

Test report No: 4392400.56

## TEST REPORT

### Radio Spectrum Matters (RF)

|                                 |  |
|---------------------------------|--|
| Identification of item tested   | Prostate massager & Rabbit Vibrator  |
| Trademark                       | Vector for 10000-02<br>Nova 2 for 10000-05   |
| Model and /or type reference    | 10000-02, 10000-05   |
| FCC ID                          | ZUE1000I   |
| Features                        | Charging input: 5 Vdc<br>Li-ion Battery: 3.7 Vdc   |
| Applicant's name / address      | WOW Tech Canada Ltd.<br>1545 Carling Avenue, Suite 401, Ottawa Ontario, K1Z 8P9,<br>Canada |
| Test method requested, standard | FCC CFR Title 47 Part15 Subpart C Section 15.247;<br>KDB558074 D01v05r02;                  |
| Verdict Summary                 | COMPLIANCE   |
| Tested by (name & signature)    | Jazz Liang<br>Jazz Liang   |
| Approved by (name & signature)  | Tim Yan<br>Tim Yan   |
| Date of issue                   | 2022-08-26   |
| Report template No              | TRF_EMС 2017-06- FCC_Part15C_247   |

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## GENERAL CONDITIONS

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1. This report is only referred to the item that has undergone the test.
2. This report does not constitute or imply on its own an approval of the product by the Certification Bodies or Competent Authorities.
3. This document is only valid if complete; no partial reproduction can be made without previous written permission of DEKRA.
4. This test report cannot be used partially or in full for publicity and/or promotional purposes without previous written permission of DEKRA.
5. This report will not be used for social proof function in China market.

## UNCERTAINTY

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For all measurements where guidance for the calculation of the instrumentation uncertainty of a measurement is specified in EN 55016-4-2 (CISPR 16-4-2), EN/IEC 61000-4 series or a product standard, the measurement instrumentation uncertainty has been calculated and applied in accordance with these standards.

Uncertainties have been calculated according to the DEKRA internal document. The reported expanded uncertainties are based on a standard uncertainty multiplied by a coverage factor of  $k=2$ , providing a level of confidence of approximately 95%.

## ENVIRONMENTAL CONDITIONS

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The climatic conditions during the tests are within the limits specified by the manufacturer for the operation of the EUT and the test equipment. The climatic conditions during the tests were within the following limits:

|                       |                  |
|-----------------------|------------------|
| Ambient temperature   | 15 °C – 35 °C    |
| Relative Humidity air | 30% - 60%        |
| Atmospheric pressure  | 86 kPa – 106 kPa |

If explicitly required in the basic standard or applied product / product family standard the climatic values are recorded and documented separately in this test report.

## POSSIBLE TEST CASE VERDICTS

---

|   |                 |
|---|-----------------|
| Test case does not apply to test object | N/A             |
| Test object does meet requirement       | P (Pass) / PASS |
| Test object does not meet requirement   | F (Fail) / FAIL |
| Not tested                              | N/T             |

## DEFINITION OF SYMBOLS USED IN THIS TEST REPORT

|  |                                     |           |                                    |
|--|-------------------------------------|-----------|------------------------------------|
| <input checked="" type="checkbox"/> Indicates that the listed condition, standard or equipment is applicable for this report/test/EUT. |                                     |           |                                    |
| <input type="checkbox"/> Indicates that the listed condition, standard or equipment is not applicable for this report/test/EUT.        |                                     |           |                                    |
| Decimal separator used in this report  | <input checked="" type="checkbox"/> | Comma (,) | <input type="checkbox"/> Point (.) |

## ABBREVIATIONS

For the purposes of the present document, the following abbreviations apply:

|       |   |                             |
|-------|---|-----------------------------|
| EUT   | : | Equipment Under Test        |
| QP    | : | Quasi-Peak                  |
| CAV   | : | CISPR Average               |
| AV    | : | Average                     |
| CDN   | : | Coupling Decoupling Network |
| SAC   | : | Semi-Anechoic Chamber       |
| OATS  | : | Open Area Test Site         |
| BW    | : | Bandwidth                   |
| AM    | : | Amplitude Modulation        |
| PM    | : | Pulse Modulation            |
| HCP   | : | Horizontal Coupling Plane   |
| VCP   | : | Vertical Coupling Plane     |
| $U_N$ | : | Nominal voltage             |
| $T_x$ | : | Transmitter                 |
| $R_x$ | : | Receiver                    |
| N/A   | : | Not Applicable              |
| N/M   | : | Not Measured                |

## DOCUMENT HISTORY

| Report nr. | Date       | Description    |
|------------|------------|----------------|
| 4392400.56 | 2022-08-26 | First release. |
|            |            |                |

## REMARKS AND COMMENTS

The equipment under test (EUT) does meet the essential requirements of the stated standard(s)/test(s).

## 1 GENERAL INFORMATION

### 1.1 General Description of the Item(s)

|                               |  |
|-------------------------------|--|
| Description of the item ..... | Prostate massager & Rabbit Vibrator  |
| Trademark.....                | Vector for 10000-02<br>Nova 2 for 10000-05   |
| Model / Type number.....      | 10000-02, 10000-05   |
| FCC ID .....                  | ZUE1000I   |
| Hardware .....                | 10000-02, 10000-05   |
| Software.....                 | 510-00076, 510-00075   |
| Firmware .....                | N/A  |
| Ratings.....                  | Charging input: 5 Vdc<br>Li-ion Battery: 3.7 Vdc   |
| Manufacturer.....             | WOW Tech Europe GmbH.<br>Hermann-Blankenstein-Str. 5, 10249 Berlin, Germany.   |
| Factory .....                 | Seaco Technology(Dongguan)Co., Ltd.<br>No.6, the 3rd Jin He Industrial Zone, Zhang Mutou Town<br>Dongguan City Guangdong China |

the characteristics of wireless module for BLE mode:

|   |                     |
|---|---------------------|
| Operating frequency range(s).....                   | 2402 MHz – 2480 MHz |
| Type of Modulation .....                            | GFSK                |
| Maximum RF output power(conducted) .....            | -2.9 dBm            |
| EIRP(equivalent isotropically radiated power) ..... | 2.1 dBm             |
| Antenna type.....                                   | Integral Antenna    |
| Operating Temperature Range.....                    | -40 – 85 °C         |
| BT version.....                                     | Bluetooth 5.1BLE    |
| Antenna gain.....                                   | 5 dBi               |
| Adaptive/ non-adaptive equipment                    | Adaptive            |

| Rated power supply ..... | Voltage and Frequency                                   | Reference poles          |                          |                          |                          |                          |
|--------------------------|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
|                          |   | L1                       | L2                       | L3                       | N                        | PE                       |
|                          | <input type="checkbox"/> AC:                            | <input type="checkbox"/> |
|                          | <input checked="" type="checkbox"/> DC: 5V              |                          |                          |                          |                          |                          |
|                          | <input checked="" type="checkbox"/> Battery: 3.7V       |                          |                          |                          |                          |                          |
| Mounting position.....   | <input type="checkbox"/> Table top equipment            |                          |                          |                          |                          |                          |
|                          | <input type="checkbox"/> Wall/Ceiling mounted equipment |                          |                          |                          |                          |                          |
|                          | <input type="checkbox"/> Floor standing equipment       |                          |                          |                          |                          |                          |
|                          | <input checked="" type="checkbox"/> Hand-held equipment |                          |                          |                          |                          |                          |
|                          | <input type="checkbox"/> Other:                         |                          |                          |                          |                          |                          |

#### Intended use of the Equipment Under Test (EUT)

The apparatus as supplied for the test is Prostate massager & Rabbit Vibrator intended for residential use and the product contains electronic control circuitry, it is powered by battery.

According to customer description, models 10000-02, 10000-05 are identical except for the trade mark and the appearance of size. Both products share the same PCB, slightly different in PCBA, but there will be no change in radio parameters occurred.

After technical reviewed, model 10000-02 was chosen for full test, model 10000-05 was chosen to repeat Conducted Emission and radiated emissions for compliance verification.

#### Copy of marking plate:

No provide.

## 1.2 Test data

|                                  |  |
|----------------------------------|--|
| Test Location                    | DEKRA Testing and Certification (Shanghai) Ltd. Guangzhou Branch<br>Block 5, No.3, Qiyun Road, Huangpu District, Guangzhou, Guangdong, China<br>FCC Designation Number: CN1324;  |
| Date of receipt of test item     | 2022-07-13   |
| Date (s) of performance of tests | 2022-07-13 to 2022-08-26   |
| Test sample                      | Normal sample: 10000-02(Lab no.4392400-1), 10000-05(Lab no.4392400-4)<br>RF conducted sample: 10000-02(Lab no.4392400-2), 10000-05(Lab no.4392400-5)<br>RF radiated sample: 10000-02(Lab no.4392400-3), 10000-05(Lab no.4392400-6) |

## 1.3 The environment(s) in which the EUT is intended to be used

The equipment under test (EUT) is intended to be used in the following environment(s):

|                                     |  |
|-------------------------------------|--|
| <input checked="" type="checkbox"/> | Residential (domestic) environment.          |
| <input checked="" type="checkbox"/> | Commercial and light-industrial environment. |
| <input type="checkbox"/>            | Industrial environment.                      |

## 1.4 Channel List

The radio module (Bluetooth) operating channels are:

| 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            | -       | -               |

## 2 DESCRIPTION OF TEST SETUP

### 2.1 Operating mode(s) used for tests

During the tests the following operating mode(s) has(have) been used.

| Operating mode                | Operating mode description | Used for methos                     |                                     |
|-------------------------------|----------------------------|-------------------------------------|-------------------------------------|
|                               |                            | Conducted                           | Radiated                            |
| 1                             | Transmitting at 1 Mbit/s,  | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| 2                             | Transmitting at 2 Mbit/s,  | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3                             | Charging mode              | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| 4                             |                            |                                     |                                     |
| Supplemental information: --- |                            |                                     |                                     |

### 2.2 Support / Auxiliary equipment / unit / software for the EUT

The EUT has been tested with the following auxiliary equipment / unit / software:

| Auxiliary equipment / unit / software  | Type / Version | Manufacturer | Supplied by |
|--|----------------|--------------|-------------|
| Laptop                                 | Latitude 5488  | DELL         | DEKRA       |
| Adaptor                                | ADC4501TM      | XIAOMI       | DEKRA       |
| EMI_TEST(soft ware)                    | V2.0           | -            | Client      |
| TELINK BDT(Burning and Debugging tool) | -              | -            | Client      |
| Supplemental information: ---          |                |              |             |

### 2.3 Test Configuration / Block diagram used for tests

Refer to Annex 3.

### 2.4 Measurement procedure

The EUT was controlled by a serial PCB(TELINK BDT) which provided by manufacturer which connected to laptop through the com port. After connected, run the software “EMI\_TESTV2.0” supplied by manufacturer to control the EUT work in required test mode as below table.

| RF Mode | Set_channel(MHz) | Set_power in software |
|---------|------------------|-----------------------|
| BLE_1M  | 2402             | 11.3                  |
|         | 2440             | 11.3                  |
|         | 2480             | 11.3                  |
| BLE_2M  | 2402             | 11.3                  |
|         | 2440             | 11.3                  |
|         | 2480             | 11.3                  |

### 3 VERDICT SUMMARY SECTION

This chapter presents an overview of standards and results. Refer to the next chapters for details of measured test results and applied test levels.

#### 3.1 Standards

| Standard  | Year | Description   |
|---|------|---|
| FCC CFR Title 47 Part 15 Subpart C Section 15.247 | 2022 | Operation within the bands 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz.   |
| KDB 558074 D01 v05r02                             | 2019 | Guidance for performing compliance measurements on Digital Transmission System (DTS) operating under section 15.247 |
| ANSI C63.10                                       | 2013 | American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices                      |

#### 3.2 Deviation(s) from the Standard(s) / Test Specification(s)

The following deviation(s) was / were made from the published requirements of the listed standards: N/A.

#### 3.3 Overview of results

| FCC measurement                             |                           |         |        |
|---|---------------------------|---------|--------|
| Requirement – Test case                     | Basic standard(s)         | Verdict | Remark |
| AC Power Line Conducted Emission            | FCC 15.207                | PASS    | ---    |
| Emissions in non-restricted frequency bands | FCC 15.247(d), FCC 15.209 | PASS    | ---    |
| Emissions in restricted frequency bands     | FCC 15.247(b)(3)          | PASS    | ---    |
| Duty cycle                                  | ANSI C63.10:2013          | PASS    | ---    |
| Band Edge                                   | FCC 15.247(d)             | PASS    | ---    |
| Fundamental emission output power           | FCC 15.247(d), FCC 15.209 | PASS    | ---    |
| DTS Bandwidth                               | FCC 15.247(a)(2)          | PASS    | ---    |
| Power Spectral Density                      | FCC 15.247(e)             | PASS    | ---    |
| Antenna Requirement                         | FCC 15.203                | PASS    | ---    |
| <u>Supplementary information:</u> ---       |                           |         |        |

The measurement result is considered in conformance with the requirement if it is within the prescribed limit. It is not necessary to calculate the uncertainty associated with the measurement result.

## 4 TRANSMITTER TEST RESULTS

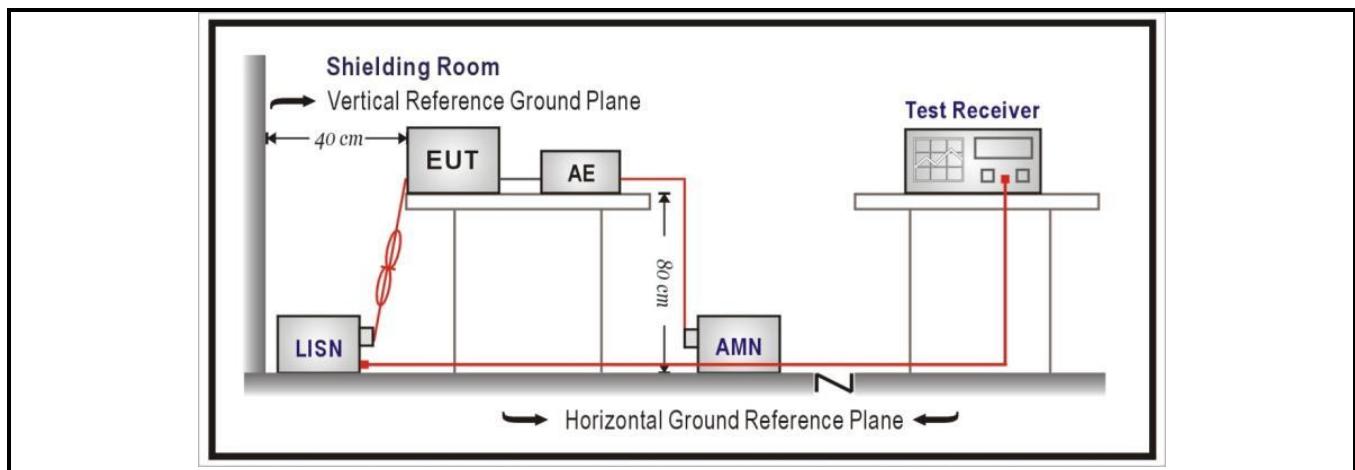
|   |                      |
|---|----------------------|
| <b>4.1 AC Power Line Conducted Emission</b> | <b>VERDICT: PASS</b> |
|---|----------------------|

### Limits

| FCC Part 15 Subpart C Paragraph 15.207 |                                   |                                   |       |             |
|--|-----------------------------------|-----------------------------------|-------|-------------|
| Frequency range [MHz]                  | Limit: QP [dB(µV) <sup>1)</sup> ] | Limit: AV [dB(µV) <sup>1)</sup> ] | IF BW | Detector(s) |
| 0,15 - 0,50                            | 66 - 56 <sup>2)</sup>             | 56 - 46 <sup>2)</sup>             | 9 KHz | QP, AV      |
| 0,50 - 5,0                             | 56                                | 46                                | 9 KHz | QP, AV      |
| 5,0 - 30                               | 60                                | 50                                | 9 KHz | QP, AV      |

<sup>1)</sup> At the transition frequency, the lower limit applies.  
<sup>2)</sup> The limit decreases linearly with the logarithm of the frequency.

### Test Configuration



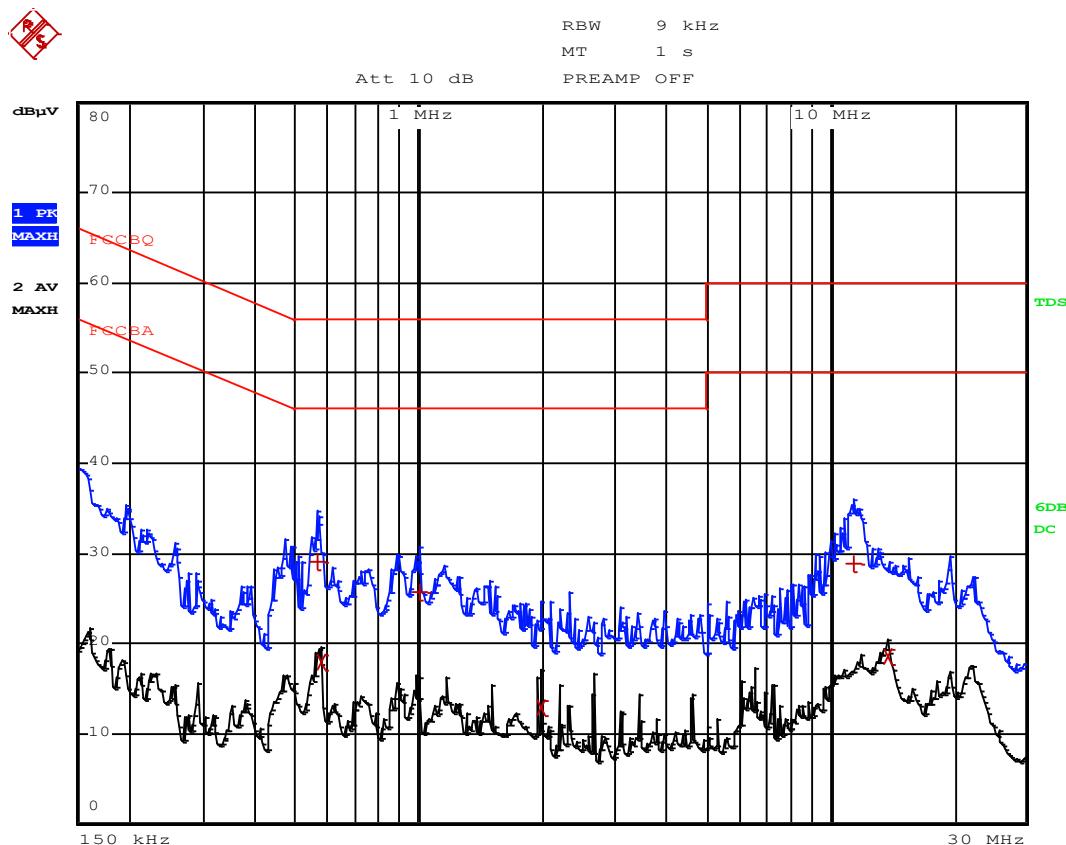
### Performed measurements

| Port under test  | Terminal                            |                                     |                                     |                          |   |              |                          |    |  |  |  |  |  |  |  |
|--|-------------------------------------|-------------------------------------|-------------------------------------|--------------------------|---|--------------|--------------------------|----|--|--|--|--|--|--|--|
| <input checked="" type="checkbox"/> AC mains input power | <input checked="" type="checkbox"/> | N                                   | <input checked="" type="checkbox"/> | L1                       | <input type="checkbox"/>                                | L2           | <input type="checkbox"/> | L3 |  |  |  |  |  |  |  |
| <input type="checkbox"/> DC input power                  | <input type="checkbox"/>            | Positive (+)                        |                                     |                          | <input type="checkbox"/>                                | Negative (-) |                          |    |  |  |  |  |  |  |  |
| Test method applied                                      |                                     | <input checked="" type="checkbox"/> | Artificial mains network            |                          |   |              |                          |    |  |  |  |  |  |  |  |
|  |                                     | <input type="checkbox"/>            | Voltage probe                       |                          |   |              |                          |    |  |  |  |  |  |  |  |
| Test setup   |                                     | <input checked="" type="checkbox"/> | Table top                           | <input type="checkbox"/> | Artificial hand applied                                 |              |                          |    |  |  |  |  |  |  |  |
|  |                                     | <input type="checkbox"/>            | Floor standing                      | <input type="checkbox"/> | Other:<br>Refer to the Annex 2 for test setup photo(s). |              |                          |    |  |  |  |  |  |  |  |
| Operating mode(s) used                                   | Mode 3                              |                                     |                                     |                          |   |              |                          |    |  |  |  |  |  |  |  |
| Envirment condition (temperature; humidiry)              | 23,0 °C; 45,0 %                     |                                     |                                     |                          |   |              |                          |    |  |  |  |  |  |  |  |
| Remark   | ---                                 |                                     |                                     |                          |   |              |                          |    |  |  |  |  |  |  |  |

|                             |                |
|-----------------------------|----------------|
| Model                       | 10000-02       |
| Operation Mode (worst case) | Mode 3         |
| Test voltage                | 120 Vac, 60 Hz |

## Results

### Live



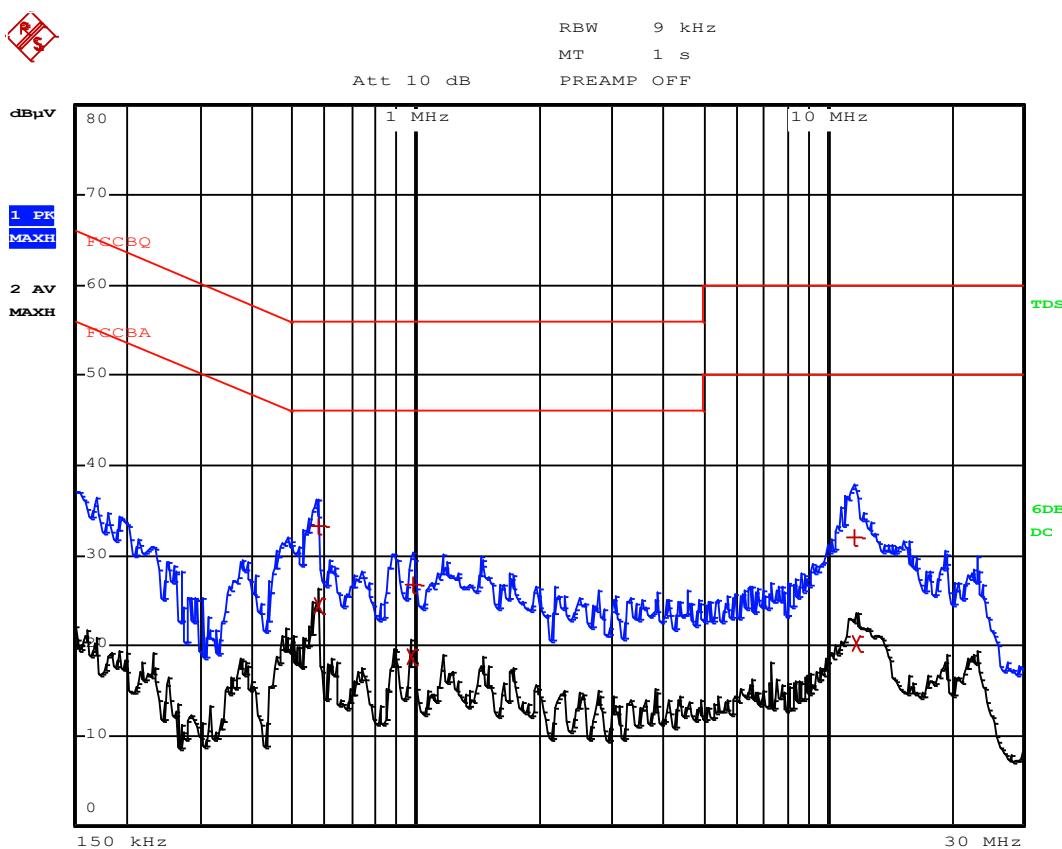
| EDIT PEAK LIST (Final Measurement Results) |            |            |                |
|--|------------|------------|----------------|
| Trace1:                                    | FCCBQ      |            |                |
| Trace2:                                    | FCCBA      |            |                |
| Trace3:                                    | ---        |            |                |
| TRACE                                      | FREQUENCY  | LEVEL dBµV | DELTA LIMIT dB |
| 1 Quasi Peak                               | 566 kHz    | 29.02      | -26.97         |
| 2 Average                                  | 578 kHz    | 17.99      | -28.00         |
| 1 Quasi Peak                               | 1.002 MHz  | 25.75      | -30.24         |
| 1 Quasi Peak                               | 11.43 MHz  | 28.87      | -31.12         |
| 2 Average                                  | 13.814 MHz | 18.50      | -31.49         |
| 2 Average                                  | 1.982 MHz  | 12.84      | -33.15         |

### Remarks:

- 1) Level (final measurement) = received value + transducer (Lisn+cable)
- 2) Delta = Level – Limit

No other significant emissions were measured at the frequency range of interest employing both the QP and AV detectors.

**Neutral**



| EDIT PEAK LIST (Final Measurement Results) |            |            |        |          |
|--|------------|------------|--------|----------|
| Trace1:                                    | FCCBQ      |            |        |          |
| Trace2:                                    | FCCBA      |            |        |          |
| Trace3:                                    | ---        |            |        |          |
| TRACE                                      | FREQUENCY  | LEVEL dBµV | DELTA  | LIMIT dB |
| 2 Average                                  | 578 kHz    | 24.41      | -21.59 |          |
| 1 Quasi Peak                               | 578 kHz    | 33.25      | -22.74 |          |
| 2 Average                                  | 978 kHz    | 18.85      | -27.14 |          |
| 1 Quasi Peak                               | 11.646 MHz | 32.09      | -27.90 |          |
| 1 Quasi Peak                               | 990 kHz    | 26.86      | -29.13 |          |
| 2 Average                                  | 11.822 MHz | 20.25      | -29.74 |          |

**Remarks:**

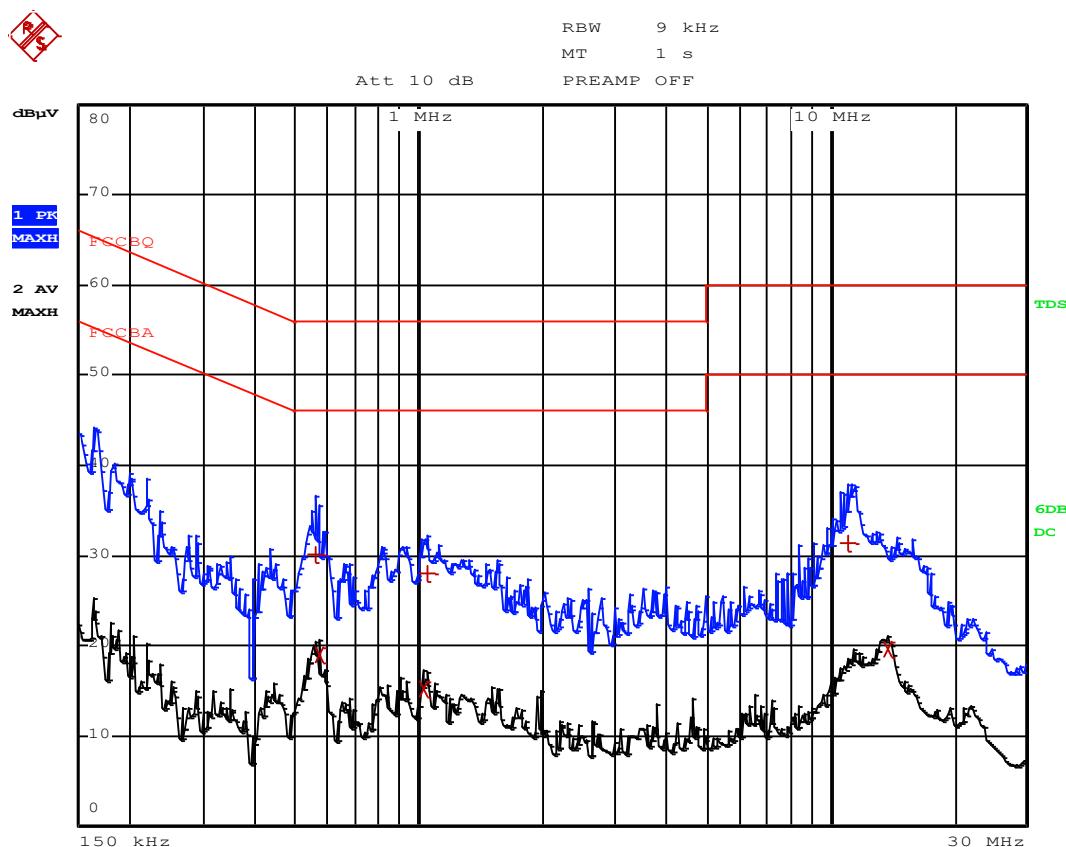
- 1) Level (final measurement) = received value + transducer (Lisn+cable)
- 2) Delta = Level – Limit

No other significant emissions were measured at the frequency range of interest employing both the QP and AV detectors.

|                             |                |
|-----------------------------|----------------|
| Model                       | 10000-05       |
| Operation Mode (worst case) | Mode 3         |
| Test voltage                | 120 Vac, 60 Hz |

## Results

### Live



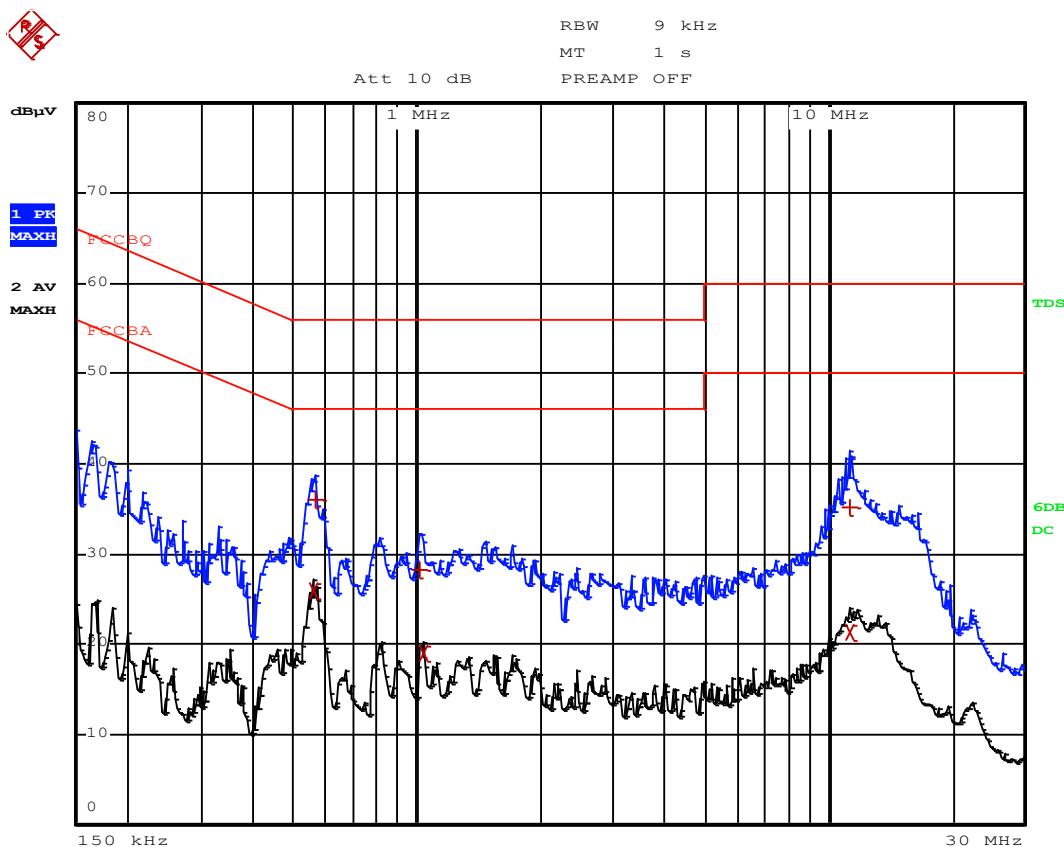
| EDIT PEAK LIST (Final Measurement Results) |            |            |        |          |
|--|------------|------------|--------|----------|
| Trace1:                                    | FCCBQ      |            |        |          |
| Trace2:                                    | FCCBA      |            |        |          |
| Trace3:                                    | ---        |            |        |          |
| TRACE                                      | FREQUENCY  | LEVEL dBµV | DELTA  | LIMIT dB |
| 1 Quasi Peak                               | 562 kHz    | 30.14      | -25.85 |          |
| 2 Average                                  | 570 kHz    | 19.02      | -26.97 |          |
| 1 Quasi Peak                               | 1.046 MHz  | 27.94      | -28.05 |          |
| 1 Quasi Peak                               | 11.05 MHz  | 31.39      | -28.60 |          |
| 2 Average                                  | 13.902 MHz | 19.58      | -30.41 |          |
| 2 Average                                  | 1.03 MHz   | 15.26      | -30.73 |          |

### Remarks:

- 3) Level (final measurement) = received value + transducer (Lisn+cable)
- 4) Delta = Level – Limit

No other significant emissions were measured at the frequency range of interest employing both the QP and AV detectors.

**Neutral**



| EDIT PEAK LIST (Final Measurement Results) |           |                  |        |          |
|--|-----------|------------------|--------|----------|
| Trace1:                                    | FCCBQ     |                  |        |          |
| Trace2:                                    | FCCBA     |                  |        |          |
| Trace3:                                    | ---       |                  |        |          |
| TRACE                                      | FREQUENCY | LEVEL dB $\mu$ V | DELTA  | LIMIT dB |
| 2 Average                                  | 562 kHz   | 25.93            | -20.06 |          |
| 1 Quasi Peak                               | 566 kHz   | 35.92            | -20.07 |          |
| 1 Quasi Peak                               | 11.33 MHz | 35.07            | -24.92 |          |
| 2 Average                                  | 1.034 MHz | 18.90            | -27.09 |          |
| 1 Quasi Peak                               | 1.018 MHz | 28.26            | -27.73 |          |
| 2 Average                                  | 11.31 MHz | 21.34            | -28.65 |          |

**Remarks:**

- 3) Level (final measurement) = received value + transducer (Lisn+cable)
- 4) Delta = Level – Limit

No other significant emissions were measured at the frequency range of interest employing both the QP and AV detectors.

**4.2 Emissions in non-restricted frequency bands**

**VERDICT: PASS**

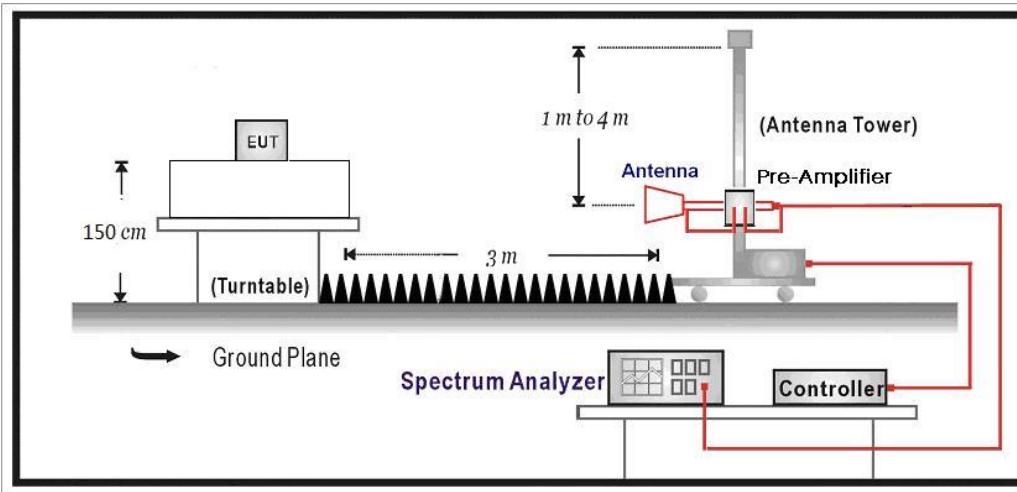
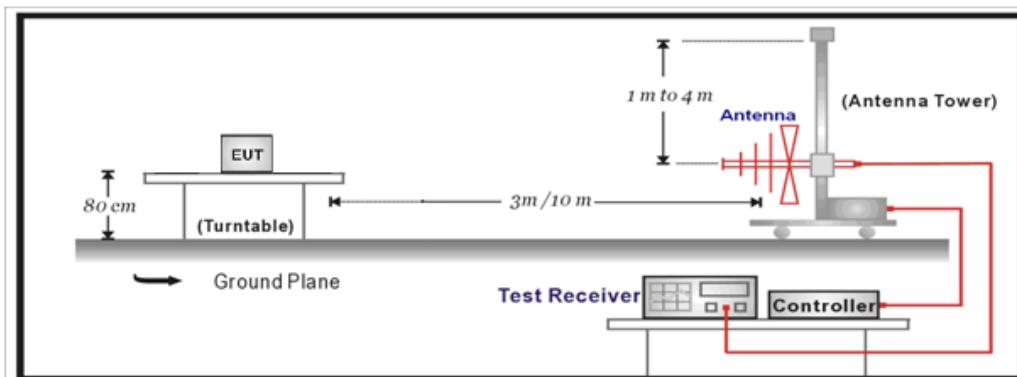
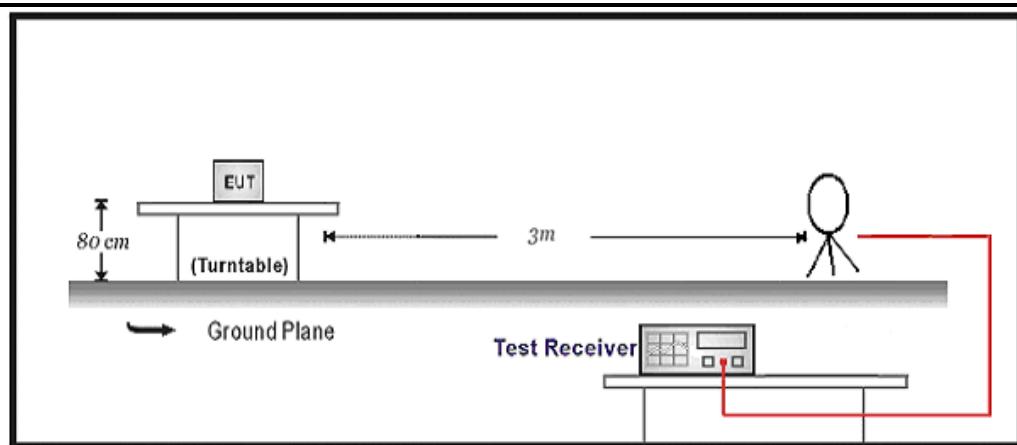
Emissions Limit 15.209(a)

| Frequency (MHz) | Field strength ( $\mu$ V/m) | Field strength (dB $\mu$ V/m) | Measurement distance (m)    |
|-----------------|-----------------------------|-------------------------------|-----------------------------|
| 0.009 - 0.49    | 2400/F(kHz)                 | 48.5 – 13.8                   | 300 <small>(Note 1)</small> |
| 0.49 - 1.705    | 24000/F(kHz)                | 33.8 - 23                     | 30 <small>(Note 1)</small>  |
| 1.705 - 30      | 30                          | 29.5                          | 30 <small>(Note 1)</small>  |
| 30 - 88         | 100                         | 40                            | 3 <small>(Note 2)</small>   |
| 88 - 216        | 150                         | 43.5                          | 3 <small>(Note 2)</small>   |
| 216 - 960       | 200                         | 46                            | 3 <small>(Note 2)</small>   |
| Above 960       | 500                         | 54                            | 3 <small>(Note 2)</small>   |

Note 1: At frequencies below 30 MHz, measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field. Pending the development of an appropriate measurement procedure for measurements performed below 30 MHz, when performing measurements at a closer distance than specified, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two 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).

Note 2: At frequencies at or above 30 MHz, measurements may be performed at a distance other than what is specified provided: measurements are not made in the near field except where it can be shown that near field measurements are appropriate due to the characteristics of the device; and it can be demonstrated that the signal levels needed to be measured at the distance employed can be detected by the measurement equipment. Measurements shall not be performed at a distance greater than 30 meters unless it can be further demonstrated that measurements at a distance of 30 meters or less are impractical. 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 linear-distance for field strength measurements; inverse-linear-distance-squared for power density measurements).

## Test Configuration



## Performed measurements

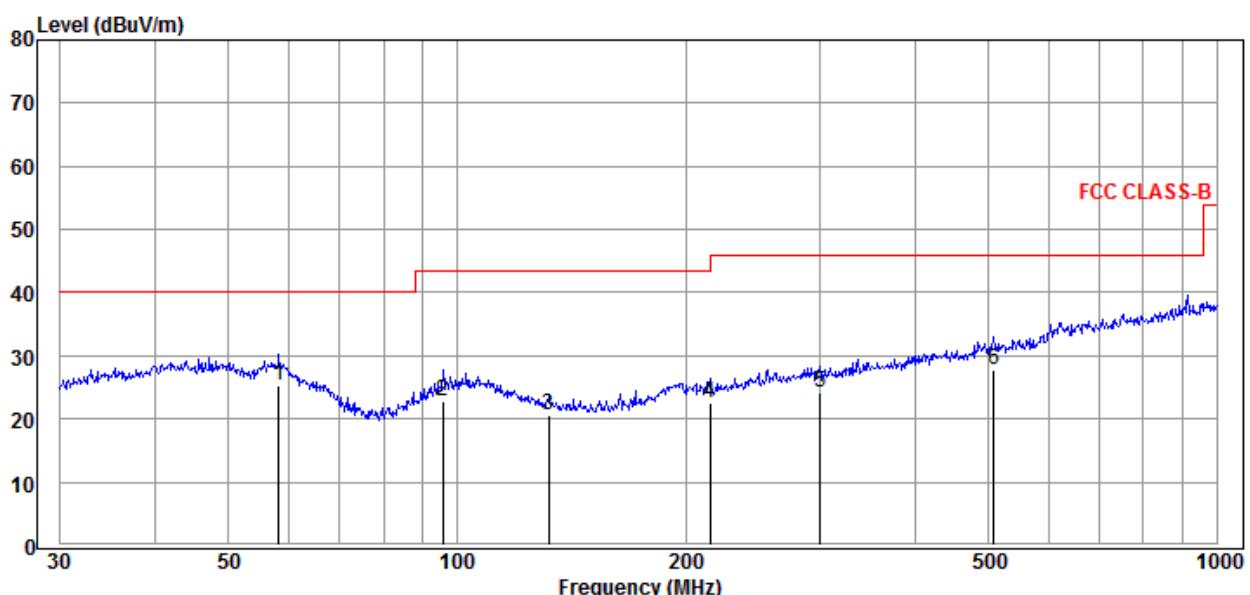
|                        |  |
|------------------------|--|
| Port under test        | Enclosure port   |
| Test method applied    | <input type="checkbox"/> Conducted measurement   |
|                        | <input checked="" type="checkbox"/> Radiated measurement   |
| Test setup             | Refer to the Annex 3 for test setup photo(s).  |
| Operating mode(s) used | Mode 1-3   |
| Remark                 | 1)The test frequency range, 9kHz~30MHz, 18GHz~26GHz, both of the worst case are at least 20dB below the limits, therefore no data appear in the report.<br>2)The EUT are tested in three orientations. The record is the worst orientation which refer to the Annex 3 for test setup photo(s). |

**Results of 30 – 1000 MHz**

|                |                              |
|----------------|------------------------------|
| Model          | 10000-02                     |
| Operation Mode | Mode 1 @2402MHz (worst case) |
| Test voltage   | 3.7 Vdc                      |

**Results**

**Horizontal**



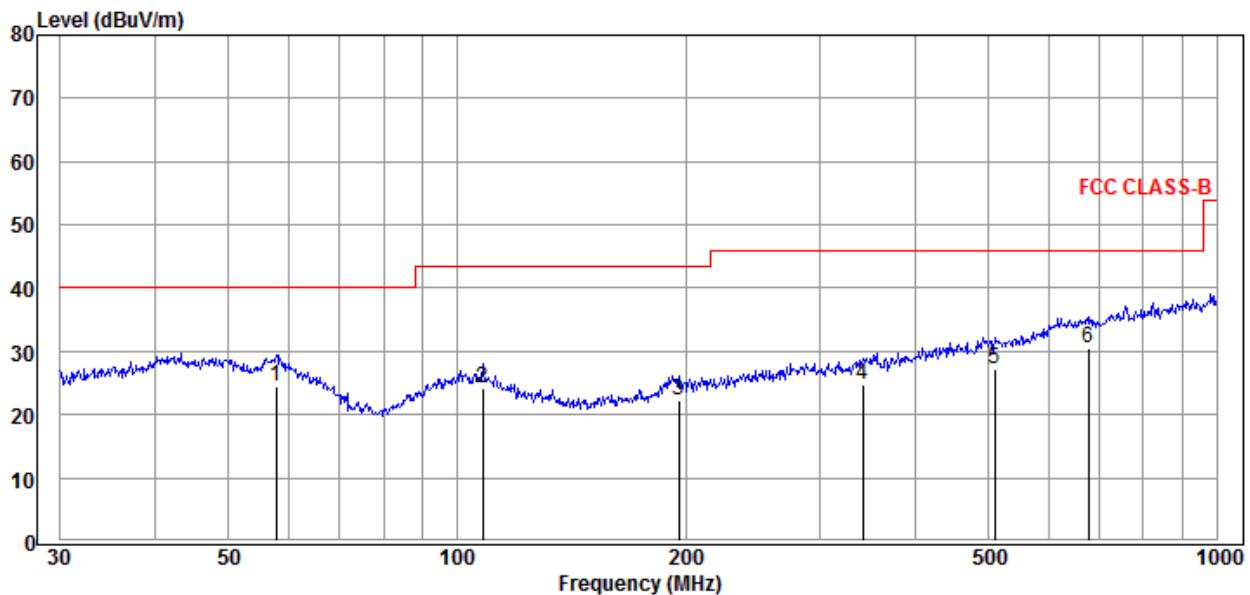
| Freq (MHz) | Reading (dBuV) | C.F (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin=limit-result (dB) |
|------------|----------------|----------|-----------------|----------------|--------------------------|
| 58.20      | 9.79           | 15.37    | 25.16           | 40.00          | 14.84                    |
| 95.76      | 10.68          | 12.10    | 22.78           | 43.50          | 20.72                    |
| 131.76     | 11.41          | 9.30     | 20.71           | 43.50          | 22.79                    |
| 215.27     | 10.83          | 11.60    | 22.43           | 43.50          | 21.07                    |
| 300.37     | 10.38          | 13.80    | 24.18           | 46.00          | 21.82                    |
| 508.26     | 9.73           | 18.13    | 27.86           | 46.00          | 18.14                    |

**Remarks:**

- 1) C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain
- 2) Result = Reading + C.F (Correction Factor)

No other significant emissions were measured at the frequency range of interest employing the QP detectors.

**Vertical**



| Freq (MHz) | Reading (dBuV) | C.F (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin=limit-result (dB) |
|------------|----------------|----------|-----------------|----------------|--------------------------|
| 57.80      | 8.94           | 15.45    | 24.39           | 40.00          | 15.61                    |
| 107.89     | 11.45          | 12.70    | 24.15           | 43.50          | 19.35                    |
| 195.82     | 10.53          | 11.70    | 22.23           | 43.50          | 21.27                    |
| 341.98     | 9.52           | 15.28    | 24.80           | 46.00          | 21.20                    |
| 510.04     | 8.89           | 18.20    | 27.09           | 46.00          | 18.91                    |
| 677.58     | 10.13          | 20.40    | 30.53           | 46.00          | 15.47                    |

**Remarks:**

- 1) C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain
- 2) Result = Reading + C.F (Correction Factor)

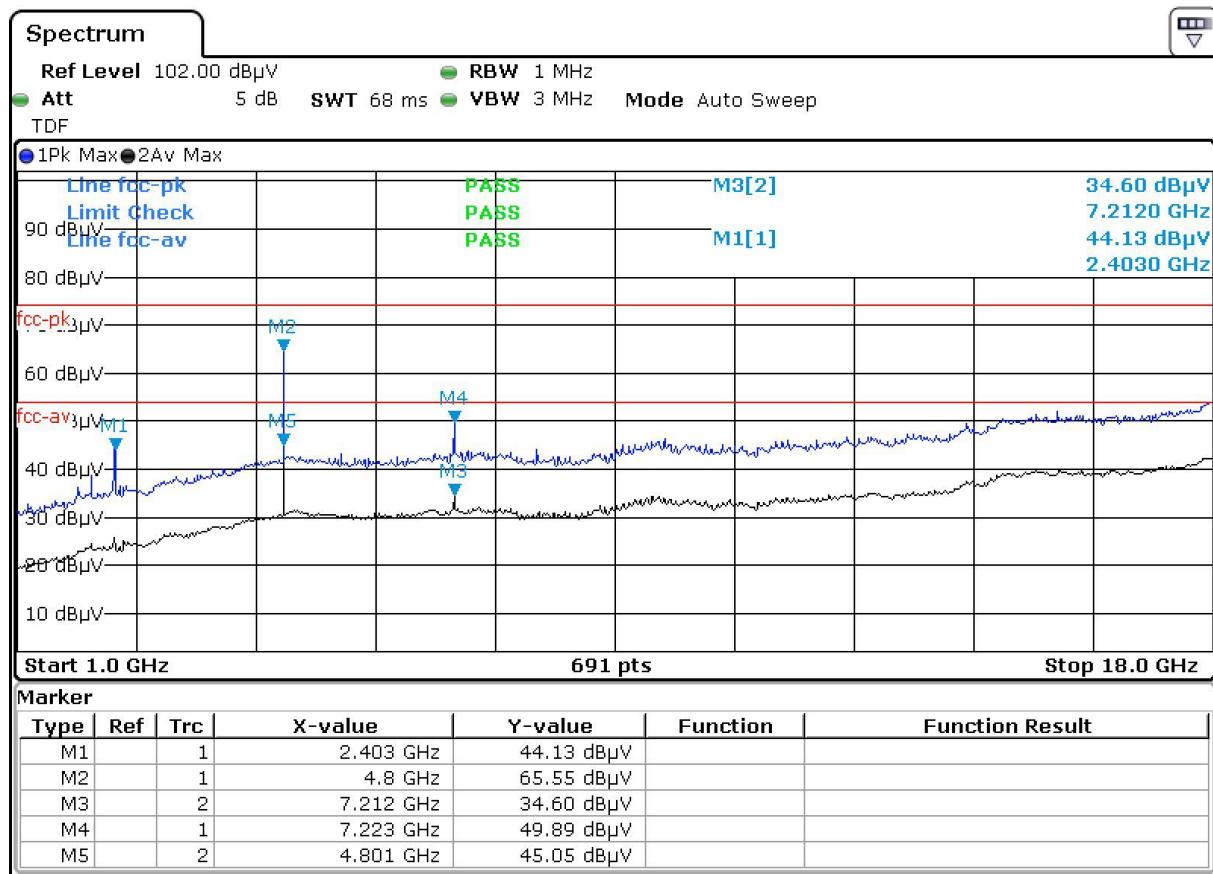
No other significant emissions were measured at the frequency range of interest employing the QP detectors.

## Results of 1 – 18 GHz

|                             |                  |
|-----------------------------|------------------|
| Model                       | 10000-02         |
| Operation Mode (worst case) | Mode 1 @2402 MHz |
| Test voltage                | 3.7 Vdc          |

## Results

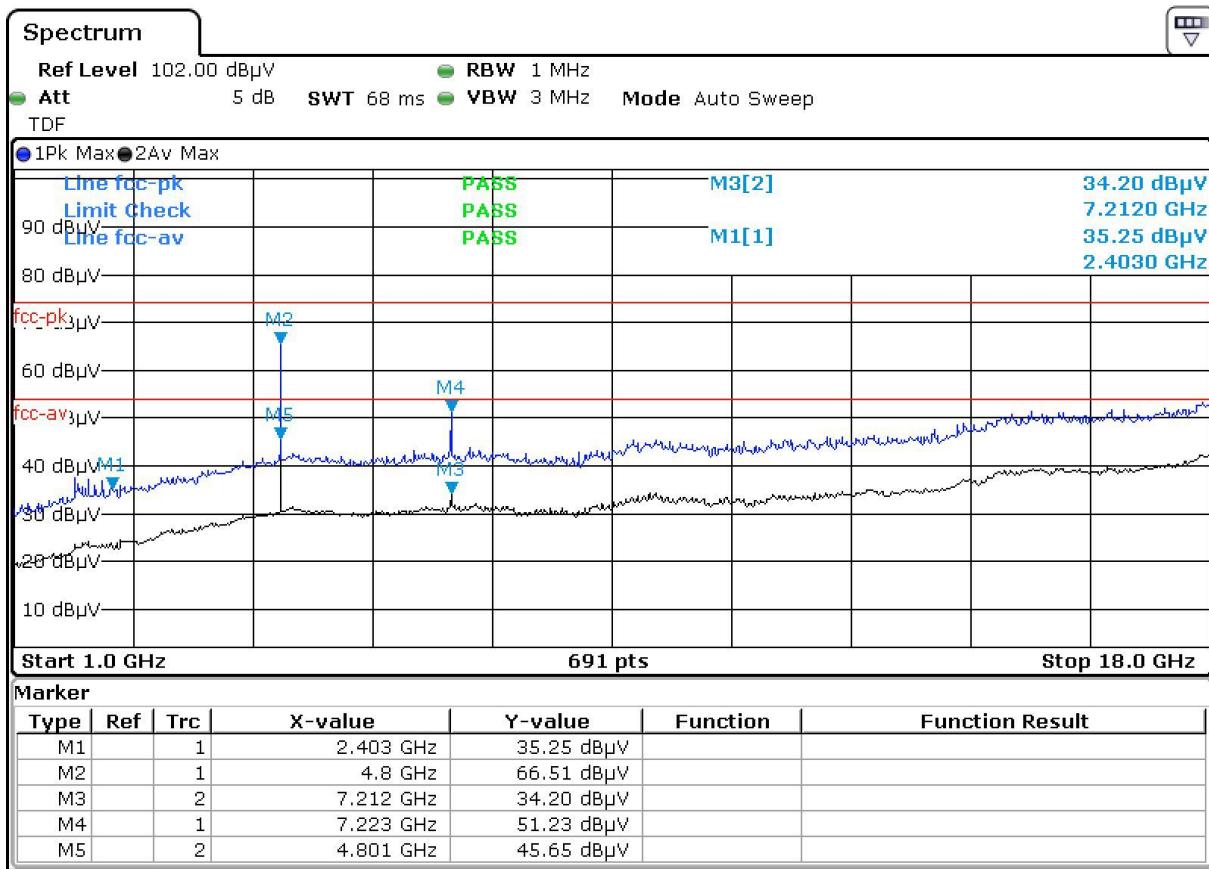
### Horizontal



Remarks: Y-Value = received value + Correction Factor (Antenna factor + Cable loss - Preamp gain)

No other significant emissions were measured at the frequency range of interest employing the PK and AV detectors.

**Vertical**



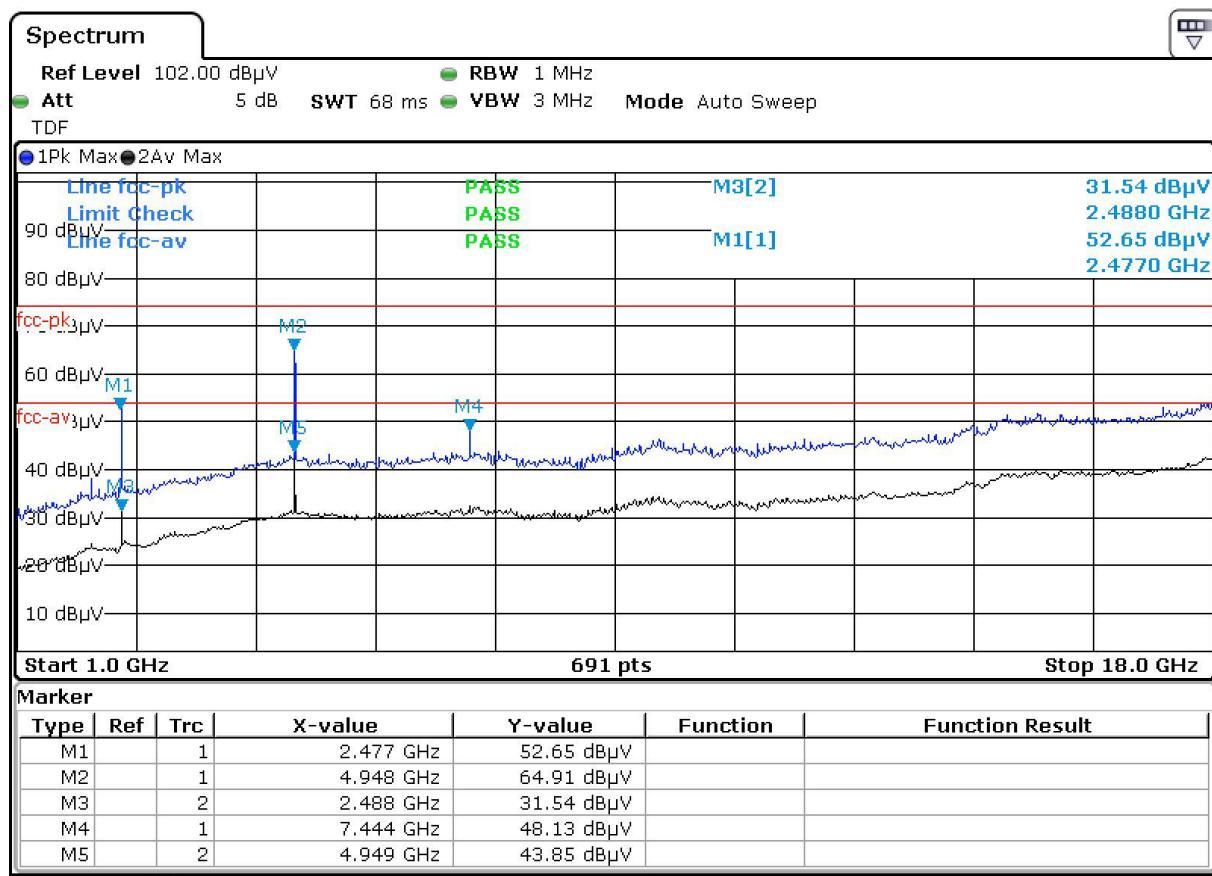
Remarks: Y-Value = received value + Correction Factor (Antenna factor + Cable loss - Preamp gain)

No other significant emissions were measured at the frequency range of interest employing the PK and AV detectors.

|                             |                  |
|-----------------------------|------------------|
| Model                       | 10000-02         |
| Operation Mode (worst case) | Mode 1 @2480 MHz |
| Test voltage                | 3.7 Vdc          |

## Results

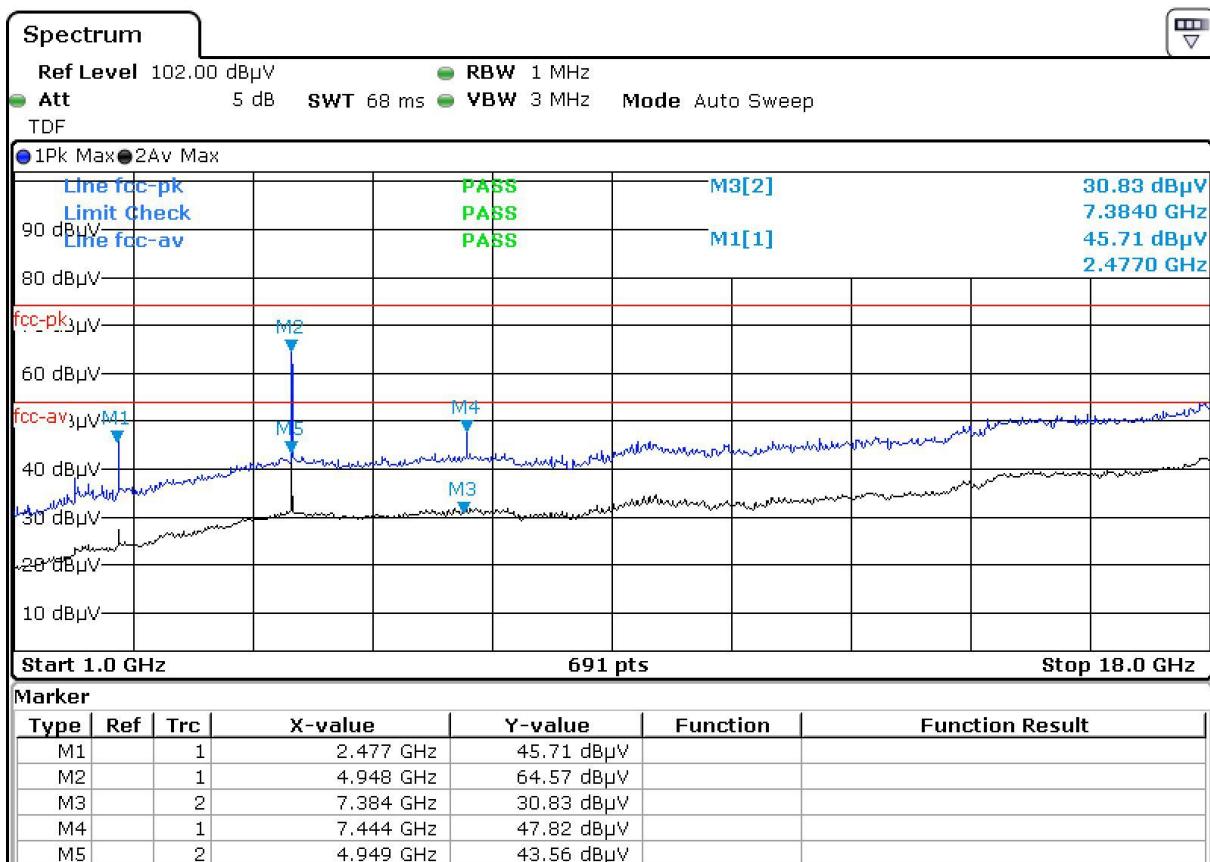
### Horizontal



Remarks: Y-Value = received value + Correction Factor (Antenna factor + Cable loss - Preamp gain)

No other significant emissions were measured at the frequency range of interest employing the PK and AV detectors.

## Vertical



Remarks: Y-Value = received value + Correction Factor (Antenna factor + Cable loss - Preamp gain)

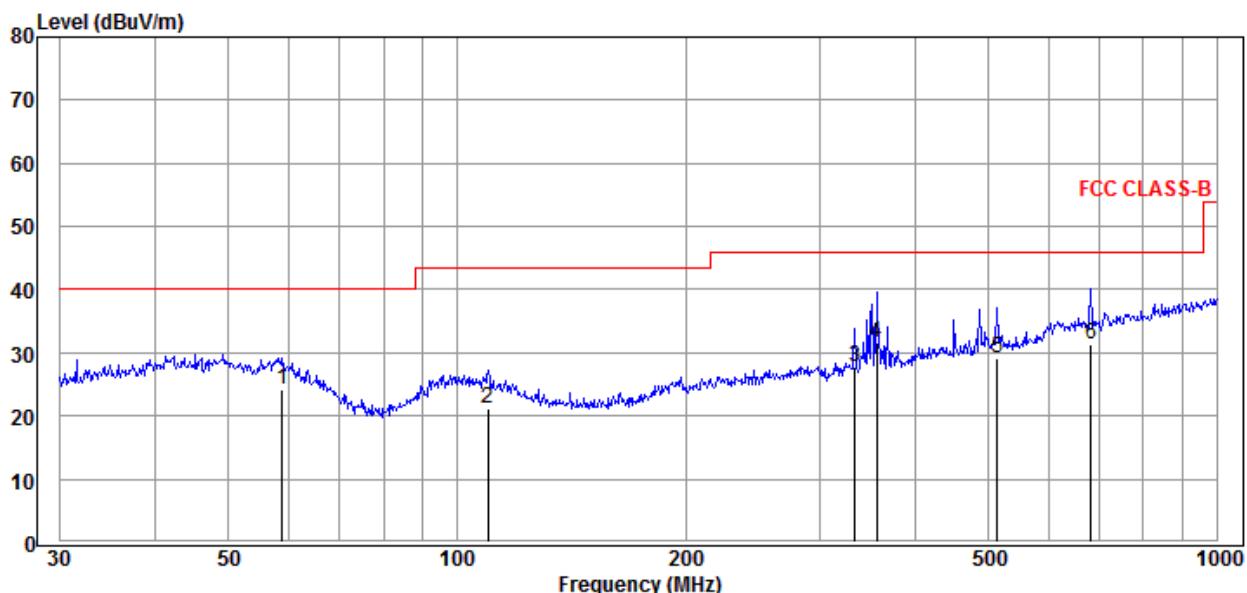
No other significant emissions were measured at the frequency range of interest employing the PK and AV detectors.

## Results of 30 – 1000 MHz

|                |                              |
|----------------|------------------------------|
| Model          | 10000-05                     |
| Operation Mode | Mode 1 @2402MHz (worst case) |
| Test voltage   | 3.7 Vdc                      |

### Results

#### Horizontal



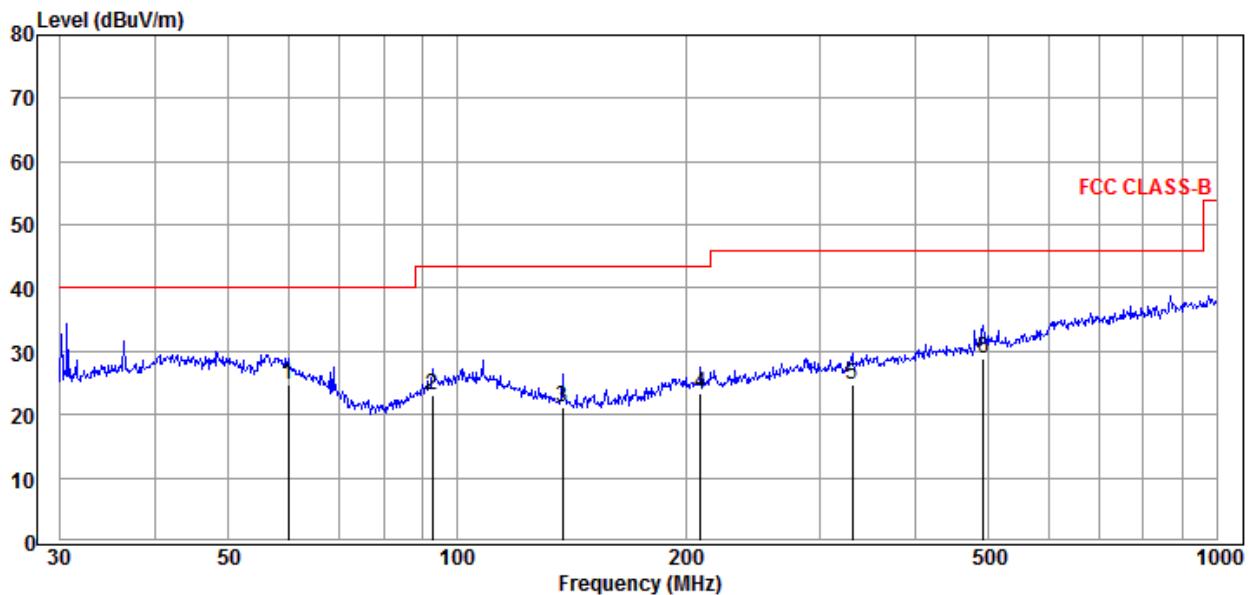
| Freq (MHz) | Reading (dBuV) | C.F (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin=limit-result (dB) |
|------------|----------------|----------|-----------------|----------------|--------------------------|
| 58.82      | 9.26           | 14.98    | 24.24           | 40.00          | 15.76                    |
| 109.80     | 8.65           | 12.45    | 21.10           | 43.50          | 22.40                    |
| 333.69     | 13.00          | 14.85    | 27.85           | 46.00          | 18.15                    |
| 356.68     | 16.03          | 15.45    | 31.48           | 46.00          | 14.52                    |
| 513.63     | 10.81          | 18.27    | 29.08           | 46.00          | 16.92                    |
| 682.35     | 10.97          | 20.30    | 31.27           | 46.00          | 14.73                    |

#### Remarks:

- 3) C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain
- 4) Result = Reading + C.F (Correction Factor)

No other significant emissions were measured at the frequency range of interest employing the QP detectors.

**Vertical**



| Freq (MHz) | Reading (dBuV) | C.F (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin=limit-result (dB) |
|------------|----------------|----------|-----------------|----------------|--------------------------|
| 59.86      | 10.44          | 14.33    | 24.77           | 40.00          | 15.23                    |
| 92.79      | 11.40          | 11.70    | 23.10           | 43.50          | 20.40                    |
| 137.42     | 12.49          | 8.77     | 21.26           | 43.50          | 22.24                    |
| 209.31     | 12.01          | 11.39    | 23.40           | 43.50          | 20.10                    |
| 331.36     | 9.93           | 14.75    | 24.68           | 46.00          | 21.32                    |
| 492.47     | 11.10          | 17.90    | 29.00           | 46.00          | 17.00                    |

**Remarks:**

- 3) C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain
- 4) Result = Reading + C.F (Correction Factor)

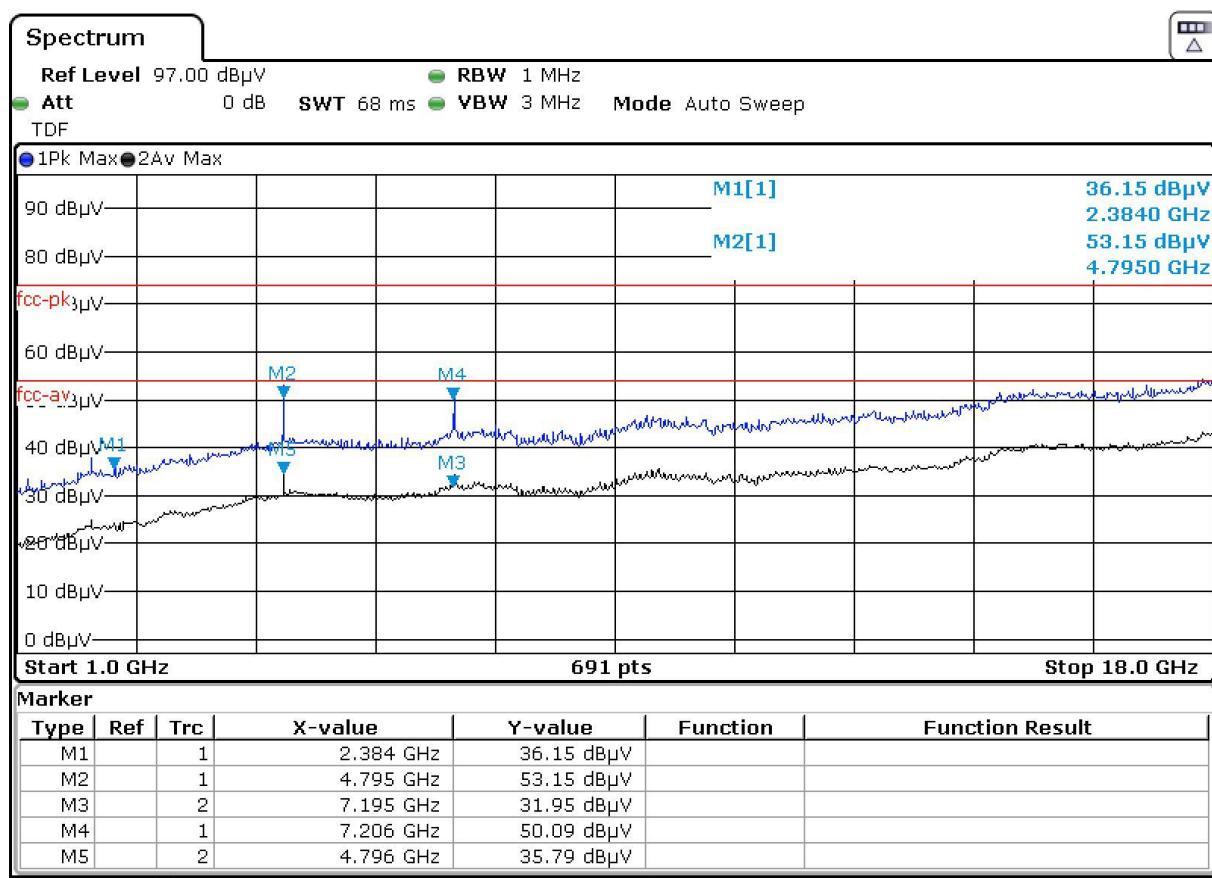
No other significant emissions were measured at the frequency range of interest employing the QP detectors.

## Results of 1 – 18 GHz

|                             |                  |
|-----------------------------|------------------|
| Model                       | 10000-05         |
| Operation Mode (worst case) | Mode 1 @2402 MHz |
| Test voltage                | 3.7 Vdc          |

### Results

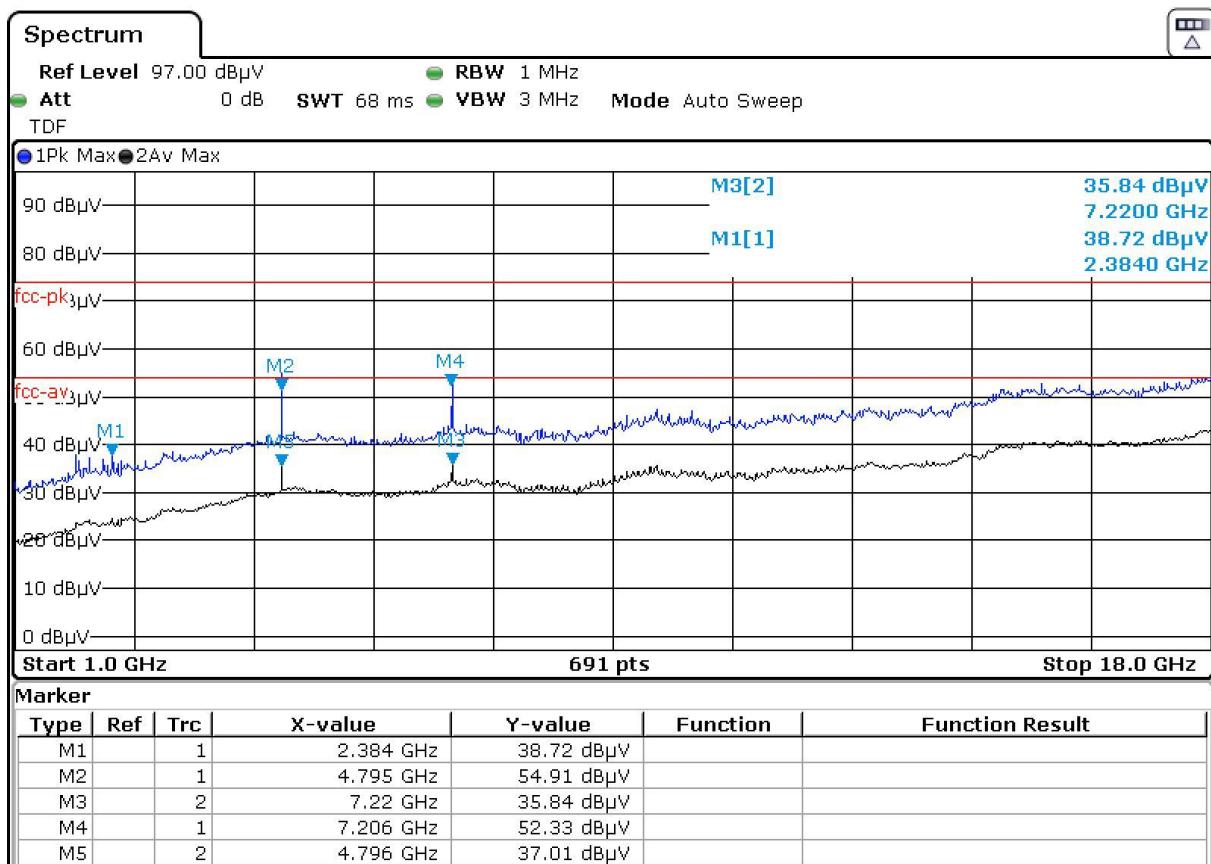
#### Horizontal



Remarks: Y-Value = received value + Correction Factor (Antenna factor + Cable loss - Preamp gain)

No other significant emissions were measured at the frequency range of interest employing the PK and AV detectors.

## Vertical



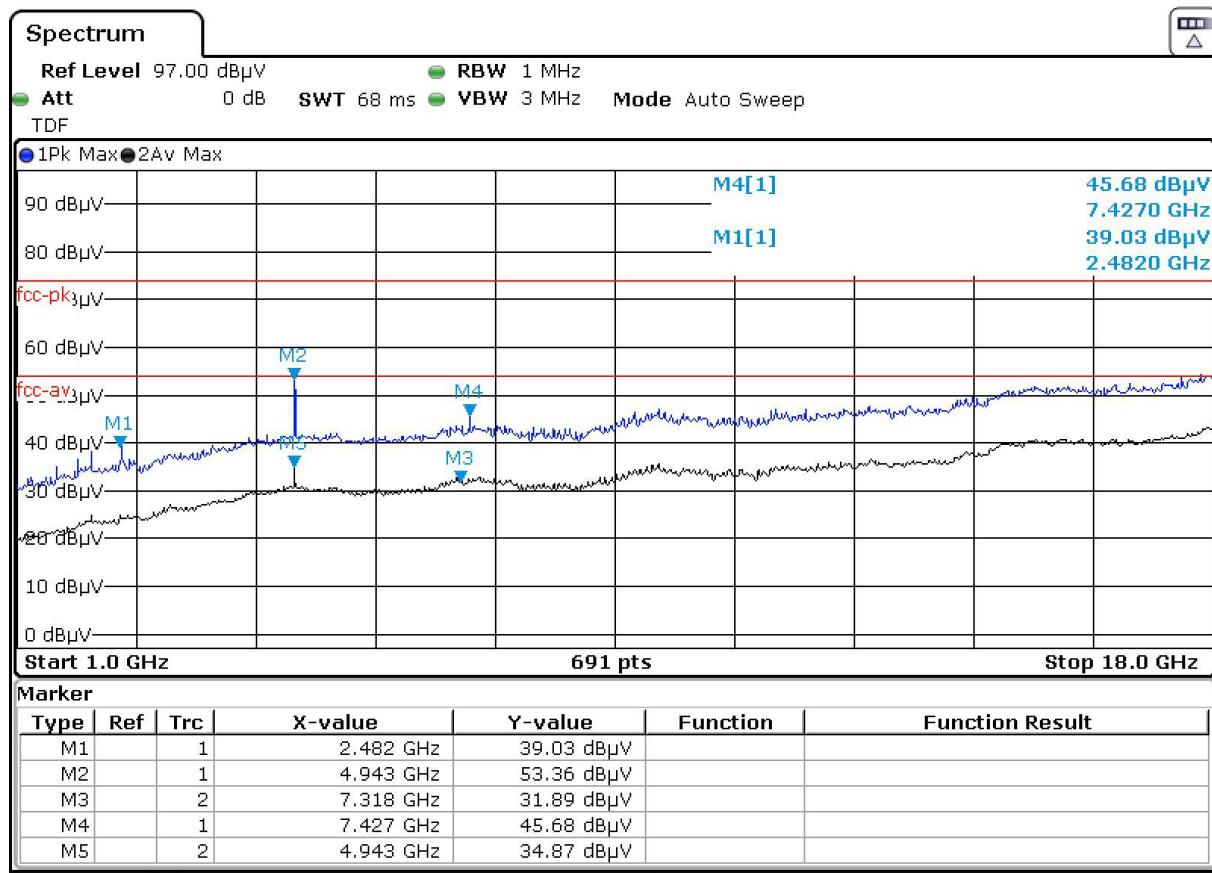
Remarks: Y-Value = received value + Correction Factor (Antenna factor + Cable loss - Preamp gain)

No other significant emissions were measured at the frequency range of interest employing the PK and AV detectors.

|                             |                  |
|-----------------------------|------------------|
| Model                       | 10000-05         |
| Operation Mode (worst case) | Mode 1 @2480 MHz |
| Test voltage                | 3.7 Vdc          |

## Results

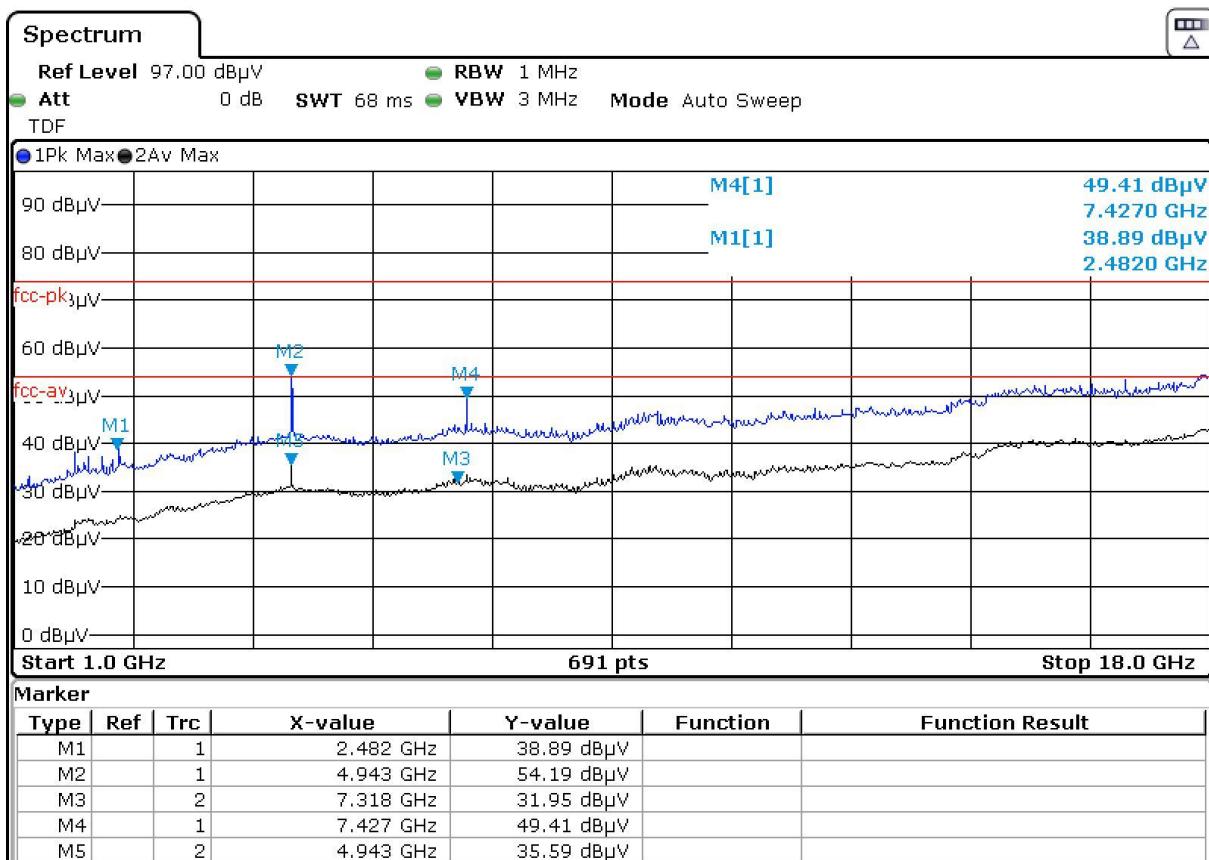
### Horizontal



Remarks: Y-Value = received value + Correction Factor (Antenna factor + Cable loss - Preamp gain)

No other significant emissions were measured at the frequency range of interest employing the PK and AV detectors.

**Vertical**



Remarks: Y-Value = received value + Correction Factor (Antenna factor + Cable loss - Preamp gain)

No other significant emissions were measured at the frequency range of interest employing the PK and AV detectors.

### 4.3 Emissions in restricted frequency bands

**VERDICT: PASS**

| Restricted Bands of operation of FCC |                       |                 |                 |
|--------------------------------------|-----------------------|-----------------|-----------------|
| Frequency (MHz)                      | Frequency (MHz)       | Frequency (MHz) | Frequency (GHz) |
| 0.090 – 0.110                        | 16.42 – 16.423        | 399.9 – 410     | 4.5 – 5.15      |
| 0.495 – 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 – 156.52525 | 2483.5 – 2500   | 17.7 – 21.4     |
| 8.37625 – 8.38675                    | 156.7 – 156.9         | 2690 – 2900     | 22.01 – 23.12   |
| 8.81425 – 8.81475                    | 162.0125 – 167.17     | 3260 – 3267     | 23.6 – 24.0     |
| 12.29 – 12.293                       | 167.72 – 173.2        | 3332 – 3339     | 31.2 – 31.8     |
| 12.51975 – 12.52025                  | 240 – 285             | 3345.8 – 3358   | 36.43 – 36.5    |
| 12.57675 – 12.57725                  | 322 – 335.4           | 3600 – 4400     |                 |
| 13.36 – 13.41                        |                       |                 |                 |
| Restricted Bands of operation for IC |                       |                 |                 |
| 0.090 - 0.110                        | 13.36 - 13.41         | 960 - 1427      | 9.0 - 9.2       |
| 0.495 - 0.505                        | 16.42 - 16.423        | 1435 - 1626.5   | 9.3 - 9.5       |
| 2.1735 - 2.1905                      | 16.69475 - 16.69525   | 1645.5 - 1646.5 | 10.6 - 12.7     |
| 3.020 - 3.026                        | 16.80425 - 16.80475   | 1660 - 1710     | 13.25 - 13.4    |
| 4.125 - 4.128                        | 25.5 - 25.67          | 1718.8 - 1722.2 | 14.47 - 14.5    |
| 4.17725 - 4.17775                    | 37.5 - 38.25          | 2200 - 2300     | 15.35 - 16.2    |
| 4.20725 - 4.20775                    | 73 - 74.6             | 2310 - 2390     | 17.7 - 21.4     |
| 5.677 - 5.683                        | 74.8 - 75.2           | 2483.5 - 2500   | 22.01 - 23.12   |
| 6.215 - 6.218                        | 108 - 138             | 2655 - 2900     | 23.6 - 24.0     |
| 6.26775 - 6.26825                    | 149.9 - 150.05        | 3260 - 3267     | 31.2 - 31.8     |
| 6.31175 - 6.31225                    | 156.52475 - 156.52525 | 3332 - 3339     | 36.43 - 36.5    |
| 8.291 - 8.294                        | 156.7 - 156.9         | 3345.8 - 3358   | Above 38.6      |
| 8.362 - 8.366                        | 162.0125 - 167.17     | 3500 - 4400     |                 |
| 8.37625 - 8.38675                    | 167.72 - 173.2        | 4500 - 5150     |                 |
| 8.41425 - 8.41475                    | 240 - 285             | 5350 - 5460     |                 |
| 12.29 - 12.293                       | 322 - 335.4           | 7250 - 7750     |                 |
| 12.51975 - 12.52025                  | 399.9 - 410           | 8025 - 8500     |                 |
| 12.57675 - 12.57725                  | 608 - 614             | --              |                 |

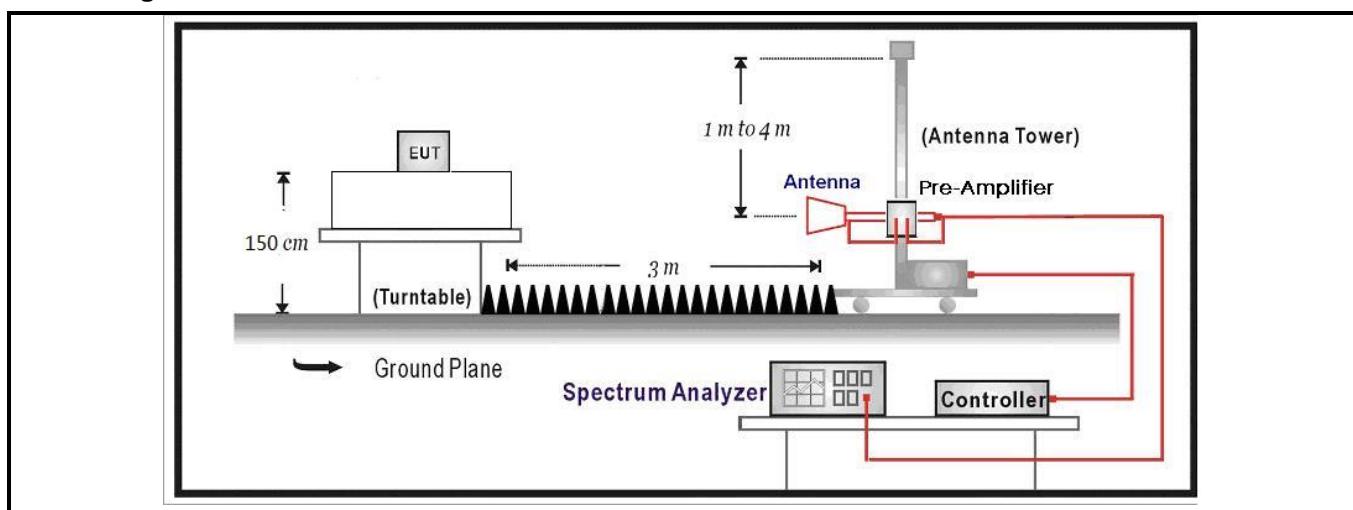
Restricted Band Emissions Limit

| Frequency (MHz) | Field strength ( $\mu\text{V/m}$ ) | Field strength ( $\text{dB}\mu\text{V/m}$ ) | Measurement distance (m) |
|-----------------|------------------------------------|---|--------------------------|
| 0.009 - 0.49    | 2400/F(kHz)                        | 48.5 – 13.8                                 | 300 (Note 1)             |
| 0.49 - 1.705    | 24000/F(kHz)                       | 33.8 - 23                                   | 30 (Note 1)              |
| 1.705 - 30      | 30                                 | 29.5  | 30 (Note 1)              |
| 30 - 88         | 100                                | 40  | 3 (Note 2)               |
| 88 - 216        | 150                                | 43.5  | 3 (Note 2)               |
| 216 - 960       | 200                                | 46  | 3 (Note 2)               |
| Above 960       | 500                                | 54  | 3 (Note 2)               |

Note 1: At frequencies below 30 MHz, measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field. Pending the development of an appropriate measurement procedure for measurements performed below 30 MHz, when performing measurements at a closer distance than specified, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two 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).

Note 2: At frequencies at or above 30 MHz, measurements may be performed at a distance other than what is specified provided: measurements are not made in the near field except where it can be shown that near field measurements are appropriate due to the characteristics of the device; and it can be demonstrated that the signal levels needed to be measured at the distance employed can be detected by the measurement equipment. Measurements shall not be performed at a distance greater than 30 meters unless it can be further demonstrated that measurements at a distance of 30 meters or less are impractical. 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 linear-distance for field strength measurements; inverse-linear-distance-squared for power density measurements).

Test Configuration



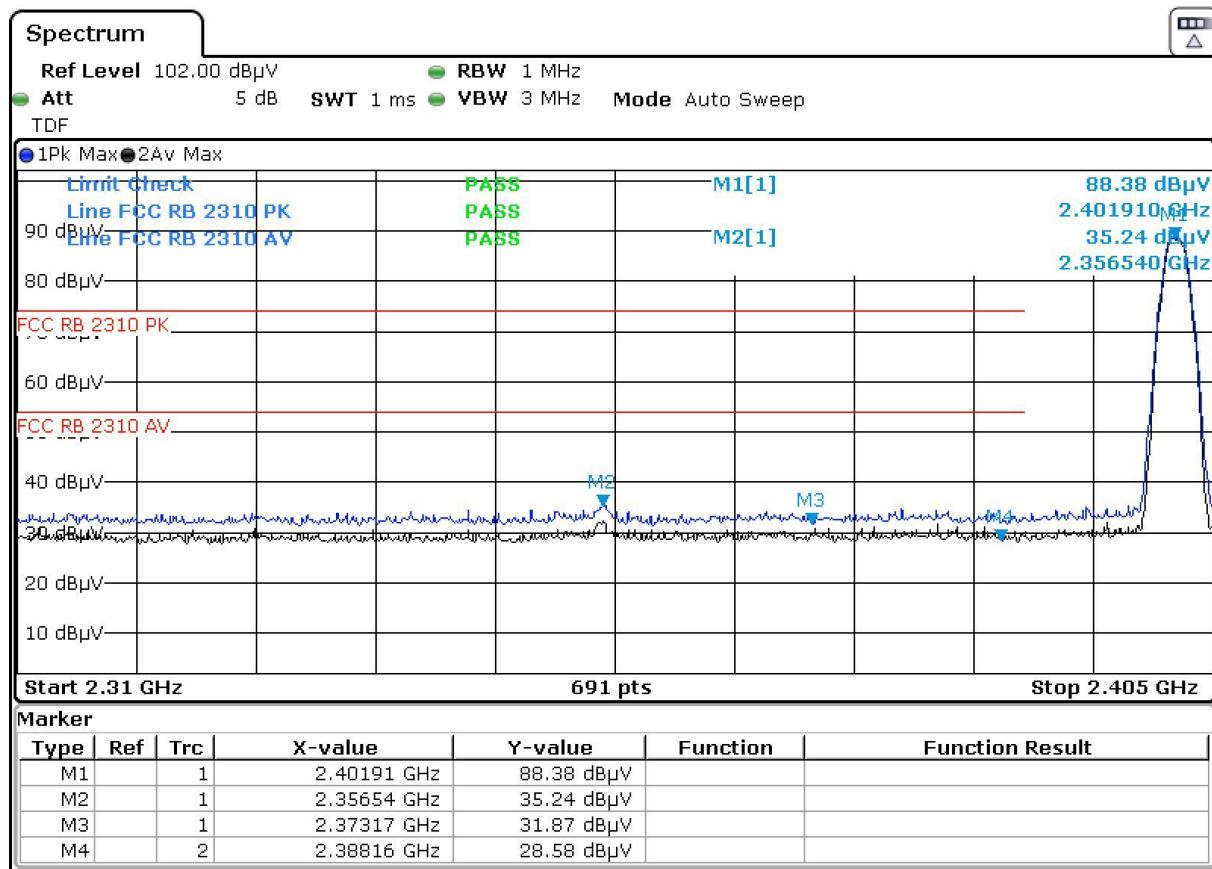
### Performed measurements

|                        |   |                       |
|------------------------|---|-----------------------|
| Port under test        | Enclosure port                                |                       |
| Test method applied    | <input type="checkbox"/>                      | Conducted measurement |
|                        | <input checked="" type="checkbox"/>           | Radiated measurement  |
| Test setup             | Refer to the Annex 3 for test setup photo(s). |                       |
| Operating mode(s) used | Mode 1-2                                      |                       |
| Remark                 | ---   |                       |

|                             |                  |
|-----------------------------|------------------|
| Model                       | 10000-02         |
| Operation Mode (worst case) | Mode 2 @2402 MHz |
| Test voltage                | 3.7 Vdc          |

## Results

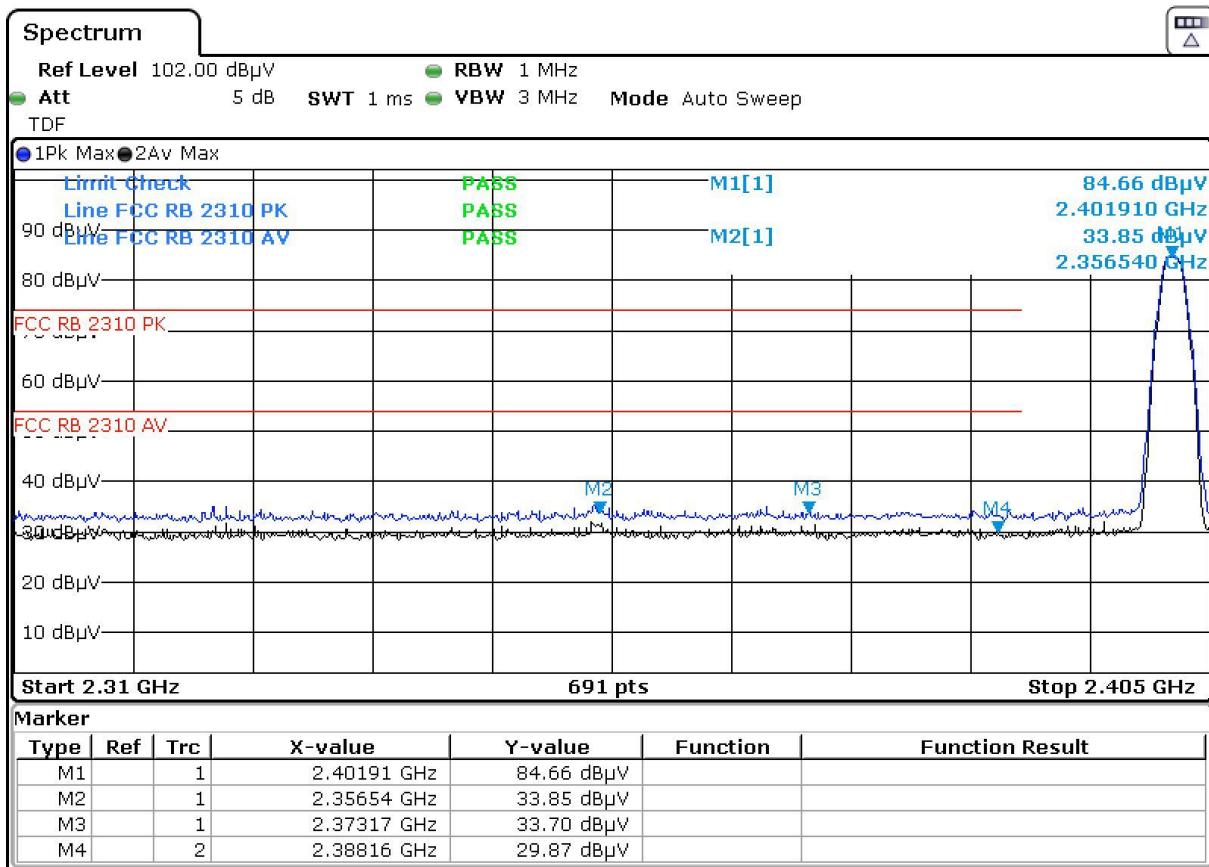
### Horizontal



Remarks: Y-Value = received value + Correction Factor (Antenna factor + Cable loss - Preamp gain)

No other significant emissions were measured at the frequency range of interest employing the PK and AV detectors.

**Vertical**



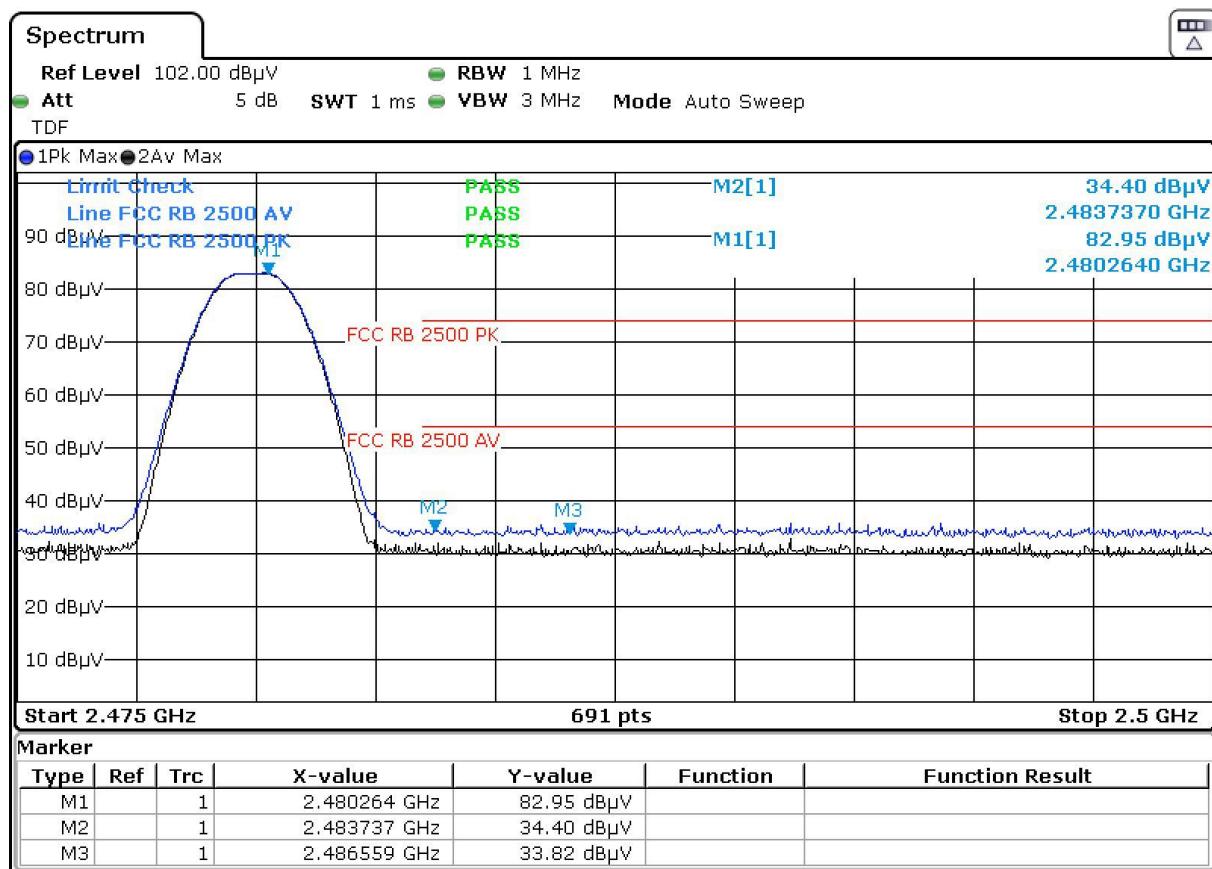
Remarks: Y-Value = received value + Correction Factor (Antenna factor + Cable loss - Preamp gain)

No other significant emissions were measured at the frequency range of interest employing the PK and AV detectors.

|                             |                  |
|-----------------------------|------------------|
| Model                       | 10000-02         |
| Operation Mode (worst case) | Mode 2 @2480 MHz |
| Test voltage                | 3.7 Vdc          |

## Results

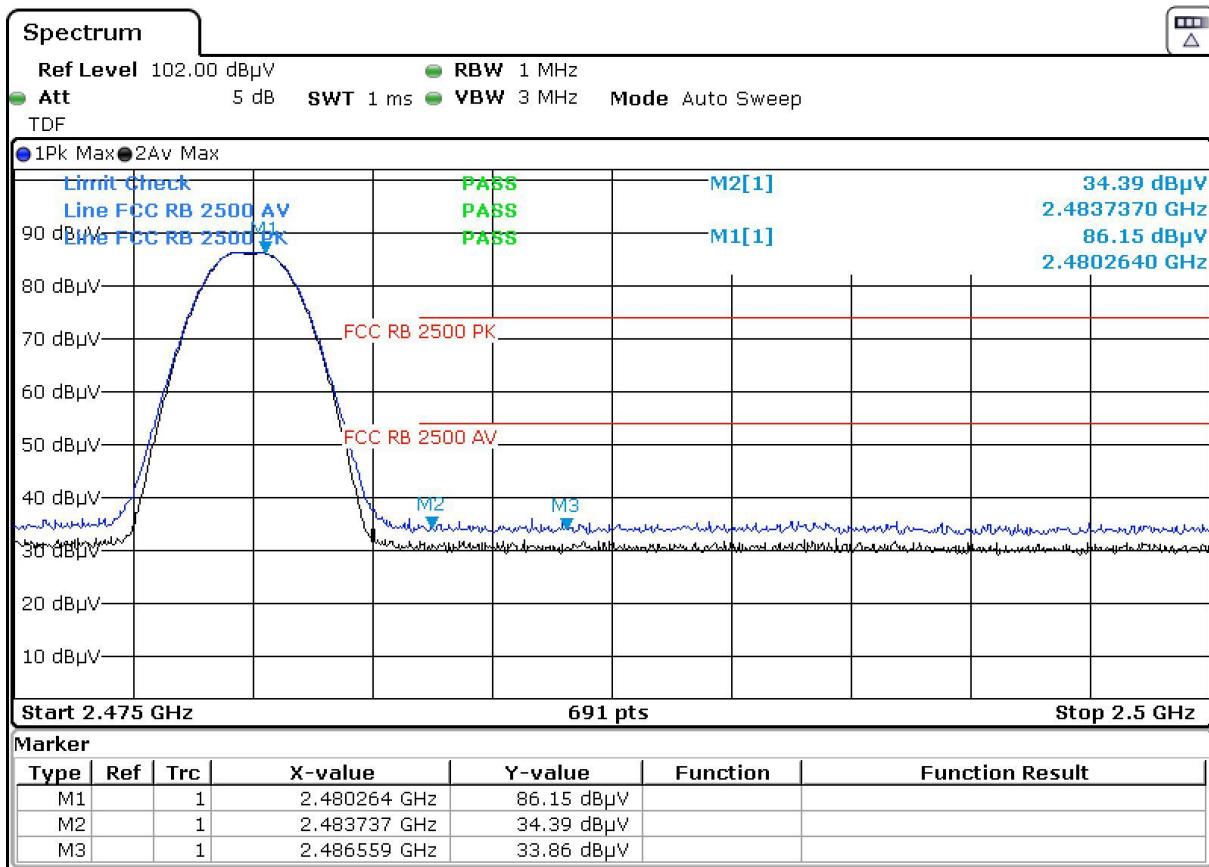
### Horizontal



Remarks: Y-Value = received value + Correction Factor (Antenna factor + Cable loss - Preamp gain)

No other significant emissions were measured at the frequency range of interest employing the PK and AV detectors.

**Vertical**



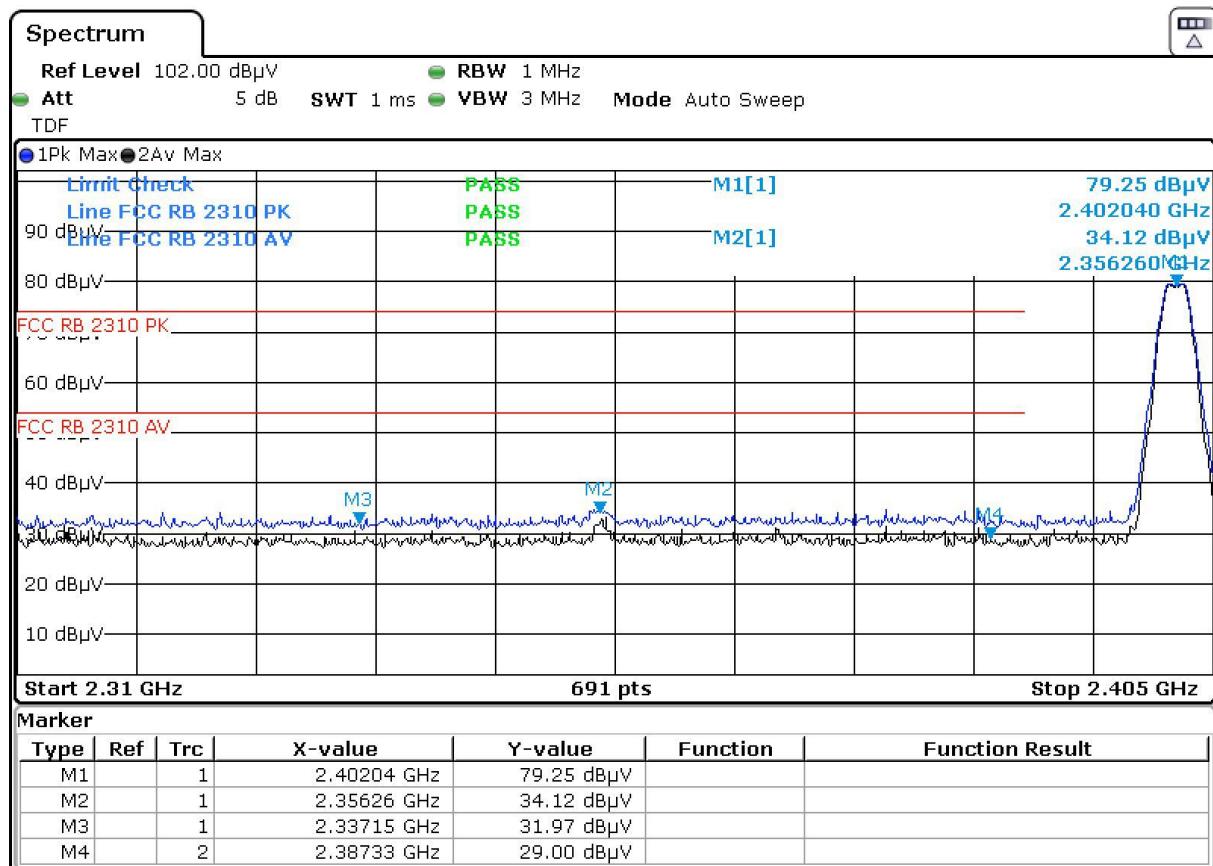
Remarks: Y-Value = received value + Correction Factor (Antenna factor + Cable loss - Preamp gain)

No other significant emissions were measured at the frequency range of interest employing the PK and AV detectors.

|                |                  |
|----------------|------------------|
| Model          | 10000-05         |
| Operation Mode | Mode 2 @2402 MHz |
| Test voltage   | 3.7 Vdc          |

## Results

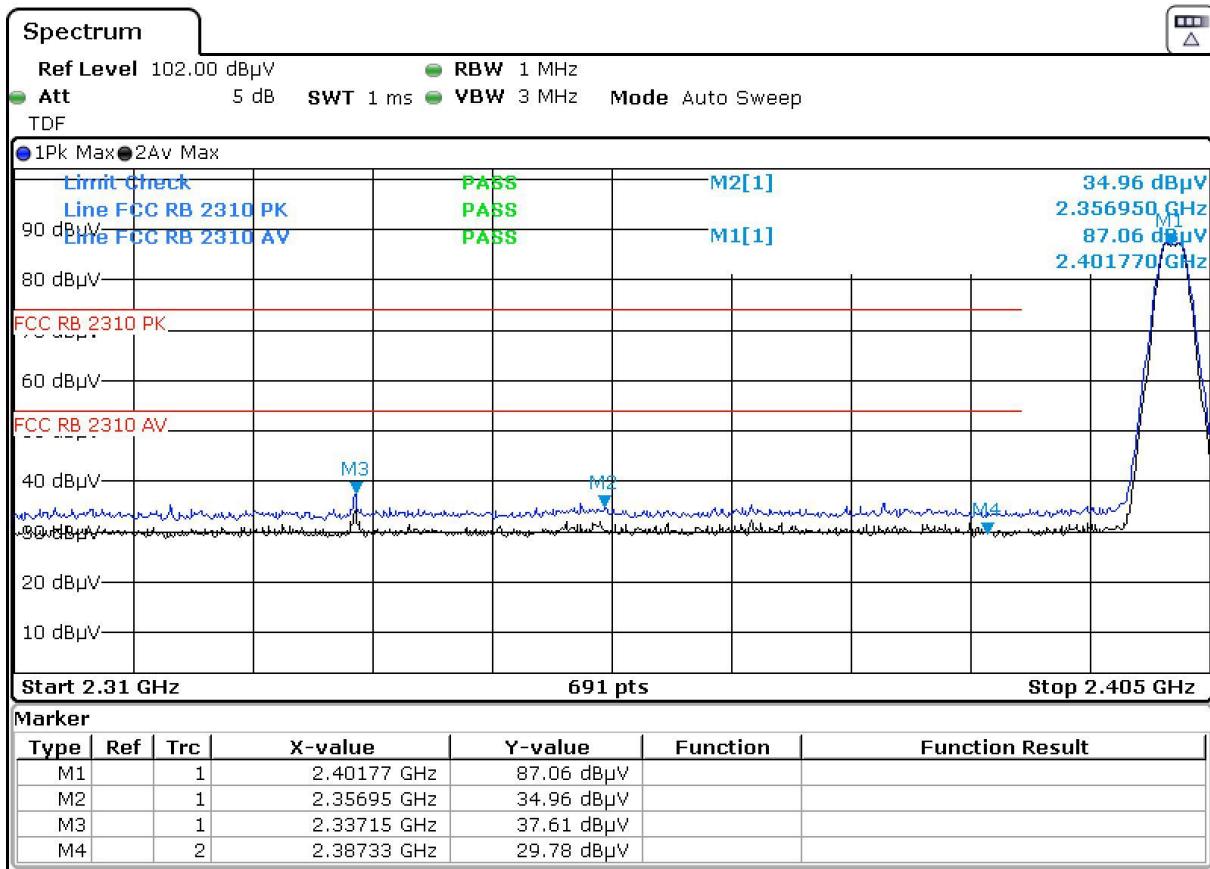
### Horizontal



Remarks: Y-Value = received value + Correction Factor (Antenna factor + Cable loss - Preamp gain)

No other significant emissions were measured at the frequency range of interest employing the PK and AV detectors.

## Vertical



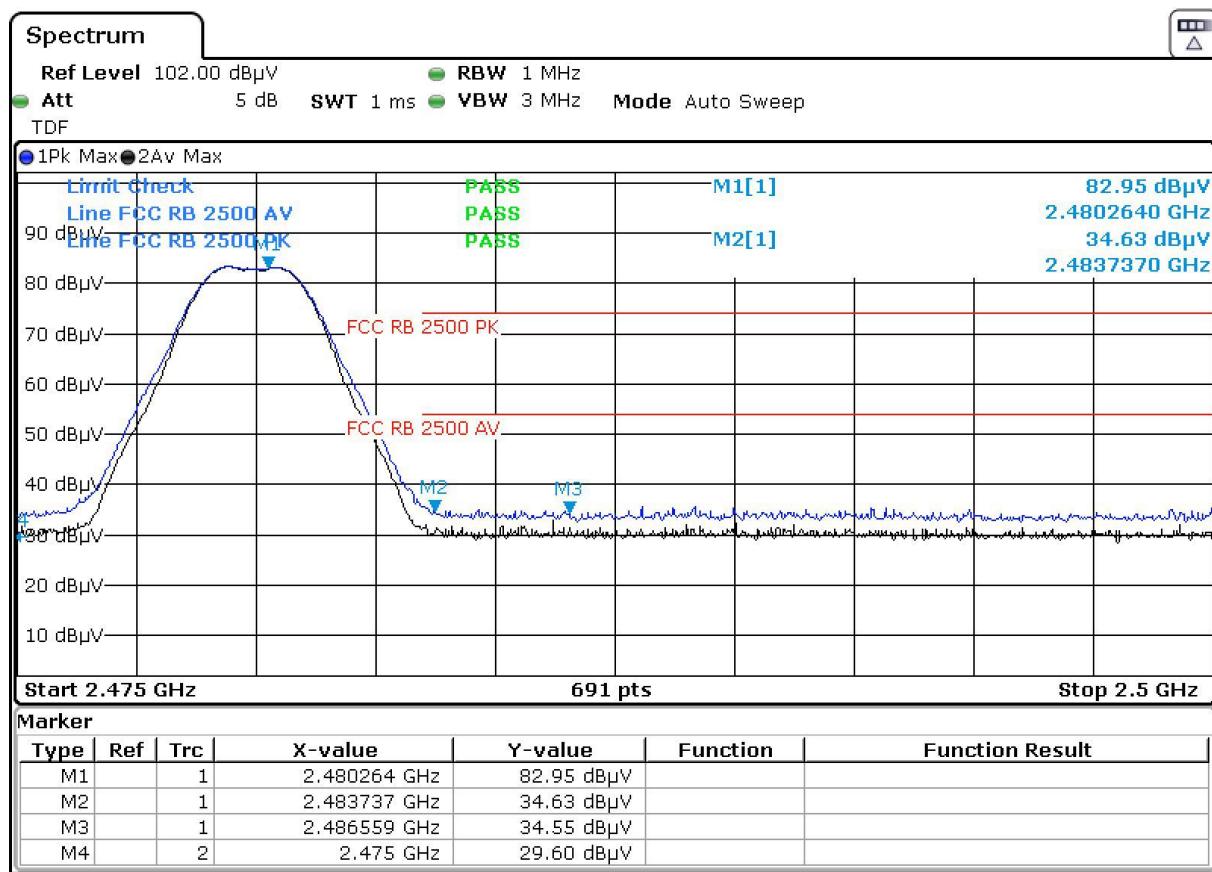
Remarks: Y-Value = received value + Correction Factor (Antenna factor + Cable loss - Preamp gain)

No other significant emissions were measured at the frequency range of interest employing the PK and AV detectors.

|                |                  |
|----------------|------------------|
| Model          | 10000-05         |
| Operation Mode | Mode 2 @2480 MHz |
| Test voltage   | 3.7 Vdc          |

## Results

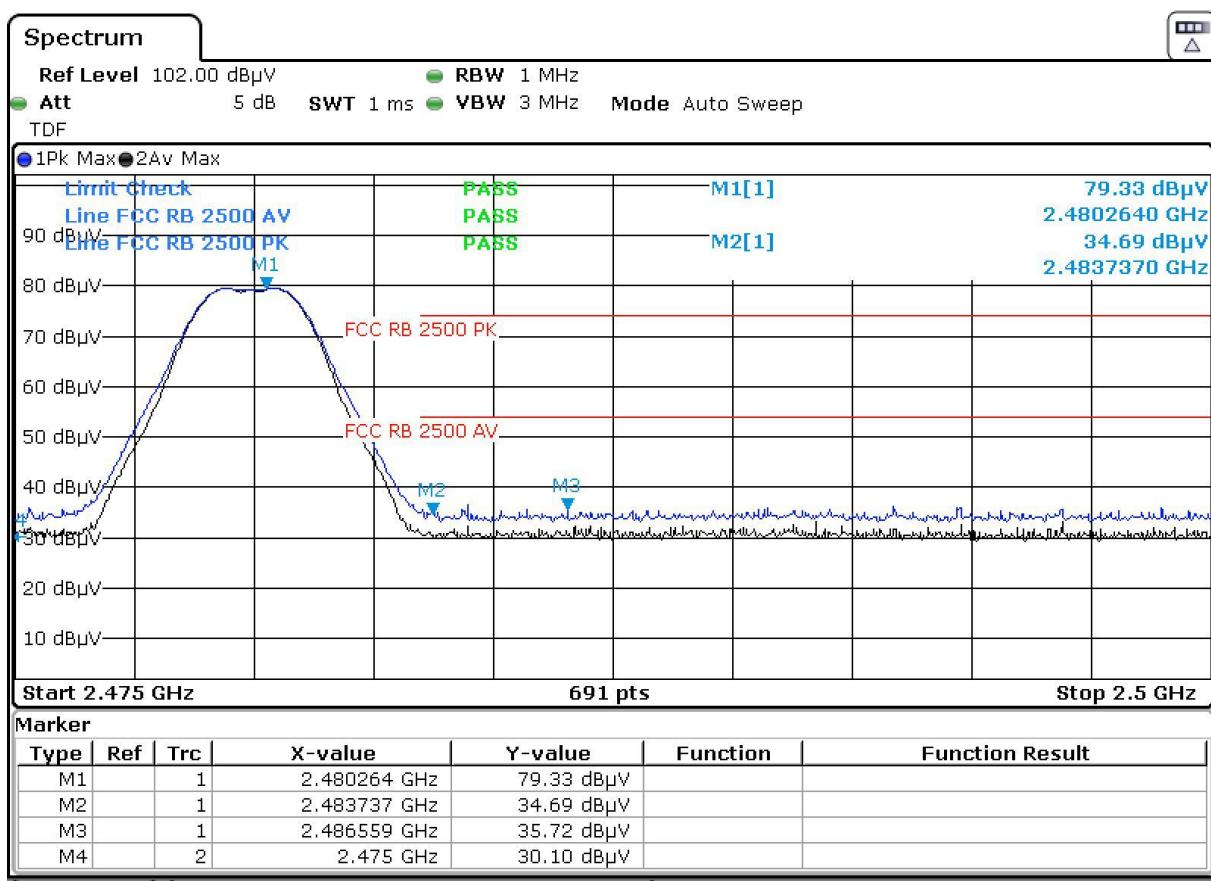
### Horizontal



Remarks: Y-Value = received value + Correction Factor (Antenna factor + Cable loss - Preamp gain)

No other significant emissions were measured at the frequency range of interest employing the PK and AV detectors.

## Vertical



Remarks: Y-Value = received value + Correction Factor (Antenna factor + Cable loss - Preamp gain)

No other significant emissions were measured at the frequency range of interest employing the PK and AV detectors.

#### 4.4 Band Edge

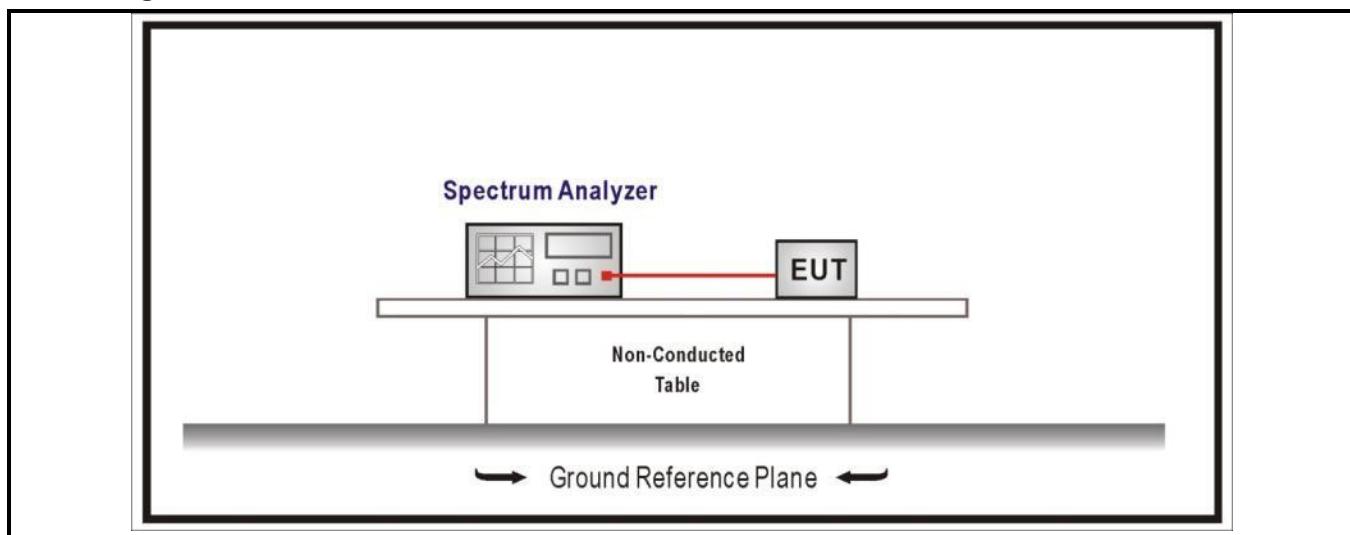
**VERDICT: PASS**

| Standard                            | FCC Part 15 Subpart C Paragraph 15.247(d) |
|-------------------------------------|---|
| RF Output power (Detection methods) | Limit(dB)                                 |
| RF Output power(Average detector)   | 30dBc(Note1)                              |
| RF Output power(PK detector)        | 20dBc(Note2)                              |

Note 1: If maximum conducted (average) output power was used to demonstrate compliance as described in 9.2, then the peak power in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 30 dB relative to the maximum in-band peak PSD by level in 100 kHz (i.e., 30 dBc).

Note 2: If the maximum peak conducted output power procedure was used, then the peak output power measured in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum in-band peak PSD by level in 100 kHz (i.e., 20 dBc).

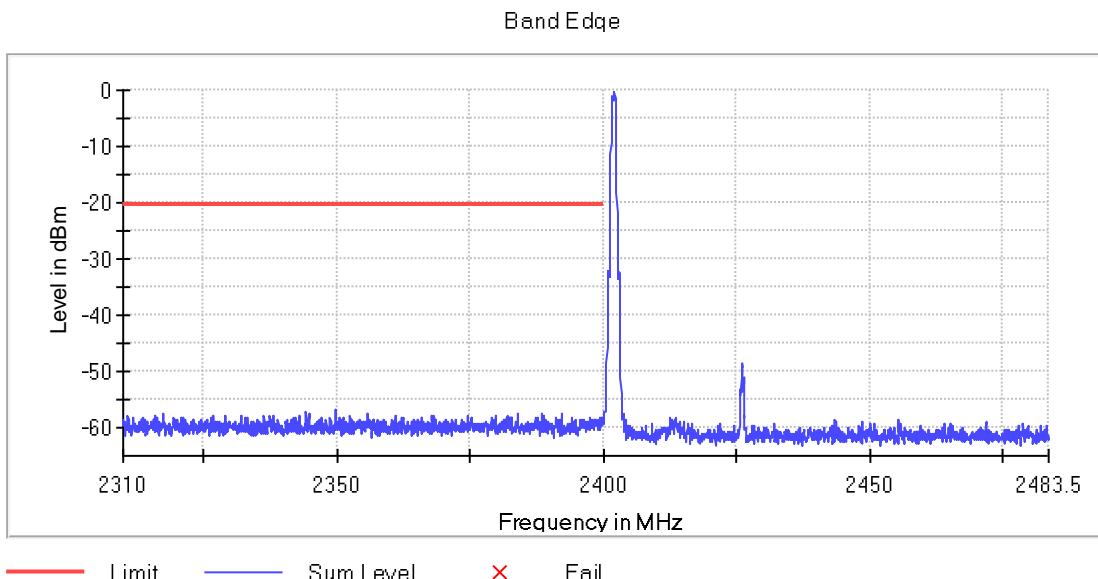
#### Test Configuration



#### Performed measurements

|                        |   |                       |
|------------------------|---|-----------------------|
| Port under test        | Antenna port                                  |                       |
| Test method applied    | <input checked="" type="checkbox"/>           | Conducted measurement |
|                        | <input type="checkbox"/>                      | Radiated measurement  |
| Test setup             | Refer to the Annex 3 for test setup photo(s). |                       |
| Operating mode(s) used | Mode 1, Mode 2                                |                       |
| Remark                 | ---   |                       |

## Results of mode 1 @2402 MHz



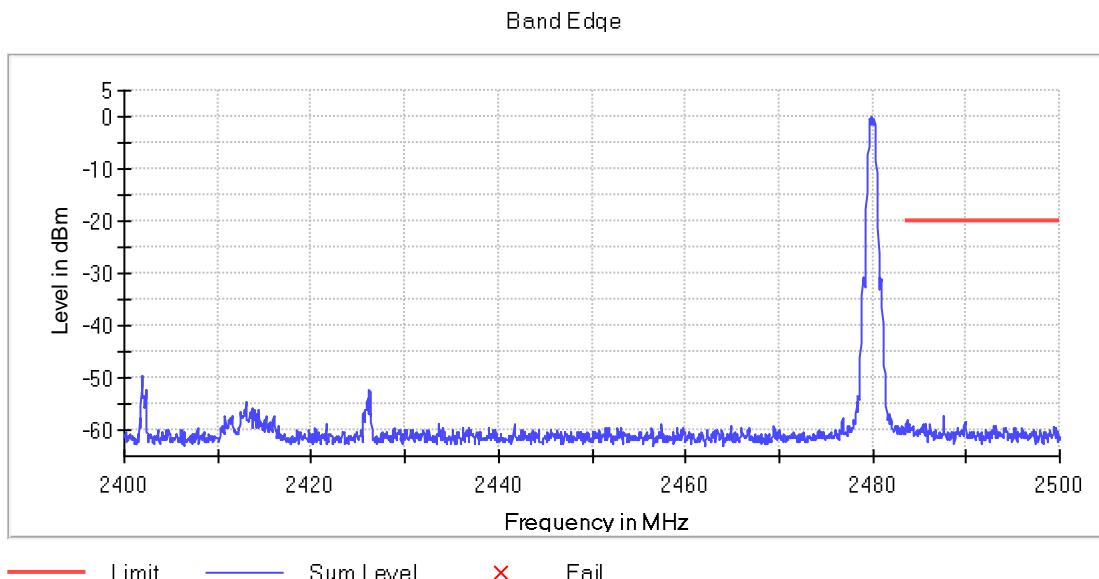
### Inband Peak

| Frequency (MHz) | Level (dBm) |
|-----------------|-------------|
| 2402.0000       | -0.3        |

### Measurements

| Frequency (MHz) | Level (dBm) | Margin (dB) | Limit (dBm) | Result |
|-----------------|-------------|-------------|-------------|--------|
| 2349.675000     | -56.9       | 36.6        | -20.3       | PASS   |
| 2344.325000     | -57.1       | 36.8        | -20.3       | PASS   |
| 2344.275000     | -57.1       | 36.8        | -20.3       | PASS   |
| 2349.725000     | -57.3       | 37.1        | -20.3       | PASS   |
| 2344.825000     | -57.5       | 37.2        | -20.3       | PASS   |
| 2383.975000     | -57.5       | 37.2        | -20.3       | PASS   |
| 2355.725000     | -57.5       | 37.3        | -20.3       | PASS   |
| 2392.275000     | -57.6       | 37.3        | -20.3       | PASS   |
| 2317.425000     | -57.6       | 37.3        | -20.3       | PASS   |
| 2383.925000     | -57.6       | 37.4        | -20.3       | PASS   |
| 2388.525000     | -57.7       | 37.4        | -20.3       | PASS   |
| 2374.675000     | -57.7       | 37.5        | -20.3       | PASS   |
| 2392.325000     | -57.7       | 37.5        | -20.3       | PASS   |
| 2352.575000     | -57.7       | 37.5        | -20.3       | PASS   |
| 2379.825000     | -57.8       | 37.5        | -20.3       | PASS   |

## Results of mode 1 @2480 MHz



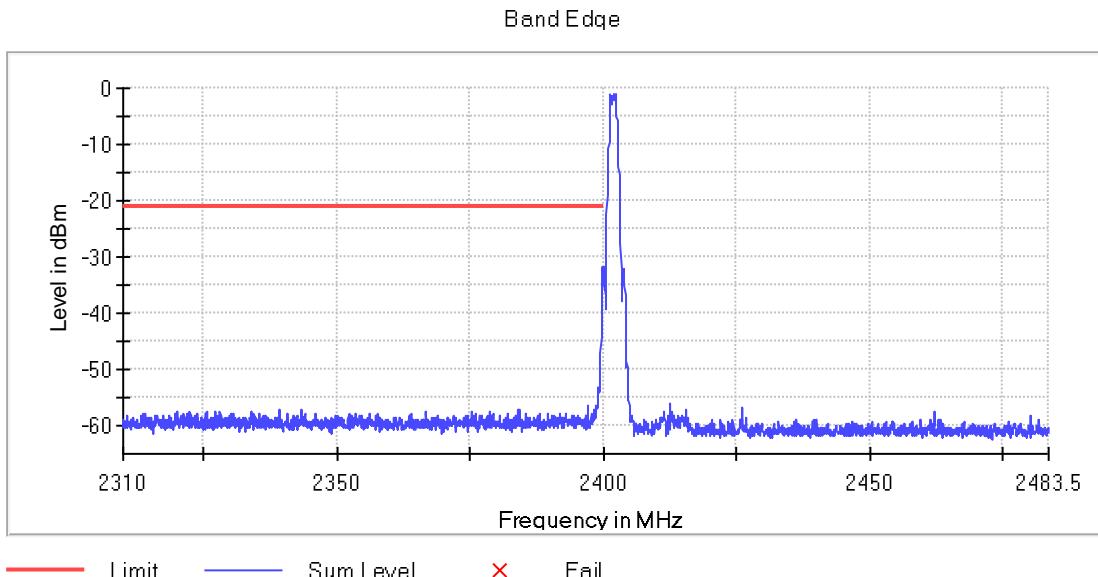
### Inband Peak

| Frequency (MHz) | Level (dBm) |
|-----------------|-------------|
| 2480.0000       | 0.1         |

### Measurements

| Frequency (MHz) | Level (dBm) | Margin (dB) | Limit (dBm) | Result |
|-----------------|-------------|-------------|-------------|--------|
| 2487.575000     | -57.2       | 37.3        | -19.9       | PASS   |
| 2487.625000     | -57.4       | 37.5        | -19.9       | PASS   |
| 2483.725000     | -58.3       | 38.3        | -19.9       | PASS   |
| 2483.625000     | -58.5       | 38.5        | -19.9       | PASS   |
| 2489.975000     | -58.5       | 38.6        | -19.9       | PASS   |
| 2489.875000     | -58.6       | 38.7        | -19.9       | PASS   |
| 2487.525000     | -58.6       | 38.7        | -19.9       | PASS   |
| 2483.675000     | -58.8       | 38.9        | -19.9       | PASS   |
| 2489.925000     | -58.8       | 38.9        | -19.9       | PASS   |
| 2486.175000     | -58.9       | 38.9        | -19.9       | PASS   |
| 2486.125000     | -58.9       | 39.0        | -19.9       | PASS   |
| 2485.375000     | -59.0       | 39.0        | -19.9       | PASS   |
| 2485.675000     | -59.0       | 39.1        | -19.9       | PASS   |
| 2483.575000     | -59.0       | 39.1        | -19.9       | PASS   |
| 2483.875000     | -59.0       | 39.1        | -19.9       | PASS   |

## Results of mode 2 @2402 MHz



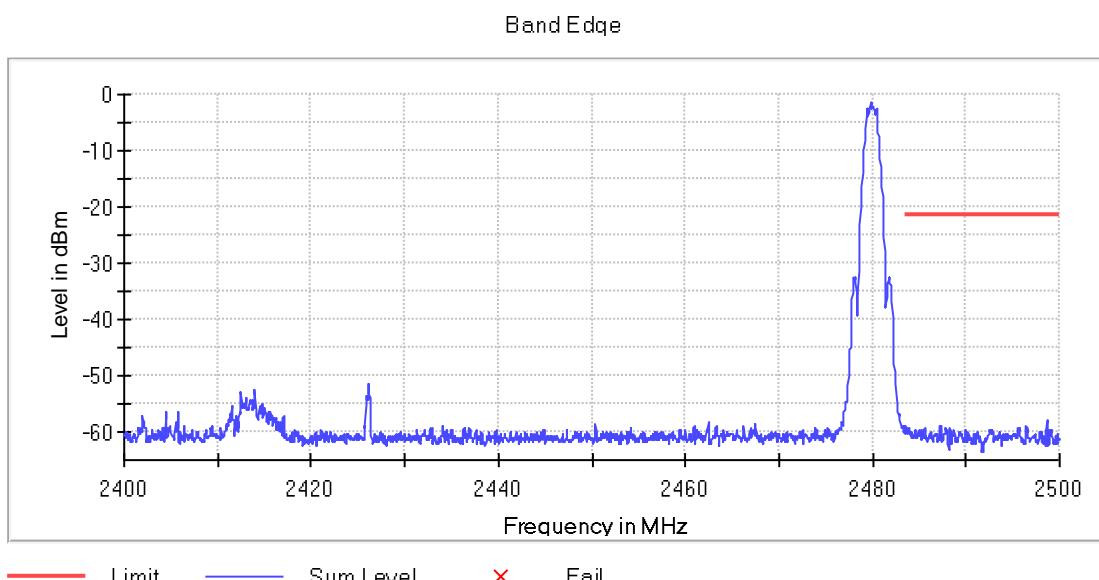
### Inband Peak

| Frequency (MHz) | Level (dBm) |
|-----------------|-------------|
| 2402.0000       | -1.0        |

### Measurements

| Frequency (MHz) | Level (dBm) | Margin (dB) | Limit (dBm) | Result |
|-----------------|-------------|-------------|-------------|--------|
| 2399.975000     | -31.7       | 10.7        | -21.0       | PASS   |
| 2399.925000     | -31.8       | 10.8        | -21.0       | PASS   |
| 2399.875000     | -33.1       | 12.1        | -21.0       | PASS   |
| 2399.825000     | -34.1       | 13.1        | -21.0       | PASS   |
| 2399.775000     | -35.9       | 14.9        | -21.0       | PASS   |
| 2399.725000     | -37.8       | 16.8        | -21.0       | PASS   |
| 2399.675000     | -39.8       | 18.8        | -21.0       | PASS   |
| 2399.625000     | -42.1       | 21.2        | -21.0       | PASS   |
| 2399.575000     | -44.3       | 23.3        | -21.0       | PASS   |
| 2399.525000     | -47.0       | 26.1        | -21.0       | PASS   |
| 2399.475000     | -47.6       | 26.6        | -21.0       | PASS   |
| 2399.425000     | -48.1       | 27.1        | -21.0       | PASS   |
| 2399.375000     | -50.6       | 29.6        | -21.0       | PASS   |
| 2399.325000     | -52.7       | 31.7        | -21.0       | PASS   |
| 2399.125000     | -53.2       | 32.2        | -21.0       | PASS   |

## Results of mode 2 @2480 MHz



### Inband Peak

| Frequency (MHz) | Level (dBm) |
|-----------------|-------------|
| 2480.0000       | -1.4        |

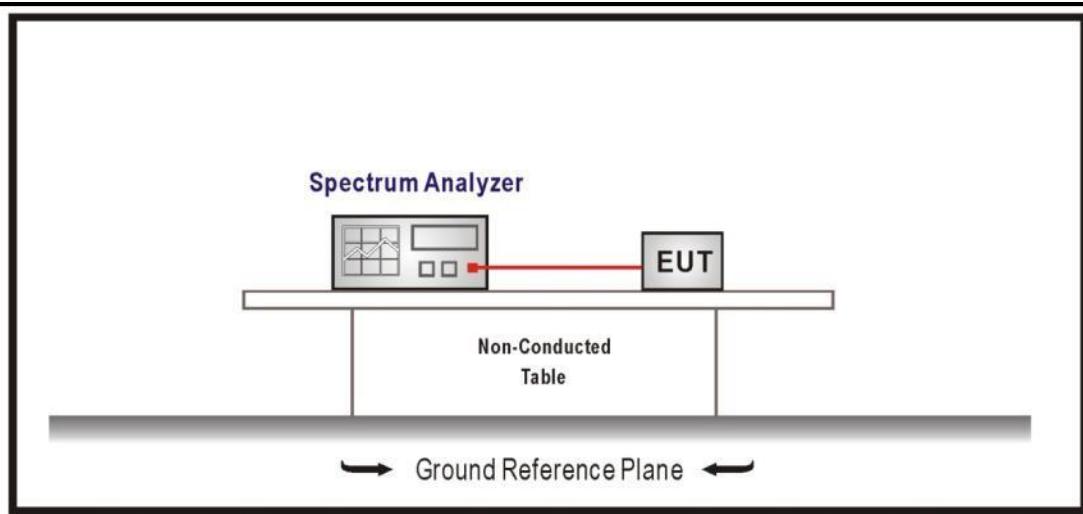
### Measurements

| Frequency (MHz) | Level (dBm) | Margin (dB) | Limit (dBm) | Result |
|-----------------|-------------|-------------|-------------|--------|
| 2498.625000     | -58.0       | 36.6        | -21.4       | PASS   |
| 2498.675000     | -58.2       | 36.8        | -21.4       | PASS   |
| 2487.225000     | -59.0       | 37.6        | -21.4       | PASS   |
| 2487.275000     | -59.1       | 37.7        | -21.4       | PASS   |
| 2496.425000     | -59.1       | 37.7        | -21.4       | PASS   |
| 2495.525000     | -59.1       | 37.7        | -21.4       | PASS   |
| 2496.475000     | -59.2       | 37.8        | -21.4       | PASS   |
| 2495.575000     | -59.2       | 37.8        | -21.4       | PASS   |
| 2483.775000     | -59.3       | 37.9        | -21.4       | PASS   |
| 2483.675000     | -59.3       | 37.9        | -21.4       | PASS   |
| 2483.725000     | -59.3       | 37.9        | -21.4       | PASS   |
| 2483.575000     | -59.3       | 37.9        | -21.4       | PASS   |
| 2488.325000     | -59.3       | 37.9        | -21.4       | PASS   |
| 2495.675000     | -59.3       | 37.9        | -21.4       | PASS   |
| 2483.875000     | -59.4       | 38.0        | -21.4       | PASS   |

**4.5 Duty cycle**

**VERDICT: PASS**

**Test Configuration**



**Performed measurements**

|                        |   |                       |
|------------------------|---|-----------------------|
| Port under test        | Antenna port                                  |                       |
| Test method applied    | <input checked="" type="checkbox"/>           | Conducted measurement |
|                        | <input type="checkbox"/>                      | Radiated measurement  |
| Test setup             | Refer to the Annex 3 for test setup photo(s). |                       |
| Operating mode(s) used | Mode 1, Mode 2                                |                       |
| Remark                 | ---   |                       |

## Results

| Test Mode | Tx On (ms) | Tx On + Tx Off (ms) | Duty Cycle |
|-----------|------------|---------------------|------------|
| Mode 1    | ---        | ---                 | 100%       |

Note 1: T means the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control Level for the tested mode of operation.

Note 2: According to KDB 558074, when test for Radiated Emission Band Edge and Radiated Emission, for average detector set:  $VBW \geq 1/T$  will be used.

Gated Trace

Level in dBm

Time in s

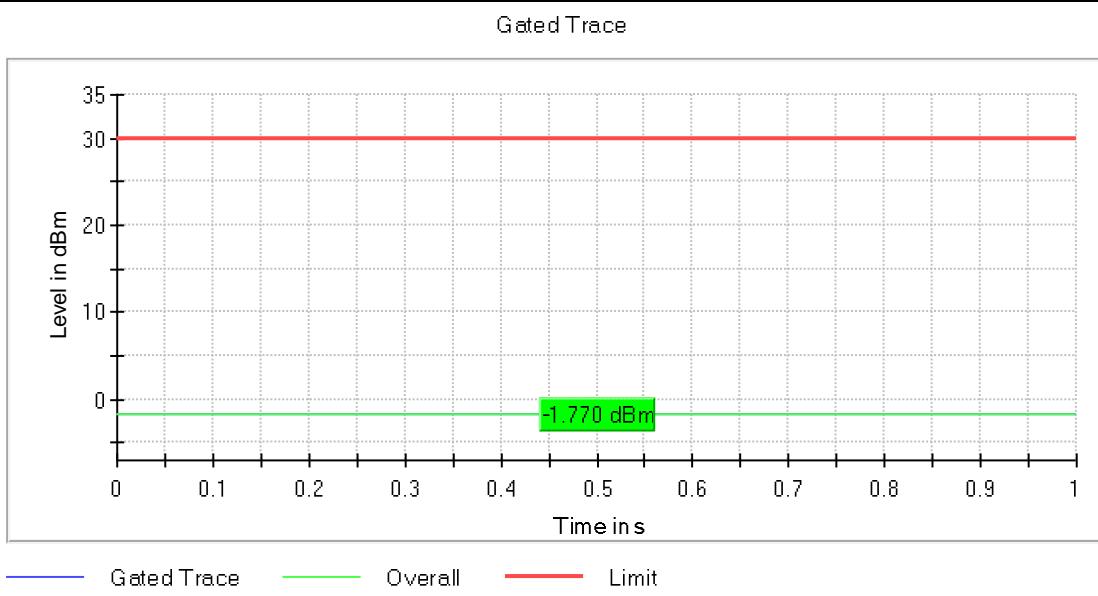
Legend: Gated Trace (Blue), Overall (Green), Limit (Red)

-1.938 dBm

| Test Mode | Tx On (ms) | Tx On + Tx Off (ms) | Duty Cycle |
|-----------|------------|---------------------|------------|
| Mode 2    | ---        | ---                 | 100%       |

Note 1: T means the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control Level for the tested mode of operation.

Note 2: According to KDB 558074, when test for Radiated Emission Band Edge and Radiated Emission, for average detector set:  $VBW \geq 1/T$  will be used.



## 4.6 DTS Bandwidth

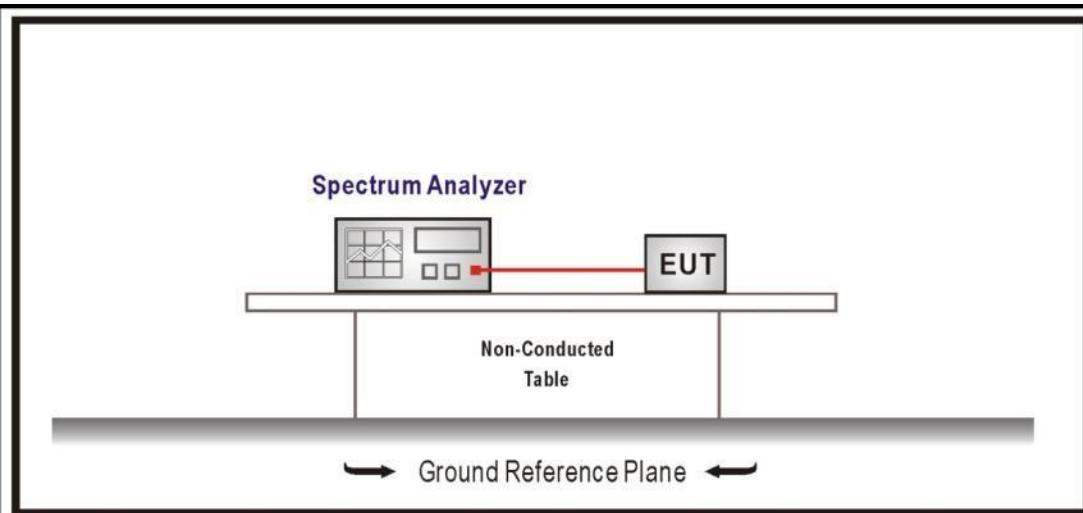
VERDICT: PASS

### Standard

FCC Part 15 Subpart C Paragraph 15.247 (a)(2)

Systems using digital modulation techniques operate in the 2400-2483.5 MHz .The minimum 6 dB bandwidth shall be at least 500 kHz

### Test Configuration



### Performed measurements

|                        |   |                       |
|------------------------|---|-----------------------|
| Port under test        | Antenna port                                  |                       |
| Test method applied    | <input checked="" type="checkbox"/>           | Conducted measurement |
|                        | <input type="checkbox"/>                      | Radiated measurement  |
| Test setup             | Refer to the Annex 3 for test setup photo(s). |                       |
| Operating mode(s) used | Mode 1, Mode 2                                |                       |
| Remark                 | ---   |                       |

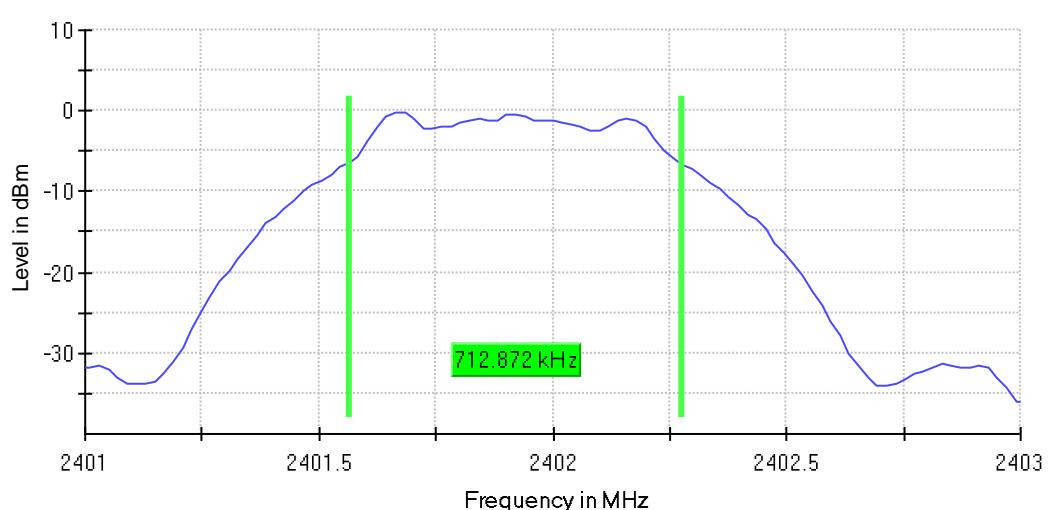
## Results

| Mode | CH. | Test Freq.<br>(MHz) | 6dB Occupied Bandwidth<br>(kHz) | Limit<br>(kHz) | Result |
|------|-----|---------------------|---------------------------------|----------------|--------|
| 1    | 1   | 2402                | 712,87                          | >500           | Pass   |
|      | 39  | 2480                | 732,48                          | >500           | Pass   |

### 6dB Occupied Bandwidth

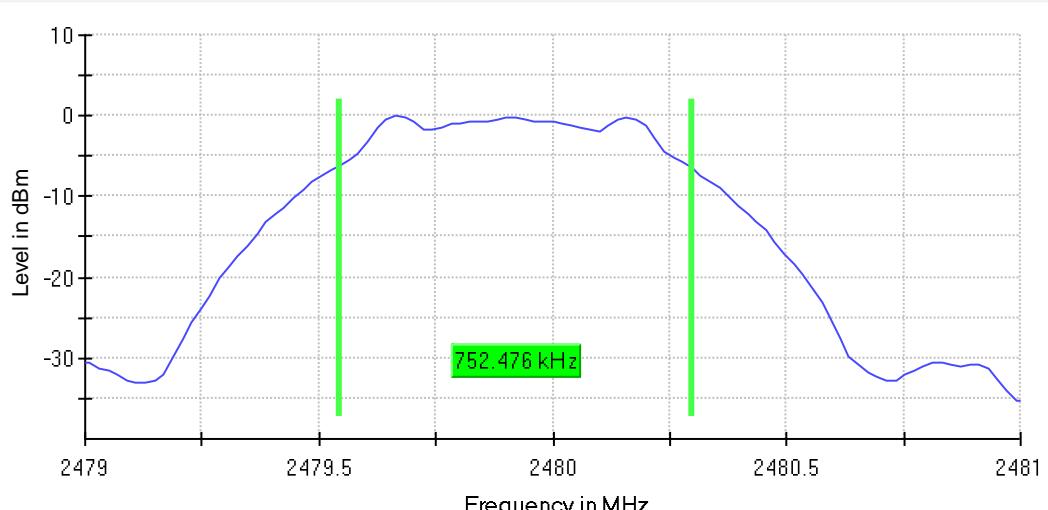
Mode 1 / CH1 (2402MHz)

6 dB Bandwidth



### Mode 1 / CH39 (2480MHz)

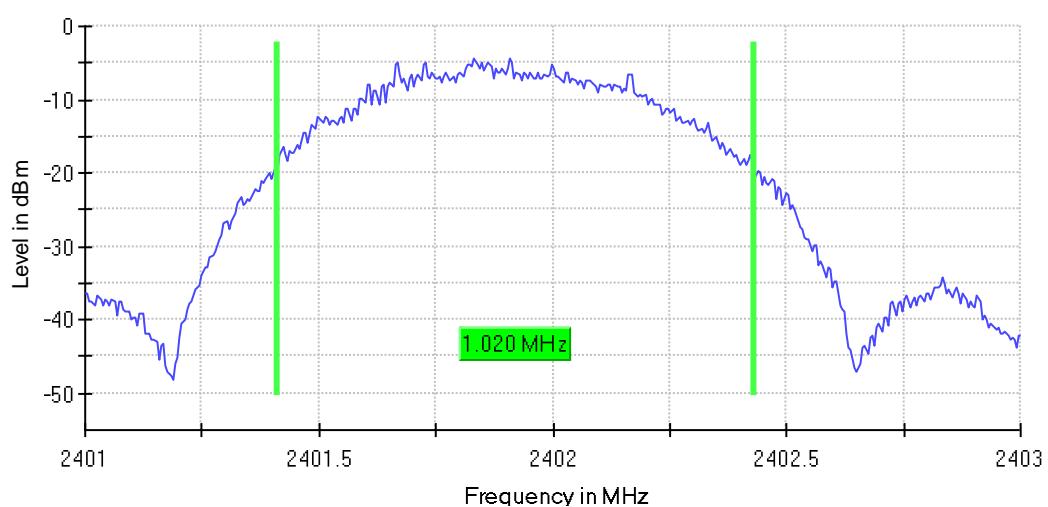
6 dB Bandwidth



| Mode | CH. | Test Freq.<br>(MHz) | 99% Occupied Bandwidth<br>(MHz) | Limit                  | Result |
|------|-----|---------------------|---------------------------------|------------------------|--------|
| 1    | 1   | 2402                | 1.02                            | Within frequency range | Pass   |
|      | 39  | 2480                | 1.03                            | Within frequency range | Pass   |

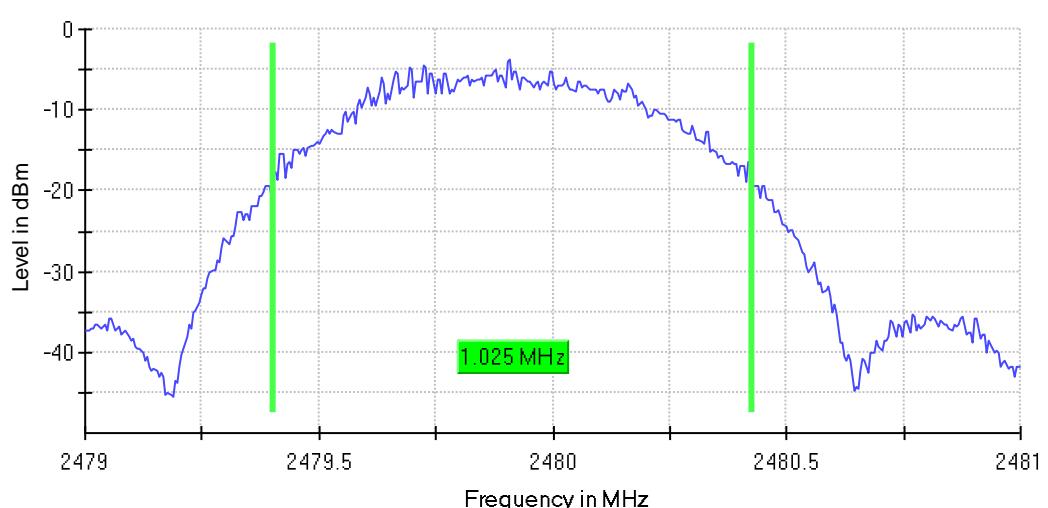
99% Occupied Bandwidth  
Mode 1 / CH1 (2402 MHz)

99 % Bandwidth



Mode 1 / CH39 (2480 MHz)

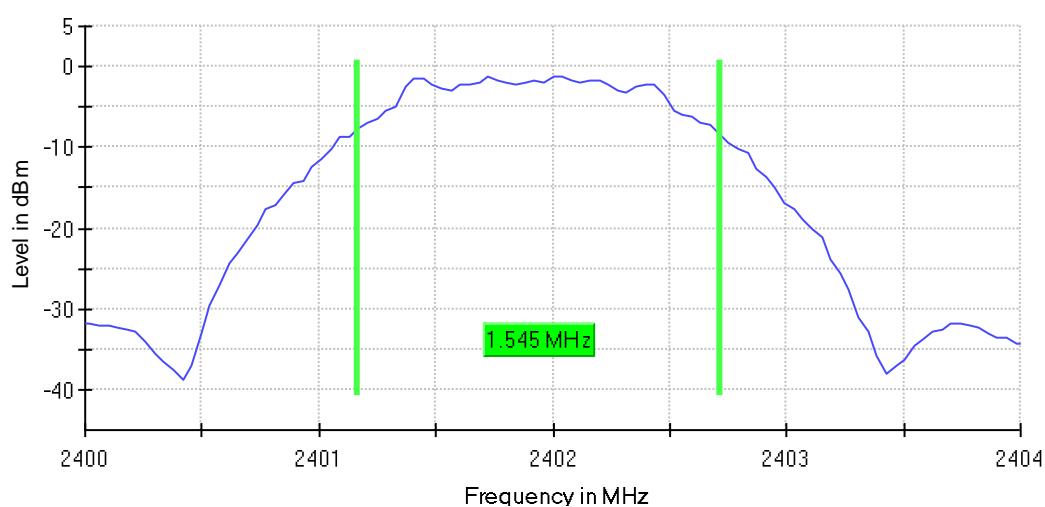
99 % Bandwidth



| Mode | CH. | Test Freq.<br>(MHz) | 6dB Occupied Bandwidth<br>(kHz) | Limit<br>(kHz) | Result |
|------|-----|---------------------|---------------------------------|----------------|--------|
| 2    | 1   | 2402                | 1545                            | >500           | Pass   |
|      | 39  | 2480                | 1505                            | >500           | Pass   |

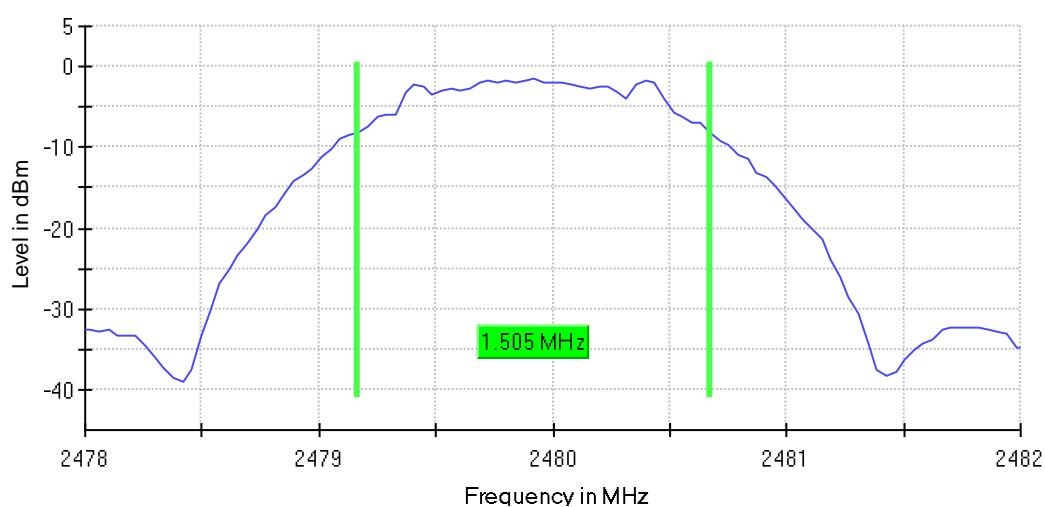
6dB Occupied Bandwidth  
Mode 2 / CH1 (2402MHz)

6 dB Bandwidth



Mode 2 / CH39 (2480MHz)

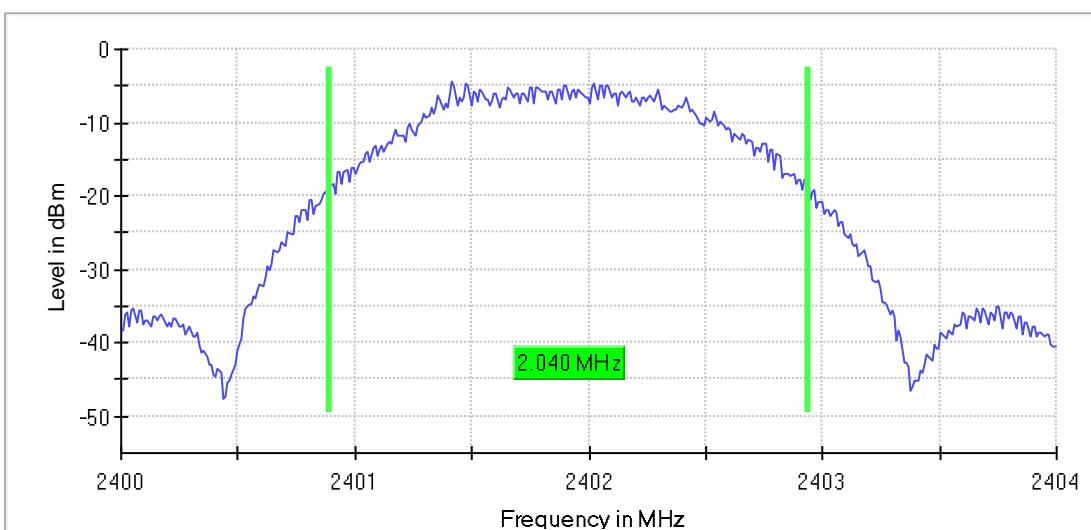
6 dB Bandwidth



| Mode | CH. | Test Freq.<br>(MHz) | 99% Occupied Bandwidth<br>(MHz) | Limit                  | Result |
|------|-----|---------------------|---------------------------------|------------------------|--------|
| 2    | 1   | 2402                | 2,04                            | Within frequency range | Pass   |
|      | 39  | 2480                | 2,05                            | Within frequency range | Pass   |

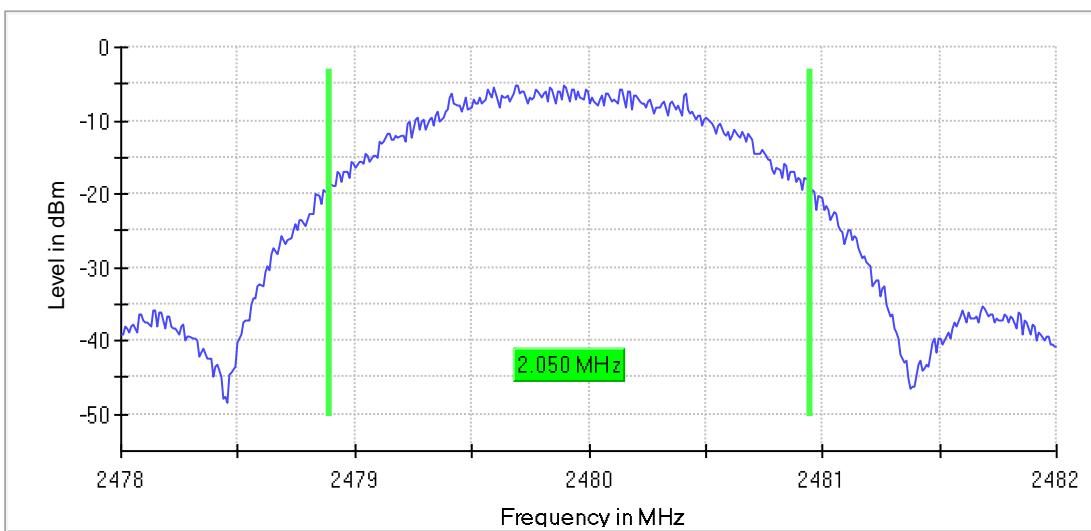
99% Occupied Bandwidth  
Mode 2 / CH1 (2402 MHz)

99 % Bandwidth



Mode 2 / CH39 (2480 MHz)

99 % Bandwidth



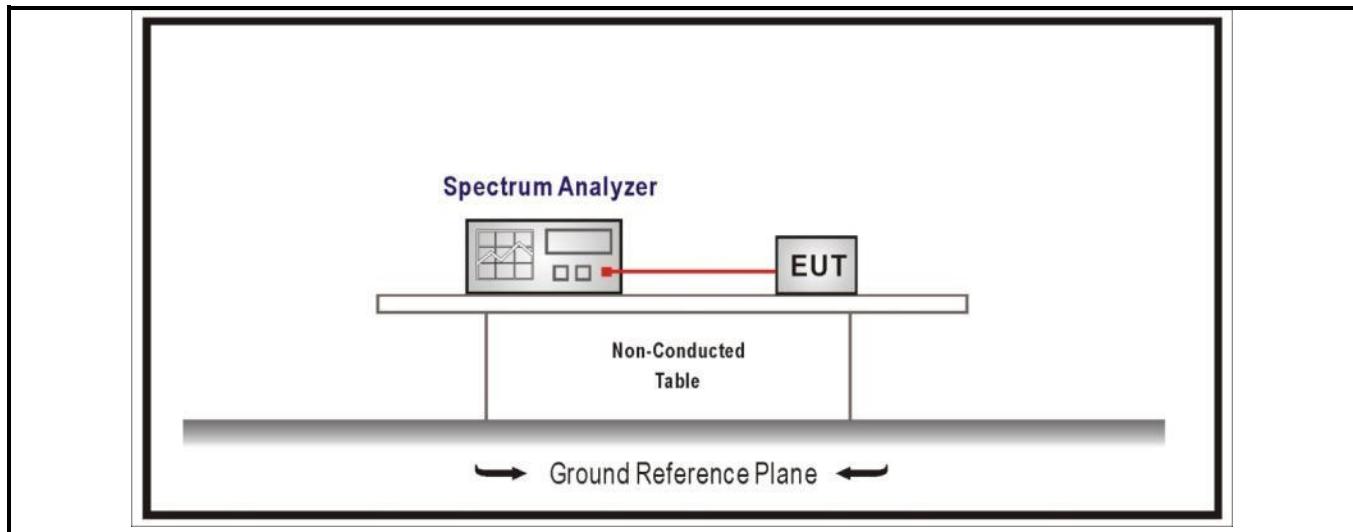
**4.7 Fundamental emission output power**

**VERDICT: PASS**

| Standard                            |   | FCC Part 15 Subpart C Paragraph 15.247 (b)(3) |
|-------------------------------------|---|---|
| <input checked="" type="checkbox"/> | GTX <6dBi   | Pout≤30dBm                                    |
| <input type="checkbox"/>            | GTX >6dBi   |   |
| <input type="checkbox"/>            | Non-Fix point-point                                     | Pout≤30-( GTX -6)                             |
| <input type="checkbox"/>            | Fix point-point   | Pout≤30-[(GTX-6)]/3                           |
| <input type="checkbox"/>            | Point-to-multipoint                                     | Pout≤30-(GTX-6)                               |
| <input type="checkbox"/>            | Overlap Beams   | Pout≤30-[(GTX-6)]/3                           |
| <input type="checkbox"/>            | Aggregate power transmitted simultaneously on all beams | Pout≤30-[(GTX-6)]/3                           |
| <input type="checkbox"/>            | singby LE directional beam                              | Pout≤30-[(GTX-6)]/3+8dB                       |

Note 1 : GTX directional gain of transmitting antennas.  
 Note 2 : Pout is maximum peak conducted output power .

**Test Configuration**



**Performed measurements**

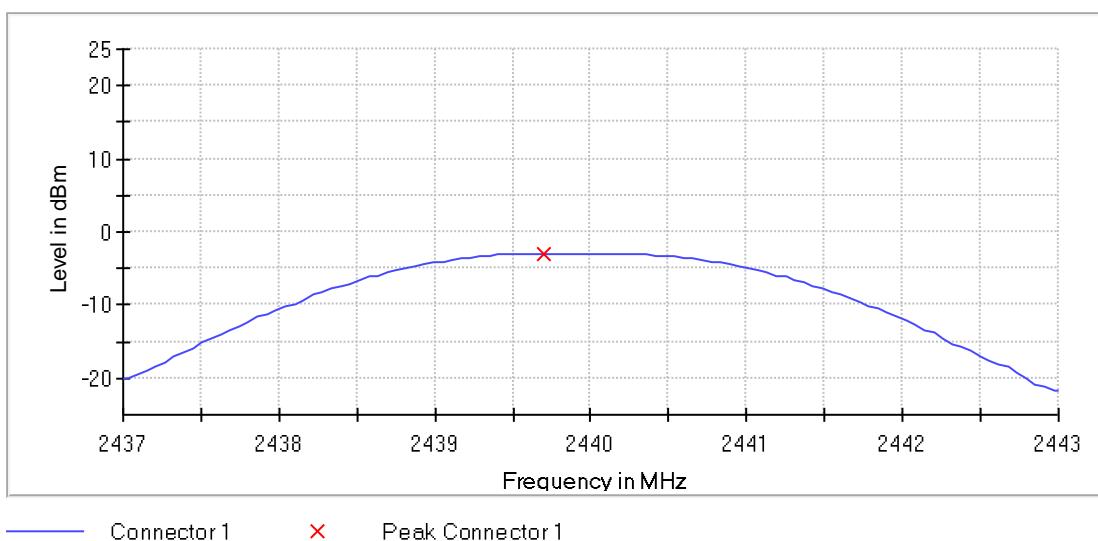
|                        |   |                       |
|------------------------|---|-----------------------|
| Port under test        | Antenna port                                  |                       |
| Test method applied    | <input checked="" type="checkbox"/>           | Conducted measurement |
|                        | <input type="checkbox"/>                      | Radiated measurement  |
| Test setup             | Refer to the Annex 3 for test setup photo(s). |                       |
| Operating mode(s) used | Mode 1, Mode 2                                |                       |
| Remark                 | ---   |                       |

## Results

| Mode   | Channel | Test Frequency (MHz) | Power Output (dBm) | Limit (dBm) | EIRP (dBm) | EIRP Limit (dBm) | Result |
|--------|---------|----------------------|--------------------|-------------|------------|------------------|--------|
| Mode 1 | 1       | 2402                 | -3,2               | ≤30         | 1,8        | ≤36              | Pass   |
|        | 17      | 2440                 | -4,2               | ≤30         | 0,8        | ≤36              | Pass   |
|        | 39      | 2480                 | -4,9               | ≤30         | 0,1        | ≤36              | Pass   |
| Mode 2 | 1       | 2402                 | -2,9               | ≤30         | 2,1        | ≤36              | Pass   |
|        | 17      | 2440                 | -3,1               | ≤30         | 1,9        | ≤36              | Pass   |
|        | 39      | 2480                 | -4,9               | ≤30         | 0,1        | ≤36              | Pass   |

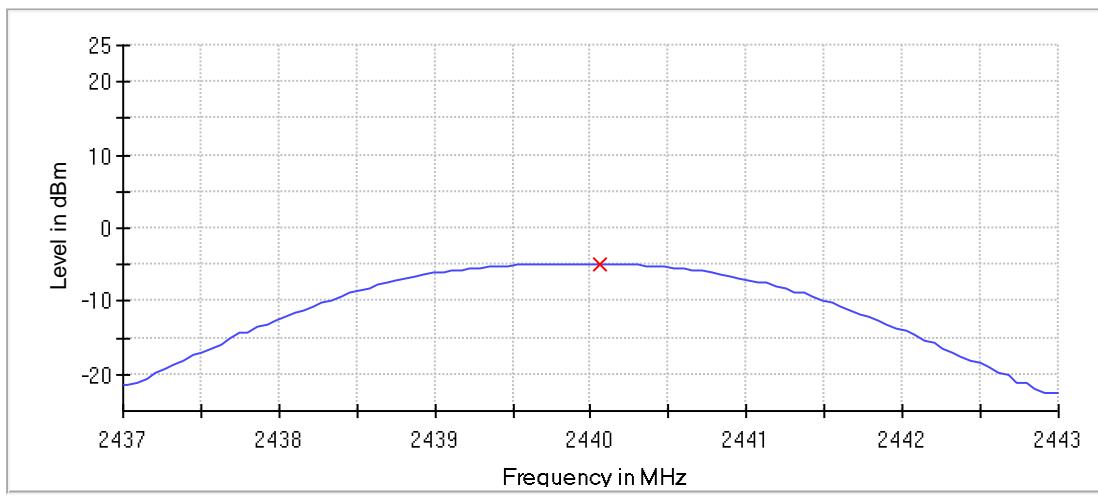
Data of Mode 1

Peak Power



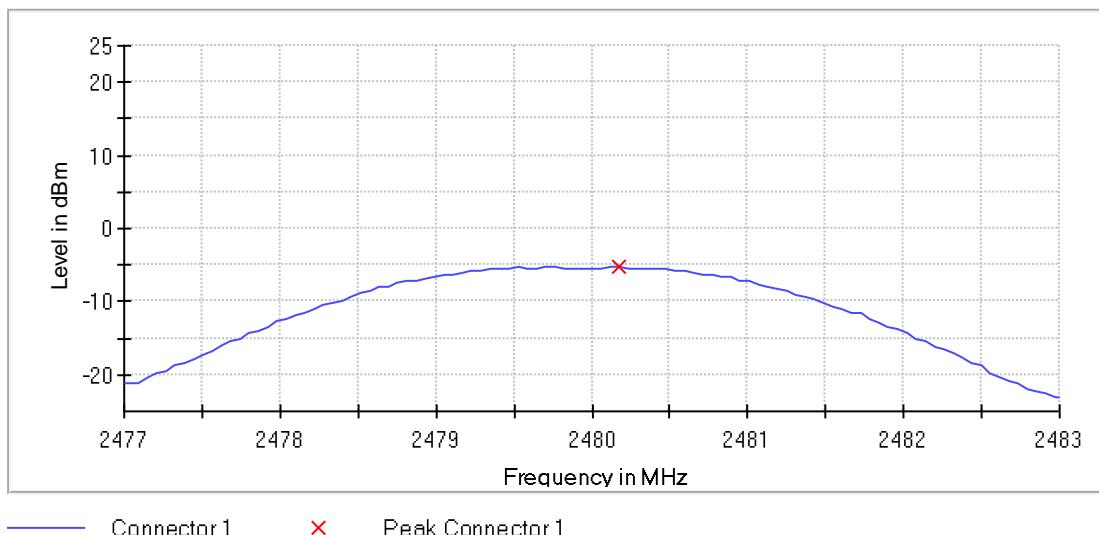
— Connector 1      ✕ Peak Connector 1

Peak Power



— Connector 1      ✕ Peak Connector 1

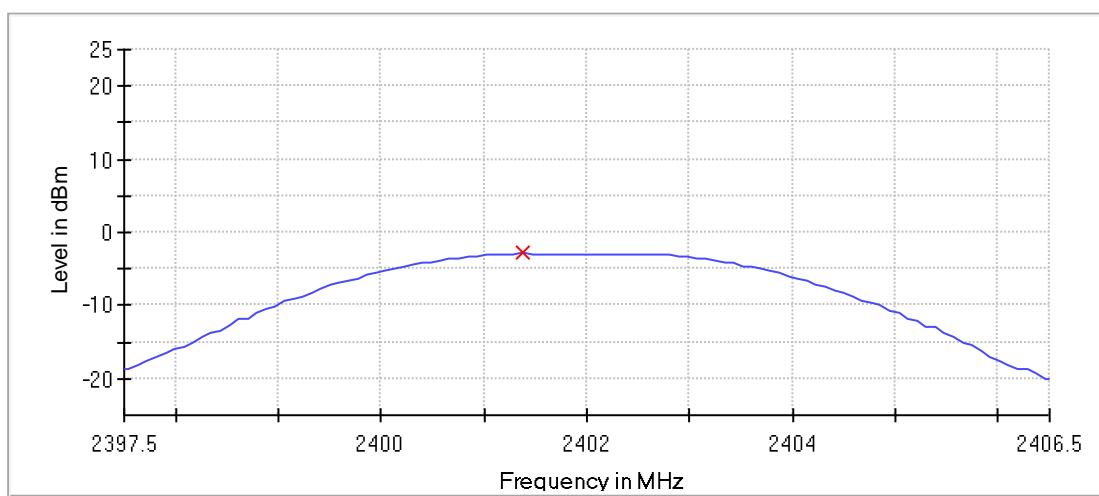
Peak Power



— Connector 1      ✕ Peak Connector 1

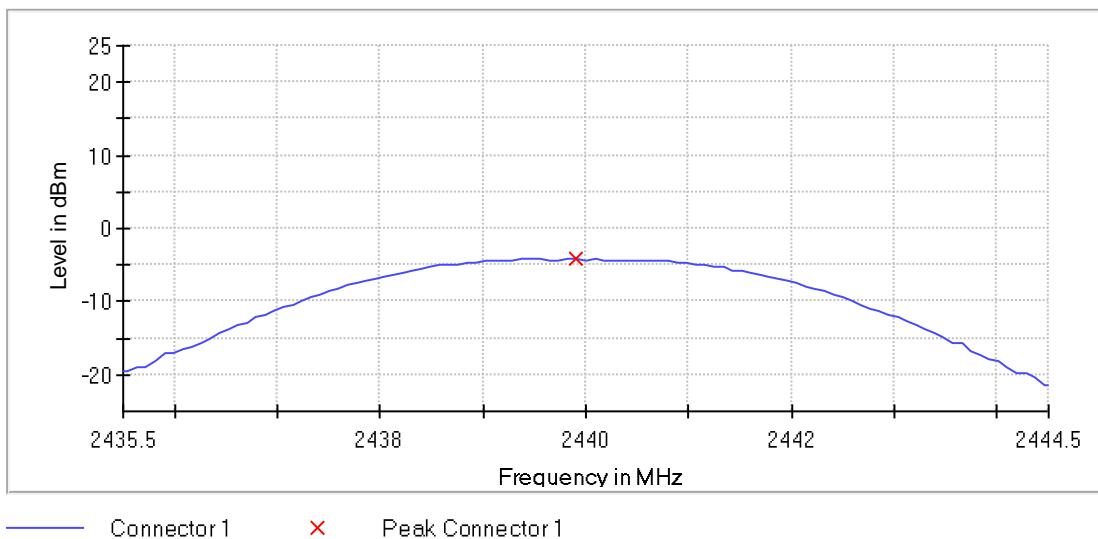
Data of Mode 2

Peak Power



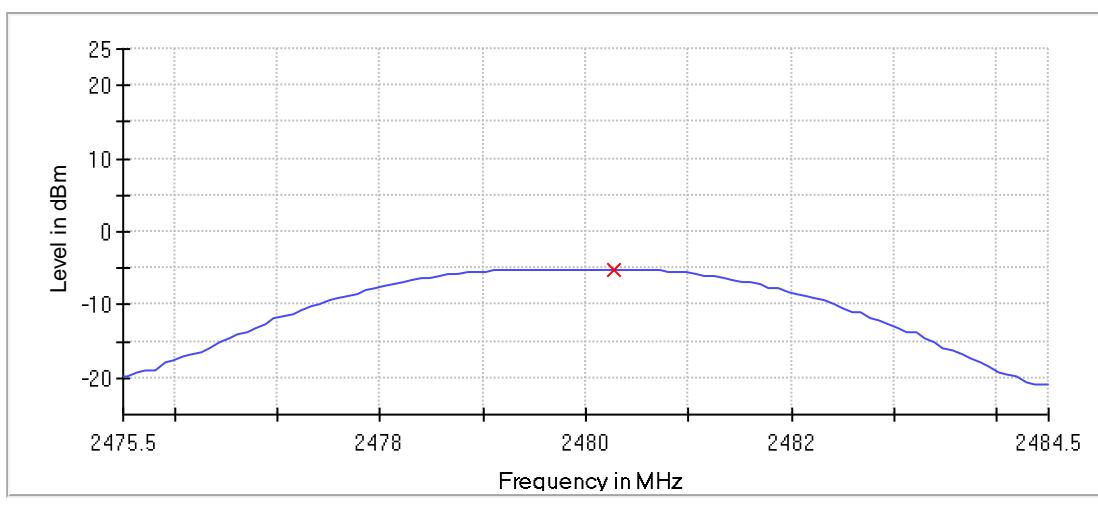
— Connector 1      ✕ Peak Connector 1

Peak Power



— Connector 1      ✕ Peak Connector 1

Peak Power



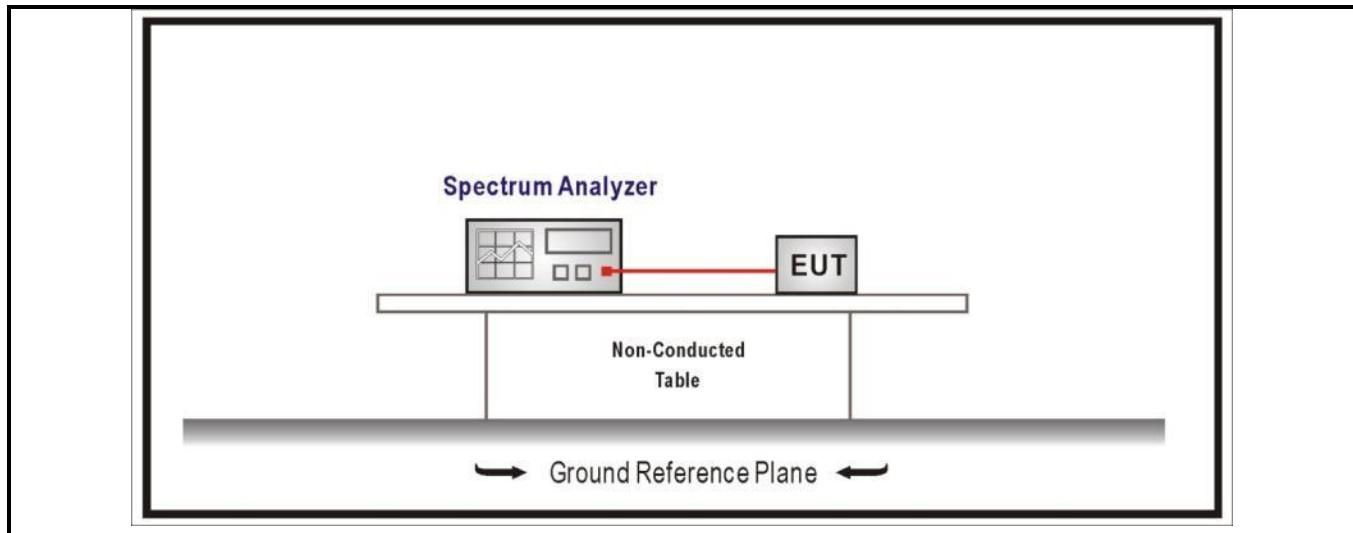
— Connector 1      ✕ Peak Connector 1

## 4.8 Power Density

**VERDICT: PASS**

|   |   |
|---|---|
| <b>Standard</b>                         | FCC Part 15 Subpart C Paragraph 15.247 (b)(3) |
| Power Spectral Density $\leq$ 8dBm/3kHz |   |

### Test Configuration



### Performed measurements

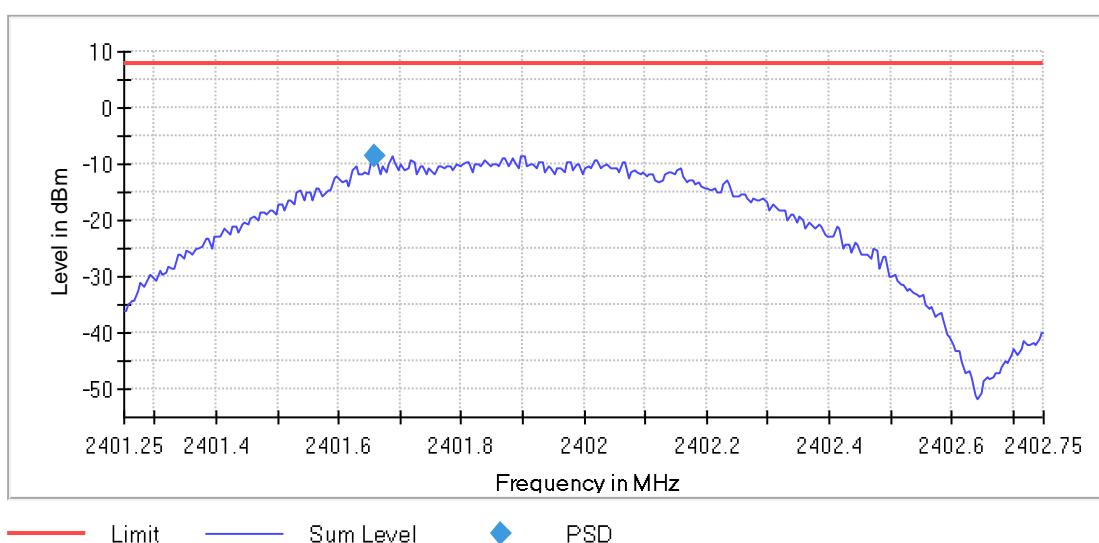
|                        |   |                       |
|------------------------|---|-----------------------|
| Port under test        | Antenna port                                  |                       |
| Test method applied    | <input checked="" type="checkbox"/>           | Conducted measurement |
|                        | <input type="checkbox"/>                      | Radiated measurement  |
| Test setup             | Refer to the Annex 3 for test setup photo(s). |                       |
| Operating mode(s) used | Mode 1, Mode 2                                |                       |
| Remark                 | ---   |                       |

### Results

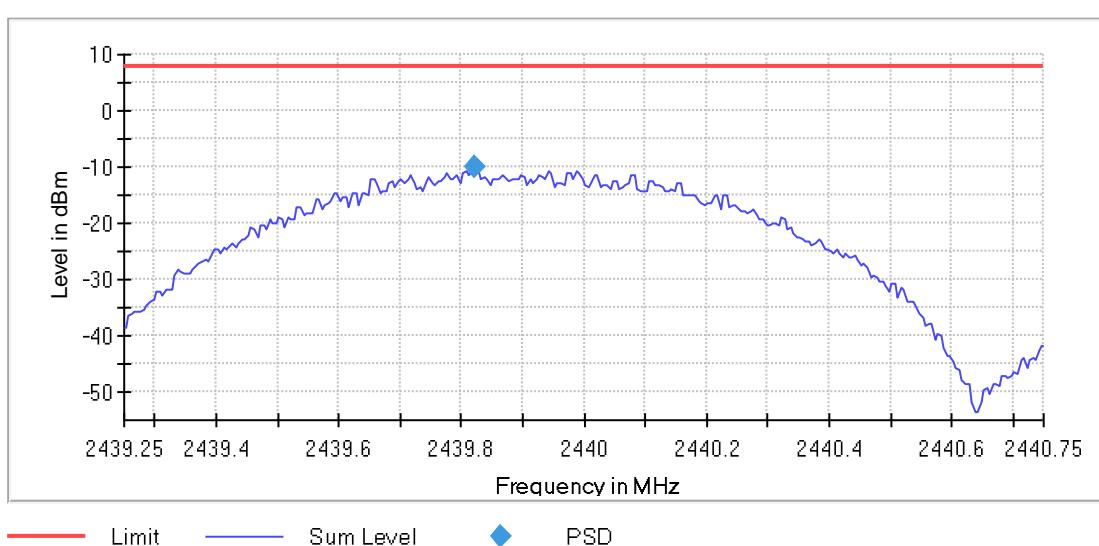
| Mode   | Channel | Test Frequency (MHz) | Power Output (dBm) | Limit (dBm/3kHz) | Result |
|--------|---------|----------------------|--------------------|------------------|--------|
| Mode 1 | 1       | 2402                 | -8,45              | $\leq$ 8         | Pass   |
|        | 17      | 2440                 | -9,83              | $\leq$ 8         | Pass   |
|        | 39      | 2480                 | -9,92              | $\leq$ 8         | Pass   |
| Mode 2 | 1       | 2402                 | -8,86              | $\leq$ 8         | Pass   |
|        | 17      | 2440                 | -10,05             | $\leq$ 8         | Pass   |
|        | 39      | 2480                 | -10,28             | $\leq$ 8         | Pass   |

Data of Mode 1

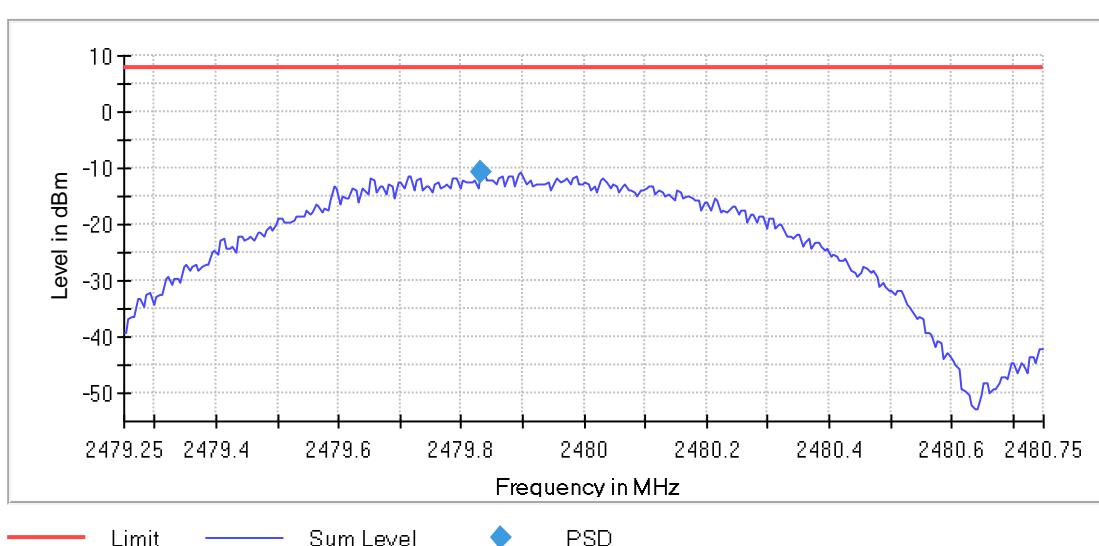
Peak Power Spectral Density



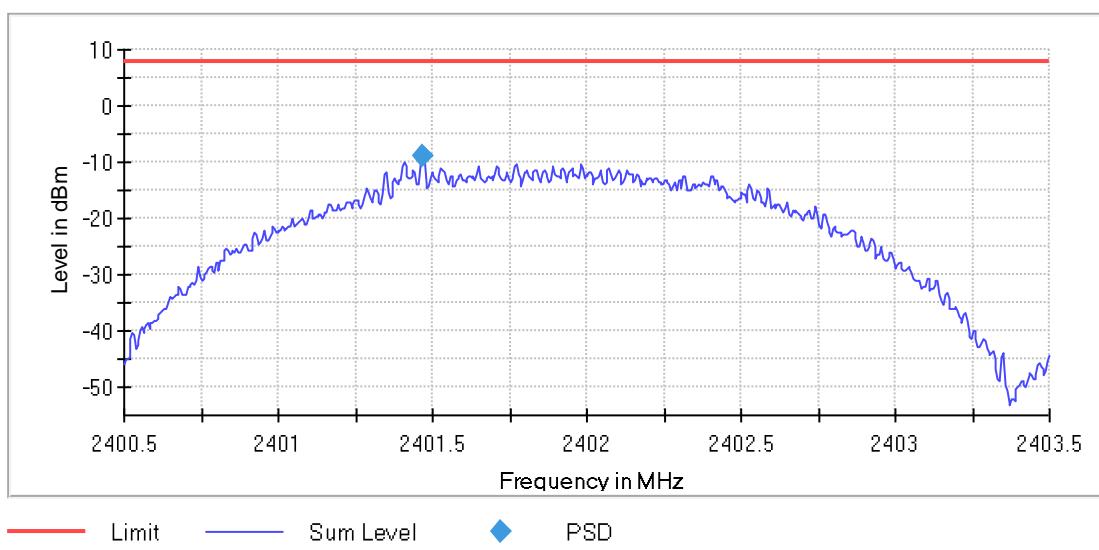
Peak Power Spectral Density



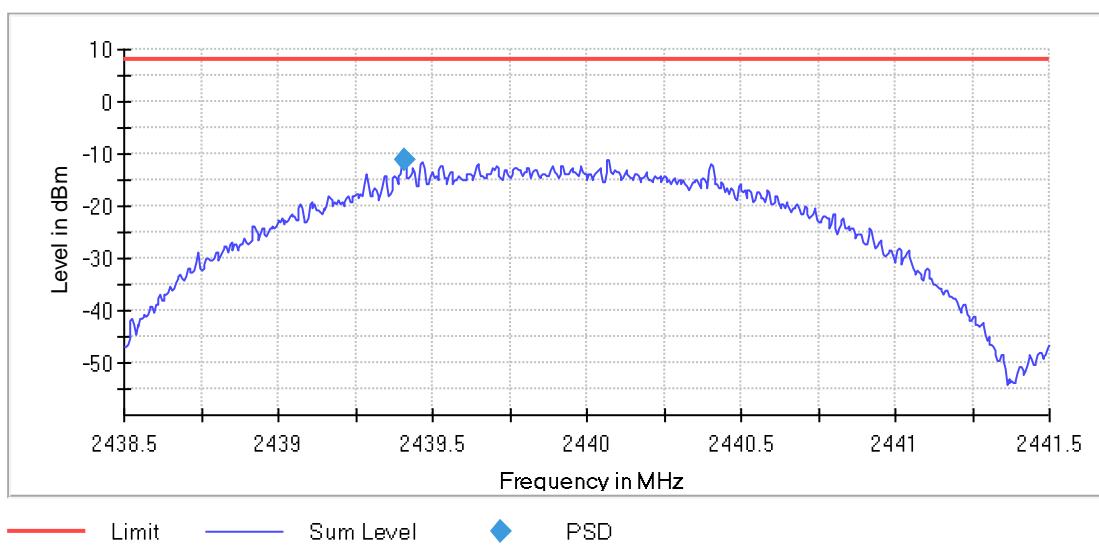
Peak Power Spectral Density



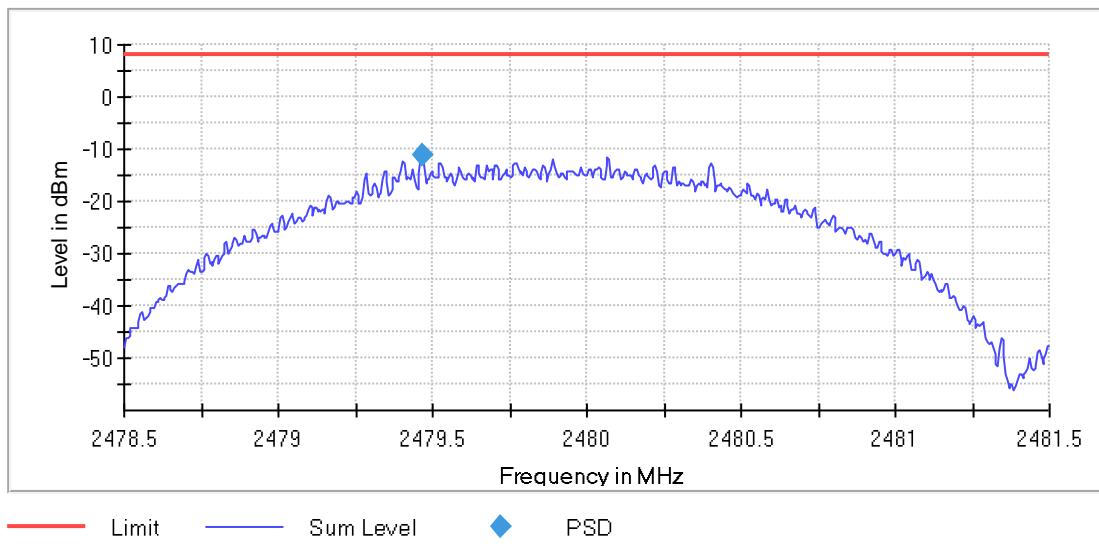
Data of Mode 2  
Peak Power Spectral Density



Peak Power Spectral Density



Peak Power Spectral Density



## 5 IDENTIFICATION OF THE EQUIPMENT UNDER TEST

The photographs show the tested device.

Refer to documents External photo and Internal photo.

## ANNEX 1 – MEASUREMENT UNCERTAINTY

| Test Item                         | Uncertainty |
|-----------------------------------|-------------|
| Occupied Channel Bandwidth        | ±0,7%       |
| RF Output power, conducted        | ±0,6dB      |
| Power Spectral Density, Conducted | ±0,6dB      |
| Unwanted Emissions, Conducted     | ±0.7dB      |
| Spurious (30-1000MHz)             | ±4,4dB      |
| Spurious (1-12,75GHz)             | ±4,4dB      |

## ANNEX 2 - USED EQUIPMENT

Continuous disturbances conducted (150 kHz to 30 MHz)

| Item | Instrumentation | Manufacturer    | Model No. | Serial No. | DEKRA No. | Cal. Due date |
|------|-----------------|-----------------|-----------|------------|-----------|---------------|
| 1    | EMI Receiver    | R&S             | ESCI      | 101206     | G/L858    | 2023/07/21    |
| 2    | LISN            | R&S             | ENV216    | 101336     | G/L859    | 2023/07/21    |
| 3    | Shielding Room  | Changzhou Feite | /         | /          | G/L861    | 2023/06/17    |

Emissions in non-restricted frequency bands/ Emissions in restricted frequency bands

| Item | Instrumentation   | Manufacturer | Model No. | Serial No. | DEKRA No. | Cal. Due date |
|------|---|--------------|-----------|------------|-----------|---------------|
| 1    | EMI receiver  | R&S          | ESCI      | 101205     | G/L857    | 2023/07/21    |
| 2    | Antenna<br>(30MHz-3GHz)                                   | SCHWARZBECK  | VULB9163  | 506        | G/L864    | 2022/10/26    |
| 3    | Chamber   | ETS          | /         | /          | G/L856    | 2024/06/10    |
| 4    | Antenna<br>(1GHz-18GHz)                                   | R&S          | HF907     | 102306     | G/L1236   | 2023/02/23    |
| 5    | Horn antenna<br>preamplifier                              | Schwarzbeek  | SCU-18    | 102234     | G/L1236-1 | 2023/02/21    |
| 6    | Spectrum analyzer   | R&S          | FSV       | SN101012   | G/L1235   | 2023/01/17    |
| 7    | HF antenna<br>(18 – 26.5 GHz)                             | ETS          | 3160-09   | 00164643   | G/L1237   | 2023/01/16    |
| 8    | High frequency<br>antenna preamplifier<br>(18 – 26.5 GHz) | Schwarzbeck  | SCU-26    | 1879064    | G/L1237-1 | 2023/01/10    |
| 9    | Broadband horn<br>antenna<br>(15 – 40 GHz)                | Schwarzbeck  | BBHA9170  | 00908      | GZ1901    | 2023/05/06    |
| 10   | High frequency<br>antenna preamplifier<br>(18 – 26.5 GHz) | Schwarzbeck  | SCU-26    | 1879064    | G/L1237-1 | 2023/01/10    |
| 11   | Annular magnetic field<br>antenna                         | TESEQ        | HLA6121   | 540045     | GZ1905    | 2023/05/12    |

Duty cycle/Band Edge/Fundamental emission output power/DTS Bandwidth/Power Spectral Density

| Item | Instrumentation   | Manufacturer | Model   | Serial no. | DEKRA No. | Cal Due date |
|------|-------------------|--------------|---------|------------|-----------|--------------|
| 1    | Spectrum analyzer | R&S          | FSV     | SN101012   | G/L1235   | 2023/01/17   |
| 2    | Chamber           | ETS          | /       | /          | G/L856    | 2024/06/10   |
| 3    | OSP               | R&S          | OSP 150 | 101907     | GZ1894    | 2023/04/27   |

## **ANNEX 3 - TEST PHOTOS**

Refer to document Test setup.

--- END ---