
1 Version

Revision History Of Report

| Report No. | Version | Description | Issue Date |
|----------------------|---------|----------------|------------|
| CQASZ20230500829E-03 | Rev.01 | Initial report | 2023-06-19 |

2 Test Summary

| Test Item | Test Requirement | Test method | Result |
|---|--|--------------------------------|--------|
| Antenna Requirement | 47 CFR Part 15 Subpart C Section 15.203 | ANSI C63.10-2013; KDB789033 | PASS |
| AC Power Line Conducted Emission | 47 CFR Part 15 Subpart E Section 15.207 | ANSI C63.10-2013; KDB789033 | PASS |
| Maximum Conducted Output Power | 47 CFR Part 15 Subpart C Section 15.407 (a) | ANSI C63.10-2013; KDB789033 | PASS |
| Emission Bandwidth | 47 CFR Part 15 Subpart C Section 15.407 (a)(e) | ANSI C63.10-2013; KDB789033 | PASS |
| Maximum Power Spectral Density | 47 CFR Part 15 Subpart E Section 15.407 (a) | ANSI C63.10-2013; KDB789033 | PASS |
| Band Edge Measurements | 47 CFR Part 15 Subpart C Section 15.209 & 15.407(b) | ANSI C63.10-2013; KDB789033 | PASS |
| Frequency stability | 47 CFR Part 15 Subpart E Section 15.407 (g) | ANSI C63.10-2013; KDB789033 | PASS |
| Operation in the absence of information to the transmit | 47 CFR Part 15 Subpart E Section 15.407 (c) | 47 CFR Part 15 Subpart E | PASS |
| Radiated Spurious Emissions | 47 CFR Part 15 Subpart E Section 15.407 (b) | ANSI C63.10-2013; KDB789033 | PASS |

Remark:

The tested sample(s) and the sample information are provided by the client.

Tx: In this whole report Tx (or tx) means Transmitter.

Rx: In this whole report Rx (or rx) means Receiver.

RF: In this whole report RF means Radiated Frequency.

CH: In this whole report CH means channel.

Volt: In this whole report Volt means Voltage.

Temp: In this whole report Temp means Temperature.

Humid: In this whole report Humid means humidity.

Press: In this whole report Press means Pressure.

N/A: In this whole report not application

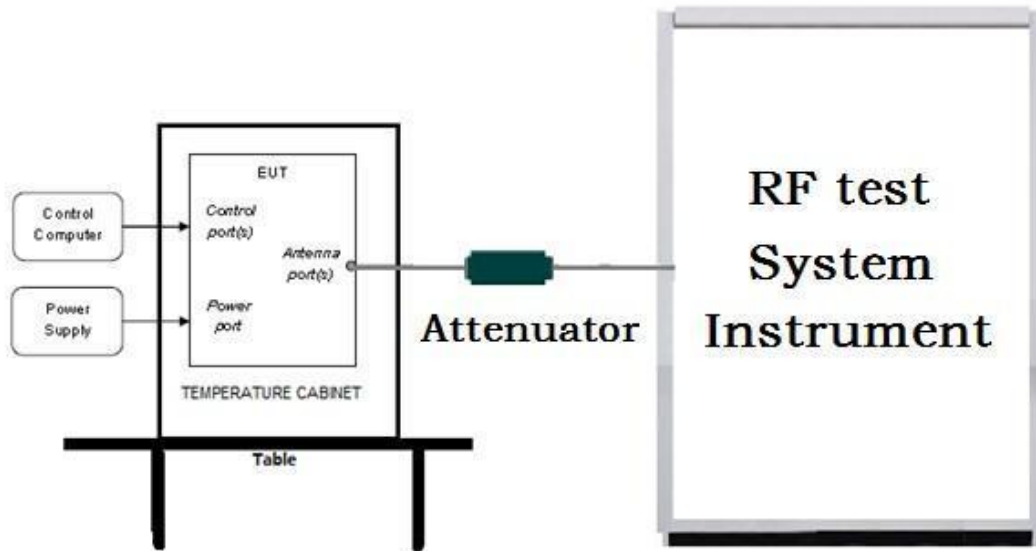
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4 Test Requirement

4.1 Test setup

4.1.1 For Conducted test setup



4.1.2 For Radiated Emissions test setup

Radiated Emissions setup:

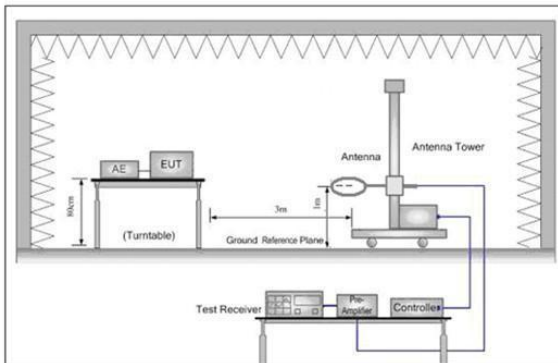


Figure 1. Below 30MHz

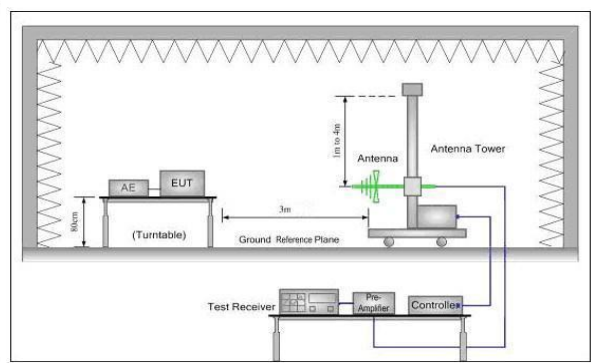


Figure 2. 30MHz to 1GHz

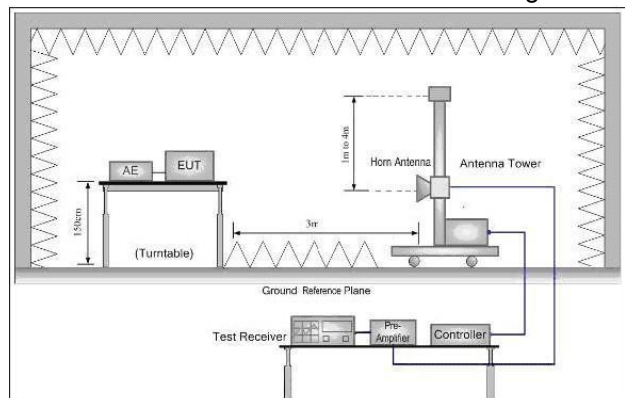
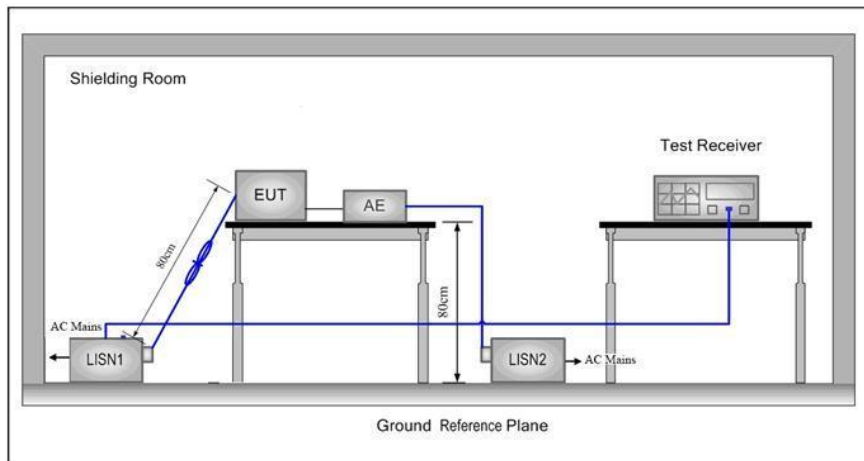


Figure 3. Above 1GHz

4.1.3 For Conducted Emissions test setup

Conducted Emissions setup



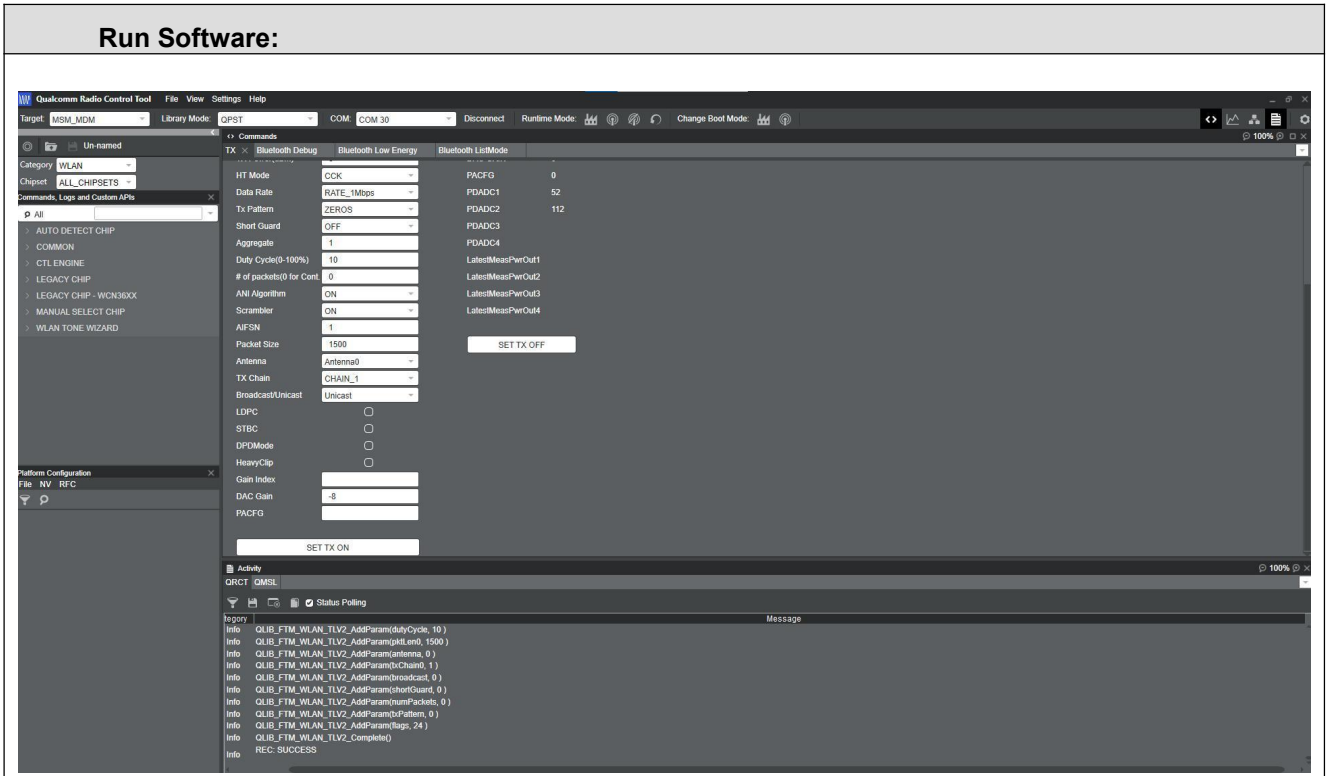
4.2 Test Environment

| | | |
|--|------------------|-------------|
| Operating Environment: | | |
| Conducted Emissions: | | |
| Temperature: | 25.6 °C | |
| Humidity: | 60 % RH | |
| Atmospheric Pressure: | 1009 mbar | |
| Radiated Emissions: | | |
| Temperature: | 25.5 °C | |
| Humidity: | 54 % RH | |
| Atmospheric Pressure: | 1009mbar | |
| Radio conducted item test (RF Conducted test room): | | |
| Temperature: | 25.3 °C | |
| Humidity: | 50 % RH | |
| Atmospheric Pressure: | 1009 mbar | |
| Test Condition | Temperature (°C) | Voltage (V) |
| TN/VN | +15 to +35 | 12 |
| TL/VL | 0 | 10.8 |
| TH/VL | 50 | 10.8 |
| TL/VH | 0 | 13.2 |
| TH/VH | 50 | 13.2 |
| Remark: | | |
| 1)The EUT just work in such extreme temperature of 0 °C to 50 °C and the extreme voltage of 10.8V to 13.2V, so here the EUT is tested in the temperature of 0 °C to 50 °C and the voltage of 10.8V to 13.2V. | | |
| 2)VN: Normal Voltage; TN: Normal Temperature; | | |
| TL: Low Extreme Test Temperature; TH: High Extreme Test Temperature; | | |
| VL: Low Extreme Test Voltage; VH: High Extreme Test Voltage. | | |

4.3 Test Condition

Test channel:

| Test Mode | Tx/Rx | RF Channel | | |
|-------------------|-------------------|------------|------------|------------|
| | | Low(L) | Middle(M) | High(H) |
| 802.11a/n/ac(20M) | 5150MHz ~5250 MHz | Channel 36 | Channel 40 | Channel 48 |
| | | 5180MHz | 5200MHz | 5240MHz |
| 802.11n/ac(40M) | 5150MHz ~5250 MHz | Channel 38 | N/A | Channel 46 |
| | | 5190MHz | N/A | 5230MHz |
| 802.11ac(80M) | 5150MHz ~5250 MHz | N/A | Channel 42 | N/A |
| | | N/A | 5210MHz | N/A |



Test mode:

Pre-scan under all rate at lowest channel for Ant1

Through Pre-scan, 6Mbps is the worst case of 802.11a (20M); MCS0 is the worst case of 802.11n (20M); MCS0 is the worst case of 802.11ac (20M); MCS0 is the worst case of 802.11n(40M); MCS0 is the worst case of 802.11ac (40M); MCS0 is the worst case of 802.11ac(80M).

5 General Information

5.1 Client Information

| | |
|--------------------------|--|
| Applicant: | Shenzhen Hollyland Technology Co., Ltd |
| Address of Applicant: | 8F, Building 5D, Skyworth Innovation Valley, Tangtou Road, Shiyan Street, Baoan District, Shenzhen, 518055 China |
| Manufacturer: | Shenzhen Hollyland Technology Co., Ltd |
| Address of Manufacturer: | 8F, Building 5D, Skyworth Innovation Valley, Tangtou Road, Shiyan Street, Baoan District, Shenzhen, 518055 China |
| Factory: | Shenzhen Hollyland Technology Co., Ltd |
| Address of Factory: | 8F, Building 5D, Skyworth Innovation Valley, Tangtou Road, Shiyan Street, Baoan District, Shenzhen, 518055 China |

5.2 General Description of EUT

| | |
|----------------------------------|--|
| Product Name: | VenusLiv Air Live Stream Camera |
| Model No.: | VenusLiv Air, VenusLiv Lite, VenusLiv , VenusLiv Mini, VenusLiv X Air, VenusLiv X Lite, VenusLive Air, VenusLive Lite, VenusLive, VenusLive Mini, VenusLiv X Air, Venus X Air, Venus X Lite, Venus Air, Venus Lite |
| Test Model No.: | VenusLiv Air |
| Trade Mark: | HOLLYLAND |
| Software Version: | V1.0.2.0 |
| Hardware Version: | V28 |
| EUT Power Supply: | Power supply DC12V for adaptor Model:R241-1202000I Input:100-240V~50/60Hz 1.5A Output:12V 2A 24W |
| EUT Supports Radios application: | 5GHz: Wi-Fi: U-NII-1: 5.15-5.25GHz |
| EUT Type: | Client devices |

5.3 Product Specification subjective to this standard

| | |
|-----------------------|---|
| Operation Frequency: | IEEE 802.11a/n/ac(20M): 5150MHz ~5250 MHz IEEE802.11n/ac(40M): 5150MHz ~5250 MHz IEEE802.11ac(80M): 5150MHz ~5250 MHz |
| Channel Numbers: | IEEE 802.11a/n/ac(20M): 5150MHz ~5250MHz/ 4 channel IEEE 802.11n/ac(40M): 5150MHz ~5250MHz/ 2 channel IEEE 802.11ac(80M): 5150MHz ~5250MHz/ 1 channel |
| Type of Modulation: | OFDM |
| Sample Type: | <input checked="" type="checkbox"/> Mobile <input type="checkbox"/> Portable |
| Test Software of EUT: | QDART |
| Antenna Type: | FPC antenna |
| Antenna gain: | 3.96dBi |
| Cable loss: | 1.0 dB |

Note:

The above parameters will directly affect the test results. The information is provided by the applicant.

Operation Frequency each of channel

| For 802.11a/n/ac(20M) Operation in the 5150MHz ~5250 MHz band | | | |
|---|-----------|---------|-----------|
| Channel | Frequency | Channel | Frequency |
| 36 | 5180MHz | 44 | 5220MHz |
| 40 | 5200MHz | 48 | 5240MHz |

| For 802.11n/ac(40M) Operation in the 5150MHz ~5250 MHz band | | | |
|---|-----------|---------|-----------|
| Channel | Frequency | Channel | Frequency |
| 38 | 5190MHz | 46 | 5230MHz |

| For 802.11ac(80M) Operation in the 5150MHz ~5250 MHz band | | | |
|---|-----------|----|----|
| Channel | Frequency | NA | NA |
| 42 | 5210MHz | NA | NA |

5.4 Description of Support Units

The EUT has been tested with associated equipment below.

| Description | Manufacturer | Model No. | Certification | Supplied by |
|-------------|--------------|-----------|---------------|-------------|
| / | / | / | / | / |

5.5 Test Location

All tests were performed at:

Shenzhen Huaxia Testing Technology Co., Ltd.

1F., Block A of Tongsheng Technology Building, Huahui Road, Dalang Street, Longhua New District, Shenzhen, Guangdong, China

5.6 Test Facility

• **A2LA (Certificate No. 4742.01)**

Shenzhen Huaxia Testing Technology Co., Ltd., Shenzhen EMC Laboratory is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 4742.01.

• **FCC Registration No.: 522263**

Shenzhen Huaxia Testing Technology Co., Ltd., Shenzhen EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration No.:522263

5.7 Deviation from Standards

None.

5.8 Abnormalities from Standard Conditions

None.

5.9 Other Information Requested by the Customer

None.

5.10 Measurement Uncertainty (95% confidence levels, k=2)

| No. | Item | Measurement Uncertainty |
|-----|---------------------------------|-------------------------|
| 1 | Radio Frequency | 3×10^{-8} |
| 2 | RF power, conducted | 0.86dB |
| 3 | Radiated Spurious emission test | 5.12dB (Below 1GHz) |
| | | 4.6dB (Above 1GHz) |
| 4 | Conduction emission | 3.5dB (9kHz to 150kHz) |
| | | 3.1dB (150kHz to 30MHz) |
| 5 | Temperature test | 0.8°C |
| 6 | Humidity test | 2.0% |
| 7 | DC power voltages | 0.5% |

6 Equipment List

| Test Equipment | Manufacturer | Model No. | Instrument No. | Calibration Date | Calibration Due Date |
|---|--------------|------------------------|----------------|------------------|----------------------|
| EMI Test Receiver | R&S | ESR7 | CQA-005 | 2022/09/09 | 2023/09/08 |
| Spectrum analyzer | R&S | FSU26 | CQA-038 | 2022/09/09 | 2023/09/08 |
| Spectrum analyzer | R&S | FSU40 | CQA-075 | 2022/09/09 | 2023/09/08 |
| Preamplifier | MITEQ | AFS4-00010300-18-10P-4 | CQA-035 | 2022/09/09 | 2023/09/08 |
| Preamplifier | MITEQ | AMF-6D-02001800-29-20P | CQA-036 | 2022/09/09 | 2023/09/08 |
| Preamplifier | EMCI | EMC184055SE | CQA-089 | 2022/09/09 | 2023/09/08 |
| Loop antenna | Schwarzbeck | FMZB1516 | CQA-060 | 2021/09/16 | 2024/09/15 |
| Bilog Antenna | R&S | HL562 | CQA-011 | 2021/09/16 | 2024/09/15 |
| Horn Antenna | R&S | HF906 | CQA-012 | 2021/09/16 | 2024/09/15 |
| Horn Antenna | Schwarzbeck | BBHA 9170 | CQA-088 | 2021/09/16 | 2024/09/15 |
| Coaxial Cable (Above 1GHz) | CQA | N/A | C007 | 2022/09/09 | 2023/09/08 |
| Coaxial Cable (Below 1GHz) | CQA | N/A | C013 | 2022/09/09 | 2023/09/08 |
| RF cable(9KHz~40GHz) | CQA | RF-01 | CQA-079 | 2022/09/09 | 2023/09/08 |
| Antenna Connector | CQA | RFC-01 | CQA-080 | 2022/09/09 | 2023/09/08 |
| Power Sensor | KEYSIGHT | U2021XA | CQA-30 | 2022/09/09 | 2023/09/08 |
| N1918A Power Analysis Manager Power Panel | Agilent | N1918A | CQA-074 | 2022/09/09 | 2023/09/08 |
| Power meter | R&S | NRVD | CQA-029 | 2022/09/09 | 2023/09/08 |
| Power divider | MIDWEST | PWD-2533-02-SMA-79 | CQA-067 | 2022/09/09 | 2023/09/08 |
| EMI Test Receiver | R&S | ESR7 | CQA-005 | 2022/09/09 | 2023/09/08 |
| LISN | R&S | ENV216 | CQA-003 | 2022/09/09 | 2023/09/08 |
| Coaxial cable | CQA | N/A | CQA-C009 | 2022/09/09 | 2023/09/08 |
| DC power | KEYSIGHT | E3631A | CQA-028 | 2022/09/09 | 2023/09/08 |

Test software:

| | Manufacturer | Software brand |
|-----------------------------------|--------------|----------------|
| Radiated Emissions test software | Tonscend | JS1120-3 |
| Conducted Emissions test software | Audix | e3 |
| RF Conducted test software | Audix | e3 |

7 Radio Technical Requirements Specification

Reference documents for testing:

| No. | Identity | Document Title |
|-----|---|---|
| 1 | FCC Part15E | Subpart C-Intentional Radiators |
| 2 | ANSI C63.10-2013 | American National Standard for Testing Unlicensed Wireless Devices |
| 3 | KDB 789033 D02 General U-NII Test Procedures New Rules v02r01 | Guidelines for compliance testing of unlicensed national information infrastructure (U-NII) device part 15, subpart E |
| 4 | KDB 662911 D01 Multiple Transmitter Output v02r01 | Emissions Testing of Transmitters with Multiple Outputs in the Same Band |

Appendix A): Emission Bandwidth

26dB Emission bandwidth

Test Requirement: 47 CFR Part 15, Subpart C 15.407 (a)

Test Method: KDB 789033 D02 II C 1

6 dB bandwidth (5.725-5.85 GHz band)

Test Requirement 47 CFR Part 15, Subpart C 15.407 (e)

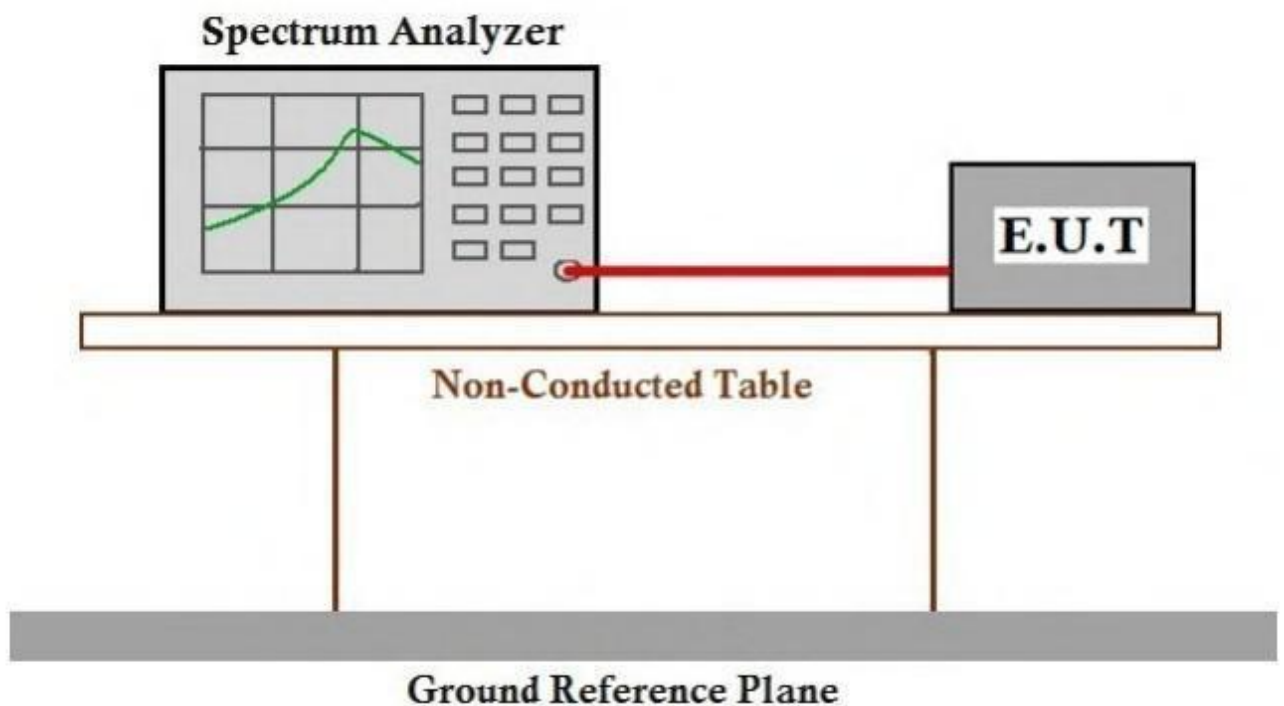
Test Method: KDB 789033 D02 II C 2

Limit: ≥ 500 kHz

Test Procedure:

- a) Set RBW = approximately 1% of the emission bandwidth.
- b) Set the VBW > RBW.
- c) Detector = Peak.
- d) Trace mode = max hold.
- e) Measure the maximum width of the emission that is 26 dB down from the maximum of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

Test Setup Diagram

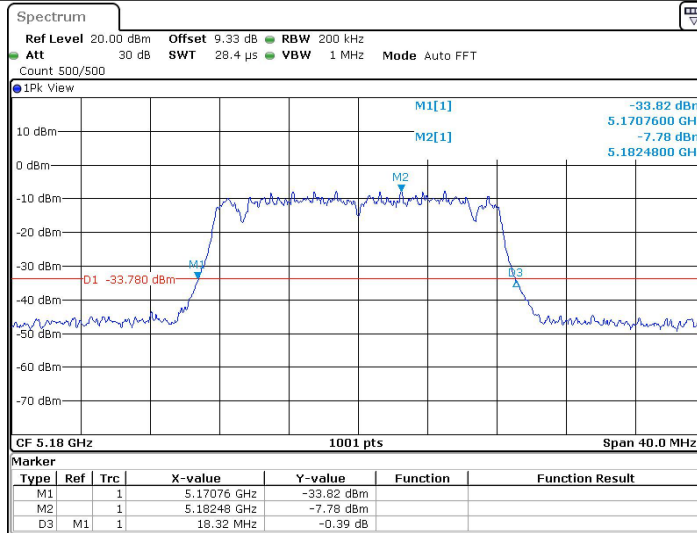


Result Table

| TestMode | Freq(MHz) | 26db EBW [MHz] | FL[MHz] | FH[MHz] |
|------------|-----------|----------------|---------|---------|
| 11A | 5180 | 18.32 | 5170.76 | 5189.08 |
| | 5200 | 18.16 | 5190.88 | 5209.04 |
| | 5240 | 18.24 | 5230.88 | 5249.12 |
| 11N20SISO | 5180 | 19.68 | 5170.00 | 5189.68 |
| | 5200 | 19.16 | 5190.36 | 5209.52 |
| | 5240 | 19.20 | 5230.40 | 5249.60 |
| 11N40SISO | 5190 | 39.12 | 5170.40 | 5209.52 |
| | 5230 | 39.04 | 5210.56 | 5249.60 |
| 11AC20SISO | 5180 | 20.16 | 5169.96 | 5190.12 |
| | 5200 | 20.24 | 5189.88 | 5210.12 |
| | 5240 | 20.40 | 5229.88 | 5250.28 |
| 11AC40SISO | 5190 | 38.72 | 5170.64 | 5209.36 |
| | 5230 | 38.80 | 5210.56 | 5249.36 |
| 11AC80SISO | 5210 | 83.68 | 5167.76 | 5251.44 |

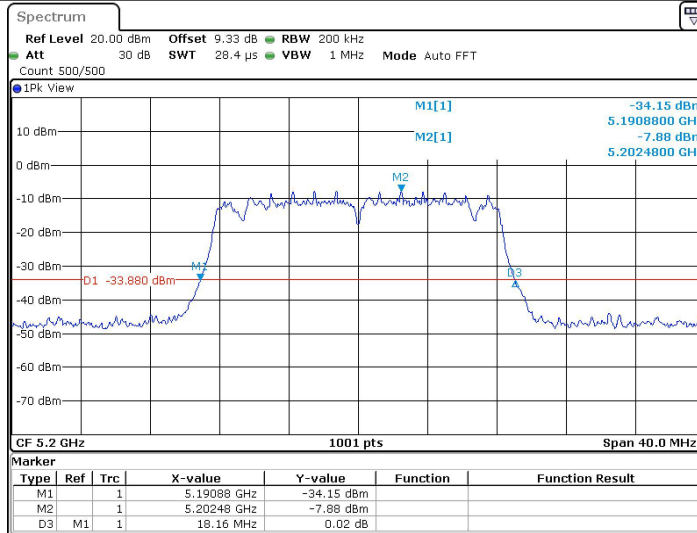
Test Graph

11A_Ant1_5180



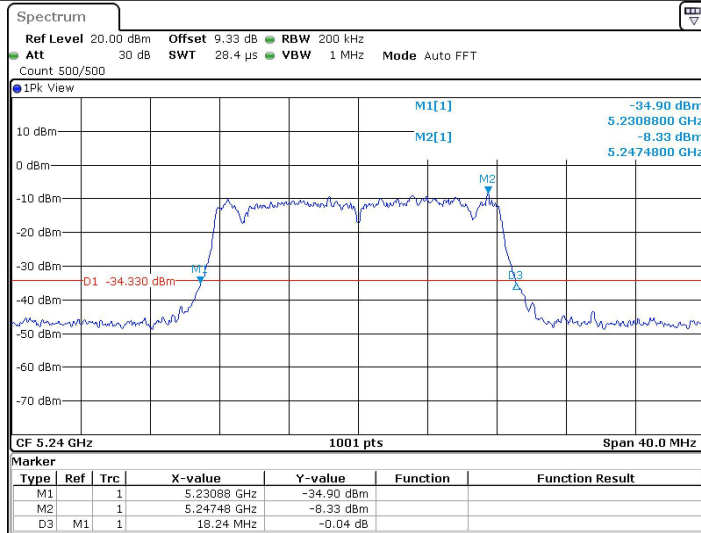
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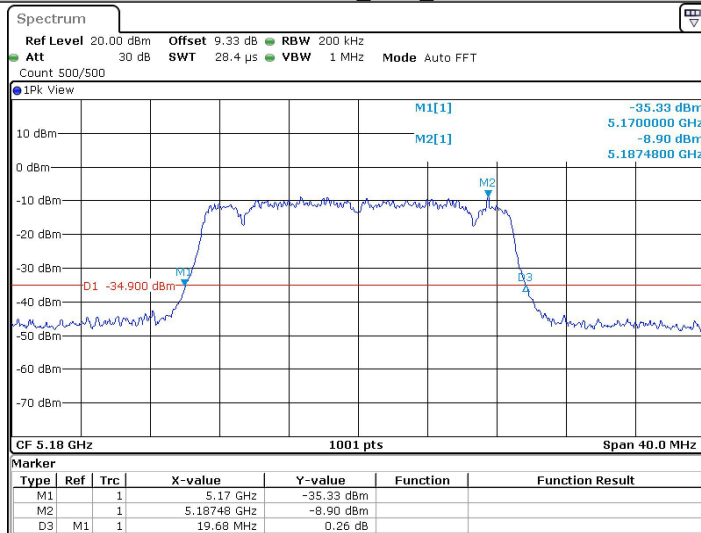


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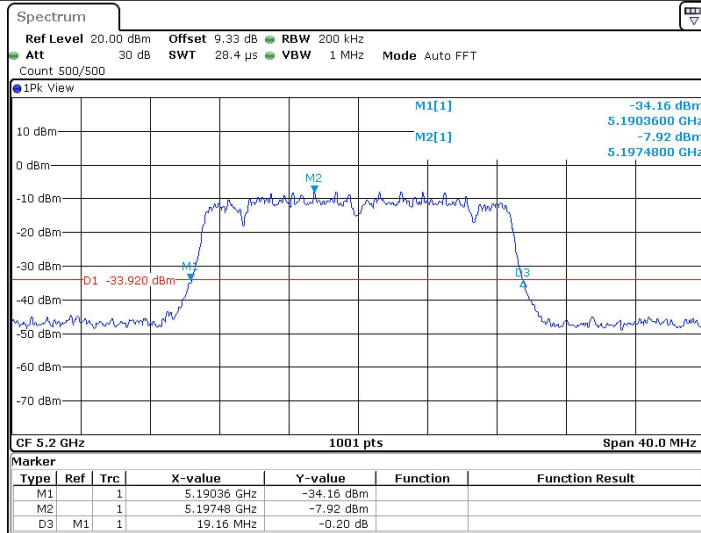
11A_Ant1_5240



11N20SISO_Ant1_5180

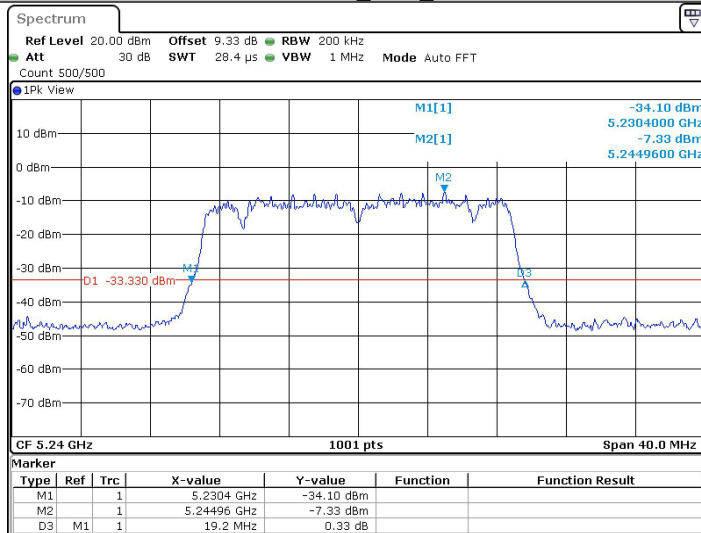


11N20SISO_Ant1_5200



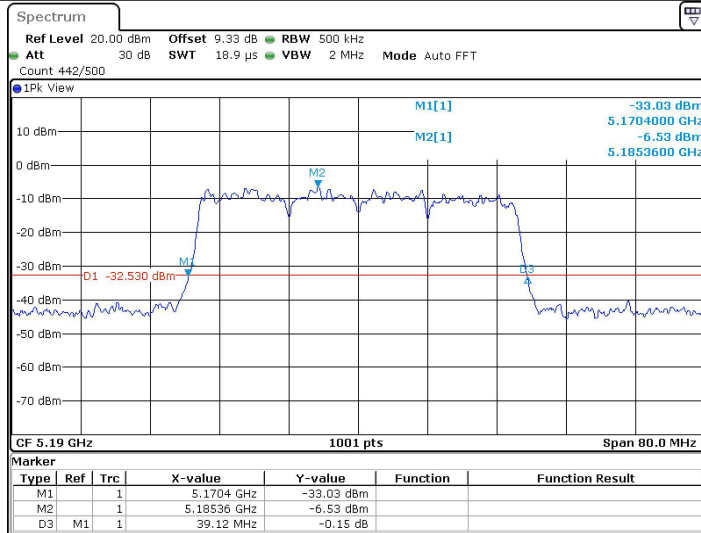
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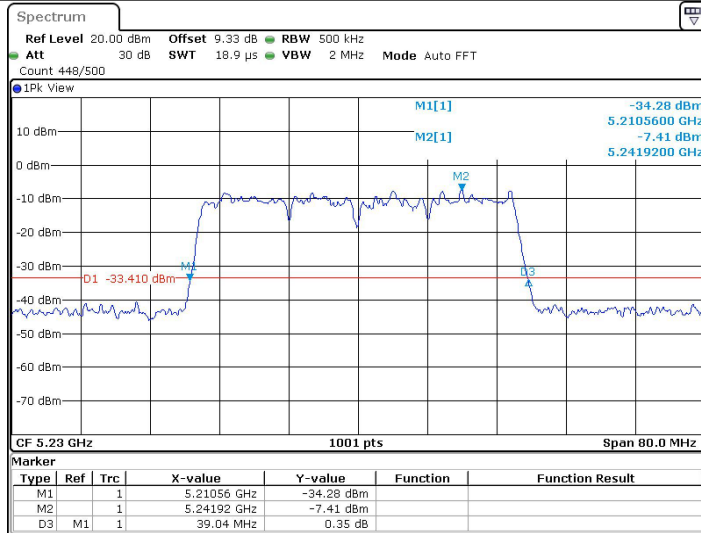


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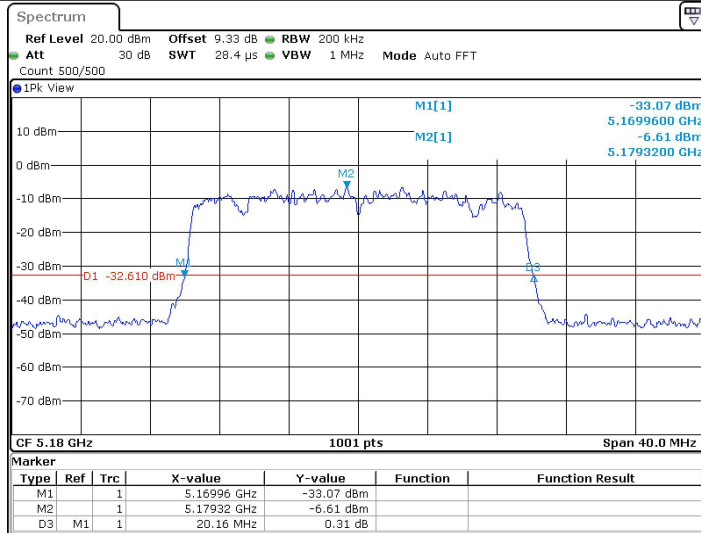
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11N40SISO_Ant1_5230

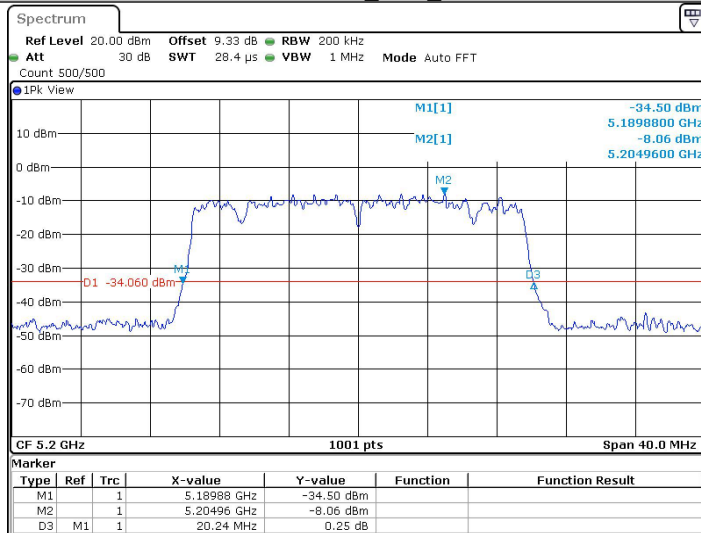


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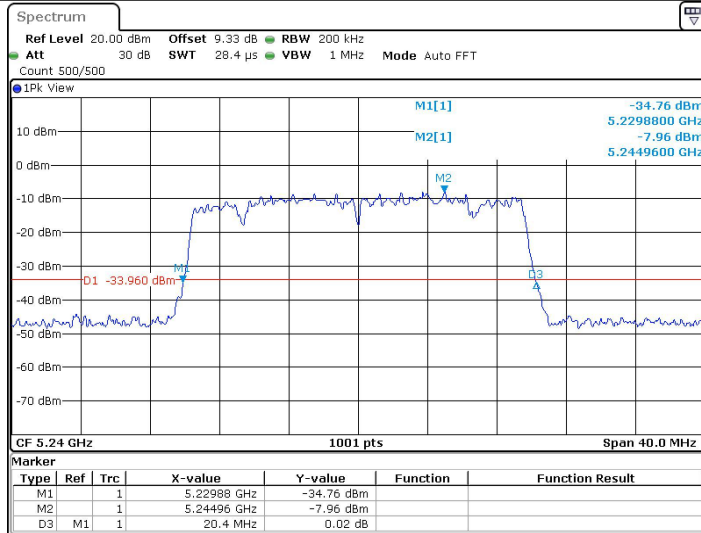
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11AC20SISO_Ant1_5200



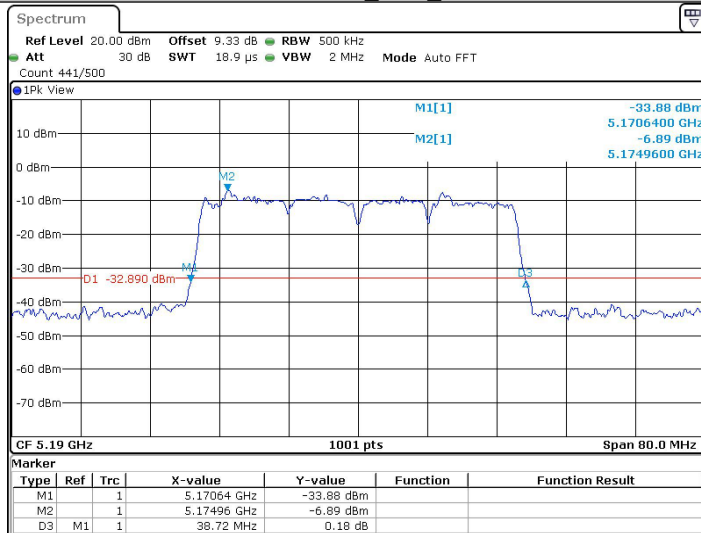
Date: 3 JUL 2023 14:51:53

11AC20SISO_Ant1_5240



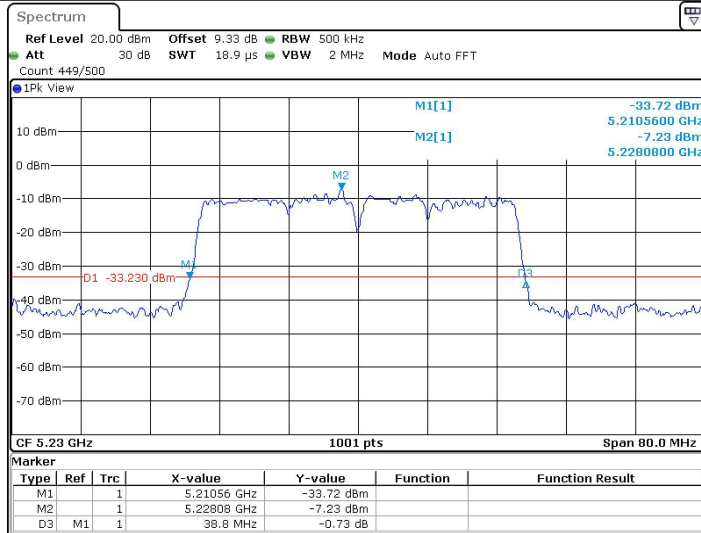
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11AC40SISO_Ant1_5190



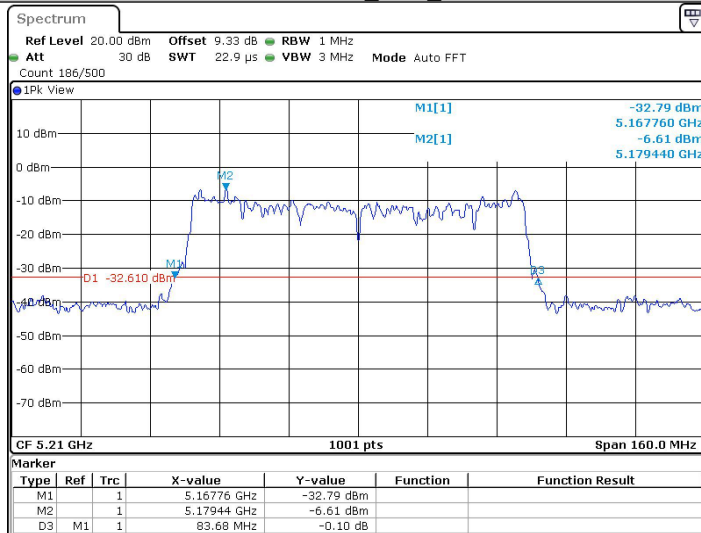
Date: 3 JUL 2023 14:54:35

11AC40SISO_Ant1_5230



Date: 3 JUL 2023 14:55:43

11AC80SISO_Ant1_5210



Date: 3 JUL 2023 15:00:44

Appendix B): Maximum Conduct Output Power

Test Requirement 47 CFR Part 15, Subpart C 15.407 (a)

Test Method: KDB 789033 D02 II E

Limit:

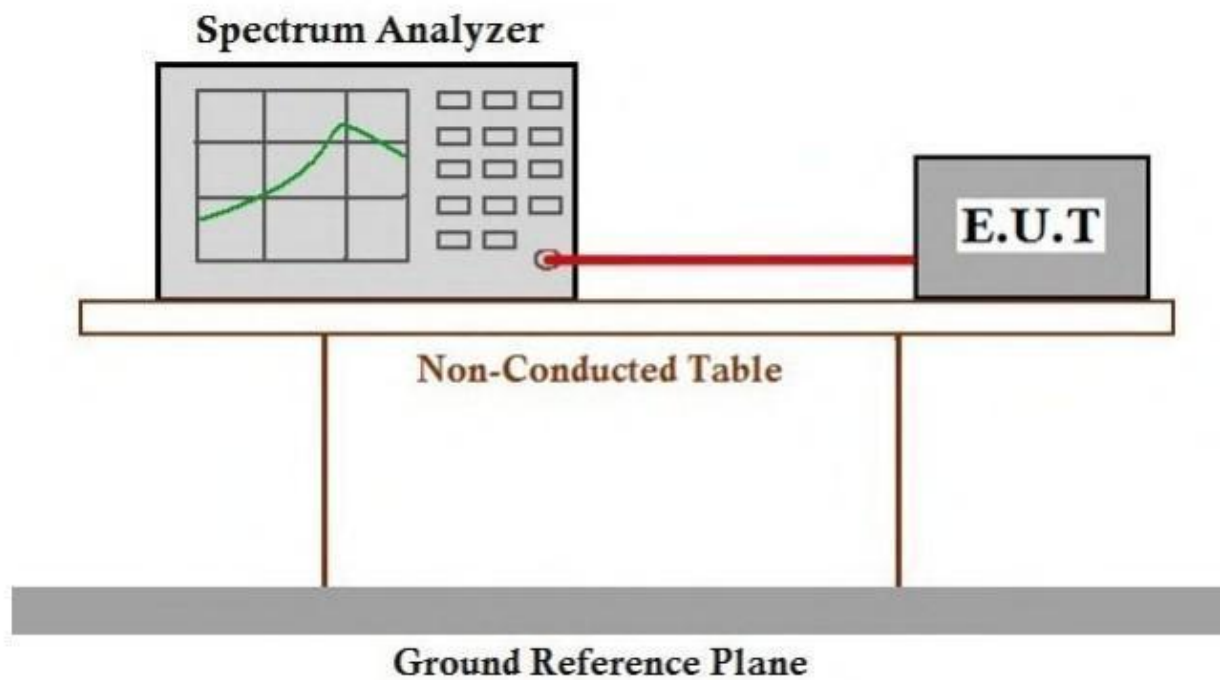
| Frequency band(MHz) | Limit |
|---------------------|--|
| 5150-5250 | ≤1W(30dBm) for master device |
| | ≤250mW(24dBm) for client device |
| 5250-5350 | ≤250mW(24dBm) for client device or 11dBm+10logB* |
| 5470-5725 | ≤250mW(24dBm) for client device or 11dBm+10logB* |
| 5725-5850 | ≤1W(30dBm) |
| Remark: | * Where B is the 26dB emission bandwidth in MHz. The maximum conducted output power must be measured over any interval of continuous transmission using instrumentation calibrated in terms of an rms-equivalent voltage. |

Test Procedure:

Method SA-2 (trace averaging across on and off times of the EUT transmissions, followed by duty cycle correction).

- (1) Set RBW = 1 MHz.
- (2) Set VBW ≥ 3 MHz.
- (3) Detector = power average
- (4) Sweep time = auto.
- (5) Add duty cycle to the measured average power.

Test Setup Diagram



Measurement Data

| Test Mode | Antenna | Freq(MHz) | Result [dBm] | Limit [dBm] | Verdict |
|------------|---------|-----------|--------------|-------------|---------|
| 11A | Ant1 | 5180 | 1.59 | ≤24 | PASS |
| | | 5200 | 1.20 | ≤24 | PASS |
| | | 5240 | -0.14 | ≤24 | PASS |
| 11N20SISO | Ant1 | 5180 | 1.44 | ≤24 | PASS |
| | | 5200 | 1.00 | ≤24 | PASS |
| | | 5240 | -0.31 | ≤24 | PASS |
| 11N40SISO | Ant1 | 5190 | 1.15 | ≤24 | PASS |
| | | 5230 | -1.04 | ≤24 | PASS |
| 11AC20SISO | Ant1 | 5180 | 1.41 | ≤24 | PASS |
| | | 5200 | 0.97 | ≤24 | PASS |
| | | 5240 | -0.33 | ≤24 | PASS |
| 11AC40SISO | Ant1 | 5190 | 1.13 | ≤24 | PASS |
| | | 5230 | -0.99 | ≤24 | PASS |
| 11AC80SISO | Ant1 | 5210 | 0.95 | ≤24 | PASS |

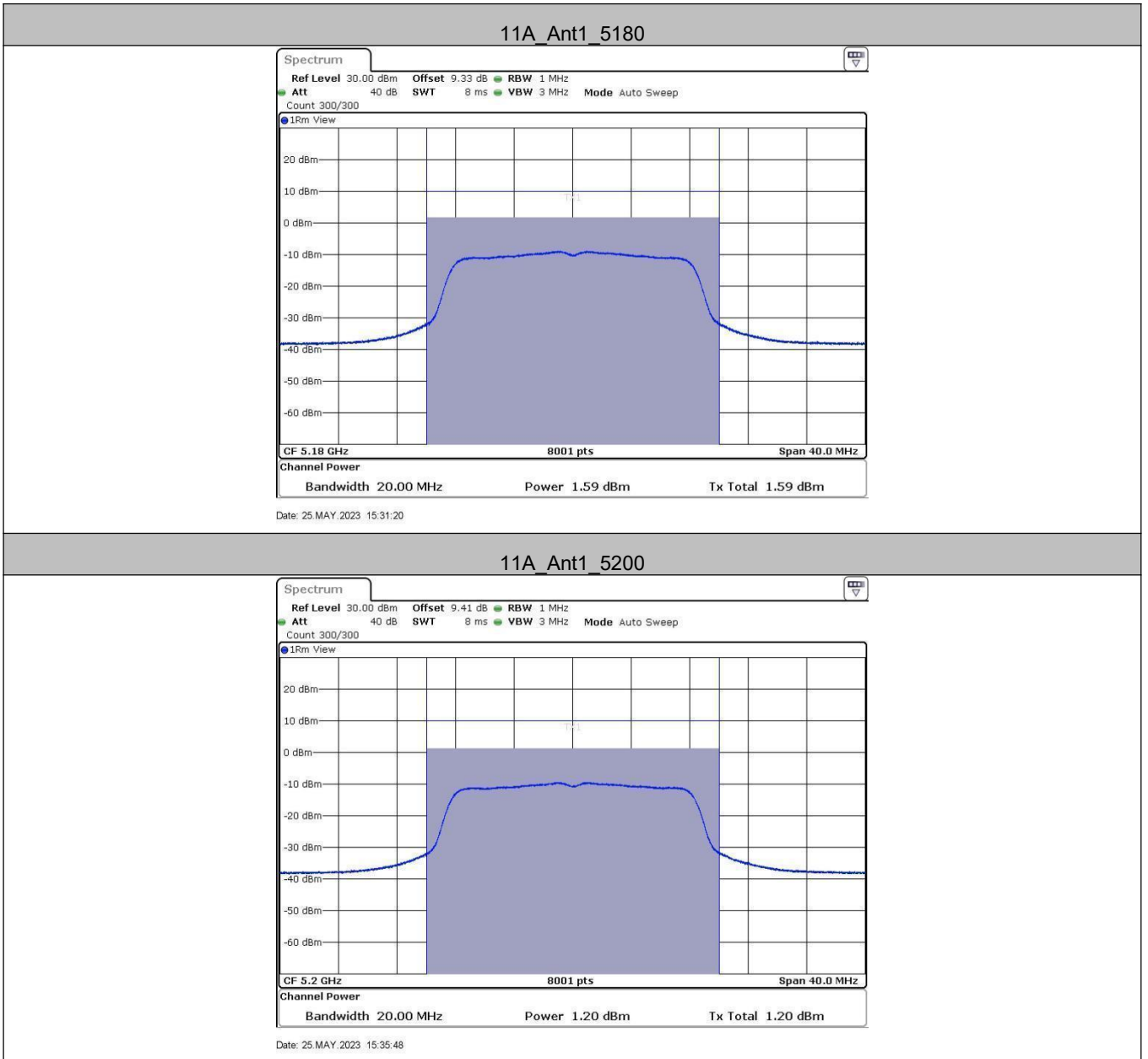
Remark:

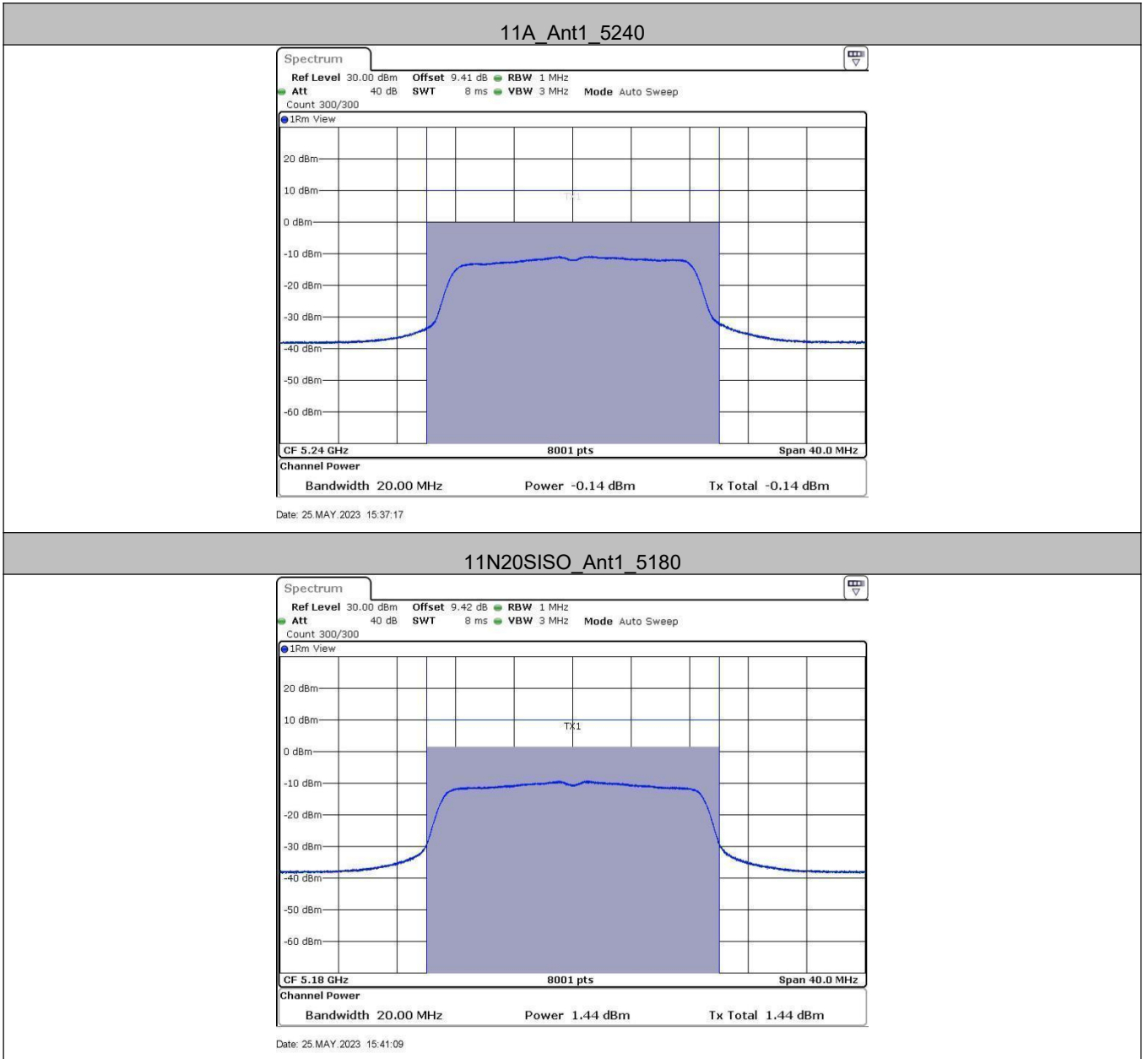
Av.Power=Meas.Level+10 log (1/duty cycle)

E.i.r.p=Av.Power+G,

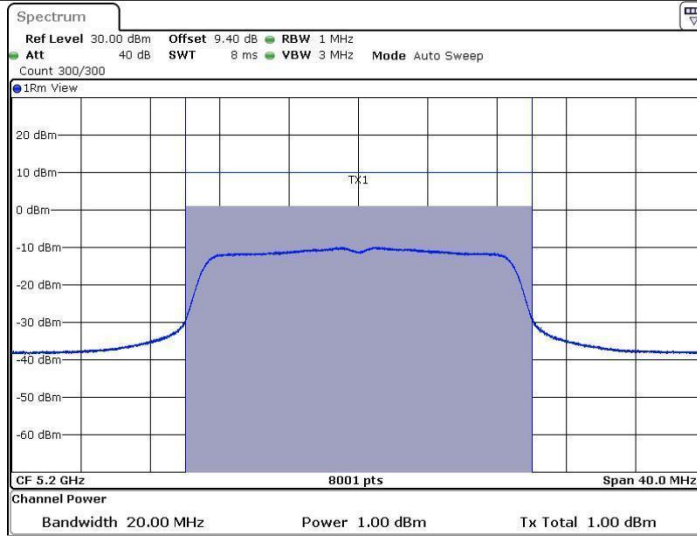
G = antenna gain in dBi.

When Duty cycle >98%, D.C.F is not required.



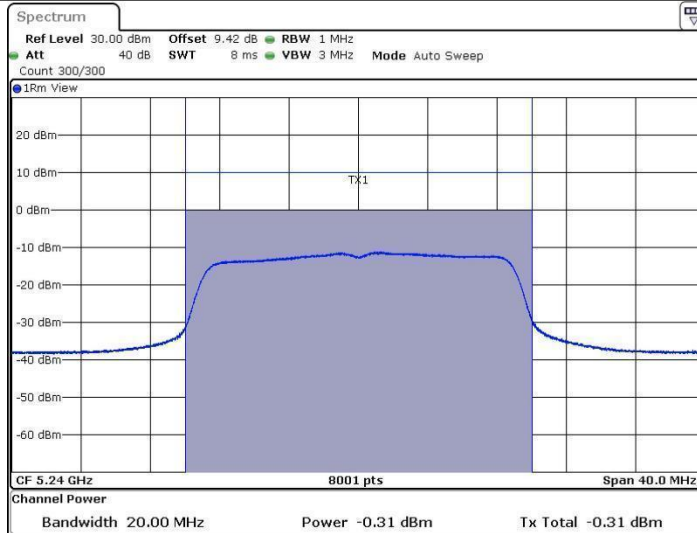


11N20SISO_Ant1_5200



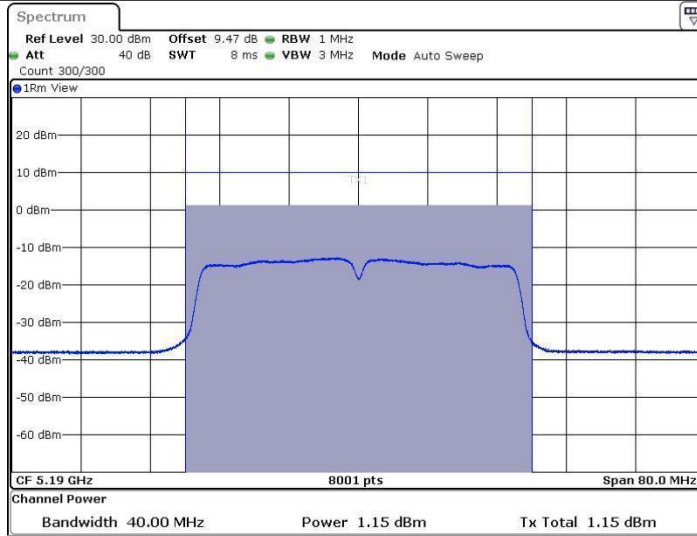
Date: 25 MAY 2023 15:43:38

11N20SISO_Ant1_5240



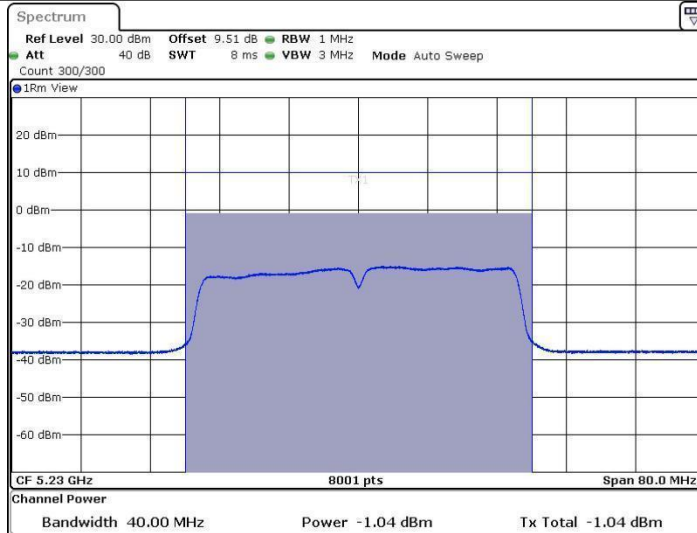
Date: 25 MAY 2023 15:45:00

11N40SISO_Ant1_5190



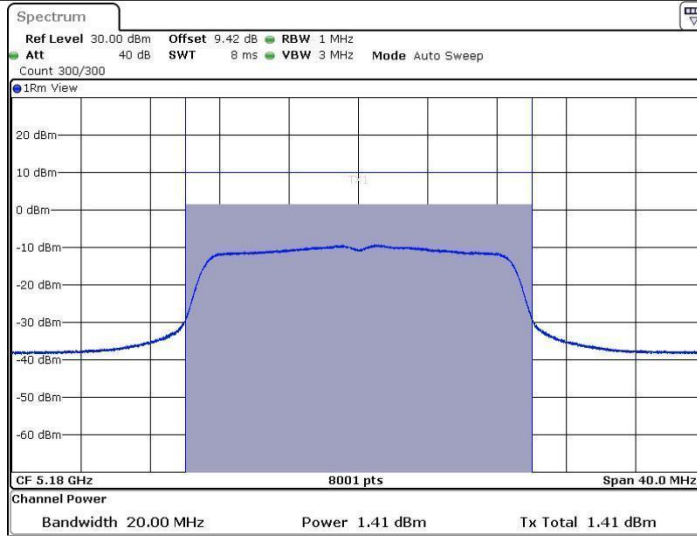
Date: 25 MAY 2023 15:47:57

11N40SISO_Ant1_5230



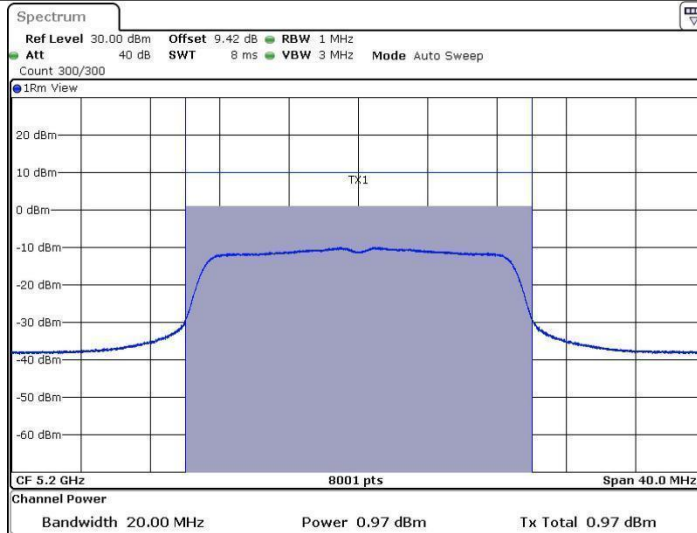
Date: 25 MAY 2023 15:53:28

11AC20SISO_Ant1_5180



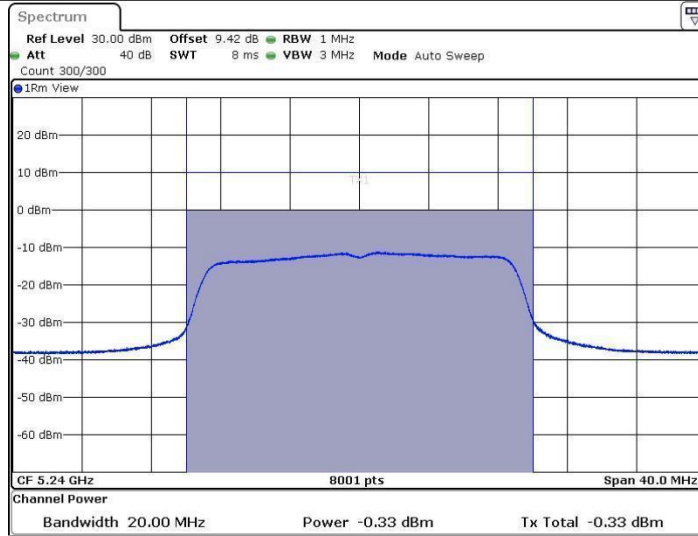
Date: 25 MAY 2023 15:59:18

11AC20SISO_Ant1_5200



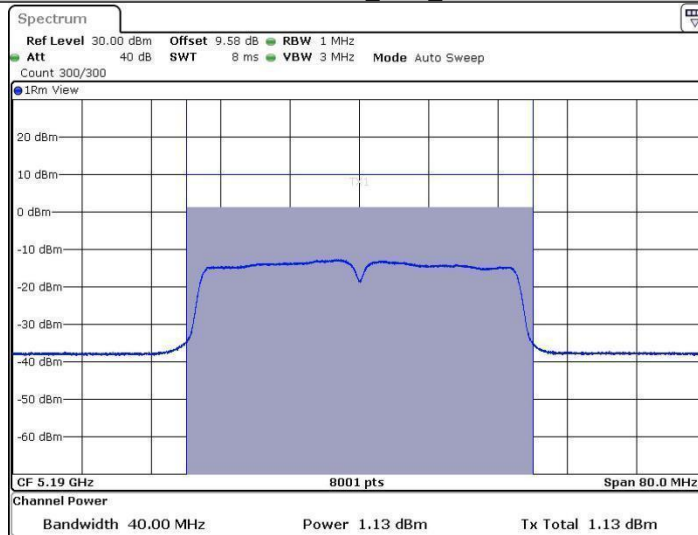
Date: 25 MAY 2023 16:24:05

11AC20SISO_Ant1_5240



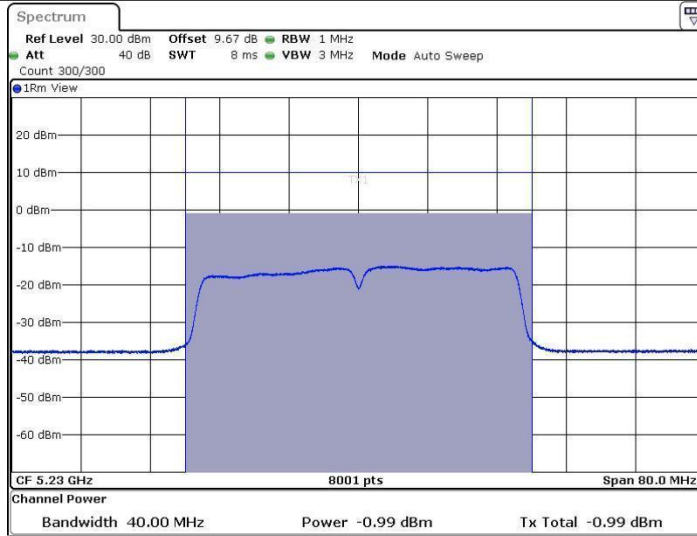
Date: 25 MAY 2023 16:25:35

11AC40SISO_Ant1_5190



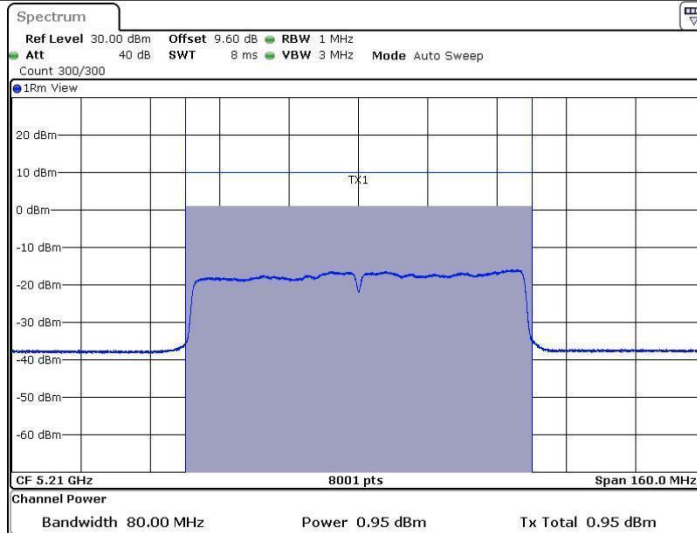
Date: 25 MAY 2023 16:28:54

11AC40SISO_Ant1_5230



Date: 25 MAY 2023 16:31:27

11AC80SISO_Ant1_5210



Date: 25 MAY 2023 16:35:14

Appendix C): Maximum Power Spectral Density

Test Requirement 47 CFR Part 15, Subpart C 15.407 (a)

Test Method: KDB 789033 D02 II F

Test Procedure:

For 5150-5725MHz:

1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
2. Set the EUT Work on operation frequency individually.
3. Set RBW = 1MHz.
4. Set the VBW $\geq 3 \times$ RBW. Detector = Peak. Trace mode = max hold.

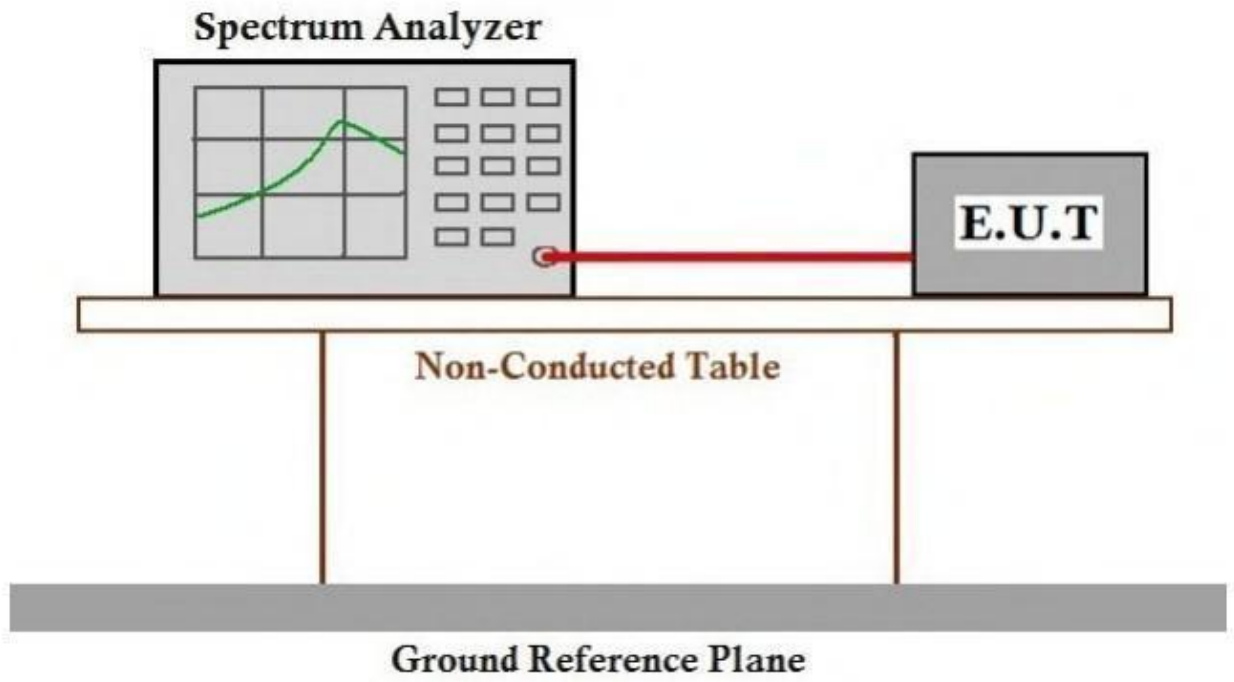
For 5725-5850MHz:

1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
2. Set the EUT Work on operation frequency individually.
3. Set RBW = 500KHz.
4. Set the VBW $\geq 3 \times$ RBW. Detector = Peak. Trace mode = max hold.

Limit:

| Frequency band(MHz) | Limit |
|---------------------|--|
| 5150-5250 | $\leq 17\text{dBm}$ in 1MHz for master device |
| | $\leq 11\text{dBm}$ in 1MHz for client device |
| 5250-5350 | $\leq 11\text{dBm}$ in 1MHz for client device |
| 5470-5725 | $\leq 11\text{dBm}$ in 1MHz for client device |
| 5725-5850 | $\leq 30\text{dBm}$ in 500 kHz |
| Remark: | The maximum power spectral density is measured as a conducted emission by direct connection of a calibrated test instrument to the equipment under test. |

Test Setup Diagram



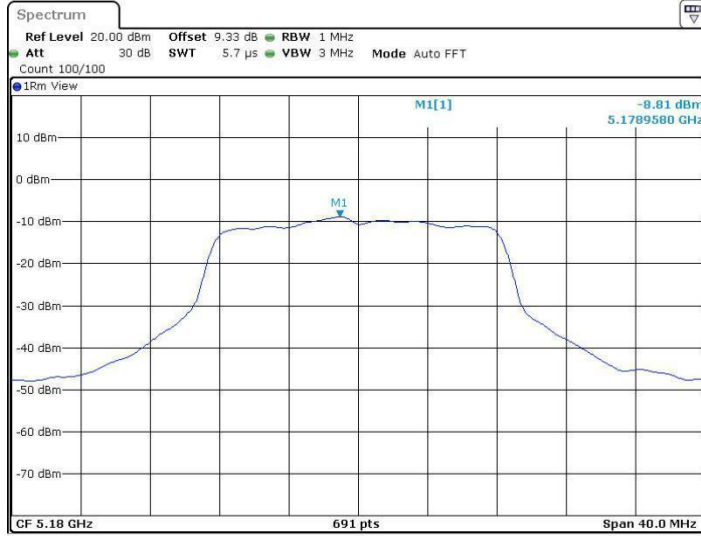
Result Table

| TestMode | Freq(MHz) | Result [dBm/MHz] | Limit[dBm/MHz] | Verdict |
|------------|-----------|------------------|----------------|---------|
| 11A | 5180 | -8.81 | ≤11.00 | PASS |
| | 5200 | -9.57 | ≤11.00 | PASS |
| | 5240 | -10.68 | ≤11.00 | PASS |
| 11N20SISO | 5180 | -9.73 | ≤11.00 | PASS |
| | 5200 | -10.23 | ≤11.00 | PASS |
| | 5240 | -11.73 | ≤11.00 | PASS |
| 11N40SISO | 5190 | -12.8 | ≤11.00 | PASS |
| | 5230 | -15.24 | ≤11.00 | PASS |
| 11AC20SISO | 5180 | -9.62 | ≤11.00 | PASS |
| | 5200 | -10.1 | ≤11.00 | PASS |
| | 5240 | -11.56 | ≤11.00 | PASS |
| 11AC40SISO | 5190 | -12.2 | ≤11.00 | PASS |
| | 5230 | -14.57 | ≤11.00 | PASS |
| 11AC80SISO | 5210 | -15.65 | ≤11.00 | PASS |

Remark:

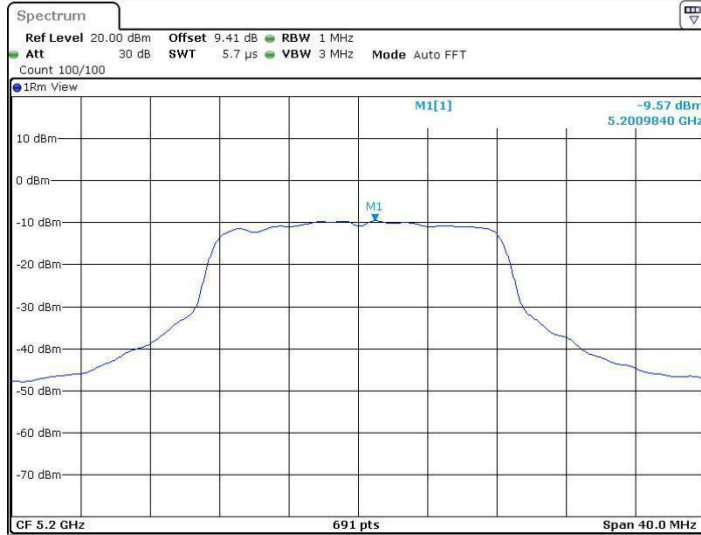
When Duty cycle >98%, D.C.F is not required.

11A_Ant1_5180



Date: 25.MAY.2023 15:31:28

11A_Ant1_5200



Date: 25.MAY.2023 15:35:56

11A_Ant1_5240



Date: 25 MAY 2023 15:37:25

11N20SISO_Ant1_5180



Date: 25 MAY 2023 15:41:16

11N20SISO_Ant1_5200



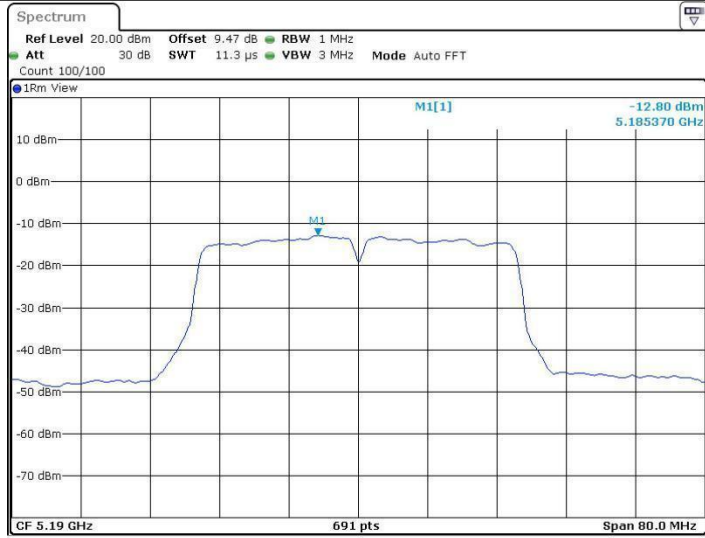
Date: 25 MAY 2023 15:43:45

11N20SISO_Ant1_5240



Date: 25 MAY 2023 15:45:08

11N40SISO_Ant1_5190



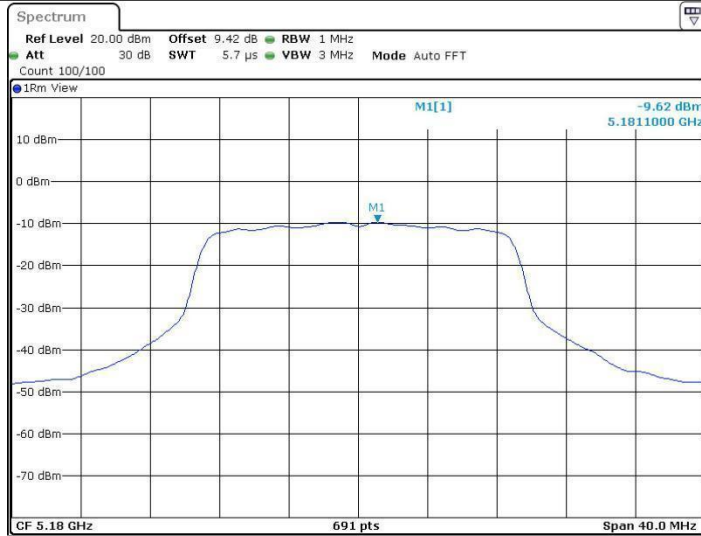
Date: 25 MAY 2023 15:48:04

11N40SISO_Ant1_5230



Date: 25 MAY 2023 15:53:35

11AC20SISO_Ant1_5180



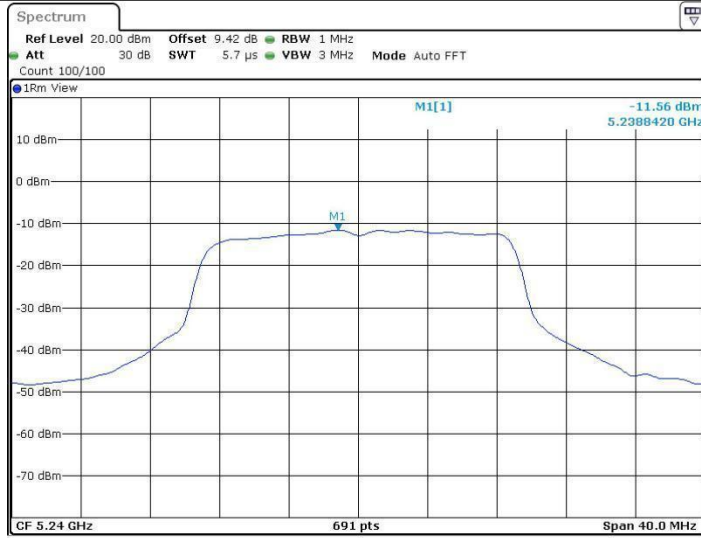
Date: 25 MAY 2023 15:59:26

11AC20SISO_Ant1_5200



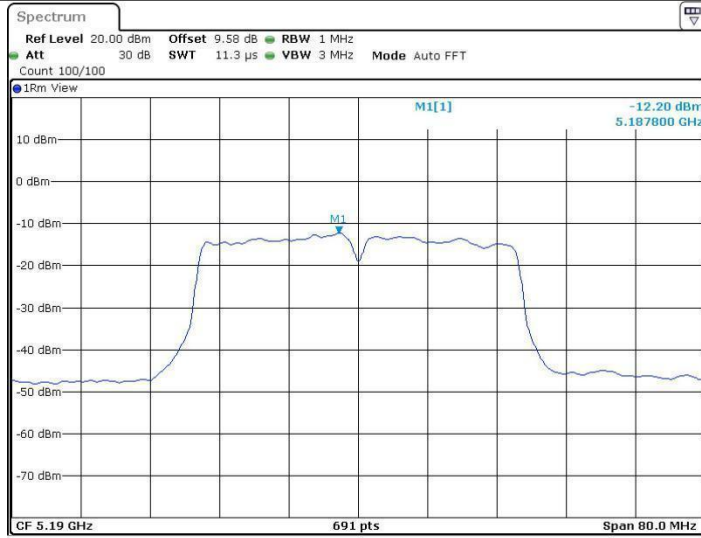
Date: 25 MAY 2023 16:24:13

11AC20SISO_Ant1_5240



Date: 25 MAY 2023 16:25:43

11AC40SISO_Ant1_5190



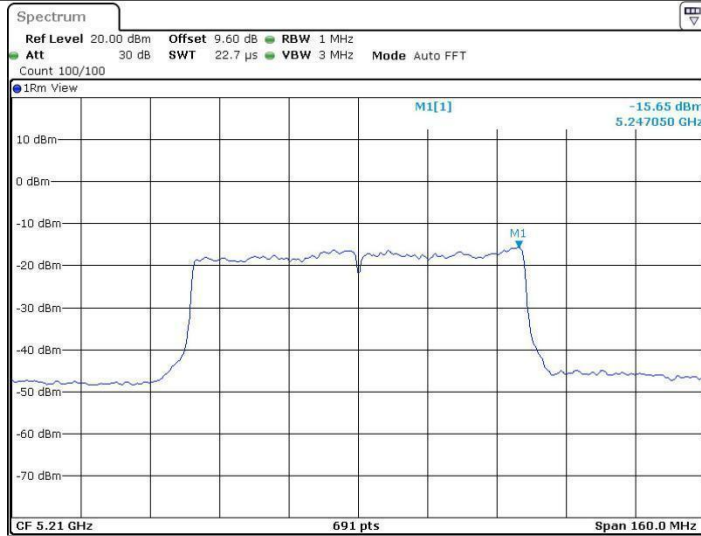
Date: 25 MAY 2023 16:28:02

11AC40SISO_Ant1_5230



Date: 25 MAY 2023 16:31:35

11AC80SISO_Ant1_5210



Date: 25 MAY 2023 16:35:22

Appendix D): Band Edge Measurements

Test Requirement 47 CFR Part 15, Subpart C 15.209 & 15.407(b)

Test Method: KDB 789033 D02 II G

Test Procedure:

1. The EUT operates at transmitting mode. The operate channel is tested to verify the largest transmission and spurious emissions power at the continuous transmission mode.
2. Set the spectrum analyzer in the following setting in order to capture the lower and upper band-edges of the emission:
 - (a) PEAK: RBW=VBW=1MHz / Sweep=AUTO
 - (b) AVERAGE: RBW=1MHz ; VBW=1/on time(1KHz) / Sweep=AUTO

Limit:

| | |
|--|--|
| For transmitters operating in the 5.15-5.25 GHz band: | All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz (68.2dBuV/m). |
| For transmitters operating in the 5.25-5.35 GHz band: | All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz (68.2dBuV/m). |
| For transmitters operating in the 5.47-5.725 GHz band: | All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz (68.2dBuV/m). |
| For transmitters operating in the 5.725-5.85 GHz band: | (i) All emissions shall be limited to a level of -27 dBm/MHz (68.2dBuV/m) at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz (105.2dBuV/m) at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz (110.8dBuV/m) at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz (122.2dBuV/m) at the band edge. |

Test Setup Diagram

