For an intentional radiator, the spectrum shall be investigated from the lowest radio frequency signal generated in the device, without going below 9 kHz, up to at least the frequency shown in the following table:

Frequency range of radiated emission measurements

| Lowest frequency generated in the device | Upper frequency range of measurement |
|---|---|
| 9 kHz to below 10 GHz | 10th harmonic of highest fundamental frequency or to 40 GHz, whichever is lower |
| At or above 10 GHz to below 30 GHz | 5th harmonic of highest fundamental frequency or to 100 GHz, whichever is lower |
| At or above 30 GHz | 5th harmonic of highest fundamental frequency or to 200 GHz, whichever is lower, unless otherwise specified |

Number of fundamental frequencies to be tested in EUT transmit band

| Frequency range in which device operates | Number of frequencies | Location in frequency range of operation |
|---|---|---|
| 1 MHz or less | 1 | Middle |
| 1 MHz to 10 MHz | 2 | 1 near top and 1 near bottom |
| More than 10 MHz | 3 | 1 near top, 1 near middle and 1 near bottom |

### 3.2 EUT Exercising Software

| Description | Manufacturer | Model No. | SN/Version | Supplied by |
|---|---|---|---|---|
| For fixing frequency | -- | sscom | V5.13.1 | Client |

### 3.3 Special Accessories

No special accessories used.

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### 3.4 Measurement Uncertainty

| No. | Item | Measurement Uncertainty |
|---|---|---|
| 1 | 20 dB Bandwidth | 2.3% |
| | 6dB Bandwidth | |
| | 99% Bandwidth | |
| 2 | Carrier Frequencies Separated | 2.3% |
| 3 | Dwell Time | 1.2% |
| 4 | Maximum Peak Conducted Output Power | 1.5dB |
| 5 | Peak Power Spectral Density | 1.5dB |
| 6 | Out of Band Conducted Emissions | 1.5dB |
| 7 | Band edges measurement | 1.5dB |
| 8 | Radiated Emissions | 4.7 dB (25 MHz-1 GHz) |
| | | 4.8 dB (1 GHz-18 GHz) |
| | | 5.21dB (18GZH-26GHz) |
| 9 | Conducted Emissions at Mains Terminals | 2.58dB |
| 10 | Temperature | 0.5 °C |
| 11 | Humidity | 0.4 % |
| 12 | Time | 1.2% |

The measurement uncertainty describes the overall uncertainty of the given measured value during the operation of the EUT.
Measurement uncertainty is calculated in accordance with ETSI TR 100 028-2001.
The measurement uncertainty is given with a confidence of 95%, k=2.

When determining of the test conclusion, the Measurement Uncertainty of test has been considered.

Uncertainty and Compliance – Unless the standard specifically states that measured values are to be extended by the measurement uncertainty in determining compliance, all compliance determinations are based on the actual measured value

### 3.5 Equipment Modification

Any modifications installed previous to testing by Bradley Technologies Canada Inc. will be incorporated in each production model sold / leased in the United States.

No modifications were installed by Intertek Testing Services Shenzhen Ltd. Guangzhou Branch.

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### 3.6 Support Equipment List and Description

This product was tested with corresponding support equipment as below:

Cable

| Description | Model No. | Connector type | Cable length/type | Supplied by |
|---|---|---|---|---|
| Antenna cable | RF-01 | SMA | 0.2 m(shielded) | Intertek |

Support equipment

| Description | Model No. | Rating | Supplied by |
|---|---|---|---|
| NoteBook | Latitude 5400 | -- | Intertek |

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## 4.0 Measurement Results

### 4.1 Antenna Requirement

Standard requirement:

15.203 requirement:

For intentional device. According to 15.203 an intentional radiator shall be designed to Ensure that no antenna other than that furnished by the responsible party shall be used with the device.

15.247(c) (1)(i) requirement:

(i) Systems operating in the 2400-2483.5 MHz bands that are used exclusively for fixed. Point-to-point operations may employ transmitting antennas with directional gain greater than 6 dBi provided the maximum conducted output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi.

EUT Antenna

The antenna is an integral antenna and no consideration of replacement. The best case gain of the antenna is -1.15 dBi.

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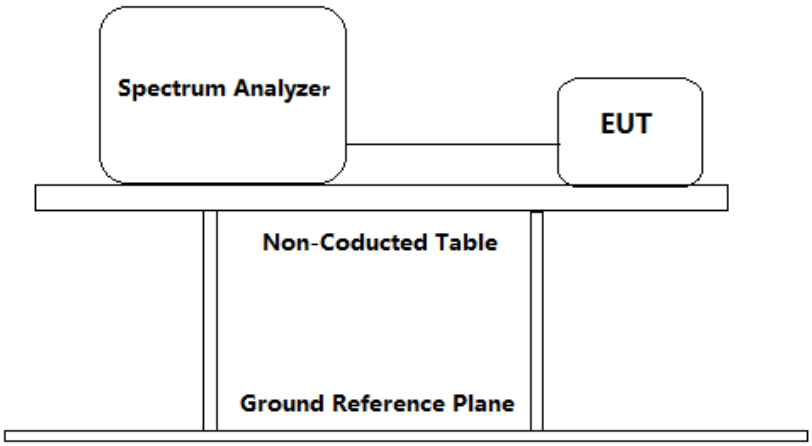
## 4.2 6 dB Bandwidth (DTS bandwidth)

| | |
|---|---|
| Test Requirement: | FCC Part 15 C section 15.247<br>(a)(2)Systems using digital modulation techniques may operate in the 902-928 MHz, 2400-2483.5MHz, and 5725-5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz. |
| Test Method: | ANSI C63.10: Clause 11.8 |
| Test Status: | Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture). Following channel(s) was (were) selected for the final test as listed below. |

Test Configuration:




Test Procedure:

1. Remove the antenna from the EUT and then connect a low attention attenuation RF cable (cable loss =1 dB, with a 10dB attenuator) from the antenna port to the spectrum.
2. Set the spectrum analyzer:
   a) Set RBW = 100 kHz
   b) Set the VBW⩾ [3 × RBW]
   c) Detector = peak.
   d) Trace mode = max hold.
   e) Sweep = auto couple
   f) Allow the trace to stabilize.
   g) Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.
   h) Span=2*BW~5*BW
3. Repeat until all the test status is investigated.

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4. Report the worst case.

**Used Test Equipment List**

Spectrum Analyzer. Refer to Clause 5 Test Equipment List for details.

1M

| Channel No. | Frequency (MHz) | Measured 6dB bandwidth (kHz) | Limit (kHz) | Result |
|---|---|---|---|---|
| 0 | 2402 | 703.3 | ≥500 | Pass |
| 19 | 2440 | 706.2 | | Pass |
| 39 | 2480 | 694.6 | | Pass |

2M

| Channel No. | Frequency (MHz) | Measured 6dB bandwidth (kHz) | Limit (kHz) | Result |
|---|---|---|---|---|
| 0 | 2402 | 1159.2 | ≥500 | Pass |
| 19 | 2440 | 1150.5 | | Pass |
| 39 | 2480 | 1185.2 | | Pass |

Test result: The unit does meet the FCC requirements.

**Result plot as follows:**

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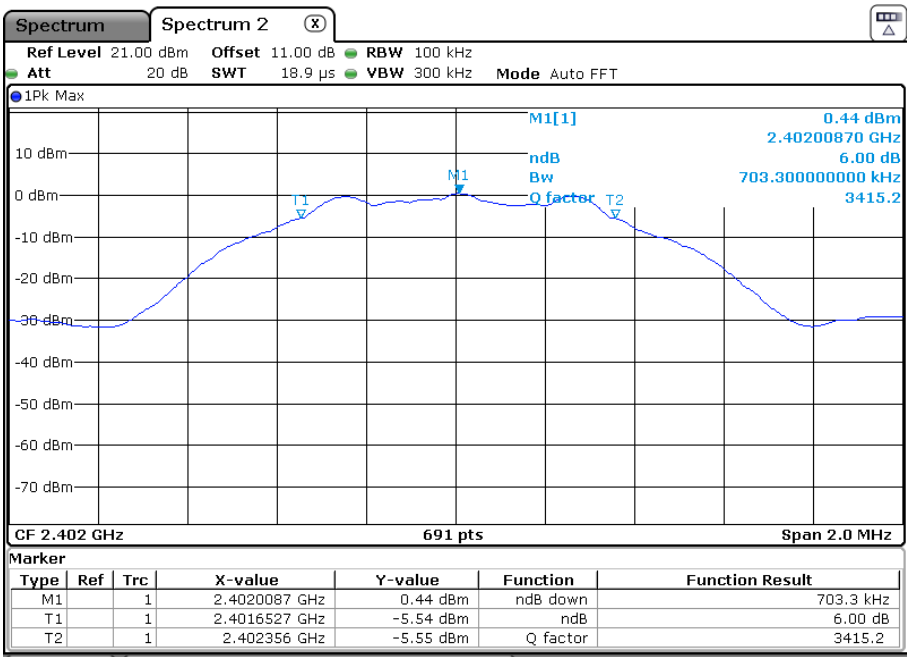
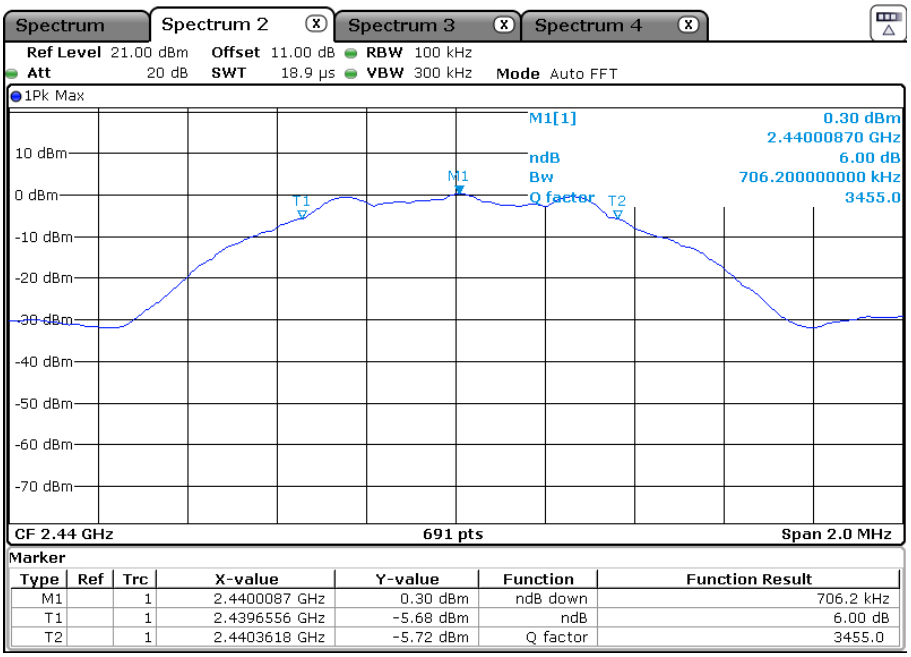
### 1M

Lowest Channel(2.402 GHz):




Middle Channel(2.440 GHz):



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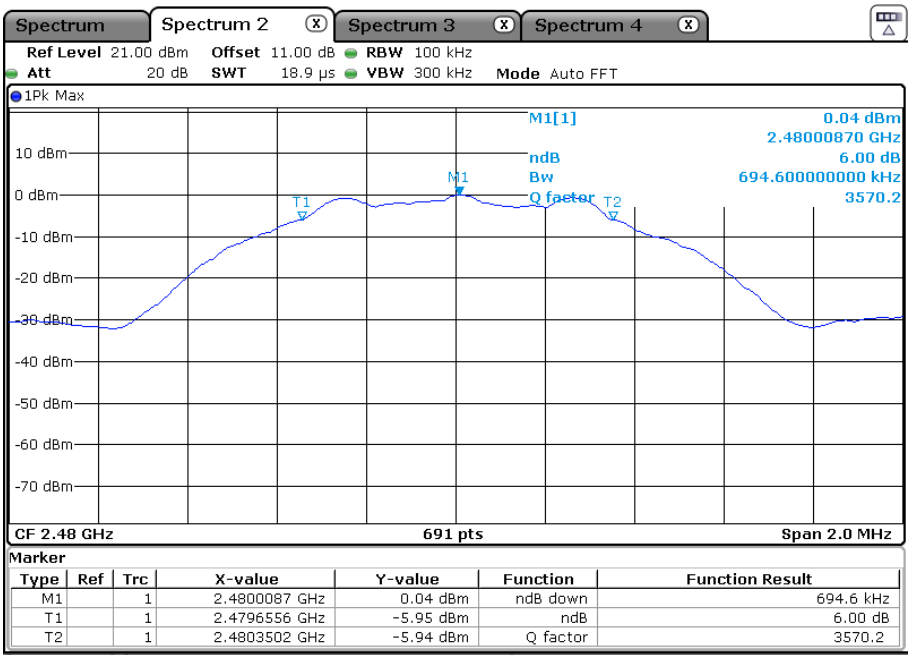
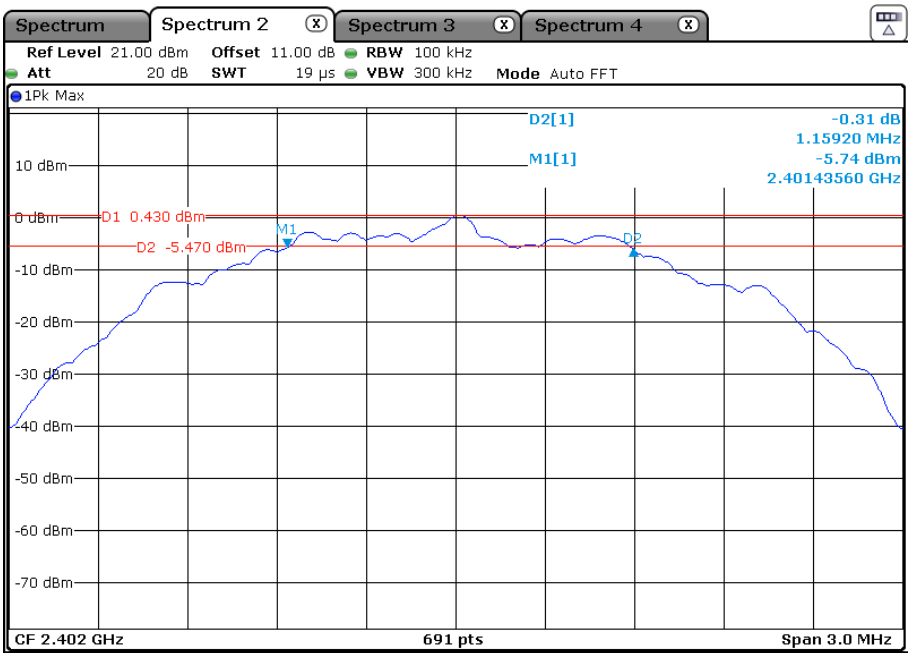
Highest Channel(2.480 GHz):




2M

Lowest Channel(2.402 GHz):



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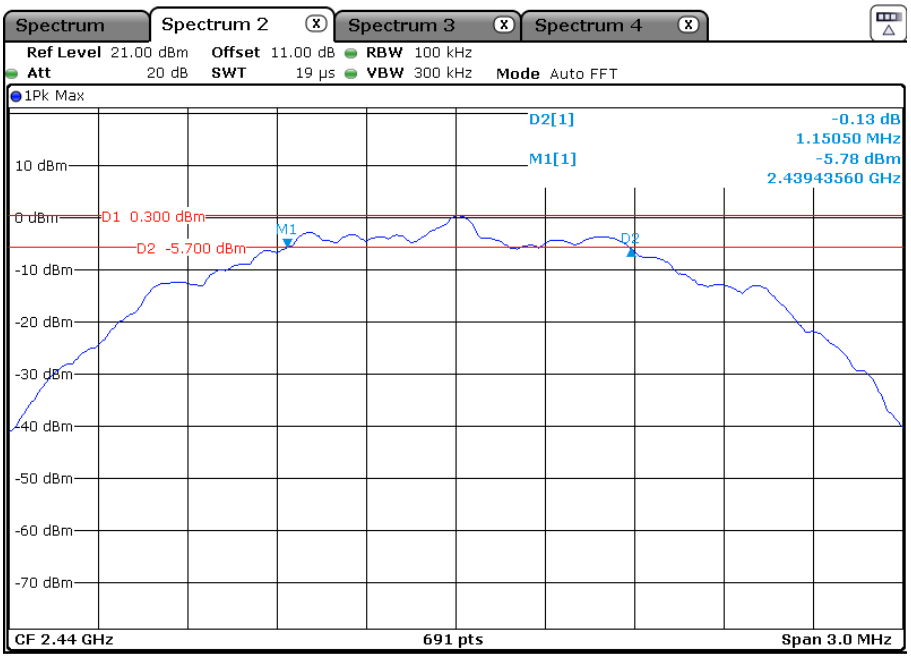
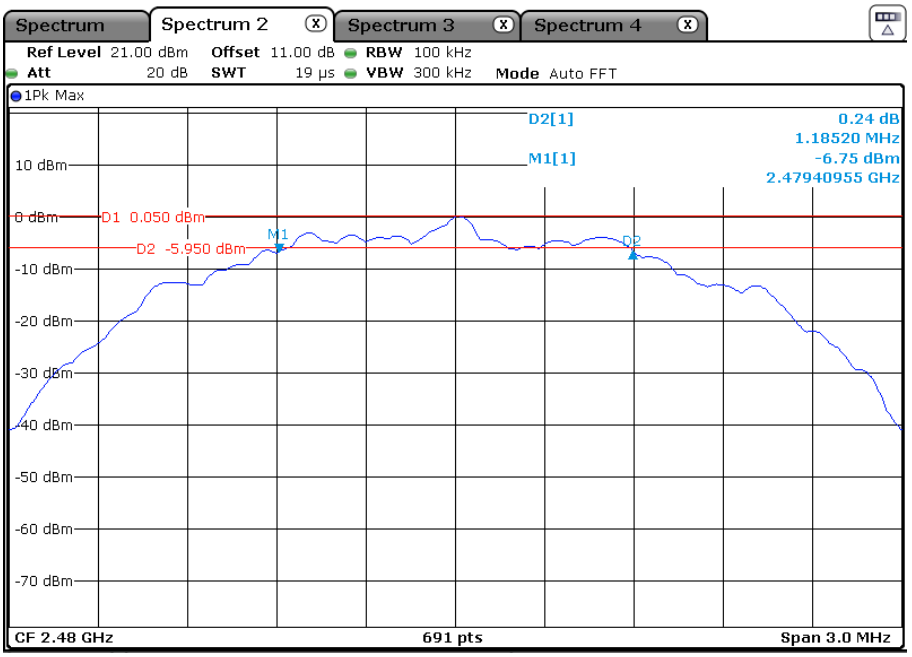
Middle Channel(2.440 GHz):




Highest Channel(2.480 GHz):



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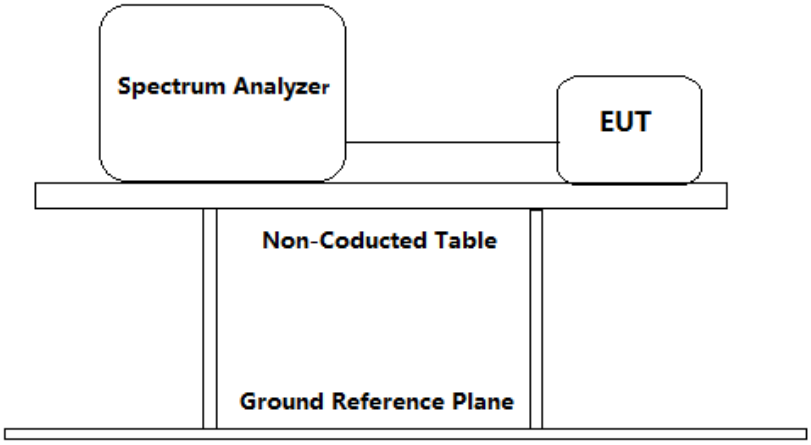
### 4.3 Maximum Peak Conducted Output Power

| | |
|---|---|
| Test Requirement: | FCC Part 15 C section 15.247<br>(b)(3) For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt.<br>Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b) (1), (b) (2), and (b) (3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi. |
| Test Method: | ANSI C63.10: Clause 11.9.1.1(RBW ≥ DTS bandwidth) |
| Test Status: | Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture). Following channel(s) was (were) selected for the final test as listed below. |

Test Configuration:




Test Procedure:

1. Remove the antenna from the EUT and then connect a low attention attenuation RF cable (cable loss =1 dB, with a 10dB attenuator) from the antenna port to the spectrum.
2. Set the spectrum analyzer:
   a) Set the RBW = 3 MHz（RBW≥DTS bandwidth）.
   b) Set the VBW≥[3 × RBW].
   c) Set the span≥10 MHz[3 × RBW].
   d) Detector = peak.
   e) Sweep time = auto couple.
   f) Trace mode = max hold.
   g) Allow trace to fully stabilize.
   h) Use peak marker function to determine the peak amplitude level.
3. Repeat until all the test status is investigated.
4. Report the worst case.

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**Used Test Equipment List**

Spectrum Analyzer. Refer to Clause 5 Test Equipment List for details.

**Test result:**

1M

| Channel No. | Frequency (MHz) | Measured channel Power (dBm) | Limit | Result |
|---|---|---|---|---|
| 0 | 2402 | 0.56 | 1W (30 dBm) | Pass |
| 19 | 2440 | 0.42 | | Pass |
| 39 | 2480 | 0.16 | | Pass |

2M

| Channel No. | Frequency (MHz) | Measured channel Power (dBm) | Limit | Result |
|---|---|---|---|---|
| 0 | 2402 | 0.55 | 1W (30 dBm) | Pass |
| 19 | 2440 | 0.39 | | Pass |
| 39 | 2480 | 0.15 | | Pass |

Remark: Level = Read Level + Cable Loss

Result plot as follows:

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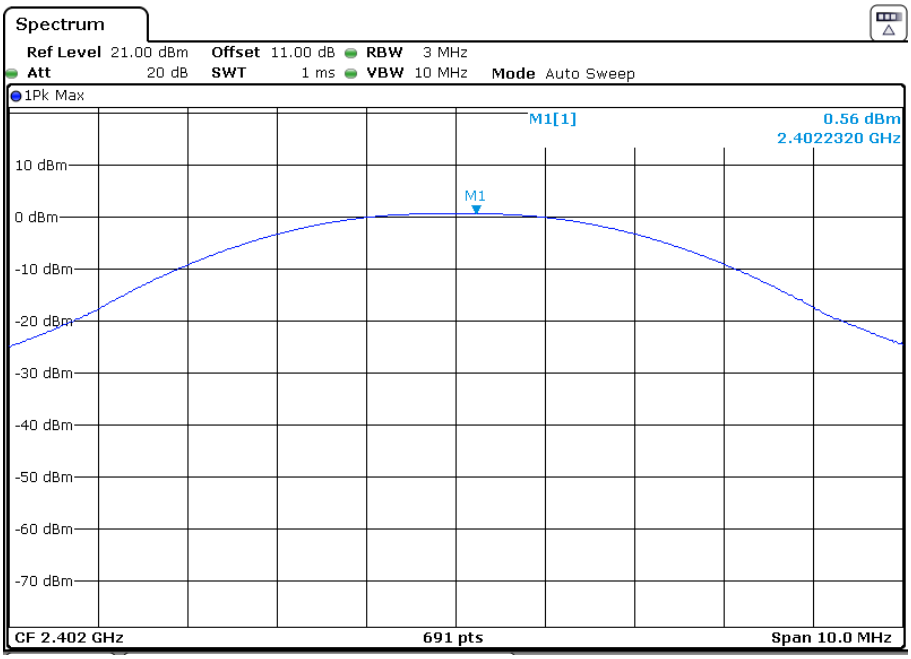
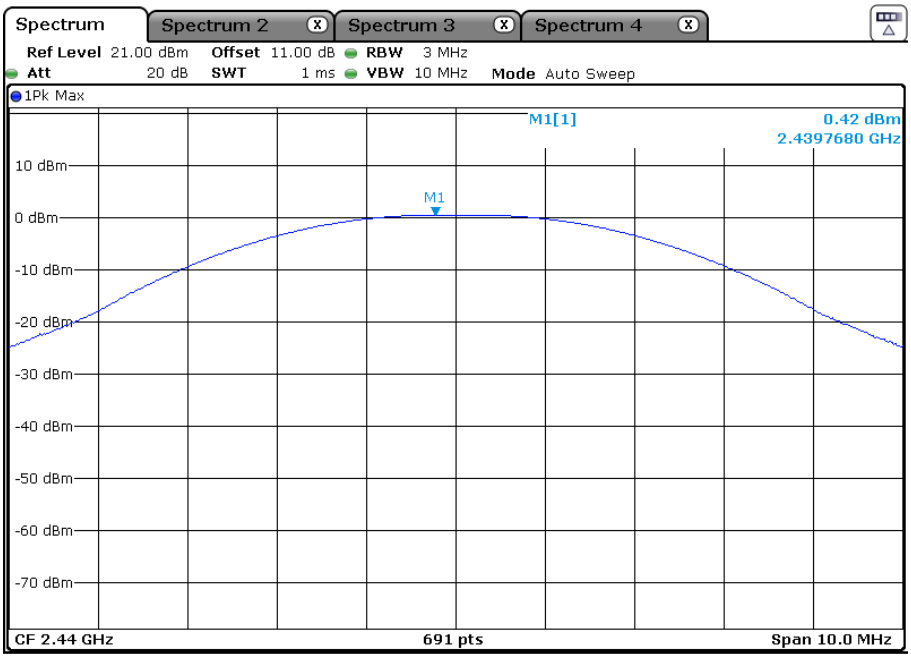
1M:

Lowest channel (2.402 GHz):




Middle Channel (2.440 GHz):



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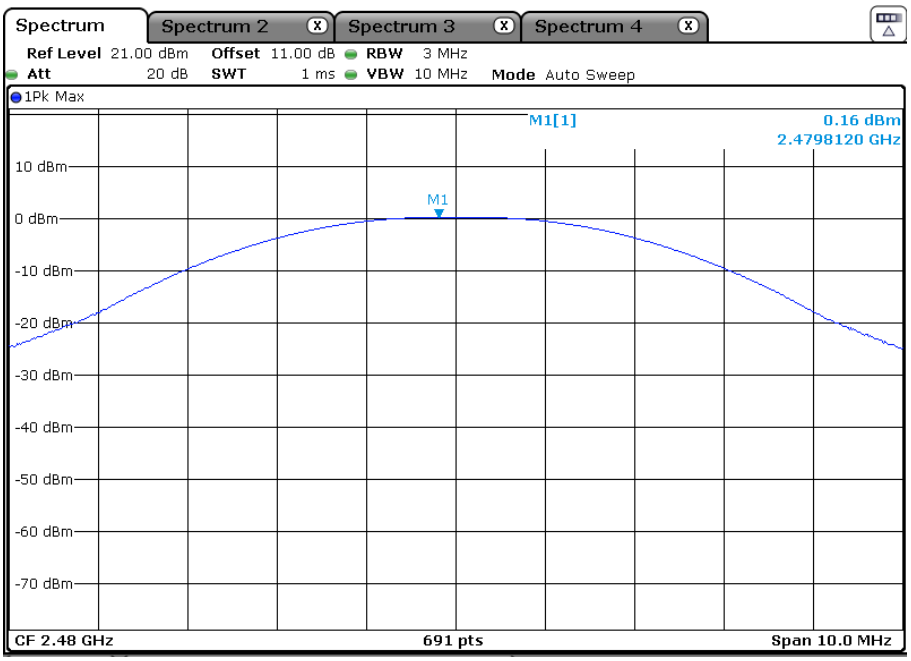
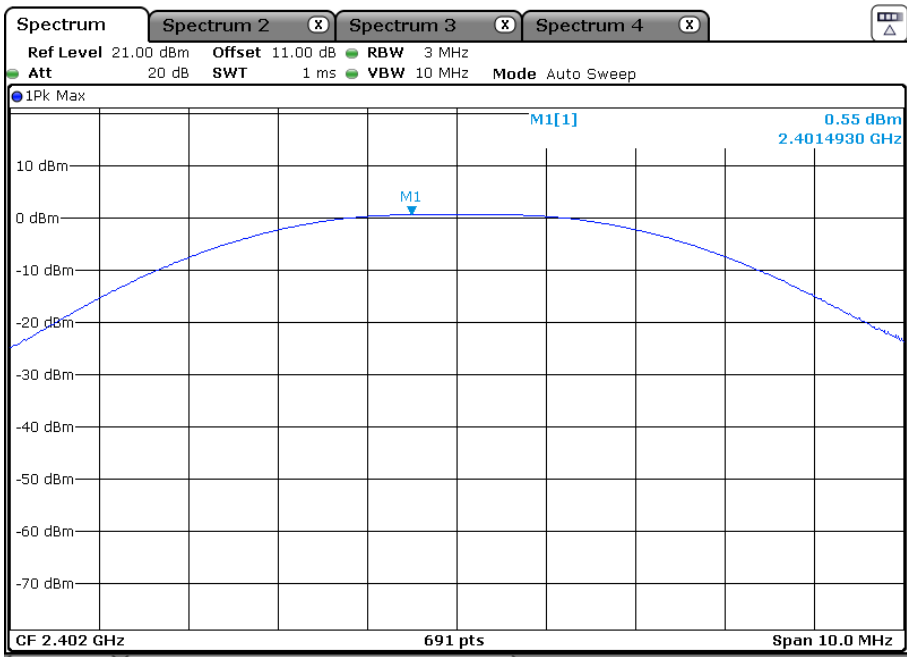
Highest Channel (2.480 GHz):




2M:

Lowest channel (2.402 GHz):



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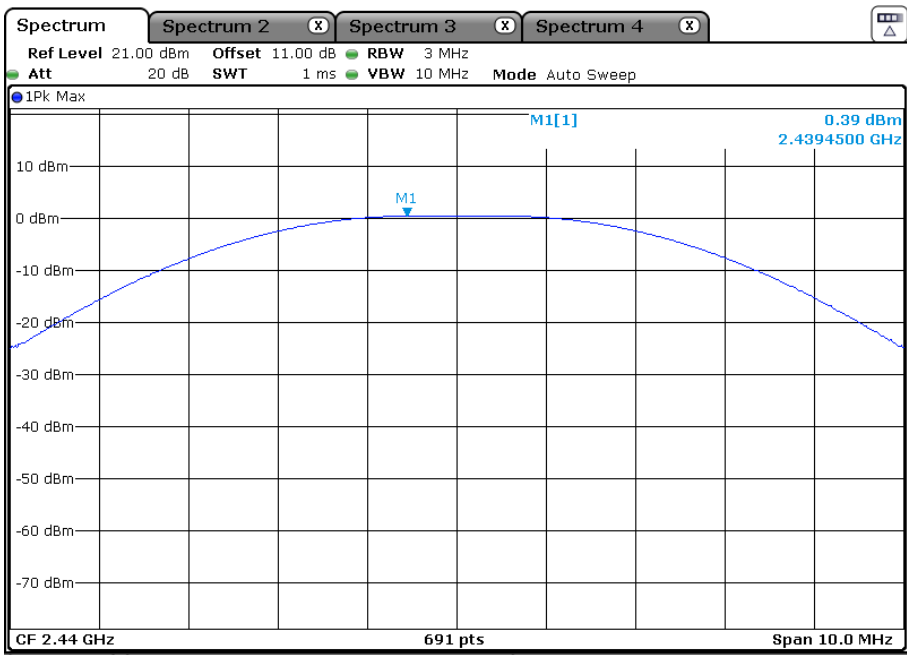
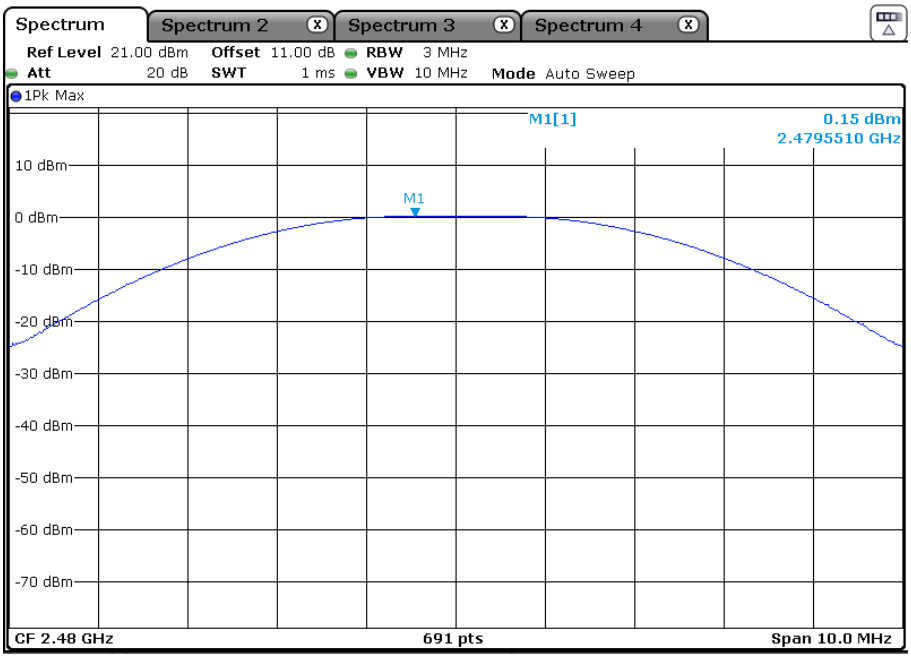
Middle Channel (2.440 GHz):




Highest Channel (2.480 GHz):




**Test result: The unit does meet the FCC requirements.**

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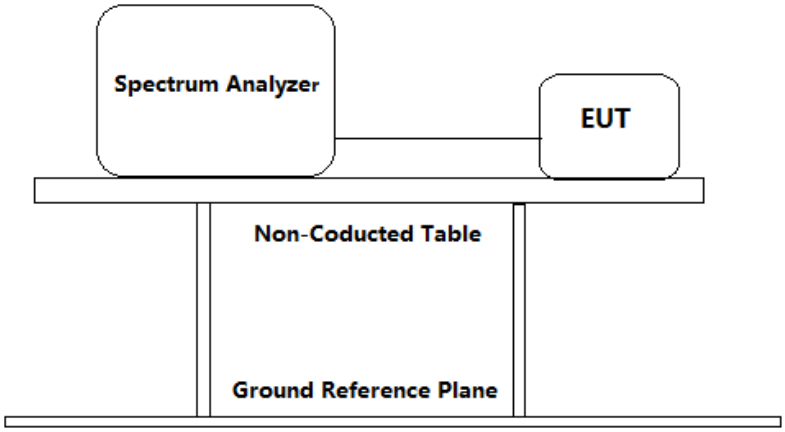
### 4.4 Peak Power Spectral Density

| | |
|---|---|
| Test Requirement: | FCC Part 15 C section 15.247<br>(e) For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.<br>This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density. |
| Test Method: | ANSI C63.10: Clause 11.10.2 |
| Test Status: | Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture). Following channel(s) was (were) selected for the final test as listed below. |

Test Configuration:




Test Procedure:

1. Remove the antenna from the EUT and then connect a low attention attenuation RF cable(cable loss =1 dB, with a 10dB attenuator) from the antenna port to the spectrum analyzer or power meter.
2. Set the spectrum analyzer:
   a) Set analyzer center frequency to DTS channel center frequency.
   b) Set the span= 1.5 × DTS bandwidth.
   c) Set the RBW to 3 kHz $\leqslant$ RBW $\leqslant$ 100 kHz.
   d) Set the VBW $\geqslant$ [3 × RBW].
   e) Detector = peak.
   f) Sweep time = auto couple.
   g) Trace mode = max hold.
   h) Allow trace to fully stabilize.
   i) Use the peak marker function to determine the maximum amplitude level within the RBW.
   j) If measured value exceeds requirement, then reduce RBW (but no less than 3

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kHz) and repeat.

3. Measure the Power Spectral Density of the test frequency with special test status.
4. Repeat until all the test status is investigated.
5. Report the worst case.

**Used Test Equipment List**

Spectrum Analyzer. Refer to Clause 5 Test Equipment List for details.

Test result:

1M

| Channel No. | Frequency (MHz) | Measured Peak Power Spectral Density (dBm/3 kHz) | Limit | Result |
|---|---|---|---|---|
| 0 | 2402 | -14.94 | 8 dBm/3kHz | Pass |
| 19 | 2440 | -15.16 | | Pass |
| 39 | 2480 | -15.49 | | Pass |

2M

| Channel No. | Frequency (MHz) | Measured Peak Power Spectral Density (dBm/3 kHz) | Limit | Result |
|---|---|---|---|---|
| 0 | 2402 | -17.40 | 8 dBm/3kHz | Pass |
| 19 | 2440 | -17.62 | | Pass |
| 39 | 2480 | -17.89 | | Pass |

Test result: Level = Read Level + Cable Loss.

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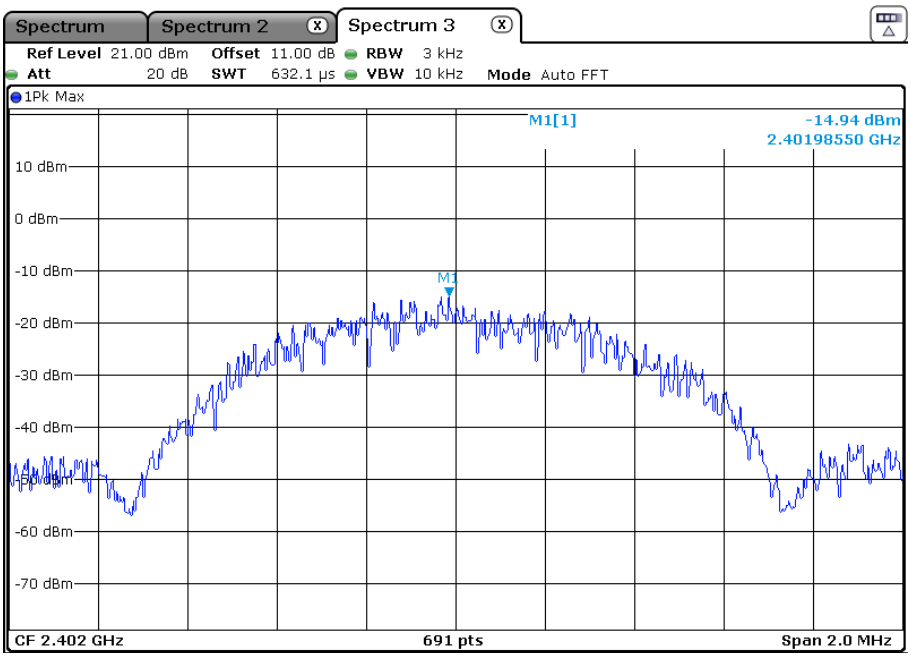
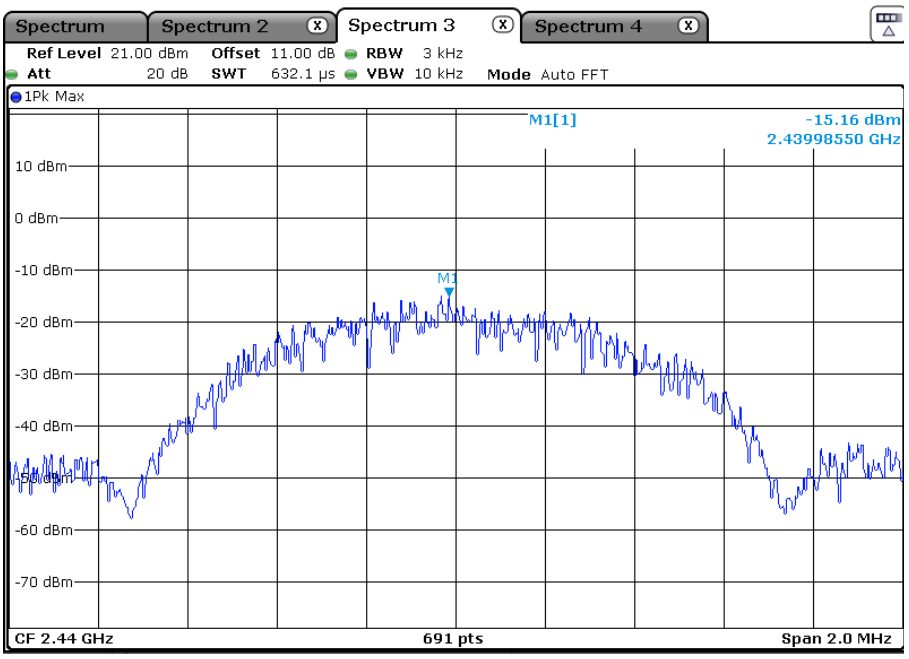
Result plot as follows:

1M:

Lowest channel (2.402 GHz):




Middle Channel (2.440 GHz):



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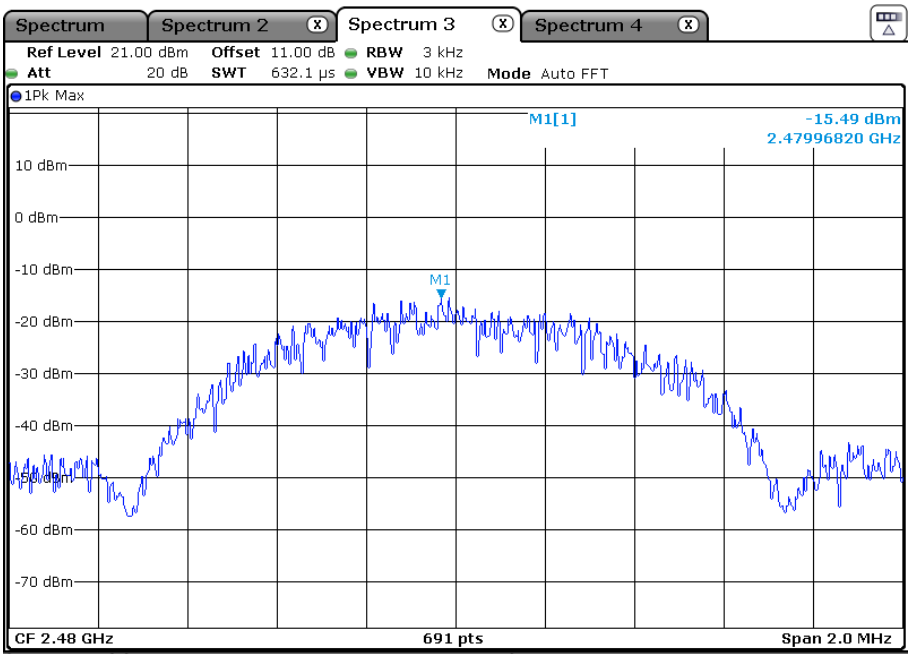
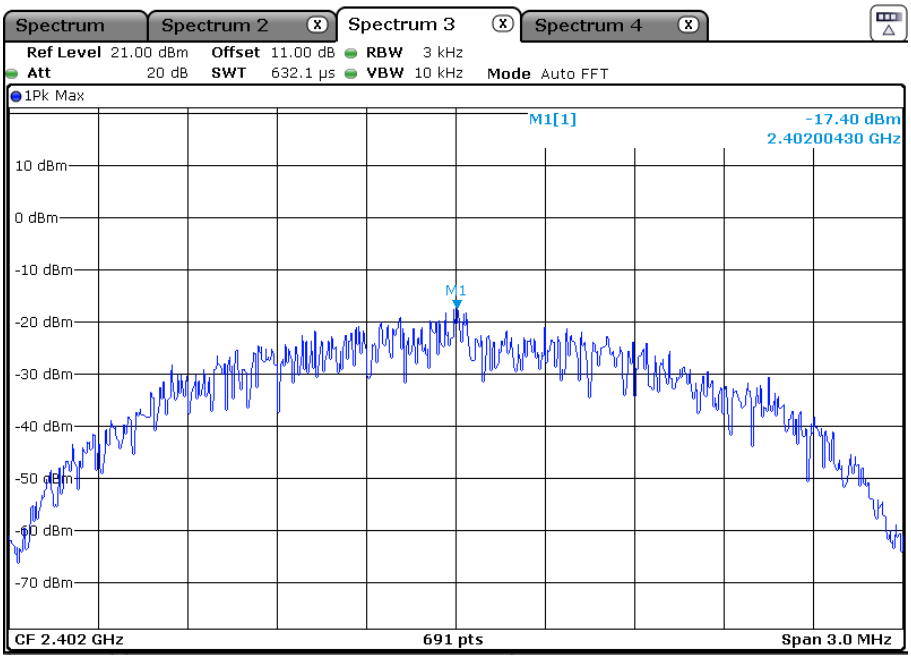
Highest Channel (2.480 GHz):



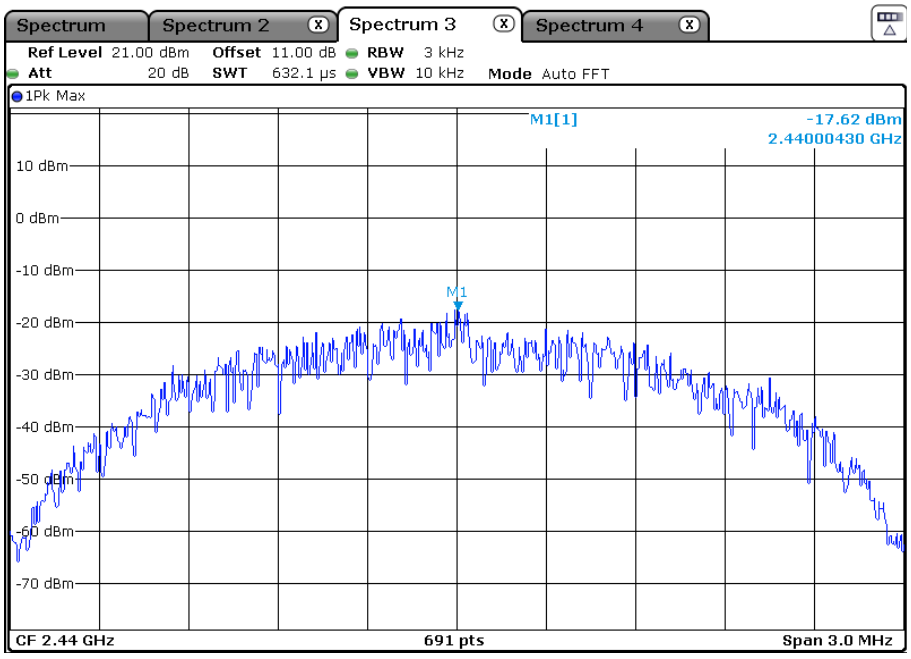

2M:

Lowest channel (2.402 GHz):

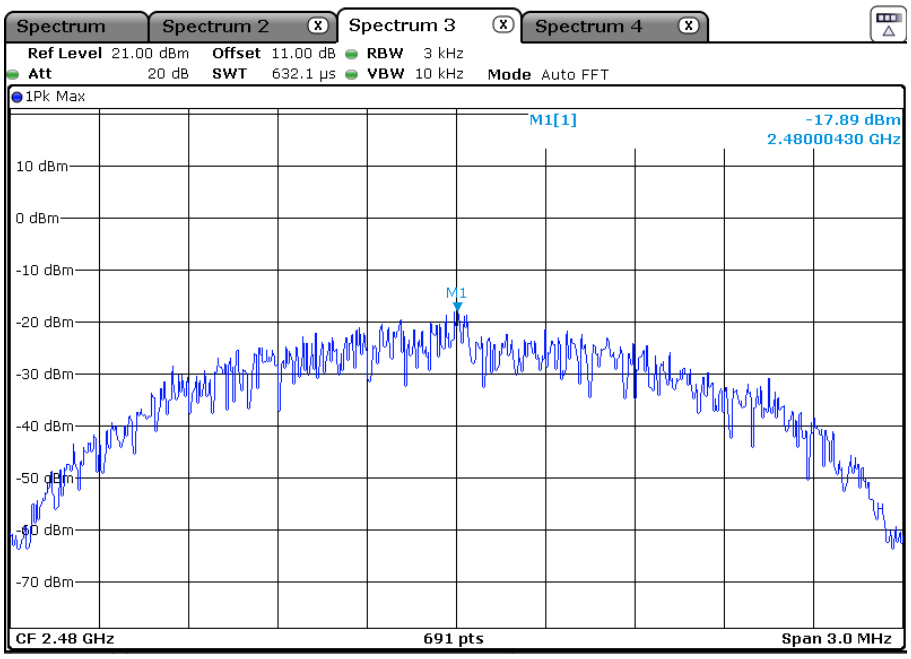


**TEST REPORT**

Middle Channel (2.440 GHz):




Highest Channel (2.480 GHz):

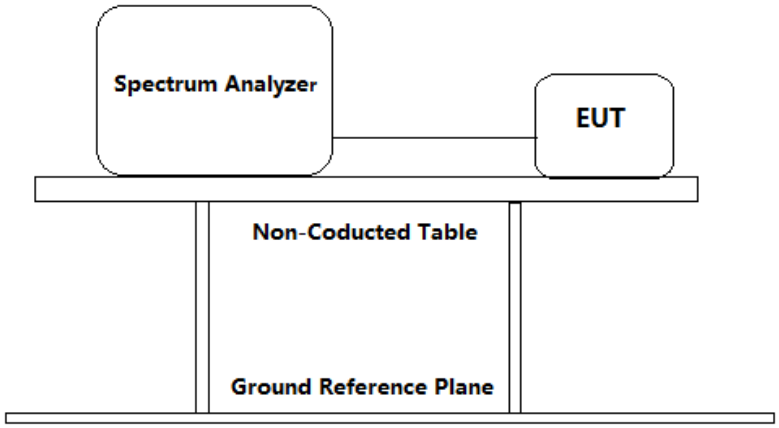


**TEST REPORT**

## 4.5 Out of Band Conducted Emissions

| | |
|---|---|
| Test Requirement: | FCC Part 15 C section 15.247<br>(d) In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating. The radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power. Based on either an RF conducted or a radiated measurement. Provided the transmitter demonstrates compliance with the peak conducted power limits. |
| Test Method: | ANSI C63.10: Clause 11.11 |
| Test Status: | Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture). Following channel(s) was (were) selected for the final test as listed below. |

Test Configuration:




Test Procedure:

1. Remove the antenna from the EUT and then connect a low RF cable (cable loss =2dB) from the antenna port to the spectrum analyzer or power meter.
2. Establish a reference level by using the following procedure:
   a) Set instrument center frequency to DTS channel center frequency.
   b) Set the span to ≥ 1.5 × DTS bandwidth.
   c) Set the RBW = 100 kHz.
   d) Set the VBW ≥ [3 × RBW].
   e) Detector = peak.
   f) Sweep time = auto couple.
   g) Trace mode = max hold.
   h) Allow trace to fully stabilize.
   i) Use the peak marker function to determine the maximum PSD level.
   Note that the channel found to contain the maximum PSD level can be used to

establish the reference level

3. Emission level measurement
   a) Set the center frequency and span to encompass frequency range to be measured.
   b) Set the RBW = 100 kHz.
   c) Set the VBW ⩾ [3 × RBW].
   d) Detector = peak.
   e) Sweep time = auto couple.
   f) Trace mode = max hold.
   g) Allow trace to fully stabilize.
   h) Use the peak marker function to determine the maximum amplitude level.
4. Measure the Conducted unwanted Emissions of the test frequency with special test status.
5. Repeat until all the test status is investigated.
6. Report the worst case.

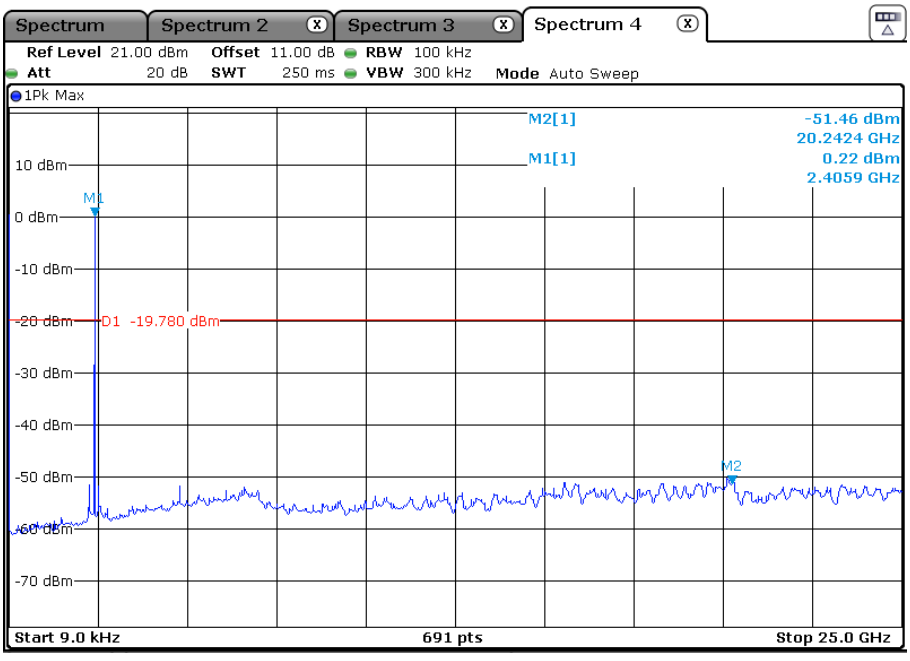
**Used Test Equipment List**
Spectrum Analyzer. Refer to Clause 5 Test Equipment List for details.

Result plot as follows:

1M

Lowest channel (2.402 GHz):

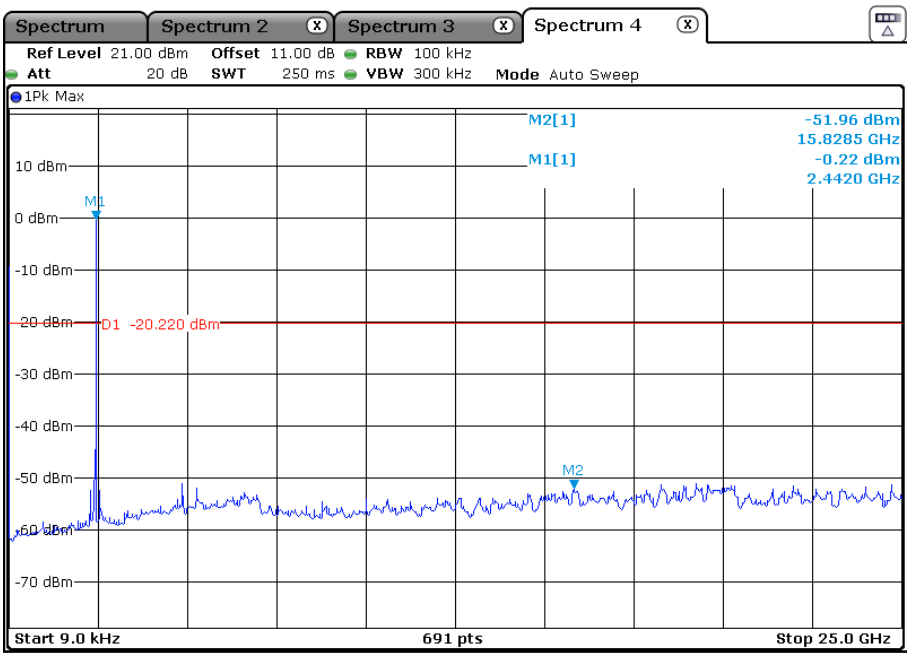
9 kHz to 25 GHz:



## TEST REPORT

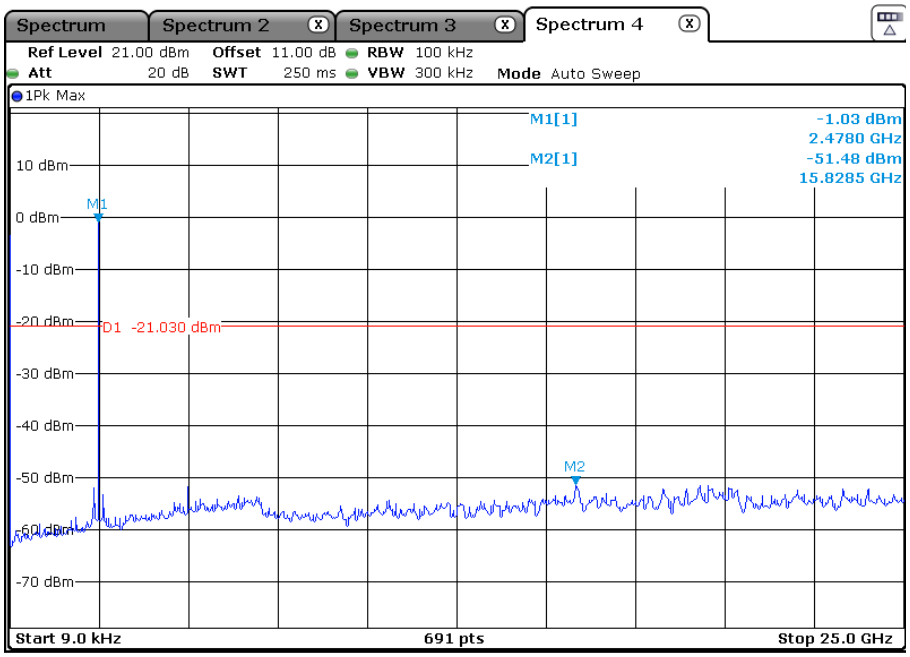
Middle Channel (2.440 GHz):

9 kHz to 25 GHz:




Highest Channel (2.480 GHz):

9 kHz to 25 GHz:

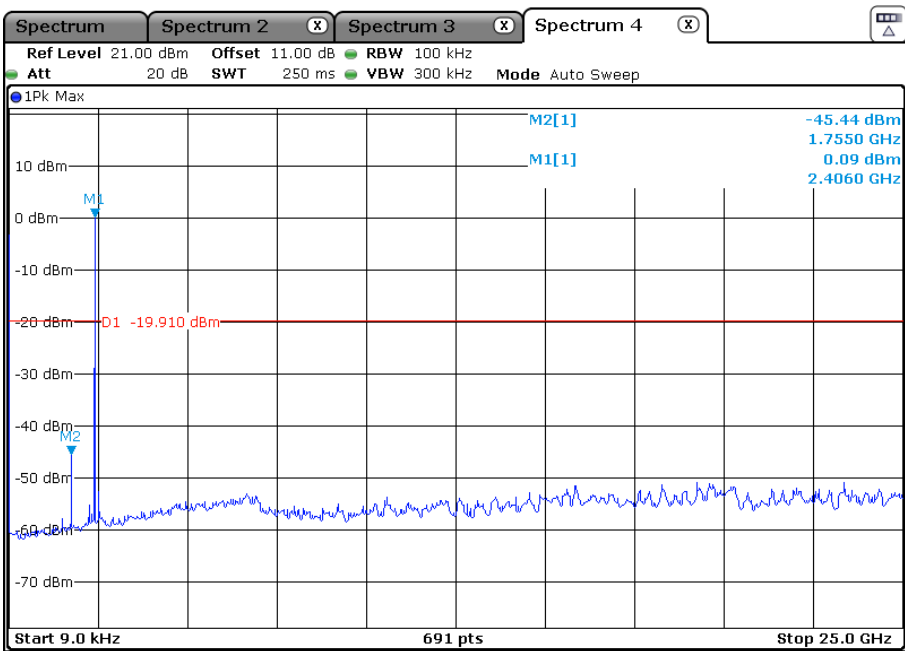


**TEST REPORT**

2M

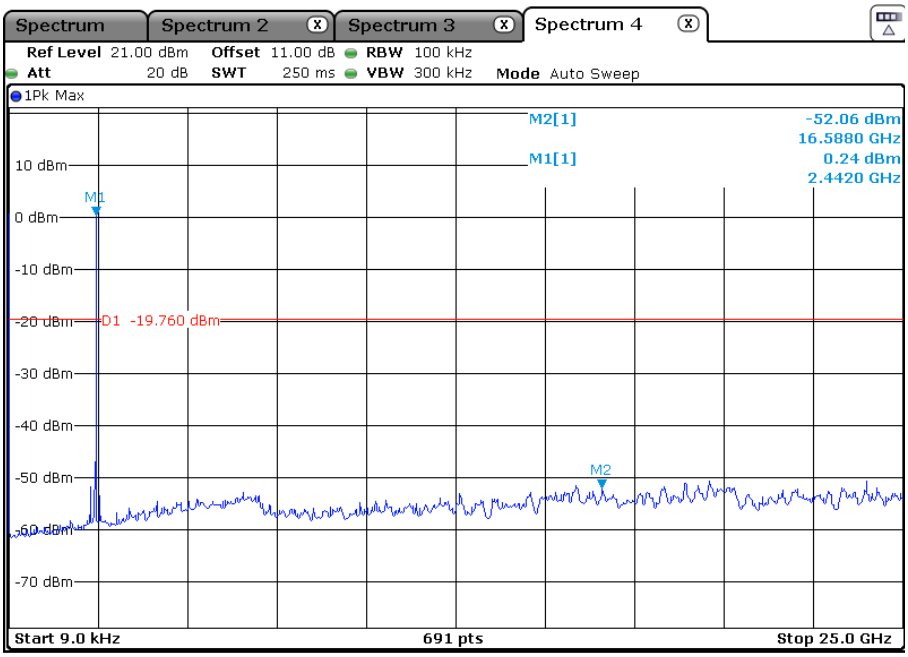
Lowest channel (2.402 GHz):

9 kHz to 25 GHz:




Middle Channel (2.440 GHz):

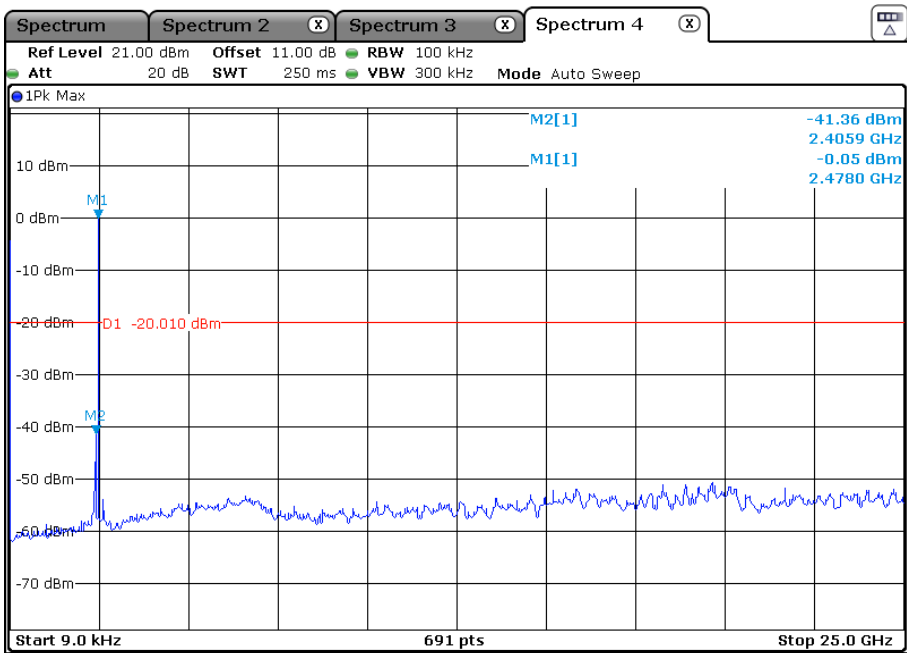
9 kHz to 25 GHz:



**TEST REPORT**

Highest Channel (2.480 GHz):

9 kHz to 25 GHz:




## 4.6 Out of Band Radiated Emissions

For out of band radiated emissions into Non-Restricted Frequency Bands were performed at a 3m separation distance to determine whether these emissions complied with the 20dB attenuation requirement.

[×] Not required, since all emissions are more than 20dB below fundamental
[ ] See attached data sheet

## 4.7 Radiated Emissions in Restricted Bands

| | |
|---|---|
| Test Requirement: | FCC Part 15 C section 15.247<br>(d) In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)). |
| Test Method: | ANSI C63.10: Clause 11.12.1, 6.4, 6.5 and 6.6 |
| Test Status: | Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture). Following channel(s) was (were) selected for the final test as listed below. |

## TEST REPORT

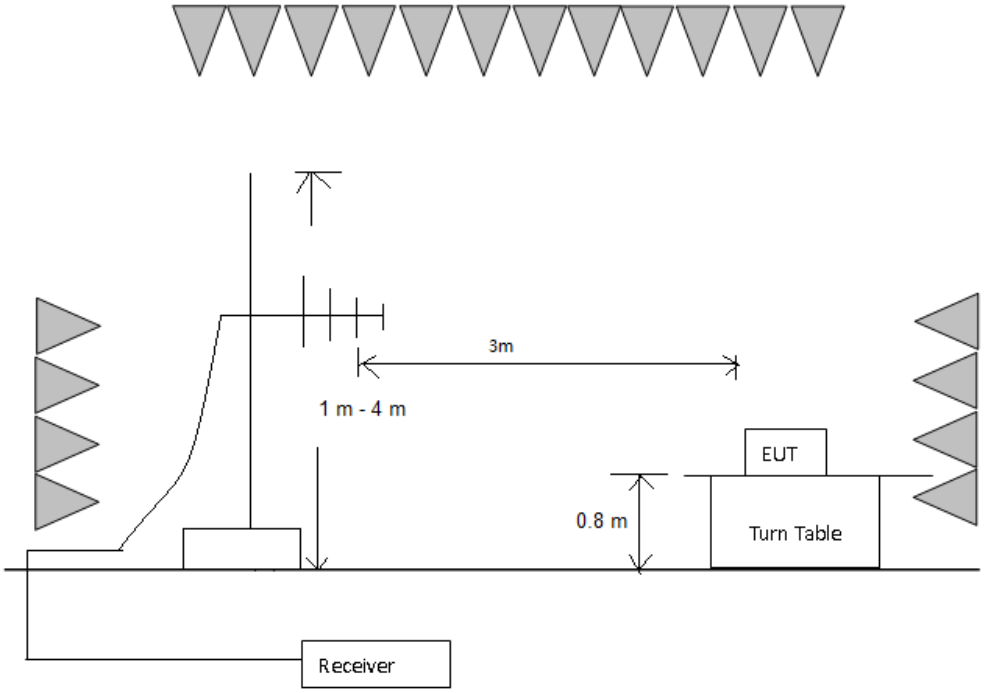
| | |
|---|---|
| Test site: | Measurement Distance: 3m (Semi-Anechoic Chamber) |
| Limit: | 40.0 dBμV/m between 30MHz & 88MHz;<br>43.5 dBμV/m between 88MHz & 216MHz;<br>46.0 dBμV/m between 216MHz & 960MHz;<br>54.0 dBμV/m above 960MHz. |
| Detector: | For Peak and Quasi-Peak value:<br>RBW =<br>1 MHz for f ≥ 1 GHz,<br>200 Hz for 9 kHz to 150 kHz<br>9 kHz for 150 kHz to 30 MHz<br>120 kHz for 30 MHz to 1GHz<br>VBW ≥ RBW<br>Sweep = auto<br>Detector function = peak for f ≥ 1 GHz, QP for f < 1 GHz<br>Trace = max hold<br><br>For AV value:<br>RBW = 1 MHz for f ≥ 1 GHz, 100 kHz for f < 1 GHz<br>VBW=10 Hz<br>Sweep = auto<br>Trace = max hold |
| Field Strength Calculation: | The field strength is calculated by adding the reading on the Spectrum Analyzer to the factors associated with preamplifiers (if any), antennas, cables, pulse desensitization and average factors (when specified limit is in average and measurements are made with peak detectors). A sample calculation is included below:<br>FS = RA + AF + CF - AG + PD + AV<br>FS = RA + Correct Factor + AV |
| Where: | FS = Field Strength in dBμV/m<br>RA = Receiver Amplitude (including preamplifier) in dBμV<br>AF = Antenna Factor in dB<br>CF = Cable Attenuation Factor in dB<br>AG = Amplifier Gain in dB<br>PD = Pulse Desensitization in dB<br>AV = Average Factor in –dB<br>Correct Factor = AF + CF – AG + PD |
| | In the radiated emission table which follows, the reading shown on the data table may reflect the preamplifier gain. An example of the calculations, where the reading does not reflect the preamplifier gain, follows:<br>FS = RA + AF + CF - AG + PD + AV<br>Assume a receiver reading of 62.0 dBμV is obtained. The antenna factor of 7.4 dB and cable factor of 1.6 dB is added. The amplifier gain of 29 dB is subtracted. The pulse desensitization factor of the spectrum analyzer was 0 dB, and the resultant average factor |

was -10 dB. The net field strength for comparison to the appropriate emission limit is 32 dBµV/m.
RA = 62.0 dBµV
AF = 7.4 dB
CF = 1.6 dB
AG = 29.0 dB
PD = 0 dB
AV = -10 dB
Correct Factor = 7.4 + 1.6 – 29.0 + 0 = -20 dB
FS = 62 + (-20) + (-10) = 32 dBµV/m

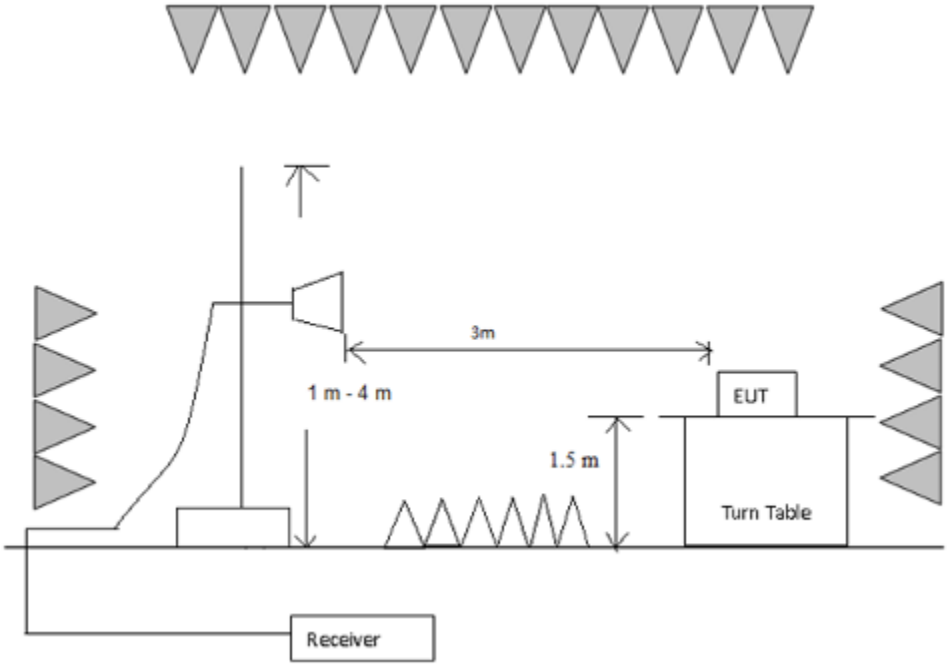
Section 15.205 Restricted bands of operation.
(a) Except as shown in paragraph (d) of this section. Only spurious emissions are permitted in any of the frequency bands listed below:

| MHz | MHz | MHz | GHz |
|---|---|---|---|
| 0.090 - 0.110 | 16.42 - 16.423 | 399.9 - 410 | 4.5 - 5.15 |
| 10.495 - 0.505 | 16.69475 - 16.69525 | 608 - 614 | 5.35 - 5.46 |
| 2.1735 - 2.1905 | 16.80425 - 16.80475 | 960 - 1240 | 7.25 - 7.75 |
| 4.125 - 4.128 | 25.5 - 25.67 | 1300 - 1427 | 8.025 - 8.5 |
| 4.17725 - 4.17775 | 37.5 - 38.25 | 1435 - 1626.5 | 9.0 - 9.2 |
| 4.20725 - 4.20775 | 73 - 74.6 | 1645.5 - 1646.5 | 9.3 - 9.5 |
| 6.215 - 6.218 | 74.8 - 75.2 | 1660 - 1710 | 10.6 - 12.7 |
| 6.26775 - 6.26825 | 108 - 121.94 | 1718.8 - 1722.2 | 13.25 - 13.4 |
| 6.31175 - 6.31225 | 123 - 138 | 2200 - 2300 | 14.47 - 14.5 |
| 8.291 - 8.294 | 149.9 - 150.05 | 2310 - 2390 | 15.35 - 16.2 |
| 8.362 - 8.366 | 156.52475 - | 2483.5 - 2500 | 17.7 - 21.4 |
| 8.37625 - 8.38675 | 156.52525 | 2655 - 2900 | 22.01 - 23.12 |
| 8.41425 - 8.41475 | 156.7 - 156.9 | 3260 - 3267 | 23.6 - 24.0 |
| 12.29 - 12.293 | 162.0125 - 167.17 | 3332 - 3339 | 31.2 - 31.8 |
| 12.51975 - 12.52025 | 167.72 - 173.2 | 3345.8 - 3358 | 36.43 - 36.5 |
| 12.57675 - 12.57725 | 240 - 285 | 3600 - 4400 | |
| 13.36 - 13.41 | 322 - 335.4 | | |

Test Configuration:
1) 30 MHz to 1 GHz emissions:




2) 1 GHz to 40 GHz emissions:




Test Procedure:

Test site with RF absorbing material covering the ground plane that met the site validation criterion called out in CISPR 16-1-4:2010 was used to perform radiated emission test above 1 GHz.

The receiver was scanned from 9 kHz to 25 GHz. When an emission was found, the table was rotated to produce the maximum signal strength. An initial pre-scan was performed for in peak detection mode using the receiver. The EUT was measured for both the Horizontal and Vertical polarities and performed a pre-test three orthogonal planes. For intentional radiators,

measurements of the variation of the input power or the radiated signal level of the fundamental frequency component of the emission, as appropriate, shall be performed with the supply voltage varied between 85% and 115% of the nominal rated supply voltage. The worst case emissions were reported.

**Used Test Equipment List:**
3m Semi-Anechoic Chamber, EMI Test Receiver (9 kHz~7 GHz), Signal and Spectrum Analyzer (10 Hz~40 GHz), Loop antenna (9 kHz-30 MHz). TRILOG Super Broadband test Antenna(30 MHz-3 GHz） (RX), Bouble-Ridged Waveguide Horn Antenna (800 MHz-18 GHz)(RX) and High Frequency Antenna & preamplifier(18 GHz~26.5 GHz) (RX). Refer to Clause 5 Test Equipment List for details.

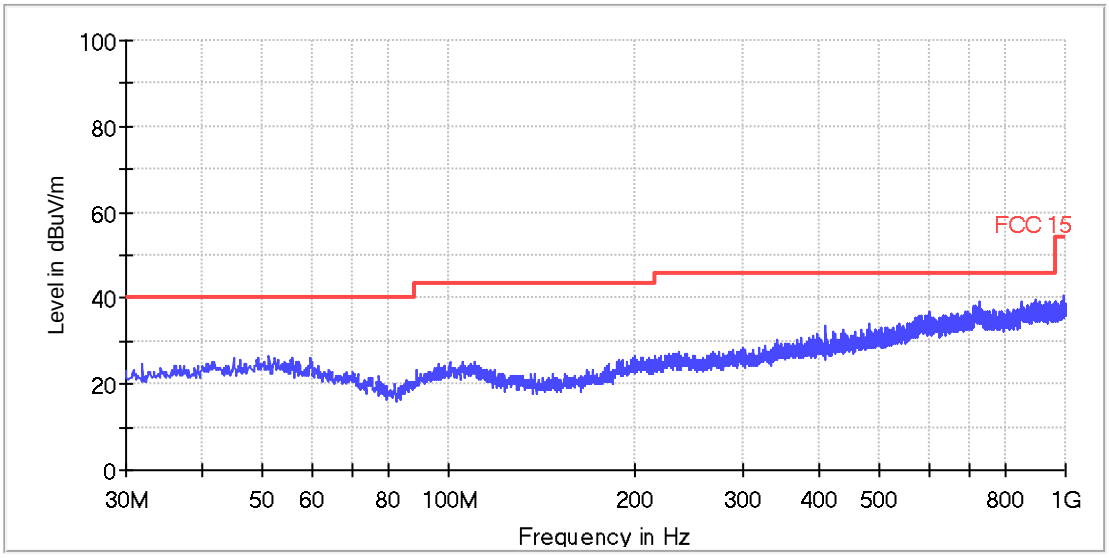
9 kHz~30 MHz Field Strength of Unwanted Emissions. Quasi-Peak Measurement
The measurements with active loop antenna were greater than 20dB below the limit, so the test data were not recorded in the test report.

30 MHz~1 GHz Spurious Emissions. Quasi-Peak Measurement

Pre-scan all modes, worst case as below

1Mbps data rate Test at Channel 1 (2.412 GHz) in transmitting status

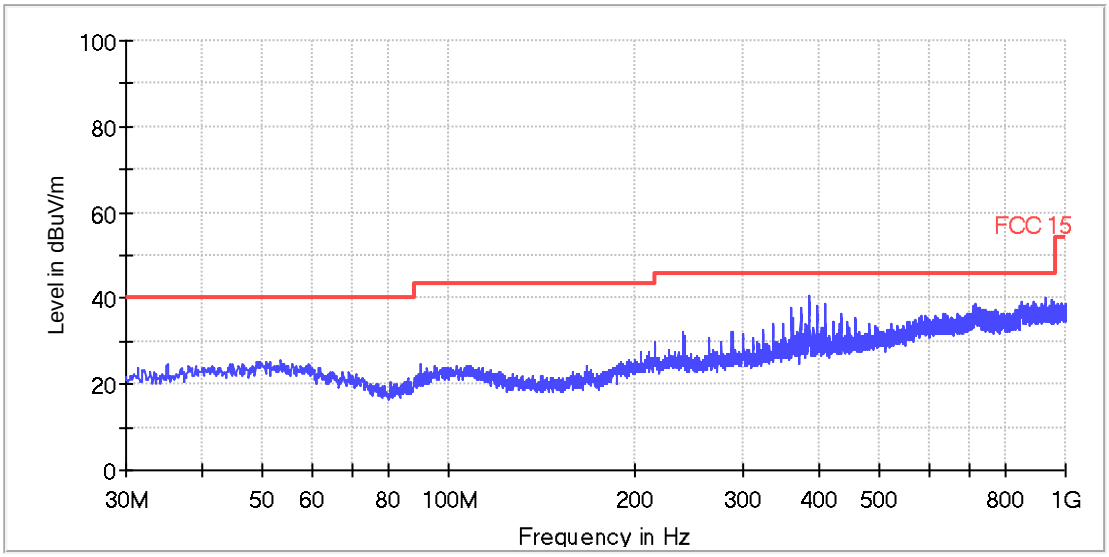
Vertical:




All emission levels are more than 6dB below the limit.

**TEST REPORT**

Horizontal:




All emission levels are more than 6dB below the limit.

1~25 GHz Radiated Emissions.

1M:

Test at Channel 0 (2.402 GHz) in transmitting status

**PK Measurement:**

| Frequency | PK Reading Level | Correction factors | PK Emission Level | PK Limit | Antenna polarization |
|---|---|---|---|---|---|
| (MHz) | (dBuV) | (dB) | (dBμV/m) | (dBμV/m) | |
| 4803.8 | 54.6 | -1.1 | 53.5 | 74 | H |
| 7207.1 | 54.8 | 2.3 | 57.1 | 74 | H |
| 4803.8 | 46.9 | -1.1 | 45.8 | 74 | V |
| 7205.0 | 47.1 | 2.3 | 49.4 | 74 | V |

**AV Measurement:**

| Frequency | AV Reading Level | Correction factors | AV Emission Level | AV Limit | Antenna polarization |
|---|---|---|---|---|---|
| (MHz) | (dBuV) | (dB) | (dBμV/m) | (dBμV/m) | |
| 4803.8 | / | -1.1 | / | 54 | H |
| 7207.1 | 43.4 | 2.3 | 45.7 | 54 | H |
| 4803.8 | / | -1.1 | / | 54 | V |
| 7205.0 | / | 2.3 | / | 54 | V |

Remark: When Peak emission level was below AV limit, the AV emission level did not be recorded.

**TEST REPORT**

Test at Channel 19 (2.440 GHz) in transmitting status

**PK Measurement:**

| Frequency | PK Reading Level | Correction factors | PK Emission Level | PK Limit | Antenna polarization |
|---|---|---|---|---|---|
| (MHz) | (dBuV) | (dB) | (dBμV/m) | (dBμV/m) | |
| 4880.2 | 54.6 | -1.0 | 53.6 | 74 | H |
| 7319.8 | 56.3 | 2.4 | 58.7 | 74 | H |
| 4878.1 | 46.5 | -1.0 | 45.5 | 74 | V |
| 7319.8 | 50.1 | 2.4 | 52.5 | 74 | V |

**AV Measurement:**

| Frequency | AV Reading Level | Correction factors | AV Emission Level | AV Limit | Antenna polarization |
|---|---|---|---|---|---|
| (MHz) | (dBuV) | (dB) | (dBμV/m) | (dBμV/m) | |
| 4880.2 | / | -1.0 | / | 54 | H |
| 7319.8 | 43.0 | 2.4 | 45.4 | 54 | H |
| 4878.1 | / | -1.0 | / | 54 | V |
| 7319.8 | / | 2.4 | / | 54 | V |

Remark: When Peak emission level was below AV limit, the AV emission level did not be recorded

Test at Channel 39 (2.480 GHz) in transmitting status

**PK Measurement:**

| Frequency | PK Reading Level | Correction factors | PK Emission Level | PK Limit | Antenna polarization |
|---|---|---|---|---|---|
| (MHz) | (dBuV) | (dB) | (dBμV/m) | (dBμV/m) | |
| 4958.9 | 57.9 | -0.9 | 57.0 | 74 | H |
| 7438.8 | 51.3 | 2.6 | 53.9 | 74 | H |
| 4961.0 | 47.9 | -0.9 | 47.0 | 74 | V |
| 7438.8 | 45.8 | 2.6 | 48.4 | 74 | V |

**AV Measurement:**

| Frequency | AV Reading Level | Correction factors | AV Emission Level | AV Limit | Antenna polarization |
|---|---|---|---|---|---|
| (MHz) | (dBuV) | (dB) | (dBμV/m) | (dBμV/m) | |
| 4958.9 | 41.3 | -0.9 | 40.4 | 54 | H |
| 7438.8 | / | 2.6 | / | 54 | H |
| 4961.0 | / | -0.9 | / | 54 | V |
| 7438.8 | / | 2.6 | / | 54 | V |

Remark: When Peak emission level was below AV limit, the AV emission level did not be recorded.

**TEST REPORT**

2M:

Test at Channel 0 (2.402 GHz) in transmitting status

**PK Measurement:**

| Frequency | PK Reading Level | Correction factors | PK Emission Level | PK Limit | Antenna polarization |
|---|---|---|---|---|---|
| (MHz) | (dBuV) | (dB) | (dBμV/m) | (dBμV/m) | |
| 4801.6 | 54.7 | -1.1 | 53.6 | 74 | H |
| 7205.0 | 55.3 | 2.3 | 57.6 | 74 | H |
| 4801.6 | 46.9 | -1.1 | 45.8 | 74 | V |
| 7205.0 | 48.4 | 2.3 | 50.7 | 74 | V |

**AV Measurement:**

| Frequency | AV Reading Level | Correction factors | AV Emission Level | AV Limit | Antenna polarization |
|---|---|---|---|---|---|
| (MHz) | (dBuV) | (dB) | (dBμV/m) | (dBμV/m) | |
| 4801.6 | / | -1.1 | | 54 | H |
| 7205.0 | 44.9 | 2.3 | 47.2 | 54 | H |
| 4801.6 | / | -1.1 | / | 54 | V |
| 7205.0 | / | 2.3 | / | 54 | V |

Remark: When Peak emission level was below AV limit, the AV emission level did not be recorded.

Test at Channel 19 (2.440 GHz) in transmitting status

**PK Measurement:**

| Frequency | PK Reading Level | Correction factors | PK Emission Level | PK Limit | Antenna polarization |
|---|---|---|---|---|---|
| (MHz) | (dBuV) | (dB) | (dBμV/m) | (dBμV/m) | |
| 4878.1 | 52.1 | -1.0 | 51.1 | 74 | H |
| 7317.6 | 56.0 | 2.4 | 58.4 | 74 | H |
| 4878.1 | 44.9 | -1.0 | 43.9 | 74 | V |
| 7321.9 | 48.8 | 2.4 | 51.2 | 74 | V |

**AV Measurement:**

| Frequency | AV Reading Level | Correction factors | AV Emission Level | AV Limit | Antenna polarization |
|---|---|---|---|---|---|
| (MHz) | (dBuV) | (dB) | (dBμV/m) | (dBμV/m) | |
| 4878.1 | / | -1.0 | / | 54 | H |
| 7317.6 | 44.1 | 2.4 | 46.5 | 54 | H |
| 4878.1 | / | -1.0 | / | 54 | V |
| 7321.9 | / | 2.4 | / | 54 | V |

Remark: When Peak emission level was below AV limit, the AV emission level did not be recorded

**TEST REPORT**

Test at Channel 39 (2.480 GHz) in transmitting status

**PK Measurement:**

| Frequency | PK Reading Level | Correction factors | PK Emission Level | PK Limit | Antenna polarization |
|---|---|---|---|---|---|
| (MHz) | (dBuV) | (dB) | (dBμV/m) | (dBμV/m) | |
| 4961.0 | 59.1 | -0.9 | 58.2 | 74 | H |
| 7438.8 | 49.4 | 2.6 | 52.0 | 74 | H |
| 4958.9 | 48.6 | -0.9 | 47.7 | 74 | V |
| 7440.9 | 46.6 | 2.6 | 49.2 | 74 | V |

**AV Measurement:**

| Frequency | AV Reading Level | Correction factors | AV Emission Level | AV Limit | Antenna polarization |
|---|---|---|---|---|---|
| (MHz) | (dBuV) | (dB) | (dBμV/m) | (dBμV/m) | |
| 4961.0 | 39.8 | -0.9 | 38.9 | 54 | H |
| 7438.8 | / | 2.6 | / | 54 | H |
| 4958.9 | / | -0.9 | / | 54 | V |
| 7440.9 | / | 2.6 | / | 54 | V |

Remark: When Peak emission level was below AV limit, the AV emission level did not be recorded.

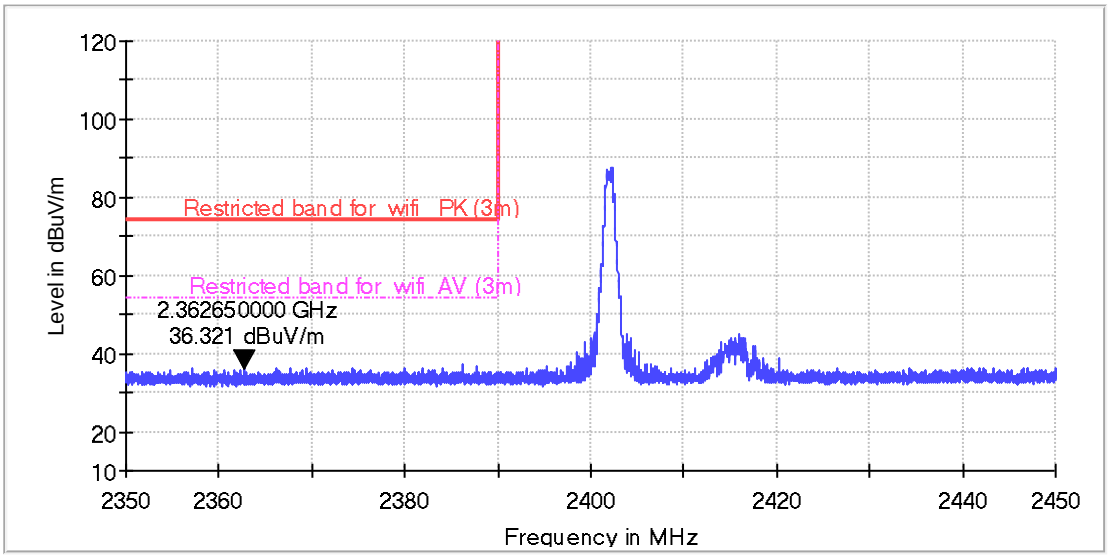
## TEST REPORT

Restricted Bands Measurement

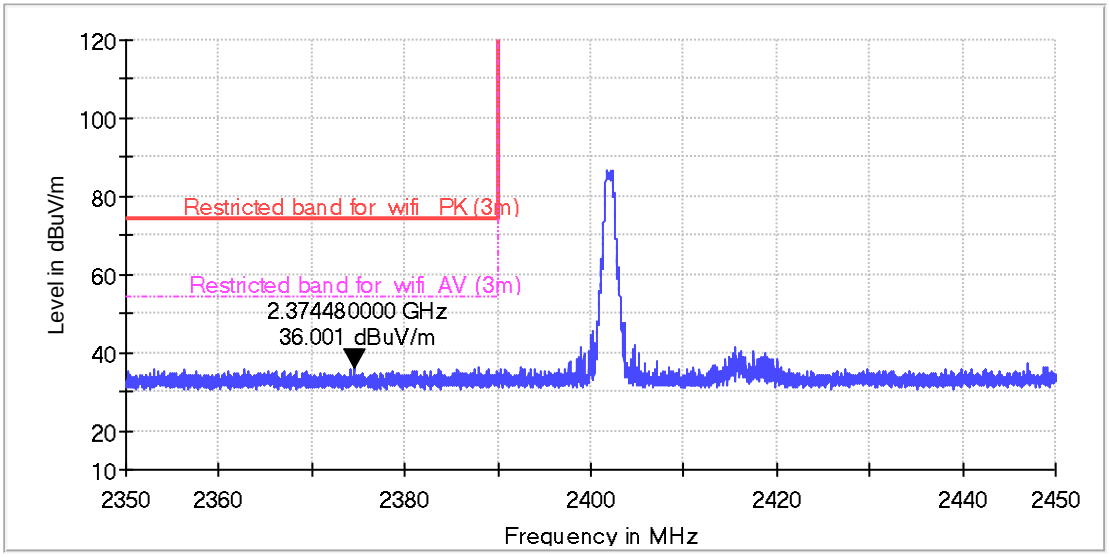
1M

Test at Channel 0 (2.402 GHz) in transmitting status

Horizontal




Vertical



**TEST REPORT**

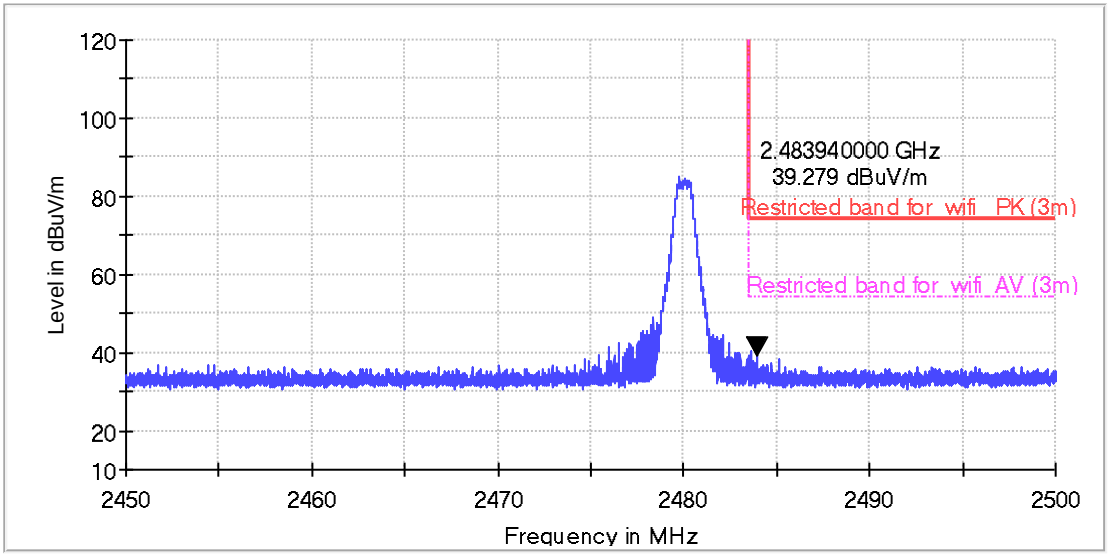
**PK Measurement:**

| Frequency | PK Reading Level | Correction factors | PK Emission Level | PK Limit | Antenna polarization |
|---|---|---|---|---|---|
| (MHz) | (dBuV) | (dB) | (dBuV/m) | (dBuV/m) | |
| 2362.7 | 44.6 | -8.3 | 36.3 | 74 | H |
| 2374.5 | 44.2 | -8.2 | 36.0 | 74 | V |

Remark: When Peak emission level was below AV limit, the AV emission level did not be recorded.

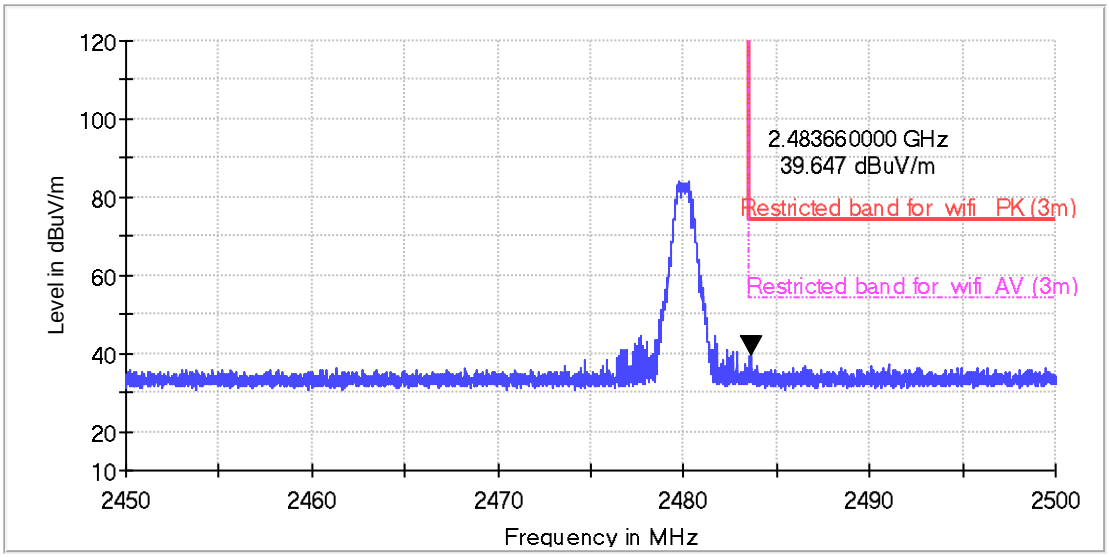
Test at Channel 39 (2.480 GHz) in transmitting status

Horizontal



**TEST REPORT**

Vertical




**PK Measurement:**

| Frequency | PK Reading Level | Correction factors | PK Emission Level | PK Limit | Antenna polarization |
|---|---|---|---|---|---|
| (MHz) | (dBuV) | (dB) | (dBuV/m) | (dBuV/m) | |
| 2483.9 | 47.1 | -7.8 | 39.3 | 74 | H |
| 2483.7 | 47.4 | -7.8 | 39.6 | 74 | V |

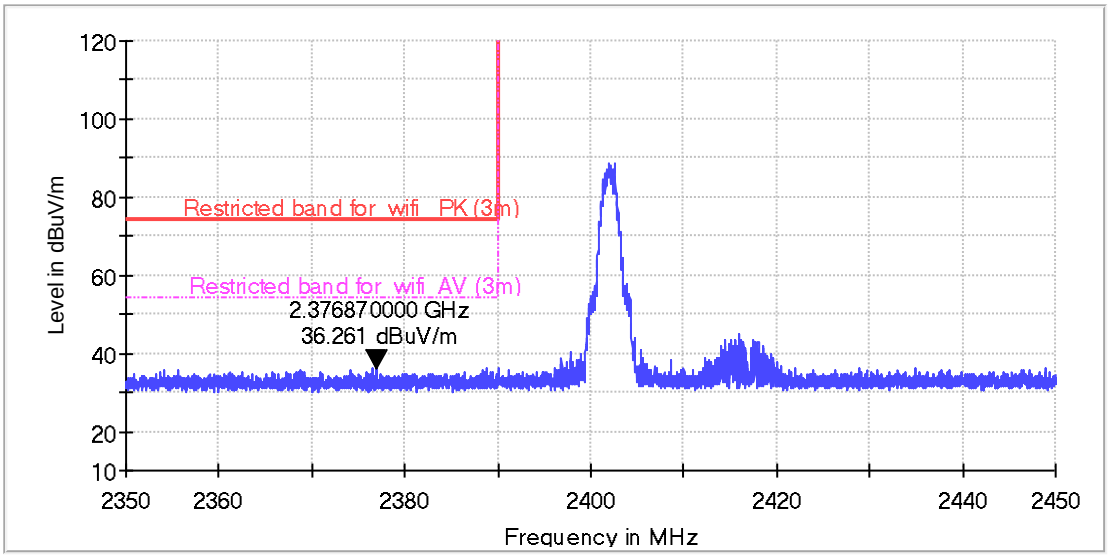
Remark: When Peak emission level was below AV limit, the AV emission level did not be recorded.

2M

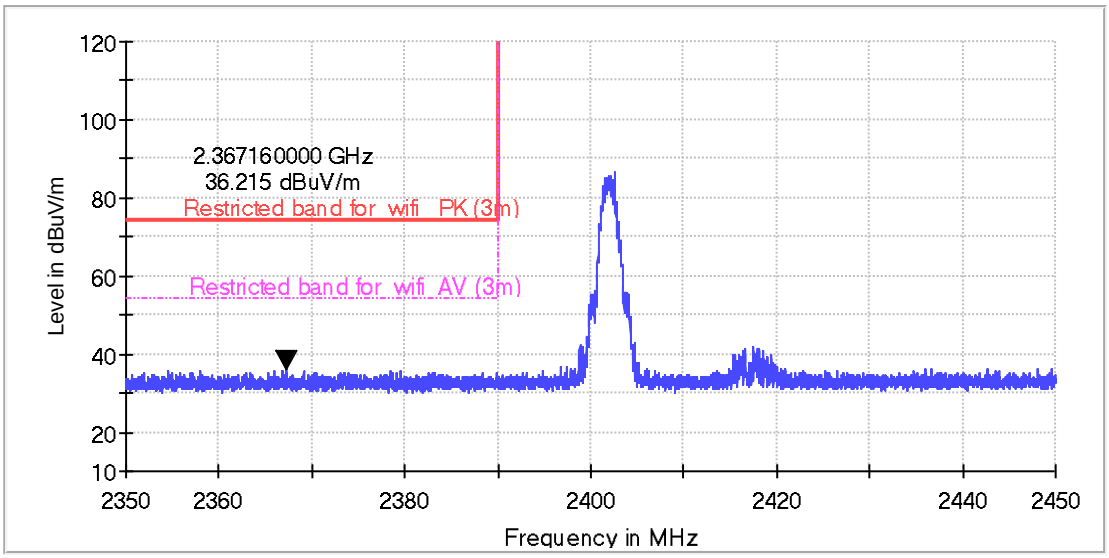
Test at Channel 0 (2.402 GHz) in transmitting status

Horizontal

**TEST REPORT**




Vertical




**PK Measurement:**

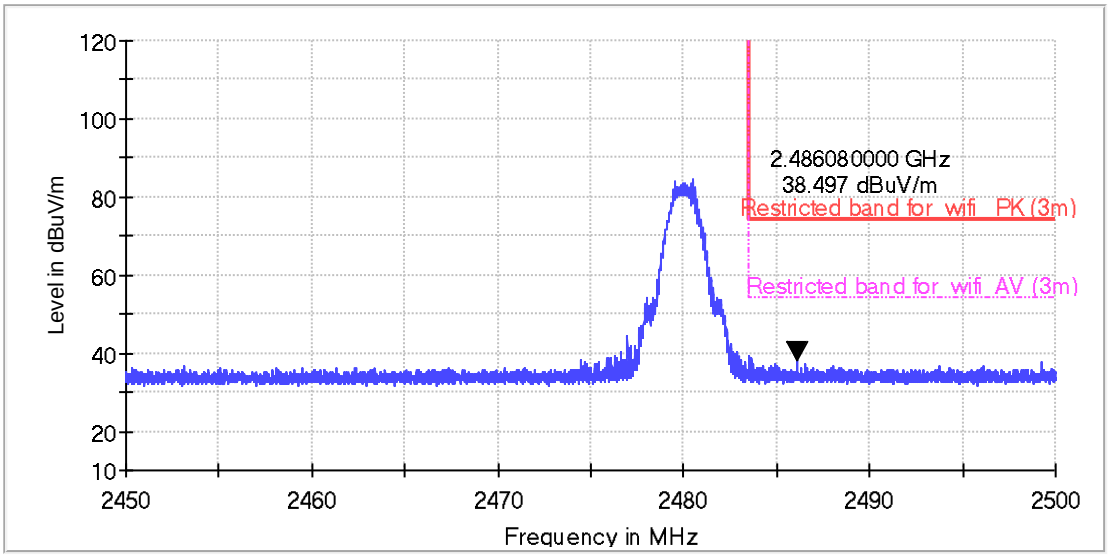
| Frequency | PK Reading Level | Correction factors | PK Emission Level | PK Limit | Antenna polarization |
|---|---|---|---|---|---|
| (MHz) | (dBuV) | (dB) | (dBuV/m) | (dBuV/m) | |
| 2376.9 | 44.6 | -8.3 | 36.3 | 74 | H |
| 2367.2 | 44.4 | -8.2 | 36.2 | 74 | V |

Remark: When Peak emission level was below AV limit, the AV emission level did not be recorded.

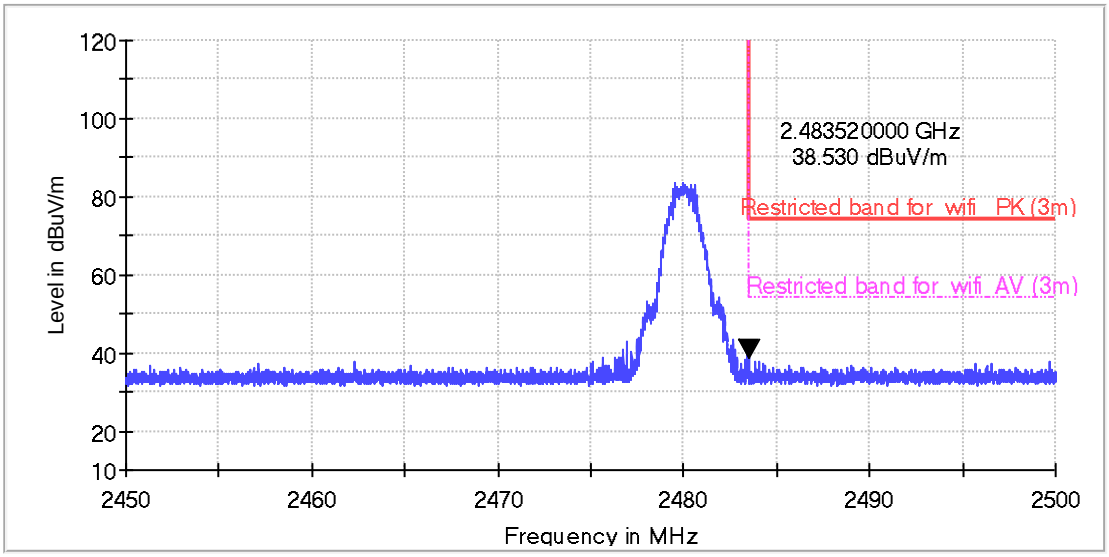
## TEST REPORT

Test at Channel 39 (2.480 GHz) in transmitting status

Horizontal




Vertical




**PK Measurement:**

| Frequency | PK Reading Level | Correction factors | PK Emission Level | PK Limit | Antenna polarization |
|---|---|---|---|---|---|
| (MHz) | (dBuV) | (dB) | (dBuV/m) | (dBuV/m) | |
| 2486.1 | 46.3 | -7.8 | 38.5 | 74 | H |
| 2483.5 | 46.3 | -7.8 | 38.5 | 74 | V |

**TEST REPORT**

Remark: When Peak emission level was below AV limit, the AV emission level did not be recorded.

* Band Edges Emission

The field strength is calculated by adding the Antenna Factor. Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level =Receiver Reading + Antenna Factor + Cable Loss –Preamplifier Factor.

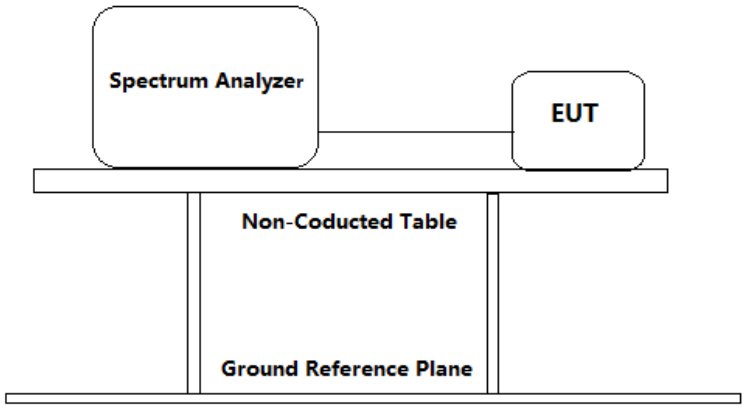
As shown in Section, for frequencies above 1000 MHz. the above field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.

No any other emissions level which are attenuated less than 20dB below the limit.

**TEST REPORT**

## 4.8 Band Edges Requirement

| | |
|---|---|
| Test Requirement: | FCC Part 15 C section 15.247<br>(d) In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating. The radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power. Based on either an RF conducted or a radiated measurement. Provided the transmitter demonstrates compliance with the peak conducted power limits. |
| Frequency Band: | 2400 MHz to 2483.5 MHz |
| Test Method: | ANSI C63.10: Clause 11.11 and 11.13 |
| Test Status: | Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture). Following channel(s) was (were) selected for the final test as listed below. |
| Test Configuration: | For Band Edges Emission in Radiated mode, Please refer to clause 4.7 |




Test Procedure:

1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum analyzer.
   a) Set instrument center frequency to the frequency of the emission to be measured (must be within 2 MHz of the authorized band edge).
   b) Set the center frequency and span to encompass frequency range to be measured.
   c) RBW = 100 kHz.
   d) VBW $\geqslant$ [3 × RBW].
   e) Detector = peak.
   f) Sweep time = auto.
   g) Trace mode = max hold.
   h) Allow sweep to continue until the trace stabilizes (required measurement time

may increase for low-duty-cycle applications).
i) For radiated Band-edge emissions within a restricted band and within 2 MHz of an authorized band edge, integration method is considered.

2. Repeat until all the test status is investigated.
3. Report the worst case.

**Used Test Equipment List:**
3m Semi-Anechoic Chamber, EMI Test Receiver (9 kHz~7 GHz), Signal and Spectrum Analyzer (10 Hz~40 GHz), Loop antenna (9 kHz-30 MHz). TRILOG Super Broadband test Antenna(30 MHz-3 GHz）(RX), Bouble-Ridged Waveguide Horn Antenna (800 MHz-18 GHz)(RX) and High Frequency Antenna & preamplifier(18 GHz~26.5 GHz) (RX). Refer to Clause 5 Test Equipment List for details.

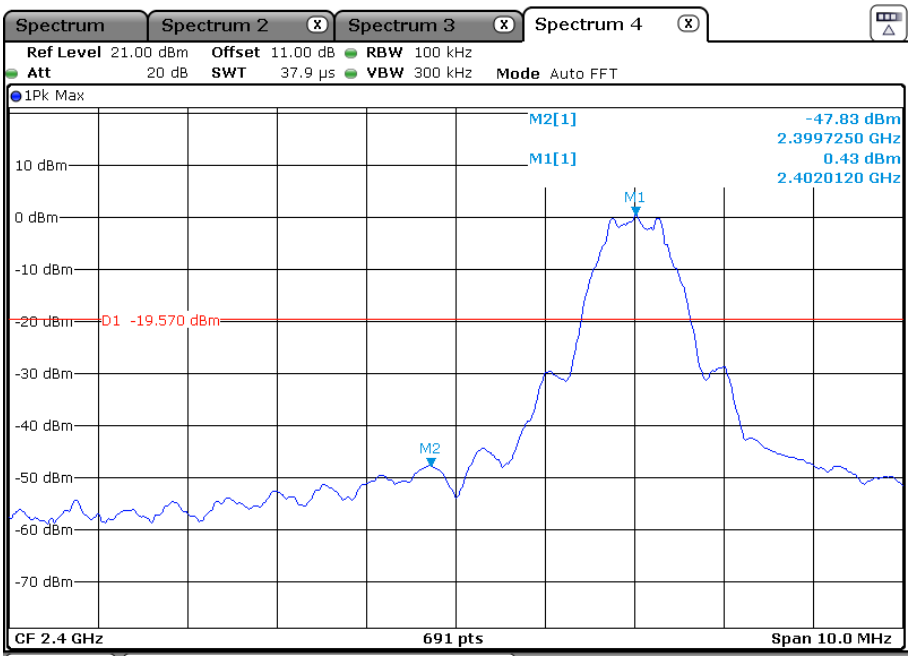
Test result with plots as follows:
For conduct mode:

The band edges was measured and recorded Result:

The Lower Edges attenuated more than 20dB.

The Upper Edges attenuated more than 20dB.

1M:
Channel 0: 2.402 GHz

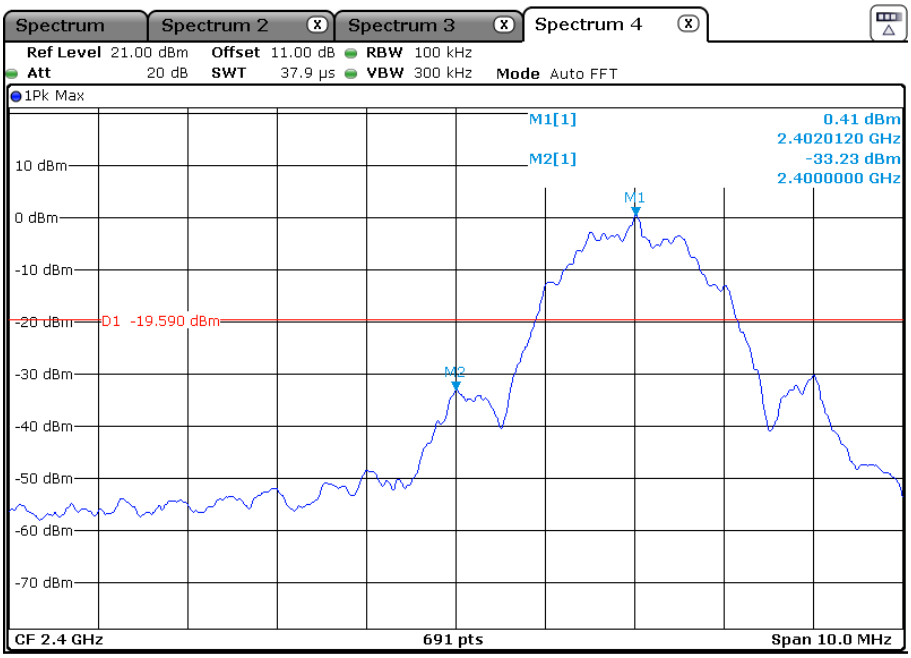


**TEST REPORT**

Channel 39: 2.480 GHz

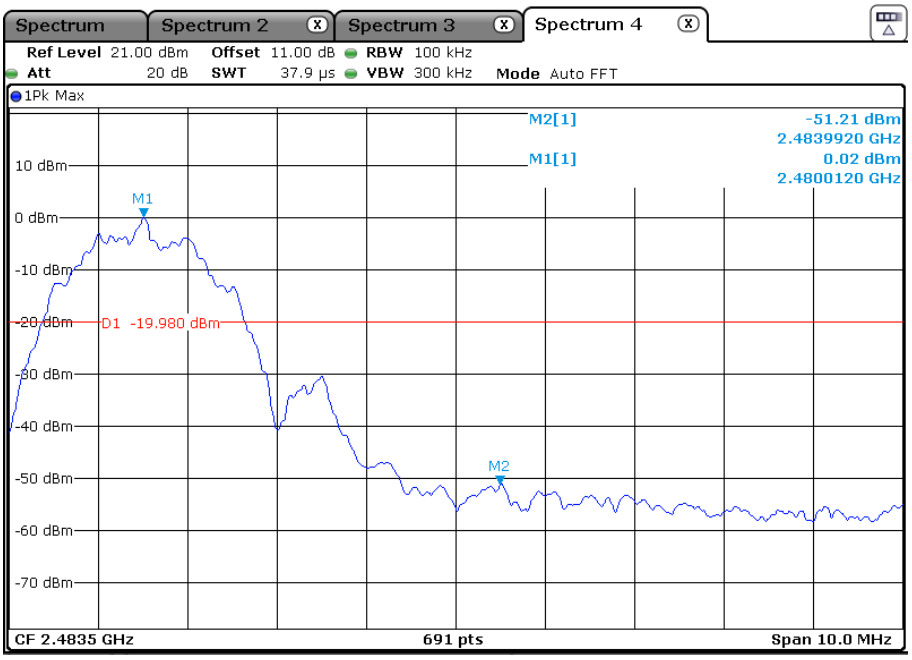

2M:

Channel 0: 2.402 GHz



## TEST REPORT

Channel 39: 2.480 GHz



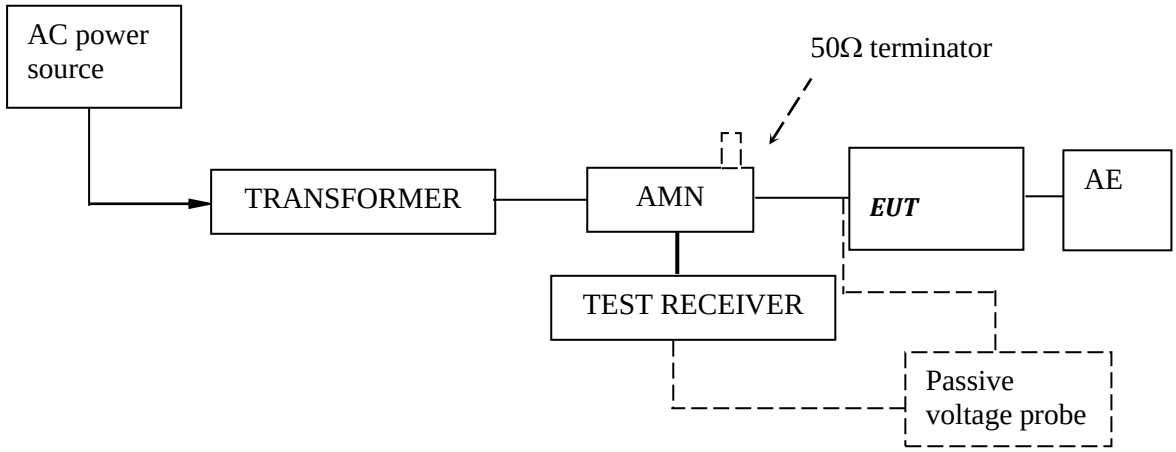

For radiated mode:

Please refer Clause 4.7 Radiated Emissions in Restricted Bands of this test report for more details. The resultant field strength in band edges meet the general radiated emission limit in section 15.209, which does not exceed 74 dBµV/m (Peak Limit) and 54 dBµV/m (Average Limit).

**TEST REPORT**

### 4.9 Conducted Emission Test

Test Configuration:




Test Setup and Procedure:
Test was performed according to ANSI C63.10 Clause 6.2. The EUT was set to achieve the maximum emission level. The mains terminal disturbance voltage was measured with the EUT in a shielded room. The EUT was connected to AC power source through an Artificial Mains Network which provides a 50Ω linear impedance Artificial hand is used if appropriate (for handheld apparatus). The load/control terminal disturbance voltage was measured with passive voltage probe if appropriate.

The table-top EUT was placed on a 0.8m high non-metallic table above earthed ground plane (Ground Reference Plane).And for floor standing EUT, was placed on a 0.1m high non-metallic supported on GRP. The EUT keeps a distance of at least 0.8m from any other of the metallic surface. The Artificial Mains Network is situated at a distance of 0.8m from the EUT.

During the test, mains lead of EUT excess 0.8m was folded back and forth parallel to the lead so as to form a horizontal bundle with a length between 0.3m and 0.4m

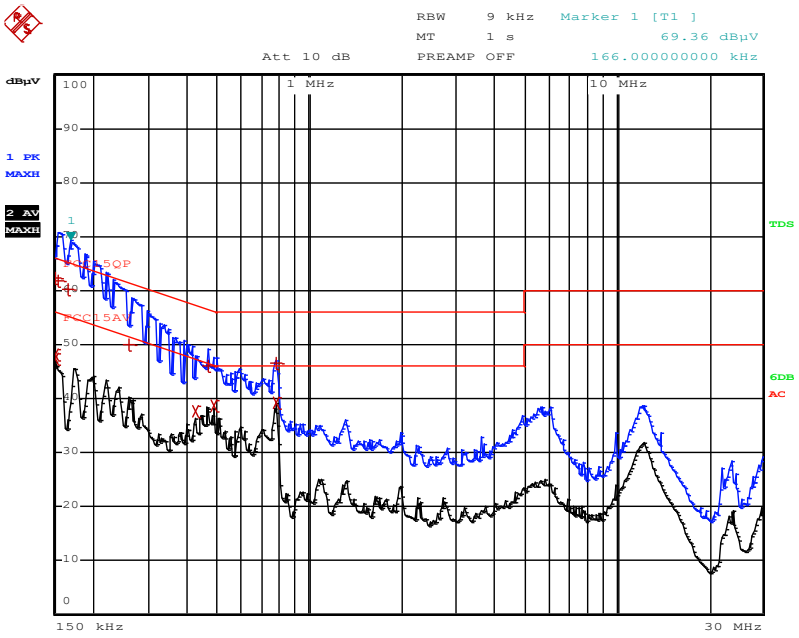
The bandwidth of test receiver was set at 9 kHz. The frequency range from 150 kHz to 30MHz was checked.

## TEST REPORT

Test Data and Curve

At main terminal: Pass

Tested Wire: Live Operation Mode: transmitting




EDIT PEAK LIST (Final Measurement Results)

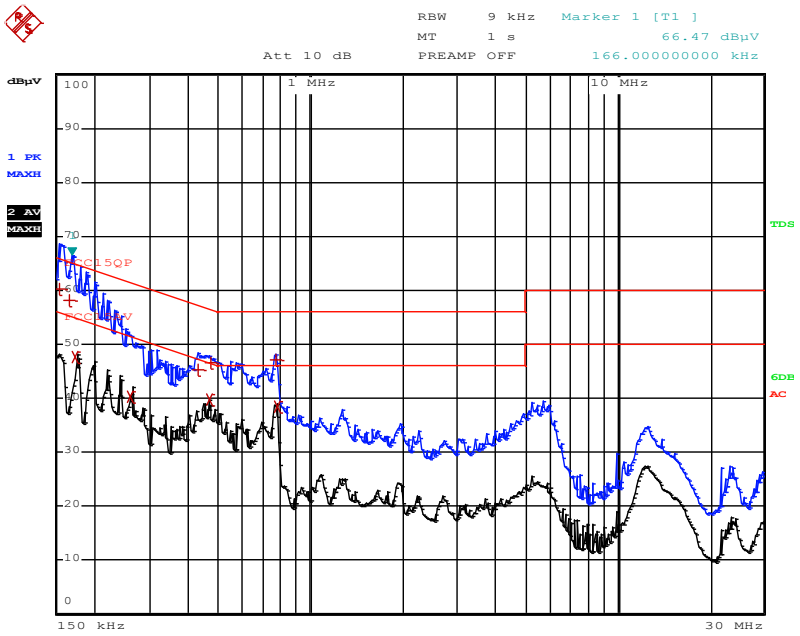
Trace1: FCC15QP
Trace2: FCC15AV
Trace3: ---

| TRACE | FREQUENCY | LEVEL dBµV | | DELTA LIMIT dB |
|---|---|---|---|---|
| 2 CISPR Average | 150 kHz | 47.46 | L1 | -8.53 |
| 1 Quasi Peak | 150.3 kHz | 62.35 | L1 | -3.63 |
| 2 CISPR Average | 150.3 kHz | 48.14 | L1 | -7.83 |
| 1 Quasi Peak | 154 kHz | 61.85 | L1 | -3.92 |
| 1 Quasi Peak | 166 kHz | 60.13 | L1 | -5.02 |
| 1 Quasi Peak | 262 kHz | 49.95 | L1 | -11.41 |
| 2 CISPR Average | 422 kHz | 37.64 | L1 | -9.76 |
| 1 Quasi Peak | 466 kHz | 45.94 | L1 | -10.63 |
| 2 CISPR Average | 486 kHz | 38.65 | L1 | -7.58 |
| 1 Quasi Peak | 778 kHz | 46.56 | L1 | -9.43 |
| 2 CISPR Average | 778 kHz | 39.11 | L1 | -6.88 |

Remark:
1. Corr. (dB) = LISN Factor (dB) + Cable Loss (dB)
2. Level (dBµV) = Corr. (dB) + Read Level (dBµV)
3. Delta Limit (dB) = Level (dBµV)-Limit (dBµV)

## TEST REPORT

Tested Wire: Neutral Operation Mode: transmitting




EDIT PEAK LIST (Final Measurement Results)

Trace1: FCC15QP
Trace2: FCC15AV
Trace3: ---

| TRACE | | FREQUENCY | LEVEL dBµV | | DELTA LIMIT dB |
|---|---|---|---|---|---|
| 1 | Quasi Peak | 154 kHz | 60.18 | L1 | -5.59 |
| 1 | Quasi Peak | 166 kHz | 58.20 | L1 | -6.95 |
| 2 | CISPR Average | 174 kHz | 47.59 | L1 | -7.17 |
| 2 | CISPR Average | 262 kHz | 40.38 | L1 | -10.98 |
| 1 | Quasi Peak | 430 kHz | 45.26 | L1 | -11.99 |
| 2 | CISPR Average | 466 kHz | 39.84 | L1 | -6.73 |
| 1 | Quasi Peak | 470 kHz | 46.48 | L1 | -10.03 |
| 1 | Quasi Peak | 770 kHz | 47.18 | L1 | -8.81 |
| 2 | CISPR Average | 778 kHz | 38.45 | L1 | -7.54 |

Remark:
1. Corr. (dB) = LISN Factor (dB) + Cable Loss (dB)
2. Level (dBµV) = Corr. (dB) + Read Level (dBµV)
3. Delta Limit (dB) = Level (dBµV)-Limit (dBµV)

**TEST REPORT**

## 5.0 Test Equipment List

**Radiated Emission/Radio**

| Equipment No. | Equipment | Model | Manufacturer | Cal. Due date (YYYY-MM-DD) | Calibration Interval |
|---|---|---|---|---|---|
| EM030-04 | 3m Semi-Anechoic Chamber | 9×6×6 $m^3$ | ETS-LINDGREN | 2024-04-10 | 1Y |
| EM031-02 | EMI Test Receiver (9 kHz~7 GHz) | R&S ESR7 | R&S | 2024-11-15 | 1Y |
| EM031-03 | Signal and Spectrum Analyzer (10 Hz~40 GHz) | R&S FSV40 | R&S | 2024-11-12 | 1Y |
| EM011-04 | Loop antenna (9 kHz-30 MHz) | HFH2-Z2 | R&S | 2024-07-02 | 1Y |
| EM033-01 | TRILOG Super Broadband test Antenna(30 MHz-3 GHz) (RX) | VULB 9163 | SCHWARZBECK | 2024-12-05 | 1Y |
| EM033-02 | Bouble-Ridged Waveguide Horn Antenna (800 MHz-18 GHz)(RX) | R&S HF907 | R&S | 2024-07-02 | 1Y |
| EM033-03 | High Frequency Antenna & preamplifier(18 GHz~26.5 GHz) (RX) | R&S SCU-26 | R&S | 2024-04-22 | 1Y |
| EM033-04 | High Frequency Antenna & preamplifier (26 GHz-40 GHz) | R&S SCU-40 | R&S | 2024-04-22 | 1Y |
| EM031-02-01 | Coaxial cable(9 kHz-1 GHz) | N/A | R&S | 2024-04-10 | 1Y |
| EM033-02-02 | Coaxial cable(1 GHz-18 GHz) | N/A | R&S | 2024-04-10 | 1Y |
| EM033-04-02 | Coaxial cable(18 GHz~40 GHz) | N/A | R&S | 2024-04-22 | 1Y |
| EM031-01 | Signal Generator (9 kHz~6 GHz) | SMB100A | R&S | 2024-07-19 | 1Y |
| EM040-01 | Band Reject/Notch Filter | WRHFV | Wainwright | N/A | 1Y |
| EM040-02 | Band Reject/Notch Filter | WRCGV | Wainwright | N/A | 1Y |
| EM040-03 | Band Reject/Notch Filter | WRCGV | Wainwright | N/A | 1Y |
| EM022-03 | 2.45 GHz Filter | BRM50702 | Micro-Tronics | 2024-05-09 | 1Y |
| SA016-29 | Climatic Test Chamber | MHU-80L | JIANQIAO | 2024-01-03 | 1Y |
| EM046-05 | Power meter | NPR6A | R&S | 2024-04-19 | 1Y |
| EM046-06 | Power meter | NPR6A | R&S | 2024-04-19 | 1Y |
| EM045-01-01 | EMC32 software (RE/RS) | V10.01.00 | R&S | N/A | N/A |

Conducted Disturbance-Mains Terminal(1)

| Equipment No. | Equipment | Model | Manufacturer | Cal. Due date (DD-MM-YYYY) | Last calibration date (DD-MM-YYYY) |
|---|---|---|---|---|---|
| EM080-05 | EMI receiver | ESCI | R&S | 06/06/2024 | 07/06/2023 |
| EM006-05 | LISN | ENV216 | R&S | 06/06/2024 | 07/06/2023 |
| SA047-112 | Digital Temperature-Humidity Recorder | RS210 | YIJIE | 22/10/2024 | 23/10/2023 |
| EM004-04 | EMC shield Room | 8m×3m×3m | Zhongyu | 03/01/2025 | 04/01/2024 |

**********End of the test report**********