# FCC Radio Test Report

## FCC ID: VSFMS3A

**This report concerns: Original Grant**

| | | |
|---|---|---|
| **Project No.** | : | 1907H013 |
| **Equipment** | : | Tablet |
| **Brand Name** | : | Juniper Systems |
| **Test Model** | : | MS3A |
| **Series Model** | : | N/A |
| **Applicant** | : | Juniper Systems |
| **Address** | : | 1132 W 1700 N Logan, UT 84321 |
| **Manufacturer** | : | Juniper Systems |
| **Address** | : | 1132 W 1700 N Logan, UT 84321 |
| **Date of Receipt** | : | Jul. 16, 2019 |
| **Date of Test** | : | Jul. 18, 2019~Nov. 03, 2019 |
| **Issued Date** | : | Nov. 07, 2019 |
| **Report Version** | : | R00 |
| **Test Sample** | : | Engineering Sample No.: SH2019091645/SH2019091646/ SH2019091641-5 /SH2019091641-6 |
| **Standard(s)** | : | FCC Part15, Subpart C (15.247)<br>ANSI C63.10-2013<br>KDB 558074 D01 15.247 Meas Guidance V05r02 |

The above equipment has been tested and found compliance with the requirement of the relative standards by BTL Inc.

Krain. Wu

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## Declaration

**BTL** represents to the client that testing is done in accordance with standard procedures as applicable and that test instruments used has been calibrated with standards traceable to international standard(s) and/or national standard(s).

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The information, data and test plan are provided by manufacturer which may affect the validity of results, so it is manufacturer's responsibility to ensure that the apparatus meets the essential requirements of applied standards and in all the possible configurations as representative of its intended use.

## Limitation

For the use of the authority's logo is limited unless the Test Standard(s)/Scope(s)/Item(s) mentioned in this test report is (are) included in the conformity assessment authorities acceptance respective.
Please note that the measurement uncertainty is provided for informational purpose only and are not use in determining the Pass/Fail results.

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## REPORT ISSUED HISTORY

| Report Version | Description | Issued Date |
|---|---|---|
| R00 | Original Issue. | Nov. 07, 2019 |

## 1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standard(s):

| FCC Part15, Subpart C (15.247) | | | | |
|---|---|---|---|---|
| **Standard(s) Section** | **Test Item** | **Test Result** | **Judgment** | **Remark** |
| 15.207 | AC Power Line Conducted Emissions | APPENDIX A | N/A | ------ |
| 15.247(d)<br>15.205(a)<br>15.209(a) | Radiated Emission | APPENDIX B<br>APPENDIX C<br>APPENDIX D | PASS | ------ |
| 15.247<br>(a)(1)(iii) | Number of Hopping Frequency | APPENDIX E | PASS | ------ |
| 15.247<br>(a)(1)(iii) | Average Time Of Occupancy | APPENDIX F | PASS | ------ |
| 15.247(a)(1) | Hopping Channel Separation | APPENDIX G | PASS | ------ |
| 15.247(a)(1) | Bandwidth | APPENDIX H | PASS | ------ |
| 15.247(a)(1) | Maximum Output Power& e.i.r.p. | APPENDIX I | PASS | ------ |
| 15.247(d) | Conducted Spurious Emission | APPENDIX J | PASS | ------ |
| 15.203 | Antenna Requirement | ------ | PASS | ------ |

Note:

(1) “N/A” denotes test is not applicable in this test report

## 1.1 TEST FACILITY

The test facilities used to collect the test data in this report is at the location of No. 29, Jintang Road, Tangzhen Industry Park, Pudong New Area, Shanghai 201210,China
BTL's Test Firm Registration Number for FCC: 476765
BTL's Designation Number for FCC: CN1241

## 1.2 MEASUREMENT UNCERTAINTY

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

A. AC power line conducted emissions test:

| Test Site | Method | Measurement Frequency Range | U, (dB) |
|---|---|---|---|
| SH-C01 | CISPR | 150 kHz ~ 30 MHz | ± 2.26 |

B. Radiated emissions test:

| Test Site | Method | Measurement Frequency Range | Ant. H / V | U, (dB) |
|---|---|---|---|---|
| SH-CB01 | CISPR | 9 KHz~30 MHz | V | 3.79 |
| | | 9 KHz~30 MHz | H | 3.57 |
| | | 30 MHz~200 MHz | V | 4.04 |
| | | 30 MHz~200 MHz | H | 3.76 |
| | | 200 MHz~1,000 MHz | V | 4.24 |
| | | 200 MHz~1,000 MHz | H | 3.84 |
| | | 1 GHz~18 GHz | V | 4.46 |
| | | 1 GHz~18 GHz | H | 4.40 |
| | | 18 GHz~40 GHz | V | 3.95 |
| | | 18 GHz~40 GHz | H | 3.95 |

Note: Unless specifically mentioned, the uncertainty of measurement has not been taken into account to declare the compliance or non-compliance to the specification.

## 1.3 TEST ENVIRONMENT CONDITIONS

| Test Item | Temperature | Humidity | Test Voltage | Tested By |
|---|---|---|---|---|
| AC Power Line Conducted Emissions | 24°C | 61% | AC 120V | Summer Xu |
| Radiated Emissions-9K-30MHz | 23°C | 55% | AC 120V | Summer Xu |
| Radiated Emissions-30 MHz to 1GHz | 23°C | 55% | AC 120V | Summer Xu |
| Radiated Emissions-Above 1000 MHz | 23°C | 55% | AC 120V | Summer Xu |
| Number of Hopping Frequency | 24°C | 61% | AC 120V | Summer Xu |
| Average Time Of Occupancy | 24°C | 61% | AC 120V | Summer Xu |
| Hopping Channel Separation | 24°C | 61% | AC 120V | Summer Xu |
| Bandwidth | 24°C | 61% | AC 120V | Summer Xu |
| Maximum Output Power & e.i.r.p. | 24°C | 61% | AC 120V | Summer Xu |
| Conducted Spurious Emission | 23°C | 55% | AC 120V | Summer Xu |

# 2. GENERAL INFORMATION

## 2.1 GENERAL DESCRIPTION OF EUT

| | |
|---|---|
| Equipment | Tablet |
| Brand Name | Juniper Systems |
| Test Model | MS3A |
| Series Model | N/A |
| Model Difference(s) | N/A |
| Software Version | MS3A-userdebug 9.1.0.1-20190619<br>eng.mirror.20190619.093211 test-keys |
| Hardware Version | DVT1 |
| Power Source | #1 DC voltage supplied from AC/DC adapter.<br>Model：PSAA30R-120<br>#2 Supplied from Li-ion battery pack. |
| Power Rating | #1 I/P: 100~240V 0.8A 50~60Hz<br>O/P: 12V ⎓ 2.5A<br>#2 7.2V, 6.0A, 43.2W |
| Operation Frequency | 2402 MHz ~ 2480 MHz |
| Modulation Technology | GFSK, π/4-DQPSK, 8-DPSK |
| Bit Rate of Transmitter | 1/2/3Mbps |
| Max. Output Power | 6.61 dBm (0.0046 W) For 1Mbps<br>5.35 dBm (0.0034 W) For 3Mbps |

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.

2. Channel List:

| Channel | Frequency (MHz) | Channel | Frequency (MHz) | Channel | Frequency (MHz) |
|---|---|---|---|---|---|
| 00 | 2402 | 27 | 2429 | 54 | 2456 |
| 01 | 2403 | 28 | 2430 | 55 | 2457 |
| 02 | 2404 | 29 | 2431 | 56 | 2458 |
| 03 | 2405 | 30 | 2432 | 57 | 2459 |
| 04 | 2406 | 31 | 2433 | 58 | 2460 |
| 05 | 2407 | 32 | 2434 | 59 | 2461 |
| 06 | 2408 | 33 | 2435 | 60 | 2462 |
| 07 | 2409 | 34 | 2436 | 61 | 2463 |
| 08 | 2410 | 35 | 2437 | 62 | 2464 |
| 09 | 2411 | 36 | 2438 | 63 | 2465 |
| 10 | 2412 | 37 | 2439 | 64 | 2466 |
| 11 | 2413 | 38 | 2440 | 65 | 2467 |
| 12 | 2414 | 39 | 2441 | 66 | 2468 |
| 13 | 2415 | 40 | 2442 | 67 | 2469 |
| 14 | 2416 | 41 | 2443 | 68 | 2470 |
| 15 | 2417 | 42 | 2444 | 69 | 2471 |
| 16 | 2418 | 43 | 2445 | 70 | 2472 |
| 17 | 2419 | 44 | 2446 | 71 | 2473 |
| 18 | 2420 | 45 | 2447 | 72 | 2474 |
| 19 | 2421 | 46 | 2448 | 73 | 2475 |
| 20 | 2422 | 47 | 2449 | 74 | 2476 |
| 21 | 2423 | 48 | 2450 | 75 | 2477 |
| 22 | 2424 | 49 | 2451 | 76 | 2478 |
| 23 | 2425 | 50 | 2452 | 77 | 2479 |
| 24 | 2426 | 51 | 2453 | 78 | 2480 |
| 25 | 2427 | 52 | 2454 | | |
| 26 | 2428 | 53 | 2455 | | |

3 Table for Filed Antenna:

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| Ant. | Brand | Model Name | Antenna Type | Connector | Gain (dBi) |
|---|---|---|---|---|---|
| 1 | N/A | N/A | PIFA | N/A | 1.2 |

## 2.2 DESCRIPTION OF TEST MODES

The test system was pre-tested based on the consideration of all possible combinations of EUT operation mode.

| Pretest Mode | Description |
|---|---|
| Mode 1 | TX Mode **NOTE (1)** |
| Mode 2 | TX Mode Channel 78 _1Mbps |

Following mode(s) was (were) found to be the worst case(s) and selected for the final test.

| **AC power line conducted emissions test** | |
|---|---|
| Final Test Mode | Description |
| Mode 1 | TX Mode |

| **Radiated emissions test - Below 1GHz** | |
|---|---|
| Final Test Mode | Description |
| Mode 2 | TX Mode Channel 78 _1Mbps |

| **Radiated emissions test - Above 1GHz** | |
|---|---|
| Final Test Mode | Description |
| Mode 1 | TX Mode **NOTE (1)** |

| **Conducted test** | |
|---|---|
| Final Test Mode | Description |
| Mode 1 | TX Mode **NOTE (1)** |

Note:

(1) The measurements are performed at the high, middle, low available channels.

(2) The measurements for Hopping Channel Separation, Bandwidth and Maximum Output Power were tested during 1Mbps, 2Mbps and 3Mbps, the worst case are 1Mbps and 3Mbps, only worst case was documented.

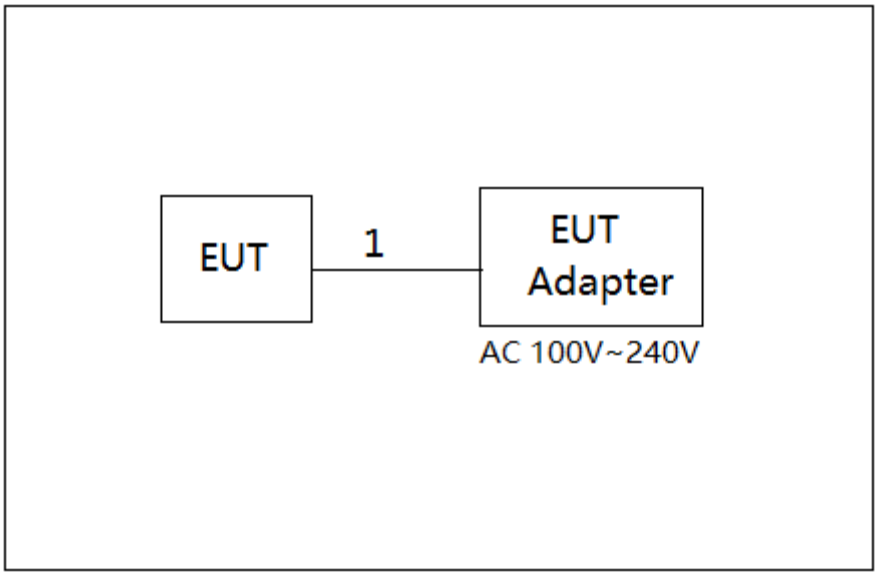
(3) For radiated emission above 1 GHz test, 1GHz~26.5GHz have been pre-tested and in this report only recorded the worst case. The remaining spurious points are all below the limit value of 20dB.

## 2.3 PARAMETERS OF TEST SOFTWARE

During testing, channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product power parameters of FHSS

| Test Software | QRCT | | |
|---|---|---|---|
| Frequency (MHz) | 2402 | 2441 | 2480 |
| Parameters(1Mbps) | 8 | 8 | 8 |
| Parameters(3Mbps) | 9 | 9 | 9 |

## 2.4 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED




## 2.5 SUPPORT UNITS

| Item | Equipment | Mfr/Brand | Model/Type No. | Series No. |
|---|---|---|---|---|
| - | - | - | - | - |

| Item | Cable Type | Shielded Type | Ferrite Core | Length |
|---|---|---|---|---|
| 1 | DC Cable | N/A | N/A | 1.5m |

# 3. AC POWER LINE CONDUCTED EMISSIONS TEST

## 3.1 LIMIT

| Frequency of Emission (MHz) | Limit (dBμV) | |
|---|---|---|
| | Quasi-peak | Average |
| 0.15 - 0.5 | 66 to 56* | 56 to 46* |
| 0.50 - 5.0 | 56 | 46 |
| 5.0 - 30.0 | 60 | 50 |

Note:

(1) The tighter limit applies at the band edges.

(2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

The following table is the setting of the receiver

| Receiver Parameters | Setting |
|---|---|
| Attenuation | 10 dB |
| Start Frequency | 0.15 MHz |
| Stop Frequency | 30 MHz |
| IF Bandwidth | 9 kHz |

## 3.2 TEST PROCEDURE

a. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipment powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.

b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.

c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.

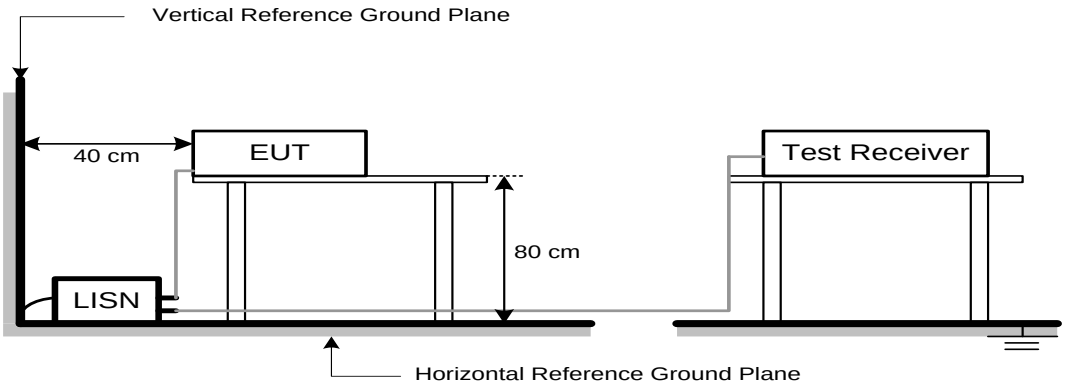
d. LISN at least 80 cm from nearest part of EUT chassis.

e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

## 3.3 DEVIATION FROM TEST STANDARD

No deviation

### 3.4 TEST SETUP




### 3.5 EUT OPERATING CONDITIONS

The EUT was configured for testing in a typical function (as a customer would normally use it), EUT was programmed to be in continuously transmitting data or hopping on mode.

### 3.6 TEST RESULTS

Please refer to the APPENDIX A.

Remark:

(1) All readings are QP Mode value unless otherwise stated AVG in column of『Note』. If the QP Mode Measured value compliance with the QP Limits and lower than AVG Limits, the EUT shall be deemed to meet both QP & AVG Limits and then only QP Mode was measured, but AVG Mode didn't perform in this case, a "*" marked in AVG Mode column of Interference Voltage Measured.

(2) Measuring frequency range from 150 kHz to 30 MHz.

# 4. RADIATED EMISSION TEST

## 4.1 LIMIT

In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.
LIMITS OF RADIATED EMISSION MEASUREMENT (9 kHz-1000 MHz)

| Frequency (MHz) | Field Strength (microvolts/meter) | Measurement Distance (meters) |
|---|---|---|
| 0.009-0.490 | 2400/F(kHz) | 300 |
| 0.490-1.705 | 24000/F(kHz) | 30 |
| 1.705-30.0 | 30 | 30 |
| 30-88 | 100 | 3 |
| 88-216 | 150 | 3 |
| 216-960 | 200 | 3 |
| Above 960 | 500 | 3 |

LIMITS OF RADIATED EMISSION MEASUREMENT (9 kHz-30 MHz)

| Frequency (MHz) | Magnetic field strength (H-Field) (μA/m) | Measurement Distance (meters) |
|---|---|---|
| 0.009-0.490 | 6.37/F(kHz) | 300 |
| 0.490-1.705 | 6.37/F(kHz) | 30 |
| 1.705-30.0 | 0.08 | 30 |

LIMITS OF RADIATED EMISSION MEASUREMENT (30 MHz-1000 MHz)

| Frequency (MHz) | Field Strength (μV/m at 3m) |
|---|---|
| 30-88 | 100 |
| 88-216 | 150 |
| 216-960 | 200 |
| Above 960 | 500 |

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000 MHz)

| Frequency (MHz) | (dBuV/m at 3 m) | |
|---|---|---|
| | Peak | Average |
| Above 1000 | 74 | 54 |

Note:

(1) The limit for radiated test was performed according to FCC PART 15C.

(2) The tighter limit applies at the band edges.

(3) Emission level (dBuV/m)=20log Emission level (uV/m).

(4) The test result calculated as following:
Measurement Value = Reading Level + Correct Factor
Correct Factor = Antenna Factor + Cable Loss - Amplifier Gain(if use)
Margin Level = Measurement Value - Limit Value

| Spectrum Parameter | Setting |
|---|---|
| Attenuation | Auto |
| Start Frequency | 1000 MHz |
| Stop Frequency | 10th carrier harmonic |
| RBW / VBW<br>(Emission in restricted band) | RBW 1 MHz VBW 3 MHz peak detector for Pk value<br>RMS detector for AV value |

| Receiver Parameter | Setting |
|---|---|
| Attenuation | Auto |
| Start ~ Stop Frequency | 9 kHz~90 kHz for PK/AVG detector |
| Start ~ Stop Frequency | 90 kHz~110 kHz for QP detector |
| Start ~ Stop Frequency | 110 kHz~490 kHz for PK/AVG detector |
| Start ~ Stop Frequency | 490 kHz~30 MHz for QP detector |
| Start ~ Stop Frequency | 30 MHz~1000 MHz for QP detector |

**4.2 TEST PROCEDURE**

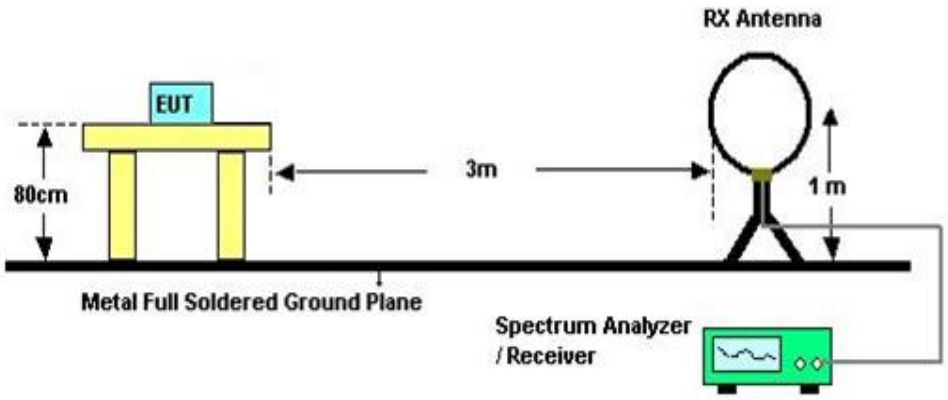
a. The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 0.8 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1 GHz)
b. The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 1.5 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(above 1 GHz)
c. The height of the equipment or of the substitution antenna shall be 0.8m or 1.5m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights find the maximum reading (used Bore sight function).
e. The receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz.
f. The initial step in collecting radiated emission data is a receiver peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
g. All readings are Peak unless otherwise stated QP in column of Note. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn‘t perform. (below 1 GHz)
h. All readings are Peak Mode value unless otherwise stated AVG in column of Note. If the Peak Mode Measured value compliance with the Peak Limits and lower than AVG Limits, the EUT shall be deemed to meet both Peak & AVG Limits and then only Peak Mode was measured, but AVG Mode didn‘t perform. (above 1 GHz)
i. For the actual test configuration, please refer to the related Item –EUT Test Photos.

**4.3 DEVIATION FROM TEST STANDARD**

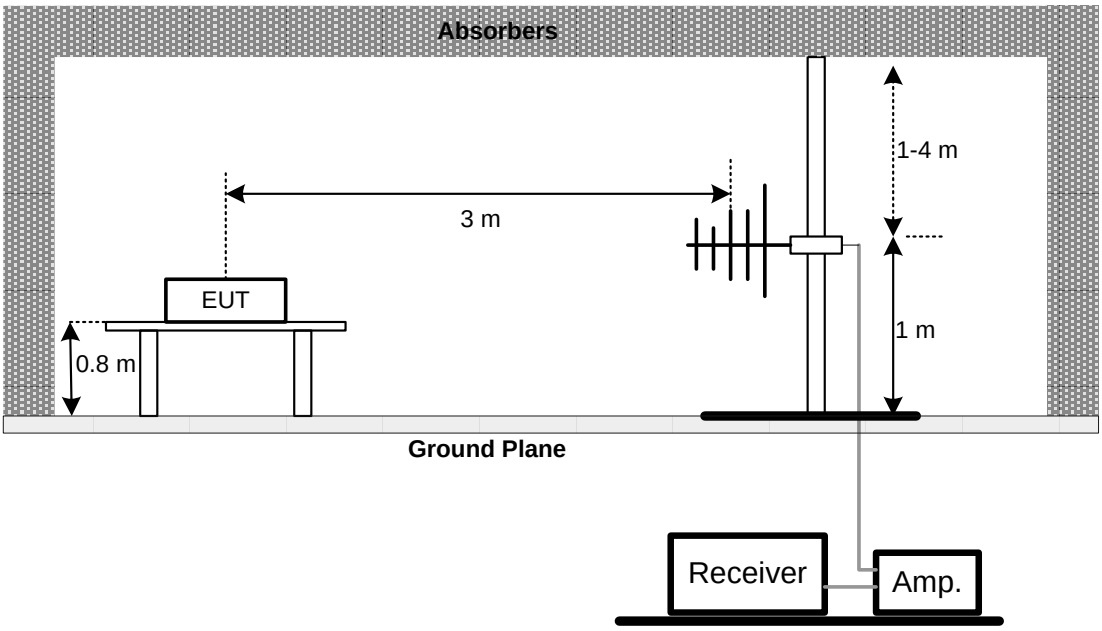
No deviation

## 4.4 TEST SETUP

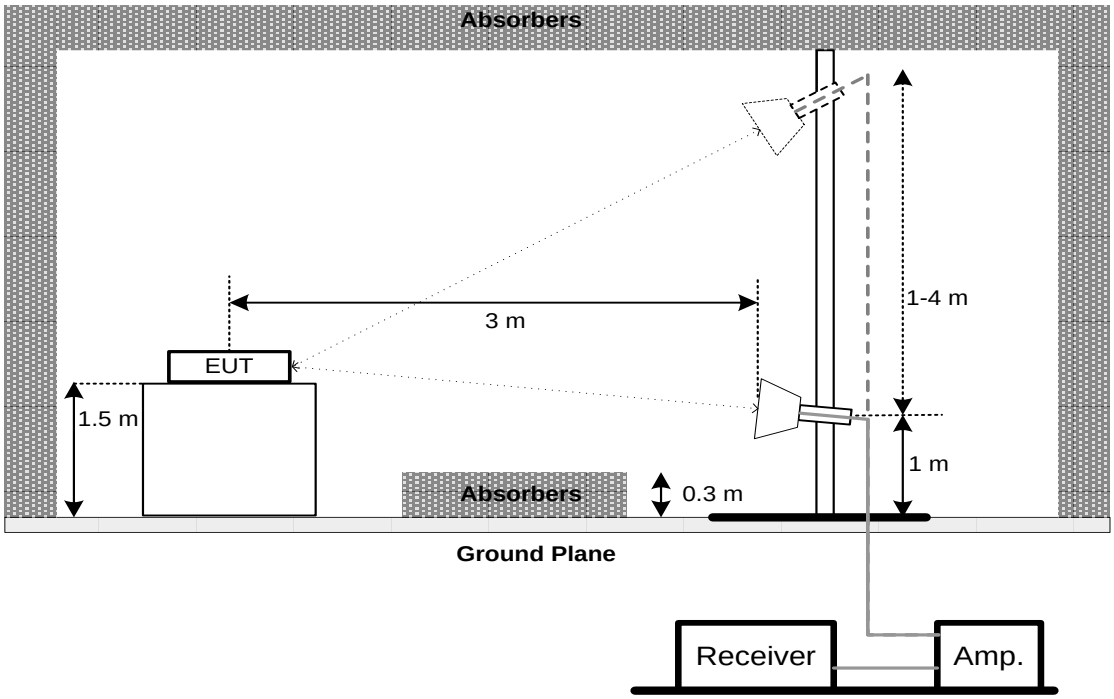
**9 kHz-30 MHz**




**30 MHz to 1 GHz**



**Above 1 GHz**




## 4.5 EUT OPERATING CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

## 4.6 TEST RESULTS - 9 kHz TO 30 MHz

Please refer to the APPENDIX B

Remark:

(1) Distance extrapolation factor = 40 log (specific distance / test distance) (dB).
(2) Limit line = specific limits (dBuV) + distance extrapolation factor.

## 4.7 TEST RESULTS - 30 MHz TO 1000 MHz

Please refer to the APPENDIX C.

## 4.8 TEST RESULTS - ABOVE 1000 MHz

Please refer to the APPENDIX D.

Remark:

(1) No limit: This is fundamental signal, the judgment is not applicable.
For fundamental signal judgment was referred to Peak output test.

## 5. NUMBER OF HOPPING FREQUENCY

### 5.1 LIMIT

| FCC Part15, Subpart C (15.247) | |
|---|---|
| Section | Test Item |
| 15.247(a)(1)(iii) | Number of Hopping Frequency |

| Spectrum Parameters | Setting |
|---|---|
| Attenuation | Auto |
| Span Frequency | > Operating Frequency Range |
| RBW | 100 kHz |
| VBW | 100 kHz |
| Detector | Peak |
| Trace | Max Hold |
| Sweep Time | Auto |

### 5.2 TEST PROCEDURE

a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.
b. Spectrum Setting: RBW=100 kHz, VBW=100 kHz, Sweep time = Auto.

### 5.3 DEVIATION FROM STANDARD

No deviation.

### 5.4 TEST SETUP


### 5.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 4.5 unless otherwise a special operating condition is specified in the follows during the testing.

### 5.6 TEST RESULTS

Please refer to the APPENDIX E

# 6. AVERAGE TIME OF OCCUPANCY

## 6.1 LIMIT

| FCC Part15, Subpart C (15.247) | | |
|---|---|---|
| Section | Test Item | Limit |
| 15.247(a)(1)(iii) | Average Time of Occupancy | 0.4sec |

## 6.2 TEST PROCEDURE

a. The transmitter output (antenna port) was connected to the spectrum analyzer
b. Set RBW of spectrum analyzer to 1 MHz and VBW to 1 MHz
c. Use a video trigger with the trigger level set to enable triggering only on full pulses
d. Sweep Time is more than once pulse time
e. Set the center frequency on any frequency would be measure and set the frequency span to zero span
f. Measure the maximum time duration of one single pulse
g. Set the EUT for DH1, DH3 and DH5 packet transmitting
h. Measure the maximum time duration of one single pulse
i. DH1 Packet permit maximum 1600 / 79 /2 = 10.12 hops per second in each channel (1 time slot TX, 1 time slot RX). So, the dwell time is the time duration of the pulse times 10.12 x 31.6 = 320 within 31.6 seconds
j. DH3 Packet permit maximum 1600 / 79 / 4 = 5.06 hops per second in each channel (3 time slots TX, 1 time slot RX). So, the dwell time is the time duration of the pulse times 5.06 x 31.6 = 160 within 31.6 seconds
k. DH5 Packet permit maximum 1600/ 79 / 6 = 3.37 hops per second in each channel (5 time slots TX, 1 time slot RX). So, the dwell time is the time duration of the pulse times 3.37 x 31.6 = 106.6 within 31.6 seconds

## 6.3 DEVIATION FROM STANDARD

No deviation.

## 6.4 TEST SETUP


## 6.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 4.5 unless otherwise a special operating condition is specified in the follows during the testing.

## 6.6 TEST RESULTS

Please refer to the APPENDIX F

# 7. HOPPING CHANNEL SEPARATION MEASUREMENT

## 7.1 LIMIT

Frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW.

| Spectrum Parameter | Setting |
|---|---|
| Attenuation | Auto |
| Span Frequency | > Measurement Bandwidth or Channel Separation |
| RBW | 30 kHz |
| VBW | 100 kHz |
| Detector | Peak |
| Trace | Max Hold |
| Sweep Time | Auto |

## 7.2 TEST PROCEDURE

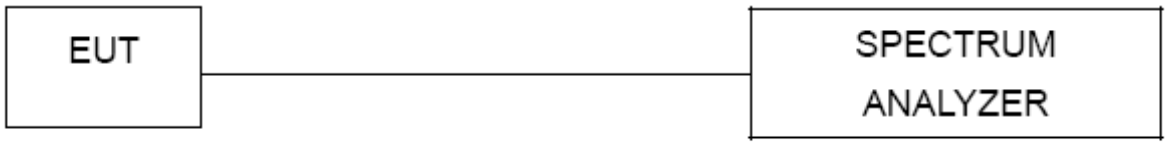
a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.

b. Span = wide enough to capture the peaks of two adjacent channels
Resolution (or IF) Bandwidth (RBW) ≥ 1% of the span
Video (or Average) Bandwidth (VBW) ≥ RBW
Sweep = Auto
Detector function = Peak
Trace = Max Hold

## 7.3 DEVIATION FROM STANDARD

No deviation.

## 7.4 TEST SETUP




## 7.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 4.5 unless otherwise a special operating condition is specified in the follows during the testing.

## 7.6 TEST RESULTS

Please refer to the APPENDIX G

# 8. BANDWIDTH TEST

## 8.1 LIMIT

| FCC Part15, Subpart C (15.247) | |
|---|---|
| Section | Test Item |
| 15.247(a)(1) | Bandwidth |

| Spectrum Parameter | Setting |
|---|---|
| Attenuation | Auto |
| Span Frequency | > Measurement Bandwidth |
| RBW | 30 kHz |
| VBW | 100 kHz |
| Detector | Peak |
| Trace | Max Hold |
| Sweep Time | Auto |

## 8.2 TEST PROCEDURE

a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.
b. Spectrum Setting: RBW= 30 kHz, VBW=100 kHz, Sweep Time = Auto.

## 8.3 DEVIATION FROM STANDARD

No deviation.

## 8.4 TEST SETUP


## 8.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 4.5 unless otherwise a special operating condition is specified in the follows during the testing.

## 8.6 TEST RESULTS

Please refer to the APPENDIX H

# 9. MAXIMUM OUTPUT POWER & E.I.R.P. TEST

## 9.1 LIMIT

| FCC Part15 , Subpart C (15.247) | | |
|---|---|---|
| Section | Test Item | Limit |
| 15.247(a)(1) | Maximum Output Power | 0.125 Watt or 21 dBm |

Note: Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater. Alternatively, frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB band width of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW.

## 9.2 TEST PROCEDURE

a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.
b. Spectrum Setting: RBW= 1 MHz/3 MHz, VBW= 1 MHz/3 MHz, Sweep time = Auto.

## 9.3 DEVIATION FROM STANDARD

No deviation.

## 9.4 TEST SETUP


## 9.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 4.5 unless otherwise a special operating condition is specified in the follows during the testing.

## 9.6 TEST RESULTS

Please refer to the APPENDIX I

# 10. CONDUCTED SPURIOUS EMISSION

## 10.1 LIMIT

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 Output Power limits. If the transmitter complies with the Output Power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Section 15.209(a) is not required. 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)).

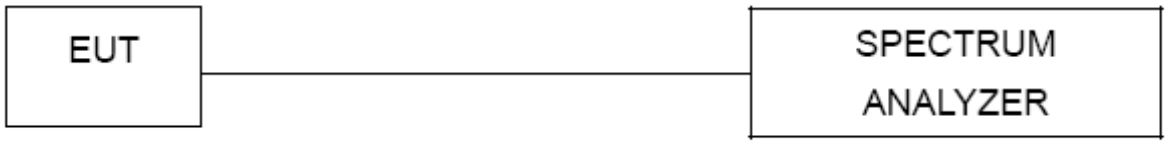
## 10.2 TEST PROCEDURE

a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.
b. Spectrum Setting: RBW= 100 kHz, VBW=100 kHz, Sweep time = Auto.

## 10.3 DEVIATION FROM STANDARD

No deviation.

## 10.4 TEST SETUP




## 10.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 4.5 unless otherwise a special operating condition is specified in the follows during the testing.

## 10.6 TEST RESULTS

Please refer to the APPENDIX J

## 11. MEASUREMENT INSTRUMENTS LIST

| AC Power Line Conducted Emissions | | | | | |
|---|---|---|---|---|---|
| Item | Kind of Equipment | Manufacturer | Type No. | Serial No. | Calibrated until |
| 1 | Line Impedance Stabilisation Network | Schwarzbeck | NNLK 8121 | 8121-822 | Mar. 29, 2020 |
| 2 | TWO-LINE V-NETWORK | R&S | ENV216 | 101340 | Nov. 20, 2019 |
| 3 | Test Cable | emci | EMCRG400-BM-NM-10000 | 170628 | Apr. 17, 2020 |
| 4 | EMI Test Receiver | R&S | ESCI | 100082 | Mar. 29, 2020 |
| 5 | 50Ω Terminator | SHX | TF2-1G-A | 17051602 | Mar. 29, 2020 |
| 6 | 50Ω coaxial switch | Anritsu | MP59B | 6201750902 | Mar. 29, 2020 |
| 7 | Measurement Software | Farad | EZ-EMC Ver.NB-03A1-01 | N/A | N/A |

| Radiated Emissions - 9 kHz to 30 MHz | | | | | |
|---|---|---|---|---|---|
| Item | Kind of Equipment | Manufacturer | Type No. | Serial No. | Calibrated until |
| 1 | Loop Antenna | EMCI | EMCI LPA600 | 275 | Mar. 29, 2020 |
| 2 | EMI Test Receiver | R&S | ESCI | 100082 | Mar. 29, 2020 |
| 3 | Measurement Software | Farad | EZ-EMC Ver.NB-03A1-01 | N/A | N/A |

| Radiated Emissions - 30 MHz to 1 GHz | | | | | |
|---|---|---|---|---|---|
| Item | Kind of Equipment | Manufacturer | Type No. | Serial No. | Calibrated until |
| 1 | TRILOG Broadband Antenna | Schwarzbeck | VULB 9168 | 719 | Mar. 29, 2020 |
| 2 | Pre-Amplifier | emci | EMC9135 | 980400 | Mar. 29, 2020 |
| 3 | MXE EMI Receiver | Keysight | N9038A | MY57150106 | Mar. 29, 2020 |
| 4 | Test Cable | emci | EMC104-SM-SM-7000 | 170330 | Apr. 17, 2020 |
| 5 | Test Cable | emci | EMC104-SM-SM-1000 | 170331 | Apr. 17, 2020 |
| 6 | Test Cable | emci | EMC104-SM-NM-3500 | 170621 | Apr. 17, 2020 |
| 7 | Measurement Software | Farad | EZ-EMC Ver.NB-03A1-01 | N/A | N/A |

| Radiated Emissions - Above 1 GHz | | | | | |
|---|---|---|---|---|---|
| Item | Kind of Equipment | Manufacturer | Type No. | Serial No. | Calibrated until |
| 1 | Double-Ridged Waveguide Horn Antenna | ETS-Lindgren | 9120D | 00206960 | Mar. 29, 2020 |
| 2 | Pre-Amplifier | emci | EMC012645SE | 980421 | Mar. 29, 2020 |
| 3 | EXA Spectrum Analyzer | Keysight | N9010A | MY56480545 | Mar. 29, 2020 |
| 4 | Test Cable | emci | EMC104-SM-SM-7000 | 170330 | Apr. 17, 2020 |
| 5 | Test Cable | emci | EMC104-SM-SM-1000 | 170331 | Apr. 17, 2020 |
| 6 | Test Cable | emci | EMC104-SM-NM-3500 | 170621 | Apr. 17, 2020 |
| 7 | Measurement Software | Farad | EZ-EMC Ver.NB-03A1-01 | N/A | N/A |
| 8 | MXE EMI Receiver | Keysight | N9038A | MY57150106 | Mar. 29, 2020 |

| Number of Hopping Frequency | | | | | |
|---|---|---|---|---|---|
| Item | Kind of Equipment | Manufacturer | Type No. | Serial No. | Calibrated until |
| 1 | Spectrum Analyzer | R&S | FSP40 | 100626 | Mar. 29, 2020 |

| Average Time of Occupancy | | | | | |
|---|---|---|---|---|---|
| Item | Kind of Equipment | Manufacturer | Type No. | Serial No. | Calibrated until |
| 1 | Spectrum Analyzer | R&S | FSP40 | 100626 | Mar. 29, 2020 |

| Hopping Channel Separation Measurement | | | | | |
|---|---|---|---|---|---|
| Item | Kind of Equipment | Manufacturer | Type No. | Serial No. | Calibrated until |
| 1 | Spectrum Analyzer | R&S | FSP40 | 100626 | Mar. 29, 2020 |

| Bandwidth | | | | | |
|---|---|---|---|---|---|
| Item | Kind of Equipment | Manufacturer | Type No. | Serial No. | Calibrated until |
| 1 | Spectrum Analyzer | R&S | FSP40 | 100626 | Mar. 29, 2020 |

| Maximum Output Power | | | | | |
|---|---|---|---|---|---|
| Item | Kind of Equipment | Manufacturer | Type No. | Serial No. | Calibrated until |
| 1 | Spectrum Analyzer | R&S | FSP40 | 100626 | Mar. 29, 2020 |

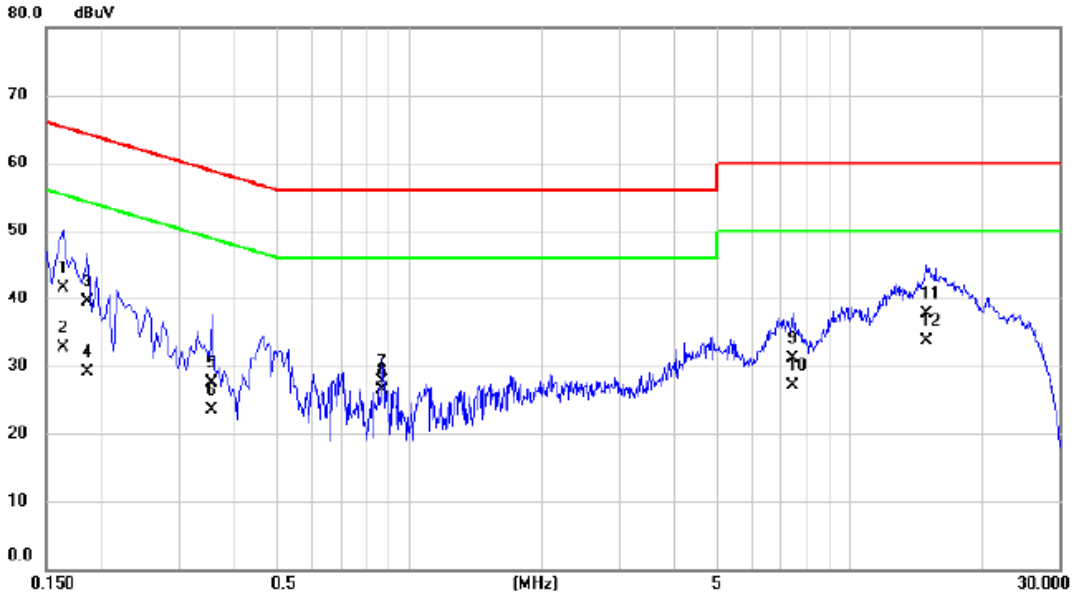
| Antenna Conducted Spurious Emission | | | | | |
|---|---|---|---|---|---|
| Item | Kind of Equipment | Manufacturer | Type No. | Serial No. | Calibrated until |
| 1 | Spectrum Analyzer | R&S | FSP40 | 100626 | Mar. 29, 2020 |

Remark: “N/A” denotes no model name, serial no. or calibration specified.
All calibration period of equipment list is one year.

# APPENDIX A - AC POWER LINE CONDUCTED EMISSIONS

| Test Mode: | TX Mode |
|---|---|

**Line**

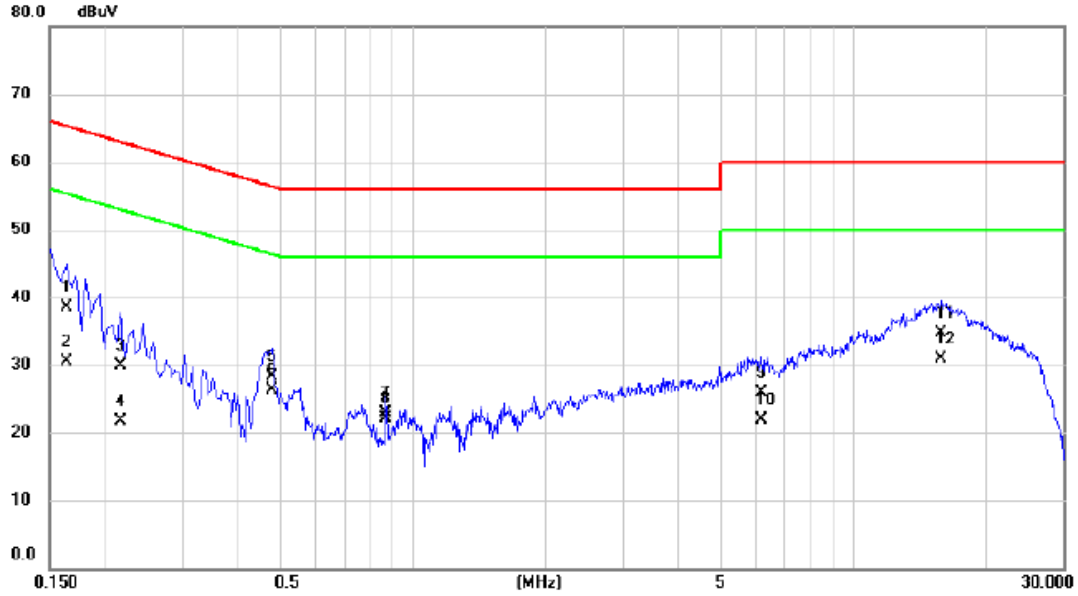



| No. | Mk. | Freq. | Reading Level | Correct Factor | Measure-ment | Limit | Margin | | |
|---|---|---|---|---|---|---|---|---|---|
| | | MHz | dBuV | dB | dBuV | dBuV | dB | Detector | Comment |
| 1 | | 0.1635 | 31.80 | 9.78 | 41.58 | 65.28 | -23.70 | QP | |
| 2 | | 0.1635 | 22.90 | 9.78 | 32.68 | 55.28 | -22.60 | AVG | |
| 3 | | 0.1860 | 29.60 | 9.81 | 39.41 | 64.21 | -24.80 | QP | |
| 4 | | 0.1860 | 19.20 | 9.81 | 29.01 | 54.21 | -25.20 | AVG | |
| 5 | | 0.3570 | 17.60 | 9.87 | 27.47 | 58.80 | -31.33 | QP | |
| 6 | | 0.3570 | 13.70 | 9.87 | 23.57 | 48.80 | -25.23 | AVG | |
| 7 | | 0.8700 | 17.80 | 9.82 | 27.62 | 56.00 | -28.38 | QP | |
| 8 | | 0.8700 | 16.60 | 9.82 | 26.42 | 46.00 | -19.58 | AVG | |
| 9 | | 7.4355 | 20.90 | 10.14 | 31.04 | 60.00 | -28.96 | QP | |
| 10 | | 7.4355 | 16.90 | 10.14 | 27.04 | 50.00 | -22.96 | AVG | |
| 11 | | 14.9820 | 27.60 | 10.07 | 37.67 | 60.00 | -22.33 | QP | |
| 12 | * | 14.9820 | 23.70 | 10.07 | 33.77 | 50.00 | -16.23 | AVG | |

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

| Test Mode: | TX Mode |
|---|---|

**Neutral**



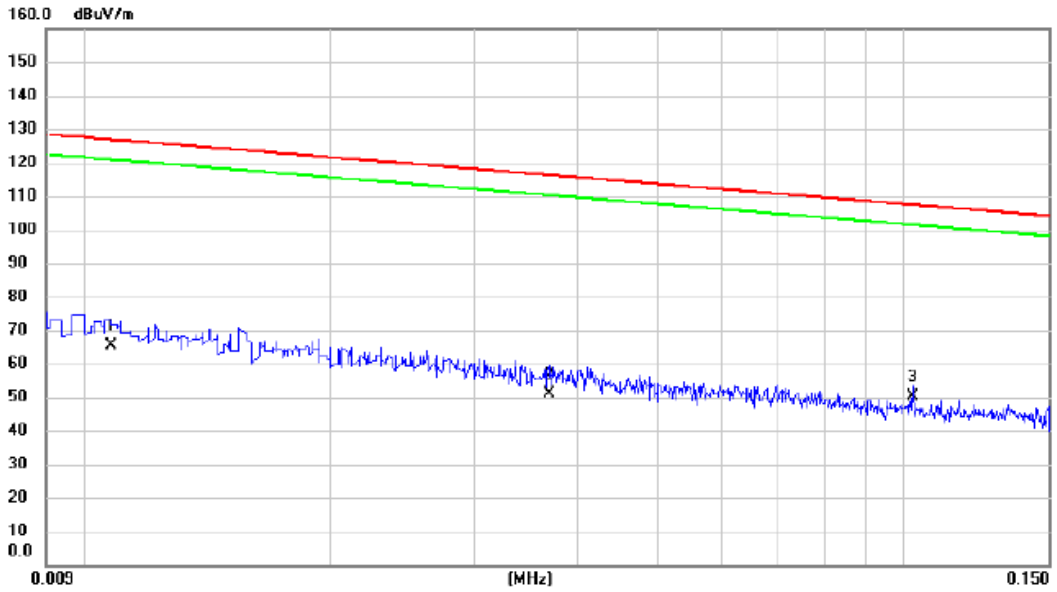

| No. | Mk. | Freq. | Reading Level | Correct Factor | Measure-ment | Limit | Margin | | |
|---|---|---|---|---|---|---|---|---|---|
| | | MHz | dBuV | dB | dBuV | dBuV | dB | Detector | Comment |
| 1 | | 0.1635 | 29.00 | 9.59 | 38.59 | 65.28 | -26.69 | QP | |
| 2 | | 0.1635 | 21.00 | 9.59 | 30.59 | 55.28 | -24.69 | AVG | |
| 3 | | 0.2175 | 20.20 | 9.68 | 29.88 | 62.91 | -33.03 | QP | |
| 4 | | 0.2175 | 12.00 | 9.68 | 21.68 | 52.91 | -31.23 | AVG | |
| 5 | | 0.4785 | 18.50 | 9.81 | 28.31 | 56.37 | -28.06 | QP | |
| 6 | | 0.4785 | 16.40 | 9.81 | 26.21 | 46.37 | -20.16 | AVG | |
| 7 | | 0.8700 | 13.20 | 9.75 | 22.95 | 56.00 | -33.05 | QP | |
| 8 | | 0.8700 | 12.30 | 9.75 | 22.05 | 46.00 | -23.95 | AVG | |
| 9 | | 6.1845 | 15.90 | 10.10 | 26.00 | 60.00 | -34.00 | QP | |
| 10 | | 6.1845 | 11.90 | 10.10 | 22.00 | 50.00 | -28.00 | AVG | |
| 11 | | 15.8145 | 24.50 | 10.11 | 34.61 | 60.00 | -25.39 | QP | |
| 12 | * | 15.8145 | 20.70 | 10.11 | 30.81 | 50.00 | -19.19 | AVG | |

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

# APPENDIX B - RADIATED EMISSION - 9 KHZ-30 MHZ

| Test Mode: | TX Mode |
|---|---|

**Ant 0°**

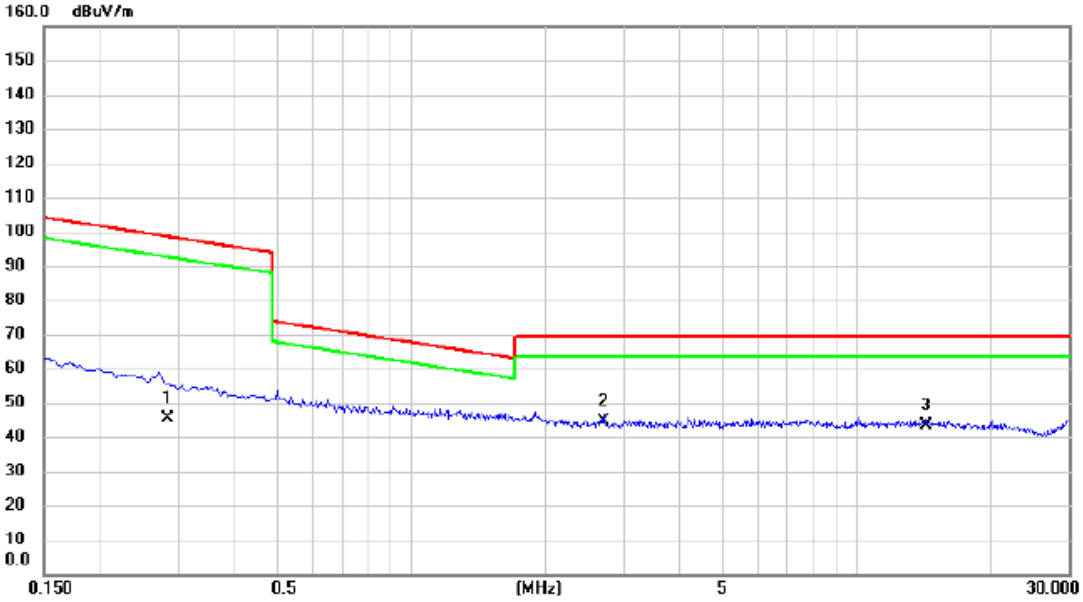



| No. | Mk. | Freq. | Reading Level | Correct Factor | Measure-ment | Limit | Margin | | |
|---|---|---|---|---|---|---|---|---|---|
| | | MHz | dBuV | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 | | 0.0108 | -12.70 | 77.91 | 65.21 | 126.94 | -61.73 | AVG | |
| 2 | | 0.0370 | -16.67 | 67.60 | 50.93 | 116.24 | -65.31 | AVG | |
| 3 | * | 0.1025 | -7.56 | 57.85 | 50.29 | 107.39 | -57.10 | QP | |

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

| Test Mode: | TX Mode |
|---|---|

**Ant 0°**

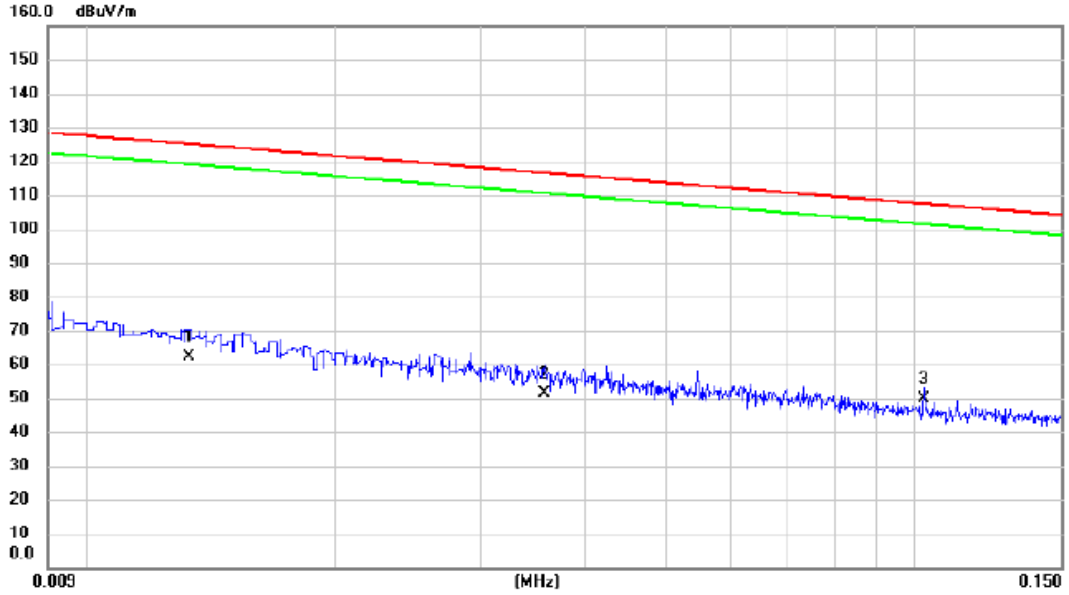



| No. | Mk. | Freq. | Reading Level | Correct Factor | Measure-ment | Limit | Margin | | |
|---|---|---|---|---|---|---|---|---|---|
| | | MHz | dBuV | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 | | 0.2850 | -3.90 | 49.21 | 45.31 | 98.51 | -53.20 | AVG | |
| 2 | * | 2.7015 | 6.23 | 38.24 | 44.47 | 69.54 | -25.07 | QP | |
| 3 | | 14.2980 | 5.35 | 38.14 | 43.49 | 69.54 | -26.05 | QP | |

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

| Test Mode: | TX Mode |
|---|---|

**Ant 90°**

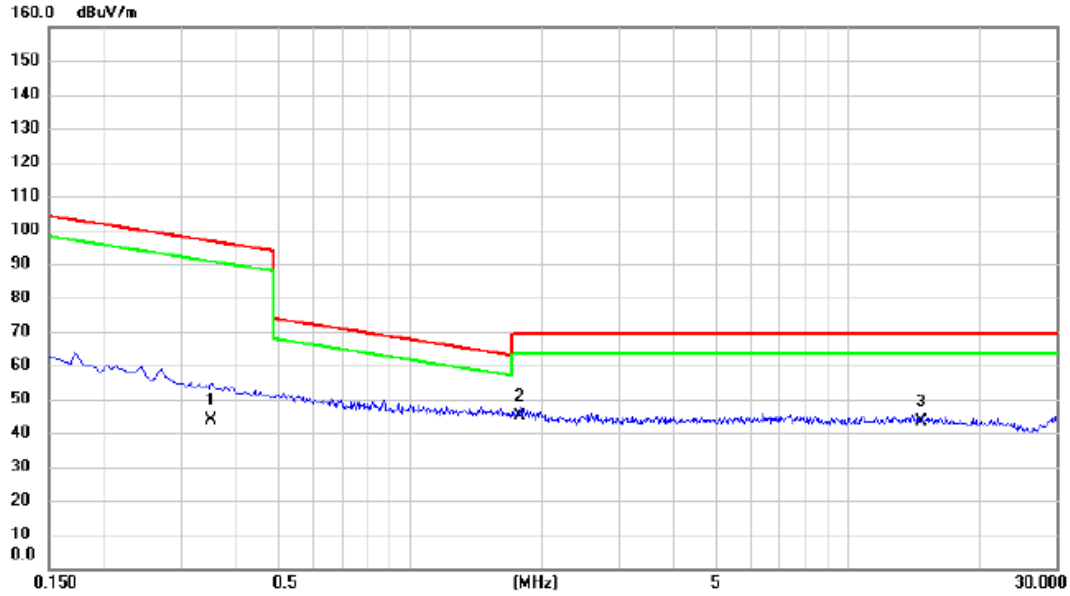



| No. | Mk. | Freq. | Reading Level | Correct Factor | Measure-ment | Limit | Margin | | |
|---|---|---|---|---|---|---|---|---|---|
| | | MHz | dBuV | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 | | 0.0133 | -14.30 | 76.39 | 62.09 | 125.13 | -63.04 | AVG | |
| 2 | | 0.0357 | -16.40 | 67.99 | 51.59 | 116.55 | -64.96 | AVG | |
| 3 | * | 0.1025 | -7.90 | 57.85 | 49.95 | 107.39 | -57.44 | QP | |

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

| Test Mode: | TX Mode |
|---|---|

**Ant 90°**



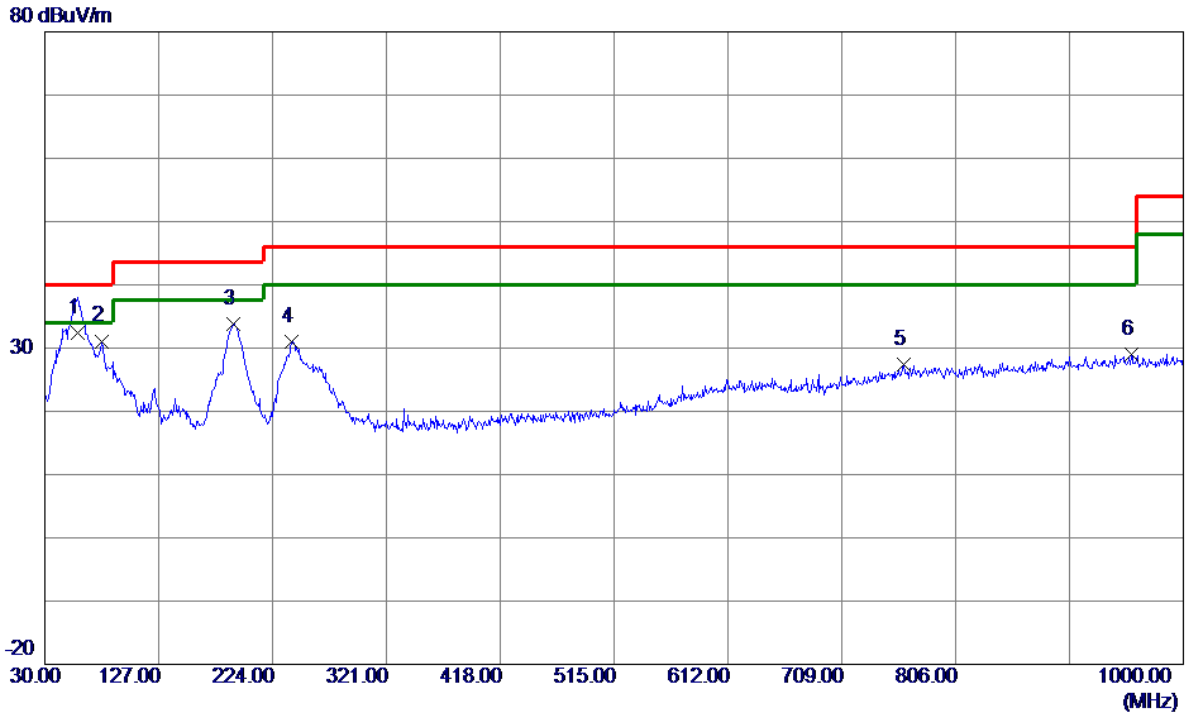

| No. | Mk. | Freq. | Reading Level | Correct Factor | Measure-ment | Limit | Margin | | |
|---|---|---|---|---|---|---|---|---|---|
| | | MHz | dBuV | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 | | 0.3525 | -3.80 | 47.55 | 43.75 | 96.66 | -52.91 | AVG | |
| 2 | * | 1.7790 | 5.54 | 39.33 | 44.87 | 69.54 | -24.67 | QP | |
| 3 | | 14.7930 | 5.42 | 38.06 | 43.48 | 69.54 | -26.06 | QP | |

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

# APPENDIX C - RADIATED EMISSION - 30 MHZ TO 1000 MHZ

| Test Mode: | TX Mode |
|---|---|

**Vertical**

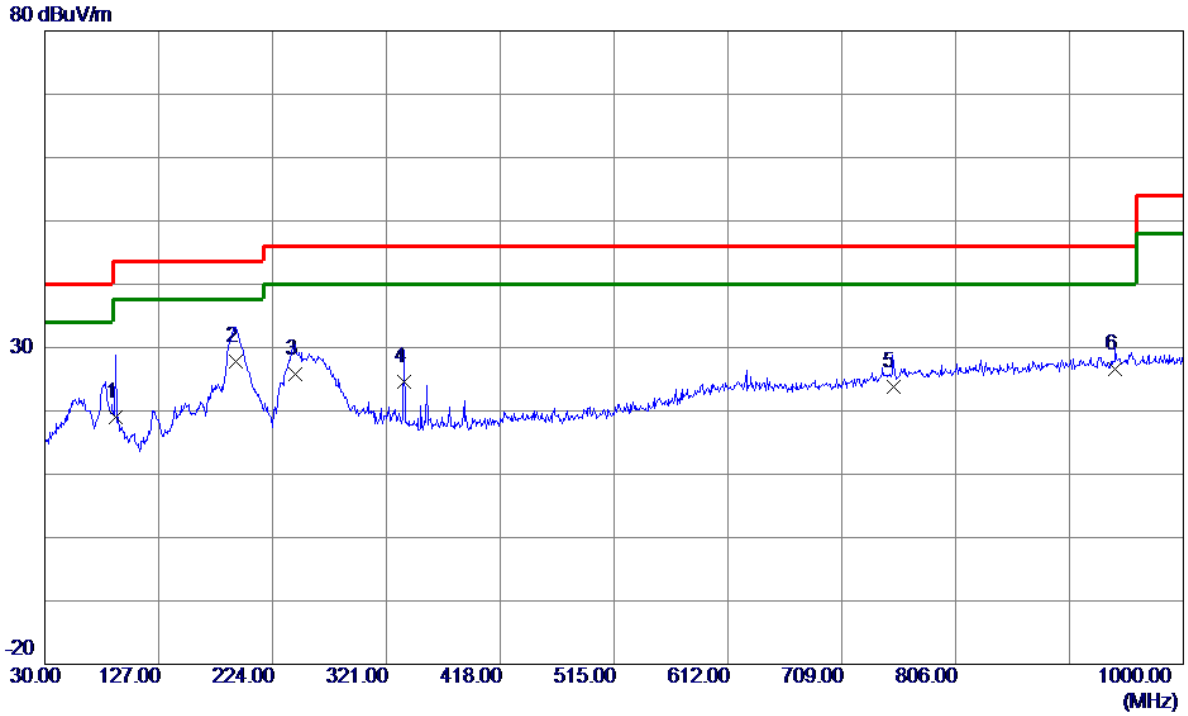



| No. | Freq. | Reading Level | Correct Factor | Measure ment | Limit | Margin | | |
|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 * | 57.6450 | 49.85 | -17.45 | 32.40 | 40.00 | -7.60 | QP | |
| 2 | 78.5000 | 51.40 | -20.30 | 31.10 | 40.00 | -8.90 | Peak | |
| 3 | 190.5350 | 52.15 | -18.27 | 33.88 | 43.50 | -9.62 | Peak | |
| 4 | 240.4900 | 47.92 | -16.91 | 31.01 | 46.00 | -14.99 | Peak | |
| 5 | 761.3800 | 33.97 | -6.62 | 27.35 | 46.00 | -18.65 | Peak | |
| 6 | 955.8650 | 34.06 | -5.11 | 28.95 | 46.00 | -17.05 | Peak | |

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

| Test Mode: | TX Mode |
|---|---|

**Horizontal**



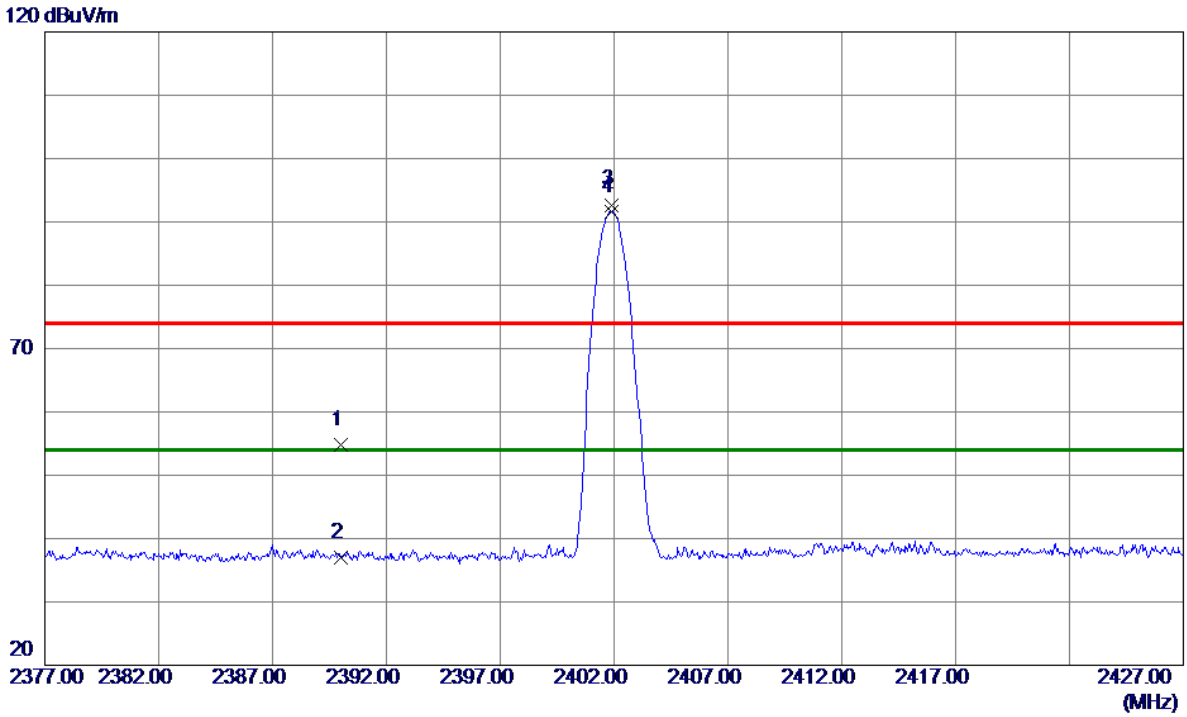

| No. | Freq. | Reading Level | Correct Factor | Measure ment | Limit | Margin | | |
|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 | 90.1400 | 39.47 | -20.47 | 19.00 | 43.50 | -24.50 | Peak | |
| 2 * | 192.9600 | 46.15 | -18.44 | 27.71 | 43.50 | -15.79 | Peak | |
| 3 | 242.9150 | 42.73 | -16.90 | 25.83 | 46.00 | -20.17 | Peak | |
| 4 | 336.0350 | 38.41 | -13.82 | 24.59 | 46.00 | -21.41 | Peak | |
| 5 | 752.6500 | 30.46 | -6.65 | 23.81 | 46.00 | -22.19 | Peak | |
| 6 | 941.8000 | 31.82 | -5.19 | 26.63 | 46.00 | -19.37 | Peak | |

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

# APPENDIX D - RADIATED EMISSION - ABOVE 1000 MHZ

| Test Mode: | TX 2402 MHz _CH00_1Mbps |
|---|---|

**Vertical**

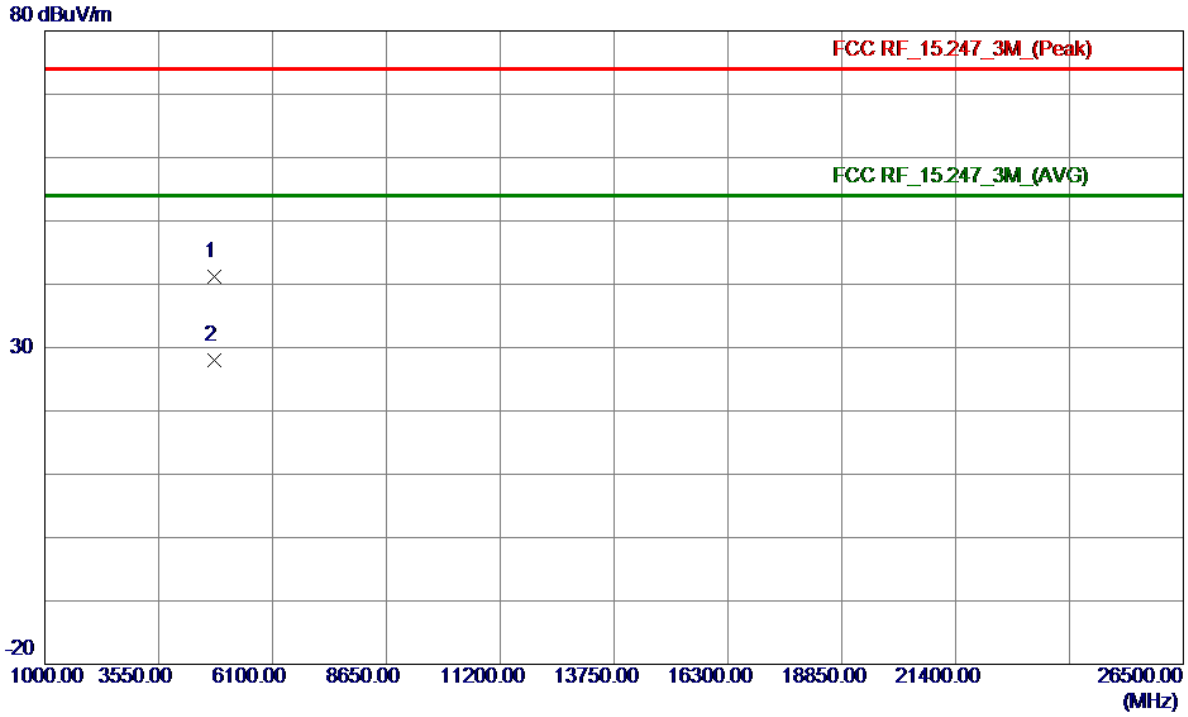



| No. | Freq. | Reading Level | Correct Factor | Measure ment | Limit | Margin | | |
|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 | 2390.0000 | 22.41 | 32.39 | 54.80 | 74.00 | -19.20 | Peak | |
| 2 | 2390.0000 | 4.66 | 32.39 | 37.05 | 54.00 | -16.95 | AVG | |
| 3 | 2401.9000 | 60.27 | 32.43 | 92.70 | 74.00 | 18.70 | Peak | NO limit |
| 4 * | 2401.9000 | 59.24 | 32.43 | 91.67 | 54.00 | 37.67 | AVG | NO limit |

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

| Test Mode: | TX 2402 MHz _CH00_1Mbps |
|---|---|

**Vertical**

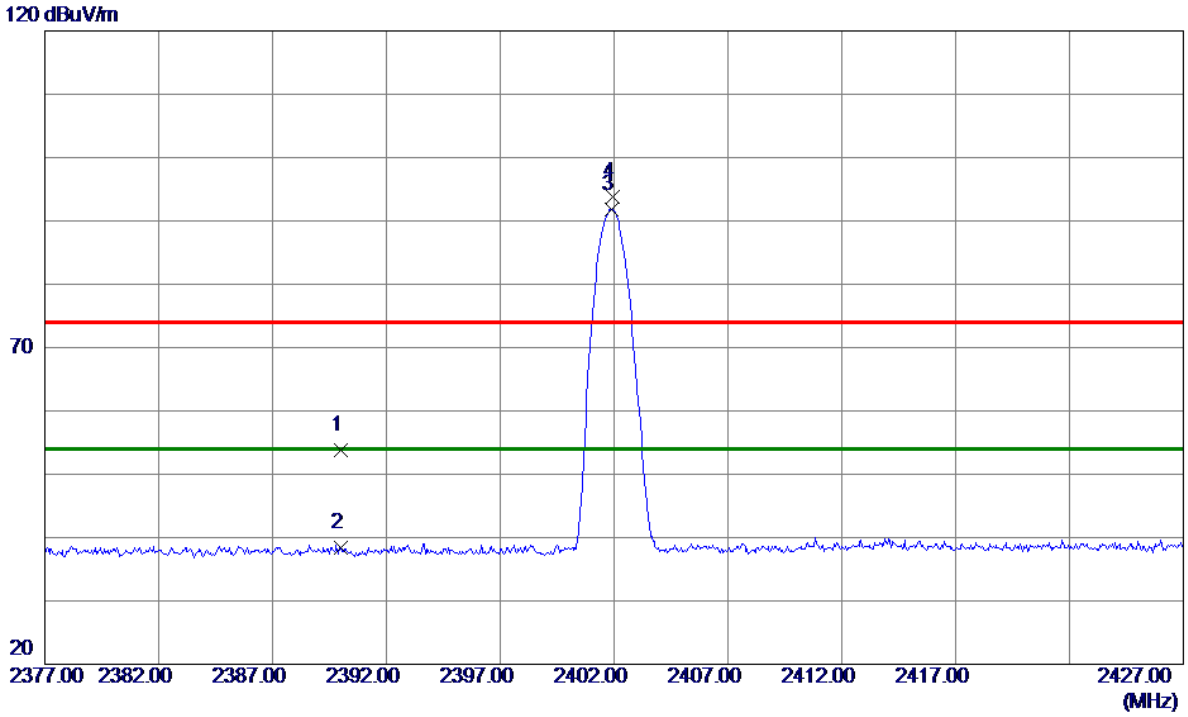



| No. | Freq. | Reading Level | Correct Factor | Measure ment | Limit | Margin | | |
|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 | 4803.5250 | 51.02 | -9.77 | 41.25 | 74.00 | -32.75 | Peak | |
| 2 * | 4804.0000 | 37.79 | -9.76 | 28.03 | 54.00 | -25.97 | AVG | |

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

| Test Mode: | TX 2402 MHz _CH00_1Mbps |
|---|---|

**Horizontal**

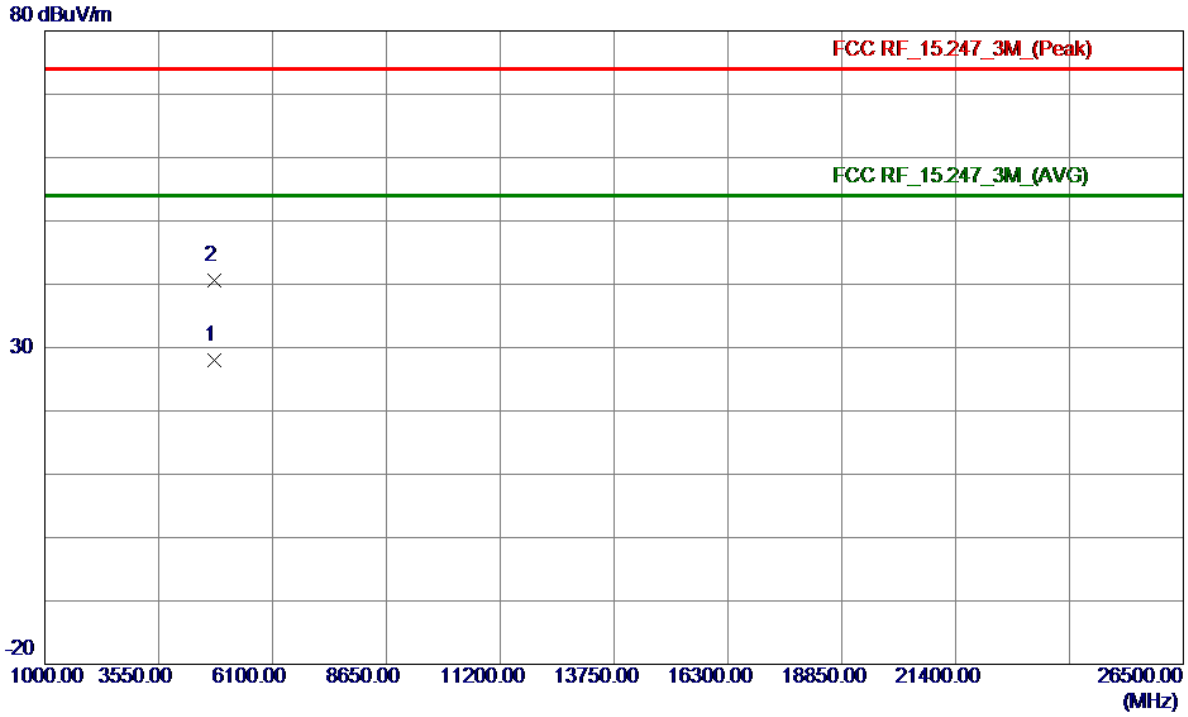



| No. | Freq. | Reading Level | Correct Factor | Measure ment | Limit | Margin | | |
|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 | 2390.0000 | 21.36 | 32.39 | 53.75 | 74.00 | -20.25 | Peak | |
| 2 | 2390.0000 | 5.97 | 32.39 | 38.36 | 54.00 | -15.64 | AVG | |
| 3 * | 2401.9000 | 59.46 | 32.43 | 91.89 | 54.00 | 37.89 | AVG | NO limit |
| 4 | 2401.9500 | 61.46 | 32.43 | 93.89 | 74.00 | 19.89 | Peak | NO limit |

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

| Test Mode: | TX 2402 MHz _CH00_1Mbps |
|---|---|

**Horizontal**

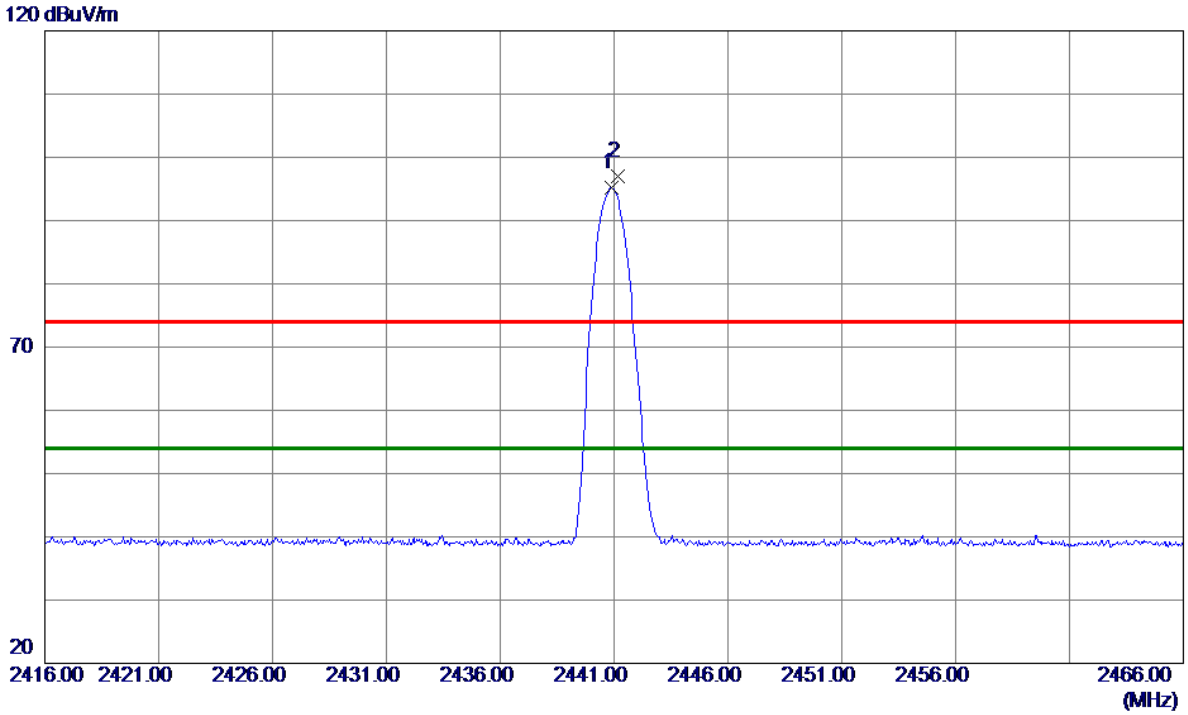



| No. | Freq. | Reading Level | Correct Factor | Measure ment | Limit | Margin | | |
|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 * | 4804.0000 | 37.78 | -9.76 | 28.02 | 54.00 | -25.98 | AVG | |
| 2 | 4804.1549 | 50.33 | -9.76 | 40.57 | 74.00 | -33.43 | Peak | |

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

| Test Mode: | TX 2441 MHz _CH39_1Mbps |
|---|---|

**Vertical**

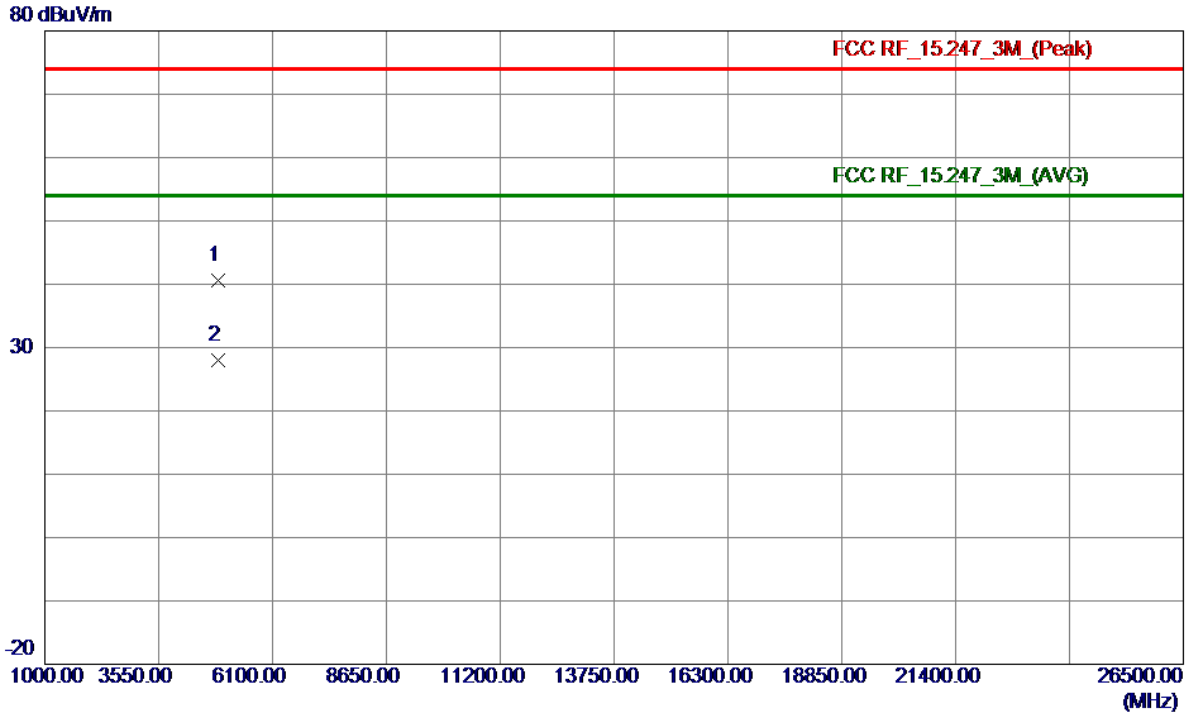



| No. | Freq. | Reading Level | Correct Factor | Measure ment | Limit | Margin | | |
|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 * | 2440.9000 | 62.58 | 32.54 | 95.12 | 54.00 | 41.12 | AVG | NO limit |
| 2 | 2441.1500 | 64.40 | 32.54 | 96.94 | 74.00 | 22.94 | Peak | NO limit |

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

| Test Mode: | TX 2441 MHz _CH39_1Mbps |
|---|---|

**Vertical**

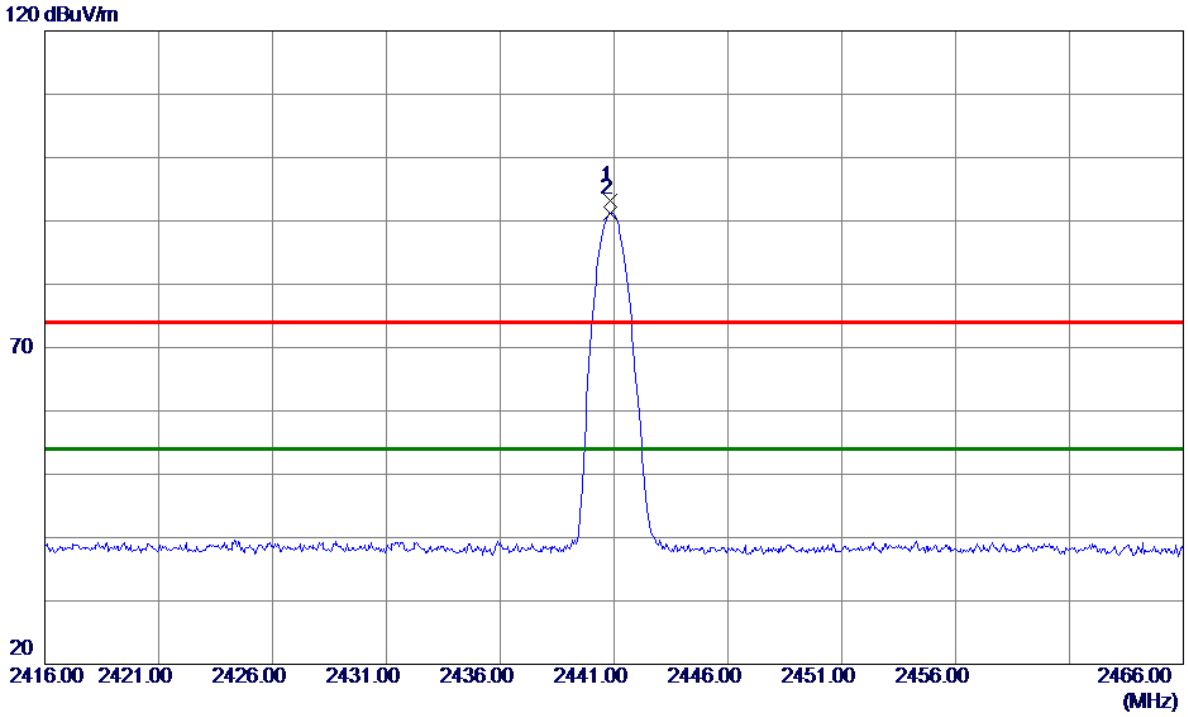



| No. | Freq. | Reading Level | Correct Factor | Measure ment | Limit | Margin | | |
|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 | 4879.1150 | 50.07 | -9.48 | 40.59 | 74.00 | -33.41 | Peak | |
| 2 * | 4880.0000 | 37.55 | -9.48 | 28.07 | 54.00 | -25.93 | AVG | |

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

| Test Mode: | TX 2441 MHz _CH39_1Mbps |
|---|---|

**Horizontal**

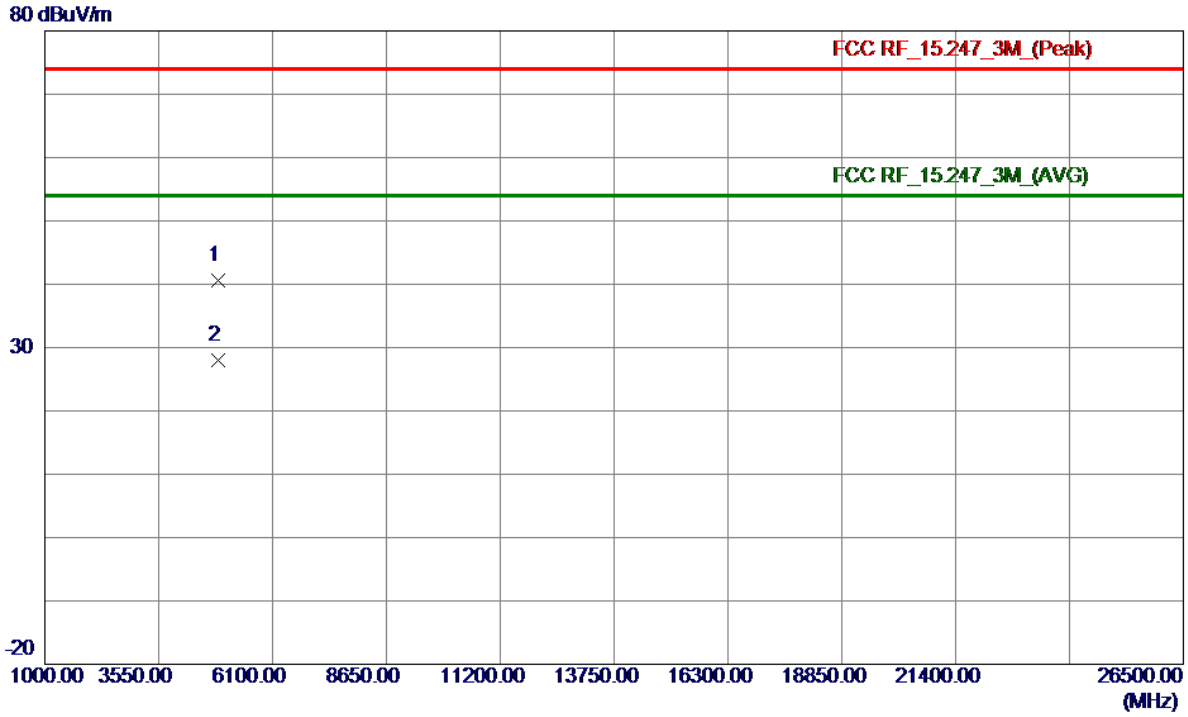



| No. | Freq. | Reading Level | Correct Factor | Measure ment | Limit | Margin | | |
|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 | 2440.8500 | 60.62 | 32.54 | 93.16 | 74.00 | 19.16 | Peak | NO limit |
| 2 * | 2440.8500 | 58.72 | 32.54 | 91.26 | 54.00 | 37.26 | AVG | NO limit |

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

| Test Mode: | TX 2441 MHz _CH39_1Mbps |
|---|---|

**Horizontal**

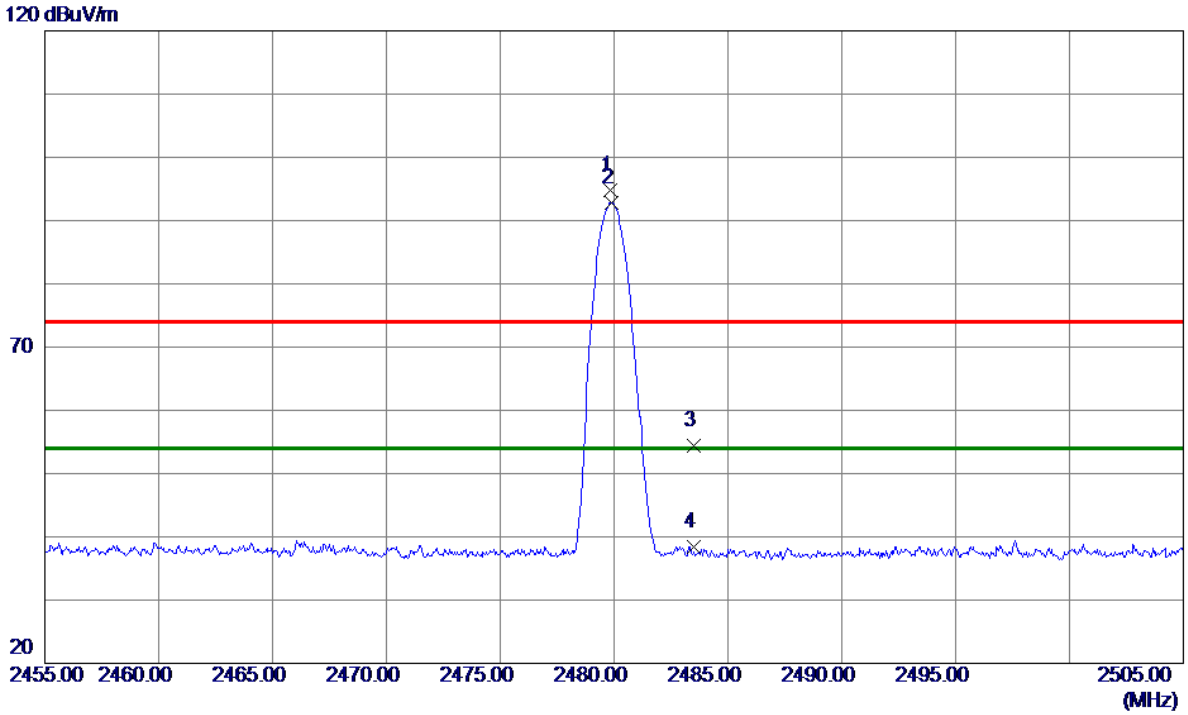



| No. | Freq. | Reading Level | Correct Factor | Measure ment | Limit | Margin | | |
|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 | 4879.5600 | 50.16 | -9.48 | 40.68 | 74.00 | -33.32 | Peak | |
| 2 * | 4880.0000 | 37.50 | -9.48 | 28.02 | 54.00 | -25.98 | AVG | |

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

| Test Mode: | TX 2480 MHz _CH78_1Mbps |
|---|---|

**Vertical**

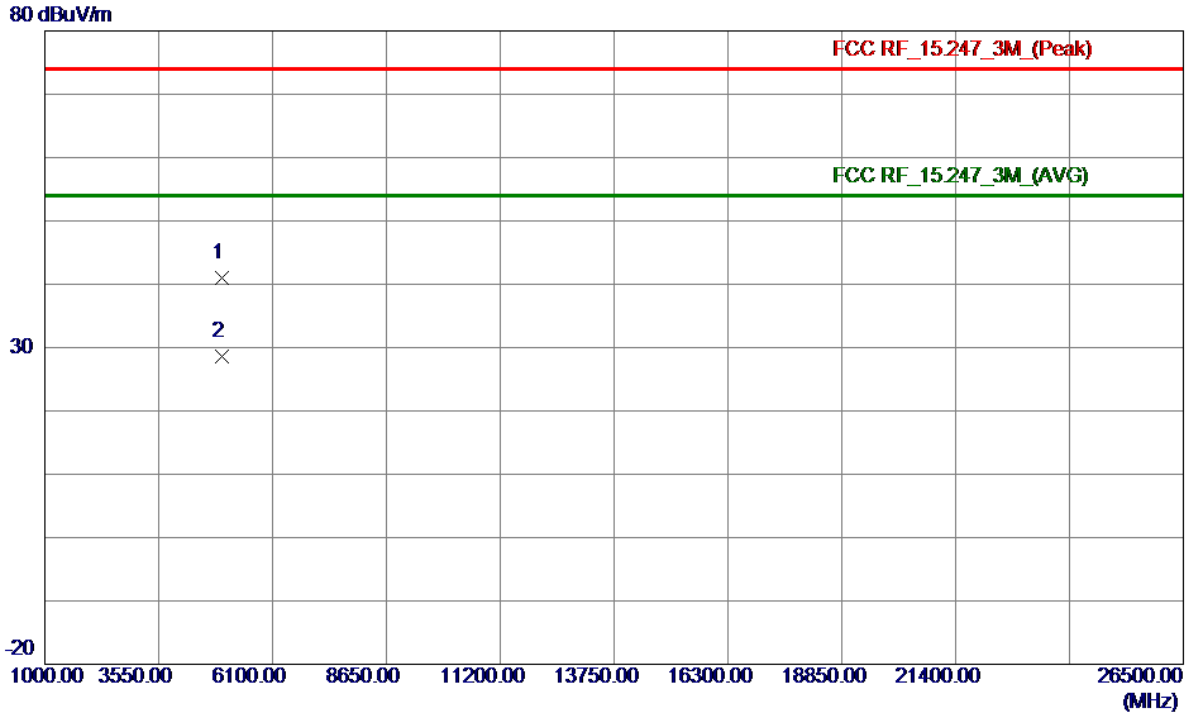



| No. | Freq. | Reading Level | Correct Factor | Measure ment | Limit | Margin | | |
|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 | 2479.8500 | 62.22 | 32.65 | 94.87 | 74.00 | 20.87 | Peak | NO limit |
| 2 * | 2479.9000 | 60.23 | 32.65 | 92.88 | 54.00 | 38.88 | AVG | NO limit |
| 3 | 2483.5000 | 21.70 | 32.66 | 54.36 | 74.00 | -19.64 | Peak | |
| 4 | 2483.5000 | 5.65 | 32.66 | 38.31 | 54.00 | -15.69 | AVG | |

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

| Test Mode: | TX 2480 MHz _CH78_1Mbps |
|---|---|

**Vertical**

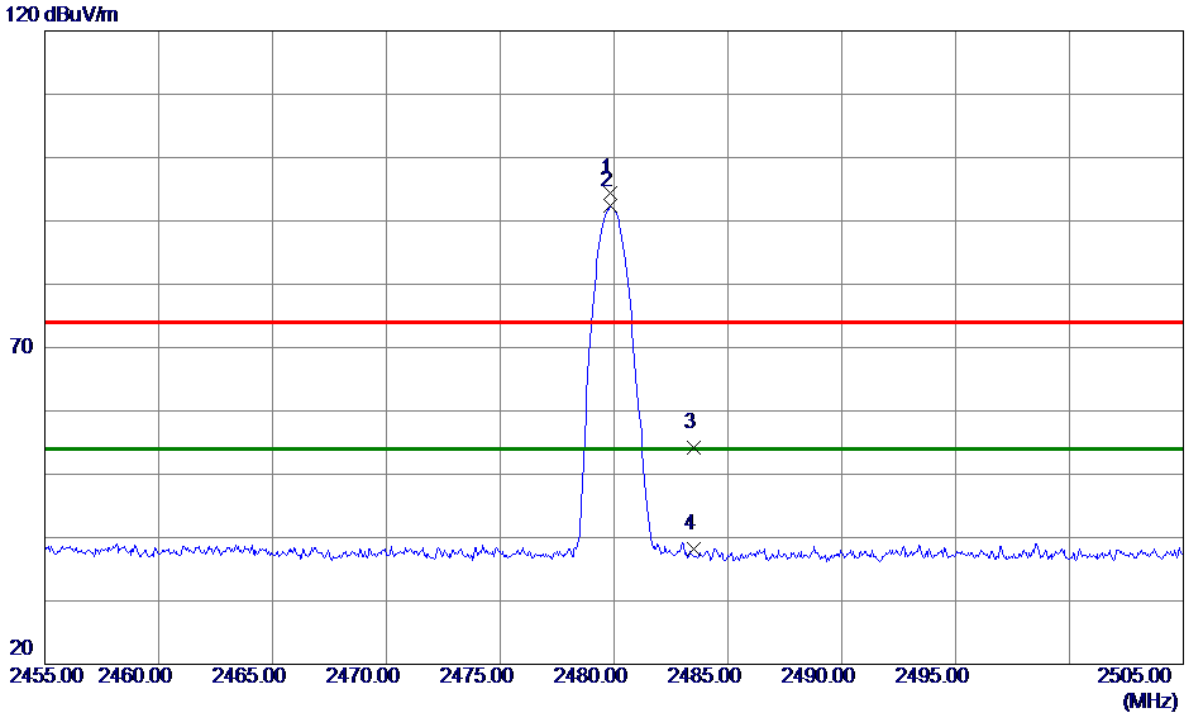



| No. | Freq. | Reading Level | Correct Factor | Measure ment | Limit | Margin | | |
|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 | 4959.6750 | 50.25 | -9.17 | 41.08 | 74.00 | -32.92 | Peak | |
| 2 * | 4960.0000 | 37.78 | -9.17 | 28.61 | 54.00 | -25.39 | AVG | |

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

| Test Mode: | TX 2480 MHz _CH78_1Mbps |
|---|---|

**Horizontal**

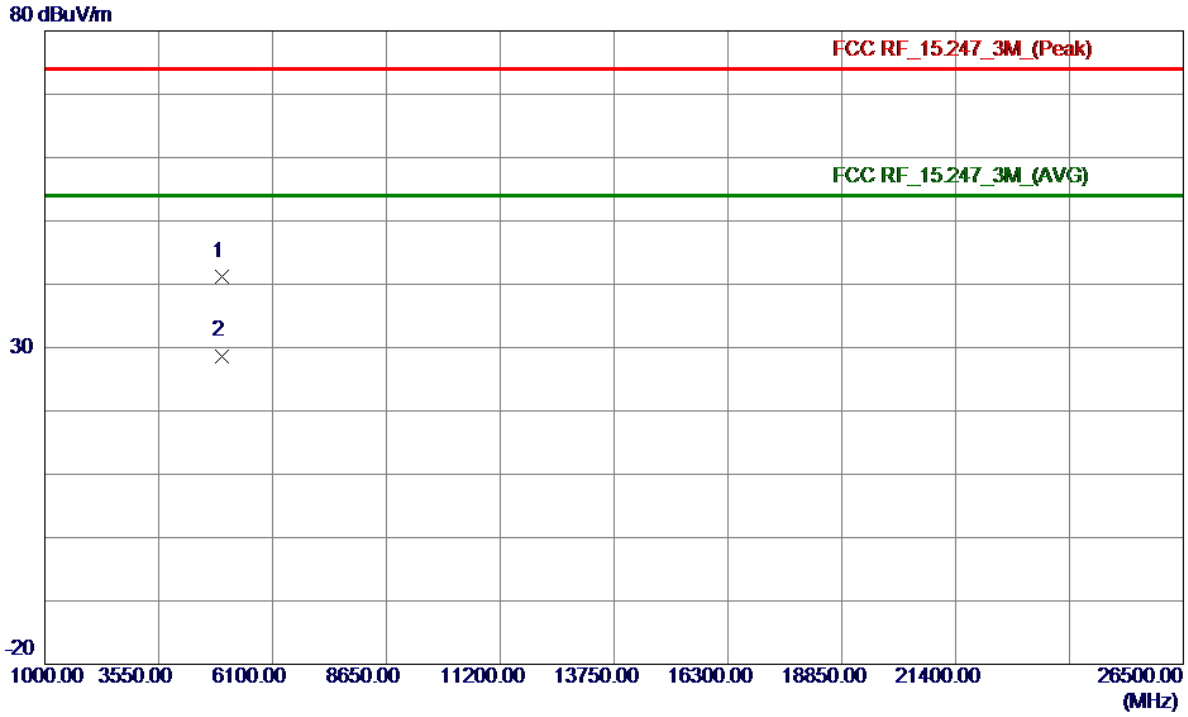



| No. | Freq. | Reading Level | Correct Factor | Measure ment | Limit | Margin | | |
|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 | 2479.8500 | 61.81 | 32.65 | 94.46 | 74.00 | 20.46 | Peak | NO limit |
| 2 * | 2479.8500 | 59.73 | 32.65 | 92.38 | 54.00 | 38.38 | AVG | NO limit |
| 3 | 2483.5000 | 21.54 | 32.66 | 54.20 | 74.00 | -19.80 | Peak | |
| 4 | 2483.5000 | 5.56 | 32.66 | 38.22 | 54.00 | -15.78 | AVG | |

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

| Test Mode: | TX 2480 MHz _CH78_1Mbps |
|---|---|

**Horizontal**

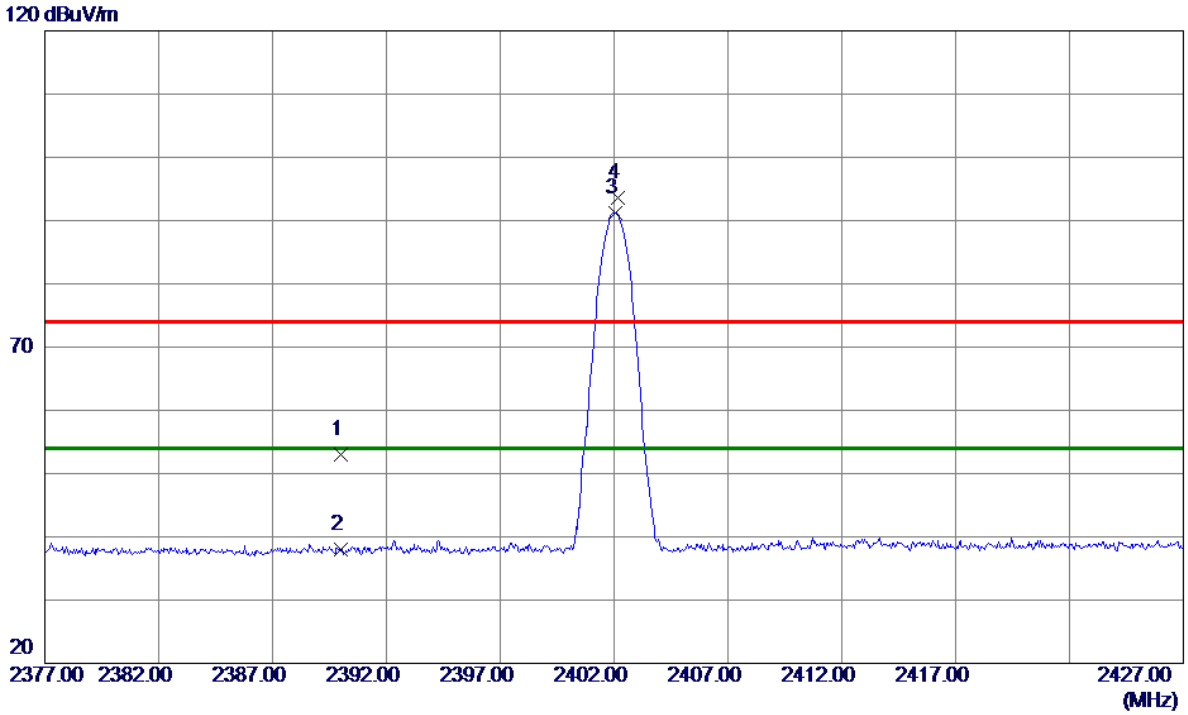



| No. | Freq. | Reading Level | Correct Factor | Measure ment | Limit | Margin | | |
|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 | 4959.4200 | 50.43 | -9.17 | 41.26 | 74.00 | -32.74 | Peak | |
| 2 * | 4960.0000 | 37.87 | -9.17 | 28.70 | 54.00 | -25.30 | AVG | |

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

| Test Mode: | TX 2402 MHz _CH00_3Mbps |
|---|---|

**Vertical**

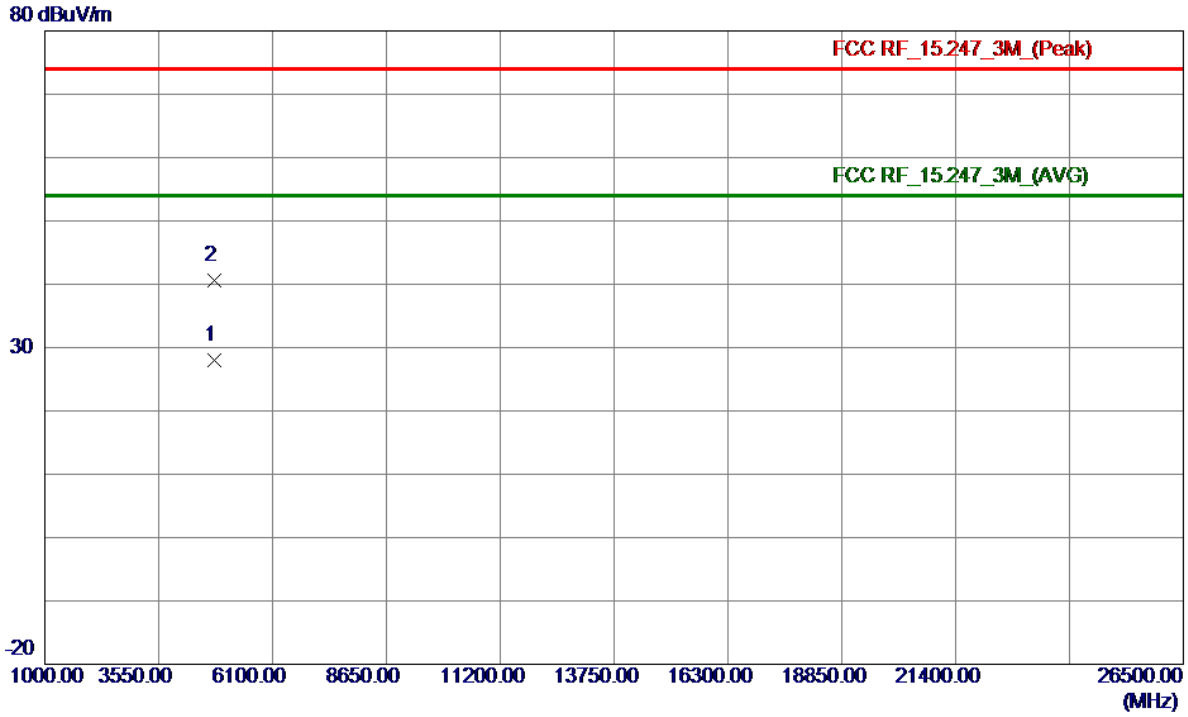



| No. | Freq. | Reading Level | Correct Factor | Measure ment | Limit | Margin | | |
|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 | 2390.0000 | 20.53 | 32.39 | 52.92 | 74.00 | -21.08 | Peak | |
| 2 | 2390.0000 | 5.61 | 32.39 | 38.00 | 54.00 | -16.00 | AVG | |
| 3 * | 2402.0500 | 58.68 | 32.43 | 91.11 | 54.00 | 37.11 | AVG | NO limit |
| 4 | 2402.1500 | 61.15 | 32.43 | 93.58 | 74.00 | 19.58 | Peak | NO limit |

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

| Test Mode: | TX 2402 MHz _CH00_3Mbps |
|---|---|

**Vertical**

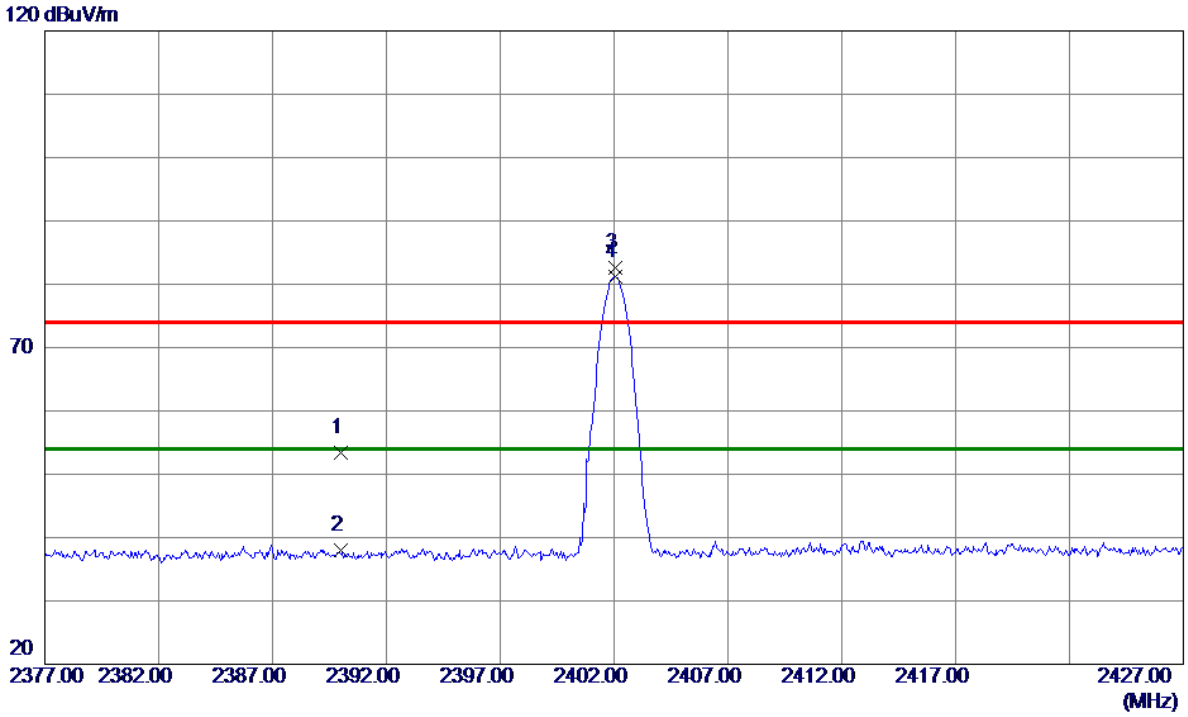



| No. | Freq. | Reading Level | Correct Factor | Measure ment | Limit | Margin | | |
|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 * | 4804.0000 | 37.73 | -9.76 | 27.97 | 54.00 | -26.03 | AVG | |
| 2 | 4806.4500 | 50.30 | -9.76 | 40.54 | 74.00 | -33.46 | Peak | |

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

| Test Mode: | TX 2402 MHz _CH00_3Mbps |
|---|---|

**Horizontal**

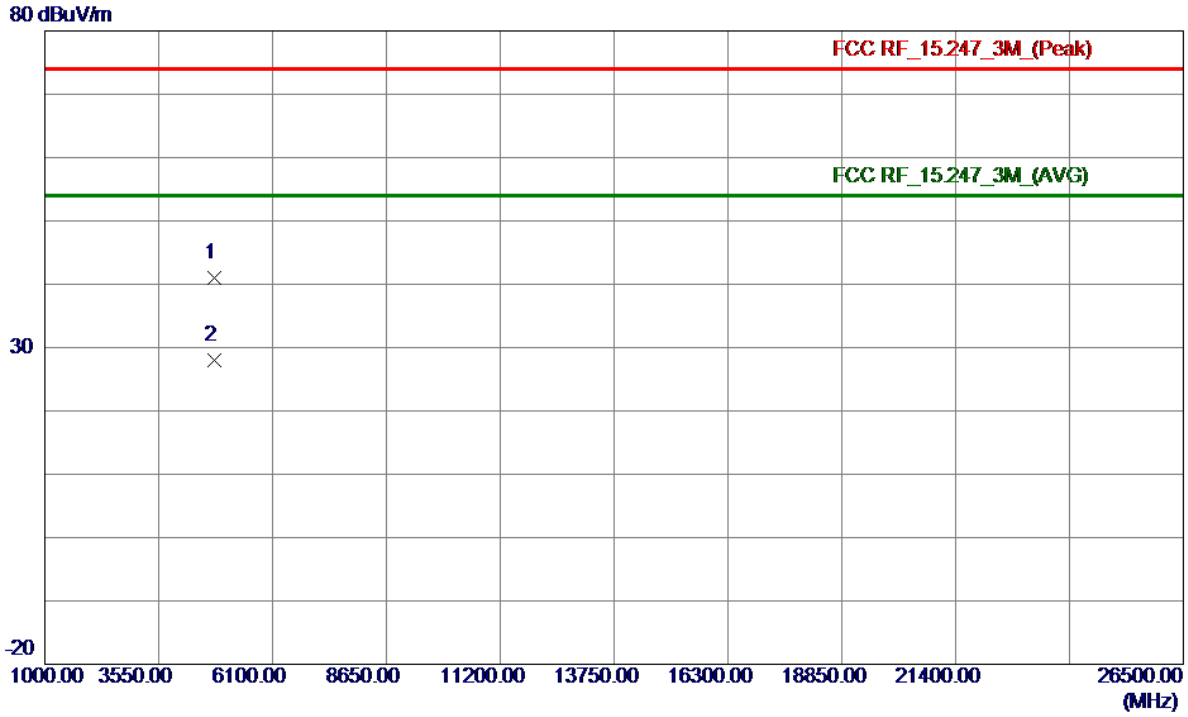



| No. | Freq. | Reading Level | Correct Factor | Measure ment | Limit | Margin | | |
|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 | 2390.0000 | 20.93 | 32.39 | 53.32 | 74.00 | -20.68 | Peak | |
| 2 | 2390.0000 | 5.61 | 32.39 | 38.00 | 54.00 | -16.00 | AVG | |
| 3 | 2402.0500 | 50.20 | 32.43 | 82.63 | 74.00 | 8.63 | Peak | NO limit |
| 4 * | 2402.0500 | 48.71 | 32.43 | 81.14 | 54.00 | 27.14 | AVG | NO limit |

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

| Test Mode: | TX 2402 MHz _CH00_3Mbps |
|---|---|

**Horizontal**

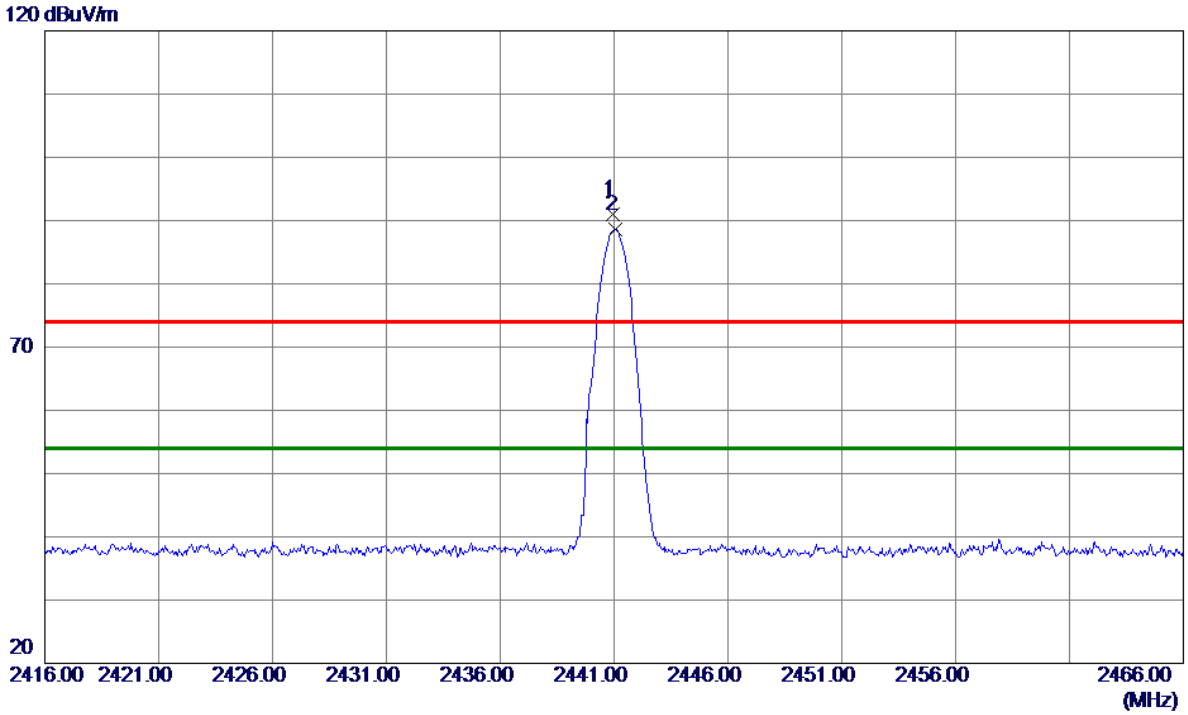



| No. | Freq. | Reading Level | Correct Factor | Measure ment | Limit | Margin | | |
|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 | 4801.8900 | 50.75 | -9.77 | 40.98 | 74.00 | -33.02 | Peak | |
| 2 * | 4804.0000 | 37.79 | -9.76 | 28.03 | 54.00 | -25.97 | AVG | |

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

| Test Mode: | TX 2441 MHz _CH39_3Mbps |
|---|---|

**Vertical**

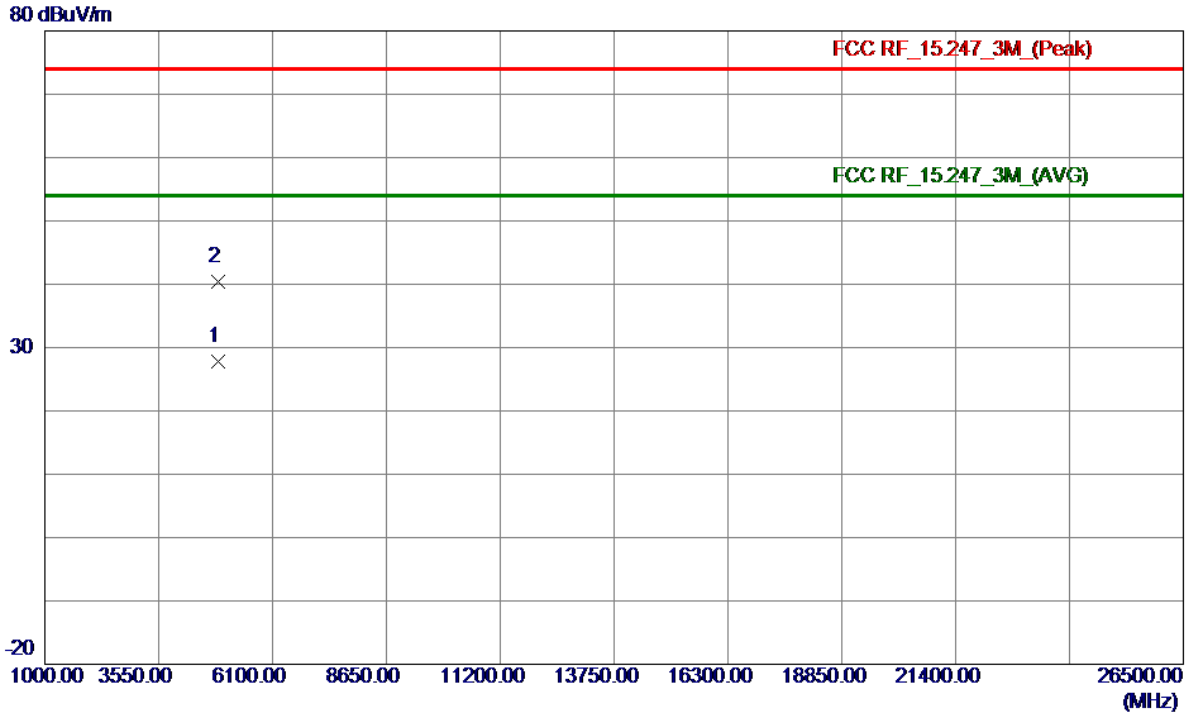



| No. | Freq. | Reading Level | Correct Factor | Measure ment | Limit | Margin | | |
|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 | 2440.9500 | 58.49 | 32.54 | 91.03 | 74.00 | 17.03 | Peak | NO limit |
| 2 * | 2441.0500 | 56.06 | 32.54 | 88.60 | 54.00 | 34.60 | AVG | NO limit |

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

| Test Mode: | TX 2441 MHz _CH39_3Mbps |
|---|---|

**Vertical**

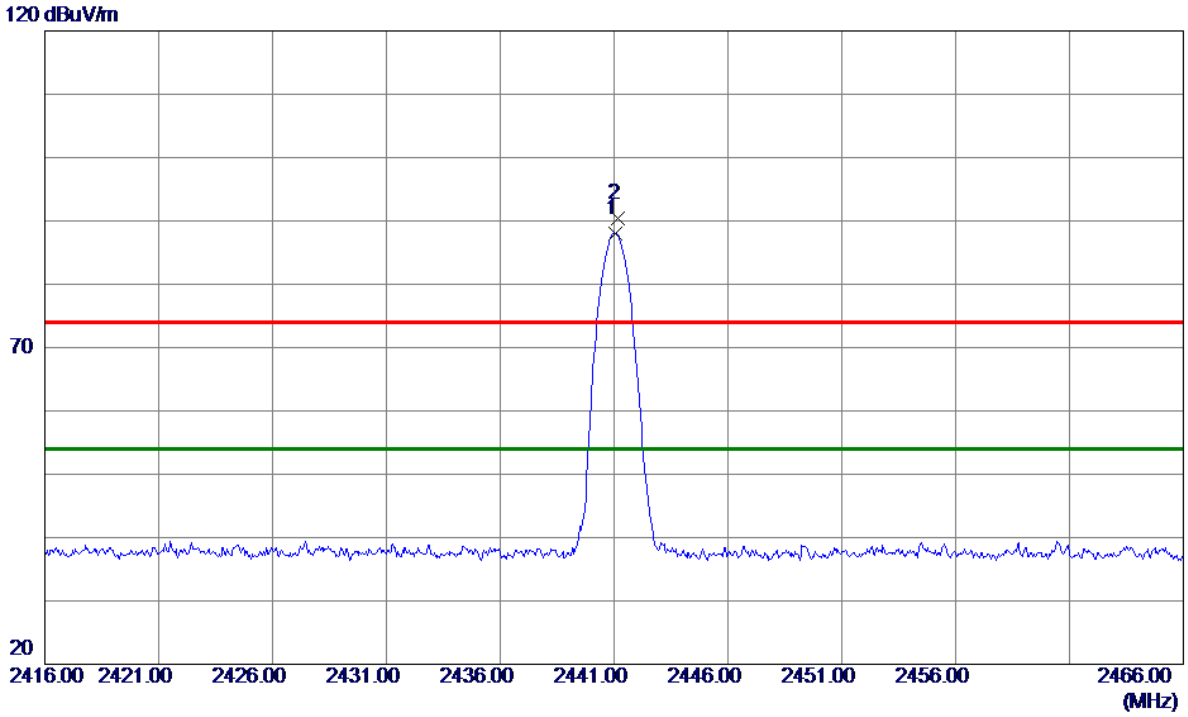



| No. | Freq. | Reading Level | Correct Factor | Measure ment | Limit | Margin | | |
|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 * | 4880.0000 | 37.30 | -9.48 | 27.82 | 54.00 | -26.18 | AVG | |
| 2 | 4881.6650 | 49.81 | -9.47 | 40.34 | 74.00 | -33.66 | Peak | |

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

| Test Mode: | TX 2441 MHz _CH39_3Mbps |
|---|---|

**Horizontal**

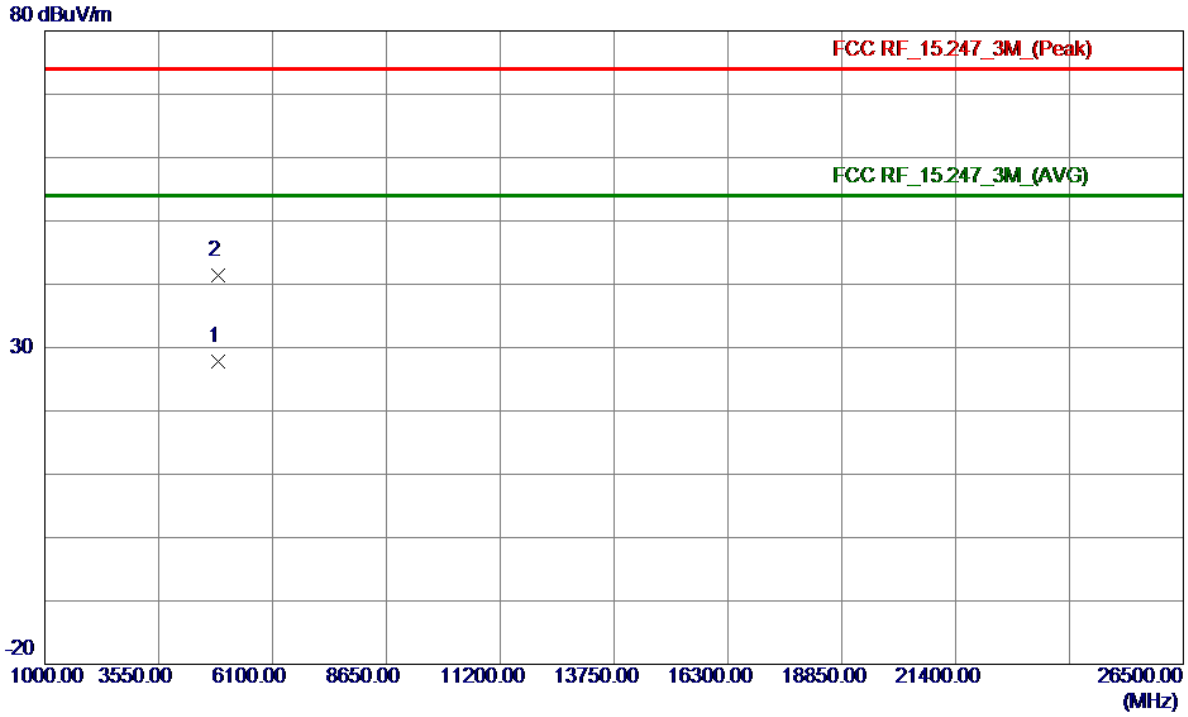



| No. | Freq. | Reading Level | Correct Factor | Measure ment | Limit | Margin | | |
|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 * | 2441.0500 | 55.50 | 32.54 | 88.04 | 54.00 | 34.04 | AVG | NO limit |
| 2 | 2441.1500 | 57.87 | 32.54 | 90.41 | 74.00 | 16.41 | Peak | NO limit |

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

| Test Mode: | TX 2441 MHz _CH39_3Mbps |
|---|---|

**Horizontal**

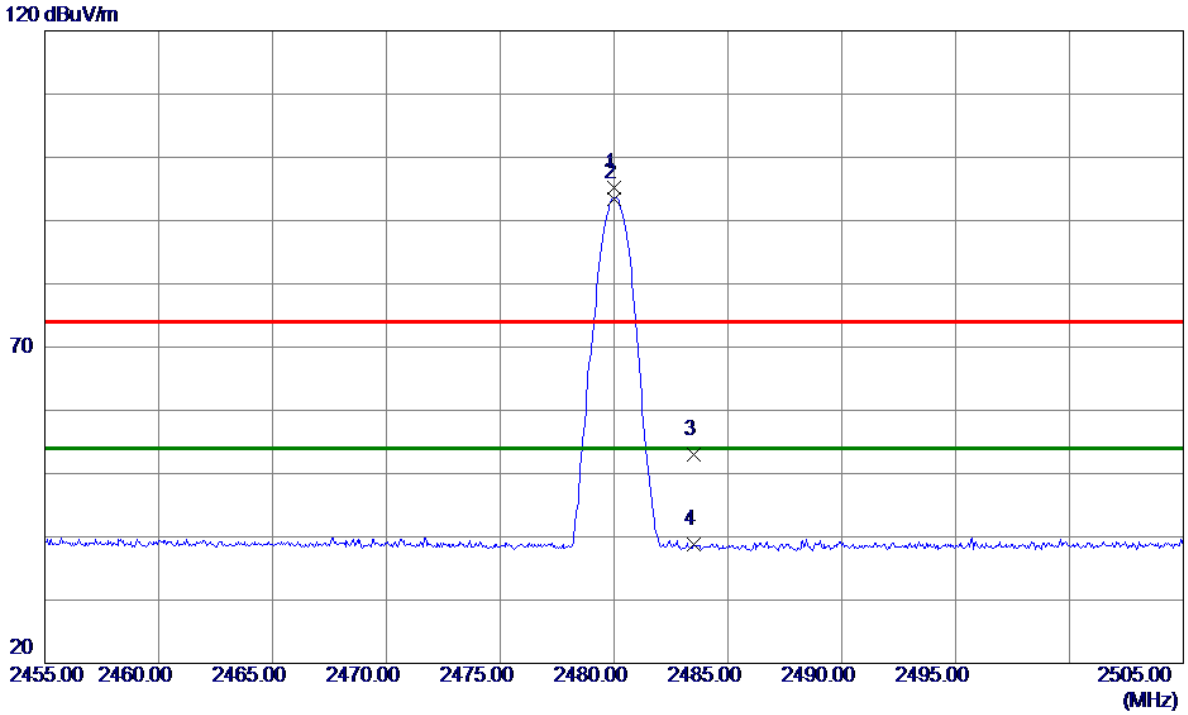



| No. | Freq. | Reading Level | Correct Factor | Measure ment | Limit | Margin | | |
|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 * | 4880.0000 | 37.34 | -9.48 | 27.86 | 54.00 | -26.14 | AVG | |
| 2 | 4881.8750 | 50.85 | -9.47 | 41.38 | 74.00 | -32.62 | Peak | |

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

| Test Mode: | TX 2480 MHz _CH78_3Mbps |
|---|---|

**Vertical**

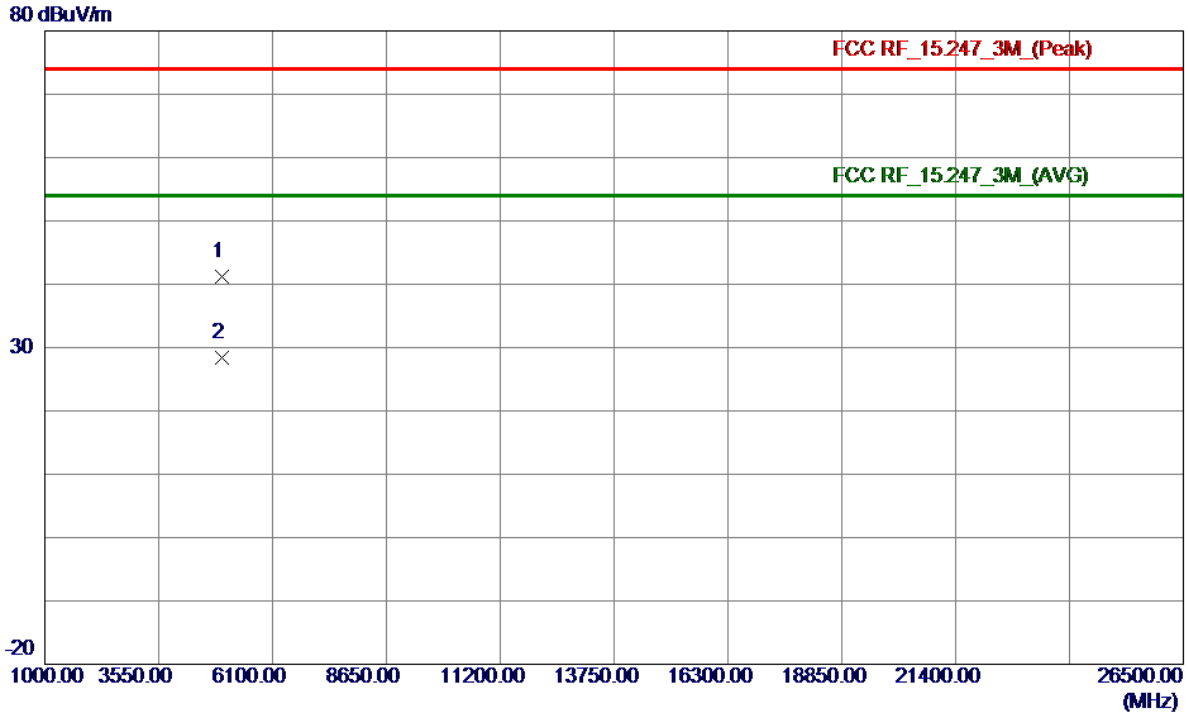



| No. | Freq. | Reading Level | Correct Factor | Measure ment | Limit | Margin | | |
|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 | 2480.0000 | 62.52 | 32.65 | 95.17 | 74.00 | 21.17 | Peak | NO limit |
| 2 * | 2480.0000 | 60.85 | 32.65 | 93.50 | 54.00 | 39.50 | AVG | NO limit |
| 3 | 2483.5000 | 20.41 | 32.66 | 53.07 | 74.00 | -20.93 | Peak | |
| 4 | 2483.5000 | 6.20 | 32.66 | 38.86 | 54.00 | -15.14 | AVG | |

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

| Test Mode: | TX 2480 MHz _CH78_3Mbps |
|---|---|

**Vertical**

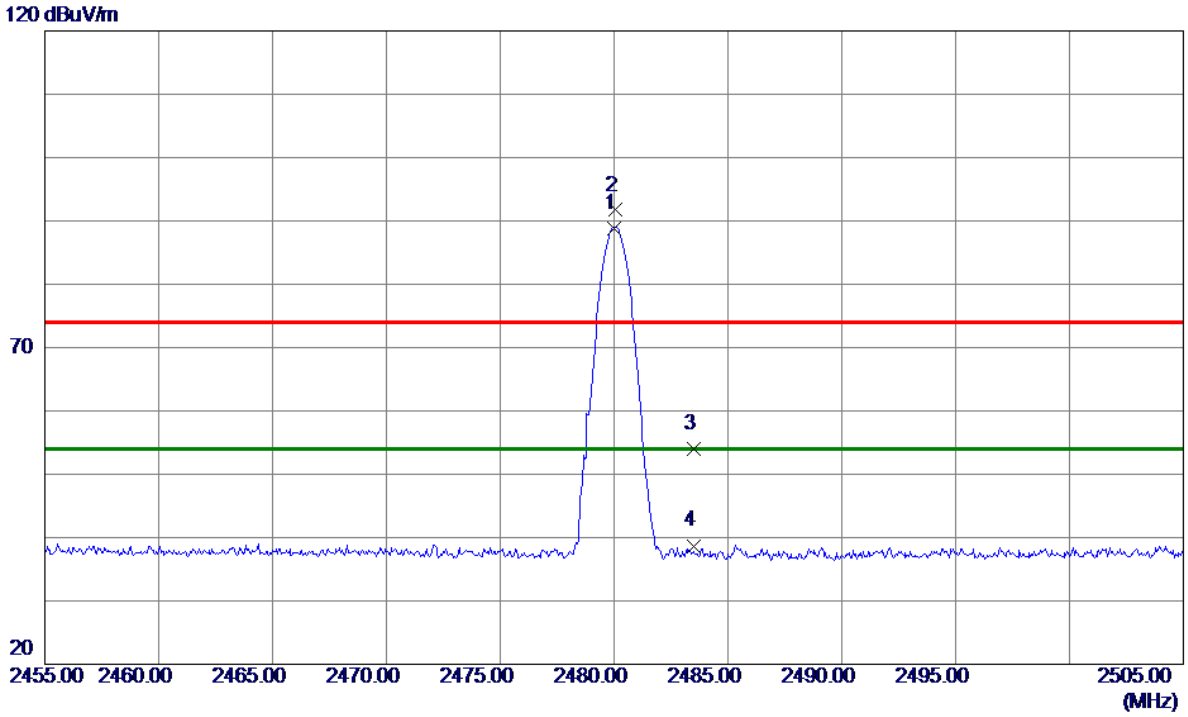



| No. | Freq. | Reading Level | Correct Factor | Measure ment | Limit | Margin | | |
|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 | 4957.5950 | 50.46 | -9.18 | 41.28 | 74.00 | -32.72 | Peak | |
| 2 * | 4960.0000 | 37.53 | -9.17 | 28.36 | 54.00 | -25.64 | AVG | |

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

| Test Mode: | TX 2480 MHz _CH78_3Mbps |
|---|---|

**Horizontal**

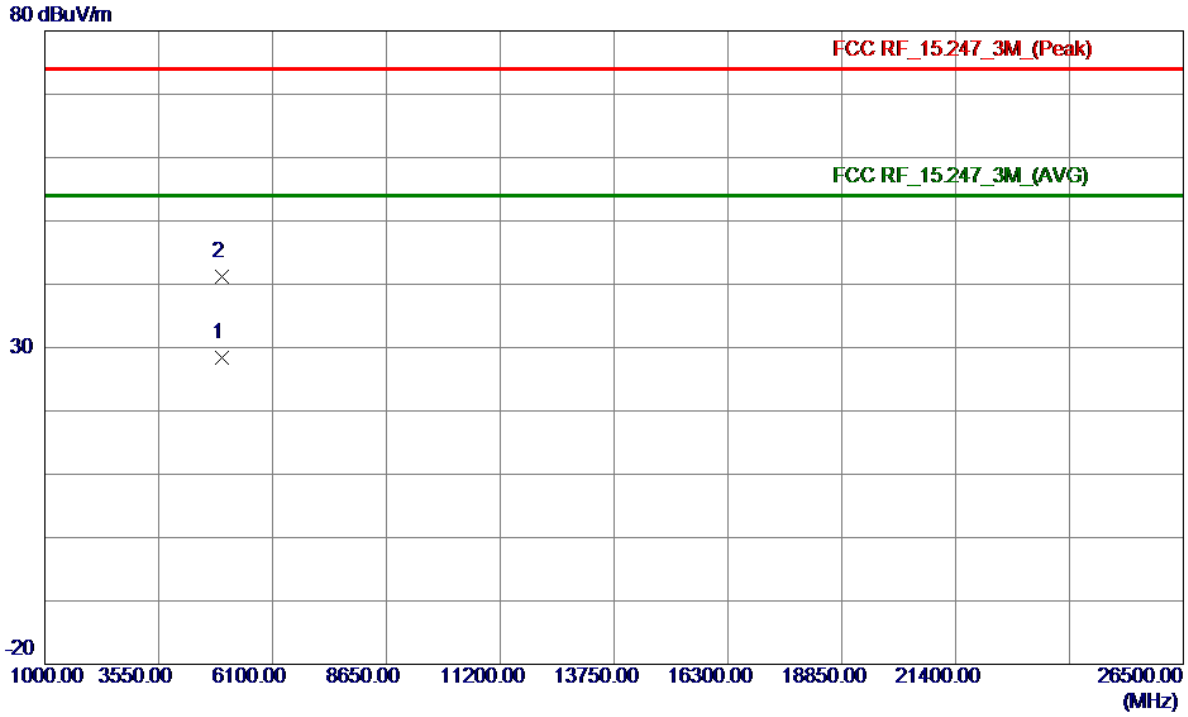



| No. | Freq. | Reading Level | Correct Factor | Measure ment | Limit | Margin | | |
|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 * | 2480.0000 | 56.20 | 32.65 | 88.85 | 54.00 | 34.85 | AVG | NO limit |
| 2 | 2480.0500 | 59.05 | 32.65 | 91.70 | 74.00 | 17.70 | Peak | NO limit |
| 3 | 2483.5000 | 21.35 | 32.66 | 54.01 | 74.00 | -19.99 | Peak | |
| 4 | 2483.5000 | 6.04 | 32.66 | 38.70 | 54.00 | -15.30 | AVG | |

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

| Test Mode: | TX 2480 MHz _CH78_3Mbps |
|---|---|

**Horizontal**

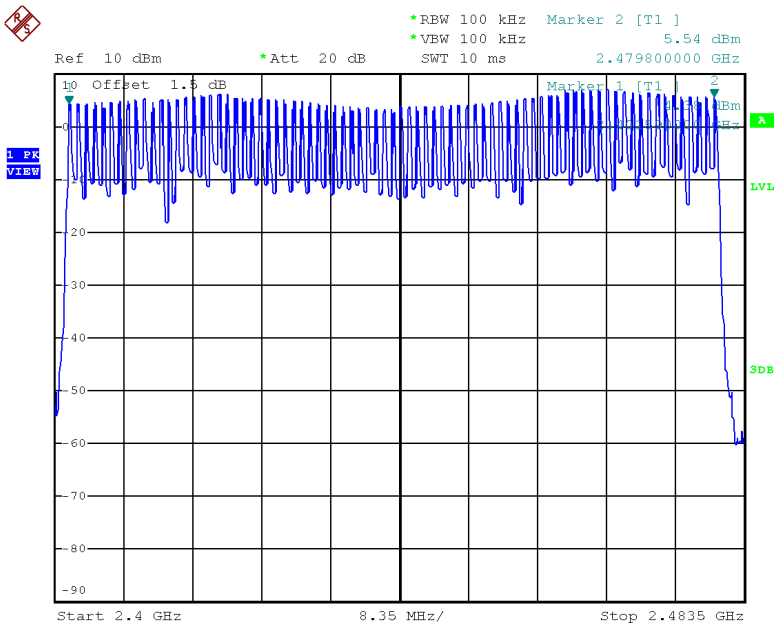



| No. | Freq. | Reading Level | Correct Factor | Measure ment | Limit | Margin | | |
|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 * | 4960.0000 | 37.57 | -9.17 | 28.40 | 54.00 | -25.60 | AVG | |
| 2 | 4962.0700 | 50.43 | -9.16 | 41.27 | 74.00 | -32.73 | Peak | |

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

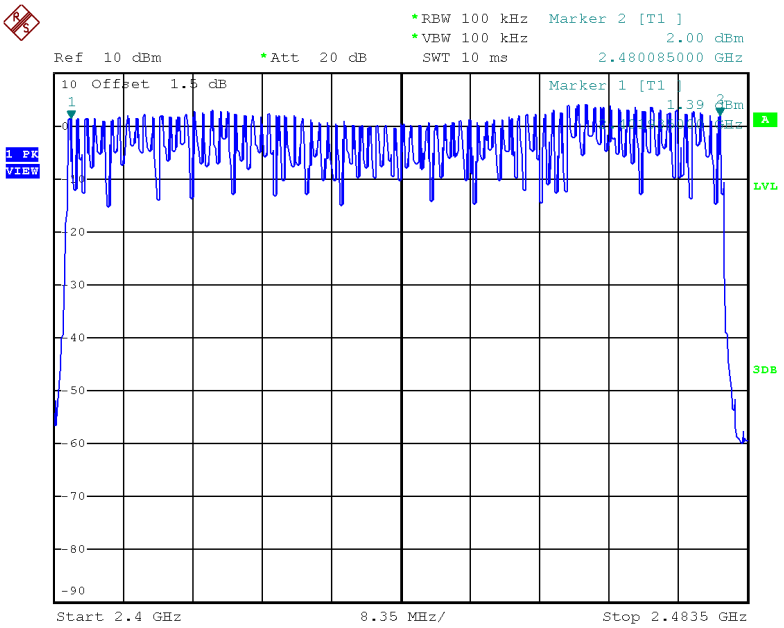
# APPENDIX E - NUMBER OF HOPPING FREQUENCY

| Test Mode | Hopping Mode_1Mbps |
|---|---|
| Number of Hopping Frequency | 79 |




Date: 3.SEP.2019 11:09:15

| Test Mode | Hopping Mode_3Mbps |
|---|---|
| Number of Hopping Frequency | 79 |



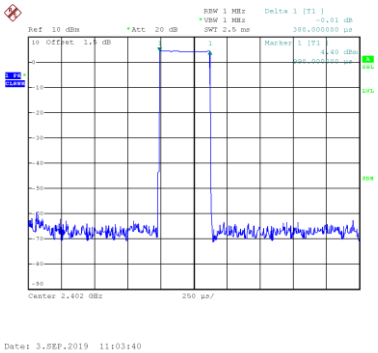

Date: 3.SEP.2019 11:47:32

# APPENDIX F - AVERAGE TIME OF OCCUPANCY

| Test Mode: | TX Mode_1Mbps |
|---|---|

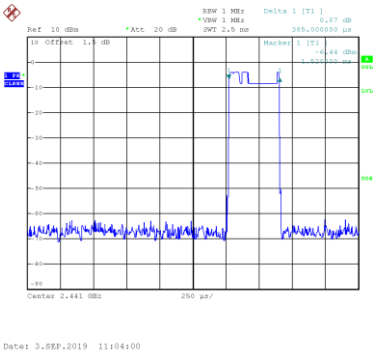
| Data Packet | Frequency (MHz) | Pulse Duration (ms) | Dwell Time (s) | Limits (s) | Test Result |
|---|---|---|---|---|---|
| DH1 | 2402 | 0.3800 | 0.1216 | 0.4000 | Pass |
| DH3 | 2402 | 1.6400 | 0.2624 | 0.4000 | Pass |
| DH5 | 2402 | 2.9200 | 0.3115 | 0.4000 | Pass |
| DH1 | 2441 | 0.3850 | 0.1232 | 0.4000 | Pass |
| DH3 | 2441 | 1.6400 | 0.2624 | 0.4000 | Pass |
| DH5 | 2441 | 2.8800 | 0.3072 | 0.4000 | Pass |
| DH1 | 2480 | 0.3800 | 0.1216 | 0.4000 | Pass |
| DH3 | 2480 | 1.6400 | 0.2624 | 0.4000 | Pass |
| DH5 | 2480 | 2.8800 | 0.3072 | 0.4000 | Pass |

## CH00-DH1



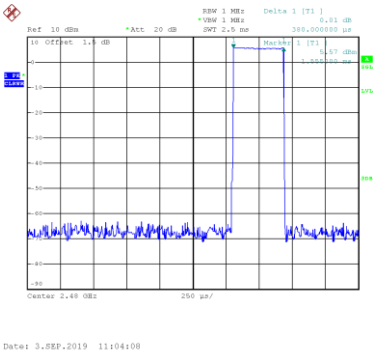
Date: 3.SEP.2019 11:03:40

## CH39-DH1



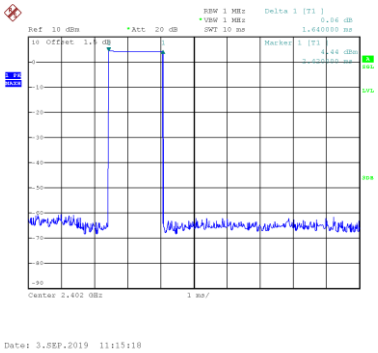
Date: 3.SEP.2019 11:04:00

## CH78-DH1



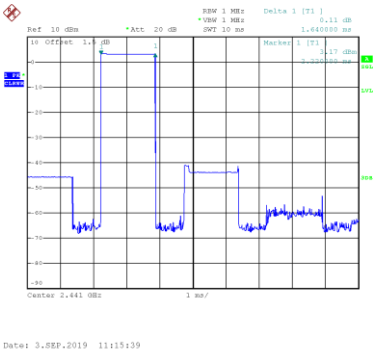
Date: 3.SEP.2019 11:04:08

## CH00-DH3



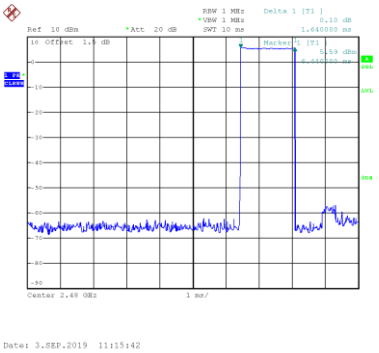
Date: 3.SEP.2019 11:15:18

## CH39-DH3



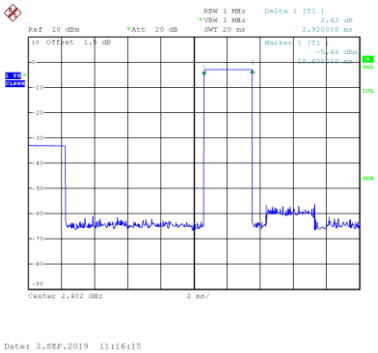
Date: 3.SEP.2019 11:15:39

## CH78-DH3



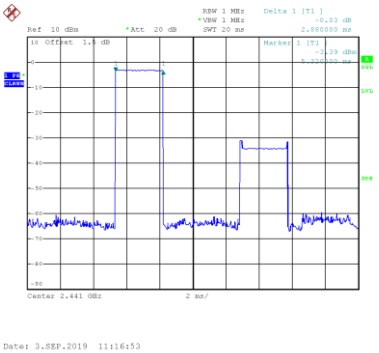
Date: 3.SEP.2019 11:15:42

## CH00-DH5



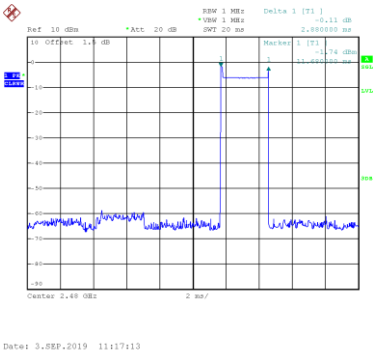
Date: 3.SEP.2019 11:16:15

## CH39-DH5



Date: 3.SEP.2019 11:16:53

## CH78-DH5

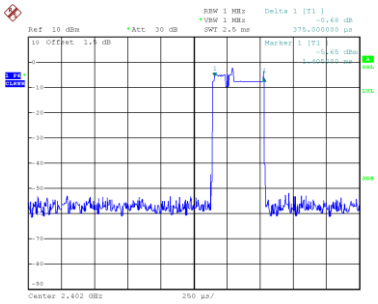


Date: 3.SEP.2019 11:17:13

| Test Mode: | TX Mode_3Mbps |
|---|---|

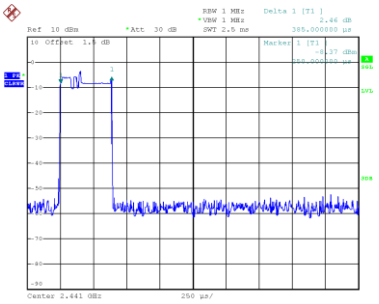
| Data Packet | Frequency | Pulse Duration(ms) | Dwell Time(s) | Limits(s) | Test Result |
|---|---|---|---|---|---|
| 3DH1 | 2402 | 0.3750 | 0.1200 | 0.4000 | Pass |
| 3DH3 | 2402 | 1.6200 | 0.2592 | 0.4000 | Pass |
| 3DH5 | 2402 | 2.8800 | 0.3072 | 0.4000 | Pass |
| 3DH1 | 2441 | 0.3850 | 0.1232 | 0.4000 | Pass |
| 3DH3 | 2441 | 1.6400 | 0.2624 | 0.4000 | Pass |
| 3DH5 | 2441 | 2.9200 | 0.3115 | 0.4000 | Pass |
| 3DH1 | 2480 | 0.3850 | 0.1232 | 0.4000 | Pass |
| 3DH3 | 2480 | 1.6400 | 0.2624 | 0.4000 | Pass |
| 3DH5 | 2480 | 2.9200 | 0.3115 | 0.4000 | Pass |

## CH00-3DH1



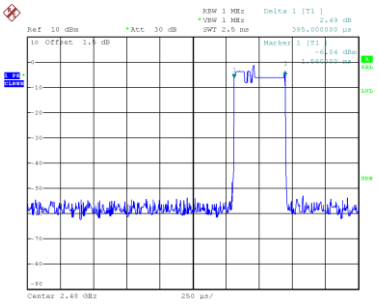
Date: 3.SEP.2019 16:34:58

## CH39-3DH1



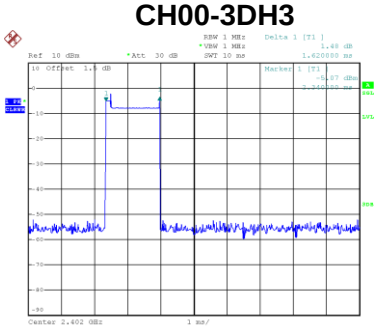
Date: 3.SEP.2019 16:35:02

## CH78-3DH1



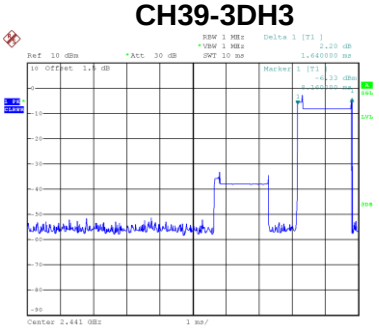
Date: 3.SEP.2019 16:35:06

## CH00-3DH3



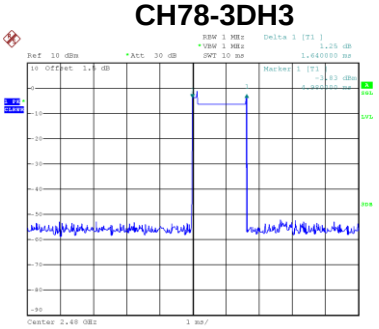
Date: 3.SEP.2019 16:35:38

## CH39-3DH3



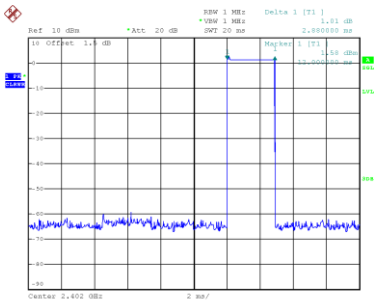
Date: 3.SEP.2019 16:35:43

## CH78-3DH3



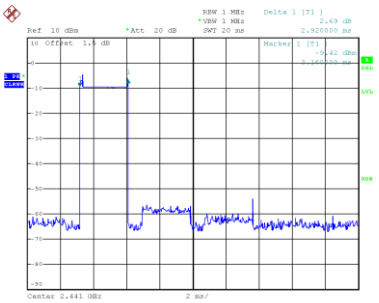
Date: 3.SEP.2019 16:35:47

## CH00-3DH5



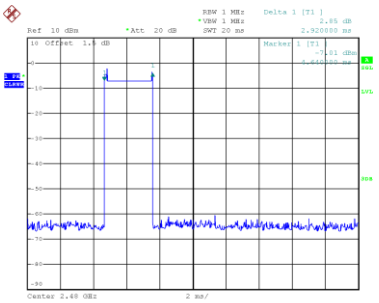
Date: 3.SEP.2019 11:50:08

## CH39-3DH5



Date: 3.SEP.2019 11:50:12

## CH78-3DH5



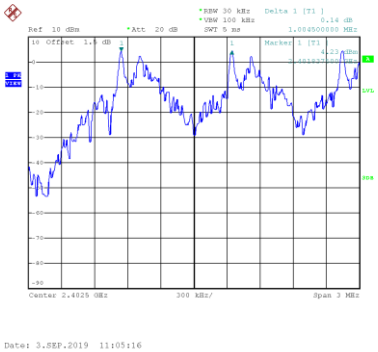
Date: 3.SEP.2019 11:50:16

# APPENDIX G - HOPPING CHANNEL SEPARATION MEASUREMENT

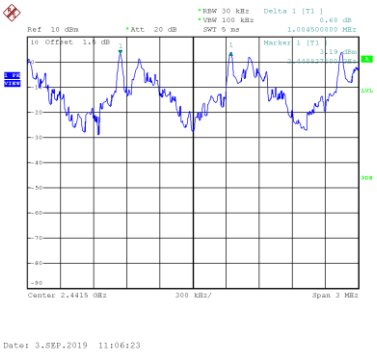
| Test Mode: | Hopping on _1Mbps |
|---|---|

| Channel | Frequency (MHz) | Channel Separation (MHz) | 2/3 of 20 dB Bandwidth (MHz) | Test Result |
|---|---|---|---|---|
| 00 | 2402 | 1.005 | 0.448 | Pass |
| 39 | 2441 | 1.005 | 0.501 | Pass |
| 78 | 2480 | 1.002 | 0.432 | Pass |

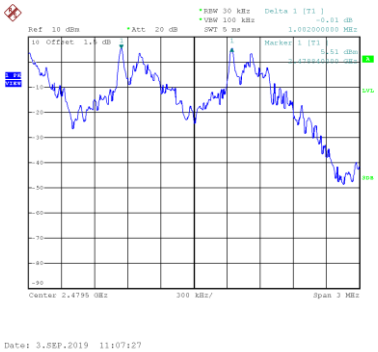
**CH00**



**CH39**



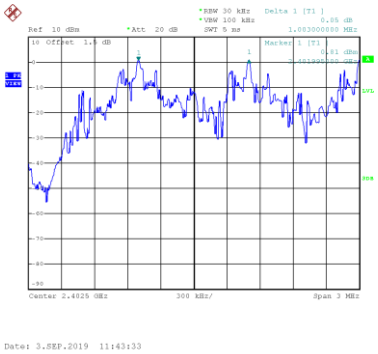
**CH78**



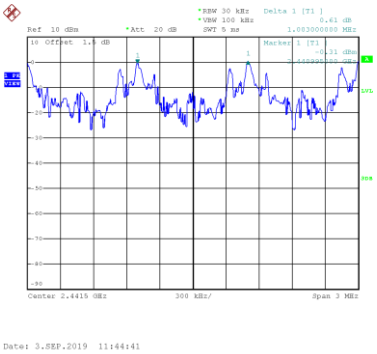
| Test Mode: | Hopping on _3Mbps |
|---|---|

| Channel | Frequency (MHz) | Channel Separation (MHz) | 2/3 of 20 dB Bandwidth (MHz) | Test Result |
|---|---|---|---|---|
| 00 | 2402 | 1.003 | 0.725 | Pass |
| 39 | 2441 | 1.003 | 0.719 | Pass |
| 78 | 2480 | 1.002 | 0.733 | Pass |

**CH00**



**CH39**



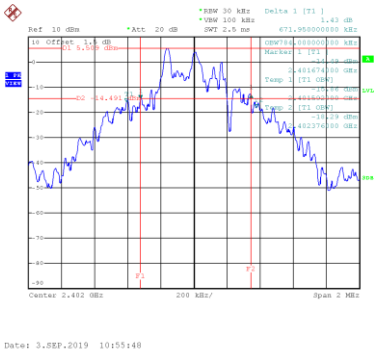
**CH78**

# APPENDIX H - BANDWIDTH

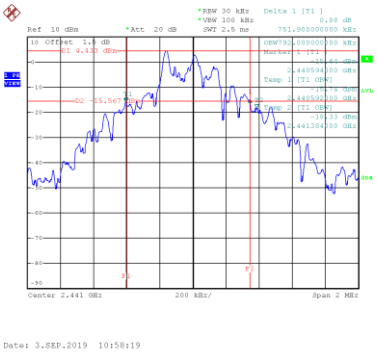
| Test Mode: | TX Mode _1Mbps |
|---|---|

| Channel | Frequency (MHz) | 20 dB Bandwidth (MHz) | 99 % Emission Bandwidth (MHz) |
|---|---|---|---|
| 00 | 2402 | 0.672 | 0.784 |
| 39 | 2441 | 0.752 | 0.792 |
| 78 | 2480 | 0.648 | 0.752 |

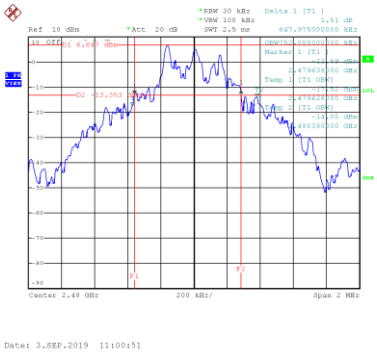
**CH00**



**CH39**



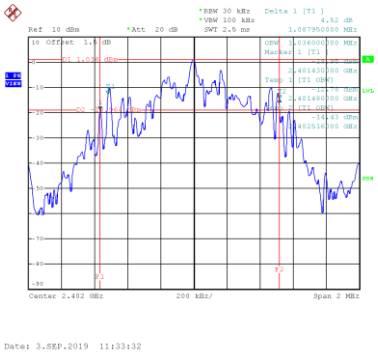
**CH78**



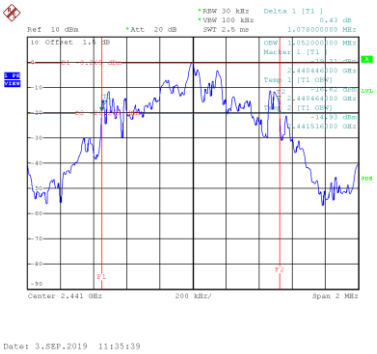
| Test Mode: | TX Mode _3Mbps |
|---|---|

| Channel | Frequency (MHz) | 20 dB Bandwidth (MHz) | 99 % Emission Bandwidth (MHz) |
|---|---|---|---|
| 00 | 2402 | 1.088 | 1.036 |
| 39 | 2441 | 1.078 | 1.052 |
| 78 | 2480 | 1.100 | 1.056 |

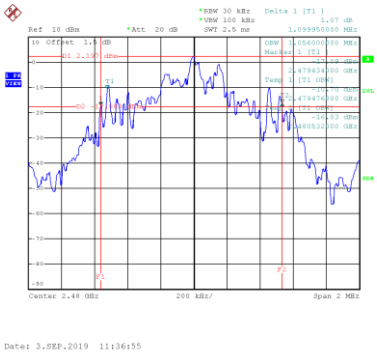
**CH00**



**CH39**



**CH78**

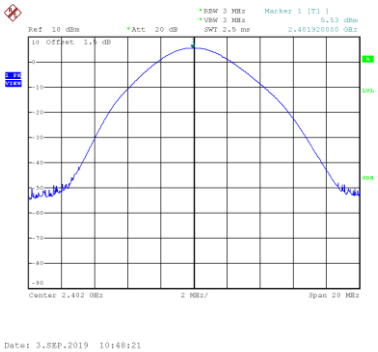


# APPENDIX I - MAXIMUM OUTPUT POWER & E.I.R.P.

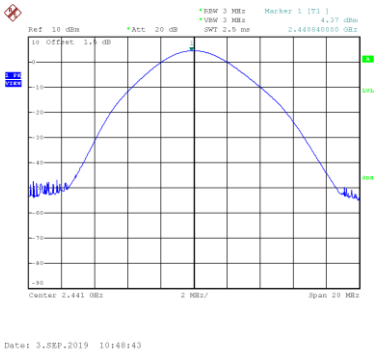
| Test Mode: | TX Mode _1Mbps |
|---|---|

| Channel | Frequency (MHz) | Output Power (dBm) | Output Power (W) | Max. Limit (dBm) | Max. Limit (W) | Test Result |
|---|---|---|---|---|---|---|
| 00 | 2402 | 5.53 | 0.0036 | 21.00 | 0.125 | Pass |
| 39 | 2441 | 4.37 | 0.0027 | 21.00 | 0.125 | Pass |
| 78 | 2480 | 6.61 | 0.0046 | 21.00 | 0.125 | Pass |

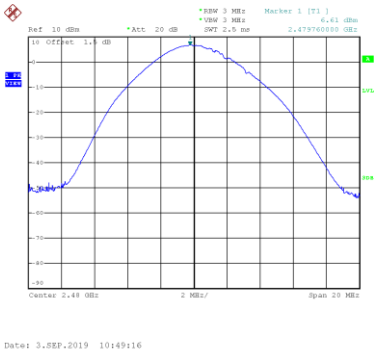
**CH00**



**CH39**



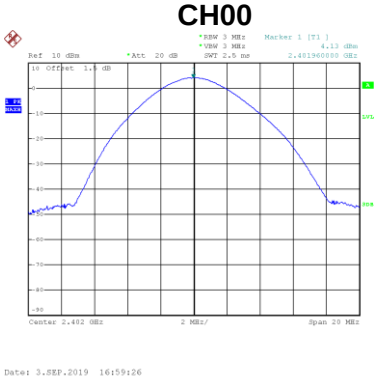
**CH78**



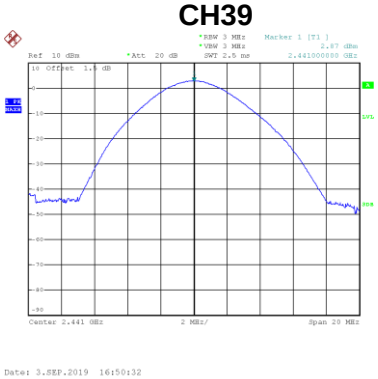
| Test Mode: | TX Mode _3Mbps |
|---|---|

| Channel | Frequency (MHz) | Output Power (dBm) | Output Power (W) | Max. Limit (dBm) | Max. Limit (W) | Test Result |
|---|---|---|---|---|---|---|
| 00 | 2402 | 4.13 | 0.0026 | 21.00 | 0.125 | Pass |
| 39 | 2441 | 2.87 | 0.0019 | 21.00 | 0.125 | Pass |
| 78 | 2480 | 5.35 | 0.0034 | 21.00 | 0.125 | Pass |

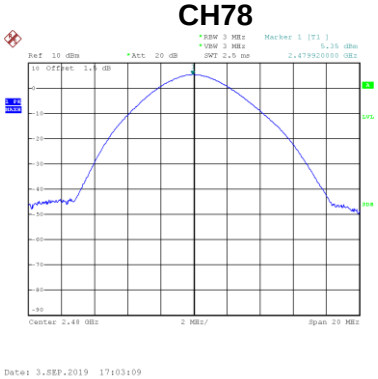
**CH00**



**CH39**



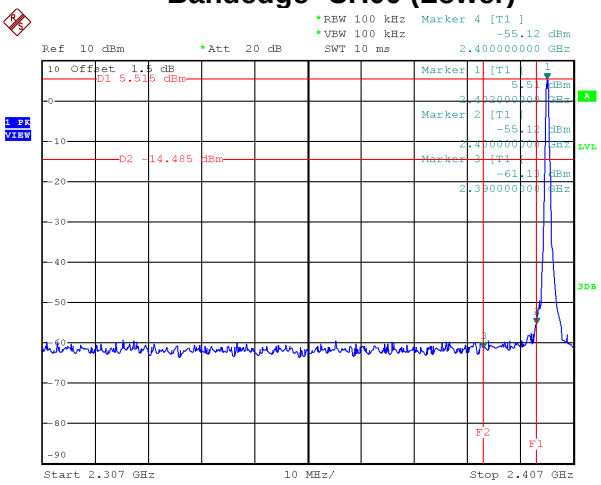
**CH78**



# APPENDIX J - CONDUCTED SPURIOUS EMISSION

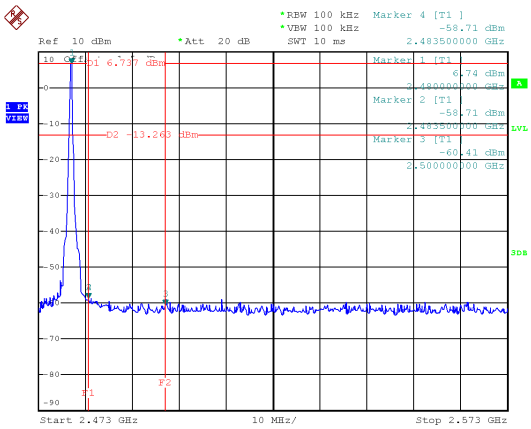
## Test Mode : TX Mode _1Mbps

### Bandedge- CH00 (Lower)



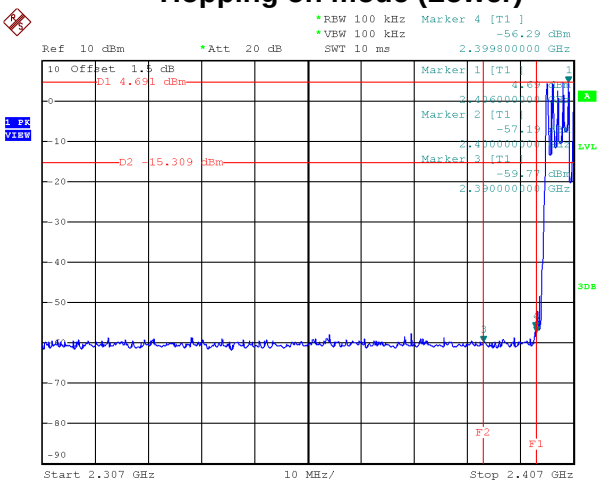

Date: 3.SEP.2019 10:55:08

### Bandedge CH78 (Upper)



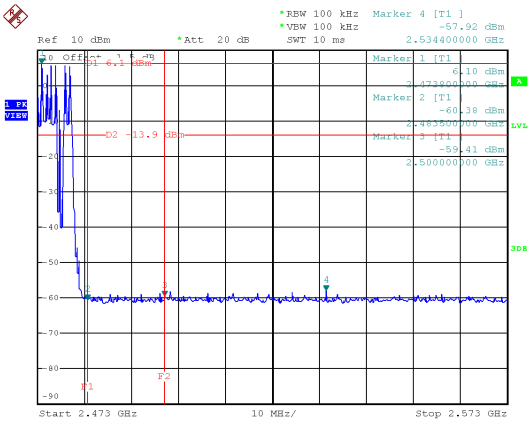

Date: 3.SEP.2019 11:00:03

### Hopping on mode (Lower)



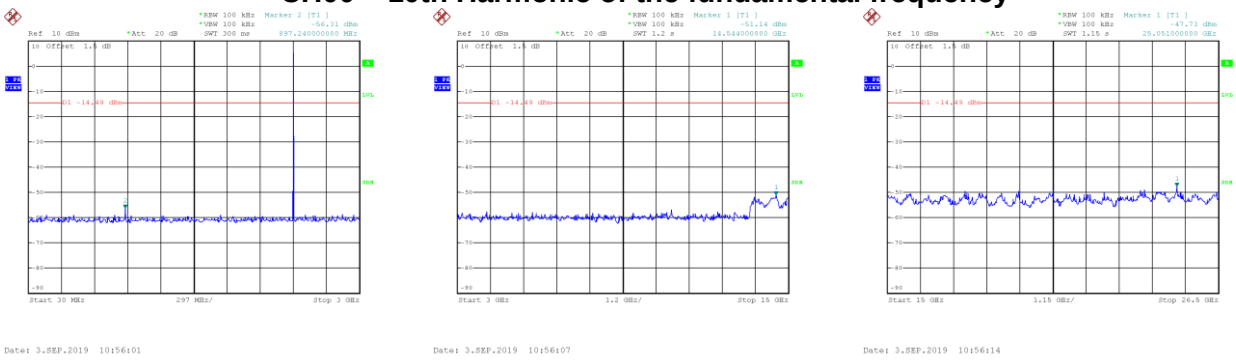

Date: 3.SEP.2019 11:10:05

### Hopping on mode (Upper)

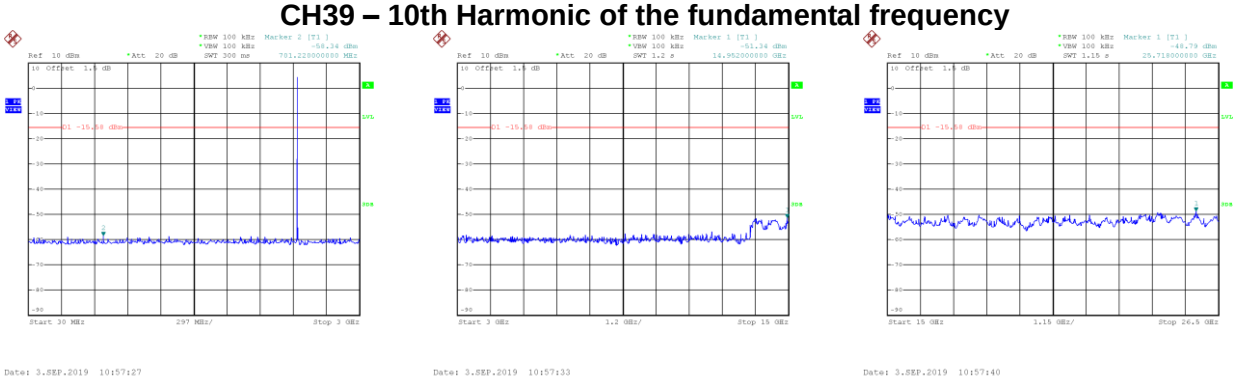



Date: 3.SEP.2019 11:10:56

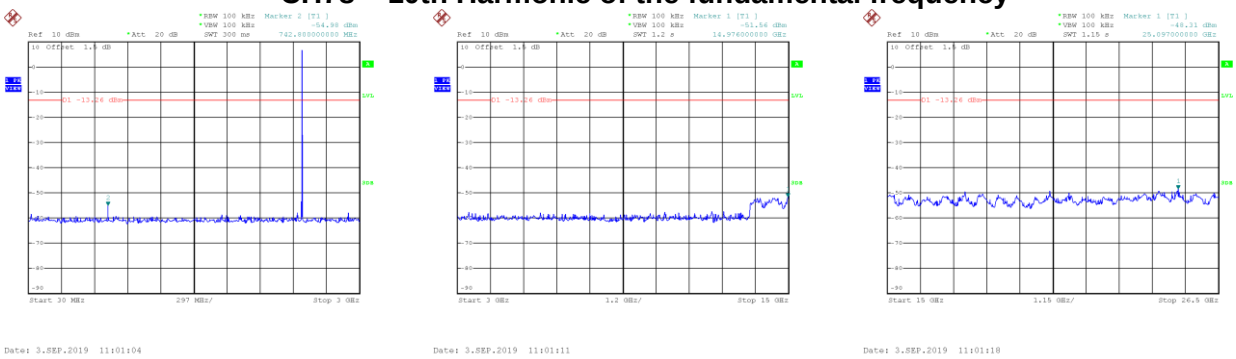
## CH00 – 10th Harmonic of the fundamental frequency



## CH39 – 10th Harmonic of the fundamental frequency

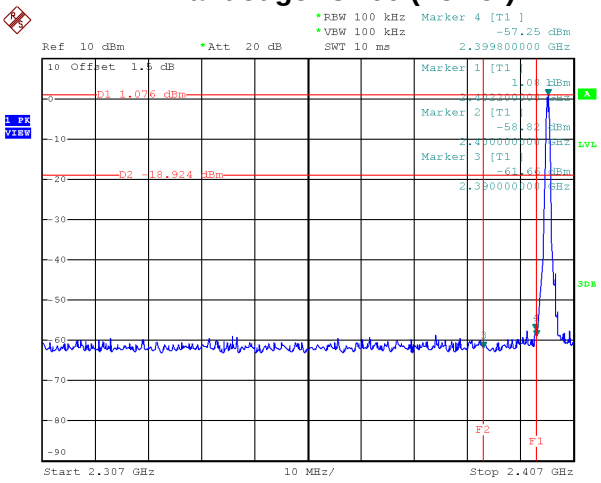


## CH78 – 10th Harmonic of the fundamental frequency



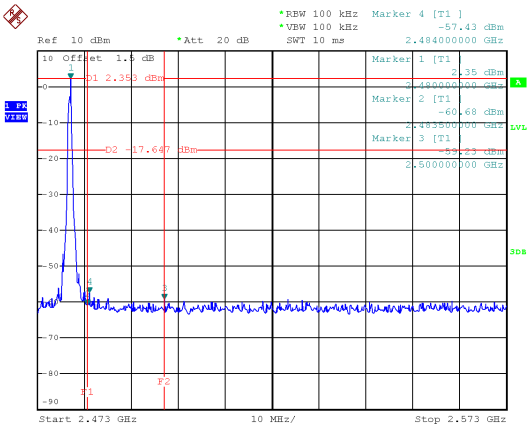
## Test Mode : TX Mode _3Mbps

### Bandedge- CH00 (Lower)



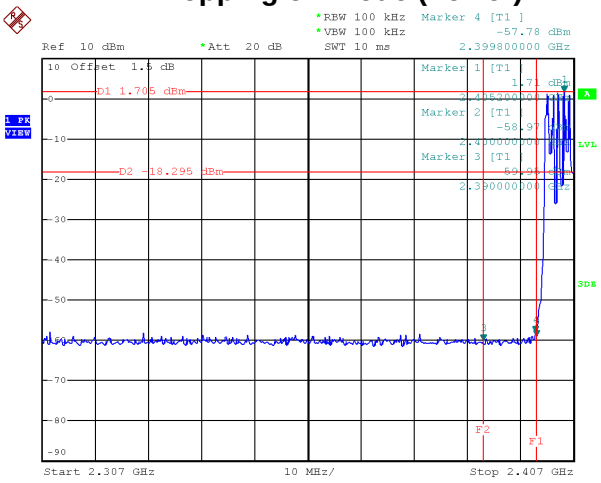

Date: 3.SEP.2019 11:33:02

### Bandedge CH78 (Upper)



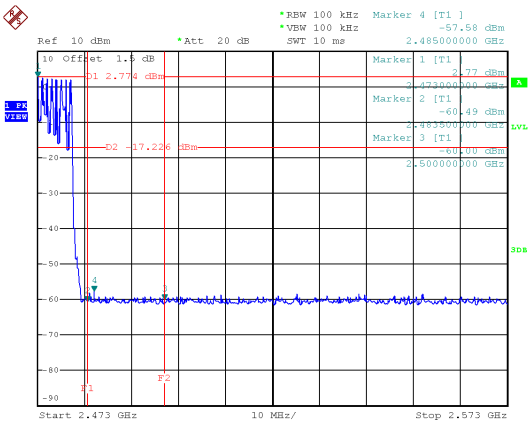

Date: 3.SEP.2019 11:36:18

### Hopping on mode (Lower)



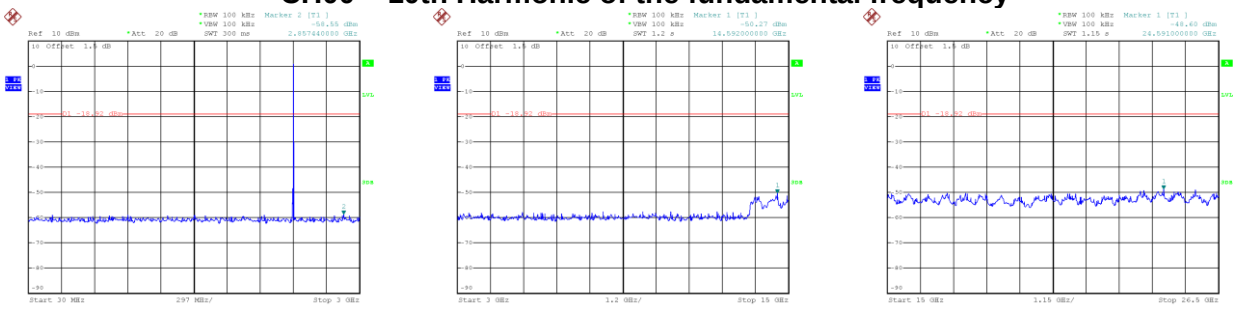

Date: 3.SEP.2019 11:48:07

### Hopping on mode (Upper)



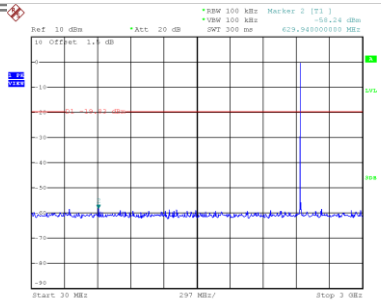

Date: 3.SEP.2019 11:48:41

### CH00 – 10th Harmonic of the fundamental frequency

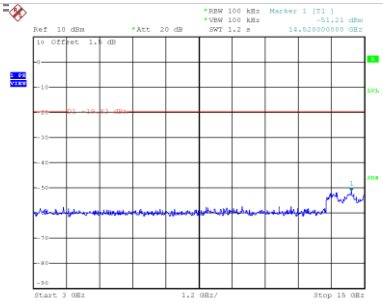


Date: 3.SEP.2019 11:33:45 Date: 3.SEP.2019 11:33:52 Date: 3.SEP.2019 11:33:59

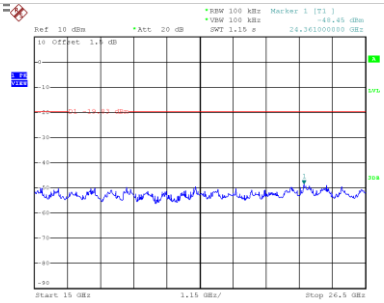
### CH39 – 10th Harmonic of the fundamental frequency



Date: 3.SEP.2019 11:34:51

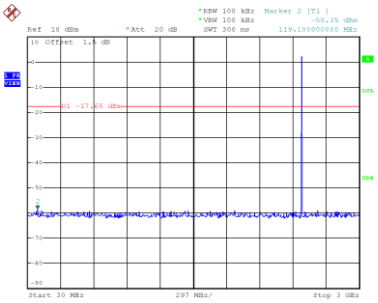


Date: 3.SEP.2019 11:34:58

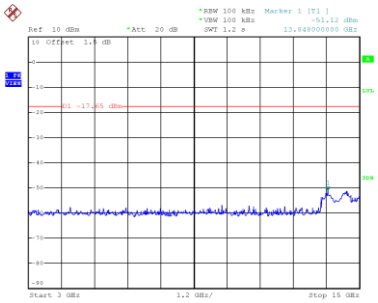


Date: 3.SEP.2019 11:35:05

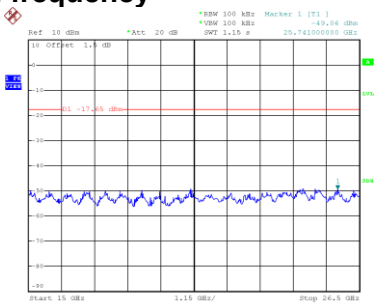
**CH78 – 10th Harmonic of the fundamental frequency**



Date: 3.SEP.2019 11:37:08



Date: 3.SEP.2019 11:37:15



Date: 3.SEP.2019 11:37:22

**End of Test Report**