



# FCC Test Report

**Application No.:** DNT2602280172R00303-00863  
**Applicant:** Shenzhen Green Giant Energy Technology Development Co.,Ltd  
**Address of Applicant:** Room 203,Building B,Minle Science Industrial Park,Minzhi St.,  
LonghuaDist. Shenzhen  
**EUT Description:** 4K Mecha-style Point-to-Point Wireless Screen Mirroring Device  
**Model No.:** T12  
**FCC ID:** 2A77D-T12  
**Power Supply:** DC 5V  
**Trade Mark:** /  
**Standards:** 47 CFR FCC Part 2, Subpart J  
47 CFR Part 15, Subpart E  
ANSI C63.10: 2020  
**Date of Receipt:** 2026/02/28  
**Date of Test:** 2026/03/01 to 2026/03/23  
**Date of Issue:** 2026/03/24  
**Test Result:** **PASS**

**Prepared By:** Geek. Lin (Testing Engineer)

**Reviewed By:** Wayne. Lin (Project Engineer)

**Approved By:** Heise Shan (Manager)



Note: If there is any objection to the results in this report, please submit a written inquiry to the company within 15 days from the date of receiving the report. The test report is effective only with both signature and specialized stamp, and is issued by the company in accordance with the requirements of the "Conditions of Issuance of Test Reports" printed in the attached page. Unless otherwise stated, the results presented in this report only apply to the samples tested this time. Partial reproduction of this report is not allowed unless approved by the company in writing.

**Dongguan DN Testing Co., Ltd.**

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Report Revise Record

| Report Version | Revise Time | Issued Date  | Valid Version | Notes           |
|----------------|-------------|--------------|---------------|-----------------|
| V1.0           | /           | Mar.24, 2026 | Valid         | Original Report |



## 1 Test Summary

| No. | Description of Test Item                                | FCC Standard Section          | Results |
|-----|---------------------------------------------------------|-------------------------------|---------|
| 1   | 6dB Bandwidth & 26dB Bandwidth & 99% Occupied Bandwidth | 15.407(a)<br>15.407(e)        | PASS    |
| 2   | Maximum Conducted Output Power                          | 15.407(a)                     | PASS    |
| 3   | Peak Power Spectral Density                             | 15.407(a)                     | PASS    |
| 4   | Unwanted Emissions and Band Edge                        | 15.205<br>15.209<br>15.407(b) | PASS    |
| 5   | Frequency Stability                                     | 15.407(g)                     | PASS    |
| 6   | AC Power Line Conducted Emissions                       | 15.207<br>15.407(b)(9)        | PASS    |
| 7   | Antenna Requirement                                     | 15.203                        | PASS    |

Note:

1. "N/A" denotes test is not applicable in this test report.



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## 2 General Information

### 2.1 Test Location

|                |                                                                                                            |
|----------------|------------------------------------------------------------------------------------------------------------|
| Company:       | Dongguan DN Testing Co., Ltd                                                                               |
| Address:       | No. 1, West Fourth Street, South Xinfu Road, Wusha Liwu, Chang'an Town, Dongguan City, Guangdong P.R.China |
| Test engineer: | Gali Lin                                                                                                   |



## 2.2 General Description of EUT

|                                 |                                                                                                                                                                      |
|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Manufacturer:                   | Shenzhen Green Giant Energy Technology Development Co.,Ltd                                                                                                           |
| Address of Manufacturer:        | Room 203,Building B,Minle Science Industrial Park,Minzhi St.,<br>LonghuaDist. Shenzhen                                                                               |
| EUT Description:                | 4K Mecha-style Point-to-Point Wireless Screen Mirroring Device                                                                                                       |
| Test Model No.:                 | T12                                                                                                                                                                  |
| Additional Model(s):            | /                                                                                                                                                                    |
| Power Supply:                   | DC 5V                                                                                                                                                                |
| Trade Mark:                     | /                                                                                                                                                                    |
| Hardware Version:               | V1.0                                                                                                                                                                 |
| Software Version:               | V1.0                                                                                                                                                                 |
| Chip Type:                      | AM9421                                                                                                                                                               |
| Serial number                   | PR2602280172R00303                                                                                                                                                   |
| IEEE 802.11 WLAN Mode Supported | <input checked="" type="checkbox"/> 802.11a (20 MHz channel bandwidth),<br><input checked="" type="checkbox"/> 802.11n (20 MHz channel bandwidth).                   |
| Operation Frequency:            | U-NII-1: 5180 MHz~5240 MHz;<br>U-NII-3: 5745 MHz~5825 MHz                                                                                                            |
| Type of Modulation:             | OFDM                                                                                                                                                                 |
| Sample Type:                    | <input type="checkbox"/> Portable Device, <input type="checkbox"/> Module, <input checked="" type="checkbox"/> Mobile Device                                         |
| Antenna Type:                   | <input type="checkbox"/> External, <input checked="" type="checkbox"/> Integrated                                                                                    |
| Antenna Ports                   | <input checked="" type="checkbox"/> Ant 1, <input type="checkbox"/> Ant 2, <input type="checkbox"/> Ant 3                                                            |
| Smart System                    | <input checked="" type="checkbox"/> SISO (for 802.11a/n),<br><input type="checkbox"/> MIMO (for 802.11n/ac/ax),<br><input type="checkbox"/> Diversity (for 802.11a). |
| Antenna Gain*:                  | <input checked="" type="checkbox"/> Provided by applicant<br>2.5dBi                                                                                                  |
| RF Cable*:                      | <input checked="" type="checkbox"/> Provided by applicant<br>0.5dB(0.6~1GHz); 0.8dB(1.4~2GHz); 1.0dB(2.1~2.7GHz); 1.5dB(3~4GHz);<br>1.8dB(4.4~6GHz);                 |

Remark:

\*Since the above data and/or information is provided by the applicant relevant results or conclusions of this report are only made for these data and/or information , DNT is not responsible for the authenticity, integrity and results of the data and information and/or the validity of the conclusion.



## 2.3 Channel List

| Band    | Mode                  | Channel | Frequency (MHz) |
|---------|-----------------------|---------|-----------------|
| U-NII-1 | IEEE 802.11a & n HT20 | 36      | 5180            |
|         |                       | 40      | 5200            |
|         |                       | 44      | 5220            |
|         |                       | 48      | 5240            |
| UNII-3  | IEEE 802.11a & n HT20 | 149     | 5745            |
|         |                       | 153     | 5765            |
|         |                       | 157     | 5785            |
|         |                       | 161     | 5805            |
|         |                       | 165     | 5825            |

Remark:

In FCC 15.31, for each band in which the device can be operated with the device operating at the number of frequencies in each band specified in the following table, and the selected channel to perform the test as below:

| Frequency Range of Operation<br>Operating Frequency Range (in each Band) | Number of Measurement<br>Frequencies Required | Location of Measurement<br>Frequency in Band of Operation |
|--------------------------------------------------------------------------|-----------------------------------------------|-----------------------------------------------------------|
| 1 MHz or less                                                            | 1                                             | centre                                                    |
| 1 MHz to 10 MHz                                                          | 2                                             | 1 near high end, 1 near low end                           |
| Greater than 10 MHz                                                      | 3                                             | 1 near high end, 1 near centre                            |

## 2.4 Test Environment and Mode

| Operating Environment: |                                                                                          |
|------------------------|------------------------------------------------------------------------------------------|
| Temperature:           | 20~25.0 °C                                                                               |
| Humidity:              | 45~56 % RH                                                                               |
| Atmospheric Pressure:  | 101.0~101.30 KPa                                                                         |
| Test mode:             |                                                                                          |
| Transmitting mode:     | Keep the EUT in transmitting mode with all kind of modulation and all kind of data rate. |

## 2.5 Power Setting of Test Software

| Software Name  | MP Tool |      |      |      |      |      |
|----------------|---------|------|------|------|------|------|
| Frequency(MHz) | 5180    | 5200 | 5240 | 5745 | 5785 | 5825 |
| 11A            | 5       | 5    | 5    | 5    | 5    | 5    |
| 11N20          | 5       | 5    | 5    | 5    | 5    | 5    |



## 2.6 Description of Support Units

The EUT has been tested independent unit.

## 2.7 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

### Lab A:

#### • FCC, USA

Designation Number: CN1348

#### • A2LA (Certificate No. 7050.01)

DONGGUAN DN TESTING CO., LTD. is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 7050.01.

#### • Innovation, Science and Economic Development Canada

DONGGUAN DN TESTING CO., LTD. EMC Laboratory has been recognized by ISED as an accredited testing laboratory. CAB identifier is CN0149.

IC#: 30755.

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

| No. | Item                                            | Measurement Uncertainty                                 |
|-----|-------------------------------------------------|---------------------------------------------------------|
| 1   | DTS Bandwidth                                   | $\pm 0.0196\%$                                          |
| 2   | Maximum Conducted Output Power                  | $\pm 0.686$ dB                                          |
| 3   | Maximum Power Spectral Density Level            | $\pm 0.743$ dB                                          |
| 4   | Band-edge Compliance                            | $\pm 1.328$ dB                                          |
| 5   | Unwanted Emissions In Non-restricted Freq Bands | 9KHz-1GHz: $\pm 0.746$ dB<br>1GHz-26GHz: $\pm 1.328$ dB |

| No. | Item                | Measurement Uncertainty        |
|-----|---------------------|--------------------------------|
| 1   | Conduction Emission | $\pm 3.0$ dB (150kHz to 30MHz) |
| 2   | Radiated Emission   | $\pm 4.8$ dB (Below 1GHz)      |
|     |                     | $\pm 4.8$ dB (1GHz to 6GHz)    |
|     |                     | $\pm 4.5$ dB (6GHz to 18GHz)   |
|     |                     | $\pm 5.02$ dB (Above 18GHz)    |



## 2.9 Equipment List

| For Connect EUT Antenna Terminal Test |              |                        |               |            |            |
|---------------------------------------|--------------|------------------------|---------------|------------|------------|
| Description                           | Manufacturer | Model                  | Serial Number | Cal date   | Due date   |
| Signal Generator                      | Keysight     | N5181A-6G              | MY48180415    | 2025-10-21 | 2026-10-20 |
| Signal Generator                      | Keysight     | N5182B                 | MY57300617    | 2025-10-21 | 2026-10-20 |
| Power supply                          | Keysight     | E3640A                 | ZB2022656     | 2025-10-21 | 2026-10-20 |
| Radio Communication Tester            | R&S          | CMW500                 | 105082        | 2025-10-21 | 2026-10-20 |
| Spectrum Analyzer                     | Aglient      | N9010A                 | MY52220200    | 2025-10-21 | 2026-10-20 |
| BT/WIFI Test Software                 | Tonscend     | JS1120 V3.1.83         | NA            | NA         | NA         |
| RF Control Unit                       | Tonscend     | JS0806-2               | 22F8060581    | NA         | NA         |
| Power Sensor                          | Anritsu      | ML2495A                | 2129005       | 2025-10-21 | 2026-10-20 |
| Pulse Power Sensor                    | Anritsu      | MA2411B                | 1911397       | 2025-10-21 | 2026-10-20 |
| temperature and humidity box          | SCOTEK       | SCD-C40-80PRO          | 6866682020008 | 2025-10-21 | 2026-10-20 |
| RF Cable                              | ETS-LINDGREN | RFC-NMS-100-NMS-350-IN | NA            | 2025-10-21 | 2026-10-20 |

| Test Equipment for Conducted Emission |              |               |               |            |            |
|---------------------------------------|--------------|---------------|---------------|------------|------------|
| Description                           | Manufacturer | Model         | Serial Number | Cal Date   | Due Date   |
| Receiver                              | R&S          | ESCI3         | 101152        | 2025-10-21 | 2026-10-20 |
| LISN                                  | R&S          | ENV216        | 102874        | 2025-10-21 | 2026-10-20 |
| ISN                                   | R&S          | ENY81-CA6     | 1309.8590.03  | 2025-10-21 | 2026-10-20 |
| RF Cable                              | ETS-LINDGREN | Cable-CE TS01 | /             | 2025-10-21 | 2026-10-20 |

| Test Equipment for Radiated Emission(30MHz-1000MHz) |              |               |               |            |            |
|-----------------------------------------------------|--------------|---------------|---------------|------------|------------|
| Description                                         | Manufacturer | Model         | Serial Number | Cal Date   | Due Date   |
| Receiver                                            | R&S          | ESR7          | 102497        | 2025-10-21 | 2026-10-20 |
| Test Software                                       | Tonscend     | JS32-RE       | NA            | NA         | NA         |
| RF Cable                                            | ETS-LINDGREN | RE Cable-TS01 | NA            | 2025-10-21 | 2026-10-20 |
| Log periodic antenna                                | ETS-LINDGREN | VULB 9168     | 01475         | 2025-10-21 | 2026-10-20 |



|               |                      |            |           |            |            |
|---------------|----------------------|------------|-----------|------------|------------|
| Pre-amplifier | Schwarzbeck          | BBV9743B   | 00423     | 2025-10-21 | 2026-10-20 |
| Attenuator 1  | Shanghai<br>Huaxiang | TS2-6-18-A | 22061803  | 2025-5-6   | 2026-5-5   |
| Attenuator 2  | Shanghai<br>Huaxiang | TS2-6-6-A  | 230927163 | 2025-5-6   | 2026-5-5   |

| Test Equipment for Radiated Emission(Above 1000MHz) |              |               |               |            |            |
|-----------------------------------------------------|--------------|---------------|---------------|------------|------------|
| Description                                         | Manufacturer | Model         | Serial Number | Cal Date   | Due Date   |
| Frequency analyser                                  | Keysight     | N9010A        | MY52221458    | 2025-10-21 | 2026-10-20 |
| RF Cable                                            | ETS-LINDGREN | RE Cable-TS02 | NA            | 2025-10-21 | 2026-10-20 |
| Horn Antenna                                        | ETS-LINDGREN | 3117          | 00252567      | 2025-10-21 | 2026-10-20 |
| Double ridged<br>waveguide antenna                  | ETS-LINDGREN | 3116C         | 00251780      | 2025-10-21 | 2026-10-20 |
| Test Software                                       | Tonscend     | JS32-RE       | NA            | NA         | NA         |
| Pre-amplifier                                       | ETS-LINDGREN | 3117-PA       | 252567        | 2025-10-21 | 2026-10-20 |
| Pre-amplifier                                       | ETS-LINDGREN | 3116C-PA      | 251780        | 2025-10-21 | 2026-10-20 |



### 3 Test results and Measurement Data

#### 3.1 Antenna Requirement

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|
| Standard requirement:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 47 CFR Part 15C Section 15.203 |
| <p>An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of §§15.211, 15.213, 15.217, 15.219, 15.221, or §15.236. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with §15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.</p> |                                |
| <p>The antenna is integrated to the motherboard, The best case gain of the antenna is 2.5dBi.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                |



## 3.2 Duty Cycle

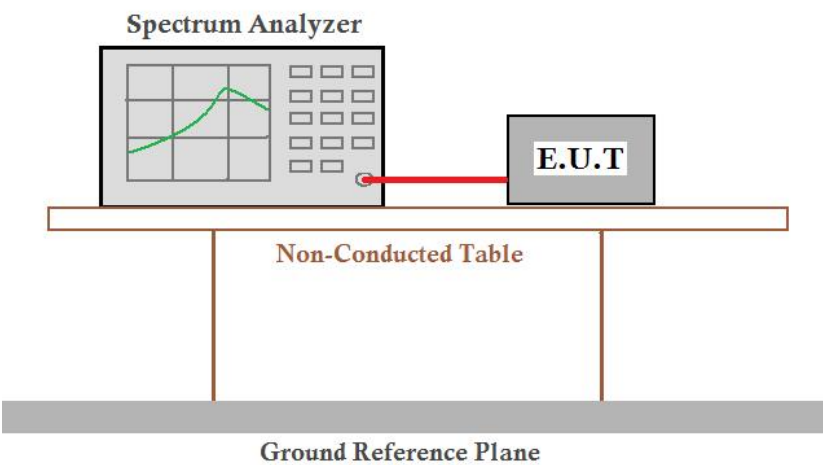
Refer to section : **Appendix A**

Note:

- 1.If duty cycle  $< 98\%$ , the conducted average output power and average power spectral density should be add duty factor.
- 2.If duty cycle  $\geq 98\%$ , the EUT is consider to be transmitting continuously, the conducted average output power and average power spectral density no need to add duty factor (consider to be zero).
- 3.The conducted peak output power and peak power spectral density no need to consider duty factor.
- 4.The on-time time is transmission duration (T).



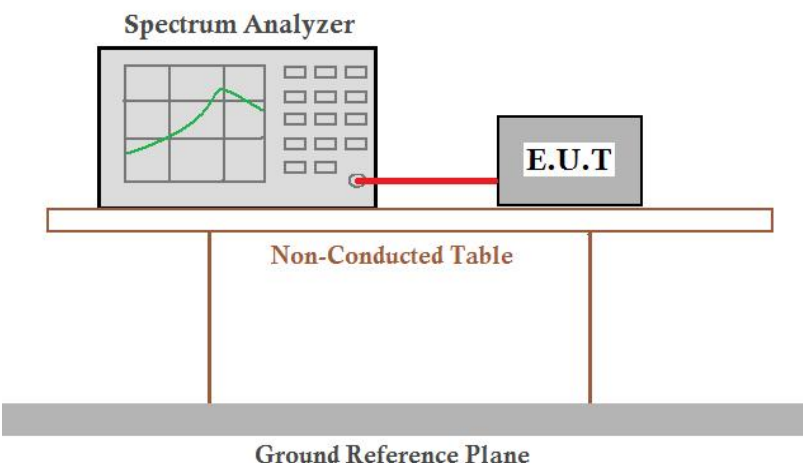
### 3.3 Emission Bandwidth

| Test Requirement:      | 47 CFR Part 15 Section 15.407(a)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                       |                        |  |      |                 |           |       |         |           |                                       |     |          |           |                                       |     |          |           |                                       |     |         |           |                                      |                        |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|------------------------|--|------|-----------------|-----------|-------|---------|-----------|---------------------------------------|-----|----------|-----------|---------------------------------------|-----|----------|-----------|---------------------------------------|-----|---------|-----------|--------------------------------------|------------------------|
| Test Method:           | ANSI C63.10: 2020                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                       |                        |  |      |                 |           |       |         |           |                                       |     |          |           |                                       |     |          |           |                                       |     |         |           |                                      |                        |
| Test Setup:            | <div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                       |                        |  |      |                 |           |       |         |           |                                       |     |          |           |                                       |     |          |           |                                       |     |         |           |                                      |                        |
| Instruments Used:      | Refer to section 2.9 for details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                       |                        |  |      |                 |           |       |         |           |                                       |     |          |           |                                       |     |          |           |                                       |     |         |           |                                      |                        |
| Exploratory Test Mode: | Transmitting with all kind of modulations, data rates                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                       |                        |  |      |                 |           |       |         |           |                                       |     |          |           |                                       |     |          |           |                                       |     |         |           |                                      |                        |
| Final Test Mode:       | Through Pre-scan, find the worst case of all modulations.<br>Only the worst case is recorded in the report.                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                       |                        |  |      |                 |           |       |         |           |                                       |     |          |           |                                       |     |          |           |                                       |     |         |           |                                      |                        |
| Limit                  | <table><tr><th>Band</th><th>Frequency (MHz)</th><th>Test Item</th><th>Limit</th></tr><tr><td>U-NII-1</td><td>5150-5250</td><td>26dB Bandwidth&amp;99% Occupied Bandwidth</td><td>N/A</td></tr><tr><td>U-NII-2A</td><td>5250-5350</td><td>26dB Bandwidth&amp;99% Occupied Bandwidth</td><td>N/A</td></tr><tr><td>U-NII-2C</td><td>5470-5725</td><td>26dB Bandwidth&amp;99% Occupied Bandwidth</td><td>N/A</td></tr><tr><td>U-NII-3</td><td>5725-5850</td><td>6dB Bandwidth&amp;99% Occupied Bandwidth</td><td>6dB Bandwidth ≥ 500KHz</td></tr></table> |                                       |                        |  | Band | Frequency (MHz) | Test Item | Limit | U-NII-1 | 5150-5250 | 26dB Bandwidth&99% Occupied Bandwidth | N/A | U-NII-2A | 5250-5350 | 26dB Bandwidth&99% Occupied Bandwidth | N/A | U-NII-2C | 5470-5725 | 26dB Bandwidth&99% Occupied Bandwidth | N/A | U-NII-3 | 5725-5850 | 6dB Bandwidth&99% Occupied Bandwidth | 6dB Bandwidth ≥ 500KHz |
| Band                   | Frequency (MHz)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Test Item                             | Limit                  |  |      |                 |           |       |         |           |                                       |     |          |           |                                       |     |          |           |                                       |     |         |           |                                      |                        |
| U-NII-1                | 5150-5250                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 26dB Bandwidth&99% Occupied Bandwidth | N/A                    |  |      |                 |           |       |         |           |                                       |     |          |           |                                       |     |          |           |                                       |     |         |           |                                      |                        |
| U-NII-2A               | 5250-5350                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 26dB Bandwidth&99% Occupied Bandwidth | N/A                    |  |      |                 |           |       |         |           |                                       |     |          |           |                                       |     |          |           |                                       |     |         |           |                                      |                        |
| U-NII-2C               | 5470-5725                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 26dB Bandwidth&99% Occupied Bandwidth | N/A                    |  |      |                 |           |       |         |           |                                       |     |          |           |                                       |     |          |           |                                       |     |         |           |                                      |                        |
| U-NII-3                | 5725-5850                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 6dB Bandwidth&99% Occupied Bandwidth  | 6dB Bandwidth ≥ 500KHz |  |      |                 |           |       |         |           |                                       |     |          |           |                                       |     |          |           |                                       |     |         |           |                                      |                        |

The detailed test data see: **Appendix B**



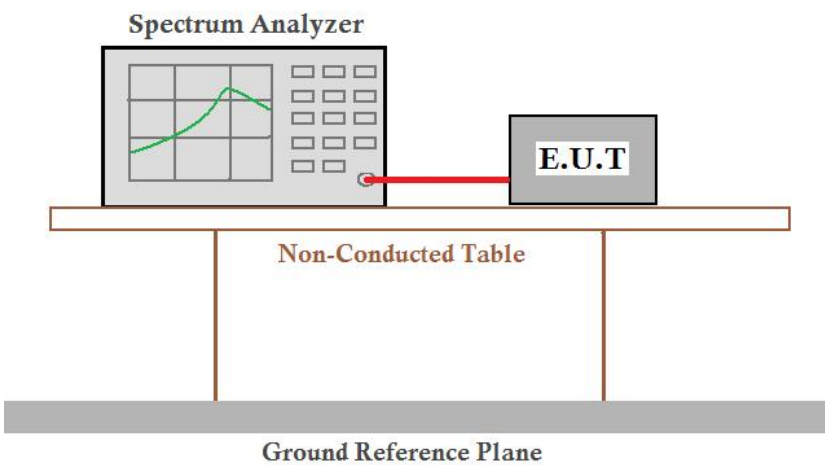
### 3.4 DTS (6 dB) Bandwidth

| Test Requirement:      | 47 CFR Part 15 Section 15.407(e)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                       |                        |  |      |                 |           |       |         |           |                                       |     |          |           |                                       |     |          |           |                                       |     |         |           |                                      |                        |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|------------------------|--|------|-----------------|-----------|-------|---------|-----------|---------------------------------------|-----|----------|-----------|---------------------------------------|-----|----------|-----------|---------------------------------------|-----|---------|-----------|--------------------------------------|------------------------|
| Test Method:           | ANSI C63.10: 2020                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                       |                        |  |      |                 |           |       |         |           |                                       |     |          |           |                                       |     |          |           |                                       |     |         |           |                                      |                        |
| Test Setup:            | <div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                       |                        |  |      |                 |           |       |         |           |                                       |     |          |           |                                       |     |          |           |                                       |     |         |           |                                      |                        |
| Instruments Used:      | Refer to section 2.9 for details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                       |                        |  |      |                 |           |       |         |           |                                       |     |          |           |                                       |     |          |           |                                       |     |         |           |                                      |                        |
| Exploratory Test Mode: | Transmitting with all kind of modulations, data rates                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                       |                        |  |      |                 |           |       |         |           |                                       |     |          |           |                                       |     |          |           |                                       |     |         |           |                                      |                        |
| Final Test Mode:       | Through Pre-scan, find the worst case of all modulations.<br>Only the worst case is recorded in the report.                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                       |                        |  |      |                 |           |       |         |           |                                       |     |          |           |                                       |     |          |           |                                       |     |         |           |                                      |                        |
| Limit:                 | <table><tr><th>Band</th><th>Frequency (MHz)</th><th>Test Item</th><th>Limit</th></tr><tr><td>U-NII-1</td><td>5150-5250</td><td>26dB Bandwidth&amp;99% Occupied Bandwidth</td><td>N/A</td></tr><tr><td>U-NII-2A</td><td>5250-5350</td><td>26dB Bandwidth&amp;99% Occupied Bandwidth</td><td>N/A</td></tr><tr><td>U-NII-2C</td><td>5470-5725</td><td>26dB Bandwidth&amp;99% Occupied Bandwidth</td><td>N/A</td></tr><tr><td>U-NII-3</td><td>5725-5850</td><td>6dB Bandwidth&amp;99% Occupied Bandwidth</td><td>6dB Bandwidth ≥ 500KHz</td></tr></table> |                                       |                        |  | Band | Frequency (MHz) | Test Item | Limit | U-NII-1 | 5150-5250 | 26dB Bandwidth&99% Occupied Bandwidth | N/A | U-NII-2A | 5250-5350 | 26dB Bandwidth&99% Occupied Bandwidth | N/A | U-NII-2C | 5470-5725 | 26dB Bandwidth&99% Occupied Bandwidth | N/A | U-NII-3 | 5725-5850 | 6dB Bandwidth&99% Occupied Bandwidth | 6dB Bandwidth ≥ 500KHz |
| Band                   | Frequency (MHz)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Test Item                             | Limit                  |  |      |                 |           |       |         |           |                                       |     |          |           |                                       |     |          |           |                                       |     |         |           |                                      |                        |
| U-NII-1                | 5150-5250                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 26dB Bandwidth&99% Occupied Bandwidth | N/A                    |  |      |                 |           |       |         |           |                                       |     |          |           |                                       |     |          |           |                                       |     |         |           |                                      |                        |
| U-NII-2A               | 5250-5350                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 26dB Bandwidth&99% Occupied Bandwidth | N/A                    |  |      |                 |           |       |         |           |                                       |     |          |           |                                       |     |          |           |                                       |     |         |           |                                      |                        |
| U-NII-2C               | 5470-5725                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 26dB Bandwidth&99% Occupied Bandwidth | N/A                    |  |      |                 |           |       |         |           |                                       |     |          |           |                                       |     |          |           |                                       |     |         |           |                                      |                        |
| U-NII-3                | 5725-5850                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 6dB Bandwidth&99% Occupied Bandwidth  | 6dB Bandwidth ≥ 500KHz |  |      |                 |           |       |         |           |                                       |     |          |           |                                       |     |          |           |                                       |     |         |           |                                      |                        |
| Test Results:          | PASS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                       |                        |  |      |                 |           |       |         |           |                                       |     |          |           |                                       |     |          |           |                                       |     |         |           |                                      |                        |

The detailed test data see: **Appendix B**



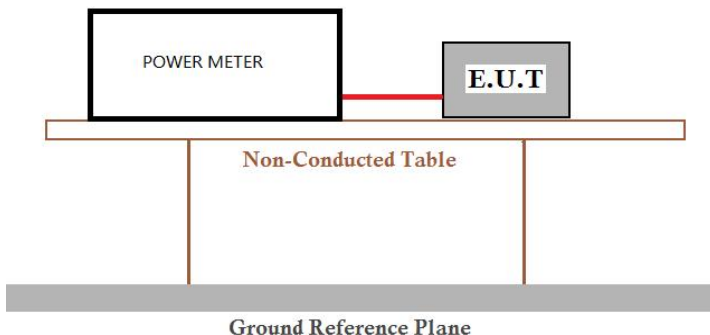
### 3.5 99% Occupied Bandwidth

| Test Requirement:      | 47 CFR Part 15 Section 15.407(a)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                       |                        |  |      |                 |           |       |         |           |                                       |     |          |           |                                       |     |          |           |                                       |     |         |           |                                      |                        |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|------------------------|--|------|-----------------|-----------|-------|---------|-----------|---------------------------------------|-----|----------|-----------|---------------------------------------|-----|----------|-----------|---------------------------------------|-----|---------|-----------|--------------------------------------|------------------------|
| Test Method:           | ANSI C63.10: 2020                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                       |                        |  |      |                 |           |       |         |           |                                       |     |          |           |                                       |     |          |           |                                       |     |         |           |                                      |                        |
| Test Setup:            | <div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                       |                        |  |      |                 |           |       |         |           |                                       |     |          |           |                                       |     |          |           |                                       |     |         |           |                                      |                        |
| Instruments Used:      | Refer to section 2.9 for details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                       |                        |  |      |                 |           |       |         |           |                                       |     |          |           |                                       |     |          |           |                                       |     |         |           |                                      |                        |
| Exploratory Test Mode: | Transmitting with all kind of modulations, data rates                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                       |                        |  |      |                 |           |       |         |           |                                       |     |          |           |                                       |     |          |           |                                       |     |         |           |                                      |                        |
| Final Test Mode:       | Through Pre-scan, find the worst case of all modulations.<br>Only the worst case is recorded in the report.                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                       |                        |  |      |                 |           |       |         |           |                                       |     |          |           |                                       |     |          |           |                                       |     |         |           |                                      |                        |
| Limit:                 | <table><tr><th>Band</th><th>Frequency (MHz)</th><th>Test Item</th><th>Limit</th></tr><tr><td>U-NII-1</td><td>5150-5250</td><td>26dB Bandwidth&amp;99% Occupied Bandwidth</td><td>N/A</td></tr><tr><td>U-NII-2A</td><td>5250-5350</td><td>26dB Bandwidth&amp;99% Occupied Bandwidth</td><td>N/A</td></tr><tr><td>U-NII-2C</td><td>5470-5725</td><td>26dB Bandwidth&amp;99% Occupied Bandwidth</td><td>N/A</td></tr><tr><td>U-NII-3</td><td>5725-5850</td><td>6dB Bandwidth&amp;99% Occupied Bandwidth</td><td>6dB Bandwidth ≥ 500KHz</td></tr></table> |                                       |                        |  | Band | Frequency (MHz) | Test Item | Limit | U-NII-1 | 5150-5250 | 26dB Bandwidth&99% Occupied Bandwidth | N/A | U-NII-2A | 5250-5350 | 26dB Bandwidth&99% Occupied Bandwidth | N/A | U-NII-2C | 5470-5725 | 26dB Bandwidth&99% Occupied Bandwidth | N/A | U-NII-3 | 5725-5850 | 6dB Bandwidth&99% Occupied Bandwidth | 6dB Bandwidth ≥ 500KHz |
| Band                   | Frequency (MHz)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Test Item                             | Limit                  |  |      |                 |           |       |         |           |                                       |     |          |           |                                       |     |          |           |                                       |     |         |           |                                      |                        |
| U-NII-1                | 5150-5250                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 26dB Bandwidth&99% Occupied Bandwidth | N/A                    |  |      |                 |           |       |         |           |                                       |     |          |           |                                       |     |          |           |                                       |     |         |           |                                      |                        |
| U-NII-2A               | 5250-5350                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 26dB Bandwidth&99% Occupied Bandwidth | N/A                    |  |      |                 |           |       |         |           |                                       |     |          |           |                                       |     |          |           |                                       |     |         |           |                                      |                        |
| U-NII-2C               | 5470-5725                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 26dB Bandwidth&99% Occupied Bandwidth | N/A                    |  |      |                 |           |       |         |           |                                       |     |          |           |                                       |     |          |           |                                       |     |         |           |                                      |                        |
| U-NII-3                | 5725-5850                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 6dB Bandwidth&99% Occupied Bandwidth  | 6dB Bandwidth ≥ 500KHz |  |      |                 |           |       |         |           |                                       |     |          |           |                                       |     |          |           |                                       |     |         |           |                                      |                        |
| Test Results:          | Pass                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                       |                        |  |      |                 |           |       |         |           |                                       |     |          |           |                                       |     |          |           |                                       |     |         |           |                                      |                        |

The detailed test data see: **Appendix C**



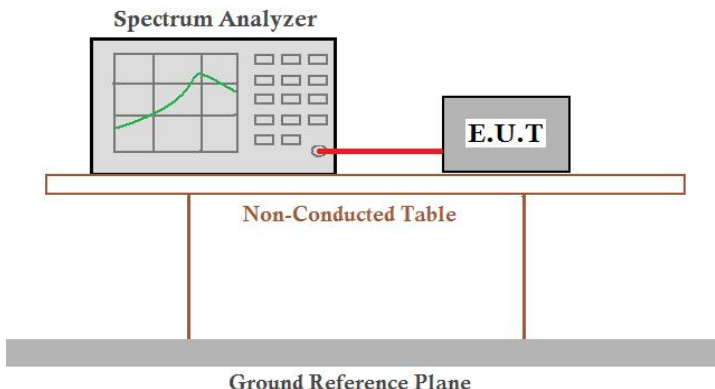
### 3.6 Conducted Output Power

|                        |                                                                                                             |                                               |
|------------------------|-------------------------------------------------------------------------------------------------------------|-----------------------------------------------|
| Test Requirement:      | 47 CFR Part 15 Section 15.407(a)                                                                            |                                               |
| Test Method:           | ANSI C63.10: 2020                                                                                           |                                               |
| Test Setup:            |                           |                                               |
| Test Instruments:      | Refer to section 2.9 for details                                                                            |                                               |
| Exploratory Test Mode: | Transmitting with all kind of modulations, data rates                                                       |                                               |
| Final Test Mode:       | Through Pre-scan, find the worst case of all modulations.<br>Only the worst case is recorded in the report. |                                               |
| Limit:                 | Frequency Band                                                                                              | Limit                                         |
|                        | 5150-5250MHz                                                                                                | Not exceed 250mW(24dBm)                       |
|                        | 5250-5350MHz                                                                                                | The lesser of 250mW(24dBm) or $11 + 10\log B$ |
|                        | 5470-5725MHz                                                                                                | The lesser of 250mW(24dBm) or $11 + 10\log B$ |
|                        | 5725-5850MHz                                                                                                | Not exceed 1W(30dBm)                          |
| Test Results:          | Pass                                                                                                        |                                               |

The detailed test data see: **Appendix D**



### 3.7 Power Spectral Density

|                        |                                                                                                             |                                                    |
|------------------------|-------------------------------------------------------------------------------------------------------------|----------------------------------------------------|
| Test Requirement:      | 47 CFR Part 15 Section 15.407(a)                                                                            |                                                    |
| Test Method:           | ANSI C63.10: 2020<br>KDB 789033 D02 v02r01, Section F.                                                      |                                                    |
| Test Setup:            |                           |                                                    |
| Test Instruments:      | Refer to section 2.9 for details                                                                            |                                                    |
| Exploratory Test Mode: | Transmitting with all kind of modulations, data rates                                                       |                                                    |
| Final Test Mode:       | Through Pre-scan, find the worst case of all modulations.<br>Only the worst case is recorded in the report. |                                                    |
| Limit:                 | Frequency Band                                                                                              | Limit                                              |
|                        | 5150-5250MHz                                                                                                | The power spectral density less than 11dBm/1MHz    |
|                        | 5250-5350MHz                                                                                                | The power spectral density less than 11dBm/1MHz    |
|                        | 5470-5725MHz                                                                                                | The power spectral density less than 11dBm/1MHz    |
|                        | 5725-5850MHz                                                                                                | The power spectral density less than <30dBm/500KHz |
| Test Results:          | Pass                                                                                                        |                                                    |

The detailed test data see: **Appendix E**

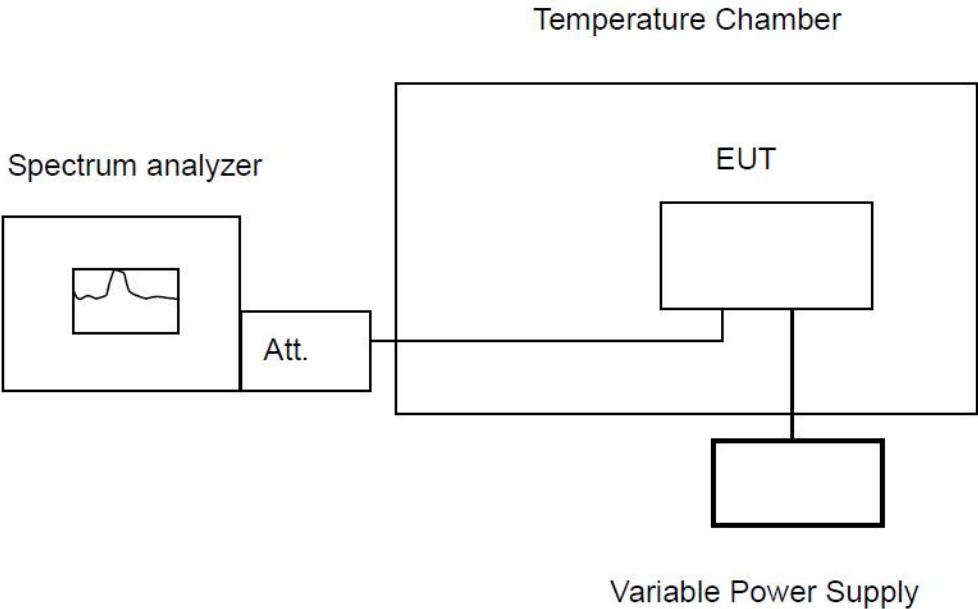


3.8 Frequency Stability

Limit

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the operational description.

Test Setup



Spectrum Analyzer Setting

| Spectrum Parameters | Setting  |
|---------------------|----------|
| RBW                 | 10KHz    |
| VBW                 | 10KHz    |
| Span                | 200KHz   |
| Sweep Time          | Auto     |
| Detector            | PEAK     |
| Trace Mode          | Max Hold |



## Test Procedure

### For measurement frequency stability under temperature variation :

- a. Supply the EUT with a nominal ac voltage or install a new or fully charged battery in the EUT.
- b. Turn the EUT OFF and place it inside the environmental temperature chamber.
- c. Connect EUT antenna terminal to the spectrum analyzer with RF cable.
- d. Spectrum analyzer setting parameters in accordance with section 7.3.
- e. Set the temperature control on the chamber to the Specified temperature and allow the oscillator heater and the chamber temperature to stabilize.
- f. Turn the EUT ON with the rated voltage, and the EUT transmit continuously with maximum output power.
- g. Record the operating frequency at startup, and at 2 minutes, 5 minutes, and 10 minutes after the EUT is energized.
- h. Repeat step d through step f to measured the temperature form  $-30^{\circ}\text{C}$  to  $+50^{\circ}\text{C}$  in  $10^{\circ}\text{C}$  steps.

### For frequency stability under voltage variation:

- a. Supply the EUT with a nominal ac voltage or install a new or fully charged battery in the EUT.
- b. Turn the EUT OFF and place it inside the environmental temperature chamber.
- c. Connect EUT antenna terminal to the spectrum analyzer with RF cable.
- d. Spectrum analyzer setting parameters in accordance with section 7.3.
- e. Unless otherwise specified, set the temperature control on the chamber to the ambient room temperature ( $+22^{\circ}\text{C}$  to  $+25^{\circ}\text{C}$ ) and allow the oscillator heater and the chamber temperature to stabilize.
- f. Turn the EUT ON with the rated voltage, and the EUT transmit continuously with maximum output power.
- g. Record the operating frequency.
- h. Repeat step d through step f to measured the varied from 85% to 115% of the rated voltage.

## Test Result

The detailed test data see: **Appendix F**



### 3.9 Radiated Spurious Emissions

|                   |                                                                                                                                                                                                                                                                               |                                     |                   |                                                     |                             |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|-------------------|-----------------------------------------------------|-----------------------------|
| Test Requirement: | 47 CFR Part 15 Section 15.407(b)                                                                                                                                                                                                                                              |                                     |                   |                                                     |                             |
| Test Method:      | ANSI C63.10: 2020                                                                                                                                                                                                                                                             |                                     |                   |                                                     |                             |
| Test Site:        | Measurement Distance: 3m or 10m (Semi-Anechoic Chamber)                                                                                                                                                                                                                       |                                     |                   |                                                     |                             |
| Receiver Setup:   | Frequency                                                                                                                                                                                                                                                                     | Detector                            | RBW               | VBW                                                 | Remark                      |
|                   | 0.009MHz-0.090MHz                                                                                                                                                                                                                                                             | Peak                                | 10kHz             | 30kHz                                               | Peak                        |
|                   | 0.009MHz-0.090MHz                                                                                                                                                                                                                                                             | Average                             | 10kHz             | 30kHz                                               | Average                     |
|                   | 0.090MHz-0.110MHz                                                                                                                                                                                                                                                             | Quasi-peak                          | 10kHz             | 30kHz                                               | Quasi-peak                  |
|                   | 0.110MHz-0.490MHz                                                                                                                                                                                                                                                             | Peak                                | 10kHz             | 30kHz                                               | Peak                        |
|                   | 0.110MHz-0.490MHz                                                                                                                                                                                                                                                             | Average                             | 10kHz             | 30kHz                                               | Average                     |
|                   | 0.490MHz -30MHz                                                                                                                                                                                                                                                               | Quasi-peak                          | 10kHz             | 30kHz                                               | Quasi-peak                  |
|                   | 30MHz-1GHz                                                                                                                                                                                                                                                                    | Quasi-peak                          | 120kHz            | 300kHz                                              | Quasi-peak                  |
|                   | Above 1GHz                                                                                                                                                                                                                                                                    | Peak                                | 1MHz              | 3MHz                                                | Peak                        |
|                   |                                                                                                                                                                                                                                                                               | Peak                                | 1MHz              | 10Hz<br>(DC $\geq$ 0.98)<br>$\geq$ 1/T<br>(DC<0.98) | Average                     |
| Limit:            | Frequency                                                                                                                                                                                                                                                                     | Field strength<br>(microvolt/meter) | Limit<br>(dBuV/m) | Remark                                              | Measurement<br>distance (m) |
|                   | 0.009MHz-0.490MHz                                                                                                                                                                                                                                                             | 2400/F(kHz)                         | -                 | -                                                   | 300                         |
|                   | 0.490MHz-1.705MHz                                                                                                                                                                                                                                                             | 24000/F(kHz)                        | -                 | -                                                   | 30                          |
|                   | 1.705MHz-30MHz                                                                                                                                                                                                                                                                | 30                                  | -                 | -                                                   | 30                          |
|                   | 30MHz-88MHz                                                                                                                                                                                                                                                                   | 100                                 | 40.0              | Quasi-peak                                          | 3                           |
|                   | 88MHz-216MHz                                                                                                                                                                                                                                                                  | 150                                 | 43.5              | Quasi-peak                                          | 3                           |
|                   | 216MHz-960MHz                                                                                                                                                                                                                                                                 | 200                                 | 46.0              | Quasi-peak                                          | 3                           |
|                   | 960MHz-1GHz                                                                                                                                                                                                                                                                   | 500                                 | 54.0              | Quasi-peak                                          | 3                           |
|                   | Above 1GHz                                                                                                                                                                                                                                                                    | 500                                 | 54.0              | Average                                             | 3                           |
|                   | Remark: 15.35(b), Unless otherwise specified, the limit on peak radio frequency emissions is 20dB above the maximum permitted average emission limit applicable to the equipment under test. This peak limit applies to the total peak emission level radiated by the device. |                                     |                   |                                                     |                             |

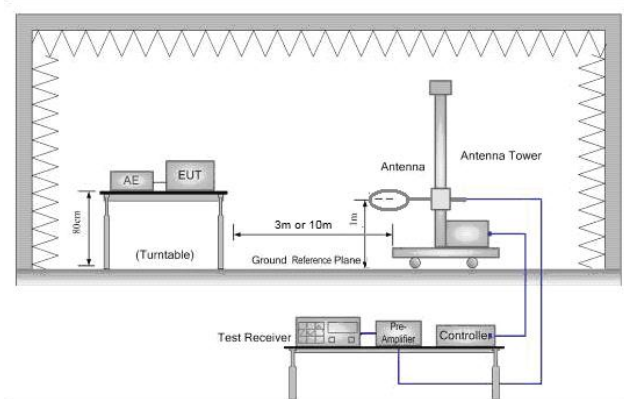
**Test Setup:**

Figure 1. Below 30MHz

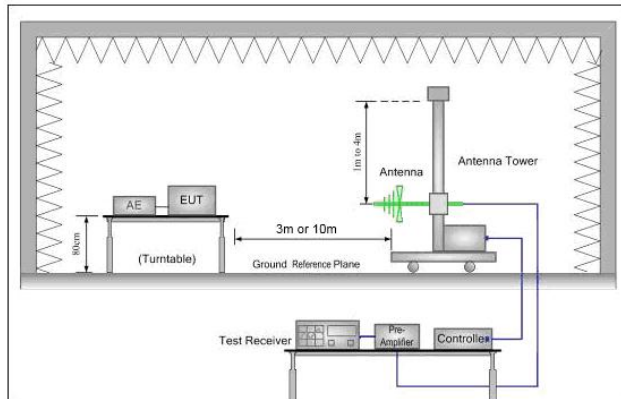


Figure 2. 30MHz to 1GHz

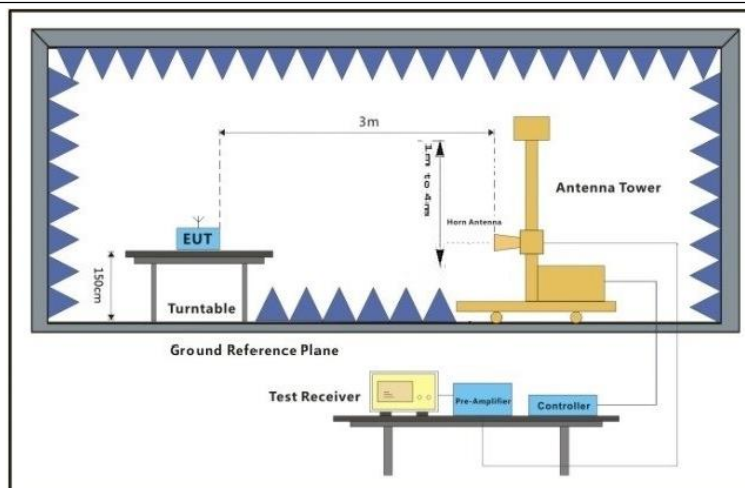


Figure 3. Above 1 GHz

**Test Procedure:**

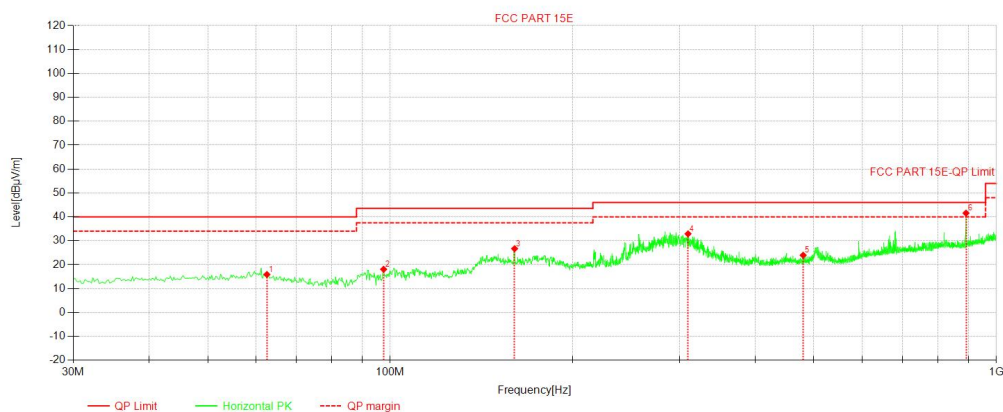
- For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation
- The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. 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 from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.
- Test the EUT in the lowest channel, the middle channel, the Highest channel.
- The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, And found the X axis positioning which it is worse case.



|                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                        | j. Repeat above procedures until all frequencies measured was complete.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Test Configuration:    | <p>Measurements Below 1000MHz</p> <ul style="list-style-type: none"><li>• RBW = 120 kHz</li><li>• VBW = 300 kHz</li><li>• Detector = Peak</li><li>• Trace mode = max hold</li></ul> <p>Peak Measurements Above 1000 MHz</p> <ul style="list-style-type: none"><li>• RBW = 1 MHz</li><li>• VBW <math>\geq</math> 3 MHz</li><li>• Detector = Peak</li><li>• Sweep time = auto</li><li>• Trace mode = max hold</li></ul> <p>Average Measurements Above 1000MHz</p> <ul style="list-style-type: none"><li>• RBW = 1 MHz</li><li>• VBW = 10 Hz, when duty cycle is no less than 98 percent.</li><li>• VBW <math>\geq</math> 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.</li></ul> |
| Exploratory Test Mode: | Transmitting with all kind of modulations, data rates.<br>Charge + Transmitting mode.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Final Test Mode:       | Pretest the EUT at Transmitting mode.<br>Through Pre-scan, find the worst case of all modulations.<br>Only the worst case is recorded in the report.<br>For below 1GHz, through Pre-scan, find the the worst case. Only the worst case is recorded in the report.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Instruments Used:      | Refer to section 2.9 for details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Test Results:          | Pass                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

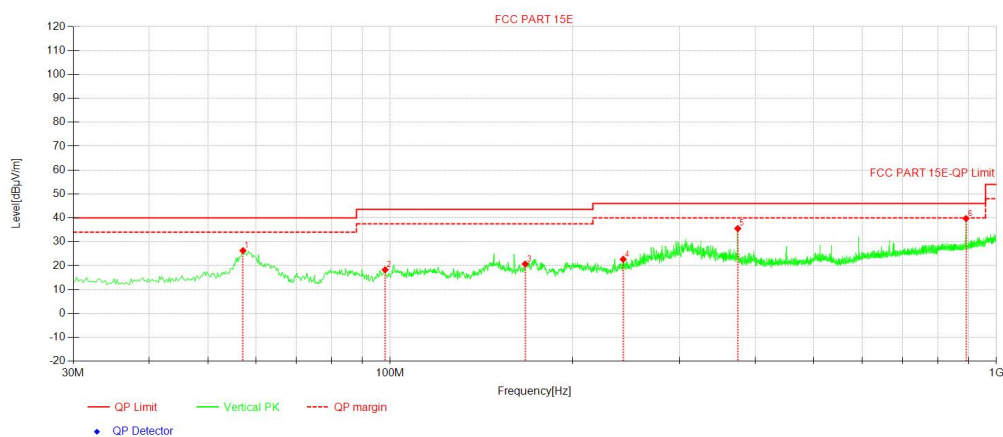
**Test data****For 30-1000MHz****5.1G**

Horizontal:



| NO. | Freq. [MHz] | Reading Level [dBμV] | Correct Factor [dB/m] | Result Level [dBμV/m] | Limit [dBμV/m] | Margin [dB] | Height [cm] | Angle [°] | Detect or |
|-----|-------------|----------------------|-----------------------|-----------------------|----------------|-------------|-------------|-----------|-----------|
| 1   | 62.60       | 24.93                | -9.05                 | 15.88                 | 40.00          | 24.12       | 100         | 79        | PK        |
| 2   | 97.53       | 31.05                | -12.99                | 18.06                 | 43.50          | 25.44       | 100         | 4         | PK        |
| 3   | 160.39      | 34.50                | -7.81                 | 26.69                 | 43.50          | 16.81       | 100         | 61        | PK        |
| 4   | 310.00      | 39.52                | -6.63                 | 32.89                 | 46.00          | 13.11       | 100         | 72        | PK        |
| 5   | 479.98      | 26.19                | -2.24                 | 23.95                 | 46.00          | 22.05       | 100         | 4         | PK        |
| 6   | 891.14      | 36.72                | 4.83                  | 41.55                 | 46.00          | 4.45        | 100         | 77        | PK        |

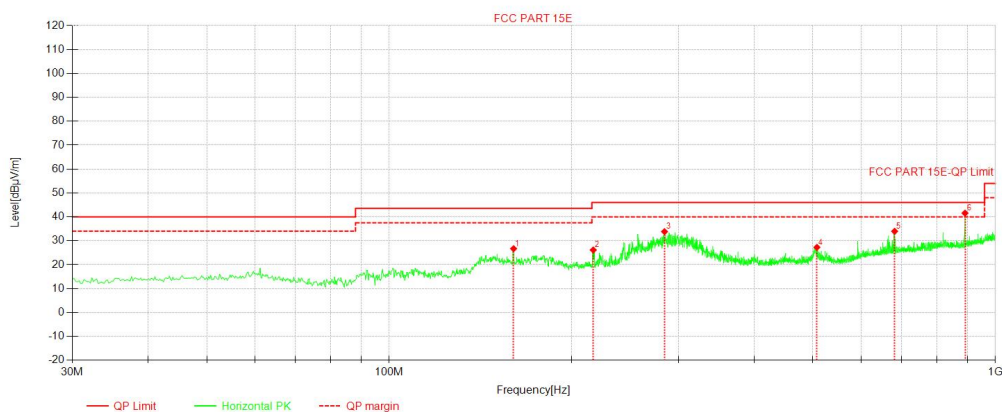
Vertical :



| NO. | Freq. [MHz] | Reading Level [dBμV] | Correct Factor [dB/m] | Result Level [dBμV/m] | Limit [dBμV/m] | Margin [dB] | Height [cm] | Angle [°] | Detect or |
|-----|-------------|----------------------|-----------------------|-----------------------|----------------|-------------|-------------|-----------|-----------|
| 1   | 57.17       | 34.78                | -8.48                 | 26.30                 | 40.00          | 13.70       | 100         | 242       | PK        |
| 2   | 98.11       | 31.19                | -12.90                | 18.29                 | 43.50          | 25.21       | 100         | 88        | PK        |
| 3   | 166.99      | 28.77                | -8.09                 | 20.68                 | 43.50          | 22.82       | 100         | 94        | PK        |
| 4   | 242.28      | 31.82                | -9.14                 | 22.68                 | 46.00          | 23.32       | 100         | 207       | PK        |
| 5   | 374.42      | 40.53                | -5.00                 | 35.53                 | 46.00          | 10.47       | 100         | 20        | PK        |
| 6   | 891.14      | 34.89                | 4.83                  | 39.72                 | 46.00          | 6.28        | 100         | 9         | PK        |

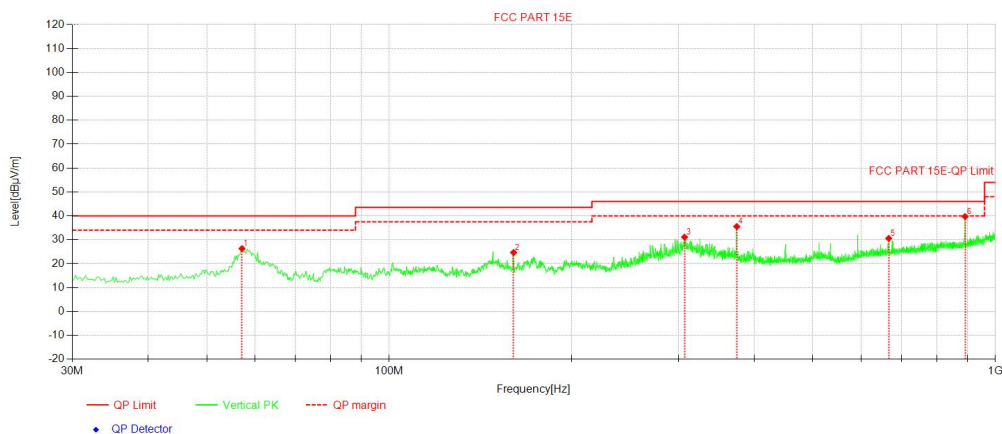
**5.8G**

Horizontal:



| NO. | Freq. [MHz] | Reading Level [dBμV] | Correct Factor [dB/m] | Result Level [dBμV/m] | Limit [dBμV/m] | Margin [dB] | Height [cm] | Angle [°] | Detect or |
|-----|-------------|----------------------|-----------------------|-----------------------|----------------|-------------|-------------|-----------|-----------|
| 1   | 160.39      | 34.50                | -7.81                 | 26.69                 | 43.50          | 16.81       | 100         | 61        | PK        |
| 2   | 217.05      | 37.19                | -11.05                | 26.14                 | 46.00          | 19.86       | 100         | 72        | PK        |
| 3   | 284.58      | 41.21                | -7.39                 | 33.82                 | 46.00          | 12.18       | 100         | 77        | PK        |
| 4   | 507.72      | 28.92                | -1.67                 | 27.25                 | 46.00          | 18.75       | 200         | 178       | PK        |
| 5   | 681.97      | 31.92                | 2.04                  | 33.96                 | 46.00          | 12.04       | 100         | 306       | PK        |
| 6   | 891.14      | 36.72                | 4.83                  | 41.55                 | 46.00          | 4.45        | 100         | 77        | PK        |

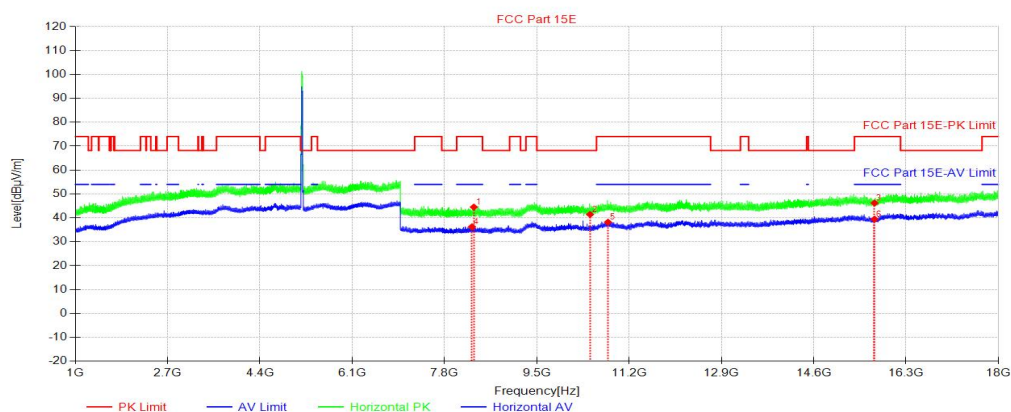
Vertical :



| NO. | Freq. [MHz] | Reading Level [dBμV] | Correct Factor [dB/m] | Result Level [dBμV/m] | Limit [dBμV/m] | Margin [dB] | Height [cm] | Angle [°] | Detect or |
|-----|-------------|----------------------|-----------------------|-----------------------|----------------|-------------|-------------|-----------|-----------|
| 1   | 57.17       | 34.78                | -8.48                 | 26.30                 | 40.00          | 13.70       | 100         | 242       | PK        |
| 2   | 84.52       | 32.30                | -13.52                | 18.78                 | 40.00          | 21.22       | 100         | 69        | PK        |
| 3   | 148.36      | 32.99                | -7.97                 | 25.02                 | 43.50          | 18.48       | 100         | 39        | PK        |
| 4   | 374.42      | 40.53                | -5.00                 | 35.53                 | 46.00          | 10.47       | 100         | 20        | PK        |
| 5   | 594.07      | 32.21                | -0.21                 | 32.00                 | 46.00          | 14.00       | 100         | 282       | PK        |
| 6   | 891.14      | 34.89                | 4.83                  | 39.72                 | 46.00          | 6.28        | 100         | 9         | PK        |

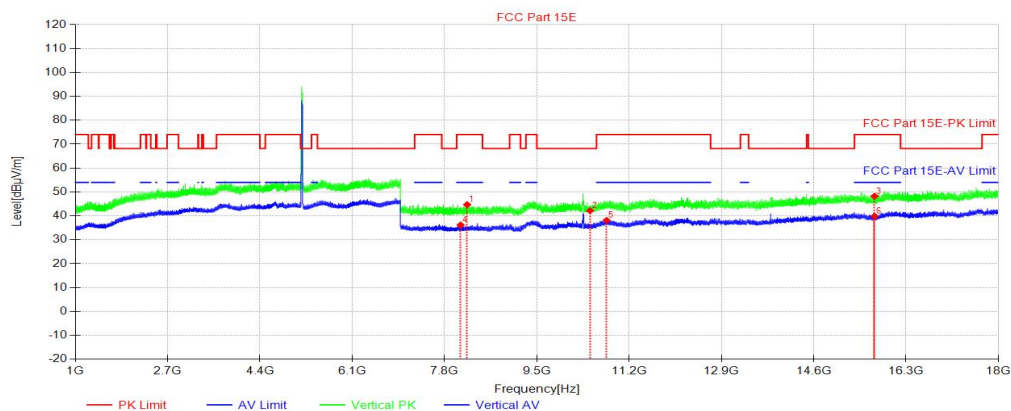
**For above 1GHz****5.8G 11A 5180MHz**

Horizontal:



| NO. | Freq. [MHz] | Reading Level [dBμV] | Correct Factor [dB/m] | Result Level [dBμV/m] | AV Limit [dBμV/m] | Margin [dB] | Height [cm] | Angle [°] | Detector |
|-----|-------------|----------------------|-----------------------|-----------------------|-------------------|-------------|-------------|-----------|----------|
| 1   | 8339.85     | 46.58                | -2.08                 | 44.50                 | 74.00             | 29.50       | 150         | 59        | PK       |
| 2   | 10480.10    | 40.96                | 0.47                  | 41.43                 | 68.20             | 26.77       | 150         | 183       | PK       |
| 3   | 15720.27    | 40.84                | 5.35                  | 46.19                 | 74.00             | 27.81       | 150         | 112       | PK       |
| 4   | 8305.53     | 38.35                | -2.09                 | 36.26                 | 54.00             | 17.74       | 150         | 239       | AV       |
| 5   | 10810.55    | 36.61                | 1.58                  | 38.19                 | 54.00             | 15.81       | 150         | 183       | AV       |
| 6   | 15720.27    | 34.09                | 5.35                  | 39.44                 | 54.00             | 14.56       | 150         | 147       | AV       |

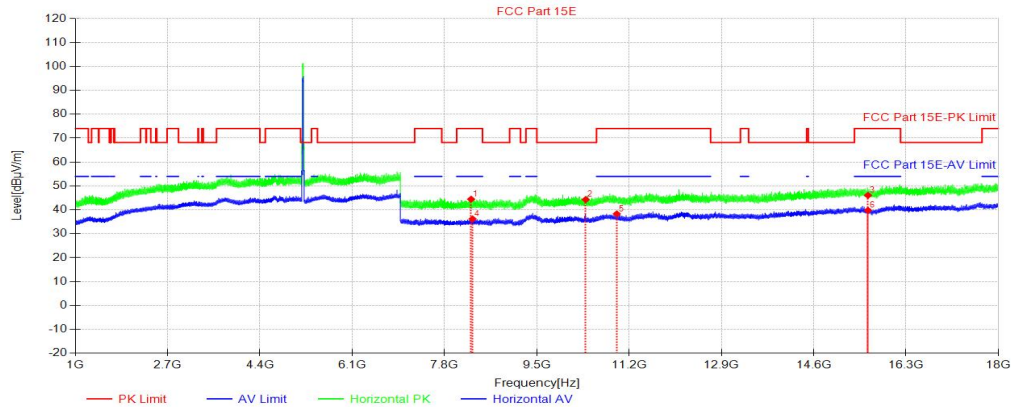
Vertical:



| NO. | Freq. [MHz] | Reading Level [dBμV] | Correct Factor [dB/m] | Result Level [dBμV/m] | AV Limit [dBμV/m] | Margin [dB] | Height [cm] | Angle [°] | Detector |
|-----|-------------|----------------------|-----------------------|-----------------------|-------------------|-------------|-------------|-----------|----------|
| 1   | 8217.09     | 46.81                | -2.12                 | 44.69                 | 74.00             | 29.31       | 150         | 298       | PK       |
| 2   | 10480.10    | 41.70                | 0.47                  | 42.17                 | 68.20             | 26.03       | 150         | 206       | PK       |
| 3   | 15720.27    | 42.88                | 5.35                  | 48.23                 | 74.00             | 25.77       | 150         | 152       | PK       |
| 4   | 8096.08     | 37.96                | -1.78                 | 36.18                 | 54.00             | 17.82       | 150         | 43        | AV       |
| 5   | 10785.47    | 36.59                | 1.51                  | 38.10                 | 54.00             | 15.90       | 150         | 171       | AV       |
| 6   | 15720.27    | 34.50                | 5.35                  | 39.85                 | 54.00             | 14.15       | 150         | 22        | AV       |

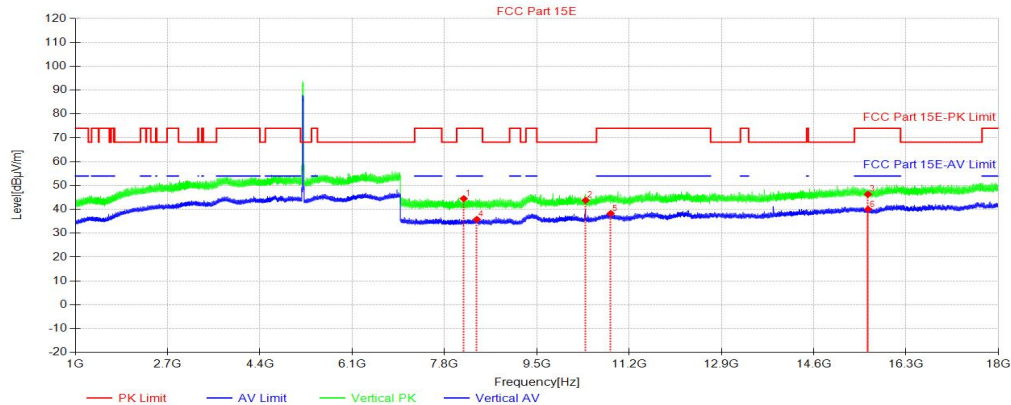
**5.1G 11A 5200MHz**

Horizontal:



| NO. | Freq. [MHz] | Reading Level [dBμV] | Correct Factor [dB/m] | Result Level [dBμV/m] | AV Limit [dBμV/m] | Margin [dB] | Height [cm] | Angle [°] | Detector |
|-----|-------------|----------------------|-----------------------|-----------------------|-------------------|-------------|-------------|-----------|----------|
| 1   | 8289.69     | 46.54                | -2.09                 | 44.45                 | 74.00             | 29.55       | 150         | 246       | PK       |
| 2   | 10400.02    | 43.97                | 0.36                  | 44.33                 | 68.20             | 23.87       | 150         | 301       | PK       |
| 3   | 15600.14    | 40.63                | 5.43                  | 46.06                 | 74.00             | 27.94       | 150         | 336       | PK       |
| 4   | 8316.09     | 38.28                | -2.08                 | 36.20                 | 54.00             | 17.80       | 150         | 226       | AV       |
| 5   | 10972.48    | 36.91                | 1.40                  | 38.31                 | 54.00             | 15.69       | 150         | 20        | AV       |
| 6   | 15600.14    | 34.36                | 5.43                  | 39.79                 | 54.00             | 14.21       | 150         | 284       | AV       |

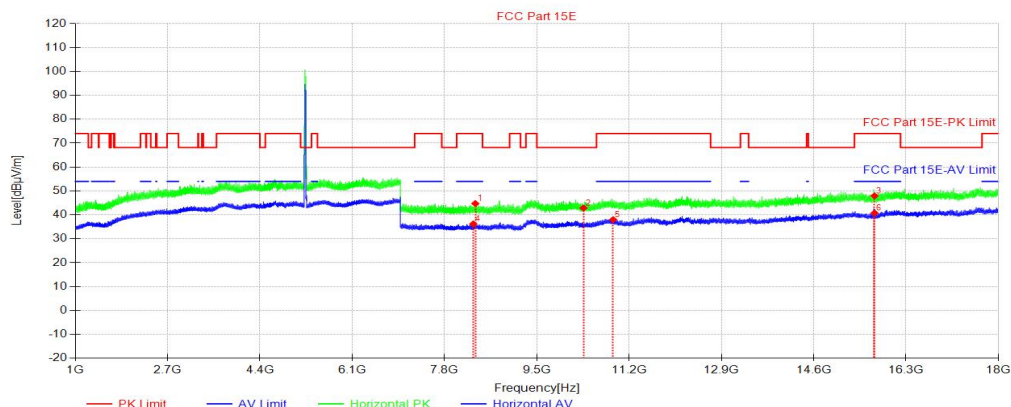
Vertical:



| NO. | Freq. [MHz] | Reading Level [dBμV] | Correct Factor [dB/m] | Result Level [dBμV/m] | AV Limit [dBμV/m] | Margin [dB] | Height [cm] | Angle [°] | Detector |
|-----|-------------|----------------------|-----------------------|-----------------------|-------------------|-------------|-------------|-----------|----------|
| 1   | 8154.17     | 46.48                | -1.97                 | 44.51                 | 74.00             | 29.49       | 150         | 196       | PK       |
| 2   | 10400.02    | 43.44                | 0.36                  | 43.80                 | 68.20             | 24.40       | 150         | 177       | PK       |
| 3   | 15600.14    | 40.92                | 5.43                  | 46.35                 | 74.00             | 27.65       | 150         | 99        | PK       |
| 4   | 8395.30     | 37.84                | -2.03                 | 35.81                 | 54.00             | 18.19       | 150         | 21        | AV       |
| 5   | 10860.71    | 36.75                | 1.54                  | 38.29                 | 54.00             | 15.71       | 150         | 328       | AV       |
| 6   | 15600.14    | 34.61                | 5.43                  | 40.04                 | 54.00             | 13.96       | 150         | 310       | AV       |

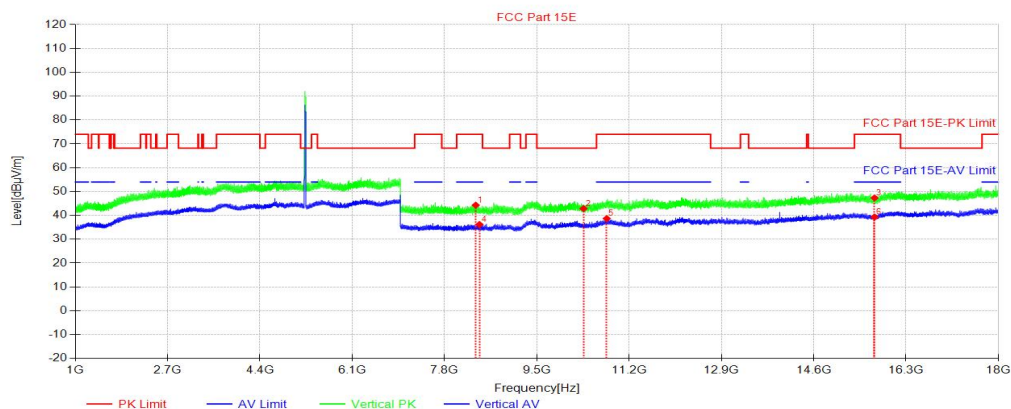
**5.1G 11A 5240MHz**

Horizontal:



| NO. | Freq. [MHz] | Reading Level [dBμV] | Correct Factor [dB/m] | Result Level [dBμV/m] | AV Limit [dBμV/m] | Margin [dB] | Height [cm] | Angle [°] | Detector |
|-----|-------------|----------------------|-----------------------|-----------------------|-------------------|-------------|-------------|-----------|----------|
| 1   | 8367.13     | 46.78                | -2.06                 | 44.72                 | 74.00             | 29.28       | 150         | 60        | PK       |
| 2   | 10360.41    | 42.44                | 0.40                  | 42.84                 | 68.20             | 25.36       | 150         | 114       | PK       |
| 3   | 15720.27    | 42.59                | 5.35                  | 47.94                 | 74.00             | 26.06       | 150         | 281       | PK       |
| 4   | 8329.29     | 38.28                | -2.09                 | 36.19                 | 54.00             | 17.81       | 150         | 4         | AV       |
| 5   | 10906.48    | 36.50                | 1.49                  | 37.99                 | 54.00             | 16.01       | 150         | 318       | AV       |
| 6   | 15720.27    | 35.40                | 5.35                  | 40.75                 | 54.00             | 13.25       | 150         | 281       | AV       |

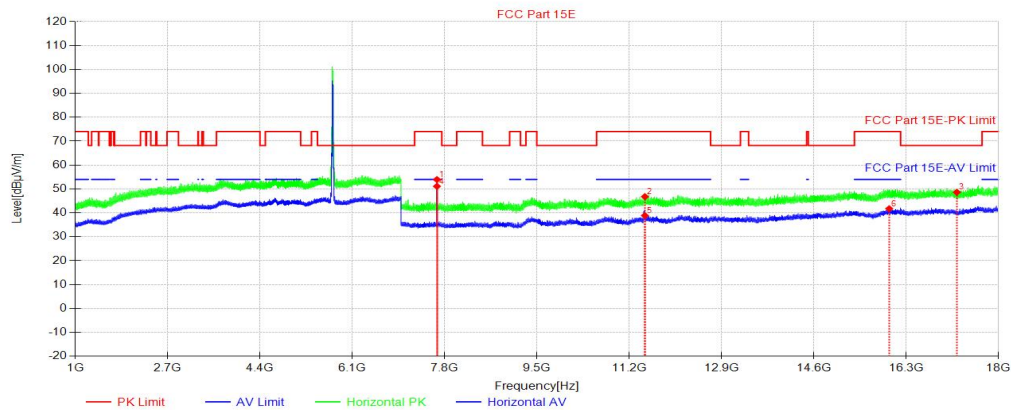
Vertical:



| NO. | Freq. [MHz] | Reading Level [dBμV] | Correct Factor [dB/m] | Result Level [dBμV/m] | AV Limit [dBμV/m] | Margin [dB] | Height [cm] | Angle [°] | Detector |
|-----|-------------|----------------------|-----------------------|-----------------------|-------------------|-------------|-------------|-----------|----------|
| 1   | 8374.61     | 46.33                | -2.05                 | 44.28                 | 74.00             | 29.72       | 150         | 77        | PK       |
| 2   | 10360.41    | 42.44                | 0.40                  | 42.84                 | 68.20             | 25.36       | 150         | 267       | PK       |
| 3   | 15720.27    | 41.98                | 5.35                  | 47.33                 | 74.00             | 26.67       | 150         | 189       | PK       |
| 4   | 8443.70     | 38.21                | -2.03                 | 36.18                 | 54.00             | 17.82       | 150         | 324       | AV       |
| 5   | 10787.23    | 37.14                | 1.52                  | 38.66                 | 54.00             | 15.34       | 150         | 208       | AV       |
| 6   | 15720.27    | 33.95                | 5.35                  | 39.30                 | 54.00             | 14.70       | 150         | 306       | AV       |

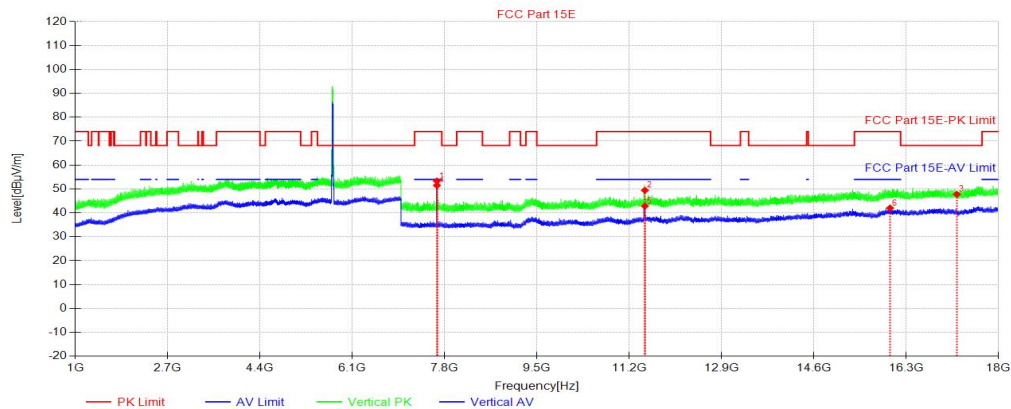
**5.8G 11A 5745MHz**

Horizontal:



| NO. | Freq. [MHz] | Reading Level [dBμV] | Correct Factor [dB/m] | Result Level [dBμV/m] | AV Limit [dBμV/m] | Margin [dB] | Height [cm] | Angle [°] | Detector |
|-----|-------------|----------------------|-----------------------|-----------------------|-------------------|-------------|-------------|-----------|----------|
| 1   | 7659.59     | 55.08                | -1.14                 | 53.94                 | 74.00             | 20.06       | 150         | 247       | PK       |
| 2   | 11490.38    | 44.75                | 2.03                  | 46.78                 | 74.00             | 27.22       | 150         | 301       | PK       |
| 3   | 17235.25    | 39.76                | 8.86                  | 48.62                 | 68.20             | 19.58       | 150         | 209       | PK       |
| 4   | 7660.47     | 52.26                | -1.14                 | 51.12                 | 54.00             | 2.88        | 150         | 247       | AV       |
| 5   | 11490.38    | 36.83                | 2.03                  | 38.86                 | 54.00             | 15.14       | 150         | 209       | AV       |
| 6   | 15990.00    | 35.45                | 6.30                  | 41.75                 | 54.00             | 12.25       | 150         | 229       | AV       |

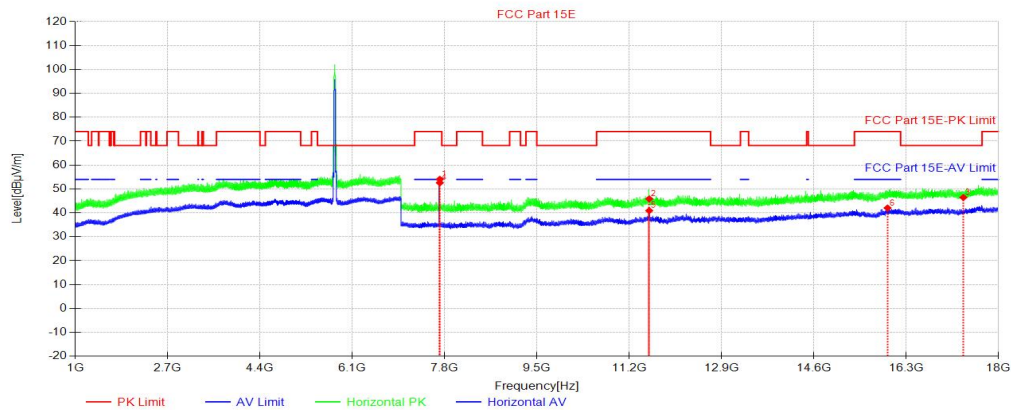
Vertical:



| NO. | Freq. [MHz] | Reading Level [dBμV] | Correct Factor [dB/m] | Result Level [dBμV/m] | AV Limit [dBμV/m] | Margin [dB] | Height [cm] | Angle [°] | Detector |
|-----|-------------|----------------------|-----------------------|-----------------------|-------------------|-------------|-------------|-----------|----------|
| 1   | 7660.03     | 54.47                | -1.14                 | 53.33                 | 74.00             | 20.67       | 150         | 282       | PK       |
| 2   | 11490.38    | 47.41                | 2.03                  | 49.44                 | 74.00             | 24.56       | 150         | 97        | PK       |
| 3   | 17235.25    | 38.90                | 8.86                  | 47.76                 | 68.20             | 20.44       | 150         | 264       | PK       |
| 4   | 7660.47     | 52.64                | -1.14                 | 51.50                 | 54.00             | 2.50        | 150         | 282       | AV       |
| 5   | 11490.38    | 40.79                | 2.03                  | 42.82                 | 54.00             | 11.18       | 150         | 114       | AV       |
| 6   | 16005.84    | 35.66                | 6.35                  | 42.01                 | 54.00             | 11.99       | 150         | 212       | AV       |

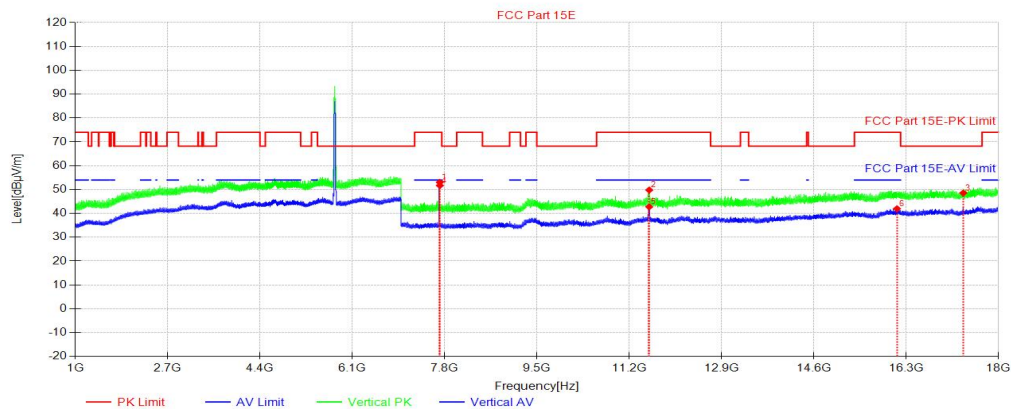
**5.8G 11A 5785MHz**

Horizontal:



| NO. | Freq. [MHz] | Reading Level [dBμV] | Correct Factor [dB/m] | Result Level [dBμV/m] | AV Limit [dBμV/m] | Margin [dB] | Height [cm] | Angle [°] | Detector |
|-----|-------------|----------------------|-----------------------|-----------------------|-------------------|-------------|-------------|-----------|----------|
| 1   | 7713.27     | 55.11                | -1.08                 | 54.03                 | 74.00             | 19.97       | 150         | 301       | PK       |
| 2   | 11570.02    | 43.52                | 2.33                  | 45.85                 | 74.00             | 28.15       | 150         | 200       | PK       |
| 3   | 17355.37    | 37.46                | 8.97                  | 46.43                 | 68.20             | 21.77       | 150         | 282       | PK       |
| 4   | 7713.71     | 53.66                | -1.08                 | 52.58                 | 54.00             | 1.42        | 150         | 301       | AV       |
| 5   | 11570.02    | 38.59                | 2.33                  | 40.92                 | 54.00             | 13.08       | 150         | 221       | AV       |
| 6   | 15959.64    | 35.90                | 6.14                  | 42.04                 | 54.00             | 11.96       | 150         | 239       | AV       |

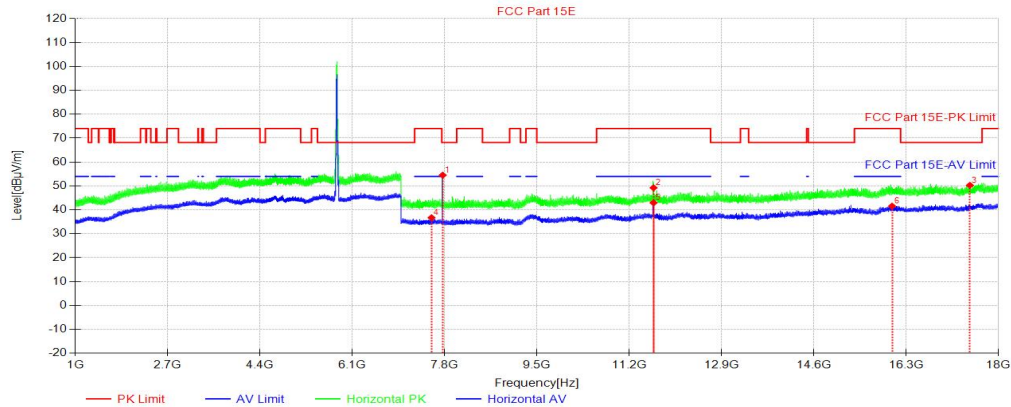
Vertical:



| NO. | Freq. [MHz] | Reading Level [dBμV] | Correct Factor [dB/m] | Result Level [dBμV/m] | AV Limit [dBμV/m] | Margin [dB] | Height [cm] | Angle [°] | Detector |
|-----|-------------|----------------------|-----------------------|-----------------------|-------------------|-------------|-------------|-----------|----------|
| 1   | 7713.27     | 54.11                | -1.08                 | 53.03                 | 74.00             | 20.97       | 150         | 279       | PK       |
| 2   | 11570.02    | 47.46                | 2.33                  | 49.79                 | 74.00             | 24.21       | 150         | 241       | PK       |
| 3   | 17355.37    | 39.58                | 8.97                  | 48.55                 | 68.20             | 19.65       | 150         | 299       | PK       |
| 4   | 7713.71     | 52.76                | -1.08                 | 51.68                 | 54.00             | 2.32        | 150         | 279       | AV       |
| 5   | 11570.02    | 40.42                | 2.33                  | 42.75                 | 54.00             | 11.25       | 150         | 299       | AV       |
| 6   | 16133.45    | 35.39                | 6.56                  | 41.95                 | 54.00             | 12.05       | 150         | 260       | AV       |

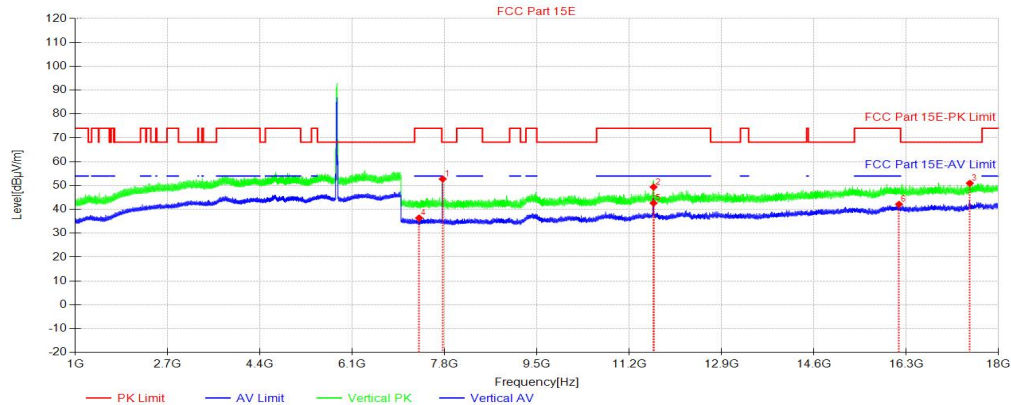
**5.8G 11A 5825MHz**

Horizontal:



| NO. | Freq. [MHz] | Reading Level [dBμV] | Correct Factor [dB/m] | Result Level [dBμV/m] | AV Limit [dBμV/m] | Margin [dB] | Height [cm] | Angle [°] | Detector |
|-----|-------------|----------------------|-----------------------|-----------------------|-------------------|-------------|-------------|-----------|----------|
| 1   | 7766.51     | 55.51                | -1.01                 | 54.50                 | 68.20             | 13.70       | 150         | 249       | PK       |
| 2   | 11650.11    | 46.91                | 2.32                  | 49.23                 | 74.00             | 24.77       | 150         | 174       | PK       |
| 3   | 17475.06    | 40.71                | 9.55                  | 50.26                 | 68.20             | 17.94       | 150         | 174       | PK       |
| 4   | 7561.02     | 37.92                | -1.20                 | 36.72                 | 54.00             | 17.28       | 150         | 67        | AV       |
| 5   | 11650.11    | 40.62                | 2.32                  | 42.94                 | 54.00             | 11.06       | 150         | 249       | AV       |
| 6   | 16043.24    | 35.18                | 6.37                  | 41.55                 | 54.00             | 12.45       | 150         | 9         | AV       |

Vertical:



| NO. | Freq. [MHz] | Reading Level [dBμV] | Correct Factor [dB/m] | Result Level [dBμV/m] | AV Limit [dBμV/m] | Margin [dB] | Height [cm] | Angle [°] | Detector |
|-----|-------------|----------------------|-----------------------|-----------------------|-------------------|-------------|-------------|-----------|----------|
| 1   | 7766.51     | 53.76                | -1.01                 | 52.75                 | 68.20             | 15.45       | 150         | 285       | PK       |
| 2   | 11650.11    | 47.07                | 2.32                  | 49.39                 | 74.00             | 24.61       | 150         | 194       | PK       |
| 3   | 17475.06    | 41.40                | 9.55                  | 50.95                 | 68.20             | 17.25       | 150         | 266       | PK       |
| 4   | 7333.09     | 37.57                | -1.16                 | 36.41                 | 54.00             | 17.59       | 150         | 285       | AV       |
| 5   | 11650.11    | 40.31                | 2.32                  | 42.63                 | 54.00             | 11.37       | 150         | 194       | AV       |
| 6   | 16170.85    | 35.46                | 6.67                  | 42.13                 | 54.00             | 11.87       | 150         | 100       | AV       |

**Note:**

1. The Measurement (Result Level) is calculated by Reading Level adding the Correct Factor(maybe including Ant.Factor and the Cable Factor etc.), The basic equation is as follows:

Result Level= Reading Level + Correct Factor(including Ant.Factor, Cable Factor etc. )

2. The amplitude of 9KHz to 30MHz spurious emission that is attenuated by more than 20dB below the permissible limit has no need to be reported.

3. The amplitude of 18GHz to 40GHz spurious emission that is attenuated by more than 20dB below the permissible limit has no need to be report.

4. All channels had been pre-test, 802.11A is the worst case, only the worst case was reported.



### 3.10 Restricted bands around fundamental frequency

|                   |                                                         |                       |                  |
|-------------------|---------------------------------------------------------|-----------------------|------------------|
| Test Requirement: | 47 CFR Part 15 Section 15.407(b)                        |                       |                  |
| Test Method:      | ANSI C63.10: 2020                                       |                       |                  |
| Test Site:        | Measurement Distance: 3m or 10m (Semi-Anechoic Chamber) |                       |                  |
| Limit:            | Frequency                                               | Limit (dBuV/m)        | Remark           |
|                   | 30MHz-88MHz                                             | 40.0                  | Quasi-peak       |
|                   | 88MHz-216MHz                                            | 43.5                  | Quasi-peak       |
|                   | 216MHz-960MHz                                           | 46.0                  | Quasi-peak       |
|                   | 960MHz-1GHz                                             | 54.0                  | Quasi-peak       |
|                   | Above 1GHz                                              | 54.0                  | Average Value    |
|                   |                                                         | 74.0                  | Peak Value       |
|                   | MHz                                                     | MHz                   | MHz              |
|                   | 0.090 - 0.110                                           | 16.42 - 16.423        | 399.9 - 410      |
|                   | 0.495 - 0.505                                           | 16.69475 - 16.69525   | 608 - 614        |
|                   | 2.1735 - 2.1905                                         | 16.80425 - 16.80475   | 960 - 1240       |
|                   | 4.125 - 4.128                                           | 25.5 - 25.67          | 1300 - 1427      |
|                   | 4.17725 - 4.17775                                       | 37.5 - 38.25          | 1435 - 1626.5    |
|                   | 4.20725 - 4.20775                                       | 73 - 74.6             | 1645.5 - 1646.5  |
|                   | 6.215 - 6.218                                           | 74.8 - 75.2           | 1660 - 1710      |
|                   | 6.26775 - 6.26825                                       | 108 - 121.94          | 1718.8 - 1722.2  |
|                   | 6.31175 - 6.31225                                       | 123 - 138             | 2200 - 2300      |
|                   | 8.291 - 8.294                                           | 149.9 - 150.05        | 2310 - 2390      |
|                   | 8.362 - 8.366                                           | 156.52475 - 156.52525 | 2483.5 - 2500    |
|                   | 8.37625 - 8.38675                                       | 156.7 - 156.9         | 2690 - 2900      |
|                   | 8.41425 - 8.41475                                       | 162.0125 - 167.17     | 3260 - 3267      |
|                   | 12.29 - 12.293                                          | 167.72 - 173.2        | 3332 - 3339      |
|                   | 12.51975 - 12.52025                                     | 240 - 285             | 3345.8 - 3358    |
|                   | 12.57675 - 12.57725                                     | 322 - 335.4           | 3600 - 4400      |
|                   |                                                         |                       | ( <sup>2</sup> ) |
| Test Setup:       |                                                         |                       |                  |

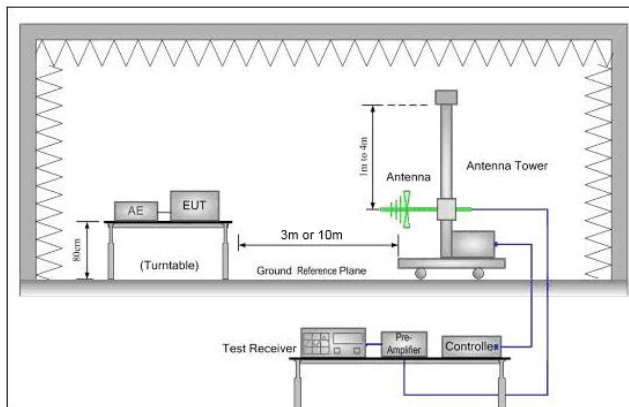


Figure 1. 30MHz to 1GHz

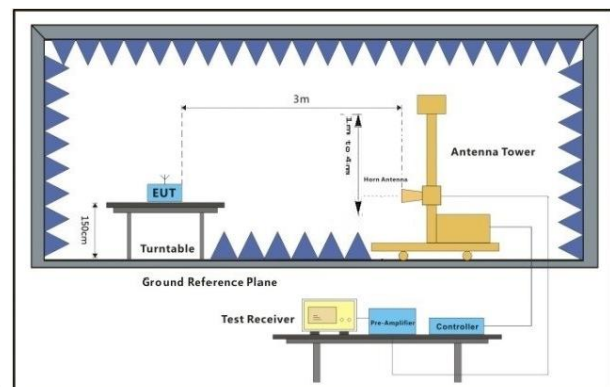


Figure 2. Above 1 GHz



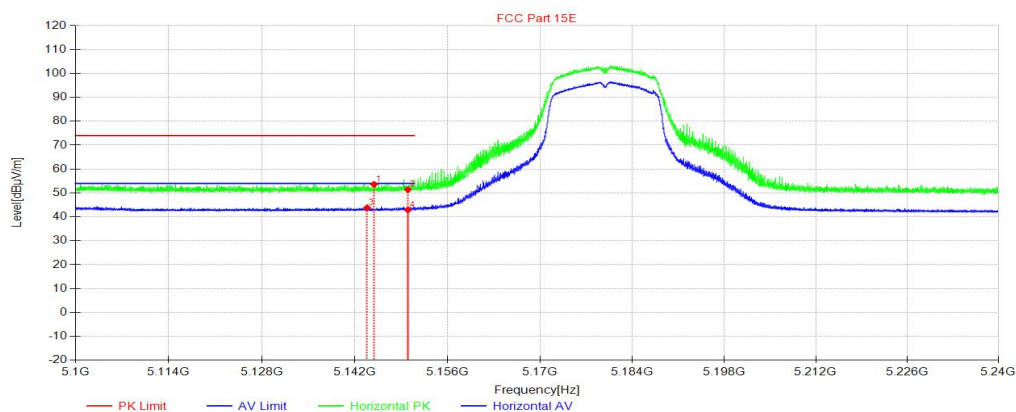
|                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test Procedure:        | <ol style="list-style-type: none"><li>For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.</li><li>For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.</li><li>The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.</li><li>The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.</li><li>For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.</li><li>The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.</li><li>Place a marker at the end of the restricted band closest to the transmit frequency to show compliance. Also measure any emissions in the restricted bands. Save the spectrum analyzer plot. Repeat for each power and modulation for lowest and highest channel</li><li>Test the EUT in the lowest channel , the Highest channel</li><li>The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode,And found the X axis positioning which it is worse case.</li><li>Repeat above procedures until all frequencies measured was complete.</li></ol> |
| Test Configuration:    | <p>Measurements Below 1000MHz</p> <ul style="list-style-type: none"><li>• RBW = 120 kHz</li><li>• VBW = 300 kHz</li><li>• Detector = Peak</li><li>• Trace mode = max hold</li></ul> <p>Peak Measurements Above 1000 MHz</p> <ul style="list-style-type: none"><li>• RBW = 1 MHz</li><li>• VBW <math>\geq</math> 3 MHz</li><li>• Detector = Peak</li><li>• Sweep time = auto</li><li>• Trace mode = max hold</li></ul> <p>Average Measurements Above 1000MHz</p> <ul style="list-style-type: none"><li>• RBW = 1 MHz</li><li>• VBW = 10 Hz, when duty cycle is no less than 98 percent.</li><li>• VBW <math>\geq</math> 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Exploratory Test Mode: | Transmitting with all kind of modulations, data rates.<br>Transmitting mode.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Final Test Mode:       | Pretest the EUT at Charge + Transmitting mode.<br>Through Pre-scan, find the worst case of all modulations.<br>Only the worst case is recorded in the report.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Instruments Used:      | Refer to section 2.9 for details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Test Results:          | Pass                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |



## Test Date

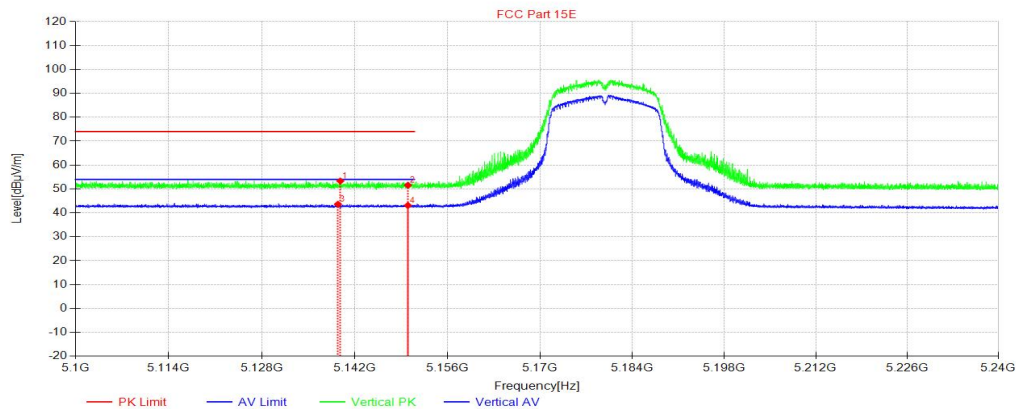
5.1G 11A 5180MHz

Horizontal:



| NO. | Freq. [MHz] | Reading Level [dBμV] | Correct Factor [dB/m] | Result Level [dBμV/m] | AV Limit [dBμV/m] | Margin [dB] | Height [cm] | Angle [°] | Detector |
|-----|-------------|----------------------|-----------------------|-----------------------|-------------------|-------------|-------------|-----------|----------|
| 1   | 5144.89     | 48.60                | 5.00                  | 53.60                 | 74.00             | 20.40       | 150         | 278       | PK       |
| 2   | 5150.01     | 46.43                | 5.01                  | 51.44                 | 74.00             | 22.56       | 150         | 187       | PK       |
| 3   | 5143.85     | 38.82                | 4.99                  | 43.81                 | 54.00             | 10.19       | 150         | 167       | AV       |
| 4   | 5150.01     | 37.89                | 5.01                  | 42.90                 | 54.00             | 11.10       | 150         | 290       | AV       |

Vertical:

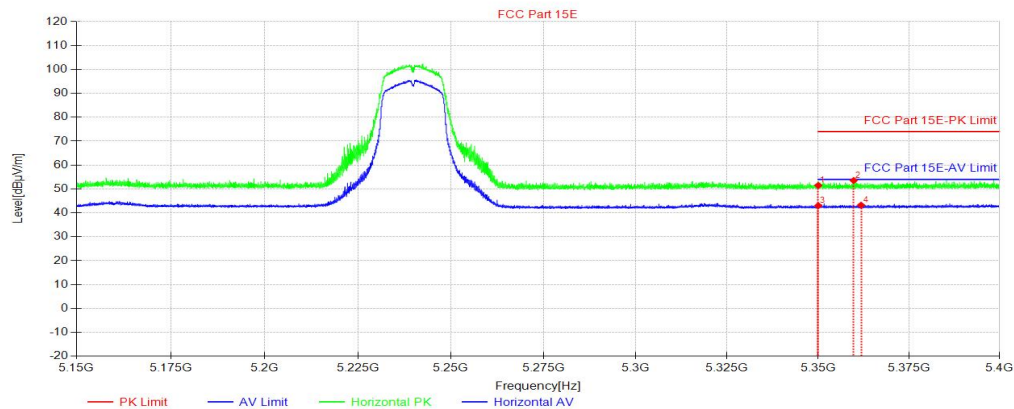


| NO. | Freq. [MHz] | Reading Level [dBμV] | Correct Factor [dB/m] | Result Level [dBμV/m] | AV Limit [dBμV/m] | Margin [dB] | Height [cm] | Angle [°] | Detector |
|-----|-------------|----------------------|-----------------------|-----------------------|-------------------|-------------|-------------|-----------|----------|
| 1   | 5139.81     | 48.33                | 4.98                  | 53.31                 | 74.00             | 20.69       | 150         | 58        | PK       |
| 2   | 5150.01     | 46.55                | 5.01                  | 51.56                 | 74.00             | 22.44       | 150         | 249       | PK       |
| 3   | 5139.44     | 38.62                | 4.98                  | 43.60                 | 54.00             | 10.40       | 150         | 306       | AV       |
| 4   | 5150.01     | 38.11                | 5.01                  | 43.12                 | 54.00             | 10.88       | 150         | 36        | AV       |



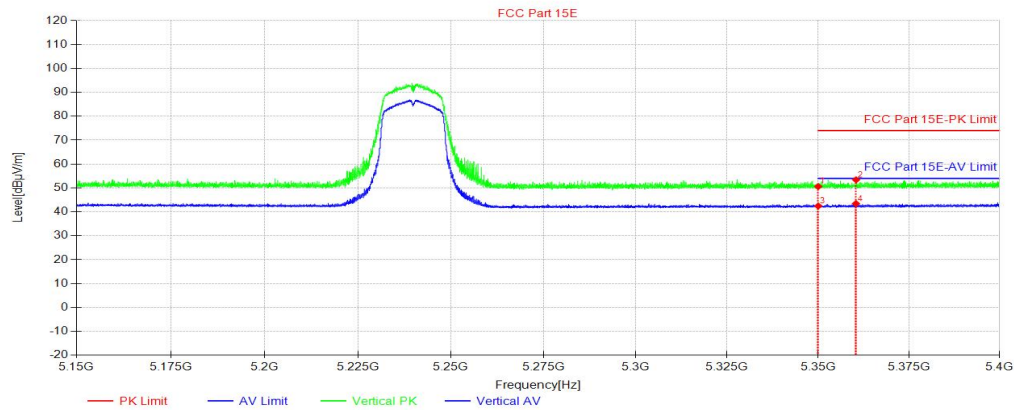
5.1G 11A 5240MHz

Horizontal:



| NO. | Freq. [MHz] | Reading Level [dBμV] | Correct Factor [dB/m] | Result Level [dBμV/m] | AV Limit [dBμV/m] | Margin [dB] | Height [cm] | Angle [°] | Detector |
|-----|-------------|----------------------|-----------------------|-----------------------|-------------------|-------------|-------------|-----------|----------|
| 1   | 5350.02     | 46.34                | 5.15                  | 51.49                 | 74.00             | 22.51       | 150         | 29        | PK       |
| 2   | 5359.75     | 48.41                | 5.13                  | 53.54                 | 74.00             | 20.46       | 150         | 42        | PK       |
| 3   | 5350.02     | 37.87                | 5.15                  | 43.02                 | 54.00             | 10.98       | 150         | 145       | AV       |
| 4   | 5361.80     | 38.10                | 5.13                  | 43.23                 | 54.00             | 10.77       | 150         | 301       | AV       |

Vertical:

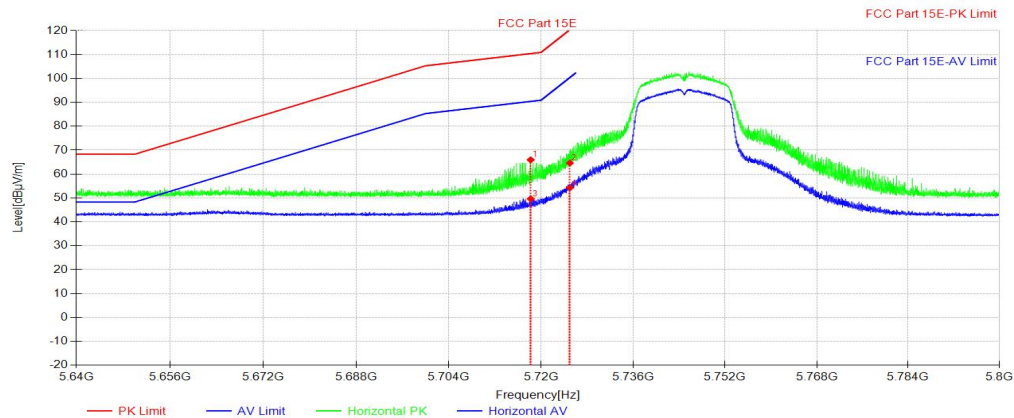


| NO. | Freq. [MHz] | Reading Level [dBμV] | Correct Factor [dB/m] | Result Level [dBμV/m] | AV Limit [dBμV/m] | Margin [dB] | Height [cm] | Angle [°] | Detector |
|-----|-------------|----------------------|-----------------------|-----------------------|-------------------|-------------|-------------|-----------|----------|
| 1   | 5350.02     | 45.44                | 5.15                  | 50.59                 | 74.00             | 23.41       | 150         | 149       | PK       |
| 2   | 5360.42     | 48.27                | 5.13                  | 53.40                 | 74.00             | 20.60       | 150         | 296       | PK       |
| 3   | 5350.02     | 37.29                | 5.15                  | 42.44                 | 54.00             | 11.56       | 150         | 296       | AV       |
| 4   | 5360.40     | 38.32                | 5.13                  | 43.45                 | 54.00             | 10.55       | 150         | 238       | AV       |



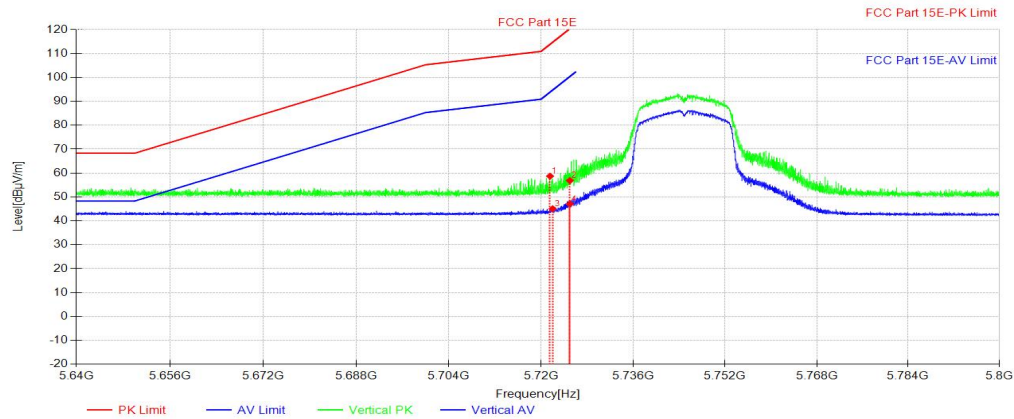
5.8G 11A 5745MHz

Horizontal:



| NO. | Freq. [MHz] | Reading Level [dBμV] | Correct Factor [dB/m] | Result Level [dBμV/m] | AV Limit [dBμV/m] | Margin [dB] | Height [cm] | Angle [°] | Detector |
|-----|-------------|----------------------|-----------------------|-----------------------|-------------------|-------------|-------------|-----------|----------|
| 1   | 5718.20     | 60.76                | 5.19                  | 65.95                 | 110.40            | 44.45       | 150         | 360       | PK       |
| 2   | 5725.00     | 59.41                | 5.21                  | 64.62                 | 120.40            | 55.78       | 150         | 4         | PK       |
| 3   | 5718.22     | 44.44                | 5.19                  | 49.63                 | 90.40             | 40.77       | 150         | 360       | AV       |
| 4   | 5725.00     | 49.00                | 5.21                  | 54.21                 | 100.40            | 46.19       | 150         | 346       | AV       |

Vertical:

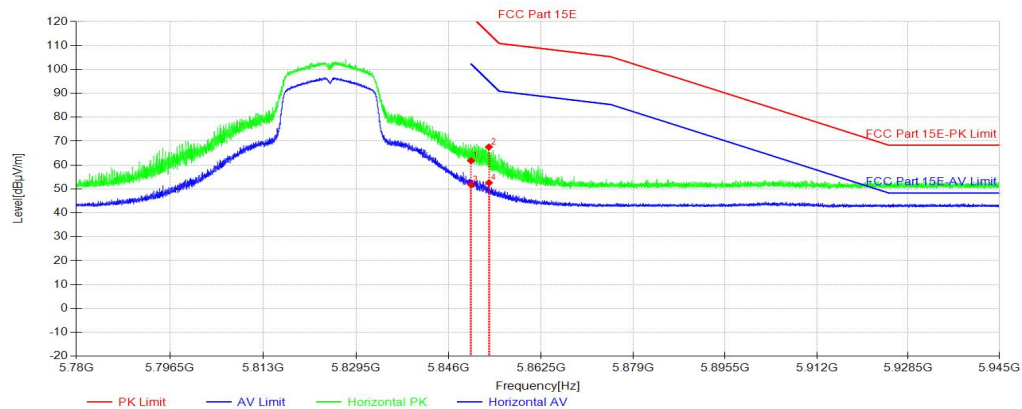


| NO. | Freq. [MHz] | Reading Level [dBμV] | Correct Factor [dB/m] | Result Level [dBμV/m] | AV Limit [dBμV/m] | Margin [dB] | Height [cm] | Angle [°] | Detector |
|-----|-------------|----------------------|-----------------------|-----------------------|-------------------|-------------|-------------|-----------|----------|
| 1   | 5721.56     | 53.50                | 5.20                  | 58.70                 | 113.86            | 55.16       | 150         | 346       | PK       |
| 2   | 5725.00     | 51.64                | 5.21                  | 56.85                 | 120.40            | 63.55       | 150         | 346       | PK       |
| 3   | 5722.01     | 39.88                | 5.20                  | 45.08                 | 94.72             | 49.64       | 150         | 4         | AV       |
| 4   | 5725.00     | 41.88                | 5.21                  | 47.09                 | 100.40            | 53.31       | 150         | 346       | AV       |



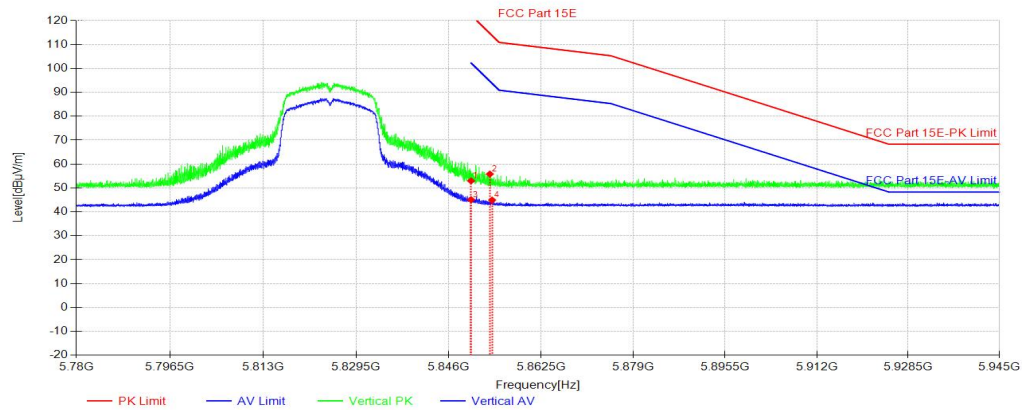
5.8G 11A 5825MHz

Horizontal:



| NO. | Freq. [MHz] | Reading Level [dBμV] | Correct Factor [dB/m] | Result Level [dBμV/m] | AV Limit [dBμV/m] | Margin [dB] | Height [cm] | Angle [°] | Detector |
|-----|-------------|----------------------|-----------------------|-----------------------|-------------------|-------------|-------------|-----------|----------|
| 1   | 5850.00     | 56.33                | 5.50                  | 61.83                 | 122.30            | 60.47       | 150         | 347       | PK       |
| 2   | 5853.18     | 62.06                | 5.51                  | 67.57                 | 115.04            | 47.47       | 150         | 223       | PK       |
| 3   | 5850.00     | 46.33                | 5.50                  | 51.83                 | 102.30            | 50.47       | 150         | 347       | AV       |
| 4   | 5853.20     | 47.10                | 5.51                  | 52.61                 | 95.00             | 42.39       | 150         | 223       | AV       |

Vertical:



| NO. | Freq. [MHz] | Reading Level [dBμV] | Correct Factor [dB/m] | Result Level [dBμV/m] | AV Limit [dBμV/m] | Margin [dB] | Height [cm] | Angle [°] | Detector |
|-----|-------------|----------------------|-----------------------|-----------------------|-------------------|-------------|-------------|-----------|----------|
| 1   | 5850.00     | 47.45                | 5.50                  | 52.95                 | 122.30            | 69.35       | 150         | 0         | PK       |
| 2   | 5853.35     | 50.31                | 5.51                  | 55.82                 | 114.66            | 58.84       | 150         | 318       | PK       |
| 3   | 5850.00     | 39.60                | 5.50                  | 45.10                 | 102.30            | 57.20       | 150         | 344       | AV       |
| 4   | 5853.76     | 39.42                | 5.51                  | 44.93                 | 93.72             | 48.79       | 150         | 344       | AV       |

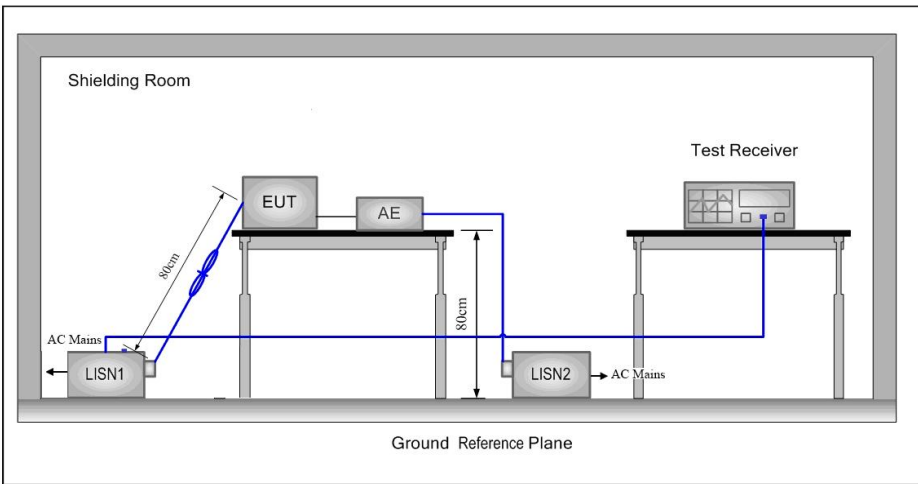
1. The Measurement (Result Level) is calculated by Reading Level adding the Correct Factor(maybe including Ant.Factor and the Cable Factor etc.), The basic equation is as follows:

Result Level= Reading Level + Correct Factor(including Ant.Factor, Cable Factor etc. )

2. All channels had been pre-test, 802.11A is the worst case, only the worst case was reported.



### 3.11 AC Power Line Conducted Emissions

|                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |              |           |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-----------|
| Test Requirement:      | 47 CFR Part 15 Section 15.407(b)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |              |           |
| Test Method:           | ANSI C63.10: 2020                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |              |           |
| Test Frequency Range:  | 150kHz to 30MHz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |              |           |
| Limit:                 | Frequency range (MHz)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Limit (dBuV) |           |
|                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Quasi-peak   | Average   |
|                        | 0.15-0.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 66 to 56*    | 56 to 46* |
|                        | 0.5-5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 56           | 46        |
|                        | 5-30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 60           | 50        |
|                        | * Decreases with the logarithm of the frequency.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |              |           |
| Test Procedure:        | <p>1) The mains terminal disturbance voltage test was conducted in a shielded room.</p> <p>2) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a <math>50\Omega/50\mu\text{H} + 5\Omega</math> linear impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was bonded to the ground reference plane in the same way as the LISN 1 for the unit being measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was not exceeded.</p> <p>3) The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane,</p> <p>4) The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0.4 m from the vertical ground reference plane. The vertical ground reference plane was bonded to the horizontal ground reference plane. The LISN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane for LISNs mounted on top of the ground reference plane. This distance was between the closest points of the LISN 1 and the EUT. All other units of the EUT and associated equipment was at least 0.8 m from the LISN 2. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10 2013 on conducted measurement.</p> |              |           |
| Test Setup:            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |              |           |
| Exploratory Test Mode: | Transmitting with all kind of modulations, data rates at lowest, middle and highest channel.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |              |           |



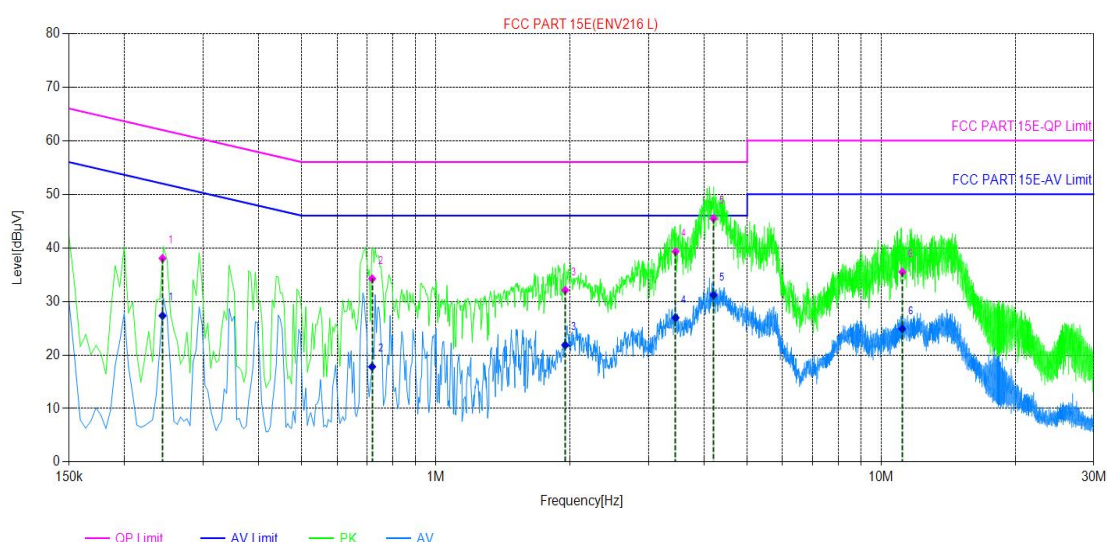
|                   |                                                                                                                                                                                   |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                   | Charge + Transmitting mode.                                                                                                                                                       |
| Final Test Mode:  | Through Pre-scan, find the 6.5Mbps of rate of 802.11n(HT20) at lowest channel is the worst case.<br>Charge + Transmitting mode.<br>Only the worst case is recorded in the report. |
| Instruments Used: | Refer to section 2.9 for details                                                                                                                                                  |
| Test Results:     | Pass                                                                                                                                                                              |

## Measurement Data

An initial pre-scan was performed on the live and neutral lines with peak detector.

Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission were detected.

Live Line:

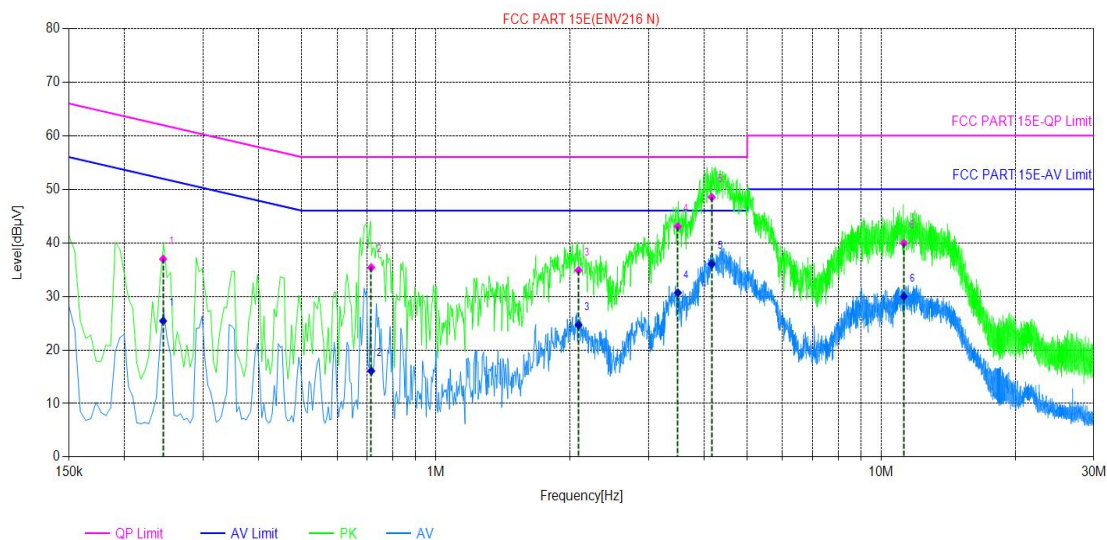


## Final Data List

| NO. | Freq. [MHz] | Factor [dB] | QP Value [dBμV] | QP Limit [dBμV] | QP Margin [dB] | AV Value [dBμV] | AV Limit [dBμV] | AV Margin [dB] | Verdict |
|-----|-------------|-------------|-----------------|-----------------|----------------|-----------------|-----------------|----------------|---------|
| 1   | 0.2433      | 9.91        | 38.04           | 61.98           | 23.94          | 27.32           | 51.98           | 24.66          | PASS    |
| 2   | 0.7190      | 9.76        | 34.24           | 56.00           | 21.76          | 17.80           | 46.00           | 28.20          | PASS    |
| 3   | 1.9516      | 9.74        | 32.09           | 56.00           | 23.91          | 21.84           | 46.00           | 24.16          | PASS    |
| 4   | 3.4523      | 9.74        | 39.29           | 56.00           | 16.71          | 26.95           | 46.00           | 19.05          | PASS    |
| 5   | 4.2009      | 9.76        | 45.48           | 56.00           | 10.52          | 31.17           | 46.00           | 14.83          | PASS    |
| 6   | 11.1486     | 9.88        | 35.48           | 60.00           | 24.52          | 24.87           | 50.00           | 25.13          | PASS    |



Neutral Line:



## Final Data List

| NO. | Freq. [MHz] | Factor [dB] | QP Value [dBμV] | QP Limit [dBμV] | QP Margin [dB] | AV Value [dBμV] | AV Limit [dBμV] | AV Margin [dB] | Verdict |
|-----|-------------|-------------|-----------------|-----------------|----------------|-----------------|-----------------|----------------|---------|
| 1   | 0.2440      | 9.87        | 36.96           | 61.96           | 25.00          | 25.41           | 51.96           | 26.55          | PASS    |
| 2   | 0.7157      | 9.85        | 35.38           | 56.00           | 20.62          | 16.09           | 46.00           | 29.91          | PASS    |
| 3   | 2.0902      | 9.79        | 34.85           | 56.00           | 21.15          | 24.67           | 46.00           | 21.33          | PASS    |
| 4   | 3.4944      | 9.92        | 43.04           | 56.00           | 12.96          | 30.68           | 46.00           | 15.32          | PASS    |
| 5   | 4.1618      | 9.96        | 48.50           | 56.00           | 7.50           | 36.06           | 46.00           | 9.94           | PASS    |
| 6   | 11.2396     | 9.84        | 39.91           | 60.00           | 20.09          | 29.99           | 50.00           | 20.01          | PASS    |

Remark:

1. The 802.11A is the worse case.
2. The following Quasi-Peak and Average measurements were performed on the EUT:
3. The Measurement (Result Level) is calculated by Reading Level adding the Correct Factor(maybe including LISN Factor and the Cable Factor etc.), The basic equation is as follows:

Result Level= Reading Level + Correct Factor(including LISN Factor, Cable Factor etc. )



## 4 Appendix

### Appendix A: Duty Cycle

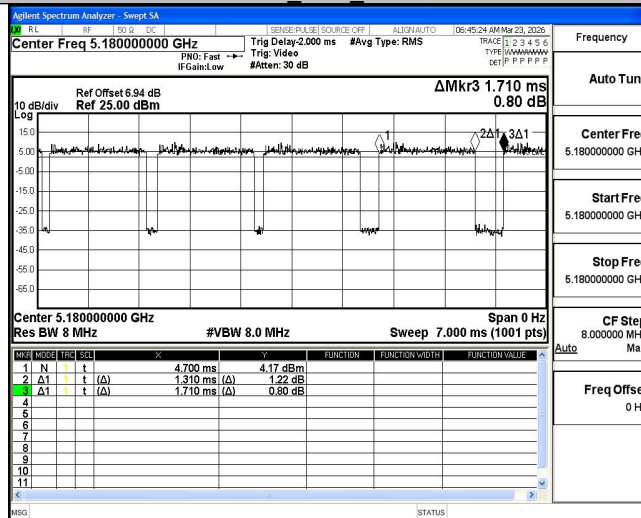
#### Test Result

| TestMode  | Antenna | Freq(MHz) | Transmission Duration [ms] | Transmission Period [ms] | Duty Cycle [%] | Limit | Verdict |
|-----------|---------|-----------|----------------------------|--------------------------|----------------|-------|---------|
| 11A       | Ant1    | 5180      | 1.31                       | 1.71                     | 76.61          | ---   | ---     |
|           |         | 5200      | 1.31                       | 1.47                     | 89.12          | ---   | ---     |
|           |         | 5240      | 1.32                       | 1.46                     | 90.41          | ---   | ---     |
|           |         | 5745      | 1.31                       | 1.53                     | 85.62          | ---   | ---     |
|           |         | 5785      | 1.41                       | 1.63                     | 86.50          | ---   | ---     |
|           |         | 5825      | 1.41                       | 1.64                     | 85.98          | ---   | ---     |
| 11N20SISO | Ant1    | 5180      | 1.31                       | 1.53                     | 85.62          | ---   | ---     |
|           |         | 5200      | 1.31                       | 1.54                     | 85.06          | ---   | ---     |
|           |         | 5240      | 1.32                       | 1.45                     | 91.03          | ---   | ---     |
|           |         | 5745      | 1.31                       | 1.54                     | 85.06          | ---   | ---     |
|           |         | 5785      | 1.32                       | 1.55                     | 85.16          | ---   | ---     |
|           |         | 5825      | 1.31                       | 1.50                     | 87.33          | ---   | ---     |

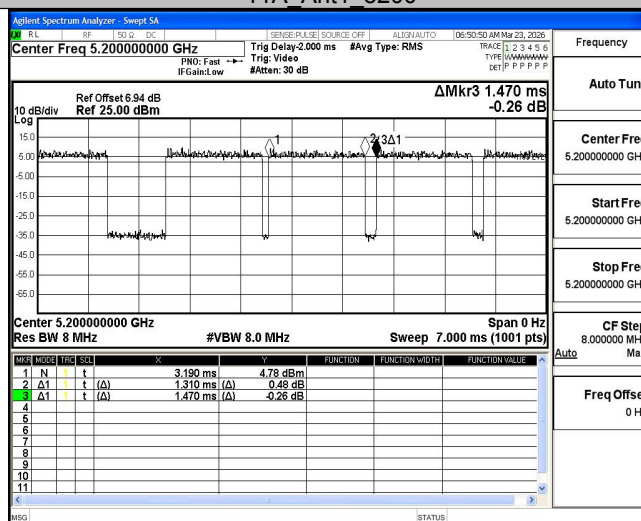


## Test Graphs

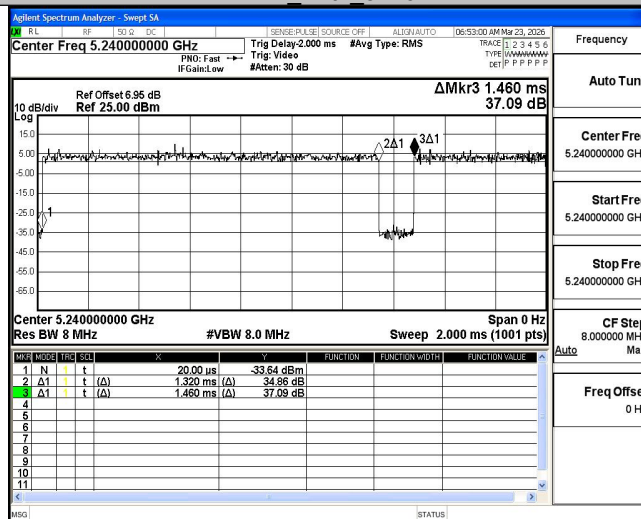
11A\_Ant1\_5180



11A\_Ant1\_5200

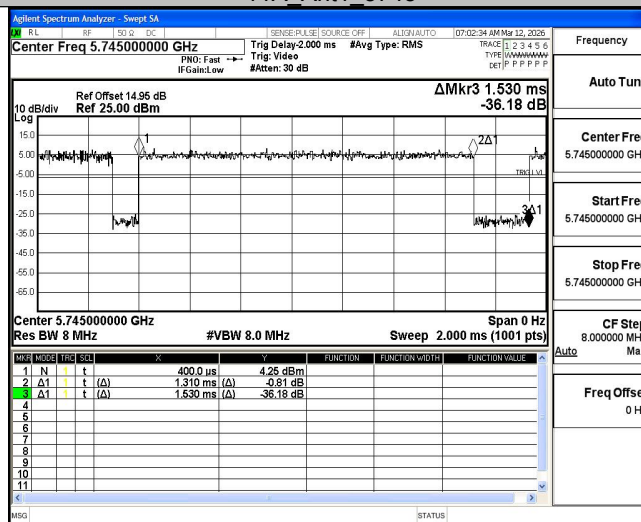


11A\_Ant1\_5240

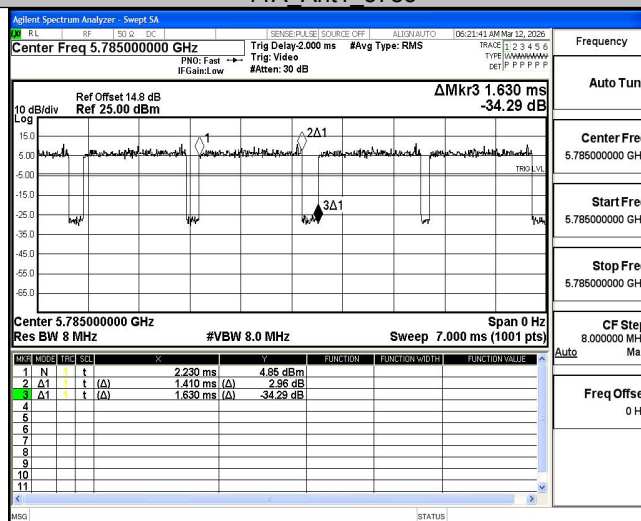




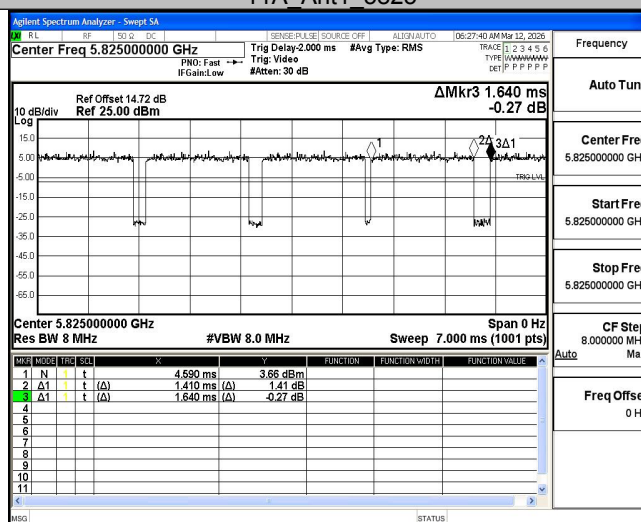
## 11A\_Ant1\_5745



## 11A\_Ant1\_5785

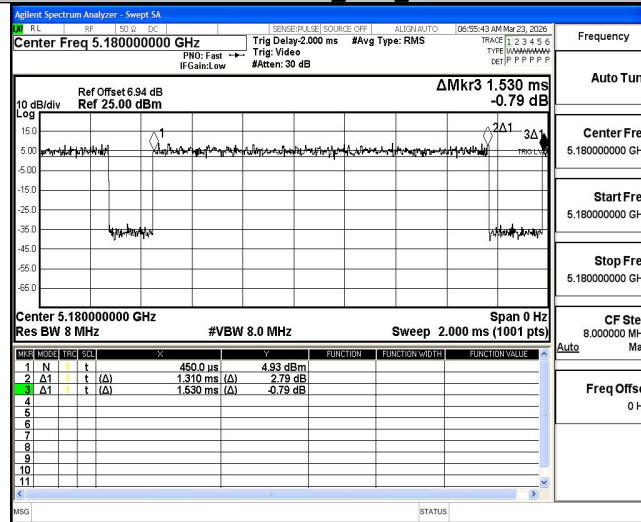


## 11A\_Ant1\_5825

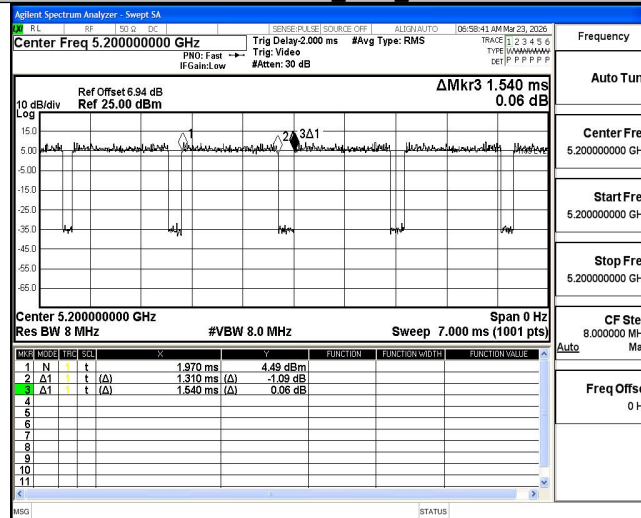




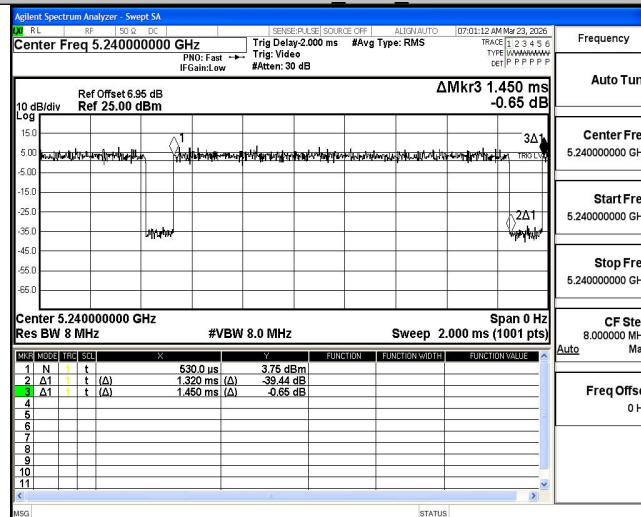
## 11N20SISO Ant1 5180



## 11N20SISO Ant1 5200

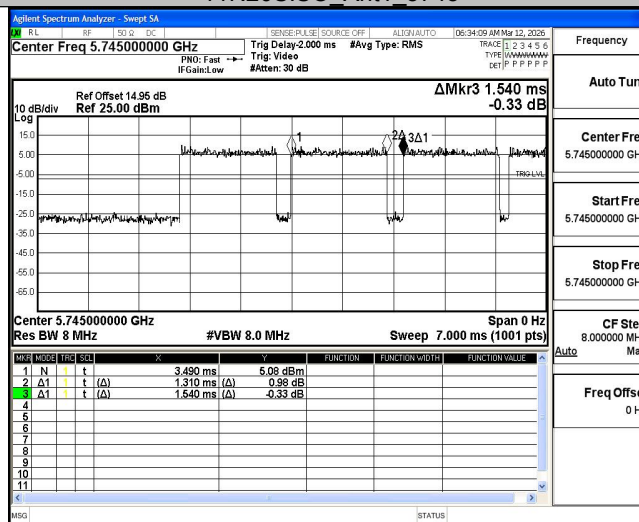


## 11N20SISO Ant1 5240

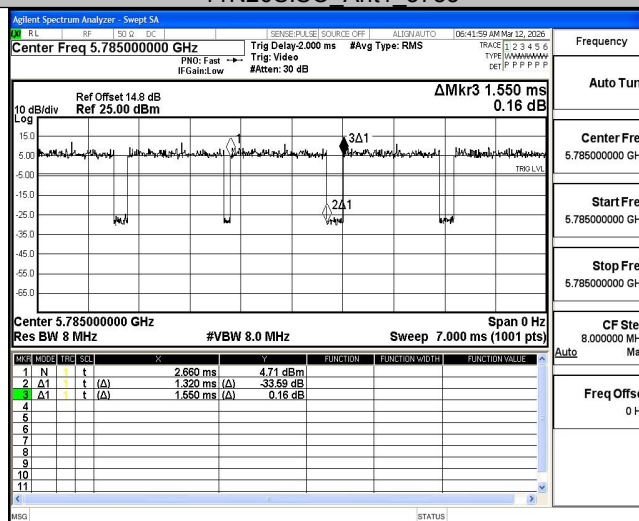




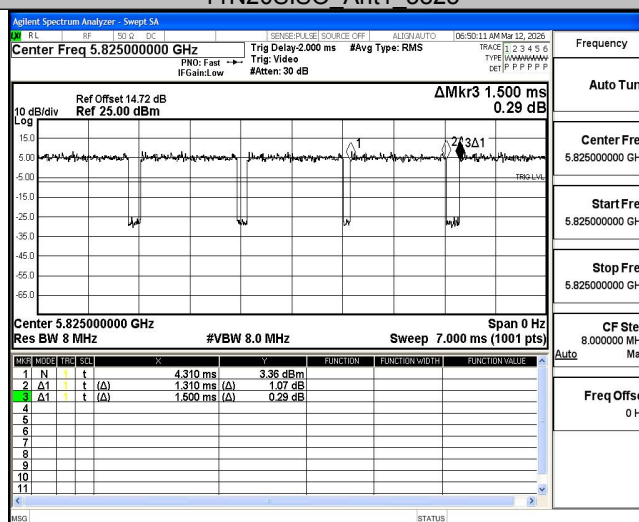
## 11N20SISO Ant1 5745



## 11N20SISO Ant1 5785



## 11N20SISO Ant1 5825



**Appendix B: 26dB Emission Bandwidth&6dB Emission Bandwidth****Test Result**

| TestMode  | Antenna | Freq(MHz) | 26db EBW [MHz] | FL[MHz]  | FH[MHz]  | Limit[MHz] | Verdict |
|-----------|---------|-----------|----------------|----------|----------|------------|---------|
| 11A       | Ant1    | 5180      | 19.920         | 5170.080 | 5190.000 | ---        | ---     |
|           |         | 5200      | 20.160         | 5190.120 | 5210.280 | ---        | ---     |
|           |         | 5240      | 20.040         | 5230.200 | 5250.240 | ---        | ---     |
| 11N20SISO | Ant1    | 5180      | 19.920         | 5169.960 | 5189.880 | ---        | ---     |
|           |         | 5200      | 19.920         | 5190.040 | 5209.960 | ---        | ---     |
|           |         | 5240      | 20.120         | 5229.960 | 5250.080 | ---        | ---     |

**Test Result B4**

| TestMode  | Antenna | Freq(MHz) | 6db EBW [MHz] | FL[MHz]  | FH[MHz]  | Limit[MHz] | Verdict |
|-----------|---------|-----------|---------------|----------|----------|------------|---------|
| 11A       | Ant1    | 5745      | 11.280        | 5740.040 | 5751.320 | 0.5        | PASS    |
|           |         | 5785      | 15.040        | 5777.400 | 5792.440 | 0.5        | PASS    |
|           |         | 5825      | 15.040        | 5817.480 | 5832.520 | 0.5        | PASS    |
| 11N20SISO | Ant1    | 5745      | 11.920        | 5738.720 | 5750.640 | 0.5        | PASS    |
|           |         | 5785      | 14.800        | 5777.760 | 5792.560 | 0.5        | PASS    |
|           |         | 5825      | 10.280        | 5818.760 | 5829.040 | 0.5        | PASS    |