

**ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT****INTENTIONAL RADIATOR CERTIFICATION TO  
FCC PART 15 SUBPART E REQUIREMENT**

OF

**Applicant:** Quanta Computer Inc.  
No. 188, Wenhua 2nd Road, Guishan District, Taoyuan City 33377,  
Taiwan

**Product Name:** Clover Station

**Brand Name:** clover

**Model No.:** C500

**Model Difference:** N/A

**FCC ID:** HFS-C500

**Report Number:** E2/2017/90032

**FCC Rule Part:** §15.407, Cat: NII

**Issue Date:** Oct. 27, 2017

**Date of Test:** Sep. 12, 2017 ~ Oct. 25, 2017

**Date of EUT Received:** Sep. 12, 2017

**We hereby certify that:**

The above equipment was tested by SGS Taiwan Ltd. Electronics & Communication Laboratory. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.10: 2013 and the energy emitted by the sample EUT tested as described in this report is in compliance with conducted and radiated emission limits.

The test results of this report relate only to the tested sample identified in this report.

**Prepared By:**

Karen Huang

Karen Huang / Clerk

**Approved By:**

Jim Chang

Jim Chang / Asst. Manager



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## Revision History

| Report Number | Revision | Description                  | Issue Date    |
|---------------|----------|------------------------------|---------------|
| E2/2017/90032 | Rev.00   | Initial creation of document | Oct. 27, 2017 |
|               |          |                              |               |
|               |          |                              |               |
|               |          |                              |               |

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# 1 GENERAL INFORMATION

## 1.1 Product Description

### General:

|                     |                                                                                                              |                                           |
|---------------------|--------------------------------------------------------------------------------------------------------------|-------------------------------------------|
| Product Name:       | Clover Station                                                                                               |                                           |
| Brand Name:         | clover                                                                                                       |                                           |
| Model No.:          | C500                                                                                                         |                                           |
| Model Difference:   | N/A                                                                                                          |                                           |
| Hardware Version:   | 1.0                                                                                                          |                                           |
| Software Version:   | android-goldenoak-eng-1010001                                                                                |                                           |
| Hub:                | Model No.: H500, Brand: clover                                                                               |                                           |
| Printer (Optional): | 1. Model No.: P550 (with NFC & LCD panel), Brand: clover<br>2. Model No.: P500 (pure printer), Brand: clover |                                           |
| Power Supply:       | 3.8Vdc from Rechargeable Li-ion Polymer Battery or 24Vdc from AC/DC adapter                                  |                                           |
|                     | Battery:                                                                                                     | Model No.: MLP3853144, Supplier: McNair   |
|                     | Adapter:                                                                                                     | Model No.: FSP120-AABN3,<br>Brand: clover |

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# WLAN 5GHz:

| Wi-Fi 802.11          | Frequency Range | Channels                                                                                                                                                                                                                | Rated Power (Avg.) (dBm) | Modulation Technology |
|-----------------------|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-----------------------|
| a                     | 5180~5240       | 4                                                                                                                                                                                                                       | 15.94                    | OFDM                  |
|                       | 5260~5320       | 4                                                                                                                                                                                                                       | 15.92                    |                       |
|                       | 5500~5700       | 12                                                                                                                                                                                                                      | 15.99                    |                       |
|                       | 5745-5825       | 5                                                                                                                                                                                                                       | 15.85                    |                       |
| n_HT<br>ac_VHT<br>20M | 5180~5240       | 4                                                                                                                                                                                                                       | HT: 15.99 (Worst case)   | OFDM                  |
|                       | 5260~5320       | 4                                                                                                                                                                                                                       | HT: 15.90 (Worst case)   |                       |
|                       | 5500~5720       | 12                                                                                                                                                                                                                      | HT: 15.98 (Worst case)   |                       |
|                       | 5745-5825       | 5                                                                                                                                                                                                                       | HT: 15.99 (Worst case)   |                       |
| n_HT<br>ac_VHT<br>40M | 5190~5230       | 2                                                                                                                                                                                                                       | HT: 15.92 (Worst case)   | OFDM                  |
|                       | 5270~5310       | 2                                                                                                                                                                                                                       | HT: 15.99 (Worst case)   |                       |
|                       | 5510~5710       | 6                                                                                                                                                                                                                       | HT: 15.99 (Worst case)   |                       |
|                       | 5755~5795       | 2                                                                                                                                                                                                                       | HT: 15.97 (Worst case)   |                       |
| ac_VHT<br>80M         | 5210            | 1                                                                                                                                                                                                                       | 15.99                    | OFDM                  |
|                       | 5290            | 1                                                                                                                                                                                                                       | 15.81                    |                       |
|                       | 5530~5690       | 3                                                                                                                                                                                                                       | 15.99                    |                       |
|                       | 5775            | 1                                                                                                                                                                                                                       | 15.98                    |                       |
| Modulation type       |                 | 64QAM, 16QAM, QPSK, BPSK for OFDM<br>256QAM for OFDM in 802.11ac only                                                                                                                                                   |                          |                       |
| Transition Rate:      |                 | 802.11 a: 6/9/12/18/24/36/48/54 Mbps<br>802.11 n_20MHz: 6.5 – 144.4Mbps<br>802.11 n_40MHz: 13.5 – 300.0Mbps<br>802.11 ac_20MHz: 6.5 –173.3Mbps<br>802.11 ac_40MHz: 13.5 –400.0Mbps<br>802.11 ac_80MHz: 29.3 – 866.7Mbps |                          |                       |

# Antenna Designation:

| Ant. Type | Main / Aux | Freq.(MHz) | Peak Gain (dBi) |
|-----------|------------|------------|-----------------|
| IFA       | Main       | 5150~5250  | 2.90            |
|           |            | 5250~5350  | 3.10            |
|           |            | 5470~5725  | 3.70            |
|           |            | 5725~5850  | 4.10            |
| IFA       | Aux        | 5150~5250  | <b>3.40</b>     |
|           |            | 5250~5350  | <b>4.00</b>     |
|           |            | 5470~5725  | <b>4.40</b>     |
|           |            | 5725~5850  | <b>4.30</b>     |

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## 1.2 Test Methodology of Applied Standards

FCC Part 15, Subpart E §15.407

FCC KDB 789033 D02 General UNII Test Procedures New Rules

FCC KDB 662911 D01 Multiple Transmitter Output

FCC KDB 644545 D03 Guidance for IEEE 802.11ac

ANSI C63.10:2013

### Note:

All test items have been performed and record as per the above standards.

## 1.3 Test Facility

SGS Taiwan Ltd. Electronics & Communication Laboratory No.2, Keji 1st Rd.,  
Guishan District, Taoyuan City, Taiwan 333 (TAF code 0513)

FCC Registration Number and Designation number are: 735305 / TW0002

## 1.4 Special Accessories

There are no special accessories used while test was conducted.

## 1.5 Equipment Modifications

There was no modification incorporated into the EUT.

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## 2 SYSTEM TEST CONFIGURATION

### 2.1 EUT Configuration

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

### 2.2 EUT Exercise

An engineering test mode (software/firmware) that applicant provided was utilized to manipulate the EUT into transmit, selection of the test channel, and modulation scheme.

### 2.3 Test Procedure

#### 2.3.1 Conducted Emissions

The EUT is placed on a turn table which is 0.8 m above ground plane. Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30 MHz. The CISPR Quasi-Peak and Average detector mode is employed according to §15.207. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

#### 2.3.2 Radiated Emissions

The EUT is placed on a turn table. For emissions testing at or below 1 GHz, the table height shall be 0.8 m above the reference ground plan. For emission measurements above 1 GHz, the table height shall be 1.5 m. The turn table shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the max. emission, the relative positions of this transmitter (EUT) was rotated through three orthogonal axes and measurement procedures for electric field radiated emissions above 1 GHz the EUT measurement is to be made "while keeping the antenna in the 'cone of radiation' from that area and pointed at the area both in azimuth and elevation, with polarization oriented for maximum response." is still within the 3dB illumination BW of the measurement antenna.

### 2.4 Measurement Results Explanation Example

#### For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuation factor between EUT conducted port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly EUT RF output level.

#### Note:

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

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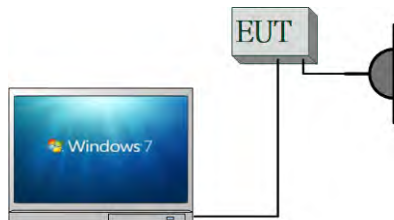
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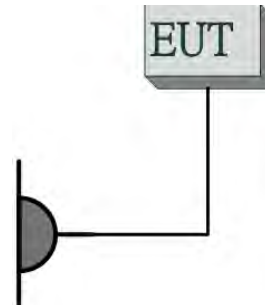
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## 2.5 Configuration of Tested System

**Fig. 2-1 Conducted (Antenna Port) Emission Configuration**



**Fig. 2-3 Conduction (AC Power Line) Radiated Emission**



**Fig. 2-2 Radiated Emission**



**Table 2-1 Equipment Used in Tested System**

| Item | Equipment          | Mfr/Brand | Model/Type No. | Series No. | Data Cable | Power Cord |
|------|--------------------|-----------|----------------|------------|------------|------------|
| 1.   | WLAN Test Software | N/A       | N/A            | N/A        | N/A        | N/A        |
| 2.   | Notebook           | Lenovo    | L430           | R9-YYG88   | Shielded   | Unshielded |

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### 3 SUMMARY OF TEST RESULT

| FCC Rules                | Description Of Test                            | Result    |
|--------------------------|------------------------------------------------|-----------|
| §15.207                  | AC Power Line Conducted Emission               | Compliant |
| §15.403(i)<br>§15.407(e) | 26 dB & 6dB & 99% Emission Bandwidth           | Compliant |
| §15.407(a)               | Maximum Conducted Output Power                 | Compliant |
| §15.407(a)               | Power Spectral Density                         | Compliant |
| §15.407(b)               | Undesirable Radiated Emissions                 | Compliant |
| §15.407(c)               | Transmission in case of Absence of Information | Compliant |
| §15.407(g)               | Frequency Stability                            | Compliant |
| §15.203<br>§15.407(a)    | Antenna Requirement                            | Compliant |

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## 4 DESCRIPTION OF TEST MODES

### 4.1 Operated in U-NII Bands

Operated band in 5150 MHz ~5250 MHz:

| 802.11a / n HT20 Mode,<br>802.11ac VHT20 Mode |           |
|-----------------------------------------------|-----------|
| Channel                                       | Frequency |
| 36                                            | 5180      |
| 40                                            | 5200      |
| 44                                            | 5220      |
| 48                                            | 5240      |

| 802.11 n HT40 Mode,<br>802.11ac VHT40 Mode |           |
|--------------------------------------------|-----------|
| channel                                    | Frequency |
| 38                                         | 5190      |
| 46                                         | 5230      |

| 802.11ac VHT80 Mode |           |
|---------------------|-----------|
| channel             | Frequency |
| 42                  | 5210      |

Operated band in 5250 MHz ~5350 MHz:

| 802.11a / n HT20 Mode,<br>802.11ac VHT20 Mode |           |
|-----------------------------------------------|-----------|
| channel                                       | Frequency |
| 52                                            | 5260      |
| 56                                            | 5280      |
| 60                                            | 5300      |
| 64                                            | 5320      |

| 802.11 n HT40 Mode,<br>802.11ac VHT40 Mode |           |
|--------------------------------------------|-----------|
| channel                                    | Frequency |
| 54                                         | 5270      |
| 62                                         | 5310      |

| 802.11ac VHT80 Mode |           |
|---------------------|-----------|
| Channel             | Frequency |
| 58                  | 5290      |

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**Operated band in 5500 MHz ~5700 MHz:**

| 802.11a / n HT20 Mode,<br>802.11ac VHT20 Mode |           |
|-----------------------------------------------|-----------|
| Channel                                       | Frequency |
| 100                                           | 5500      |
| 104                                           | 5520      |
| 108                                           | 5540      |
| 112                                           | 5560      |
| 116                                           | 5580      |
| 120                                           | 5600      |
| 124                                           | 5620      |
| 128                                           | 5640      |
| 132                                           | 5660      |
| 136                                           | 5680      |
| 140                                           | 5700      |
| 144                                           | 5720      |

| 802.11 n HT40 Mode,<br>802.11ac VHT40 Mode |           |
|--------------------------------------------|-----------|
| channel                                    | Frequency |
| 102                                        | 5510      |
| 110                                        | 5550      |
| 118                                        | 5590      |
| 126                                        | 5630      |
| 134                                        | 5670      |
| 142                                        | 5710      |

| 802.11ac VHT80 Mode |           |
|---------------------|-----------|
| channel             | Frequency |
| 106                 | 5530      |
| 122                 | 5610      |
| 138                 | 5690      |

**Operated band in 5745 MHz ~5850 MHz:**

| 802.11a / n HT20 Mode,<br>802.11ac VHT20 Mode |           |
|-----------------------------------------------|-----------|
| Channel                                       | Frequency |
| 149                                           | 5745      |
| 153                                           | 5765      |
| 157                                           | 5785      |
| 161                                           | 5805      |

| 802.11 n HT40 Mode,<br>802.11ac VHT40 Mode |           |
|--------------------------------------------|-----------|
| channel                                    | Frequency |
| 151                                        | 5755      |
| 159                                        | 5795      |

| 802.11ac VHT80 Mode |           |
|---------------------|-----------|
| channel             | Frequency |
| 155                 | 5775      |

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## 4.2 The Worst Test Modes and Channel Details

1. The EUT has been tested under operating condition.
2. Test program used to control the EUT for staying in continuous transmitting mode is programmed.
3. Investigation has been done on all the possible configurations for searching the worst case.

### RADIATED EMISSION TEST:

| MODE                                 | FREQUENCY BAND (MHz) | AVAILABLE CHANNEL | TESTED CHANNEL | MODULATION | DATA RATE (Mbps) | ANTENNA PORT |
|--------------------------------------|----------------------|-------------------|----------------|------------|------------------|--------------|
| RADIATED EMISSION TEST (BELOW 1 GHz) |                      |                   |                |            |                  |              |
| 802.11a                              | 5180~5240            | 36 to 48          | 36,44,48       | OFDM       | 6                | MIMO         |
| 802.11ac_VHT80                       | 5210                 | 42                | 42             | OFDM       | MCS8             | MIMO         |
| 802.11a                              | 5260~5320            | 52 to 64          | 52,60,64       | OFDM       | 6                | MIMO         |
| 802.11ac_VHT80                       | 5290                 | 58                | 58             | OFDM       | MCS8             | MIMO         |
| 802.11a                              | 5500~5720            | 100 to 144        | 100,116,140    | OFDM       | 6                | MIMO         |
| 802.11ac_VHT80                       | 5530~5690            | 106 to 138        | 106,122,138    | OFDM       | MCS8             | MIMO         |
| 802.11a                              | 5745~5825            | 149 to 165        | 149,157,165    | OFDM       | 6                | MIMO         |
| 802.11ac_VHT80                       | 5775                 | 155               | 155            | OFDM       | MCS8             | MIMO         |
| RADIATED EMISSION TEST (ABOVE 1 GHz) |                      |                   |                |            |                  |              |
| 802.11a                              | 5180~5240            | 36 to 48          | 36,44,48       | OFDM       | 6                | MIMO         |
| 802.11n_HT20                         |                      |                   |                | OFDM       | MCS8             | MIMO         |
| 802.11n_HT40                         | 5190~5230            | 38 to 46          | 38,46          | OFDM       | MCS8             | MIMO         |
| 802.11ac_VHT80                       | 5210                 | 42                | 42             | OFDM       | MCS8             | MIMO         |
| 802.11a                              | 5260~5320            | 52 to 64          | 52,60,64       | OFDM       | 6                | MIMO         |
| 802.11n_HT20                         |                      |                   |                | OFDM       | MCS8             | MIMO         |
| 802.11n_HT40                         | 5270~5310            | 54 to 62          | 54,62          | OFDM       | MCS8             | MIMO         |
| 802.11ac_VHT80                       | 5290                 | 58                | 58             | OFDM       | MCS8             | MIMO         |
| 802.11a                              | 5500~5720            | 100 to 144        | 100,116,140    | OFDM       | 6                | MIMO         |
| 802.11n_HT20                         |                      |                   |                | OFDM       | MCS8             | MIMO         |
| 802.11n_HT40                         | 5510~5710            | 102 to 142        | 102,110,134    | OFDM       | MCS8             | MIMO         |
| 802.11ac_VHT80                       | 5530~5690            | 106 to 138        | 106,122        | OFDM       | MCS8             | MIMO         |
| 802.11a                              | 5745~5825            | 149 to 165        | 149,157,165    | OFDM       | 6                | MIMO         |
| 802.11n_HT20                         |                      |                   |                | OFDM       | MCS8             | MIMO         |
| 802.11n_HT40                         | 5755~5795            | 151 to 159        | 151,159        | OFDM       | MCS8             | MIMO         |
| 802.11ac_VHT80                       | 5775                 | 155               | 155            | OFDM       | MCS8             | MIMO         |

**Note:** The field strength of radiation emission was measured as EUT stand-up position (H mode) and lie down position (E1, E2 mode) for 802.11a/n/ac WLAN Transmitter for channel Low, Mid and High, the worst case E2 position was reported

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# ANTENNA PORT CONDUCTED MEASUREMENT:

| CONDUCTED TEST                 |                      |                   |                |            |                  |              |
|--------------------------------|----------------------|-------------------|----------------|------------|------------------|--------------|
| MODE                           | FREQUENCY BAND (MHz) | AVAILABLE CHANNEL | TESTED CHANNEL | MODULATION | DATA RATE (Mbps) | ANTENNA PORT |
| 802.11a                        | 5180~5240            | 36 to 48          | 36,44,48       | OFDM       | 6                | MIMO         |
| 802.11n_HT20<br>802.11ac_VHT20 |                      |                   |                | OFDM       | MCS8             | MIMO         |
| 802.11n_HT40<br>802.11ac_VHT40 | 5190~5230            | 38 to 46          | 38,46          | OFDM       | MCS8             | MIMO         |
| 802.11ac_VHT80                 | 5210                 | 42                | 42             | OFDM       | MCS8             | MIMO         |
| 802.11a                        | 5260~5320            | 52 to 64          | 52,60,64       | OFDM       | 6                | MIMO         |
| 802.11n_HT20<br>802.11ac_VHT20 |                      |                   |                | OFDM       | MCS8             | MIMO         |
| 802.11n_HT40<br>802.11ac_VHT40 | 5270~5310            | 54 to 62          | 54,62          | OFDM       | MCS8             | MIMO         |
| 802.11ac_VHT80                 | 5290                 | 58                | 58             | OFDM       | MCS8             | MIMO         |
| 802.11a                        | 5500~5720            | 100 to 144        | 100,116,140    | OFDM       | 6                | MIMO         |
| 802.11n_HT20<br>802.11ac_VHT20 |                      |                   |                | OFDM       | MCS8             | MIMO         |
| 802.11n_HT40<br>802.11ac_VHT40 | 5510~5710            | 102 to 142        | 102,110,134    | OFDM       | MCS8             | MIMO         |
| 802.11ac_VHT80                 | 5530~5690            | 106 to 138        | 106,122        | OFDM       | MCS8             | MIMO         |
| 802.11a                        | 5745~5825            | 149 to 165        | 149,157,165    | OFDM       | 6                | MIMO         |
| 802.11n_HT20<br>802.11ac_VHT20 |                      |                   |                | OFDM       | MCS8             | MIMO         |
| 802.11n_HT40<br>802.11ac_VHT40 | 5755~5795            | 151 to 159        | 151,159        | OFDM       | MCS8             | MIMO         |
| 802.11ac_VHT80                 | 5775                 | 155               | 155            | OFDM       | MCS8             | MIMO         |

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## 5 MEASUREMENT UNCERTAINTY

| Test Items                              | Uncertainty                |
|-----------------------------------------|----------------------------|
| AC Power Line Conducted Emission        | +/- 2.586 dB               |
| 26dB & 6dB Emission Bandwidth           | +/- 123.36 Hz              |
| The Maximum Output Power Measurement    | +/- 0.96 dB                |
| Peak Power Spectral Density Measurement | +/- 1.67 dB                |
| Frequency Stability                     | +/- 123.36 Hz              |
| Temperature                             | +/- 0.65 °C                |
| Humidity                                | +/- 4.6 %                  |
| DC / AC Power Source                    | DC= +/- 0.13%, AC=+/- 0.2% |

### Radiated Spurious Emission:

|                                                              |                            |
|--------------------------------------------------------------|----------------------------|
| Measurement uncertainty<br>(Polarization : <b>Vertical</b> ) | 9kHz-30MHz: +/-2.87dB      |
|                                                              | 30MHz - 180MHz: +/- 3.37dB |
|                                                              | 180MHz -417MHz: +/- 3.19dB |
|                                                              | 0.417GHz-1GHz: +/- 3.19dB  |
|                                                              | 1GHz - 18GHz: +/- 4.04dB   |
|                                                              | 18GHz - 40GHz: +/- 4.04dB  |

|                                                                |                            |
|----------------------------------------------------------------|----------------------------|
| Measurement uncertainty<br>(Polarization : <b>Horizontal</b> ) | 9kHz-30MHz: +/-2.87dB      |
|                                                                | 30MHz - 167MHz: +/- 4.22dB |
|                                                                | 167MHz -500MHz: +/- 3.44dB |
|                                                                | 0.5GHz-1GHz: +/- 3.39dB    |
|                                                                | 1GHz - 18GHz: +/- 4.08dB   |
|                                                                | 18GHz - 40GHz: +/- 4.08dB  |

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

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## 6 CONDUCTED EMISSION TEST

### 6.1. Standard Applicable

Frequency range within 150 kHz to 30 MHz shall not exceed the Limit table as below.

| Frequency range<br>MHz | Limits<br>dB(μV) |          |
|------------------------|------------------|----------|
|                        | Quasi-peak       | Average  |
| 0.15 to 0.50           | 66 to 56         | 56 to 46 |
| 0.50 to 5              | 56               | 46       |
| 5 to 30                | 60               | 50       |

Note

- 1.The lower limit shall apply at the transition frequencies
- 2.The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz.

### 6.2. Measurement Equipment Used

| Conducted Emission Test Site |             |                       |                  |            |            |
|------------------------------|-------------|-----------------------|------------------|------------|------------|
| EQUIPMENT TYPE               | MFR         | MODEL NUMBER          | SERIAL NUMBER    | LAST CAL.  | CAL DUE.   |
| EMI Test Receiver            | R&S         | ESCI 7                | 100950           | 12/12/2016 | 12/11/2017 |
| Coaxial Cables               | N/A         | N30N30-1042-1<br>50cm | N/A              | 08/30/2017 | 08/29/2018 |
| LISN                         | Schwarzbeck | NSLK 8127             | 8127-648         | 06/18/2017 | 06/17/2018 |
| Test Software                | Farad       | EZ-EMC                | Ver.<br>SGS-03A2 | N.C.R.     | N.C.R.     |

### 6.3. EUT Setup

1. The conducted emission tests were performed in the test site, using the setup in accordance with the ANSI C63.10:2013.
2. The AC/DC Power adaptor of EUT was plug-in LISN. The rear of the EUT and peripherals were placed flushed with the rear of the table top.
3. The LISN was connected with 120Vac/60Hz power source.

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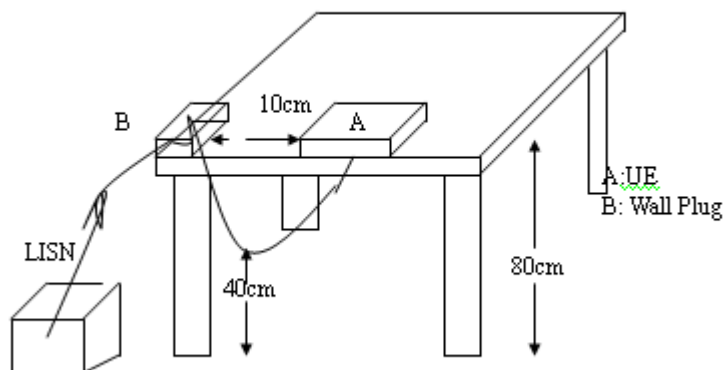
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## 6.4. Test SET-UP



## 6.5. Measurement Procedure

1. The EUT was placed on a table which is 0.8m above ground plane.
2. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
3. Repeat above procedures until all phases of power being supplied by given UE are completed.

## 6.6. Measurement Result

Note: Refer to next page for measurement data and plots.

Note2: The \* reveals the worst-case results that closet to the limit

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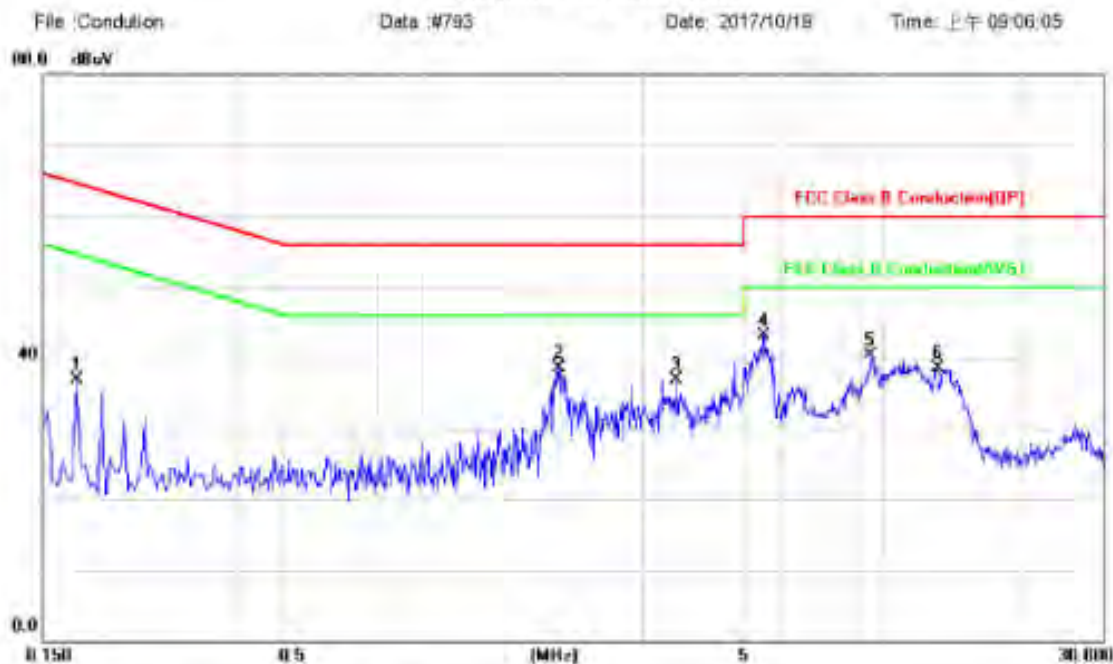
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## AC POWER LINE CONDUCTED EMISSION TEST DATA

Site : Conduction Room Phase: **L1** Temperature: 23 °C  
 Limit: FCC Class B Conduction(QP) Power: AC 120V/60Hz Humidity: 75 %  
 Mode:  
 Note:

## Conducted Emission



| No. | Mk. | Freq<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV | Limit<br>dBuV | Over<br>dB | Detector | Comment |
|-----|-----|-------------|--------------------------|-------------------------|--------------------------|---------------|------------|----------|---------|
| 1   |     | 0.1780      | 17.17                    | 19.64                   | 36.81                    | 64.58         | -27.77     | peak     |         |
| 2   |     | 1.9860      | 18.03                    | 20.55                   | 38.58                    | 56.00         | -17.42     | peak     |         |
| 3   |     | 3.5820      | 16.66                    | 20.31                   | 36.97                    | 56.00         | -19.03     | peak     |         |
| 4 * |     | 5.5300      | 22.92                    | 20.09                   | 43.01                    | 60.00         | -16.99     | peak     |         |
| 5   |     | 9.4340      | 20.32                    | 20.07                   | 40.39                    | 60.00         | -19.61     | peak     |         |
| 6   |     | 13.1540     | 18.48                    | 20.12                   | 38.60                    | 60.00         | -21.40     | peak     |         |

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Site : Conduction Room Phase: **N** Temperature: 23 °C  
 Limit: FCC Class B Conduction(QP) Power: AC 120V/60Hz Humidity: 75 %  
 Mode:  
 Note:

## Conducted Emission

File :Conduction

Data #794

Date: 2017/10/19

Time: 上午 09:06:48

dBμV



| No. | Mk. | Freq.  | Reading Level | Correct Factor | Measurement | Limit | Over   |          |         |
|-----|-----|--------|---------------|----------------|-------------|-------|--------|----------|---------|
|     |     | MHz    | dBμV          | dB             | dBμV        | dBμV  | dB     | Detector | Comment |
| 1   |     | 0.1580 | 18.94         | 19.50          | 38.44       | 65.57 | -27.13 | peak     |         |
| 2   |     | 0.1780 | 16.75         | 19.49          | 36.24       | 64.58 | -28.34 | peak     |         |
| 3 * |     | 1.9940 | 21.58         | 20.42          | 42.00       | 56.00 | -14.00 | peak     |         |
| 4   |     | 3.6900 | 18.06         | 20.16          | 38.22       | 56.00 | -17.78 | peak     |         |
| 5   |     | 5.5260 | 25.34         | 19.96          | 45.30       | 60.00 | -14.70 | peak     |         |
| 6   |     | 9.5300 | 19.08         | 19.94          | 39.02       | 60.00 | -20.98 | peak     |         |

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## 7 DUTY CYCLE TEST SIGNAL

Pre-analysis Check: While conducting average power measurement, duty cycle of each mode shall be checked to ensure its duty cycle in order to compensate for the loss due to insufficient ratio of duty cycle.

All duty cycle is pre-scanned, and result as obtained below shows only the most representative ones where duty cycle is conducted as the given transmission with given virtual operation that expresses the percentage.

### Formula:

$$\text{Duty Cycle} = \text{Ton} / (\text{Ton} + \text{Toff})$$

### Measurement Procedure:

1. Set span = Zero
2. RBW = 8MHz
3. VBW = 8MHz,
4. Detector = Peak

Duty Cycle:

| Mode        | Duty Cycle (%) | Duty Factor (dB) $= 10 * \log (1/\text{Duty Cycle})$ |
|-------------|----------------|------------------------------------------------------|
| 802.11a     | 97.34          | 0.12                                                 |
| 802.11n_20  | 94.97          | 0.22                                                 |
| 802.11ac_20 | 97.23          | 0.12                                                 |
| 802.11n_40  | 90.56          | 0.43                                                 |
| 802.11ac_40 | 94.95          | 0.23                                                 |
| 802.11ac_80 | 89.88          | 0.46                                                 |

Duty Cycle Factor:  $10 * \log(1/0.9734) = 0.12$

Duty Cycle Factor:  $10 * \log(1/0.9497) = 0.22$

Duty Cycle Factor:  $10 * \log(1/0.9723) = 0.12$

Duty Cycle Factor:  $10 * \log(1/0.9056) = 0.43$

Duty Cycle Factor:  $10 * \log(1/0.9495) = 0.23$

Duty Cycle Factor:  $10 * \log(1/0.8988) = 0.46$

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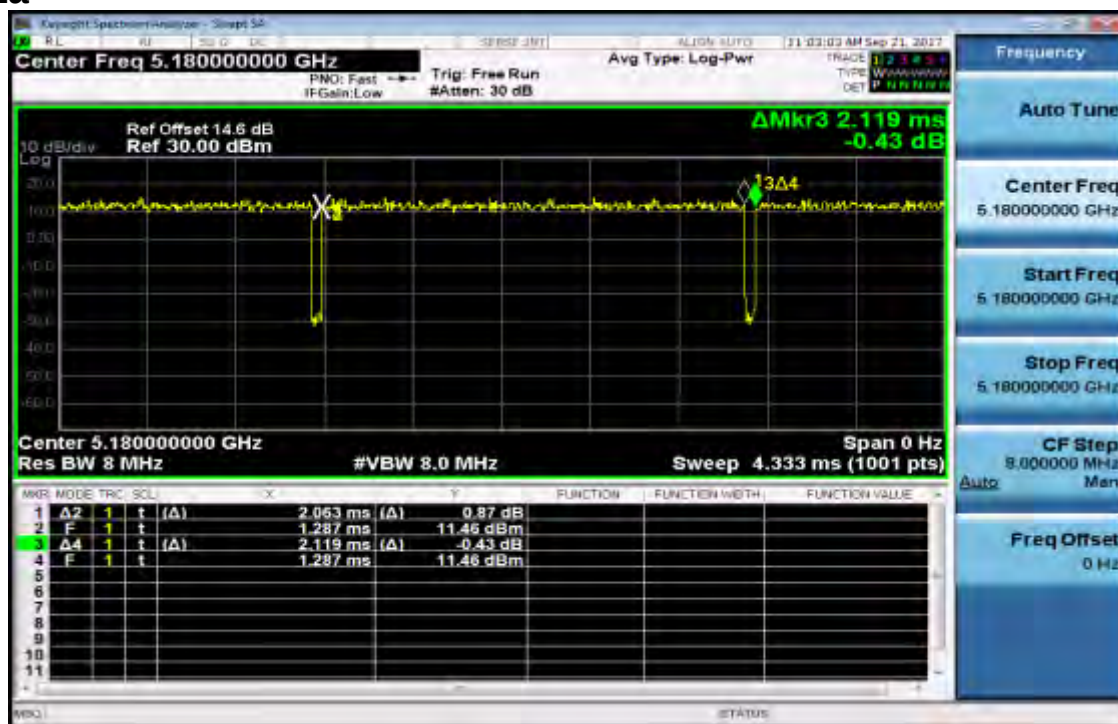
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## DUTY CYCLE TEST SIGNAL Measurement Result

### 802.11a



### 802.11n HT20



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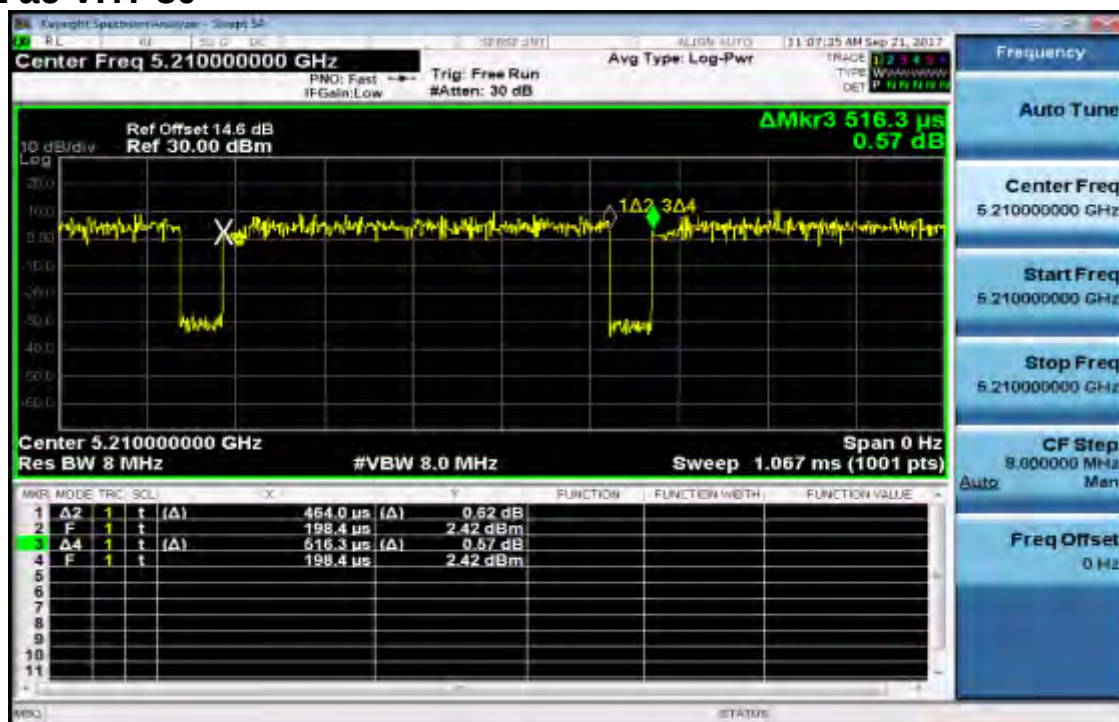
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## 802.11n HT 40



## 802.11 ac VHT 80



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## 8 26DB & 6DB EMISSION BANDWIDTH MEASUREMENT

### 8.1 Standard Applicable

There is no limit bandwidth for U-NII-1, U-NII-2-A and U-NII-2-C.

The minimum of 6dB Bandwidth measurement is 0.5 MHz for U-NII-3

### 8.2 Measurement Procedure

1. Place the EUT on the table and set it in transmitting mode.
2. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules.
3. Remove the antenna from the EUT and then connect a low loss RF cable from the Antenna port to the spectrum analyzer.
  - a. 26dB Band width Measurement: Set the spectrum analyzer as 1% of emission BW Sweep=auto, Detector = Peak, Trace Mode = Max Hold, Manually readjust RBW until the RBW/EBW ratio is 1% based on EBW as observed on the result of pre-sequence measurement.
  - b. Mark the peak frequency and –26dB (upper and lower) frequency.
4. Repeat the procedures as list above until all test default channels (low, middle, and high) are completed.
5. Minimum Emission Bandwidth for the band 5.725-5.850GHz.
  - a. Set the spectrum analyzer as RBW = 100 kHz, VBW = 3\*RBW, Span = 30M/50MHz, Detector=Peak, Sweep=auto
  - b. Mark the peak frequency and –6dB (upper and lower) frequency.
6. Repeat above procedures until all test default channel measured were complete.

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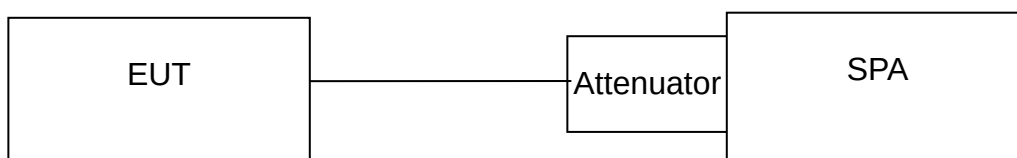
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### 8.3 Measurement Equipment Used

| SGS Conducted Room |              |                |               |                  |                 |
|--------------------|--------------|----------------|---------------|------------------|-----------------|
| Name of Equip-ment | Manufacturer | Model          | Serial Number | Calibration Date | Calibration Due |
| Spectrum Analyzer  | KEYSIGHT     | N9010A         | MY51440113    | 06/20/2017       | 06/19/2018      |
| Coaxial Cable 30cm | WOKEN        | 00100A1F1A195C | RF01          | 12/12/2016       | 12/11/2017      |
| DC Block           | PASTERNAK    | PE8210         | RF29          | 12/12/2016       | 12/11/2017      |
| Splitter           | RF-LAMBDA    | RFLT2W1G18G    | RF35          | 12/12/2016       | 12/11/2017      |
| Attenuator         | WOKEN        | 218FS-10       | RF23          | 12/12/2016       | 12/11/2017      |
| DC Power Supply    | Agilent      | E3640A         | MY53140006    | 05/02/2017       | 05/01/2018      |

### 8.4 Test Set-up



### 8.5 Measurement Result

#### 26dB Bandwidth

##### 802.11a\_Main

| Frequency (MHz) | 26dB BW (MHz) | 10 Log (B) (dB) |
|-----------------|---------------|-----------------|
| 5180            | 18.10         | 12.577          |
| 5220            | 17.83         | 12.512          |
| 5240            | 18.32         | 12.629          |
| 5260            | 18.24         | 12.610          |
| 5300            | 18.59         | 12.693          |
| 5320            | 18.16         | 12.591          |
| 5500            | 17.62         | 12.460          |
| 5580            | 18.46         | 12.662          |
| 5700            | 18.49         | 12.669          |

##### 802.11a\_Aux1

| Frequency (MHz) | 26dB BW (MHz) | 10 Log (B) (dB) |
|-----------------|---------------|-----------------|
| 5180            | 18.46         | 12.662          |
| 5220            | 18.67         | 12.711          |
| 5240            | 18.26         | 12.615          |
| 5260            | 18.32         | 12.629          |
| 5300            | 18.19         | 12.598          |
| 5320            | 18.46         | 12.662          |
| 5500            | 18.02         | 12.558          |
| 5580            | 18.02         | 12.558          |
| 5700            | 18.40         | 12.648          |

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802.11n\_HT20\_Main

| Frequency (MHz) | 26dB BW (MHz) | 10 Log (B) (dB) |
|-----------------|---------------|-----------------|
| 5180            | 18.85         | 12.753          |
| 5220            | 18.82         | 12.746          |
| 5240            | 19.05         | 12.799          |
| 5260            | 18.99         | 12.785          |
| 5300            | 19.09         | 12.808          |
| 5320            | 18.84         | 12.751          |
| 5500            | 18.86         | 12.755          |
| 5580            | 18.85         | 12.753          |
| 5700            | 18.85         | 12.753          |

802.11n\_HT20\_Aux1

| Frequency (MHz) | 26dB BW (MHz) | 10 Log (B) (dB) |
|-----------------|---------------|-----------------|
| 5180            | 18.79         | 12.739          |
| 5220            | 18.97         | 12.781          |
| 5240            | 18.82         | 12.746          |
| 5260            | 18.83         | 12.749          |
| 5300            | 18.82         | 12.746          |
| 5320            | 18.81         | 12.744          |
| 5500            | 18.83         | 12.749          |
| 5580            | 18.76         | 12.732          |
| 5700            | 18.84         | 12.751          |

802.11n\_HT40\_Main

| Frequency (MHz) | 26dB BW (MHz) | 10 Log (B) (dB) |
|-----------------|---------------|-----------------|
| 5190            | 38.01         | 15.799          |
| 5230            | 38.05         | 15.804          |
| 5270            | 40.06         | 16.027          |
| 5310            | 40.08         | 16.029          |
| 5510            | 39.91         | 16.011          |
| 5550            | <b>39.97</b>  | 16.017          |
| 5670            | 39.62         | 15.979          |

802.11n\_HT40\_Aux1

| Frequency (MHz) | 26dB BW (MHz) | 10 Log (B) (dB) |
|-----------------|---------------|-----------------|
| 5190            | 38.29         | 15.831          |
| 5230            | 39.21         | 15.934          |
| 5270            | 39.44         | 15.959          |
| 5310            | 39.60         | 15.977          |
| 5510            | 39.69         | 15.987          |
| 5550            | 39.13         | 15.925          |
| 5670            | 39.77         | 15.996          |

802.11ac\_VHT80\_Main

| Frequency (MHz) | 26dB BW (MHz) | 10 Log (B) (dB) |
|-----------------|---------------|-----------------|
| 5210            | 81.51         | 19.112          |
| 5290            | 80.86         | 19.077          |
| 5530            | 80.55         | 19.061          |
| 5610            | 81.89         | 19.132          |

802.11ac\_VHT80\_Aux1

| Frequency (MHz) | 26dB BW (MHz) | 10 Log (B) (dB) |
|-----------------|---------------|-----------------|
| 5210            | 82.37         | 19.158          |
| 5290            | 82.53         | 19.166          |
| 5530            | 81.32         | 19.102          |
| 5610            | 82.92         | 19.187          |

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## 6dB Bandwidth (5725 MHz~ 5850 MHz) measure with Peak detector for FCC

802.11a\_Main

| Frequency (MHz) | 6dB BW (MHz) | 10 Log (B) (dB) |
|-----------------|--------------|-----------------|
| 5745            | 16.36        | 12.138          |
| 5785            | 15.05        | 11.774          |
| 5825            | 14.90        | 11.732          |

802.11a\_Aux1

| Frequency (MHz) | 6dB BW (MHz) | 10 Log (B) (dB) |
|-----------------|--------------|-----------------|
| 5745            | 14.46        | 11.601          |
| 5785            | 14.90        | 11.731          |
| 5825            | 15.32        | 11.852          |

802.11n\_HT20\_Main

| Frequency (MHz) | 6dB BW (MHz) | 10 Log (B) (dB) |
|-----------------|--------------|-----------------|
| 5745            | 15.06        | 11.778          |
| 5785            | 14.24        | 11.536          |
| 5825            | 15.30        | 11.846          |

802.11n\_HT20\_Aux1

| Frequency (MHz) | 6dB BW (MHz) | 10 Log (B) (dB) |
|-----------------|--------------|-----------------|
| 5745            | 15.67        | 11.951          |
| 5785            | 16.31        | 12.124          |
| 5825            | 14.48        | 11.607          |

802.11n\_HT40\_Main

| Frequency (MHz) | 6dB BW (MHz) | 10 Log (B) (dB) |
|-----------------|--------------|-----------------|
| 5755            | 33.62        | 15.266          |
| 5795            | 35.10        | 15.453          |

802.11n\_HT40\_Aux1

| Frequency (MHz) | 6dB BW (MHz) | 10 Log (B) (dB) |
|-----------------|--------------|-----------------|
| 5755            | 35.09        | 15.452          |
| 5795            | 35.08        | 15.450          |

802.11ac\_VHT80\_Main

| Frequency (MHz) | 6dB BW (MHz) | 10 Log (B) (dB) |
|-----------------|--------------|-----------------|
| 5775            | 72.67        | 18.613          |

802.11ac\_VHT80\_Aux1

| Frequency (MHz) | 6dB BW (MHz) | 10 Log (B) (dB) |
|-----------------|--------------|-----------------|
| 5775            | 73.82        | 18.682          |

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台灣檢驗科技股份有限公司

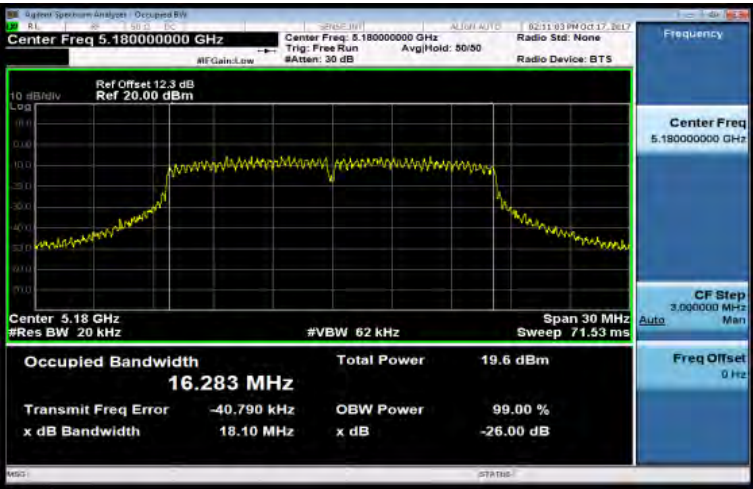
t (886-2) 2299-3279

f (886-2) 2298-0488

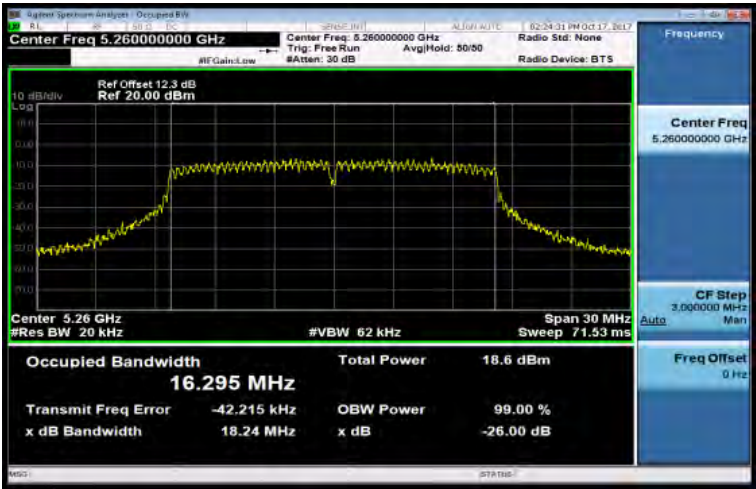
www.tw.sgs.com

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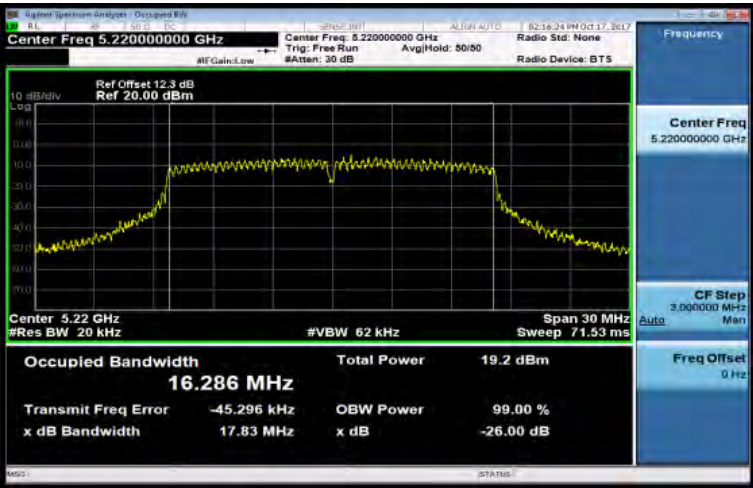
802.11a (Main) 5180MHz



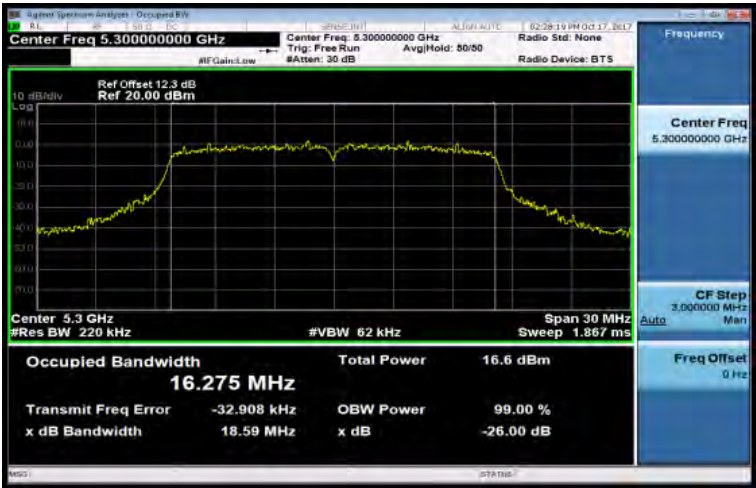
5260MHz



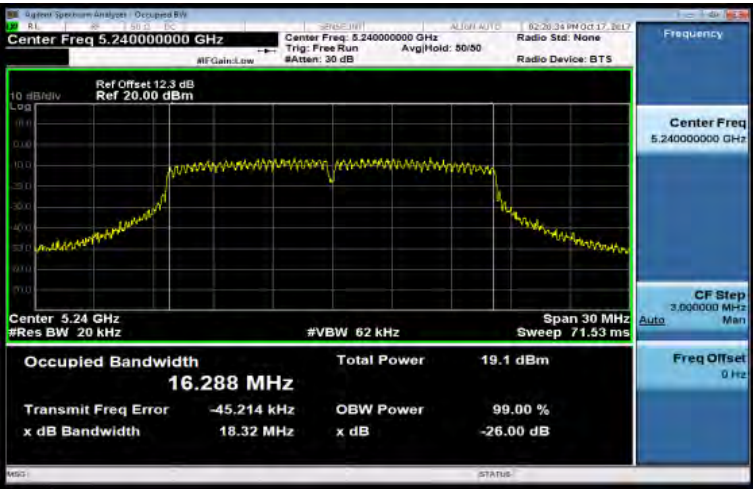
5220MHz



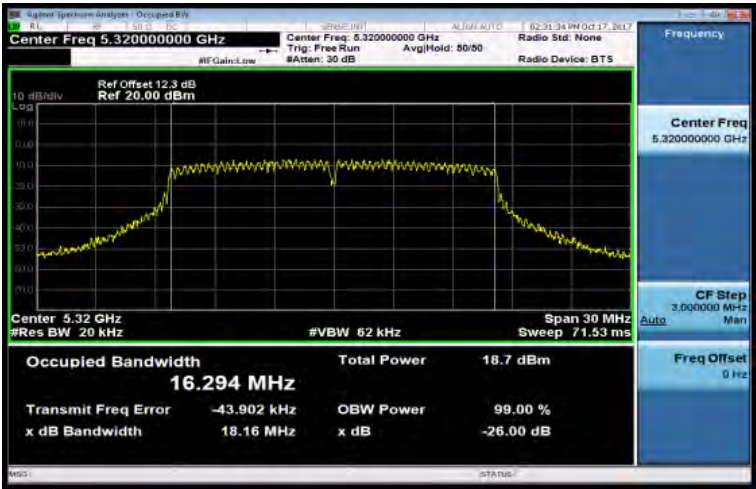
5300MHz



5240MHz



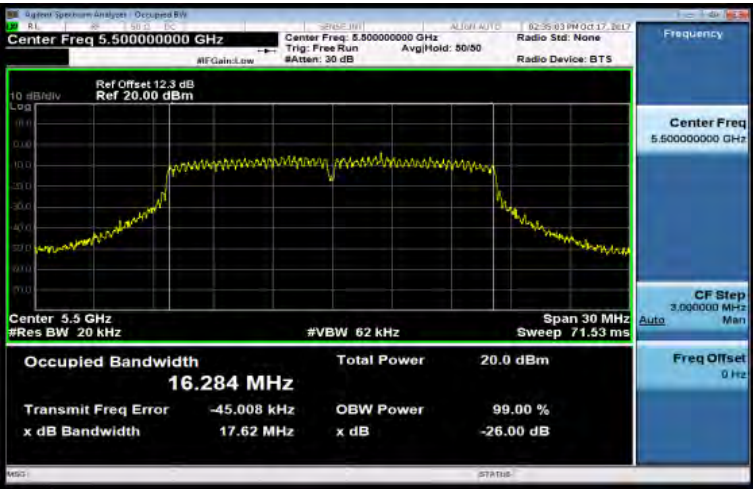
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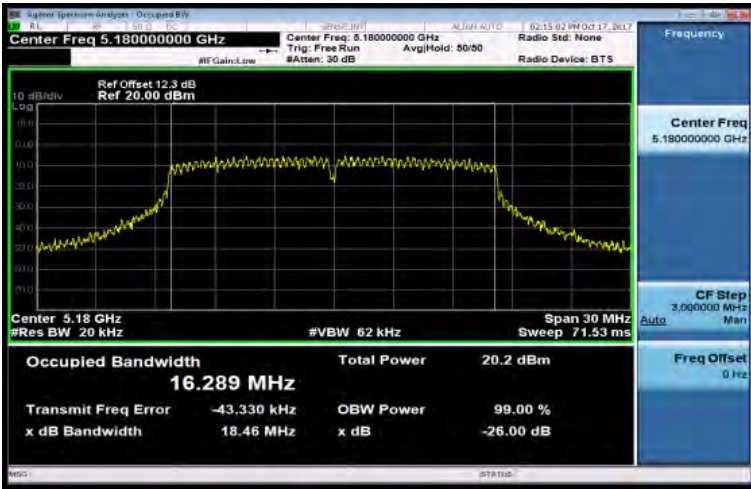
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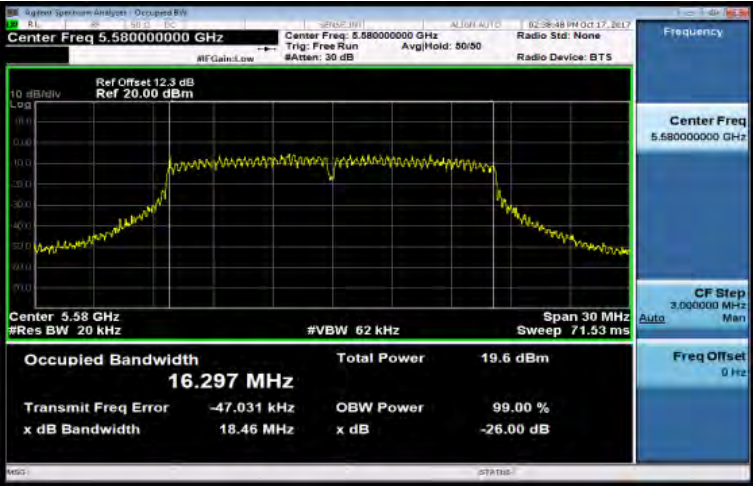
5500MHz



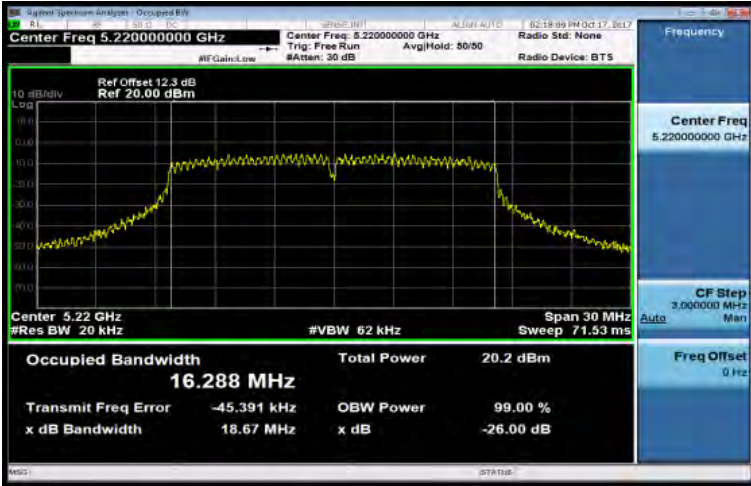
802.11a (Aux1) 5180MHz



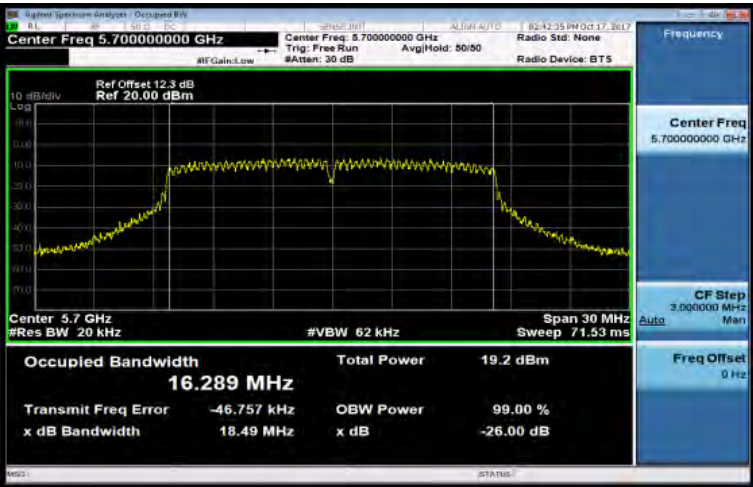
5580MHz



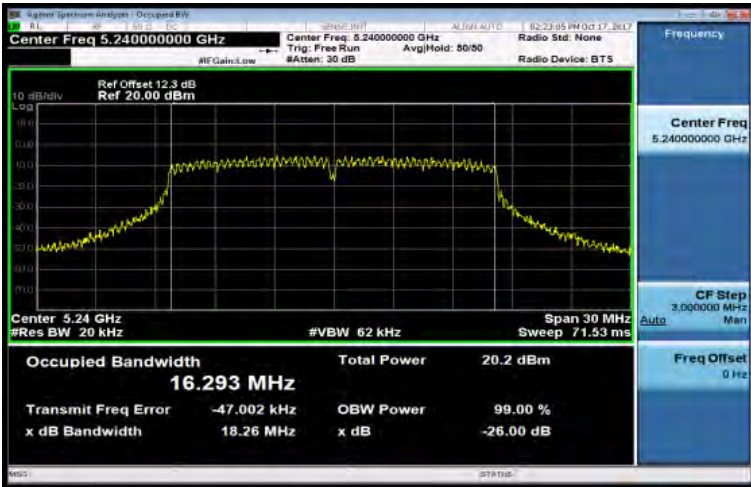
5220MHz



5700MHz



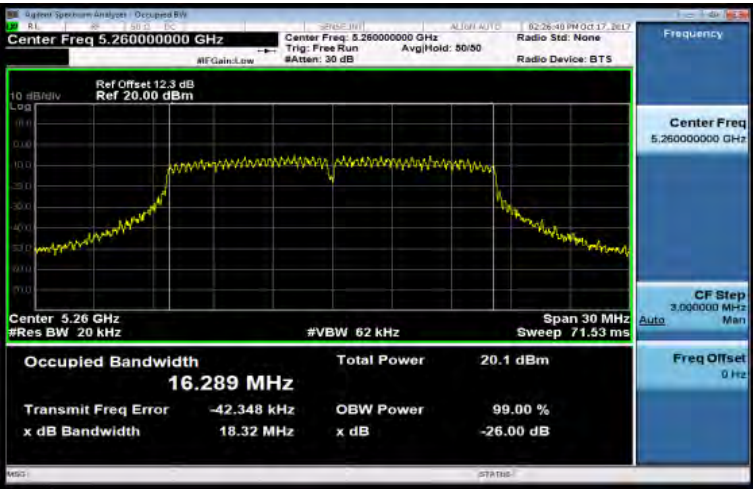
5240MHz



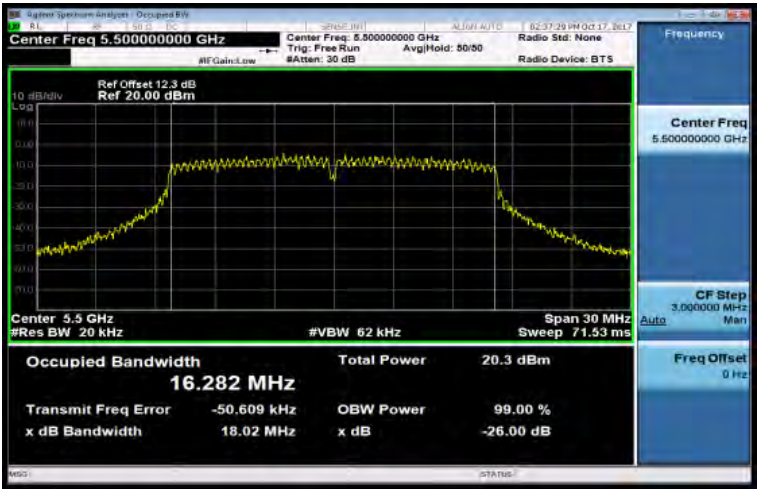
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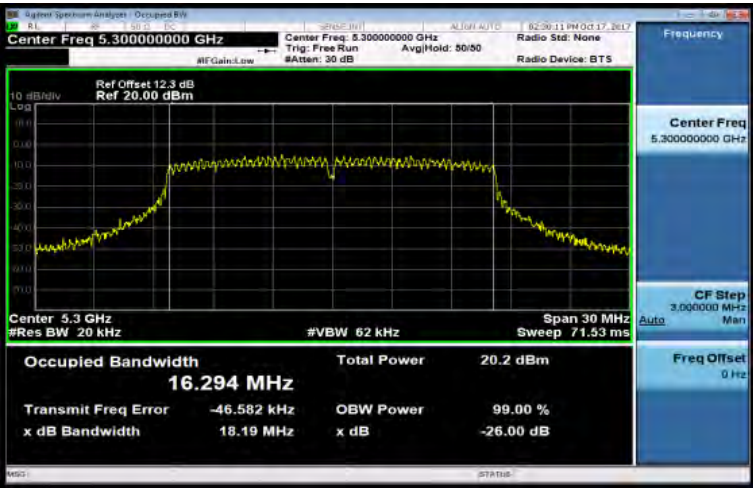
## 5260MHz



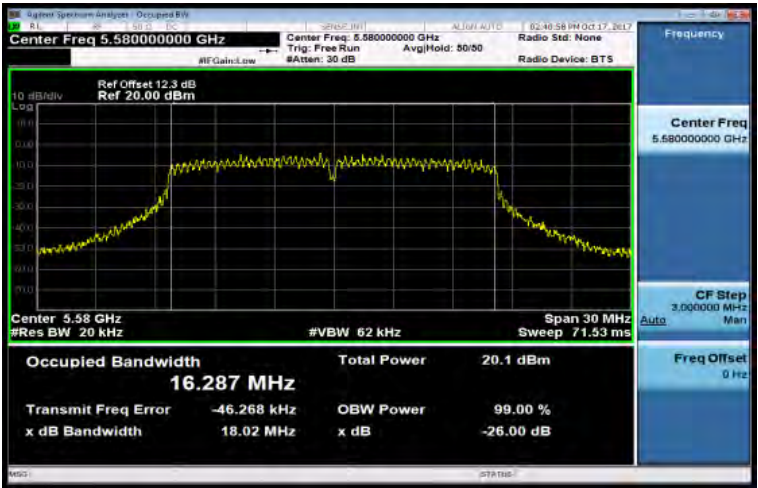
## 5500MHz



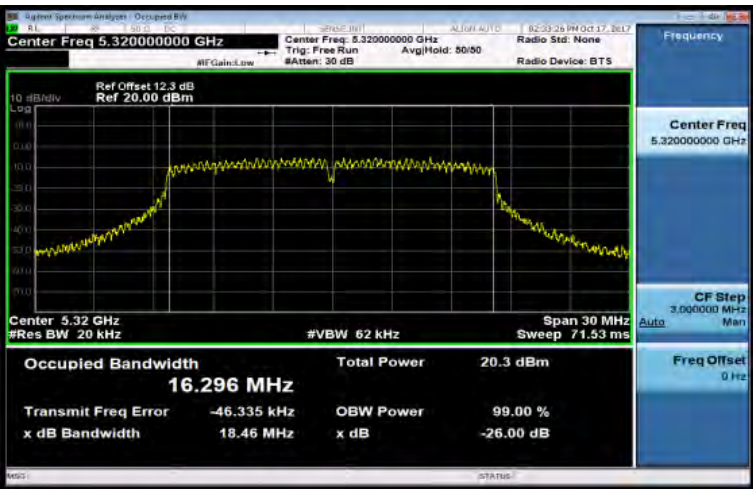
## 5300MHz



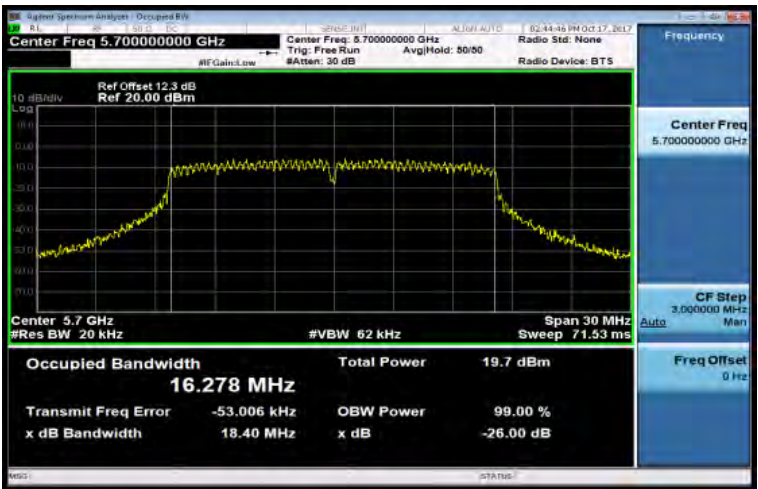
## 5580MHz



## 5320MHz



## 5700MHz



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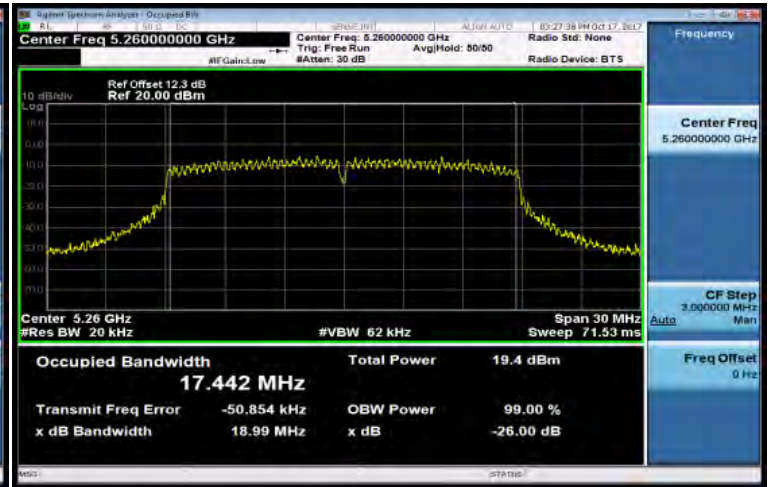
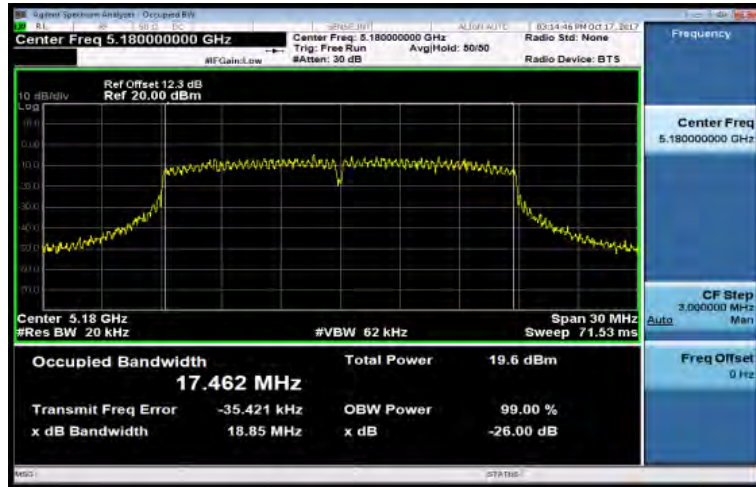
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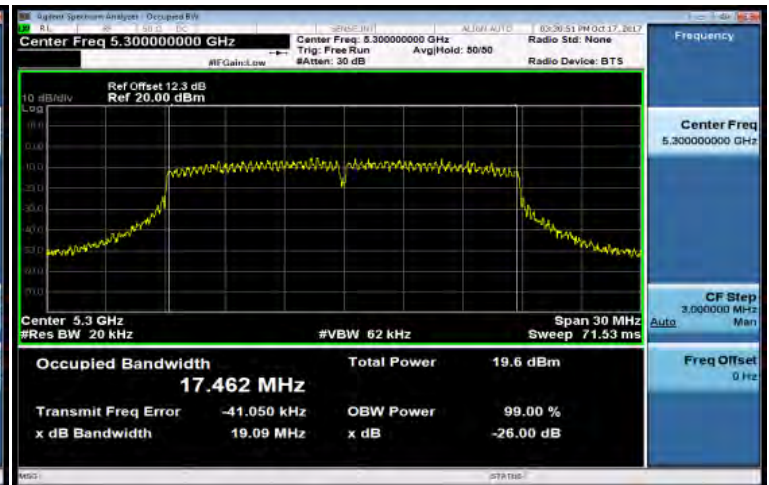
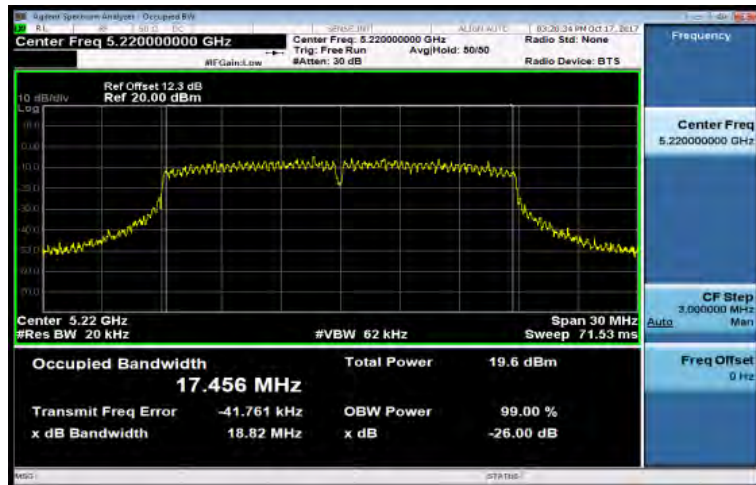
802.11n HT20 (Main) 5180 MHz

5260 MHz



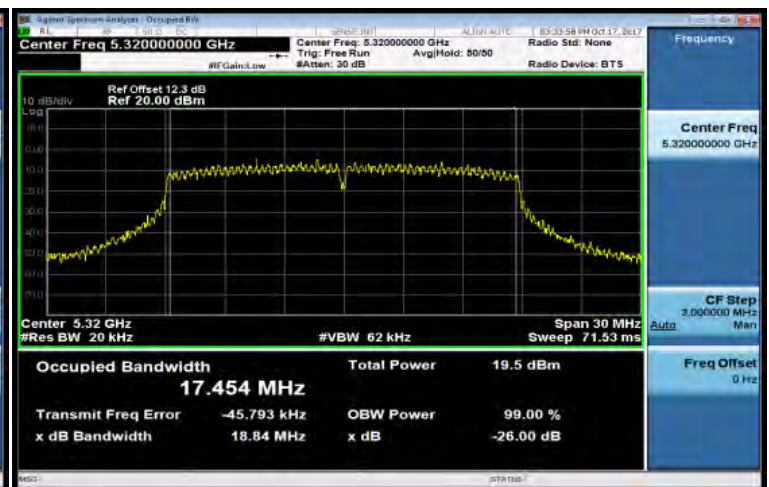
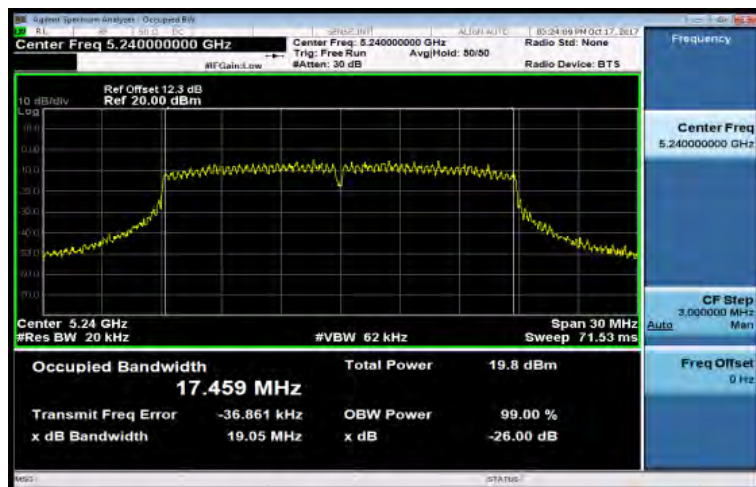
5220 MHz

5300 MHz



5240 MHz

5320 MHz



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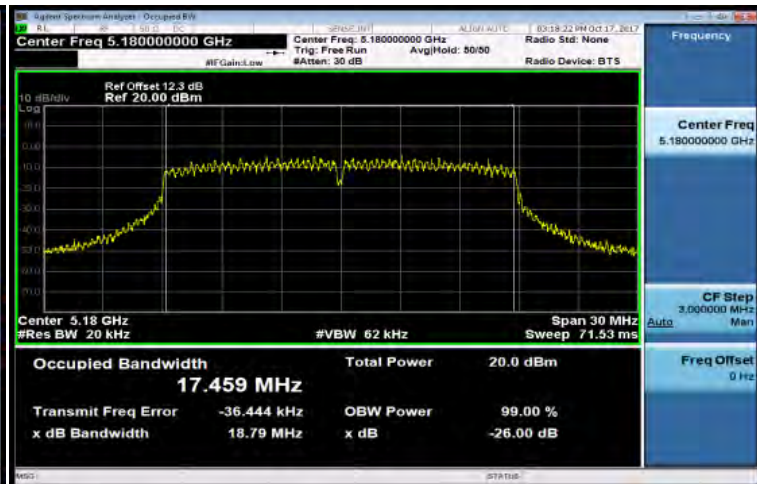
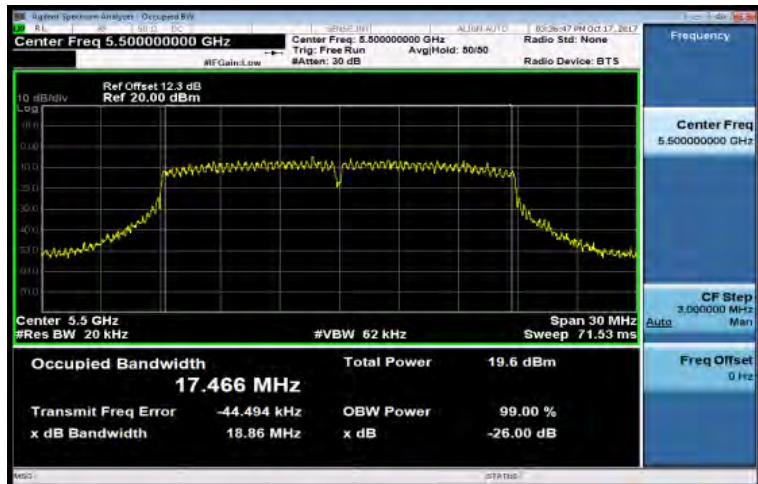
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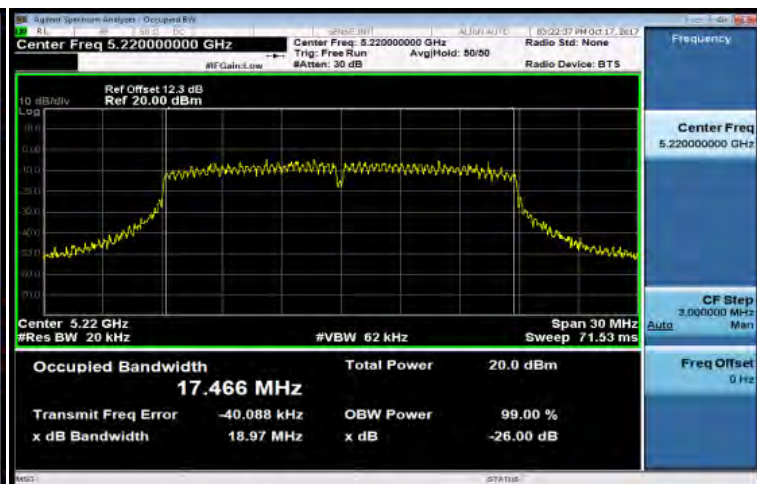
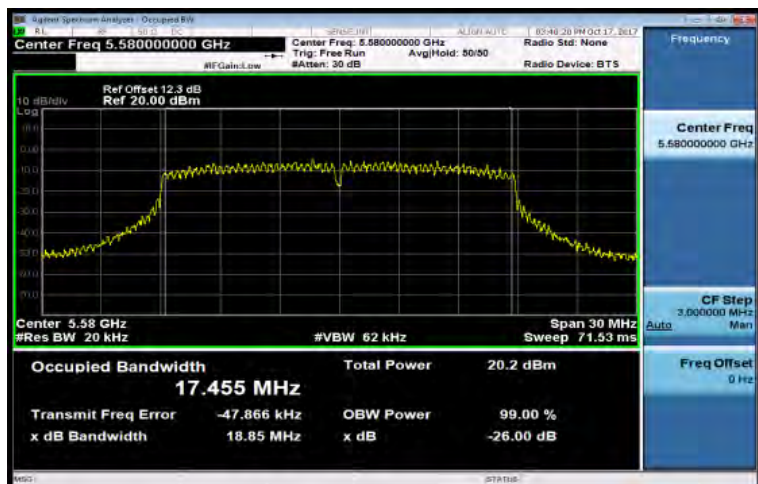
5500 MHz

802.11n HT20 (Aux1) 5180 MHz



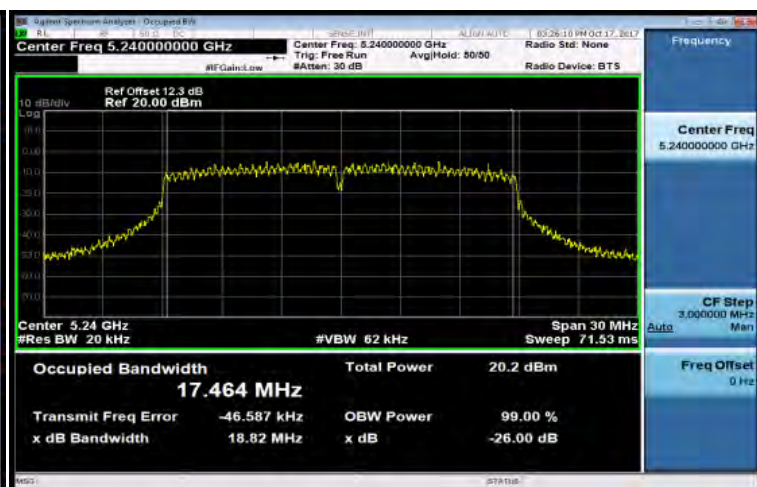
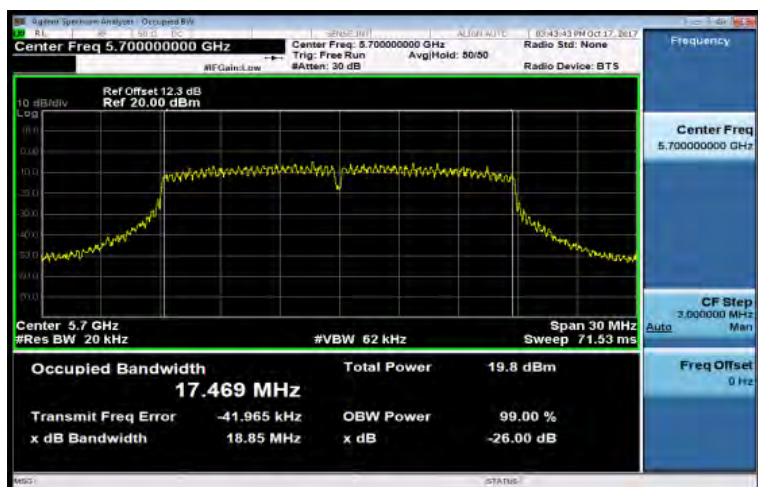
5580 MHz

5220 MHz



5700 MHz

5240 MHz



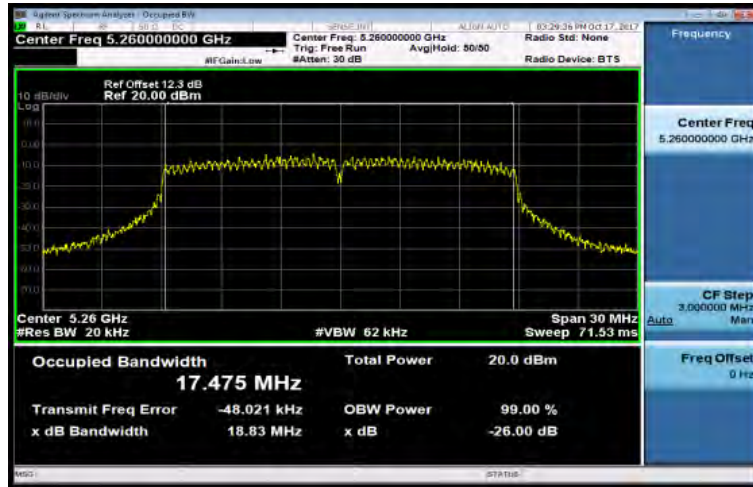
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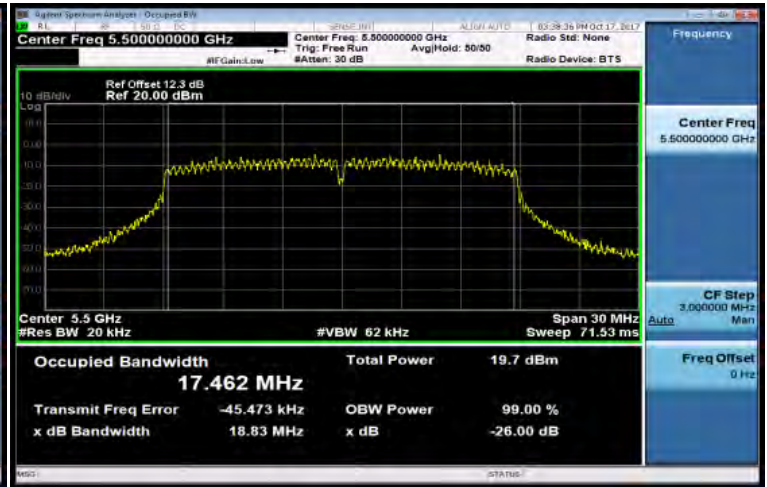
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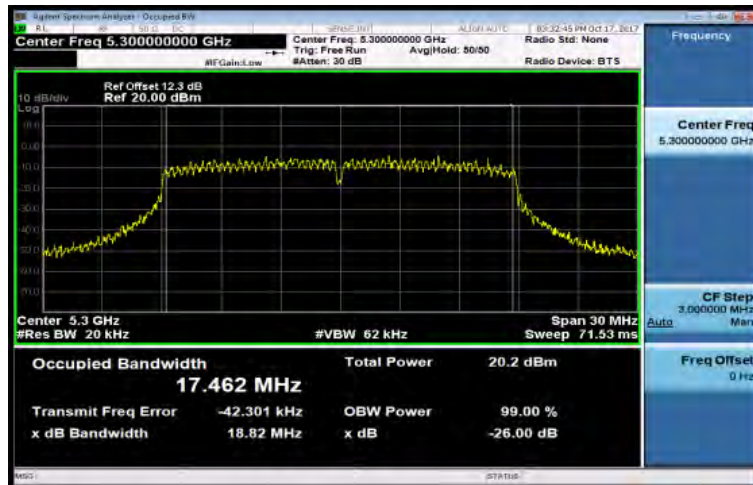
5260 MHz



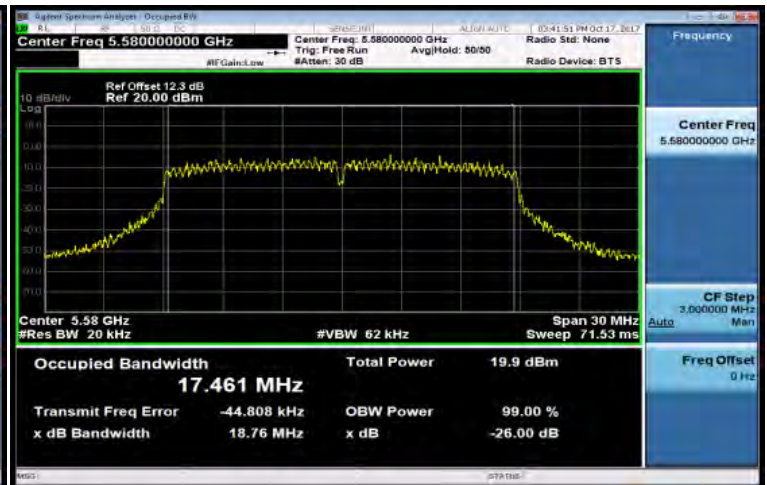
5500 MHz



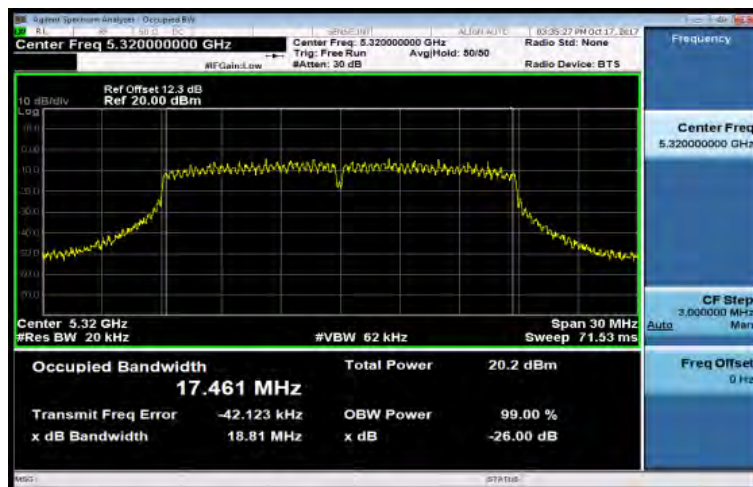
5300 MHz



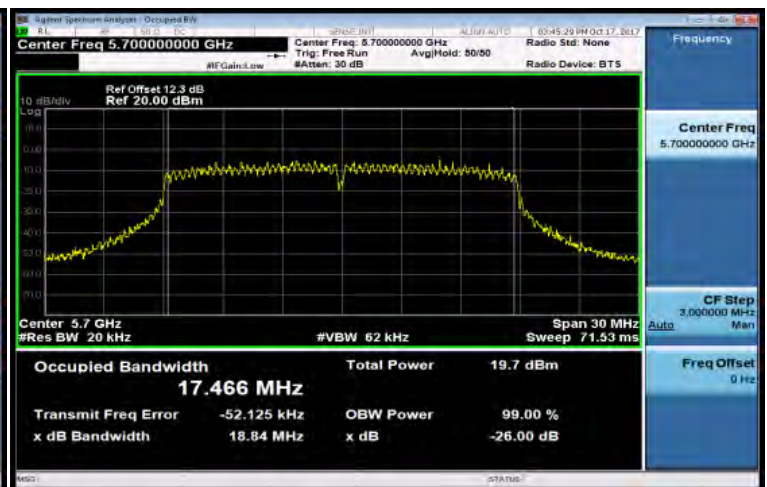
5580 MHz



5320 MHz



5700 MHz



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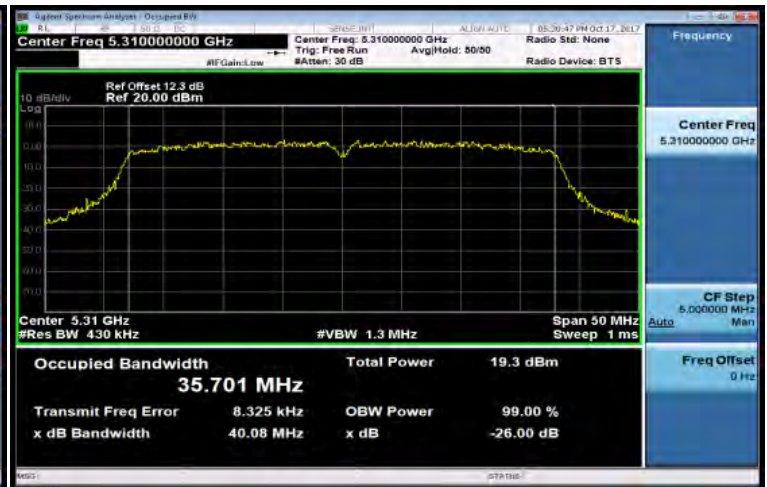
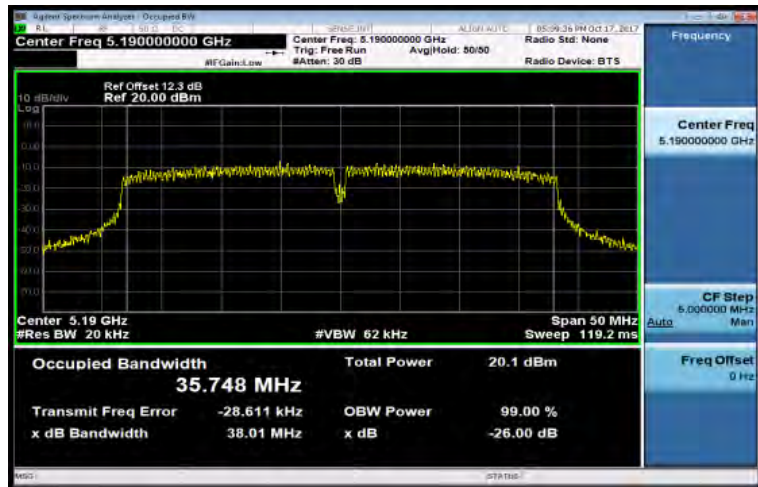
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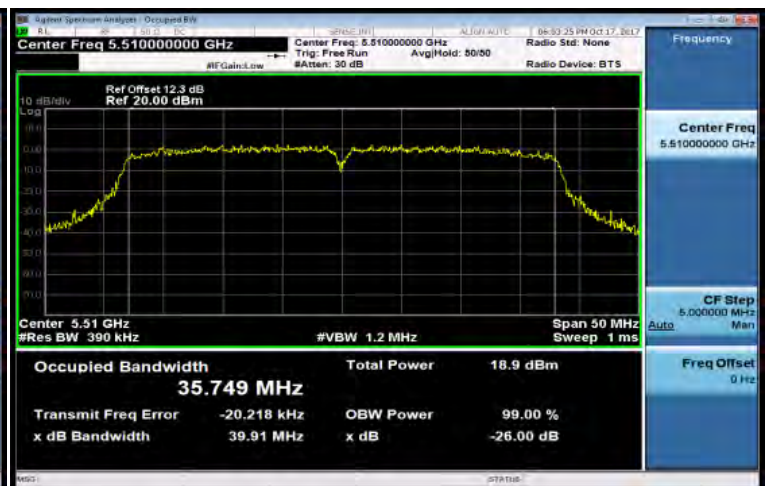
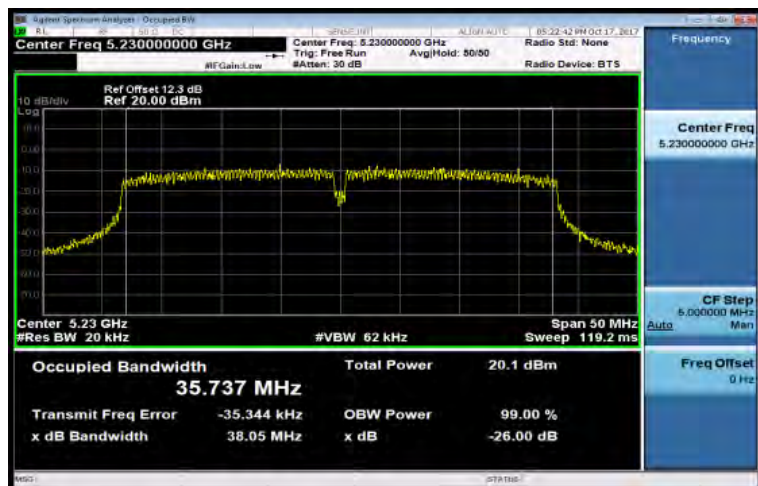
802.11n HT40 (Main) 5190 MHz

5310MHz



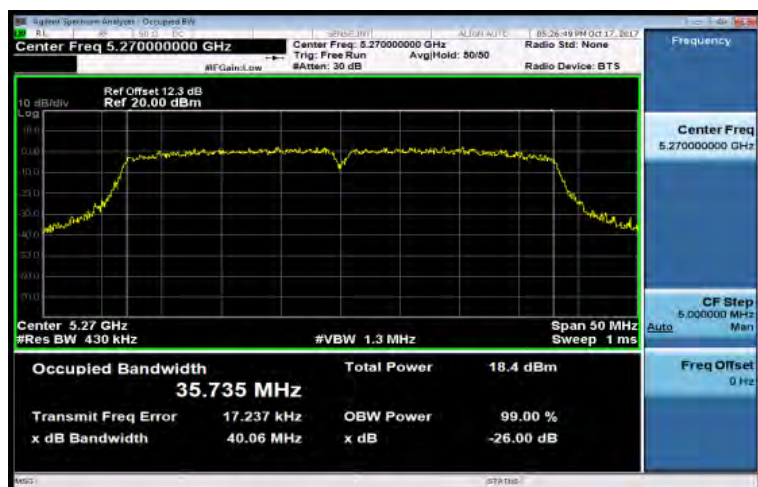
5230 MHz

5510 MHz



5270 MHz

5550 MHz

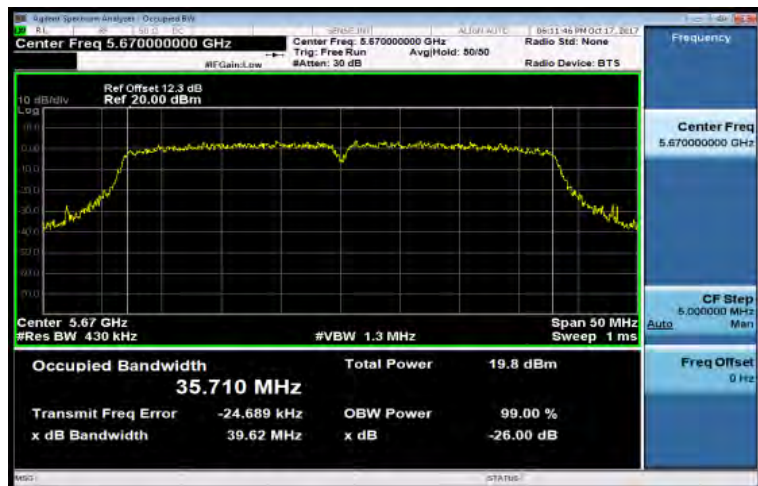


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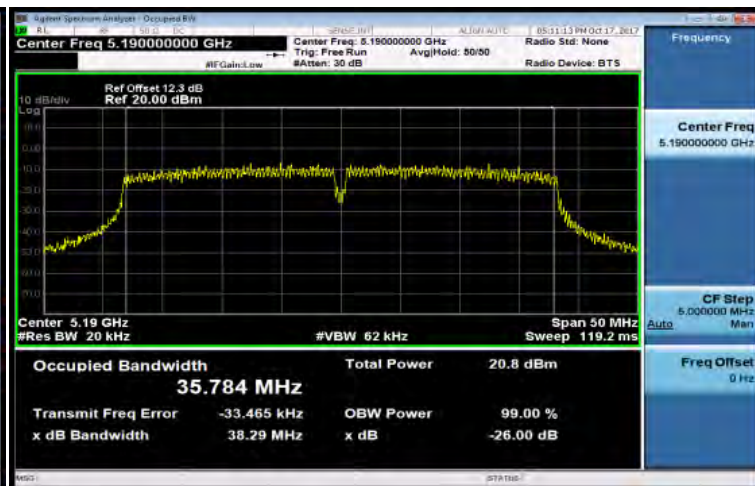
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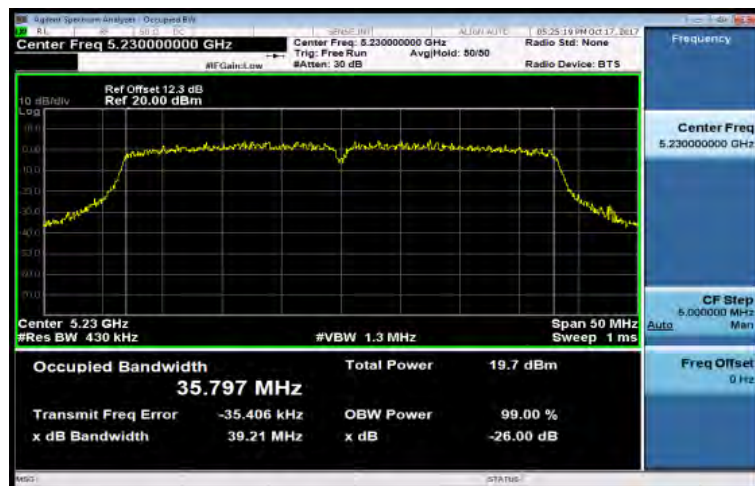
5670 MHz



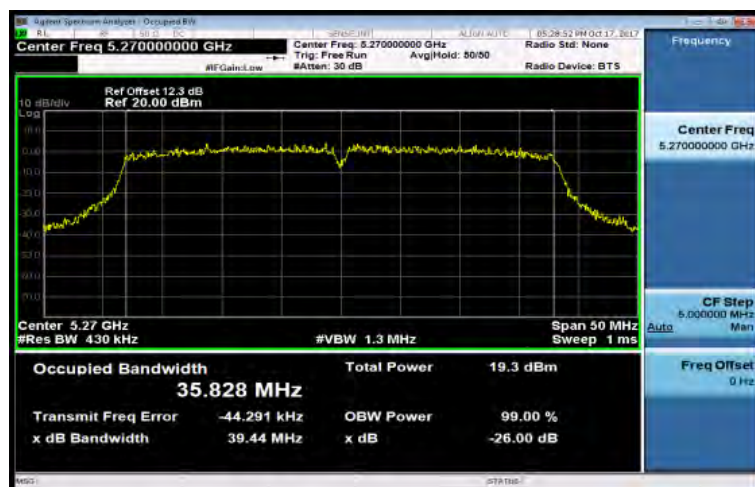
802.11n HT40 (Aux1) 5190 MHz



5230 MHz



5270 MHz



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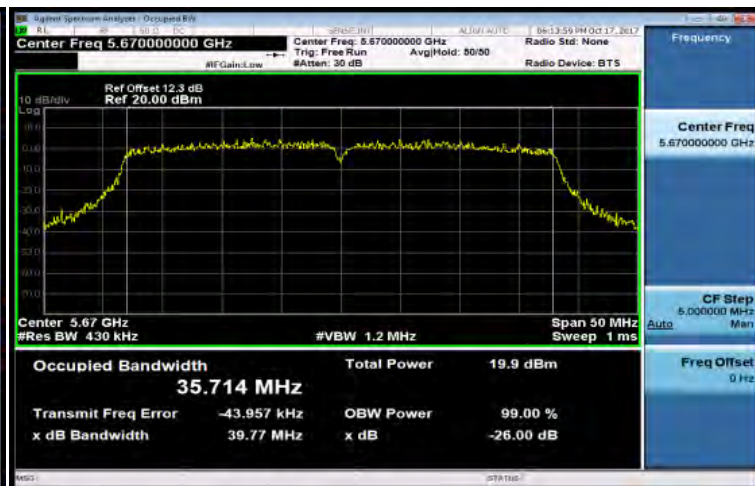
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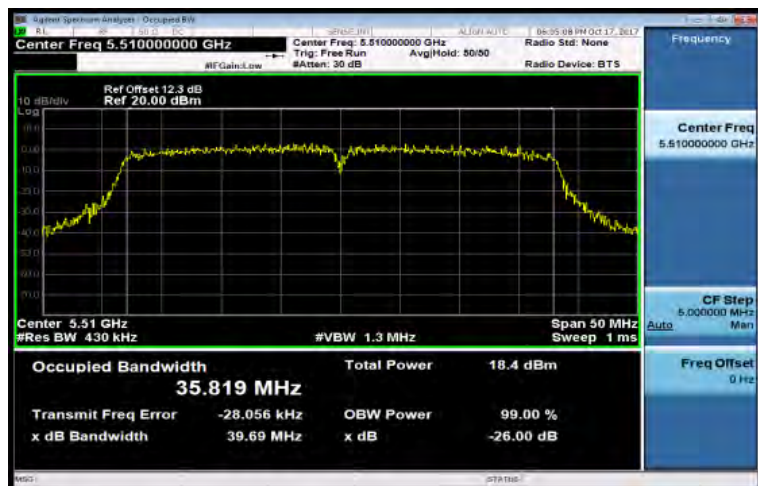


5310MHz

5670 MHz



5510 MHz



5550 MHz



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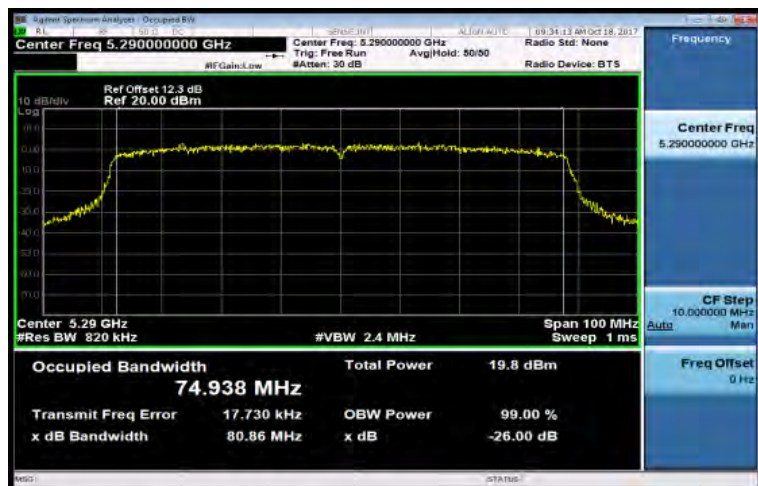
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802.11ac VHT80 (Main) 5210 MHz

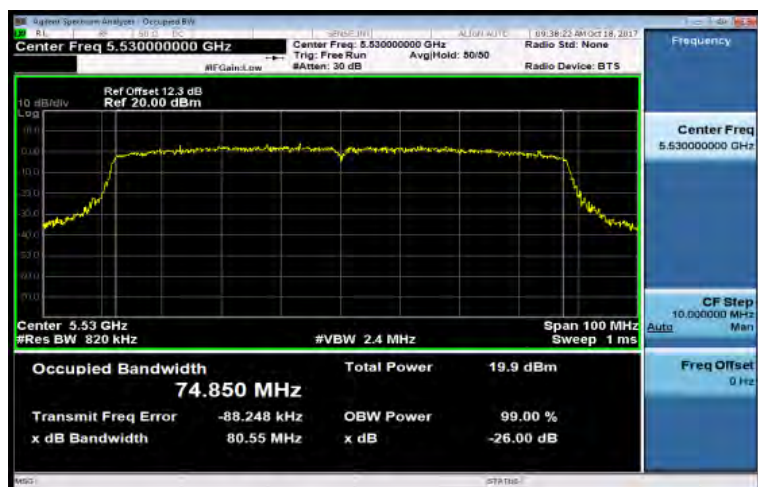
5610 MHz



5290 MHz



5530 MHz



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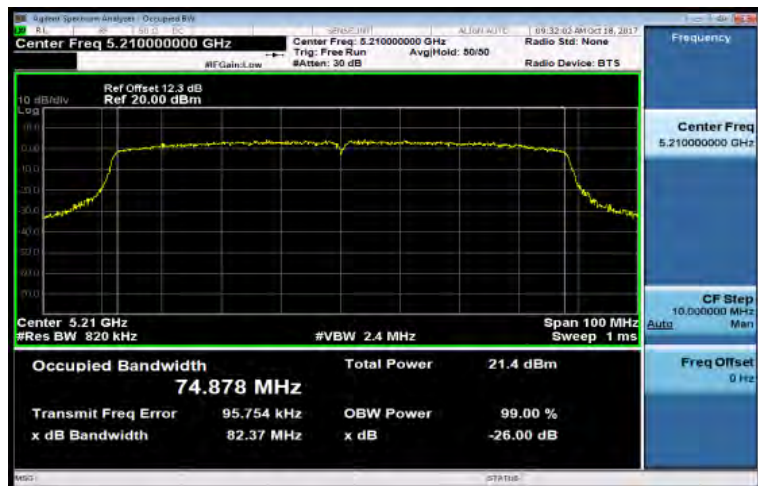
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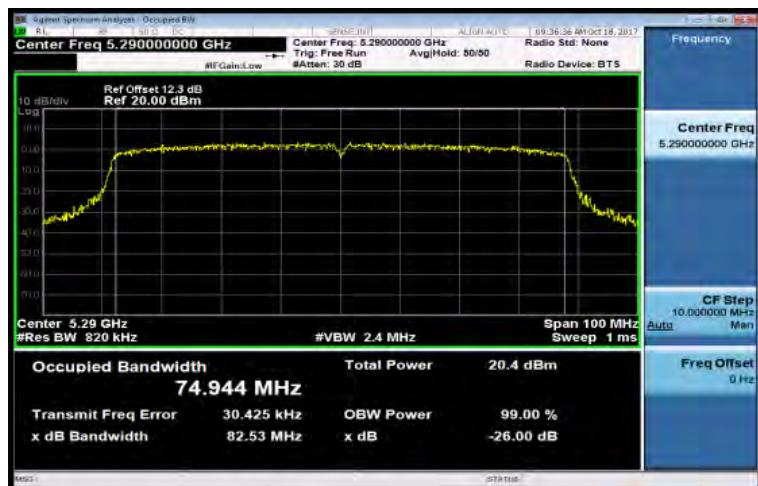


802.11ac VHT80 (Aux1) 5210 MHz

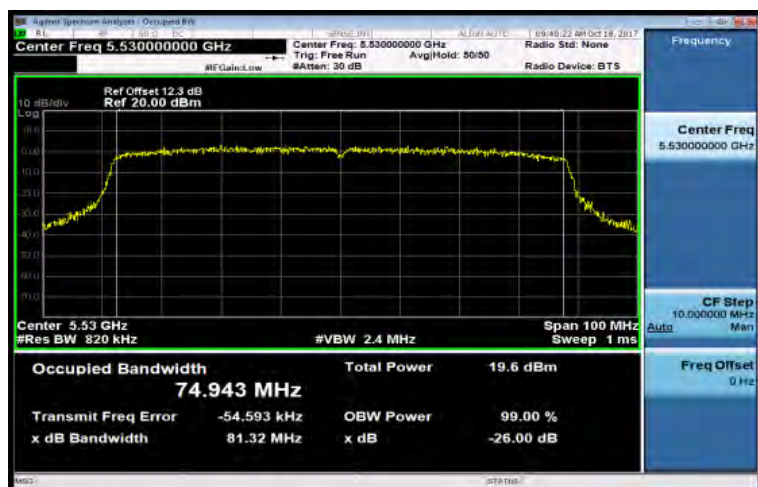
5610 MHz



5290 MHz



5530 MHz

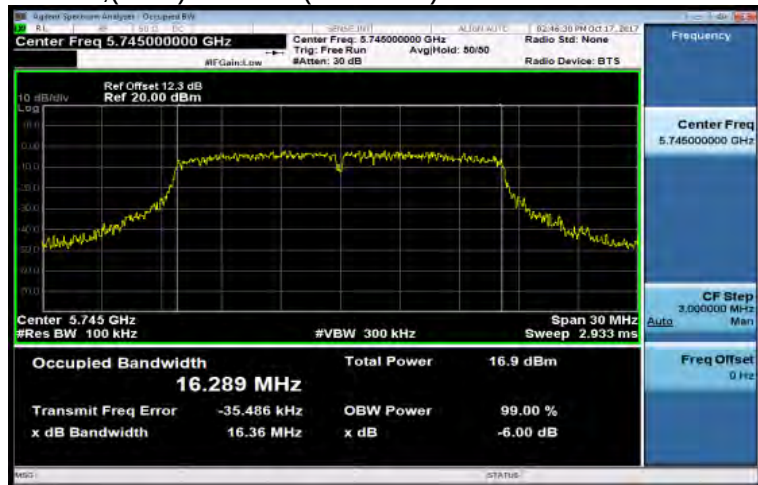


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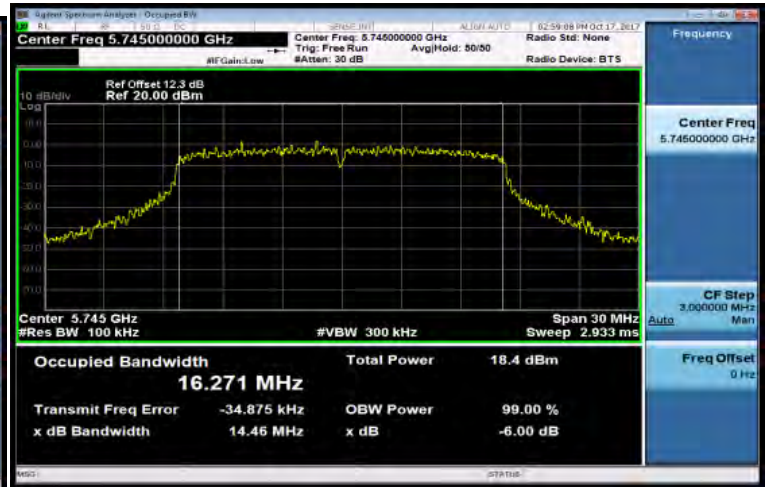
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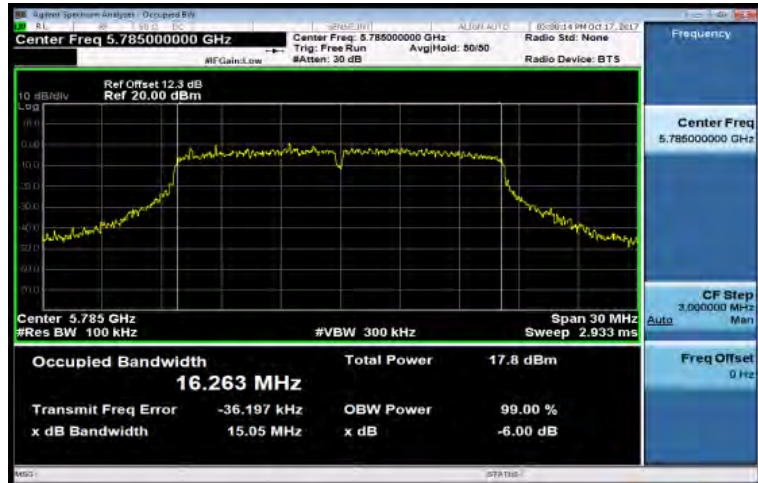
## 6dB Band Width measure with Peak detector for FCC 802.11a,(Main) 6dB BW (5745 MHz)



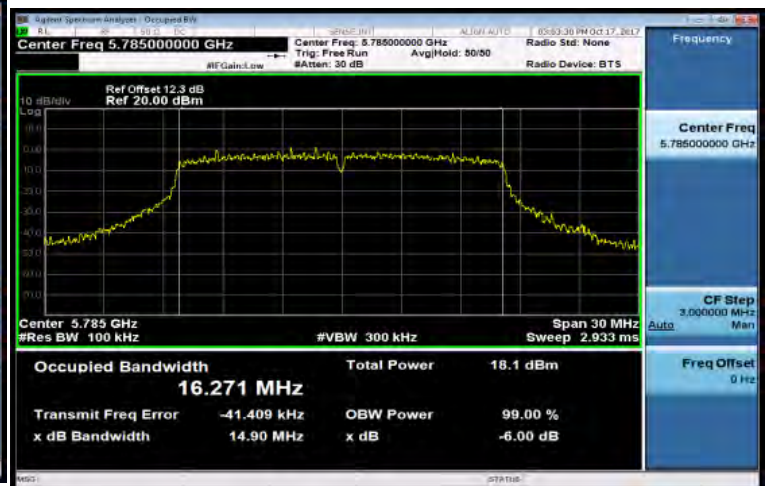
## 802.11a,(Aux1) 6dB BW (5745 MHz)



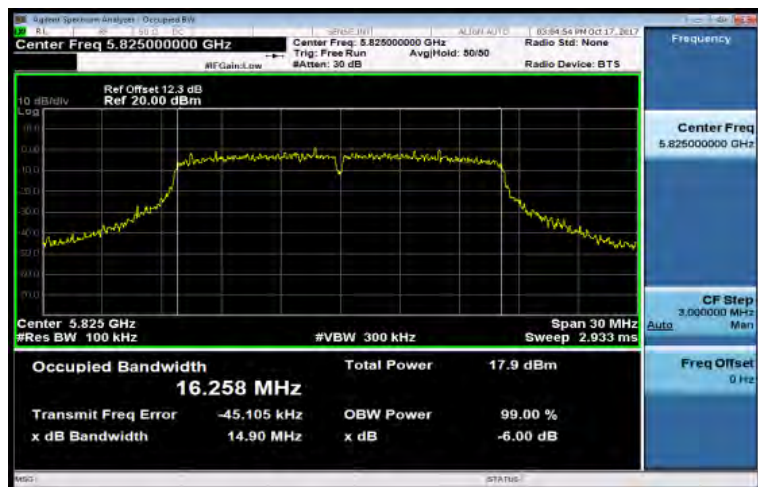
## 6dB BW (5785 MHz)



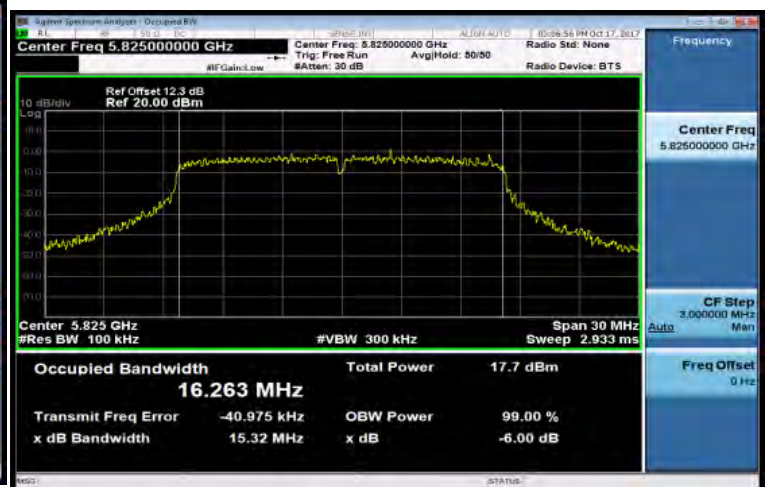
## 6dB BW (5785 MHz)



## 6dB BW (5825 MHz)



## 6dB BW (5825 MHz)



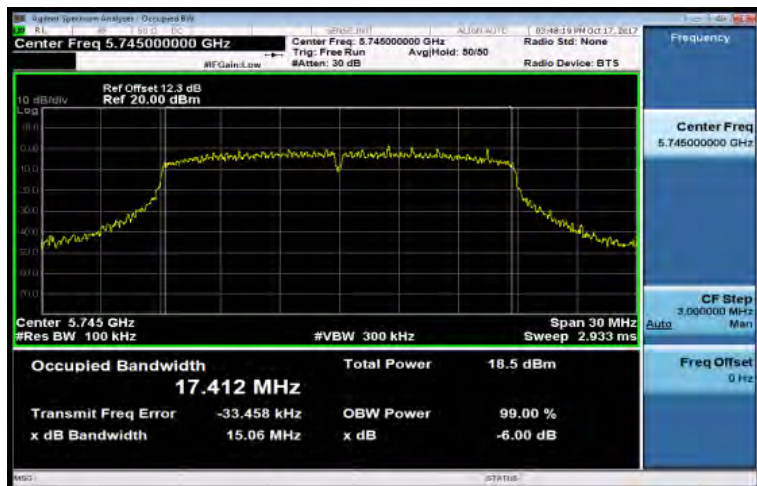
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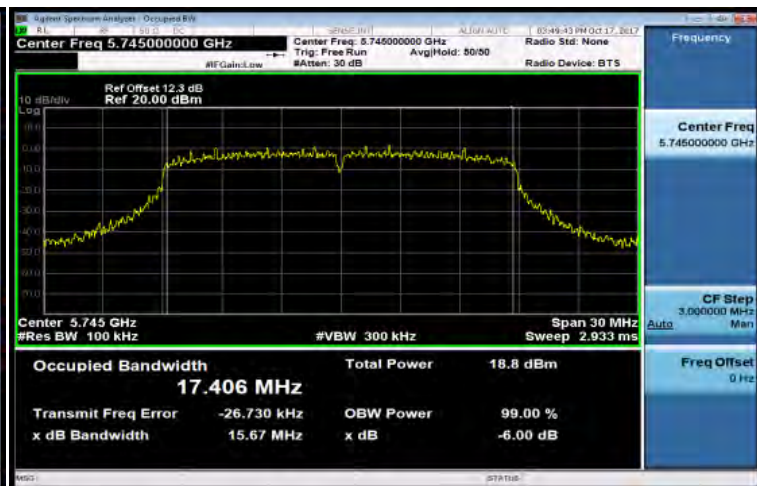
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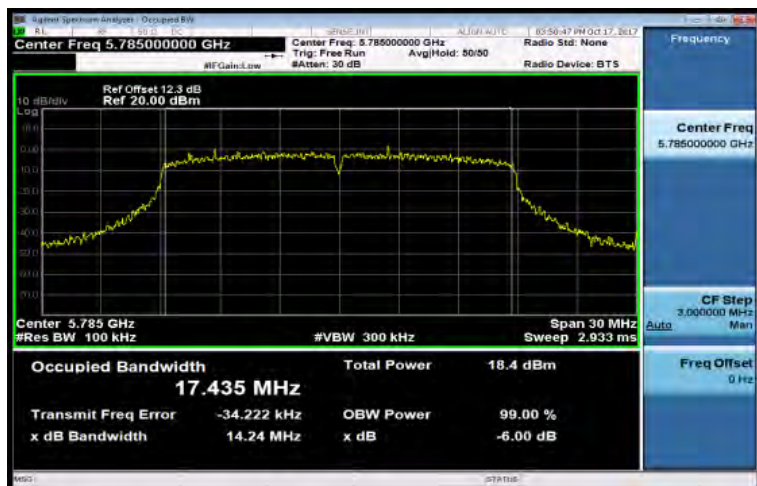
802.11n\_HT20,(Main) 6dB BW (5745 MHz)



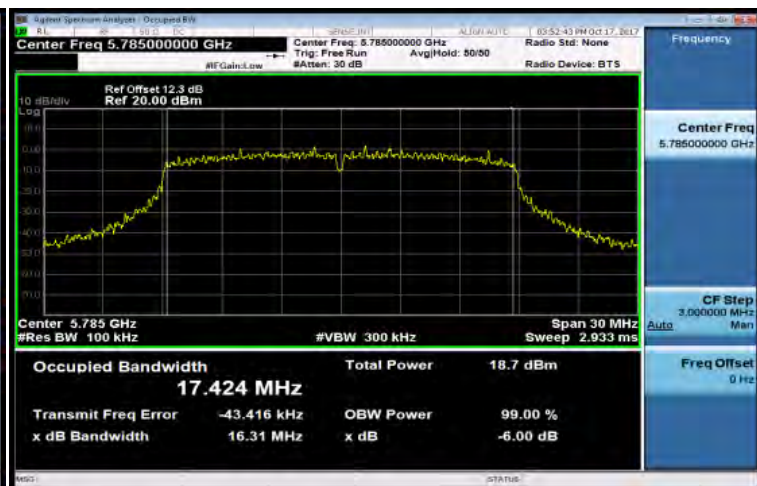
802.11n\_HT20,(Aux1) 6dB BW (5745 MHz)



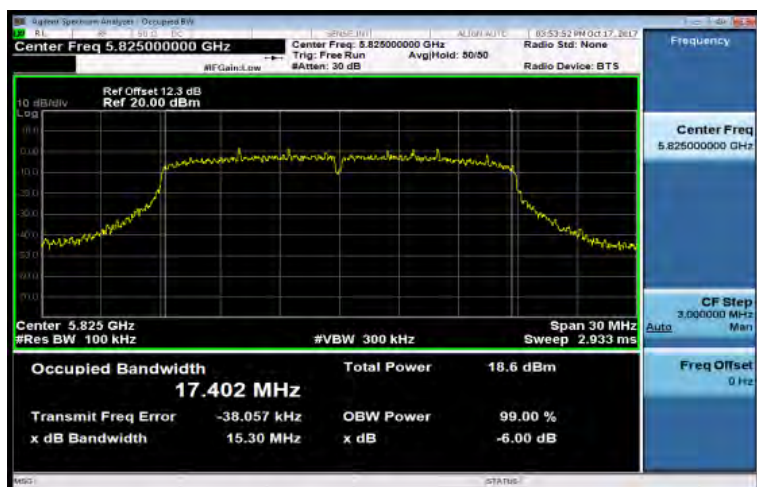
6dB BW (5785 MHz)



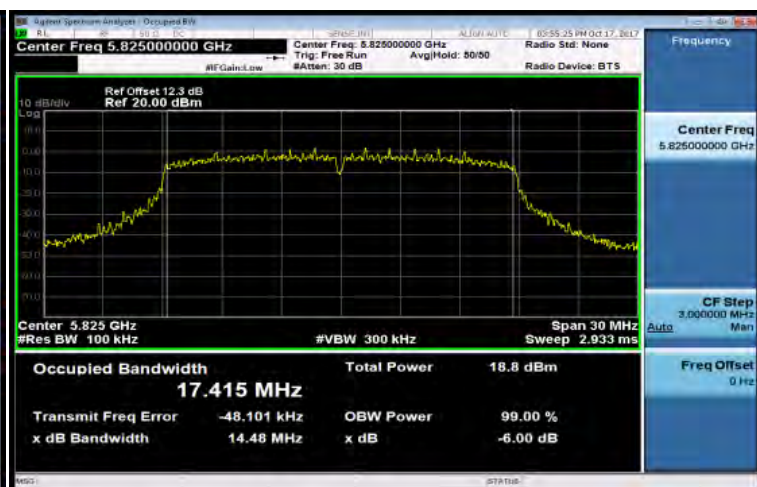
6dB BW (5785 MHz)



6dB BW (5825 MHz)



6dB BW (5825 MHz)

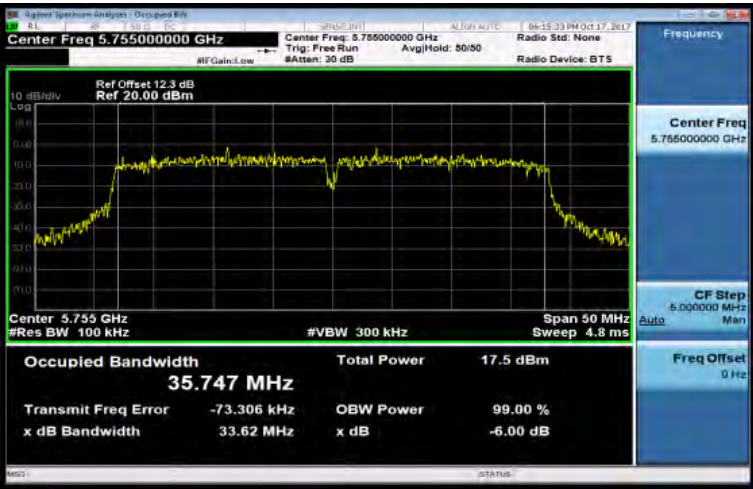


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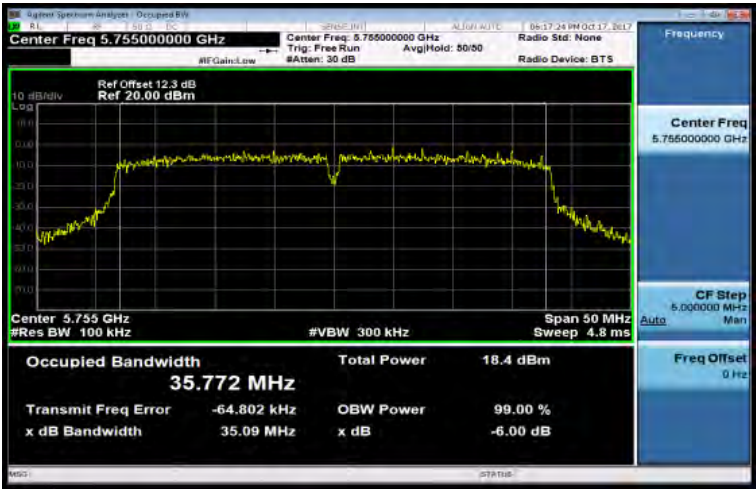
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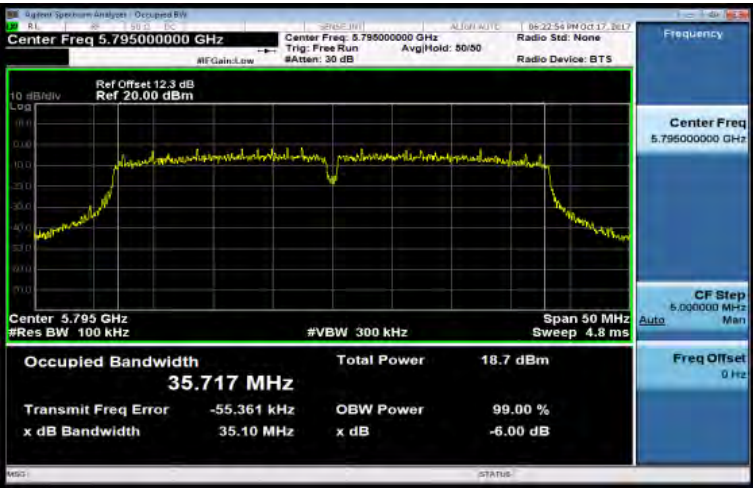
802.11n\_HT40,(Main) 6dB BW (5755 MHz)



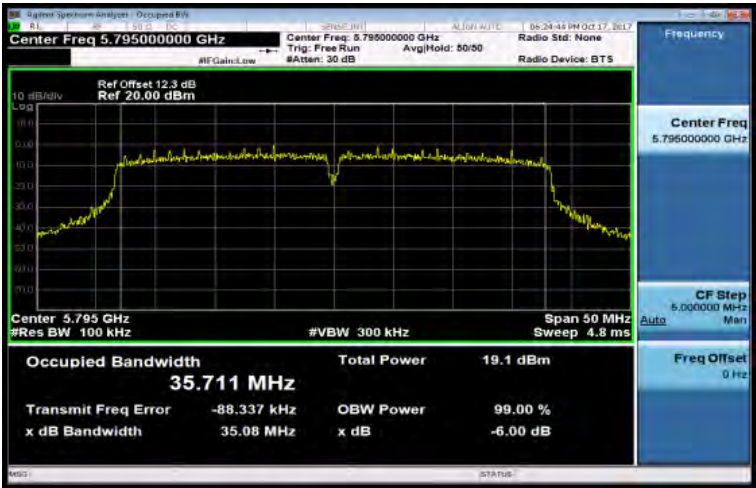
802.11n\_HT40,(Aux1) 6dB BW (5755 MHz)



6dB BW (5795 MHz)



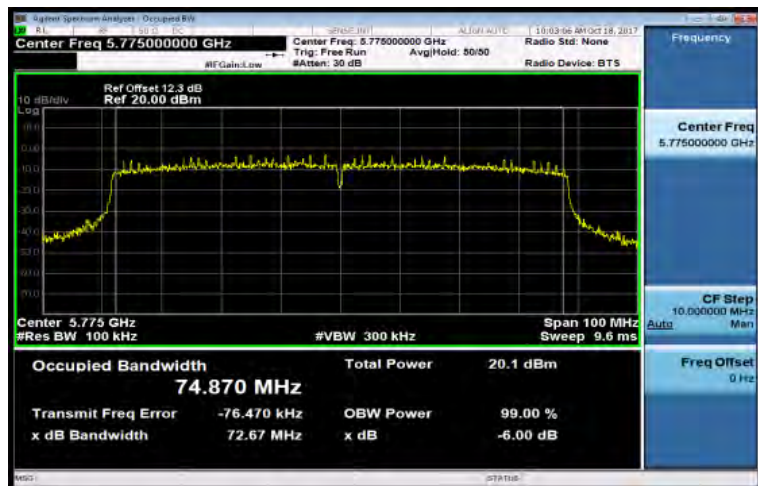
6dB BW (5795 MHz)



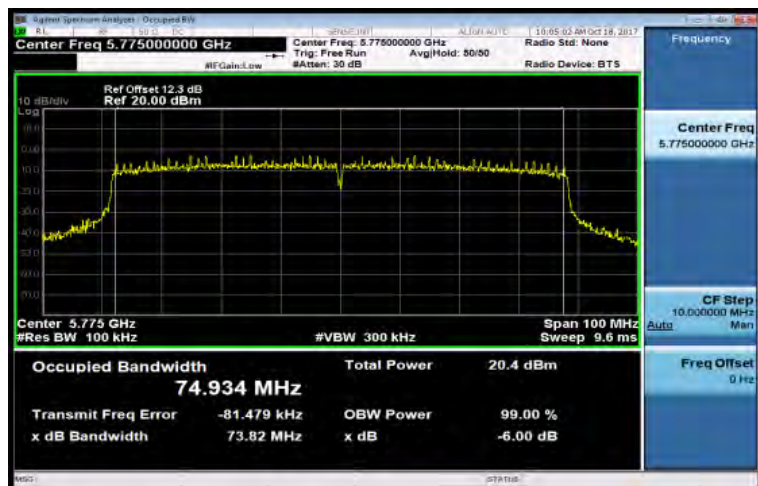
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## 802.11ac VHT80,(Main) 6dB BW (5775 MHz)



## 802.11ac VHT80,(Aux1) 6dB BW (5775 MHz)



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## 9 MAXIMUM CONDUCTED OUTPUT POWER MEASUREMENT

### 9.1 Standard Applicable

| OPERZTION Band | EUT CATEGORY |                                   | LIMIT                             |
|----------------|--------------|-----------------------------------|-----------------------------------|
| U-NII-1        |              | Access Point (Mater device )      | 1 Watt(30dBm)                     |
|                |              | Fixed point-to-point Acess Ponit  | 1 Watt(30dBm)                     |
|                | √            | Mobile and portable clinet device | 250mW(23.98dBm)                   |
| U-NII-2A       | √            |                                   | 250mW(23.98dBm) or 11dBm+10 log B |
| U-NII-2C       | √            |                                   | 250mW(23.98dBm) or 11dBm+10 log B |
| U-NII-3        | √            |                                   | 1 Watt(30dBm)                     |

If transmitting antennas of directional gain greater than 6 dBi are used, both the peak transmit power and the peak power spectral density shall be reduced by the amount in dB that the direction-al gain of the antenna exceeds 6 dBi.

#### Note:

The antenna gain is granter than 6 dBi in MIMO mode the limit reduce as below:

Directional gain = gain of antenna element + 10 log (# of TX antenna elements)

|          | Effective Legacy Gain (dBi) | Limit    |
|----------|-----------------------------|----------|
| UNII-1   | 3.40                        | 23.98dBm |
| UNII-2A  | 4.00                        | 23.98dBm |
| U-NII-2C | 4.40                        | 23.98dBm |
| U-NII-3  | 4.30                        | 30 dBm   |

Therefore the limit no needs to reduce for the UNII-1, U-NII-2A, U-NII-2C and U-NII-3 band.

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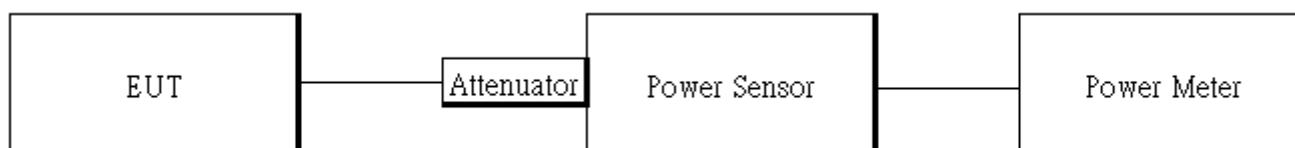
## 9.2 Measurement Procedure

1. Place the EUT on the table and set it in transmitting mode.
2. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules .
3. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the power meter
4. Power Meter is used as the auxiliary test equipment to conduct the output power measurement.
5. Record the max. reading and add 10 log(1/duty cycle).
6. Repeat above procedures until all frequency (low, middle, and high channel) measured were complete.

## 9.3 Measurement Equipment Used

| SGS Conducted Room |              |                |               |                  |                 |
|--------------------|--------------|----------------|---------------|------------------|-----------------|
| Name of Equipment  | Manufacturer | Model          | Serial Number | Calibration Date | Calibration Due |
| Spectrum Analyzer  | KEYSIGHT     | N9010A         | MY51440113    | 06/20/2017       | 06/19/2018      |
| Power Meter        | Anritsu      | ML2496A        | 1326001       | 06/23/2017       | 06/22/2018      |
| Power Sensor       | Anritsu      | MA2411B        | 1315048       | 06/23/2017       | 06/22/2018      |
| Power Sensor       | Anritsu      | MA2411B        | 1315049       | 06/23/2017       | 06/22/2018      |
| Coaxial Cable 30cm | WOKEN        | 00100A1F1A195C | RF01          | 12/12/2016       | 12/11/2017      |
| DC Block           | PASTERNAK    | PE8210         | RF29          | 12/12/2016       | 12/11/2017      |
| Splitter           | RF-LAMBDA    | RFLT2W1G18G    | RF35          | 12/12/2016       | 12/11/2017      |
| Attenuator         | WOKEN        | 218FS-10       | RF23          | 12/12/2016       | 12/11/2017      |
| DC Power Supply    | Agilent      | E3640A         | MY53140006    | 05/02/2017       | 05/01/2018      |

## 9.4 Test Set-up



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## 9.5 Measurement Result

Conducted output power (FCC)

### 802.11a\_Main

| CH  | Frequency (MHz) | Data Rate | TOTAL POWER (dBm) | REQUIRED LIMIT (dBm)            | RESULT |
|-----|-----------------|-----------|-------------------|---------------------------------|--------|
| 36  | 5180            | 6         | 15.69             | 23.98                           | PASS   |
| 44  | 5220            | 6         | 15.55             | 23.98                           | PASS   |
| 48  | 5240            | 6         | <b>15.90</b>      | 23.98                           | PASS   |
| 52  | 5260            | 6         | <b>15.89</b>      | 23.98 or $11+10\log(B) = 23.61$ | PASS   |
| 60  | 5300            | 6         | 15.55             | 23.98 or $11+10\log(B) = 23.69$ | PASS   |
| 64  | 5320            | 6         | 15.77             | 23.98 or $11+10\log(B) = 23.59$ | PASS   |
| 100 | 5500            | 6         | 15.87             | 23.98 or $11+10\log(B) = 23.46$ | PASS   |
| 116 | 5580            | 6         | <b>15.98</b>      | 23.98 or $11+10\log(B) = 23.66$ | PASS   |
| 140 | 5700            | 6         | 15.62             | 23.98 or $11+10\log(B) = 23.67$ | PASS   |
| 149 | 5745            | 6         | <b>15.78</b>      | 30                              | PASS   |
| 157 | 5785            | 6         | 15.74             | 30                              | PASS   |
| 165 | 5825            | 6         | 15.73             | 30                              | PASS   |

### 802.11a\_Aux1

| CH  | Frequency (MHz) | Data Rate | TOTAL POWER (dBm) | REQUIRED LIMIT (dBm)            | RESULT |
|-----|-----------------|-----------|-------------------|---------------------------------|--------|
| 36  | 5180            | 6         | <b>15.93</b>      | 23.98                           | PASS   |
| 44  | 5220            | 6         | 15.87             | 23.98                           | PASS   |
| 48  | 5240            | 6         | 15.89             | 23.98                           | PASS   |
| 52  | 5260            | 6         | 15.86             | 23.98 or $11+10\log(B) = 23.63$ | PASS   |
| 60  | 5300            | 6         | 15.65             | 23.98 or $11+10\log(B) = 23.60$ | PASS   |
| 64  | 5320            | 6         | <b>15.90</b>      | 23.98 or $11+10\log(B) = 23.66$ | PASS   |
| 100 | 5500            | 6         | <b>15.87</b>      | 23.98 or $11+10\log(B) = 23.56$ | PASS   |
| 116 | 5580            | 6         | 15.60             | 23.98 or $11+10\log(B) = 23.56$ | PASS   |
| 140 | 5700            | 6         | 15.52             | 23.98 or $11+10\log(B) = 23.65$ | PASS   |
| 149 | 5745            | 6         | <b>15.82</b>      | 30                              | PASS   |
| 157 | 5785            | 6         | 15.65             | 30                              | PASS   |
| 165 | 5825            | 6         | 15.61             | 30                              | PASS   |

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## 802.11a\_MIMO

| CH  | Frequency (MHz) | Data Rate | Avg. POWER (dBm) |       | TOTAL POWER (dBm) | REQUIRED LIMIT (dBm)            | RESULT |
|-----|-----------------|-----------|------------------|-------|-------------------|---------------------------------|--------|
|     |                 |           | CH 0             | CH 1  |                   |                                 |        |
| 36  | 5180            | 6         | 12.92            | 12.71 | 15.94             | 23.98                           | PASS   |
| 44  | 5220            | 6         | 12.84            | 12.66 | 15.88             | 23.98                           | PASS   |
| 48  | 5240            | 6         | 12.88            | 12.69 | 15.91             | 23.98                           | PASS   |
| 52  | 5260            | 6         | 12.86            | 12.68 | 15.90             | 23.98 or $11+10\log(B) = 22.60$ | PASS   |
| 60  | 5300            | 6         | 12.58            | 12.64 | 15.74             | 23.98 or $11+10\log(B) = 22.06$ | PASS   |
| 64  | 5320            | 6         | 12.89            | 12.7  | 15.92             | 23.98 or $11+10\log(B) = 22.06$ | PASS   |
| 100 | 5500            | 6         | 12.83            | 12.68 | 15.88             | 23.98 or $11+10\log(B) = 22.05$ | PASS   |
| 116 | 5580            | 6         | 12.94            | 12.79 | 15.99             | 23.98 or $11+10\log(B) = 22.05$ | PASS   |
| 140 | 5700            | 6         | 12.61            | 12.48 | 15.67             | 23.98 or $11+10\log(B) = 22.05$ | PASS   |
| 149 | 5745            | 6         | 12.83            | 12.61 | 15.85             | 30                              | PASS   |
| 157 | 5785            | 6         | 12.76            | 12.58 | 15.80             | 30                              | PASS   |
| 165 | 5825            | 6         | 12.68            | 12.55 | 15.74             | 30                              | PASS   |

## 802.11n\_HT20\_Main

| CH  | Frequency (MHz) | Data Rate | TOTAL POWER (dBm) | REQUIRED LIMIT (dBm)            | RESULT |
|-----|-----------------|-----------|-------------------|---------------------------------|--------|
| 36  | 5180            | MCS0      | 15.79             | 23.98                           | PASS   |
| 44  | 5220            | MCS0      | 15.76             | 23.98                           | PASS   |
| 48  | 5240            | MCS0      | 15.62             | 23.98                           | PASS   |
| 52  | 5260            | MCS0      | 15.55             | 23.98 or $11+10\log(B) = 23.79$ | PASS   |
| 60  | 5300            | MCS0      | 15.67             | 23.98 or $11+10\log(B) = 23.81$ | PASS   |
| 64  | 5320            | MCS0      | 15.62             | 23.98 or $11+10\log(B) = 23.75$ | PASS   |
| 100 | 5500            | MCS0      | 15.77             | 23.98 or $11+10\log(B) = 23.76$ | PASS   |
| 116 | 5580            | MCS0      | 15.88             | 23.98 or $11+10\log(B) = 23.75$ | PASS   |
| 140 | 5700            | MCS0      | 15.94             | 23.98 or $11+10\log(B) = 23.75$ | PASS   |
| 149 | 5745            | MCS0      | 15.98             | 30                              | PASS   |
| 157 | 5785            | MCS0      | 15.97             | 30                              | PASS   |
| 165 | 5825            | MCS0      | 15.97             | 30                              | PASS   |

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## 802.11n\_HT20\_Aux1

| CH  | Frequency (MHz) | Data Rate | TOTAL POWER (dBm) | REQUIRED LIMIT (dBm)            | RESULT |
|-----|-----------------|-----------|-------------------|---------------------------------|--------|
| 36  | 5180            | MCS0      | 15.64             | 23.98                           | PASS   |
| 44  | 5220            | MCS0      | <b>15.94</b>      | 23.98                           | PASS   |
| 48  | 5240            | MCS0      | 15.58             | 23.98                           | PASS   |
| 52  | 5260            | MCS0      | 15.59             | 23.98 or $11+10\log(B) = 23.75$ | PASS   |
| 60  | 5300            | MCS0      | <b>15.74</b>      | 23.98 or $11+10\log(B) = 23.75$ | PASS   |
| 64  | 5320            | MCS0      | <b>15.74</b>      | 23.98 or $11+10\log(B) = 23.74$ | PASS   |
| 100 | 5500            | MCS0      | 15.69             | 23.98 or $11+10\log(B) = 23.75$ | PASS   |
| 116 | 5580            | MCS0      | 15.83             | 23.98 or $11+10\log(B) = 23.73$ | PASS   |
| 140 | 5700            | MCS0      | <b>15.93</b>      | 23.98 or $11+10\log(B) = 23.75$ | PASS   |
| 149 | 5745            | MCS0      | 15.74             | 30                              | PASS   |
| 157 | 5785            | MCS0      | 15.57             | 30                              | PASS   |
| 165 | 5825            | MCS0      | <b>15.92</b>      | 30                              | PASS   |

## 802.11n\_HT20\_MIMO

| CH  | Frequency (MHz) | Data Rate | Avg. POWER (dBm) |       | TOTAL POWER (dBm) | REQUIRED LIMIT (dBm)            | RESULT |
|-----|-----------------|-----------|------------------|-------|-------------------|---------------------------------|--------|
|     |                 |           | CH 0             | CH 1  |                   |                                 |        |
| 36  | 5180            | MCS8      | 12.82            | 12.69 | <b>15.99</b>      | 23.98                           | PASS   |
| 44  | 5220            | MCS8      | 12.79            | 12.66 | 15.96             | 23.98                           | PASS   |
| 48  | 5240            | MCS8      | 12.78            | 12.64 | 15.94             | 23.98                           | PASS   |
| 52  | 5260            | MCS8      | 12.74            | 12.6  | <b>15.90</b>      | 23.98 or $11+10\log(B) = 22.74$ | PASS   |
| 60  | 5300            | MCS8      | 12.65            | 12.53 | 15.82             | 23.98 or $11+10\log(B) = 22.74$ | PASS   |
| 64  | 5320            | MCS8      | 12.63            | 12.49 | 15.79             | 23.98 or $11+10\log(B) = 22.74$ | PASS   |
| 100 | 5500            | MCS8      | 12.75            | 12.61 | 15.91             | 23.98 or $11+10\log(B) = 22.34$ | PASS   |
| 116 | 5580            | MCS8      | 12.74            | 12.58 | 15.90             | 23.98 or $11+10\log(B) = 22.34$ | PASS   |
| 140 | 5700            | MCS8      | 12.82            | 12.67 | <b>15.98</b>      | 23.98 or $11+10\log(B) = 22.34$ | PASS   |
| 149 | 5745            | MCS8      | 12.83            | 12.68 | <b>15.99</b>      | 30                              | PASS   |
| 157 | 5785            | MCS8      | 12.82            | 12.68 | 15.98             | 30                              | PASS   |
| 165 | 5825            | MCS8      | 12.81            | 12.67 | 15.97             | 30                              | PASS   |

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### 802.11n\_HT40\_Main

| CH  | Frequency (MHz) | Data Rate | TOTAL POWER (dBm) | REQUIRED LIMIT (dBm) |                           | RESULT |
|-----|-----------------|-----------|-------------------|----------------------|---------------------------|--------|
| 38  | 5190            | MCS0      | <b>15.88</b>      | 23.98                |                           | PASS   |
| 46  | 5230            | MCS0      | 15.68             | 23.98                |                           | PASS   |
| 54  | 5270            | MCS0      | <b>15.97</b>      | 23.98                | or $11+10\log(B) = 27.03$ | PASS   |
| 62  | 5310            | MCS0      | 15.65             | 23.98                | or $11+10\log(B) = 27.03$ | PASS   |
| 102 | 5510            | MCS0      | 15.75             | 23.98                | or $11+10\log(B) = 27.01$ | PASS   |
| 110 | 5550            | MCS0      | 15.92             | 23.98                | or $11+10\log(B) = 27.02$ | PASS   |
| 134 | 5670            | MCS0      | <b>15.95</b>      | 23.98                | or $11+10\log(B) = 26.98$ | PASS   |
| 151 | 5755            | MCS0      | <b>15.66</b>      | 30                   |                           | PASS   |
| 159 | 5795            | MCS0      | 15.58             | 30                   |                           | PASS   |

### 802.11n\_HT40\_Aux1

| CH  | Frequency (MHz) | Data Rate | TOTAL POWER (dBm) | REQUIRED LIMIT (dBm) |                           | RESULT |
|-----|-----------------|-----------|-------------------|----------------------|---------------------------|--------|
| 38  | 5190            | MCS0      | <b>15.78</b>      | 23.98                |                           | PASS   |
| 46  | 5230            | MCS0      | 15.75             | 23.98                |                           | PASS   |
| 54  | 5270            | MCS0      | 15.70             | 23.98                | or $11+10\log(B) = 26.96$ | PASS   |
| 62  | 5310            | MCS0      | <b>15.89</b>      | 23.98                | or $11+10\log(B) = 26.98$ | PASS   |
| 102 | 5510            | MCS0      | <b>15.84</b>      | 23.98                | or $11+10\log(B) = 26.99$ | PASS   |
| 110 | 5550            | MCS0      | 15.58             | 23.98                | or $11+10\log(B) = 26.93$ | PASS   |
| 134 | 5670            | MCS0      | 15.56             | 23.98                | or $11+10\log(B) = 27.00$ | PASS   |
| 151 | 5755            | MCS0      | <b>15.91</b>      | 30                   |                           | PASS   |
| 159 | 5795            | MCS0      | 15.76             | 30                   |                           | PASS   |

### 802.11n\_HT40\_MIMO

| CH  | Frequency (MHz) | Data Rate | Avg. POWER (dBm) |       | TOTAL POWER (dBm) | REQUIRED LIMIT (dBm)            | RESULT |
|-----|-----------------|-----------|------------------|-------|-------------------|---------------------------------|--------|
|     |                 |           | CH 0             | CH 1  |                   |                                 |        |
| 38  | 5190            | MCS8      | 12.59            | 12.37 | <b>15.92</b>      | 23.98                           | PASS   |
| 46  | 5230            | MCS8      | 12.54            | 12.32 | 15.87             | 23.98                           | PASS   |
| 54  | 5270            | MCS8      | 12.63            | 12.44 | 15.98             | 23.98 or $11+10\log(B) = 25.95$ | PASS   |
| 62  | 5310            | MCS8      | 12.65            | 12.45 | <b>15.99</b>      | 23.98 or $11+10\log(B) = 25.95$ | PASS   |
| 102 | 5510            | MCS8      | 12.66            | 12.43 | <b>15.99</b>      | 23.98 or $11+10\log(B) = 25.58$ | PASS   |
| 110 | 5550            | MCS8      | 12.62            | 12.39 | 15.95             | 23.98 or $11+10\log(B) = 25.58$ | PASS   |
| 134 | 5670            | MCS8      | 12.64            | 12.41 | 15.97             | 23.98 or $11+10\log(B) = 25.58$ | PASS   |
| 151 | 5755            | MCS8      | 12.62            | 12.34 | 15.92             | 30                              | PASS   |
| 159 | 5795            | MCS8      | 12.63            | 12.42 | <b>15.97</b>      | 30                              | PASS   |

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### 802.11ac\_VHT20\_Main

| CH  | Frequency (MHz) | Data Rate | TOTAL POWER (dBm) | REQUIRED LIMIT (dBm) |                           | RESULT |
|-----|-----------------|-----------|-------------------|----------------------|---------------------------|--------|
| 36  | 5180            | MCS0      | 15.74             | 23.98                |                           | PASS   |
| 44  | 5220            | MCS0      | 15.58             | 23.98                |                           | PASS   |
| 48  | 5240            | MCS0      | <b>15.83</b>      | 23.98                |                           | PASS   |
| 52  | 5260            | MCS0      | 15.57             | 23.98                | or $11+10\log(B) = 24.06$ | PASS   |
| 60  | 5300            | MCS0      | 15.76             | 23.98                | or $11+10\log(B) = 24.10$ | PASS   |
| 64  | 5320            | MCS0      | <b>15.77</b>      | 23.98                | or $11+10\log(B) = 24.07$ | PASS   |
| 100 | 5500            | MCS0      | <b>15.88</b>      | 23.98                | or $11+10\log(B) = 24.07$ | PASS   |
| 116 | 5580            | MCS0      | 15.83             | 23.98                | or $11+10\log(B) = 24.00$ | PASS   |
| 140 | 5700            | MCS0      | 15.87             | 23.98                | or $11+10\log(B) = 24.10$ | PASS   |
| 149 | 5745            | MCS0      | 15.85             | 30                   |                           | PASS   |
| 157 | 5785            | MCS0      | <b>15.88</b>      | 30                   |                           | PASS   |
| 165 | 5825            | MCS0      | 15.84             | 30                   |                           | PASS   |

### 802.11ac\_VHT20\_Aux1

| CH  | Frequency (MHz) | Data Rate | TOTAL POWER (dBm) | REQUIRED LIMIT (dBm) |                           | RESULT |
|-----|-----------------|-----------|-------------------|----------------------|---------------------------|--------|
| 36  | 5180            | MCS0      | <b>15.97</b>      | 23.98                |                           | PASS   |
| 44  | 5220            | MCS0      | 15.90             | 23.98                |                           | PASS   |
| 48  | 5240            | MCS0      | 15.93             | 23.98                |                           | PASS   |
| 52  | 5260            | MCS0      | <b>15.88</b>      | 23.98                | or $11+10\log(B) = 24.07$ | PASS   |
| 60  | 5300            | MCS0      | 15.65             | 23.98                | or $11+10\log(B) = 24.11$ | PASS   |
| 64  | 5320            | MCS0      | 15.64             | 23.98                | or $11+10\log(B) = 24.11$ | PASS   |
| 100 | 5500            | MCS0      | 15.67             | 23.98                | or $11+10\log(B) = 24.06$ | PASS   |
| 116 | 5580            | MCS0      | 15.75             | 23.98                | or $11+10\log(B) = 24.14$ | PASS   |
| 140 | 5700            | MCS0      | <b>15.84</b>      | 23.98                | or $11+10\log(B) = 24.06$ | PASS   |
| 149 | 5745            | MCS0      | 15.69             | 30                   |                           | PASS   |
| 157 | 5785            | MCS0      | <b>15.97</b>      | 30                   |                           | PASS   |
| 165 | 5825            | MCS0      | 15.91             | 30                   |                           | PASS   |

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## 802.11ac\_VHT20\_MIMO

| CH  | Frequency (MHz) | Data Rate | Avg. POWER (dBm) |       | TOTAL POWER (dBm) | REQUIRED LIMIT (dBm)            | RESULT |
|-----|-----------------|-----------|------------------|-------|-------------------|---------------------------------|--------|
|     |                 |           | CH 0             | CH 1  |                   |                                 |        |
| 36  | 5180            | MCS8      | 12.93            | 12.76 | <b>15.98</b>      | 23.98                           | PASS   |
| 44  | 5220            | MCS8      | 12.87            | 12.73 | 15.93             | 23.98                           | PASS   |
| 48  | 5240            | MCS8      | 12.88            | 12.74 | 15.94             | 23.98                           | PASS   |
| 52  | 5260            | MCS8      | 12.83            | 12.69 | <b>15.89</b>      | 23.98 or $11+10\log(B) = 22.74$ | PASS   |
| 60  | 5300            | MCS8      | 12.81            | 12.67 | 15.87             | 23.98 or $11+10\log(B) = 22.74$ | PASS   |
| 64  | 5320            | MCS8      | 12.73            | 12.56 | 15.78             | 23.98 or $11+10\log(B) = 22.74$ | PASS   |
| 100 | 5500            | MCS8      | 12.83            | 12.68 | 15.89             | 23.98 or $11+10\log(B) = 22.34$ | PASS   |
| 116 | 5580            | MCS8      | 12.79            | 12.66 | 15.86             | 23.98 or $11+10\log(B) = 22.34$ | PASS   |
| 140 | 5700            | MCS8      | 12.92            | 12.74 | <b>15.96</b>      | 23.98 or $11+10\log(B) = 22.34$ | PASS   |
| 149 | 5745            | MCS8      | 12.86            | 12.59 | 15.86             | 30                              | PASS   |
| 157 | 5785            | MCS8      | 12.91            | 12.78 | <b>15.98</b>      | 30                              | PASS   |
| 165 | 5825            | MCS8      | 12.84            | 12.73 | 15.92             | 30                              | PASS   |

## 802.11ac\_VHT40\_Main

| CH  | Frequency (MHz) | Data Rate | TOTAL POWER (dBm) | REQUIRED LIMIT (dBm)            | RESULT |
|-----|-----------------|-----------|-------------------|---------------------------------|--------|
| 38  | 5190            | MCS0      | <b>15.65</b>      | 23.98                           | PASS   |
| 46  | 5230            | MCS0      | 15.55             | 23.98                           | PASS   |
| 54  | 5270            | MCS0      | 15.85             | 23.98 or $11+10\log(B) = 27.33$ | PASS   |
| 62  | 5310            | MCS0      | <b>15.95</b>      | 23.98 or $11+10\log(B) = 27.36$ | PASS   |
| 102 | 5510            | MCS0      | 15.56             | 23.98 or $11+10\log(B) = 27.23$ | PASS   |
| 110 | 5550            | MCS0      | <b>15.78</b>      | 23.98 or $11+10\log(B) = 27.35$ | PASS   |
| 134 | 5670            | MCS0      | 15.72             | 23.98 or $11+10\log(B) = 27.38$ | PASS   |
| 151 | 5755            | MCS0      | <b>15.88</b>      | 30                              | PASS   |
| 159 | 5795            | MCS0      | 15.82             | 30                              | PASS   |

## 802.11ac\_VHT40\_Aux1

| CH  | Frequency (MHz) | Data Rate | TOTAL POWER (dBm) | REQUIRED LIMIT (dBm)            | RESULT |
|-----|-----------------|-----------|-------------------|---------------------------------|--------|
| 38  | 5190            | MCS0      | <b>15.65</b>      | 23.98                           | PASS   |
| 46  | 5230            | MCS0      | 15.61             | 23.98                           | PASS   |
| 54  | 5270            | MCS0      | 15.54             | 23.98 or $11+10\log(B) = 27.45$ | PASS   |
| 62  | 5310            | MCS0      | <b>15.69</b>      | 23.98 or $11+10\log(B) = 27.51$ | PASS   |
| 102 | 5510            | MCS0      | 15.65             | 23.98 or $11+10\log(B) = 27.37$ | PASS   |
| 110 | 5550            | MCS0      | <b>15.85</b>      | 23.98 or $11+10\log(B) = 27.45$ | PASS   |
| 134 | 5670            | MCS0      | 15.84             | 23.98 or $11+10\log(B) = 27.42$ | PASS   |
| 151 | 5755            | MCS0      | 15.67             | 30                              | PASS   |
| 159 | 5795            | MCS0      | <b>15.73</b>      | 30                              | PASS   |

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## 802.11ac\_VHT40\_MIMO

| CH  | Frequency (MHz) | Data Rate | Avg. POWER (dBm) |       | TOTAL POWER (dBm) | REQUIRED LIMIT (dBm)            | RESULT |
|-----|-----------------|-----------|------------------|-------|-------------------|---------------------------------|--------|
|     |                 |           | CH 0             | CH 1  |                   |                                 |        |
| 38  | 5190            | MCS8      | 12.68            | 12.51 | 15.83             | 23.98                           | PASS   |
| 46  | 5230            | MCS8      | 12.61            | 12.43 | 15.76             | 23.98                           | PASS   |
| 54  | 5270            | MCS8      | 12.72            | 12.58 | 15.89             | 23.98 or $11+10\log(B) = 25.95$ | PASS   |
| 62  | 5310            | MCS8      | 12.83            | 12.61 | 15.96             | 23.98 or $11+10\log(B) = 25.95$ | PASS   |
| 102 | 5510            | MCS8      | 12.75            | 12.58 | 15.90             | 23.98 or $11+10\log(B) = 25.58$ | PASS   |
| 110 | 5550            | MCS8      | 12.69            | 12.55 | 15.86             | 23.98 or $11+10\log(B) = 25.58$ | PASS   |
| 134 | 5670            | MCS8      | 12.74            | 12.51 | 15.86             | 23.98 or $11+10\log(B) = 25.58$ | PASS   |
| 151 | 5755            | MCS8      | 12.78            | 12.56 | 15.91             | 30                              | PASS   |
| 159 | 5795            | MCS8      | 12.66            | 12.52 | 15.83             | 30                              | PASS   |

## 802.11ac\_VHT80\_Main

| CH  | Frequency (MHz) | Data Rate | TOTAL POWER (dBm) | REQUIRED LIMIT (dBm)            | RESULT |
|-----|-----------------|-----------|-------------------|---------------------------------|--------|
| 42  | 5210            | MCS0      | 15.74             | 23.98                           | PASS   |
| 58  | 5290            | MCS0      | 15.79             | 23.98 or $11+10\log(B) = 30.08$ | PASS   |
| 106 | 5530            | MCS0      | 15.88             | 23.98 or $11+10\log(B) = 30.06$ | PASS   |
| 122 | 5610            | MCS0      | 15.98             | 23.98 or $11+10\log(B) = 30.13$ | PASS   |
| 155 | 5775            | MCS0      | 15.97             | 30                              | PASS   |

## 802.11ac\_VHT80\_Aux1

| CH  | Frequency (MHz) | Data Rate | TOTAL POWER (dBm) | REQUIRED LIMIT (dBm)            | RESULT |
|-----|-----------------|-----------|-------------------|---------------------------------|--------|
| 42  | 5210            | MCS0      | 15.98             | 23.98                           | PASS   |
| 58  | 5290            | MCS0      | 15.62             | 23.98 or $11+10\log(B) = 30.17$ | PASS   |
| 106 | 5530            | MCS0      | 15.88             | 23.98 or $11+10\log(B) = 30.10$ | PASS   |
| 122 | 5610            | MCS0      | 15.72             | 23.98 or $11+10\log(B) = 30.19$ | PASS   |
| 155 | 5775            | MCS0      | 15.92             | 30                              | PASS   |

## 802.11ac\_VHT80\_MIMO

| CH  | Frequency (MHz) | Data Rate | Avg. POWER (dBm) |       | TOTAL POWER (dBm) | REQUIRED LIMIT (dBm)            | RESULT |
|-----|-----------------|-----------|------------------|-------|-------------------|---------------------------------|--------|
|     |                 |           | CH 0             | CH 1  |                   |                                 |        |
| 42  | 5210            | MCS8      | 12.64            | 12.39 | 15.99             | 23.98                           | PASS   |
| 58  | 5290            | MCS8      | 12.44            | 12.23 | 15.81             | 23.98 or $11+10\log(B) = 29.07$ | PASS   |
| 106 | 5530            | MCS8      | 12.56            | 12.3  | 15.91             | 23.98 or $11+10\log(B) = 28.65$ | PASS   |
| 122 | 5610            | MCS8      | 12.65            | 12.38 | 15.99             | 23.98 or $11+10\log(B) = 28.72$ | PASS   |
| 155 | 5775            | MCS8      | 12.64            | 12.36 | 15.98             | 30                              | PASS   |

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## 10 PEAK POWER SPECTRAL DENSITY

### 10.1 Standard Applicable

| OPERZTION Band | EUT CATEGORY |                                   | LIMIT         |
|----------------|--------------|-----------------------------------|---------------|
| U-NII-1        |              | Access Point (Mater device )      | 17dBm/ MHz    |
|                |              | Fixed point-to-point Acess Ponit  |               |
|                | √            | Mobile and portable clinet device | 11dBm/ MHz    |
| U-NII-2A       | √            |                                   | 11dBm/ MHz    |
| U-NII-2C       | √            |                                   | 11dBm/ MHz    |
| U-NII-3        | √            |                                   | 30dBm/ 500kHz |

If transmitting antennas of directional gain greater than 6 dBi are used, both the peak transmit power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

#### Note:

The antenna gain is granter than 6 dBi in MIMO mode the limit reduce as below:

Directional gain = gain of antenna element + 10 log (# of TX antenna elements)

|          | Effective Legacy Gain (dBi) | Limit |
|----------|-----------------------------|-------|
| UNII-1   | 3.40                        | 11dBm |
| UNII-2A  | 4.00                        | 11dBm |
| U-NII-2C | 4.40                        | 11dBm |
| U-NII-3  | 4.30                        | 30dBm |

Therefore the limit needs to reduce for the UNII-1, U-NII-2A, U-NII-2C and U-NII-3 band.

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## 10.2 Measurement Procedure

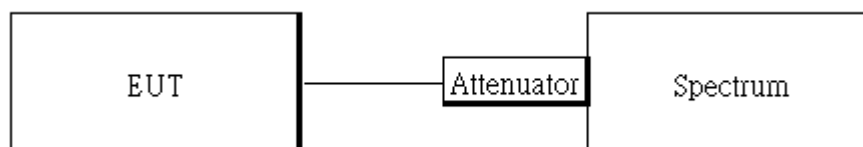
1. Place the EUT on the table and set it in transmitting mode.
2. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules .
3. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to Spectrum.
4. For U-NII1, U-NII-2A, U-NII-2C Band:  
Set RBW=1MHz, VBW=3MHz, where span is enough to capture the entire bandwidth, Sweep time = Auto (601 pts), detector = sample, traces 100 sweeps of video averaging. (SA-2 with the omission of procedure x, the integration with 26dB EBW bandwidth)  
For U-NII-3 Band:  
Set RBW=500 kHz, VBW $\geq$  3RBW, where span is enough to capture the entire bandwidth, Sweep time = Auto (601 pts), detector = sample, traces 100 sweeps of video averaging. (SA-2 with the omission of procedure x, the integration with 26dB EBW bandwidth)
5. Use the cursor on spectrum to peak search the highest level of trace
6. Record the max. reading and add 10 log(1/duty cycle).
7. Repeat above procedures until all default test channel (low, middle, and high) was complete.

Note: For the test of PSD at MIMO mode, the highest emission of worst case employing Measure and add 10 log (N) technical is reported on this report after the comparison between Main Antenna at single transmitting mode and Aux that yields the higher value. The MIMO transmitting mode produces higher value of outcome

## 10.3 Measurement Equipment Used

| SGS Conducted Room |              |                |               |                  |                 |
|--------------------|--------------|----------------|---------------|------------------|-----------------|
| Name of Equipment  | Manufacturer | Model          | Serial Number | Calibration Date | Calibration Due |
| Spectrum Analyzer  | KEYSIGHT     | N9010A         | MY51440113    | 06/20/2017       | 06/19/2018      |
| Coaxial Cable 30cm | WOKEN        | 00100A1F1A195C | RF01          | 12/12/2016       | 12/11/2017      |
| DC Block           | PASTERNAK    | PE8210         | RF29          | 12/12/2016       | 12/11/2017      |
| Attenuator         | WOKEN        | 218FS-10       | RF23          | 12/12/2016       | 12/11/2017      |
| DC Power Supply    | Agilent      | E3640A         | MY53140006    | 05/02/2017       | 05/01/2018      |

## 10.4 Test Set-up



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## 10.5 Measurement Result

| POWER DENSITY 802.11a MODE      |                            |             |                             |             |             |
|---------------------------------|----------------------------|-------------|-----------------------------|-------------|-------------|
| Frequency (MHz)                 | PPSD W/O Duty Factor (dBm) | Duty Factor | PPSD With Duty Factor (dBm) | Limit (dBm) | Margin (dB) |
| 5180                            | 5.00                       | 0.12        | 5.12                        | 11          | -5.88       |
| 5220                            | 4.21                       | 0.12        | 4.33                        | 11          | -6.67       |
| 5240                            | 5.08                       | 0.12        | 5.20                        | 11          | -5.80       |
| 5260                            | 5.43                       | 0.12        | 5.55                        | 11          | -5.45       |
| 5300                            | 5.36                       | 0.12        | 5.48                        | 11          | -5.52       |
| 5320                            | 5.73                       | 0.12        | 5.85                        | 11          | -5.15       |
| 5500                            | 4.99                       | 0.12        | 5.11                        | 11          | -5.89       |
| 5580                            | 4.31                       | 0.12        | 4.43                        | 11          | -6.57       |
| 5700                            | 5.46                       | 0.12        | 5.58                        | 11          | -5.42       |
| 5745                            | 11.32                      | 0.12        | 11.32                       | 30          | -18.68      |
| 5785                            | 11.62                      | 0.12        | 11.62                       | 30          | -18.38      |
| 5825                            | 11.50                      | 0.12        | 11.50                       | 30          | -18.50      |
| POWER DENSITY 802.11n HT20 MODE |                            |             |                             |             |             |
| Frequency (MHz)                 | PPSD W/O Duty Factor (dBm) | Duty Factor | PPSD With Duty Factor (dBm) | Limit (dBm) | Margin (dB) |
| 5180                            | 4.76                       | 0.22        | 4.98                        | 11          | -6.02       |
| 5220                            | 3.85                       | 0.22        | 4.07                        | 11          | -6.93       |
| 5240                            | 4.13                       | 0.22        | 4.35                        | 11          | -6.65       |
| 5260                            | 2.14                       | 0.22        | 2.36                        | 11          | -8.64       |
| 5300                            | 4.08                       | 0.22        | 4.30                        | 11          | -6.70       |
| 5320                            | 2.88                       | 0.22        | 3.10                        | 11          | -7.90       |
| 5500                            | 3.86                       | 0.22        | 4.08                        | 11          | -6.92       |
| 5580                            | 3.44                       | 0.22        | 3.66                        | 11          | -7.34       |
| 5700                            | 4.88                       | 0.22        | 5.10                        | 11          | -5.90       |
| 5745                            | 9.15                       | 0.22        | 9.15                        | 30          | -20.85      |
| 5785                            | 9.54                       | 0.22        | 9.54                        | 30          | -20.46      |
| 5825                            | 9.54                       | 0.22        | 9.54                        | 30          | -20.46      |
| POWER DENSITY 802.11n HT40 MODE |                            |             |                             |             |             |
| Frequency (MHz)                 | PPSD W/O Duty Factor (dBm) | Duty Factor | PPSD With Duty Factor (dBm) | Limit (dBm) | Margin (dB) |
| 5190                            | -1.18                      | 0.43        | -0.75                       | 11          | -11.75      |
| 5230                            | -1.38                      | 0.43        | -0.95                       | 11          | -11.95      |
| 5270                            | -1.51                      | 0.43        | -1.08                       | 11          | -12.08      |
| 5310                            | -0.69                      | 0.43        | -0.26                       | 11          | -11.26      |
| 5510                            | -5.46                      | 0.43        | -5.03                       | 11          | -16.03      |
| 5550                            | -0.73                      | 0.43        | -0.30                       | 11          | -11.30      |
| 5670                            | -1.13                      | 0.43        | -0.70                       | 11          | -11.70      |
| 5755                            | 6.59                       | 0.43        | 6.59                        | 30          | -23.41      |
| 5795                            | 6.92                       | 0.43        | 6.92                        | 30          | -23.08      |

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| POWER DENSITY 802.11ac VHT80 MODE |                            |             |                             |             |             |
|-----------------------------------|----------------------------|-------------|-----------------------------|-------------|-------------|
| Frequency (MHz)                   | PPSD W/O Duty Factor (dBm) | Duty Factor | PPSD With Duty Factor (dBm) | Limit (dBm) | Margin (dB) |
| 5210                              | -4.46                      | 0.46        | -4.00                       | 11          | -15.00      |
| 5290                              | -4.09                      | 0.46        | -3.63                       | 11          | -14.63      |
| 5530                              | -4.33                      | 0.46        | -3.87                       | 11          | -14.87      |
| 5610                              | -3.86                      | 0.46        | -3.40                       | 11          | -14.40      |
| 5775                              | 4.89                       | 0.46        | 4.89                        | 30          | -25.11      |

**Note:**

SISO offset= 12.3 dB

MIMO offset= 15.3 dB

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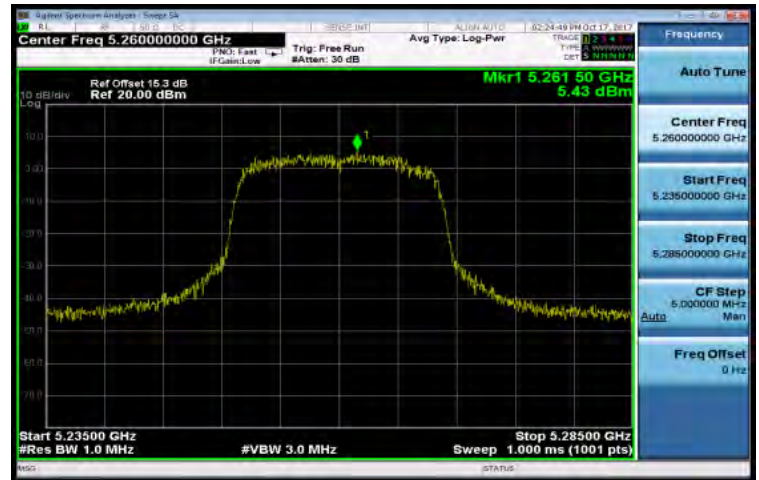
802.11a 5150~5250 MHz

Peak Power Spectral Density Data Plot (CH Low 5180 MHz)



802.11a 5250~5350 MHz

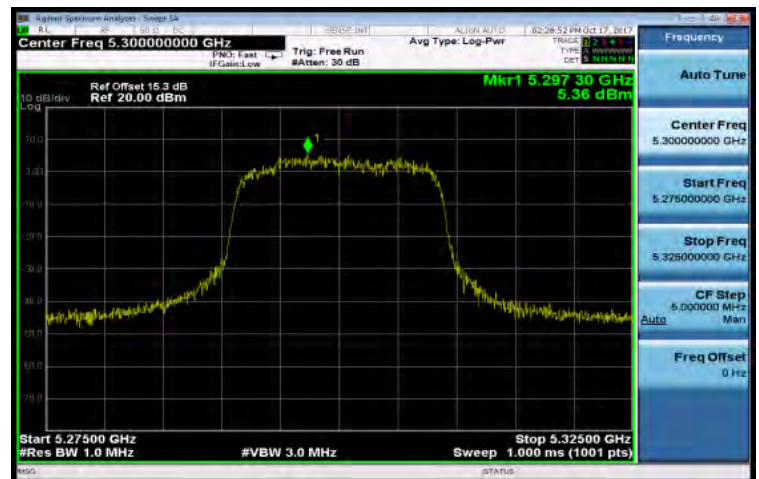
Peak Power Spectral Density Data Plot (CH Low 5260 MHz)



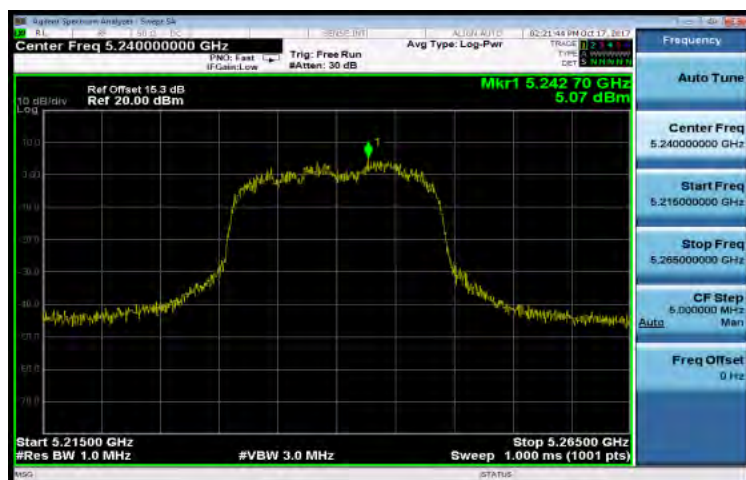
Peak Power Spectral Density Data Plot (CH Mid 5220 MHz)



Peak Power Spectral Density Data Plot (CH Mid 5300 MHz)



Peak Power Spectral Density Data Plot (CH High 5240 MHz)



Peak Power Spectral Density Data Plot (CH High 5320 MHz)



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802.11a 5470~5725 MHz

Peak Power Spectral Density Data Plot (CH Low 5500 MHz)

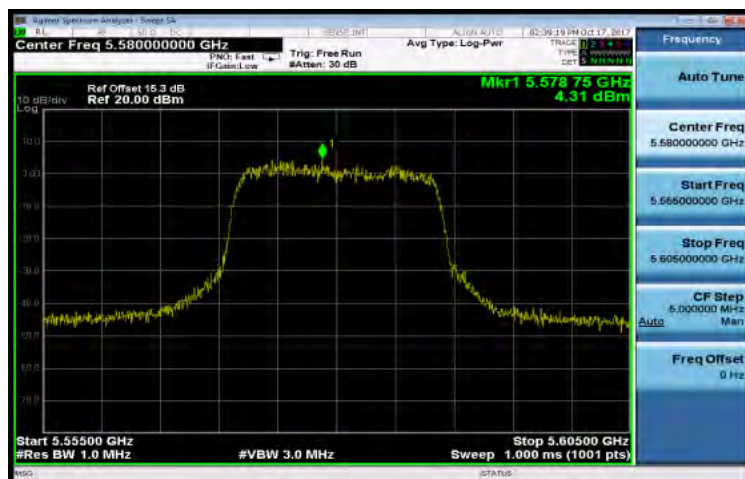


802.11a 5725~5850 MHz

Peak Power Spectral Density Data Plot (CH Low 5745 MHz)



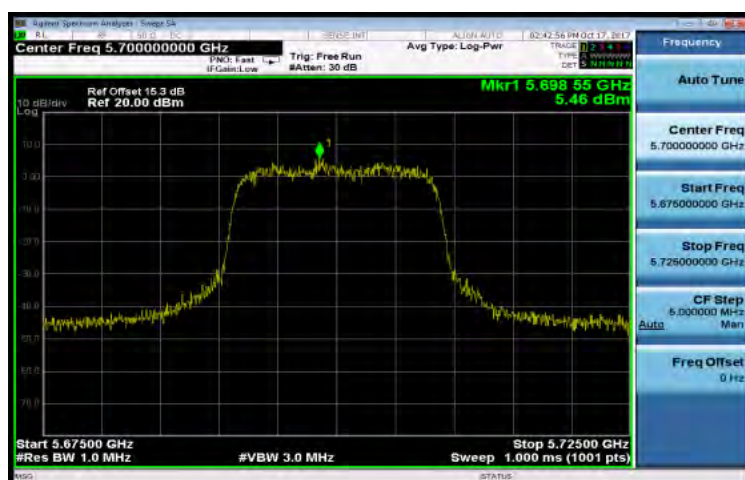
Peak Power Spectral Density Data Plot (CH Mid 5580 MHz)



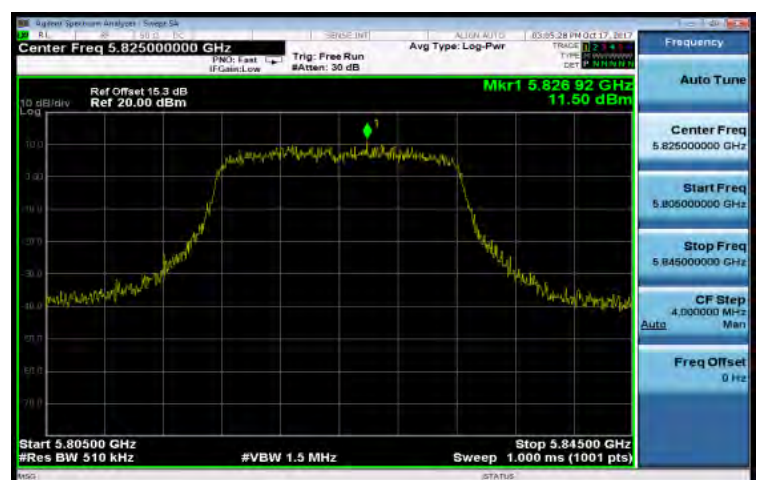
Peak Power Spectral Density Data Plot (CH Mid 5785 MHz)



Peak Power Spectral Density Data Plot (CH High 5700 MHz)



Peak Power Spectral Density Data Plot (CH High 5825 MHz)



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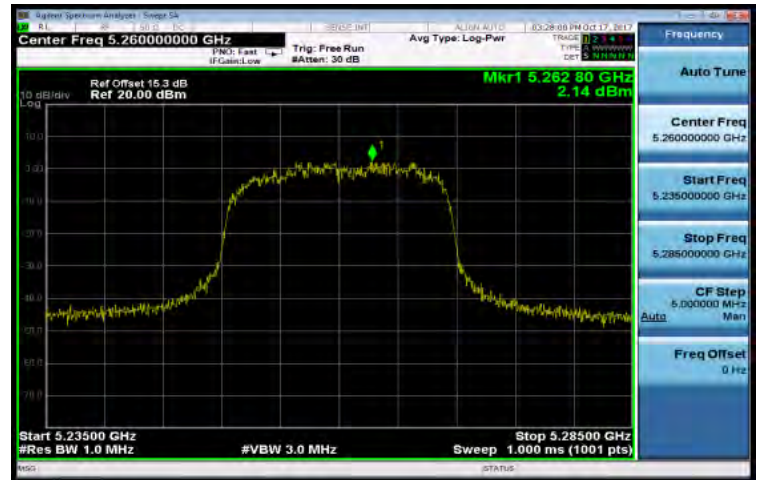
802.11n HT20, 5150~5250 MHz

Peak Power Spectral Density Data Plot (CH Low 5180 MHz)



802.11n HT20, 5250~5350 MHz

Peak Power Spectral Density Data Plot (CH Low 5260MHz)



Peak Power Spectral Density Data Plot (CH Mid 5220 MHz)



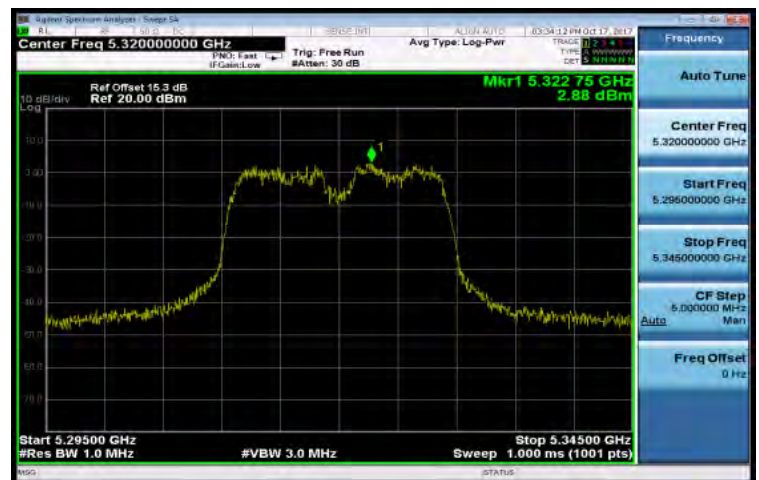
Peak Power Spectral Density Data Plot (CH Mid 5300 MHz)



Peak Power Spectral Density Data Plot (CH High 5240 MHz)



Peak Power Spectral Density Data Plot (CH High 5320 MHz)



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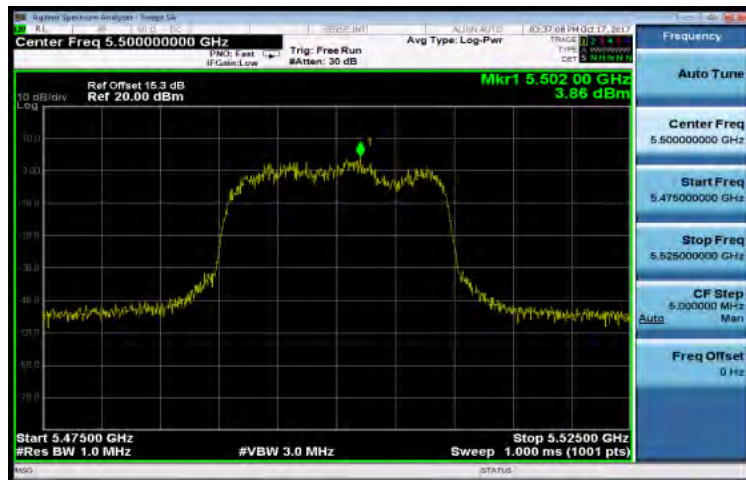
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802.11n HT20, 5470~5725 MHz

Peak Power Spectral Density Data Plot (CH Low 5500 MHz)

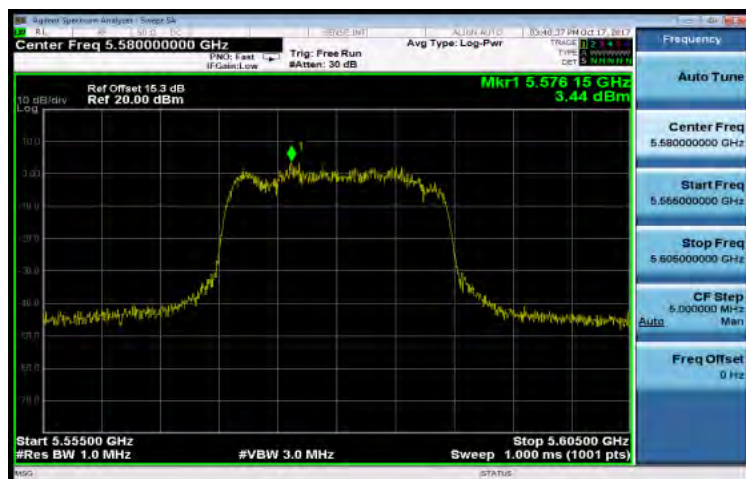


802.11n HT20, 5725~5850 MHz

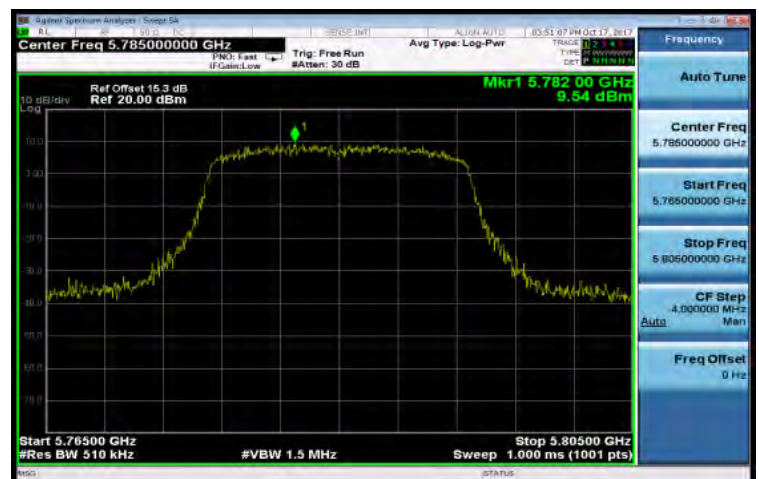
Peak Power Spectral Density Data Plot (CH Low 5745 MHz)



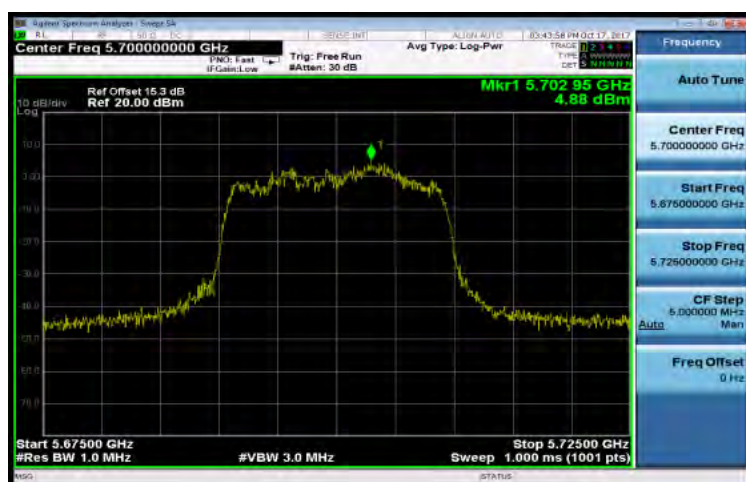
Peak Power Spectral Density Data Plot (CH Mid 5580MHz)



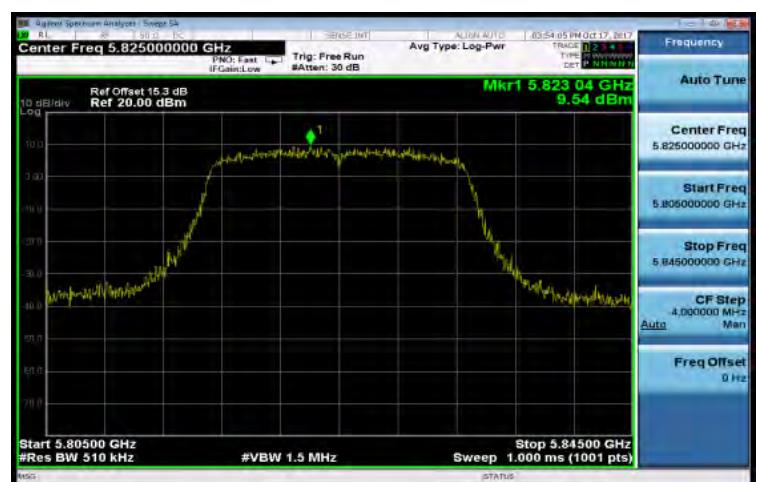
Peak Power Spectral Density Data Plot (CH Mid 5785 MHz)



Peak Power Spectral Density Data Plot (CH High 5700 MHz)



Peak Power Spectral Density Data Plot (CH High 5825 MHz)



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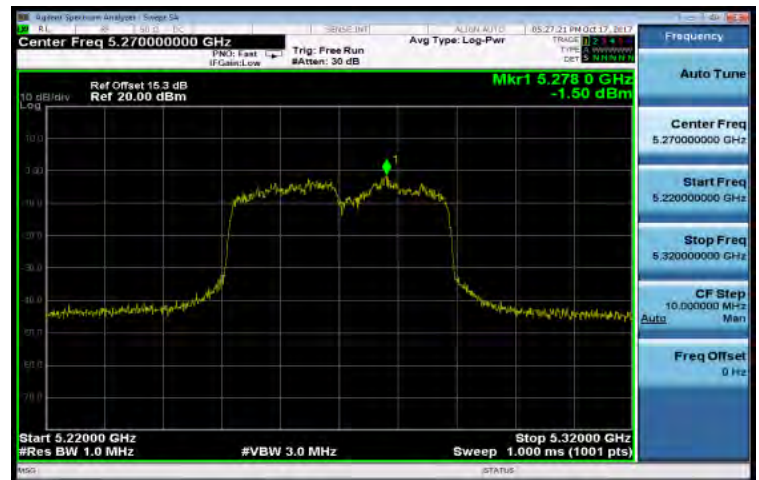
802.11n HT40, 5150~5250 MHz

Peak Power Spectral Density Data Plot (CH Low 5190 MHz)

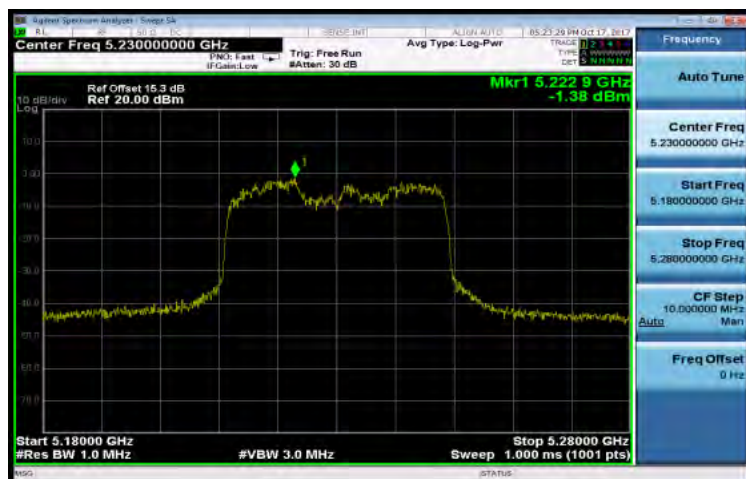


802.11n HT40, 5250~5350 MHz

Peak Power Spectral Density Data Plot (CH Low 5270 MHz)



Peak Power Spectral Density Data Plot (CH High 5230 MHz)



Peak Power Spectral Density Data Plot (CH High 5310 MHz)

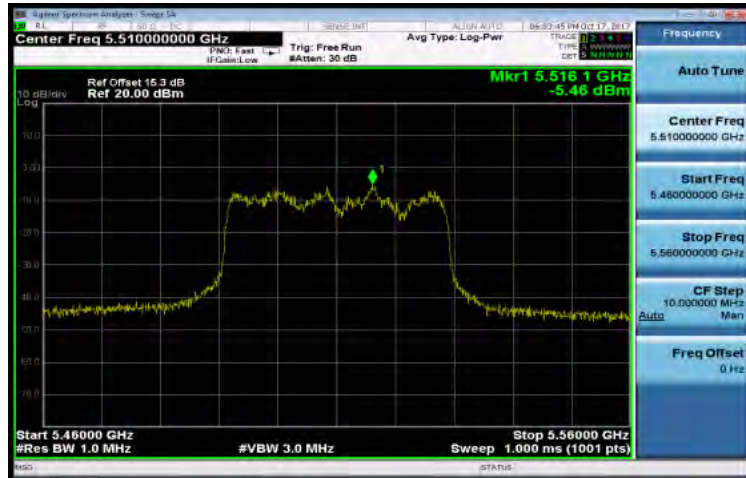


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802.11n HT40, 5470~5725 MHz  
Peak Power Spectral Density Data Plot (CH Low 5510 MHz)



802.11n HT40, 5725~5850 MHz  
Peak Power Spectral Density Data Plot (CH Low 5755 MHz)



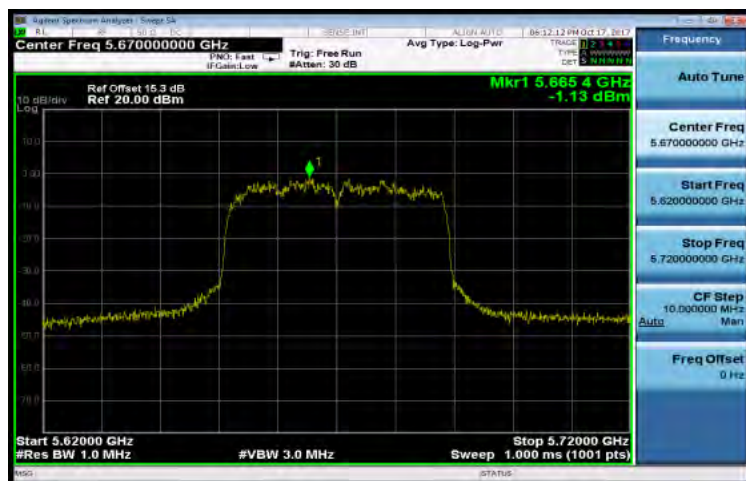
Peak Power Spectral Density Data Plot (CH Mid 5550 MHz)



Peak Power Spectral Density Data Plot (CH High 5795 MHz)



Peak Power Spectral Density Data Plot (CH High 5670 MHz)



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802.11ac VHT80, 5150~5250 MHz

Peak Power Spectral Density Data Plot (CH Mid 5210 MHz)



802.11ac VHT80, 5470~5725 MHz

Peak Power Spectral Density Data Plot (CH Low 5530 MHz)



802.11ac VHT80, 5250~5350 MHz

Peak Power Spectral Density Data Plot (CH Mid 5290 MHz)



802.11ac VHT80, 5470~5725 MHz

Peak Power Spectral Density Data Plot (CH High 5610 MHz)



802.11ac VHT80, 5725~5850 MHz

Peak Power Spectral Density Data Plot (CH Mid 5775 MHz)



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## 11 UNDESIRABLE RADIATED EMISSION MEASUREMENT

### 11.1 Standard Applicable

The maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

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

| APPLICABLE TO                                                                                                                                                                                                                                                                                                                      | LIMIT                                                                                   |                                                                                             |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| FCC KDB 789033 D02 General<br>UNII Test Procedures New Rules                                                                                                                                                                                                                                                                       | FIELD STRENGTH AT 3m                                                                    |                                                                                             |
|                                                                                                                                                                                                                                                                                                                                    | PK: 74 (dBμV/m)                                                                         | AV 54 (dBμV/m)                                                                              |
| APPLICABLE TO                                                                                                                                                                                                                                                                                                                      | EIRP LIMIT                                                                              | FIELD STRENGTH AT 3m                                                                        |
| 15.407(b)(1)                                                                                                                                                                                                                                                                                                                       | PK: -27 (dBm/MHz)                                                                       | PK: 68.3 (dBμV/m)                                                                           |
| 15.407(b)(2)                                                                                                                                                                                                                                                                                                                       |                                                                                         |                                                                                             |
| 15.407(b)(3)                                                                                                                                                                                                                                                                                                                       |                                                                                         |                                                                                             |
| 15.407(b)(4)(i)                                                                                                                                                                                                                                                                                                                    | PK:-27 (dBm/MHz) *1<br>PK:10 (dBm/MHz) *2<br>PK:15.6 (dBm/MHz) *3<br>PK:27 (dBm/MHz) *4 | PK: 68.2(dBμV/m) *1<br>PK:105.2 (dBμV/m) *2<br>PK: 110.8(dBμV/m) *3<br>PK:122.2 (dBμV/m) *4 |
| *1 beyond 75 MHz or more above of the bandedge.<br>*2 below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above.<br>*3 below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above.<br>*4 from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge. |                                                                                         |                                                                                             |

$EIRP = (E \cdot d)^2 / 30$ , where E is the field in V/m, d is the measurement distance (3m), EIRP is the equivalent isotropically radiated power in Watts.

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Unwanted spurious emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table:

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

**Note:**

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBμV/m) = 20 log Emission level (dBμV/m)

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## 11.2 Measurement Equipment Used

| SGS SAC-III       |                 |                             |                  |                  |                 |
|-------------------|-----------------|-----------------------------|------------------|------------------|-----------------|
| Name of Equipment | Manufacturer    | Model                       | Serial Number    | Calibration Date | Calibration Due |
| EMI Test Receiver | R&S             | ESU 40                      | 100363           | 04/18/2017       | 04/17/2018      |
| Loop Antenna      | ETS-Lindgren    | 6502                        | 00143303         | 12/23/2016       | 12/22/2017      |
| Broadband Antenna | TESEQ           | CBL 6112D                   | 35240            | 11/03/2016       | 11/02/2017      |
| Horn Antenna      | ETS-Lindgren    | 3117                        | 00143272         | 12/15/2016       | 12/16/2017      |
| Horn Antenna      | Schwarzbeck     | BBHA9170                    | 185              | 08/01/2017       | 07/31/2018      |
| Pre Amplifier     | EMC Instruments | EMC330                      | 980096           | 12/12/2016       | 12/11/2017      |
| Pre Amplifier     | EMC Instruments | EMC0011830                  | 980199           | 12/12/2016       | 12/11/2017      |
| Pre Amplifier     | R&S             | SCU-18                      | 10204            | 12/12/2016       | 12/11/2017      |
| Pre Amplifier     | R&S             | SCU-26                      | 100780           | 12/12/2016       | 12/11/2017      |
| Coaxial Cable     | Huber+Suhner    | RG 214/U                    | 966Rx<br>9K-30M  | 12/12/2016       | 12/11/2017      |
| Coaxial Cable     | Huber+Suhner    | RG 214/U<br>SUCOFLEX 104    | 966Rx<br>30M-3G  | 12/12/2016       | 12/11/2017      |
| Coaxial Cable     | Huber+Suhner    | SUCOFLEX 104                | 966Rx<br>1G-18G  | 12/12/2016       | 12/11/2017      |
| Coaxial Cable     | Huber+Suhner    | mini 141-12<br>SUCOFLEX 104 | 966Rx<br>18G-40G | 12/12/2016       | 12/11/2017      |
| Coaxial Cable     | Huber+Suhner    | SUCOFLEX 104                | 966Tx<br>30M-18G | 12/12/2016       | 12/11/2017      |
| Coaxial Cable     | Huber+Suhner    | SUCOFLEX 102                | 966Tx<br>18G-40G | 12/12/2016       | 12/11/2017      |
| Attenuator        | WOKEN           | 218FS-10                    | RF27             | 12/12/2016       | 12/11/2017      |
| Site NSA          | SGS             | 966 Chamber C               | SAC-C            | 03/02/2017       | 03/01/2018      |
| Site VSWR         | SGS             | 966 Chamber C               | SAC-C            | 03/02/2017       | 03/01/2018      |
| DC Power Supply   | HOLA            | DP-3003                     | D7070035         | 05/04/2017       | 05/03/2018      |
| Controller        | MF              | MF-7802                     | N/A              | N.C.R.           | N.C.R.          |
| Antenna Master    | MF              | N/A                         | N/A              | N.C.R.           | N.C.R.          |
| Turn Table        | MF              | N/A                         | N/A              | N.C.R.           | N.C.R.          |
| Test Software     | World-Pallas    | Dr. E                       | V 3.0 Lite       | N.C.R.           | N.C.R.          |

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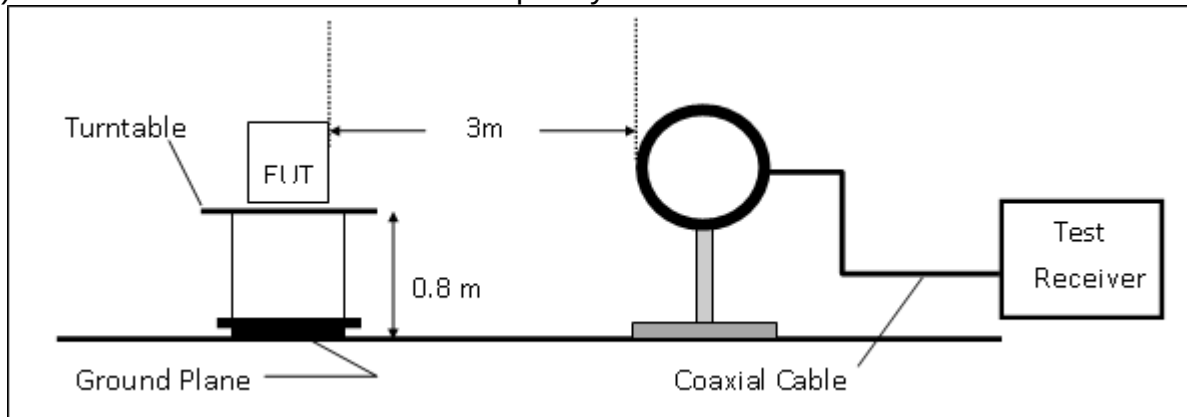
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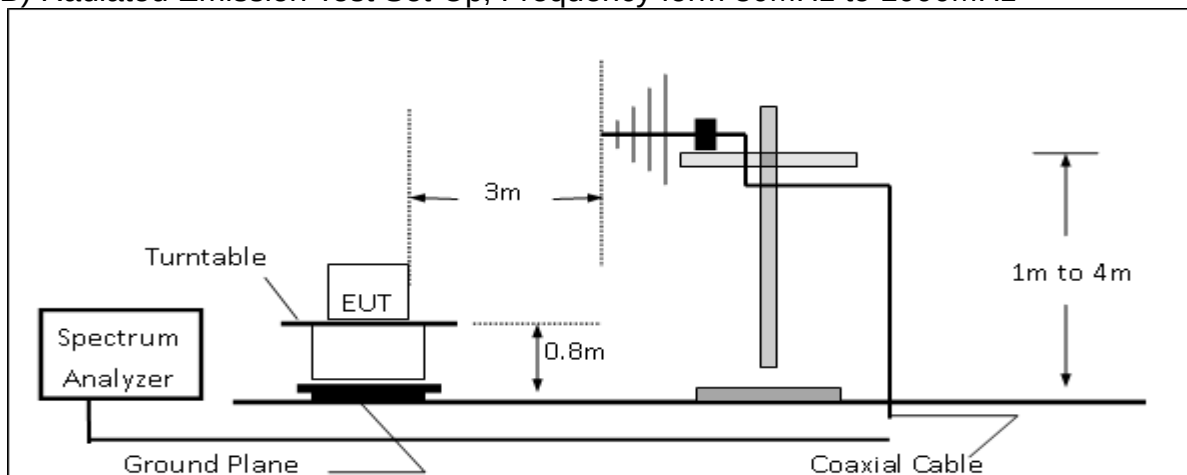
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## 11.3 Test SET-UP

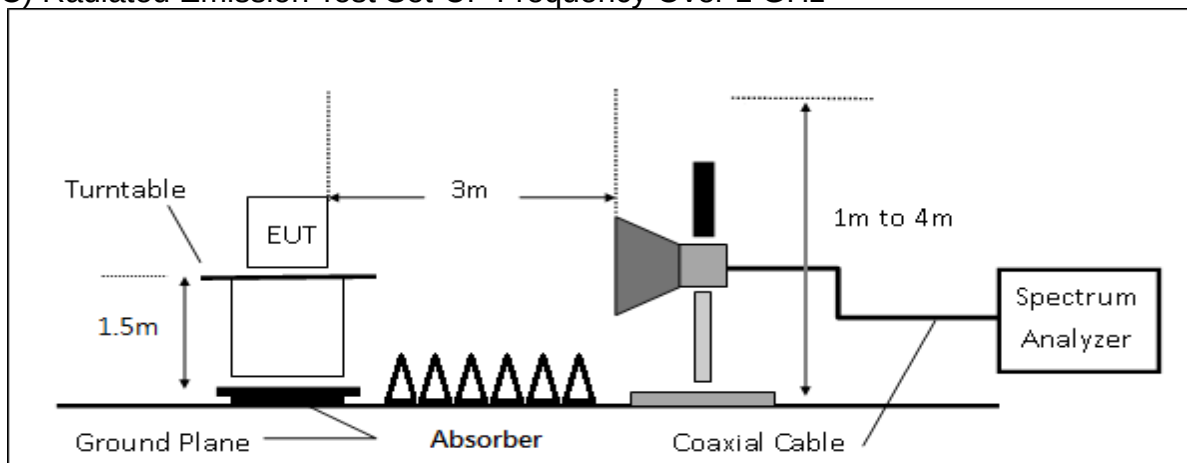
### (A) Radiated Emission Test Set-UP Frequency Below 30MHz.



### (B) Radiated Emission Test Set-UP, Frequency form 30MHz to 1000MHz



### (C) Radiated Emission Test Set-UP Frequency Over 1 GHz



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#### 11.4 Measurement Procedure

1. The EUT was placed on a turn table which is 0.8m above ground plane.
2. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules .
3. The EUT was placed on a turn table with 0.8m for frequency< 1GHz and 1.5m for frequency> 1GHz above ground plane.
4. The turn table shall rotate 360 degrees to determine the position of maximum emission level.
5. EUT is set 3m away from the receiving antenna which varied from 1m to 4m to find out the highest emissions.
6. Set the spectrum analyzer as RBW=120 kHz and VBW=300 kHz for Peak Detector (PK) and Quasi-peak (QP) at frequency below 1 GHz.
7. Set the spectrum analyzer as RBW=1 MHz, VBW=3 MHz for Peak Detector at frequency above 1 GHz.
8. Set the spectrum analyzer as RBW=1 MHz, VBW=10 Hz (Duty cycle > 98%) or VBW ≥ 1/T (Duty cycle < 98%) for Average Detector at frequency above 1 GHz.
9. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
10. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
11. Repeat above procedures until all frequency measured were complete.

#### 11.5 Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain and Duty Cycle Correction Factor (if any) from the measured reading. The basic equation with a sample calculation is as follows:

$$FS = RA + AF + CL - AG$$

|       |                        |                                            |
|-------|------------------------|--------------------------------------------|
| Where | FS = Field Strength    | CL = Cable Attenuation Factor (Cable Loss) |
|       | RA = Reading Amplitude | AG = Amplifier Gain                        |
|       | AF = Antenna Factor    |                                            |

Actual FS(dBμV/m) = SPA. Reading level(dBμV) + Factor(dB)

Factor(dB) = Antenna Factor(dBμV/m) + Cable Loss(dB) – Pre\_Amplifier Gain(dB)

##### Note :

“F” : denotes Fundamental Frequency. ; “H” : denotes Harmonic Frequency.

“E” : denotes Band Edge Frequency. ; “S” : denotes Spurious Frequency.

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## 11.6 Test Results of Radiated Spurious Emissions form 9 KHz to 30 MHz

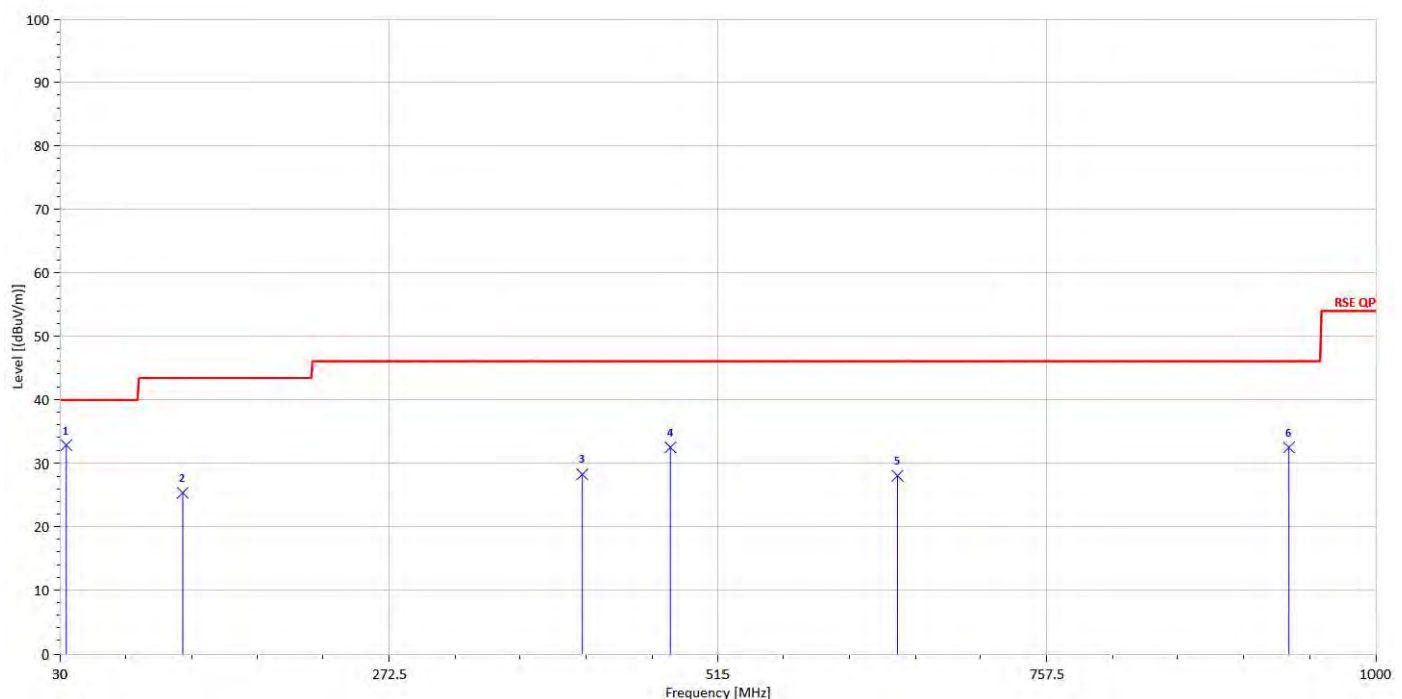
The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit per 15.31(o) was not reported.

## 11.7 Measurement Result

### Radiated Spurious Emission Measurement Result

#### Below 1GHz Worst-Case Data:

|                         |           |                            |                |
|-------------------------|-----------|----------------------------|----------------|
| Operation Mode :        | 802.11aB1 | Test Date :                | 2017/10/19     |
| Fundamental Frequency : | 5220 MHz  | Temp. / Humi. :            | 24.5deg_C/70RH |
| Operation Band :        | Tx CH MID | Test Engineer :            | Ashton         |
| EUT Pol. :              | E2        | Measurement Antenna Pol. : | Vertical       |



| Freq.<br>MHz | Note<br>F/H/E/S | Detector<br>Mode<br>PK/QP/AV | Spectrum<br>Reading Level<br>dBuV | Factor<br>dB | Actual<br>FS<br>dBuV/m | Limit<br>@3m<br>dBuV/m | Margin<br>dB |
|--------------|-----------------|------------------------------|-----------------------------------|--------------|------------------------|------------------------|--------------|
| 34.85        | S               | Peak                         | 42.58                             | -9.78        | 32.80                  | 40                     | -7.20        |
| 120.21       | S               | Peak                         | 41.20                             | -15.84       | 25.36                  | 43.5                   | -18.14       |
| 415.09       | S               | Peak                         | 37.42                             | -9.11        | 28.30                  | 46                     | -17.70       |
| 480.08       | S               | Peak                         | 40.25                             | -7.81        | 32.44                  | 46                     | -13.56       |
| 647.89       | S               | Peak                         | 33.10                             | -5.02        | 28.08                  | 46                     | -17.92       |
| 935.98       | S               | Peak                         | 34.09                             | -1.66        | 32.43                  | 46                     | -13.57       |

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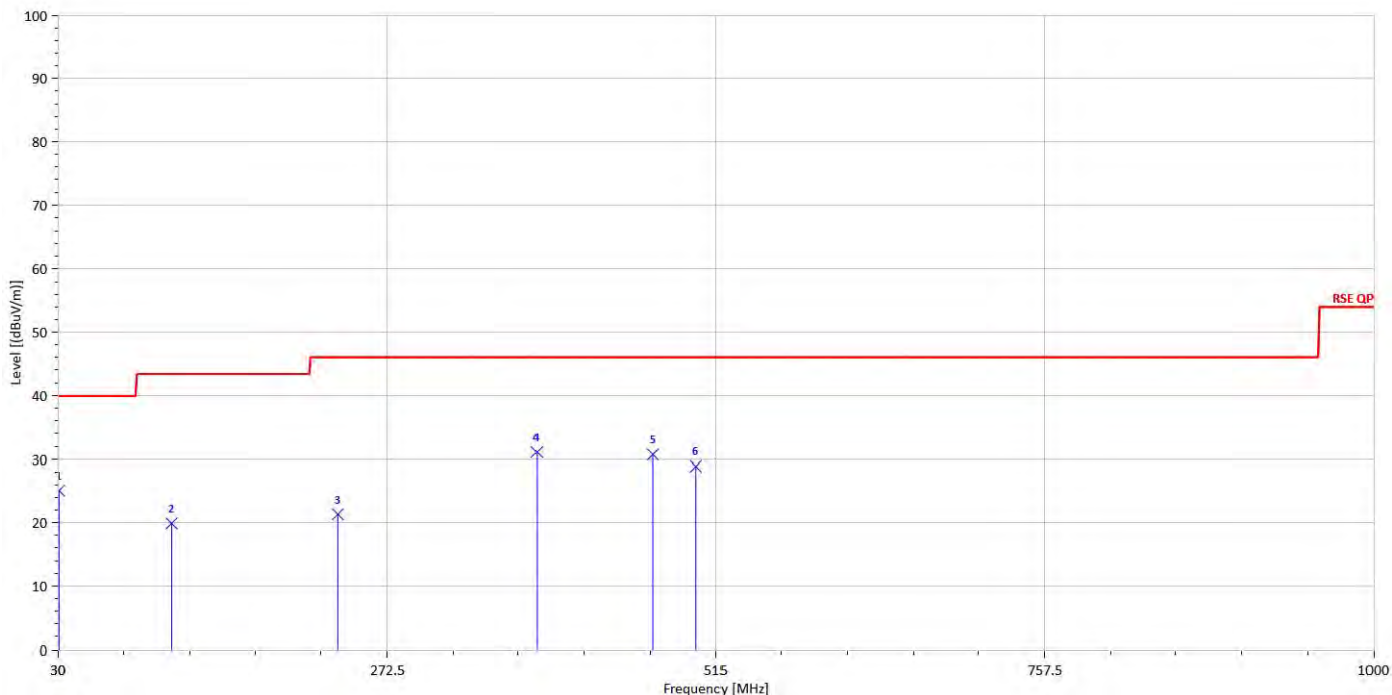
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Operation Mode : 802.11aB1      Test Date : 2017/10/19  
 Fundamental Frequency : 5220 MHz      Temp. / Humi. : 24.5deg\_C/70RH  
 Operation Band : Tx CH MID      Test Engineer : Ashton  
 EUT Pol. : E2      Measurement Antenna Pol. : Horizontal



| Freq.  | Note    | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|--------|---------|----------|---------------|--------|--------|--------|--------|
| MHz    | F/H/E/S | Mode     | Reading Level |        | FS     | @3m    |        |
|        |         | PK/QP/AV | dBuV          | dB     | dBuV/m | dBuV/m | dB     |
| 30.97  | S       | Peak     | 32.78         | -7.70  | 25.08  | 40     | -14.92 |
| 113.42 | S       | Peak     | 36.14         | -16.28 | 19.86  | 43.5   | -23.64 |
| 236.61 | S       | Peak     | 36.93         | -15.63 | 21.30  | 46     | -24.70 |
| 383.08 | S       | Peak     | 41.39         | -10.31 | 31.08  | 46     | -14.92 |
| 468.44 | S       | Peak     | 38.36         | -7.66  | 30.71  | 46     | -15.29 |
| 500.45 | S       | Peak     | 36.40         | -7.53  | 28.87  | 46     | -17.13 |

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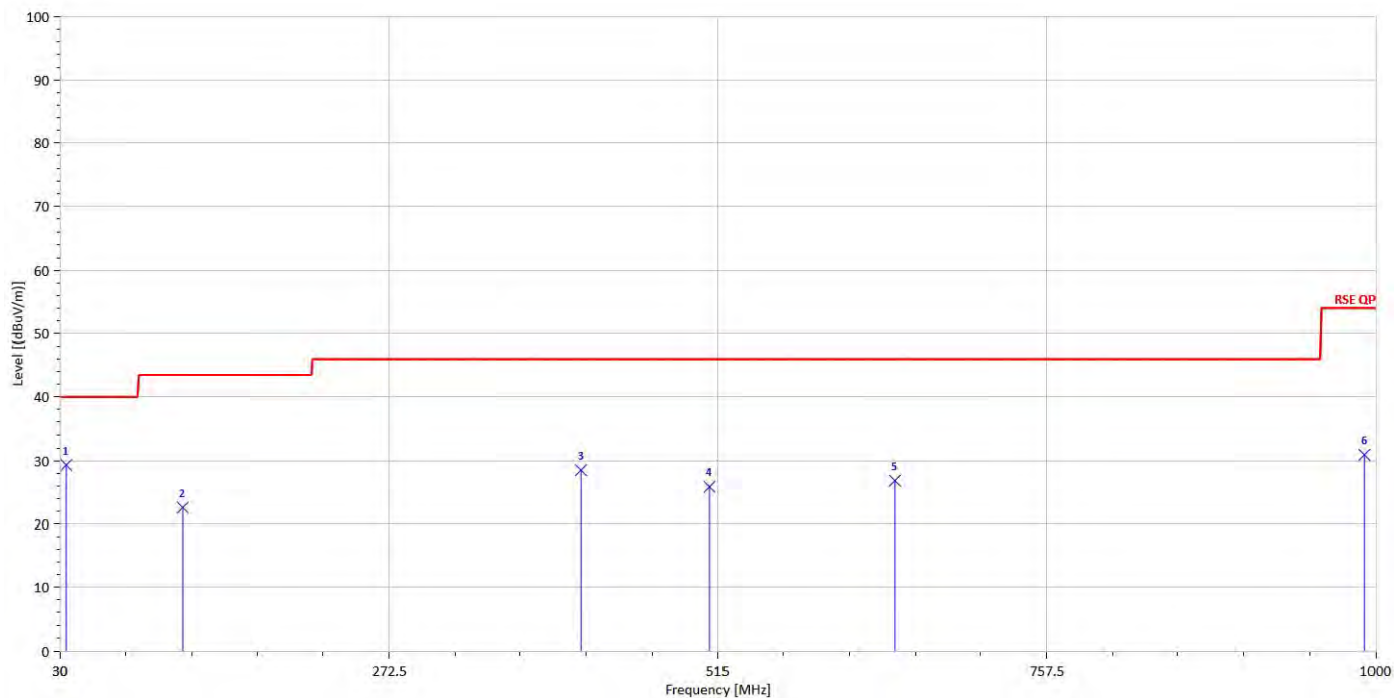
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Operation Mode : 802.11aB2      Test Date : 2017/10/19  
 Fundamental Frequency : 5300 MHz      Temp. / Humi. : 24.5deg\_C/70RH  
 Operation Band : Tx CH MID      Test Engineer : Ashton  
 EUT Pol. : E2      Measurement Antenna Pol. : Vertical



| Freq.  | Note    | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|--------|---------|----------|---------------|--------|--------|--------|--------|
| MHz    | F/H/E/S | Mode     | Reading Level |        | FS     | @3m    |        |
|        |         | PK/QP/AV | dBμV          | dB     | dBμV/m | dBμV/m | dB     |
| 34.85  | S       | Peak     | 39.10         | -9.78  | 29.32  | 40     | -10.68 |
| 120.21 | S       | Peak     | 38.41         | -15.84 | 22.57  | 43.5   | -20.93 |
| 414.12 | S       | Peak     | 37.72         | -9.21  | 28.51  | 46     | -17.49 |
| 509.18 | S       | Peak     | 33.59         | -7.75  | 25.84  | 46     | -20.16 |
| 645.95 | S       | Peak     | 31.61         | -4.79  | 26.83  | 46     | -19.17 |
| 992.24 | S       | Peak     | 31.67         | -0.74  | 30.92  | 54     | -23.08 |

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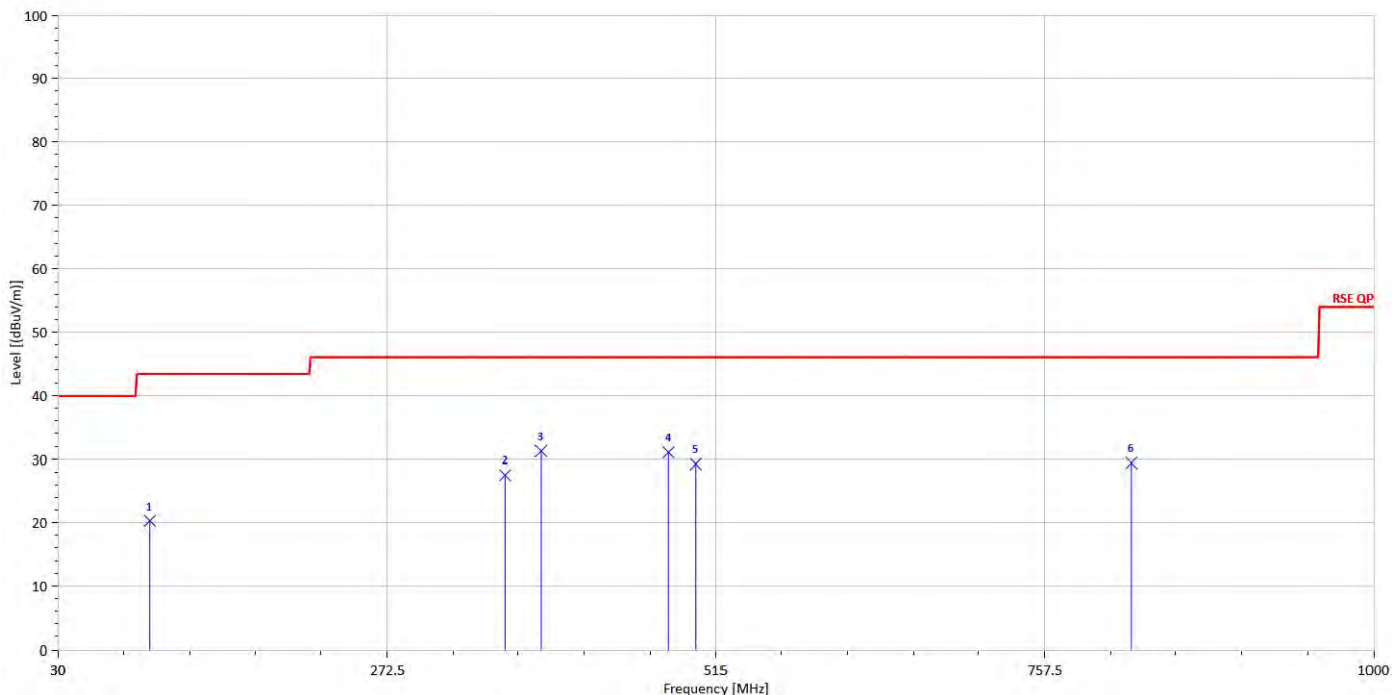
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Operation Mode : 802.11aB2      Test Date : 2017/10/19  
 Fundamental Frequency : 5300 MHz      Temp. / Humi. : 24.5deg\_C/70RH  
 Operation Band : Tx CH MID      Test Engineer : Ashton  
 EUT Pol. : E2      Measurement Antenna Pol. : Horizontal



| Freq.  | Note    | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|--------|---------|----------|---------------|--------|--------|--------|--------|
| MHz    | F/H/E/S | Mode     | Reading Level |        | FS     | @3m    |        |
|        |         | PK/QP/AV | dBuV          | dB     | dBuV/m | dBuV/m | dB     |
| 97.90  | S       | Peak     | 38.38         | -18.10 | 20.28  | 43.5   | -23.22 |
| 359.80 | S       | Peak     | 38.71         | -11.20 | 27.51  | 46     | -18.49 |
| 385.99 | S       | Peak     | 41.42         | -10.18 | 31.24  | 46     | -14.76 |
| 480.08 | S       | Peak     | 38.85         | -7.81  | 31.04  | 46     | -14.96 |
| 500.45 | S       | Peak     | 36.77         | -7.53  | 29.24  | 46     | -16.76 |
| 821.52 | S       | Peak     | 32.08         | -2.66  | 29.42  | 46     | -16.58 |

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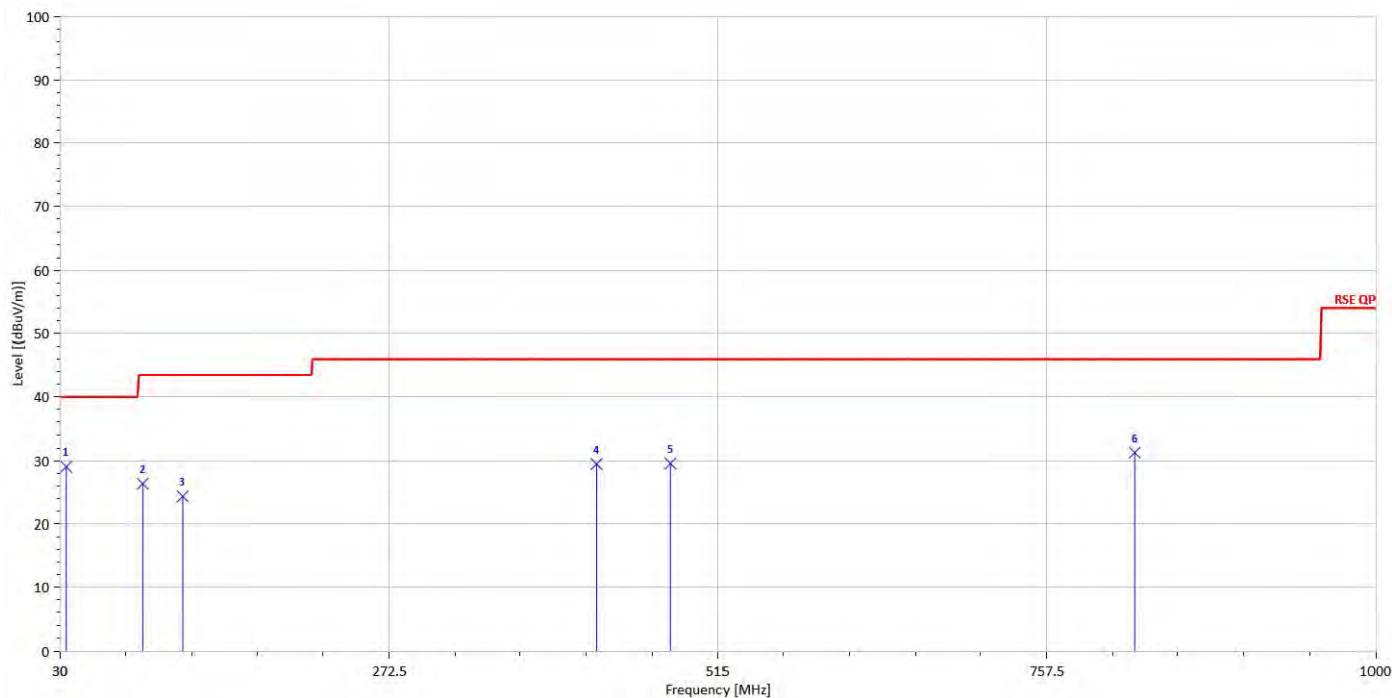
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Operation Mode : 802.11aB3 Test Date : 2017/10/19  
 Fundamental Frequency : 5580 MHz Temp. / Humi. : 24.5deg\_C/70RH  
 Operation Band : Tx CH MID Test Engineer : Ashton  
 EUT Pol. : E2 Measurement Antenna Pol. : Vertical



| Freq.<br>MHz | Note<br>F/H/E/S | Detector<br>Mode<br>PK/QP/AV | Spectrum<br>Reading Level<br>dBμV | Factor<br>dB | Actual<br>FS<br>dBμV/m | Limit<br>@3m<br>dBμV/m | Margin<br>dB |
|--------------|-----------------|------------------------------|-----------------------------------|--------------|------------------------|------------------------|--------------|
| 34.85        | S               | Peak                         | 38.81                             | -9.78        | 29.03                  | 40                     | -10.97       |
| 91.11        | S               | Peak                         | 45.62                             | -19.29       | 26.33                  | 43.5                   | -17.17       |
| 120.21       | S               | Peak                         | 40.17                             | -15.84       | 24.33                  | 43.5                   | -19.17       |
| 425.76       | S               | Peak                         | 38.53                             | -9.06        | 29.47                  | 46                     | -16.53       |
| 480.08       | S               | Peak                         | 37.38                             | -7.81        | 29.57                  | 46                     | -16.43       |
| 822.49       | S               | Peak                         | 33.88                             | -2.59        | 31.29                  | 46                     | -14.71       |

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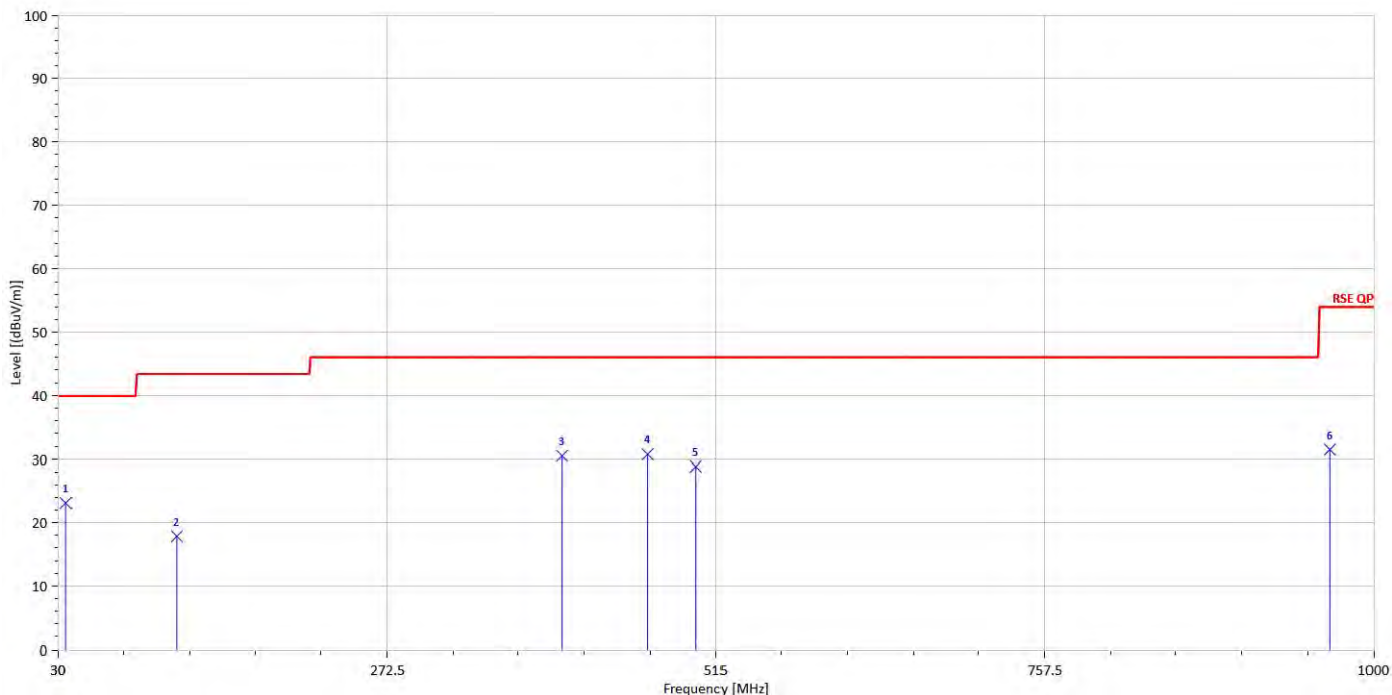
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Operation Mode : 802.11aB3      Test Date : 2017/10/19  
 Fundamental Frequency : 5580 MHz      Temp. / Humi. : 24.5deg\_C/70RH  
 Operation Band : Tx CH MID      Test Engineer : Ashton  
 EUT Pol. : E2      Measurement Antenna Pol. : Horizontal



| Freq.<br>MHz | Note<br>F/H/E/S | Detector<br>Mode<br>PK/QP/AV | Spectrum<br>Reading Level<br>dBμV | Factor<br>dB | Actual<br>FS<br>dBμV/m | Limit<br>@3m<br>dBμV/m | Margin<br>dB |
|--------------|-----------------|------------------------------|-----------------------------------|--------------|------------------------|------------------------|--------------|
| 35.82        | S               | Peak                         | 33.45                             | -10.35       | 23.10                  | 40                     | -16.90       |
| 117.30       | S               | Peak                         | 33.81                             | -16.00       | 17.81                  | 43.5                   | -25.69       |
| 401.51       | S               | Peak                         | 40.30                             | -9.81        | 30.49                  | 46                     | -15.51       |
| 464.56       | S               | Peak                         | 38.78                             | -8.05        | 30.73                  | 46                     | -15.27       |
| 500.45       | S               | Peak                         | 36.38                             | -7.53        | 28.85                  | 46                     | -17.15       |
| 967.99       | S               | Peak                         | 32.99                             | -1.52        | 31.46                  | 54                     | -22.54       |

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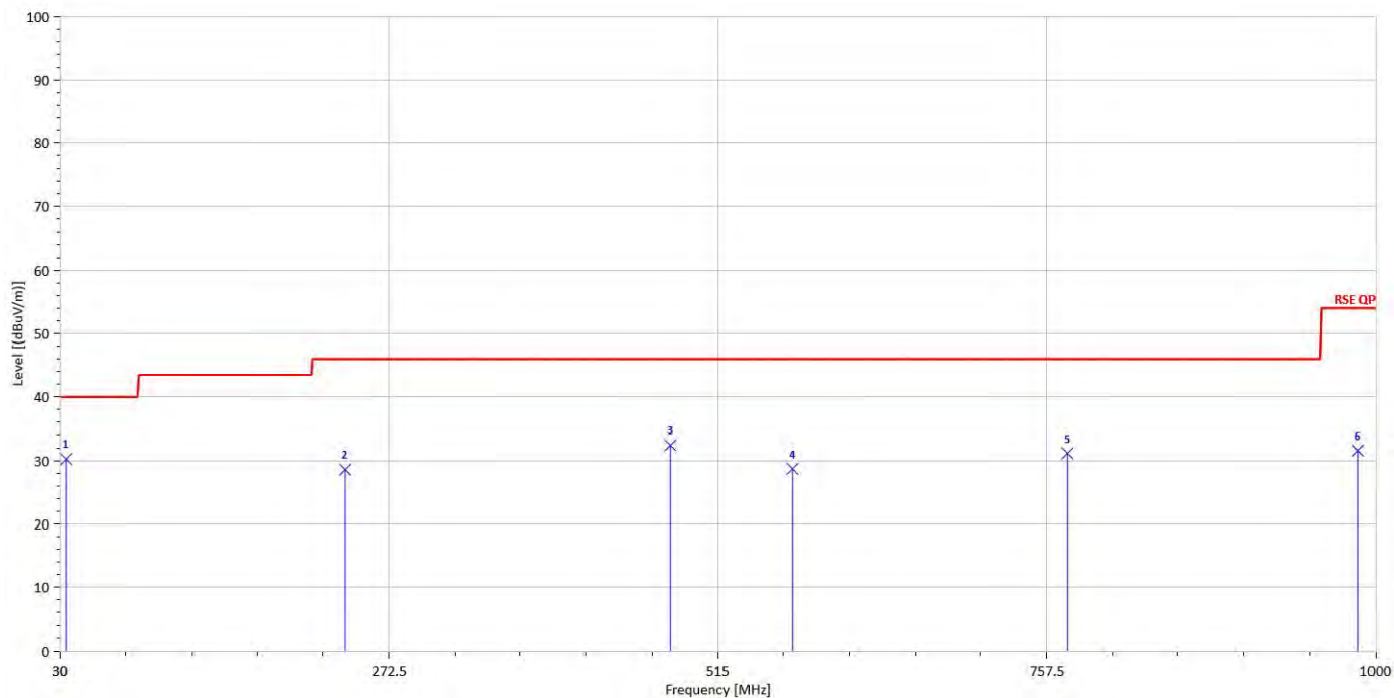
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Operation Mode : 802.11aB4      Test Date : 2017/10/19  
 Fundamental Frequency : 5785 MHz      Temp. / Humi. : 24.5deg\_C/70RH  
 Operation Band : Tx CH MID      Test Engineer : Ashton  
 EUT Pol. : E2      Measurement Antenna Pol. : Vertical



| Freq.  | Note    | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|--------|---------|----------|---------------|--------|--------|--------|--------|
| MHz    | F/H/E/S | Mode     | Reading Level |        | FS     | @3m    |        |
|        |         | PK/QP/AV | dBμV          | dB     | dBμV/m | dBμV/m | dB     |
| 34.85  | S       | Peak     | 40.03         | -9.78  | 30.25  | 40     | -9.75  |
| 240.49 | S       | Peak     | 43.78         | -15.21 | 28.57  | 46     | -17.43 |
| 480.08 | S       | Peak     | 40.22         | -7.81  | 32.41  | 46     | -13.59 |
| 570.29 | S       | Peak     | 35.17         | -6.47  | 28.70  | 46     | -17.30 |
| 773.02 | S       | Peak     | 35.75         | -4.59  | 31.16  | 46     | -14.84 |
| 987.39 | S       | Peak     | 32.16         | -0.57  | 31.59  | 54     | -22.41 |

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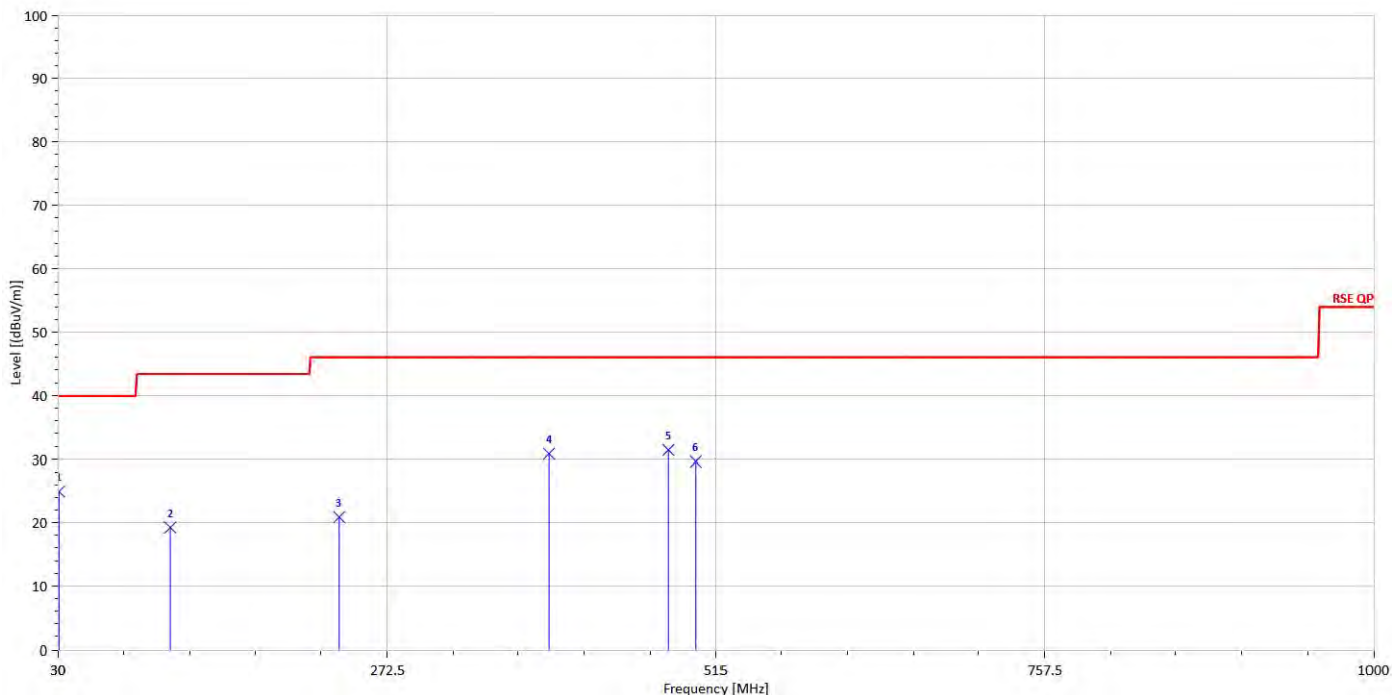
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Operation Mode : 802.11aB4      Test Date : 2017/10/19  
 Fundamental Frequency : 5785 MHz      Temp. / Humi. : 24.5deg\_C/70RH  
 Operation Band : Tx CH MID      Test Engineer : Ashton  
 EUT Pol. : E2      Measurement Antenna Pol. : Horizontal



| Freq.  | Note    | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|--------|---------|----------|---------------|--------|--------|--------|--------|
| MHz    | F/H/E/S | Mode     | Reading Level |        | FS     | @3m    |        |
|        |         | PK/QP/AV | dBuV          | dB     | dBuV/m | dBuV/m | dB     |
| 30.97  | S       | Peak     | 32.64         | -7.70  | 24.93  | 40     | -15.07 |
| 112.45 | S       | Peak     | 35.55         | -16.33 | 19.21  | 43.5   | -24.29 |
| 237.58 | S       | Peak     | 36.40         | -15.53 | 20.86  | 46     | -25.14 |
| 391.81 | S       | Peak     | 40.83         | -10.01 | 30.82  | 46     | -15.18 |
| 480.08 | S       | Peak     | 39.22         | -7.81  | 31.41  | 46     | -14.59 |
| 500.45 | S       | Peak     | 37.14         | -7.53  | 29.61  | 46     | -16.39 |

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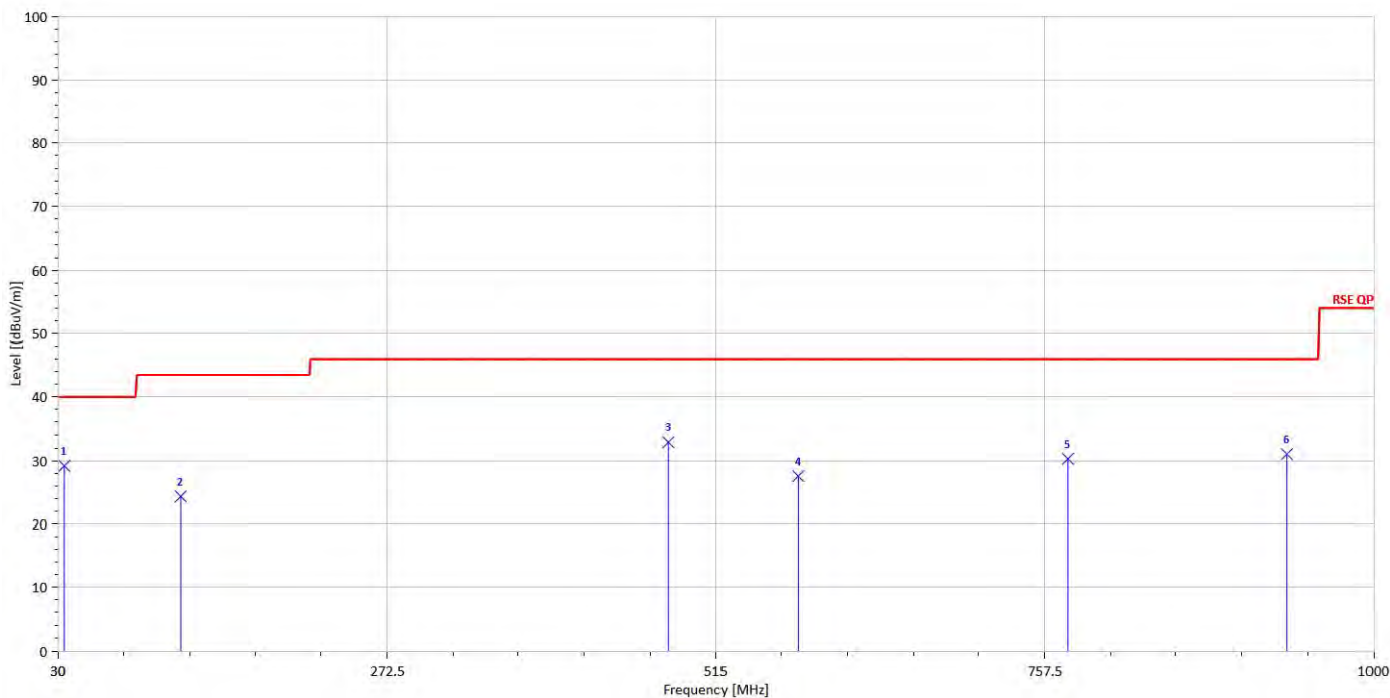
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Operation Mode : 802.11ac80B1      Test Date : 2017/10/19  
 Fundamental Frequency : 5210 MHz      Temp. / Humi. : 24.5deg\_C/70RH  
 Operation Band : Tx CH LOW      Test Engineer : Ashton  
 EUT Pol. : E2      Measurement Antenna Pol. : Vertical



| Freq.  | Note    | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|--------|---------|----------|---------------|--------|--------|--------|--------|
| MHz    | F/H/E/S | Mode     | Reading Level |        | FS     | @3m    |        |
|        |         | PK/QP/AV | dBμV          | dB     | dBμV/m | dBμV/m | dB     |
| 34.85  | S       | Peak     | 38.96         | -9.78  | 29.18  | 40     | -10.82 |
| 120.21 | S       | Peak     | 40.16         | -15.84 | 24.32  | 43.5   | -19.18 |
| 480.08 | S       | Peak     | 40.75         | -7.81  | 32.94  | 46     | -13.06 |
| 576.11 | S       | Peak     | 33.77         | -6.21  | 27.56  | 46     | -18.44 |
| 774.96 | S       | Peak     | 35.06         | -4.75  | 30.31  | 46     | -15.69 |
| 935.98 | S       | Peak     | 32.71         | -1.66  | 31.05  | 46     | -14.95 |

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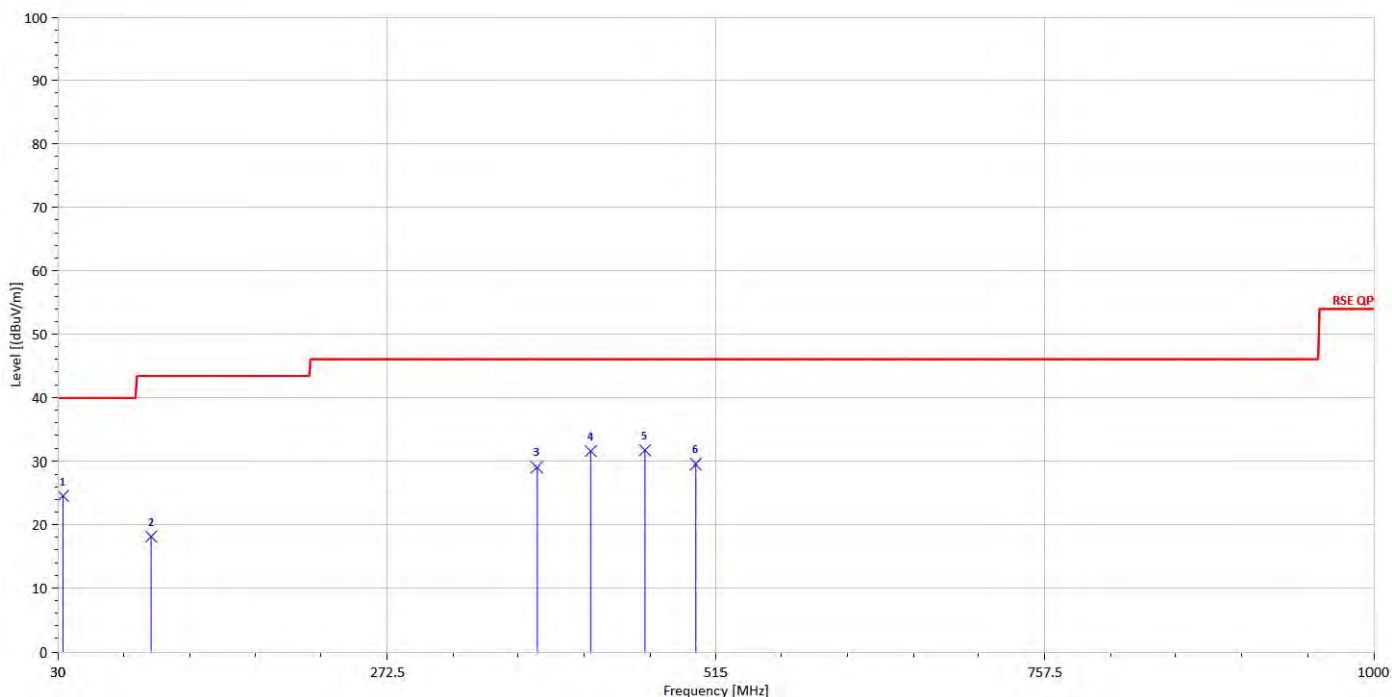
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Operation Mode : 802.11ac80B1      Test Date : 2017/10/19  
 Fundamental Frequency : 5210 MHz      Temp. / Humi. : 24.5deg\_C/70RH  
 Operation Band : Tx CH LOW      Test Engineer : Ashton  
 EUT Pol. : E2      Measurement Antenna Pol. : Horizontal



| Freq.  | Note    | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|--------|---------|----------|---------------|--------|--------|--------|--------|
| MHz    | F/H/E/S | Mode     | Reading Level |        | FS     | @3m    |        |
|        |         | PK/QP/AV | dBuV          | dB     | dBuV/m | dBuV/m | dB     |
| 33.88  | S       | Peak     | 33.84         | -9.27  | 24.57  | 40     | -15.43 |
| 98.87  | S       | Peak     | 36.01         | -17.93 | 18.08  | 43.5   | -25.42 |
| 383.08 | S       | Peak     | 39.36         | -10.31 | 29.05  | 46     | -16.95 |
| 422.85 | S       | Peak     | 40.89         | -9.36  | 31.53  | 46     | -14.47 |
| 462.62 | S       | Peak     | 39.82         | -8.14  | 31.67  | 46     | -14.33 |
| 500.45 | S       | Peak     | 37.06         | -7.53  | 29.53  | 46     | -16.47 |

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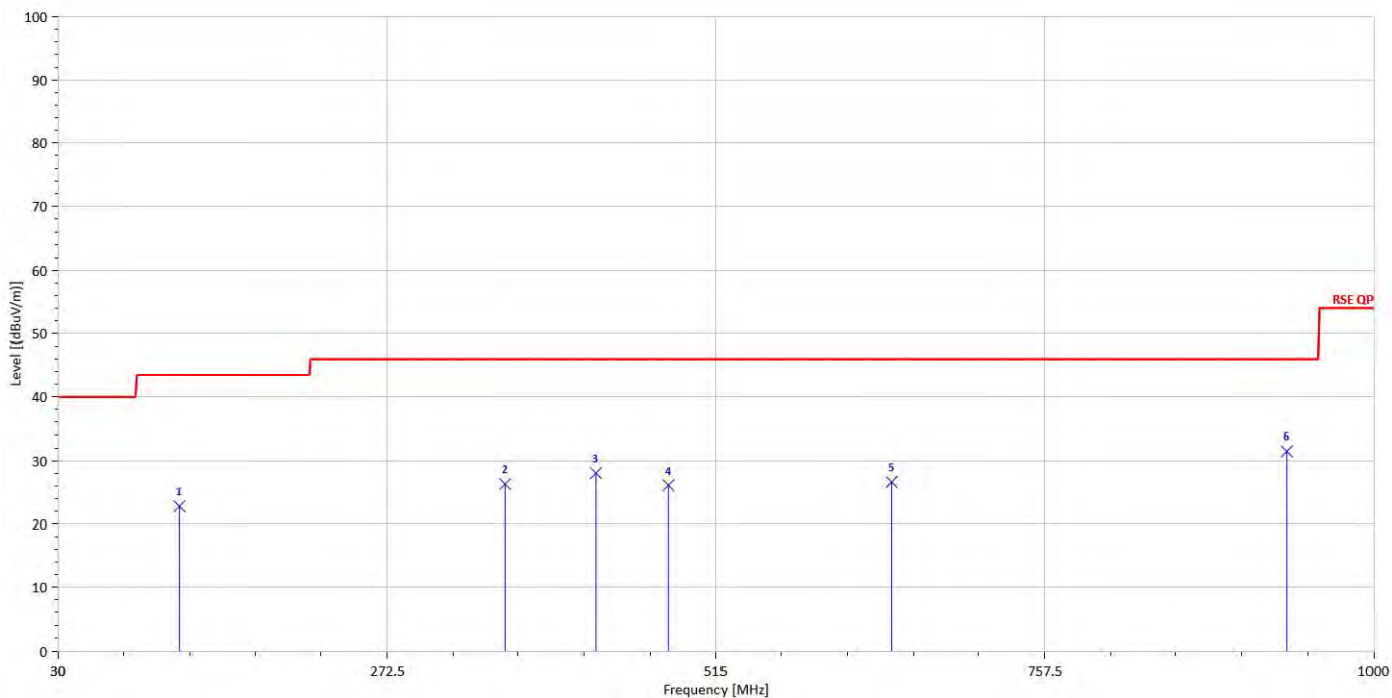
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f (886-2) 2298-0488

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Operation Mode : 802.11ac80B2      Test Date : 2017/10/19  
 Fundamental Frequency : 5290 MHz      Temp. / Humi. : 24.5deg\_C/70RH  
 Operation Band : Tx CH HIGH      Test Engineer : Ashton  
 EUT Pol. : E2      Measurement Antenna Pol. : Vertical



| Freq.<br>MHz | Note<br>F/H/E/S | Detector<br>Mode<br>PK/QP/AV | Spectrum<br>Reading Level<br>dB $\mu$ V | Factor<br>dB | Actual<br>FS<br>dB $\mu$ V/m | Limit<br>@3m<br>dB $\mu$ V/m | Margin<br>dB |
|--------------|-----------------|------------------------------|-----------------------------------------|--------------|------------------------------|------------------------------|--------------|
| 119.24       | S               | Peak                         | 38.62                                   | -15.88       | 22.75                        | 43.5                         | -20.75       |
| 359.80       | S               | Peak                         | 37.47                                   | -11.20       | 26.27                        | 46                           | -19.73       |
| 426.73       | S               | Peak                         | 37.17                                   | -9.14        | 28.03                        | 46                           | -17.97       |
| 480.08       | S               | Peak                         | 33.91                                   | -7.81        | 26.10                        | 46                           | -19.90       |
| 644.98       | S               | Peak                         | 31.48                                   | -4.88        | 26.60                        | 46                           | -19.40       |
| 935.98       | S               | Peak                         | 33.14                                   | -1.66        | 31.48                        | 46                           | -14.52       |

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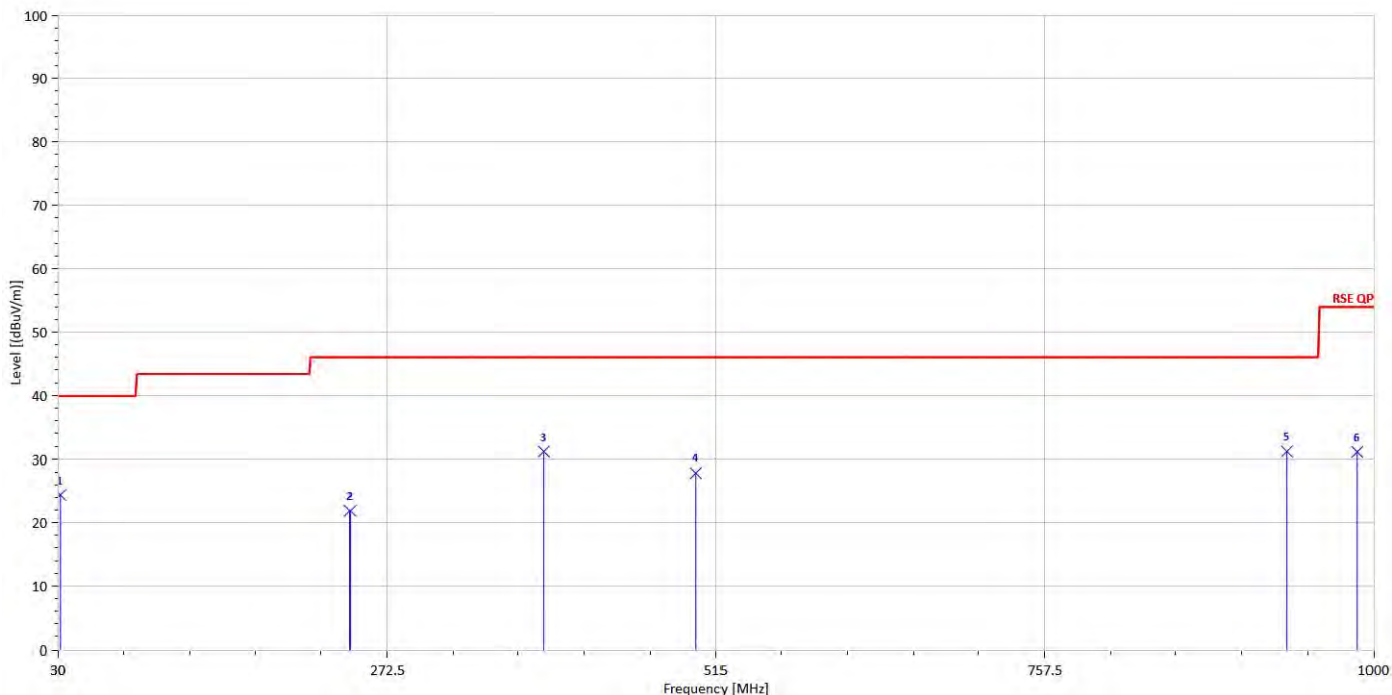
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Operation Mode : 802.11ac80B2      Test Date : 2017/10/19  
 Fundamental Frequency : 5290 MHz      Temp. / Humi. : 24.5deg\_C/70RH  
 Operation Band : Tx CH HIGH      Test Engineer : Ashton  
 EUT Pol. : E2      Measurement Antenna Pol. : Horizontal



| Freq.<br>MHz | Note<br>F/H/E/S | Detector<br>Mode<br>PK/QP/AV | Spectrum<br>Reading Level<br>dBuV | Factor<br>dB | Actual<br>FS<br>dBuV/m | Limit<br>@3m<br>dBuV/m | Margin<br>dB |
|--------------|-----------------|------------------------------|-----------------------------------|--------------|------------------------|------------------------|--------------|
| 31.94        | S               | Peak                         | 32.60                             | -8.22        | 24.38                  | 40                     | -15.62       |
| 245.34       | S               | Peak                         | 36.88                             | -15.01       | 21.88                  | 46                     | -24.12       |
| 387.93       | S               | Peak                         | 41.24                             | -10.09       | 31.16                  | 46                     | -14.84       |
| 500.45       | S               | Peak                         | 35.38                             | -7.53        | 27.85                  | 46                     | -18.15       |
| 935.98       | S               | Peak                         | 32.83                             | -1.66        | 31.17                  | 46                     | -14.83       |
| 988.36       | S               | Peak                         | 31.67                             | -0.57        | 31.10                  | 54                     | -22.90       |

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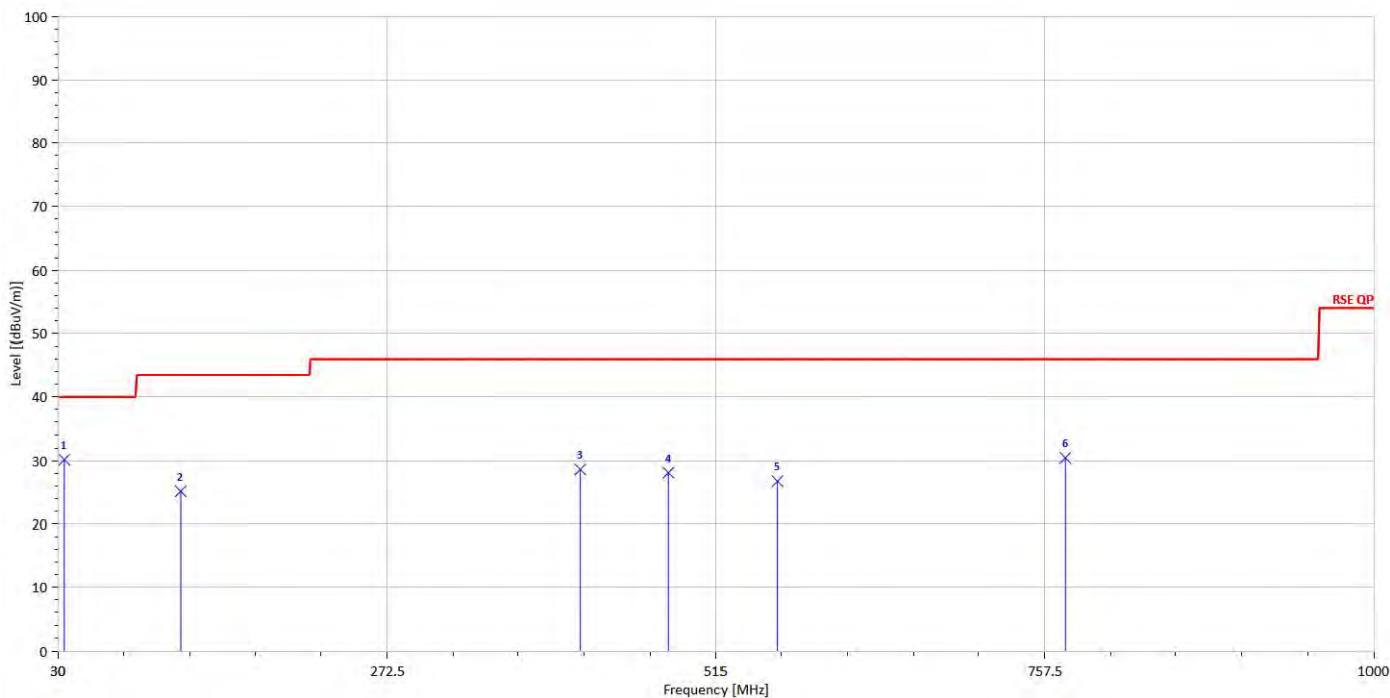
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## 802.11ac VHT80, 5470~5725 MHz

Operation Mode : 802.11ac80B3  
 Fundamental Frequency : 5610 MHz  
 Operation Band : Tx CH MID  
 EUT Pol. : E2

Test Date : 2017/10/19  
 Temp. / Humi. : 24.5deg\_C/70RH  
 Test Engineer : Ashton  
 Measurement Antenna Pol. : Vertical



| Freq.<br>MHz | Note<br>F/H/E/S | Detector<br>Mode<br>PK/QP/AV | Spectrum<br>Reading Level<br>dBμV | Factor<br>dB | Actual<br>FS<br>dBμV/m | Limit<br>@3m<br>dBμV/m | Margin<br>dB |
|--------------|-----------------|------------------------------|-----------------------------------|--------------|------------------------|------------------------|--------------|
| 34.85        | S               | Peak                         | 39.95                             | -9.78        | 30.17                  | 40                     | -9.83        |
| 120.21       | S               | Peak                         | 40.99                             | -15.84       | 25.14                  | 43.5                   | -18.36       |
| 415.09       | S               | Peak                         | 37.73                             | -9.11        | 28.62                  | 46                     | -17.38       |
| 480.08       | S               | Peak                         | 35.89                             | -7.81        | 28.09                  | 46                     | -17.91       |
| 560.59       | S               | Peak                         | 33.38                             | -6.64        | 26.74                  | 46                     | -19.26       |
| 773.02       | S               | Peak                         | 35.05                             | -4.59        | 30.46                  | 46                     | -15.54       |

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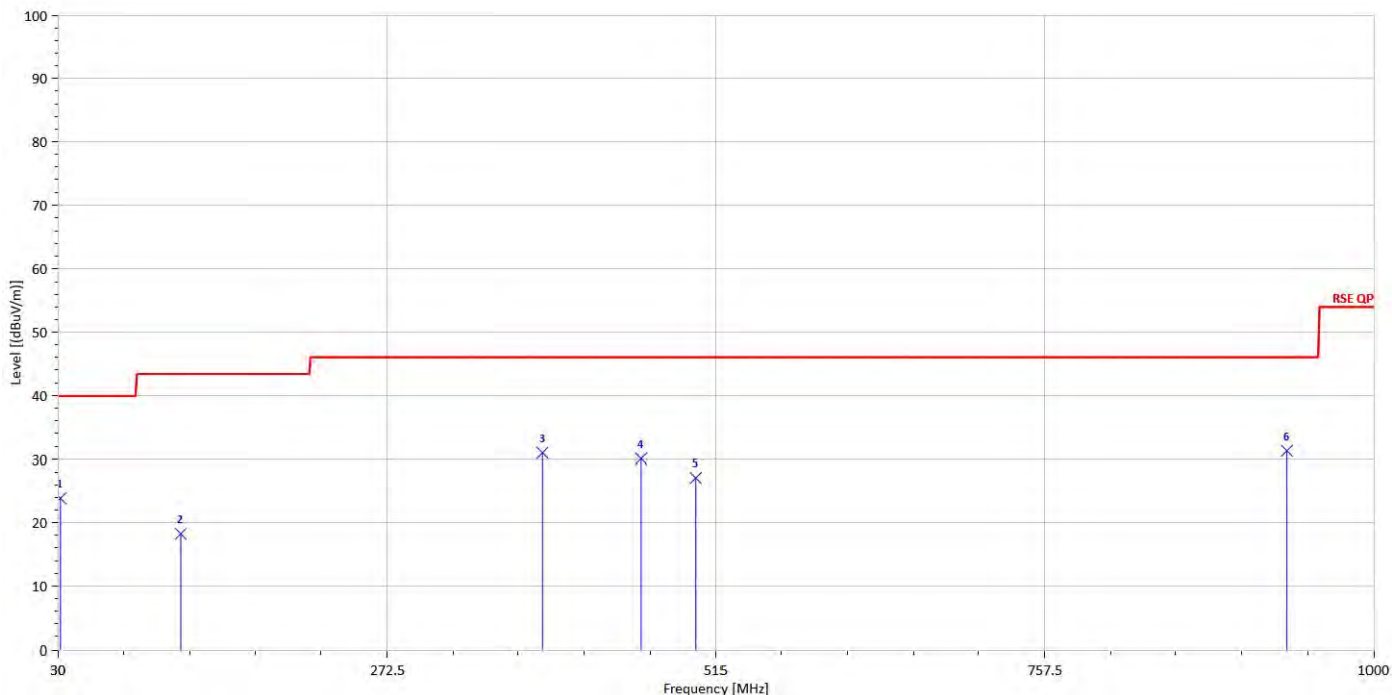
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Operation Mode : 802.11ac80B3 Test Date : 2017/10/19  
 Fundamental Frequency : 5610 MHz Temp. / Humi. : 24.5deg\_C/70RH  
 Operation Band : Tx CH MID Test Engineer : Ashton  
 EUT Pol. : E2 Measurement Antenna Pol. : Horizontal



| Freq.  | Note    | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|--------|---------|----------|---------------|--------|--------|--------|--------|
| MHz    | F/H/E/S | Mode     | Reading Level |        | FS     | @3m    |        |
|        |         | PK/QP/AV | dBuV          | dB     | dBuV/m | dBuV/m | dB     |
| 31.94  | S       | Peak     | 32.08         | -8.22  | 23.86  | 40     | -16.14 |
| 120.21 | S       | Peak     | 34.05         | -15.84 | 18.21  | 43.5   | -25.29 |
| 386.96 | S       | Peak     | 41.12         | -10.15 | 30.97  | 46     | -15.03 |
| 459.71 | S       | Peak     | 38.19         | -8.13  | 30.07  | 46     | -15.93 |
| 500.45 | S       | Peak     | 34.61         | -7.53  | 27.08  | 46     | -18.92 |
| 935.98 | S       | Peak     | 32.94         | -1.66  | 31.28  | 46     | -14.72 |

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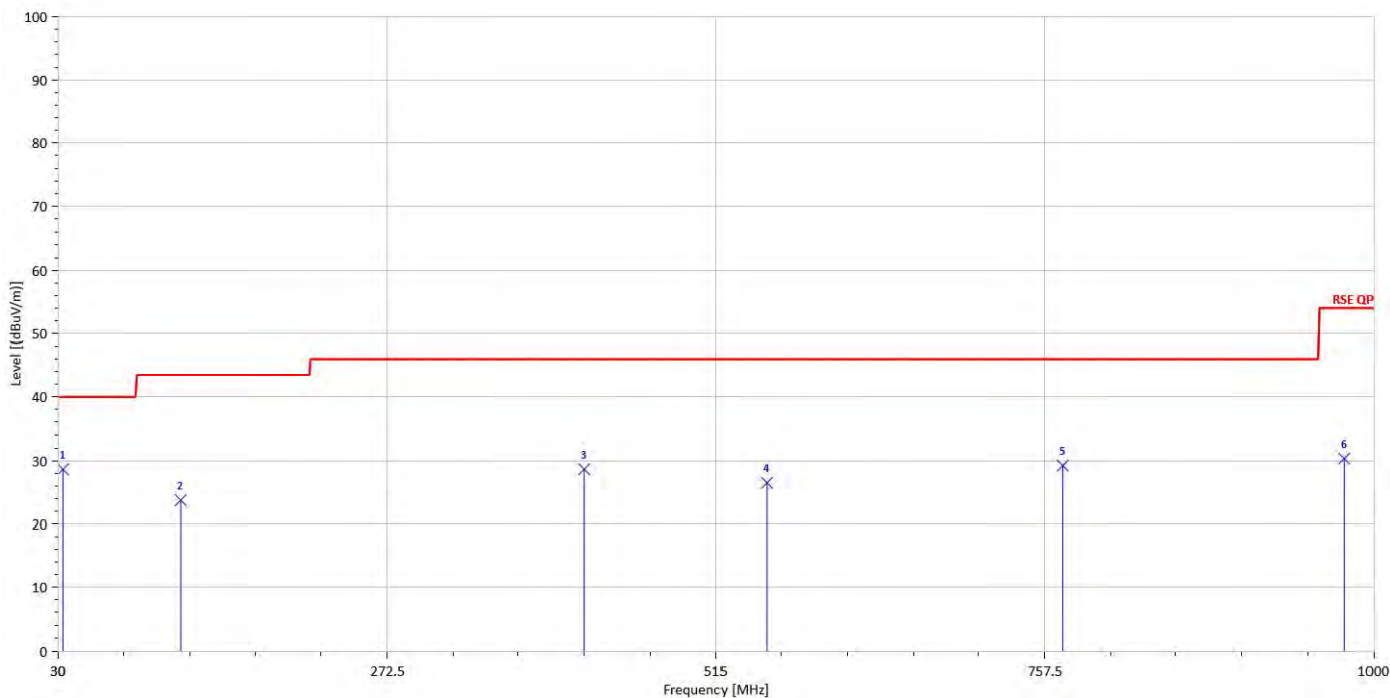
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## 802.11ac VHT80,

|                         |              |                            |                |
|-------------------------|--------------|----------------------------|----------------|
| Operation Mode :        | 802.11ac80B4 | Test Date :                | 2017/10/19     |
| Fundamental Frequency : | 5775 MHz     | Temp. / Humi. :            | 24.5deg_C/70RH |
| Operation Band :        | Tx CH LOW    | Test Engineer :            | Ashton         |
| EUT Pol. :              | E2           | Measurement Antenna Pol. : | Vertical       |



| Freq.  | Note    | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|--------|---------|----------|---------------|--------|--------|--------|--------|
| MHz    | F/H/E/S | Mode     | Reading Level |        | FS     | @3m    |        |
|        |         | PK/QP/AV | dBμV          | dB     | dBμV/m | dBμV/m | dB     |
| 33.88  | S       | Peak     | 37.90         | -9.27  | 28.63  | 40     | -11.37 |
| 120.21 | S       | Peak     | 39.57         | -15.84 | 23.73  | 43.5   | -19.77 |
| 418.00 | S       | Peak     | 37.55         | -8.91  | 28.64  | 46     | -17.36 |
| 552.83 | S       | Peak     | 33.28         | -6.78  | 26.50  | 46     | -19.50 |
| 771.08 | S       | Peak     | 33.58         | -4.35  | 29.23  | 46     | -16.77 |
| 978.66 | S       | Peak     | 31.27         | -0.92  | 30.35  | 54     | -23.65 |

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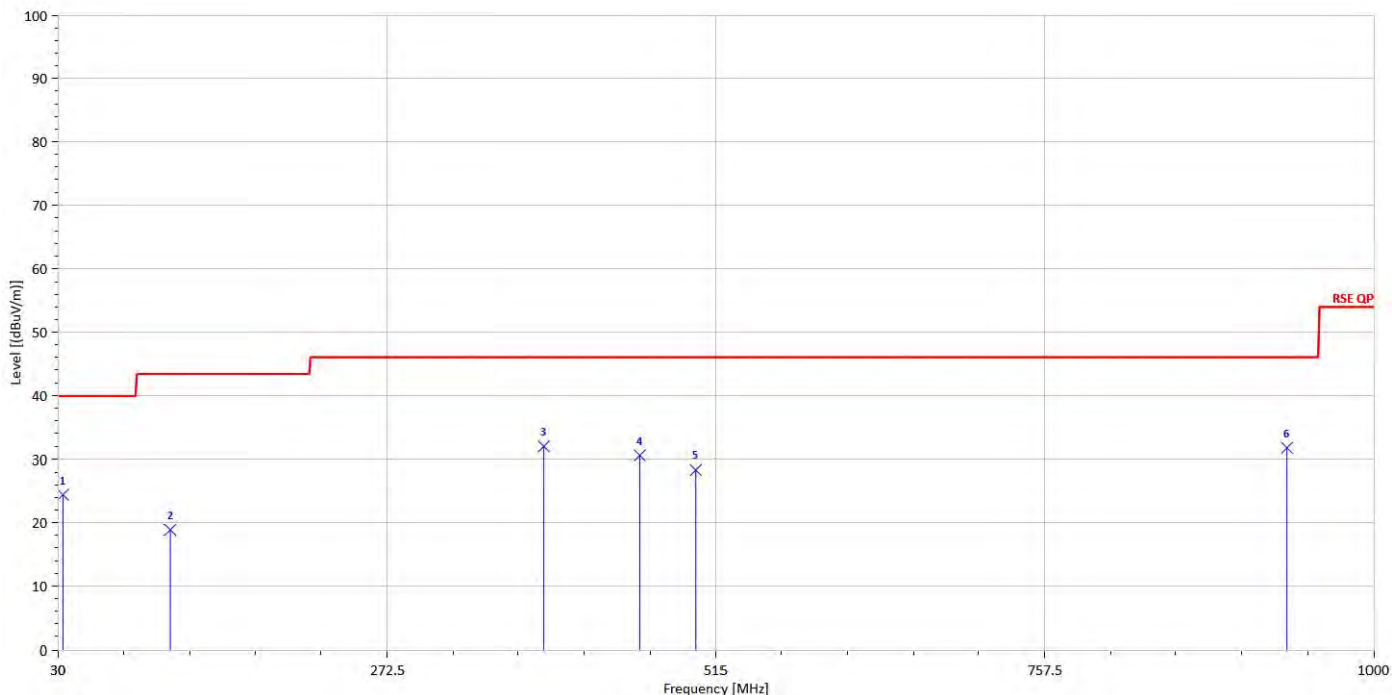
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Operation Mode : 802.11ac80B4      Test Date : 2017/10/19  
 Fundamental Frequency : 5775 MHz      Temp. / Humi. : 24.5deg\_C/70RH  
 Operation Band : Tx CH LOW      Test Engineer : Ashton  
 EUT Pol. : E2      Measurement Antenna Pol. : Horizontal



| Freq.<br>MHz | Note<br>F/H/E/S | Detector<br>Mode<br>PK/QP/AV | Spectrum<br>Reading Level<br>dBμV | Factor<br>dB | Actual<br>FS<br>dBμV/m | Limit<br>@3m<br>dBμV/m | Margin<br>dB |
|--------------|-----------------|------------------------------|-----------------------------------|--------------|------------------------|------------------------|--------------|
| 33.88        | S               | Peak                         | 33.70                             | -9.27        | 24.42                  | 40                     | -15.58       |
| 112.45       | S               | Peak                         | 35.16                             | -16.33       | 18.83                  | 43.5                   | -24.67       |
| 387.93       | S               | Peak                         | 42.08                             | -10.09       | 31.99                  | 46                     | -14.01       |
| 458.74       | S               | Peak                         | 38.64                             | -8.09        | 30.55                  | 46                     | -15.45       |
| 500.45       | S               | Peak                         | 35.87                             | -7.53        | 28.35                  | 46                     | -17.65       |
| 935.98       | S               | Peak                         | 33.40                             | -1.66        | 31.74                  | 46                     | -14.26       |

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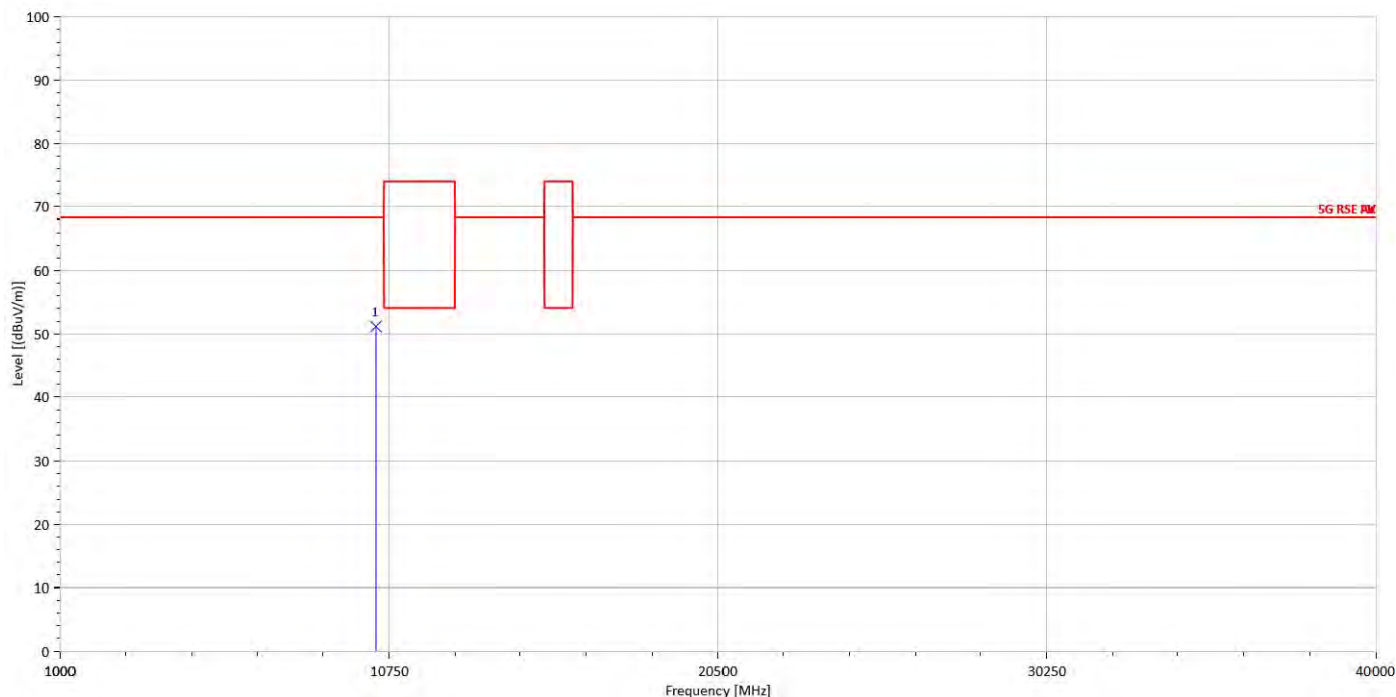
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## Above 1GHz Worst-Case Data:

### Radiated Spurious Emission Measurement Result 802.11a, 5150~5250 MHz

|                         |           |                            |                |
|-------------------------|-----------|----------------------------|----------------|
| Operation Mode :        | 802.11aB1 | Test Date :                | 2017/10/23     |
| Fundamental Frequency : | 5180 MHz  | Temp. / Humi. :            | 24.5deg_C/70RH |
| Operation Band :        | Tx CH LOW | Test Engineer :            | Ashton         |
| EUT Pol. :              | E2        | Measurement Antenna Pol. : | Vertical       |



| Freq.    | Note    | Detector Mode | Spectrum Reading Level | Factor | Actual FS | Limit @3m | Margin |
|----------|---------|---------------|------------------------|--------|-----------|-----------|--------|
| MHz      | F/H/E/S | PK/QP/AV      | dBuV                   | dB     | dBuV/m    | dBuV/m    | dB     |
| 10360.00 | H       | Peak          | 31.04                  | 20.18  | 51.22     | 68.3      | -17.08 |

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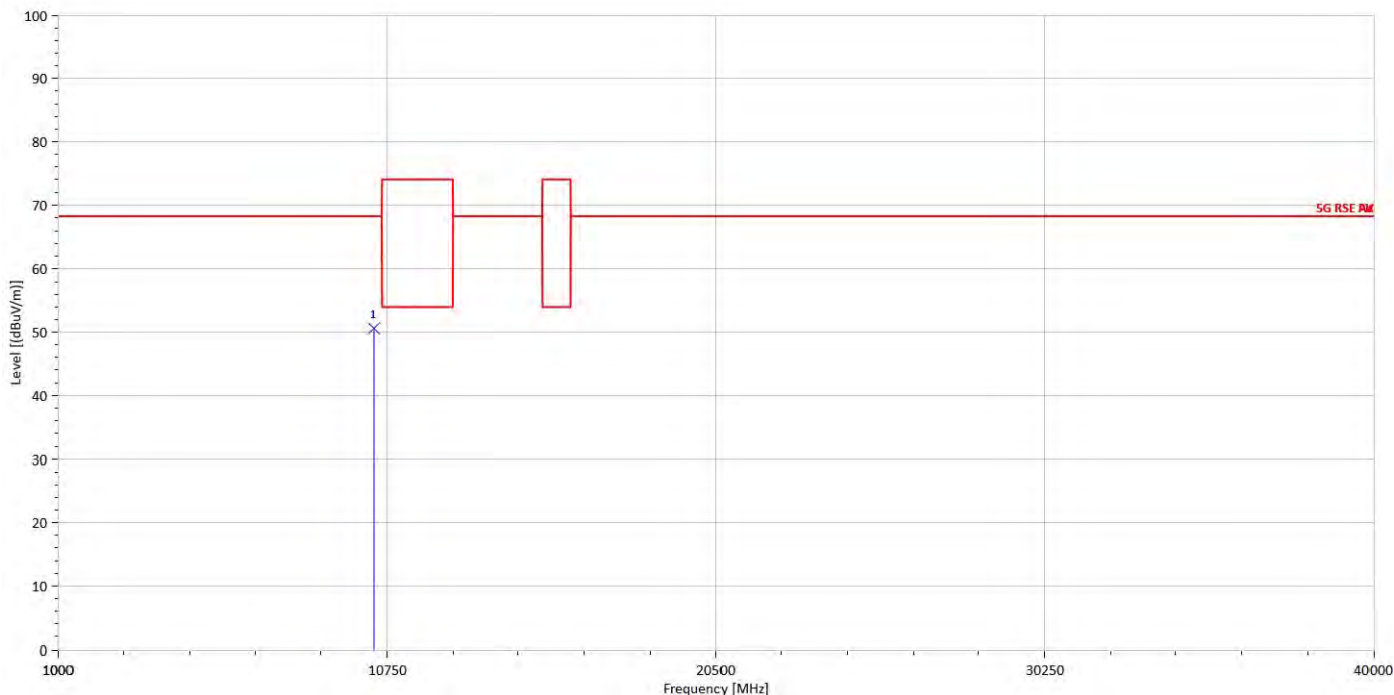
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Operation Mode : 802.11aB1      Test Date : 2017/10/23  
 Fundamental Frequency : 5180 MHz      Temp. / Humi. : 24.5deg\_C/70RH  
 Operation Band : Tx CH LOW      Test Engineer : Ashton  
 EUT Pol. : E2      Measurement Antenna Pol. : Horizontal



| Freq.    | Note    | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|----------|---------|----------|---------------|--------|--------|--------|--------|
| MHz      | F/H/E/S | Mode     | Reading Level | dB     | FS     | @3m    | dB     |
|          |         | PK/QP/AV | dBμV          |        | dBμV/m | dBμV/m |        |
| 10360.00 | H       | Peak     | 30.43         | 20.18  | 50.60  | 68.3   | -17.70 |

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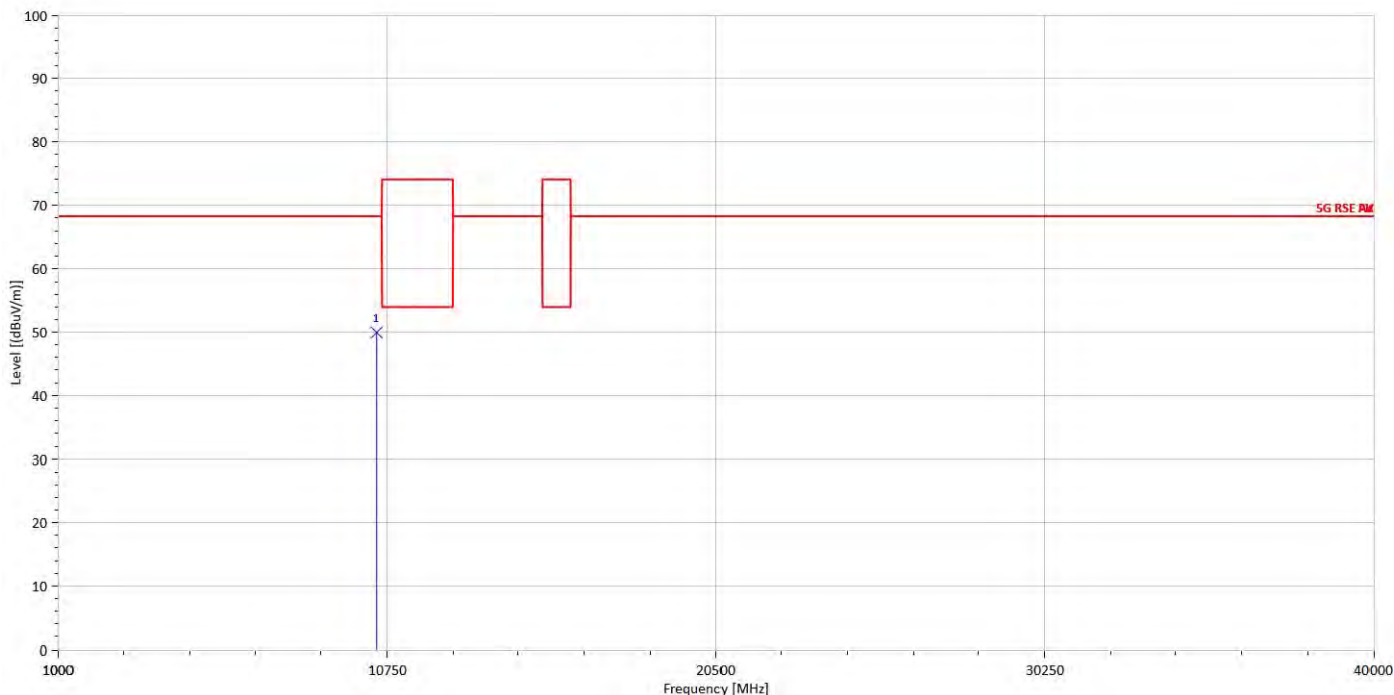
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|                         |           |                            |                |
|-------------------------|-----------|----------------------------|----------------|
| Operation Mode :        | 802.11aB1 | Test Date :                | 2017/10/23     |
| Fundamental Frequency : | 5220 MHz  | Temp. / Humi. :            | 24.5deg_C/70RH |
| Operation Band :        | Tx CH MID | Test Engineer :            | Ashton         |
| EUT Pol. :              | E2        | Measurement Antenna Pol. : | Vertical       |



| Freq.    | Note    | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|----------|---------|----------|---------------|--------|--------|--------|--------|
| MHz      | F/H/E/S | Mode     | Reading Level | dB     | FS     | @3m    | dB     |
|          |         | PK/QP/AV | dBμV          |        | dBμV/m | dBμV/m |        |
| 10440.00 | H       | Peak     | 29.67         | 20.29  | 49.96  | 68.3   | -18.34 |

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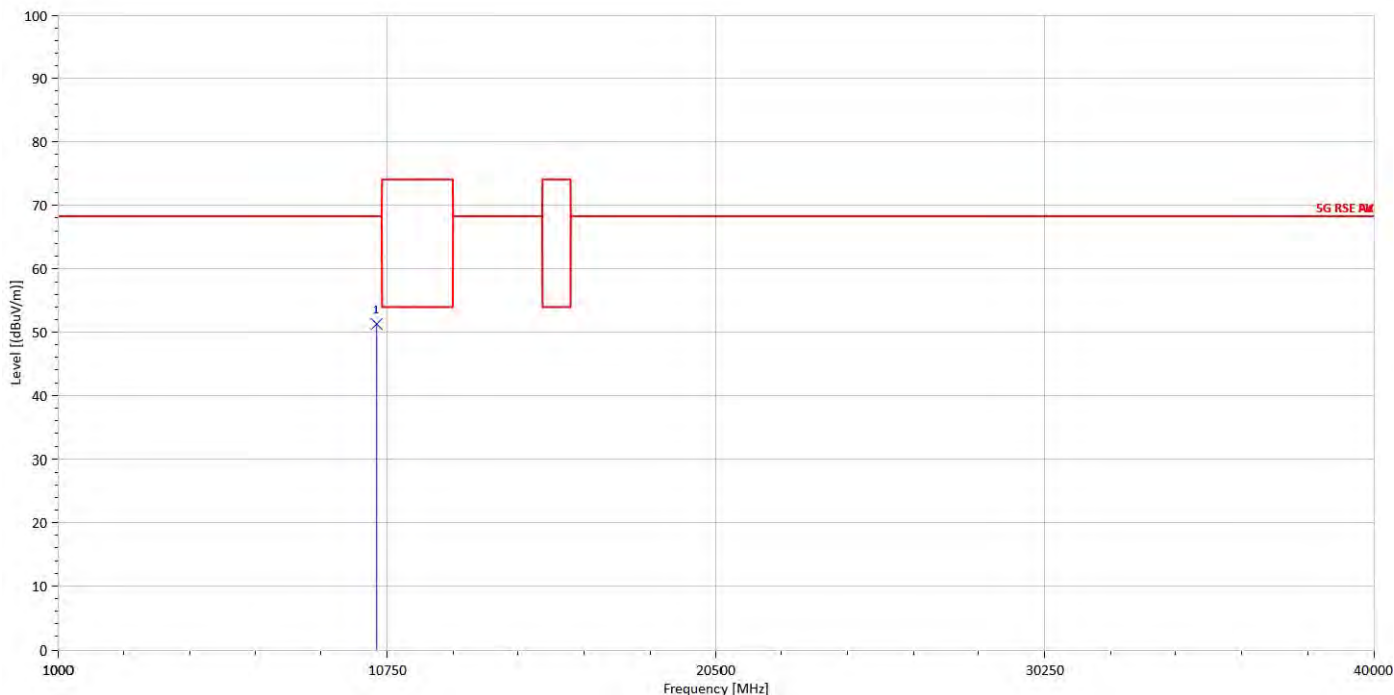
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|                         |           |                            |                |
|-------------------------|-----------|----------------------------|----------------|
| Operation Mode :        | 802.11aB1 | Test Date :                | 2017/10/23     |
| Fundamental Frequency : | 5220 MHz  | Temp. / Humi. :            | 24.5deg_C/70RH |
| Operation Band :        | Tx CH MID | Test Engineer :            | Ashton         |
| EUT Pol. :              | E2        | Measurement Antenna Pol. : | Horizontal     |



| Freq.    | Note    | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|----------|---------|----------|---------------|--------|--------|--------|--------|
| MHz      | F/H/E/S | Mode     | Reading Level | dB     | FS     | @3m    | dB     |
|          |         | PK/QP/AV | dBuV          |        | dBuV/m | dBuV/m |        |
| 10440.00 | H       | Peak     | 30.99         | 20.29  | 51.29  | 68.3   | -17.01 |

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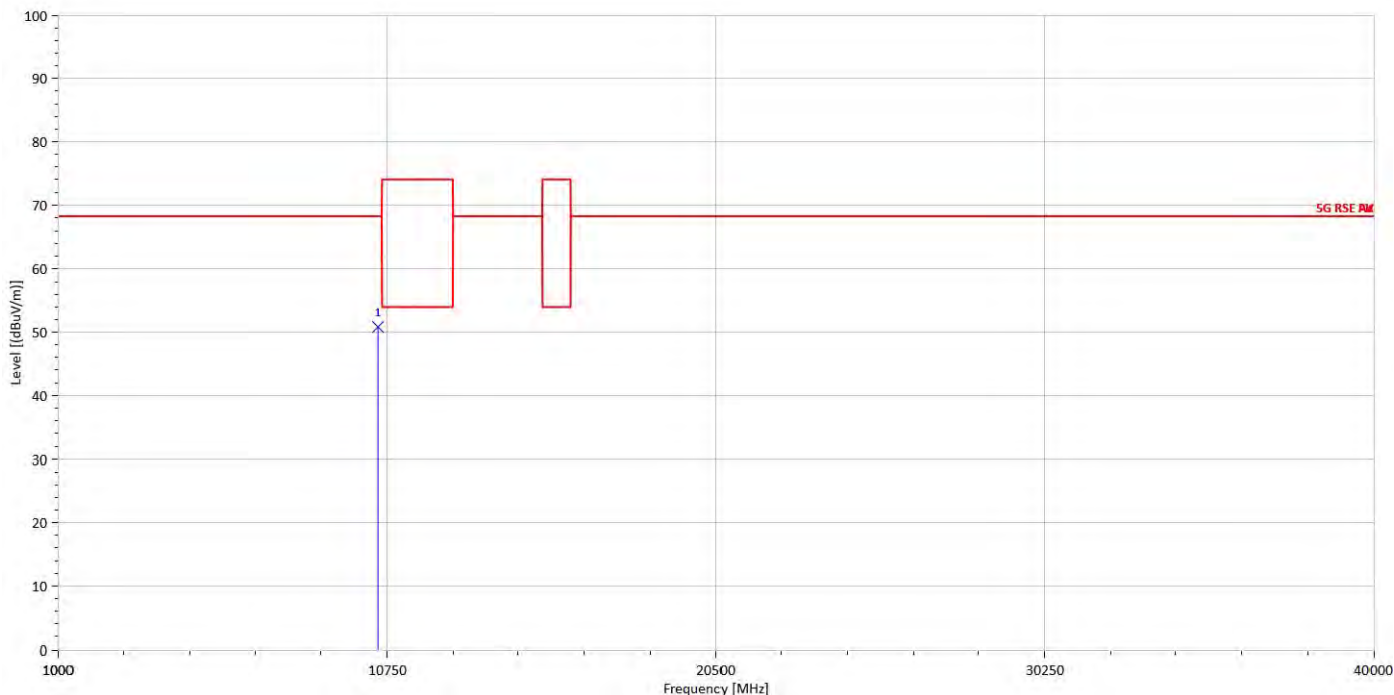
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Operation Mode : 802.11aB1      Test Date : 2017/10/23  
 Fundamental Frequency : 5240 MHz      Temp. / Humi. : 24.5deg\_C/70RH  
 Operation Band : Tx CH HIGH      Test Engineer : Ashton  
 EUT Pol. : E2      Measurement Antenna Pol. : Vertical



| Freq.    | Note    | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|----------|---------|----------|---------------|--------|--------|--------|--------|
| MHz      | F/H/E/S | Mode     | Reading Level | dB     | FS     | @3m    | dB     |
|          |         | PK/QP/AV | dBμV          |        | dBμV/m | dBμV/m |        |
| 10480.00 | H       | Peak     | 30.15         | 20.68  | 50.83  | 68.3   | -17.47 |

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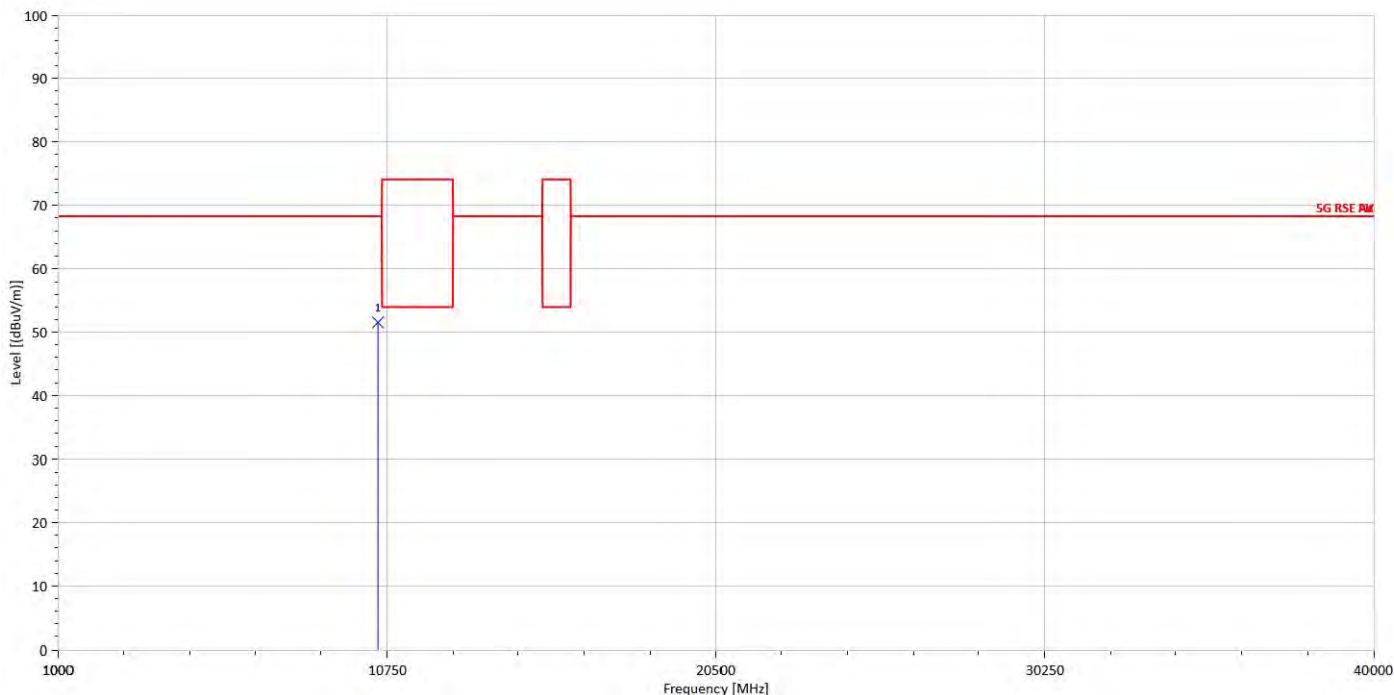
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Operation Mode : 802.11aB1      Test Date : 2017/10/23  
 Fundamental Frequency : 5240 MHz      Temp. / Humi. : 24.5deg\_C/70RH  
 Operation Band : Tx CH HIGH      Test Engineer : Ashton  
 EUT Pol. : E2      Measurement Antenna Pol. : Horizontal



| Freq.    | Note    | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|----------|---------|----------|---------------|--------|--------|--------|--------|
| MHz      | F/H/E/S | Mode     | Reading Level | dB     | FS     | @3m    | dB     |
|          |         | PK/QP/AV | dBuV          |        | dBuV/m | dBuV/m |        |
| 10480.00 | H       | Peak     | 30.88         | 20.68  | 51.56  | 68.3   | -16.74 |

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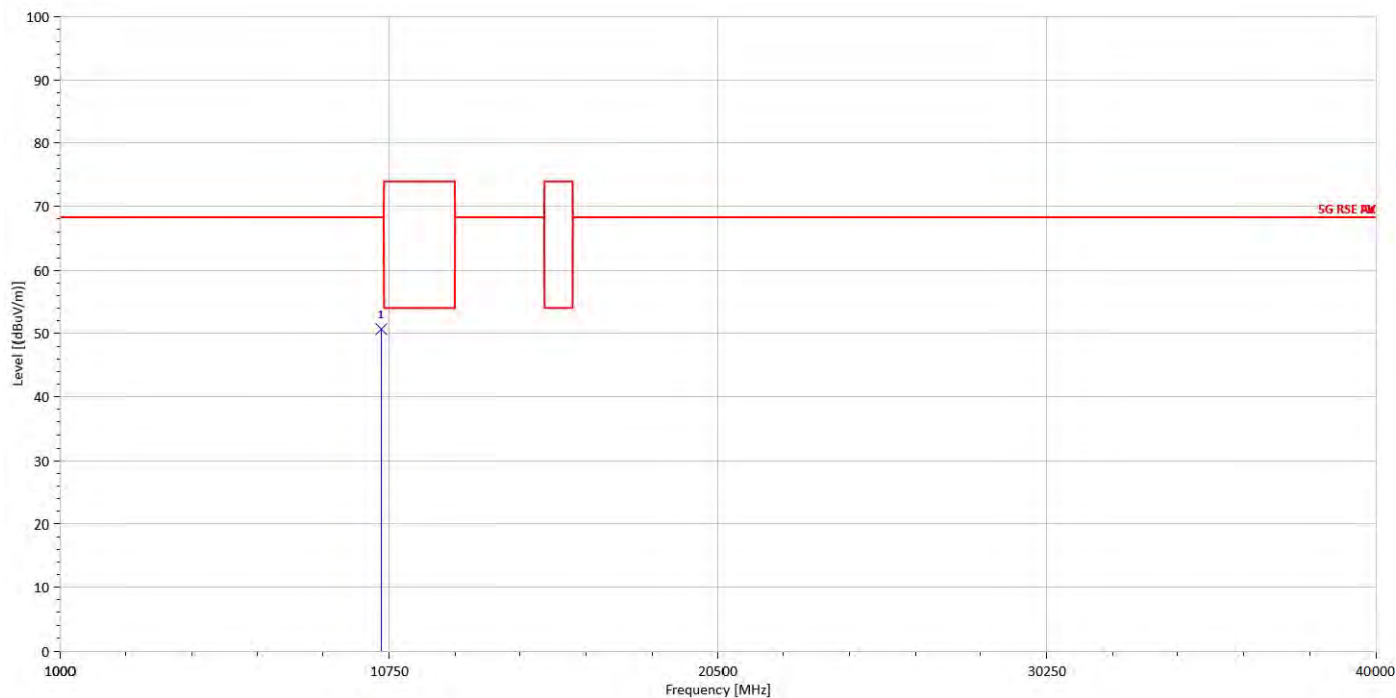
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## Radiated Spurious Emission Measurement Result 802.11a, 5250MHz-5350MHz

|                         |           |                            |                |
|-------------------------|-----------|----------------------------|----------------|
| Operation Mode :        | 802.11aB2 | Test Date :                | 2017/10/23     |
| Fundamental Frequency : | 5260 MHz  | Temp. / Humi. :            | 24.5deg_C/70RH |
| Operation Band :        | Tx CH LOW | Test Engineer :            | Ashton         |
| EUT Pol. :              | E2        | Measurement Antenna Pol. : | Vertical       |



| Freq.    | Note    | Detector Mode | Spectrum Reading Level | Factor | Actual FS | Limit @3m | Margin |
|----------|---------|---------------|------------------------|--------|-----------|-----------|--------|
| MHz      | F/H/E/S | PK/QP/AV      | dBμV                   | dB     | dBμV/m    | dBμV/m    | dB     |
| 10520.00 | H       | Peak          | 30.55                  | 20.10  | 50.65     | 68.3      | -17.65 |

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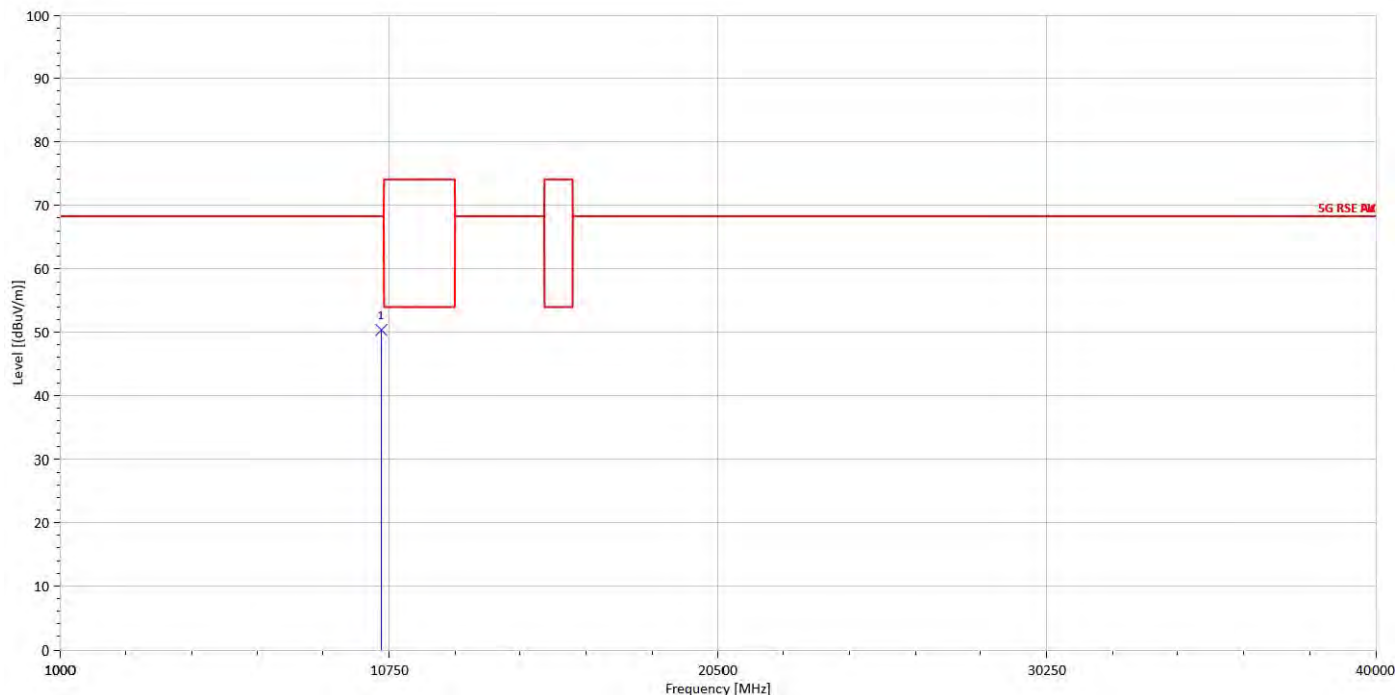
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Operation Mode : 802.11aB2      Test Date : 2017/10/23  
 Fundamental Frequency : 5260 MHz      Temp. / Humi. : 24.5deg\_C/70RH  
 Operation Band : Tx CH LOW      Test Engineer : Ashton  
 EUT Pol. : E2      Measurement Antenna Pol. : Horizontal



| Freq.    | Note    | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|----------|---------|----------|---------------|--------|--------|--------|--------|
| MHz      | F/H/E/S | Mode     | Reading Level | dB     | FS     | @3m    | dB     |
|          |         | PK/QP/AV | dBuV          |        | dBuV/m | dBuV/m |        |
| 10520.00 | H       | Peak     | 30.26         | 20.10  | 50.36  | 68.3   | -17.94 |

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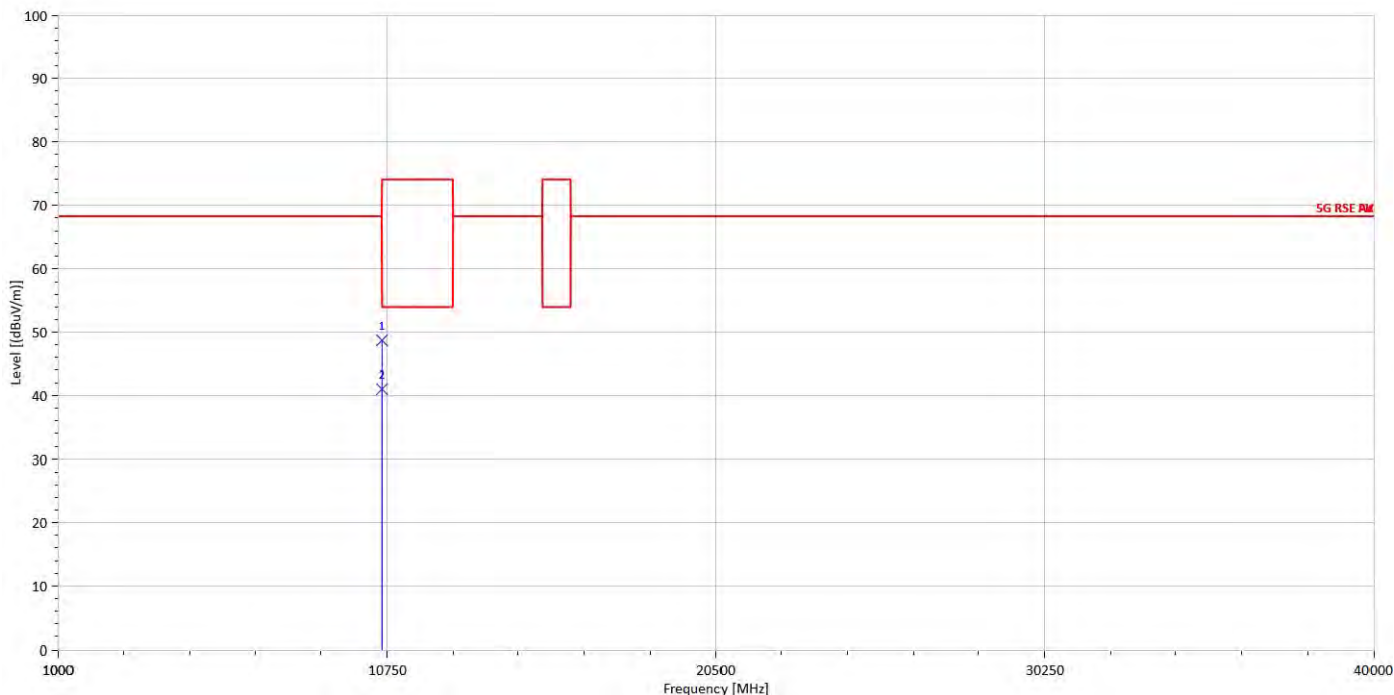
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|                         |           |                            |                |
|-------------------------|-----------|----------------------------|----------------|
| Operation Mode :        | 802.11aB2 | Test Date :                | 2017/10/23     |
| Fundamental Frequency : | 5300 MHz  | Temp. / Humi. :            | 24.5deg_C/70RH |
| Operation Band :        | Tx CH MID | Test Engineer :            | Ashton         |
| EUT Pol. :              | E2        | Measurement Antenna Pol. : | Vertical       |



| Freq.    | Note    | Detector Mode | Spectrum Reading Level | Factor | Actual FS | Limit @3m | Margin |
|----------|---------|---------------|------------------------|--------|-----------|-----------|--------|
| MHz      | F/H/E/S | PK/QP/AV      | dBuV                   | dB     | dBuV/m    | dBuV/m    | dB     |
| 10600.00 | H       | Peak          | 28.54                  | 20.17  | 48.71     | 74        | -25.29 |
| 10600.00 | H       | Average       | 20.91                  | 20.17  | 41.08     | 54        | -12.92 |

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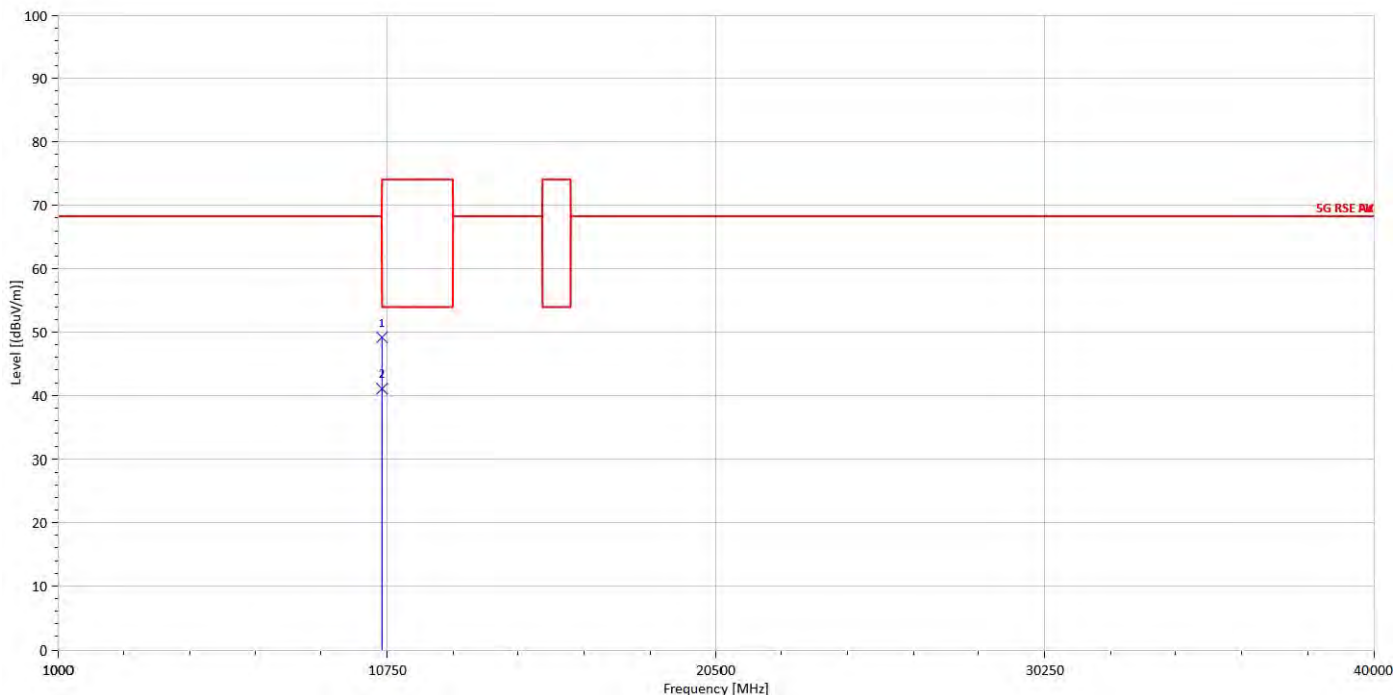
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|                         |           |                            |                |
|-------------------------|-----------|----------------------------|----------------|
| Operation Mode :        | 802.11aB2 | Test Date :                | 2017/10/23     |
| Fundamental Frequency : | 5300 MHz  | Temp. / Humi. :            | 24.5deg_C/70RH |
| Operation Band :        | Tx CH MID | Test Engineer :            | Ashton         |
| EUT Pol. :              | E2        | Measurement Antenna Pol. : | Horizontal     |



| Freq.    | Note    | Detector Mode | Spectrum Reading Level | Factor | Actual FS | Limit @3m | Margin |
|----------|---------|---------------|------------------------|--------|-----------|-----------|--------|
| MHz      | F/H/E/S | PK/QP/AV      | dBuV                   | dB     | dBuV/m    | dBuV/m    | dB     |
| 10600.00 | H       | Peak          | 29.02                  | 20.17  | 49.18     | 74        | -24.82 |
| 10600.00 | H       | Average       | 20.98                  | 20.17  | 41.15     | 54        | -12.85 |

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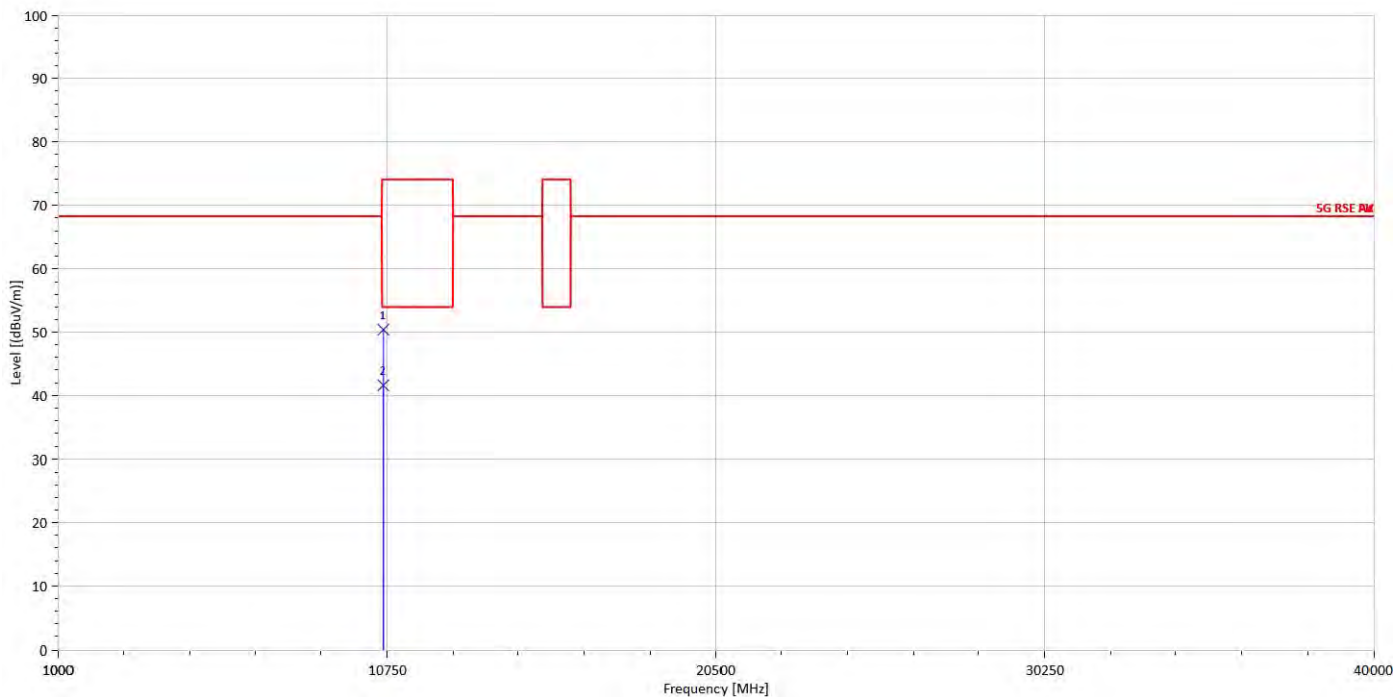
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Operation Mode : 802.11aB2      Test Date : 2017/10/23  
 Fundamental Frequency : 5320 MHz      Temp. / Humi. : 24.5deg\_C/70RH  
 Operation Band : Tx CH HIGH      Test Engineer : Ashton  
 EUT Pol. : E2      Measurement Antenna Pol. : Vertical



| Freq.    | Note    | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|----------|---------|----------|---------------|--------|--------|--------|--------|
| MHz      | F/H/E/S | Mode     | Reading Level |        | FS     | @3m    |        |
|          |         | PK/QP/AV | dBuV          | dB     | dBuV/m | dBuV/m | dB     |
| 10640.00 | H       | Peak     | 30.06         | 20.34  | 50.41  | 74     | -23.59 |
| 10640.00 | H       | Average  | 21.36         | 20.34  | 41.70  | 54     | -12.30 |

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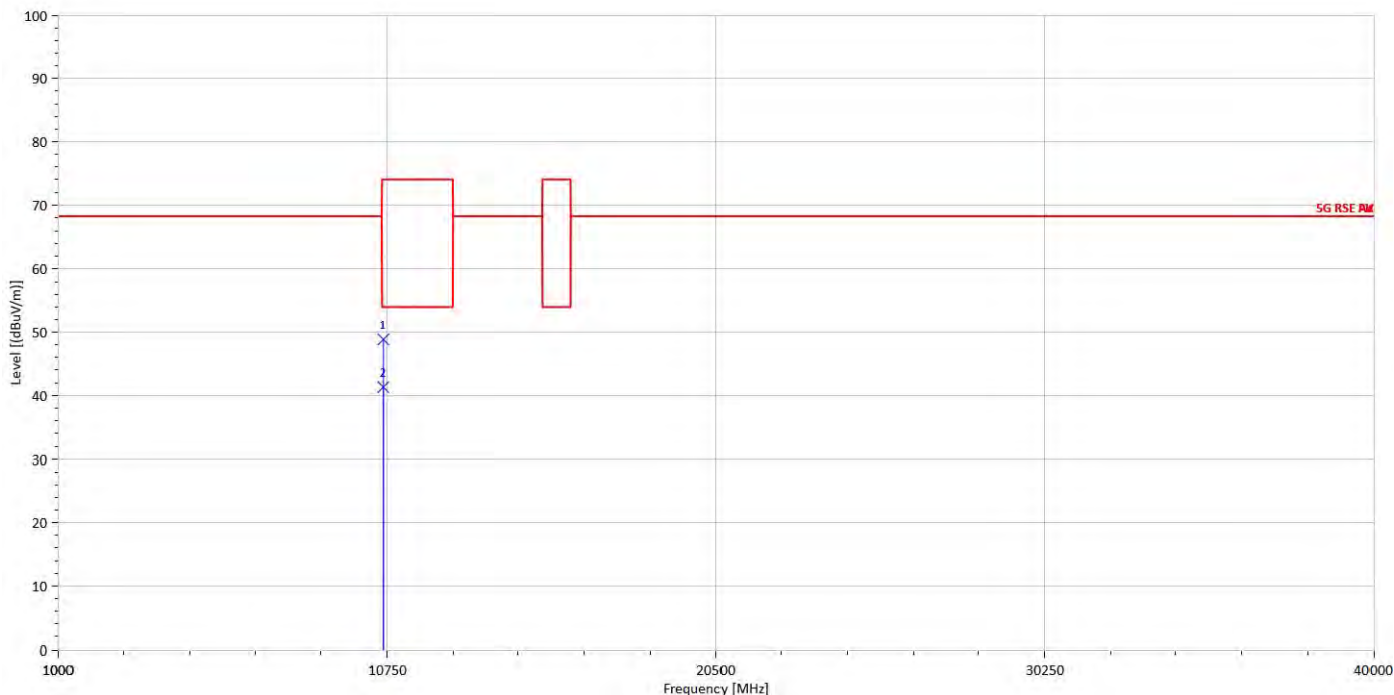
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Operation Mode : 802.11aB2      Test Date : 2017/10/23  
 Fundamental Frequency : 5320 MHz      Temp. / Humi. : 24.5deg\_C/70RH  
 Operation Band : Tx CH HIGH      Test Engineer : Ashton  
 EUT Pol. : E2      Measurement Antenna Pol. : Horizontal



| Freq.    | Note    | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|----------|---------|----------|---------------|--------|--------|--------|--------|
| MHz      | F/H/E/S | Mode     | Reading Level |        | FS     | @3m    |        |
|          |         | PK/QP/AV | dBuV          | dB     | dBuV/m | dBuV/m | dB     |
| 10640.00 | H       | Peak     | 28.51         | 20.34  | 48.85  | 74     | -25.15 |
| 10640.00 | H       | Average  | 21.07         | 20.34  | 41.41  | 54     | -12.59 |

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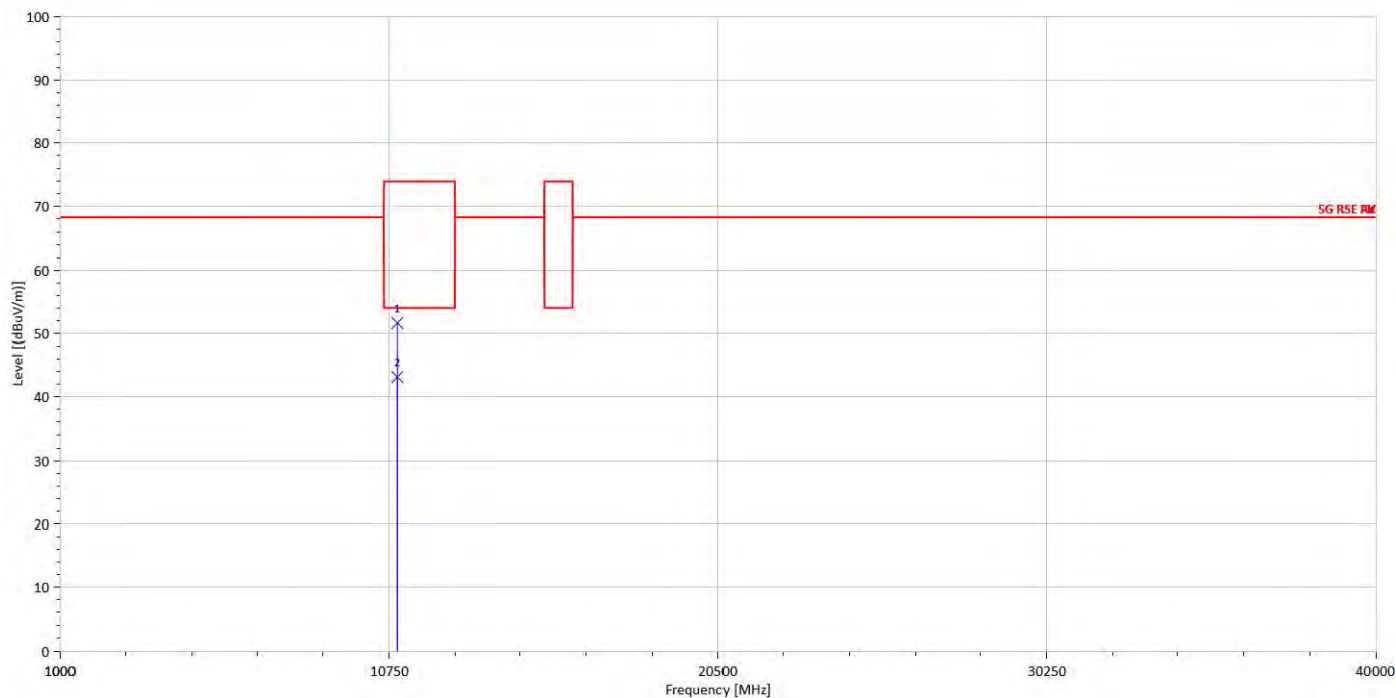
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## Radiated Spurious Emission Measurement Result 802.11a, 5470~5725 MHz

|                         |           |                            |                |
|-------------------------|-----------|----------------------------|----------------|
| Operation Mode :        | 802.11aB3 | Test Date :                | 2017/10/23     |
| Fundamental Frequency : | 5500 MHz  | Temp. / Humi. :            | 24.5deg_C/70RH |
| Operation Band :        | Tx CH LOW | Test Engineer :            | Ashton         |
| EUT Pol. :              | E2        | Measurement Antenna Pol. : | Vertical       |



| Freq.    | Note    | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|----------|---------|----------|---------------|--------|--------|--------|--------|
| MHz      | F/H/E/S | Mode     | Reading Level |        | FS     | @3m    |        |
|          |         | PK/QP/AV | dBμV          | dB     | dBμV/m | dBμV/m | dB     |
| 11000.00 | H       | Peak     | 29.53         | 22.11  | 51.63  | 74     | -22.37 |
| 11000.00 | H       | Average  | 21.07         | 22.11  | 43.18  | 54     | -10.82 |

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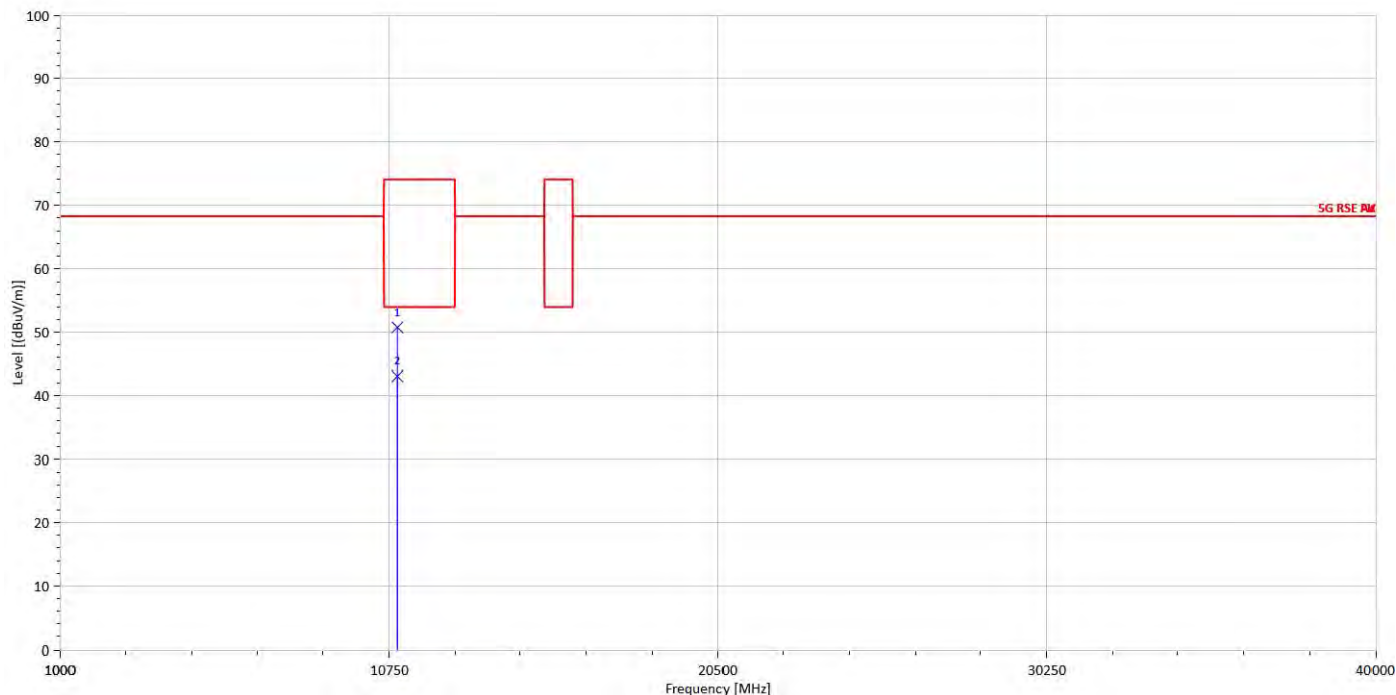
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Operation Mode : 802.11aB3      Test Date : 2017/10/23  
 Fundamental Frequency : 5500 MHz      Temp. / Humi. : 24.5deg\_C/70RH  
 Operation Band : Tx CH LOW      Test Engineer : Ashton  
 EUT Pol. : E2      Measurement Antenna Pol. : Horizontal



| Freq.    | Note    | Detector Mode | Spectrum Reading Level | Factor | Actual FS | Limit @3m | Margin |
|----------|---------|---------------|------------------------|--------|-----------|-----------|--------|
| MHz      | F/H/E/S | PK/QP/AV      | dBuV                   | dB     | dBuV/m    | dBuV/m    | dB     |
| 11000.00 | H       | Peak          | 28.67                  | 22.11  | 50.77     | 74        | -23.23 |
| 11000.00 | H       | Average       | 21.02                  | 22.11  | 43.13     | 54        | -10.87 |

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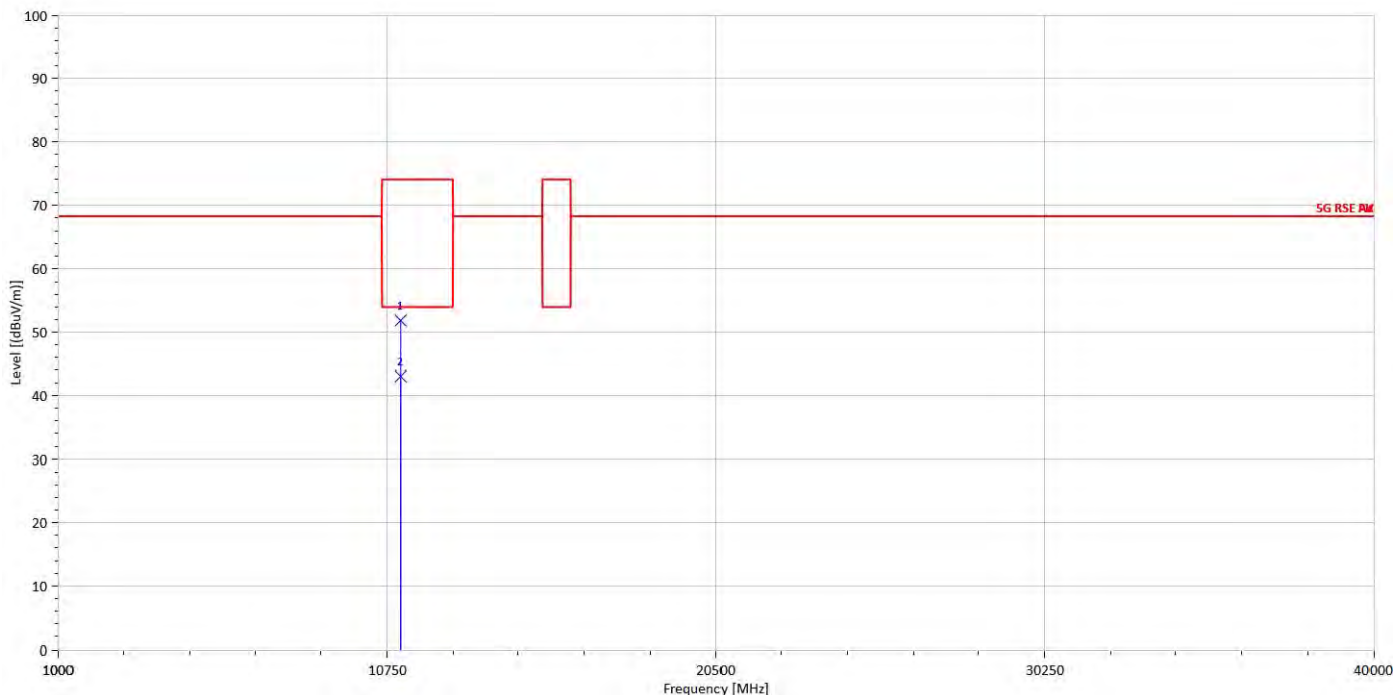
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Operation Mode : 802.11aB3      Test Date : 2017/10/23  
 Fundamental Frequency : 5580 MHz      Temp. / Humi. : 24.5deg\_C/70RH  
 Operation Band : Tx CH MID      Test Engineer : Ashton  
 EUT Pol. : E2      Measurement Antenna Pol. : Vertical



| Freq.    | Note    | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|----------|---------|----------|---------------|--------|--------|--------|--------|
| MHz      | F/H/E/S | Mode     | Reading Level |        | FS     | @3m    |        |
|          |         | PK/QP/AV | dBμV          | dB     | dBμV/m | dBμV/m | dB     |
| 11160.00 | H       | Peak     | 29.82         | 22.04  | 51.86  | 74     | -22.14 |
| 11160.00 | H       | Average  | 21.06         | 22.04  | 43.10  | 54     | -10.90 |

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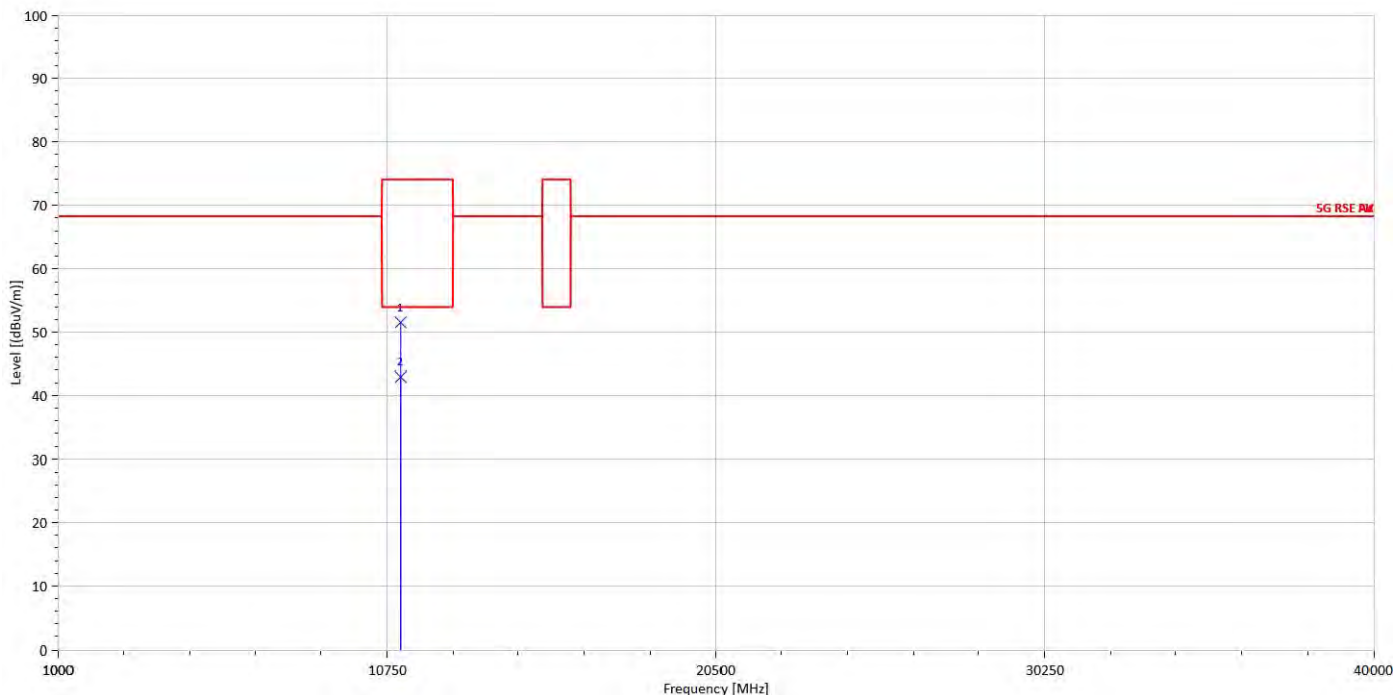
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Operation Mode : 802.11aB3      Test Date : 2017/10/23  
 Fundamental Frequency : 5580 MHz      Temp. / Humi. : 24.5deg\_C/70RH  
 Operation Band : Tx CH MID      Test Engineer : Ashton  
 EUT Pol. : E2      Measurement Antenna Pol. : Horizontal



| Freq.    | Note    | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|----------|---------|----------|---------------|--------|--------|--------|--------|
| MHz      | F/H/E/S | Mode     | Reading Level |        | FS     | @3m    |        |
|          |         | PK/QP/AV | dBuV          | dB     | dBuV/m | dBuV/m | dB     |
| 11160.00 | H       | Peak     | 29.53         | 22.04  | 51.57  | 74     | -22.43 |
| 11160.00 | H       | Average  | 20.97         | 22.04  | 43.01  | 54     | -10.99 |

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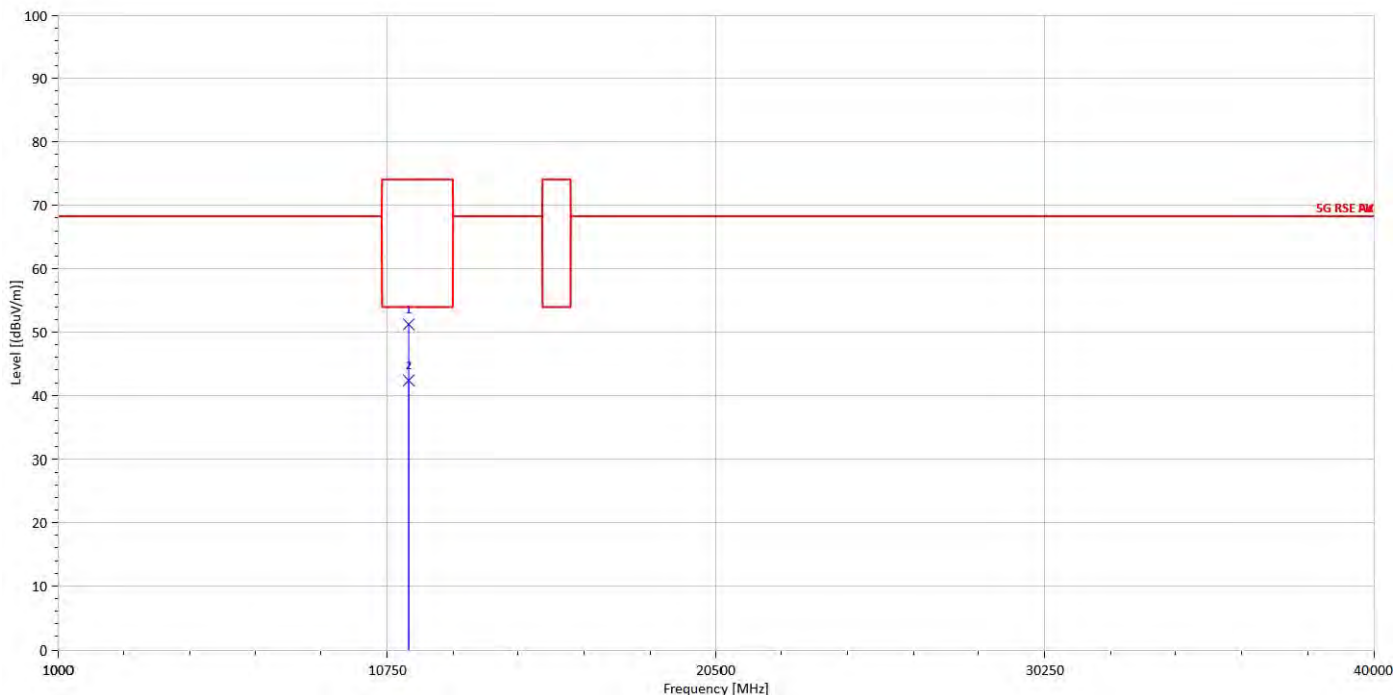
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Operation Mode : 802.11aB3      Test Date : 2017/10/23  
 Fundamental Frequency : 5700 MHz      Temp. / Humi. : 24.5deg\_C/70RH  
 Operation Band : Tx CH HIGH      Test Engineer : Ashton  
 EUT Pol. : E2      Measurement Antenna Pol. : Vertical



| Freq.    | Note    | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|----------|---------|----------|---------------|--------|--------|--------|--------|
| MHz      | F/H/E/S | Mode     | Reading Level |        | FS     | @3m    |        |
|          |         | PK/QP/AV | dBuV          | dB     | dBuV/m | dBuV/m | dB     |
| 11400.00 | H       | Peak     | 30.03         | 21.22  | 51.25  | 74     | -22.75 |
| 11400.00 | H       | Average  | 21.26         | 21.22  | 42.48  | 54     | -11.52 |

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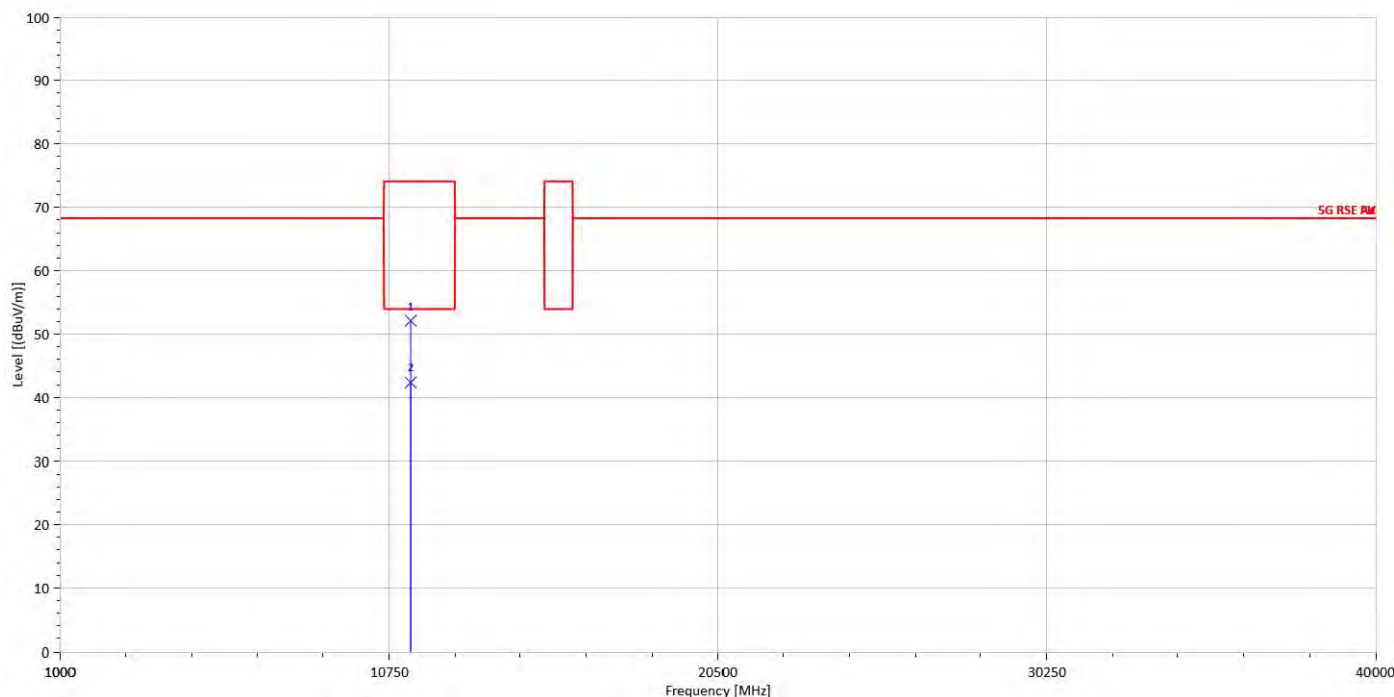
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|                         |            |                            |                |
|-------------------------|------------|----------------------------|----------------|
| Operation Mode :        | 802.11aB3  | Test Date :                | 2017/10/23     |
| Fundamental Frequency : | 5700 MHz   | Temp. / Humi. :            | 24.5deg_C/70RH |
| Operation Band :        | Tx CH HIGH | Test Engineer :            | Ashton         |
| EUT Pol. :              | E2         | Measurement Antenna Pol. : | Horizontal     |



| Freq.    | Note    | Detector Mode | Spectrum Reading Level | Factor | Actual FS | Limit @3m | Margin |
|----------|---------|---------------|------------------------|--------|-----------|-----------|--------|
| MHz      | F/H/E/S | PK/QP/AV      | dBμV                   | dB     | dBμV/m    | dBμV/m    | dB     |
| 11400.00 | H       | Peak          | 30.92                  | 21.22  | 52.14     | 74        | -21.86 |
| 11400.00 | H       | Average       | 21.24                  | 21.22  | 42.46     | 54        | -11.54 |

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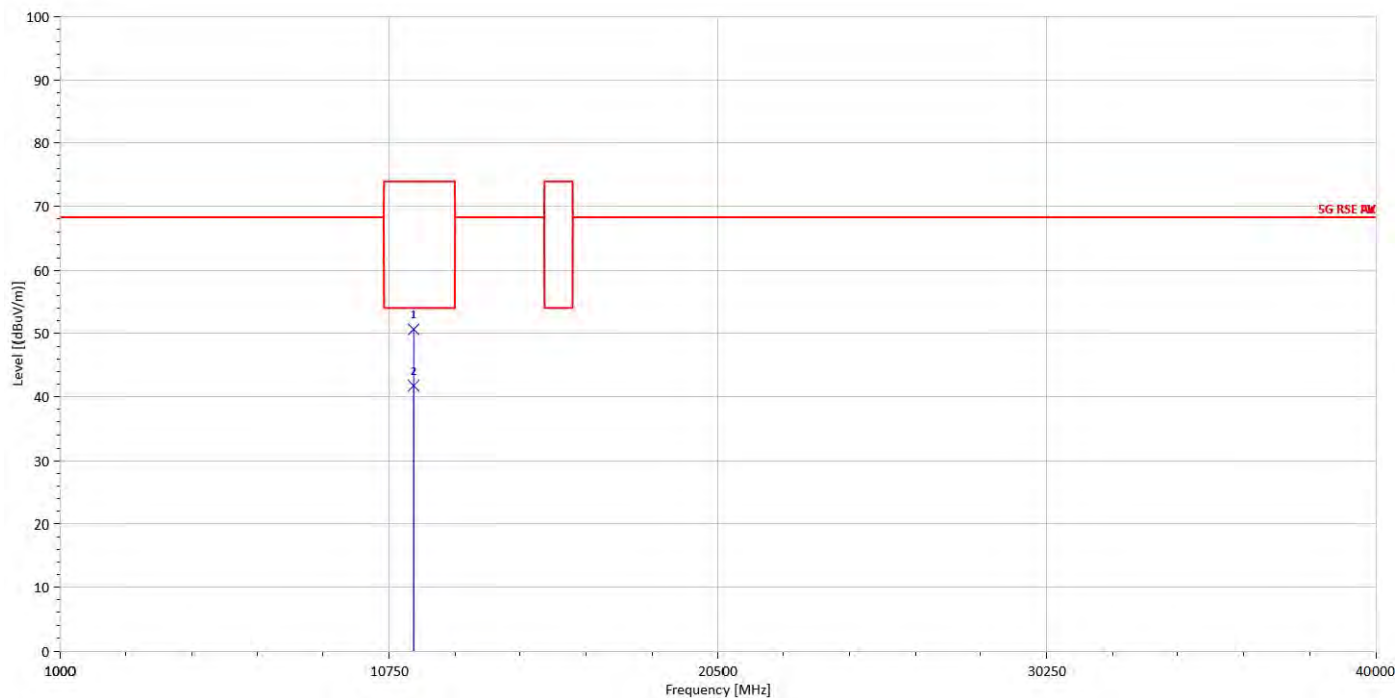
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## Radiated Spurious Emission Measurement Result 802.11a, 5725~5850 MHz

|                         |           |                            |                |
|-------------------------|-----------|----------------------------|----------------|
| Operation Mode :        | 802.11aB4 | Test Date :                | 2017/10/23     |
| Fundamental Frequency : | 5745 MHz  | Temp. / Humi. :            | 24.5deg_C/70RH |
| Operation Band :        | Tx CH LOW | Test Engineer :            | Ashton         |
| EUT Pol. :              | E2        | Measurement Antenna Pol. : | Vertical       |



| Freq.    | Note    | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|----------|---------|----------|---------------|--------|--------|--------|--------|
| MHz      | F/H/E/S | Mode     | Reading Level |        | FS     | @3m    |        |
|          |         | PK/QP/AV | dBμV          | dB     | dBμV/m | dBμV/m | dB     |
| 11490.00 | H       | Peak     | 29.92         | 20.70  | 50.62  | 74     | -23.38 |
| 11490.00 | H       | Average  | 21.09         | 20.70  | 41.79  | 54     | -12.21 |

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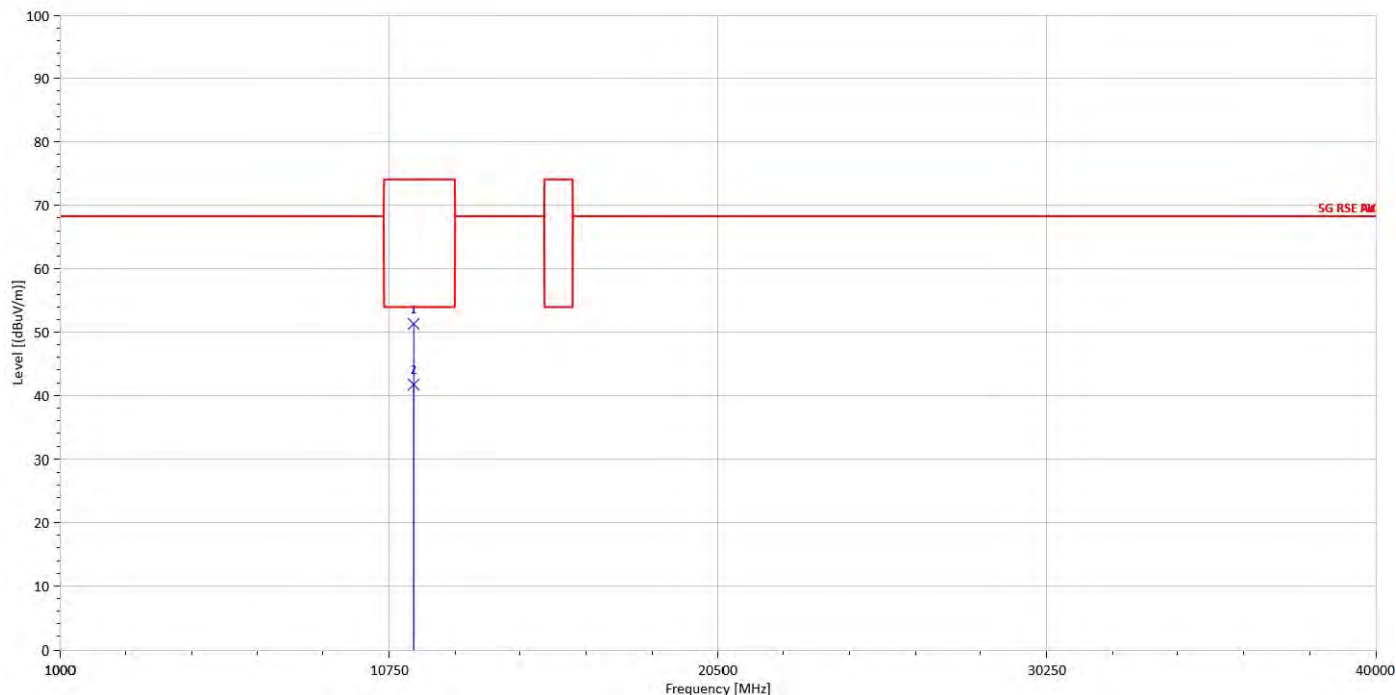
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Operation Mode : 802.11aB4      Test Date : 2017/10/23  
 Fundamental Frequency : 5745 MHz      Temp. / Humi. : 24.5deg\_C/70RH  
 Operation Band : Tx CH LOW      Test Engineer : Ashton  
 EUT Pol. : E2      Measurement Antenna Pol. : Horizontal



| Freq.    | Note    | Detector Mode | Spectrum Reading Level | Factor | Actual FS | Limit @3m | Margin |
|----------|---------|---------------|------------------------|--------|-----------|-----------|--------|
| MHz      | F/H/E/S | PK/QP/AV      | dBuV                   | dB     | dBuV/m    | dBuV/m    | dB     |
| 11490.00 | H       | Peak          | 30.63                  | 20.70  | 51.33     | 74        | -22.67 |
| 11490.00 | H       | Average       | 21.11                  | 20.70  | 41.81     | 54        | -12.19 |

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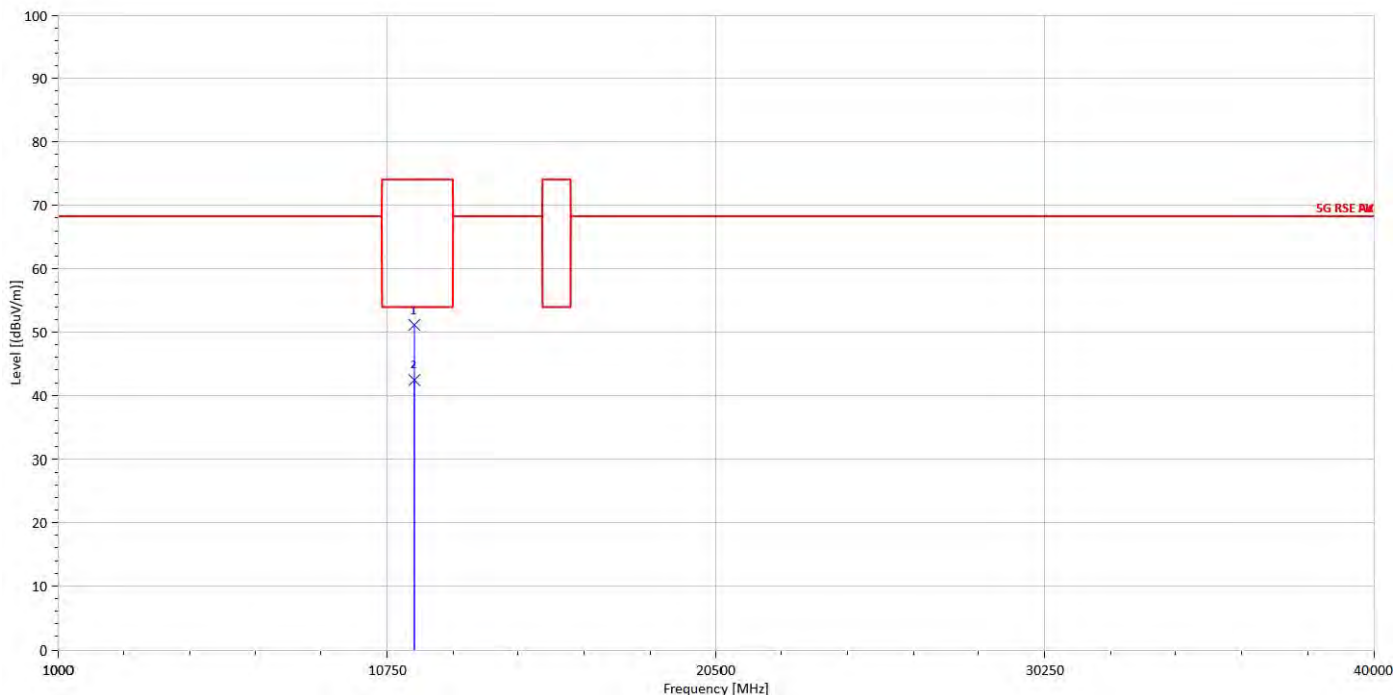
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Operation Mode : 802.11aB4      Test Date : 2017/10/23  
 Fundamental Frequency : 5785 MHz      Temp. / Humi. : 24.5deg\_C/70RH  
 Operation Band : Tx CH MID      Test Engineer : Ashton  
 EUT Pol. : E2      Measurement Antenna Pol. : Vertical



| Freq.    | Note    | Detector Mode | Spectrum Reading Level | Factor | Actual FS | Limit @3m | Margin |
|----------|---------|---------------|------------------------|--------|-----------|-----------|--------|
| MHz      | F/H/E/S | PK/QP/AV      | dBμV                   | dB     | dBμV/m    | dBμV/m    | dB     |
| 11570.00 | H       | Peak          | 29.72                  | 21.44  | 51.16     | 74        | -22.84 |
| 11570.00 | H       | Average       | 21.08                  | 21.44  | 42.52     | 54        | -11.48 |

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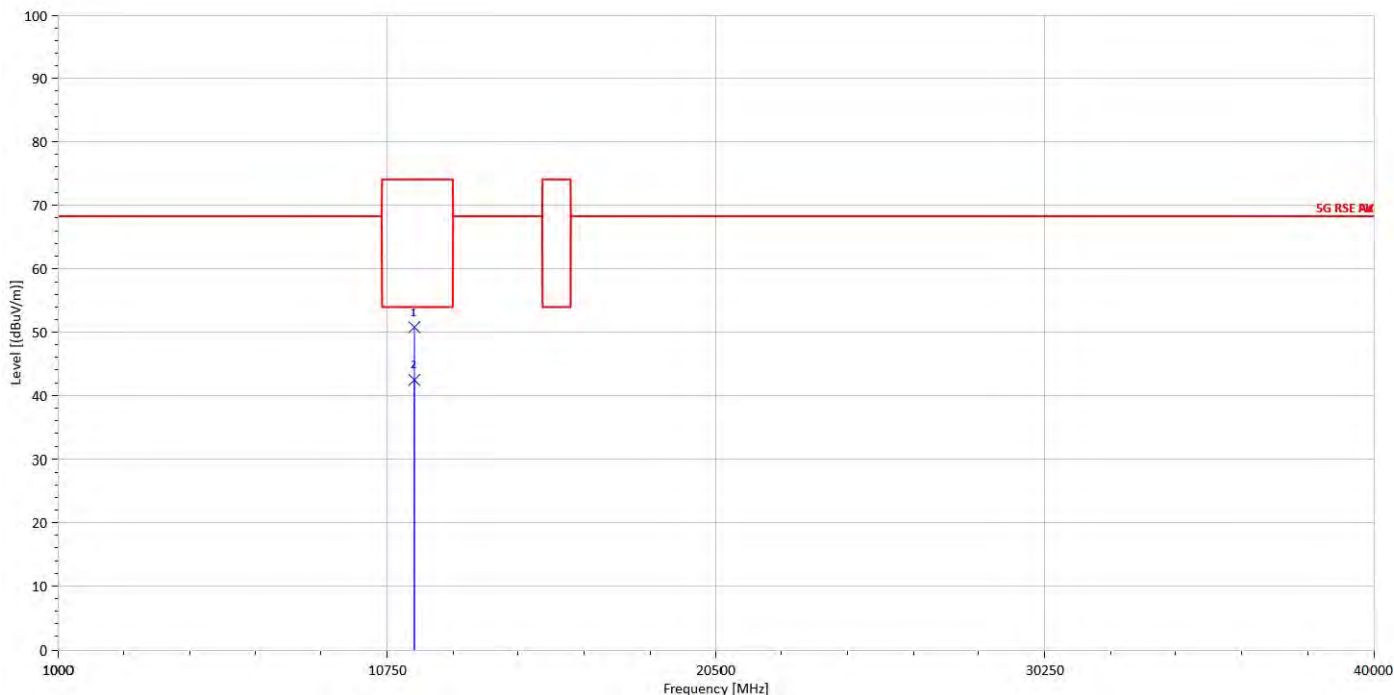
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Operation Mode : 802.11aB4      Test Date : 2017/10/23  
 Fundamental Frequency : 5785 MHz      Temp. / Humi. : 24.5deg\_C/70RH  
 Operation Band : Tx CH MID      Test Engineer : Ashton  
 EUT Pol. : E2      Measurement Antenna Pol. : Horizontal



| Freq.    | Note    | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|----------|---------|----------|---------------|--------|--------|--------|--------|
| MHz      | F/H/E/S | Mode     | Reading Level | dB     | FS     | @3m    | dB     |
|          |         | PK/QP/AV | dBuV          |        | dBuV/m | dBuV/m |        |
| 11570.00 | H       | Peak     | 29.35         | 21.44  | 50.80  | 74     | -23.20 |
| 11570.00 | H       | Average  | 21.11         | 21.44  | 42.55  | 54     | -11.45 |

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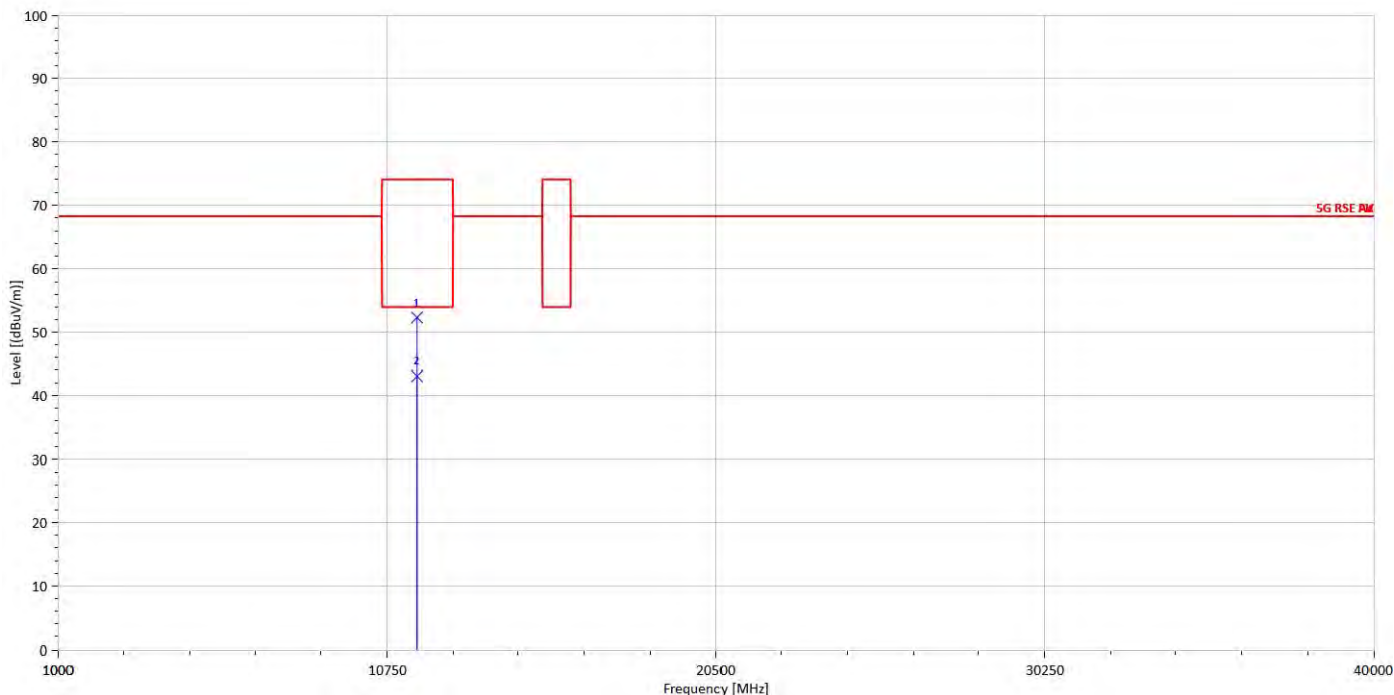
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Operation Mode : 802.11aB4      Test Date : 2017/10/23  
 Fundamental Frequency : 5825 MHz      Temp. / Humi. : 24.5deg\_C/70RH  
 Operation Band : Tx CH HIGH      Test Engineer : Ashton  
 EUT Pol. : E2      Measurement Antenna Pol. : Vertical



| Freq.    | Note    | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|----------|---------|----------|---------------|--------|--------|--------|--------|
| MHz      | F/H/E/S | Mode     | Reading Level |        | FS     | @3m    |        |
|          |         | PK/QP/AV | dBμV          | dB     | dBμV/m | dBμV/m | dB     |
| 11650.00 | H       | Peak     | 30.31         | 22.02  | 52.33  | 74     | -21.67 |
| 11650.00 | H       | Average  | 21.10         | 22.02  | 43.12  | 54     | -10.88 |

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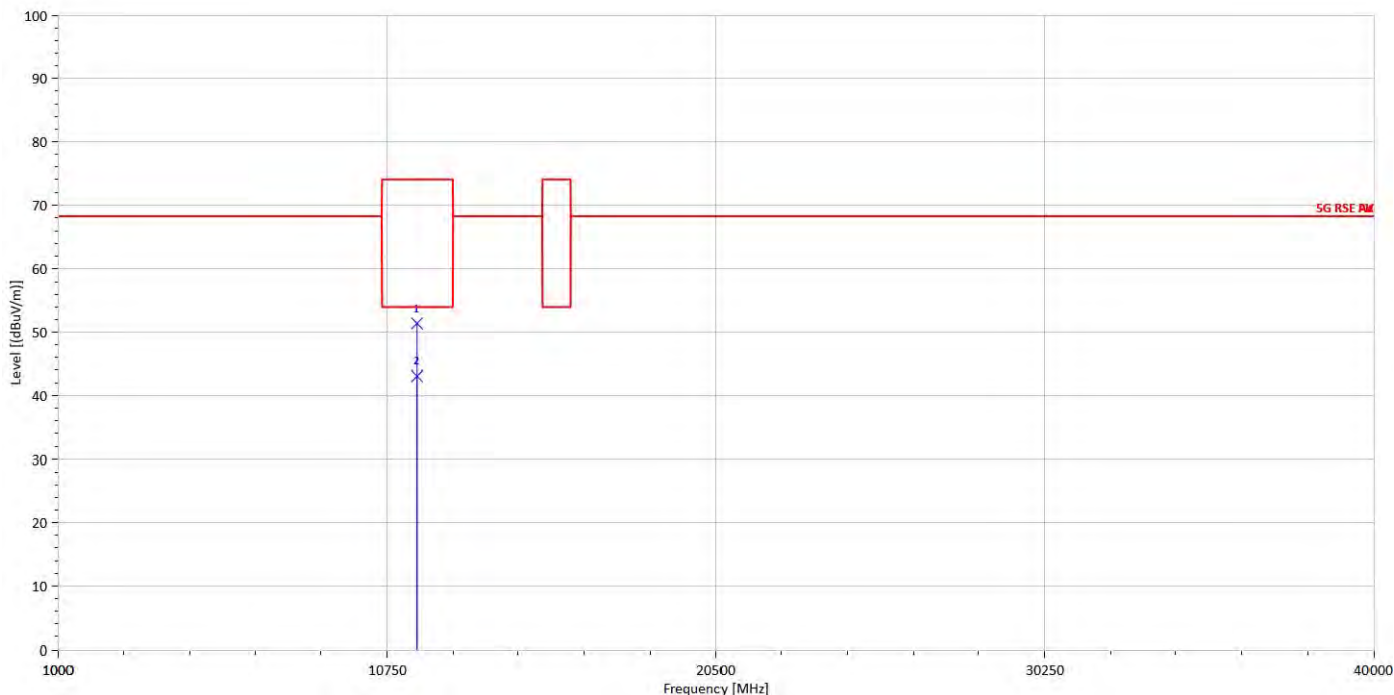
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Operation Mode : 802.11aB4      Test Date : 2017/10/23  
 Fundamental Frequency : 5825 MHz      Temp. / Humi. : 24.5deg\_C/70RH  
 Operation Band : Tx CH HIGH      Test Engineer : Ashton  
 EUT Pol. : E2      Measurement Antenna Pol. : Horizontal



| Freq.    | Note    | Detector Mode | Spectrum Reading Level | Factor | Actual FS | Limit @3m | Margin |
|----------|---------|---------------|------------------------|--------|-----------|-----------|--------|
| MHz      | F/H/E/S | PK/QP/AV      | dBuV                   | dB     | dBuV/m    | dBuV/m    | dB     |
| 11650.00 | H       | Peak          | 29.37                  | 22.02  | 51.40     | 74        | -22.60 |
| 11650.00 | H       | Average       | 21.11                  | 22.02  | 43.13     | 54        | -10.87 |

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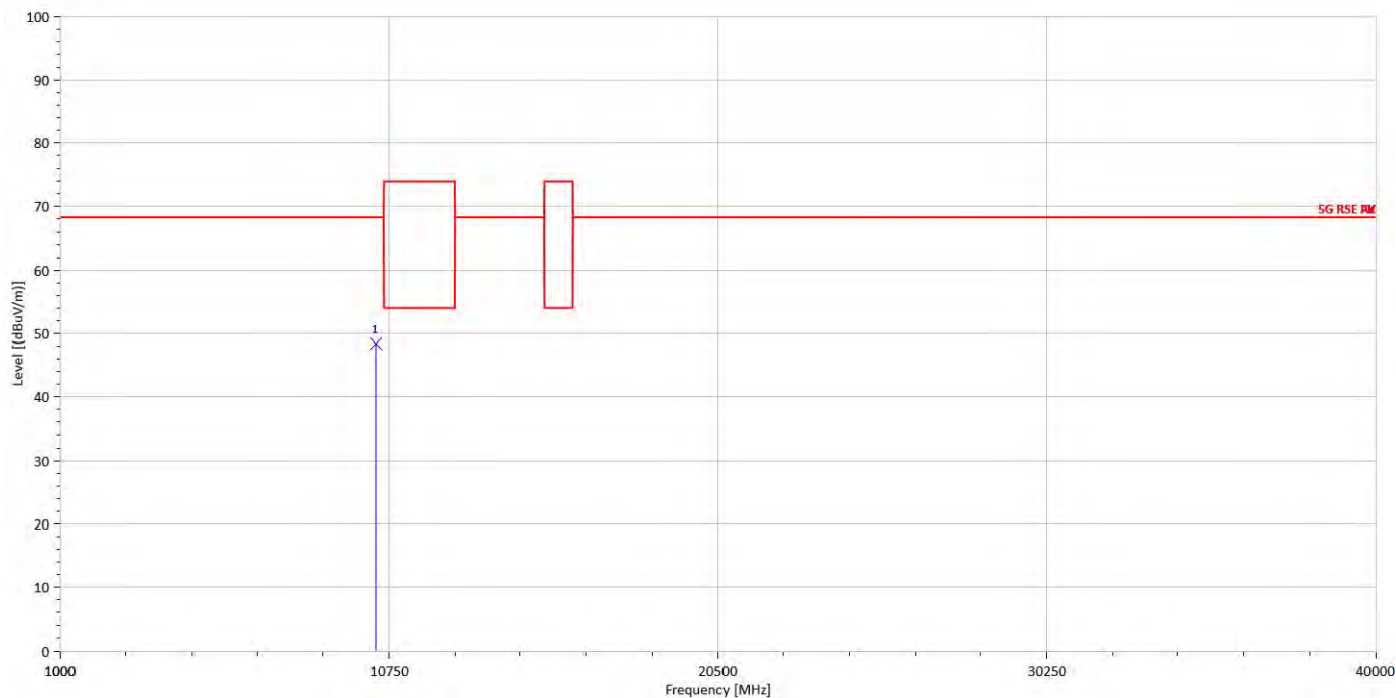
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## Radiated Spurious Emission Measurement Result 802.11n HT20, 5150~5250 MHz

|                         |             |                            |                |
|-------------------------|-------------|----------------------------|----------------|
| Operation Mode :        | 802.11n20B1 | Test Date :                | 2017/10/23     |
| Fundamental Frequency : | 5180 MHz    | Temp. / Humi. :            | 24.5deg_C/70RH |
| Operation Band :        | Tx CH LOW   | Test Engineer :            | Ashton         |
| EUT Pol. :              | E2          | Measurement Antenna Pol. : | Vertical       |



| Freq.    | Note    | Detector Mode | Spectrum Reading Level | Factor | Actual FS | Limit @3m | Margin |
|----------|---------|---------------|------------------------|--------|-----------|-----------|--------|
| MHz      | F/H/E/S | PK/QP/AV      | dBμV                   | dB     | dBμV/m    | dBμV/m    | dB     |
| 10360.00 | H       | Peak          | 28.23                  | 20.18  | 48.40     | 68.3      | -19.90 |

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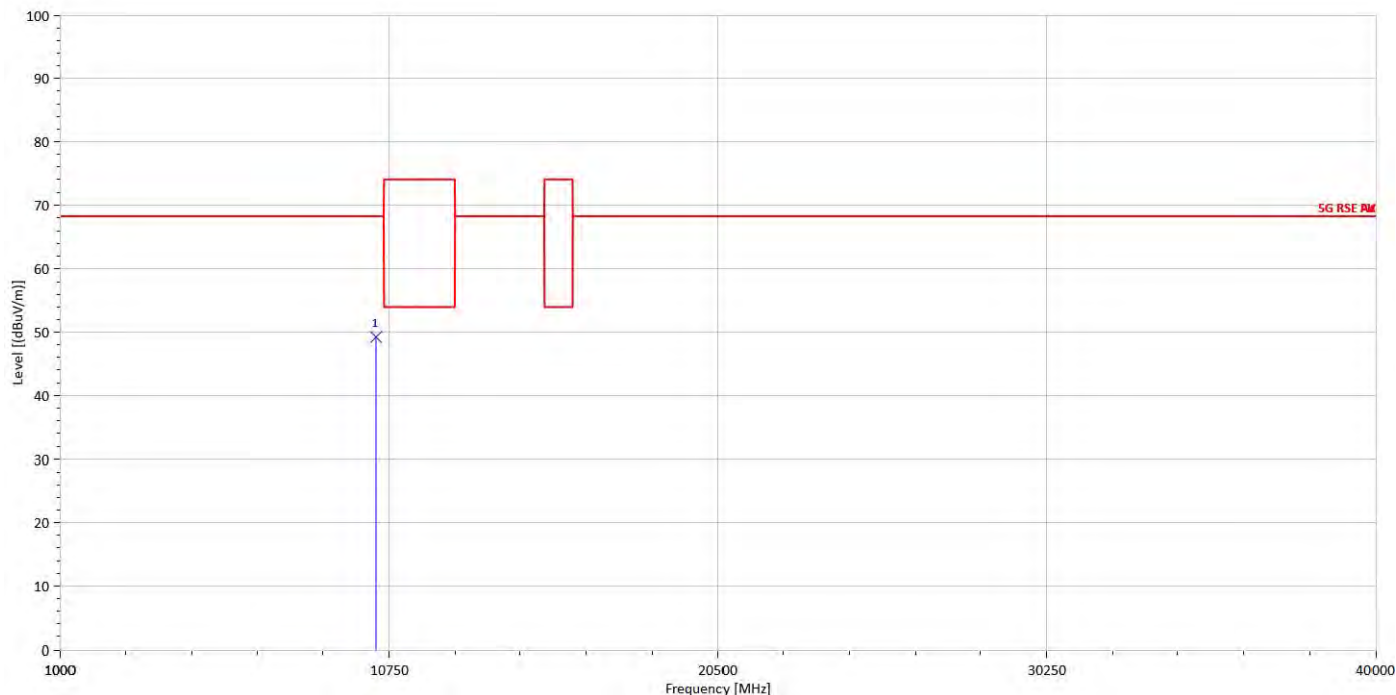
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Operation Mode : 802.11n20B1      Test Date : 2017/10/23  
 Fundamental Frequency : 5180 MHz      Temp. / Humi. : 24.5deg\_C/70RH  
 Operation Band : Tx CH LOW      Test Engineer : Ashton  
 EUT Pol. : E2      Measurement Antenna Pol. : Horizontal



| Freq.    | Note    | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|----------|---------|----------|---------------|--------|--------|--------|--------|
| MHz      | F/H/E/S | Mode     | Reading Level | dB     | FS     | @3m    | dB     |
|          |         | PK/QP/AV | dBuV          |        | dBuV/m | dBuV/m |        |
| 10360.00 | H       | Peak     | 29.05         | 20.18  | 49.23  | 68.3   | -19.07 |

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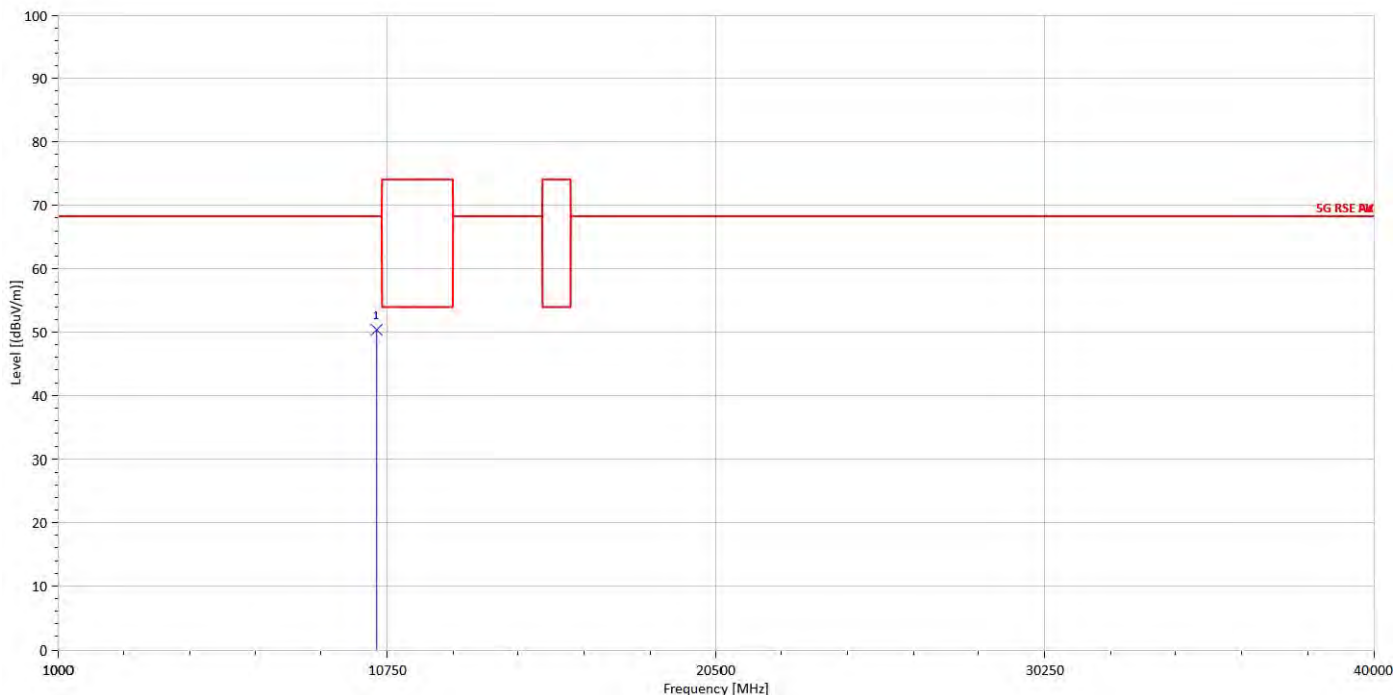
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Operation Mode : 802.11n20B1      Test Date : 2017/10/23  
 Fundamental Frequency : 5220 MHz      Temp. / Humi. : 24.5deg\_C/70RH  
 Operation Band : Tx CH MID      Test Engineer : Ashton  
 EUT Pol. : E2      Measurement Antenna Pol. : Vertical



| Freq.    | Note    | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|----------|---------|----------|---------------|--------|--------|--------|--------|
| MHz      | F/H/E/S | Mode     | Reading Level | dB     | FS     | @3m    | dB     |
|          |         | PK/QP/AV | dBuV          |        | dBuV/m | dBuV/m |        |
| 10440.00 | H       | Peak     | 30.08         | 20.29  | 50.38  | 68.3   | -17.92 |

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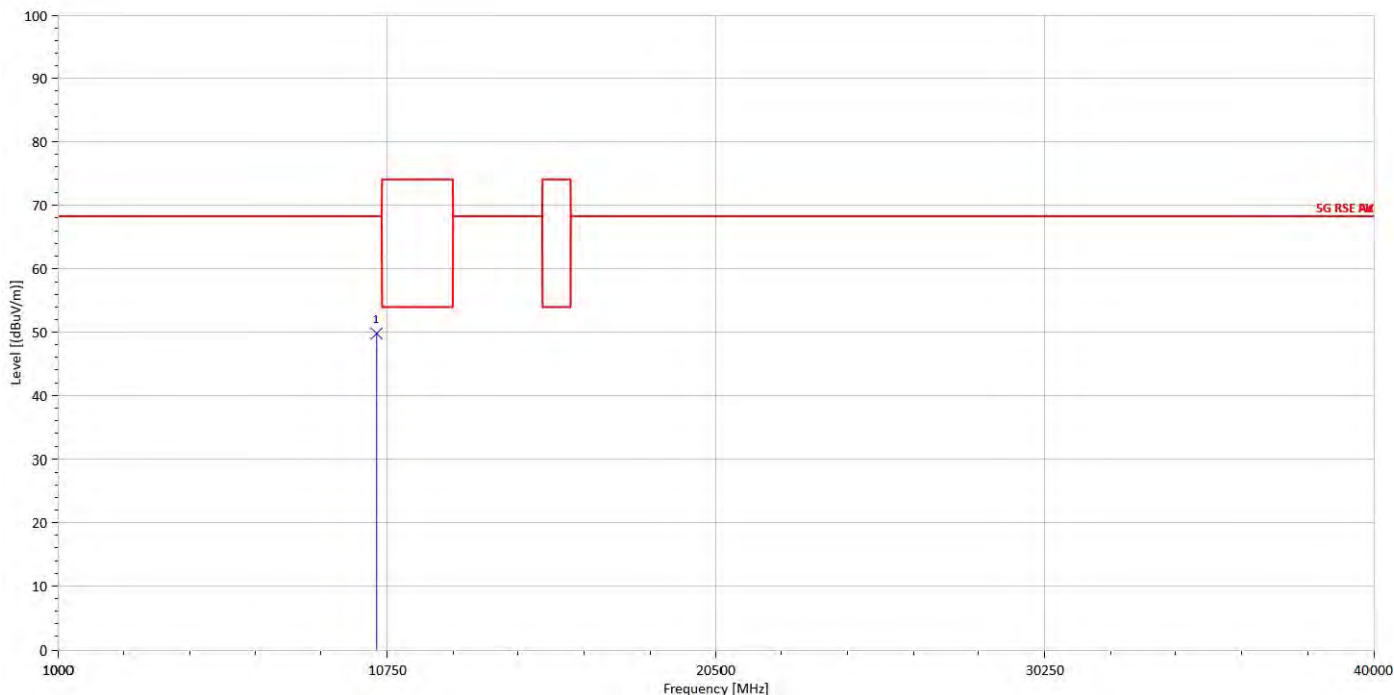
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Operation Mode : 802.11n20B1      Test Date : 2017/10/23  
 Fundamental Frequency : 5220 MHz      Temp. / Humi. : 24.5deg\_C/70RH  
 Operation Band : Tx CH MID      Test Engineer : Ashton  
 EUT Pol. : E2      Measurement Antenna Pol. : Horizontal



| Freq.    | Note    | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|----------|---------|----------|---------------|--------|--------|--------|--------|
| MHz      | F/H/E/S | Mode     | Reading Level | dB     | FS     | @3m    | dB     |
|          |         | PK/QP/AV | dBuV          |        | dBuV/m | dBuV/m |        |
| 10440.00 | H       | Peak     | 29.48         | 20.29  | 49.77  | 68.3   | -18.53 |

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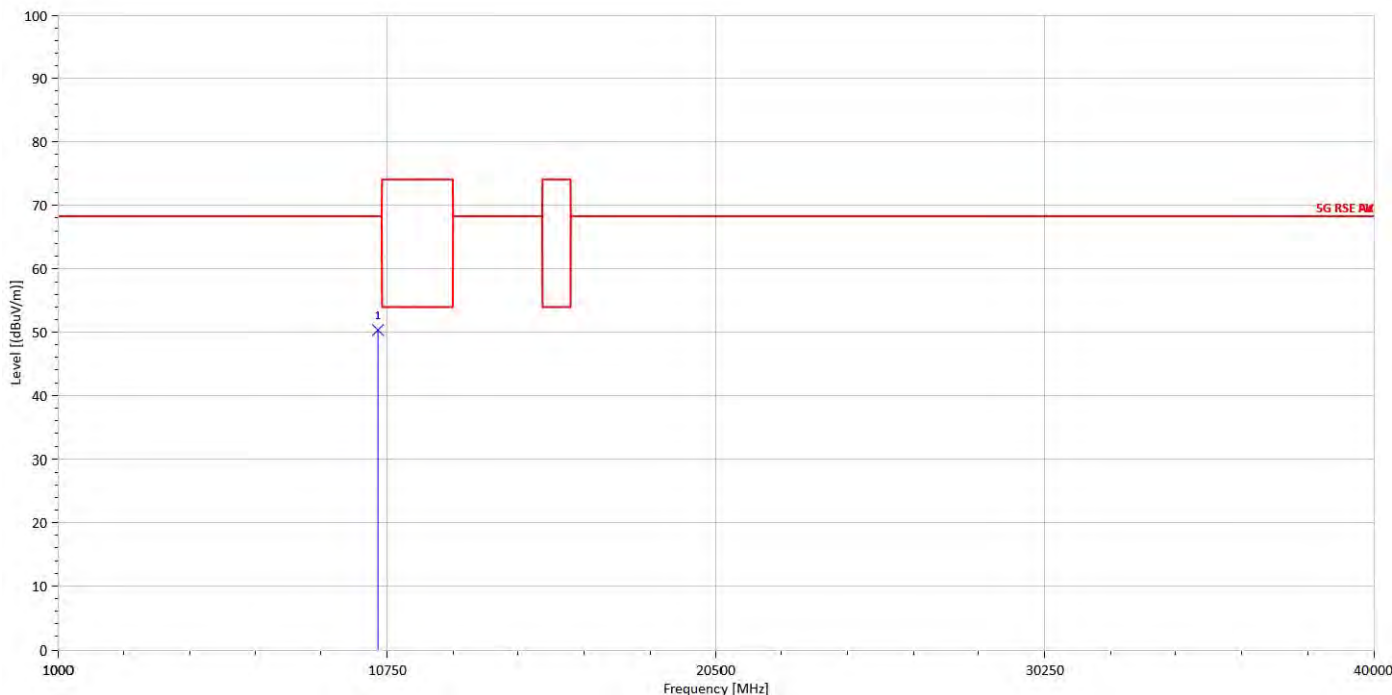
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Operation Mode : 802.11n20B1      Test Date : 2017/10/23  
 Fundamental Frequency : 5240 MHz      Temp. / Humi. : 24.5deg\_C/70RH  
 Operation Band : Tx CH HIGH      Test Engineer : Ashton  
 EUT Pol. : E2      Measurement Antenna Pol. : Vertical



| Freq.    | Note    | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|----------|---------|----------|---------------|--------|--------|--------|--------|
| MHz      | F/H/E/S | Mode     | Reading Level | dB     | FS     | @3m    | dB     |
|          |         | PK/QP/AV | dBuV          |        | dBuV/m | dBuV/m |        |
| 10480.00 | H       | Peak     | 29.66         | 20.68  | 50.34  | 68.3   | -17.96 |

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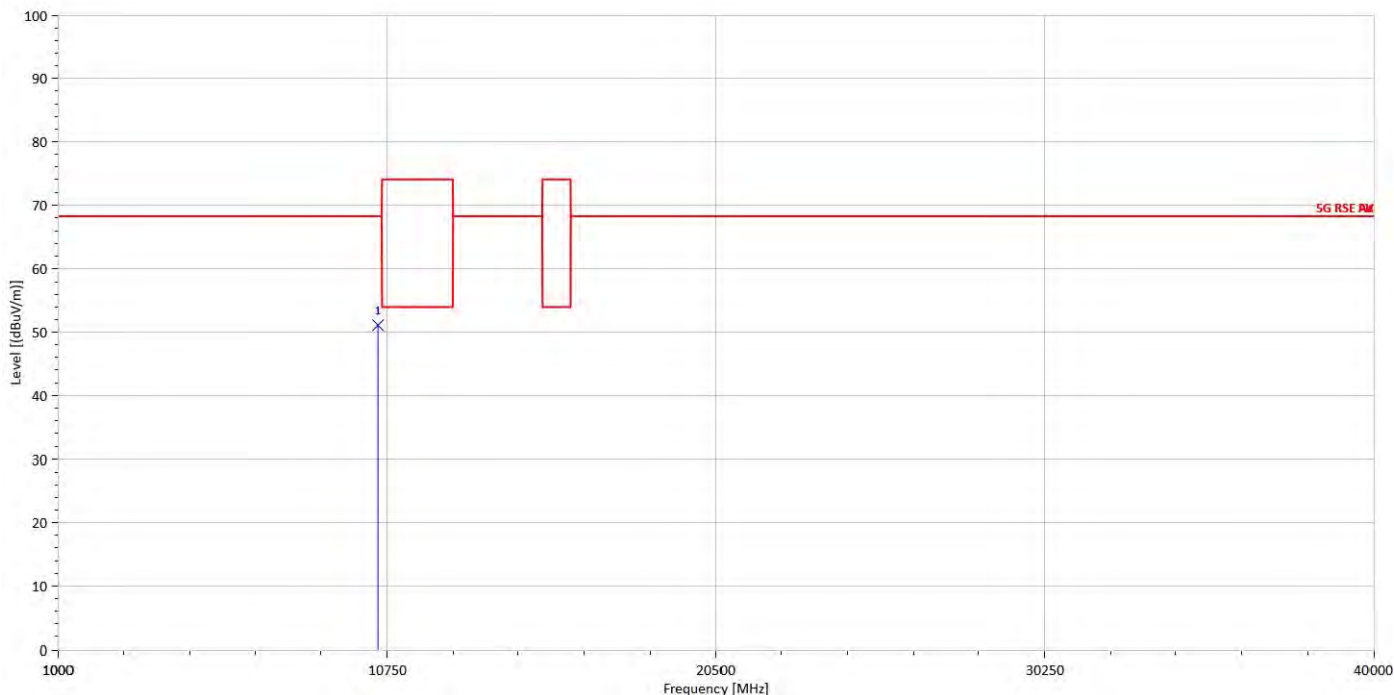
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Operation Mode : 802.11n20B1      Test Date : 2017/10/23  
 Fundamental Frequency : 5240 MHz      Temp. / Humi. : 24.5deg\_C/70RH  
 Operation Band : Tx CH HIGH      Test Engineer : Ashton  
 EUT Pol. : E2      Measurement Antenna Pol. : Horizontal



| Freq.    | Note    | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|----------|---------|----------|---------------|--------|--------|--------|--------|
| MHz      | F/H/E/S | Mode     | Reading Level | dB     | FS     | @3m    | dB     |
|          |         | PK/QP/AV | dBuV          |        | dBuV/m | dBuV/m |        |
| 10480.00 | H       | Peak     | 30.44         | 20.68  | 51.12  | 68.3   | -17.18 |

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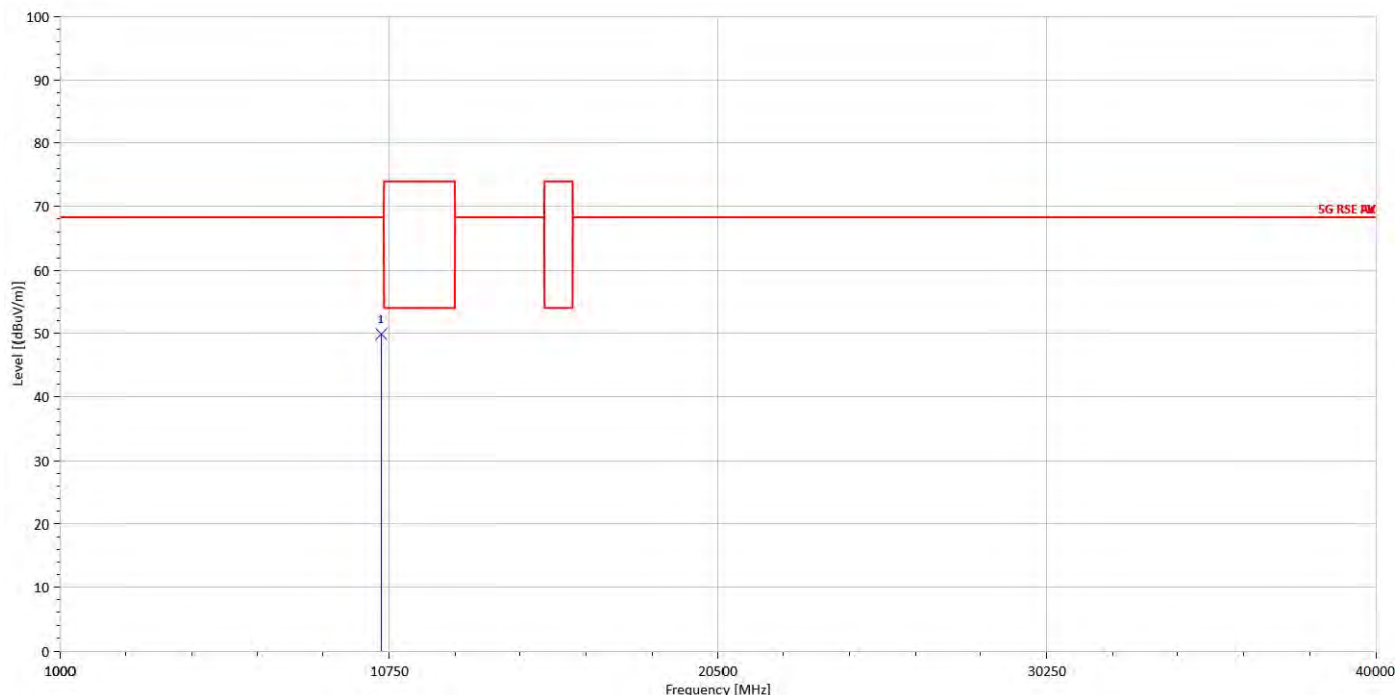
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## Radiated Spurious Emission Measurement Result 802.11n HT20, 5250~5350 MHz

|                         |             |                            |                |
|-------------------------|-------------|----------------------------|----------------|
| Operation Mode :        | 802.11n20B2 | Test Date :                | 2017/10/23     |
| Fundamental Frequency : | 5260 MHz    | Temp. / Humi. :            | 24.5deg_C/70RH |
| Operation Band :        | Tx CH LOW   | Test Engineer :            | Ashton         |
| EUT Pol. :              | E2          | Measurement Antenna Pol. : | Vertical       |



| Freq.    | Note    | Detector Mode | Spectrum Reading Level | Factor | Actual FS | Limit @3m | Margin |
|----------|---------|---------------|------------------------|--------|-----------|-----------|--------|
| MHz      | F/H/E/S | PK/QP/AV      | dBμV                   | dB     | dBμV/m    | dBμV/m    | dB     |
| 10520.00 | H       | Peak          | 29.76                  | 20.10  | 49.86     | 68.3      | -18.44 |

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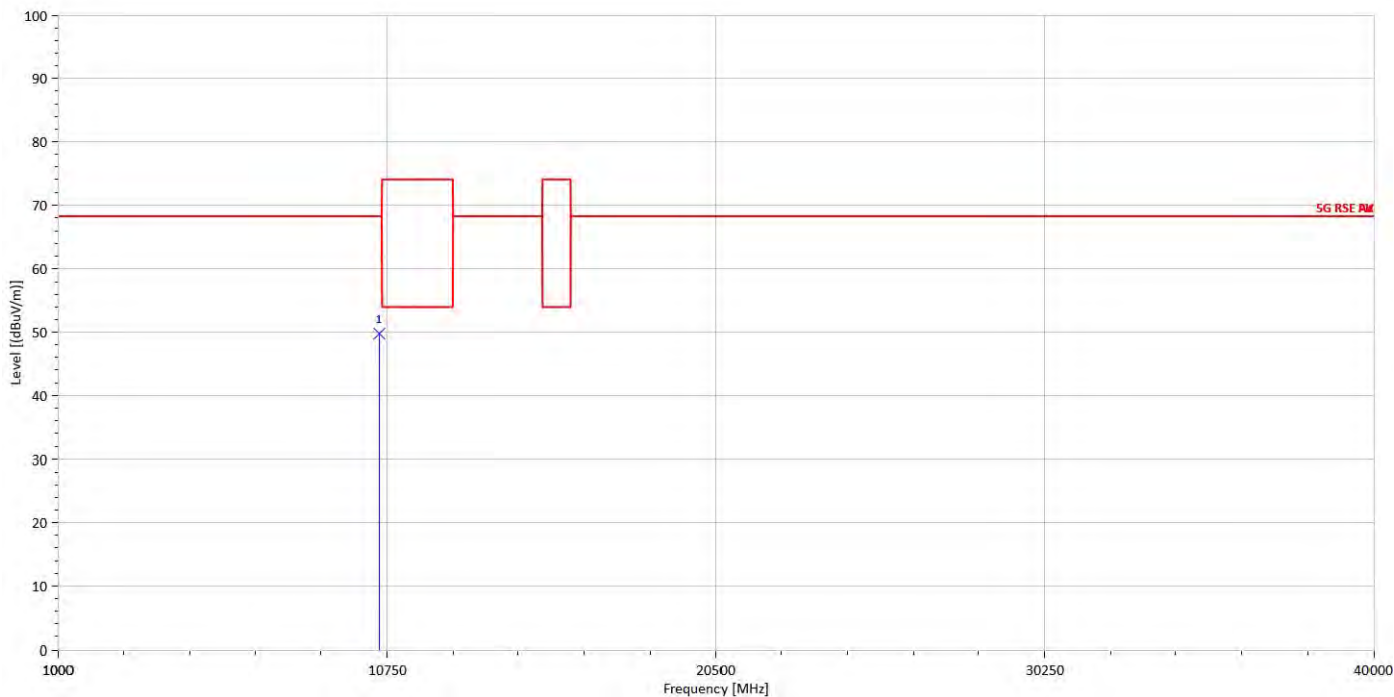
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Operation Mode : 802.11n20B2      Test Date : 2017/10/23  
 Fundamental Frequency : 5260 MHz      Temp. / Humi. : 24.5deg\_C/70RH  
 Operation Band : Tx CH LOW      Test Engineer : Ashton  
 EUT Pol. : E2      Measurement Antenna Pol. : Horizontal



| Freq.    | Note    | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|----------|---------|----------|---------------|--------|--------|--------|--------|
| MHz      | F/H/E/S | Mode     | Reading Level | dB     | FS     | @3m    | dB     |
|          |         | PK/QP/AV | dBuV          |        | dBuV/m | dBuV/m |        |
| 10520.00 | H       | Peak     | 29.67         | 20.10  | 49.77  | 68.3   | -18.53 |

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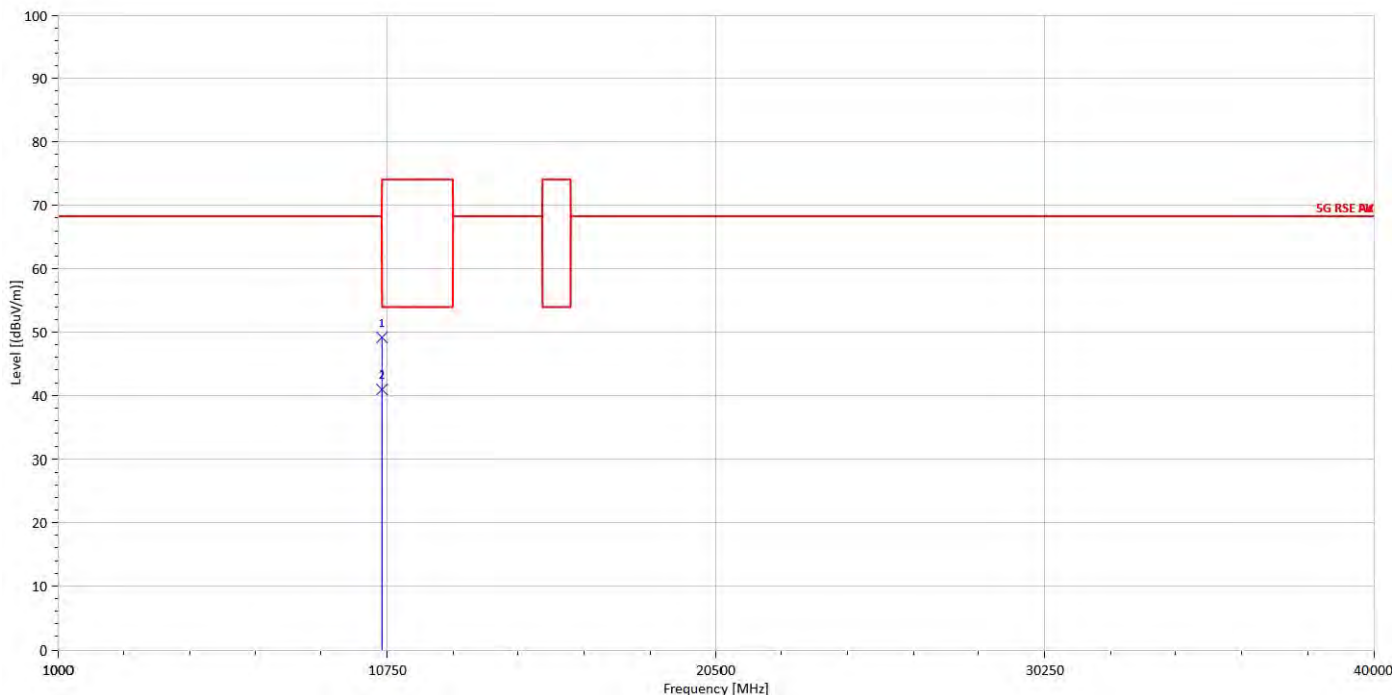
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Operation Mode : 802.11n20B2      Test Date : 2017/10/23  
 Fundamental Frequency : 5300 MHz      Temp. / Humi. : 24.5deg\_C/70RH  
 Operation Band : Tx CH MID      Test Engineer : Ashton  
 EUT Pol. : E2      Measurement Antenna Pol. : Vertical



| Freq.    | Note    | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|----------|---------|----------|---------------|--------|--------|--------|--------|
| MHz      | F/H/E/S | Mode     | Reading Level |        | FS     | @3m    |        |
|          |         | PK/QP/AV | dBμV          | dB     | dBμV/m | dBμV/m | dB     |
| 10600.00 | H       | Peak     | 29.00         | 20.17  | 49.16  | 74     | -24.84 |
| 10600.00 | H       | Average  | 20.86         | 20.17  | 41.03  | 54     | -12.97 |

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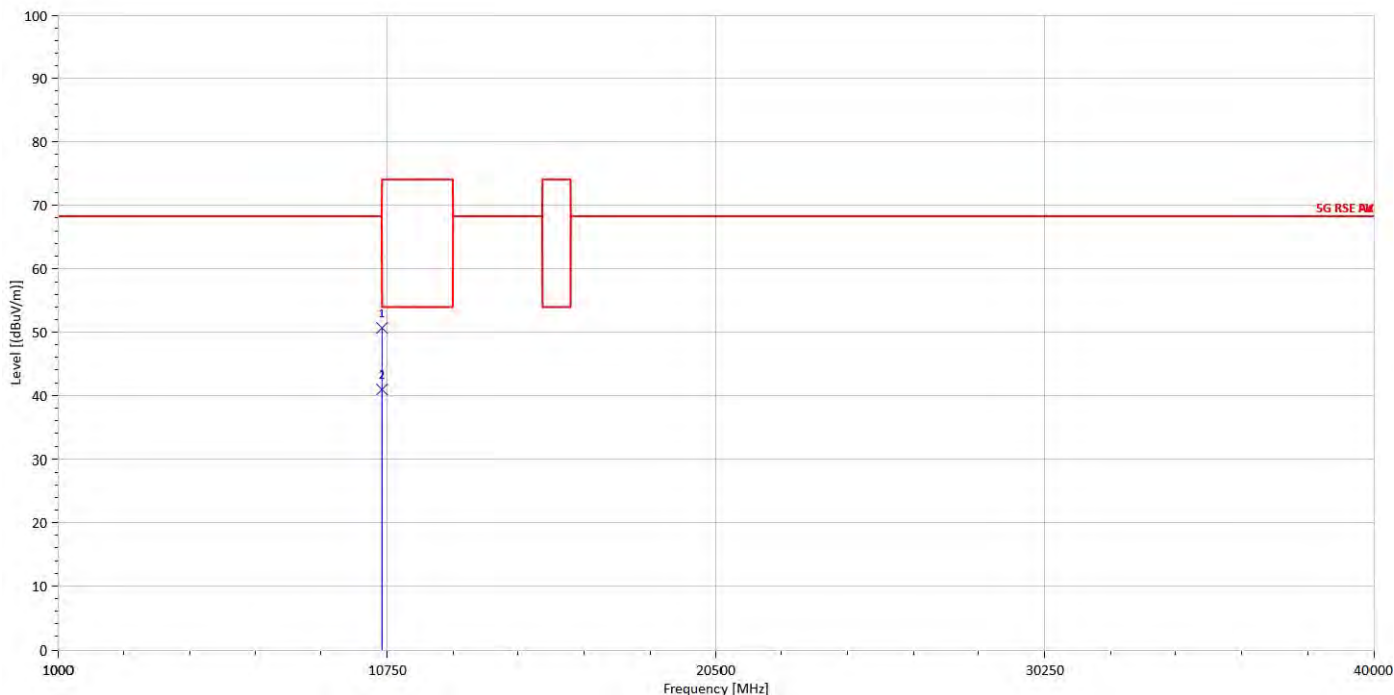
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Operation Mode : 802.11n20B2      Test Date : 2017/10/23  
 Fundamental Frequency : 5300 MHz      Temp. / Humi. : 24.5deg\_C/70RH  
 Operation Band : Tx CH MID      Test Engineer : Ashton  
 EUT Pol. : E2      Measurement Antenna Pol. : Horizontal



| Freq.    | Note    | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|----------|---------|----------|---------------|--------|--------|--------|--------|
| MHz      | F/H/E/S | Mode     | Reading Level | dB     | FS     | @3m    | dB     |
|          |         | PK/QP/AV | dBuV          |        | dBuV/m | dBuV/m |        |
| 10600.00 | H       | Peak     | 30.50         | 20.17  | 50.66  | 74     | -23.34 |
| 10600.00 | H       | Average  | 20.86         | 20.17  | 41.03  | 54     | -12.97 |

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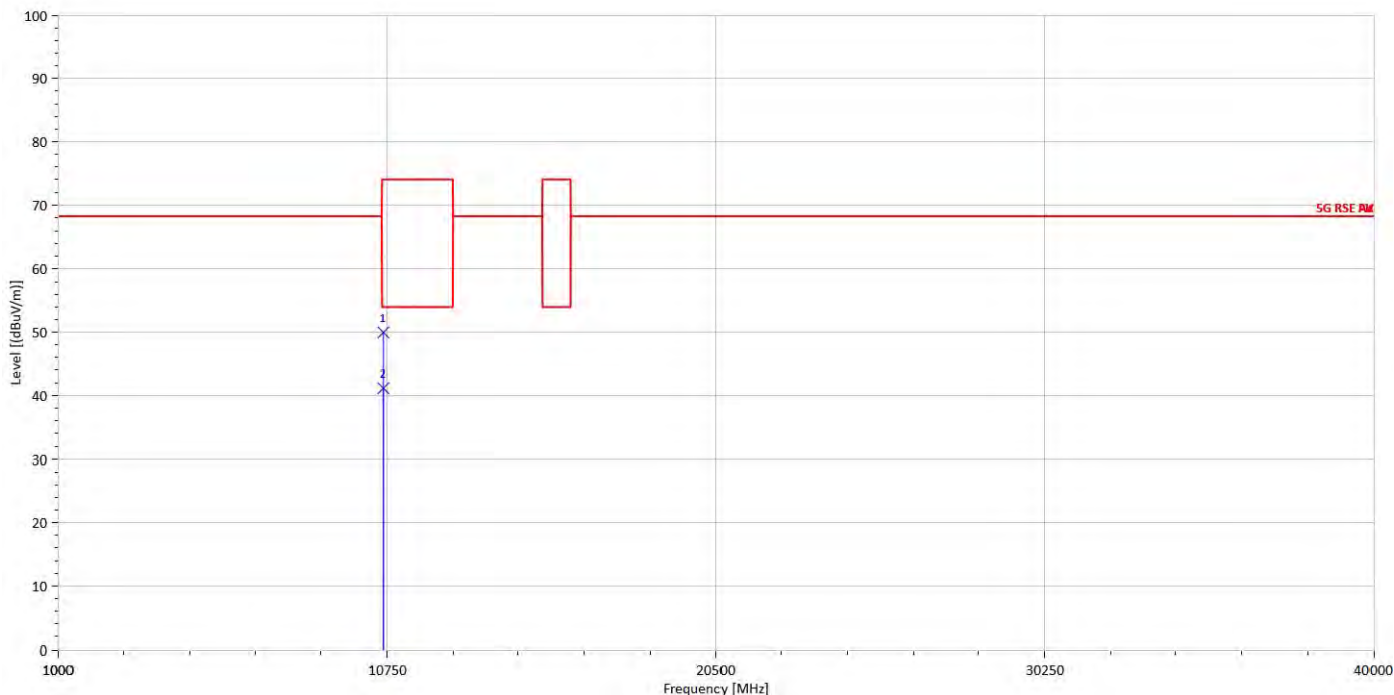
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 Fundamental Frequency : 5320 MHz      Temp. / Humi. : 24.5deg\_C/70RH  
 Operation Band : Tx CH HIGH      Test Engineer : Ashton  
 EUT Pol. : E2      Measurement Antenna Pol. : Vertical



| Freq.    | Note    | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|----------|---------|----------|---------------|--------|--------|--------|--------|
| MHz      | F/H/E/S | Mode     | Reading Level |        | FS     | @3m    |        |
|          |         | PK/QP/AV | dBuV          | dB     | dBuV/m | dBuV/m | dB     |
| 10640.00 | H       | Peak     | 29.62         | 20.34  | 49.96  | 74     | -24.04 |
| 10640.00 | H       | Average  | 20.88         | 20.34  | 41.22  | 54     | -12.78 |

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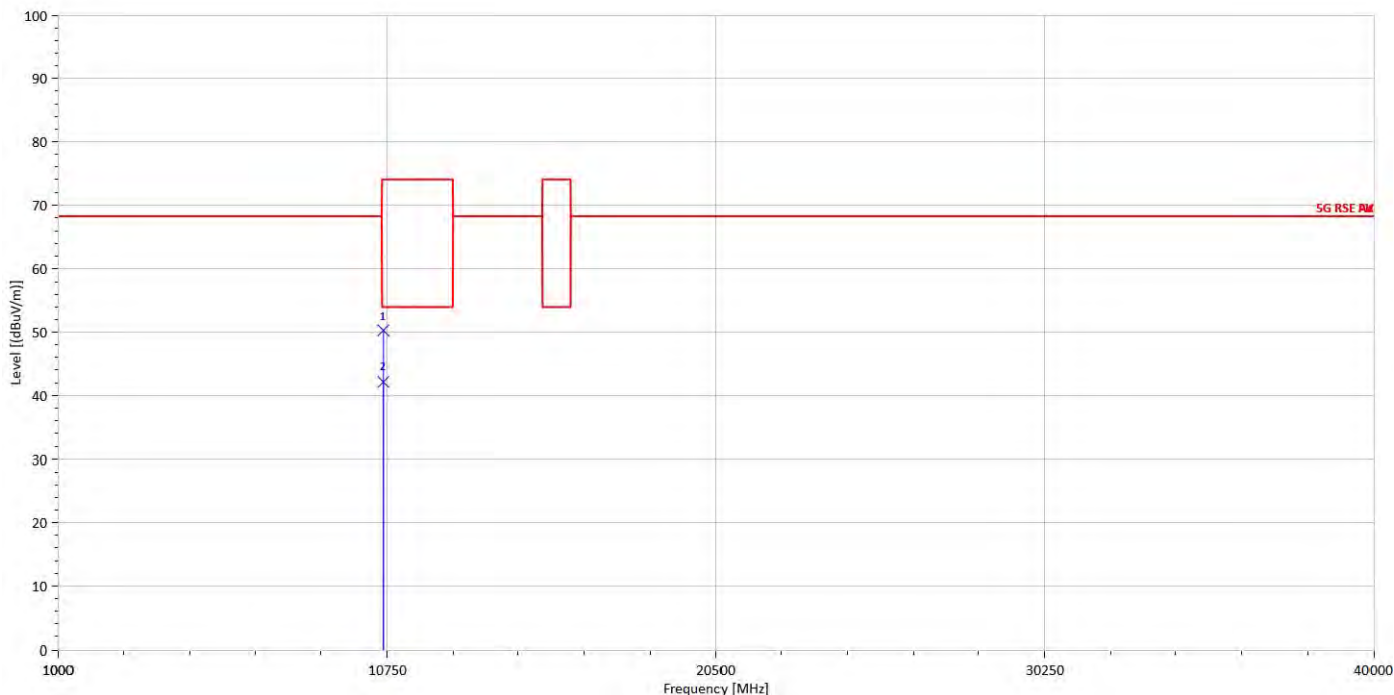
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Operation Mode : 802.11n20B2      Test Date : 2017/10/23  
 Fundamental Frequency : 5320 MHz      Temp. / Humi. : 24.5deg\_C/70RH  
 Operation Band : Tx CH HIGH      Test Engineer : Ashton  
 EUT Pol. : E2      Measurement Antenna Pol. : Horizontal



| Freq.    | Note    | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|----------|---------|----------|---------------|--------|--------|--------|--------|
| MHz      | F/H/E/S | Mode     | Reading Level |        | FS     | @3m    |        |
|          |         | PK/QP/AV | dBμV          | dB     | dBμV/m | dBμV/m | dB     |
| 10640.00 | H       | Peak     | 29.94         | 20.34  | 50.29  | 74     | -23.71 |
| 10640.00 | H       | Average  | 21.89         | 20.34  | 42.23  | 54     | -11.77 |

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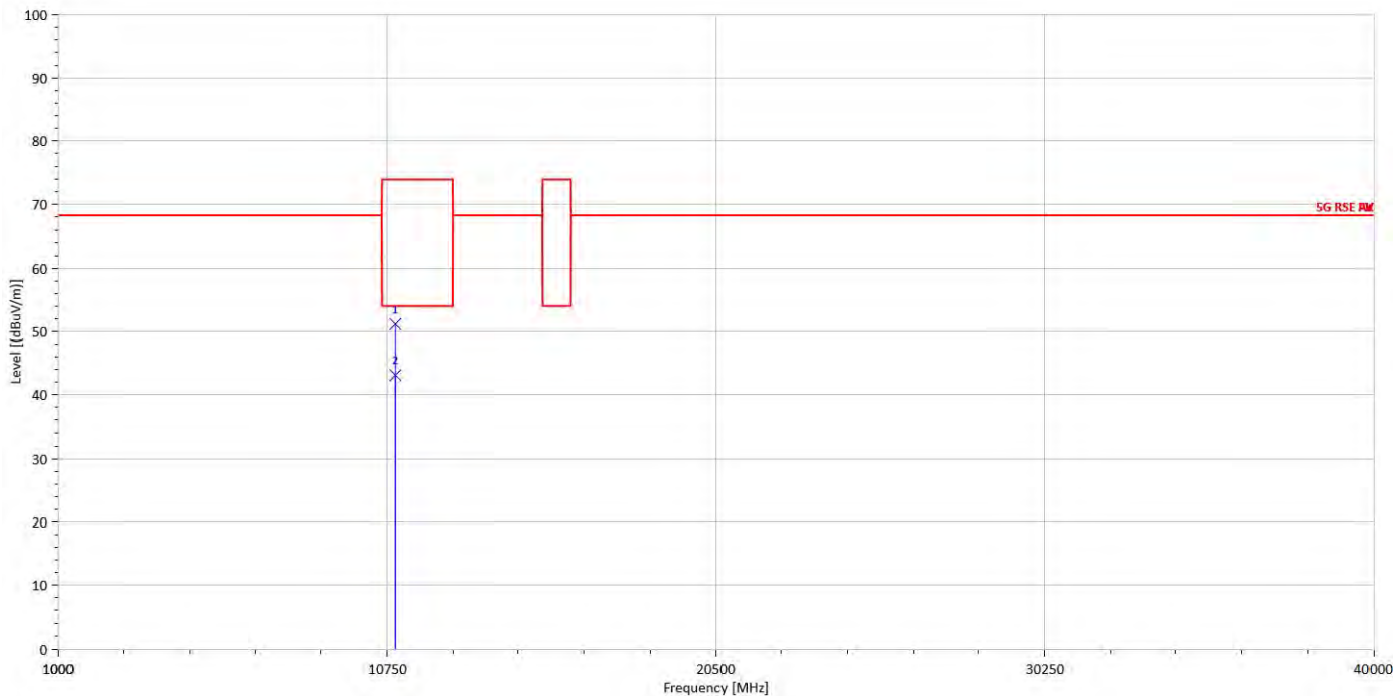
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## Radiated Spurious Emission Measurement Result 802.11n HT20, 5470~5725 MHz

|                         |             |                            |                |
|-------------------------|-------------|----------------------------|----------------|
| Operation Mode :        | 802.11n20B3 | Test Date :                | 2017/10/23     |
| Fundamental Frequency : | 5500 MHz    | Temp. / Humi. :            | 24.5deg_C/70RH |
| Operation Band :        | Tx CH LOW   | Test Engineer :            | Ashton         |
| EUT Pol. :              | E2          | Measurement Antenna Pol. : | Vertical       |



| Freq.    | Note    | Detector Mode | Spectrum Reading Level | Factor | Actual FS | Limit @3m | Margin |
|----------|---------|---------------|------------------------|--------|-----------|-----------|--------|
| MHz      | F/H/E/S | PK/QP/AV      | dBμV                   | dB     | dBμV/m    | dBμV/m    | dB     |
| 11000.00 | H       | Peak          | 29.06                  | 22.11  | 51.16     | 74        | -22.84 |
| 11000.00 | H       | Average       | 21.04                  | 22.11  | 43.15     | 54        | -10.85 |

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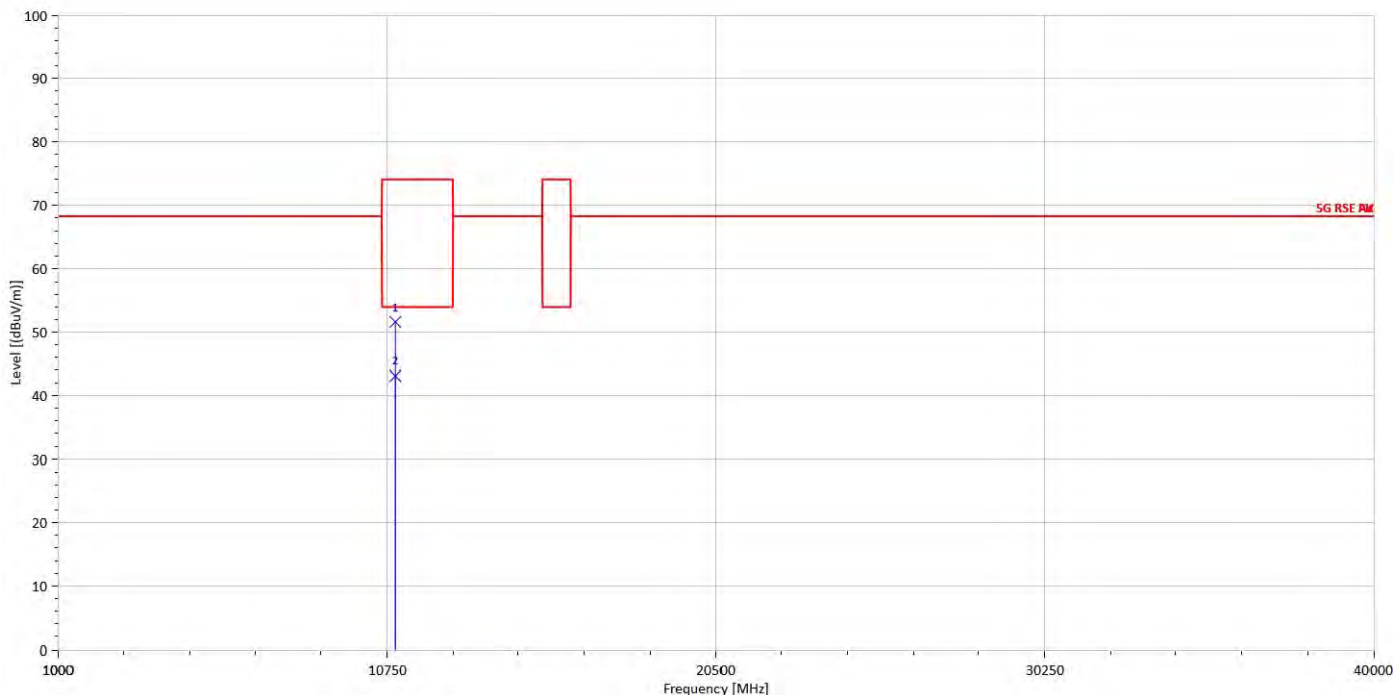
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Operation Mode : 802.11n20B3      Test Date : 2017/10/23  
 Fundamental Frequency : 5500 MHz      Temp. / Humi. : 24.5deg\_C/70RH  
 Operation Band : Tx CH LOW      Test Engineer : Ashton  
 EUT Pol. : E2      Measurement Antenna Pol. : Horizontal



| Freq.    | Note    | Detector Mode | Spectrum Reading Level | Factor | Actual FS | Limit @3m | Margin |
|----------|---------|---------------|------------------------|--------|-----------|-----------|--------|
| MHz      | F/H/E/S | PK/QP/AV      | dBuV                   | dB     | dBuV/m    | dBuV/m    | dB     |
| 11000.00 | H       | Peak          | 29.52                  | 22.11  | 51.62     | 74        | -22.38 |
| 11000.00 | H       | Average       | 21.05                  | 22.11  | 43.16     | 54        | -10.84 |

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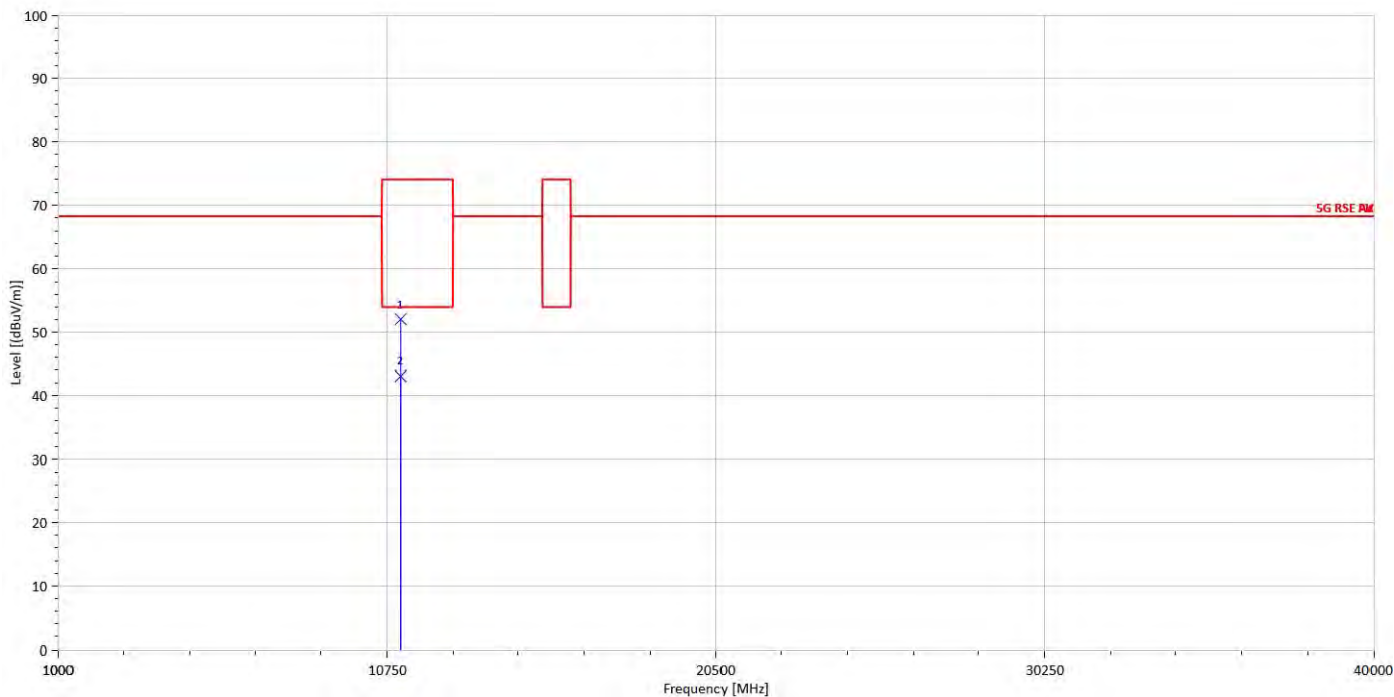
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Operation Mode : 802.11n20B3      Test Date : 2017/10/23  
 Fundamental Frequency : 5580 MHz      Temp. / Humi. : 24.5deg\_C/70RH  
 Operation Band : Tx CH MID      Test Engineer : Ashton  
 EUT Pol. : E2      Measurement Antenna Pol. : Vertical



| Freq.    | Note    | Detector Mode | Spectrum Reading Level | Factor | Actual FS | Limit @3m | Margin |
|----------|---------|---------------|------------------------|--------|-----------|-----------|--------|
| MHz      | F/H/E/S | PK/QP/AV      | dBμV                   | dB     | dBμV/m    | dBμV/m    | dB     |
| 11160.00 | H       | Peak          | 30.03                  | 22.04  | 52.07     | 74        | -21.93 |
| 11160.00 | H       | Average       | 21.09                  | 22.04  | 43.13     | 54        | -10.87 |

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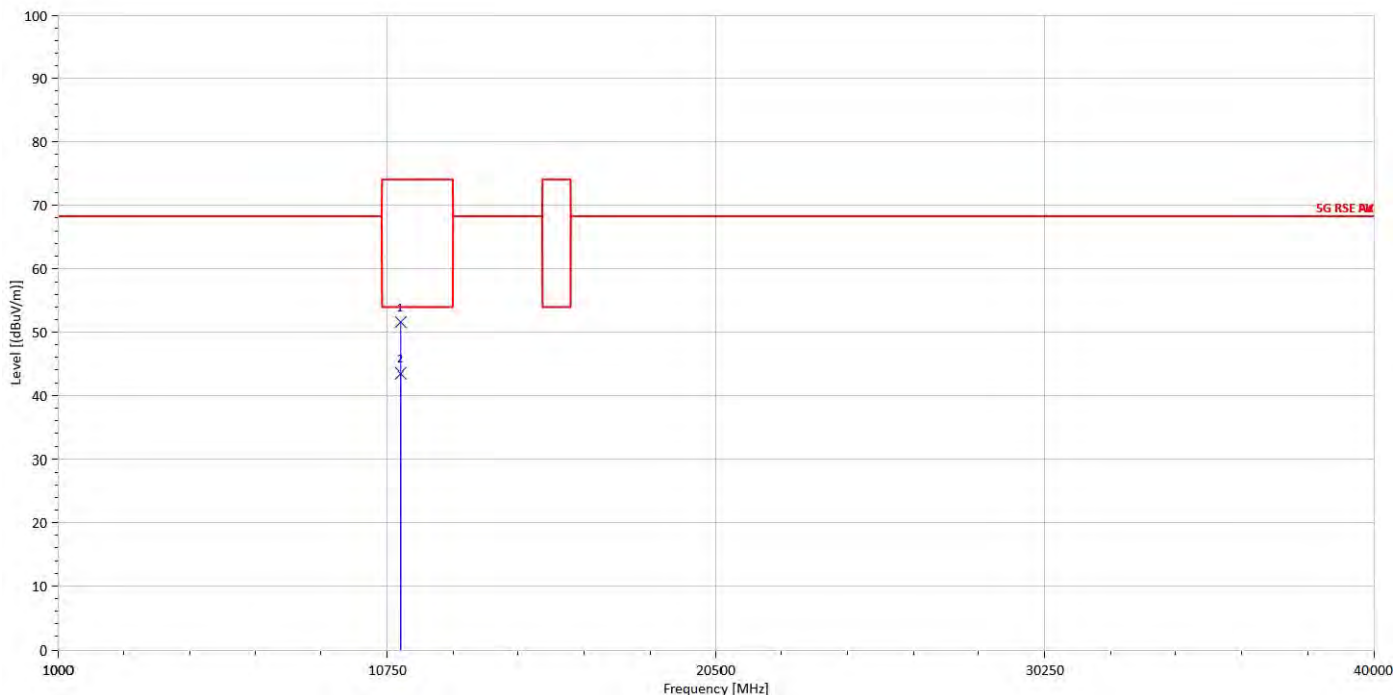
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Operation Mode : 802.11n20B3      Test Date : 2017/10/23  
 Fundamental Frequency : 5580 MHz      Temp. / Humi. : 24.5deg\_C/70RH  
 Operation Band : Tx CH MID      Test Engineer : Ashton  
 EUT Pol. : E2      Measurement Antenna Pol. : Horizontal



| Freq.    | Note    | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|----------|---------|----------|---------------|--------|--------|--------|--------|
| MHz      | F/H/E/S | Mode     | Reading Level | dB     | FS     | @3m    | dB     |
|          |         | PK/QP/AV | dBuV          |        | dBuV/m | dBuV/m |        |
| 11160.00 | H       | Peak     | 29.58         | 22.04  | 51.61  | 74     | -22.39 |
| 11160.00 | H       | Average  | 21.51         | 22.04  | 43.55  | 54     | -10.45 |

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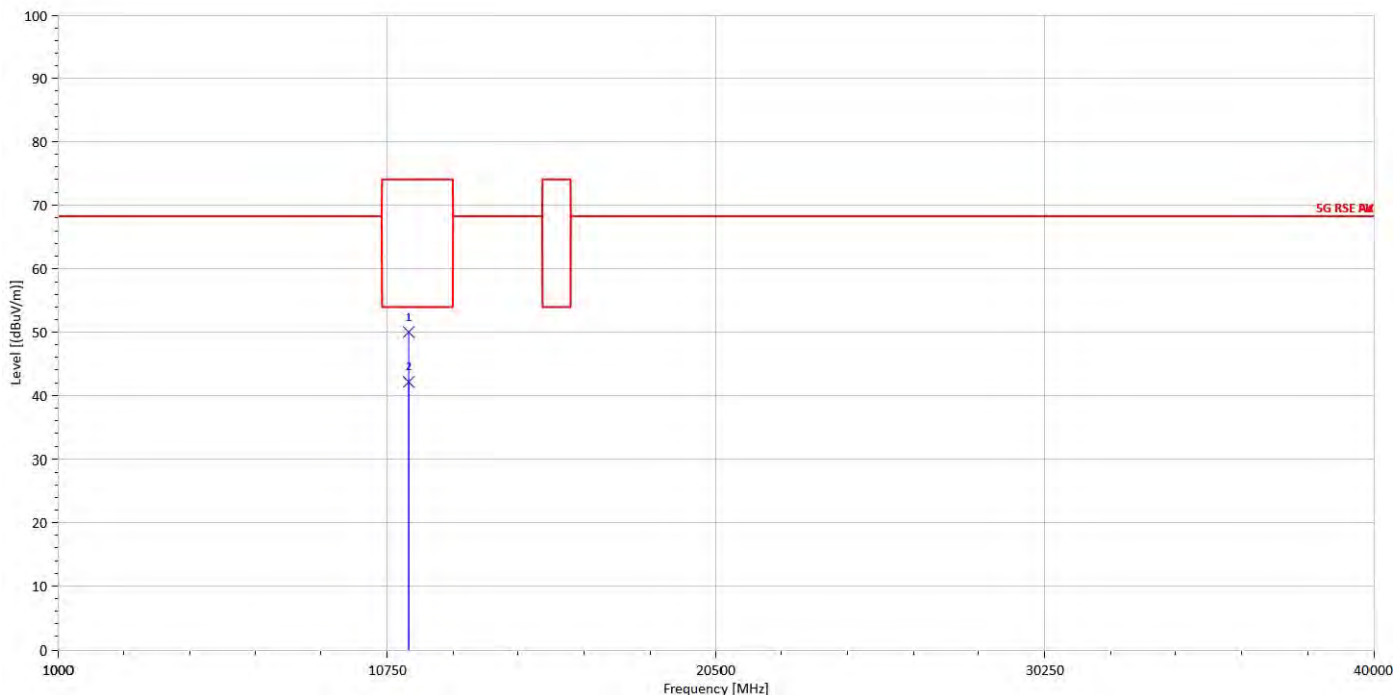
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Operation Mode : 802.11n20B3      Test Date : 2017/10/23  
 Fundamental Frequency : 5700 MHz      Temp. / Humi. : 24.5deg\_C/70RH  
 Operation Band : Tx CH HIGH      Test Engineer : Ashton  
 EUT Pol. : E2      Measurement Antenna Pol. : Vertical



| Freq.    | Note    | Detector Mode | Spectrum Reading Level | Factor | Actual FS | Limit @3m | Margin |
|----------|---------|---------------|------------------------|--------|-----------|-----------|--------|
| MHz      | F/H/E/S | PK/QP/AV      | dBuV                   | dB     | dBuV/m    | dBuV/m    | dB     |
| 11400.00 | H       | Peak          | 28.81                  | 21.22  | 50.02     | 74        | -23.98 |
| 11400.00 | H       | Average       | 21.02                  | 21.22  | 42.24     | 54        | -11.76 |

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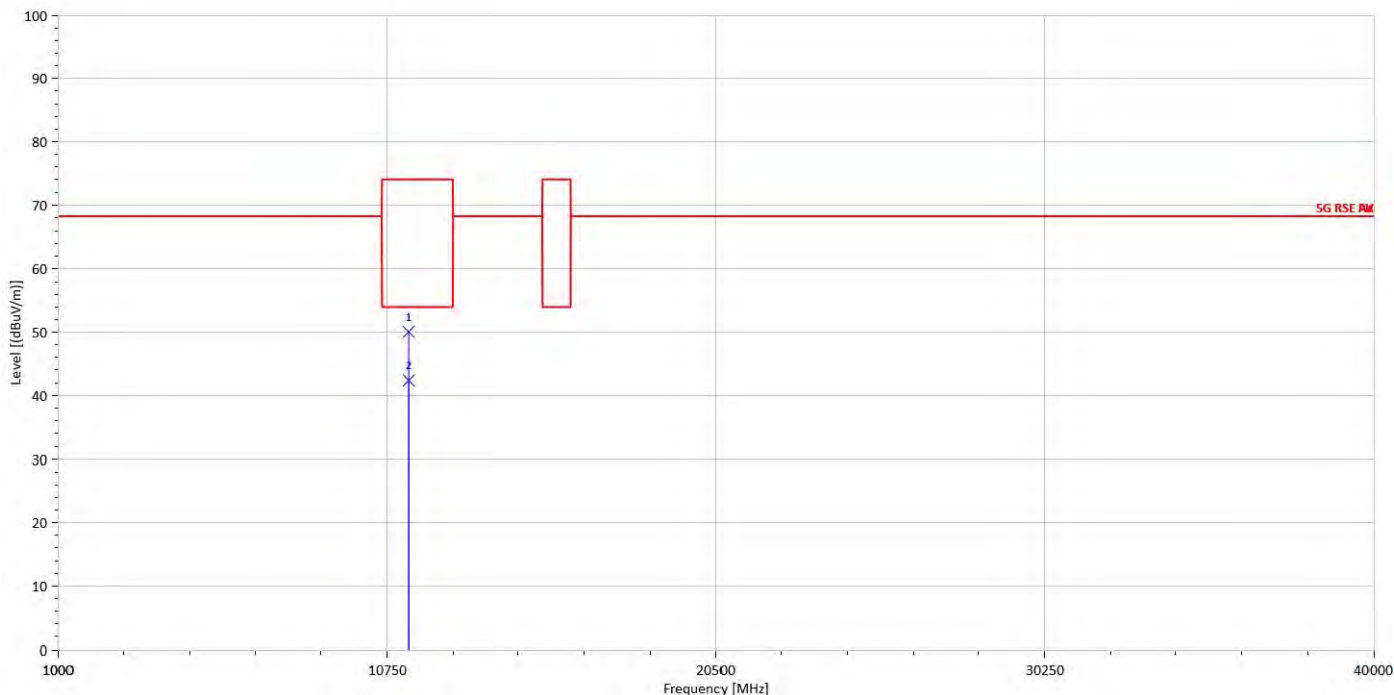
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Operation Mode : 802.11n20B3      Test Date : 2017/10/23  
 Fundamental Frequency : 5700 MHz      Temp. / Humi. : 24.5deg\_C/70RH  
 Operation Band : Tx CH HIGH      Test Engineer : Ashton  
 EUT Pol. : E2      Measurement Antenna Pol. : Horizontal



| Freq.    | Note    | Detector Mode | Spectrum Reading Level | Factor | Actual FS | Limit @3m | Margin |
|----------|---------|---------------|------------------------|--------|-----------|-----------|--------|
| MHz      | F/H/E/S | PK/QP/AV      | dBuV                   | dB     | dBuV/m    | dBuV/m    | dB     |
| 11400.00 | H       | Peak          | 28.84                  | 21.22  | 50.05     | 74        | -23.95 |
| 11400.00 | H       | Average       | 21.26                  | 21.22  | 42.48     | 54        | -11.52 |

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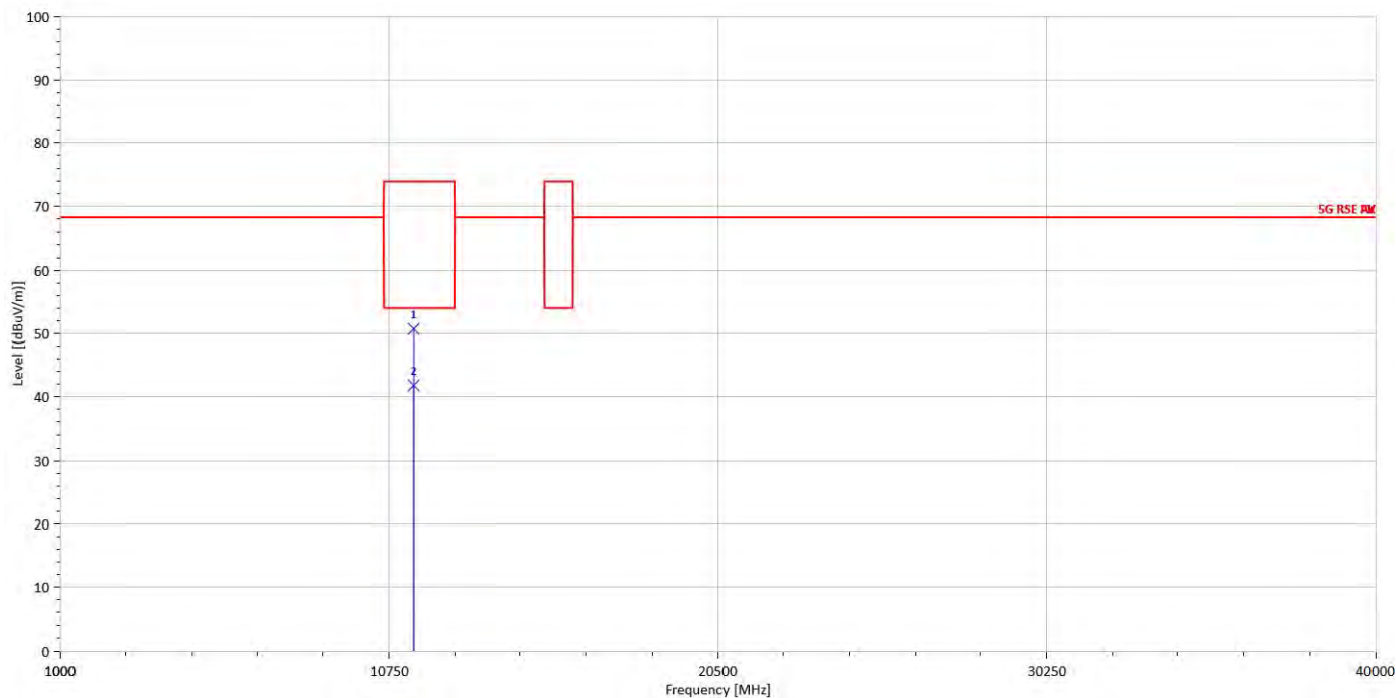
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## Radiated Spurious Emission Measurement Result 802.11n HT20,

|                         |             |                            |                |
|-------------------------|-------------|----------------------------|----------------|
| Operation Mode :        | 802.11n20B4 | Test Date :                | 2017/10/23     |
| Fundamental Frequency : | 5745 MHz    | Temp. / Humi. :            | 24.5deg_C/70RH |
| Operation Band :        | Tx CH LOW   | Test Engineer :            | Ashton         |
| EUT Pol. :              | E2          | Measurement Antenna Pol. : | Vertical       |



| Freq.    | Note    | Detector Mode | Spectrum Reading Level | Factor | Actual FS | Limit @3m | Margin |
|----------|---------|---------------|------------------------|--------|-----------|-----------|--------|
| MHz      | F/H/E/S | PK/QP/AV      | dBμV                   | dB     | dBμV/m    | dBμV/m    | dB     |
| 11490.00 | H       | Peak          | 30.02                  | 20.70  | 50.72     | 74        | -23.28 |
| 11490.00 | H       | Average       | 21.14                  | 20.70  | 41.84     | 54        | -12.16 |

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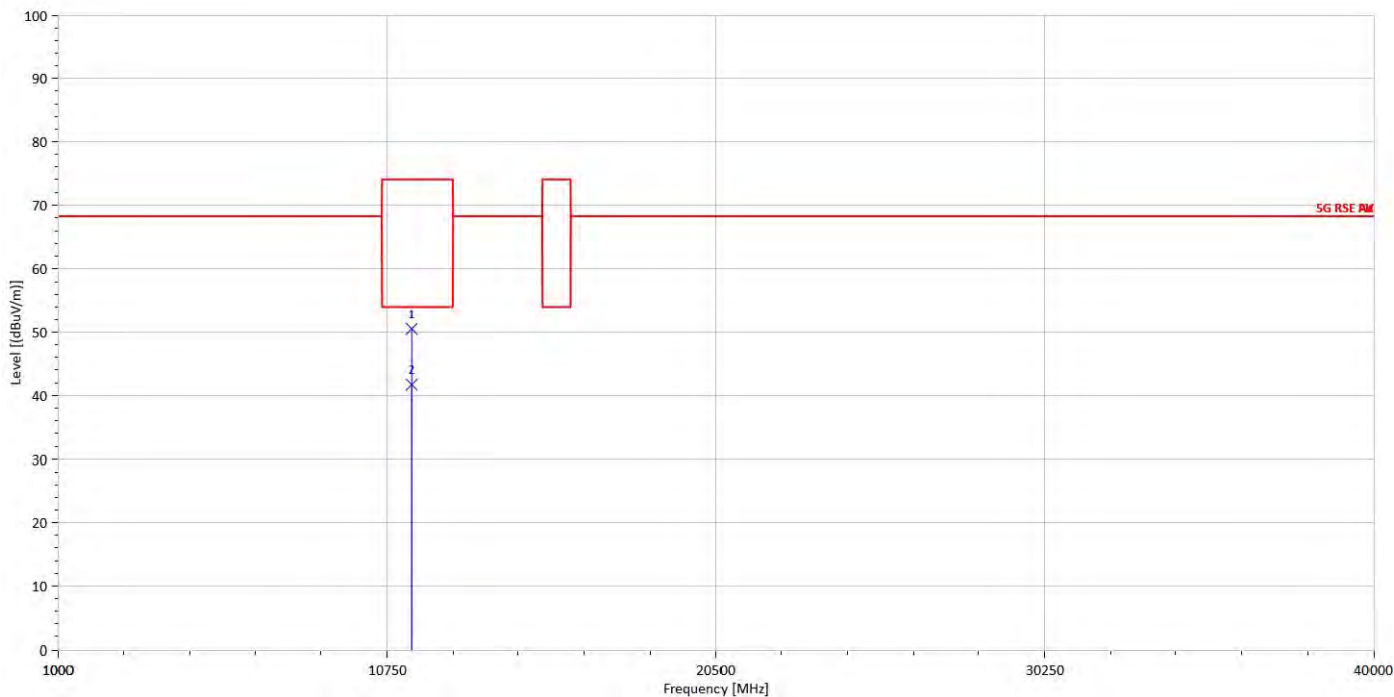
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Operation Mode : 802.11n20B4      Test Date : 2017/10/23  
 Fundamental Frequency : 5745 MHz      Temp. / Humi. : 24.5deg\_C/70RH  
 Operation Band : Tx CH LOW      Test Engineer : Ashton  
 EUT Pol. : E2      Measurement Antenna Pol. : Horizontal



| Freq.    | Note    | Detector Mode | Spectrum Reading Level | Factor | Actual FS | Limit @3m | Margin |
|----------|---------|---------------|------------------------|--------|-----------|-----------|--------|
| MHz      | F/H/E/S | PK/QP/AV      | dBuV                   | dB     | dBuV/m    | dBuV/m    | dB     |
| 11490.00 | H       | Peak          | 29.83                  | 20.70  | 50.54     | 74        | -23.46 |
| 11490.00 | H       | Average       | 21.10                  | 20.70  | 41.80     | 54        | -12.20 |

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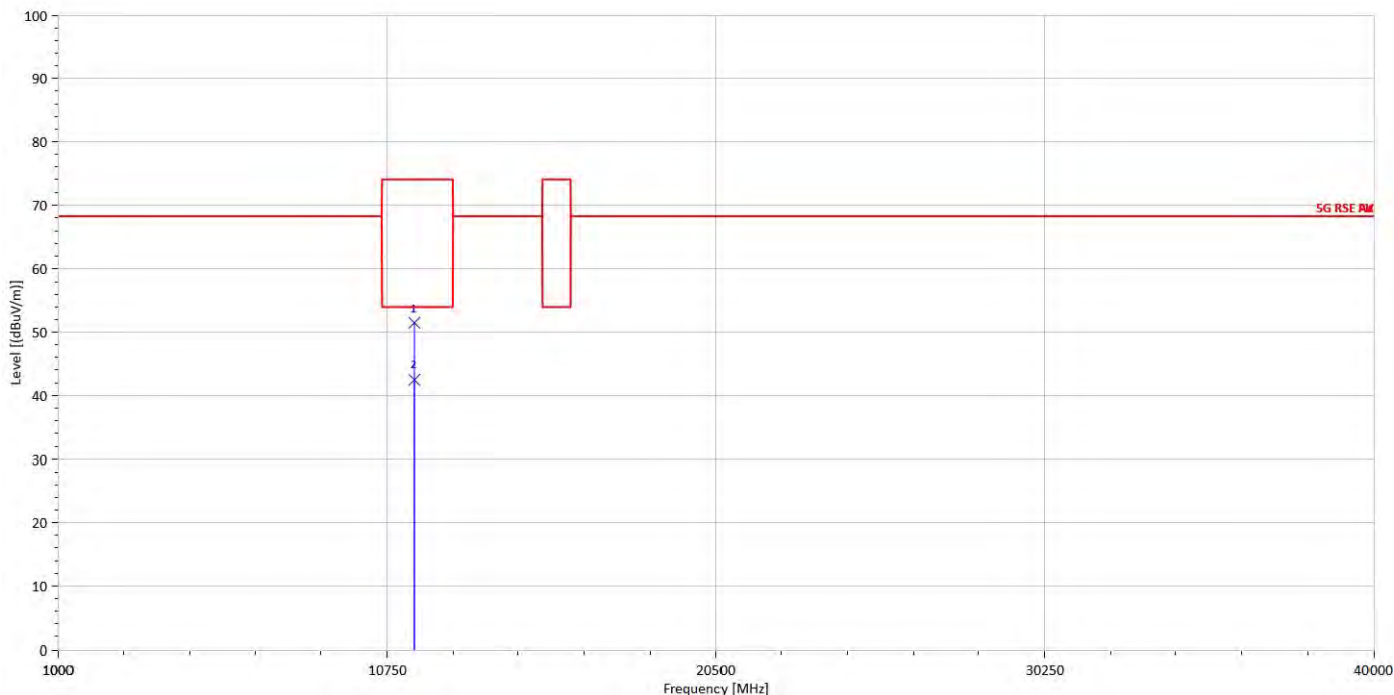
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Operation Mode : 802.11n20B4      Test Date : 2017/10/23  
 Fundamental Frequency : 5785 MHz      Temp. / Humi. : 24.5deg\_C/70RH  
 Operation Band : Tx CH MID      Test Engineer : Ashton  
 EUT Pol. : E2      Measurement Antenna Pol. : Vertical



| Freq.    | Note    | Detector Mode | Spectrum Reading Level | Factor | Actual FS | Limit @3m | Margin |
|----------|---------|---------------|------------------------|--------|-----------|-----------|--------|
| MHz      | F/H/E/S | PK/QP/AV      | dBuV                   | dB     | dBuV/m    | dBuV/m    | dB     |
| 11570.00 | H       | Peak          | 30.07                  | 21.44  | 51.51     | 74        | -22.49 |
| 11570.00 | H       | Average       | 21.12                  | 21.44  | 42.56     | 54        | -11.44 |

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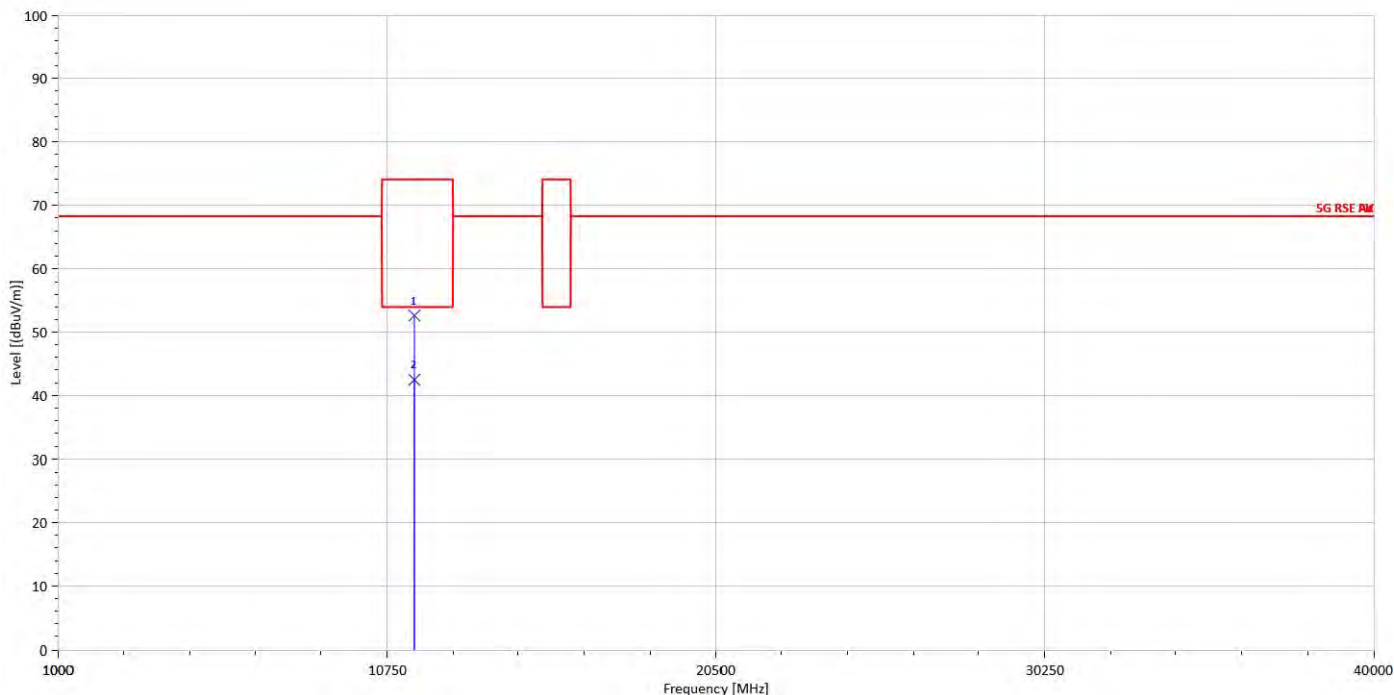
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Operation Mode : 802.11n20B4      Test Date : 2017/10/23  
 Fundamental Frequency : 5785 MHz      Temp. / Humi. : 24.5deg\_C/70RH  
 Operation Band : Tx CH MID      Test Engineer : Ashton  
 EUT Pol. : E2      Measurement Antenna Pol. : Horizontal



| Freq.    | Note    | Detector Mode | Spectrum Reading Level | Factor | Actual FS | Limit @3m | Margin |
|----------|---------|---------------|------------------------|--------|-----------|-----------|--------|
| MHz      | F/H/E/S | PK/QP/AV      | dBuV                   | dB     | dBuV/m    | dBuV/m    | dB     |
| 11570.00 | H       | Peak          | 31.20                  | 21.44  | 52.65     | 74        | -21.35 |
| 11570.00 | H       | Average       | 21.13                  | 21.44  | 42.57     | 54        | -11.43 |

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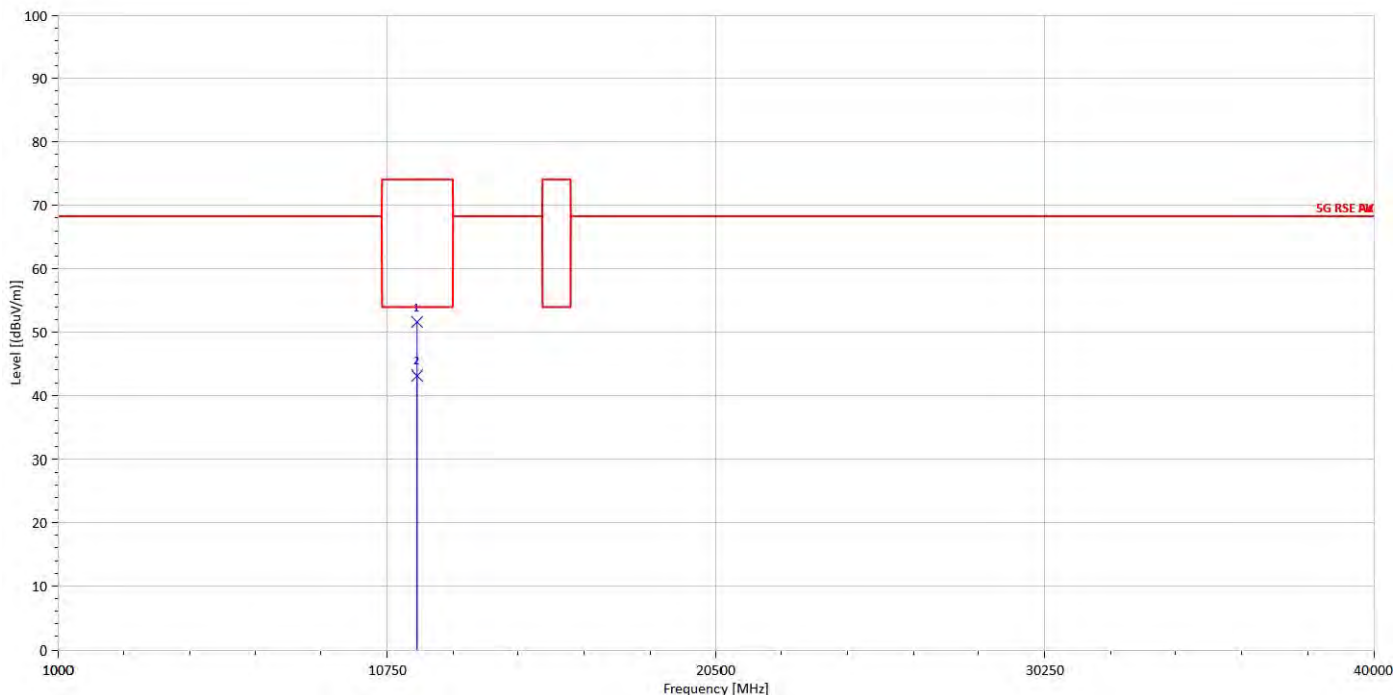
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Operation Mode : 802.11n20B4      Test Date : 2017/10/23  
 Fundamental Frequency : 5825 MHz      Temp. / Humi. : 24.5deg\_C/70RH  
 Operation Band : Tx CH HIGH      Test Engineer : Ashton  
 EUT Pol. : E2      Measurement Antenna Pol. : Vertical



| Freq.    | Note    | Detector Mode | Spectrum Reading Level | Factor | Actual FS | Limit @3m | Margin |
|----------|---------|---------------|------------------------|--------|-----------|-----------|--------|
| MHz      | F/H/E/S | PK/QP/AV      | dBμV                   | dB     | dBμV/m    | dBμV/m    | dB     |
| 11650.00 | H       | Peak          | 29.59                  | 22.02  | 51.61     | 74        | -22.39 |
| 11650.00 | H       | Average       | 21.18                  | 22.02  | 43.20     | 54        | -10.80 |

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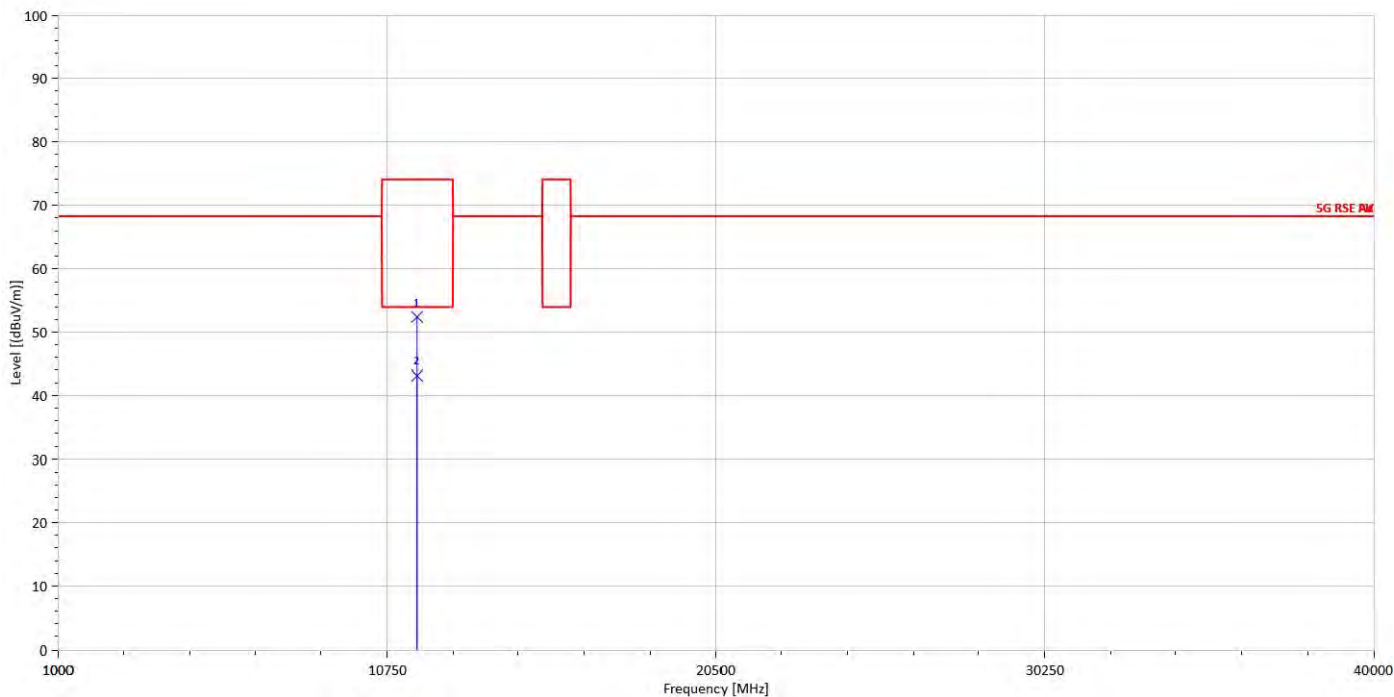
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Operation Mode : 802.11n20B4      Test Date : 2017/10/23  
 Fundamental Frequency : 5825 MHz      Temp. / Humi. : 24.5deg\_C/70RH  
 Operation Band : Tx CH HIGH      Test Engineer : Ashton  
 EUT Pol. : E2      Measurement Antenna Pol. : Horizontal



| Freq.    | Note    | Detector Mode | Spectrum Reading Level | Factor | Actual FS | Limit @3m | Margin |
|----------|---------|---------------|------------------------|--------|-----------|-----------|--------|
| MHz      | F/H/E/S | PK/QP/AV      | dBμV                   | dB     | dBμV/m    | dBμV/m    | dB     |
| 11650.00 | H       | Peak          | 30.41                  | 22.02  | 52.43     | 74        | -21.57 |
| 11650.00 | H       | Average       | 21.18                  | 22.02  | 43.20     | 54        | -10.80 |

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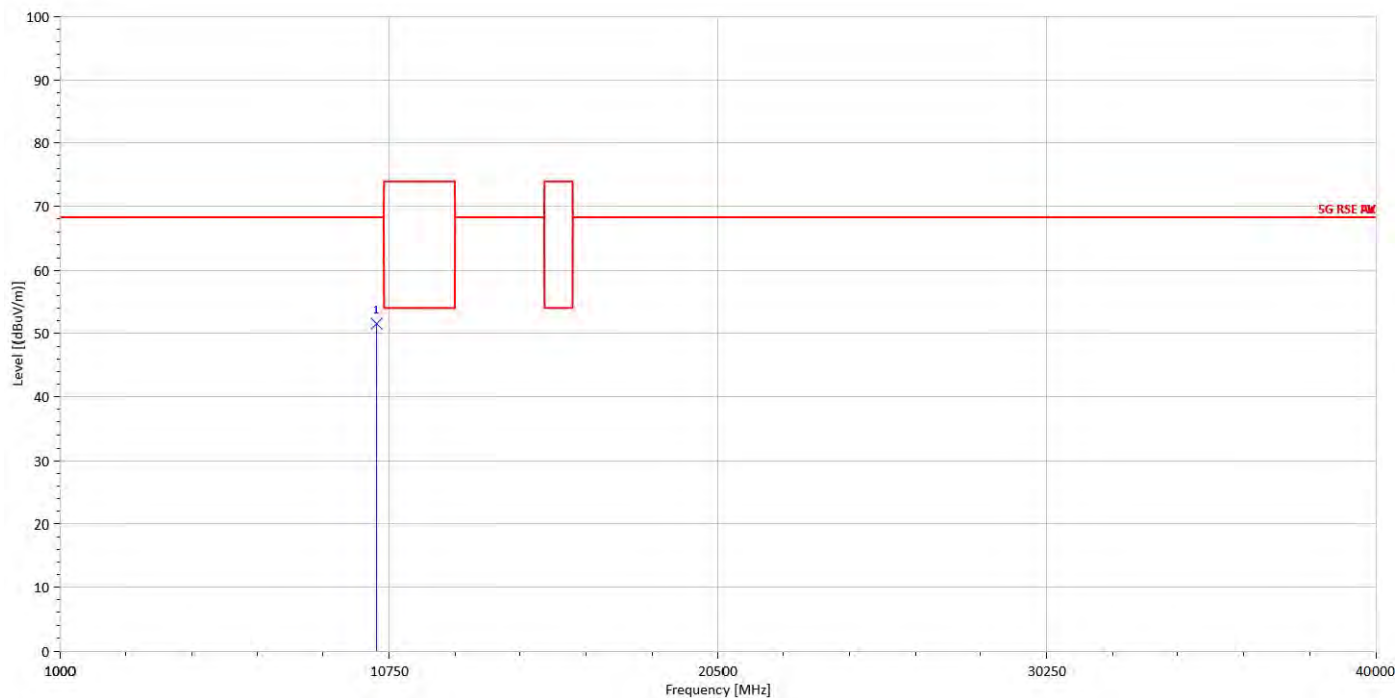
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## Radiated Spurious Emission Measurement Result 802.11n HT40, 5150~5250 MHz

|                         |             |                            |                |
|-------------------------|-------------|----------------------------|----------------|
| Operation Mode :        | 802.11n40B1 | Test Date :                | 2017/10/23     |
| Fundamental Frequency : | 5190 MHz    | Temp. / Humi. :            | 24.5deg_C/70RH |
| Operation Band :        | Tx CH LOW   | Test Engineer :            | Ashton         |
| EUT Pol. :              | E2          | Measurement Antenna Pol. : | Vertical       |



| Freq.    | Note    | Detector Mode | Spectrum Reading Level | Factor | Actual FS | Limit @3m | Margin |
|----------|---------|---------------|------------------------|--------|-----------|-----------|--------|
| MHz      | F/H/E/S | PK/QP/AV      | dBμV                   | dB     | dBμV/m    | dBμV/m    | dB     |
| 10380.00 | H       | Peak          | 30.55                  | 20.95  | 51.51     | 68.3      | -16.79 |

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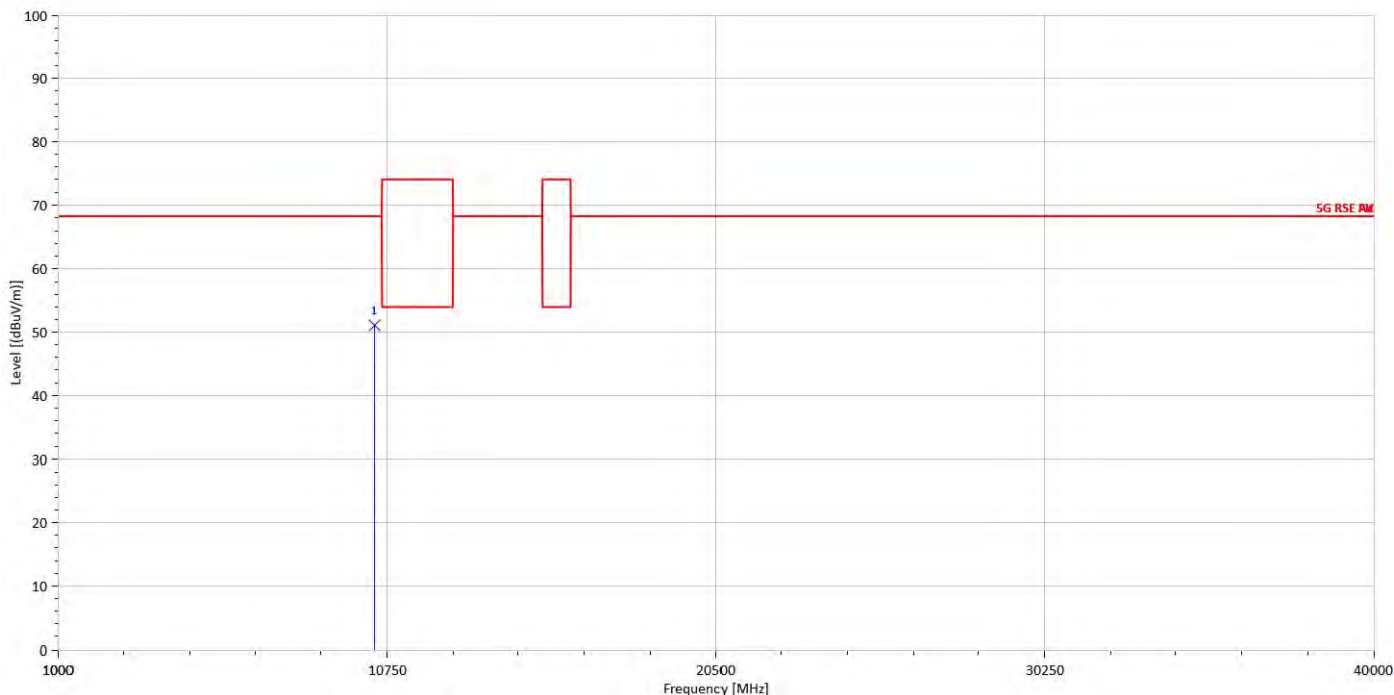
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Operation Mode : 802.11n40B1      Test Date : 2017/10/23  
 Fundamental Frequency : 5190 MHz      Temp. / Humi. : 24.5deg\_C/70RH  
 Operation Band : Tx CH LOW      Test Engineer : Ashton  
 EUT Pol. : E2      Measurement Antenna Pol. : Horizontal



| Freq.    | Note    | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|----------|---------|----------|---------------|--------|--------|--------|--------|
| MHz      | F/H/E/S | Mode     | Reading Level | dB     | FS     | @3m    | dB     |
|          |         | PK/QP/AV | dBμV          |        | dBμV/m | dBμV/m |        |
| 10380.00 | H       | Peak     | 30.14         | 20.95  | 51.10  | 68.3   | -17.20 |

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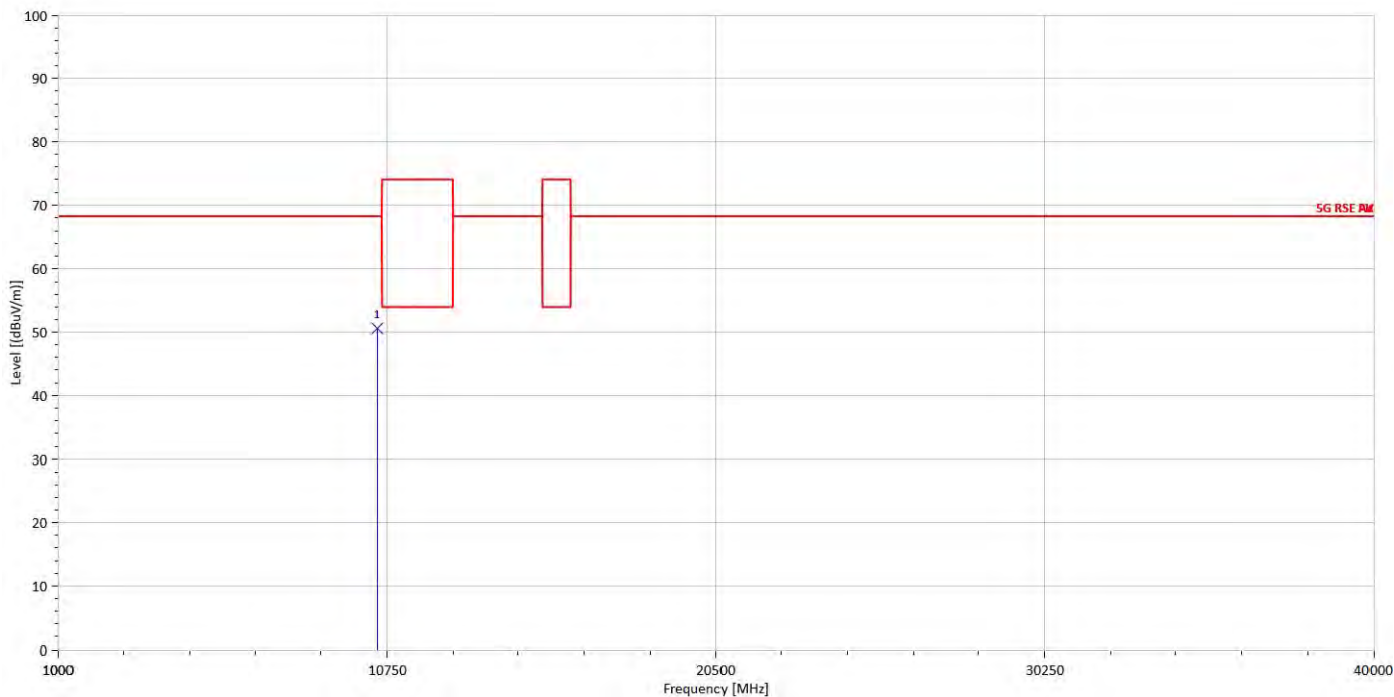
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Operation Mode : 802.11n40B1      Test Date : 2017/10/23  
 Fundamental Frequency : 5230 MHz      Temp. / Humi. : 24.5deg\_C/70RH  
 Operation Band : Tx CH HIGH      Test Engineer : Ashton  
 EUT Pol. : E2      Measurement Antenna Pol. : Vertical



| Freq.    | Note    | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|----------|---------|----------|---------------|--------|--------|--------|--------|
| MHz      | F/H/E/S | Mode     | Reading Level | dB     | FS     | @3m    | dB     |
|          |         | PK/QP/AV | dBuV          |        | dBuV/m | dBuV/m |        |
| 10460.00 | H       | Peak     | 29.65         | 20.95  | 50.60  | 68.3   | -17.70 |

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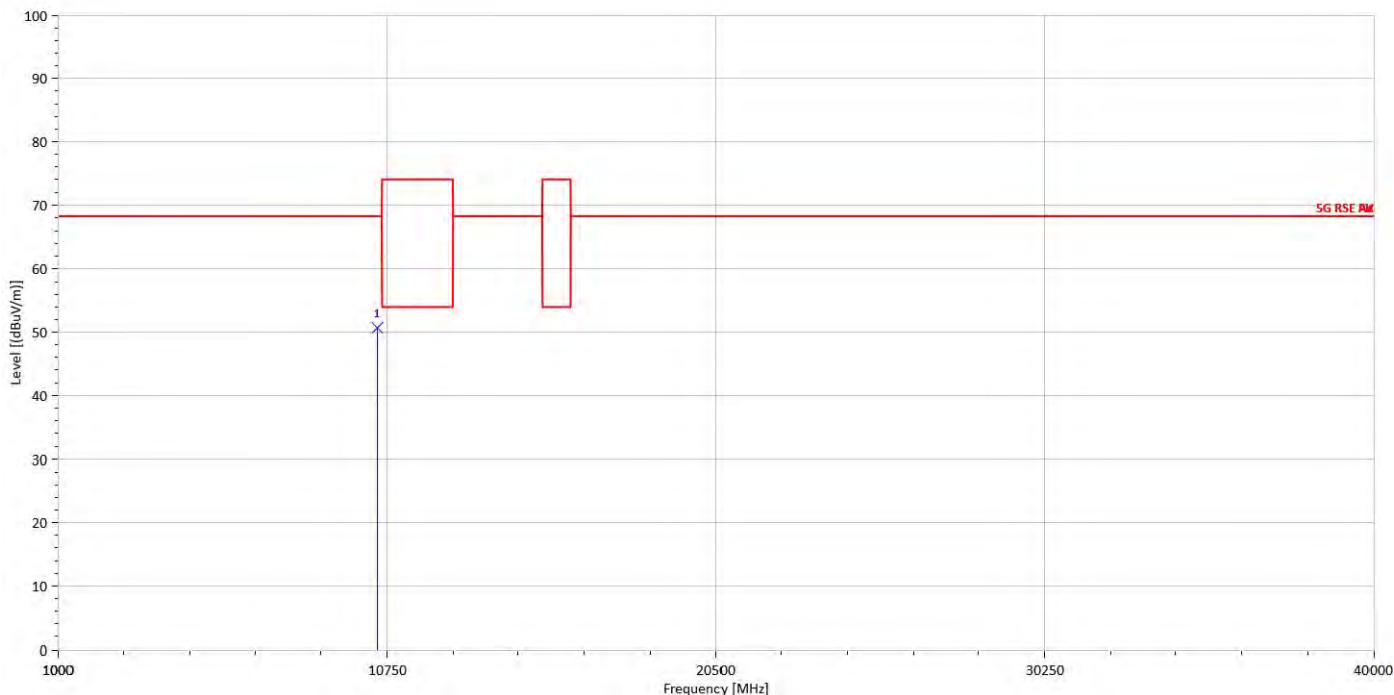
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Operation Mode : 802.11n40B1      Test Date : 2017/10/23  
 Fundamental Frequency : 5230 MHz      Temp. / Humi. : 24.5deg\_C/70RH  
 Operation Band : Tx CH HIGH      Test Engineer : Ashton  
 EUT Pol. : E2      Measurement Antenna Pol. : Horizontal



| Freq.    | Note    | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|----------|---------|----------|---------------|--------|--------|--------|--------|
| MHz      | F/H/E/S | Mode     | Reading Level | dB     | FS     | @3m    | dB     |
|          |         | PK/QP/AV | dBuV          |        | dBuV/m | dBuV/m |        |
| 10460.00 | H       | Peak     | 29.73         | 20.95  | 50.68  | 68.3   | -17.62 |

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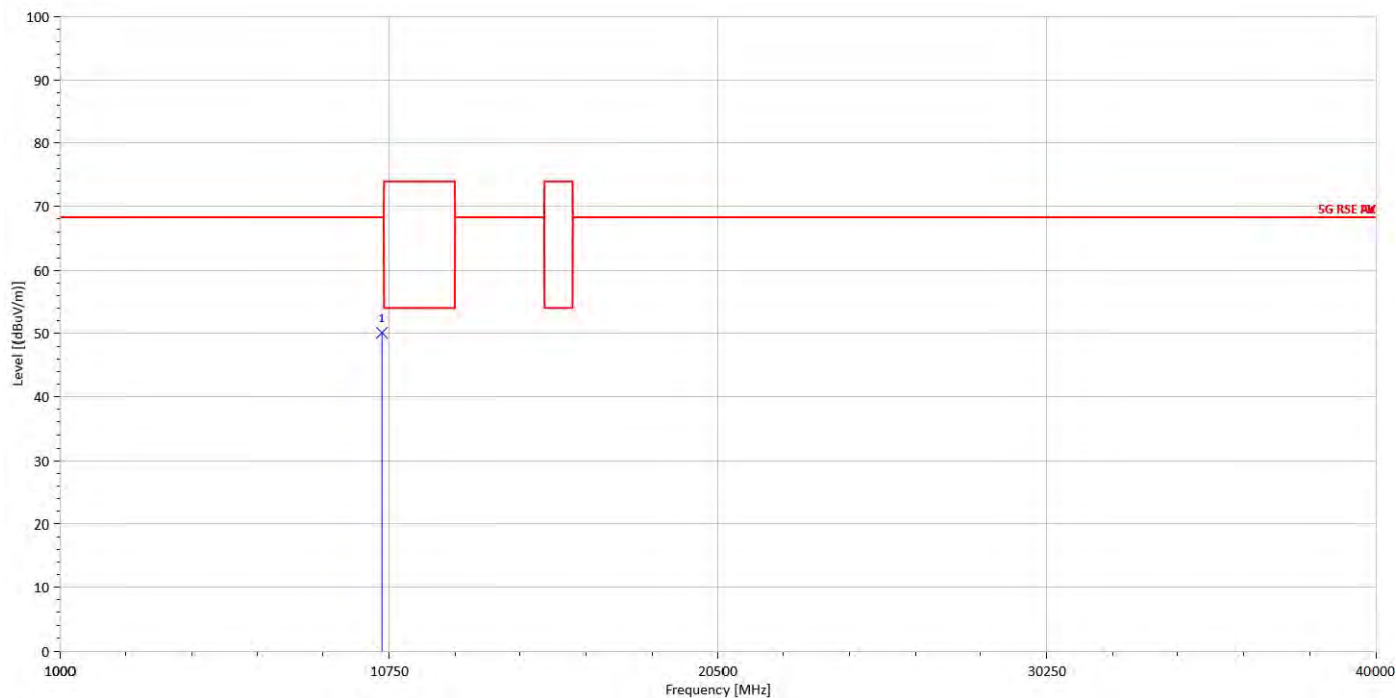
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## Radiated Spurious Emission Measurement Result 802.11n HT40, 5250~5350 MHz

|                         |             |                            |                |
|-------------------------|-------------|----------------------------|----------------|
| Operation Mode :        | 802.11n40B2 | Test Date :                | 2017/10/23     |
| Fundamental Frequency : | 5270 MHz    | Temp. / Humi. :            | 24.5deg_C/70RH |
| Operation Band :        | Tx CH LOW   | Test Engineer :            | Ashton         |
| EUT Pol. :              | E2          | Measurement Antenna Pol. : | Vertical       |



| Freq.    | Note    | Detector Mode | Spectrum Reading Level | Factor | Actual FS | Limit @3m | Margin |
|----------|---------|---------------|------------------------|--------|-----------|-----------|--------|
| MHz      | F/H/E/S | PK/QP/AV      | dBuV                   | dB     | dBuV/m    | dBuV/m    | dB     |
| 10540.00 | H       | Peak          | 30.01                  | 20.06  | 50.08     | 68.3      | -18.22 |

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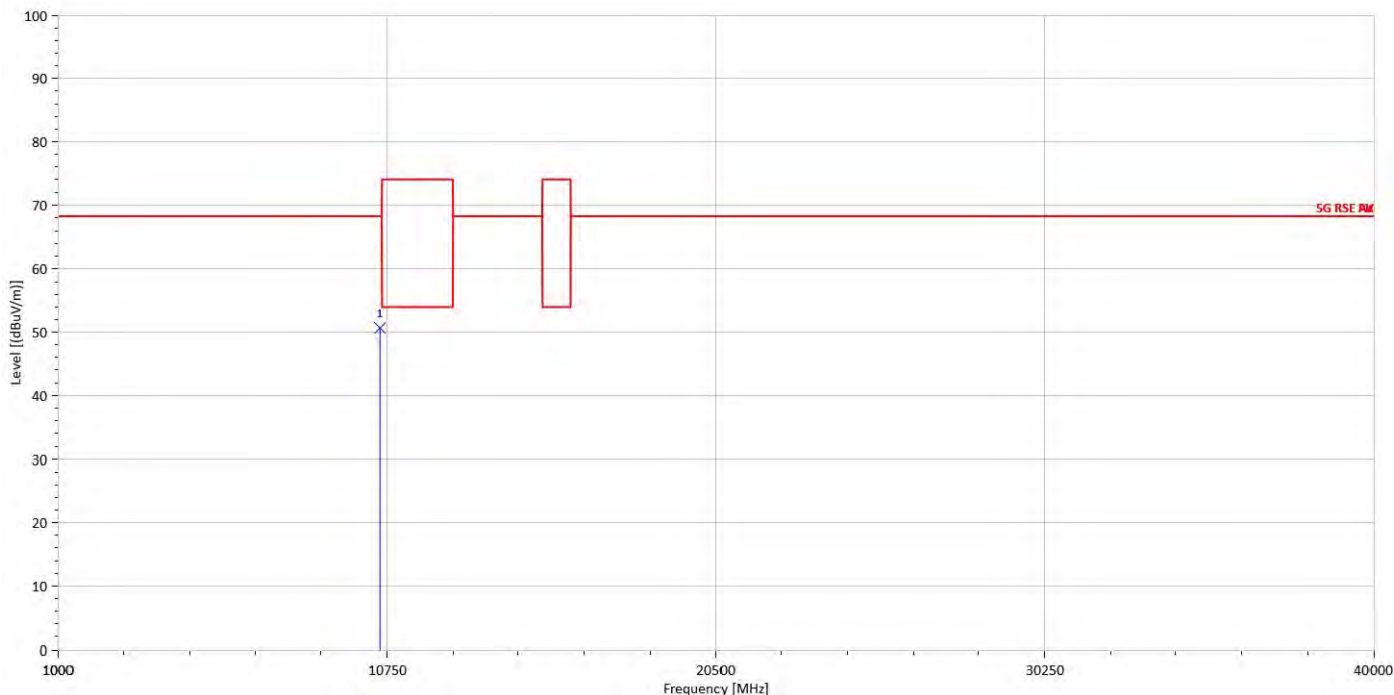
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Operation Mode : 802.11n40B2      Test Date : 2017/10/23  
 Fundamental Frequency : 5270 MHz      Temp. / Humi. : 24.5deg\_C/70RH  
 Operation Band : Tx CH LOW      Test Engineer : Ashton  
 EUT Pol. : E2      Measurement Antenna Pol. : Horizontal



| Freq.    | Note    | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|----------|---------|----------|---------------|--------|--------|--------|--------|
| MHz      | F/H/E/S | Mode     | Reading Level | dB     | FS     | @3m    | dB     |
|          |         | PK/QP/AV | dBuV          |        | dBuV/m | dBuV/m |        |
| 10540.00 | H       | Peak     | 30.60         | 20.06  | 50.66  | 68.3   | -17.64 |

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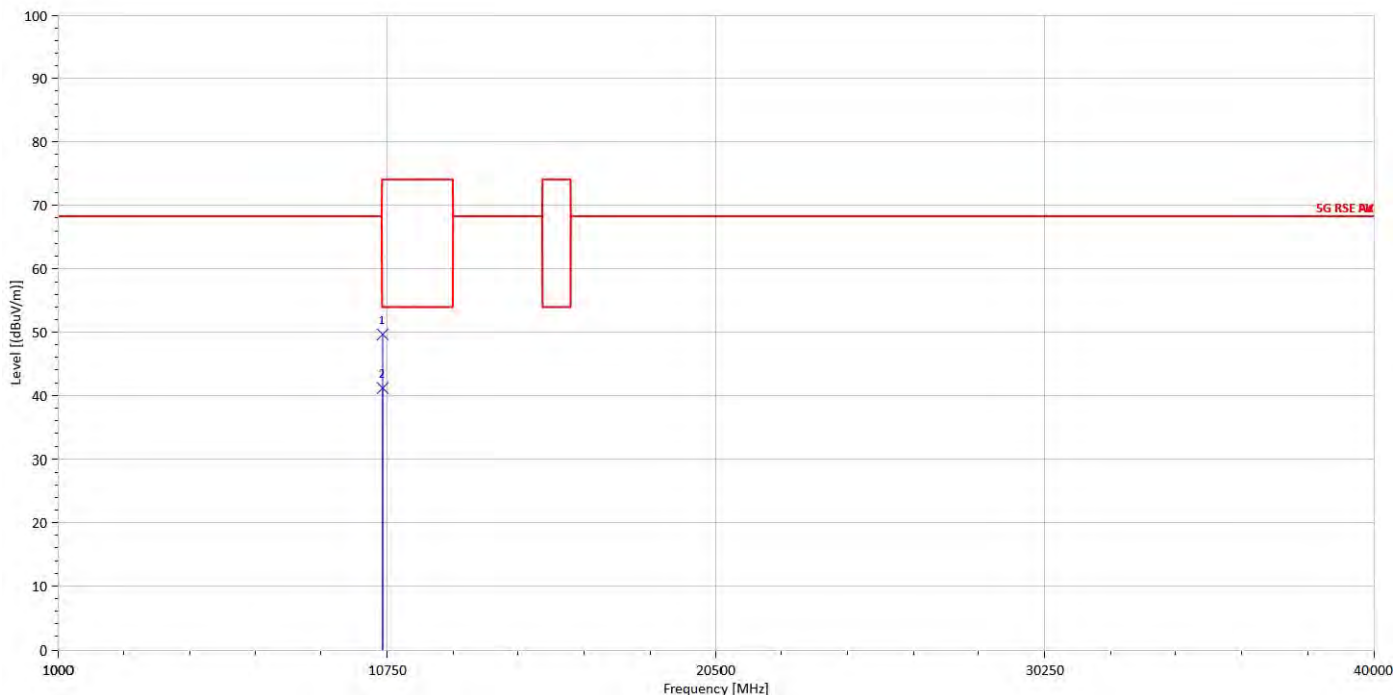
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Operation Mode : 802.11n40B2      Test Date : 2017/10/23  
 Fundamental Frequency : 5310 MHz      Temp. / Humi. : 24.5deg\_C/70RH  
 Operation Band : Tx CH HIGH      Test Engineer : Ashton  
 EUT Pol. : E2      Measurement Antenna Pol. : Vertical



| Freq.    | Note    | Detector Mode | Spectrum Reading Level | Factor | Actual FS | Limit @3m | Margin |
|----------|---------|---------------|------------------------|--------|-----------|-----------|--------|
| MHz      | F/H/E/S | PK/QP/AV      | dBμV                   | dB     | dBμV/m    | dBμV/m    | dB     |
| 10620.00 | H       | Peak          | 29.35                  | 20.29  | 49.64     | 74        | -24.36 |
| 10620.00 | H       | Average       | 20.97                  | 20.29  | 41.26     | 54        | -12.74 |

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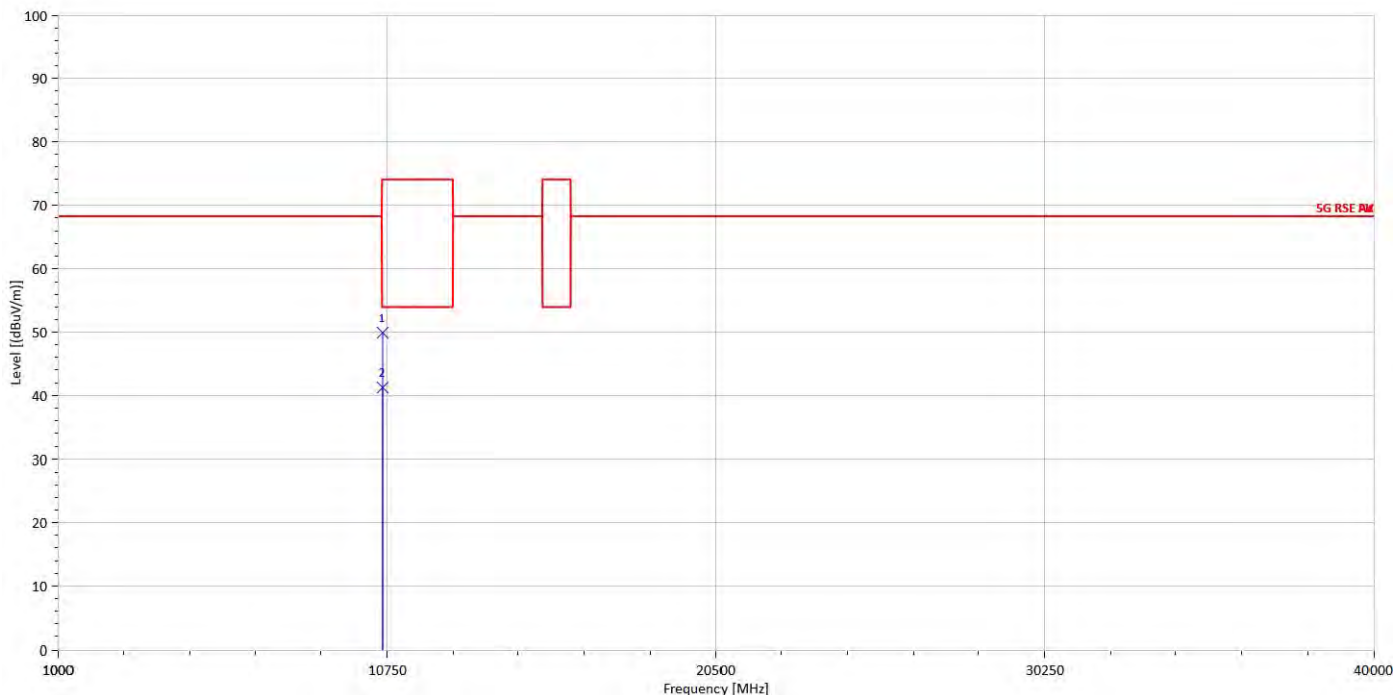
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Operation Mode : 802.11n40B2      Test Date : 2017/10/23  
 Fundamental Frequency : 5310 MHz      Temp. / Humi. : 24.5deg\_C/70RH  
 Operation Band : Tx CH HIGH      Test Engineer : Ashton  
 EUT Pol. : E2      Measurement Antenna Pol. : Horizontal



| Freq.    | Note    | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|----------|---------|----------|---------------|--------|--------|--------|--------|
| MHz      | F/H/E/S | Mode     | Reading Level | dB     | FS     | @3m    | dB     |
|          |         | PK/QP/AV | dBuV          |        | dBuV/m | dBuV/m |        |
| 10620.00 | H       | Peak     | 29.63         | 20.29  | 49.92  | 74     | -24.08 |
| 10620.00 | H       | Average  | 21.05         | 20.29  | 41.34  | 54     | -12.66 |

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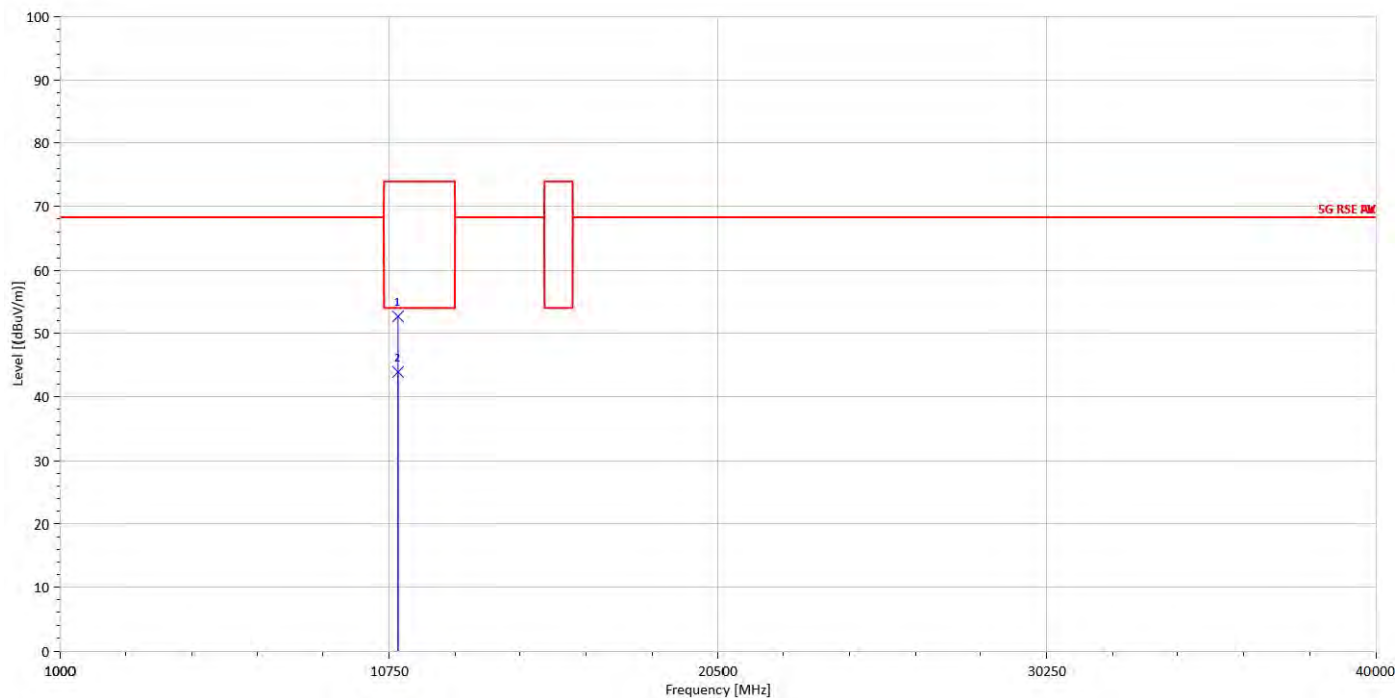
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## Radiated Spurious Emission Measurement Result 802.11n HT40, 5470~5725 MHz

|                         |             |                            |                |
|-------------------------|-------------|----------------------------|----------------|
| Operation Mode :        | 802.11n40B3 | Test Date :                | 2017/10/23     |
| Fundamental Frequency : | 5510 MHz    | Temp. / Humi. :            | 24.5deg_C/70RH |
| Operation Band :        | Tx CH LOW   | Test Engineer :            | Ashton         |
| EUT Pol. :              | E2          | Measurement Antenna Pol. : | Vertical       |



| Freq.    | Note    | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|----------|---------|----------|---------------|--------|--------|--------|--------|
| MHz      | F/H/E/S | Mode     | Reading Level |        | FS     | @3m    |        |
|          |         | PK/QP/AV | dBμV          | dB     | dBμV/m | dBμV/m | dB     |
| 11020.00 | H       | Peak     | 29.77         | 22.90  | 52.67  | 74     | -21.33 |
| 11020.00 | H       | Average  | 21.08         | 22.90  | 43.98  | 54     | -10.02 |

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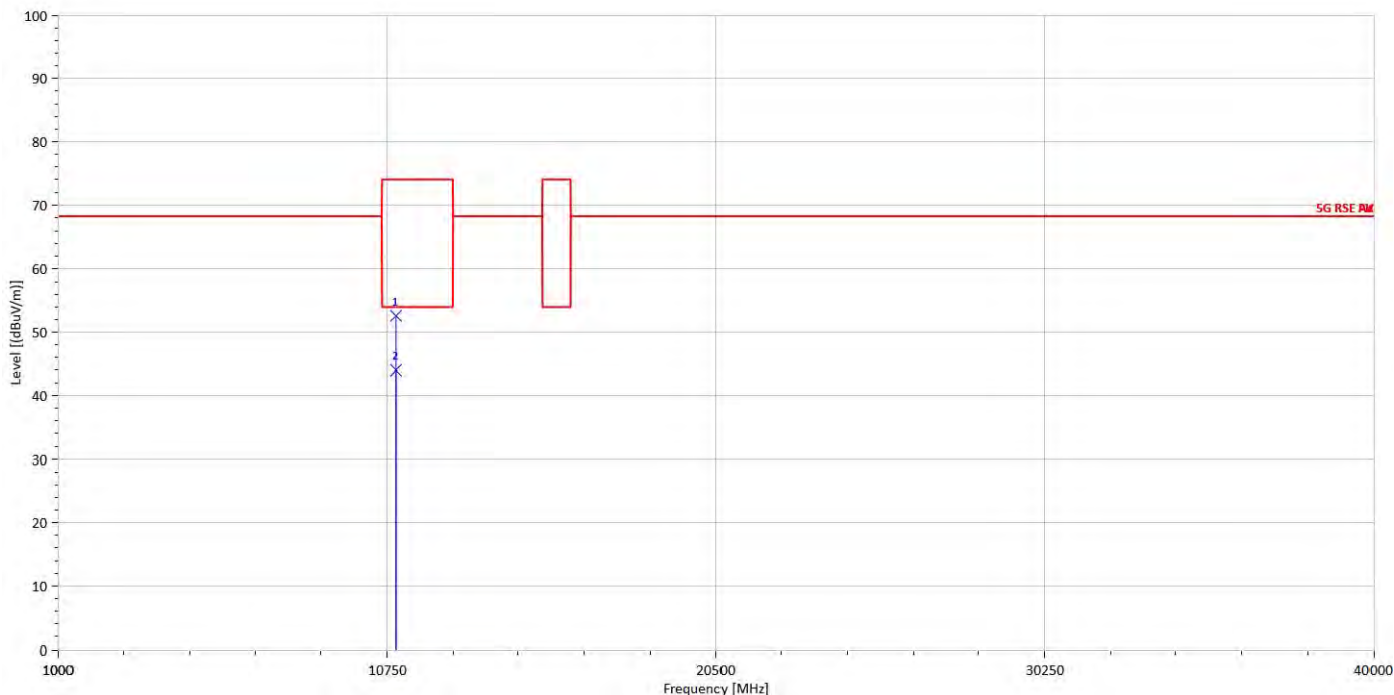
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Operation Mode : 802.11n40B3      Test Date : 2017/10/23  
 Fundamental Frequency : 5510 MHz      Temp. / Humi. : 24.5deg\_C/70RH  
 Operation Band : Tx CH LOW      Test Engineer : Ashton  
 EUT Pol. : E2      Measurement Antenna Pol. : Horizontal



| Freq.    | Note    | Detector Mode | Spectrum Reading Level | Factor | Actual FS | Limit @3m | Margin |
|----------|---------|---------------|------------------------|--------|-----------|-----------|--------|
| MHz      | F/H/E/S | PK/QP/AV      | dBuV                   | dB     | dBuV/m    | dBuV/m    | dB     |
| 11020.00 | H       | Peak          | 29.70                  | 22.90  | 52.60     | 74        | -21.40 |
| 11020.00 | H       | Average       | 21.11                  | 22.90  | 44.01     | 54        | -9.99  |

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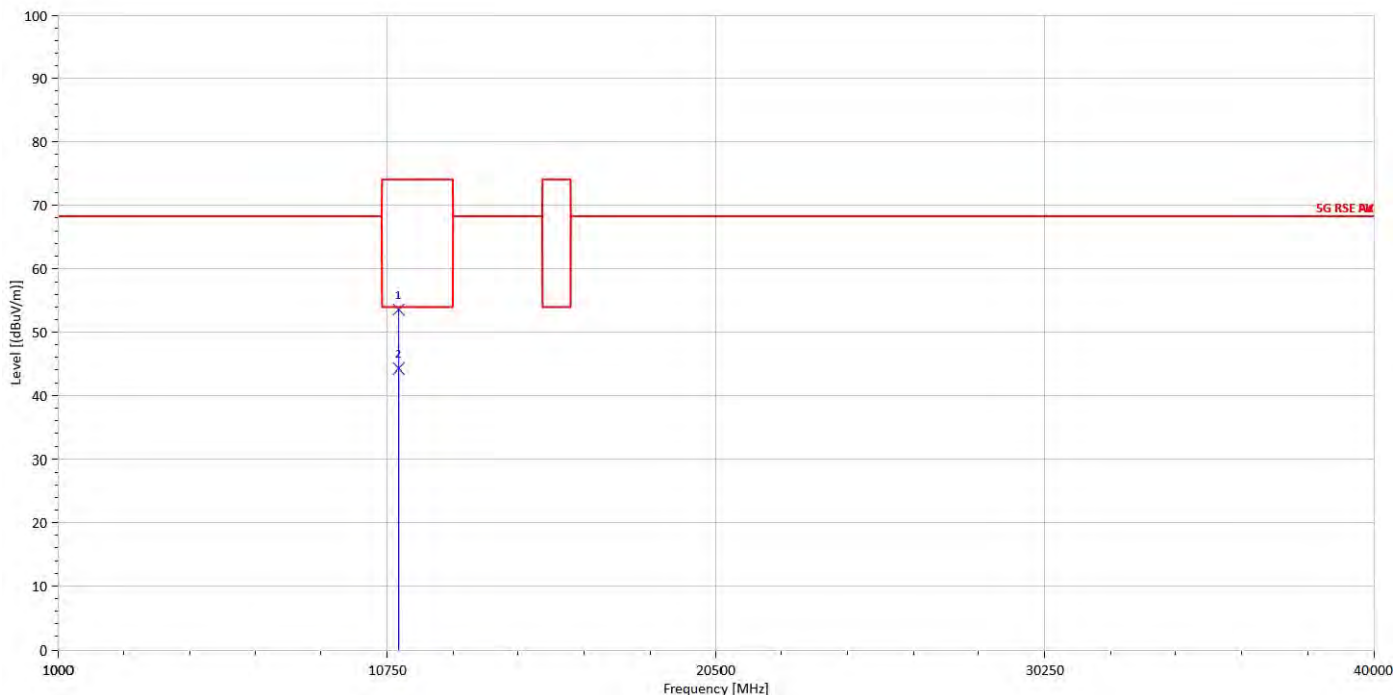
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Operation Mode : 802.11n40B3      Test Date : 2017/10/23  
 Fundamental Frequency : 5550 MHz      Temp. / Humi. : 24.5deg\_C/70RH  
 Operation Band : Tx CH MID      Test Engineer : Ashton  
 EUT Pol. : E2      Measurement Antenna Pol. : Vertical



| Freq.    | Note    | Detector Mode | Spectrum Reading Level | Factor | Actual FS | Limit @3m | Margin |
|----------|---------|---------------|------------------------|--------|-----------|-----------|--------|
| MHz      | F/H/E/S | PK/QP/AV      | dBuV                   | dB     | dBuV/m    | dBuV/m    | dB     |
| 11100.00 | H       | Peak          | 30.43                  | 23.16  | 53.60     | 74        | -20.40 |
| 11100.00 | H       | Average       | 21.12                  | 23.16  | 44.28     | 54        | -9.72  |

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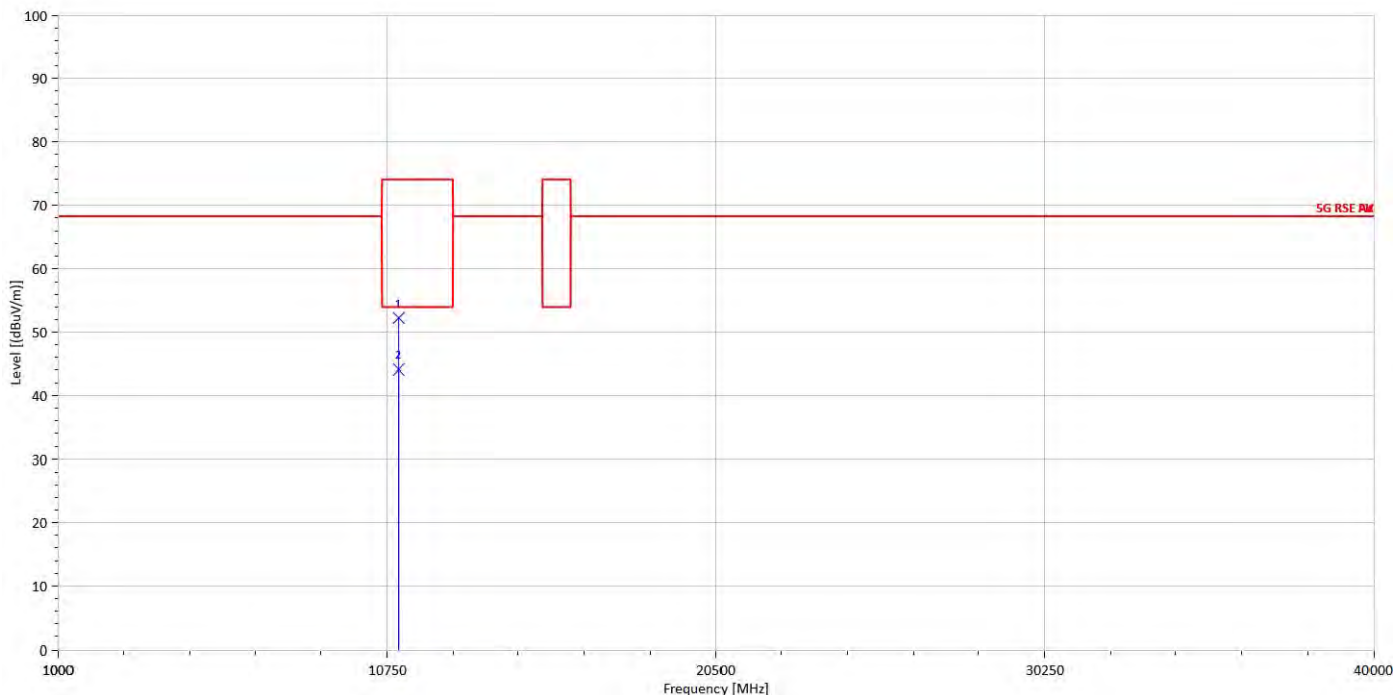
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Operation Mode : 802.11n40B3      Test Date : 2017/10/23  
 Fundamental Frequency : 5550 MHz      Temp. / Humi. : 24.5deg\_C/70RH  
 Operation Band : Tx CH MID      Test Engineer : Ashton  
 EUT Pol. : E2      Measurement Antenna Pol. : Horizontal



| Freq.    | Note    | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|----------|---------|----------|---------------|--------|--------|--------|--------|
| MHz      | F/H/E/S | Mode     | Reading Level | dB     | FS     | @3m    | dB     |
|          |         | PK/QP/AV | dBuV          |        | dBuV/m | dBuV/m |        |
| 11100.00 | H       | Peak     | 29.10         | 23.16  | 52.27  | 74     | -21.73 |
| 11100.00 | H       | Average  | 20.96         | 23.16  | 44.12  | 54     | -9.88  |

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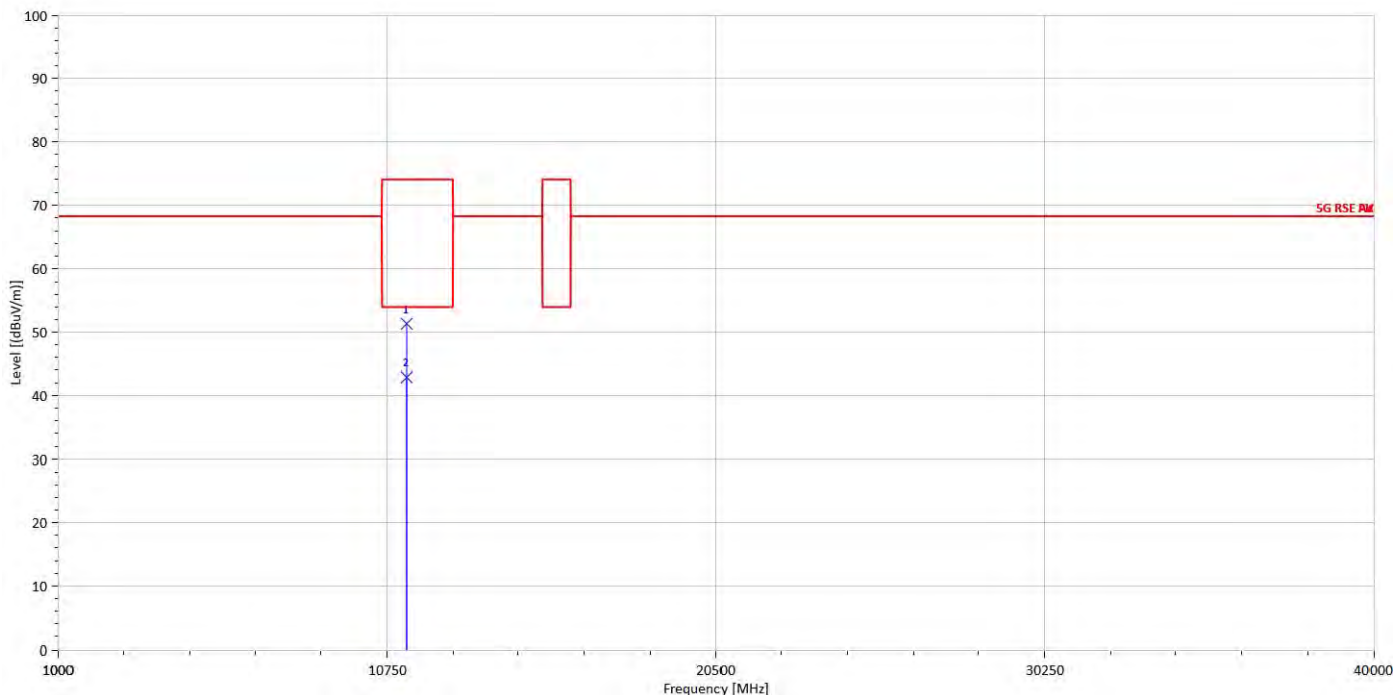
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Operation Mode : 802.11n40B3      Test Date : 2017/10/23  
 Fundamental Frequency : 5670 MHz      Temp. / Humi. : 24.5deg\_C/70RH  
 Operation Band : Tx CH HIGH      Test Engineer : Ashton  
 EUT Pol. : E2      Measurement Antenna Pol. : Vertical



| Freq.    | Note    | Detector Mode | Spectrum Reading Level | Factor | Actual FS | Limit @3m | Margin |
|----------|---------|---------------|------------------------|--------|-----------|-----------|--------|
| MHz      | F/H/E/S | PK/QP/AV      | dBμV                   | dB     | dBμV/m    | dBμV/m    | dB     |
| 11340.00 | H       | Peak          | 30.38                  | 20.97  | 51.35     | 74        | -22.65 |
| 11340.00 | H       | Average       | 21.99                  | 20.97  | 42.96     | 54        | -11.04 |

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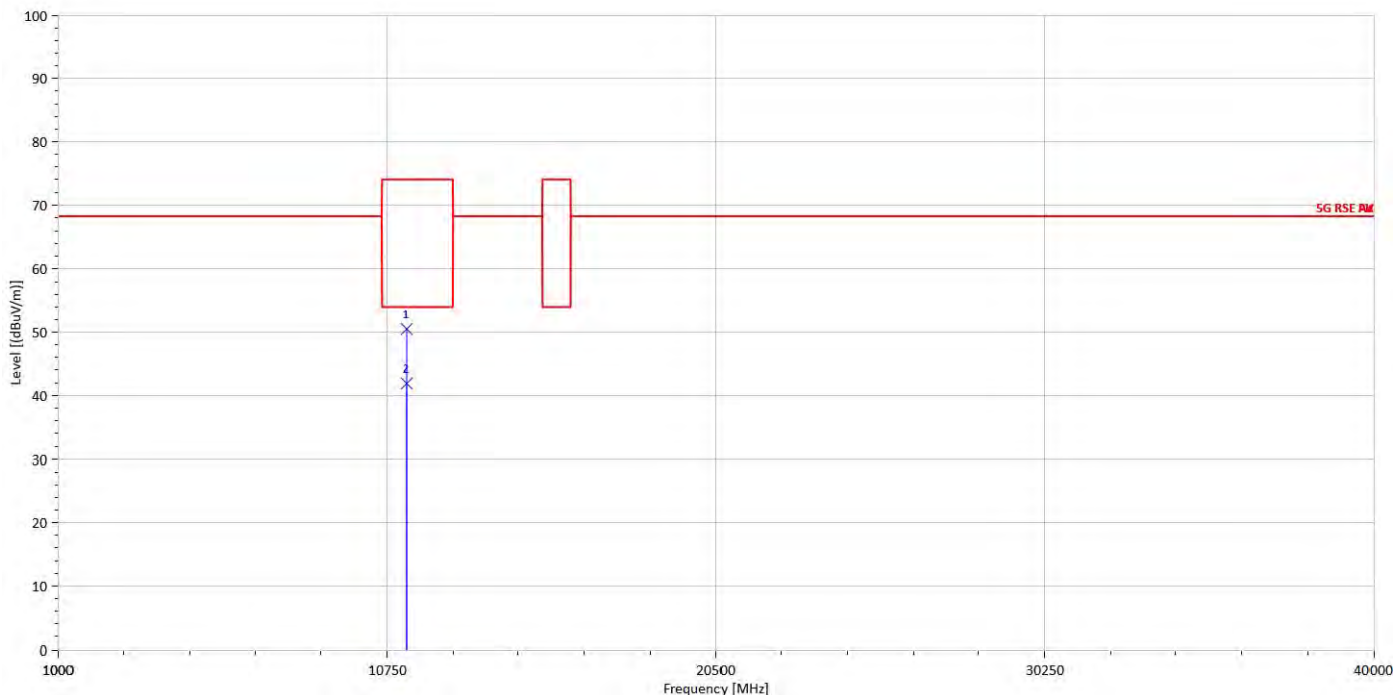
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Operation Mode : 802.11n40B3      Test Date : 2017/10/23  
 Fundamental Frequency : 5670 MHz      Temp. / Humi. : 24.5deg\_C/70RH  
 Operation Band : Tx CH HIGH      Test Engineer : Ashton  
 EUT Pol. : E2      Measurement Antenna Pol. : Horizontal



| Freq.    | Note    | Detector Mode | Spectrum Reading Level | Factor | Actual FS | Limit @3m | Margin |
|----------|---------|---------------|------------------------|--------|-----------|-----------|--------|
| MHz      | F/H/E/S | PK/QP/AV      | dBμV                   | dB     | dBμV/m    | dBμV/m    | dB     |
| 11340.00 | H       | Peak          | 29.53                  | 20.97  | 50.50     | 74        | -23.50 |
| 11340.00 | H       | Average       | 21.03                  | 20.97  | 42.00     | 54        | -12.00 |

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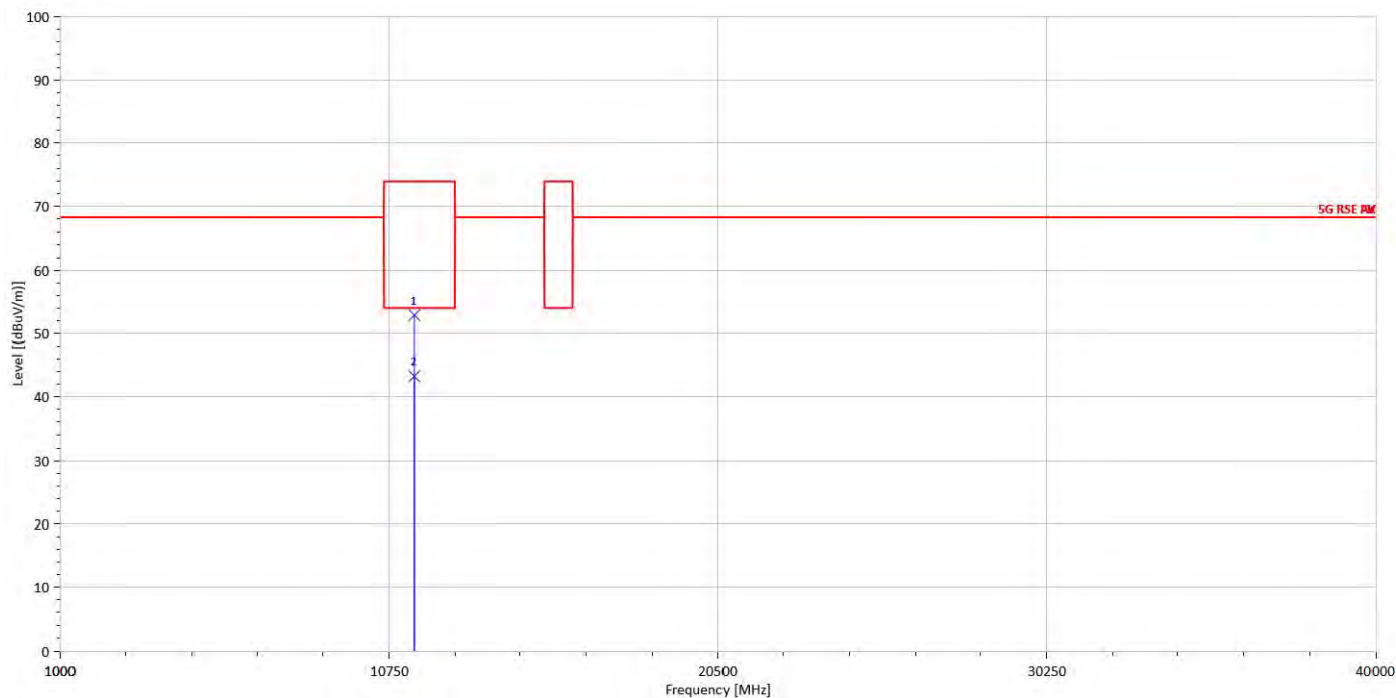
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## Radiated Spurious Emission Measurement Result 802.11n HT40,

|                         |             |                            |                |
|-------------------------|-------------|----------------------------|----------------|
| Operation Mode :        | 802.11n40B4 | Test Date :                | 2017/10/23     |
| Fundamental Frequency : | 5755 MHz    | Temp. / Humi. :            | 24.5deg_C/70RH |
| Operation Band :        | Tx CH LOW   | Test Engineer :            | Ashton         |
| EUT Pol. :              | E2          | Measurement Antenna Pol. : | Vertical       |



| Freq.    | Note    | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|----------|---------|----------|---------------|--------|--------|--------|--------|
| MHz      | F/H/E/S | Mode     | Reading Level |        | FS     | @3m    |        |
|          |         | PK/QP/AV | dBμV          | dB     | dBμV/m | dBμV/m | dB     |
| 11510.00 | H       | Peak     | 30.72         | 22.17  | 52.89  | 74     | -21.11 |
| 11510.00 | H       | Average  | 21.13         | 22.17  | 43.30  | 54     | -10.70 |

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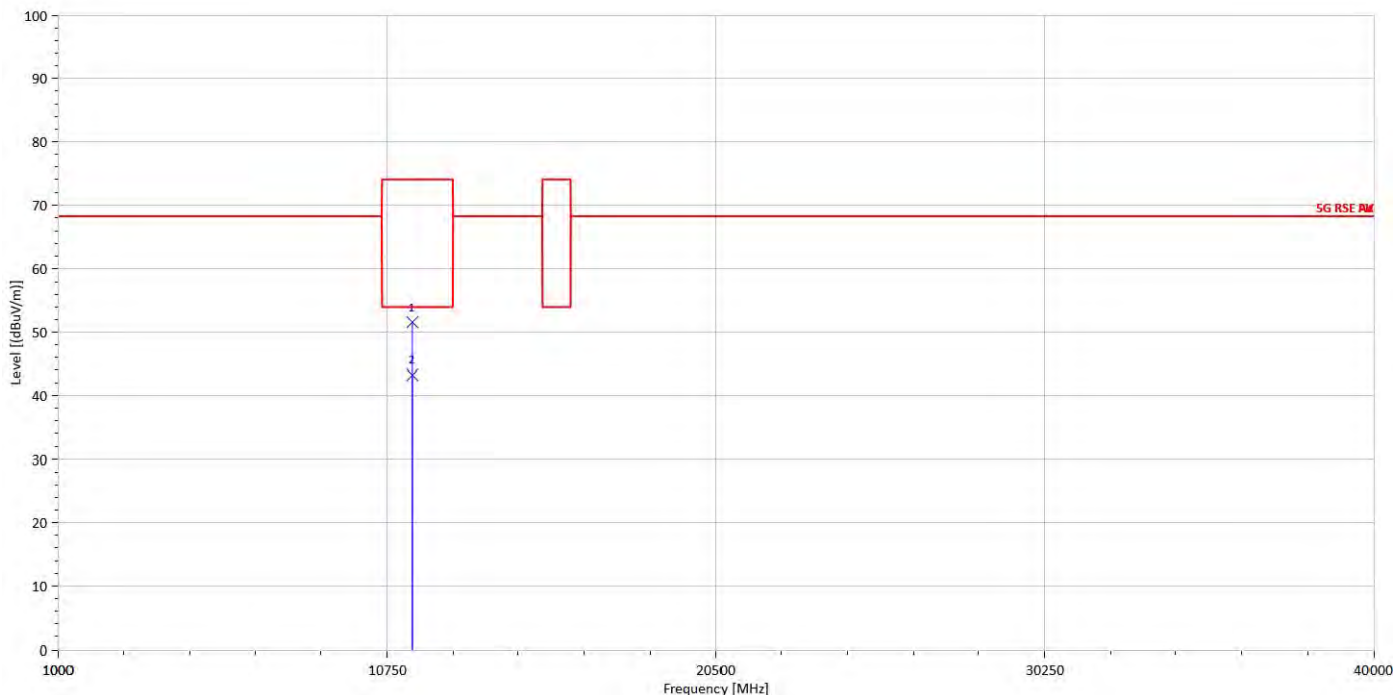
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 Fundamental Frequency : 5755 MHz      Temp. / Humi. : 24.5deg\_C/70RH  
 Operation Band : Tx CH LOW      Test Engineer : Ashton  
 EUT Pol. : E2      Measurement Antenna Pol. : Horizontal



| Freq.    | Note    | Detector Mode | Spectrum Reading Level | Factor | Actual FS | Limit @3m | Margin |
|----------|---------|---------------|------------------------|--------|-----------|-----------|--------|
| MHz      | F/H/E/S | PK/QP/AV      | dBuV                   | dB     | dBuV/m    | dBuV/m    | dB     |
| 11510.00 | H       | Peak          | 29.43                  | 22.17  | 51.60     | 74        | -22.40 |
| 11510.00 | H       | Average       | 21.11                  | 22.17  | 43.28     | 54        | -10.72 |

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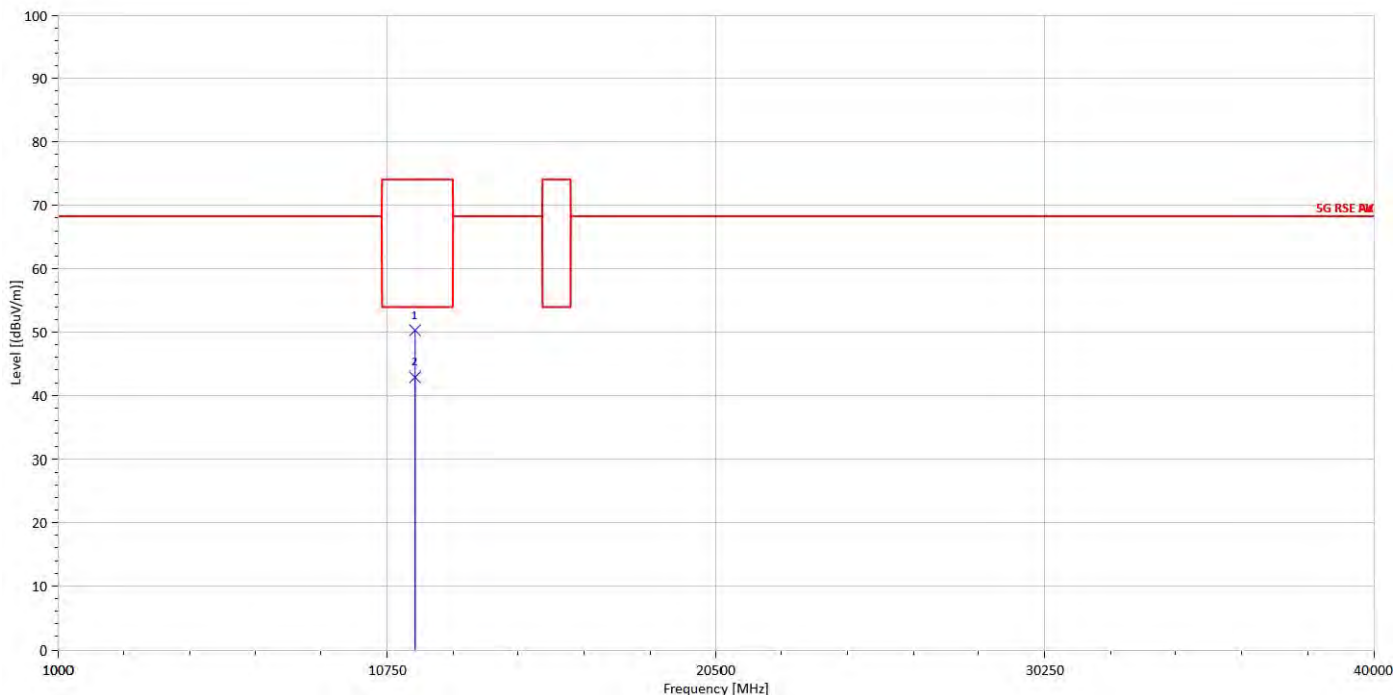
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Operation Mode : 802.11n40B4      Test Date : 2017/10/23  
 Fundamental Frequency : 5795 MHz      Temp. / Humi. : 24.5deg\_C/70RH  
 Operation Band : Tx CH HIGH      Test Engineer : Ashton  
 EUT Pol. : E2      Measurement Antenna Pol. : Vertical



| Freq.    | Note    | Detector Mode | Spectrum Reading Level | Factor | Actual FS | Limit @3m | Margin |
|----------|---------|---------------|------------------------|--------|-----------|-----------|--------|
| MHz      | F/H/E/S | PK/QP/AV      | dBuV                   | dB     | dBuV/m    | dBuV/m    | dB     |
| 11590.00 | H       | Peak          | 28.46                  | 21.84  | 50.31     | 74        | -23.69 |
| 11590.00 | H       | Average       | 21.12                  | 21.84  | 42.96     | 54        | -11.04 |

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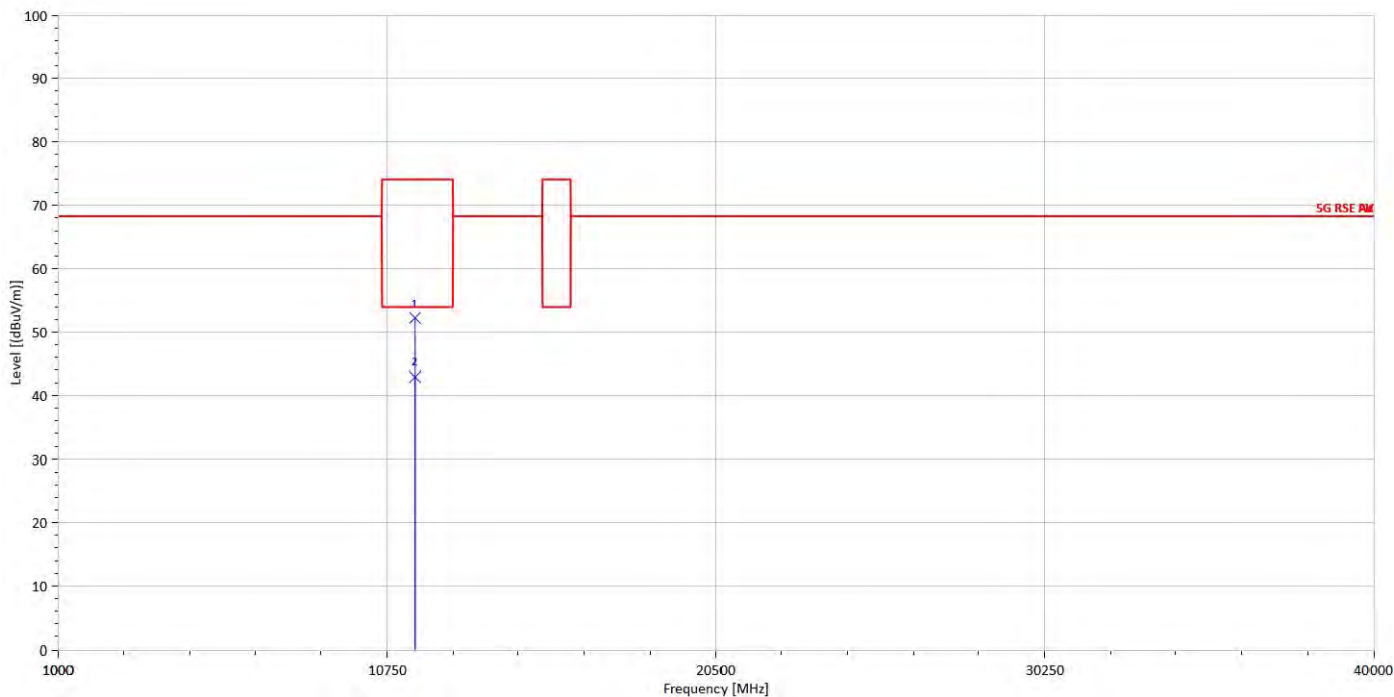
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Operation Mode : 802.11n40B4      Test Date : 2017/10/23  
 Fundamental Frequency : 5795 MHz      Temp. / Humi. : 24.5deg\_C/70RH  
 Operation Band : Tx CH HIGH      Test Engineer : Ashton  
 EUT Pol. : E2      Measurement Antenna Pol. : Horizontal



| Freq.    | Note    | Detector Mode | Spectrum Reading Level | Factor | Actual FS | Limit @3m | Margin |
|----------|---------|---------------|------------------------|--------|-----------|-----------|--------|
| MHz      | F/H/E/S | PK/QP/AV      | dBuV                   | dB     | dBuV/m    | dBuV/m    | dB     |
| 11590.00 | H       | Peak          | 30.43                  | 21.84  | 52.27     | 74        | -21.73 |
| 11590.00 | H       | Average       | 21.15                  | 21.84  | 42.99     | 54        | -11.01 |

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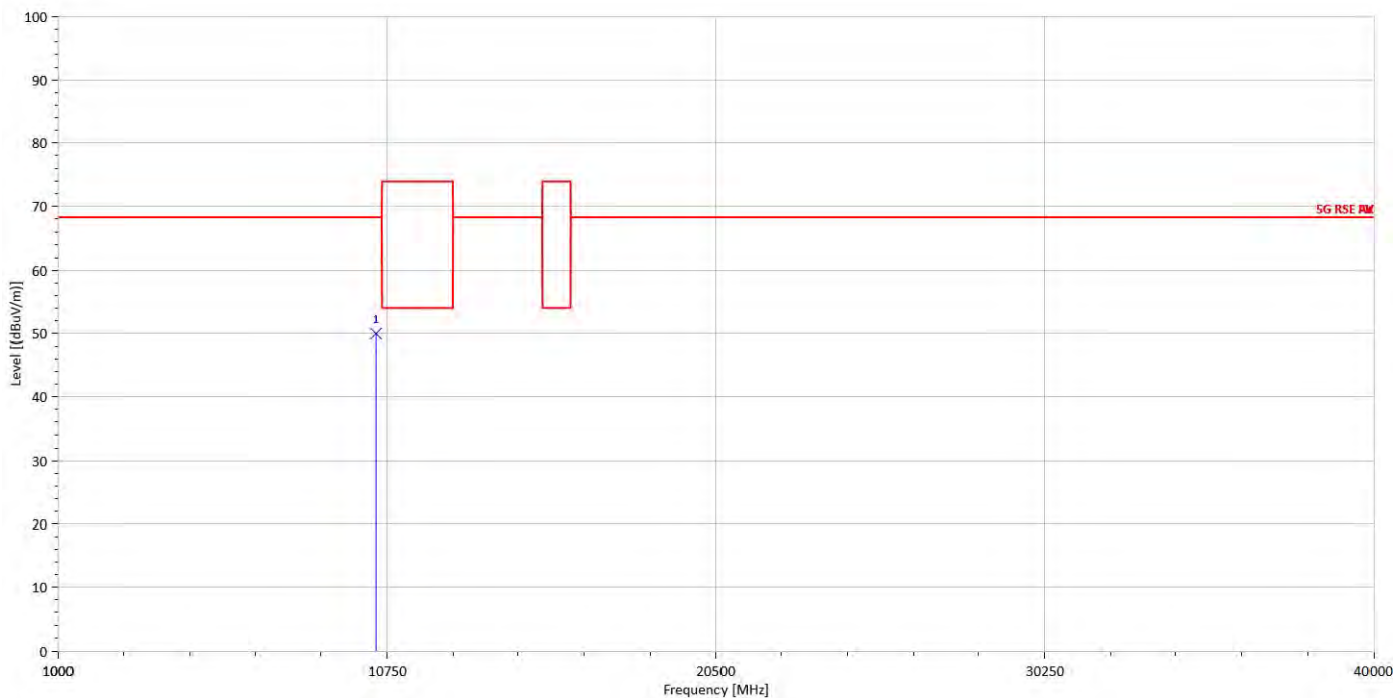
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## Radiated Spurious Emission Measurement Result 802.11ac VHT80, 5150~5250 MHz

|                         |              |                            |                |
|-------------------------|--------------|----------------------------|----------------|
| Operation Mode :        | 802.11ac80B1 | Test Date :                | 2017/10/23     |
| Fundamental Frequency : | 5210 MHz     | Temp. / Humi. :            | 24.5deg_C/70RH |
| Operation Band :        | Tx CH LOW    | Test Engineer :            | Ashton         |
| EUT Pol. :              | E2           | Measurement Antenna Pol. : | Vertical       |



| Freq.    | Note    | Detector Mode | Spectrum Reading Level | Factor | Actual FS | Limit @3m | Margin |
|----------|---------|---------------|------------------------|--------|-----------|-----------|--------|
| MHz      | F/H/E/S | PK/QP/AV      | dBuV                   | dB     | dBuV/m    | dBuV/m    | dB     |
| 10420.00 | H       | Peak          | 29.27                  | 20.67  | 49.94     | 68.3      | -18.36 |

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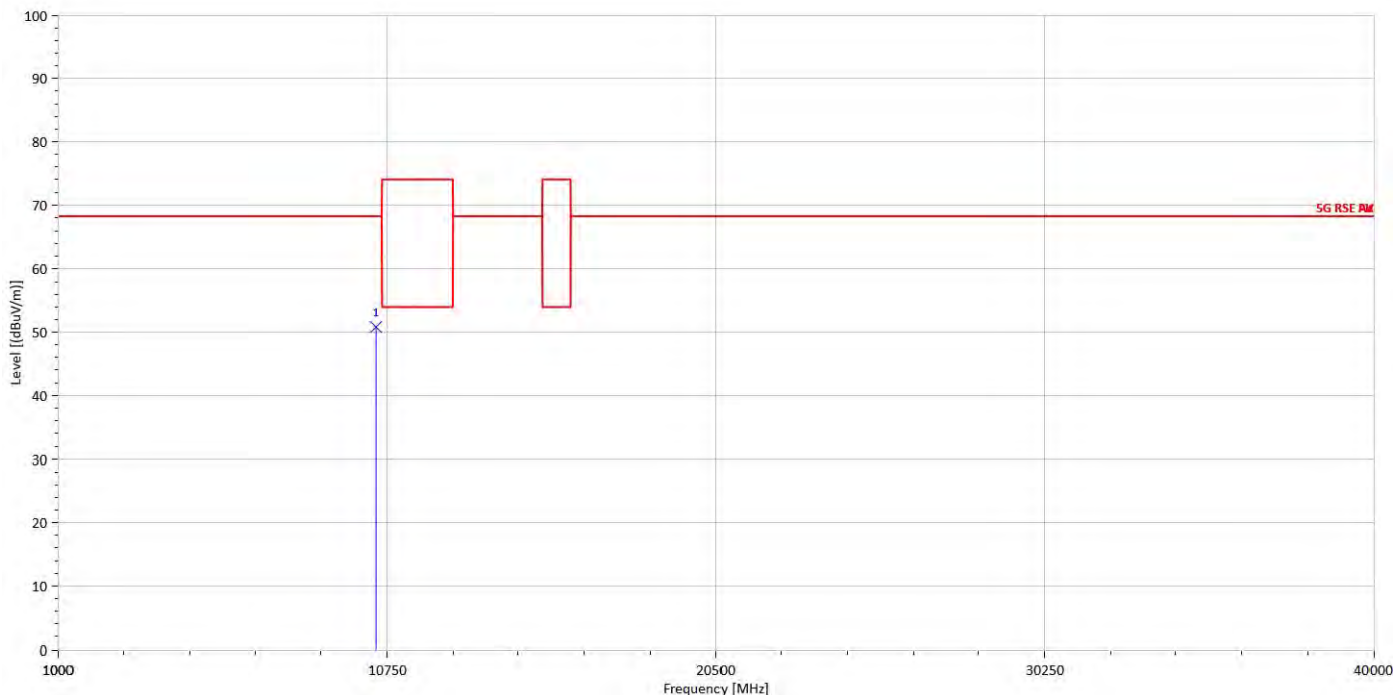
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Operation Mode : 802.11ac80B1      Test Date : 2017/10/23  
 Fundamental Frequency : 5210 MHz      Temp. / Humi. : 24.5deg\_C/70RH  
 Operation Band : Tx CH LOW      Test Engineer : Ashton  
 EUT Pol. : E2      Measurement Antenna Pol. : Horizontal



| Freq.    | Note    | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|----------|---------|----------|---------------|--------|--------|--------|--------|
| MHz      | F/H/E/S | Mode     | Reading Level | dB     | FS     | @3m    | dB     |
|          |         | PK/QP/AV | dBμV          |        | dBμV/m | dBμV/m |        |
| 10420.00 | H       | Peak     | 30.16         | 20.67  | 50.83  | 68.3   | -17.47 |

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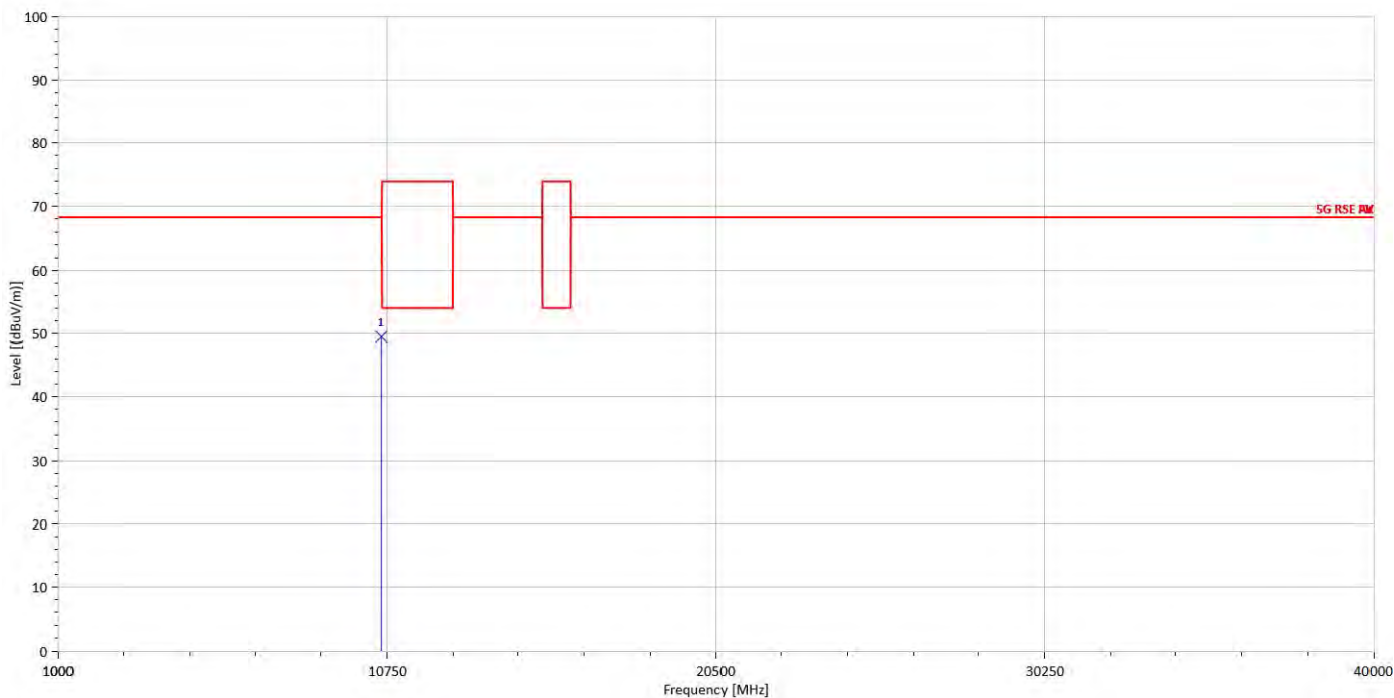
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## Radiated Spurious Emission Measurement Result 802.11ac VHT80, 5250~5350 MHz

|                         |              |                            |                |
|-------------------------|--------------|----------------------------|----------------|
| Operation Mode :        | 802.11ac80B2 | Test Date :                | 2017/10/23     |
| Fundamental Frequency : | 5290 MHz     | Temp. / Humi. :            | 24.5deg_C/70RH |
| Operation Band :        | Tx CH HIGH   | Test Engineer :            | Ashton         |
| EUT Pol. :              | E2           | Measurement Antenna Pol. : | Vertical       |



| Freq.    | Note    | Detector Mode | Spectrum Reading Level | Factor | Actual FS | Limit @3m | Margin |
|----------|---------|---------------|------------------------|--------|-----------|-----------|--------|
| MHz      | F/H/E/S | PK/QP/AV      | dBμV                   | dB     | dBμV/m    | dBμV/m    | dB     |
| 10580.00 | H       | Peak          | 29.36                  | 20.12  | 49.48     | 68.3      | -18.82 |

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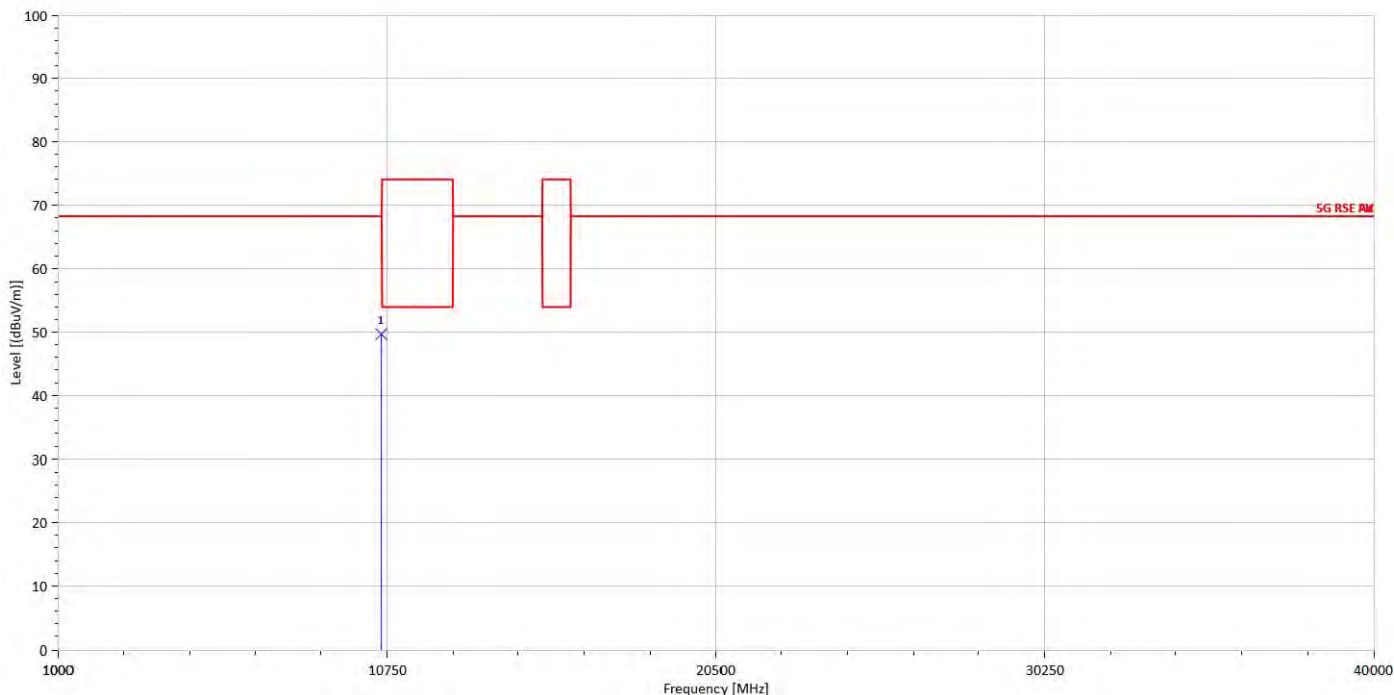
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|                         |              |                            |                |
|-------------------------|--------------|----------------------------|----------------|
| Operation Mode :        | 802.11ac80B2 | Test Date :                | 2017/10/23     |
| Fundamental Frequency : | 5290 MHz     | Temp. / Humi. :            | 24.5deg_C/70RH |
| Operation Band :        | Tx CH HIGH   | Test Engineer :            | Ashton         |
| EUT Pol. :              | E2           | Measurement Antenna Pol. : | Horizontal     |



| Freq.    | Note    | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|----------|---------|----------|---------------|--------|--------|--------|--------|
| MHz      | F/H/E/S | Mode     | Reading Level | dB     | FS     | @3m    | dB     |
|          |         | PK/QP/AV | dBuV          |        | dBuV/m | dBuV/m |        |
| 10580.00 | H       | Peak     | 29.57         | 20.12  | 49.69  | 68.3   | -18.61 |

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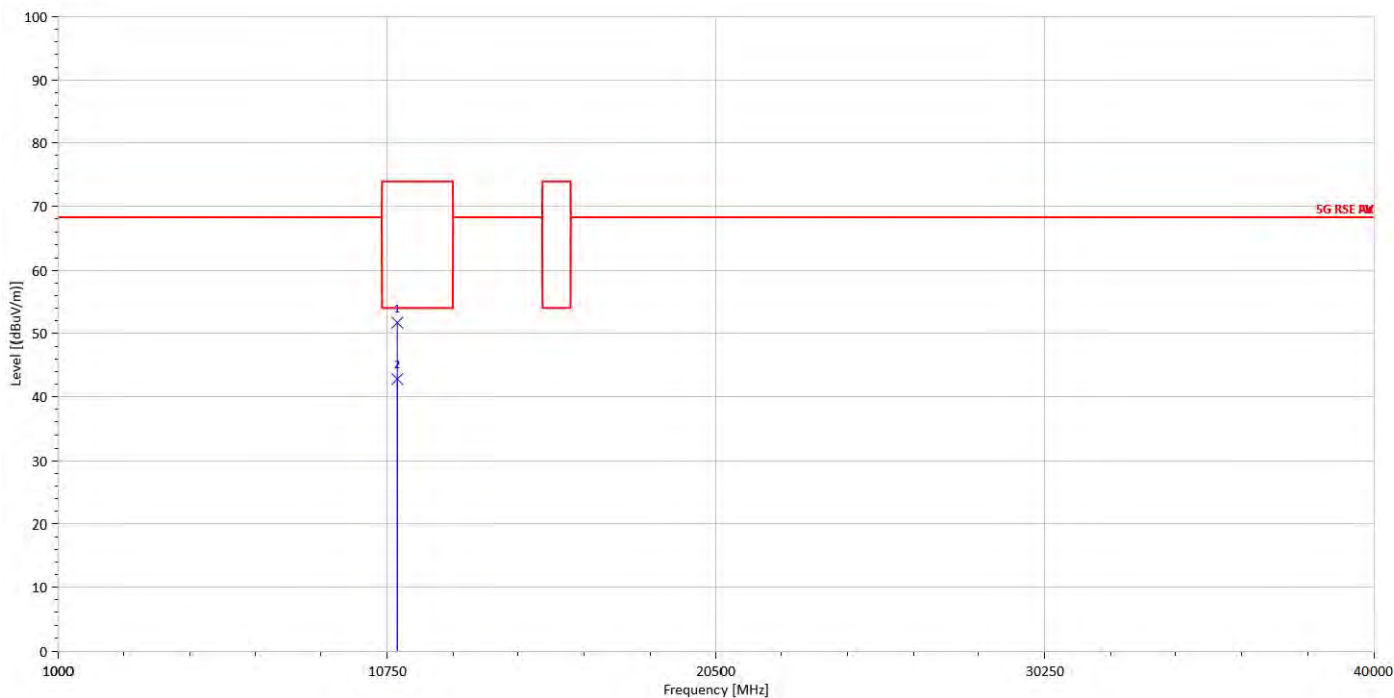
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# Radiated Spurious Emission Measurement Result 802.11ac VHT80, 5470~5725 MHz

|                         |              |                            |                |
|-------------------------|--------------|----------------------------|----------------|
| Operation Mode :        | 802.11ac80B3 | Test Date :                | 2017/10/23     |
| Fundamental Frequency : | 5530 MHz     | Temp. / Humi. :            | 24.5deg_C/70RH |
| Operation Band :        | Tx CH LOW    | Test Engineer :            | Ashton         |
| EUT Pol. :              | E2           | Measurement Antenna Pol. : | Vertical       |



| Freq.    | Note    | Detector Mode | Spectrum Reading Level | Factor | Actual FS | Limit @3m | Margin |
|----------|---------|---------------|------------------------|--------|-----------|-----------|--------|
| MHz      | F/H/E/S | PK/QP/AV      | dBμV                   | dB     | dBμV/m    | dBμV/m    | dB     |
| 11060.00 | H       | Peak          | 29.85                  | 21.83  | 51.68     | 74        | -22.32 |
| 11060.00 | H       | Average       | 21.03                  | 21.83  | 42.86     | 54        | -11.14 |

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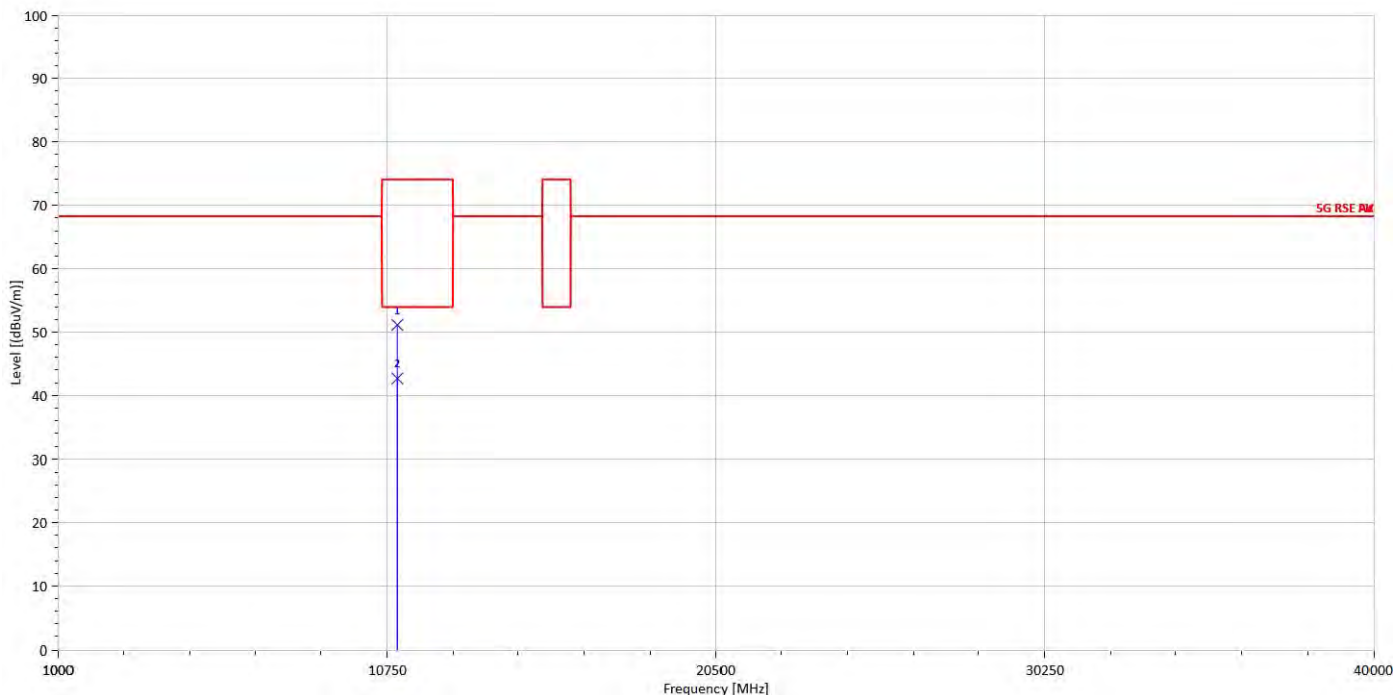
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Operation Mode : 802.11ac80B3      Test Date : 2017/10/23  
 Fundamental Frequency : 5530 MHz      Temp. / Humi. : 24.5deg\_C/70RH  
 Operation Band : Tx CH LOW      Test Engineer : Ashton  
 EUT Pol. : E2      Measurement Antenna Pol. : Horizontal



| Freq.    | Note    | Detector Mode | Spectrum Reading Level | Factor | Actual FS | Limit @3m | Margin |
|----------|---------|---------------|------------------------|--------|-----------|-----------|--------|
| MHz      | F/H/E/S | PK/QP/AV      | dBuV                   | dB     | dBuV/m    | dBuV/m    | dB     |
| 11060.00 | H       | Peak          | 29.33                  | 21.83  | 51.16     | 74        | -22.84 |
| 11060.00 | H       | Average       | 20.96                  | 21.83  | 42.79     | 54        | -11.21 |

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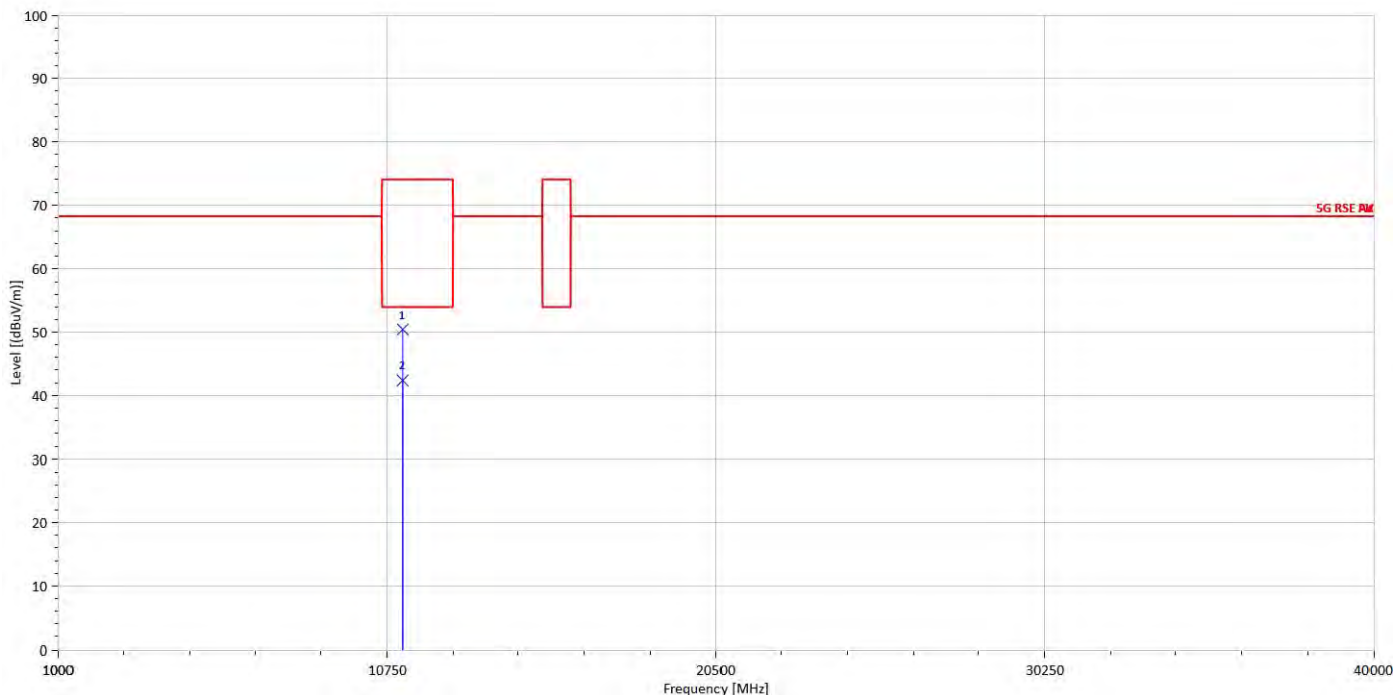
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|                         |              |                            |                |
|-------------------------|--------------|----------------------------|----------------|
| Operation Mode :        | 802.11ac80B3 | Test Date :                | 2017/10/23     |
| Fundamental Frequency : | 5610 MHz     | Temp. / Humi. :            | 24.5deg_C/70RH |
| Operation Band :        | Tx CH MID    | Test Engineer :            | Ashton         |
| EUT Pol. :              | E2           | Measurement Antenna Pol. : | Vertical       |



| Freq.    | Note    | Detector Mode | Spectrum Reading Level | Factor | Actual FS | Limit @3m | Margin |
|----------|---------|---------------|------------------------|--------|-----------|-----------|--------|
| MHz      | F/H/E/S | PK/QP/AV      | dBμV                   | dB     | dBμV/m    | dBμV/m    | dB     |
| 11220.00 | H       | Peak          | 29.13                  | 21.32  | 50.45     | 74        | -23.55 |
| 11220.00 | H       | Average       | 21.15                  | 21.32  | 42.47     | 54        | -11.53 |

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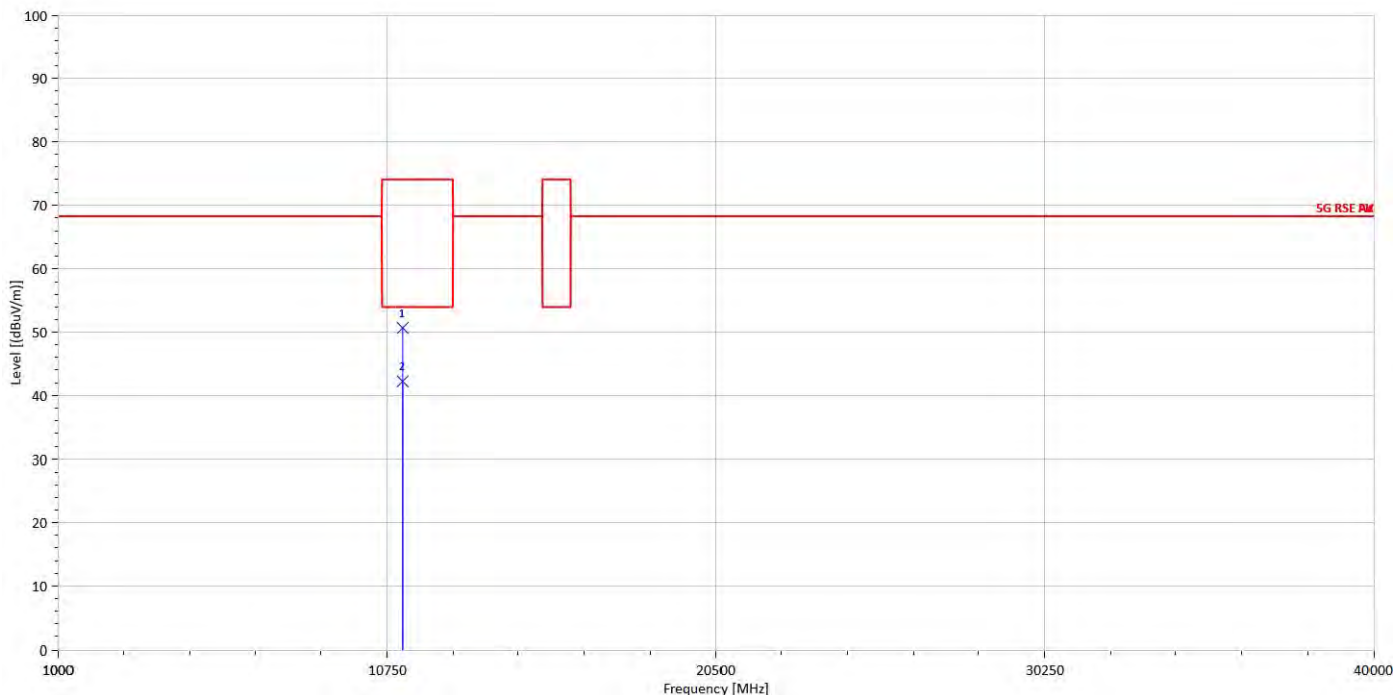
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|                         |              |                            |                |
|-------------------------|--------------|----------------------------|----------------|
| Operation Mode :        | 802.11ac80B3 | Test Date :                | 2017/10/23     |
| Fundamental Frequency : | 5610 MHz     | Temp. / Humi. :            | 24.5deg_C/70RH |
| Operation Band :        | Tx CH MID    | Test Engineer :            | Ashton         |
| EUT Pol. :              | E2           | Measurement Antenna Pol. : | Horizontal     |



| Freq.    | Note    | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|----------|---------|----------|---------------|--------|--------|--------|--------|
| MHz      | F/H/E/S | Mode     | Reading Level |        | FS     | @3m    |        |
|          |         | PK/QP/AV | dBμV          | dB     | dBμV/m | dBμV/m | dB     |
| 11220.00 | H       | Peak     | 29.36         | 21.32  | 50.67  | 74     | -23.33 |
| 11220.00 | H       | Average  | 21.01         | 21.32  | 42.33  | 54     | -11.67 |

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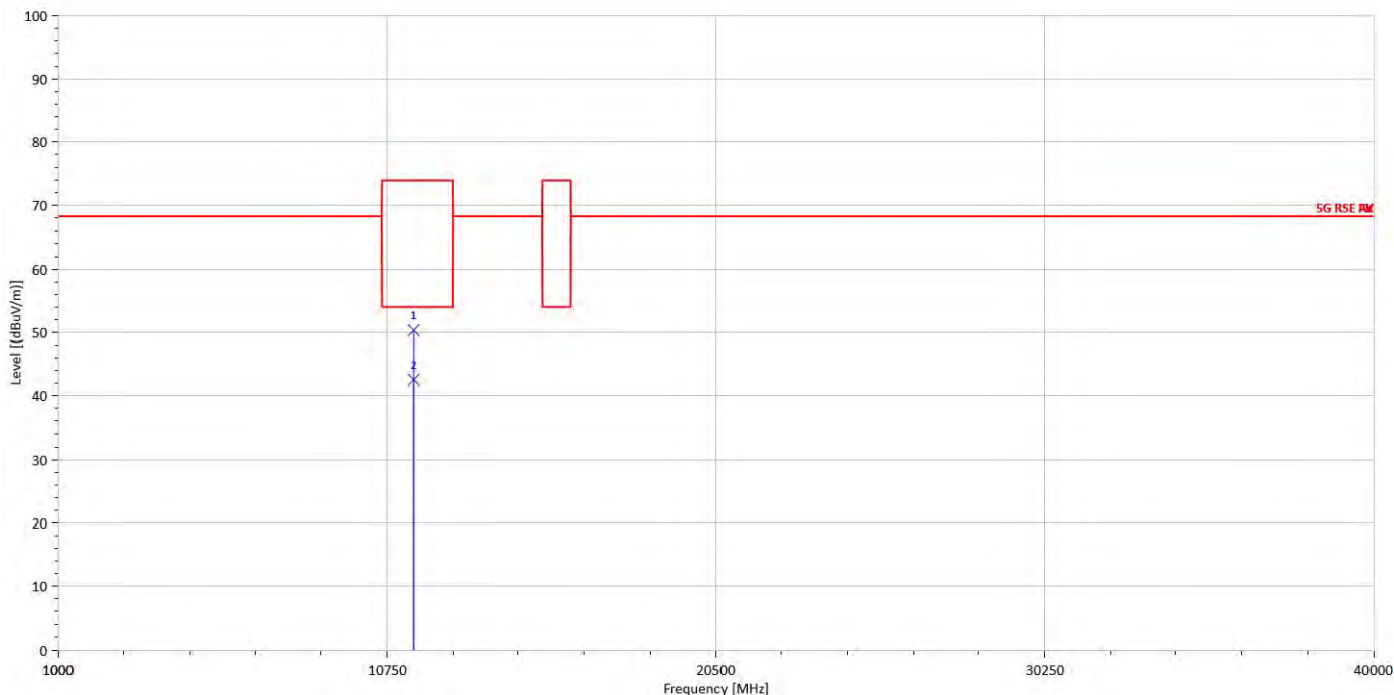
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**Radiated Spurious Emission Measurement Result 802.11ac VHT80,**

|                         |              |                            |                |
|-------------------------|--------------|----------------------------|----------------|
| Operation Mode :        | 802.11ac80B4 | Test Date :                | 2017/10/23     |
| Fundamental Frequency : | 5775 MHz     | Temp. / Humi. :            | 24.5deg_C/70RH |
| Operation Band :        | Tx CH LOW    | Test Engineer :            | Ashton         |
| EUT Pol. :              | E2           | Measurement Antenna Pol. : | Vertical       |



| Freq.    | Note    | Detector Mode | Spectrum Reading Level | Factor | Actual FS | Limit @3m | Margin |
|----------|---------|---------------|------------------------|--------|-----------|-----------|--------|
| MHz      | F/H/E/S | PK/QP/AV      | dBμV                   | dB     | dBμV/m    | dBμV/m    | dB     |
| 11550.00 | H       | Peak          | 28.93                  | 21.41  | 50.34     | 74        | -23.66 |
| 11550.00 | H       | Average       | 21.18                  | 21.41  | 42.59     | 54        | -11.41 |

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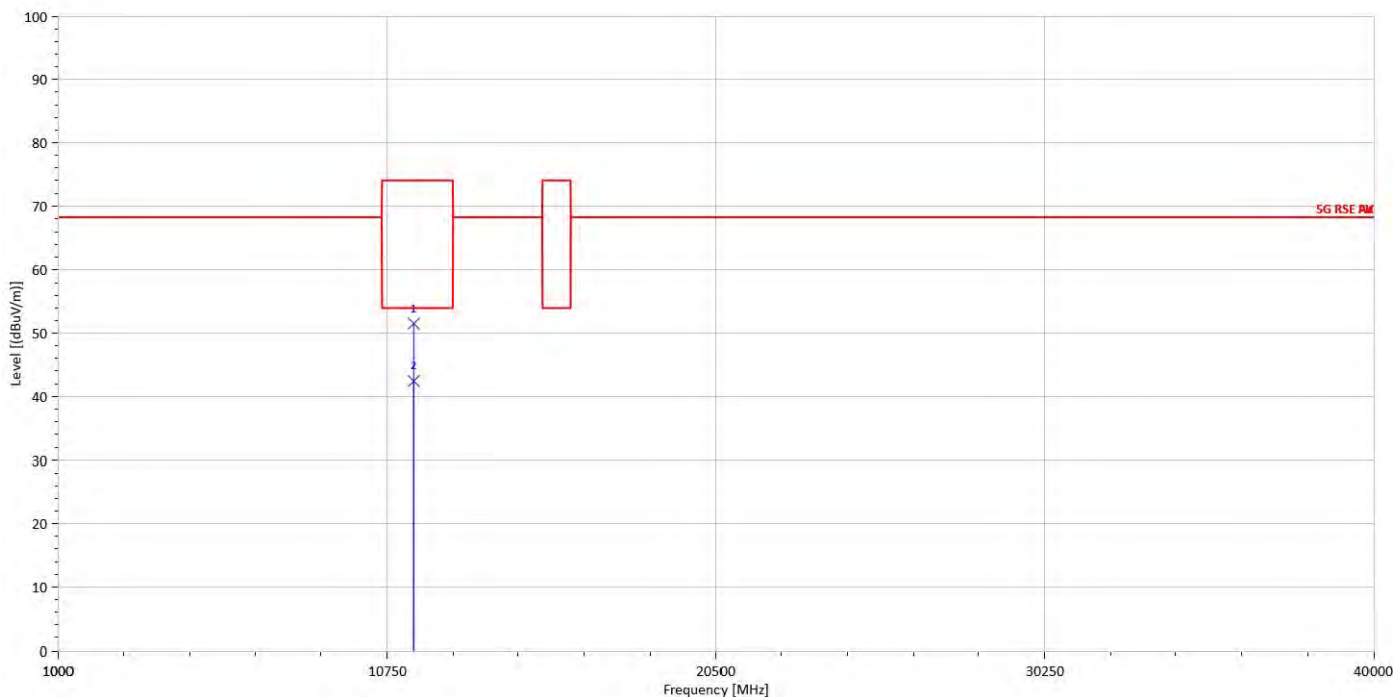
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|                         |              |                            |                |
|-------------------------|--------------|----------------------------|----------------|
| Operation Mode :        | 802.11ac80B4 | Test Date :                | 2017/10/23     |
| Fundamental Frequency : | 5775 MHz     | Temp. / Humi. :            | 24.5deg_C/70RH |
| Operation Band :        | Tx CH LOW    | Test Engineer :            | Ashton         |
| EUT Pol. :              | E2           | Measurement Antenna Pol. : | Horizontal     |



| Freq.    | Note    | Detector Mode | Spectrum Reading Level | Factor | Actual FS | Limit @3m | Margin |
|----------|---------|---------------|------------------------|--------|-----------|-----------|--------|
| MHz      | F/H/E/S | PK/QP/AV      | dBμV                   | dB     | dBμV/m    | dBμV/m    | dB     |
| 11550.00 | H       | Peak          | 30.12                  | 21.41  | 51.54     | 74        | -22.46 |
| 11550.00 | H       | Average       | 21.12                  | 21.41  | 42.53     | 54        | -11.47 |

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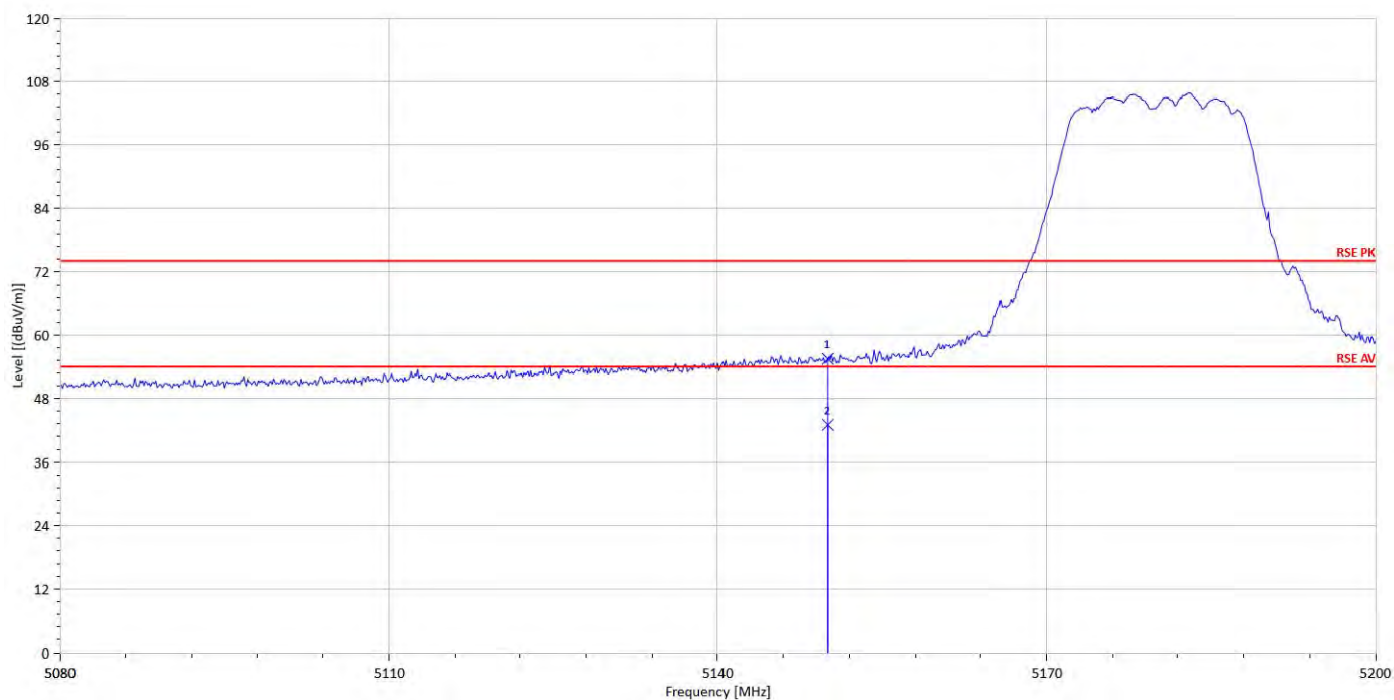
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## Band edge falling to restricted band 802.11a mode

|                         |           |                            |                |
|-------------------------|-----------|----------------------------|----------------|
| Operation Mode :        | 802.11aB1 | Test Date :                | 2017/10/20     |
| Fundamental Frequency : | 5180 MHz  | Temp. / Humi. :            | 24.5deg_C/70RH |
| Operation Band :        | BE CH LOW | Test Engineer :            | Enzo           |
| EUT Pol. :              | E2        | Measurement Antenna Pol. : | Vertical       |



| Freq.   | Note    | Detector Mode | Spectrum Reading Level | Factor | Actual FS | Limit @3m | Margin |
|---------|---------|---------------|------------------------|--------|-----------|-----------|--------|
| MHz     | F/H/E/S | PK/QP/AV      | dBμV                   | dB     | dBμV/m    | dBμV/m    | dB     |
| 5150.00 | E       | Peak          | 47.31                  | 8.19   | 55.50     | 74        | -18.50 |
| 5150.00 | E       | Average       | 34.86                  | 8.19   | 43.05     | 54        | -10.95 |

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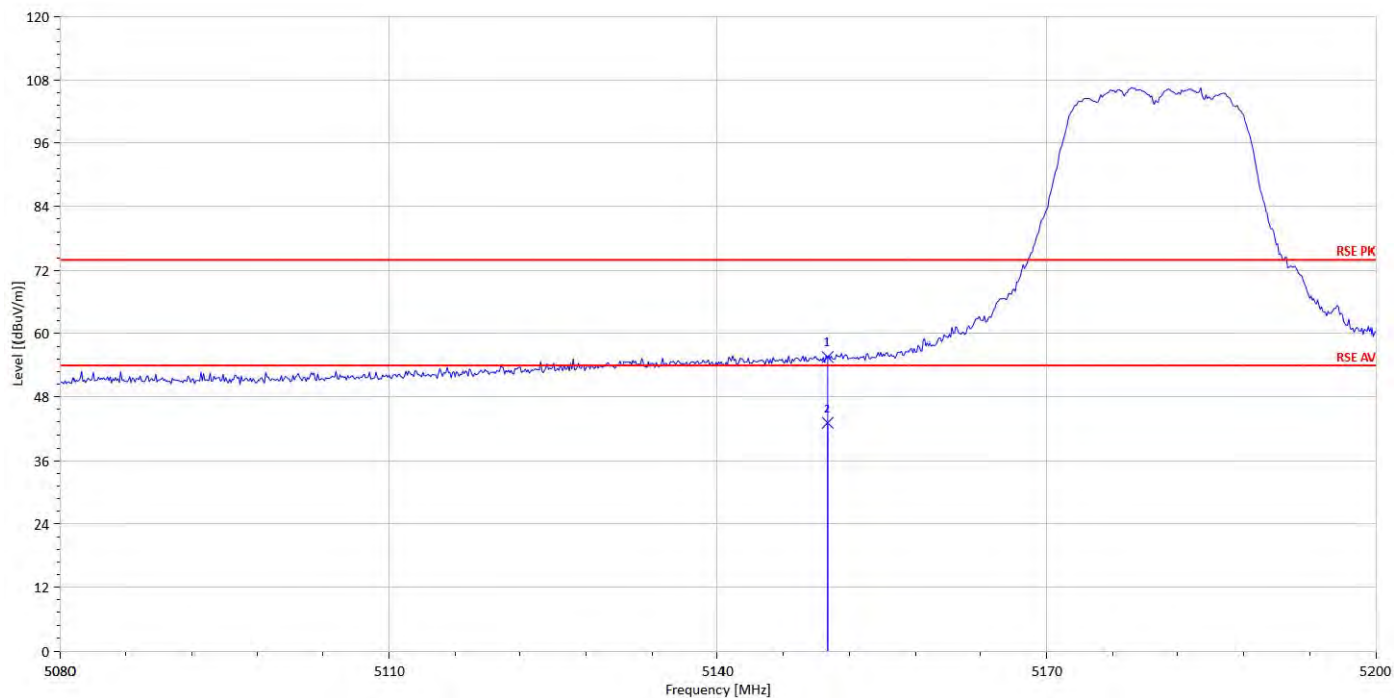
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|                         |           |                            |                |
|-------------------------|-----------|----------------------------|----------------|
| Operation Mode :        | 802.11aB1 | Test Date :                | 2017/10/20     |
| Fundamental Frequency : | 5180 MHz  | Temp. / Humi. :            | 24.5deg_C/70RH |
| Operation Band :        | BE CH LOW | Test Engineer :            | Enzo           |
| EUT Pol. :              | E2        | Measurement Antenna Pol. : | Horizontal     |



| Freq.   | Note    | Detector Mode | Spectrum Reading Level | Factor | Actual FS | Limit @3m | Margin |
|---------|---------|---------------|------------------------|--------|-----------|-----------|--------|
| MHz     | F/H/E/S | PK/QP/AV      | dBμV                   | dB     | dBμV/m    | dBμV/m    | dB     |
| 5150.00 | E       | Peak          | 47.44                  | 8.19   | 55.63     | 74        | -18.37 |
| 5150.00 | E       | Average       | 34.88                  | 8.19   | 43.07     | 54        | -10.93 |

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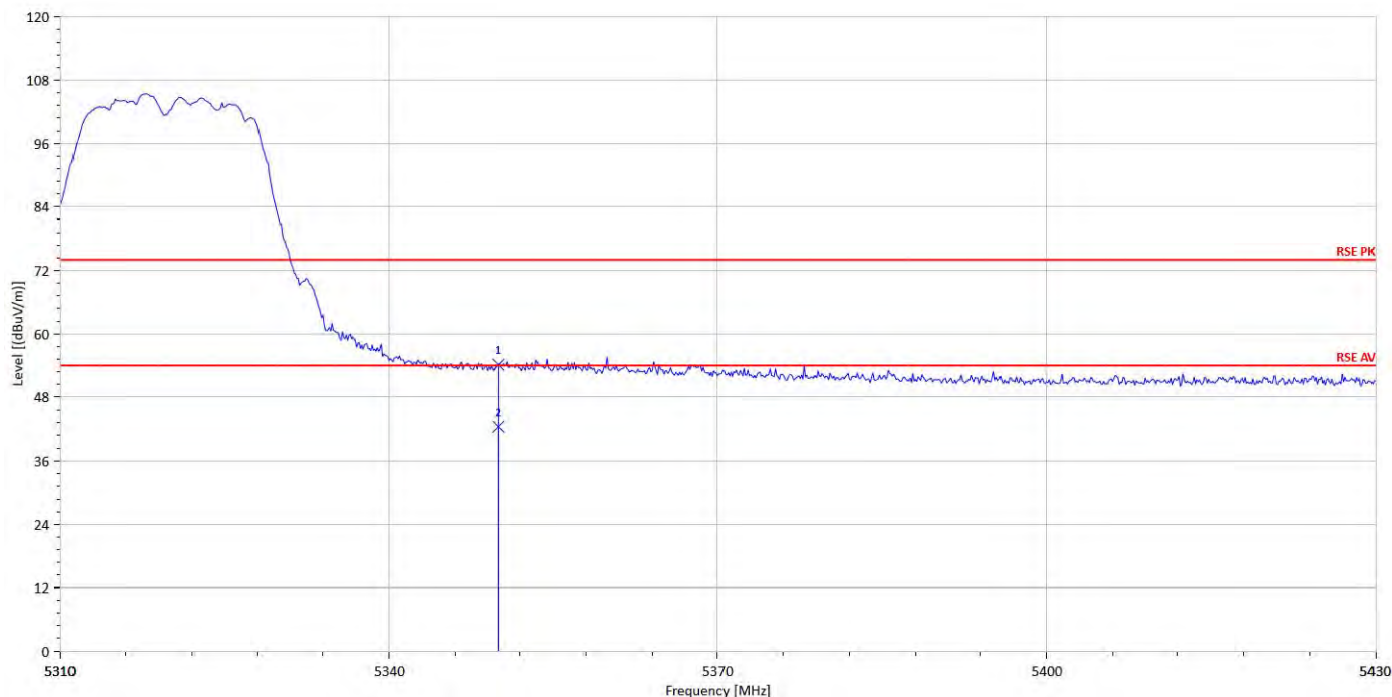
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|                         |            |                            |                |
|-------------------------|------------|----------------------------|----------------|
| Operation Mode :        | 802.11aB2  | Test Date :                | 2017/10/20     |
| Fundamental Frequency : | 5320 MHz   | Temp. / Humi. :            | 24.5deg_C/70RH |
| Operation Band :        | BE CH HIGH | Test Engineer :            | Enzo           |
| EUT Pol. :              | E2         | Measurement Antenna Pol. : | Vertical       |



| Freq.   | Note    | Detector Mode | Spectrum Reading Level | Factor | Actual FS | Limit @3m | Margin |
|---------|---------|---------------|------------------------|--------|-----------|-----------|--------|
| MHz     | F/H/E/S | PK/QP/AV      | dBuV                   | dB     | dBuV/m    | dBuV/m    | dB     |
| 5350.00 | E       | Peak          | 45.19                  | 8.96   | 54.16     | 74        | -19.84 |
| 5350.00 | E       | Average       | 33.54                  | 8.96   | 42.50     | 54        | -11.50 |

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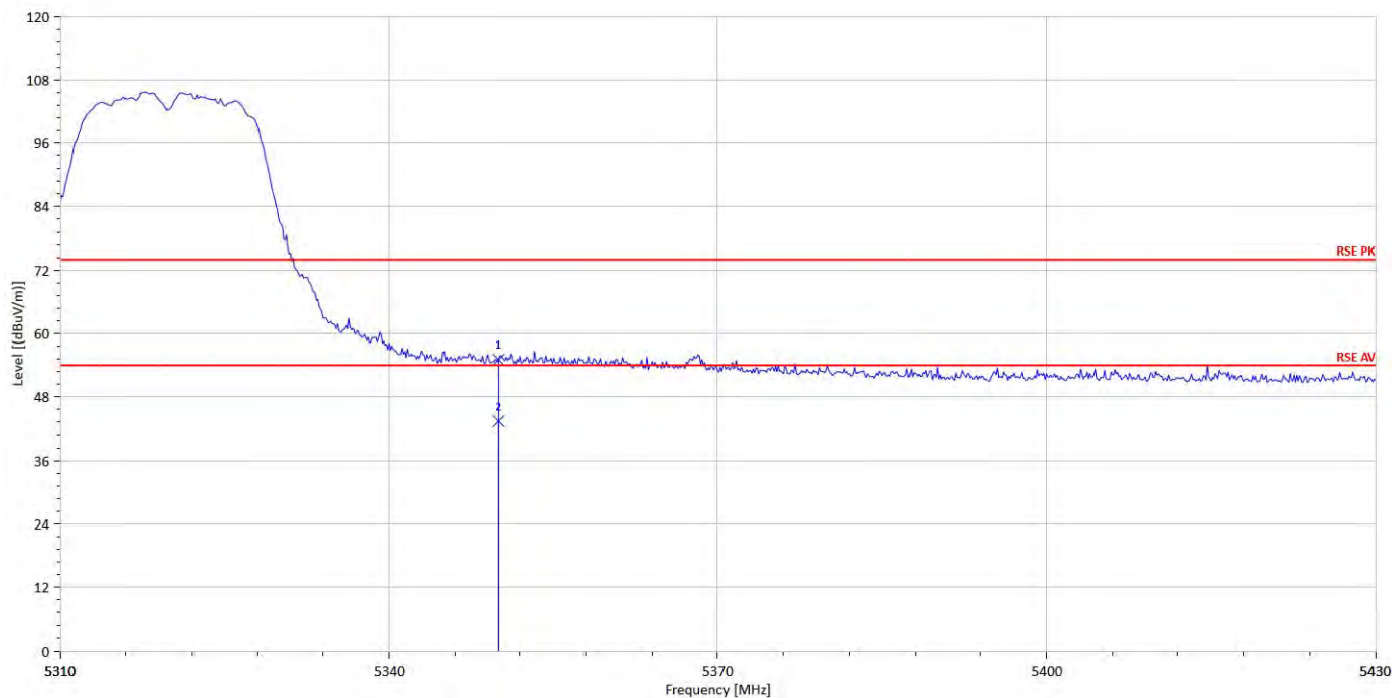
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Operation Mode : 802.11aB2      Test Date : 2017/10/20  
 Fundamental Frequency : 5320 MHz      Temp. / Humi. : 24.5deg\_C/70RH  
 Operation Band : BE CH HIGH      Test Engineer : Enzo  
 EUT Pol. : E2      Measurement Antenna Pol. : Horizontal



| Freq.<br>MHz | Note<br>F/H/E/S | Detector<br>Mode<br>PK/QP/AV | Spectrum<br>Reading Level<br>dBμV | Factor<br>dB | Actual<br>FS<br>dBμV/m | Limit<br>@3m<br>dBμV/m | Margin<br>dB |
|--------------|-----------------|------------------------------|-----------------------------------|--------------|------------------------|------------------------|--------------|
| 5350.00      | E               | Peak                         | 46.10                             | 8.96         | 55.07                  | 74                     | -18.93       |
| 5350.00      | E               | Average                      | 34.43                             | 8.96         | 43.39                  | 54                     | -10.61       |

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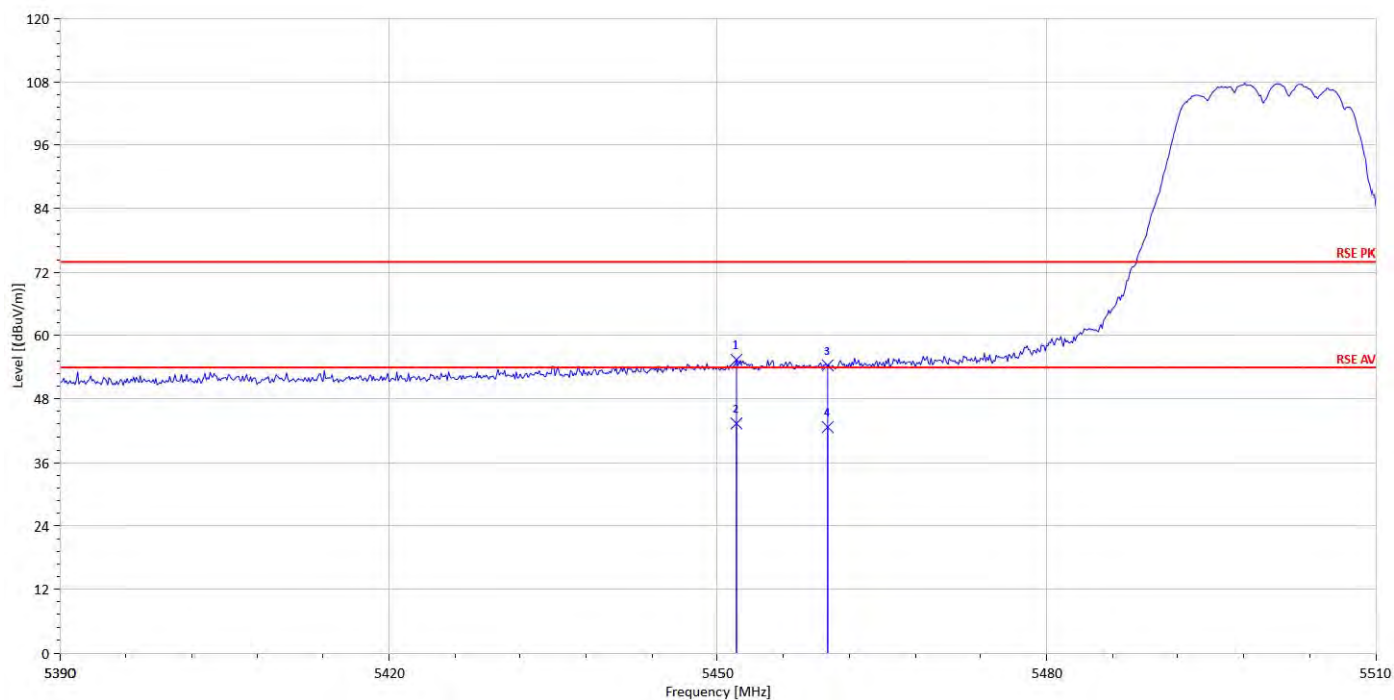
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|                         |           |                            |                |
|-------------------------|-----------|----------------------------|----------------|
| Operation Mode :        | 802.11aB3 | Test Date :                | 2017/10/20     |
| Fundamental Frequency : | 5500 MHz  | Temp. / Humi. :            | 24.5deg_C/70RH |
| Operation Band :        | BE CH LOW | Test Engineer :            | Enzo           |
| EUT Pol. :              | E2        | Measurement Antenna Pol. : | Vertical       |



| Freq.   | Note    | Detector Mode | Spectrum Reading Level | Factor | Actual FS | Limit @3m | Margin |
|---------|---------|---------------|------------------------|--------|-----------|-----------|--------|
| MHz     | F/H/E/S | PK/QP/AV      | dBμV                   | dB     | dBμV/m    | dBμV/m    | dB     |
| 5451.68 | S       | Peak          | 46.53                  | 8.97   | 55.50     | 74        | -18.50 |
| 5451.68 | S       | Average       | 34.35                  | 8.97   | 43.32     | 54        | -10.68 |
| 5460.00 | E       | Peak          | 45.55                  | 8.88   | 54.43     | 74        | -19.57 |
| 5460.00 | E       | Average       | 33.73                  | 8.88   | 42.61     | 54        | -11.39 |

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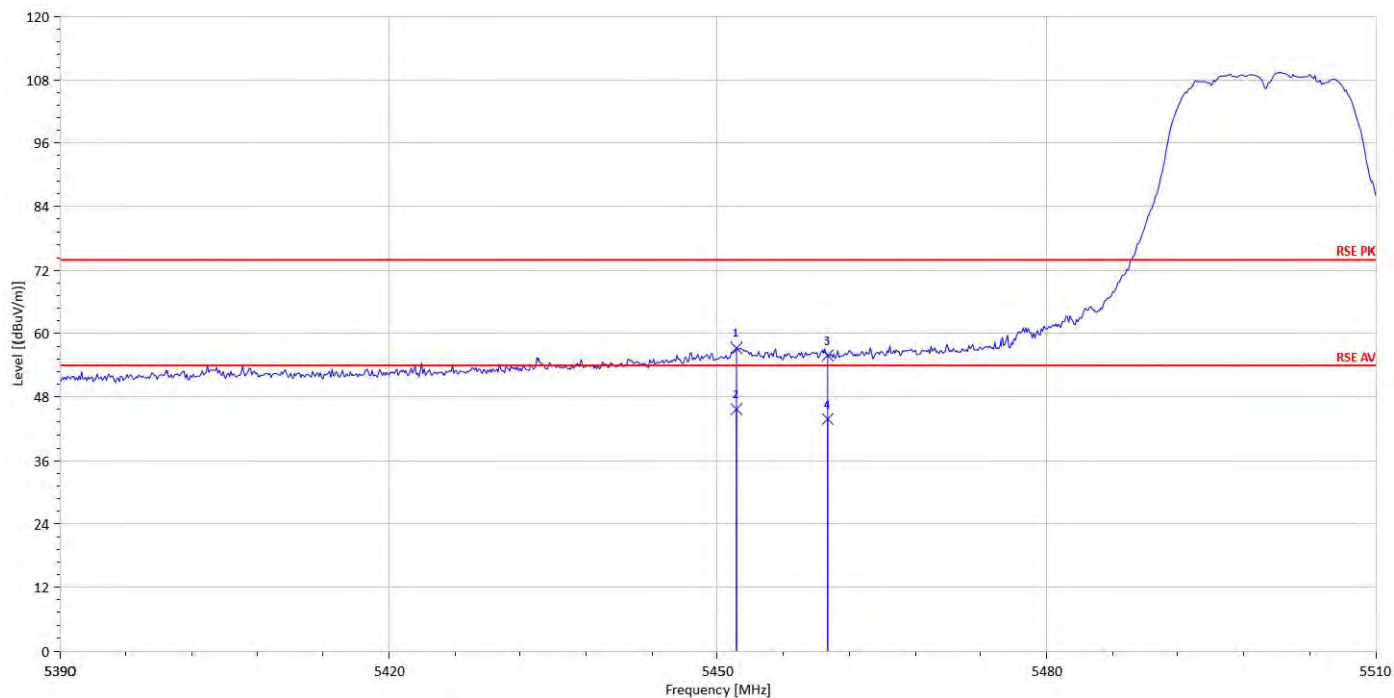
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|                         |           |                            |                |
|-------------------------|-----------|----------------------------|----------------|
| Operation Mode :        | 802.11aB3 | Test Date :                | 2017/10/20     |
| Fundamental Frequency : | 5500 MHz  | Temp. / Humi. :            | 24.5deg_C/70RH |
| Operation Band :        | BE CH LOW | Test Engineer :            | Enzo           |
| EUT Pol. :              | E2        | Measurement Antenna Pol. : | Horizontal     |



| Freq.   | Note    | Detector Mode | Spectrum Reading Level | Factor | Actual FS | Limit @3m | Margin |
|---------|---------|---------------|------------------------|--------|-----------|-----------|--------|
| MHz     | F/H/E/S | PK/QP/AV      | dBμV                   | dB     | dBμV/m    | dBμV/m    | dB     |
| 5451.68 | S       | Peak          | 48.34                  | 8.97   | 57.32     | 74        | -16.68 |
| 5451.68 | S       | Average       | 36.71                  | 8.97   | 45.68     | 54        | -8.32  |
| 5460.00 | E       | Peak          | 47.05                  | 8.88   | 55.94     | 74        | -18.06 |
| 5460.00 | E       | Average       | 34.91                  | 8.88   | 43.79     | 54        | -10.21 |

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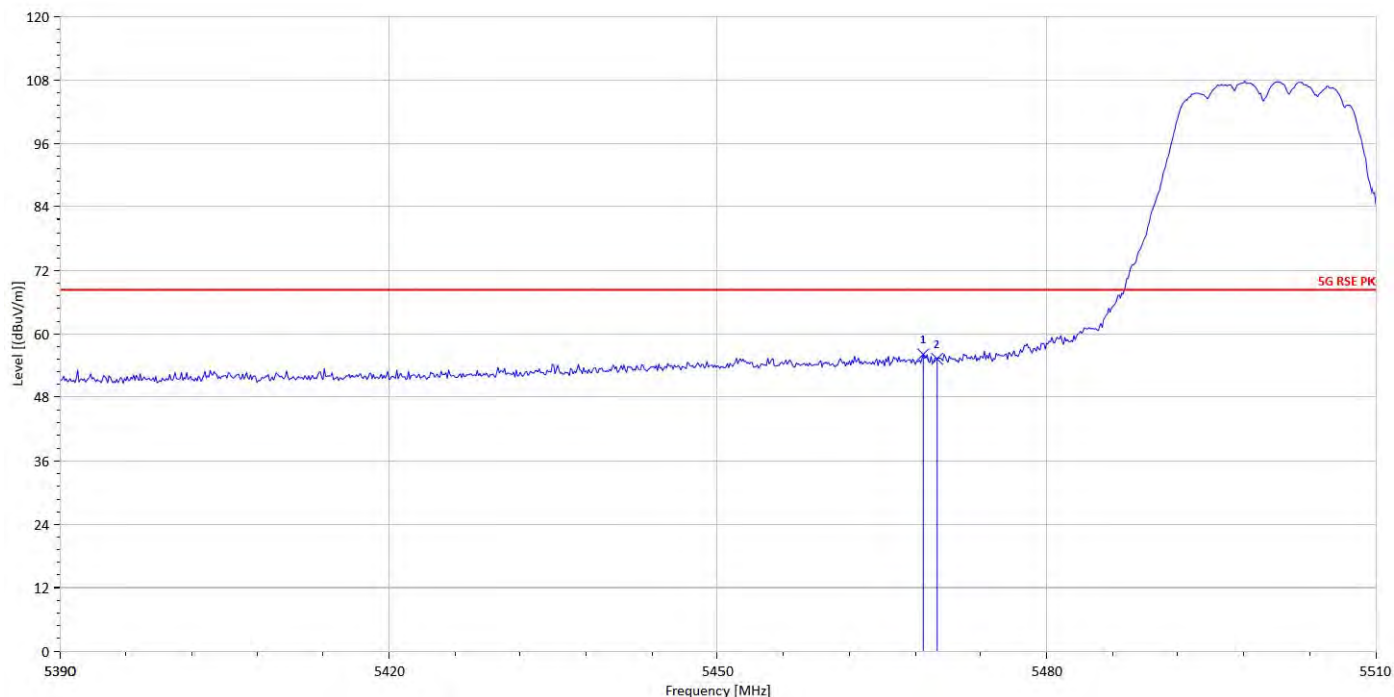
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Operation Mode : 802.11aB3  
 Fundamental Frequency : 5500 MHz  
 Operation Band : BE CH LOW RSE  
 EUT Pol. : E2

Test Date : 2017/10/20  
 Temp. / Humi. : 24.5deg\_C/70RH  
 Test Engineer : Enzo  
 Measurement Antenna Pol. : Vertical



| Freq.<br>MHz | Note<br>F/H/E/S | Detector<br>Mode<br>PK/QP/AV | Spectrum<br>Reading Level<br>dBμV | Factor<br>dB | Actual<br>FS<br>dBμV/m | Limit<br>@3m<br>dBμV/m | Margin<br>dB |
|--------------|-----------------|------------------------------|-----------------------------------|--------------|------------------------|------------------------|--------------|
| 5468.72      | S               | Peak                         | 47.36                             | 8.80         | 56.16                  | 68.3                   | -12.14       |
| 5470.00      | E               | Peak                         | 46.50                             | 8.79         | 55.29                  | 68.3                   | -13.01       |

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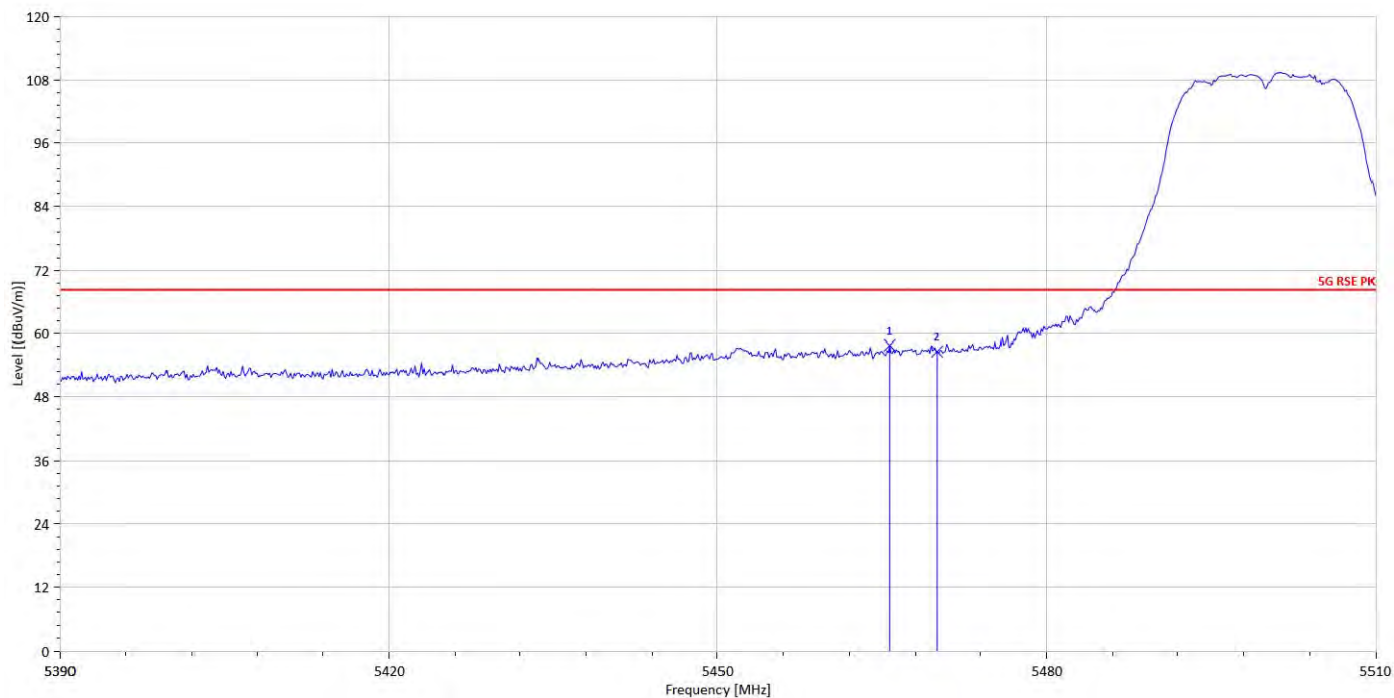
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|                         |               |                            |                |
|-------------------------|---------------|----------------------------|----------------|
| Operation Mode :        | 802.11aB3     | Test Date :                | 2017/10/20     |
| Fundamental Frequency : | 5500 MHz      | Temp. / Humi. :            | 24.5deg_C/70RH |
| Operation Band :        | BE CH LOW RSE | Test Engineer :            | Enzo           |
| EUT Pol. :              | E2            | Measurement Antenna Pol. : | Horizontal     |



| Freq.   | Note    | Detector Mode | Spectrum Reading Level | Factor | Actual FS | Limit @3m | Margin |
|---------|---------|---------------|------------------------|--------|-----------|-----------|--------|
| MHz     | F/H/E/S | PK/QP/AV      | dBμV                   | dB     | dBμV/m    | dBμV/m    | dB     |
| 5465.72 | S       | Peak          | 48.96                  | 8.83   | 57.79     | 68.3      | -10.51 |
| 5470.00 | E       | Peak          | 47.84                  | 8.79   | 56.63     | 68.3      | -11.67 |

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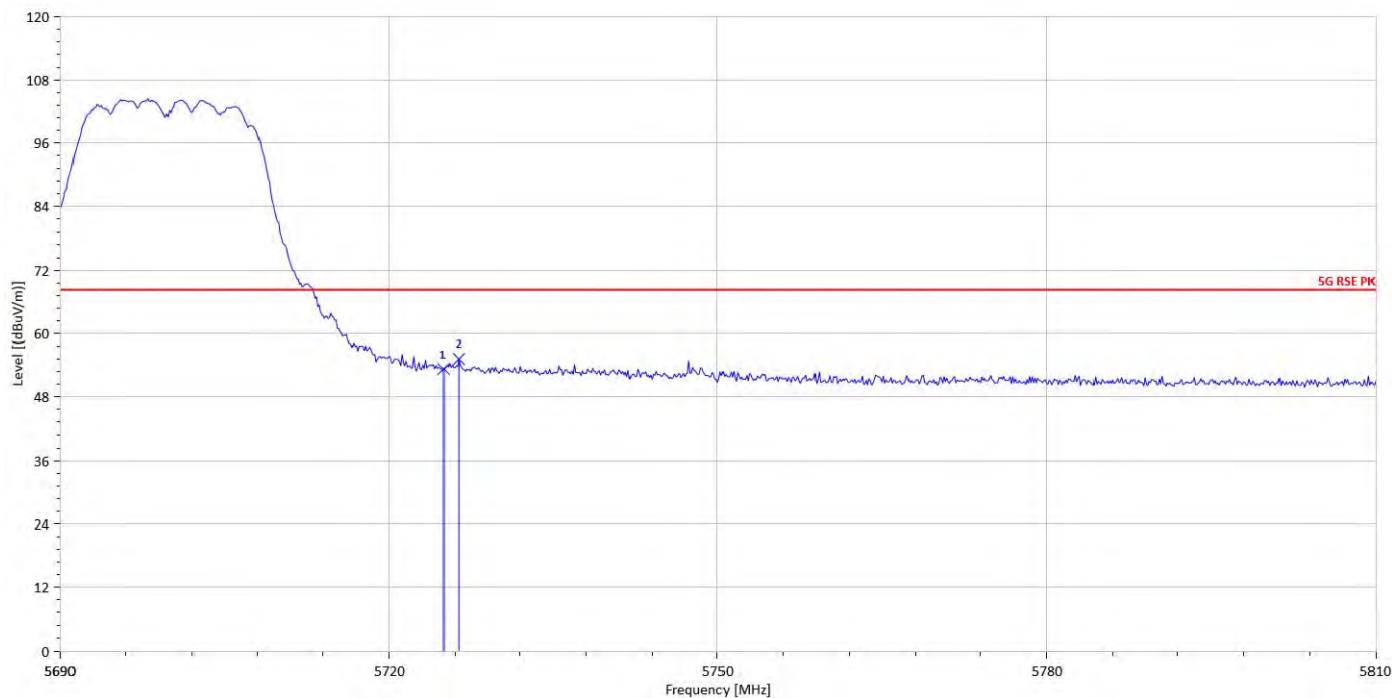
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|                         |            |                            |                |
|-------------------------|------------|----------------------------|----------------|
| Operation Mode :        | 802.11aB3  | Test Date :                | 2017/10/20     |
| Fundamental Frequency : | 5700 MHz   | Temp. / Humi. :            | 24.5deg_C/70RH |
| Operation Band :        | BE CH HIGH | Test Engineer :            | Enzo           |
| EUT Pol. :              | E2         | Measurement Antenna Pol. : | Vertical       |



| Freq.   | Note    | Detector Mode | Spectrum Reading Level | Factor | Actual FS | Limit @3m | Margin |
|---------|---------|---------------|------------------------|--------|-----------|-----------|--------|
| MHz     | F/H/E/S | PK/QP/AV      | dBμV                   | dB     | dBμV/m    | dBμV/m    | dB     |
| 5725.00 | E       | Peak          | 44.01                  | 9.30   | 53.31     | 68.3      | -14.99 |
| 5726.36 | S       | Peak          | 45.93                  | 9.30   | 55.23     | 68.3      | -13.07 |

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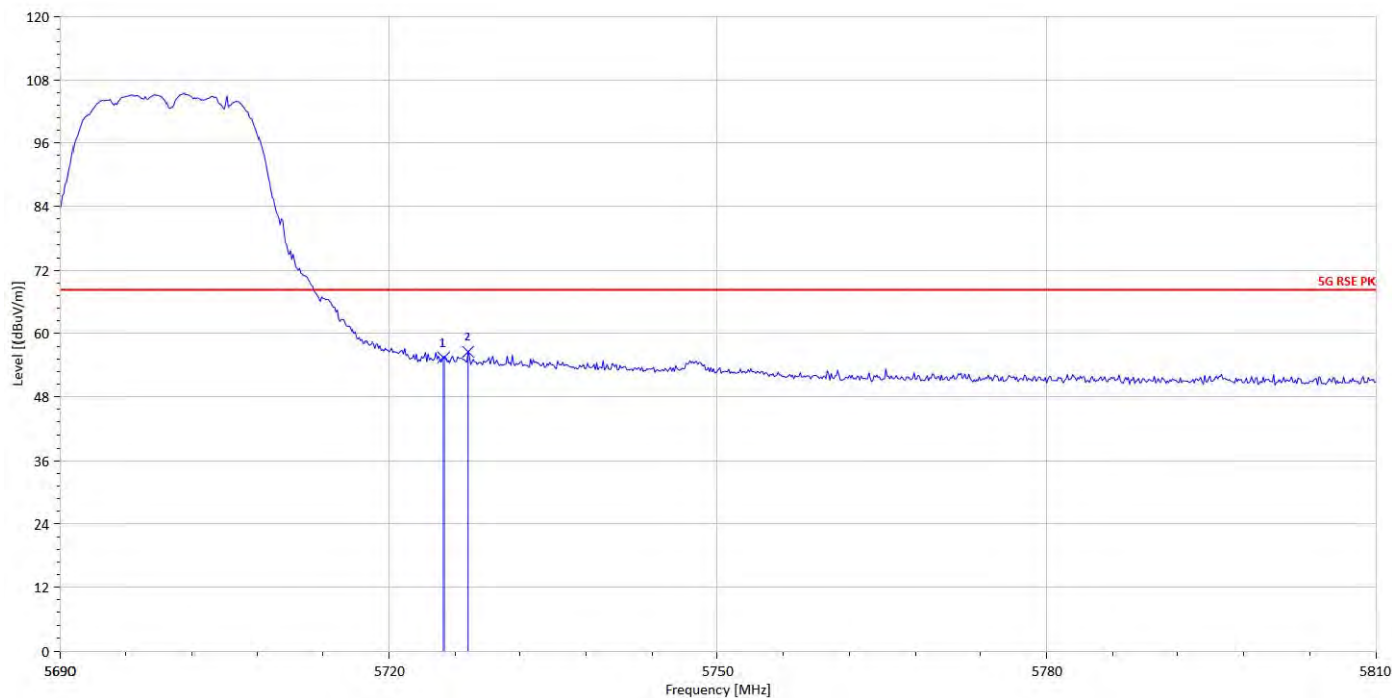
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|                         |            |                            |                |
|-------------------------|------------|----------------------------|----------------|
| Operation Mode :        | 802.11aB3  | Test Date :                | 2017/10/20     |
| Fundamental Frequency : | 5700 MHz   | Temp. / Humi. :            | 24.5deg_C/70RH |
| Operation Band :        | BE CH HIGH | Test Engineer :            | Enzo           |
| EUT Pol. :              | E2         | Measurement Antenna Pol. : | Horizontal     |



| Freq.   | Note    | Detector Mode | Spectrum Reading Level | Factor | Actual FS | Limit @3m | Margin |
|---------|---------|---------------|------------------------|--------|-----------|-----------|--------|
| MHz     | F/H/E/S | PK/QP/AV      | dBμV                   | dB     | dBμV/m    | dBμV/m    | dB     |
| 5725.00 | E       | Peak          | 46.27                  | 9.30   | 55.57     | 68.3      | -12.73 |
| 5727.20 | S       | Peak          | 47.33                  | 9.30   | 56.63     | 68.3      | -11.67 |

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