

**FCC 15.407 NII  
5 GHz WLAN Report**

**for**

**LG Electronics Inc.**

**222 LG-ro Jinwi-myeon 451-713  
Pyeongtaek-si, Gyeonggi-do 451-713, Korea**

**Brand : LG**  
**Product Name : Notebook Computer**  
**Model Name : 15Z970**  
**FCC ID : BEJNT-18Z970**

**Prepared by: : AUDIX Technology Corporation,  
EMC Department**



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APPENDIX A TEST PLOTS

APPENDIX B TEST PHOTOGRAPHS

## TEST REPORT CERTIFICATION

Applicant : LG Electronics Inc.  
Factory : LG Electronics Nanjing New Technology Co., Ltd.  
Product Name : Notebook Computer  
Model No. : 15Z970  
Serial No. : N/A  
Brand : LG

### Applicable Standards:

47 CFR FCC Part 15 Subpart E:2016  
ANSI C63.10:2013  
789033 D02 General UNII Test Procedures New Rules v01r03

**AUDIX Technology Corp.** tested the equipment mentioned in accordance with the requirements set forth in the above standards. Test results indicate that the equipment tested is capable of demonstrating compliance with the requirements as documented within this report. **AUDIX Technology Corp.** does not assume responsibility for any conclusions and generalizations drawn from the test results with regard to other specimens and samples.

Date of Test: 2016. 11. 07 ~ 24

Date of Report: 2016. 11. 24

Producer:   
(Annie Yu/Administrator)

Signatory:   
(Ben Cheng/Manager)

## 1. REPORT HISTORY

| Revision | Date         | Revision Summary | Report Number |
|----------|--------------|------------------|---------------|
| 0        | 2016. 11. 24 | Original Report. | EM-F160753    |

## 2. SUMMARY OF TEST RESULTS

| Rule                                                               | Description                                             | Results     |
|--------------------------------------------------------------------|---------------------------------------------------------|-------------|
| 15.207                                                             | Conducted Emission                                      | <b>PASS</b> |
| 15.247(d)/<br>15.205                                               | Radiated Band Edge and<br>Radiated Spurious Emission    | <b>PASS</b> |
| 15.407(a)(5)/<br>15.407(e)                                         | Emission Bandwidth Measurement                          | <b>PASS</b> |
| 15.407(a)                                                          | Maximum Output                                          | <b>PASS</b> |
| 15.407(b)                                                          | Conducted Band Edges and Conducted<br>Spurious Emission | <b>PASS</b> |
| 15.407(a)                                                          | Power Spectral Density                                  | <b>PASS</b> |
| 15.203                                                             | Antenna Requirement                                     | <b>PASS</b> |
| Note: Due to update the standard, so it is unnecessary to re-test. |                                                         |             |

### 3. GENERAL INFORMATION

#### 3.1. Description of EUT

| Product                         | Notebook Computer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |         |  |         |      |         |      |              |      |              |      |        |      |            |  |         |      |                                 |      |                                 |      |                |      |
|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|--|---------|------|---------|------|--------------|------|--------------|------|--------|------|------------|--|---------|------|---------------------------------|------|---------------------------------|------|----------------|------|
| Model Number                    | 15Z970                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |         |  |         |      |         |      |              |      |              |      |        |      |            |  |         |      |                                 |      |                                 |      |                |      |
| Serial Number                   | N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |         |  |         |      |         |      |              |      |              |      |        |      |            |  |         |      |                                 |      |                                 |      |                |      |
| Brand Name                      | LG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |         |  |         |      |         |      |              |      |              |      |        |      |            |  |         |      |                                 |      |                                 |      |                |      |
| Applicant                       | LG Electronics Inc.<br>222, LG-ro, Jinwi-myeon, Pyeongtaek-si, Gyeonggi-do<br>451-713 Korea                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |         |  |         |      |         |      |              |      |              |      |        |      |            |  |         |      |                                 |      |                                 |      |                |      |
| Factory                         | LG Electronics Nanjing New Technology Co., Ltd.<br>No.346, Yaixin Road, Economic & Technical Development<br>Zone, Nanjing, China.                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |         |  |         |      |         |      |              |      |              |      |        |      |            |  |         |      |                                 |      |                                 |      |                |      |
| RF Features                     | WLAN: 802.11a/b/g/n/ac<br>Bluetooth: BT and BLE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |         |  |         |      |         |      |              |      |              |      |        |      |            |  |         |      |                                 |      |                                 |      |                |      |
| Transmit Type                   | <table><thead><tr><th colspan="2">2.4 GHz</th></tr></thead><tbody><tr><td>802.11b</td><td>1T1R</td></tr><tr><td>802.11g</td><td>1T1R</td></tr><tr><td>802.11n-HT20</td><td>2T2R</td></tr><tr><td>802.11n-HT40</td><td>2T2R</td></tr><tr><td>BT/BLE</td><td>1T1R</td></tr></tbody></table><br><table><thead><tr><th colspan="2">UNII Bands</th></tr></thead><tbody><tr><td>802.11a</td><td>1T1R</td></tr><tr><td>802.11n-HT20/<br/>802.11ac-VHT20</td><td>2T2R</td></tr><tr><td>802.11n-HT40/<br/>802.11ac-VHT40</td><td>2T2R</td></tr><tr><td>802.11ac-VHT80</td><td>2T2R</td></tr></tbody></table> | 2.4 GHz |  | 802.11b | 1T1R | 802.11g | 1T1R | 802.11n-HT20 | 2T2R | 802.11n-HT40 | 2T2R | BT/BLE | 1T1R | UNII Bands |  | 802.11a | 1T1R | 802.11n-HT20/<br>802.11ac-VHT20 | 2T2R | 802.11n-HT40/<br>802.11ac-VHT40 | 2T2R | 802.11ac-VHT80 | 2T2R |
| 2.4 GHz                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |         |  |         |      |         |      |              |      |              |      |        |      |            |  |         |      |                                 |      |                                 |      |                |      |
| 802.11b                         | 1T1R                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |         |  |         |      |         |      |              |      |              |      |        |      |            |  |         |      |                                 |      |                                 |      |                |      |
| 802.11g                         | 1T1R                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |         |  |         |      |         |      |              |      |              |      |        |      |            |  |         |      |                                 |      |                                 |      |                |      |
| 802.11n-HT20                    | 2T2R                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |         |  |         |      |         |      |              |      |              |      |        |      |            |  |         |      |                                 |      |                                 |      |                |      |
| 802.11n-HT40                    | 2T2R                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |         |  |         |      |         |      |              |      |              |      |        |      |            |  |         |      |                                 |      |                                 |      |                |      |
| BT/BLE                          | 1T1R                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |         |  |         |      |         |      |              |      |              |      |        |      |            |  |         |      |                                 |      |                                 |      |                |      |
| UNII Bands                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |         |  |         |      |         |      |              |      |              |      |        |      |            |  |         |      |                                 |      |                                 |      |                |      |
| 802.11a                         | 1T1R                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |         |  |         |      |         |      |              |      |              |      |        |      |            |  |         |      |                                 |      |                                 |      |                |      |
| 802.11n-HT20/<br>802.11ac-VHT20 | 2T2R                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |         |  |         |      |         |      |              |      |              |      |        |      |            |  |         |      |                                 |      |                                 |      |                |      |
| 802.11n-HT40/<br>802.11ac-VHT40 | 2T2R                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |         |  |         |      |         |      |              |      |              |      |        |      |            |  |         |      |                                 |      |                                 |      |                |      |
| 802.11ac-VHT80                  | 2T2R                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |         |  |         |      |         |      |              |      |              |      |        |      |            |  |         |      |                                 |      |                                 |      |                |      |
| Device Category                 | <input type="checkbox"/> Outdoor Access Point<br><input type="checkbox"/> Fixed point-to-point Access Point<br><input type="checkbox"/> Indoor Access Point<br><input checked="" type="checkbox"/> Mobile and Portable client device                                                                                                                                                                                                                                                                                                                                                                |         |  |         |      |         |      |              |      |              |      |        |      |            |  |         |      |                                 |      |                                 |      |                |      |
| Date of Receipt of Sample       | 2016. 11. 07                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |         |  |         |      |         |      |              |      |              |      |        |      |            |  |         |      |                                 |      |                                 |      |                |      |

### 3.2. Description of Key Component Lists

| Item                       | Vendor                                     | Model name                          | Description                                                                           |
|----------------------------|--------------------------------------------|-------------------------------------|---------------------------------------------------------------------------------------|
| System                     | Microsoft                                  | Windows 10                          | ---                                                                                   |
| Main Board                 | LGIT                                       | 13/14/15Z970 Main                   | ---                                                                                   |
|                            | E&E                                        | 13/14/15Z970 Main                   | ---                                                                                   |
| CPU<br>(Socket: BGA1356)   | Intel                                      | i7-7500U                            | 2.70GHz, up to 2.90GHz                                                                |
|                            | Intel                                      | i5-7200U                            | 2.50GHz, up to 2.71GHz                                                                |
| Memory                     | SAMSUNG                                    | M471A1K43BB0-CPB                    | 8GB DDR4 2133MHz                                                                      |
|                            | SK hynix                                   | HMA81GS6AFR8N-TF                    | 8GB DDR4 2133MHz                                                                      |
| LCD Panel                  | LG Display                                 | LP156WFA-SPC1                       | Resolution: 1920 x 1080, 60Hz<br>HDMI: 4K; (Including touch)                          |
|                            | LG Display                                 | LP156WF8-SPA1                       | (Non touch)                                                                           |
| Storage                    | SAMSUNG                                    | MZNLN512HMP<br>(MZ-NLN512A)         | 512GB                                                                                 |
|                            | SK hynix                                   | HFS512G39MND-3510A                  | 512GB                                                                                 |
| Web Camera                 | Namuga                                     | LC121 / LC119                       | 1.00M/HD                                                                              |
| WLAN Combo Card            | Intel                                      | 8265D2W                             | 802.11a/b/g/n/ac<br>2.4GHz/5GHz + BT 4.2 BLE<br>FCC ID: PD98265D2<br>IC: 1000M-8265D2 |
| Wireless LAN Antenna       | LG (INPAQ)                                 | WA-F-LBLB-04-049                    | FPCB Type<br>Main: Black, Aux: Gray                                                   |
| Wireless LAN Board         | E&E                                        | 15Z970 WLAN SUB                     | ---                                                                                   |
|                            | HANNSTAR                                   | 15Z970 WLAN SUB                     | ---                                                                                   |
| HDMI Board <sup>Note</sup> | LGIT / E&E                                 | 15Z970 HDMI SUB<br>(TBT3 Model)     | ---                                                                                   |
|                            | E&E /<br>HANNSTAR                          | 15Z970 HDMI SUB<br>(Non TBT3 Model) | ---                                                                                   |
| Keyboard                   | LG                                         | 15Z970 KR<br>HMB8154ELB13           | ---                                                                                   |
|                            | LG                                         | 15Z970 KR<br>HMB8154ELB01           | ---                                                                                   |
| Touch Pad                  | LG                                         | EBD62827901                         | ---                                                                                   |
|                            |                                            | FA167D-16H0                         | ---                                                                                   |
|                            |                                            | EBD61685203<br>SA167D-26H5          | ---                                                                                   |
| Type C to LAN              | LG                                         | 10/100 Megabit Ethernet             | ---                                                                                   |
|                            | Type C to LAN: Shielded, Undetached, 0.12m |                                     |                                                                                       |

| Item         | Vendor                                                                                                                   | Model name | Description                                              |
|--------------|--------------------------------------------------------------------------------------------------------------------------|------------|----------------------------------------------------------|
| Battery Pack | LG                                                                                                                       | LBR1223E   | 60.06Wh, DC7.7V, 7800mAh                                 |
|              | LG                                                                                                                       | LBP7221E   | 34.61Wh, DC7.7V, 4495mAh                                 |
| AC Adapter   | LG<br>(Lien Chang)                                                                                                       | LCAP25B    | I/P: AC 100-240V, 50-60Hz,<br>1.0A,<br>O/P: DC 19V, 2.1A |
|              | DC Power Cord: Non-Shielded, Undetached, 1.5m, Bonded a ferrite core<br>AC Power Cord: Non-Shielded, Detached, 1.5m (2C) |            |                                                          |

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

**Note: SKU: 15Z970-H for with TBT3 mode, 15Z970-G for non TBT3 mode.**

### 3.3. EUT Specifications Assessed in Current Report

| Mode                                                                             | UNII Band | Fundamental Range (MHz) | Channel Number | Modulation                              | Data Rate (Mbps) |
|----------------------------------------------------------------------------------|-----------|-------------------------|----------------|-----------------------------------------|------------------|
| 802.11a                                                                          | I         | 5180-5240               | 4              | OFDM Modulation (BPSK/QPSK/16QAM/64QAM) | Up to 54         |
|                                                                                  | II-2A     | 5260-5320               | 4              |                                         |                  |
|                                                                                  | II-2C     | 5500-5720               | 12             |                                         |                  |
|                                                                                  | III       | 5745-5825               | 5              |                                         |                  |
| 802.11n-HT20/<br>802.11ac-VHT20                                                  | I         | 5180-5240               | 4              | OFDM Modulation (BPSK/QPSK/16QAM/64QAM) | MCS0~15          |
|                                                                                  | II-2A     | 5260-5320               | 4              |                                         |                  |
|                                                                                  | II-2C     | 5500-5720               | 12             |                                         |                  |
|                                                                                  | III       | 5745-5825               | 5              |                                         |                  |
| 802.11n-HT40/<br>802.11ac-VHT40                                                  | I         | 5190-5230               | 2              | OFDM Modulation (BPSK/QPSK/16QAM/64QAM) | MCS0~15          |
|                                                                                  | II-2A     | 5270-5310               | 2              |                                         |                  |
|                                                                                  | II-2C     | 5510-5710               | 6              |                                         |                  |
|                                                                                  | III       | 5755-5795               | 2              |                                         |                  |
| 802.11ac-VHT80                                                                   | I         | 5210                    | 1              | OFDM Modulation (BPSK/QPSK/16QAM/64QAM) | MCS0~15          |
|                                                                                  | II-2A     | 5290                    | 1              |                                         |                  |
|                                                                                  | II-2C     | 5530-5690               | 3              |                                         |                  |
|                                                                                  | III       | 5775                    | 1              |                                         |                  |
| Remark: UNII Band II (DFS Function, Slave/no In service monitor, no Ad-Hoc mode) |           |                         |                |                                         |                  |

| Channel List                        |                |                 |           |                |                 |
|-------------------------------------|----------------|-----------------|-----------|----------------|-----------------|
| 802.11a/802.11n-HT20/802.11ac-VHT20 |                |                 |           |                |                 |
| UNII Band                           | Channel Number | Frequency (MHz) | UNII Band | Channel Number | Frequency (MHz) |
| I                                   | 36             | 5180            | II-2C     | 120            | 5600            |
|                                     | 40             | 5200            |           | 124            | 5620            |
|                                     | 44             | 5220            |           | 128            | 5640            |
|                                     | 48             | 5240            |           | 132            | 5660            |
| II-2A                               | 52             | 5260            |           | 136            | 5680            |
|                                     | 56             | 5280            |           | 140            | 5700            |
|                                     | 60             | 5300            |           | 144            | 5720            |
|                                     | 64             | 5320            |           | 149            | 5745            |
| II-2C                               | 100            | 5500            | III       | 153            | 5765            |
|                                     | 104            | 5520            |           | 157            | 5785            |
|                                     | 108            | 5540            |           | 161            | 5805            |
|                                     | 112            | 5560            |           | 165            | 5825            |
|                                     | 116            | 5580            |           |                |                 |

| Channel List                |                |                 |           |                |                 |
|-----------------------------|----------------|-----------------|-----------|----------------|-----------------|
| 802.11n-HT40/802.11ac-VHT40 |                |                 |           |                |                 |
| UNII Band                   | Channel Number | Frequency (MHz) | UNII Band | Channel Number | Frequency (MHz) |
| I                           | 38             | 5190            | II-2C     | 118            | 5590            |
|                             | 46             | 5230            |           | 126            | 5630            |
| II-2A                       | 54             | 5270            |           | 134            | 5670            |
|                             | 62             | 5310            |           | 142            | 5710            |
| II-2C                       | 102            | 5510            | III       | 151            | 5755            |
|                             | 110            | 5550            |           | 159            | 5795            |

| Channel List   |                |                 |           |                |                 |
|----------------|----------------|-----------------|-----------|----------------|-----------------|
| 802.11ac-VHT80 |                |                 |           |                |                 |
| UNII Band      | Channel Number | Frequency (MHz) | UNII Band | Channel Number | Frequency (MHz) |
| I              | 42             | 5210            | II-2C     | 138            | 5690            |
| II-2A          | 58             | 5290            | III       | 155            | 5775            |
| II-2C          | 106            | 5530            |           |                |                 |
|                | 122            | 5610            |           |                |                 |

Note 1: 802.11n has similar modulation to 802.11ac at 20 MHz and 40 MHz bandwidths, we assess the worst case to be the representative mode in this report.

2: Test modes are presented at section 3.6.

### 3.4. Antenna Information

| 2.4G Antenna |                         |             |              |                 |                |
|--------------|-------------------------|-------------|--------------|-----------------|----------------|
| No.          | Antenna Part Number     | Manufacture | Antenna Type | Frequency (MHz) | Max Gain (dBi) |
| 1            | WA-F-LBLB-04-049 (Main) | INPAQ       | FPCB         | 2400            | 2.53           |
|              |                         |             |              | 2450            | 3.82           |
|              |                         |             |              | 2500            | 3.49           |
| 2            | WA-F-LBLB-04-049 (AUX)  |             |              | 2400            | 1.94           |
|              |                         |             |              | 2450            | 2.70           |
|              |                         |             |              | 2500            | 1.47           |

| 5G Antenna |                         |             |              |                 |                |
|------------|-------------------------|-------------|--------------|-----------------|----------------|
| No.        | Antenna Part Number     | Manufacture | Antenna Type | Frequency (MHz) | Max Gain (dBi) |
| 1          | WA-F-LBLB-04-049 (Main) | INPAQ       | FPCB         | 5100            | 2.61           |
|            |                         |             |              | 5400            | 1.48           |
|            |                         |             |              | 5800            | 4.59           |
| 2          | WA-F-LBLB-04-049 (AUX)  |             |              | 5100            | 2.90           |
|            |                         |             |              | 5400            | 0.61           |
|            |                         |             |              | 5800            | 0.64           |

### 3.5. Data Rate Relative to Output Power

| 802.11a |            |           |             | 802.11n-HT20 |            |           |             |
|---------|------------|-----------|-------------|--------------|------------|-----------|-------------|
| Channel | Modulation | Date Rate | Power (dBm) | Channel      | Modulation | Date Rate | Power (dBm) |
| 36      | BPSK       | 6         | 16.97       | 36           | BPSK       | MCS8      | 14.96       |
| 36      | QPSK       | 9         | 16.91       | 36           | QPSK       | MCS9      | 14.92       |
| 36      | QPSK       | 12        | 16.84       | 36           | QPSK       | MCS10     | 14.89       |
| 36      | 16-QAM     | 18        | 16.79       | 36           | 16-QAM     | MCS11     | 14.81       |
| 36      | 16-QAM     | 24        | 16.72       | 36           | 16-QAM     | MCS12     | 14.75       |
| 36      | 64-QAM     | 36        | 16.65       | 36           | 64-QAM     | MCS13     | 14.68       |
| 36      | 64-QAM     | 48        | 16.57       | 36           | 64-QAM     | MCS14     | 14.64       |
| 36      | 64-QAM     | 54        | 16.51       | 36           | 64-QAM     | MCS15     | 14.62       |

| 802.11n-HT40 |            |           |             | 802.11ac-VHT80 |            |           |             |
|--------------|------------|-----------|-------------|----------------|------------|-----------|-------------|
| Channel      | Modulation | Date Rate | Power (dBm) | Channel        | Modulation | Date Rate | Power (dBm) |
| 38           | BPSK       | MCS8      | 12.59       | 38             | BPSK       | MCS8      | 10.90       |
| 38           | QPSK       | MCS9      | 12.53       | 38             | QPSK       | MCS9      | 10.83       |
| 38           | QPSK       | MCS10     | 12.48       | 38             | QPSK       | MCS10     | 10.79       |
| 38           | 16-QAM     | MCS11     | 12.37       | 38             | 16-QAM     | MCS11     | 10.74       |
| 38           | 16-QAM     | MCS12     | 12.34       | 38             | 16-QAM     | MCS12     | 10.70       |
| 38           | 64-QAM     | MCS13     | 12.22       | 38             | 64-QAM     | MCS13     | 10.58       |
| 38           | 64-QAM     | MCS14     | 12.18       | 38             | 64-QAM     | MCS14     | 10.52       |
| 38           | 64-QAM     | MCS15     | 12.11       | 38             | 64-QAM     | MCS15     | 10.45       |

Note: Above results are assessed in average power.

### 3.6. Test Configuration

| Mode                        | Duty Cycle (x) | T (ms) | Duty Cycle Factor (dB) |
|-----------------------------|----------------|--------|------------------------|
| 802.11a                     | 1.00           | 2.050  | 0.00                   |
| 802.11n-HT20/802.11ac-VHT20 | 0.97           | 0.975  | 0.13                   |
| 802.11n-HT40/802.11ac-VHT40 | 0.94           | 0.494  | 0.27                   |
| 802.11ac-VHT80              | 0.66           | 0.663  | 1.80                   |

Note: When duty cycle is less than 98% (0.98) that duty cycle factor  $10\log(1/x)$  is needed to add in conducted test items measured in average detector.

| AC Conduction |                  |
|---------------|------------------|
| Test Case     | Normal operation |

| Item               |                                         | Mode           | Data Rate | Test Channel      |
|--------------------|-----------------------------------------|----------------|-----------|-------------------|
| Radiated Test Case | Radiated Band Edge<br>Note1             | 802.11a        | 6 Mbps    | 36/64/100/140     |
|                    |                                         | 802.11n-HT20   | MCS8      | 36/64/100/140     |
|                    |                                         | 802.11n-HT40   | MCS8      | 38/62/102/134     |
|                    |                                         | 802.11ac-VHT80 | MCS8      | 42/58/106/122     |
|                    | Radiated Spurious Emission<br>Note1 & 2 | 802.11a        | 6 Mbps    | 40/52/120/144/157 |
|                    |                                         | 802.11n-HT20   | MCS8      | 40/52/120/144/157 |
|                    |                                         | 802.11n-HT40   | MCS8      | 46/54/118/142/159 |
|                    |                                         | 802.11ac-VHT80 | MCS8      | 42/58/122/138/155 |

| Item                |                        | Mode           | Data Rate | Test Channel                                     |
|---------------------|------------------------|----------------|-----------|--------------------------------------------------|
| Conducted Test Case | Emission Bandwidth     | 802.11a        | 6 Mbps    | 36/40/48/52/60/64<br>100/120/140/144/149/157/165 |
|                     |                        | 802.11n-HT20   | MCS8      | 36/40/48/52/60/64<br>100/120/140/144/149/157/165 |
|                     |                        | 802.11n-HT40   | MCS8      | 38/46/54/62/102<br>118/134/142/151/159           |
|                     |                        | 802.11ac-VHT80 | MCS8      | 42/58/106/122/138/155                            |
|                     | Maximum output power   | 802.11a        | 6 Mbps    | 36/40/48/52/60/64<br>100/120/140/144/149/157/165 |
|                     |                        | 802.11n-HT20   | MCS8      | 36/40/48/52/60/64<br>100/120/140/144/149/157/165 |
|                     |                        | 802.11n-HT40   | MCS8      | 38/46/54/62/102<br>118/134/142/151/159           |
|                     |                        | 802.11ac-VHT80 | MCS8      | 42/58/106/122/138/155                            |
|                     | Emission Limitations   | 802.11a        | 6 Mbps    | 36/40/48/52/60/64<br>100/120/140/144/149/157/165 |
|                     |                        | 802.11n-HT20   | MCS8      | 36/40/48/52/60/64<br>100/120/140/144/149/157/165 |
|                     |                        | 802.11n-HT40   | MCS8      | 38/46/54/62/102<br>118/134/142/151/159           |
|                     |                        | 802.11ac-VHT80 | MCS8      | 42/58/106/122/138/155                            |
| Conducted Test Case | Power spectral density | 802.11a        | 6 Mbps    | 36/40/48/52/60/64<br>100/120/140/144/149/157/165 |
|                     |                        | 802.11n-HT20   | MCS8      | 36/40/48/52/60/64<br>100/120/140/144/149/157/165 |
|                     |                        | 802.11n-HT40   | MCS8      | 38/46/54/62/102<br>118/134/142/151/159           |
|                     |                        | 802.11ac-VHT80 | MCS8      | 42/58/106/122/138/155                            |

Note 1:

☒ Mobile Device

☐ Portable Device, and 3 axis were assessed. The worst scenario for Radiated Spurious Emission as follow:

- ☐ Lie  
☐ Side  
☐ Stand

Note 2: Low, mid, and high channels were measured, only the worst channel of each modulation was presented in this report.

### 3.7. Tested Supporting System List

#### 3.7.1. Support Peripheral Unit

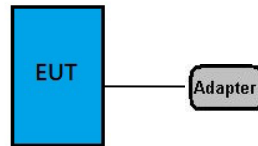
| No. | Product         | Brand     | Model No.  | Serial No.                   | FCC ID |
|-----|-----------------|-----------|------------|------------------------------|--------|
| 1.  | SD Card         | ADATA     | N/A        | N/A                          | N/A    |
| 2.  | Earphone        | APPLE     | N/A        | N/A                          | N/A    |
| 3.  | LCD Monitor     | VIEWSONIC | VP2780-4K  | U8K153600277                 | N/A    |
| 4.  | External HDD #1 | SONY      | HD-E1      | 3GDL0T155151<br>A12          | N/A    |
| 5.  | External HDD #2 | SONY      | HD-E1      | 3GDL0T155150<br>A14          | N/A    |
| 6.  | USB Mouse       | DELL      | MS111-T    | CN-0KW2YH-7<br>1616-282-0XYP | N/A    |
| 7.  | Earphone        | HTC       | Max300     | N/A                          | N/A    |
| 8.  | USB Mouse       | ASUS      | N6-mimi    | N/A                          | N/A    |
| 9.  | LCD TV          | LG        | 22LK330-DB | N/A                          | N/A    |
| 10. | USB Storage     | Transcend | N/A        | N/A                          | N/A    |

#### 3.7.2. Cable Lists

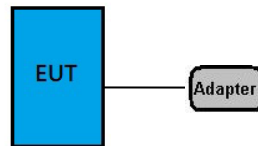
| No. | Cable Description Of The Above Support Units                                     |
|-----|----------------------------------------------------------------------------------|
| 1.  | N/A                                                                              |
| 2.  | Earphone Cable: Unshielded, Detachable, 0.9m                                     |
| 3.  | HDMI Cable: Shielded, Detachable, 1.8m                                           |
| 4.  | USB Cable: Shielded, Detachable, 0.5m                                            |
| 5.  | USB Cable: Shielded, Detachable, 0.5m                                            |
| 6.  | USB Cable: Shielded, Detachable, 1.8m                                            |
| 7.  | Earphone Cable: Unshielded, Detachable, 1.5m                                     |
| 8.  | USB Cable: Shielded, Detachable, 1.5m                                            |
| 9.  | Power Cord: Shielded, Detachable, 1.5m<br>HDMI Cable: Shielded, Detachable, 1.5m |
| 10. | N/A                                                                              |

### 3.8. Setup Configuration

#### 3.8.1. EUT Configuration for Power Line Emission



#### 3.8.2. EUT Configuration for Conducted Test Items



### 3.9. Operating Condition of EUT

Test program “DRTU” is used for enabling EUT WLAN function under continues transmitting and choosing data rate/ channel.

### 3.10. Description of Test Facility

|                          |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|--------------------------|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test Firm Name           | : | <b>AUDIX Technology Corporation</b><br><b>EMC Department</b><br>No. 53-11, Dingfu, Linkou Dist.,<br>New Taipei City 244, Taiwan                                                                                                                                                                                                                                                                                                                                 |
| Test Location & Facility | : | <b>No. 7 Shielded Room</b><br>No. 53-11, Dingfu, Linkou Dist.,<br>New Taipei City 244, Taiwan<br><br><b>Semi-Anechoic Chamber</b><br>No. 53-11, Dingfu, Linkou Dist.,<br>New Taipei City 244, Taiwan<br>IC Test Site Registration No.: 5183B-1<br>Renewal on September 17, 2014<br><br><b>Fully Anechoic Chamber</b><br>No. 53-11, Dingfu, Linkou Dist.,<br>New Taipei City 244, Taiwan<br>IC Test Site Registration No.: 5183B-4<br>Renewal on August 31, 2015 |
| NVLAP Lab. Code          | : | 200077-0                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| TAF Accreditation No     | : | 1724                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| FCC OET Designation      | : | TW1004 & TW1090                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

### 3.11.Measurement Uncertainty

| Test Item                        | Frequency Range | Uncertainty |
|----------------------------------|-----------------|-------------|
| Conduction Test                  | 150kHz~30MHz    | ±3.5dB      |
| Radiation Test<br>(Distance: 3m) | 30MHz~1000MHz   | ± 3.68dB    |
|                                  | Above 1GHz      | ± 5.82dB    |

Remark : Uncertainty =  $k u_c(y)$

| Test Item                      | Uncertainty |
|--------------------------------|-------------|
| Emission Bandwidth             | ± 0.2kHz    |
| Maximum output power           | ± 0.33dB    |
| Power spectral density         | ± 0.13dB    |
| Conducted Emission Limitations | ± 0.13dB    |

## 4. MEASUREMENT EQUIPMENT LIST

### 4.1. Conducted Emission Measurement

| Item | Type          | Manufacturer | Model No. | Serial No. | Cal. Date    | Cal. Interval |
|------|---------------|--------------|-----------|------------|--------------|---------------|
| 1.   | Test Receiver | R&S          | ESCI      | 101276     | 2016. 03. 31 | 1 Year        |
| 2.   | A.M.N.        | R&S          | ESH2-Z5   | 100366     | 2016. 07. 27 | 1 Year        |
| 3.   | L.I.S.N.      | Kyoritsu     | KNW-407   | 8-1539-3   | 2016. 01. 21 | 1 Year        |
| 4.   | Pulse Limiter | R&S          | ESH3-Z2   | 101495     | 2016. 01. 17 | 1 Year        |
| 5.   | Test Software | Audix        | e3        | V.120619C  | N.C.R.       | N.C.R.        |
| 1.   | Test Receiver | R&S          | ESCI      | 101276     | 2016. 03. 31 | 1 Year        |

### 4.2. Radiated Emission Measurement

#### 4.2.1. Frequency Range 9kHz~1000MHz (Semi Anechoic Chamber)

| Item | Type              | Manufacturer | Model No.  | Serial No. | Cal. Date    | Cal. Interval |
|------|-------------------|--------------|------------|------------|--------------|---------------|
| 1.   | Spectrum Analyzer | Agilent      | N9010A-526 | MY53400071 | 2016. 09. 19 | 1 Year        |
| 2.   | Test Receiver     | R & S        | ESCS30     | 100338     | 2016. 06. 22 | 1 Year        |
| 3.   | Amplifier         | HP           | 8447D      | 2944A06305 | 2016. 02. 23 | 1 Year        |
| 4.   | Bilog Antenna     | CHASE        | CBL6112D   | 33821      | 2016. 01. 30 | 1 Year        |
| 5.   | Loop Antenna      | R&S          | HFH2-Z2    | 891847/27  | 2015. 12. 24 | 1 Year        |
| 6.   | Test Software     | Audix        | e3         | V.6.110601 | N.C.R.       | N.C.R.        |

#### 4.2.2. Frequency Range Above 1GHz (Fully Anechoic Chamber)

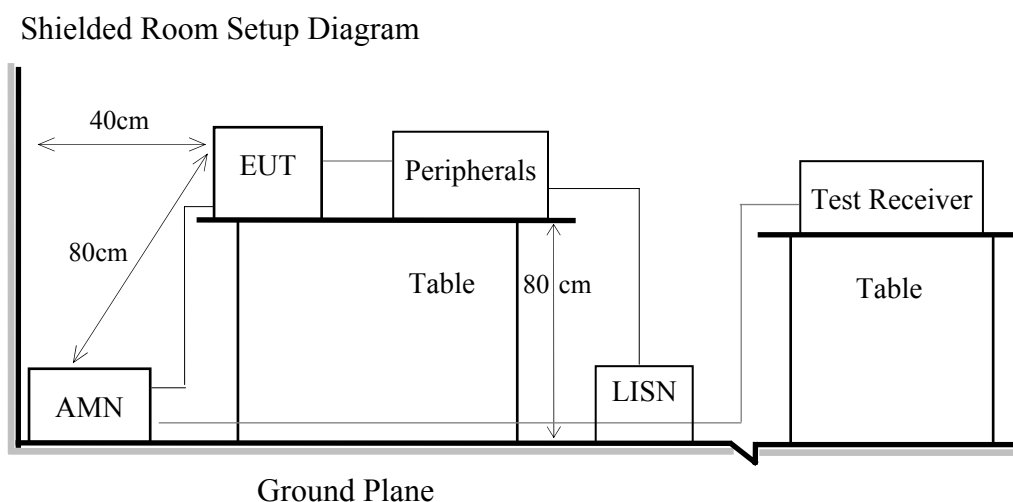
| Item | Type                         | Manufacturer       | Model No. | Serial No. | Cal. Date    | Cal. Interval |
|------|------------------------------|--------------------|-----------|------------|--------------|---------------|
| 1.   | Spectrum Analyzer            | Agilent            | E4446A    | US44300366 | 2016. 08. 19 | 1 Year        |
| 3.   | Amplifier                    | Sonoma             | 310N      | 187161     | 2016. 06. 14 | 1 Year        |
| 4.   | 5G Notch Filter              | Microwave Circuits | N0452502  | 459775     | 2016. 01. 28 | 1 Year        |
| 5.   | 5G Notch Filter              | Microwave Circuits | N0555983  | 459481     | 2016. 01. 28 | 1 Year        |
| 6.   | 5G Notch Filter              | Microwave Circuits | N0258771  | 459776     | 2016. 01. 28 | 1 Year        |
| 7.   | Double-Ridged Waveguide Horn | ETS-Lindgren       | 3117      | 00135902   | 2016. 03. 05 | 1 Year        |
| 8.   | Horn Antenna                 | EMCO               | 3116      | 2653       | 2016. 10. 24 | 1 Year        |
| 9.   | Test Software                | Audix              | e3        | V.6.110601 | N.C.R.       | N.C.R.        |

### 4.3. RF Conducted Measurement

| Item | Type              | Manufacturer | Model No.  | Serial No. | Cal. Date    | Cal. Interval |
|------|-------------------|--------------|------------|------------|--------------|---------------|
| 1.   | Spectrum Analyzer | Agilent      | N9010A-507 | MY52220264 | 2016. 08. 09 | 1 Year        |
| 2.   | Power Meter       | Anritsu      | ML2495A    | 1145008    | 2016. 10. 27 | 1 Year        |
| 3.   | Power Sensor      | Anritsu      | MA2411B    | 1126096    | 2016. 10. 27 | 1 Year        |

## 5. CONDUCTED EMISSION MEASUREMENT

### 5.1. Block Diagram of Test Setup



### 5.2. Power Line Conducted Emission Limit

| Frequency       | Conducted Limit    |                    |
|-----------------|--------------------|--------------------|
|                 | Quasi-Peak Level   | Average Level      |
| 150kHz ~ 500kHz | 66 ~ 56 dB $\mu$ V | 56 ~ 46 dB $\mu$ V |
| 500kHz ~ 5MHz   | 56 dB $\mu$ V      | 46 dB $\mu$ V      |
| 5MHz ~ 30MHz    | 60 dB $\mu$ V      | 50 dB $\mu$ V      |

Remark 1.: If the average limit is met when using a Quasi-Peak detector, the measurement using the average detector is not required.

2.: The lower limit applies to the band edges.

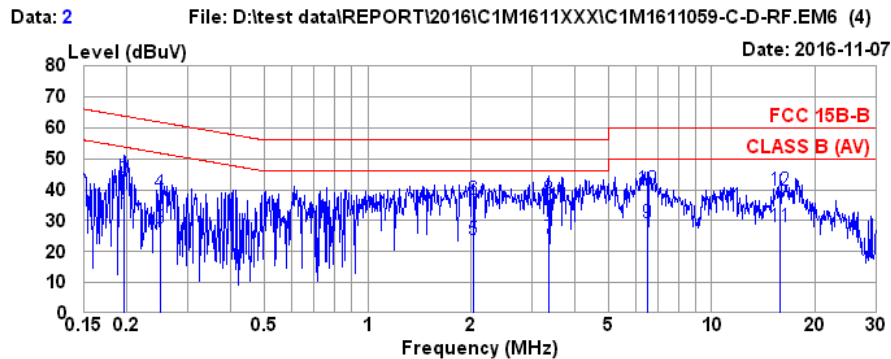
### 5.3. Test Procedure

- 5.3.1. To set up the EUT as indicated in ANSI C 63.10. The EUT was placed on the table which has 80 cm height to the ground and 40 cm distance to the conducting wall.
- 5.3.2. Power supplier of the EUT was connected to the AC mains through an Artificial Mains Network (A.M.N.).
- 5.3.3. The AC power supplies to all peripheral devices must be provided through line impedance stabilization network (L.I.S.N.)
- 5.3.4. Checking frequency range from 150 kHz to 30 MHz and record the emission which does not have 20 dB below limit.

## 5.4. Conducted Emission Measurement Results

PASSED.

|              |                                |            |          |
|--------------|--------------------------------|------------|----------|
| Test Date    | 2016/11/07                     | Temp./Hum. | 24°C/53% |
| Test Voltage | AC 120V, 60Hz (via AC Adapter) |            |          |

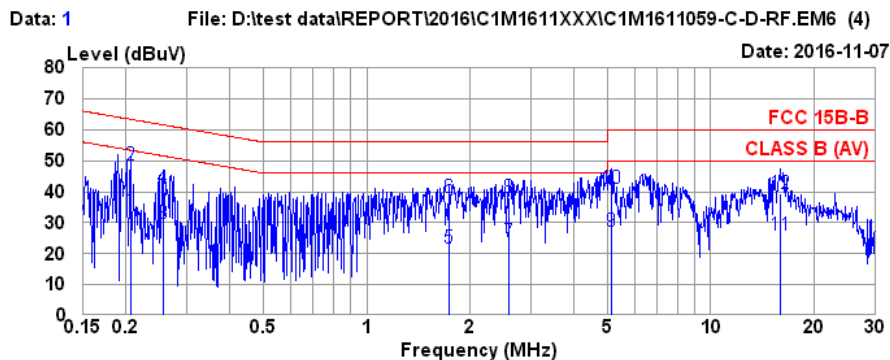


Site no. : No.7 Shielded Room Data no. : 2  
Condition : ESH2-Z5 366(ADAPTER) Phase : NEUTRAL  
Limit : FCC 15B-B  
Env. / Ins. : 24°C / 53% ESCI (1276) Engineer : Nick Du  
EUT : 15Z970  
Power Rating : 120Vac/60Hz  
Test Mode : Operating

|    | Freq.<br>(MHz) | AMN<br>Factor<br>(dB) | Cable<br>Loss<br>(dB) | Pulse<br>Att.<br>(dB) | Reading<br>(dBμV) | Emission<br>Level<br>(dBμV) | Limits<br>(dBμV) | Margin<br>(dB) | Remark  |
|----|----------------|-----------------------|-----------------------|-----------------------|-------------------|-----------------------------|------------------|----------------|---------|
| 1  | 0.195          | 0.17                  | 0.04                  | 9.85                  | 21.78             | 31.84                       | 53.80            | 21.96          | Average |
| 2  | 0.195          | 0.17                  | 0.04                  | 9.85                  | 33.15             | 43.21                       | 63.80            | 20.59          | QP      |
| 3  | 0.249          | 0.18                  | 0.04                  | 9.85                  | 17.45             | 27.52                       | 51.78            | 24.26          | Average |
| 4  | 0.249          | 0.18                  | 0.04                  | 9.85                  | 29.07             | 39.14                       | 61.78            | 22.64          | QP      |
| 5  | 2.023          | 0.25                  | 0.07                  | 9.96                  | 13.61             | 23.89                       | 46.00            | 22.11          | Average |
| 6  | 2.023          | 0.25                  | 0.07                  | 9.96                  | 26.47             | 36.75                       | 56.00            | 19.25          | QP      |
| 7  | 3.364          | 0.30                  | 0.10                  | 9.90                  | 13.90             | 24.20                       | 46.00            | 21.80          | Average |
| 8  | 3.364          | 0.30                  | 0.10                  | 9.90                  | 26.49             | 36.79                       | 56.00            | 19.21          | QP      |
| 9  | 6.488          | 0.43                  | 0.14                  | 9.87                  | 18.86             | 29.30                       | 50.00            | 20.70          | Average |
| 10 | 6.488          | 0.43                  | 0.14                  | 9.87                  | 29.64             | 40.08                       | 60.00            | 19.92          | QP      |
| 11 | 15.801         | 0.83                  | 0.22                  | 9.91                  | 16.99             | 27.95                       | 50.00            | 22.05          | Average |
| 12 | 15.801         | 0.83                  | 0.22                  | 9.91                  | 29.05             | 40.01                       | 60.00            | 19.99          | QP      |

Remarks: 1. Emission Level= AMN Factor + Cable Loss + Pulse Att. + Reading.  
2. If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.

|              |                                |            |          |
|--------------|--------------------------------|------------|----------|
| Test Date    | 2016/11/07                     | Temp./Hum. | 24°C/53% |
| Test Voltage | AC 120V, 60Hz (via AC Adapter) |            |          |



Site no. : No.7 Shielded Room Data no. : 1  
Condition : ESH2-Z5 366(ADAPTER) Phase : LINE  
Limit : FCC 15B-B  
Env. / Ins. : 24°C / 53% ESCI (1276) Engineer : Nick Du  
EUT : 15Z970  
Power Rating : 120Vac/60Hz  
Test Mode : Operating

|    | Freq.<br>(MHz) | AMN<br>Factor<br>(dB) | Cable<br>Loss<br>(dB) | Pulse<br>Att.<br>(dB) | Reading<br>(dBμV) | Emission<br>Level<br>(dBμV) | Limits<br>(dBμV) | Margin<br>(dB) | Remark  |
|----|----------------|-----------------------|-----------------------|-----------------------|-------------------|-----------------------------|------------------|----------------|---------|
| 1  | 0.206          | 0.16                  | 0.04                  | 9.85                  | 23.69             | 33.74                       | 53.36            | 19.62          | Average |
| 2  | 0.206          | 0.16                  | 0.04                  | 9.85                  | 38.38             | 48.43                       | 63.36            | 14.93          | QP      |
| 3  | 0.256          | 0.17                  | 0.04                  | 9.85                  | 19.73             | 29.79                       | 51.56            | 21.77          | Average |
| 4  | 0.256          | 0.17                  | 0.04                  | 9.85                  | 31.12             | 41.18                       | 61.56            | 20.38          | QP      |
| 5  | 1.744          | 0.24                  | 0.07                  | 9.95                  | 11.47             | 21.73                       | 46.00            | 24.27          | Average |
| 6  | 1.744          | 0.24                  | 0.07                  | 9.95                  | 27.77             | 38.03                       | 56.00            | 17.97          | QP      |
| 7  | 2.581          | 0.28                  | 0.08                  | 9.93                  | 13.75             | 24.04                       | 46.00            | 21.96          | Average |
| 8  | 2.581          | 0.28                  | 0.08                  | 9.93                  | 27.68             | 37.97                       | 56.00            | 18.03          | QP      |
| 9  | 5.166          | 0.40                  | 0.12                  | 9.86                  | 16.89             | 27.27                       | 50.00            | 22.73          | Average |
| 10 | 5.166          | 0.40                  | 0.12                  | 9.86                  | 30.79             | 41.17                       | 60.00            | 18.83          | QP      |
| 11 | 15.885         | 0.94                  | 0.22                  | 9.91                  | 15.03             | 26.10                       | 50.00            | 23.90          | Average |
| 12 | 15.885         | 0.94                  | 0.22                  | 9.91                  | 28.15             | 39.22                       | 60.00            | 20.78          | QP      |

Remarks: 1. Emission Level= AMN Factor + Cable Loss + Pulse Att. + Reading.  
2. If the average limit is met when using a quasi-peak detector,  
the EUT shall be deemed to meet both limits and measurement  
with average detector is unnecessary.

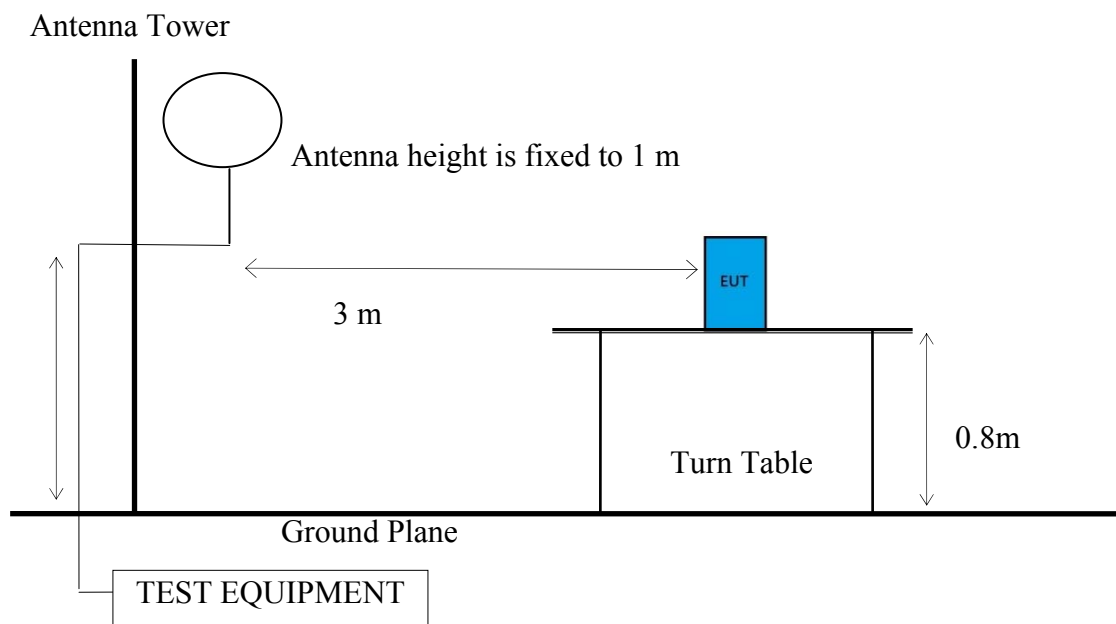
## 6. RADIATED EMISSION MEASUREMENT

### 6.1. Block Diagram of Test Setup

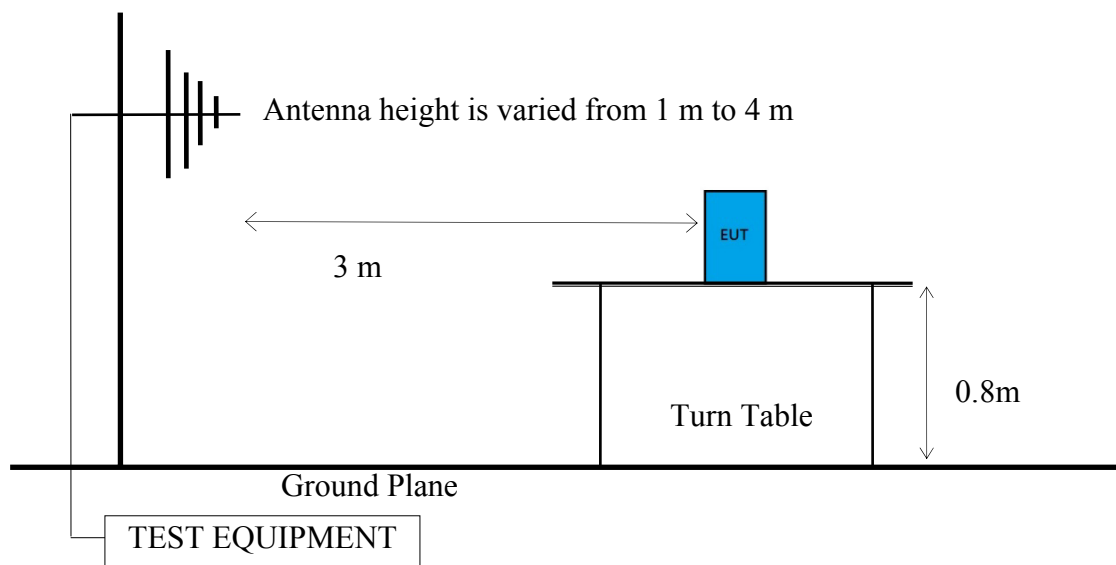
#### 6.1.1. Block Diagram of connection between EUT and simulators

Indicated as section 3.7

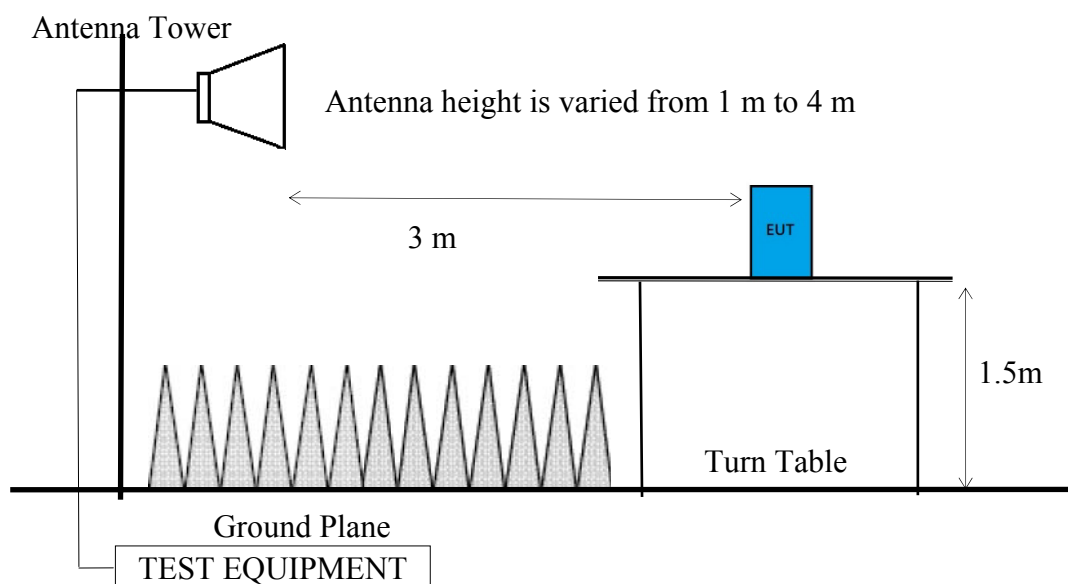
#### 6.1.2. Semi-Anechoic Chamber (3m) Setup Diagram for 9kHz-30MHz



#### 6.1.3. Semi-Anechoic Chamber (3m) Setup Diagram for 30-1000MHz



#### 6.1.4. Fully Anechoic Chamber (3m) Setup Diagram for above 1GHz



## 6.2. Radiated Emission Limits

Radiated emissions fall in restricted bands, as defined in Section 15.205 must be in compliance with the radiated emission limits specified in Section 15.205 as below.

### 6.2.1. General Limit

| Frequency (MHz) | Distance (m) | Field Strengths Limits                                                          |                          |
|-----------------|--------------|---------------------------------------------------------------------------------|--------------------------|
|                 |              | $\mu\text{V/m}$                                                                 | $\text{dB}\mu\text{V/m}$ |
| 0.009 - 0.490   | 300          | 67.6                                                                            | 2400/kHz                 |
| 0.490 - 1.705   | 30           | 87.6                                                                            | 24000/kHz                |
| 1.705 - 30      | 30           | 29.5                                                                            | 30                       |
| 30 ~ 88         | 3            | 100                                                                             | 40.0                     |
| 88 ~ 216        | 3            | 150                                                                             | 43.5                     |
| 216 ~ 960       | 3            | 200                                                                             | 46.0                     |
| Above 960       | 3            | 500                                                                             | 54.0                     |
| Above 1000      | 3            | 74.0 $\text{dB}\mu\text{V/m}$ (Peak)<br>54.0 $\text{dB}\mu\text{V/m}$ (Average) |                          |

Remark: (1)  $\text{dB}\mu\text{V/m} = 20 \log (\mu\text{V/m})$

(2) The tighter limit applies to the edge between two frequency bands.

(3) Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

(4) Fundamental and emission fall within operation band are exempted from this section.

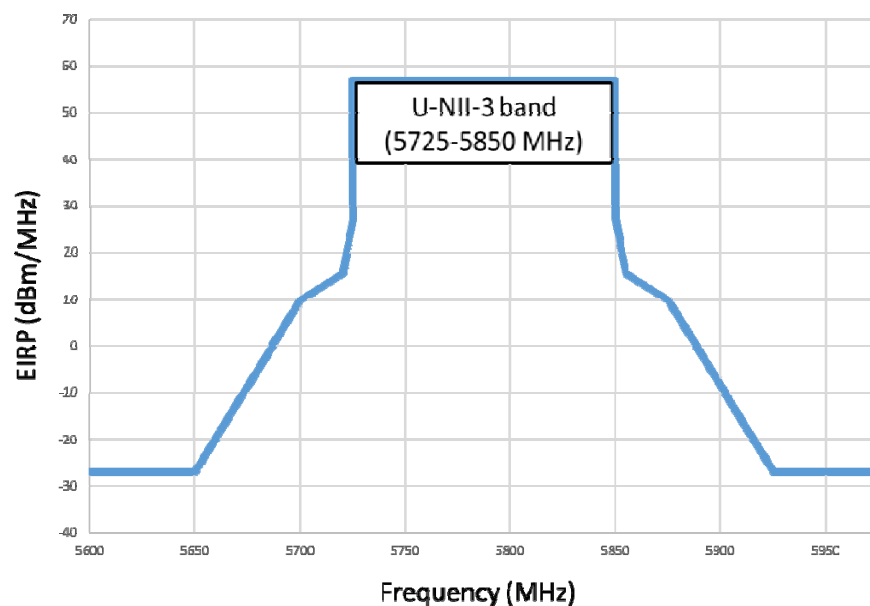
(5) Pursuant to ANSI C63.10: 6.6.4.3, if the maximized peak measured value complies with the average limit, then it is unnecessary to perform an average measurement.

### 6.2.2. Limit for non-restricted frequency above 1 GHz

| Frequency Band (MHz) | E.I.R.P. Limit | Field Strength Limit at 3 m (dBμV/m) |
|----------------------|----------------|--------------------------------------|
| 5150 to 5250         | -27 dBm        | 68.2                                 |
| 5250 to 5350         |                | 68.2                                 |
| 5470 to 5725         |                | 68.2                                 |

Note: Field Strength at 3 m = E.I.R.P. + 95.2 dB

| Frequency Band (MHz) | Field Strength Limit at 3 m         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|----------------------|-------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5725 to 5850         | <input checked="" type="checkbox"/> | 15.407(b)(4)(i) All emissions shall be limited to a level of 68.2 dBμV/m at 75 MHz or more above or below the band edge increasing linearly to 105.2dBμV/m at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 110.8 dBμV/m at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 68.2 dBμV/m at the band edge.                             |
|                      | <input type="checkbox"/>            | 15.407(b)(4)(ii) ,compliance with the emission limits in § 15.247(d) Shall be at least 30dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power,. Attenuation below the general limits specified in §15.209(a) is not required. In addition,radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)) |



### 6.3. Test Procedure

#### **Frequency Range 9kHz~30MHz:**

The EUT setup on the turn table which has 0.8 m height to the ground. The turn table rotated 360 degrees and antenna fixed to 1 m to find the maximum emission level. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10-2013 regulation.

(1) RBW = 9kHz with peak and average detector.

(2) Detector: average and peak (9kHz-490kHz)

Q.P. (490kHz-30MHz)

#### **Frequency Range 30MHz ~ 40GHz:**

The EUT setup on the turn table which has 0.8m (For 30-1000MHz) or 1.5m (For Above 1GHz) height to the ground. The turn table rotated 360 degrees and antenna varied from 1 m to 4 m to find the maximum emission level. Both horizontal and vertical polarization are required. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10-2013 regulation.

#### **Frequency below 1 GHz:**

Spectrum Analyzer is used for pre-testing with following setting:

(1) RBW = 120 kHz

(2) VBW  $\geq 3 \times$  RBW.

(3) Detector = Peak.

(4) Sweep time = auto.

(5) Trace mode = max hold.

(6) Allow sweeps to continue until the trace stabilizes.

(7) When peak-detected value is lower than limit that the measurement using the Q.P. detector is not required. Otherwise using Q.P. for finally measurement.

**Frequency above 1GHz to 10th harmonic (up to 40 GHz):****Peak Detector:**

- (1) RBW = 1 MHz
- (2) VBW  $\geq 3 \times$  RBW.
- (3) Detector = Peak.
- (4) Sweep time = auto.
- (5) Trace mode = max hold.
- (6) Allow sweeps to continue until the trace stabilizes.
- (7) When peak-detected value is lower than limit that the measurement using the average detector is not required. Otherwise using average for finally measurement.

**Average Detector:**☒ **Option 1:**

- (1) RBW = 1 MHz
- (2) VBW  $\geq 1/T$ .

| Modulation Type | T (ms) | 1/ T (kHz) | VBW Setting (kHz) |
|-----------------|--------|------------|-------------------|
| 802.11a         | 2.050  | 0.488      | 0.488             |
| 802.11ac-VHT20  | 0.975  | 1.026      | 1.026             |
| 802.11ac-VHT40  | 0.494  | 2.024      | 2.024             |
| 802.11ac-VHT80  | 0.663  | 1.508      | 1.508             |

N/A: 1/ T is not implemented when duty cycle presented in section 3.5 is  $\geq 98\%$ .

- (1) Detector = Peak.
- (2) Sweep time = auto.
- (3) Trace mode = max hold.
- (4) Allow sweeps to continue until the trace stabilizes.

☐ **Option 2:**

**Average Emission Level= Peak Emission Level+ D.C.C.F.**

**6.4. Measurement Result Explanation**

- ☒ Peak Emission Level=Antenna Factor + Cable Loss + Meter Reading
- ☒ Average Emission Level=Antenna Factor + Cable Loss + Meter Reading
- ☐ Average Emission Level= Peak Emission Level+ DCCF  
Duty Cycle Correction Factor (DCCF)=  $20\log(TX_{on}/TX_{on+off})$  presented in section 3.5

**6.5. Test Results**

**PASSED.**

|              |               |            |          |
|--------------|---------------|------------|----------|
| Test Date    | 2016/11/24    | Temp./Hum. | 24°C/53% |
| Test Voltage | AC 120V, 60Hz |            |          |

**6.5.1. Emissions within Restricted Frequency Bands****6.5.1.1. Frequency 9kHz~30MHz**

**The emissions (9kHz~30MHz) not reported for there is no emission be found.**

**6.5.1.2. Frequency 30MHz~1000MHz**

|      |         |           |            |
|------|---------|-----------|------------|
| Mode | 802.11a | UNII Band | III        |
|      |         | Frequency | TX 5785MHz |

**Antenna at Horizontal Polarization**

| Emission Frequency<br>(MHz) | Antenna Factor<br>(dB/m) | Cable Loss<br>(dB) | Meter Reading<br>(dBμV) | Emission Level<br>(dBμV/m) | Limits<br>(dBμV/m) | Margin<br>(dB) | Detector |
|-----------------------------|--------------------------|--------------------|-------------------------|----------------------------|--------------------|----------------|----------|
| 92.08                       | 9.49                     | 3.17               | 12.57                   | 25.23                      | 43.50              | 18.27          | Peak     |
| 242.43                      | 11.96                    | 4.28               | 19.89                   | 36.13                      | 46.00              | 9.87           | Peak     |
| 324.88                      | 13.78                    | 4.93               | 12.87                   | 31.58                      | 46.00              | 14.42          | Peak     |
| 556.71                      | 17.77                    | 6.48               | 1.97                    | 26.22                      | 46.00              | 19.78          | Peak     |
| 763.32                      | 19.58                    | 7.01               | 2.31                    | 28.90                      | 46.00              | 17.10          | Peak     |
| 894.27                      | 20.55                    | 7.52               | 4.26                    | 32.33                      | 46.00              | 13.67          | Peak     |

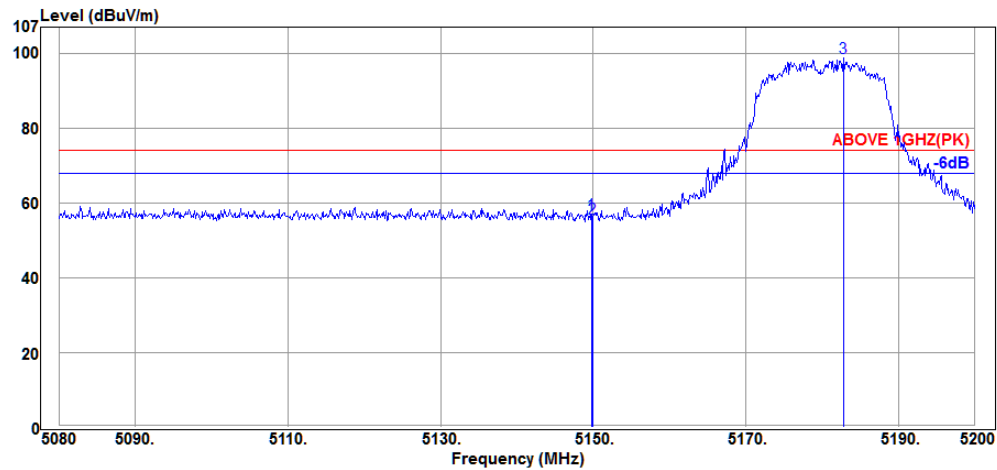
**Antenna at Vertical Polarization**

| Emission Frequency<br>(MHz) | Antenna Factor<br>(dB/m) | Cable Loss<br>(dB) | Meter Reading<br>(dBμV) | Emission Level<br>(dBμV/m) | Limits<br>(dBμV/m) | Margin<br>(dB) | Detector |
|-----------------------------|--------------------------|--------------------|-------------------------|----------------------------|--------------------|----------------|----------|
| 30.00                       | 18.62                    | 2.32               | 13.98                   | 34.92                      | 40.00              | 5.08           | Peak     |
| 74.62                       | 7.01                     | 2.94               | 17.92                   | 27.87                      | 40.00              | 12.13          | Peak     |
| 243.40                      | 12.01                    | 4.29               | 12.89                   | 29.19                      | 46.00              | 16.81          | Peak     |
| 326.82                      | 13.84                    | 4.95               | 8.89                    | 27.68                      | 46.00              | 18.32          | Peak     |
| 593.57                      | 18.24                    | 6.50               | 1.73                    | 26.47                      | 46.00              | 19.53          | Peak     |
| 813.76                      | 20.10                    | 7.22               | 1.59                    | 28.91                      | 46.00              | 17.09          | Peak     |

### 6.5.1.3. Frequency Above 1 GHz to 10<sup>th</sup> harmonics

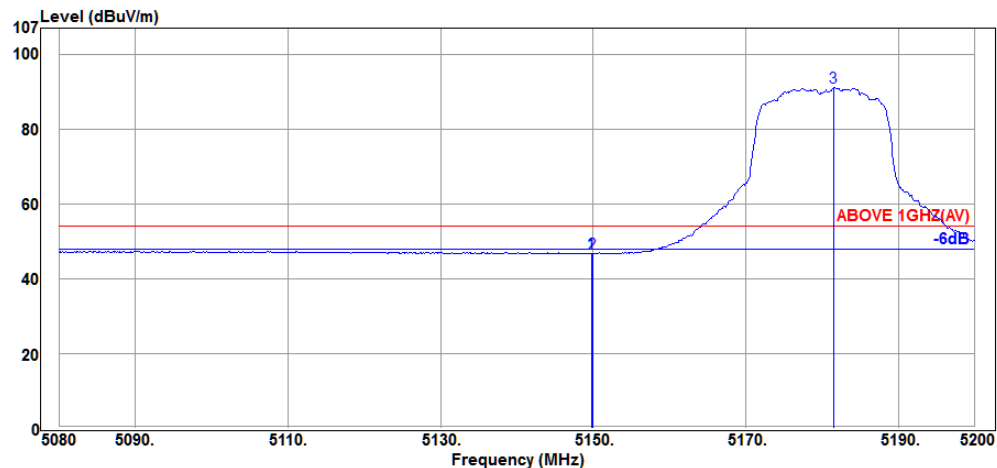
#### Band Edge:

| Mode | 802.11a | Frequency | TX 5180MHz |
|------|---------|-----------|------------|
|------|---------|-----------|------------|



#### Antenna at Horizontal Polarization

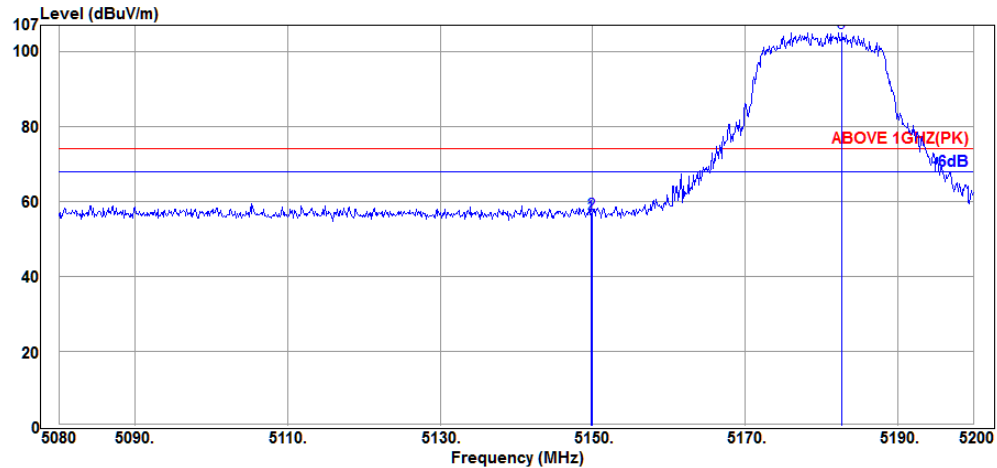
| Emission Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Meter Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Detector |
|--------------------------|-----------------------|-----------------|----------------------|-------------------------|-----------------|-------------|----------|
| 5149.84                  | 34.45                 | 8.84            | 13.65                | 56.94                   | 74.00           | 17.06       | Peak     |
| 5149.96                  | 34.45                 | 8.84            | 12.59                | 55.88                   | 74.00           | 18.12       | Peak     |
| 5182.84                  | 34.48                 | 8.77            | 55.66                | 98.91                   | ---             | ---         | Peak     |



#### Antenna at Horizontal Polarization

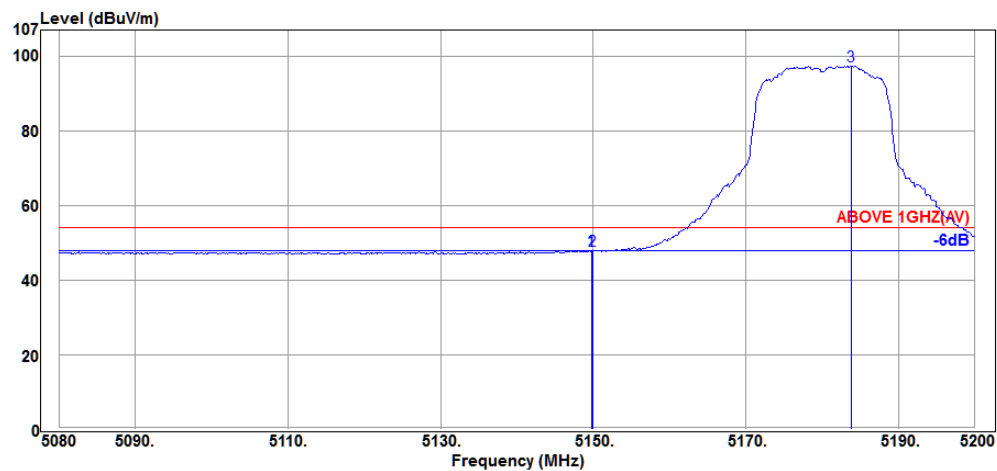
| Emission Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Meter Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Detector |
|--------------------------|-----------------------|-----------------|----------------------|-------------------------|-----------------|-------------|----------|
| 5149.84                  | 34.45                 | 8.84            | 3.48                 | 46.77                   | 54.00           | 7.23        | Average  |
| 5149.96                  | 34.45                 | 8.84            | 3.46                 | 46.75                   | 54.00           | 7.25        | Average  |
| 5181.52                  | 34.48                 | 8.77            | 47.82                | 91.07                   | ---             | ---         | Average  |

| Mode | 802.11a | Frequency | TX 5180MHz |
|------|---------|-----------|------------|
|------|---------|-----------|------------|



#### Antenna at Vertical Polarization

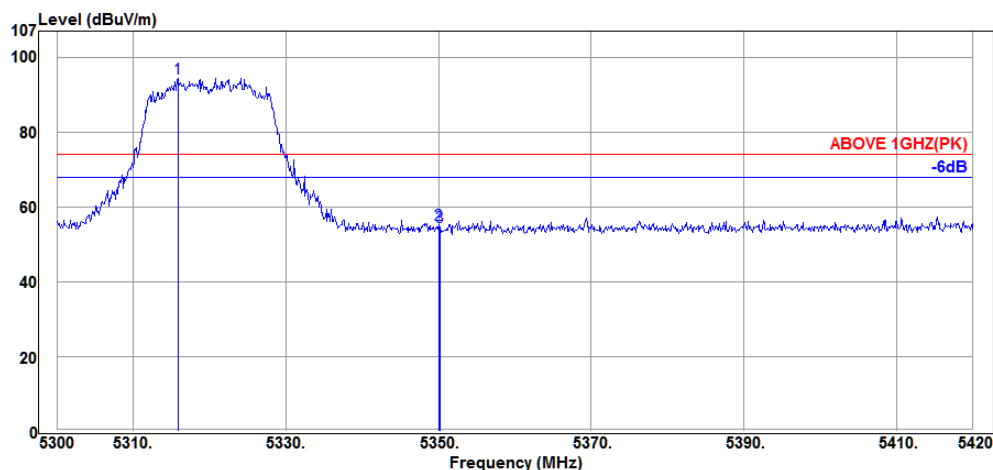
| Emission Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Meter Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Detector |
|--------------------------|-----------------------|-----------------|----------------------|-------------------------|-----------------|-------------|----------|
| 5149.84                  | 34.45                 | 8.84            | 12.97                | 56.26                   | 74.00           | 17.74       | Peak     |
| 5149.96                  | 34.45                 | 8.84            | 13.38                | 56.67                   | 74.00           | 17.33       | Peak     |
| 5182.72                  | 34.48                 | 8.77            | 61.69                | 104.94                  | ---             | ---         | Peak     |



#### Antenna at Vertical Polarization

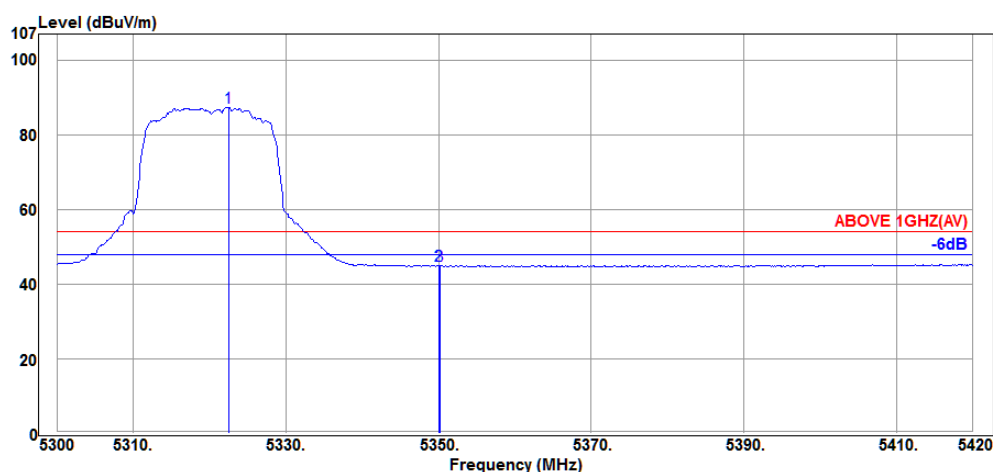
| Emission Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Meter Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Detector |
|--------------------------|-----------------------|-----------------|----------------------|-------------------------|-----------------|-------------|----------|
| 5149.84                  | 34.45                 | 8.84            | 4.61                 | 47.90                   | 54.00           | 6.10        | Average  |
| 5149.96                  | 34.45                 | 8.84            | 4.51                 | 47.80                   | 54.00           | 6.20        | Average  |
| 5183.80                  | 34.48                 | 8.77            | 54.14                | 97.39                   | ---             | ---         | Average  |

| Mode | 802.11a | Frequency | TX 5320MHz |
|------|---------|-----------|------------|
|------|---------|-----------|------------|



### Antenna at Horizontal Polarization

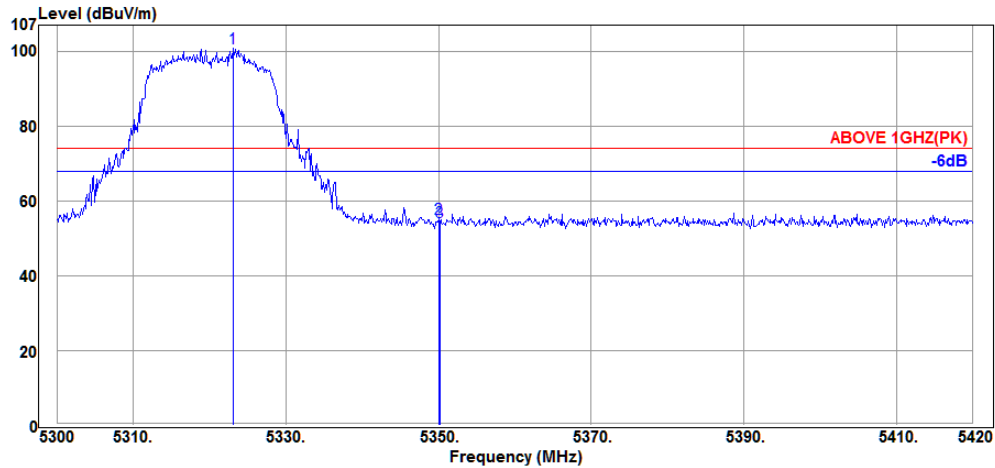
| Emission Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Meter Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Detector |
|--------------------------|-----------------------|-----------------|----------------------|-------------------------|-----------------|-------------|----------|
| 5315.84                  | 34.62                 | 8.70            | 51.07                | 94.39                   | ---             | ---         | Peak     |
| 5350.04                  | 34.65                 | 8.61            | 12.15                | 55.41                   | 74.00           | 18.59       | Peak     |
| 5350.16                  | 34.65                 | 8.61            | 11.46                | 54.72                   | 74.00           | 19.28       | Peak     |



### Antenna at Horizontal Polarization

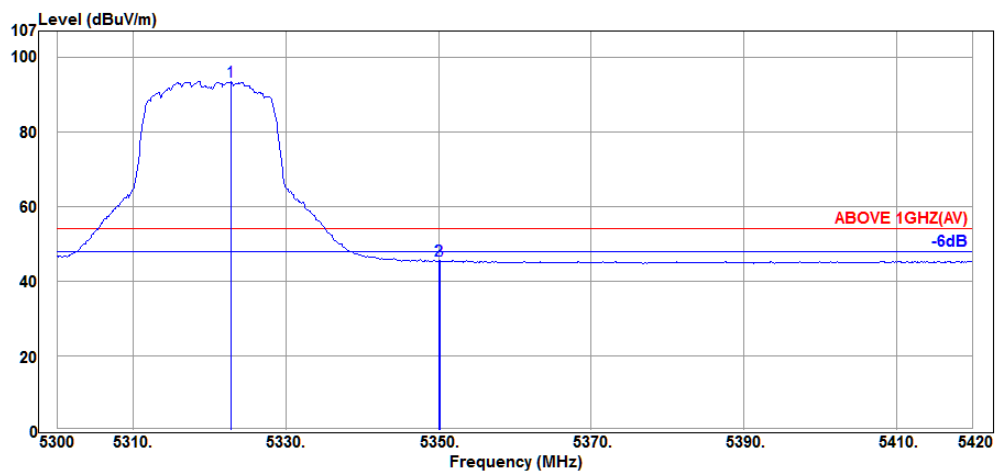
| Emission Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Meter Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Detector |
|--------------------------|-----------------------|-----------------|----------------------|-------------------------|-----------------|-------------|----------|
| 5322.56                  | 34.62                 | 8.70            | 43.97                | 87.29                   | ---             | ---         | Average  |
| 5350.04                  | 34.65                 | 8.61            | 1.70                 | 44.96                   | 54.00           | 9.04        | Average  |
| 5350.16                  | 34.65                 | 8.61            | 1.68                 | 44.94                   | 54.00           | 9.06        | Average  |

| Mode | 802.11a | Frequency | TX 5320MHz |
|------|---------|-----------|------------|
|------|---------|-----------|------------|



#### Antenna at Vertical Polarization

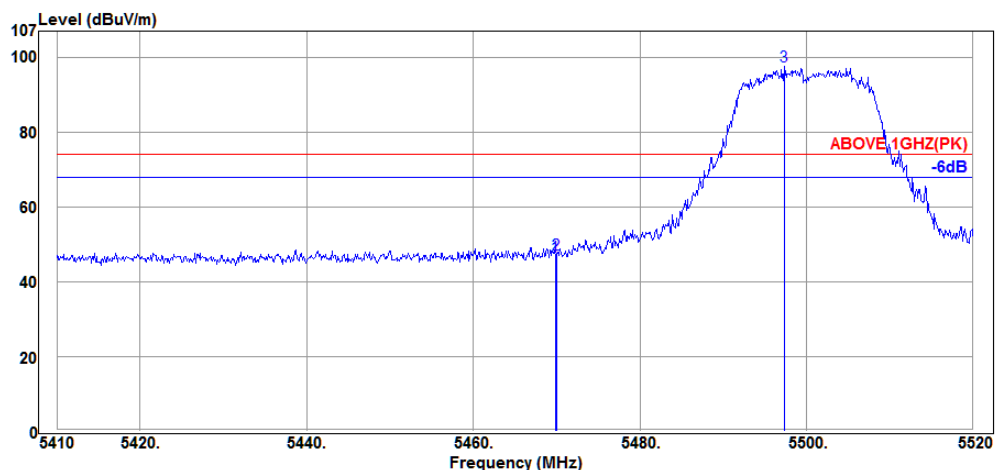
| Emission Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Meter Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Detector |
|--------------------------|-----------------------|-----------------|----------------------|-------------------------|-----------------|-------------|----------|
| 5323.04                  | 34.62                 | 8.70            | 57.57                | 100.89                  | ---             | ---         | Peak     |
| 5350.04                  | 34.65                 | 8.61            | 12.12                | 55.38                   | 74.00           | 18.62       | Peak     |
| 5350.16                  | 34.65                 | 8.61            | 11.15                | 54.41                   | 74.00           | 19.59       | Peak     |



#### Antenna at Vertical Polarization

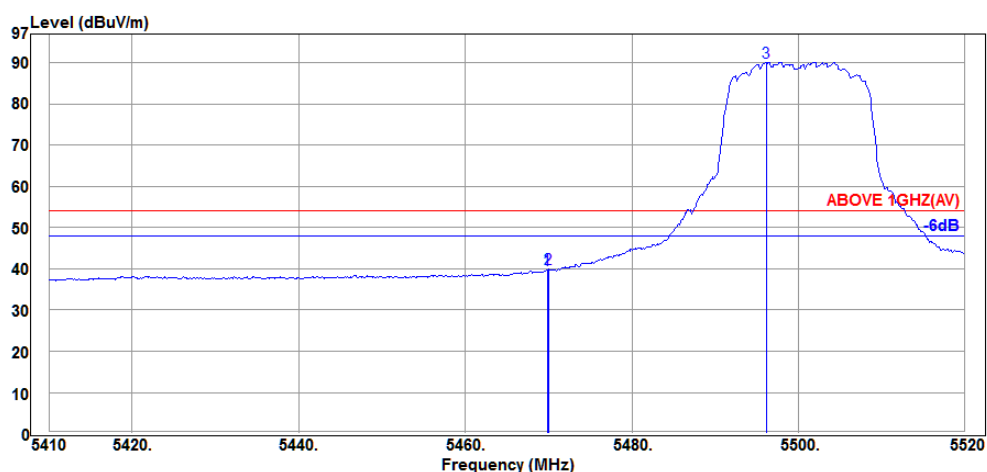
| Emission Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Meter Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Detector |
|--------------------------|-----------------------|-----------------|----------------------|-------------------------|-----------------|-------------|----------|
| 5322.80                  | 34.62                 | 8.70            | 50.04                | 93.36                   | ---             | ---         | Average  |
| 5350.04                  | 34.65                 | 8.61            | 2.24                 | 45.50                   | 54.00           | 8.50        | Average  |
| 5350.16                  | 34.65                 | 8.61            | 2.24                 | 45.50                   | 54.00           | 8.50        | Average  |

| Mode | 802.11a | Frequency | TX 5500MHz |
|------|---------|-----------|------------|
|------|---------|-----------|------------|



#### Antenna at Horizontal Polarization

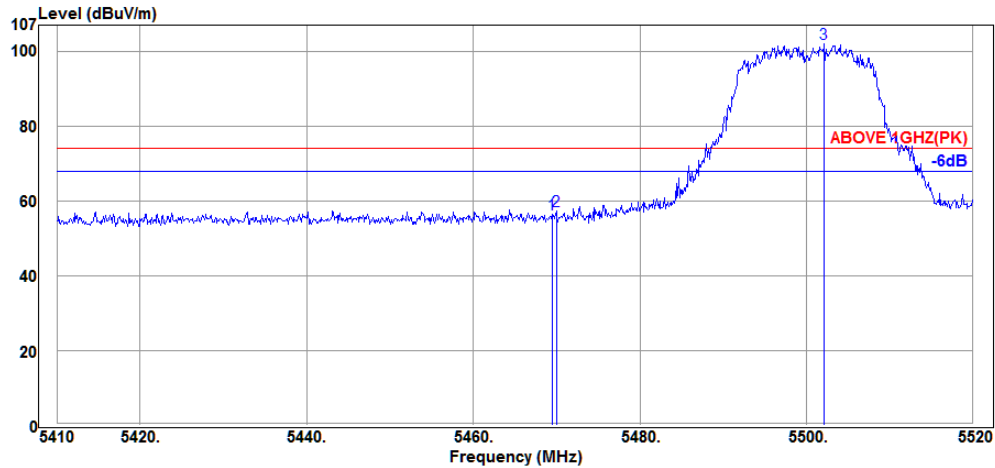
| Emission Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Meter Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Detector |
|--------------------------|-----------------------|-----------------|----------------------|-------------------------|-----------------|-------------|----------|
| 5469.84                  | 34.77                 | 8.65            | 3.47                 | 46.89                   | 74.00           | 27.11       | Peak     |
| 5469.95                  | 34.77                 | 8.65            | 3.89                 | 47.31                   | 74.00           | 26.69       | Peak     |
| 5497.34                  | 34.80                 | 8.73            | 54.21                | 97.74                   | ---             | ---         | Peak     |



#### Antenna at Horizontal Polarization

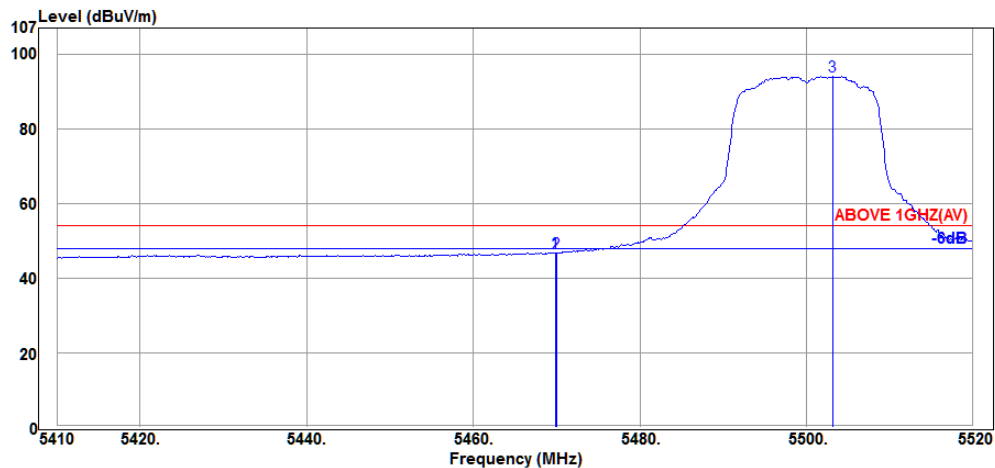
| Emission Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Meter Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Detector |
|--------------------------|-----------------------|-----------------|----------------------|-------------------------|-----------------|-------------|----------|
| 5469.84                  | 34.77                 | 8.65            | -3.62                | 39.80                   | 54.00           | 14.20       | Average  |
| 5469.95                  | 34.77                 | 8.65            | -3.57                | 39.85                   | 54.00           | 14.15       | Average  |
| 5496.13                  | 34.78                 | 8.69            | 46.67                | 90.14                   | ---             | ---         | Average  |

| Mode | 802.11a | Frequency | TX 5500MHz |
|------|---------|-----------|------------|
|------|---------|-----------|------------|



#### Antenna at Vertical Polarization

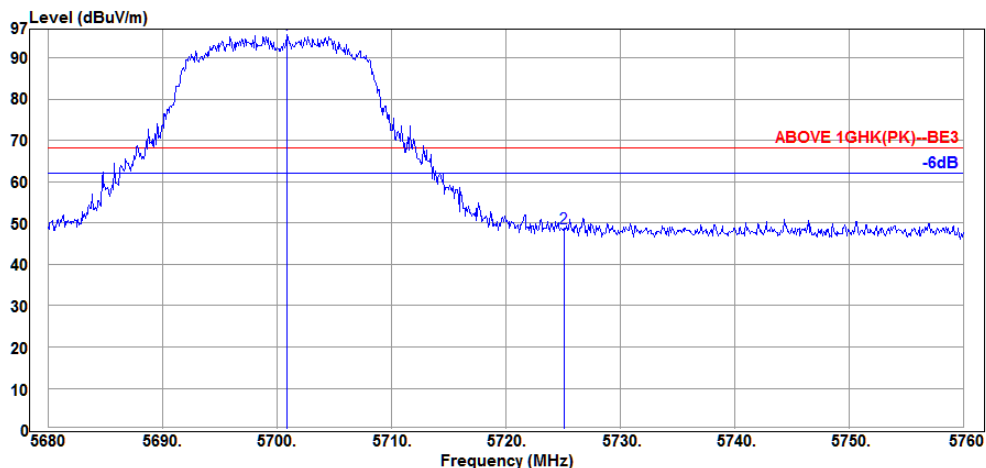
| Emission Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Meter Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Detector |
|--------------------------|-----------------------|-----------------|----------------------|-------------------------|-----------------|-------------|----------|
| 5469.51                  | 34.77                 | 8.65            | 12.95                | 56.37                   | 74.00           | 17.63       | Peak     |
| 5469.95                  | 34.77                 | 8.65            | 14.02                | 57.44                   | 74.00           | 16.56       | Peak     |
| 5502.18                  | 34.80                 | 8.73            | 58.42                | 101.95                  | ---             | ---         | Peak     |



#### Antenna at Vertical Polarization

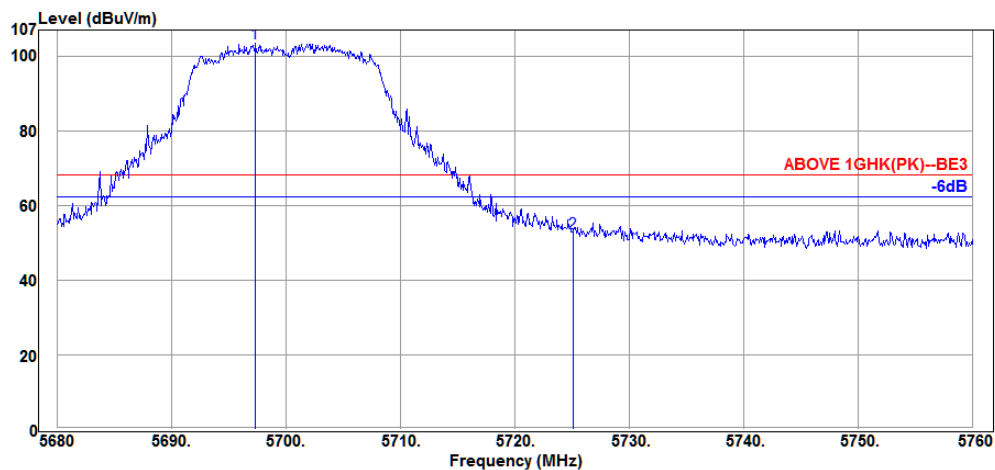
| Emission Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Meter Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Detector |
|--------------------------|-----------------------|-----------------|----------------------|-------------------------|-----------------|-------------|----------|
| 5469.84                  | 34.77                 | 8.65            | 3.31                 | 46.73                   | 54.00           | 7.27        | Average  |
| 5469.95                  | 34.77                 | 8.65            | 3.35                 | 46.77                   | 54.00           | 7.23        | Average  |
| 5503.17                  | 34.80                 | 8.73            | 50.46                | 93.99                   | ---             | ---         | Average  |

|      |         |           |            |
|------|---------|-----------|------------|
| Mode | 802.11a | Frequency | TX 5700MHz |
|------|---------|-----------|------------|



#### Antenna at Horizontal Polarization

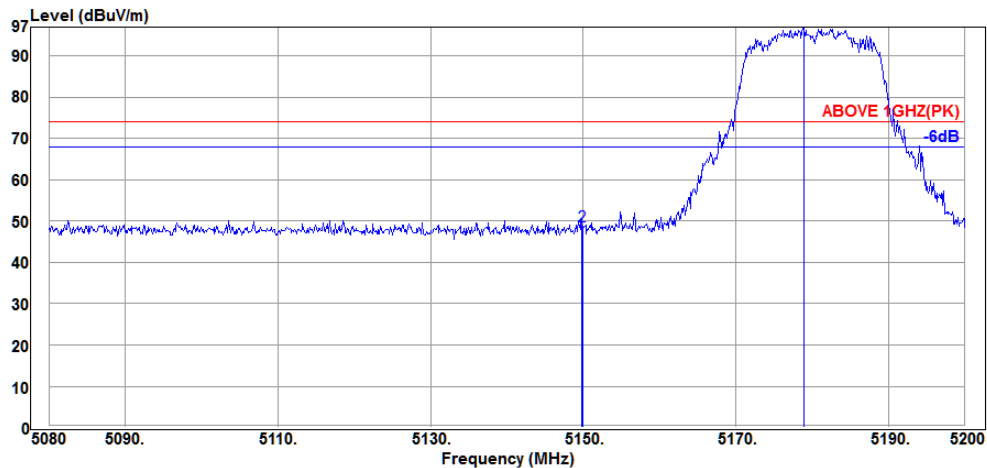
| Emission Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Meter Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Detector |
|--------------------------|-----------------------|-----------------|----------------------|-------------------------|-----------------|-------------|----------|
| 5700.88                  | 35.05                 | 9.73            | 50.81                | 95.59                   | ---             | ---         | Peak     |
| 5725.04                  | 35.07                 | 9.78            | 3.93                 | 48.78                   | 68.20           | 19.42       | Peak     |



#### Antenna at Vertical Polarization

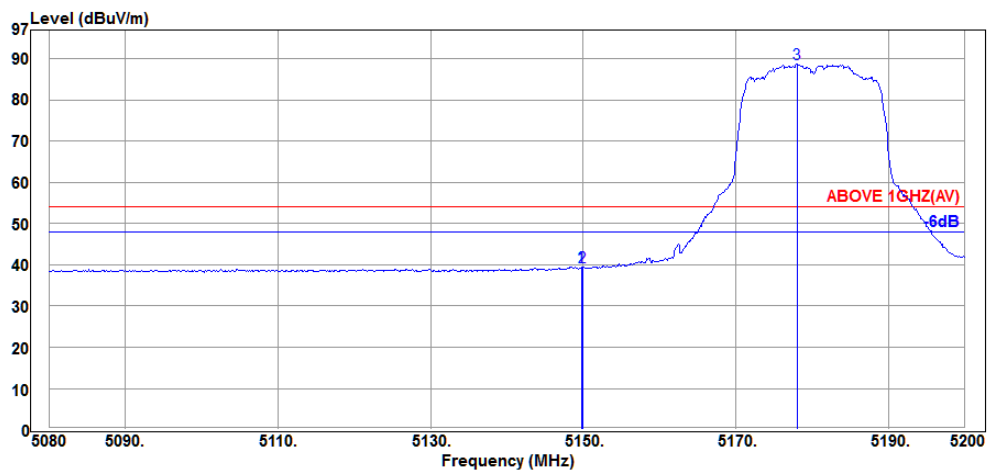
| Emission Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Meter Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Detector |
|--------------------------|-----------------------|-----------------|----------------------|-------------------------|-----------------|-------------|----------|
| 5697.36                  | 35.03                 | 9.68            | 58.84                | 103.55                  | ---             | ---         | Peak     |
| 5725.04                  | 35.07                 | 9.78            | 7.81                 | 52.66                   | 68.20           | 15.54       | Peak     |

| Mode | 802.11n-HT20 | Frequency | TX 5180MHz |
|------|--------------|-----------|------------|
|------|--------------|-----------|------------|



#### Antenna at Horizontal Polarization

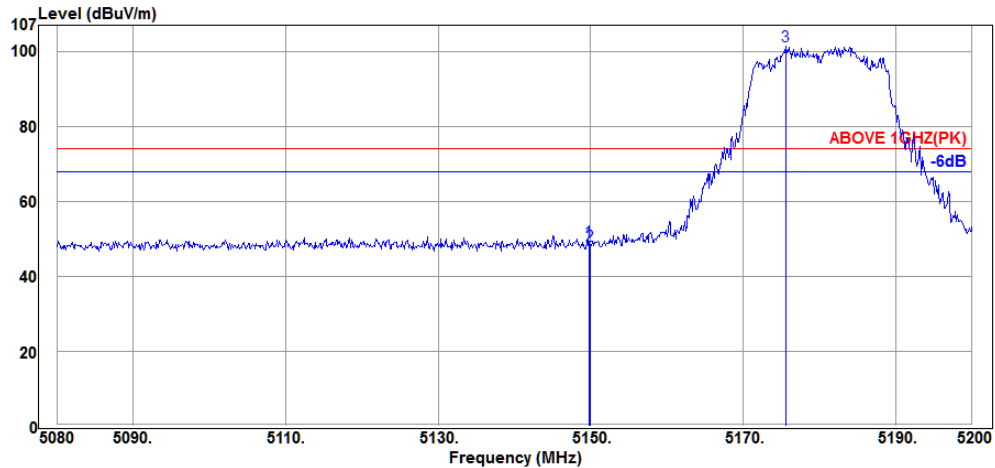
| Emission Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Meter Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Detector |
|--------------------------|-----------------------|-----------------|----------------------|-------------------------|-----------------|-------------|----------|
| 5149.84                  | 34.45                 | 8.84            | 3.72                 | 47.01                   | 74.00           | 26.99       | Peak     |
| 5149.96                  | 34.45                 | 8.84            | 5.41                 | 48.70                   | 74.00           | 25.30       | Peak     |
| 5178.88                  | 34.48                 | 8.77            | 53.71                | 96.96                   | ---             | ---         | Peak     |



#### Antenna at Horizontal Polarization

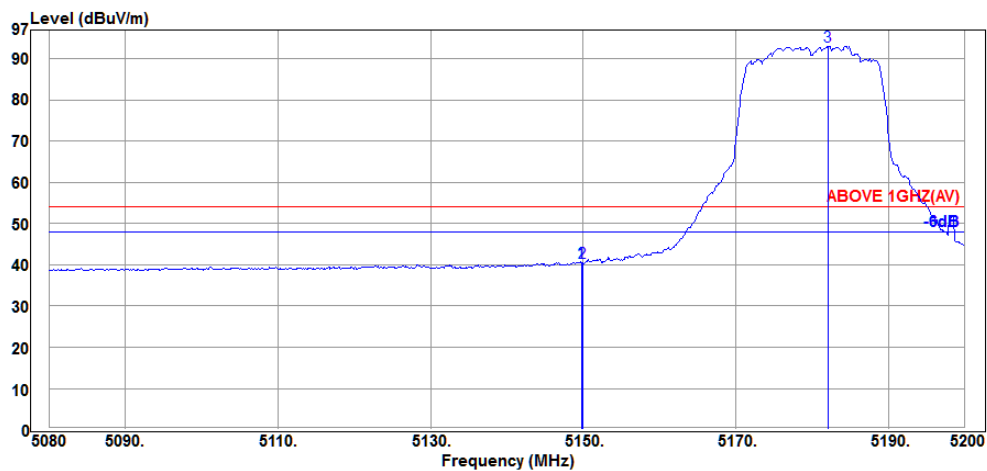
| Emission Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Meter Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Detector |
|--------------------------|-----------------------|-----------------|----------------------|-------------------------|-----------------|-------------|----------|
| 5149.84                  | 34.45                 | 8.84            | -3.92                | 39.37                   | 54.00           | 14.63       | Average  |
| 5149.96                  | 34.45                 | 8.84            | -3.93                | 39.36                   | 54.00           | 14.64       | Average  |
| 5178.04                  | 34.48                 | 8.77            | 45.46                | 88.71                   | ---             | ---         | Average  |

| Mode | 802.11n-HT20 | Frequency | TX 5180MHz |
|------|--------------|-----------|------------|
|------|--------------|-----------|------------|



#### Antenna at Vertical Polarization

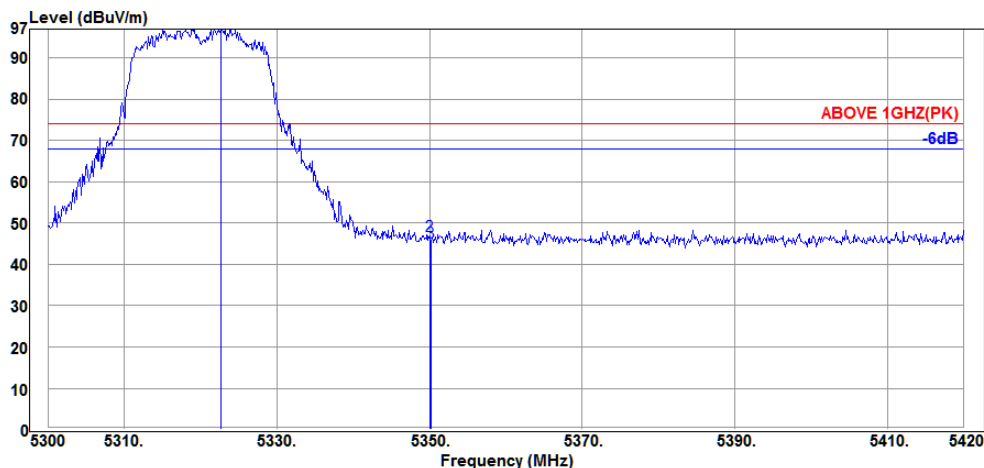
| Emission Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Meter Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Detector |
|--------------------------|-----------------------|-----------------|----------------------|-------------------------|-----------------|-------------|----------|
| 5149.84                  | 34.45                 | 8.84            | 6.14                 | 49.43                   | 74.00           | 24.57       | Peak     |
| 5149.96                  | 34.45                 | 8.84            | 4.95                 | 48.24                   | 74.00           | 25.76       | Peak     |
| 5175.52                  | 34.48                 | 8.77            | 58.13                | 101.38                  | ---             | ---         | Peak     |



#### Antenna at Vertical Polarization

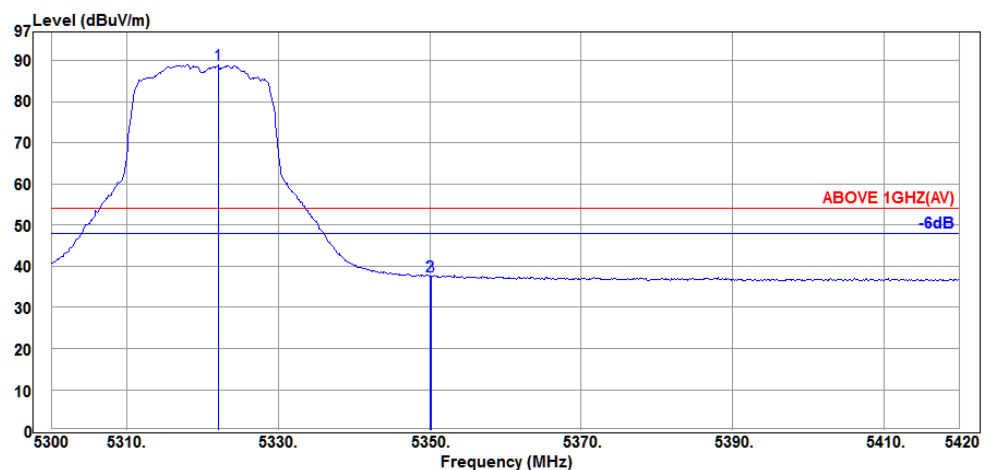
| Emission Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Meter Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Detector |
|--------------------------|-----------------------|-----------------|----------------------|-------------------------|-----------------|-------------|----------|
| 5149.84                  | 34.45                 | 8.84            | -2.79                | 40.50                   | 54.00           | 13.50       | Average  |
| 5149.96                  | 34.45                 | 8.84            | -2.77                | 40.52                   | 54.00           | 13.48       | Average  |
| 5182.12                  | 34.48                 | 8.77            | 49.82                | 93.07                   | ---             | ---         | Average  |

| Mode | 802.11n-HT20 | Frequency | TX 5320MHz |
|------|--------------|-----------|------------|
|------|--------------|-----------|------------|



#### Antenna at Horizontal Polarization

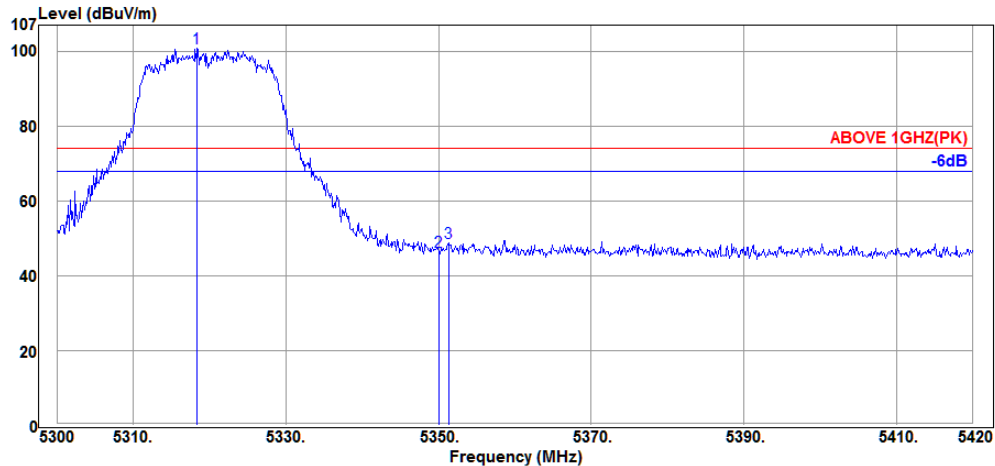
| Emission Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Meter Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Detector |
|--------------------------|-----------------------|-----------------|----------------------|-------------------------|-----------------|-------------|----------|
| 5322.68                  | 34.62                 | 8.70            | 53.79                | 97.11                   | ---             | ---         | Peak     |
| 5350.04                  | 34.65                 | 8.61            | 3.69                 | 46.95                   | 74.00           | 27.05       | Peak     |
| 5350.16                  | 34.65                 | 8.61            | 2.09                 | 45.35                   | 74.00           | 28.65       | Peak     |



#### Antenna at Horizontal Polarization

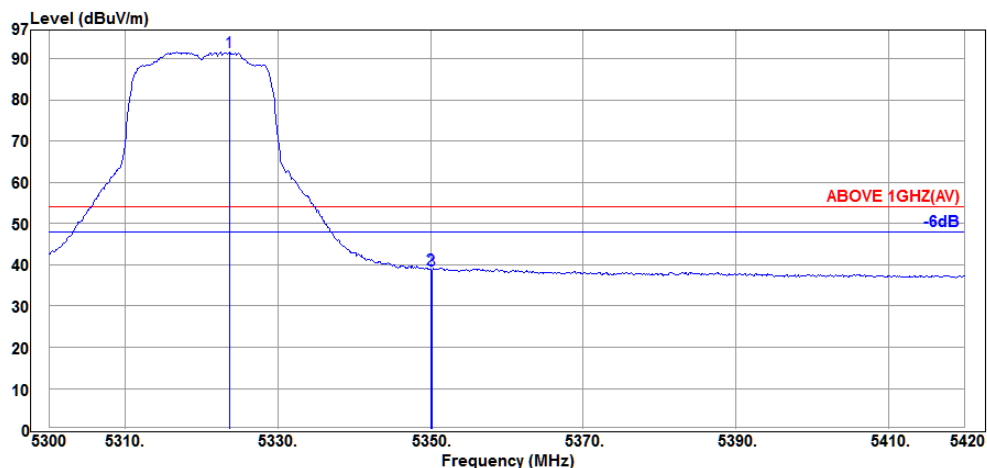
| Emission Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Meter Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Detector |
|--------------------------|-----------------------|-----------------|----------------------|-------------------------|-----------------|-------------|----------|
| 5322.08                  | 34.62                 | 8.70            | 45.81                | 89.13                   | ---             | ---         | Average  |
| 5350.04                  | 34.65                 | 8.61            | -5.67                | 37.59                   | 54.00           | 16.41       | Average  |
| 5350.16                  | 34.65                 | 8.61            | -5.80                | 37.46                   | 54.00           | 16.54       | Average  |

| Mode | 802.11n-HT20 | Frequency | TX 5320MHz |
|------|--------------|-----------|------------|
|------|--------------|-----------|------------|



#### Antenna at Vertical Polarization

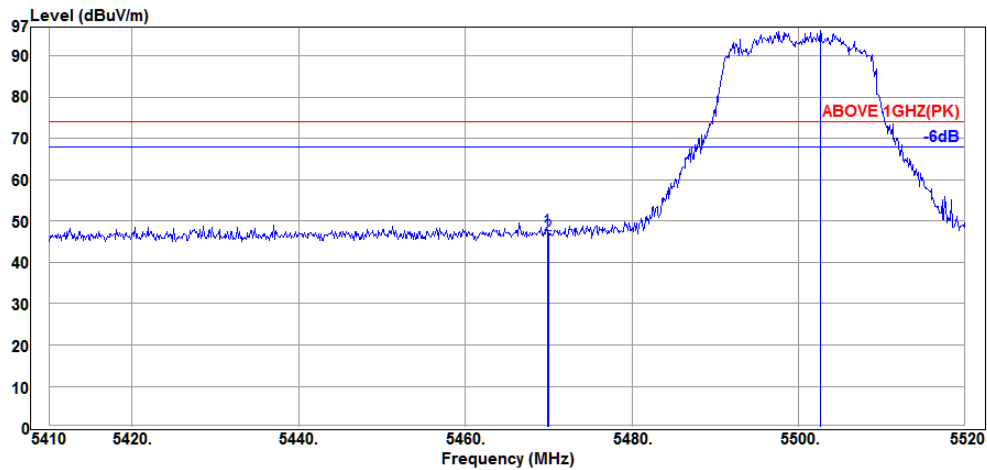
| Emission Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Meter Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Detector |
|--------------------------|-----------------------|-----------------|----------------------|-------------------------|-----------------|-------------|----------|
| 5318.36                  | 34.62                 | 8.70            | 57.47                | 100.79                  | ---             | ---         | Peak     |
| 5350.04                  | 34.65                 | 8.61            | 3.19                 | 46.45                   | 74.00           | 27.55       | Peak     |
| 5351.36                  | 34.65                 | 8.61            | 5.47                 | 48.73                   | 74.00           | 25.27       | Peak     |



#### Antenna at Vertical Polarization

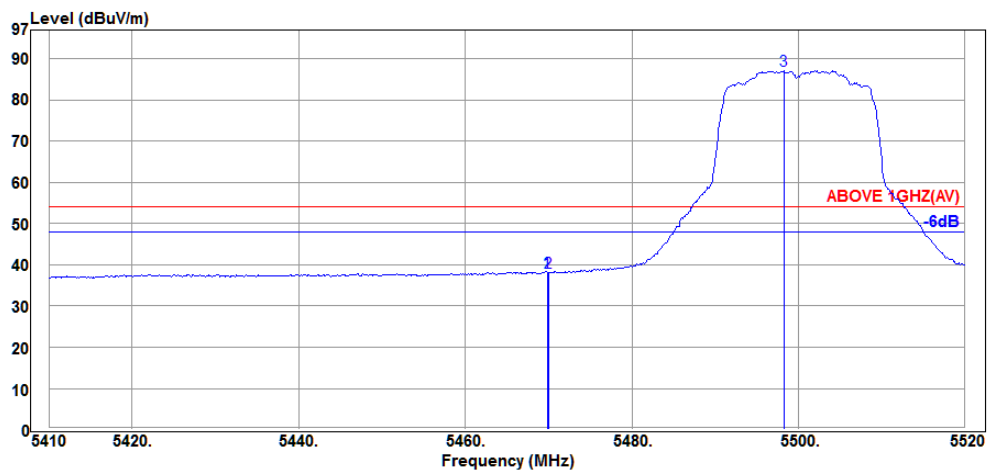
| Emission Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Meter Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Detector |
|--------------------------|-----------------------|-----------------|----------------------|-------------------------|-----------------|-------------|----------|
| 5323.64                  | 34.62                 | 8.70            | 48.28                | 91.60                   | ---             | ---         | Average  |
| 5350.04                  | 34.65                 | 8.61            | -4.33                | 38.93                   | 54.00           | 15.07       | Average  |
| 5350.16                  | 34.65                 | 8.61            | -4.51                | 38.75                   | 54.00           | 15.25       | Average  |

| Mode | 802.11n-HT20 | Frequency | TX 5500MHz |
|------|--------------|-----------|------------|
|------|--------------|-----------|------------|



#### Antenna at Horizontal Polarization

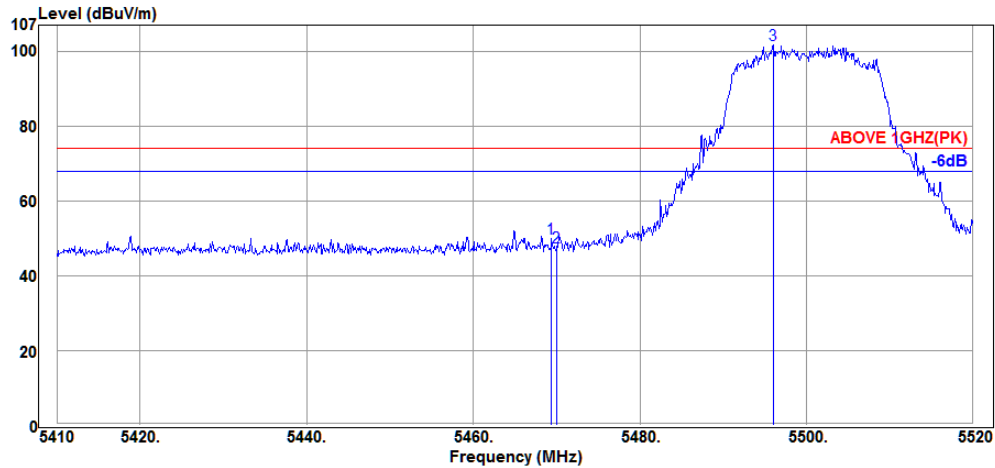
| Emission Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Meter Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Detector |
|--------------------------|-----------------------|-----------------|----------------------|-------------------------|-----------------|-------------|----------|
| 5469.84                  | 34.77                 | 8.65            | 4.51                 | 47.93                   | 74.00           | 26.07       | Peak     |
| 5469.95                  | 34.77                 | 8.65            | 3.20                 | 46.62                   | 74.00           | 27.38       | Peak     |
| 5502.62                  | 34.80                 | 8.73            | 52.73                | 96.26                   | ---             | ---         | Peak     |



#### Antenna at Horizontal Polarization

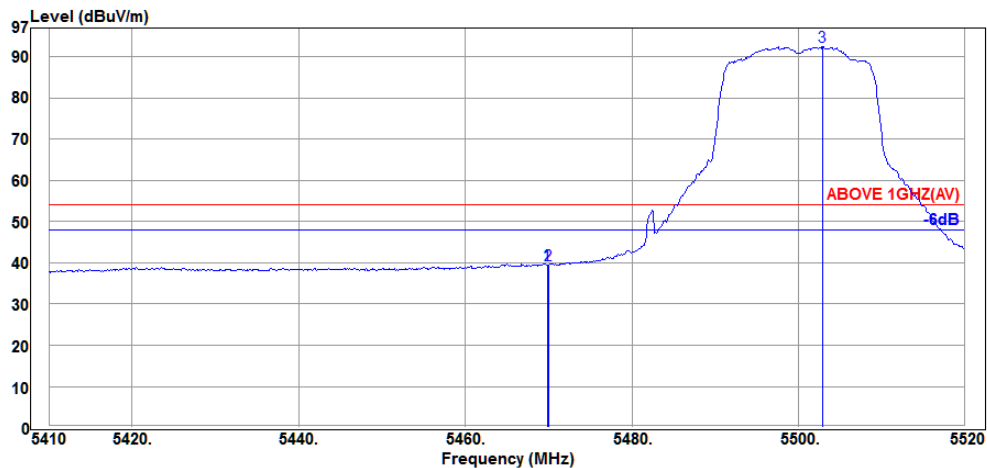
| Emission Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Meter Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Detector |
|--------------------------|-----------------------|-----------------|----------------------|-------------------------|-----------------|-------------|----------|
| 5469.84                  | 34.77                 | 8.65            | -5.23                | 38.19                   | 54.00           | 15.81       | Average  |
| 5469.95                  | 34.77                 | 8.65            | -5.25                | 38.17                   | 54.00           | 15.83       | Average  |
| 5498.22                  | 34.80                 | 8.73            | 43.59                | 87.12                   | ---             | ---         | Average  |

| Mode | 802.11n-HT20 | Frequency | TX 5500MHz |
|------|--------------|-----------|------------|
|------|--------------|-----------|------------|



#### Antenna at Vertical Polarization

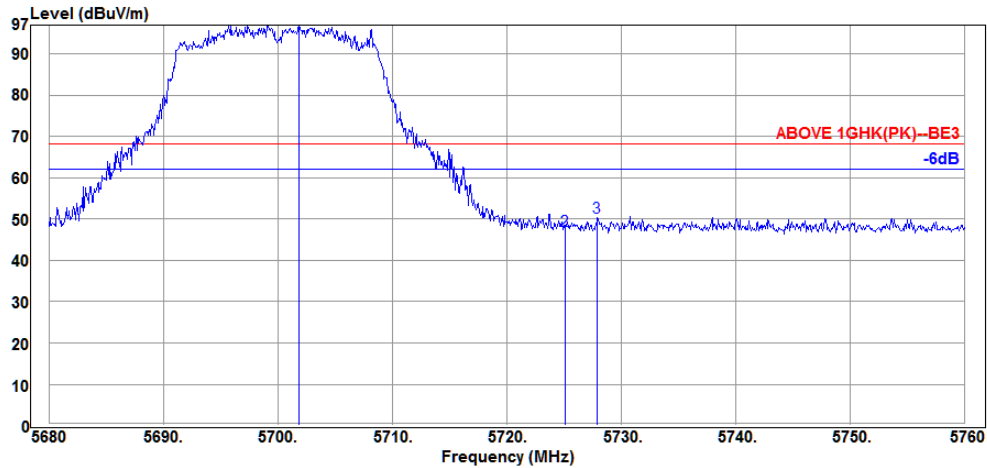
| Emission Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Meter Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Detector |
|--------------------------|-----------------------|-----------------|----------------------|-------------------------|-----------------|-------------|----------|
| 5469.40                  | 34.77                 | 8.65            | 6.47                 | 49.89                   | 74.00           | 24.11       | Peak     |
| 5469.95                  | 34.77                 | 8.65            | 4.34                 | 47.76                   | 74.00           | 26.24       | Peak     |
| 5496.02                  | 34.78                 | 8.69            | 58.20                | 101.67                  | ---             | ---         | Peak     |



#### Antenna at Vertical Polarization

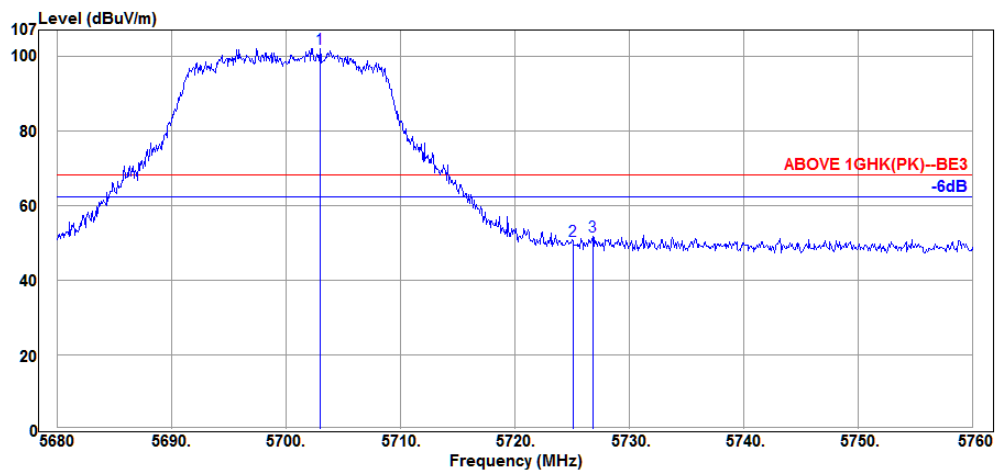
| Emission Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Meter Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Detector |
|--------------------------|-----------------------|-----------------|----------------------|-------------------------|-----------------|-------------|----------|
| 5469.84                  | 34.77                 | 8.65            | -3.99                | 39.43                   | 54.00           | 14.57       | Average  |
| 5469.95                  | 34.77                 | 8.65            | -3.92                | 39.50                   | 54.00           | 14.50       | Average  |
| 5502.95                  | 34.80                 | 8.73            | 49.00                | 92.53                   | ---             | ---         | Average  |

| Mode | 802.11n-HT20 | Frequency | TX 5700MHz |
|------|--------------|-----------|------------|
|------|--------------|-----------|------------|



#### Antenna at Horizontal Polarization

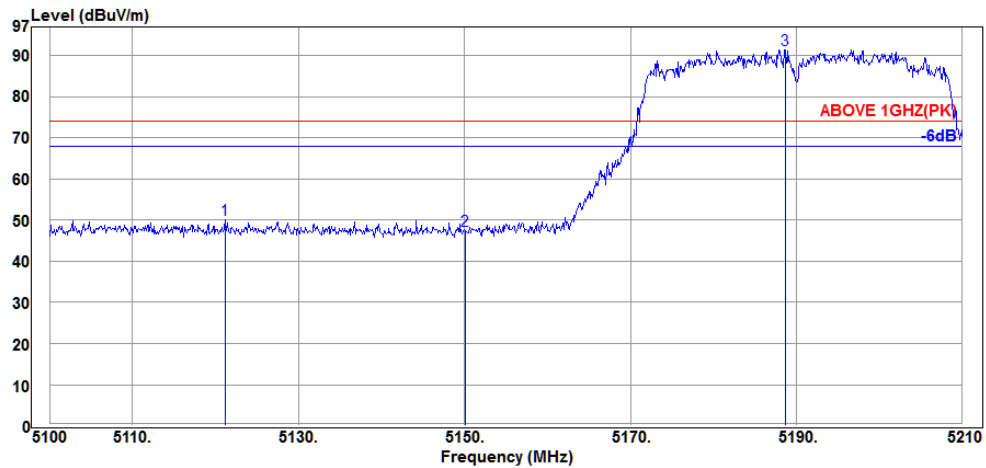
| Emission Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Meter Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Detector |
|--------------------------|-----------------------|-----------------|----------------------|-------------------------|-----------------|-------------|----------|
| 5701.84                  | 35.05                 | 9.73            | 52.40                | 97.18                   | ---             | ---         | Peak     |
| 5725.04                  | 35.07                 | 9.78            | 2.46                 | 47.31                   | 68.20           | 20.89       | Peak     |
| 5727.92                  | 35.07                 | 9.78            | 5.43                 | 50.28                   | 68.20           | 17.92       | Peak     |



#### Antenna at Vertical Polarization

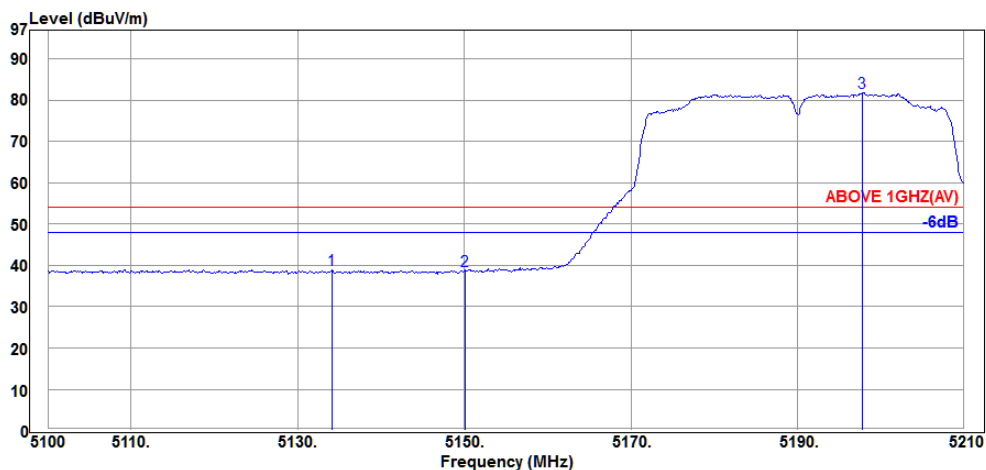
| Emission Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Meter Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Detector |
|--------------------------|-----------------------|-----------------|----------------------|-------------------------|-----------------|-------------|----------|
| 5702.96                  | 35.05                 | 9.73            | 57.31                | 102.09                  | ---             | ---         | Peak     |
| 5725.04                  | 35.07                 | 9.78            | 5.75                 | 50.60                   | 68.20           | 17.60       | Peak     |
| 5726.80                  | 35.07                 | 9.78            | 6.98                 | 51.83                   | 68.20           | 16.37       | Peak     |

| Mode | 802.11n-HT40 | Frequency | TX 5190MHz |
|------|--------------|-----------|------------|
|------|--------------|-----------|------------|



#### Antenna at Horizontal Polarization

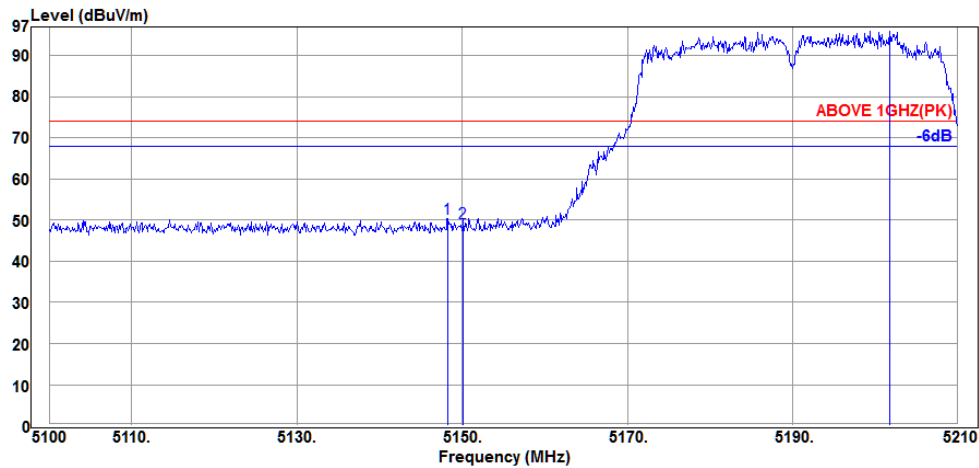
| Emission Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Meter Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Detector |
|--------------------------|-----------------------|-----------------|----------------------|-------------------------|-----------------|-------------|----------|
| 5121.12                  | 34.42                 | 8.91            | 6.76                 | 50.09                   | 74.00           | 23.91       | Peak     |
| 5150.05                  | 34.45                 | 8.84            | 4.09                 | 47.38                   | 74.00           | 26.62       | Peak     |
| 5188.66                  | 34.48                 | 8.77            | 48.27                | 91.52                   | ---             | ---         | Peak     |



#### Antenna at Horizontal Polarization

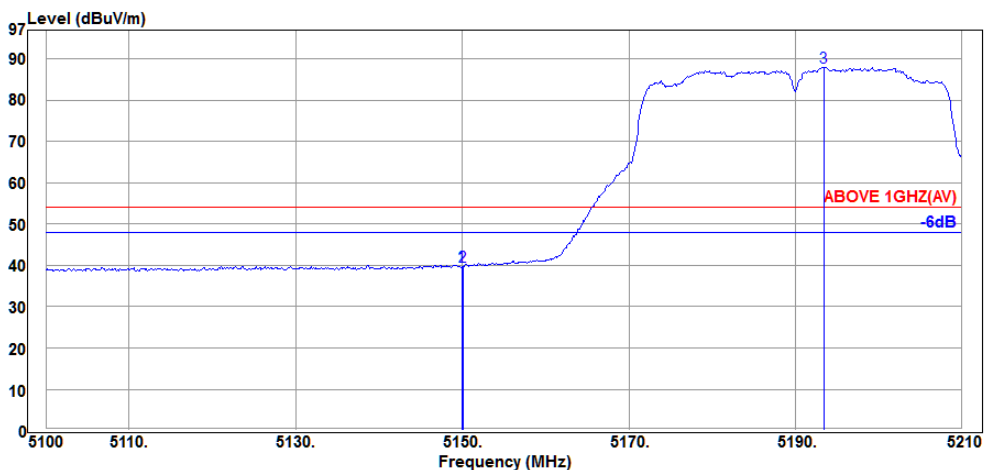
| Emission Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Meter Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Detector |
|--------------------------|-----------------------|-----------------|----------------------|-------------------------|-----------------|-------------|----------|
| 5134.10                  | 34.43                 | 8.88            | -4.52                | 38.79                   | 54.00           | 15.21       | Average  |
| 5150.05                  | 34.45                 | 8.84            | -4.70                | 38.59                   | 54.00           | 15.41       | Average  |
| 5197.79                  | 34.50                 | 8.74            | 38.47                | 81.71                   | ---             | ---         | Average  |

|      |              |           |            |
|------|--------------|-----------|------------|
| Mode | 802.11n-HT40 | Frequency | TX 5190MHz |
|------|--------------|-----------|------------|



#### Antenna at Vertical Polarization

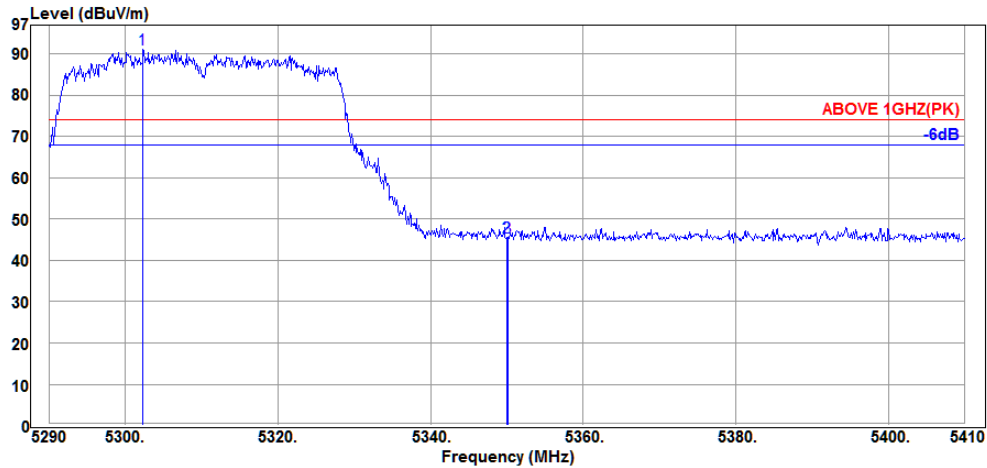
| Emission Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Meter Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Detector |
|--------------------------|-----------------------|-----------------|----------------------|-------------------------|-----------------|-------------|----------|
| 5148.29                  | 34.45                 | 8.84            | 7.17                 | 50.46                   | 74.00           | 23.54       | Peak     |
| 5150.05                  | 34.45                 | 8.84            | 6.01                 | 49.30                   | 74.00           | 24.70       | Peak     |
| 5201.75                  | 34.50                 | 8.74            | 52.83                | 96.07                   | ---             | ---         | Peak     |



#### Antenna at Vertical Polarization

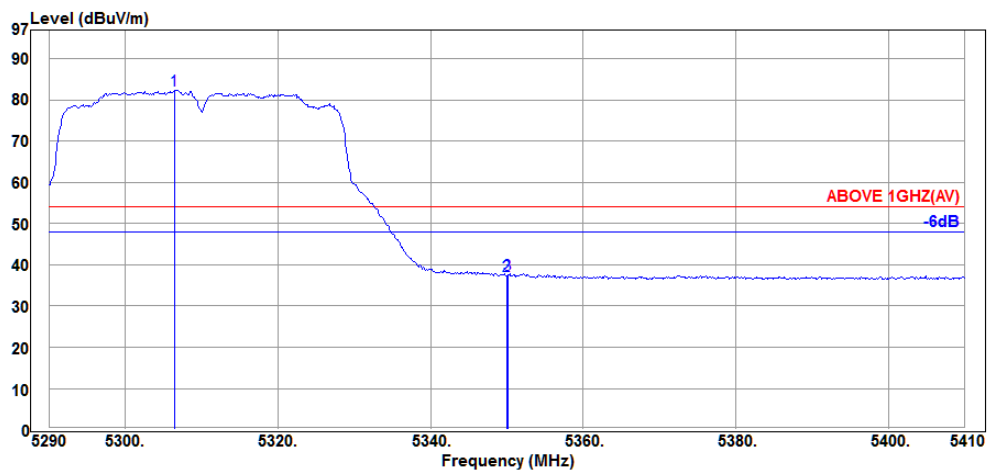
| Emission Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Meter Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Detector |
|--------------------------|-----------------------|-----------------|----------------------|-------------------------|-----------------|-------------|----------|
| 5149.94                  | 34.45                 | 8.84            | -3.54                | 39.75                   | 54.00           | 14.25       | Average  |
| 5150.05                  | 34.45                 | 8.84            | -3.51                | 39.78                   | 54.00           | 14.22       | Average  |
| 5193.50                  | 34.50                 | 8.74            | 44.75                | 87.99                   | ---             | ---         | Average  |

| Mode | 802.11n-HT40 | Frequency | TX 5310MHz |
|------|--------------|-----------|------------|
|------|--------------|-----------|------------|



#### Antenna at Horizontal Polarization

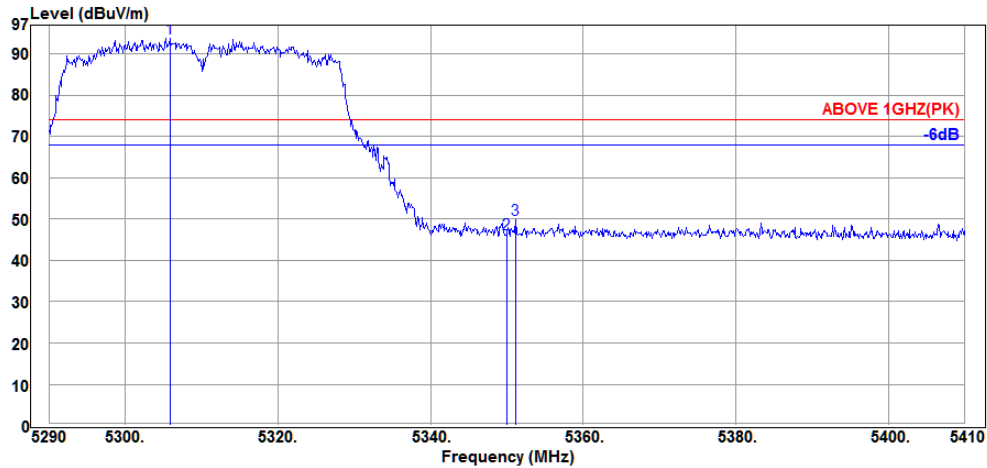
| Emission Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Meter Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Detector |
|--------------------------|-----------------------|-----------------|----------------------|-------------------------|-----------------|-------------|----------|
| 5302.36                  | 34.60                 | 8.74            | 47.93                | 91.27                   | ---             | ---         | Peak     |
| 5350.00                  | 34.65                 | 8.61            | 2.30                 | 45.56                   | 74.00           | 28.44       | Peak     |
| 5350.12                  | 34.65                 | 8.61            | 2.44                 | 45.70                   | 74.00           | 28.30       | Peak     |



#### Antenna at Horizontal Polarization

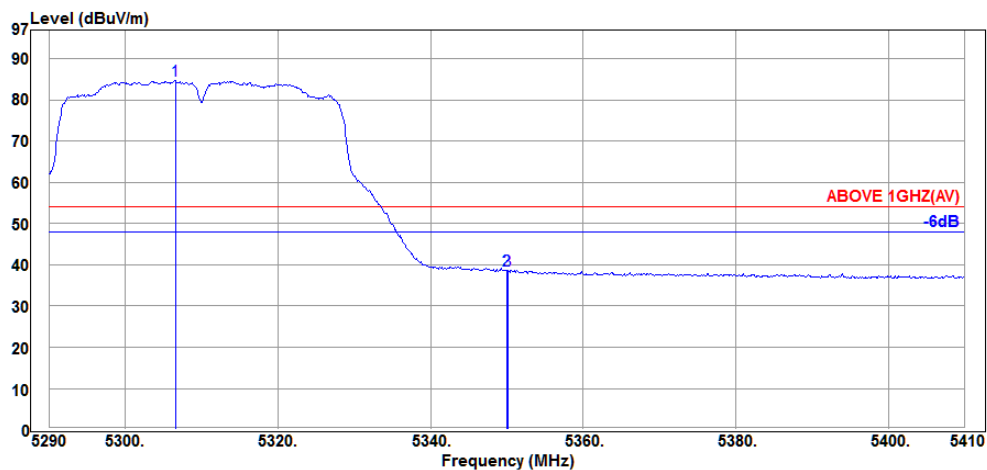
| Emission Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Meter Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Detector |
|--------------------------|-----------------------|-----------------|----------------------|-------------------------|-----------------|-------------|----------|
| 5306.44                  | 34.60                 | 8.74            | 39.06                | 82.40                   | ---             | ---         | Average  |
| 5350.00                  | 34.65                 | 8.61            | -5.95                | 37.31                   | 54.00           | 16.69       | Average  |
| 5350.12                  | 34.65                 | 8.61            | -5.70                | 37.56                   | 54.00           | 16.44       | Average  |

| Mode | 802.11n-HT40 | Frequency | TX 5310MHz |
|------|--------------|-----------|------------|
|------|--------------|-----------|------------|



#### Antenna at Vertical Polarization

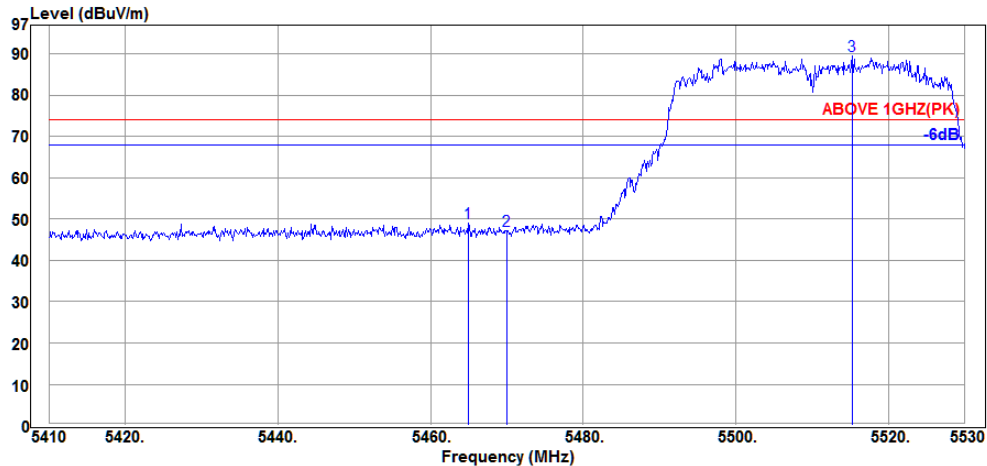
| Emission Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Meter Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Detector |
|--------------------------|-----------------------|-----------------|----------------------|-------------------------|-----------------|-------------|----------|
| 5305.84                  | 34.60                 | 8.74            | 50.55                | 93.89                   | ---             | ---         | Peak     |
| 5350.00                  | 34.65                 | 8.61            | 3.14                 | 46.40                   | 74.00           | 27.60       | Peak     |
| 5351.08                  | 34.65                 | 8.61            | 6.63                 | 49.89                   | 74.00           | 24.11       | Peak     |



#### Antenna at Vertical Polarization

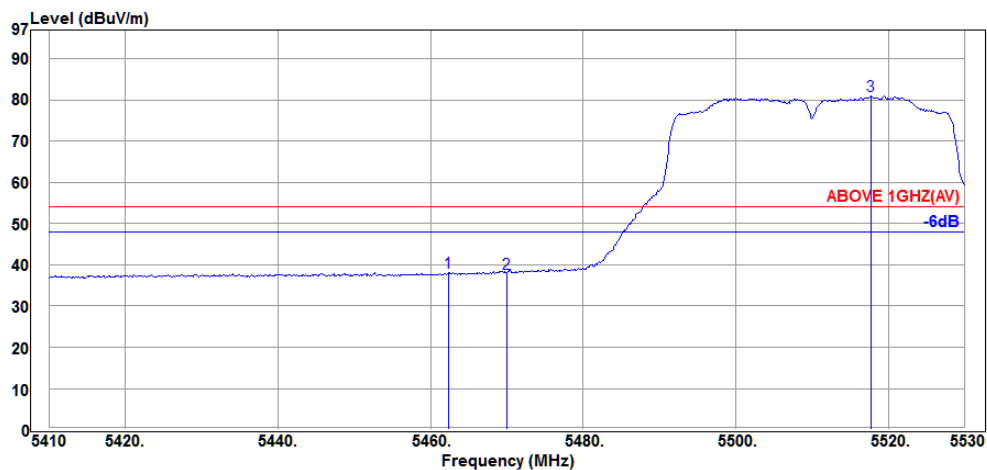
| Emission Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Meter Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Detector |
|--------------------------|-----------------------|-----------------|----------------------|-------------------------|-----------------|-------------|----------|
| 5306.56                  | 34.60                 | 8.74            | 41.48                | 84.82                   | ---             | ---         | Average  |
| 5350.00                  | 34.65                 | 8.61            | -4.56                | 38.70                   | 54.00           | 15.30       | Average  |
| 5350.12                  | 34.65                 | 8.61            | -4.65                | 38.61                   | 54.00           | 15.39       | Average  |

| Mode | 802.11n-HT40 | Frequency | TX 5510MHz |
|------|--------------|-----------|------------|
|------|--------------|-----------|------------|



#### Antenna at Horizontal Polarization

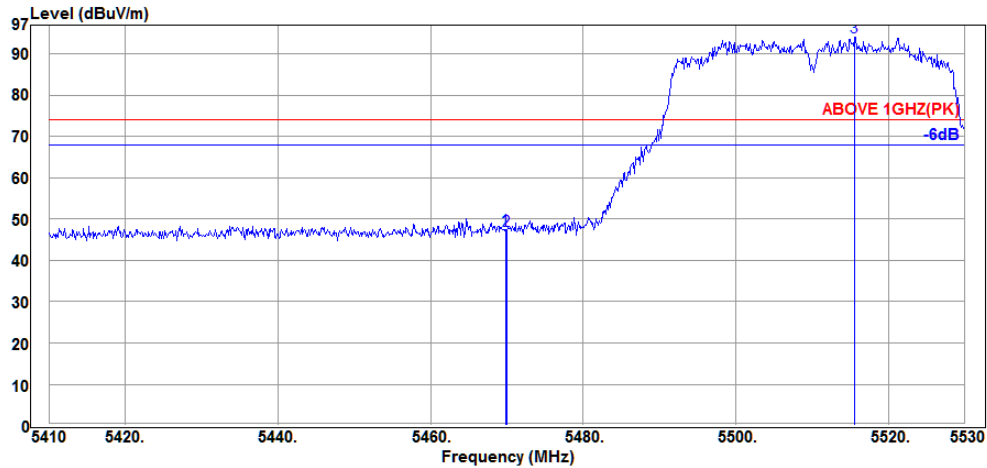
| Emission Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Meter Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Detector |
|--------------------------|-----------------------|-----------------|----------------------|-------------------------|-----------------|-------------|----------|
| 5464.96                  | 34.77                 | 8.65            | 5.55                 | 48.97                   | 74.00           | 25.03       | Peak     |
| 5470.00                  | 34.77                 | 8.65            | 3.69                 | 47.11                   | 74.00           | 26.89       | Peak     |
| 5515.24                  | 34.82                 | 8.80            | 45.91                | 89.53                   | ---             | ---         | Peak     |



#### Antenna at Horizontal Polarization

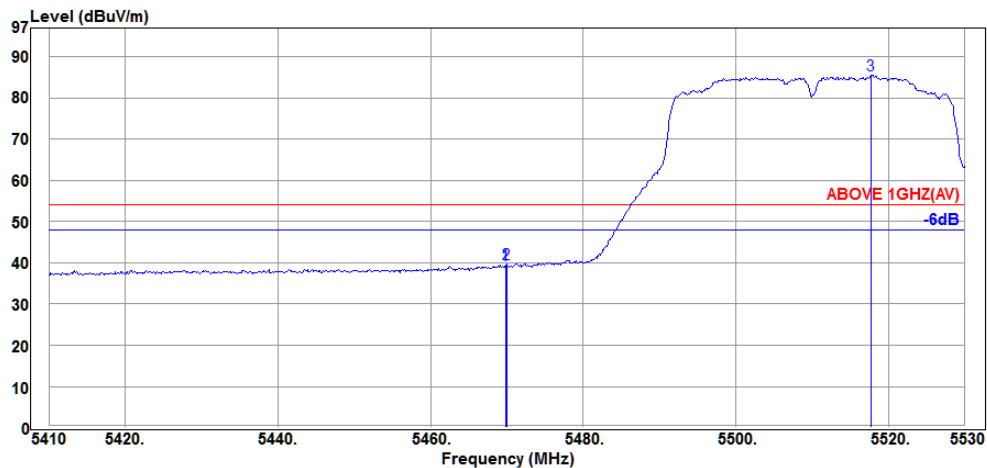
| Emission Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Meter Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Detector |
|--------------------------|-----------------------|-----------------|----------------------|-------------------------|-----------------|-------------|----------|
| 5462.32                  | 34.75                 | 8.61            | -5.25                | 38.11                   | 54.00           | 15.89       | Average  |
| 5470.00                  | 34.77                 | 8.65            | -5.45                | 37.97                   | 54.00           | 16.03       | Average  |
| 5517.76                  | 34.82                 | 8.80            | 37.34                | 80.96                   | ---             | ---         | Average  |

| Mode | 802.11n-HT40 | Frequency | TX 5510MHz |
|------|--------------|-----------|------------|
|------|--------------|-----------|------------|



#### Antenna at Vertical Polarization

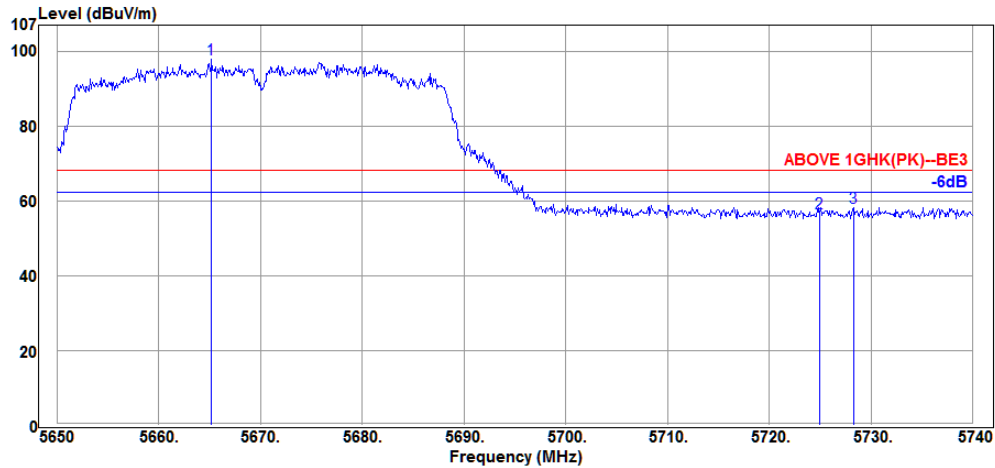
| Emission Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Meter Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Detector |
|--------------------------|-----------------------|-----------------|----------------------|-------------------------|-----------------|-------------|----------|
| 5469.88                  | 34.77                 | 8.65            | 3.98                 | 47.40                   | 74.00           | 26.60       | Peak     |
| 5470.00                  | 34.77                 | 8.65            | 3.84                 | 47.26                   | 74.00           | 26.74       | Peak     |
| 5515.60                  | 34.82                 | 8.80            | 50.52                | 94.14                   | ---             | ---         | Peak     |



#### Antenna at Vertical Polarization

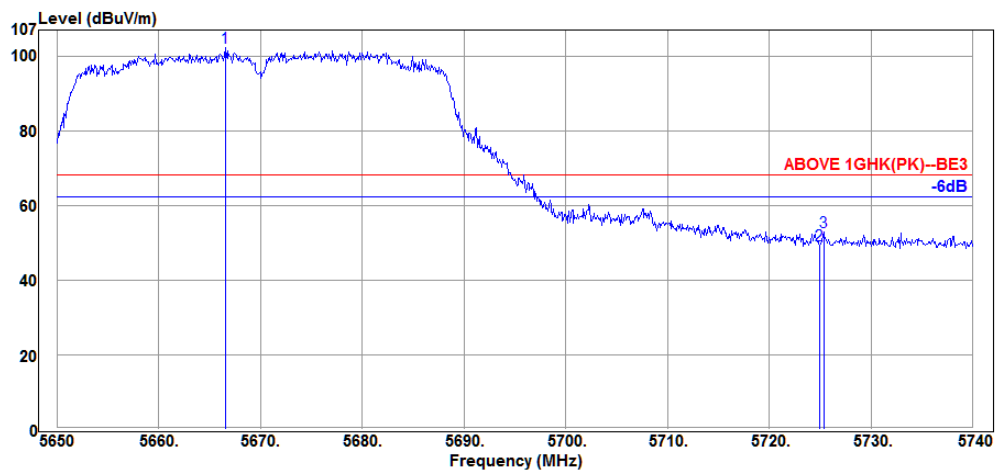
| Emission Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Meter Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Detector |
|--------------------------|-----------------------|-----------------|----------------------|-------------------------|-----------------|-------------|----------|
| 5469.88                  | 34.77                 | 8.65            | -3.84                | 39.58                   | 54.00           | 14.42       | Average  |
| 5470.00                  | 34.77                 | 8.65            | -3.72                | 39.70                   | 54.00           | 14.30       | Average  |
| 5517.64                  | 34.82                 | 8.80            | 42.02                | 85.64                   | ---             | ---         | Average  |

| Mode | 802.11n-HT40 | Frequency | TX 5670MHz |
|------|--------------|-----------|------------|
|------|--------------|-----------|------------|



#### Antenna at Horizontal Polarization

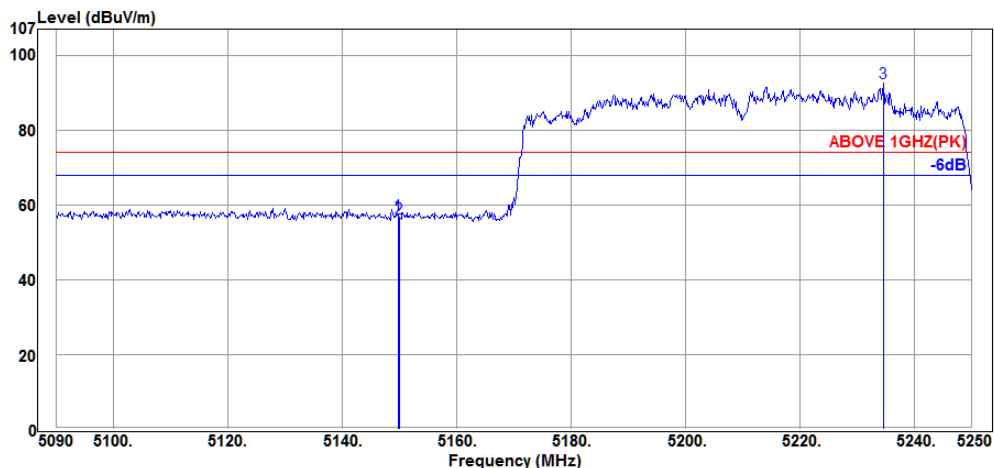
| Emission Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Meter Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Detector |
|--------------------------|-----------------------|-----------------|----------------------|-------------------------|-----------------|-------------|----------|
| 5665.21                  | 34.99                 | 9.47            | 53.43                | 97.89                   | ---             | ---         | Peak     |
| 5724.97                  | 35.07                 | 9.78            | 11.82                | 56.67                   | 68.20           | 11.53       | Peak     |
| 5728.30                  | 35.07                 | 9.78            | 13.22                | 58.07                   | 68.20           | 10.13       | Peak     |



#### Antenna at Vertical Polarization

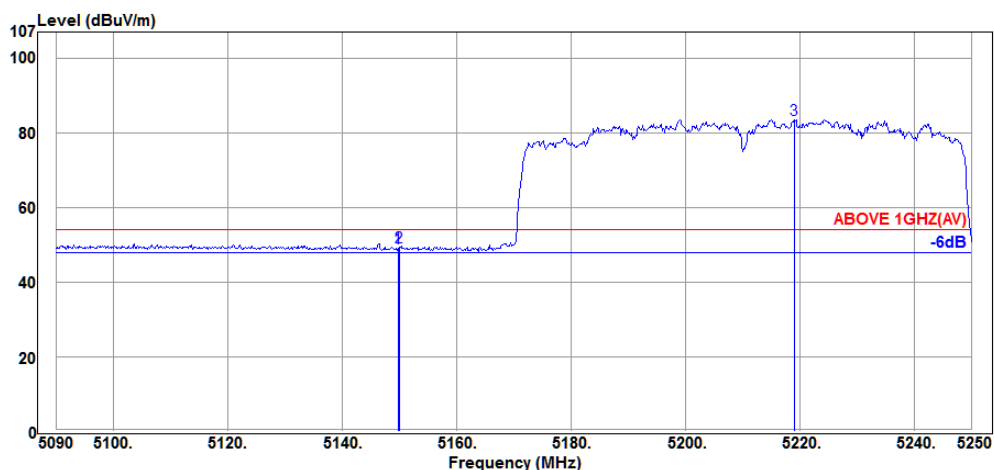
| Emission Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Meter Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Detector |
|--------------------------|-----------------------|-----------------|----------------------|-------------------------|-----------------|-------------|----------|
| 5666.56                  | 35.01                 | 9.57            | 57.68                | 102.26                  | ---             | ---         | Peak     |
| 5724.97                  | 35.07                 | 9.78            | 4.65                 | 49.50                   | 68.20           | 18.70       | Peak     |
| 5725.33                  | 35.07                 | 9.78            | 7.99                 | 52.84                   | 68.20           | 15.36       | Peak     |

| Mode | 802.11ac-VHT80 | Frequency | TX 5210MHz |
|------|----------------|-----------|------------|
|------|----------------|-----------|------------|



#### Antenna at Horizontal Polarization

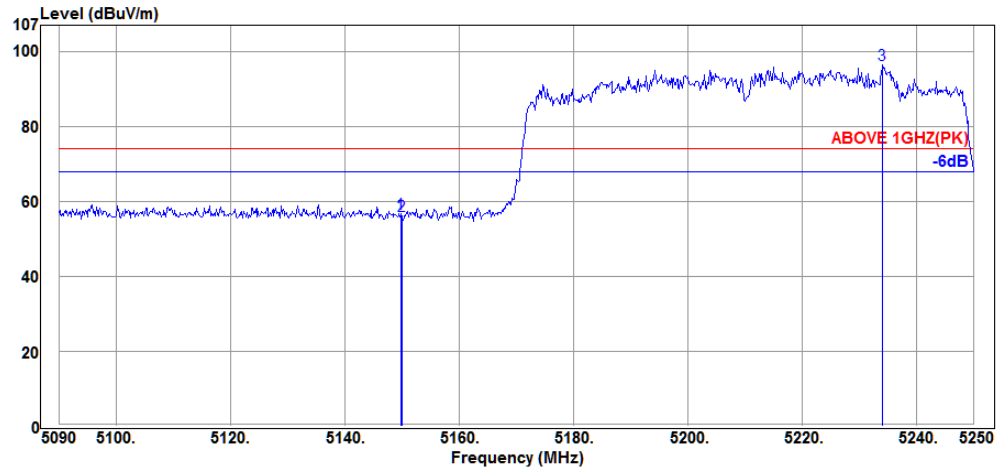
| Emission Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Meter Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Detector |
|--------------------------|-----------------------|-----------------|----------------------|-------------------------|-----------------|-------------|----------|
| 5149.84                  | 34.45                 | 8.84            | 14.17                | 57.46                   | 74.00           | 16.54       | Peak     |
| 5150.00                  | 34.45                 | 8.84            | 13.08                | 56.37                   | 74.00           | 17.63       | Peak     |
| 5234.64                  | 34.53                 | 8.74            | 49.21                | 92.48                   | ---             | ---         | Peak     |



#### Antenna at Horizontal Polarization

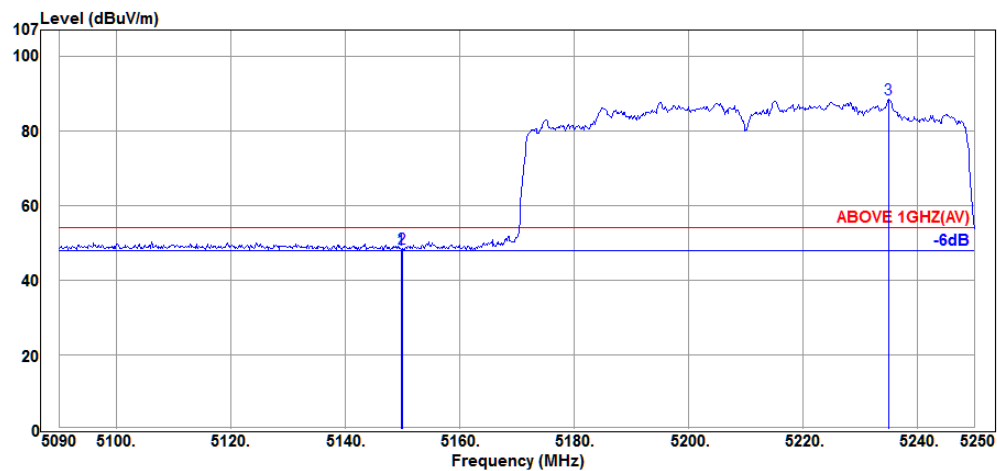
| Emission Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Meter Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Detector |
|--------------------------|-----------------------|-----------------|----------------------|-------------------------|-----------------|-------------|----------|
| 5149.84                  | 34.45                 | 8.84            | 5.94                 | 49.23                   | 54.00           | 4.77        | Average  |
| 5150.00                  | 34.45                 | 8.84            | 6.00                 | 49.29                   | 54.00           | 4.71        | Average  |
| 5218.96                  | 34.52                 | 8.74            | 40.32                | 83.58                   | ---             | ---         | Average  |

| Mode | 802.11ac-VHT80 | Frequency | TX 5210MHz |
|------|----------------|-----------|------------|
|------|----------------|-----------|------------|



#### Antenna at Vertical Polarization

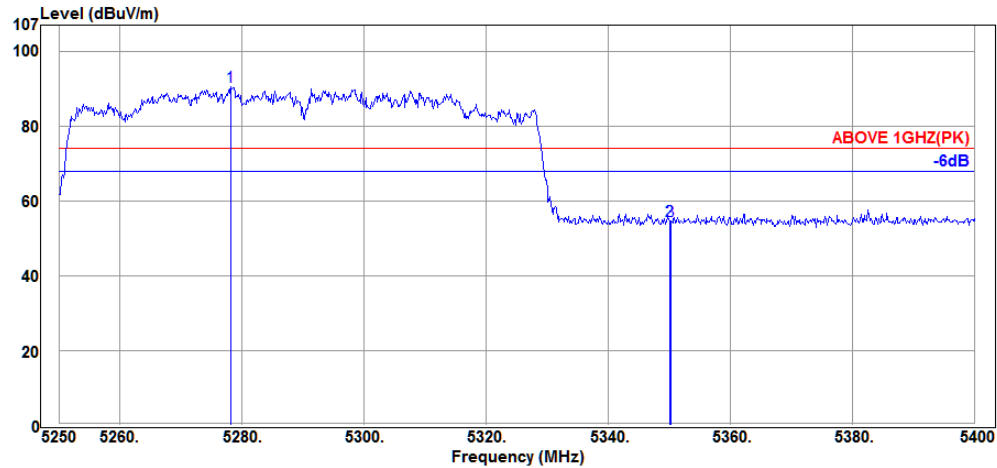
| Emission Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Meter Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Detector |
|--------------------------|-----------------------|-----------------|----------------------|-------------------------|-----------------|-------------|----------|
| 5149.84                  | 34.45                 | 8.84            | 13.32                | 56.61                   | 74.00           | 17.39       | Peak     |
| 5150.00                  | 34.45                 | 8.84            | 13.00                | 56.29                   | 74.00           | 17.71       | Peak     |
| 5234.00                  | 34.53                 | 8.74            | 53.23                | 96.50                   | ---             | ---         | Peak     |



#### Antenna at Vertical Polarization

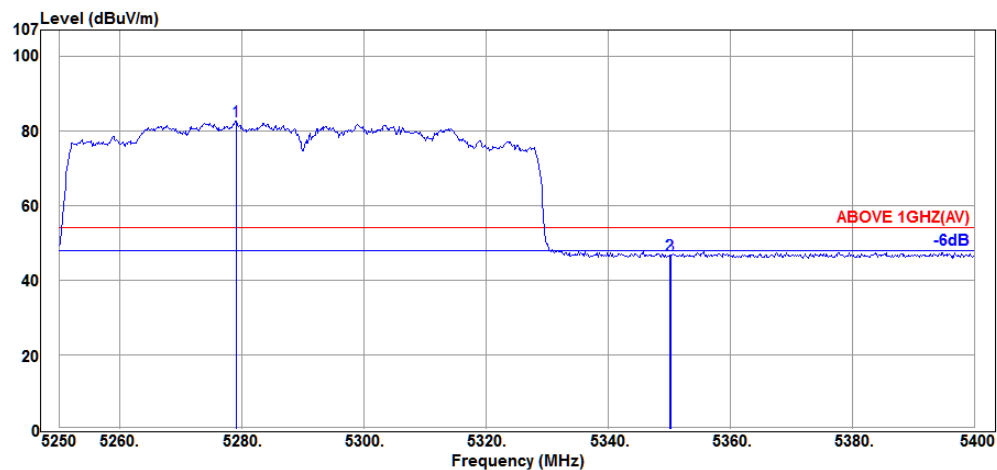
| Emission Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Meter Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Detector |
|--------------------------|-----------------------|-----------------|----------------------|-------------------------|-----------------|-------------|----------|
| 5149.84                  | 34.45                 | 8.84            | 4.91                 | 48.20                   | 54.00           | 5.80        | Average  |
| 5150.00                  | 34.45                 | 8.84            | 5.22                 | 48.51                   | 54.00           | 5.49        | Average  |
| 5234.96                  | 34.53                 | 8.74            | 45.14                | 88.41                   | ---             | ---         | Average  |

| Mode | 802.11ac-VHT80 | Frequency | TX 5290MHz |
|------|----------------|-----------|------------|
|------|----------------|-----------|------------|



#### Antenna at Horizontal Polarization

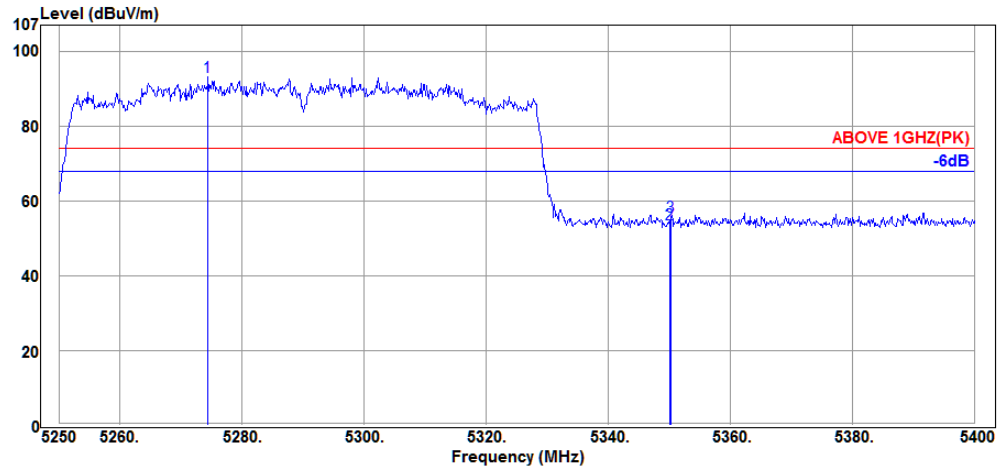
| Emission Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Meter Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Detector |
|--------------------------|-----------------------|-----------------|----------------------|-------------------------|-----------------|-------------|----------|
| 5278.20                  | 34.58                 | 8.74            | 47.12                | 90.44                   | ---             | ---         | Peak     |
| 5350.05                  | 34.65                 | 8.61            | 11.52                | 54.78                   | 74.00           | 19.22       | Peak     |
| 5350.20                  | 34.65                 | 8.61            | 11.37                | 54.63                   | 74.00           | 19.37       | Peak     |



#### Antenna at Horizontal Polarization

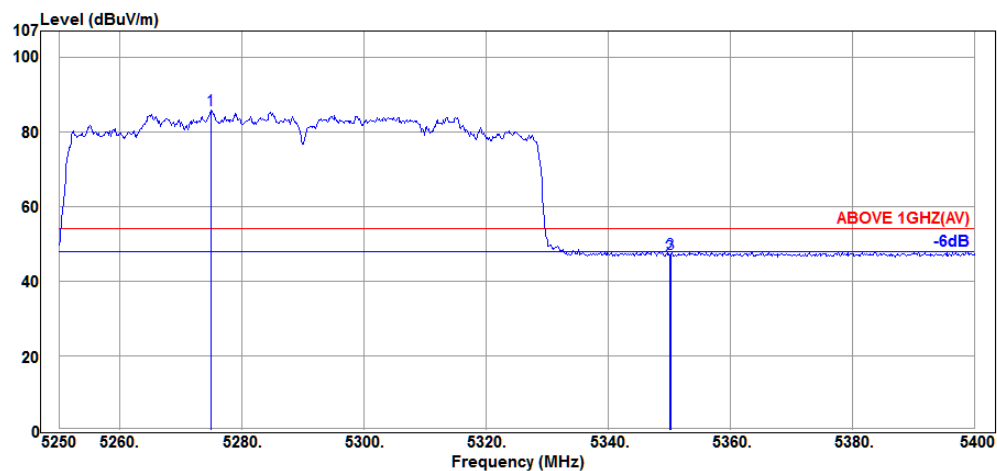
| Emission Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Meter Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Detector |
|--------------------------|-----------------------|-----------------|----------------------|-------------------------|-----------------|-------------|----------|
| 5279.10                  | 34.58                 | 8.74            | 39.27                | 82.59                   | ---             | ---         | Average  |
| 5350.05                  | 34.65                 | 8.61            | 3.40                 | 46.66                   | 54.00           | 7.34        | Average  |
| 5350.20                  | 34.65                 | 8.61            | 3.52                 | 46.78                   | 54.00           | 7.22        | Average  |

| Mode | 802.11ac-VHT80 | Frequency | TX 5290MHz |
|------|----------------|-----------|------------|
|------|----------------|-----------|------------|



#### Antenna at Vertical Polarization

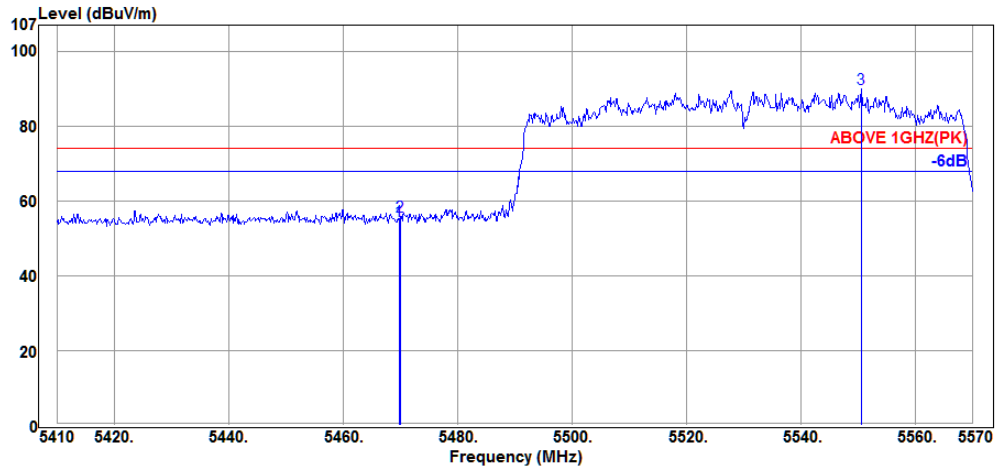
| Emission Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Meter Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Detector |
|--------------------------|-----------------------|-----------------|----------------------|-------------------------|-----------------|-------------|----------|
| 5274.45                  | 34.57                 | 8.74            | 49.87                | 93.18                   | ---             | ---         | Peak     |
| 5350.05                  | 34.65                 | 8.61            | 10.57                | 53.83                   | 74.00           | 20.17       | Peak     |
| 5350.20                  | 34.65                 | 8.61            | 12.72                | 55.98                   | 74.00           | 18.02       | Peak     |



#### Antenna at Vertical Polarization

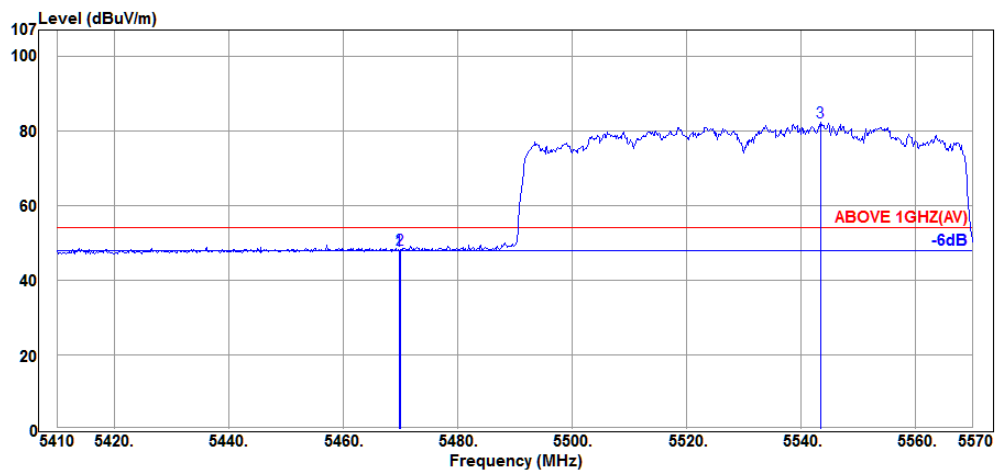
| Emission Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Meter Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Detector |
|--------------------------|-----------------------|-----------------|----------------------|-------------------------|-----------------|-------------|----------|
| 5274.90                  | 34.57                 | 8.74            | 42.47                | 85.78                   | ---             | ---         | Average  |
| 5350.05                  | 34.65                 | 8.61            | 3.51                 | 46.77                   | 54.00           | 7.23        | Average  |
| 5350.20                  | 34.65                 | 8.61            | 4.13                 | 47.39                   | 54.00           | 6.61        | Average  |

|      |                |           |            |
|------|----------------|-----------|------------|
| Mode | 802.11ac-VHT80 | Frequency | TX 5530MHz |
|------|----------------|-----------|------------|



#### Antenna at Horizontal Polarization

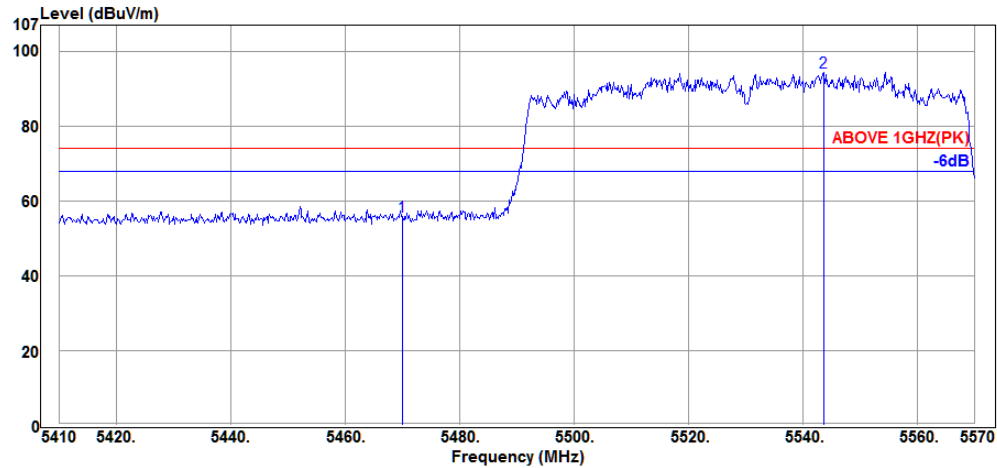
| Emission Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Meter Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Detector |
|--------------------------|-----------------------|-----------------|----------------------|-------------------------|-----------------|-------------|----------|
| 5469.84                  | 34.77                 | 8.65            | 11.28                | 54.70                   | 74.00           | 19.30       | Peak     |
| 5470.00                  | 34.77                 | 8.65            | 12.39                | 55.81                   | 74.00           | 18.19       | Peak     |
| 5550.48                  | 34.86                 | 8.94            | 46.14                | 89.94                   | ---             | ---         | Peak     |



#### Antenna at Horizontal Polarization

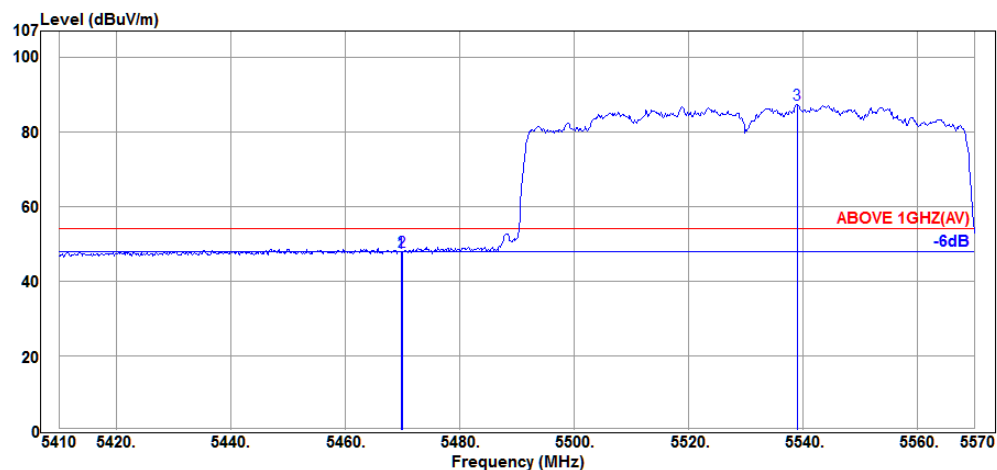
| Emission Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Meter Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Detector |
|--------------------------|-----------------------|-----------------|----------------------|-------------------------|-----------------|-------------|----------|
| 5469.84                  | 34.77                 | 8.65            | 4.54                 | 47.96                   | 54.00           | 6.04        | Average  |
| 5470.00                  | 34.77                 | 8.65            | 4.70                 | 48.12                   | 54.00           | 5.88        | Average  |
| 5543.44                  | 34.84                 | 8.87            | 38.61                | 82.32                   | ---             | ---         | Average  |

| Mode | 802.11ac-VHT80 | Frequency | TX 5530MHz |
|------|----------------|-----------|------------|
|------|----------------|-----------|------------|



#### Antenna at Vertical Polarization

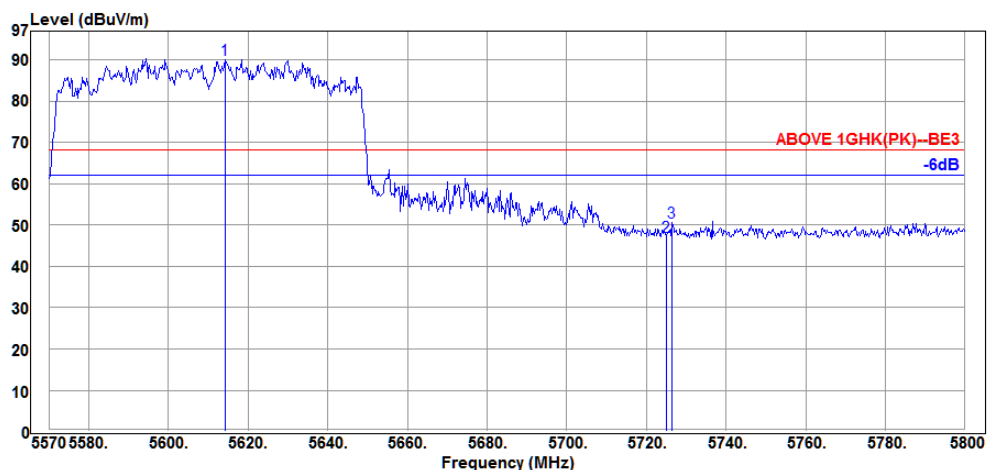
| Emission Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Meter Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Detector |
|--------------------------|-----------------------|-----------------|----------------------|-------------------------|-----------------|-------------|----------|
| 5470.00                  | 34.77                 | 8.65            | 12.34                | 55.76                   | 74.00           | 18.24       | Peak     |
| 5543.60                  | 34.84                 | 8.87            | 50.79                | 94.50                   | ---             | ---         | Peak     |



#### Antenna at Vertical Polarization

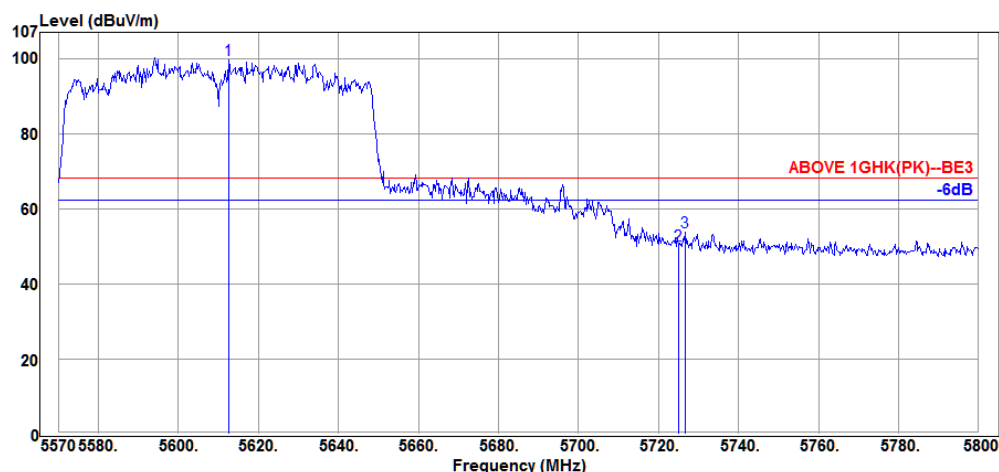
| Emission Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Meter Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Detector |
|--------------------------|-----------------------|-----------------|----------------------|-------------------------|-----------------|-------------|----------|
| 5469.84                  | 34.77                 | 8.65            | 4.19                 | 47.61                   | 54.00           | 6.39        | Average  |
| 5470.00                  | 34.77                 | 8.65            | 4.53                 | 47.95                   | 54.00           | 6.05        | Average  |
| 5538.96                  | 34.84                 | 8.87            | 43.57                | 87.28                   | ---             | ---         | Average  |

|      |                |           |            |
|------|----------------|-----------|------------|
| Mode | 802.11ac-VHT80 | Frequency | TX 5610MHz |
|------|----------------|-----------|------------|



### Antenna at Horizontal Polarization

| Emission Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Meter Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Detector |
|--------------------------|-----------------------|-----------------|----------------------|-------------------------|-----------------|-------------|----------|
| 5614.16                  | 34.92                 | 9.15            | 45.97                | 90.04                   | ---             | ---         | Peak     |
| 5725.02                  | 35.07                 | 9.78            | 2.31                 | 47.16                   | 68.20           | 21.04       | Peak     |
| 5726.40                  | 35.07                 | 9.78            | 5.81                 | 50.66                   | 68.20           | 17.54       | Peak     |



### Antenna at Vertical Polarization

| Emission Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Meter Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Detector |
|--------------------------|-----------------------|-----------------|----------------------|-------------------------|-----------------|-------------|----------|
| 5612.55                  | 34.92                 | 9.15            | 55.50                | 99.57                   | ---             | ---         | Peak     |
| 5725.02                  | 35.07                 | 9.78            | 5.38                 | 50.23                   | 68.20           | 17.97       | Peak     |
| 5726.63                  | 35.07                 | 9.78            | 8.91                 | 53.76                   | 68.20           | 14.44       | Peak     |

### 6.5.2. Emissions outside the frequency band:

The emissions (up to 40GHz) not reported for there is no emission be found.

|      |         |           |            |
|------|---------|-----------|------------|
| Mode | 802.11a | UNII Band | I          |
|      |         | Frequency | TX 5200MHz |

#### Antenna at Vertical Polarization

| Emission Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Meter Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Detector |
|--------------------------|-----------------------|-----------------|----------------------|-------------------------|-----------------|-------------|----------|
| 2126.00                  | 31.77                 | 5.43            | 16.03                | 53.23                   | 54.00           | 0.77        | Peak     |
| 2662.00                  | 32.50                 | 6.07            | 8.48                 | 47.05                   | 54.00           | 6.95        | Peak     |
| 4255.00                  | 33.70                 | 8.00            | 4.10                 | 45.80                   | 54.00           | 8.20        | Peak     |

|      |         |           |            |
|------|---------|-----------|------------|
| Mode | 802.11a | UNII Band | II-2A      |
|      |         | Frequency | TX 5260MHz |

#### Antenna at Vertical Polarization

| Emission Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Meter Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Detector |
|--------------------------|-----------------------|-----------------|----------------------|-------------------------|-----------------|-------------|----------|
| 2130.00                  | 31.77                 | 5.43            | 15.53                | 52.73                   | 54.00           | 1.27        | Peak     |
| 2662.00                  | 32.50                 | 6.07            | 8.63                 | 47.20                   | 54.00           | 6.80        | Peak     |
| 4250.00                  | 33.70                 | 8.00            | 4.29                 | 45.99                   | 54.00           | 8.01        | Peak     |

|      |         |           |            |
|------|---------|-----------|------------|
| Mode | 802.11a | UNII Band | II-2C      |
|      |         | Frequency | TX 5600MHz |

#### Antenna at Vertical Polarization

| Emission Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Meter Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Detector |
|--------------------------|-----------------------|-----------------|----------------------|-------------------------|-----------------|-------------|----------|
| 2126.00                  | 31.77                 | 5.43            | 16.13                | 53.33                   | 54.00           | 0.67        | Peak     |
| 5360.00                  | 34.65                 | 8.61            | 6.80                 | 50.06                   | 54.00           | 3.94        | Peak     |
| 5595.00                  | 34.90                 | 9.08            | 7.57                 | 51.55                   | 54.00           | 2.45        | Peak     |
| 5925.00                  | 35.32                 | 9.62            | 8.28                 | 53.22                   | 54.00           | 0.78        | Peak     |

|      |         |           |            |
|------|---------|-----------|------------|
| Mode | 802.11a | UNII Band | II-2C      |
|      |         | Frequency | TX 5720MHz |

**Antenna at Vertical Polarization**

| Emission<br>Frequency<br>(MHz) | Antenna<br>Factor<br>(dB/m) | Cable<br>Loss<br>(dB) | Meter<br>Reading<br>(dBμV) | Emission<br>Level<br>(dBμV/m) | Limits<br>(dBμV/m) | Margin<br>(dB) | Detector |
|--------------------------------|-----------------------------|-----------------------|----------------------------|-------------------------------|--------------------|----------------|----------|
| 1722.00                        | 29.56                       | 4.51                  | 11.94                      | 46.01                         | 54.00              | 7.99           | Peak     |
| 2132.00                        | 31.79                       | 5.46                  | 15.87                      | 53.12                         | 54.00              | 0.88           | Peak     |
| 2292.00                        | 32.01                       | 5.64                  | 9.36                       | 47.01                         | 54.00              | 6.99           | Peak     |
| 2658.00                        | 32.50                       | 6.07                  | 8.49                       | 47.06                         | 54.00              | 6.94           | Peak     |

|      |         |           |            |
|------|---------|-----------|------------|
| Mode | 802.11a | UNII Band | III        |
|      |         | Frequency | TX 5825MHz |

**Antenna at Vertical Polarization**

| Emission<br>Frequency<br>(MHz) | Antenna<br>Factor<br>(dB/m) | Cable<br>Loss<br>(dB) | Meter<br>Reading<br>(dBμV) | Emission<br>Level<br>(dBμV/m) | Limits<br>(dBμV/m) | Margin<br>(dB) | Detector |
|--------------------------------|-----------------------------|-----------------------|----------------------------|-------------------------------|--------------------|----------------|----------|
| 2132.00                        | 31.79                       | 5.46                  | 16.58                      | 53.83                         | 54.00              | 0.17           | Peak     |
| 2300.00                        | 32.01                       | 5.64                  | 10.35                      | 48.00                         | 54.00              | 6.00           | Peak     |
| 2656.00                        | 32.48                       | 6.05                  | 8.73                       | 47.26                         | 54.00              | 6.74           | Peak     |

|      |              |           |            |
|------|--------------|-----------|------------|
| Mode | 802.11n-HT20 | UNII Band | I          |
|      |              | Frequency | TX 5200MHz |

**Antenna at Vertical Polarization**

| Emission<br>Frequency<br>(MHz) | Antenna<br>Factor<br>(dB/m) | Cable<br>Loss<br>(dB) | Meter<br>Reading<br>(dBμV) | Emission<br>Level<br>(dBμV/m) | Limits<br>(dBμV/m) | Margin<br>(dB) | Detector |
|--------------------------------|-----------------------------|-----------------------|----------------------------|-------------------------------|--------------------|----------------|----------|
| 2461.60                        | 32.25                       | 5.80                  | 8.20                       | 46.25                         | 54.00              | 7.75           | Peak     |
| 4885.00                        | 34.26                       | 8.47                  | 4.01                       | 46.74                         | 54.00              | 7.26           | Peak     |
| 4997.50                        | 34.30                       | 8.78                  | 6.18                       | 49.26                         | 54.00              | 4.74           | Peak     |
| 1064.00                        | 28.09                       | 3.42                  | 10.50                      | 42.01                         | 54.00              | 11.99          | Peak     |
| 1330.00                        | 28.03                       | 3.84                  | 10.28                      | 42.15                         | 54.00              | 11.85          | Peak     |
| 1598.00                        | 28.72                       | 4.22                  | 8.40                       | 41.34                         | 54.00              | 12.66          | Peak     |
| 1758.00                        | 29.92                       | 4.65                  | 13.27                      | 47.84                         | 54.00              | 6.16           | Peak     |

|      |              |           |            |
|------|--------------|-----------|------------|
| Mode | 802.11n-HT20 | UNII Band | II-2A      |
|      |              | Frequency | TX 5260MHz |

**Antenna at Vertical Polarization**

| Emission<br>Frequency<br>(MHz) | Antenna<br>Factor<br>(dB/m) | Cable<br>Loss<br>(dB) | Meter<br>Reading<br>(dBμV) | Emission<br>Level<br>(dBμV/m) | Limits<br>(dBμV/m) | Margin<br>(dB) | Detector |
|--------------------------------|-----------------------------|-----------------------|----------------------------|-------------------------------|--------------------|----------------|----------|
| 1330.00                        | 28.03                       | 3.84                  | 9.56                       | 41.43                         | 54.00              | 12.57          | Peak     |
| 1764.00                        | 29.92                       | 4.65                  | 14.98                      | 49.55                         | 54.00              | 4.45           | Peak     |
| 2132.00                        | 31.79                       | 5.46                  | 14.93                      | 52.18                         | 54.00              | 1.82           | Peak     |
| 2298.00                        | 32.01                       | 5.64                  | 8.32                       | 45.97                         | 54.00              | 8.03           | Peak     |
| 2656.00                        | 32.48                       | 6.05                  | 7.47                       | 46.00                         | 54.00              | 8.00           | Peak     |

|      |              |           |            |
|------|--------------|-----------|------------|
| Mode | 802.11n-HT20 | UNII Band | II-2C      |
|      |              | Frequency | TX 5600MHz |

**Antenna at Vertical Polarization**

| Emission Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Meter Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Detector |
|--------------------------|-----------------------|-----------------|----------------------|-------------------------|-----------------|-------------|----------|
| 2126.00                  | 31.77                 | 5.43            | 15.30                | 52.50                   | 54.00           | 1.50        | Peak     |
| 2352.00                  | 32.11                 | 5.69            | 7.85                 | 45.65                   | 54.00           | 8.35        | Peak     |
| 4800.00                  | 34.22                 | 7.86            | 5.97                 | 48.05                   | 54.00           | 5.95        | Peak     |
| 5595.00                  | 34.90                 | 9.08            | 6.37                 | 50.35                   | 54.00           | 3.65        | Peak     |
| 5925.00                  | 35.32                 | 9.62            | 5.75                 | 50.69                   | 54.00           | 3.31        | Peak     |

|      |              |           |            |
|------|--------------|-----------|------------|
| Mode | 802.11n-HT20 | UNII Band | II-2C      |
|      |              | Frequency | TX 5720MHz |

**Antenna at Horizontal Polarization**

| Emission Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Meter Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Detector |
|--------------------------|-----------------------|-----------------|----------------------|-------------------------|-----------------|-------------|----------|
| 1064.00                  | 28.09                 | 3.42            | 9.22                 | 40.73                   | 54.00           | 13.27       | Peak     |
| 1332.00                  | 28.03                 | 3.87            | 9.42                 | 41.32                   | 54.00           | 12.68       | Peak     |
| 1600.00                  | 28.72                 | 4.22            | 8.95                 | 41.89                   | 54.00           | 12.11       | Peak     |
| 2130.00                  | 31.77                 | 5.43            | 7.41                 | 44.61                   | 54.00           | 9.39        | Peak     |

**Antenna at Vertical Polarization**

| Emission Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Meter Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Detector |
|--------------------------|-----------------------|-----------------|----------------------|-------------------------|-----------------|-------------|----------|
| 1598.00                  | 28.72                 | 4.22            | 9.33                 | 42.27                   | 54.00           | 11.73       | Peak     |
| 2132.00                  | 31.79                 | 5.46            | 15.90                | 53.15                   | 54.00           | 0.85        | Peak     |
| 3195.00                  | 32.86                 | 6.43            | 5.22                 | 44.51                   | 54.00           | 9.49        | Peak     |
| 4255.00                  | 33.70                 | 8.00            | 5.43                 | 47.13                   | 54.00           | 6.87        | Peak     |

|      |              |           |            |
|------|--------------|-----------|------------|
| Mode | 802.11n-HT20 | UNII Band | III        |
|      |              | Frequency | TX 5825MHz |

**Antenna at Vertical Polarization**

| Emission<br>Frequency<br>(MHz) | Antenna<br>Factor<br>(dB/m) | Cable<br>Loss<br>(dB) | Meter<br>Reading<br>(dBμV) | Emission<br>Level<br>(dBμV/m) | Limits<br>(dBμV/m) | Margin<br>(dB) | Detector |
|--------------------------------|-----------------------------|-----------------------|----------------------------|-------------------------------|--------------------|----------------|----------|
| 1334.00                        | 28.03                       | 3.87                  | 9.83                       | 41.73                         | 54.00              | 12.27          | Peak     |
| 1598.00                        | 28.72                       | 4.22                  | 8.41                       | 41.35                         | 54.00              | 12.65          | Peak     |
| 1954.00                        | 31.24                       | 4.93                  | 9.26                       | 45.43                         | 54.00              | 8.57           | Peak     |
| 2130.00                        | 31.77                       | 5.43                  | 14.74                      | 51.94                         | 54.00              | 2.06           | Peak     |
| 2300.00                        | 32.01                       | 5.64                  | 11.03                      | 48.68                         | 54.00              | 5.32           | Peak     |

|      |              |           |            |
|------|--------------|-----------|------------|
| Mode | 802.11n-HT40 | UNII Band | I          |
|      |              | Frequency | TX 5230MHz |

**Antenna at Vertical Polarization**

| Emission Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Meter Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Detector |
|--------------------------|-----------------------|-----------------|----------------------|-------------------------|-----------------|-------------|----------|
| 1144.00                  | 28.07                 | 3.52            | 11.07                | 42.66                   | 54.00           | 11.34       | Peak     |
| 1334.00                  | 28.03                 | 3.87            | 11.02                | 42.92                   | 54.00           | 11.08       | Peak     |
| 2132.00                  | 31.79                 | 5.46            | 15.68                | 52.93                   | 54.00           | 1.07        | Peak     |
| 2298.00                  | 32.01                 | 5.64            | 9.61                 | 47.26                   | 54.00           | 6.74        | Peak     |
| 2666.00                  | 32.50                 | 6.07            | 9.28                 | 47.85                   | 54.00           | 6.15        | Peak     |
| 4450.00                  | 34.02                 | 7.76            | 3.87                 | 45.65                   | 54.00           | 8.35        | Peak     |

|      |              |           |            |
|------|--------------|-----------|------------|
| Mode | 802.11n-HT40 | UNII Band | II-2A      |
|      |              | Frequency | TX 5270MHz |

The emissions not reported for there is no emission be found.

|      |              |           |            |
|------|--------------|-----------|------------|
| Mode | 802.11n-HT40 | UNII Band | II-2C      |
|      |              | Frequency | TX 5590MHz |

**Antenna at Vertical Polarization**

| Emission Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Meter Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Detector |
|--------------------------|-----------------------|-----------------|----------------------|-------------------------|-----------------|-------------|----------|
| 1332.00                  | 28.03                 | 3.87            | 10.26                | 42.16                   | 54.00           | 11.84       | Peak     |
| 1720.00                  | 29.56                 | 4.51            | 11.39                | 45.46                   | 54.00           | 8.54        | Peak     |
| 2134.00                  | 31.79                 | 5.46            | 16.00                | 53.25                   | 54.00           | 0.75        | Peak     |
| 2298.00                  | 32.01                 | 5.64            | 8.11                 | 45.76                   | 54.00           | 8.24        | Peak     |
| 2658.00                  | 32.50                 | 6.07            | 7.99                 | 46.56                   | 54.00           | 7.44        | Peak     |
| 4790.00                  | 34.22                 | 7.82            | 5.86                 | 47.90                   | 54.00           | 6.10        | Peak     |

|      |              |           |            |
|------|--------------|-----------|------------|
| Mode | 802.11n-HT40 | UNII Band | II-2C      |
|      |              | Frequency | TX 5710MHz |

**Antenna at Horizontal Polarization**

| Emission<br>Frequency<br>(MHz) | Antenna<br>Factor<br>(dB/m) | Cable<br>Loss<br>(dB) | Meter<br>Reading<br>(dBμV) | Emission<br>Level<br>(dBμV/m) | Limits<br>(dBμV/m) | Margin<br>(dB) | Detector |
|--------------------------------|-----------------------------|-----------------------|----------------------------|-------------------------------|--------------------|----------------|----------|
| 2124.00                        | 31.77                       | 5.43                  | 7.98                       | 45.18                         | 54.00              | 8.82           | Peak     |
| 4895.00                        | 34.26                       | 8.47                  | 3.74                       | 46.47                         | 54.00              | 7.53           | Peak     |

**Antenna at Vertical Polarization**

| Emission<br>Frequency<br>(MHz) | Antenna<br>Factor<br>(dB/m) | Cable<br>Loss<br>(dB) | Meter<br>Reading<br>(dBμV) | Emission<br>Level<br>(dBμV/m) | Limits<br>(dBμV/m) | Margin<br>(dB) | Detector |
|--------------------------------|-----------------------------|-----------------------|----------------------------|-------------------------------|--------------------|----------------|----------|
| 2656.00                        | 32.48                       | 6.05                  | 7.86                       | 46.39                         | 54.00              | 7.61           | Peak     |

|      |              |           |            |
|------|--------------|-----------|------------|
| Mode | 802.11n-HT40 | UNII Band | III        |
|      |              | Frequency | TX 5795MHz |

**Antenna at Vertical Polarization**

| Emission<br>Frequency<br>(MHz) | Antenna<br>Factor<br>(dB/m) | Cable<br>Loss<br>(dB) | Meter<br>Reading<br>(dBμV) | Emission<br>Level<br>(dBμV/m) | Limits<br>(dBμV/m) | Margin<br>(dB) | Detector |
|--------------------------------|-----------------------------|-----------------------|----------------------------|-------------------------------|--------------------|----------------|----------|
| 2124.00                        | 31.77                       | 5.43                  | 16.18                      | 53.38                         | 54.00              | 0.62           | Peak     |
| 2314.00                        | 32.03                       | 5.65                  | 7.94                       | 45.62                         | 54.00              | 8.38           | Peak     |
| 2664.00                        | 32.50                       | 6.07                  | 11.25                      | 49.82                         | 54.00              | 4.18           | Peak     |
| 4965.00                        | 34.29                       | 8.68                  | 4.84                       | 47.81                         | 54.00              | 6.19           | Peak     |

|      |                |           |            |
|------|----------------|-----------|------------|
| Mode | 802.11ac-VHT80 | UNII Band | I          |
|      |                | Frequency | TX 5210MHz |

**Antenna at Vertical Polarization**

| Emission<br>Frequency<br>(MHz) | Antenna<br>Factor<br>(dB/m) | Cable<br>Loss<br>(dB) | Meter<br>Reading<br>(dBμV) | Emission<br>Level<br>(dBμV/m) | Limits<br>(dBμV/m) | Margin<br>(dB) | Detector |
|--------------------------------|-----------------------------|-----------------------|----------------------------|-------------------------------|--------------------|----------------|----------|
| 1600.00                        | 28.72                       | 4.22                  | 11.28                      | 44.22                         | 54.00              | 9.78           | Peak     |
| 2132.00                        | 31.79                       | 5.46                  | 15.07                      | 52.32                         | 54.00              | 1.68           | Peak     |
| 2300.00                        | 32.01                       | 5.64                  | 8.38                       | 46.03                         | 54.00              | 7.97           | Peak     |
| 2666.00                        | 32.50                       | 6.07                  | 11.31                      | 49.88                         | 54.00              | 4.12           | Peak     |
| 4465.00                        | 34.05                       | 7.74                  | 5.33                       | 47.12                         | 54.00              | 6.88           | Peak     |

|      |                |           |            |
|------|----------------|-----------|------------|
| Mode | 802.11ac-VHT80 | UNII Band | II-2A      |
|      |                | Frequency | TX 5290MHz |

**Antenna at Vertical Polarization**

| Emission<br>Frequency<br>(MHz) | Antenna<br>Factor<br>(dB/m) | Cable<br>Loss<br>(dB) | Meter<br>Reading<br>(dBμV) | Emission<br>Level<br>(dBμV/m) | Limits<br>(dBμV/m) | Margin<br>(dB) | Detector |
|--------------------------------|-----------------------------|-----------------------|----------------------------|-------------------------------|--------------------|----------------|----------|
| 1598.00                        | 28.72                       | 4.22                  | 10.03                      | 42.97                         | 54.00              | 11.03          | Peak     |
| 2130.00                        | 31.77                       | 5.43                  | 15.79                      | 52.99                         | 54.00              | 1.01           | Peak     |
| 2294.00                        | 32.01                       | 5.64                  | 8.64                       | 46.29                         | 54.00              | 7.71           | Peak     |
| 2656.00                        | 32.48                       | 6.05                  | 5.89                       | 44.42                         | 54.00              | 9.58           | Peak     |

|      |                |           |            |
|------|----------------|-----------|------------|
| Mode | 802.11ac-VHT80 | UNII Band | II-2C      |
|      |                | Frequency | TX 5610MHz |

**Antenna at Vertical Polarization**

| Emission<br>Frequency<br>(MHz) | Antenna<br>Factor<br>(dB/m) | Cable<br>Loss<br>(dB) | Meter<br>Reading<br>(dBμV) | Emission<br>Level<br>(dBμV/m) | Limits<br>(dBμV/m) | Margin<br>(dB) | Detector |
|--------------------------------|-----------------------------|-----------------------|----------------------------|-------------------------------|--------------------|----------------|----------|
| 1328.00                        | 28.03                       | 3.84                  | 10.01                      | 41.88                         | 54.00              | 12.12          | Peak     |
| 2130.00                        | 31.77                       | 5.43                  | 15.47                      | 52.67                         | 54.00              | 1.33           | Peak     |
| 4810.00                        | 34.22                       | 7.86                  | 6.52                       | 48.60                         | 54.00              | 5.40           | Peak     |

|      |                |           |            |
|------|----------------|-----------|------------|
| Mode | 802.11ac-VHT80 | UNII Band | II-2C      |
|      |                | Frequency | TX 5690MHz |

**Antenna at Vertical Polarization**

| Emission<br>Frequency<br>(MHz) | Antenna<br>Factor<br>(dB/m) | Cable<br>Loss<br>(dB) | Meter<br>Reading<br>(dBμV) | Emission<br>Level<br>(dBμV/m) | Limits<br>(dBμV/m) | Margin<br>(dB) | Detector |
|--------------------------------|-----------------------------|-----------------------|----------------------------|-------------------------------|--------------------|----------------|----------|
| 1330.00                        | 28.03                       | 3.84                  | 9.40                       | 41.27                         | 54.00              | 12.73          | Peak     |
| 1594.00                        | 28.72                       | 4.22                  | 9.34                       | 42.28                         | 54.00              | 11.72          | Peak     |
| 1720.00                        | 29.56                       | 4.51                  | 8.00                       | 42.07                         | 54.00              | 11.93          | Peak     |
| 2130.00                        | 31.77                       | 5.43                  | 15.60                      | 52.80                         | 54.00              | 1.20           | Peak     |
| 2306.00                        | 32.03                       | 5.65                  | 7.88                       | 45.56                         | 54.00              | 8.44           | Peak     |
| 2460.00                        | 32.25                       | 5.80                  | 7.23                       | 45.28                         | 54.00              | 8.72           | Peak     |
| 2664.00                        | 32.50                       | 6.07                  | 10.25                      | 48.82                         | 54.00              | 5.18           | Peak     |
| 3655.00                        | 32.96                       | 7.31                  | 4.98                       | 45.25                         | 54.00              | 8.75           | Peak     |
| 3995.00                        | 33.30                       | 7.21                  | 5.86                       | 46.37                         | 54.00              | 7.63           | Peak     |
| 4875.00                        | 34.25                       | 8.35                  | 5.34                       | 47.94                         | 54.00              | 6.06           | Peak     |

|      |                |           |            |
|------|----------------|-----------|------------|
| Mode | 802.11ac-VHT80 | UNII Band | III        |
|      |                | Frequency | TX 5775MHz |

**Antenna at Horizontal Polarization**

| Emission Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Meter Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Detector |
|--------------------------|-----------------------|-----------------|----------------------|-------------------------|-----------------|-------------|----------|
| 1958.00                  | 31.24                 | 4.93            | 15.15                | 51.32                   | 54.00           | 2.68        | Peak     |

**Antenna at Vertical Polarization**

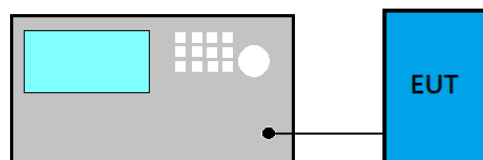
| Emission Frequency (MHz) | Antenna Factor (dB/m) | Cable Loss (dB) | Meter Reading (dBμV) | Emission Level (dBμV/m) | Limits (dBμV/m) | Margin (dB) | Detector |
|--------------------------|-----------------------|-----------------|----------------------|-------------------------|-----------------|-------------|----------|
| 1332.00                  | 28.03                 | 3.87            | 9.89                 | 41.79                   | 54.00           | 12.21       | Peak     |
| 2130.00                  | 31.77                 | 5.43            | 15.61                | 52.81                   | 54.00           | 1.19        | Peak     |
| 2292.00                  | 32.01                 | 5.64            | 7.05                 | 44.70                   | 54.00           | 9.30        | Peak     |
| 2464.00                  | 32.25                 | 5.80            | 6.85                 | 44.90                   | 54.00           | 9.10        | Peak     |
| 2664.00                  | 32.50                 | 6.07            | 5.44                 | 44.01                   | 54.00           | 9.99        | Peak     |
| 4260.00                  | 33.73                 | 8.00            | 5.26                 | 46.99                   | 54.00           | 7.01        | Peak     |
| 4950.00                  | 34.28                 | 8.62            | 3.76                 | 46.66                   | 54.00           | 7.34        | Peak     |

**6.5.3. Emissions in Non-restricted Frequency Bands**

Pursuant to 789033 D02 General UNII Test Procedures New Rules v01r03 that emission levels below the 15.209 general radiated emissions limits is not required.

## 7. EMISSION BANDWIDTH MEASUREMENT

### 7.1. Block Diagram of Test Setup



### 7.2. Specification Limits

| Frequency Band (MHz) | Limit                |
|----------------------|----------------------|
| 5150 to 5250         | Reference only       |
| 5250 to 5350         |                      |
| 5470 to 5725         |                      |
| 5725 to 5850         | $\geq 500\text{kHz}$ |

### 7.3. Test Procedure

Following measurement procedure is reference to 789033 D02 General UNII Test Procedures New Rules v01r03:

■ Applicable to all bands except to 5725 MHz- 5850 MHz

- (1) Set RBW= 1% of the emission bandwidth
- (2) Set VBW > RBW
- (3) Detector = Peak
- (4) Trace mode = max hold
- (5) Setting channel bandwidth function x dB to -26 dB to record the final bandwidth.

■ 5725 MHz- 5850 MHz

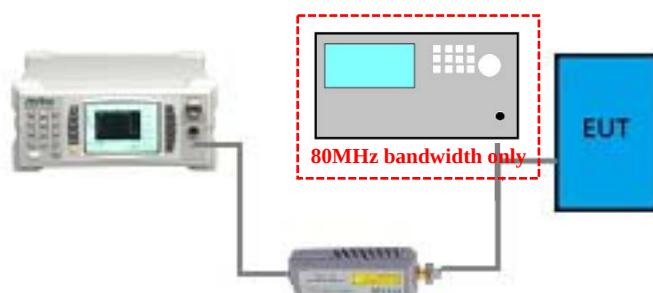
- (1) Set RBW = 100 kHz.
- (2) Set the video bandwidth (VBW)  $\geq 3 \times \text{RBW}$ .
- (3) Detector = Peak.
- (4) Trace mode = max hold.
- (5) Sweep = auto couple.
- (6) Allow the trace to stabilize.
- (7) Setting channel bandwidth function x dB to -6 dB to record the final bandwidth.

### 7.4. Test Results

Please refer to Appendix A

## 8. MAXIMUM OUTPUT POWER MEASUREMENT

### 8.1. Block Diagram of Test Setup



### 8.2. Specification Limits

| Frequency Band (MHz) | Category                          | Limit                                                                                                                   |
|----------------------|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| 5150 to 5250         | Outdoor Access Point              | 1 W(30 dBm)/<br>Max e.i.r.p. $\leq 125$ mW(21 dBm) at any elevation angle above 30 degrees as measured from the horizon |
|                      | Fixed point-to-point Access Point | 1 W(30 dBm)                                                                                                             |
|                      | Indoor Access Point               | 1 W(30 dBm)                                                                                                             |
|                      | Mobile and Portable client device | 250 mW(24 dBm)                                                                                                          |
| 5250 to 5350         | N/A                               | 250 mW or $11 \text{ dBm} + 10 \log B$ <sup>Note1</sup>                                                                 |
| 5470 to 5725         |                                   | 250 mW or $11 \text{ dBm} + 10 \log B$ <sup>Note1</sup>                                                                 |
| 5725 to 5850         |                                   | 1 W(30 dBm)                                                                                                             |

Note 1: B is the 26 dB emission bandwidth, which presented in section 7 and appendix A.1.

### 8.3. Test Procedure

Following measurement procedure is reference to 789033 D02 General UNII Test Procedures New Rules v01r03:

■ **Method AVGPM (Measurement using an RF average power meter):**

EUT is connected to power sensor and record the maximum average output power and duty cycle factor is added when duty cycle presented in section 3.5 is < 98%.

■ **Method AVGSA-2 (Spectrum channel power)**

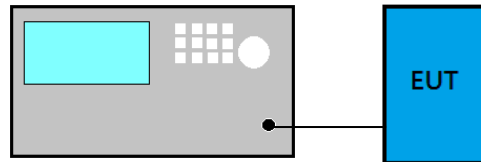
- (1) Set span to at least 1.5 times the OBW
- (2) Set RBW = 1 MHz
- (3) Set the video bandwidth (VBW)  $\geq$  3 MHz.
- (4) Detector = RMS.
- (5) Trace mode = trace average at least 100 traces
- (6) Sweep = auto couple.
- (7) Compute power by integrating the spectrum across the OBW of the signal using the instrument's band power measurement function with band limits set equal to the OBW band edges.
- (8) Duty cycle factor is added when duty cycle presented in section 3.5 is < 98%.

### 8.4. Test Results

Please refer to Appendix A

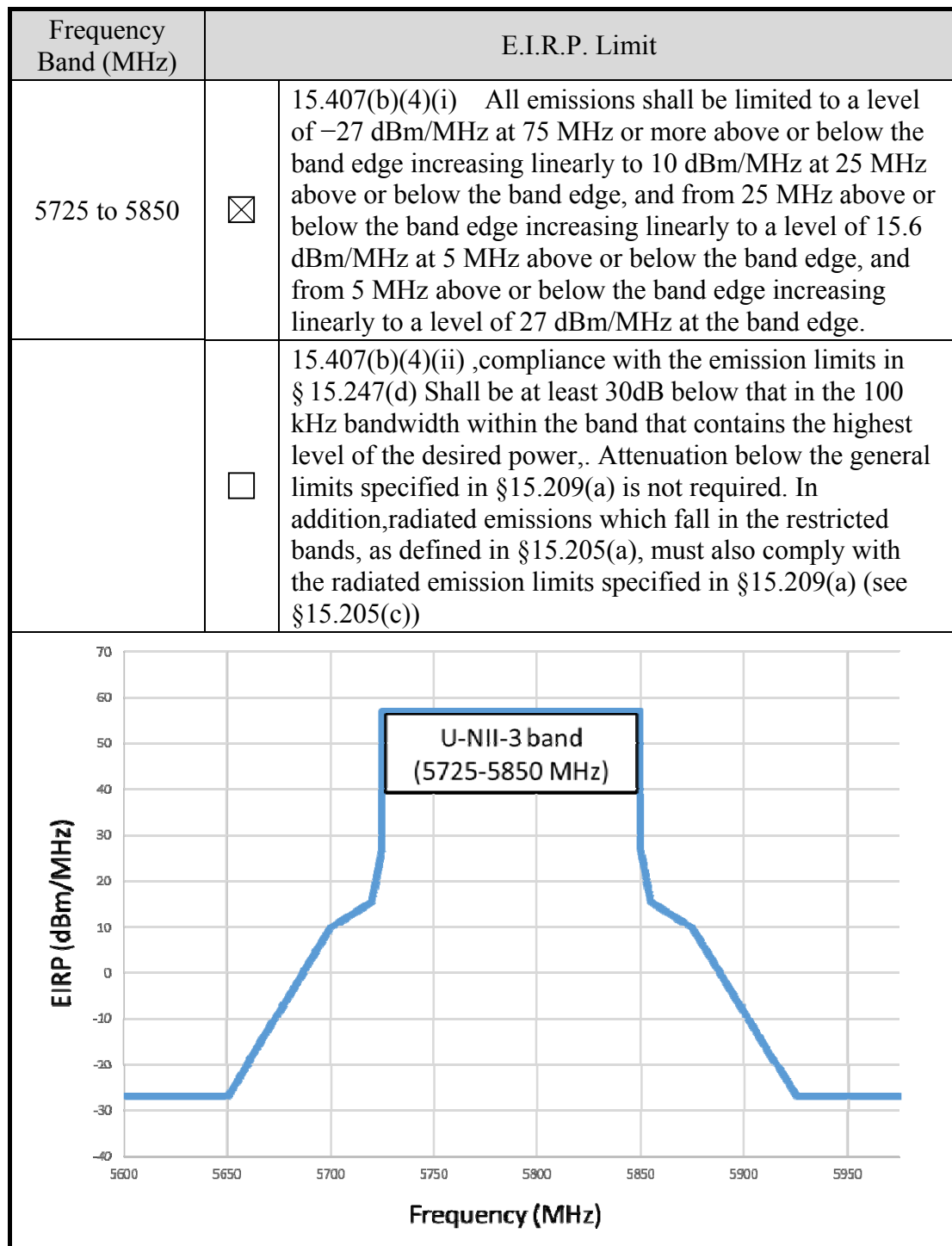
## 9. EMISSION LIMITATIONS MEASUREMENT

### 9.1. Block Diagram of Test Setup



### 9.2. Specification Limits

| Frequency Band (MHz) | E.I.R.P. Limit |
|----------------------|----------------|
| 5150 to 5250         | -27 dBm        |
| 5250 to 5350         |                |
| 5470 to 5725         |                |



### **9.3. Test Procedure**

Following measurement procedure is reference to 789033 D02 General UNII Test Procedures New Rules v01r03:

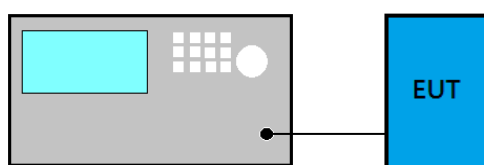
- (1) RBW = 1 MHz
- (2) VBW  $\geq 3 \times$  RBW
- (3) Detector = Peak
- (4) Sweep time = auto
- (5) Trace mode = max hold
- (6) Allow sweeps to continue until the trace stabilizes.

### **9.4. Test Results**

Please refer to Appendix A

## 10. POWER SPECTRAL DENSITY MEASUREMENT

### 10.1. Block Diagram of Test Setup



### 10.2. Specification Limits

| Frequency Band (MHz) | Category                          | Limit         |
|----------------------|-----------------------------------|---------------|
| 5150 to 5250         | Outdoor Access Point              | 17dBm         |
|                      | Fixed point-to-point Access Point |               |
|                      | Indoor Access Point               |               |
|                      | Mobile and Portable client device | 11 dBm/MHz    |
| 5250 to 5350         | N/A                               | 11 dBm/MHz    |
| 5470 to 5725         |                                   | 11 dBm/MHz    |
| 5725 to 5850         |                                   | 30dBm/500 kHz |

### 10.3. Test Procedure

Following measurement procedure is reference to 789033 D02 General UNII Test Procedures New Rules v01r03:

#### ■ Method AVGSA-2 (Spectrum channel power)

- (1) Set span to at least 1.5 times the OBW
- (2) Set RBW = 1 MHz
- (3) Set the video bandwidth (VBW)  $\geq$  3 MHz.
- (4) Detector = RMS.
- (5) Trace mode = trace average at least 100 traces
- (6) Sweep = auto couple.
- (7) Use peak search function to find out the maximum power density.
- (8) Duty cycle factor is added when duty cycle presented in section 3.5 is  $< 98\%$ .

### 10.4. Test Results

Please refer to Appendix A

## **11.DEVIATION TO TEST SPECIFICATIONS**

**【NONE】**