


| | |
|---------------------------|-------------------------------|
| Product Name: Dash camera | Report No: ITEZA2-202500004RF |
| Product Model: HDE-1002 | Security Classification: Open |
| Version: V1.0 | Total Page:76 |

TIRT Testing Report

| Prepared By: | Checked By: | Approved By: |  |
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FCC Radio Test Report

FCC ID: 2BNBZ-HDE-1002

According to

47 CFR FCC Part 15, Subpart C(Section 15.247)

ANSI C63.10:2013

| | |
|---------------|--|
| Applicant: | Honistar technology Co., Ltd |
| Address: | Unit 1507B 15/f eastcore 398 kwun tong road kwun tong kL |
| Manufacturer: | Honistar technology Co., Ltd |
| Address: | Unit 1507B 15/f eastcore 398 kwun tong road kwun tong kL |
| Factory: | Honglishida technology Co.,Ltd |
| Address: | 3F, Block B, Jianxinda science and technology park, NO.3, 3rd Road, Yang Yong industrial zone, Song Gang town, BaoAn District, ShenZhen, China |
| Sample No: | 1000053362 |

| | |
|------------------|-----------------------|
| Date of Receipt: | 2025/01/07 |
| Date of Test: | 2025/01/07~2025/02/08 |
| Issued Date: | 2025/02/18 |
| Testing Lab: | TIRT |

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Table of Contents**Page**

| | |
|---|-----------|
| REPORT ISSUED HISTORY | 5 |
| 1 . SUMMARY OF TEST RESULTS | 6 |
| 1.1 TEST FACILITY | 7 |
| 1.2 MEASUREMENT UNCERTAINTY | 7 |
| 1.3 TEST ENVIRONMENT CONDITIONS | 8 |
| 2 . GENERAL INFORMATION | 9 |
| 2.1 GENERAL DESCRIPTION OF EUT | 9 |
| 2.2 DESCRIPTION OF TEST MODES | 10 |
| 2.3 DUTY CYCLE | 12 |
| 2.4 BLOCKDIAGRAMSHOWINGTHECONFIGURATIONOFSYSTEMTESTED | 17 |
| 2.5 SUPPORT UNITS | 17 |
| 3 .AC POWER LINE CONDUCTED EMISSIONS | 18 |
| 3.1 LIMIT | 18 |
| 3.2 TEST PROCEDURE | 18 |
| 3.3 DEVIATIONFROMTESTSTANDARD | 18 |
| 3.4 TESTSETUP | 19 |
| 3.5 EUT OPERATION CONDITIONS | 19 |
| 3.6 TEST RESULTS | 19 |
| 4 . RADIATED EMISSIONS | 20 |
| 4.1 LIMIT | 20 |
| 4.2 TEST PROCEDURE | 21 |
| 4.3 DEVIATIONFROMTESTSTANDARD | 22 |
| 4.4 TESTSETUP | 22 |
| 4.5 EUT OPERATIONCONDITIONS | 24 |
| 4.6 TEST RESULTS - 9 KHZ TO 30MHZ | 24 |
| 4.7 TEST RESULTS - 30 MHZTO 1000MHZ | 24 |
| 4.8 TEST RESULTS- ABOVE 1000MHZ | 24 |
| 5 .BANDWIDTH | 25 |
| 5.1 LIMIT | 25 |
| 5.2 TEST PROCEDURE | 25 |
| 5.3 DEVIATION FROM STANDARD | 25 |
| 5.4 TEST SETUP | 25 |
| 5.5 EUT OPERATION CONDITIONS | 25 |
| 5.6 TESTRESULTS | 25 |

| Table of Contents | Page |
|--|-------------|
| 6 .MAXIMUM OUTPUT POWER | 26 |
| 6.1 LIMIT | 26 |
| 6.2 TEST PROCEDURE | 26 |
| 6.3 DEVIATION FROM STANDARD | 26 |
| 6.4 TEST SETUP | 26 |
| 6.5 EUT OPERATION CONDITIONS | 26 |
| 6.6 TESTRESULTS | 26 |
| 7 .CONDUCTED SPURIOUS EMISSIONS | 27 |
| 7.1 LIMIT | 27 |
| 7.2 TEST PROCEDURE | 27 |
| 7.3 DEVIATION FROM STANDARD | 27 |
| 7.4 TEST SETUP | 27 |
| 7.5 EUT OPERATION CONDITIONS | 27 |
| 7.6 TESTRESULTS | 27 |
| 8 .POWER SPECTRAL DENSITY | 28 |
| 8.1 LIMIT | 28 |
| 8.2 TEST PROCEDURE | 28 |
| 8.3 DEVIATION FROM STANDARD | 28 |
| 8.4 TEST SETUP | 28 |
| 8.5 EUT OPERATION CONDITIONS | 28 |
| 8.6 TESTRESULTS | 28 |
| 9 . MEASUREMENT INSTRUMENTS LIST | 29 |
| 10 .EUT TEST PHOTO | 30 |
| 11. PHOTOS OF EUT | 30 |
| APPENDIX A - RADIATED EMISSION - 9 KHZ TO 30 MHZ | 31 |
| APPENDIX B - RADIATED EMISSION - 30 MHZ TO 1000 MHZ | 32 |
| APPENDIXC -RADIATED EMISSION- ABOVE 1000MHZ | 34 |
| APPENDIXD - BANDWIDTH | 39 |
| APPENDIXE - MAXIMUMOUTPUT POWER | 49 |
| APPENDIXF - CONDUCTED SPURIOUS EMISSIONS | 54 |
| APPENDIXG - POWER SPECTRAL DENSITY | 72 |

REPORT ISSUED HISTORY

| Report No. | Version | Description | Issued Date | Note |
|--------------------|---------|-----------------|-------------|-------|
| ITEZA2-202400004RF | V1.0 | OriginalReport. | 2025.02.18 | Valid |

1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standard(s):

| FCC CFR Title 47, Part 15, Subpart C | | | | |
|--------------------------------------|-----------------------------------|--|----------|---------|
| Standard(s) Section | Test Item | Test Result | Judgment | Remark |
| 15.207 | AC Power Line Conducted Emissions | N/A | N/A | ----- |
| 15.247(d) 15.205(a) 15.209(a) | Radiated Emissions | APPENDIX A APPENDIX B APPENDIX C | PASS | ----- |
| 15.247(a)(2) | Bandwidth | APPENDIX D | PASS | ----- |
| 15.247(b)(3) | Maximum Output Power | APPENDIX E | PASS | ----- |
| 15.247(d) | Conducted Spurious Emissions | APPENDIX F | PASS | ----- |
| 15.247(e) | Power Spectral Density | APPENDIX G | PASS | ----- |
| 15.203 | Antenna Requirement | ----- | PASS | Note(2) |

Note:

- (1) "N/A" denotes test is not applicable in this test report.
- (2) The device what use a permanently attached antenna were considered sufficient to comply with the provisions of 15.203.

1.1 TEST FACILITY

| | |
|--|---|
| Company: | Beijing TIRT Technology Service Co.,Ltd Shenzhen |
| Address: | 104 Building C, Xinmingsheng Industrial Park No.132, Zhangge Old Village East Zone, Zhangge Community, Fucheng Street, Longhua District, Shenzhen, Guangdong, P. R. China |
| CNAS Registration Number: | CNAS L14158 |
| A2LA Registration Number: | 6049.01 |
| FCC Accredited Lab.Designation Number: | CN1366 |
| FCC Test Firm Registration Number: | 820690 |
| Telephone: | +86-0755-27087573 |

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 TIRT measurement uncertainty as below table:

| Uncertainty | |
|---|---------------------------|
| Parameter | Uncertainty |
| Occupied Channel Bandwidth | ± 142.12 KHz |
| RF power conducted | ± 0.74 dB |
| RF power radiated | ± 3.25 dB |
| Spurious emissions, conducted | ± 1.78 dB |
| Spurious emissions, radiated (30MHz~1GHz) | ± 4.6 dB |
| Spurious emissions, radiated (1GHz~18GHz) | ± 4.9 dB |
| Conduction Emissions(150kHz~30MHz) | ± 3.1 dB |
| Humidity | $\pm 4.6\%$ |
| Temprature | $\pm 0.7^{\circ}\text{C}$ |
| Time | $\pm 1.2\%$ |

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 | 25.1°C | 52% | N/A | N/A |
| Radiated Emissions-9kHz to 3 MHz | 24.5°C | 50% | DC 3.7V from battery or DC 5V Car charger | Stone Tang |
| Radiated Emissions-30MHz to 1000MHz | 24.2°C | 53% | DC 3.7V from battery or DC 5V Car charger | Stone Tang |
| Radiated Emissions-Above 1000MHz | 26.0°C | 53% | DC 3.7V from battery or DC 5V Car charger | Stone Tang |
| Bandwidth | 25.0°C | 56% | DC 3.7V from battery or DC 5V Car charger | Stone Tang |
| Maximum Output Power | 24.9°C | 54% | DC 3.7V from battery or DC 5V Car charger | Stone Tang |
| Conducted Spurious Emissions | 25.1°C | 62% | DC 3.7V from battery or DC 5V Car charger | Stone Tang |
| Power Spectral Density | 26.0°C | 60% | DC 3.7V from battery or DC 5V Car charger | Stone Tang |

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

| | |
|------------------------------|---|
| Equipment | Dash camera |
| Brand Name | N/A |
| Test Model | HDE-1002 |
| Series Model | N/A |
| Model Difference(s) | N/A |
| Software Version | V1.0 |
| Hardware Version | V1.0 |
| Power Rating | DC 3.7V from battery or DC 5V Car charger |
| Operation Frequency | 2412 MHz~ 2462 MHz |
| Modulation Type | IEEE 802.11b: DSSS(CCK,DQPSK,DBPSK) IEEE 802.11g: OFDM(64QAM, 16QAM, QPSK, BPSK) IEEE 802.11n :OFDM(64QAM, 16QAM, QPSK, BPSK) |
| Maximum Output Average Power | IEEE 802.11b: 16.81dBm (0.047973W) |

Note:

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

2. Channel List:

| CH01 - CH11 for IEEE 802.11b, IEEE 802.11g, IEEE 802.11n(HT20) CH03 - CH09 for IEEE 802.11n(HT40) | | | | | | | |
|--|-----------------|---------|-----------------|---------|-----------------|---------|-----------------|
| Channel | Frequency (MHz) | Channel | Frequency (MHz) | Channel | Frequency (MHz) | Channel | Frequency (MHz) |
| 01 | 2412 | 04 | 2427 | 07 | 2442 | 10 | 2457 |
| 02 | 2417 | 05 | 2432 | 08 | 2447 | 11 | 2462 |
| 03 | 2422 | 06 | 2437 | 09 | 2452 | | |

3. Antenna Specification:

| Ant. | Manufactured | Model Name | Antenna Type | Connector | Gain (dBi) |
|------|---|------------|--------------|-----------|------------|
| 1 | Shenzhen unity wireless technology co., ltd | Q63 | FPC | N/A | 0.23 |

Note:

- The antenna gain is provided by the manufacturer.
- The antenna is for fixed use

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 B Mode Channel 01/06/11 |
| Mode 2 | TX G Mode Channel 01/06/11 |
| Mode 3 | TX N(HT20) Mode Channel 01/06/11 |
| Mode 4 | TX N(HT40) Mode Channel 03/06/09 |

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

| Radiated emissions test - Below 1GHz | |
|--------------------------------------|----------------------------|
| Final Test Mode | Description |
| Mode 1 | TX B Mode Channel 01/06/11 |

| Radiated emissions test- Above 1GHz | |
|-------------------------------------|----------------------------|
| Final Test Mode | Description |
| Mode 1 | TX B Mode Channel 01/06/11 |

| Final Test Mode | Conducted RF test |
|-----------------|----------------------------------|
| Mode 1 | TX B Mode Channel 01/06/11 |
| Mode 2 | TX G Mode Channel 01/06/11 |
| Mode 3 | TX N(HT20) Mode Channel 01/06/11 |
| Mode 4 | TX N(HT40) Mode Channel 03/06/09 |

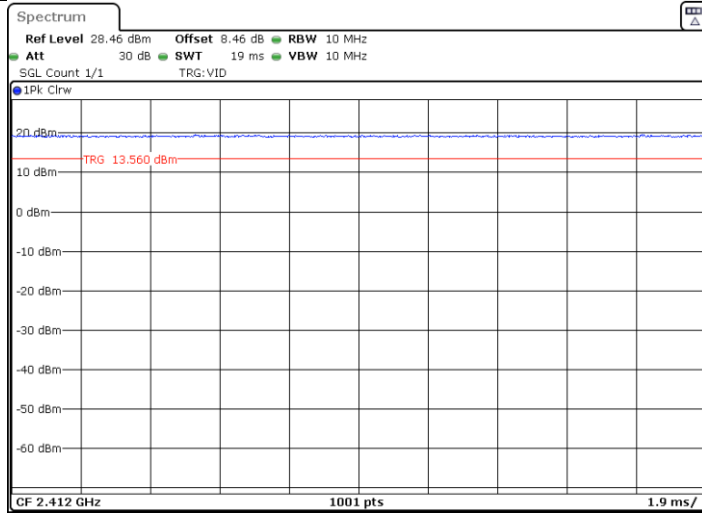
NOTE:

- (1) All the bit rate of transmitter have been tested and found the lowest rate is found to be the worst case and recorded.
- (2) For radiated emission above 1 GHz test, the spurious points of 1GHz~18GHz and 18GHz~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.

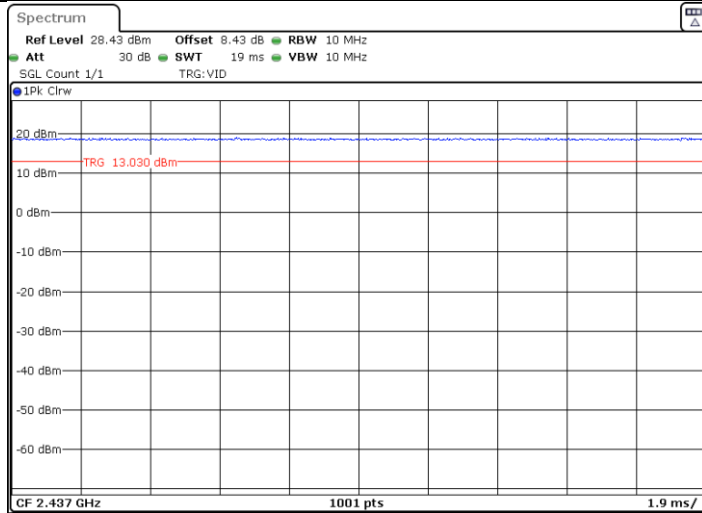
2.3 DUTY CYCLE

| TestMode | Antenna | Frequency[MHz] | Transmission Duration [ms] | Transmission Period [ms] | Duty Cycle [%] |
|-----------|---------|----------------|----------------------------|--------------------------|----------------|
| 11B | Ant1 | 2412 | 19.00 | 19.00 | 100.00 |
| | | 2437 | 19.00 | 19.00 | 100.00 |
| | | 2462 | 19.00 | 19.00 | 100.00 |
| 11G | Ant1 | 2412 | 2.03 | 3.03 | 67.00 |
| | | 2437 | 2.03 | 3.03 | 67.00 |
| | | 2462 | 2.02 | 3.03 | 66.67 |
| 11N20SISO | Ant1 | 2412 | 1.89 | 2.89 | 65.40 |
| | | 2437 | 1.89 | 2.89 | 65.40 |
| | | 2462 | 1.89 | 2.89 | 65.40 |
| 11N40SISO | Ant1 | 2422 | 0.93 | 1.93 | 48.19 |
| | | 2437 | 0.93 | 1.93 | 48.19 |
| | | 2452 | 0.93 | 1.93 | 48.19 |

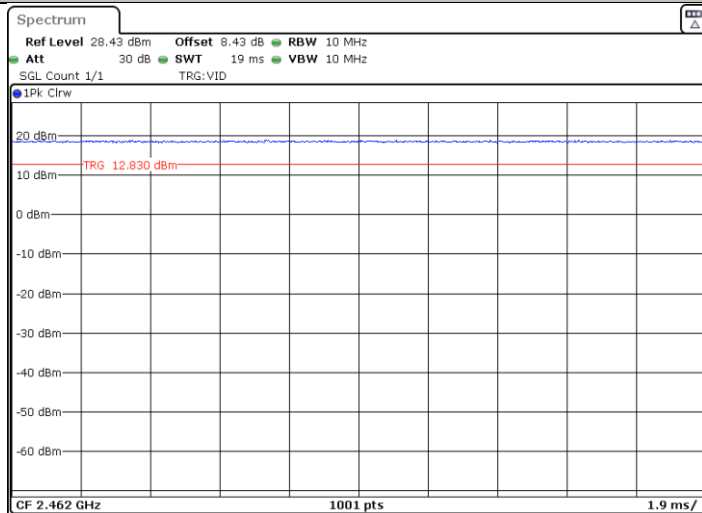
11B_Ant1_2412



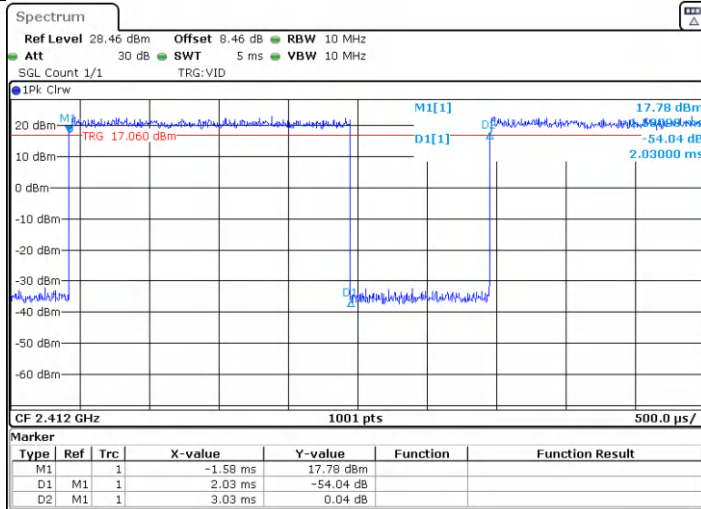
11B_Ant1_2437



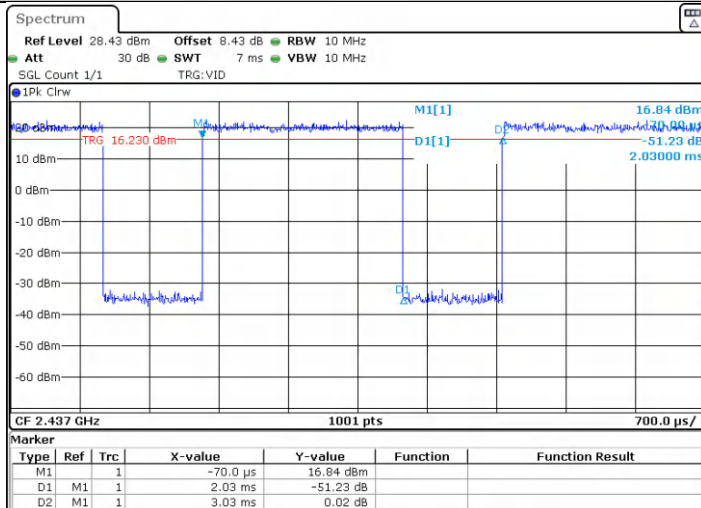
11B_Ant1_2462



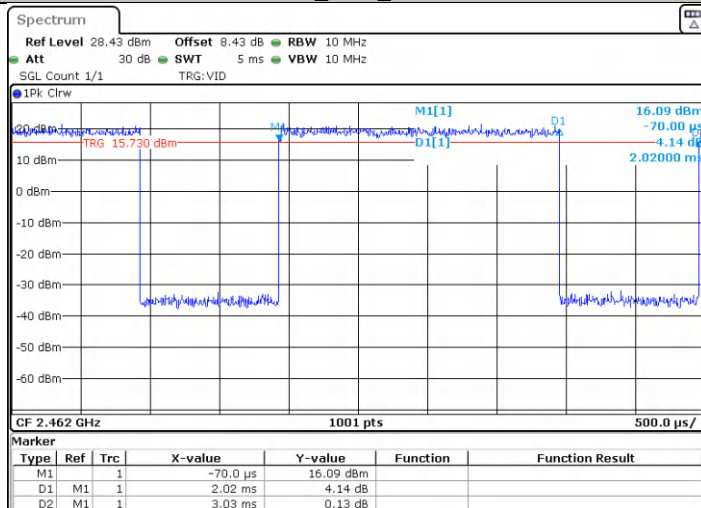
11G_Ant1_2412



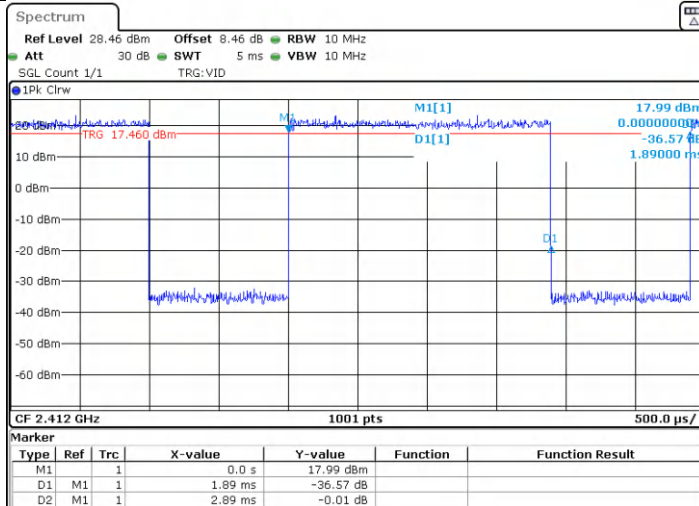
11G_Ant1_2437



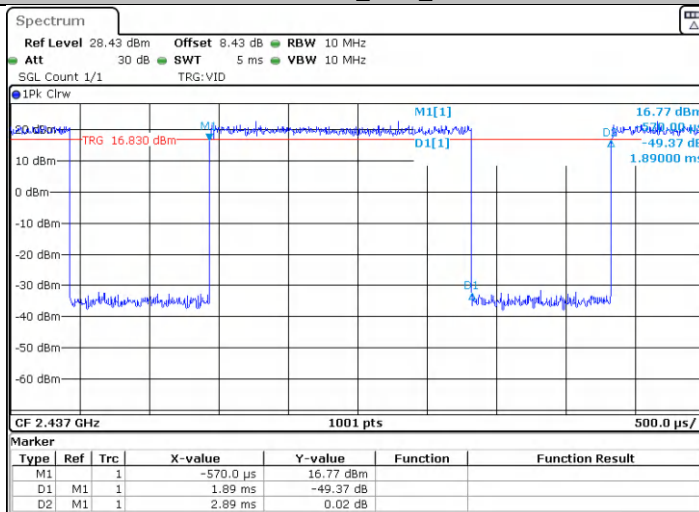
11G_Ant1_2462



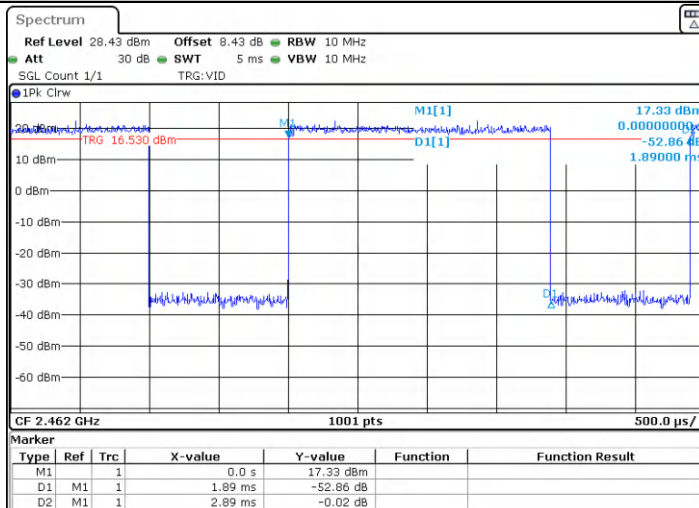
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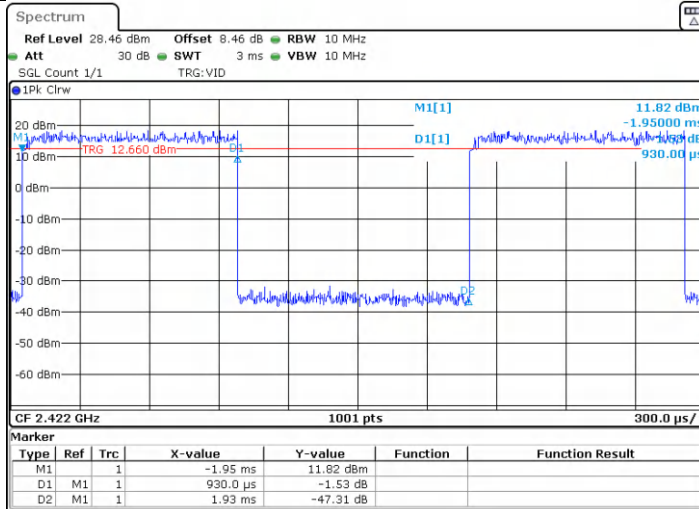
11N20SISO_Ant1_2437



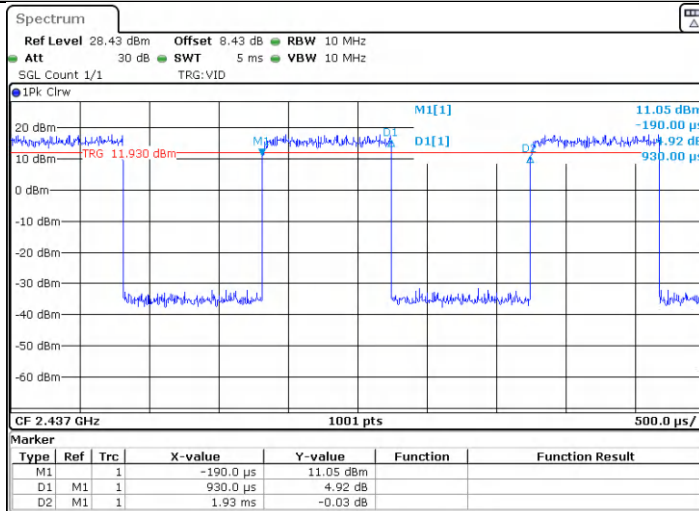
11N20SISO_Ant1_2462



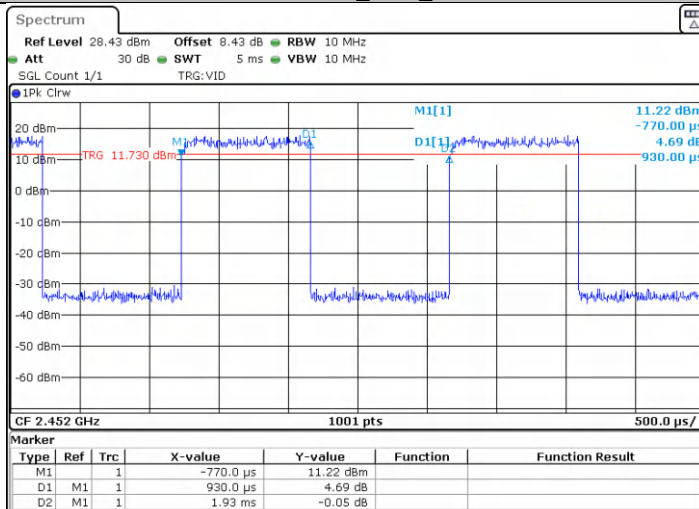
11N40SISO_Ant1_2422



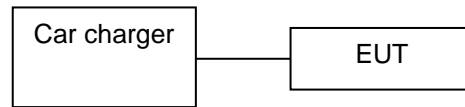
11N40SISO_Ant1_2437



11N40SISO_Ant1_2452



2.4 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED



2.5 SUPPORT UNITS

| Support Equipment | | | | |
|-------------------|-----------|------------|------------|---------|
| No. | Equipment | Brand Name | Model Name | Remarks |
| 1 | / | / | / | / |

3.AC POWER LINE CONDUCTED EMISSIONS

3.1LIMIT

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

3.2TEST 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 groundplane 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.

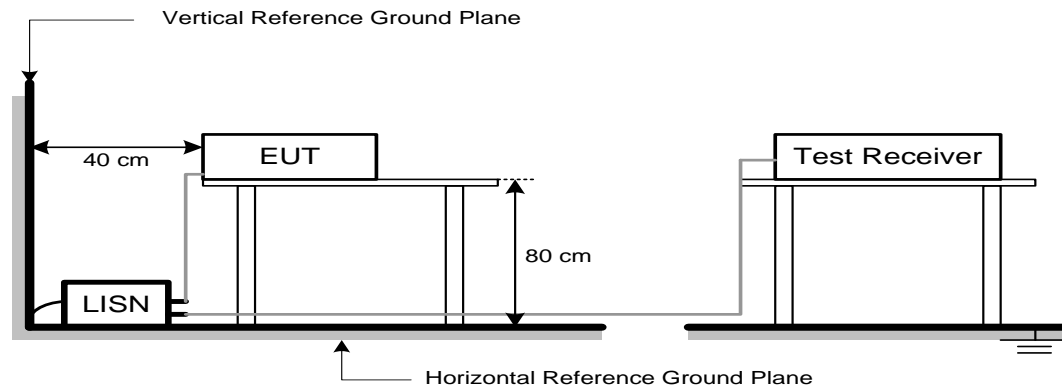
The following table is the setting of the receiver:

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

3.3DEVIATIONFROMTESTSTANDARD

No deviation.

3.4 TEST SETUP



The LISN edge is arranged parallel to the edge of the test table

The vertical conducting plane or wall of an RF-shielded (screened) room shall be located 40 cm to the rear of the EUT

3.5 EUT OPERATION CONDITIONS

EUT was programmed to be in continuously transmitting mode.

3.6 TEST RESULTS

N/A

No need to test the car charging power supply

4. RADIATED EMISSIONS

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-1000MHz)

| 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 (Above 1000MHz)

| 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 CFR Title 47, Part 15, Subpart C.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m)=20log Emission level (uV/m).

4.2 TEST PROCEDURE

- 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 1GHz)
- 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 1GHz)
- 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.
- 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).
- The receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1GHz.
- 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.
- 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 1GHz)
- 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 1GHz)
- For the actual test configuration, please refer to the related Item -EUT Test Photos.

The following table is the setting of the receiver:

| Spectrum Parameters | Setting |
|------------------------|---------------------------------|
| Start ~ Stop Frequency | 9 kHz~150 kHz for RBW 200 Hz |
| Start ~ Stop Frequency | 0.15 MHz~30 MHz for RBW 9 kHz |
| Start ~ Stop Frequency | 30 MHz~1000 MHz for RBW 100 kHz |

| Spectrum Parameters | Setting |
|--|--|
| Start Frequency | 1000 MHz |
| Stop Frequency | 10th carrier harmonic |
| RBW / VBW (Emission in restricted band) | 1MHz / 3MHz for PK value 1MHz / 1/THz for AVG value |

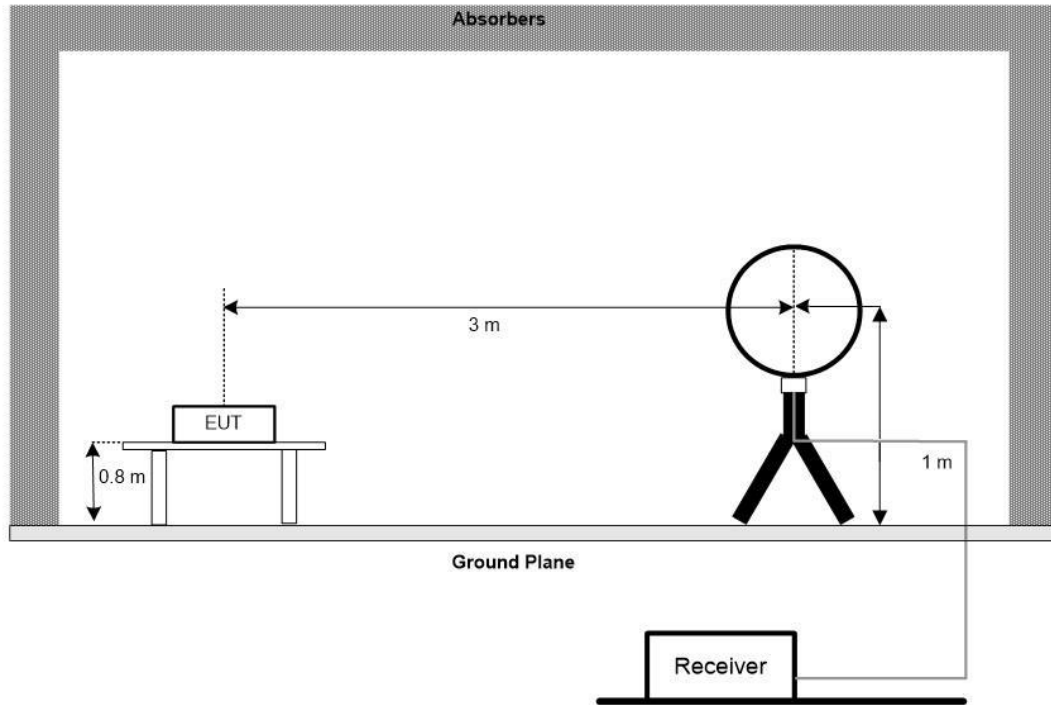
| Receiver Parameters | Setting |
|------------------------|-------------------------------------|
| Start ~ Stop Frequency | 9 kHz~90 kHz for PK/AVG detector |
| Start ~ Stop Frequency | 90 kHz~110 kHz for QP detector |
| Start ~ Stop Frequency | 110 kHz~490 kHz for PK/AVG detector |
| Start ~ Stop Frequency | 490 kHz~30 MHz for QP detector |
| Start ~ Stop Frequency | 30MHz~1000MHz for QP detector |
| Start ~ Stop Frequency | 1 GHz~26.5GHz for PK/AVG detector |

4.3 DEVIATION FROM TEST STANDARD

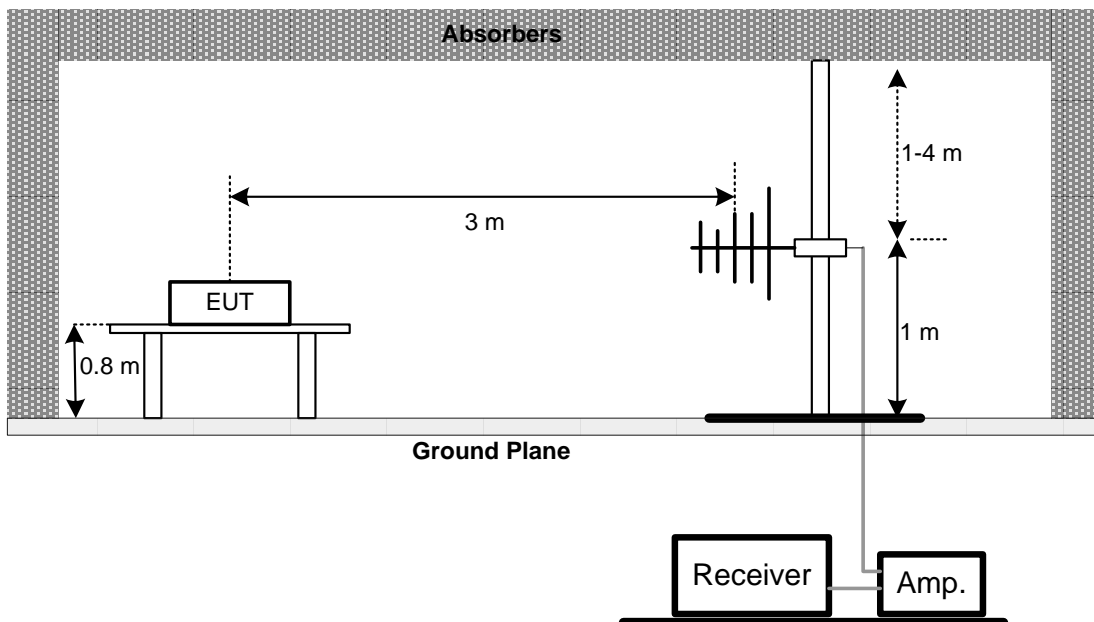
No deviation.

4.4 TEST SETUP

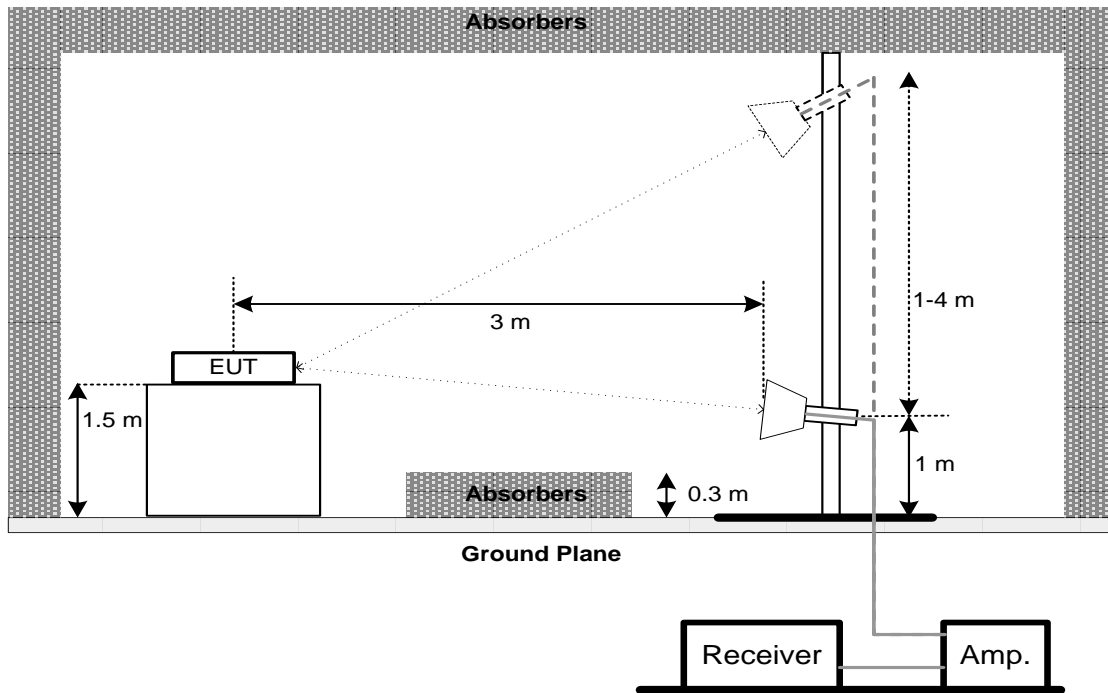
9 kHz to 30 MHz



30 MHz to 1 GHz



Above 1 GHz



4.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

4.6 TEST RESULTS - 9 KHZ TO 30MHZ

Please refer to the APPENDIX A.

Remark:

- (1) Distance extrapolation factor = $40 \log (\text{specific distance} / \text{test distance})$ (dB).
- (2) Limit line = specific limits (dBuV) + distance extrapolation factor.

4.7 TEST RESULTS - 30 MHZ TO 1000MHZ

Please refer to the APPENDIX B

4.8 TEST RESULTS- ABOVE 1000MHZ

Please refer to the APPENDIX C.

Remark:

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

5.BANDWIDTH

5.1LIMIT

| Section | Test Item | Limit |
|------------------|------------------------|-----------------|
| FCC 15.247(a)(2) | 6dB Bandwidth | Minimum 500 kHz |
| | 99% Emission Bandwidth | - |

5.2TEST PROCEDURE

- The EUT was directly connected to the tonscond test system and antenna output port as show in the block diagram below.
- The following table is the setting of the spectrum analyzer:

For 6 dB Bandwidth:

| Spectrum Parameters | Setting |
|---------------------|-------------------------|
| Span Frequency | > Measurement Bandwidth |
| RBW | 100 kHz |
| VBW | 300 kHz |
| Detector | Peak |
| Trace | Max Hold |
| Sweep Time | Auto |

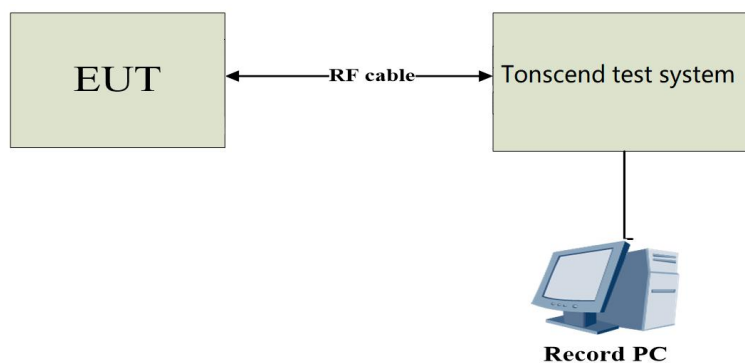
For 99% Emission Bandwidth:

| Spectrum Parameters | Setting |
|---------------------|---|
| Span Frequency | Between 1.5 times and 5.0 times the OBW |
| RBW | 500 kHz For 20MHz 1 MHz For 40MHz |
| VBW | 2MHz For 20MHz 3 MHz For 40MHz |
| Detector | Peak |
| Trace | Max Hold |
| Sweep Time | Auto |

5.3DEVIATION FROM STANDARD

No deviation.

5.4TEST SETUP



5.5EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

5.6TESTRESULTS

Please refer to the APPENDIX D.

6.MAXIMUM OUTPUT POWER

6.1LIMIT

| Section | Test Item | Limit |
|------------------|----------------------|-------------------------|
| FCC 15.247(b)(3) | Maximum Output Power | 1.0000Watt or 30.00 dBm |

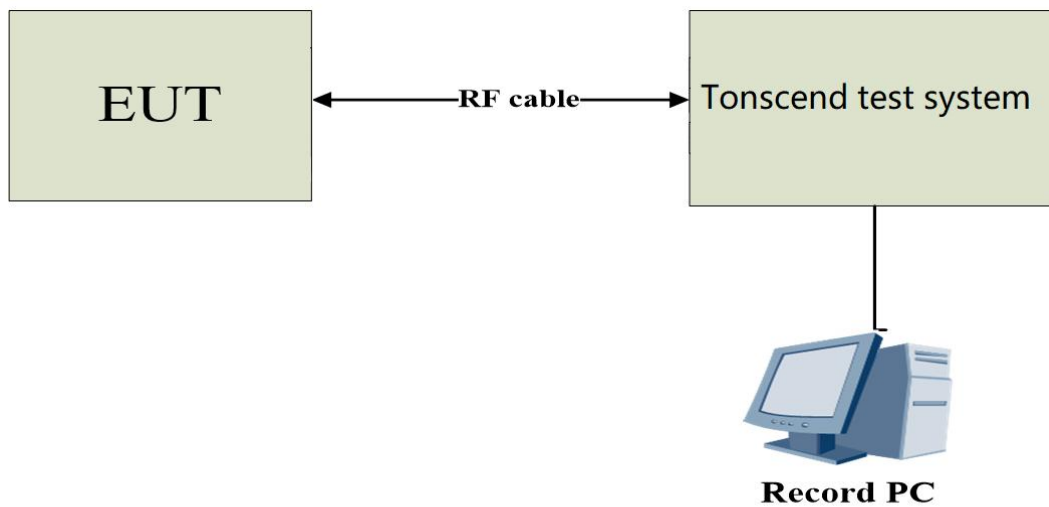
6.2TEST PROCEDURE

- The EUT was directly connected to the tonskend test system and antenna output port as show in the block diagram below.
- The maximum conducted output power was performed in accordance with method 11.9.1.3(for Average power)of ANSI C63.10-2013 and FCC KDB 662911 D01 v02r01 Multiple Transmitter Output.

6.3DEVIATION FROM STANDARD

No deviation.

6.4TEST SETUP



6.5EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

6.6TESTRESULTS

Please refer to the APPENDIX E.

7.CONDUCTED SPURIOUS EMISSIONS

7.1 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.

7.2TEST PROCEDURE

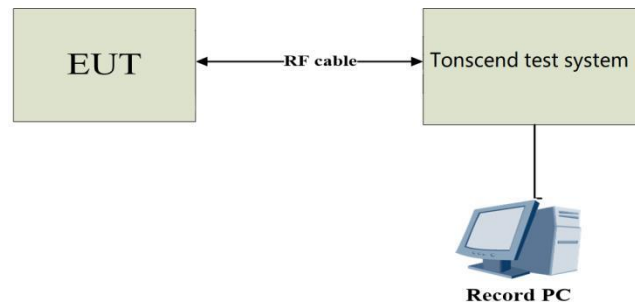
- The EUT was directly connected to the tonscond test system and antenna output port as show in the block diagram below.
- The following table is the setting of the spectrum analyzer:

| Spectrum Parameters | Setting |
|---------------------|----------|
| Start Frequency | 30 MHz |
| Stop Frequency | 26.5 GHz |
| RBW | 100 kHz |
| VBW | 300 kHz |
| Detector | Peak |
| Trace | Max Hold |
| Sweep Time | Auto |

7.3DEVIATION FROM STANDARD

No deviation.

7.4TEST SETUP



7.5EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

7.6TESTRESULTS

Please refer to the APPENDIX F.

8.POWER SPECTRAL DENSITY

8.1LIMIT

| Section | Test Item | Limit |
|---------------|------------------------|-------------------------|
| FCC 15.247(e) | Power Spectral Density | 8 dBm (in any 3 kHz) |

8.2TEST PROCEDURE

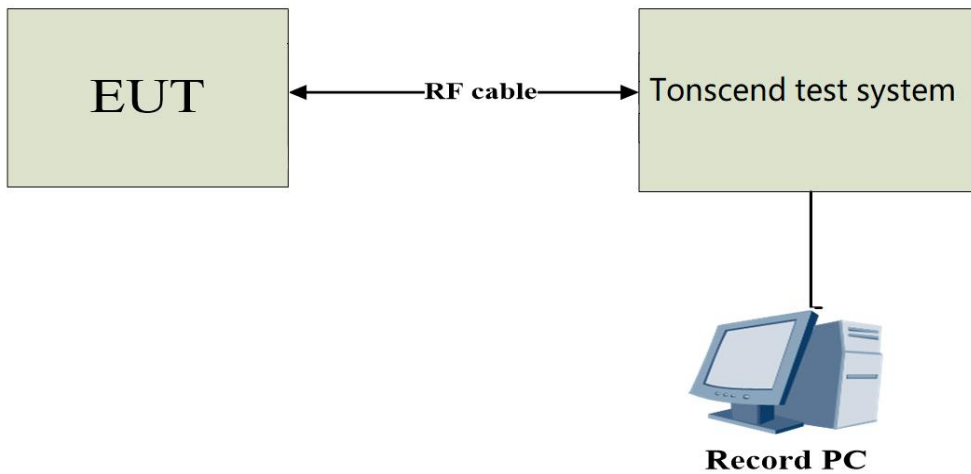
- The EUT was directly connected to the tonscend test system and antenna output port as show in the block diagram below.
- The following table is the setting of the spectrum analyzer:

| Spectrum Parameters | Setting |
|---------------------|-----------------------------|
| Span Frequency | 1.5 times the DTS bandwidth |
| RBW | 3 kHz |
| VBW | 10 kHz |
| Detector | RMS |
| Trace | Max Hold |
| Sweep Time | Auto |

8.3DEVIATION FROM STANDARD

No deviation.

8.4TEST SETUP



8.5EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

8.6TESTRESULTS

Please refer to the APPENDIX G.

9. MEASUREMENT INSTRUMENTS LIST

| Name of Equipment | Manufacturer | Model Number | Serial Number | Last Calibration | Due Calibration |
|-------------------|-----------------|----------------------|--------------------------|------------------|-----------------|
| EMI Receiver | Rohde&Schwarz | ESIB 40 | YH-TIRT-SAC-966-20220911 | 2025/01/05 | 2026/01/04 |
| Integral Antenna | Schwarzbeck | VULB 9163 | 01314 | 2023/12/11 | 2025/12/10 |
| Integral Antenna | Rohde&Schwarz | HF907 | RSM2991424 | 2023/12/11 | 2025/12/10 |
| Preamplifier | Emtrace | RP01A | '02017 | 2025/01/05 | 2026/01/04 |
| Preamplifier | Schwarzbeck | BBV9744 | 00143 | 2025/01/05 | 2026/01/04 |
| Loop Antenna | ZHINAN | ZN30900A | 12024 | 2025/01/05 | 2026/01/04 |
| Horn Antenna | Schwarzbeck | BBHA9170 | 00956 | 2025/01/05 | 2026/01/04 |
| RF Cable | / | LMR400UF-NMNM-7.0M | / | 2025/01/05 | 2026/01/04 |
| RF Cable | / | SFT2050PUR-NMNM-7.0M | / | 2025/01/05 | 2026/01/04 |
| EMI Receiver | Rohde&Schwarz | ESR7 | 1316.3003K07-102611-mk | 2024/11/02 | 2025/11/01 |
| LISN | Rohde&Schwarz | ENV216 | 3560.655.12-102915-Bp | 2024/11/02 | 2025/11/01 |
| RF Cable | \ | SFT2050PUR-NMNM-2.0M | \ | 2025/01/05 | 2026/01/04 |
| Spectrum analyzer | ROHDE&SCHWARZ | FSU26 | 200732 | 2025/01/05 | 2026/01/04 |
| Spectrum analyzer | ROHDE&SCHWARZ | FSV40-N | 101722 | 2025/01/05 | 2026/01/04 |
| Filter | HEWLETT PACKARD | JS0806-F | 19K8060209 | 2025/01/05 | 2026/01/04 |

Remark: "N/A" denotes no model name, serial no. or calibration specified.

10.EUT TEST PHOTO

Please reference to the appendix I Test Setup Photo for details.

11. PHOTOS OF EUT

Please reference to the appendix II external photos and appendix III internal photos for details..

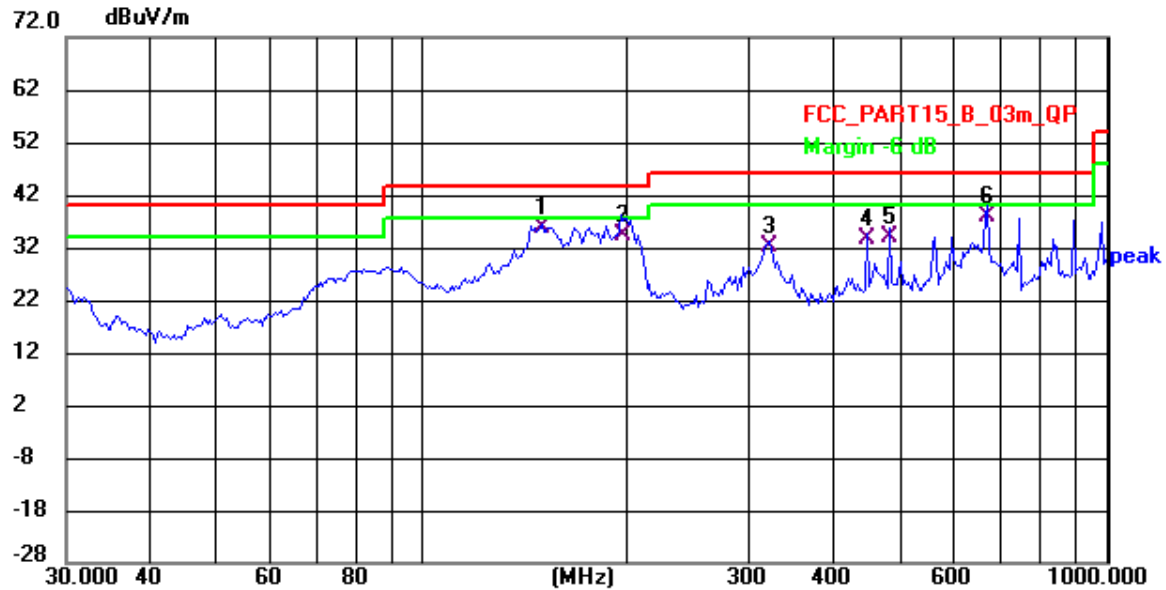
APPENDIX A - RADIATED EMISSION - 9 KHZ TO 30 MHZ

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line was not reported.

There is a comparison data of both open-field test site and semi-Anechoic chamber, and the result came out very similar.

APPENDIX B - RADIATED EMISSION - 30 MHZ TO 1000 MHZ

| | | | |
|-----------|----------------------|--------------|----------|
| Test Mode | TX B Mode Channel 06 | Polarization | Vertical |
|-----------|----------------------|--------------|----------|



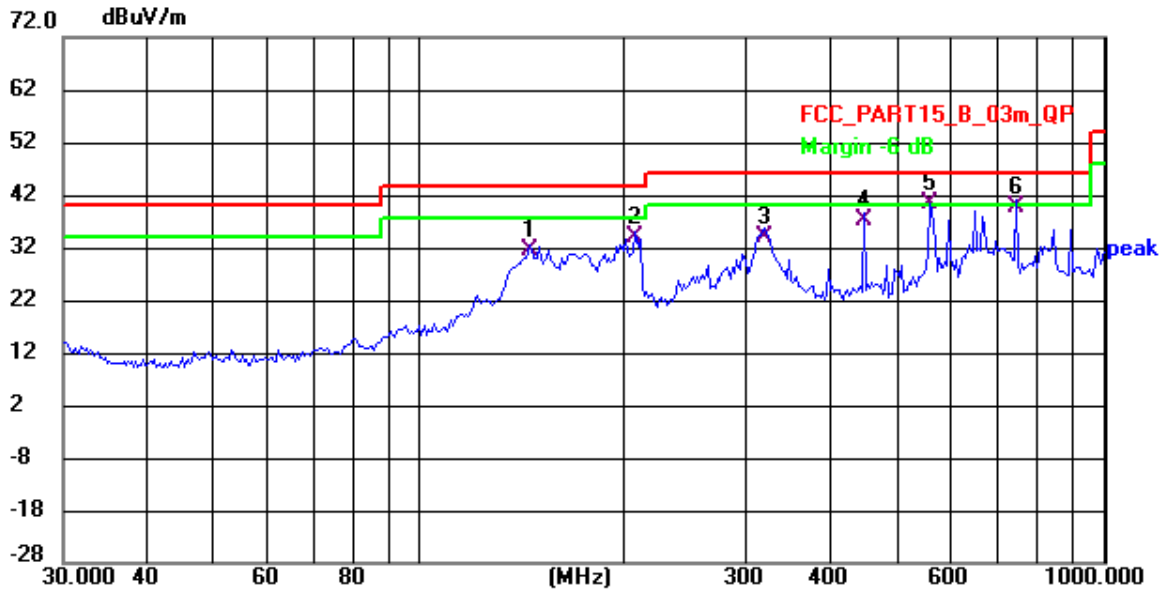
| No. | Frequency (MHz) | Reading (dBuV) | Factor (dB/m) | Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Azimuth (deg.) | P/F | Remark |
|-----|-----------------|----------------|---------------|----------------|----------------|-------------|----------|-------------|----------------|-----|--------|
| 1 * | 148.917 | 56.56 | -20.85 | 35.71 | 43.50 | -7.79 | QP | 100 | 0 | P | |
| 2 | 196.924 | 58.78 | -24.44 | 34.34 | 43.50 | -9.16 | QP | 100 | 1 | P | |
| 3 | 320.331 | 53.30 | -21.29 | 32.01 | 46.00 | -13.99 | QP | 100 | 0 | P | |
| 4 | 445.693 | 51.51 | -17.93 | 33.58 | 46.00 | -12.42 | QP | 100 | 270 | P | |
| 5 | 481.511 | 51.19 | -17.14 | 34.05 | 46.00 | -11.95 | QP | 100 | 90 | P | |
| 6 | 669.952 | 50.55 | -12.48 | 38.07 | 46.00 | -7.93 | QP | 100 | 180 | P | |

REMARKS:

(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

| | | | |
|-----------|----------------------|--------------|------------|
| Test Mode | TX B Mode Channel 06 | Polarization | Horizontal |
|-----------|----------------------|--------------|------------|



| No. | Frequency (MHz) | Reading (dBuV) | Factor (dB/m) | Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector | Height (cm) | Azimuth (deg.) | P/F | Remark |
|-----|-----------------|----------------|---------------|----------------|----------------|-------------|----------|-------------|----------------|-----|--------|
| 1 | 144.790 | 52.75 | -21.21 | 31.54 | 43.50 | -11.96 | QP | 200 | 266 | P | |
| 2 | 205.746 | 58.77 | -24.92 | 33.85 | 43.50 | -9.65 | QP | 100 | 121 | P | |
| 3 | 318.088 | 55.47 | -21.39 | 34.08 | 46.00 | -11.92 | QP | 100 | 164 | P | |
| 4 | 445.693 | 54.94 | -17.93 | 37.01 | 46.00 | -8.99 | QP | 100 | 218 | P | |
| 5 * | 558.079 | 55.43 | -15.18 | 40.25 | 46.00 | -5.75 | QP | 200 | 0 | P | |
| 6 | 744.427 | 50.30 | -10.69 | 39.61 | 46.00 | -6.39 | QP | 200 | 0 | P | |

REMARKS:

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

APPENDIXC -RADIATED EMISSION- ABOVE 1000MHZ

Test Result of Radiated Spurious at Band edges.

Note: All test plots below include both horizontal and vertical, only show the worst mode data

| Test Results | | | | | PASS | | | |
|-----------------|----------|----------|------------------|----------------|----------------------|----------------|--------|--------|
| Frequency Range | | | | | 2310MHz~2410MHz | | | |
| Test Mode | | | | | TX B Mode Channel 01 | | | |
| N o. | Freq MHz | Polarity | Reading (dBuV/m) | Correct Factor | Result (dBuV/m) | Limit (dBuV/m) | Margin | Remark |
| 1 | 2390 | H | 74.31 | -21.45 | 52.86 | 74.00 | -21.14 | Peak |
| 2 | 2390 | H | -- | -21.45 | -- | 54.00 | -- | Avg |
| 3 | 2400 | H | 79.23 | -26.20 | 53.03 | 74.00 | -20.97 | Peak |
| 4 | 2400 | H | -- | -26.20 | -- | 54.00 | -- | Avg |
| 1 | 2390 | V | 75.14 | -21.45 | 53.69 | 74.00 | -20.31 | Peak |
| 2 | 2390 | V | -- | -21.45 | -- | 54.00 | -- | Avg |
| 3 | 2400 | V | 79.38 | -26.20 | 53.18 | 74.00 | -20.82 | Peak |
| 4 | 2400 | V | -- | -26.20 | -- | 54.00 | -- | Avg |
| Test Results | | | | | PASS | | | |
| Frequency Range | | | | | 2450MHz~2550MHz | | | |
| Test Mode | | | | | TX B Mode Channel 11 | | | |
| 1 | 2483.5 | H | 79.19 | -25.35 | 53.84 | 74.00 | -20.16 | Peak |
| 2 | 2483.5 | H | -- | -25.35 | -- | 54.00 | -- | Avg |
| 1 | 2483.5 | V | 78.81 | -25.35 | 53.46 | 74.00 | -20.54 | Peak |
| 2 | 2483.5 | V | -- | -25.35 | -- | 54.00 | -- | Avg |

Note: 1. Means other frequency and mode comply with standard requirements and at least have 20dB margin.

2. Correct Factor=Cable Loss+ Antenna Factor-Amplifier Gain.

Result=Reading + Correct Factor.

Margin= Result-Limit.

3. If the limits for the measurement with the average detector are met when using a receiver with a peak detector, the test unit shall be deemed to meet both limits and the measurement with the average detector need not be carried out.

| Test Results | | | | | PASS | | | |
|---|----------|----------|------------------|----------------|----------------------|----------------|--------|--------|
| Frequency Range | | | | | 2310MHz~2410MHz | | | |
| Test Mode | | | | | TX G Mode Channel 01 | | | |
| N o. | Freq MHz | Polarity | Reading (dBuV/m) | Correct Factor | Result (dBuV/m) | Limit (dBuV/m) | Margin | Remark |
| 1 | 2390 | H | 74.66 | -21.45 | 53.21 | 74.00 | -20.79 | Peak |
| 2 | 2390 | H | -- | -21.45 | -- | 54.00 | -- | Avg |
| 3 | 2400 | H | 79.14 | -26.20 | 52.94 | 74.00 | -21.06 | Peak |
| 4 | 2400 | H | -- | -26.20 | -- | 54.00 | -- | Avg |
| | | | | | | | | |
| 1 | 2390 | V | 74.89 | -21.45 | 53.44 | 74.00 | -20.56 | Peak |
| 2 | 2390 | V | -- | -21.45 | -- | 54.00 | -- | Avg |
| 3 | 2400 | V | 79.34 | -26.20 | 53.14 | 74.00 | -20.86 | Peak |
| 4 | 2400 | V | -- | -26.20 | -- | 54.00 | -- | Avg |
| | | | | | | | | |
| Test Results | | | | | PASS | | | |
| Frequency Range | | | | | 2450MHz~2550MHz | | | |
| Test Mode | | | | | TX G Mode Channel 11 | | | |
| 1 | 2483.5 | H | 79.26 | -25.35 | 53.91 | 74.00 | -20.09 | Peak |
| 2 | 2483.5 | H | -- | -25.35 | -- | 54.00 | -- | Avg |
| | | | | | | | | |
| 1 | 2483.5 | V | 79.33 | -25.35 | 53.98 | 74.00 | -20.02 | Peak |
| 2 | 2483.5 | V | -- | -25.35 | -- | 54.00 | -- | Avg |
| | | | | | | | | |
| <p>Note: 1. Means other frequency and mode comply with standard requirements and at least have 20dB margin.</p> <p>2. Correct Factor=Cable Loss+ Antenna Factor-Amplifier Gain.</p> <p>Result=Reading + Correct Factor.</p> <p>Margin= Result-Limit.</p> <p>3. If the limits for the measurement with the average detector are met when using a receiver with a peak detector, the test unit shall be deemed to meet both limits and the measurement with the average detector need not be carried out.</p> | | | | | | | | |

| Test Results | | | | | PASS | | | |
|---|----------|----------|------------------|----------------|----------------------------|----------------|--------|--------|
| Frequency Range | | | | | 2310MHz~2410MHz | | | |
| Test Mode | | | | | TX N(HT20) Mode Channel 01 | | | |
| N o. | Freq MHz | Polarity | Reading (dBuV/m) | Correct Factor | Result (dBuV/m) | Limit (dBuV/m) | Margin | Remark |
| 1 | 2390 | H | 74.40 | -21.45 | 52.95 | 74.00 | -21.05 | Peak |
| 2 | 2390 | H | -- | -21.45 | -- | 54.00 | -- | Avg |
| 3 | 2400 | H | 79.19 | -26.20 | 52.99 | 74.00 | -21.01 | Peak |
| 4 | 2400 | H | -- | -26.20 | -- | 54.00 | -- | Avg |
| | | | | | | | | |
| 1 | 2390 | V | 74.43 | -21.45 | 52.98 | 74.00 | -21.02 | Peak |
| 2 | 2390 | V | -- | -21.45 | -- | 54.00 | -- | Avg |
| 3 | 2400 | V | 79.40 | -26.20 | 53.20 | 74.00 | -20.80 | Peak |
| 4 | 2400 | V | -- | -26.20 | -- | 54.00 | -- | Avg |
| | | | | | | | | |
| Test Results | | | | | PASS | | | |
| Frequency Range | | | | | 2450MHz~2550MHz | | | |
| Test Mode | | | | | TX N(HT20) Mode Channel 11 | | | |
| 1 | 2483.5 | H | 78.80 | -25.35 | 53.45 | 74.00 | -20.55 | Peak |
| 2 | 2483.5 | H | -- | -25.35 | -- | 54.00 | -- | Avg |
| | | | | | | | | |
| 1 | 2483.5 | V | 78.92 | -25.35 | 53.57 | 74.00 | -20.43 | Peak |
| 2 | 2483.5 | V | -- | -25.35 | -- | 54.00 | -- | Avg |
| | | | | | | | | |
| <p>Note: 1. Means other frequency and mode comply with standard requirements and at least have 20dB margin.</p> <p>2. Correct Factor=Cable Loss+ Antenna Factor-Amplifier Gain.</p> <p>Result=Reading + Correct Factor.</p> <p>Margin= Result-Limit.</p> <p>3. If the limits for the measurement with the average detector are met when using a receiver with a peak detector, the test unit shall be deemed to meet both limits and the measurement with the average detector need not be carried out.</p> | | | | | | | | |

| Test Results | | | | | PASS | | | |
|---|----------|----------|------------------|----------------|----------------------------|----------------|--------|--------|
| Frequency Range | | | | | 2310MHz~2410MHz | | | |
| Test Mode | | | | | TX N(HT40) Mode Channel 03 | | | |
| N o. | Freq MHz | Polarity | Reading (dBuV/m) | Correct Factor | Result (dBuV/m) | Limit (dBuV/m) | Margin | Remark |
| 1 | 2390 | H | 74.77 | -21.45 | 53.32 | 74.00 | -20.68 | Peak |
| 2 | 2390 | H | -- | -21.45 | -- | 54.00 | -- | Avg |
| 3 | 2400 | H | 78.96 | -26.20 | 52.76 | 74.00 | -21.24 | Peak |
| 4 | 2400 | H | -- | -26.20 | -- | 54.00 | -- | Avg |
| | | | | | | | | |
| 1 | 2390 | V | 74.91 | -21.45 | 53.46 | 74.00 | -20.54 | Peak |
| 2 | 2390 | V | -- | -21.45 | -- | 54.00 | -- | Avg |
| 3 | 2400 | V | 79.23 | -26.20 | 53.03 | 74.00 | -20.97 | Peak |
| 4 | 2400 | V | -- | -26.20 | -- | 54.00 | -- | Avg |
| | | | | | | | | |
| Test Results | | | | | PASS | | | |
| Frequency Range | | | | | 2450MHz~2550MHz | | | |
| Test Mode | | | | | TX N(HT40) Mode Channel 09 | | | |
| 1 | 2483.5 | H | 78.54 | -25.35 | 53.19 | 74.00 | -20.81 | Peak |
| 2 | 2483.5 | H | -- | -25.35 | -- | 54.00 | -- | Avg |
| | | | | | | | | |
| 1 | 2483.5 | V | 78.58 | -25.35 | 53.23 | 74.00 | -20.77 | Peak |
| 2 | 2483.5 | V | -- | -25.35 | -- | 54.00 | -- | Avg |
| | | | | | | | | |
| <p>Note: 1. Means other frequency and mode comply with standard requirements and at least have 20dB margin.</p> <p>2. Correct Factor=Cable Loss+ Antenna Factor-Amplifier Gain. Result=Reading + Correct Factor. Margin= Result-Limit.</p> <p>3. If the limits for the measurement with the average detector are met when using a receiver with a peak detector, the test unit shall be deemed to meet both limits and the measurement with the average detector need not be carried out.</p> | | | | | | | | |

ABOVE 1000 MHz

Note: All the modes have been tested and recorded worst mode in the report.

Modulation Type: IEEE 802.11b

| Channel 1 / 2412 MHz | | | | | | | | | |
|----------------------|-----------------|------------------------|----------------------|-------------------|------------------|----------------|------------------------|----------------------|----------------|
| Frequency | Ant.Pol. H/V | Peak reading (dBuV) | AV reading (dBuV) | Correction Factor | Emission Level | | Peak Limit (dBuV/m) | AV Limit (dBuV/m) | Margin (dB) |
| | | | | | Peak (dBuV/m) | AV (dBuV/m) | | | |
| 4824.00 | H | 54.37 | 51.3 | -1.89 | 52.48 | 49.41 | 74 | 54 | -21.52 |
| 7236.00 | H | 44.20 | --- | 7.9 | 52.10 | --- | 74 | 54 | -21.90 |
| --- | H | --- | --- | --- | --- | --- | --- | --- | --- |
| 4824.00 | V | 55.39 | --- | -1.89 | 53.50 | --- | 74 | 54 | -20.50 |
| 7236.00 | V | 42.92 | --- | 7.9 | 50.82 | --- | 74 | 54 | -23.18 |
| --- | V | --- | --- | --- | --- | --- | --- | --- | --- |

| Channel 6 / 2437 MHz | | | | | | | | | |
|----------------------|-----------------|------------------------|----------------------|-------------------|------------------|----------------|------------------------|----------------------|----------------|
| Frequency | Ant.Pol. H/V | Peak reading (dBuV) | AV reading (dBuV) | Correction Factor | Emission Level | | Peak Limit (dBuV/m) | AV Limit (dBuV/m) | Margin (dB) |
| | | | | | Peak (dBuV/m) | AV (dBuV/m) | | | |
| 4874.00 | H | 55.53 | 52.31 | -1.57 | 53.96 | 50.74 | 74 | 54 | -20.04 |
| 7311.00 | H | 41.61 | --- | 8.2 | 49.81 | --- | 74 | 54 | -24.19 |
| --- | H | --- | --- | --- | --- | --- | --- | --- | --- |
| 4874.00 | V | 54.95 | --- | -1.57 | 53.38 | --- | 74 | 54 | -20.62 |
| 7311.00 | V | 43.36 | --- | 8.2 | 51.56 | --- | 74 | 54 | -22.44 |
| --- | V | --- | --- | --- | --- | --- | --- | --- | --- |

| Channel 11 / 2462 MHz | | | | | | | | | |
|-----------------------|-----------------|------------------------|----------------------|-------------------|------------------|----------------|------------------------|----------------------|----------------|
| Frequency | Ant.Pol. H/V | Peak reading (dBuV) | AV reading (dBuV) | Correction Factor | Emission Level | | Peak Limit (dBuV/m) | AV Limit (dBuV/m) | Margin (dB) |
| | | | | | Peak (dBuV/m) | AV (dBuV/m) | | | |
| 4924.00 | H | 53.61 | 52 | -1.28 | 52.33 | 50.72 | 74 | 54 | -21.67 |
| 7386.00 | H | 41.83 | --- | 9.3 | 51.13 | --- | 74 | 54 | -22.87 |
| --- | H | --- | --- | --- | --- | --- | --- | --- | --- |
| 4924.00 | V | 54.36 | --- | -1.28 | 53.08 | --- | 74 | 54 | -20.92 |
| 7386.00 | V | 43.40 | --- | 9.3 | 52.70 | --- | 74 | 54 | -21.30 |
| --- | V | --- | --- | --- | --- | --- | --- | --- | --- |

Notes:

- 1). Radiated emissions measured in frequency range from 9 KHz~10th harmonic or 26.5GHz (which is less) were made with an instrument using Peak detector mode.
- 2). Data of measurement within this frequency range shown "----" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 3). Worst case data at 1Mbps at IEEE 802.11b.
- 4). Measured Level = Reading Level + Factor, Margin = Measured Level – Limit

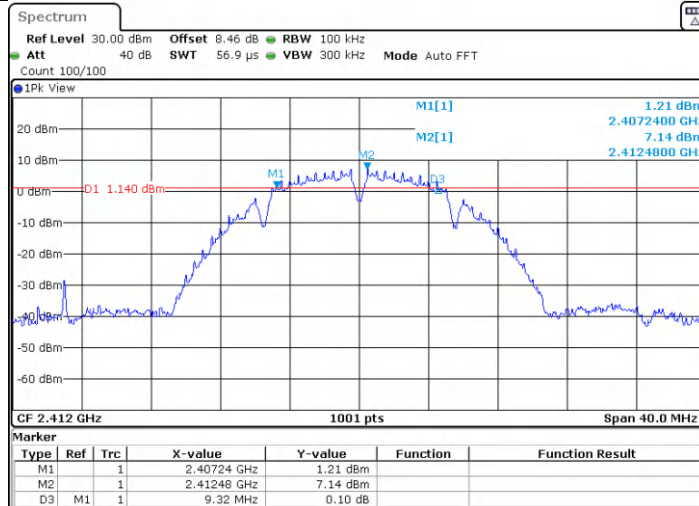
APPENDIXD - BANDWIDTH

1. DTS Bandwidth

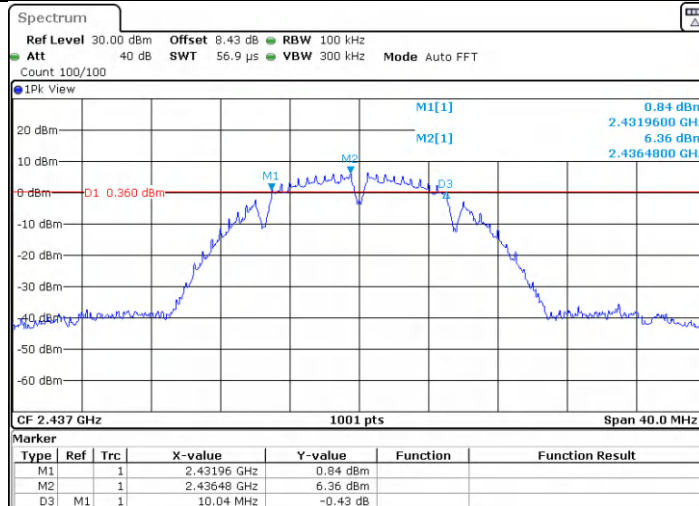
| TestMode | Frequency[MHz] | DTS BW [MHz] | FL[MHz] | FH[MHz] | Limit[MHz] | Verdict |
|-----------|----------------|--------------|---------|---------|------------|---------|
| 11B | 2412 | 9.32 | 2407.24 | 2416.56 | 0.5 | PASS |
| | 2437 | 10.04 | 2431.96 | 2442.00 | 0.5 | PASS |
| | 2462 | 9.08 | 2457.44 | 2466.52 | 0.5 | PASS |
| 11G | 2412 | 16.36 | 2403.80 | 2420.16 | 0.5 | PASS |
| | 2437 | 16.56 | 2428.72 | 2445.28 | 0.5 | PASS |
| | 2462 | 16.32 | 2453.84 | 2470.16 | 0.5 | PASS |
| 11N20SISO | 2412 | 17.64 | 2403.16 | 2420.80 | 0.5 | PASS |
| | 2437 | 17.56 | 2428.20 | 2445.76 | 0.5 | PASS |
| | 2462 | 17.72 | 2453.16 | 2470.88 | 0.5 | PASS |
| 11N40SISO | 2422 | 36.08 | 2403.84 | 2439.92 | 0.5 | PASS |
| | 2437 | 36.40 | 2418.76 | 2455.16 | 0.5 | PASS |
| | 2452 | 35.68 | 2433.84 | 2469.52 | 0.5 | PASS |

Test Graphs

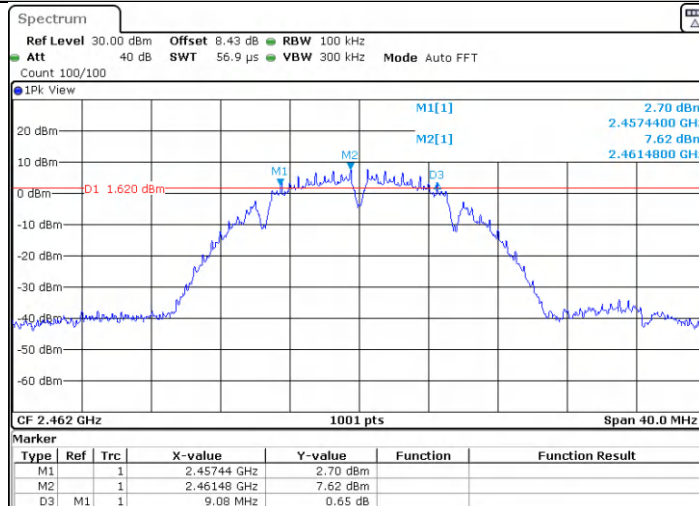
11B_Ant1_2412



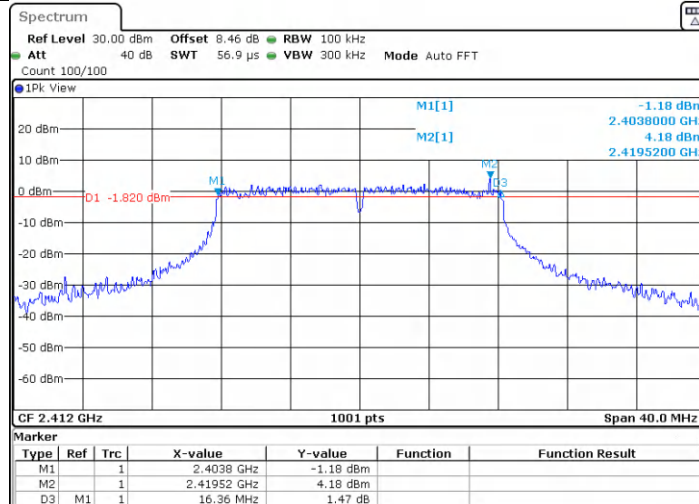
11B_Ant1_2437



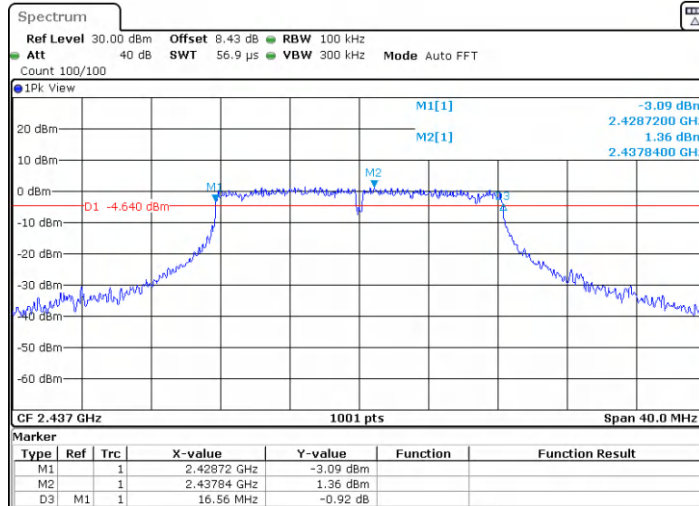
11B_Ant1_2462



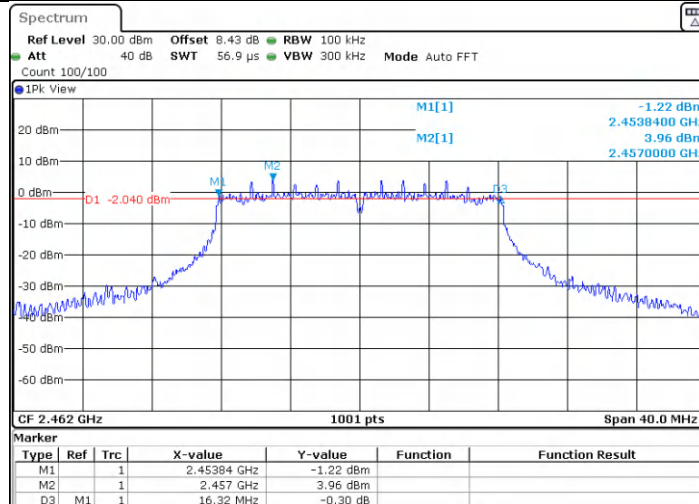
11G_Ant1_2412



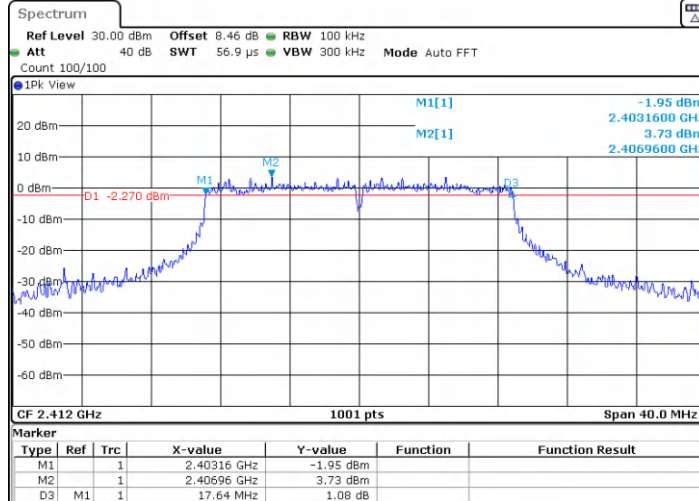
11G_Ant1_2437



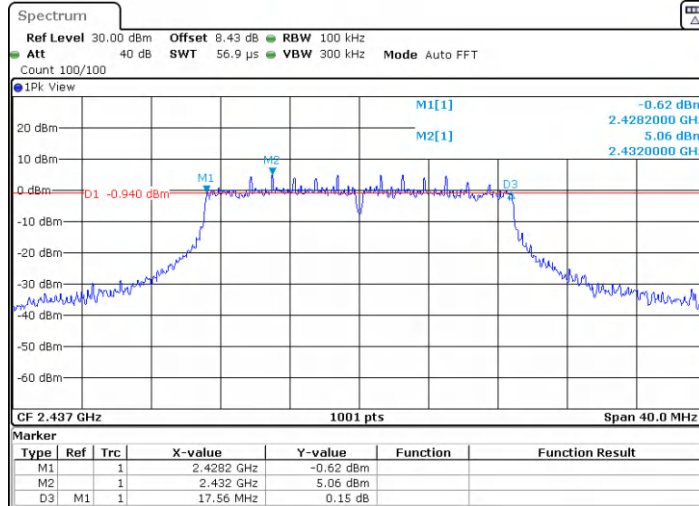
11G_Ant1_2462



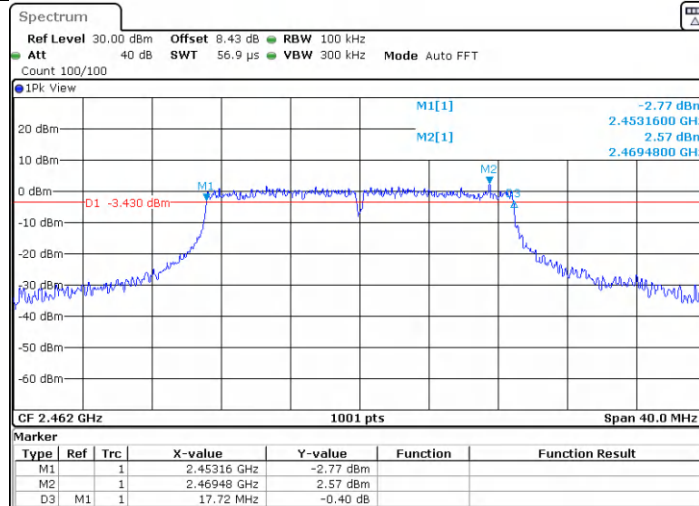
11N20SISO_Ant1_2412



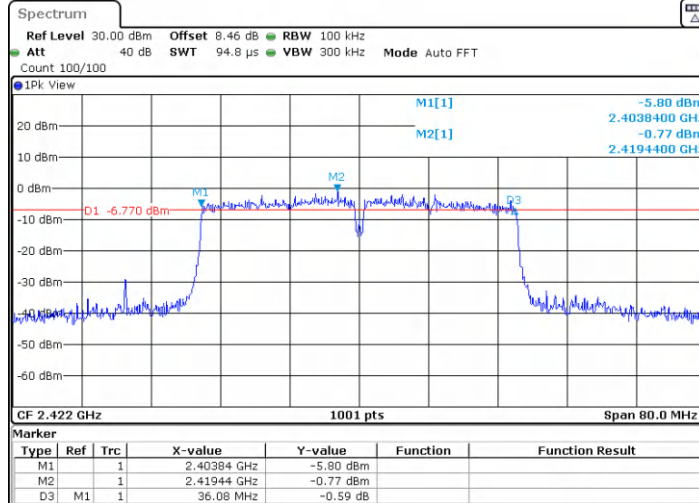
11N20SISO_Ant1_2437



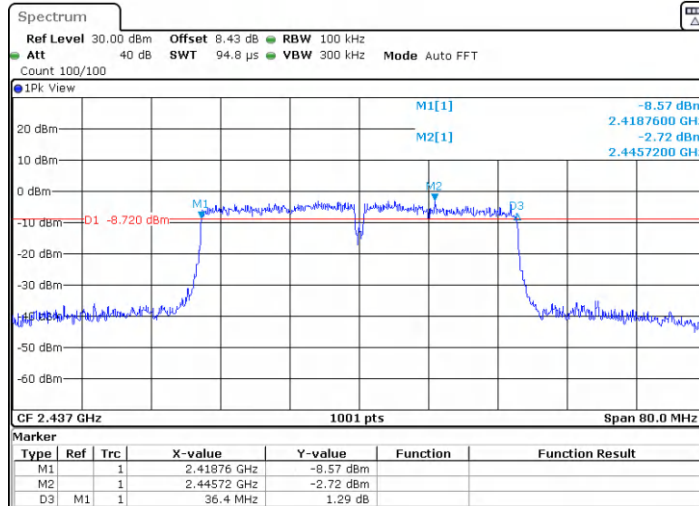
11N20SISO_Ant1_2462



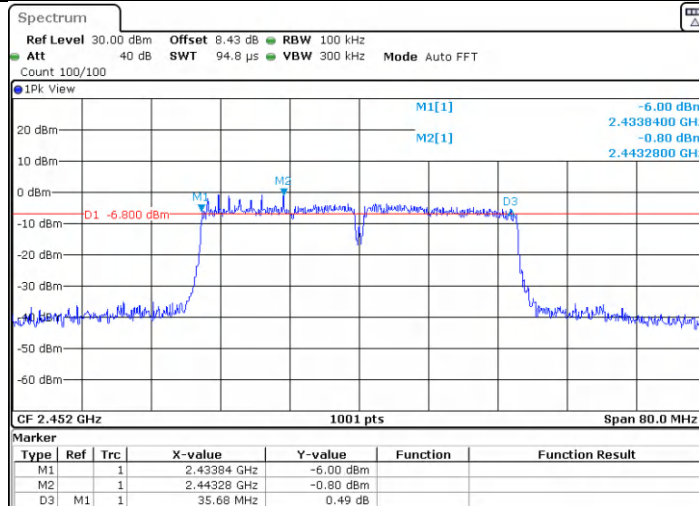
11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



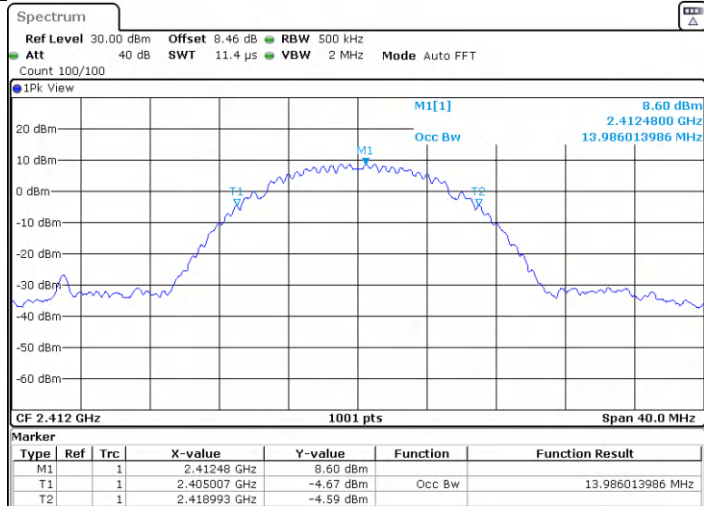
11N40SISO_Ant1_2452



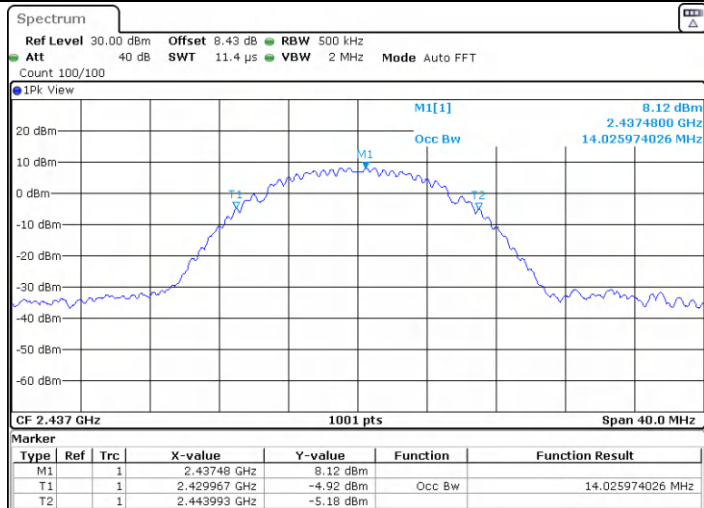
99% OCCUPIED BANDWIDTH

| TestMode | Channel Frequency[MHz] | OCB [MHz] | FL[MHz] | FH[MHz] | Limit[MHz] | Verdict |
|-----------|------------------------|-----------|-----------|-----------|------------|---------|
| 11B | 2412 | 13.986 | 2405.0070 | 2418.9930 | --- | --- |
| | 2437 | 14.026 | 2429.9670 | 2443.9930 | --- | --- |
| | 2462 | 14.066 | 2454.9670 | 2469.0330 | --- | --- |
| 11G | 2412 | 17.183 | 2403.2488 | 2420.4316 | --- | --- |
| | 2437 | 17.263 | 2428.4486 | 2445.7113 | --- | --- |
| | 2462 | 17.742 | 2453.2088 | 2470.9510 | --- | --- |
| 11N20SISO | 2412 | 18.781 | 2402.5295 | 2421.3107 | --- | --- |
| | 2437 | 18.861 | 2427.4496 | 2446.3107 | --- | --- |
| | 2462 | 18.422 | 2452.7692 | 2471.1908 | --- | --- |
| 11N40SISO | 2422 | 36.044 | 2403.8581 | 2439.9021 | --- | --- |
| | 2437 | 36.364 | 2418.6983 | 2455.0619 | --- | --- |
| | 2452 | 36.124 | 2433.9381 | 2470.0619 | --- | --- |

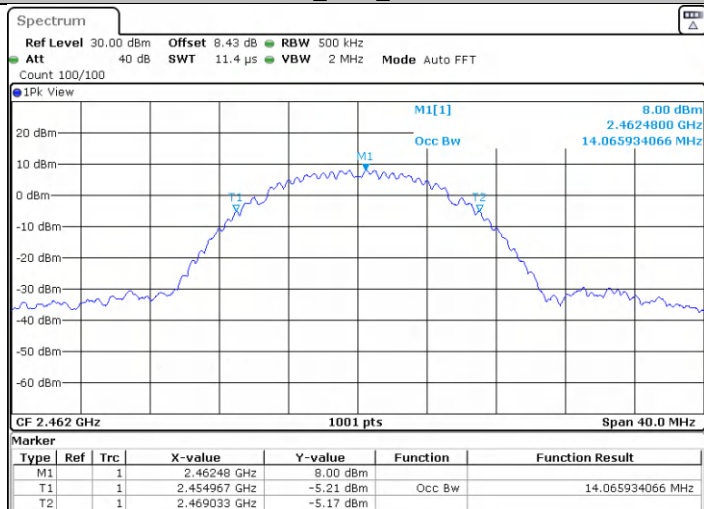
11B_Ant1_2412



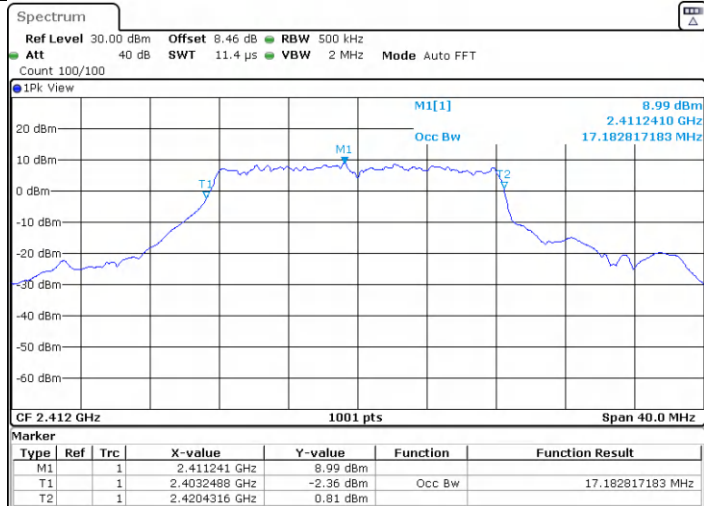
11B_Ant1_2437



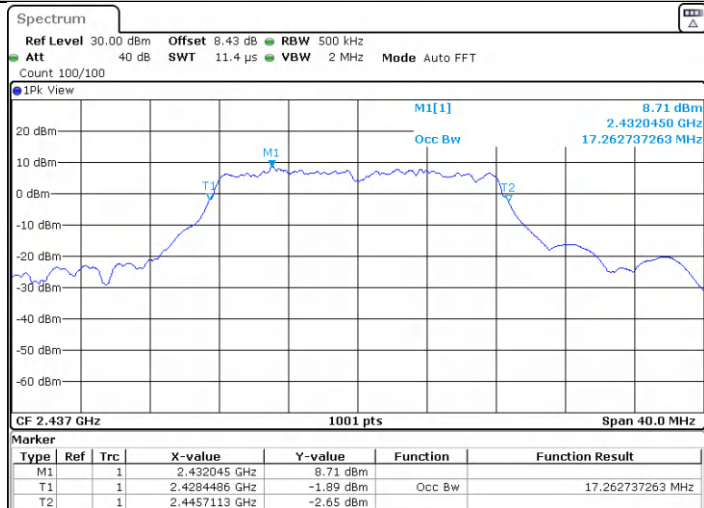
11B_Ant1_2462



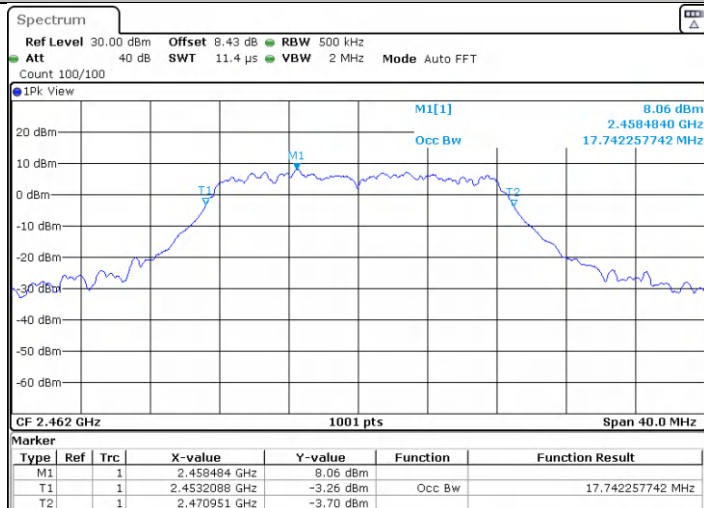
11G_Ant1_2412



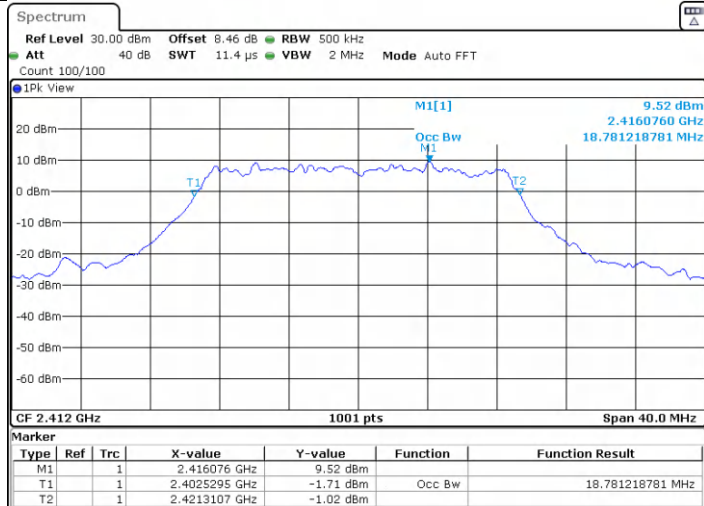
11G_Ant1_2437



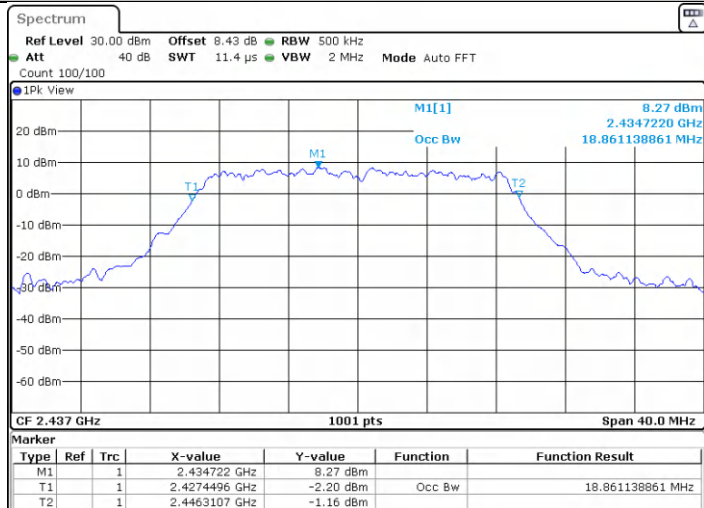
11G_Ant1_2462



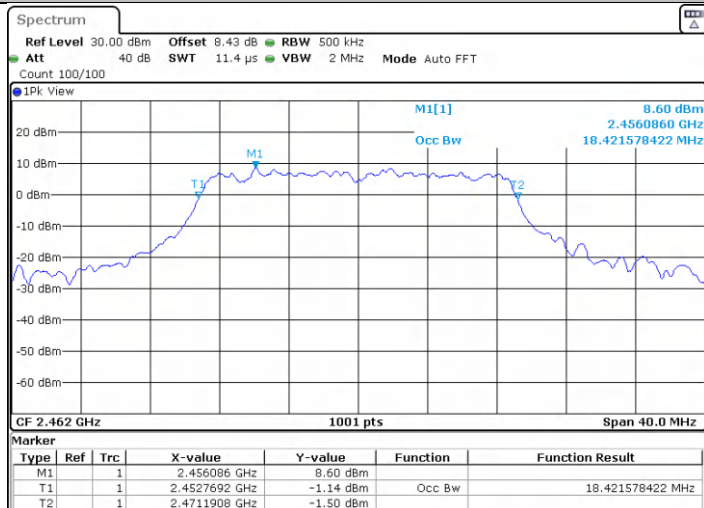
11N20SISO_Ant1_2412



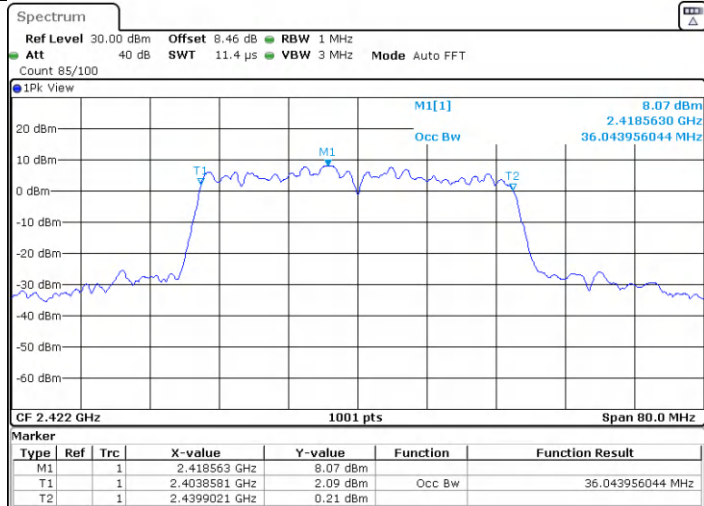
11N20SISO_Ant1_2437



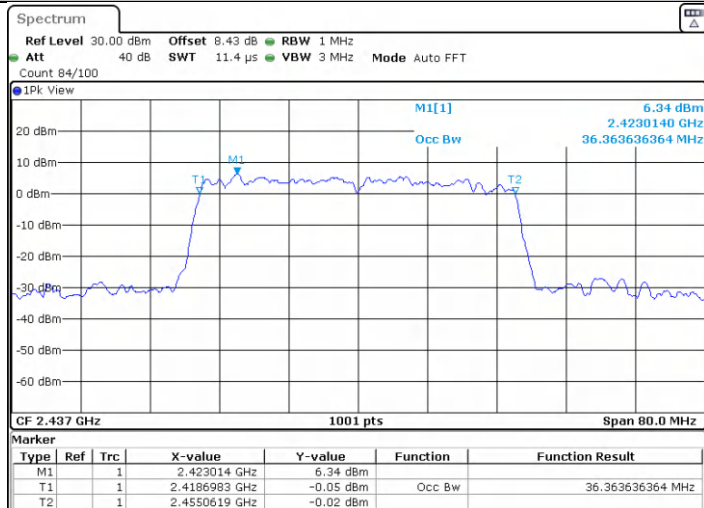
11N20SISO_Ant1_2462



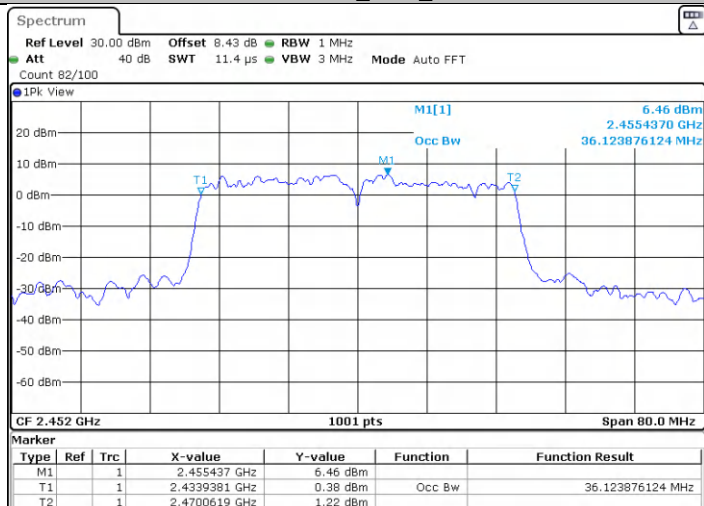
11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



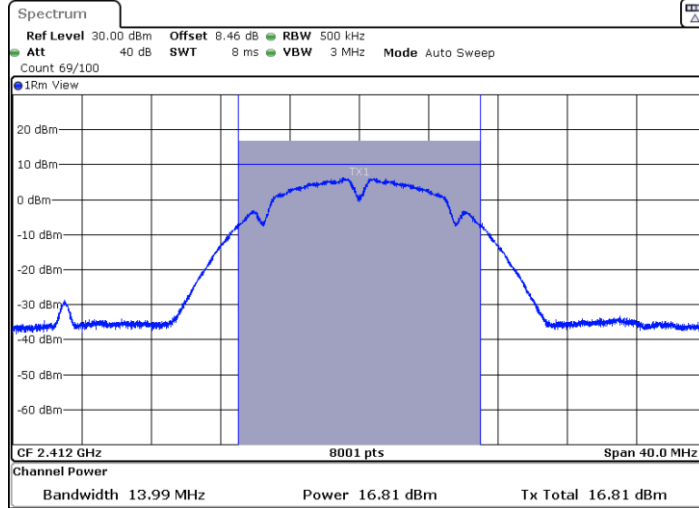
11N40SISO_Ant1_2452



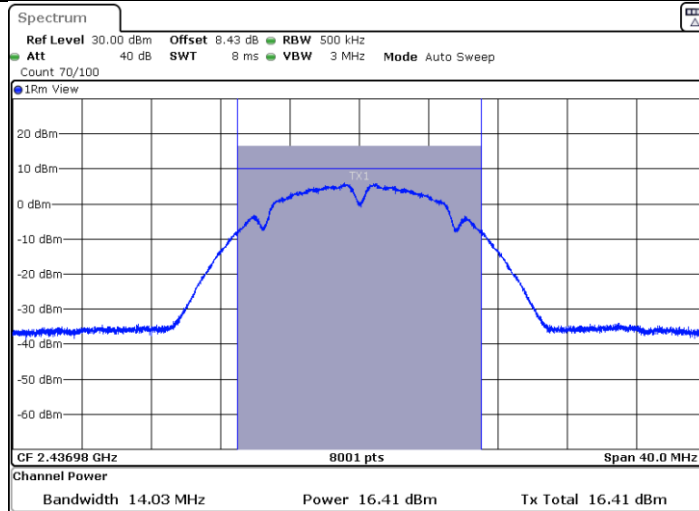
APPENDIXE - MAXIMUM OUTPUT POWER

| Test Mode | Frequency[MHz] | Average power [dBm] | Duty Cycle [%] | DC Factor [dBm] | Result [dBm] | Limit [dBm] | Verdict |
|-----------|----------------|---------------------|----------------|-----------------|--------------|-------------|---------|
| 11B | 2412 | 16.81 | 100.00 | 0.00 | 16.81 | ≤30.00 | PASS |
| | 2437 | 16.41 | 100.00 | 0.00 | 16.41 | ≤30.00 | PASS |
| | 2462 | 16.31 | 100.00 | 0.00 | 16.31 | ≤30.00 | PASS |
| 11G | 2412 | 14.73 | 67.00 | 1.74 | 16.47 | ≤30.00 | PASS |
| | 2437 | 14.06 | 67.00 | 1.74 | 15.80 | ≤30.00 | PASS |
| | 2462 | 13.20 | 66.67 | 1.76 | 14.96 | ≤30.00 | PASS |
| 11N20SISO | 2412 | 14.76 | 65.40 | 1.84 | 16.60 | ≤30.00 | PASS |
| | 2437 | 14.13 | 65.40 | 1.84 | 15.97 | ≤30.00 | PASS |
| | 2462 | 14.27 | 65.40 | 1.84 | 16.11 | ≤30.00 | PASS |
| 11N40SISO | 2422 | 11.19 | 48.19 | 3.17 | 14.36 | ≤30.00 | PASS |
| | 2437 | 10.60 | 48.19 | 3.17 | 13.77 | ≤30.00 | PASS |
| | 2452 | 10.69 | 48.19 | 3.17 | 13.86 | ≤30.00 | PASS |

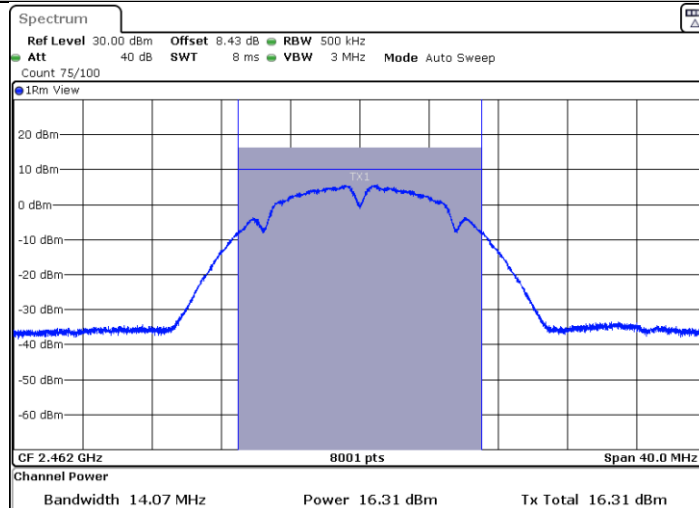
11B_Ant1_2412



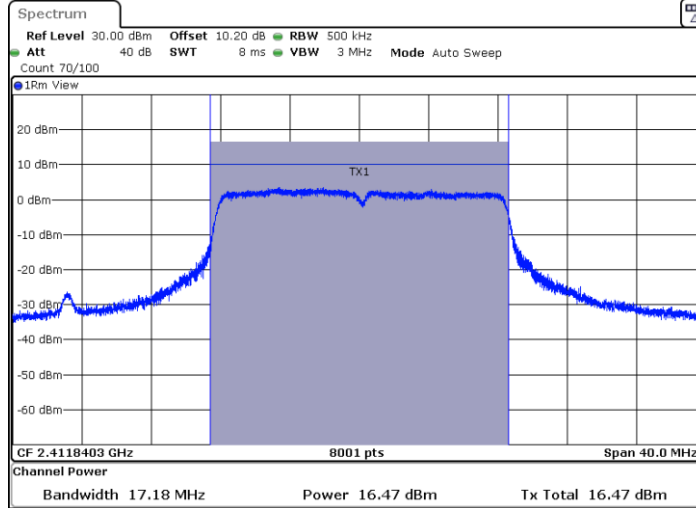
11B_Ant1_2437



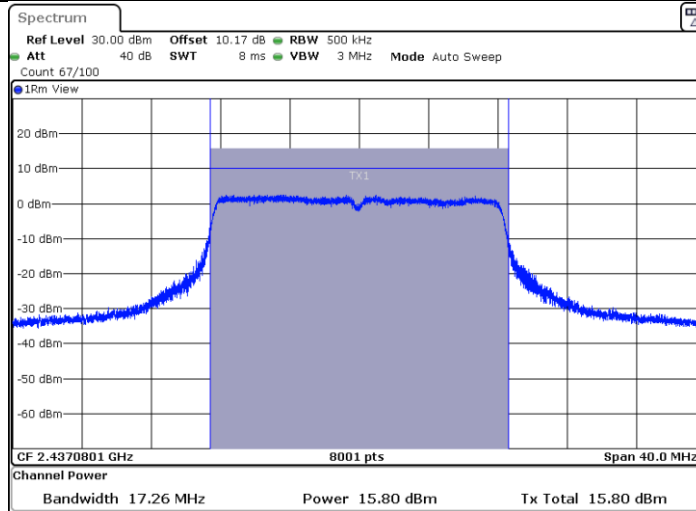
11B_Ant1_2462



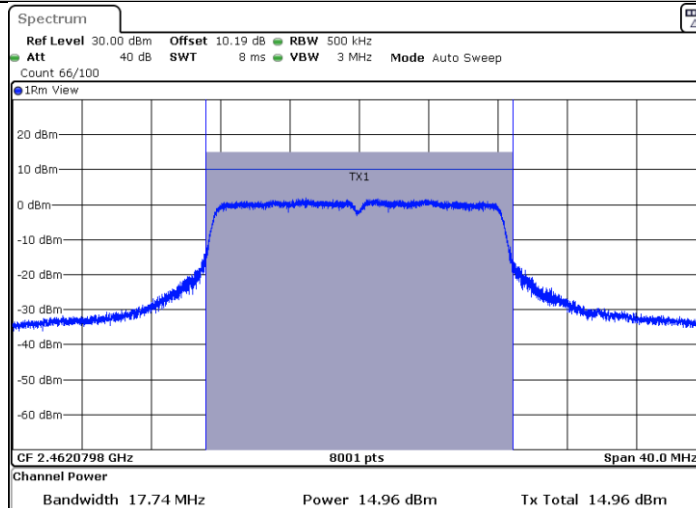
11G_Ant1_2412



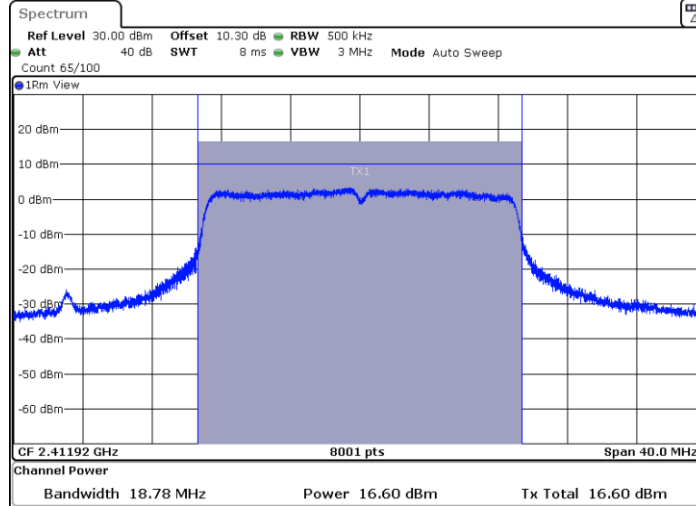
11G_Ant1_2437



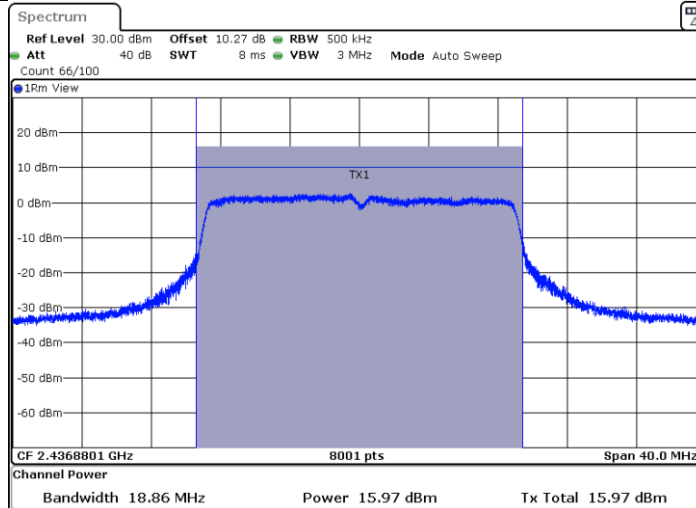
11G_Ant1_2462



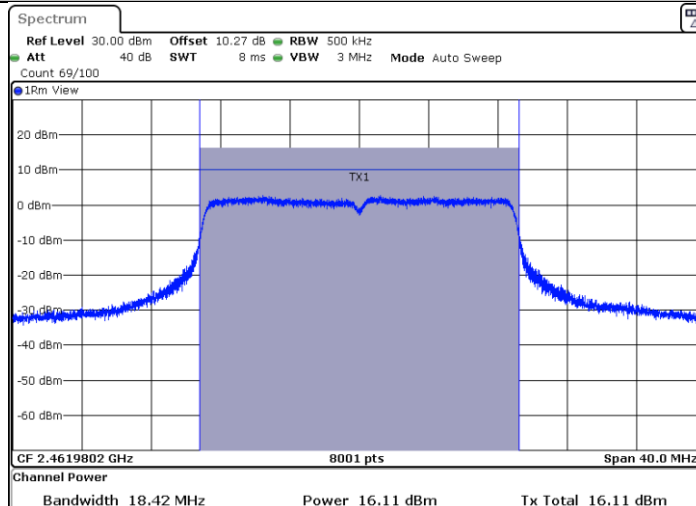
11N20SISO_Ant1_2412



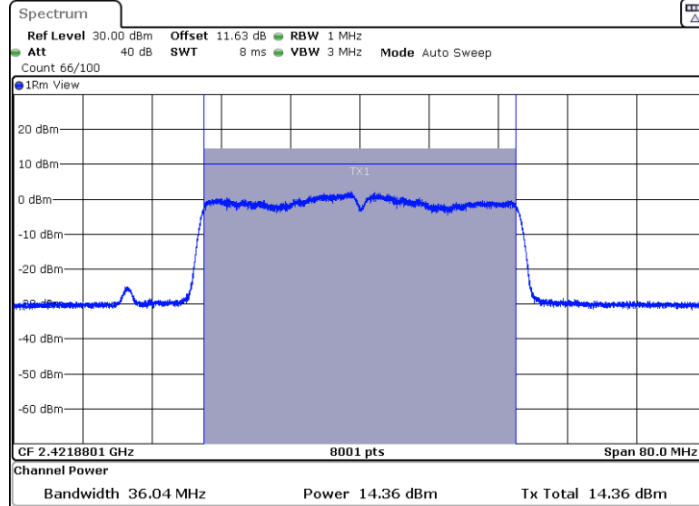
11N20SISO_Ant1_2437



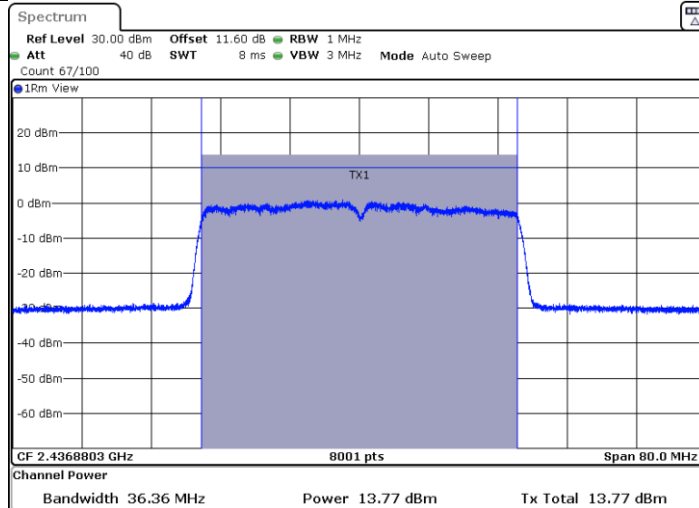
11N20SISO_Ant1_2462



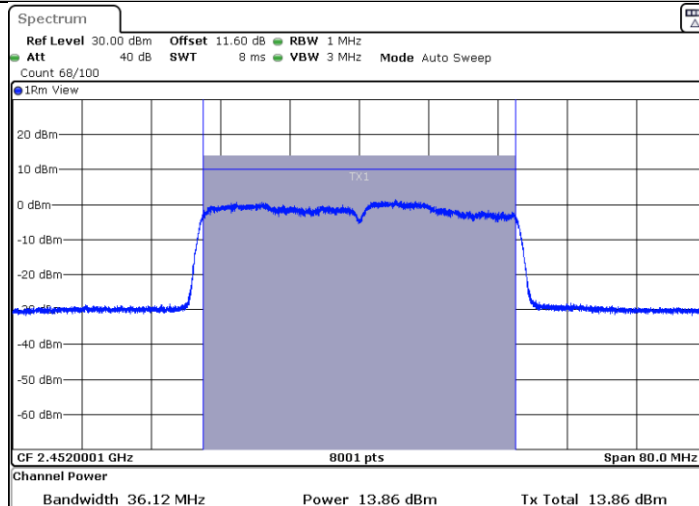
11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452



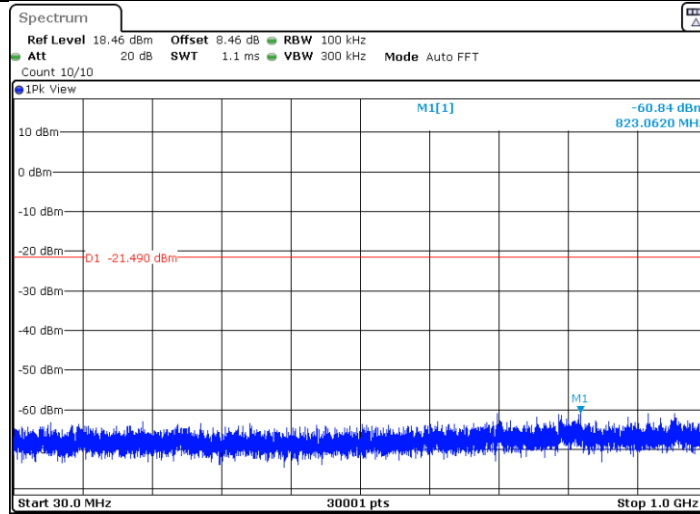
APPENDIXF - CONDUCTED SPURIOUS EMISSIONS

1. Conducted Spurious Emission

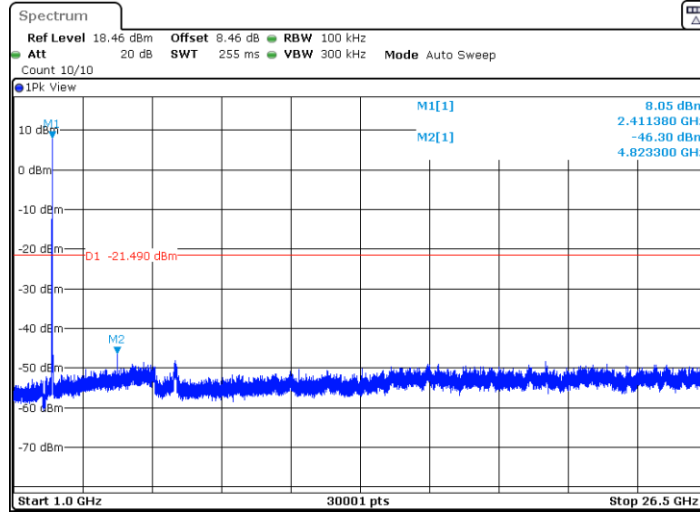
| TestMode | Frequency[MHz] | FreqRange [Mhz] | RefLevel [dBm] | Result [dBm] | Limit [dBm] | Verdict |
|-----------|----------------|-----------------|----------------|--------------|---------------|---------|
| 11B | 2412 | 30~1000 | 8.51 | -60.84 | ≤ -21.49 | PASS |
| | | 1000~26500 | 8.51 | -46.3 | ≤ -21.49 | PASS |
| | 2437 | 30~1000 | 7.78 | -61.02 | ≤ -22.22 | PASS |
| | | 1000~26500 | 7.78 | -47.69 | ≤ -22.22 | PASS |
| | 2462 | 30~1000 | 7.82 | -60.44 | ≤ -22.18 | PASS |
| | | 1000~26500 | 7.82 | -48.44 | ≤ -22.18 | PASS |
| 11G | 2412 | 30~1000 | 5.57 | -60.48 | ≤ -24.43 | PASS |
| | | 1000~26500 | 5.57 | -48.18 | ≤ -24.43 | PASS |
| | 2437 | 30~1000 | 4.75 | -61.03 | ≤ -25.25 | PASS |
| | | 1000~26500 | 4.75 | -48.6 | ≤ -25.25 | PASS |
| | 2462 | 30~1000 | 3.94 | -61.27 | ≤ -26.06 | PASS |
| | | 1000~26500 | 3.94 | -48.28 | ≤ -26.06 | PASS |
| 11N20SISO | 2412 | 30~1000 | 5.82 | -61.55 | ≤ -24.18 | PASS |
| | | 1000~26500 | 5.82 | -48.14 | ≤ -24.18 | PASS |
| | 2437 | 30~1000 | 4.97 | -61.23 | ≤ -25.03 | PASS |
| | | 1000~26500 | 4.97 | -48.17 | ≤ -25.03 | PASS |
| | 2462 | 30~1000 | 4.45 | -61.11 | ≤ -25.55 | PASS |
| | | 1000~26500 | 4.45 | -48.33 | ≤ -25.55 | PASS |
| 11N40SISO | 2422 | 30~1000 | 0.67 | -60.17 | ≤ -29.33 | PASS |
| | | 1000~26500 | 0.67 | -48.45 | ≤ -29.33 | PASS |
| | 2437 | 30~1000 | 0.07 | -61.26 | ≤ -29.93 | PASS |
| | | 1000~26500 | 0.07 | -48.62 | ≤ -29.93 | PASS |
| | 2452 | 30~1000 | -0.24 | -60.95 | ≤ -30.24 | PASS |
| | | 1000~26500 | -0.24 | -47.9 | ≤ -30.24 | PASS |

Test Graphs

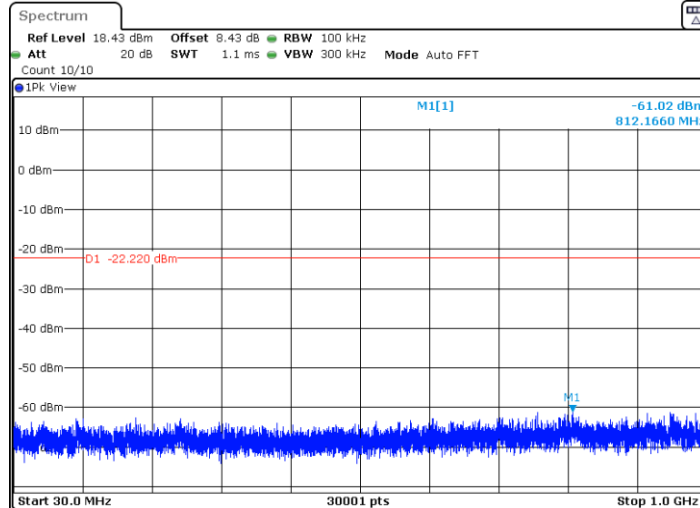
11B_Ant1_2412_30~1000



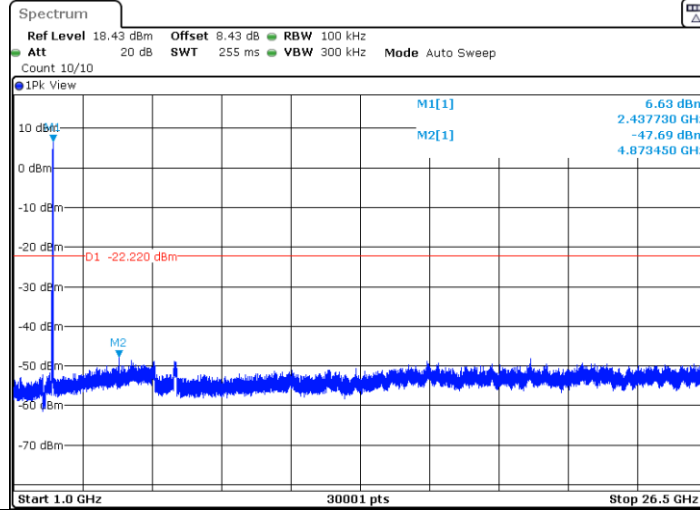
11B_Ant1_2412_1000~26500



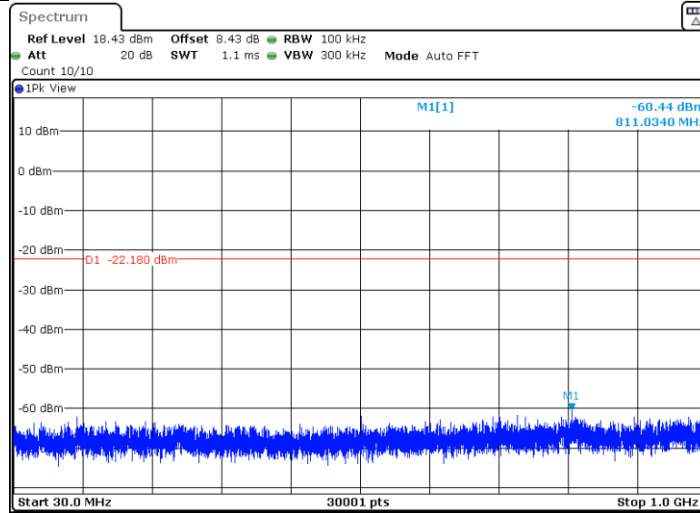
11B_Ant1_2437_30~1000



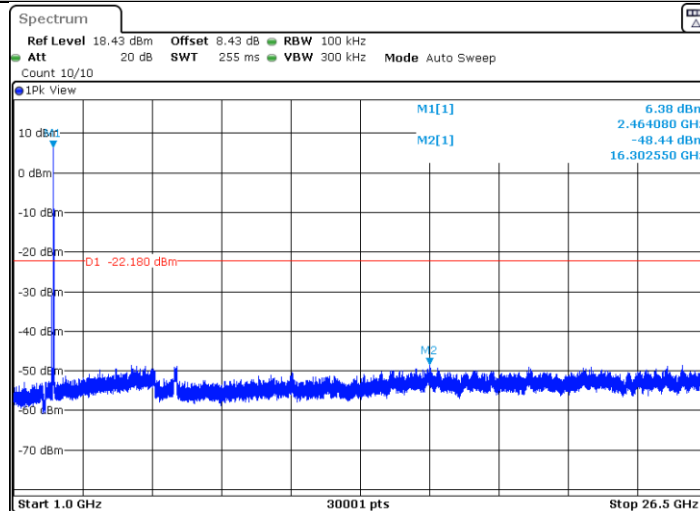
11B_Ant1_2437_1000~26500



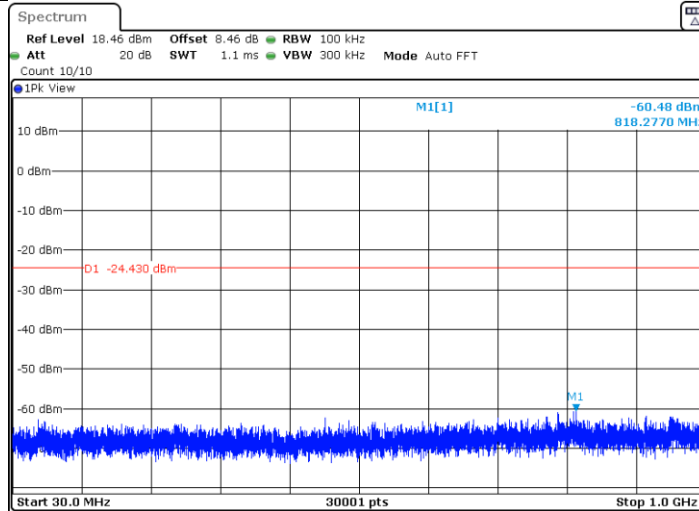
11B_Ant1_2462_30~1000



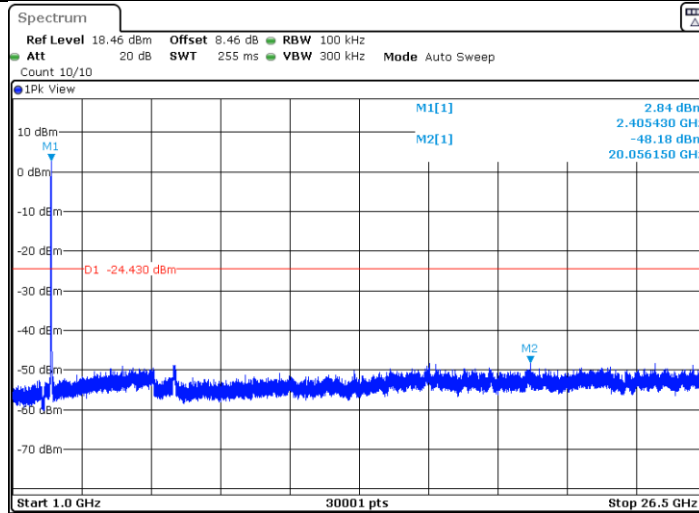
11B_Ant1_2462_1000~26500



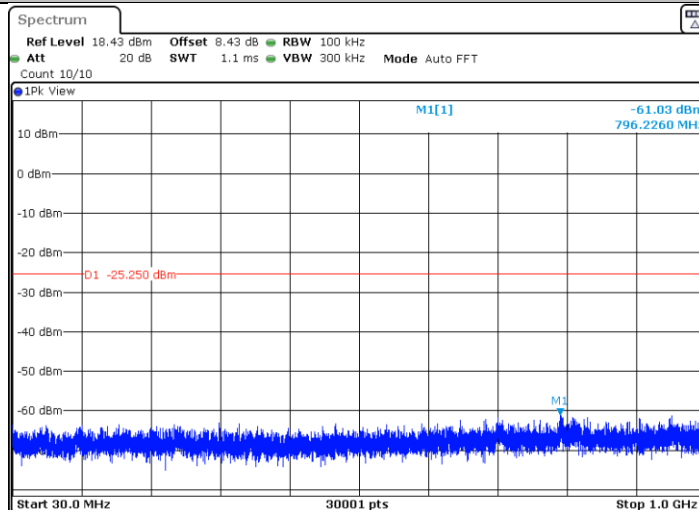
11G_Ant1_2412_30~1000



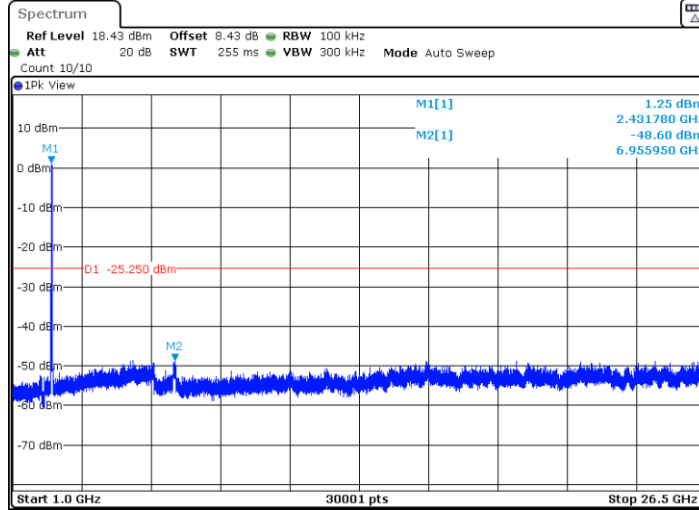
11G_Ant1_2412_1000~26500



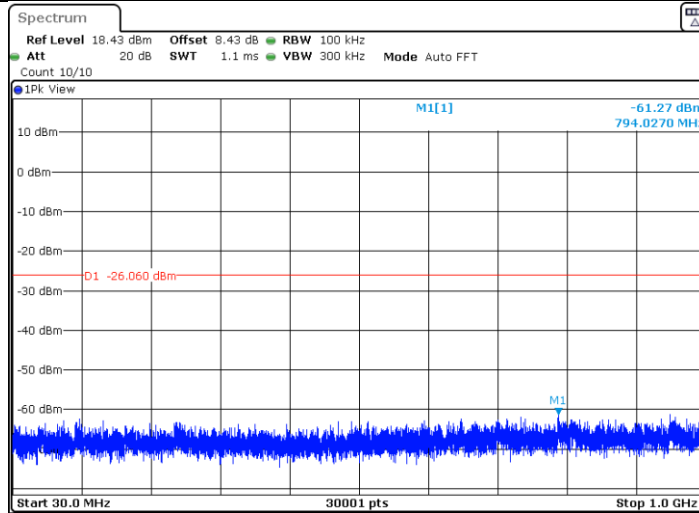
11G_Ant1_2437_30~1000



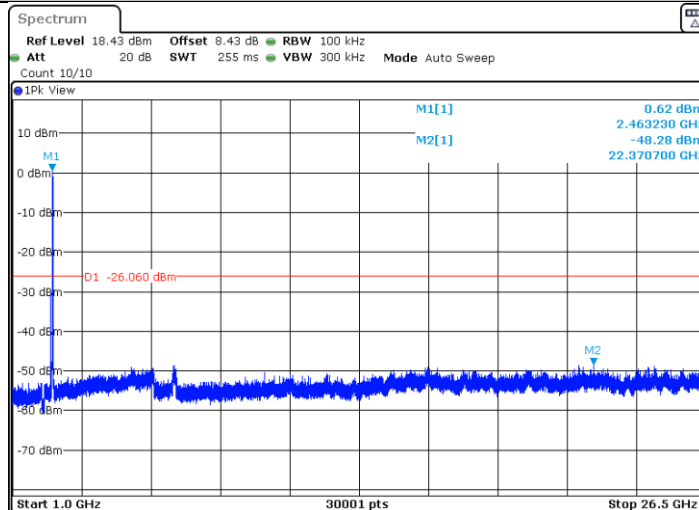
11G_Ant1_2437_1000~26500



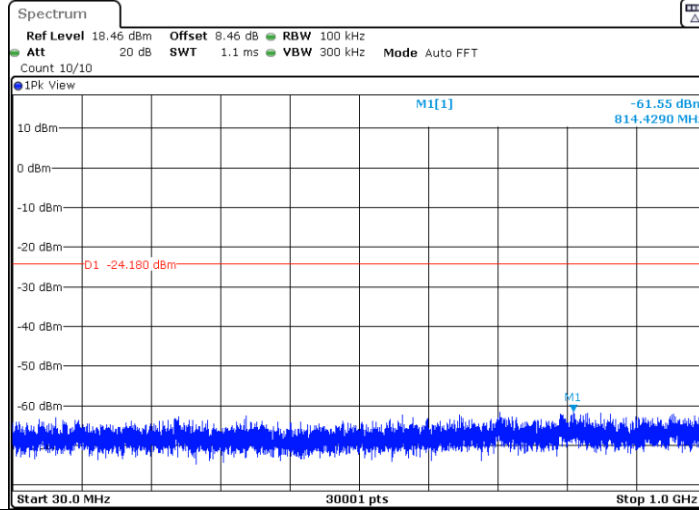
11G_Ant1_2462_30~1000



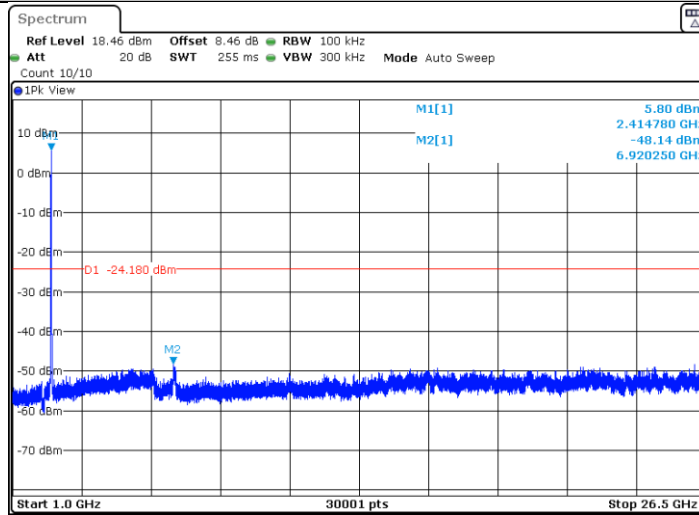
11G_Ant1_2462_1000~26500



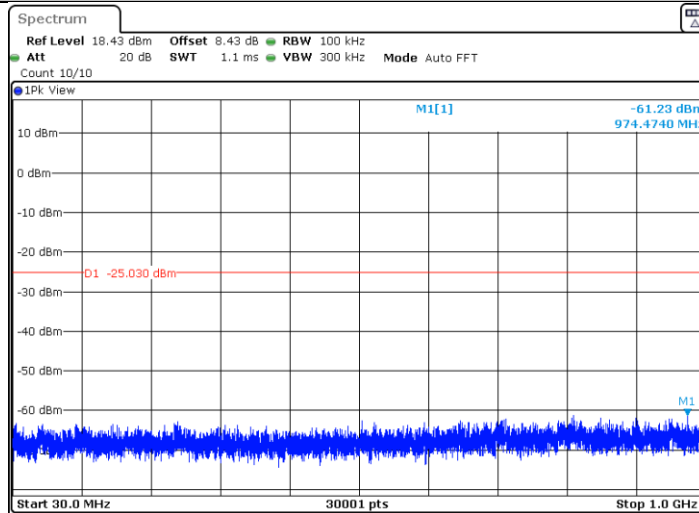
11N20SISO_Ant1_2412_30~1000



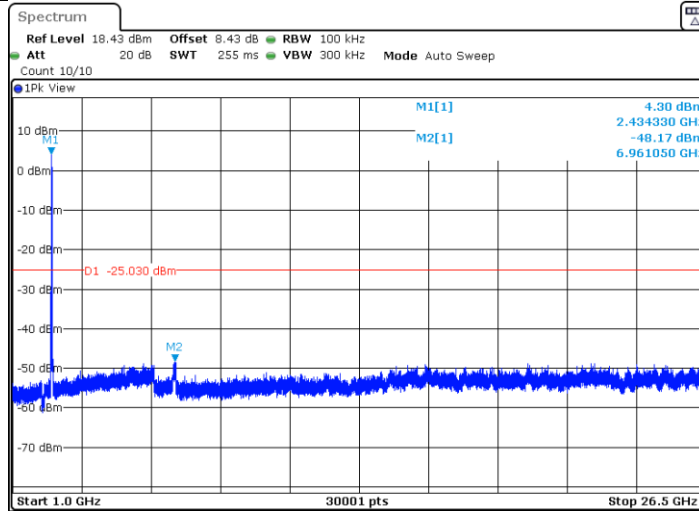
11N20SISO_Ant1_2412_1000~26500



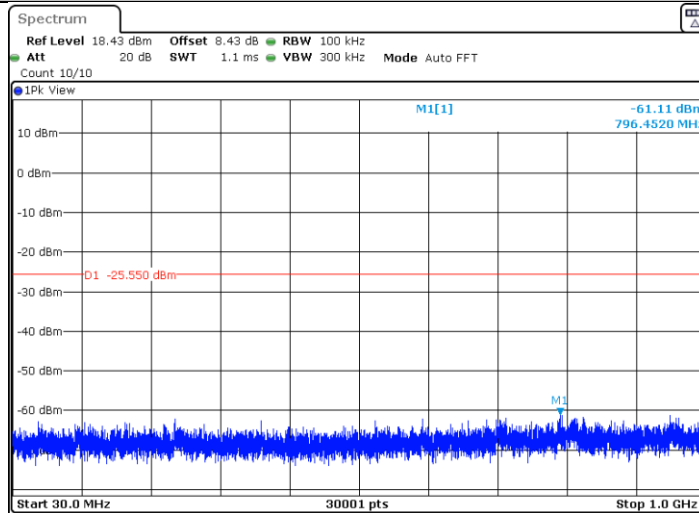
11N20SISO_Ant1_2437_30~1000



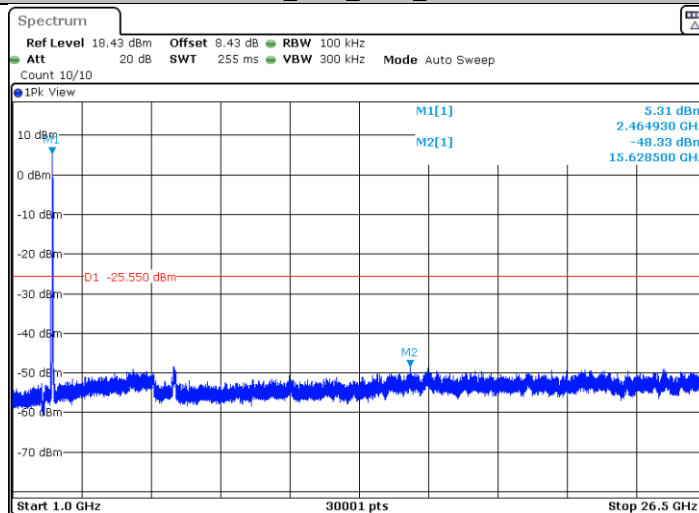
11N20SISO_Ant1_2437_1000~26500



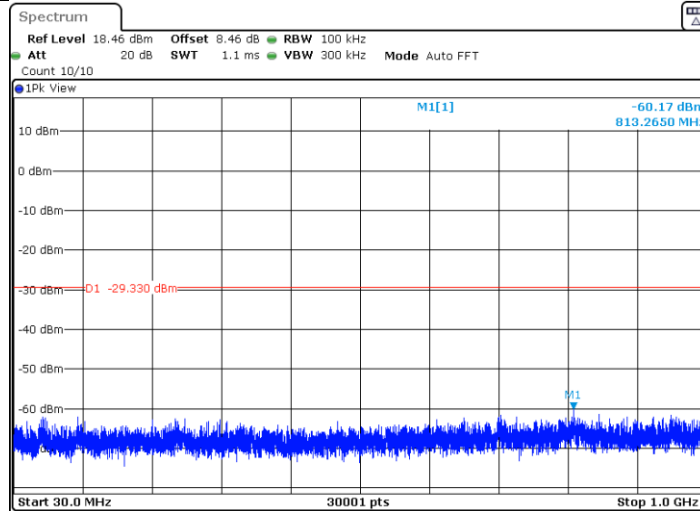
11N20SISO_Ant1_2462_30~1000



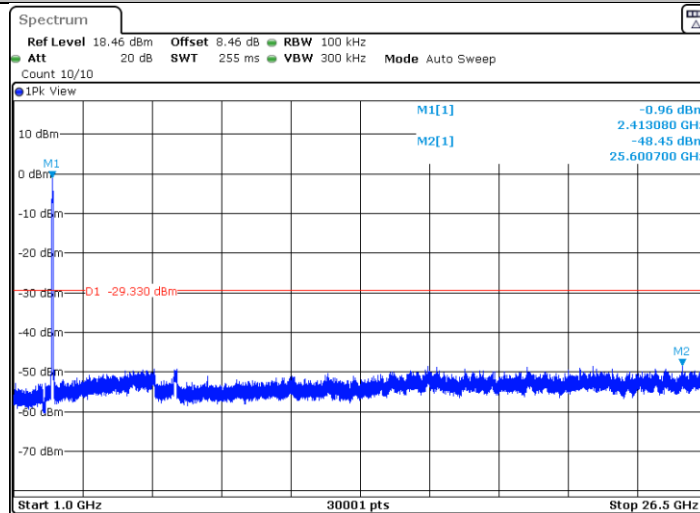
11N20SISO_Ant1_2462_1000~26500



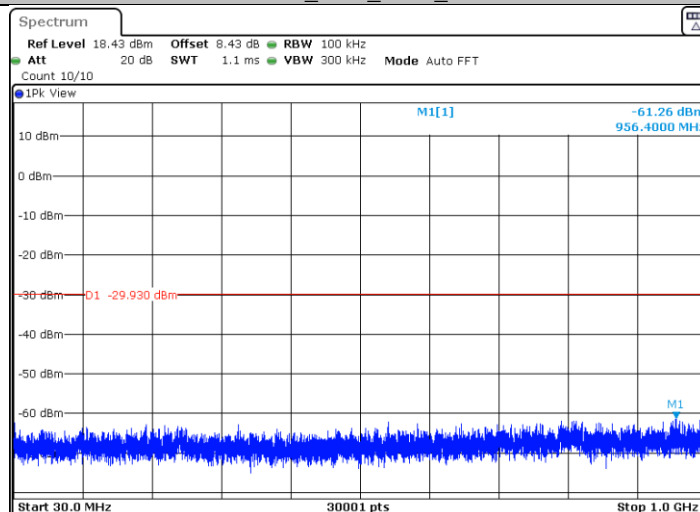
11N40SISO_Ant1_2422_30~1000



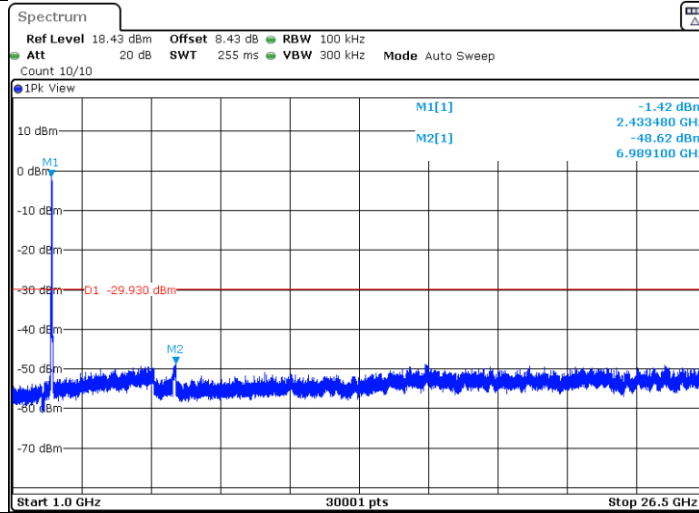
11N40SISO_Ant1_2422_1000~26500



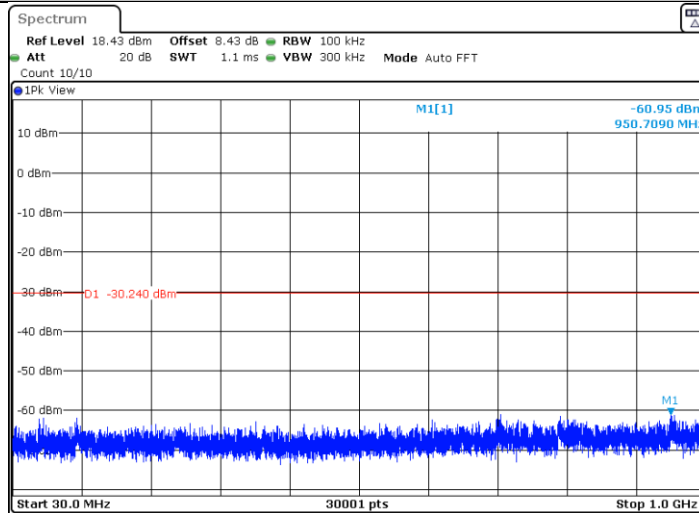
11N40SISO_Ant1_2437_30~1000



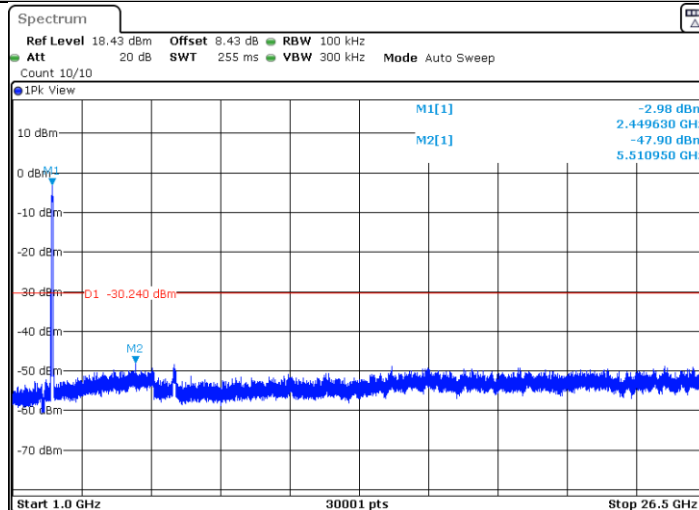
11N40SISO_Ant1_2437_1000~26500



11N40SISO_Ant1_2452_30~1000



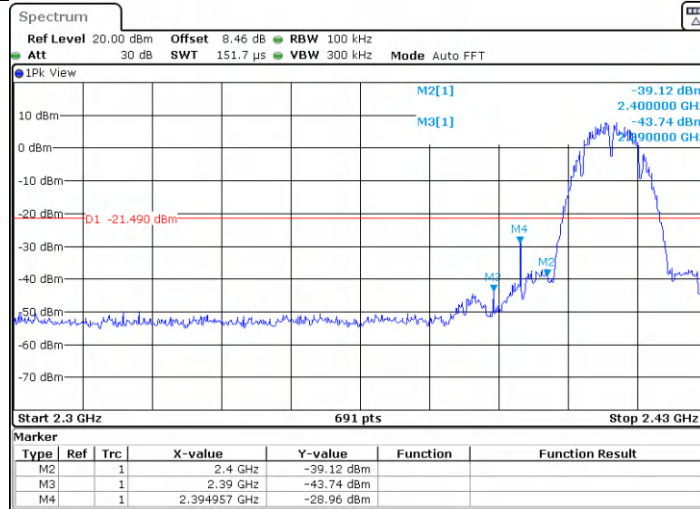
11N40SISO_Ant1_2452_1000~26500



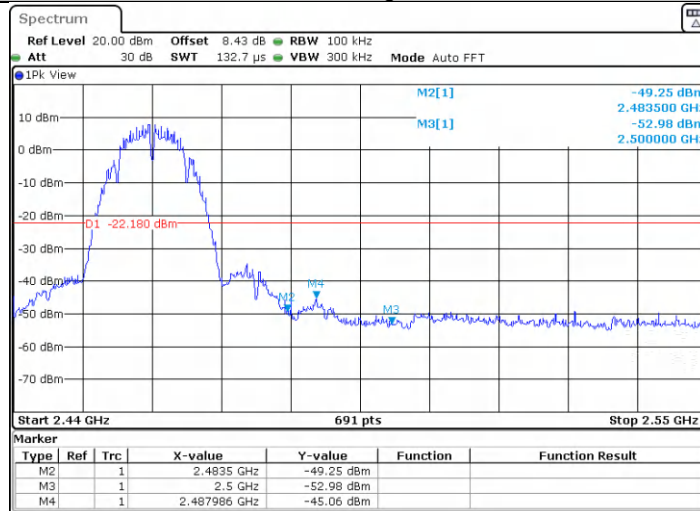
2. Band edge measurements

| TestMode | ChName | Frequency[MHz] | RefLevel[dBm] | Result[dBm] | Limit[dBm] | Verdict |
|-----------|--------|----------------|---------------|-------------|---------------|---------|
| 11B | Low | 2412 | 8.51 | -28.96 | ≤ -21.49 | PASS |
| | High | 2462 | 7.82 | -45.06 | ≤ -22.18 | PASS |
| 11G | Low | 2412 | 5.57 | -25.62 | ≤ -24.43 | PASS |
| | High | 2462 | 3.94 | -41.86 | ≤ -26.06 | PASS |
| 11N20SISO | Low | 2412 | 5.82 | -25.17 | ≤ -24.18 | PASS |
| | High | 2462 | 4.45 | -35.42 | ≤ -25.55 | PASS |
| 11N40SISO | Low | 2422 | 0.67 | -29.43 | ≤ -29.33 | PASS |
| | High | 2452 | -0.24 | -38.06 | ≤ -30.24 | PASS |

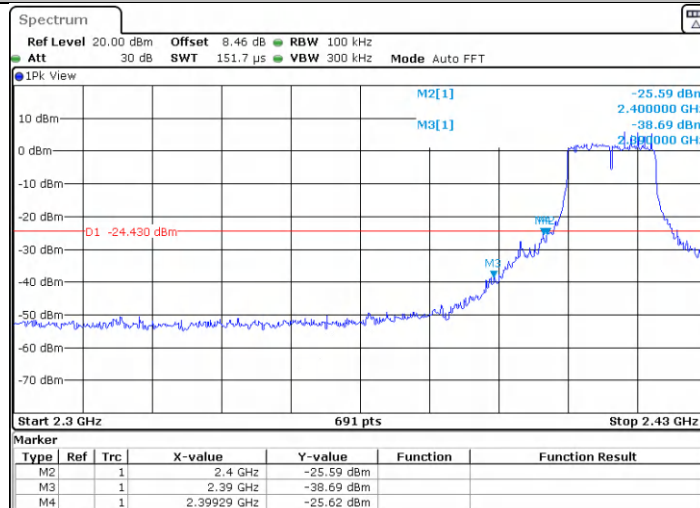
11B_Ant1_Low_2412



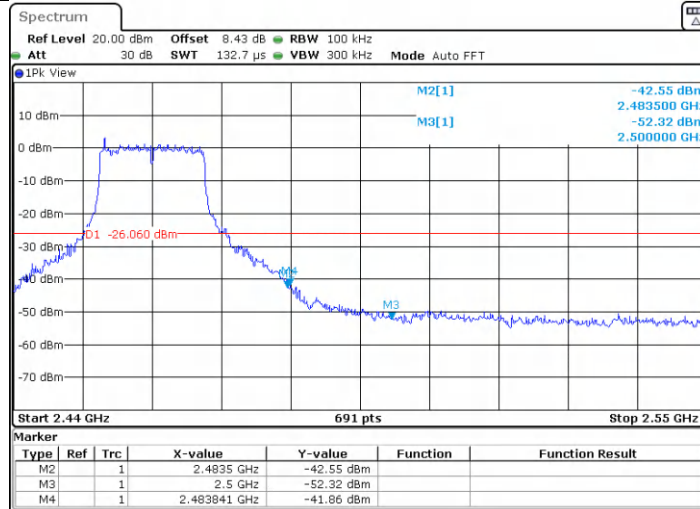
11B_Ant1_High_2462



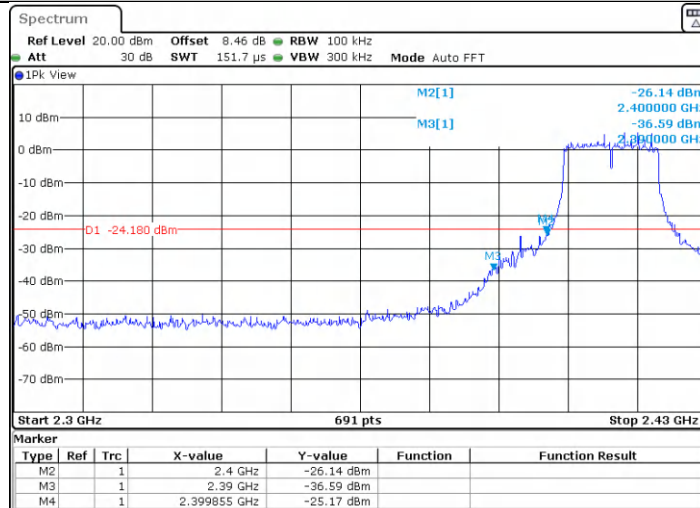
11G_Ant1_Low_2412



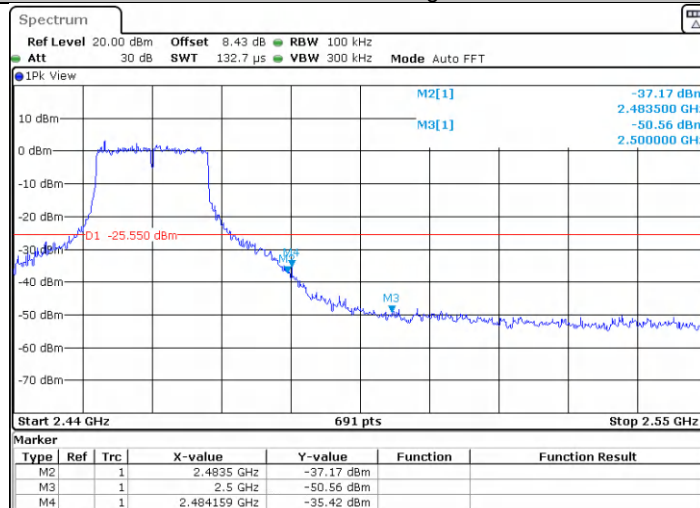
11G_Ant1_High_2462



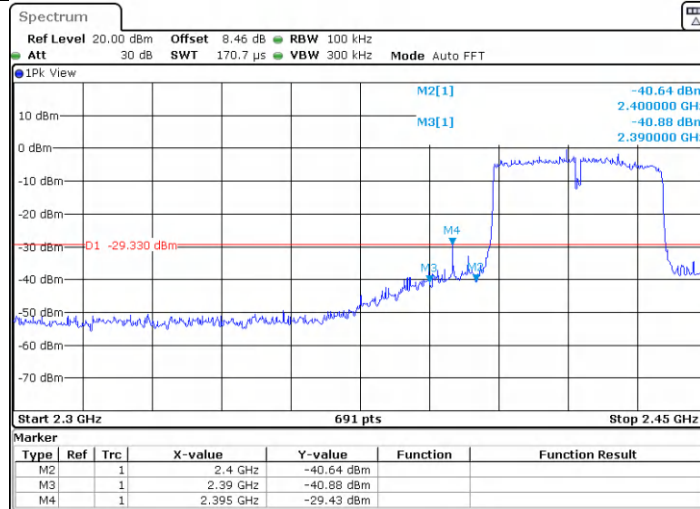
11N20SISO_Ant1_Low_2412



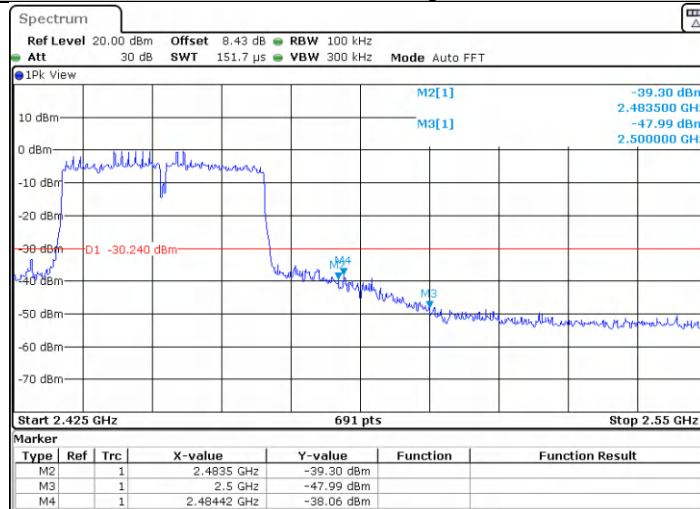
11N20SISO_Ant1_High_2462



11N40SISO_Ant1_Low_2422



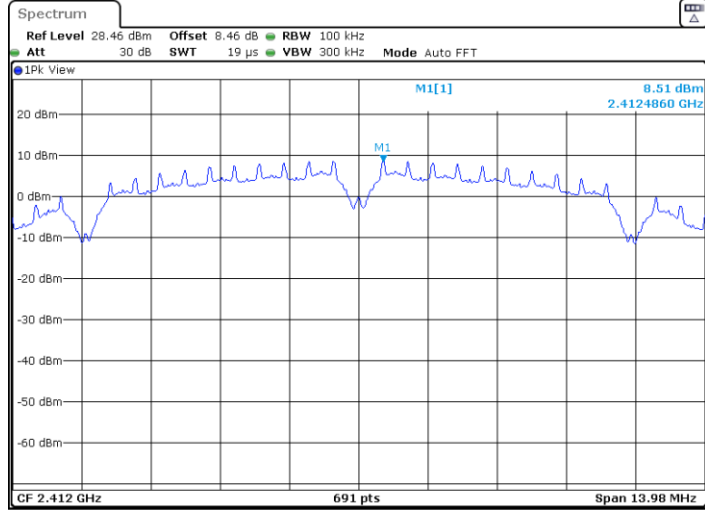
11N40SISO_Ant1_High_2452



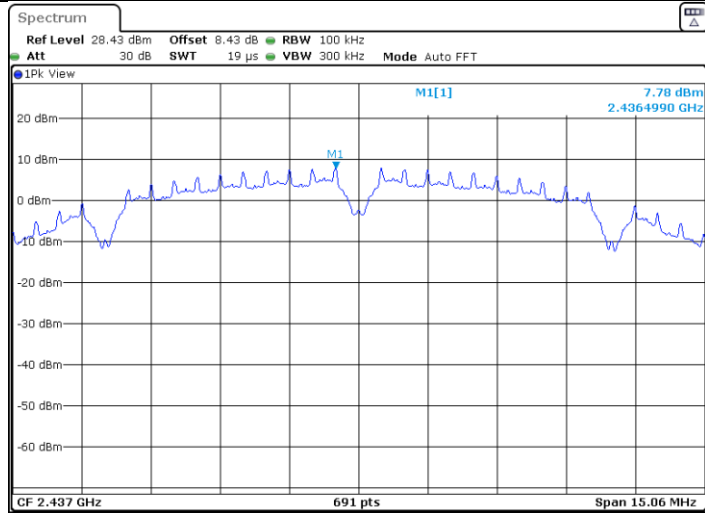
3. Reference level measurement

| TestMode | Freq(MHz) | Max.Point[MHz] | Result[dBm] |
|-----------|-----------|----------------|-------------|
| 11B | 2412 | 2412.49 | 8.51 |
| | 2437 | 2436.50 | 7.78 |
| | 2462 | 2462.49 | 7.82 |
| 11G | 2412 | 2413.24 | 5.57 |
| | 2437 | 2439.48 | 4.75 |
| | 2462 | 2457.01 | 3.94 |
| 11N20SISO | 2412 | 2414.49 | 5.82 |
| | 2437 | 2432.01 | 4.97 |
| | 2462 | 2457.00 | 4.45 |
| 11N40SISO | 2422 | 2425.76 | 0.67 |
| | 2437 | 2440.71 | 0.07 |
| | 2452 | 2455.72 | -0.24 |

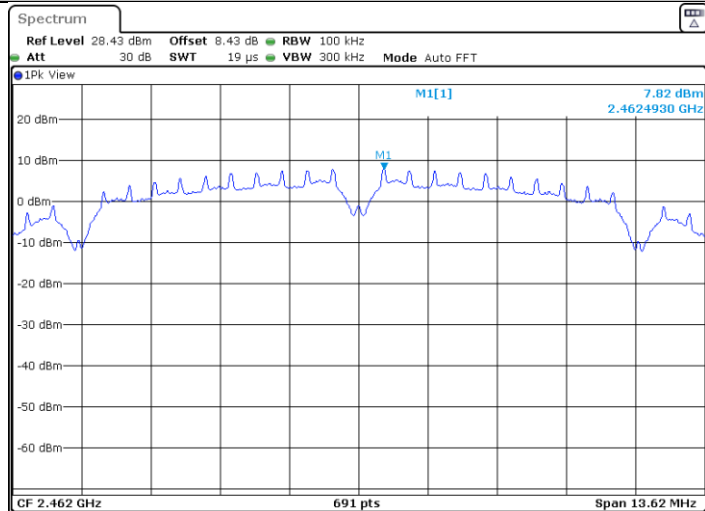
11B_Ant1_2412



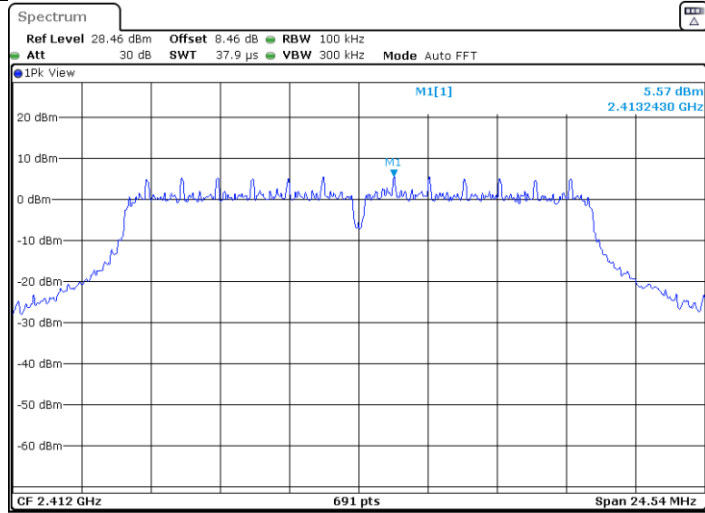
11B_Ant1_2437



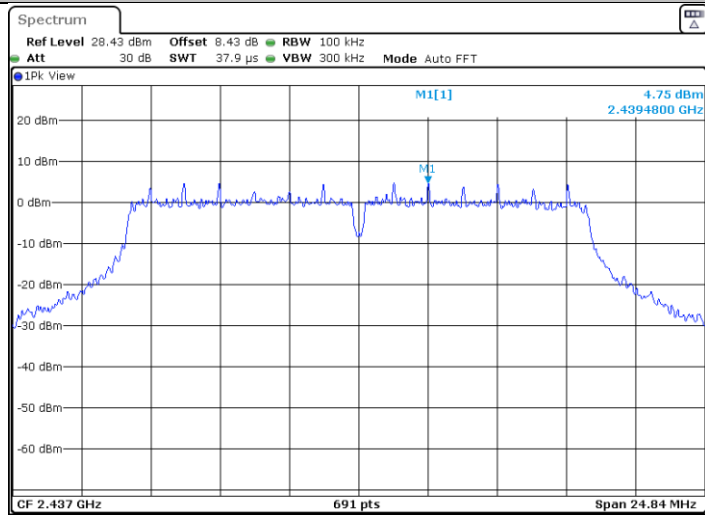
11B_Ant1_2462



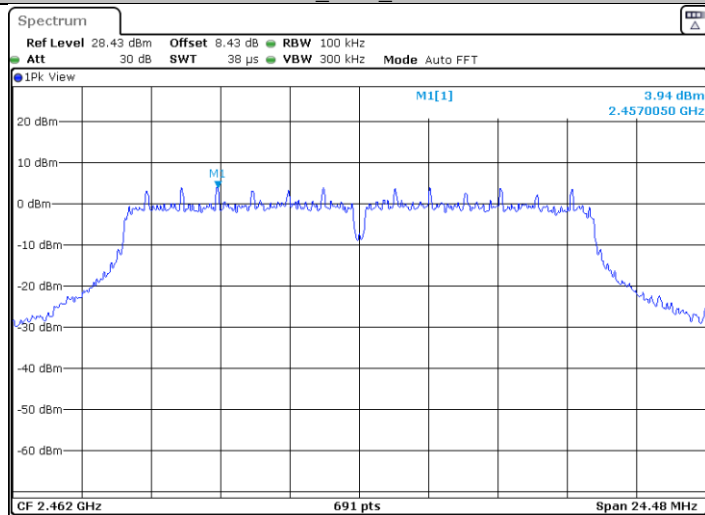
11G_Ant1_2412



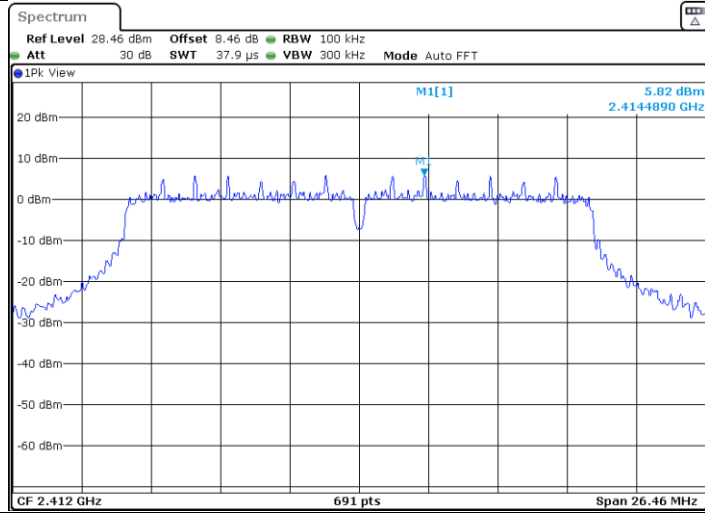
11G_Ant1_2437



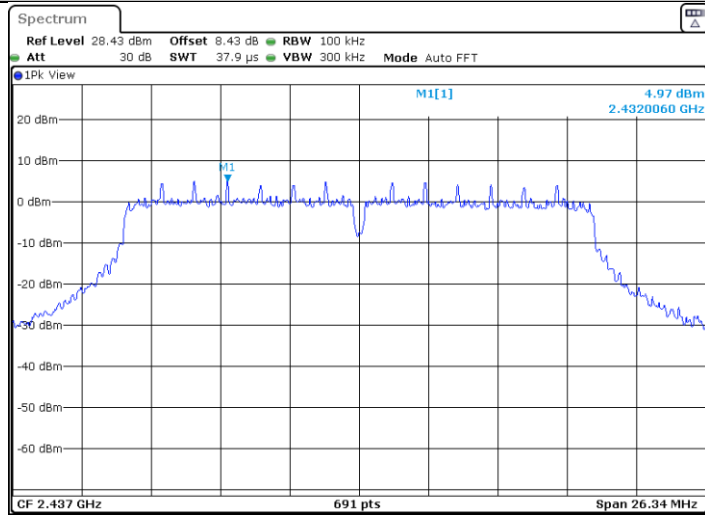
11G_Ant1_2462



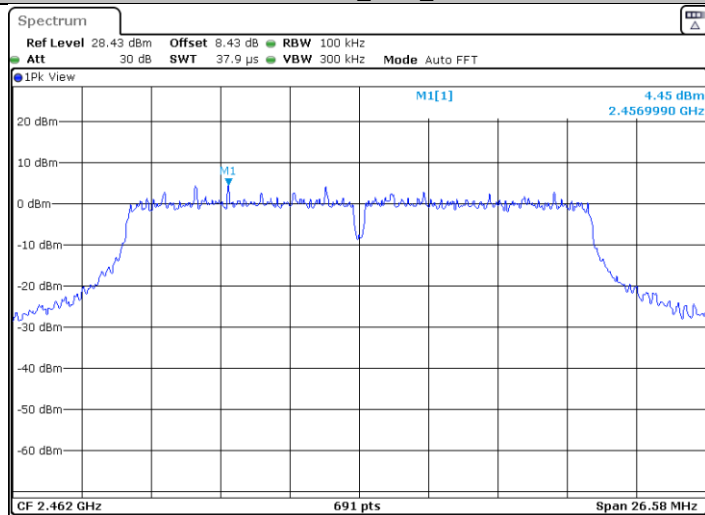
11N20SISO_Ant1_2412



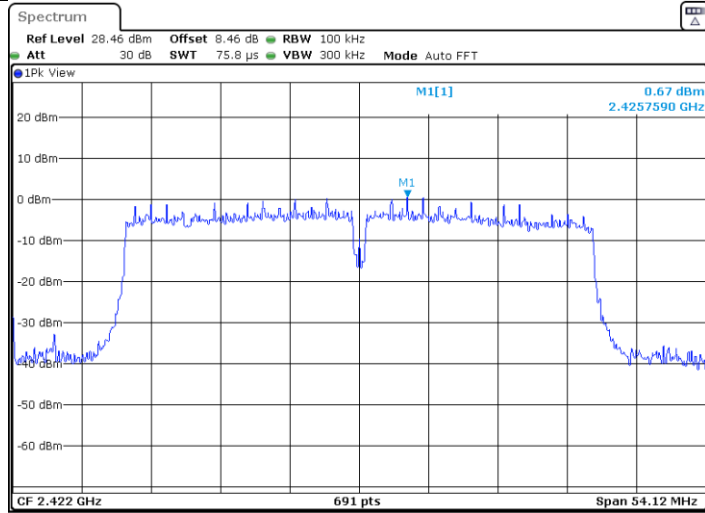
11N20SISO_Ant1_2437



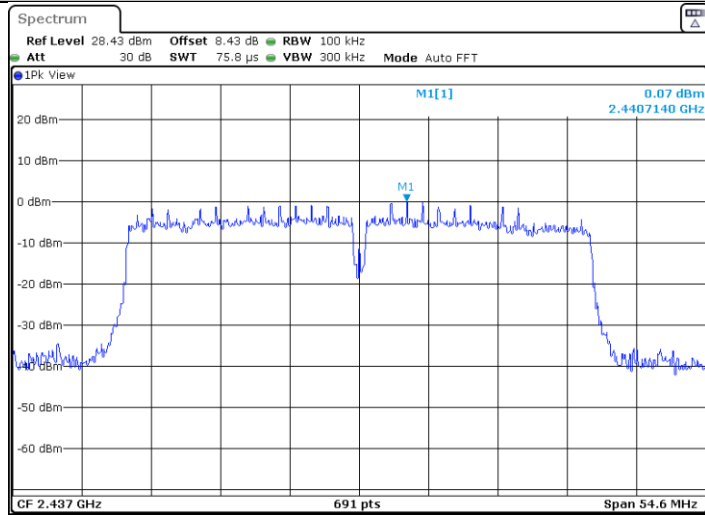
11N20SISO_Ant1_2462



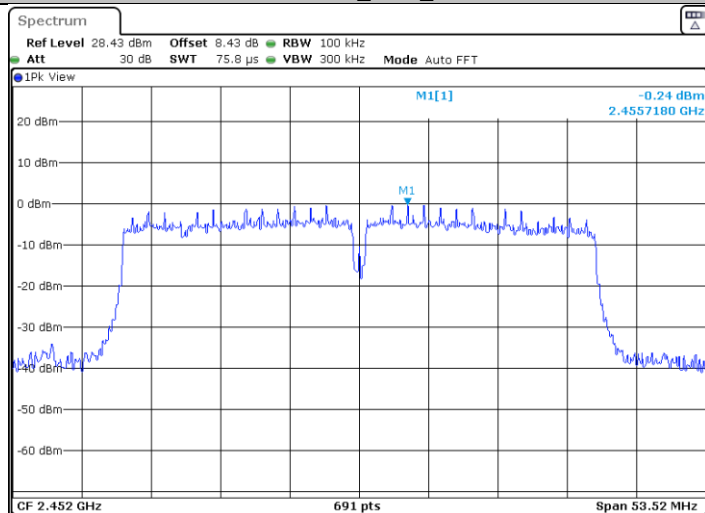
11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452

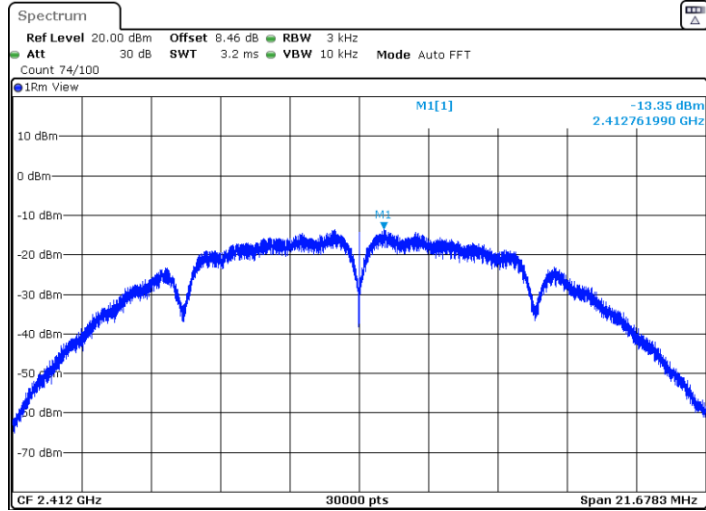


APPENDIXG - POWER SPECTRAL DENSITY

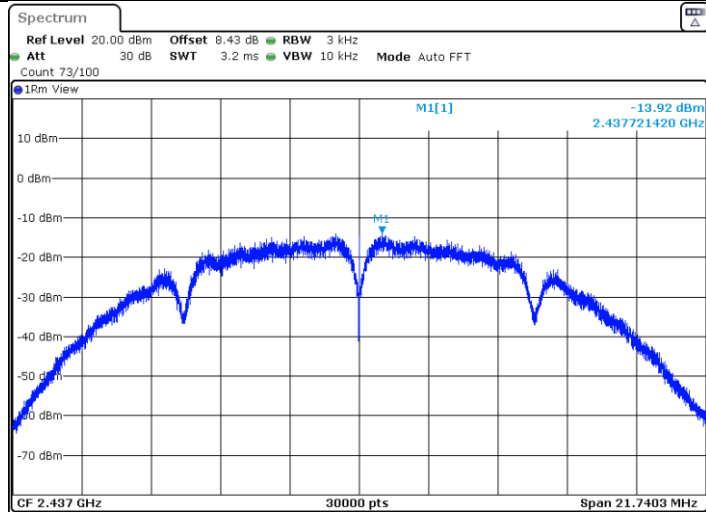
| TestMode | Frequency[MHz] | Result[dBm/3-100kHz] | Limit[dBm/3kHz] | Verdict |
|-----------|----------------|----------------------|-----------------|---------|
| 11B | 2412 | -13.35 | ≤8.00 | PASS |
| | 2437 | -13.92 | ≤8.00 | PASS |
| | 2462 | -13.07 | ≤8.00 | PASS |
| 11G | 2412 | -12.93 | ≤8.00 | PASS |
| | 2437 | -13.57 | ≤8.00 | PASS |
| | 2462 | -13.86 | ≤8.00 | PASS |
| 11N20SISO | 2412 | -12.97 | ≤8.00 | PASS |
| | 2437 | -13.22 | ≤8.00 | PASS |
| | 2462 | -12.64 | ≤8.00 | PASS |
| 11N40SISO | 2422 | -13.11 | ≤8.00 | PASS |
| | 2437 | -14.10 | ≤8.00 | PASS |
| | 2452 | -12.98 | ≤8.00 | PASS |

Note: Data already contained Duty factor

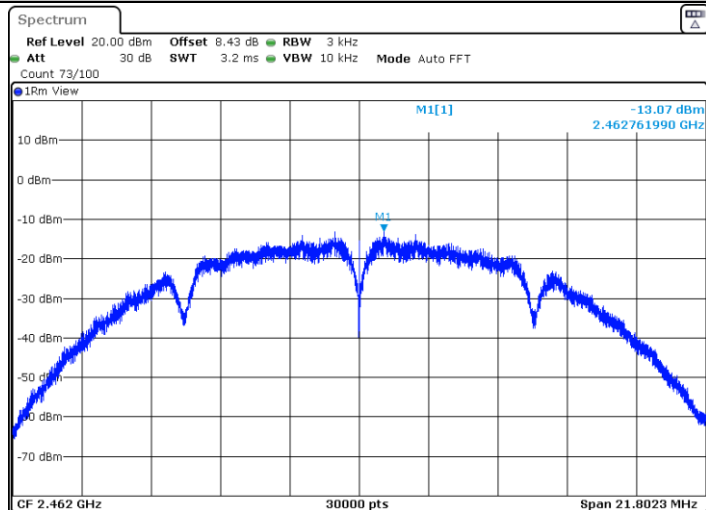
11B_Ant1_2412



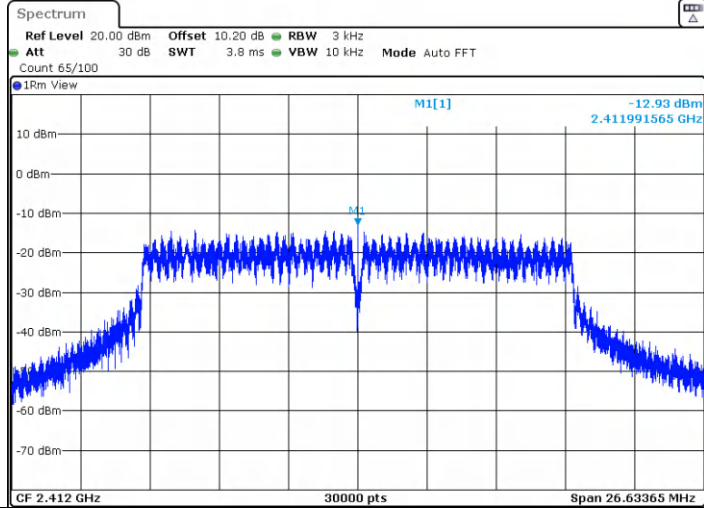
11B_Ant1_2437



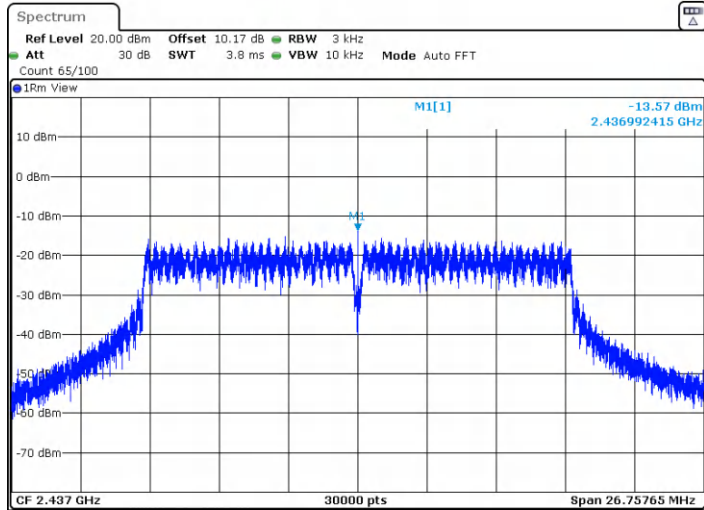
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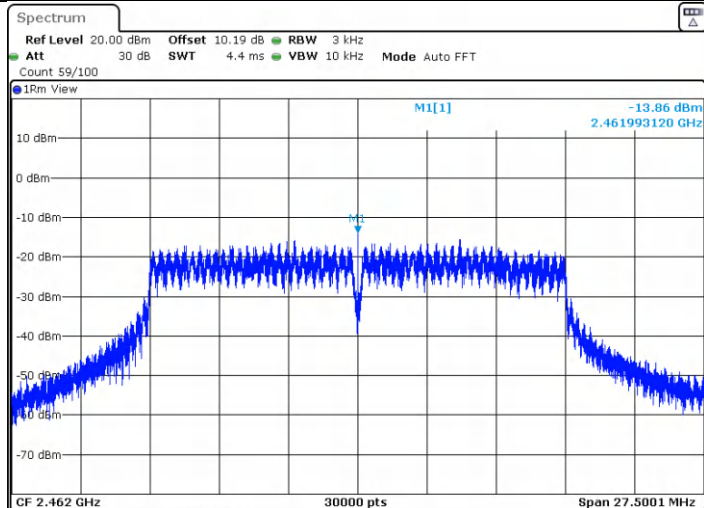
11G_Ant1_2412



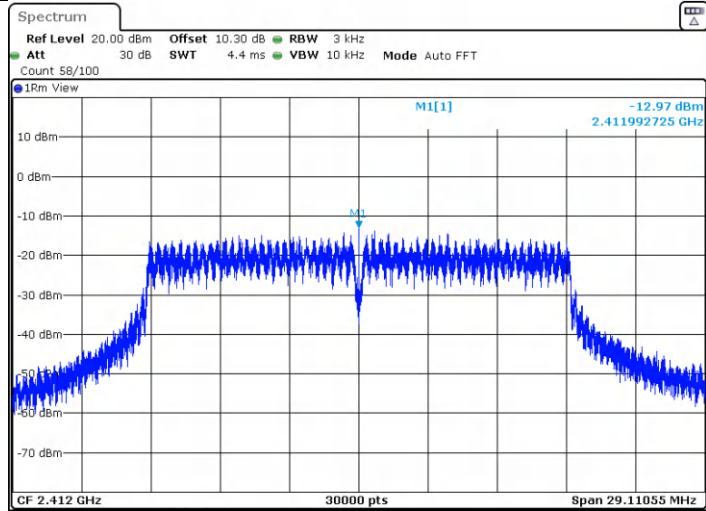
11G_Ant1_2437



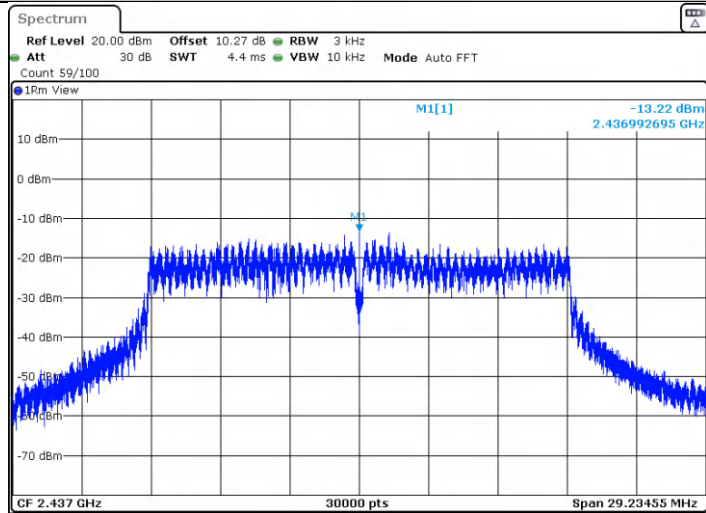
11G_Ant1_2462



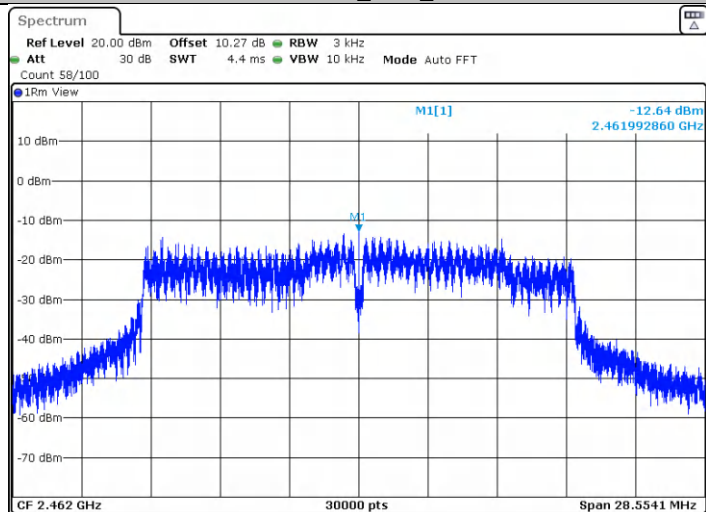
11N20SISO_Ant1_2412



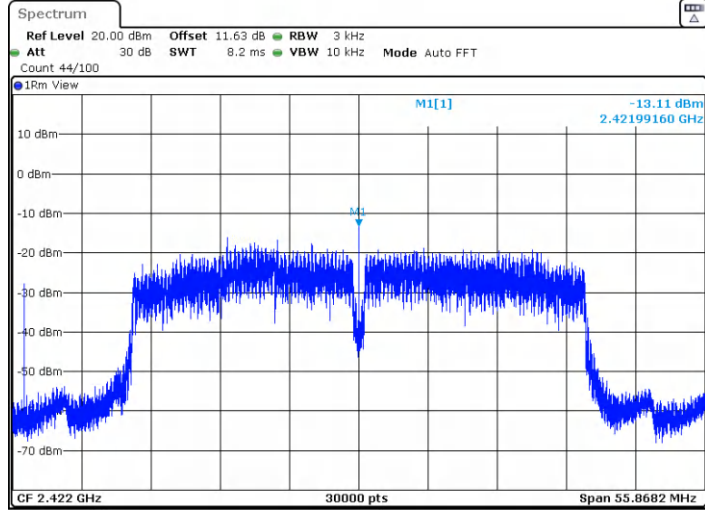
11N20SISO_Ant1_2437



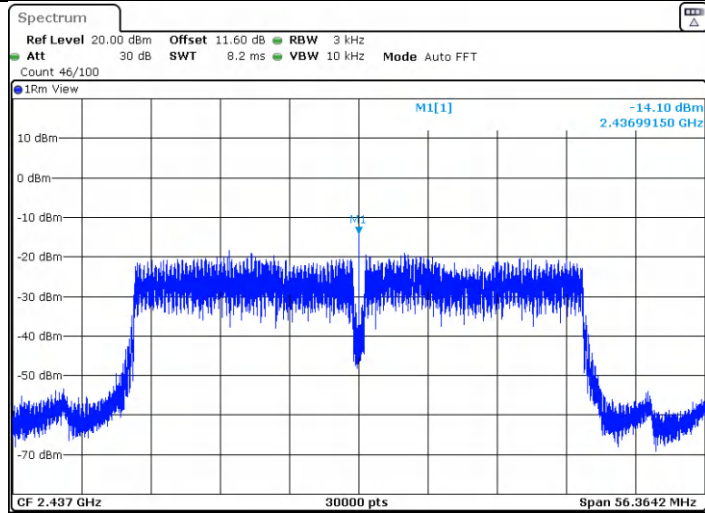
11N20SISO_Ant1_2462



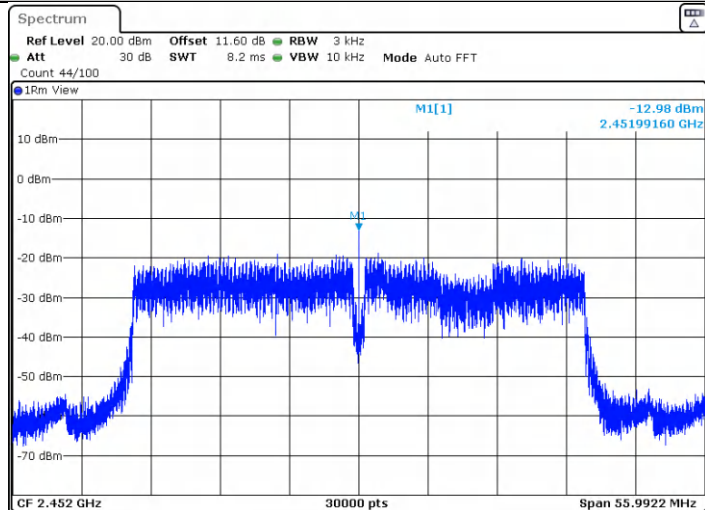
11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452



End of Test Report