

**ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT****INTENTIONAL RADIATOR CERTIFICATION TO  
FCC PART 15 SUBPART E REQUIREMENT  
AND INDUSTRY CANADA RSS 247  
CLASS II & IV PC REPORT**

OF

**Applicant:**Acer Incorporated  
8F, 88, Sec 1, Hsin Tai Wu Rd Hsichih, Taipei Hsien, 221  
Taiwan**Product Name:**

WLAN and BT, 2x2 PCIe M.2 2230 adapter card

**Brand Name:****Model No.:**

9560NGW

**Model Difference:**

N/A

**FCC ID:**

HLZ9560NG

**IC:**

1754F-9560NG

**Report Number:**

E2/2018/80028

**FCC Rule Part:**

§15.407, Cat: NII

**IC Rule Part:**

RSS-247 issue 2 Feb 2017

**Issue Date:**

Sep. 03, 2018

**Date of Test:**

Aug. 02, 2018 ~ Aug. 29, 2018

**Date of EUT Received:**

Aug. 02, 2018

**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.

**Tested By:****Aken Huang / Engineer****Approved By:****Jim Chang / Manager**

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## Revision History

| Report Number | Revision | Description                  | Effected Page | Issue Date    | Revised By |
|---------------|----------|------------------------------|---------------|---------------|------------|
| E2/2018/80028 | Rev.00   | Initial creation of document | All           | Sep. 03, 2018 | Yuri Tsai  |

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# 1. GENERAL INFORMATION

## 1.1. Product Description

General:

|                                        |                                                                                                                                                                          |                                       |
|----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|
| Product Name of Host:                  | Notebook / Tablet Computer                                                                                                                                               |                                       |
| Brand Name:                            | <i>acer</i>                                                                                                                                                              |                                       |
| Marketing Name of Host:                | SP513-53N                                                                                                                                                                |                                       |
| Model No. of Host:                     | N17W2                                                                                                                                                                    |                                       |
| Model Difference:                      | N/A                                                                                                                                                                      |                                       |
| Hardware Version:                      | version 1-1                                                                                                                                                              |                                       |
| Software Version:                      | Win 10                                                                                                                                                                   |                                       |
| Model No. of BT/WLAN Module:           | 9560NGW                                                                                                                                                                  |                                       |
| Module FCC ID:                         | HLZ9560NG                                                                                                                                                                |                                       |
| Module IC:                             | 1754F-9560NG                                                                                                                                                             |                                       |
| Scope:                                 | The test report covers the radiated emissions requirements of the standards referenced in the report to allow system level approval of the module in this specific host. |                                       |
| Class II & Class IV Permissive change: | WLAN and BT, 2x2 PCIe M.2 2230 adapter card INSTALLED IN Notebook / Tablet Computer                                                                                      |                                       |
| Power Supply:                          | 11.55Vdc from Rechargeable Li-ion Battery Pack or 19V by AC/DC Power Adapter                                                                                             |                                       |
|                                        | Battery:                                                                                                                                                                 | Model No.: AP15O5L, Supplier: acer    |
|                                        | Adapter:                                                                                                                                                                 | Model No.: W15-045N4A, Supplier: acer |

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## WLAN 5GHz:

| Wi-Fi    | Frequency Range    | Channels | Rated Power (Avg.) / Average Rated Power(EIRP)         | Modulation Technology | Type of Emission |
|----------|--------------------|----------|--------------------------------------------------------|-----------------------|------------------|
| 11a      | 5150~5250          | 4        | Avg. Power: 12.96dBm<br>EIRP: 14.09dBm                 | OFDM                  | 16M8D7W          |
|          | 5250~5350          | 4        | Avg. Power: 12.98dBm<br>EIRP: 14.11dBm                 |                       | 28M6D7W          |
|          | 5470~5725          | 12       | Avg. Power: 11.48dBm<br>EIRP: 12.13dBm                 |                       | 21M8D7W          |
|          | 5725~5850          | 5        | Avg. Power: 13.98dBm<br>EIRP: 13.33dBm                 |                       | 21M8D7W          |
| 11n_20M  | HT20<br>5150~5250  | 4        | Avg. Power: 15.94dBm<br>EIRP: 20.08dBm<br>(Worst Case) | OFDM                  | 18M0D7W          |
|          | HT20<br>5250~5350  | 4        | Avg. Power: 15.97dBm<br>EIRP: 20.11dBm<br>(Worst Case) |                       | 29M6D7W          |
|          | HT20<br>5470~5725  | 12       | Avg. Power: 14.49dBm<br>EIRP: 18.15dBm<br>(Worst Case) |                       | 22M2D7W          |
|          | HT20<br>5725~5850  | 5        | Avg. Power: 16.47dBm<br>EIRP: 18.83dBm<br>(Worst Case) |                       | 22M2D7W          |
| 11n_40M  | HT40<br>5150~5250  | 2        | Avg. Power: 15.93dBm<br>EIRP: 20.07dBm<br>(Worst Case) | OFDM                  | 36M7D7W          |
|          | HT40<br>5250~5350  | 2        | Avg. Power: 15.95dBm<br>EIRP: 20.09dBm<br>(Worst Case) |                       | 36M6D7W          |
|          | HT40<br>5470~5725  | 6        | Avg. Power: 14.48dBm<br>EIRP: 18.14dBm<br>(Worst Case) |                       | 45M9D7W          |
|          | HT40<br>5725~5850  | 2        | Avg. Power: 16.47dBm<br>EIRP: 18.83dBm<br>(Worst Case) |                       | 36M7D7W          |
| 11ac_80M | VHT80<br>5150~5250 | 1        | Avg. Power: 15.97dBm<br>EIRP: 20.11dBm                 | OFDM                  | 75M2D7W          |
|          | VHT80<br>5250~5350 | 1        | Avg. Power: 15.45dBm<br>EIRP: 19.59dBm                 |                       | 75M2D7W          |
|          | VHT80<br>5470~5725 | 3        | Avg. Power: 14.47dBm<br>EIRP: 18.13dBm                 |                       | 76M1D7W          |
|          | VHT80<br>5725~5850 | 1        | Avg. Power: 16.45dBm<br>EIRP: 18.81dBm                 |                       | 75M2D7W          |

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| Wi-Fi     | Frequency Range     | Channels | Rated Power (Avg.) / Average Rated Power (EIRP) | Modulation Technology | Type of Emission |
|-----------|---------------------|----------|-------------------------------------------------|-----------------------|------------------|
| 11ac_160M | VHT160<br>5150~5250 | 1        | Avg. Power: 15.45dBm<br>EIRP: 19.59dBm          | OFDM                  | 153M8D7W         |
|           | VHT160<br>5470~5725 | 3        | Avg. Power: 15.43dBm<br>EIRP: 19.09dBm          |                       | 153M2D7W         |

|                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Antenna Designation | <p>PIFA Antenna, Supplier: WNC</p> <p>1. P/N: 025.90159.0001 (81EAAL15.GH9) (Main)</p> <p>Gain: 1.13dBi (5150~5250MHz)</p> <p>Gain: 1.13dBi (5250~5350MHz)</p> <p>Gain: 0.65dBi (5470~5725MHz)</p> <p>Gain: -0.65dBi (5725~5850MHz)</p> <p>2. P/N: 025.90158.0001 (81EAAL15.GHC) (Aux)</p> <p>Gain: -0.05dBi (5150~5250MHz)</p> <p>Gain: -0.05dBi (5250~5350MHz)</p> <p>Gain: -0.66dBi (5470~5725MHz)</p> <p>Gain: -1.15dBi (5725~5850MHz)</p> |
| Modulation type     | CCK, DQPSK, DBPSK for DSSS<br>64QAM, 16QAM, 256QAM, QPSK, BPSK for OFDM                                                                                                                                                                                                                                                                                                                                                                        |
| Transition Rate:    | <p>802.11 a: 6/9/12/18/24/36/48/54 Mbps</p> <p>802.11 n_20MHz: 6.5 – 144.4Mbps</p> <p>802.11 n_40MHz: 13.5 – 300.0Mbps</p> <p>802.11 ac_20MHz: 6.5 – 173.3Mbps</p> <p>802.11 ac_40MHz: 13.5 – 400.0Mbps</p> <p>802.11 ac_80MHz: 29.3 – 866.7Mbps</p> <p>802.11 ac_160MHz: 58.5 – 1733.3Mbps</p>                                                                                                                                                |

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## 1.2. Related Submittal(s) / Grant (s)

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 v01

ANSI C63.10:2013

Canada RSS-247 issue 2 Feb. 2017

Canada RSS-Gen issue 5 Apr. 2018

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

Canada Registration Number: 4620E-1

## 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 plane. 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 hand-held 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.

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## 2.5. Configuration of Tested System

Fig. 2-1 Configuration of Tested System

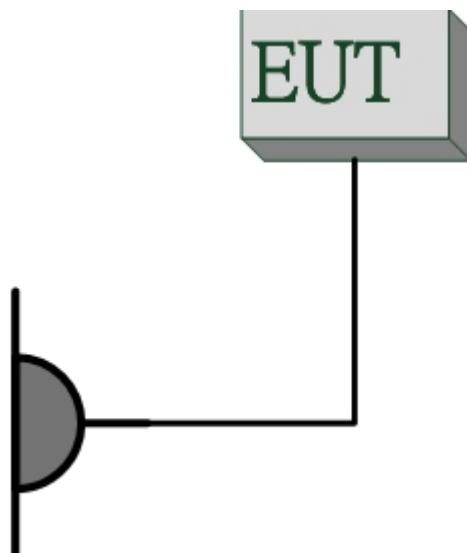


Table 2-1 Equipment Used in Tested System

| 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        |

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### 3. SUMMARY OF TEST RESULT

| FCC / IC Rules                                         | Description Of Test                            | Result    |
|--------------------------------------------------------|------------------------------------------------|-----------|
| §15.407(a) (1) (2)<br>RSS-247 §6.2.1~ 4 (1)            | The Maximum Output Power Measurement           | Compliant |
| §15.407(b) (1) (2) (3)(6) (7)<br>RSS-247 §6.2.1~ 4 (2) | Undesirable Emission –<br>Radiated Measurement | Compliant |
| §15.203<br>§15.407(a)                                  | Antenna Requirement                            | Compliant |

### 4. DESCRIPTION OF TEST MODES

#### 4.1 Operated in U-NII Bands

Operated band in 5150 MHz ~5250 MHz:

4 channels are provided for 802.11a, 802.11n, HT20

| CHANNEL | FREQUENCY | CHANNEL | FREQUENCY |
|---------|-----------|---------|-----------|
| 36      | 5180 MHz  | 44      | 5220 MHz  |
| 40      | 5200 MHz  | 48      | 5240 MHz  |

2 channels are provided for 802.11n, HT40

| CHANNEL | FREQUENCY | CHANNEL | FREQUENCY |
|---------|-----------|---------|-----------|
| 38      | 5190 MHz  | 46      | 5230 MHz  |

1 channel is provided for 802.11ac, VHT80

| CHANNEL | FREQUENCY |
|---------|-----------|
| 42      | 5210 MHz  |

1 channel is provided for 802.11ac, VHT160

| CHANNEL | FREQUENCY |
|---------|-----------|
| 50      | 5250 MHz  |

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Operated band in 5250 MHz ~5350 MHz:

4 channels are provided for 802.11a, 802.11n\_HT20

| CHANNEL | FREQUENCY | CHANNEL | FREQUENCY |
|---------|-----------|---------|-----------|
| 52      | 5260 MHz  | 60      | 5300 MHz  |
| 56      | 5280 MHz  | 64      | 5320 MHz  |

2 channels are provided for 802.11n\_HT40, 802.11ac\_VHT40

| CHANNEL | FREQUENCY | CHANNEL | FREQUENCY |
|---------|-----------|---------|-----------|
| 54      | 5270 MHz  | 62      | 5310 MHz  |

1 channel is provided for 802.11ac\_VHT80

| CHANNEL | FREQUENCY |
|---------|-----------|
| 58      | 5290 MHz  |

Operated band in 5470 MHz ~5725 MHz:

12 channels are provided for 802.11a, 802.11n\_HT20

| CHANNEL | FREQUENCY | CHANNEL | FREQUENCY |
|---------|-----------|---------|-----------|
| 100     | 5500 MHz  | 124     | 5620 MHz  |
| 104     | 5520 MHz  | 128     | 5640 MHz  |
| 108     | 5540 MHz  | 132     | 5660 MHz  |
| 112     | 5560 MHz  | 136     | 5680 MHz  |
| 116     | 5580 MHz  | 140     | 5700 MHz  |
| 120     | 5600 MHz  | 144     | 5720      |

6 channels are provided for 802.11n\_HT40

| CHANNEL | FREQUENCY | CHANNEL | FREQUENCY |
|---------|-----------|---------|-----------|
| 102     | 5510 MHz  | 126     | 5630 MHz  |
| 110     | 5550 MHz  | 134     | 5670 MHz  |
| 118     | 5590 MHz  | 142     | 5710      |

3 channel is provided for 802.11ac\_VHT80

| CHANNEL | FREQUENCY |
|---------|-----------|
| 106     | 5530 MHz  |
| 122     | 5610 MHz  |
| 138     | 5690 MHz  |

1 channel is provided for 802.11ac\_VHT160

| CHANNEL | FREQUENCY |
|---------|-----------|
| 114     | 5570 MHz  |

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Operated band in 5725 MHz ~5850 MHz:

5 channels are provided for 802.11a, 802.11n\_HT20

| CHANNEL | FREQUENCY | CHANNEL | FREQUENCY |
|---------|-----------|---------|-----------|
| 149     | 5745 MHz  | 161     | 5805 MHz  |
| 153     | 5765 MHz  | 165     | 5825 MHz  |
| 157     | 5785 MHz  |         |           |

2 channels are provided for 802.11n\_HT40

| CHANNEL | FREQUENCY | CHANNEL | FREQUENCY |
|---------|-----------|---------|-----------|
| 151     | 5755 MHz  | 159     | 5795 MHz  |

1 channel is provided for 802.11ac\_VHT80

| CHANNEL | FREQUENCY |
|---------|-----------|
| 155     | 5775 MHz  |

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# RADIATED EMISSION TEST:

| RADIATED EMISSION TEST (ABOVE 1 GHz) |                      |                   |                |            |                  |              |
|--------------------------------------|----------------------|-------------------|----------------|------------|------------------|--------------|
| MODE                                 | FREQUENCY BAND (MHz) | AVAILABLE CHANNEL | TESTED CHANNEL | MODULATION | DATA RATE (Mbps) | ANTENNA PORT |
| 802.11a                              | 5180~5240            | 36 to 48          | 40             | OFDM       | 6                | MAIN         |
| 802.11a                              | 5260~5320            | 52 to 64          | 56             | OFDM       | 6                | MAIN         |
| 802.11a                              | 5500~5700            | 100 to 140        | 120            | OFDM       | 6                | MAIN         |
| 802.11a                              | 5745~5825            | 149 to 165        | 157            | OFDM       | 6                | MAIN         |
| BANDEDGE EMISSION TEST               |                      |                   |                |            |                  |              |
| 802.11a                              | 5180~5240            | 36 to 48          | 36             | OFDM       | 6                | MAIN         |
| 802.11n_HT20                         |                      |                   |                | OFDM       | MCS8             | MIMO         |
| 802.11n_HT40                         | 5190~5230            | 38 to 46          | 38             | OFDM       | MCS8             | MIMO         |
| 802.11ac_VHT80                       | 5210                 | 42                | 42             | OFDM       | VHT0             | MIMO         |
| 802.11ac_VHT160                      | 5250                 | 50                | 50             | OFDM       | VHT0             | MIMO         |
| 802.11a                              | 5260~5320            | 52 to 64          | 64             | OFDM       | 6                | MAIN         |
| 802.11n_HT20                         |                      |                   |                | OFDM       | MCS8             | MIMO         |
| 802.11n_HT40                         | 5270~5310            | 54 to 62          | 62             | OFDM       | MCS8             | MIMO         |
| 802.11ac_VHT80                       | 5290                 | 58                | 58             | OFDM       | VHT0             | MIMO         |
| 802.11a                              | 5500~5720            | 100 to 144        | 100, 140       | OFDM       | 6                | MAIN         |
| 802.11n_HT20                         |                      |                   |                | OFDM       | MCS8             | MIMO         |
| 802.11n_HT40                         | 5510~5710            | 102 to 142        | 102, 134       | OFDM       | MCS8             | MIMO         |
| 802.11ac_VHT80                       | 5530~5690            | 106 to 138        | 106            | OFDM       | VHT0             | MIMO         |
| 802.11ac_VHT160                      | 5570                 | 114               | 114            | OFDM       | VHT0             | MIMO         |
| 802.11a                              | 5745~5825            | 149 to 165        | 149, 165       | OFDM       | 6                | MAIN         |
| 802.11n_HT20                         |                      |                   |                | OFDM       | MCS8             | MIMO         |
| 802.11n_HT40                         | 5755~5795            | 151 to 159        | 151, 159       | OFDM       | MCS8             | MIMO         |
| 802.11ac_VHT80                       | 5755                 | 155               | 155            | OFDM       | VHT0             | 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 H position was reported.

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Pre-scanned was done on Antenna Main and Antenna Aux, and Antenna MIMO results higher emission at 5GHz. Therefore, the completed set of measurement was done on Antenna MIMO (5GHz) to be presented on this test report.

**Remark: The device will not operate in 5600~5650MHz band for IC.**

#### 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          | 36,40,48       | OFDM       | 6                | MAIN         |
| 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       | VHT0             | MIMO         |
| 802.11ac_VHT160 | 5250                 | 50                | 50             | OFDM       | VHT0             | MIMO         |
| 802.11a         | 5260~5320            | 52 to 64          | 52,56,64       | OFDM       | 6                | MAIN         |
| 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       | VHT0             | MIMO         |
| 802.11a         | 5500~5720            | 100 to 144        | 100,120,140    | OFDM       | 6                | MAIN         |
| 802.11n_HT20    |                      |                   |                | OFDM       | MCS8             | MIMO         |
| 802.11n_HT40    | 5510~5710            | 102 to 142        | 102,118,134    | OFDM       | MCS8             | MIMO         |
| 802.11ac_VHT80  | 5530~5690            | 106 to 138        | 106            | OFDM       | VHT0             | MIMO         |
| 802.11ac_VHT160 | 5570                 | 114               | 114            | OFDM       | VHT0             | MIMO         |
| 802.11a         | 5745~5825            | 149 to 165        | 149,157,165    | OFDM       | 6                | MAIN         |
| 802.11n_HT20    |                      |                   |                | OFDM       | MCS8             | MIMO         |
| 802.11n_HT40    | 5755~5795            | 151 to 159        | 151,159        | OFDM       | MCS8             | MIMO         |
| 802.11ac_VHT80  | 5755                 | 155               | 155            | OFDM       | VHT0             | MIMO         |

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## 5. MEASUREMENT UNCERTAINTY

| Test Items                                      | Uncertainty             |
|-------------------------------------------------|-------------------------|
| AC Power Line Conducted Emission                | +/- 2.586 dB            |
| 26 dB and 99% Emission Bandwidth                | +/- 123.36 Hz           |
| The Maximum Output Power Measurement            | +/- 1.42 dB             |
| Peak Power Spectral Density Measurement         | +/- 1.55 dB             |
| Peak Excursion Measurement                      | +/- 1.55 dB             |
| Undesirable Emission –<br>Conducted Measurement | +/- 1.55 dB             |
| Transmission in case of Absence of Information  | +/- 1.55 dB             |
| Frequency Stability                             | +/- 123.36 Hz           |
| TPC and DFS Measurement                         | +/- 123.36 Hz           |
| Temperature                                     | +/- 0.8 °C              |
| Humidity                                        | +/- 4.7 %               |
| DC / AC Power Source                            | DC= +/- 1%, 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. MAXIMUM CONDUCTED OUTPUT POWER MEASUREMENT

### 6.1 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)                     |

According to RSS-247 §6.2.1~ 4 (1)

| OPERZTION FREQUENCY BAND                      | LIMIT                                                                                                                   |
|-----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| 5150~5250 MHz                                 | EIRP shall not exceed 200 mW or 10 + 10 log10 B                                                                         |
| 5250~5350 MHz                                 | Conducted output power shall not exceed 250 mW or 11 +10 log10 B<br>EIRP shall not exceed 1.0 W or 17 + 10 log10 B, dBm |
| 5470-5600 MHz and 5650-5725 MHz               | Conducted output power shall not exceed 250 mW or 11 +10 log10 B<br>EIRP shall not exceed 1.0 W or 17 + 10 log10 B, dBm |
| 5725~5850 MHz                                 | Conducted output power shall not exceed 1 W                                                                             |
| Note: B is the 99% emission bandwidth in MHz. |                                                                                                                         |

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

*Effective Legacy Gain = 1.13+3.01=4.14dBi (5150MHz-5250MHz)*

*Effective Legacy Gain = 1.13+3.01=4.14dBi (5250MHz-5350MHz)*

*Effective Legacy Gain = 0.65+3.01=3.66dBi (5470MHz-5725MHz)*

*Effective Legacy Gain = -0.65+3.01=2.36dBi (5725MHz-5850MHz)*

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## 6.2 Measurement Procedure

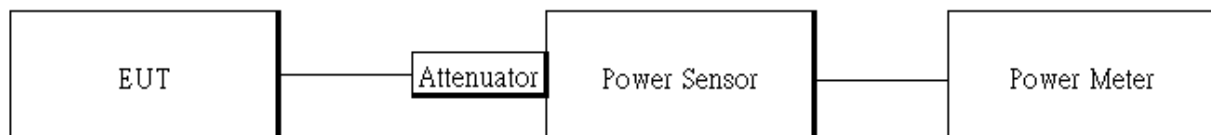
1. Place the EUT on the table and set it in transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the power meter
3. Set the offset  $10 \cdot \log(1/x)$ ,  $n_{HT20}=0.10$ ,  $n_{HT40}=0.12$
4. Record the max. reading.
5. Repeat above procedures until all frequency (low, middle, and high channel) measured were complete.
6. Employing step 1 to 4 obtaining per-chain basis in MIMO operation, and sum the power in linear to result the output of MIMO operation at frequency of interest (, where MIMO is applicable).

**Note:** For EIRP/ERP measurement complying with RSS-247 §6.2.1~ 4 (1), the formula as deduced in 1.3.2 of KDB 412172 D01 is used to calculate.  $ERP/EIRP = P_t + G_t - L_c$ , where  $P_t$  = transmitter output power measured directly at antenna port, expressing in dBm, and  $G_t$  = gain of the transmitting antenna in dBi that can be referred in antenna spec provided by the manufacturer in section 1.1,  $L_c$  = signal attenuation in the cable between the transmitting port and antenna.

## 6.3 Measurement Equipment Used:

| Name of Equipment | Manufacturer | Model      | Serial Number | Calibration Date | Calibration Due |
|-------------------|--------------|------------|---------------|------------------|-----------------|
| Spectrum Analyzer | Agilent      | N9010A     | MY51440113    | 2018/06/20       | 2019/06/19      |
| Power Meter       | Anritsu      | ML2496A    | 1326001       | 2018/07/25       | 2019/07/24      |
| Power Sensor      | Anritsu      | MA2411B    | 1315048       | 2018/07/25       | 2019/07/24      |
| Power Sensor      | Anritsu      | MA2411B    | 1315049       | 2018/07/25       | 2019/07/24      |
| Attenuator        | Marvelous    | MVE2213-10 | RF30          | 2017/12/26       | 2018/12/25      |
| Attenuator        | Marvelous    | MVE2213-10 | RF31          | 2017/12/26       | 2018/12/25      |
| DC Block          | PASTER-NACK  | PE8210     | RF29          | 2017/12/26       | 2018/12/25      |

## 6.4 Test Set-up:



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## 6.5 Measurement Result

802.11a

| CH  | Frequency (MHz) | TOTAL POWER (dBm) | TOTAL POWER (mW) | REQUIRED LIMIT (dBm)            | RESULT |
|-----|-----------------|-------------------|------------------|---------------------------------|--------|
| 36  | 5180            | <b>12.96</b>      | 19.770           | 23.98                           | PASS   |
| 40  | 5200            | 12.94             | 19.679           | 23.98                           | PASS   |
| 48  | 5240            | 12.95             | 19.724           | 23.98                           | PASS   |
| 52  | 5260            | <b>12.98</b>      | 19.861           | 23.98 or $11+10\log(B) = 27.59$ | PASS   |
| 56  | 5280            | 12.96             | 19.770           | 23.98 or $11+10\log(B) = 25.38$ | PASS   |
| 64  | 5320            | 12.97             | 19.815           | 23.98 or $11+10\log(B) = 24.78$ | PASS   |
| 100 | 5500            | 11.46             | 13.996           | 23.98 or $11+10\log(B) = 24.81$ | PASS   |
| 120 | 5600            | 11.44             | 13.932           | 23.98 or $11+10\log(B) = 27.09$ | PASS   |
| 140 | 5700            | <b>11.48</b>      | 14.060           | 23.98 or $11+10\log(B) = 24.92$ | PASS   |
| 149 | 5745            | 13.95             | 24.831           | 30                              | PASS   |
| 157 | 5785            | 13.96             | 24.889           | 30                              | PASS   |
| 165 | 5825            | <b>13.98</b>      | 25.003           | 30                              | PASS   |

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## 802.11n\_HT20 (MIMO)

| CH  | Frequency (MHz) | AVERAGE POWER (dBm) |         | TOTAL POWER (dBm) | TOTAL POWER (mW) | REQUIRED LIMIT (dBm)              | RESULT |
|-----|-----------------|---------------------|---------|-------------------|------------------|-----------------------------------|--------|
|     |                 | CHAIN 0             | CHAIN 1 |                   |                  |                                   |        |
| 36  | 5180            | 12.48               | 12.96   | 15.91             | 37.471           | 23.98                             | PASS   |
| 40  | 5200            | 12.51               | 12.97   | 15.93             | 37.639           | 23.98                             | PASS   |
| 48  | 5240            | 12.52               | 12.98   | <b>15.94</b>      | 37.726           | 23.98                             | PASS   |
| 52  | 5260            | 12.55               | 13.01   | <b>15.97</b>      | 37.987           | 23.98 or $11+10\log(B)$<br>=27.90 | PASS   |
| 56  | 5280            | 12.54               | 12.98   | 15.95             | 37.808           | 23.98 or $11+10\log(B)$<br>=25.51 | PASS   |
| 64  | 5320            | 12.47               | 12.95   | 15.90             | 37.385           | 23.98 or $11+10\log(B)$<br>=24.91 | PASS   |
| 100 | 5500            | 11.08               | 11.52   | 14.49             | 27.014           | 23.98 or $11+10\log(B)$<br>=24.82 | PASS   |
| 120 | 5600            | 11.06               | 11.49   | 14.47             | 26.857           | 23.98 or $11+10\log(B)$<br>=27.24 | PASS   |
| 140 | 5700            | 11.04               | 11.46   | 14.44             | 26.702           | 23.98 or $11+10\log(B)$<br>=24.93 | PASS   |
| 144 | 5720 (band 3)   | 11.07               | 11.51   | <b>14.48</b>      | 26.952           | 23.98 or $11+10\log(B)$<br>=24.38 | PASS   |
| 144 | 5720 (band 4)   | 12.57               | 13.57   | <b>16.28</b>      | 40.823           | 23.98 or $11+10\log(B)$<br>=24.38 | PASS   |
| 149 | 5745            | 12.96               | 13.49   | 16.42             | 42.105           | 30                                | PASS   |
| 157 | 5785            | 12.98               | 13.51   | 16.44             | 42.300           | 30                                | PASS   |
| 165 | 5825            | 13.01               | 13.55   | <b>16.47</b>      | 42.645           | 30                                | PASS   |

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## 802.11n\_HT40 (MIMO)

| CH  | Frequency (MHz) | AVERAGE POWER (dBm) |         | TOTAL POWER (dBm) | TOTAL POWER (mW) | REQUIRED LIMIT (dBm)               | RESULT |
|-----|-----------------|---------------------|---------|-------------------|------------------|------------------------------------|--------|
|     |                 | CHAIN 0             | CHAIN 1 |                   |                  |                                    |        |
| 38  | 5190            | 12.33               | 12.81   | <b>15.93</b>      | 36.199           | 23.98                              | PASS   |
| 46  | 5230            | 12.31               | 12.77   | 15.90             | 35.945           | 23.98                              | PASS   |
| 54  | 5270            | 12.29               | 12.75   | 15.88             | 35.780           | 23.98 or<br>$11+10\log(B) = 27.35$ | PASS   |
| 62  | 5310            | 12.35               | 12.84   | <b>15.95</b>      | 36.410           | 23.98 or<br>$11+10\log(B) = 27.32$ | PASS   |
| 102 | 5510            | 10.84               | 11.37   | 14.46             | 25.843           | 23.98 or<br>$11+10\log(B) = 27.46$ | PASS   |
| 118 | 5590            | 10.81               | 11.33   | 14.43             | 25.633           | 23.98 or<br>$11+10\log(B) = 27.53$ | PASS   |
| 134 | 5670            | 10.85               | 11.39   | 15.48             | 25.934           | 23.98 or<br>$11+10\log(B) = 27.48$ | PASS   |
| 142 | 5710 (band 3)   | 12.81               | 13.32   | <b>16.42</b>      | 40.577           | 23.98 or<br>$11+10\log(B) = 27.20$ | PASS   |
| 142 | 5710 (band 4)   | 9.36                | 10.31   | 13.21             | 19.370           | 23.98 or<br>$11+10\log(B) = 27.20$ | PASS   |
| 151 | 5755            | 12.84               | 13.34   | 16.45             | 40.808           | 30                                 | PASS   |
| 159 | 5795            | 12.86               | 13.37   | <b>16.47</b>      | 41.047           | 30                                 | PASS   |

## 802.11ac\_VHT80 (MIMO)

| CH  | Frequency (MHz) | AVERAGE POWER (dBm) |         | TOTAL POWER (dBm) | TOTAL POWER (mW) | REQUIRED LIMIT (dBm)               | RESULT |
|-----|-----------------|---------------------|---------|-------------------|------------------|------------------------------------|--------|
|     |                 | CHAIN 0             | CHAIN 1 |                   |                  |                                    |        |
| 42  | 5210            | 12.5                | 12.21   | <b>15.97</b>      | 34.417           | 23.98                              | PASS   |
| 58  | 5290            | 11.48               | 12.16   | <b>15.45</b>      | 30.504           | 23.98 or<br>$11+10\log(B) = 30.41$ | PASS   |
| 106 | 5530            | 11.15               | 10.49   | 14.45             | 24.226           | 23.98 or<br>$11+10\log(B) = 30.40$ | PASS   |
| 122 | 5610            | 10.51               | 11.17   | <b>14.47</b>      | 24.338           | 23.98 or<br>$11+10\log(B) = 32.07$ | PASS   |
| 138 | 5690 (band 3)   | 11.14               | 10.47   | <b>4.43</b>       | 24.145           | 23.98 or<br>$11+10\log(B) = 30.63$ | PASS   |
| 138 | 5690 (band 4)   | 4.23                | 3.41    | 7.45              | 4.841            | 23.98 or<br>$11+10\log(B) = 30.63$ | PASS   |
| 155 | 5775            | 12.49               | 13.16   | <b>16.45</b>      | 38.443           | 30                                 | PASS   |

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## 802.11ac\_VHT160 (MIMO)

| CH  | Frequency<br>(MHz) | AVERAGE POWER (dBm) |         | TOTAL<br>POWER<br>(dBm) | TOTAL<br>POWER<br>(mW) | REQUIRED<br>LIMIT<br>(dBm)         | RESULT |
|-----|--------------------|---------------------|---------|-------------------------|------------------------|------------------------------------|--------|
|     |                    | CHAIN 0             | CHAIN 1 |                         |                        |                                    |        |
| 50  | 5250               | 11.83               | 11.06   | <b>15.45</b>            | 28.005                 | 23.98                              | PASS   |
| 114 | 5570               | 11.04               | 11.82   | <b>15.43</b>            | 27.911                 | 23.98 or<br>$11+10\log(B) = 33.19$ | PASS   |

**\* Note: The duty cycle factor is compensated to obtain the maximum value of measurement in average.**

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# ERP/EIRP Measurement:

802.11a

| CH  | Frequency (MHz) | TOTAL POWER (dBm) | TOTAL POWER (mW) | GAIN (dBi) | EIRP  | REQUIRED LIMIT (dBm)            | RESULT |
|-----|-----------------|-------------------|------------------|------------|-------|---------------------------------|--------|
| 36  | 5180            | <b>12.96</b>      | 19.770           | 1.13       | 14.09 | 23.01 or $10+10\log(B) = 22.26$ | PASS   |
| 40  | 5200            | 12.94             | 19.679           |            | 14.07 | 23.01 or $10+10\log(B) = 22.26$ | PASS   |
| 48  | 5240            | 12.95             | 19.724           |            | 14.08 | 23.01 or $10+10\log(B) = 22.26$ | PASS   |
| 52  | 5260            | <b>12.98</b>      | 19.861           | 1.13       | 14.11 | 30 or $17+10\log(B) = 31.57$    | PASS   |
| 56  | 5280            | 12.96             | 19.770           |            | 14.09 | 30 or $17+10\log(B) = 29.41$    | PASS   |
| 64  | 5320            | 12.97             | 19.815           |            | 14.10 | 30 or $17+10\log(B) = 29.26$    | PASS   |
| 100 | 5500            | 11.46             | 13.996           | 0.65       | 12.11 | 30 or $17+10\log(B) = 29.26$    | PASS   |
| 120 | 5600            | 11.44             | 13.932           |            | 12.09 | 30 or $17+10\log(B) = 30.38$    | PASS   |
| 140 | 5700            | <b>11.48</b>      | 14.060           |            | 12.13 | 30 or $17+10\log(B) = 29.28$    | PASS   |
| 149 | 5745            | 13.95             | 24.831           | -0.65      | 13.30 | 30                              | PASS   |
| 157 | 5785            | 13.96             | 24.889           |            | 13.31 | 30                              | PASS   |
| 165 | 5825            | <b>13.98</b>      | 25.003           |            | 13.33 | 30                              | PASS   |

\* **Note:** EIRP = Average Power + Gain

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## 802.11n\_HT20 (MIMO)

| CH  | Frequency (MHz) | TOTAL POWER (dBm) | TOTAL POWER (mW) | GAIN (dBi) | EIRP  | REQUIRED LIMIT (dBm)            | RESULT |
|-----|-----------------|-------------------|------------------|------------|-------|---------------------------------|--------|
| 36  | 5180            | 15.91             | 38.994           | 4.14       | 20.05 | 23.01 or $10+10\log(B) = 22.53$ | PASS   |
| 40  | 5200            | 15.93             | 39.174           |            | 20.07 | 23.01 or $10+10\log(B) = 22.65$ | PASS   |
| 48  | 5240            | <b>15.94</b>      | 39.264           |            | 20.08 | 23.01 or $10+10\log(B) = 24.59$ | PASS   |
| 52  | 5260            | <b>15.97</b>      | 39.537           | 4.14       | 20.11 | 30 or $17+10\log(B) = 31.63$    | PASS   |
| 56  | 5280            | 15.95             | 39.355           |            | 20.09 | 30 or $17+10\log(B) = 29.60$    | PASS   |
| 64  | 5320            | 15.90             | 38.905           |            | 20.04 | 30 or $17+10\log(B) = 29.53$    | PASS   |
| 100 | 5500            | <b>14.49</b>      | 28.119           | 3.66       | 18.15 | 30 or $17+10\log(B) = 29.54$    | PASS   |
| 120 | 5600            | 14.47             | 27.990           |            | 18.13 | 30 or $17+10\log(B) = 30.46$    | PASS   |
| 140 | 5700            | 14.44             | 27.797           |            | 18.10 | 30 or $17+10\log(B) = 29.53$    | PASS   |
| 149 | 5745            | 16.42             | 43.853           | 2.36       | 18.78 | 30                              | PASS   |
| 157 | 5785            | 16.44             | 44.055           |            | 18.80 | 30                              | PASS   |
| 165 | 5825            | <b>16.47</b>      | 44.361           |            | 18.83 | 30                              | PASS   |

\* **Note:** EIRP = Average Power + Gain

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## 802.11n\_HT40 (MIMO)

| CH  | Frequency (MHz) | TOTAL POWER (dBm) | TOTAL POWER (mW) | GAIN (dBi) | EIRP  | REQUIRED LIMIT (dBm)        | RESULT |
|-----|-----------------|-------------------|------------------|------------|-------|-----------------------------|--------|
| 38  | 5190            | <b>15.93</b>      | 39.174           | 4.14       | 20.07 | 23.01 or 10+10log(B) =25.65 | PASS   |
| 46  | 5230            | 15.90             | 38.905           |            | 20.04 | 23.01 or 10+10log(B) =25.63 | PASS   |
| 54  | 5270            | 15.88             | 38.726           | 4.14       | 20.02 | 30 or 17+10log(B) =32.63    | PASS   |
| 62  | 5310            | <b>15.95</b>      | 39.355           |            | 20.09 | 30 or 17+10log(B) =32.63    | PASS   |
| 102 | 5510            | 14.46             | 27.925           | 3.66       | 18.12 | 30 or 17+10log(B) =32.64    | PASS   |
| 118 | 5590            | 14.43             | 27.733           |            | 18.09 | 30 or 17+10log(B) =33.62    | PASS   |
| 134 | 5670            | <b>14.48</b>      | 28.054           |            | 18.14 | 30 or 17+10log(B) =32.65    | PASS   |
| 151 | 5755            | 16.45             | 44.157           | 2.36       | 18.81 | 30                          | PASS   |
| 159 | 5795            | <b>16.47</b>      | 44.361           |            | 18.83 | 30                          | PASS   |

\* **Note:** EIRP = Average Power + Gain

## 802.11ac\_VHT80 (MIMO)

| CH  | Frequency (MHz) | TOTAL POWER (dBm) | TOTAL POWER (mW) | GAIN (dBi) | EIRP  | REQUIRED LIMIT (dBm)        | RESULT |
|-----|-----------------|-------------------|------------------|------------|-------|-----------------------------|--------|
| 42  | 5210            | <b>15.97</b>      | 39.537           | 4.14       | 20.11 | 23.01 or 10+10log(B) =28.76 | PASS   |
| 58  | 5290            | <b>15.45</b>      | 35.075           | 4.14       | 19.59 | 30 or 17+10log(B) =35.76    | PASS   |
| 106 | 5530            | 14.45             | 27.861           | 3.66       | 18.11 | 30 or 17+10log(B) =35.76    | PASS   |
| 122 | 5610            | <b>14.47</b>      | 27.990           |            | 18.13 | 30 or 17+10log(B) =35.59    | PASS   |
| 155 | 5775            | <b>16.45</b>      | 44.157           | 2.36       | 18.81 | 30                          | PASS   |

\* **Note:** EIRP = Average Power + Gain

## 802.11ac\_VHT160 (MIMO)

| CH  | Frequency (MHz) | TOTAL POWER (dBm) | TOTAL POWER (mW) | GAIN (dBi) | EIRP  | REQUIRED LIMIT (dBm)        | RESULT |
|-----|-----------------|-------------------|------------------|------------|-------|-----------------------------|--------|
| 50  | 5250            | <b>15.45</b>      | 35.075           | 4.14       | 19.59 | 23.01 or 10+10log(B) =31.87 | PASS   |
| 114 | 5570            | <b>15.43</b>      | 34.914           | 3.66       | 19.09 | 30 or 17+10log(B) =38.85    | PASS   |

\* **Note:** EIRP = Average Power + Gain

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## 7. UNDESIRABLE EMISSION - RADIATED MEASUREMENT

### 7.1 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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## 7.2 Measurement Equipment Used:

| Name of Equipment     | Manufacturer    | Model         | Serial Number | Calibration Date | Calibration Due |
|-----------------------|-----------------|---------------|---------------|------------------|-----------------|
| Horn Antenna          | Schwarzbeck     | BBHA9120D     | 1187          | 2018/01/04       | 2019/01/03      |
| EMI Test Receiver     | R&S             | ESU 40        | 100363        | 2018/04/11       | 2019/04/10      |
| Pre-Amplifier         | EMC Instruments | EMC0011830    | 980199        | 2017/12/26       | 2018/12/25      |
| Attenuator            | Marvelous       | WATT-218FS-10 | RF246         | 2017/12/26       | 2018/12/25      |
| Highpass Filter       | Micro Tronics   | BRM50701-01   | G008          | 2017/12/26       | 2018/12/25      |
| Band Rejection Filter | Micro-Tronics   | G015          | RF100         | 2017/12/26       | 2018/12/25      |
| Band Rejection Filter | Micro-Tronics   | G016          | RF101         | 2017/12/26       | 2018/12/25      |
| Band Rejection Filter | Micro-Tronics   | G021          | RF102         | 2017/12/26       | 2018/12/25      |
| Coaxial Cable         | Huber Suhner    | SUCOFLEX 104  | MY17388/4     | 2017/12/26       | 2018/12/25      |

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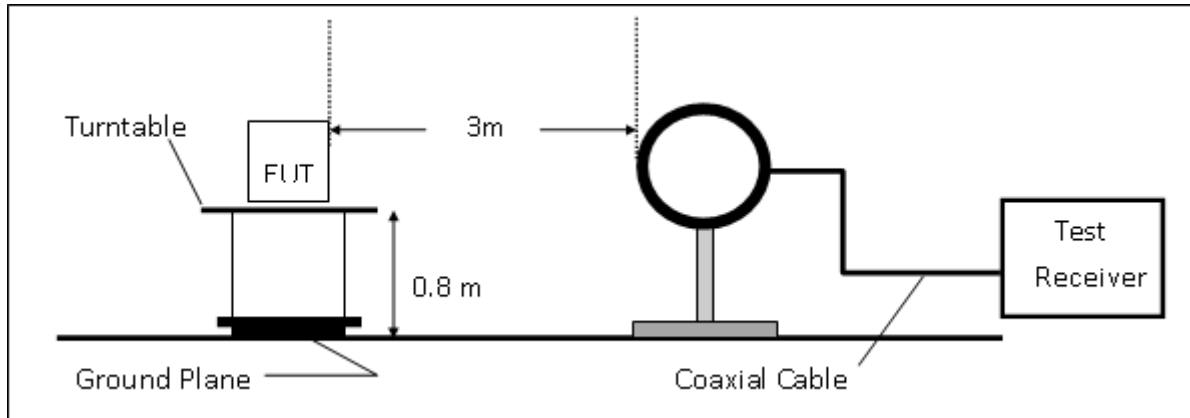
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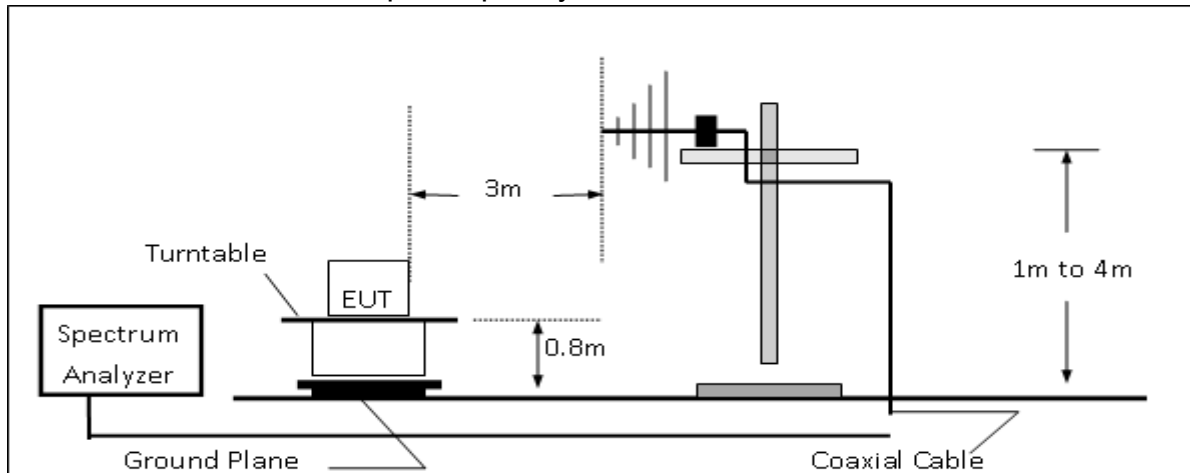
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### 7.3 Test SET-UP

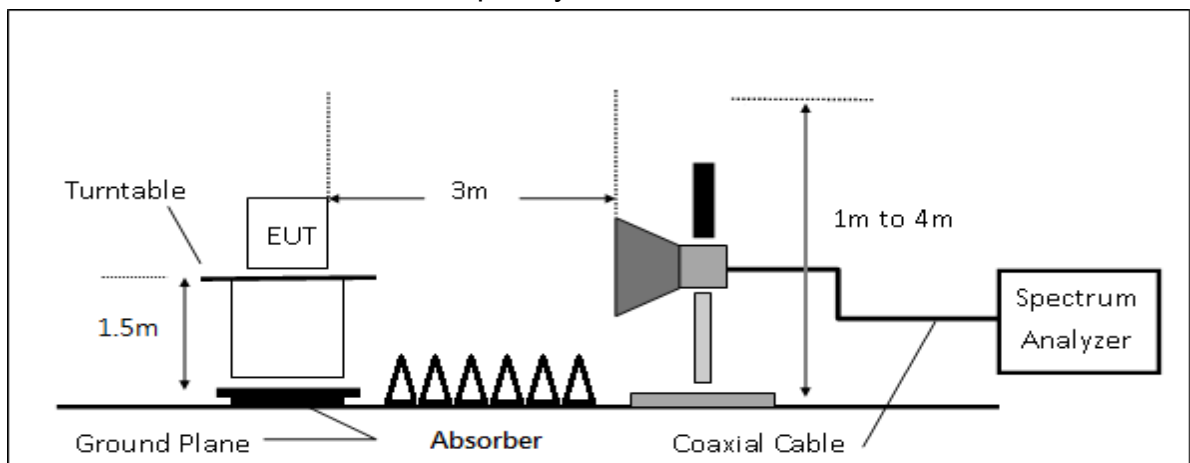
#### (A) Radiated Emission Test Set-UP Frequency Below 30MHz.



#### (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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## 7.4 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 v01.
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.

## 7.5 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)

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## 7.6 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.

## 7.7 Measurement Result

Note: Refer to attach tabular data sheets.

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

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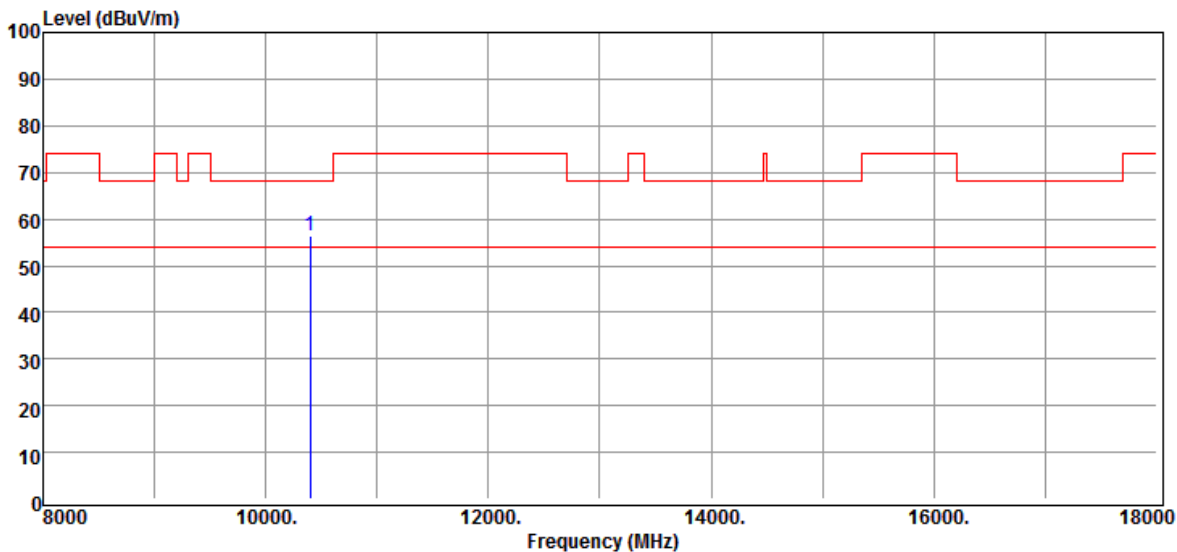
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## Radiated Spurious Emission Measurement Result

### Above 1GHz Worst-Case Data:

#### 802.11a, 5150~5250 MHz

|                |                   |              |             |
|----------------|-------------------|--------------|-------------|
| Operation Mode | :802.11a / Band 1 | Test Date    | :2018-07-18 |
| Test Mode      | :TX CH MID        | Temp./Humi.  | :24/62      |
| EUT Pol        | :E1 Plan          | Antenna Pol. | :VERTICAL   |
| Test Channel   | :5200 MHz         | Engineer     | :Enzo       |



| Freq.    | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|----------|----------|---------------|--------|--------|--------|--------|
| Mode     | Mode     | Reading Level |        | FS     | @3m    |        |
| MHz      | PK/QP/AV | dBuV          | dB     | dBuV/m | dBuV/m | dB     |
| 10400.00 | Peak     | 29.67         | 26.79  | 56.46  | 68.20  | -11.74 |

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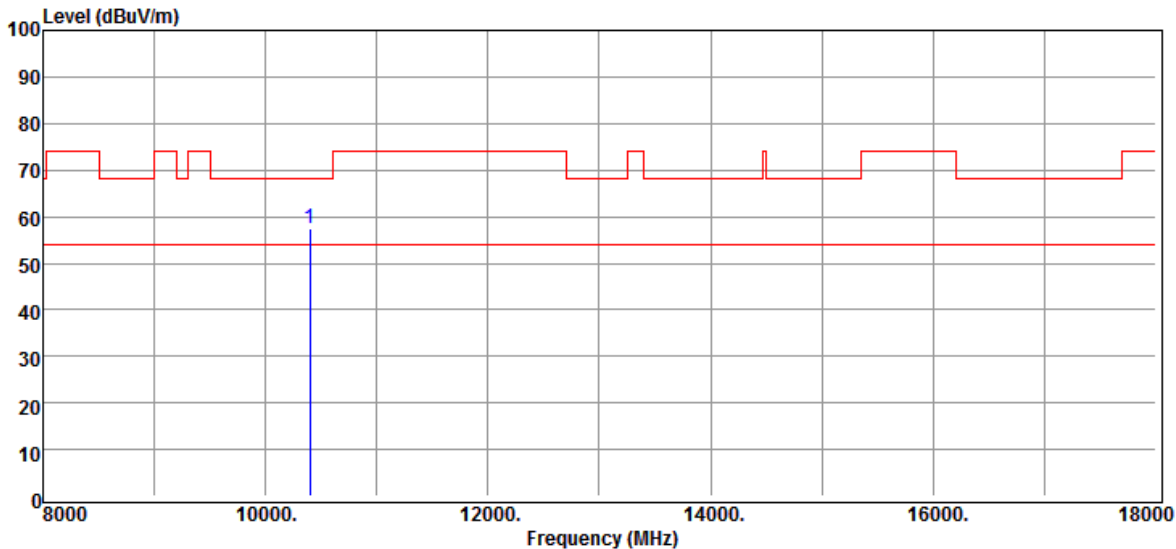
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|                |                   |              |             |
|----------------|-------------------|--------------|-------------|
| Operation Mode | :802.11a / Band 1 | Test Date    | :2018-07-18 |
| Test Mode      | :TX CH MID        | Temp./Humi.  | :24/62      |
| EUT Pol        | :E1 Plan          | Antenna Pol. | :HORIZONTAL |
| Test Channel   | :5200 MHz         | Engineer     | :Enzo       |



| Freq.    | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|----------|----------|---------------|--------|--------|--------|--------|
| MHz      | Mode     | Reading Level |        | FS     | @3m    |        |
|          | PK/QP/AV | dBμV          | dB     | dBμV/m | dBμV/m | dB     |
| 10400.00 | Peak     | 30.72         | 26.79  | 57.51  | 68.20  | -10.69 |

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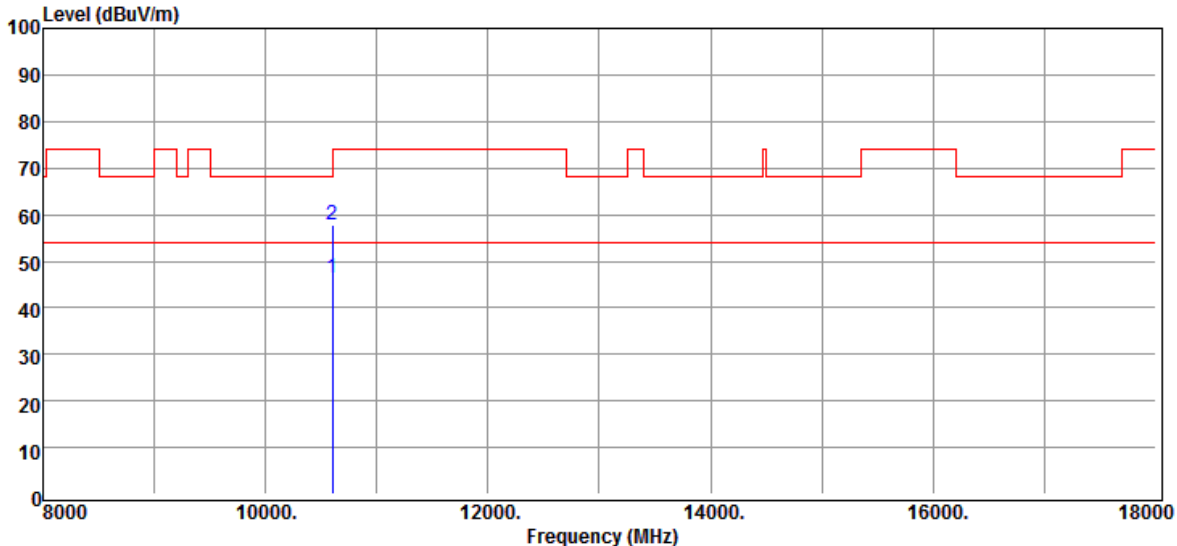
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## Radiated Spurious Emission Measurement Result

### 802.11a, 5250~5350MHz

|                |                   |              |             |
|----------------|-------------------|--------------|-------------|
| Operation Mode | :802.11a / Band 2 | Test Date    | :2018-07-18 |
| Test Mode      | :TX CH MID        | Temp./Humi.  | :24/62      |
| EUT Pol        | :E1 Plan          | Antenna Pol. | :VERTICAL   |
| Test Channel   | :5300 MHz         | Engineer     | :Enzo       |



| Freq.    | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|----------|----------|---------------|--------|--------|--------|--------|
| MHz      | Mode     | Reading Level |        | FS     | @3m    |        |
| MHz      | PK/QP/AV | dBμV          | dB     | dBμV/m | dBμV/m | dB     |
| 10600.00 | Average  | 19.09         | 27.21  | 46.30  | 54.00  | -7.70  |
| 10600.00 | Peak     | 30.46         | 27.21  | 57.67  | 68.20  | -10.53 |

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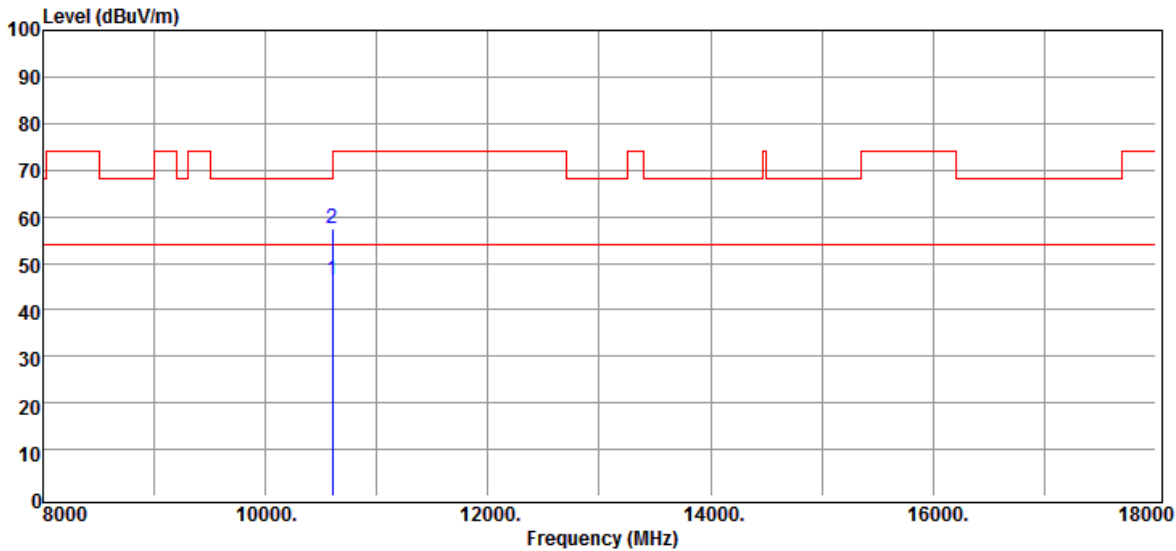
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|                |                   |              |             |
|----------------|-------------------|--------------|-------------|
| Operation Mode | :802.11a / Band 2 | Test Date    | :2018-07-18 |
| Test Mode      | :TX CH MID        | Temp./Humi.  | :24/62      |
| EUT Pol        | :E1 Plan          | Antenna Pol. | :HORIZONTAL |
| Test Channel   | :5300 MHz         | Engineer     | :Enzo       |



| Freq.    | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|----------|----------|---------------|--------|--------|--------|--------|
| MHz      | Mode     | Reading Level |        | FS     | @3m    |        |
|          | PK/QP/AV | dBμV          | dB     | dBμV/m | dBμV/m | dB     |
| 10600.00 | Average  | 19.11         | 27.21  | 46.32  | 54.00  | -7.68  |
| 10600.00 | Peak     | 30.35         | 27.21  | 57.56  | 68.20  | -10.64 |

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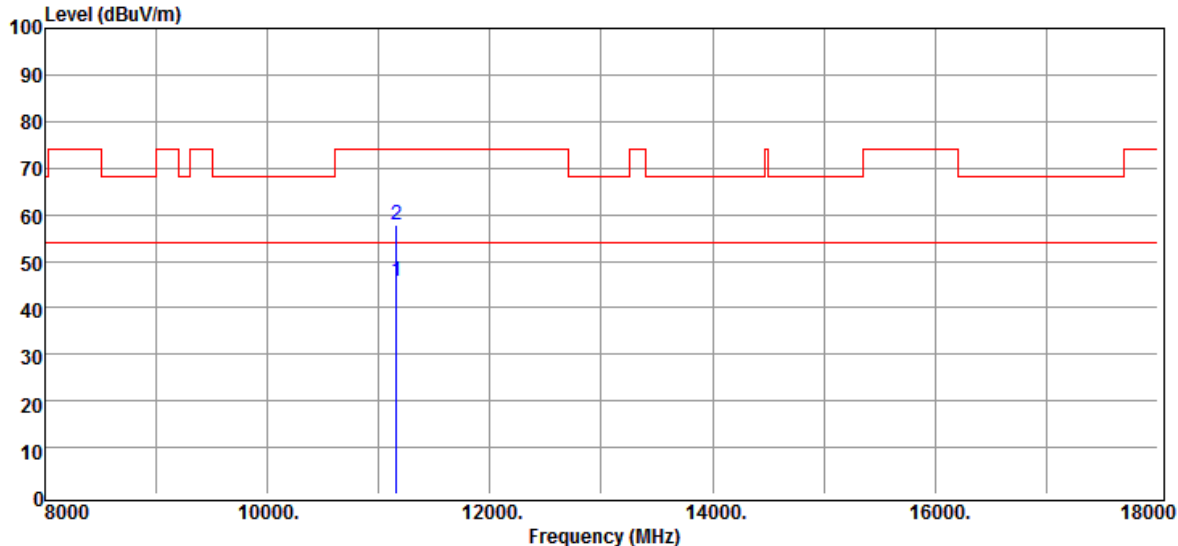
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## Radiated Spurious Emission Measurement Result

### 802.11a, 5470~5725 MHz

Operation Mode :802.11a / Band 3  
Test Mode :TX CH MID  
EUT Pol :E1 Plan  
Test Channel :5580 MHz

Test Date :2018-07-18  
Temp./Humi. :24/62  
Antenna Pol. :VERTICAL  
Engineer :Enzo



| Freq.    | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|----------|----------|---------------|--------|--------|--------|--------|
| MHz      | Mode     | Reading Level |        | FS     | @3m    |        |
| MHz      | PK/QP/AV | dBμV          | dB     | dBμV/m | dBμV/m | dB     |
| 11160.00 | Average  | 19.05         | 26.67  | 45.72  | 54.00  | -8.28  |
| 11160.00 | Peak     | 31.15         | 26.67  | 57.82  | 74.00  | -16.18 |

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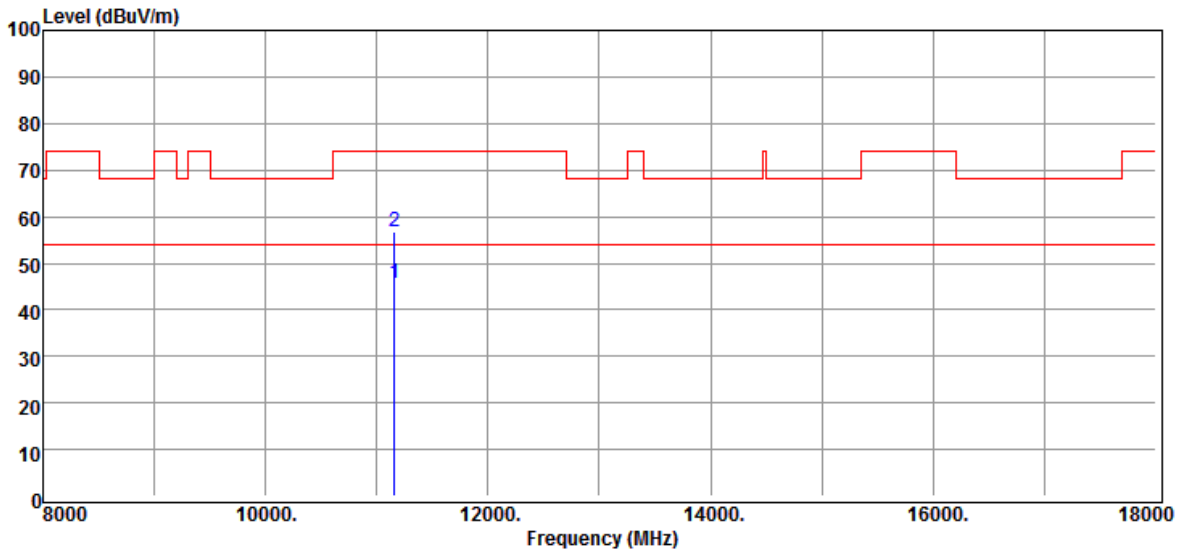
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|                |                   |              |             |
|----------------|-------------------|--------------|-------------|
| Operation Mode | :802.11a / Band 3 | Test Date    | :2018-07-18 |
| Test Mode      | :TX CH MID        | Temp./Humi.  | :24/62      |
| EUT Pol        | :E1 Plan          | Antenna Pol. | :HORIZONTAL |
| Test Channel   | :5580 MHz         | Engineer     | :Enzo       |



| Freq.    | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|----------|----------|---------------|--------|--------|--------|--------|
| MHz      | Mode     | Reading Level |        | FS     | @3m    |        |
| MHz      | PK/QP/AV | dBμV          | dB     | dBμV/m | dBμV/m | dB     |
| 11160.00 | Average  | 19.08         | 26.67  | 45.75  | 54.00  | -8.25  |
| 11160.00 | Peak     | 30.16         | 26.67  | 56.83  | 74.00  | -17.17 |

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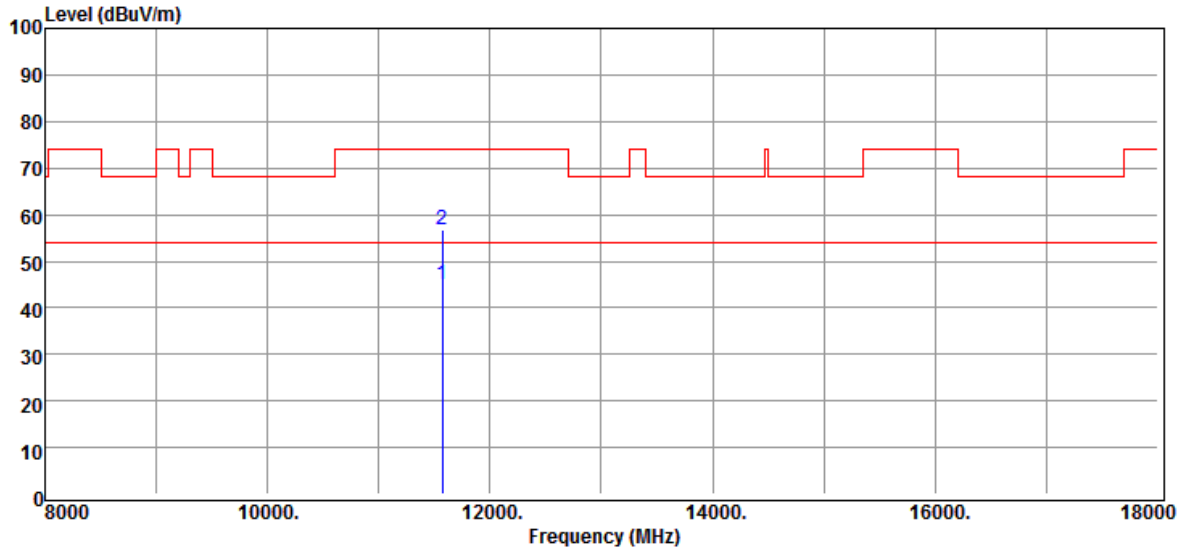
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## Radiated Spurious Emission Measurement Result

### 802.11a, 5725~5850 MHz

Operation Mode :802.11a / Band 4  
Test Mode :TX CH MID  
EUT Pol :E1 Plan  
Test Channel :5785 MHz

Test Date :2018-07-18  
Temp./Humi. :24/62  
Antenna Pol. :VERTICAL  
Engineer :Enzo



| Freq.    | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|----------|----------|---------------|--------|--------|--------|--------|
| MHz      | Mode     | Reading Level |        | FS     | @3m    |        |
| MHz      | PK/QP/AV | dBμV          | dB     | dBμV/m | dBμV/m | dB     |
| 11570.00 | Average  | 19.01         | 25.87  | 44.88  | 54.00  | -9.12  |
| 11570.00 | Peak     | 30.92         | 25.87  | 56.79  | 74.00  | -17.21 |

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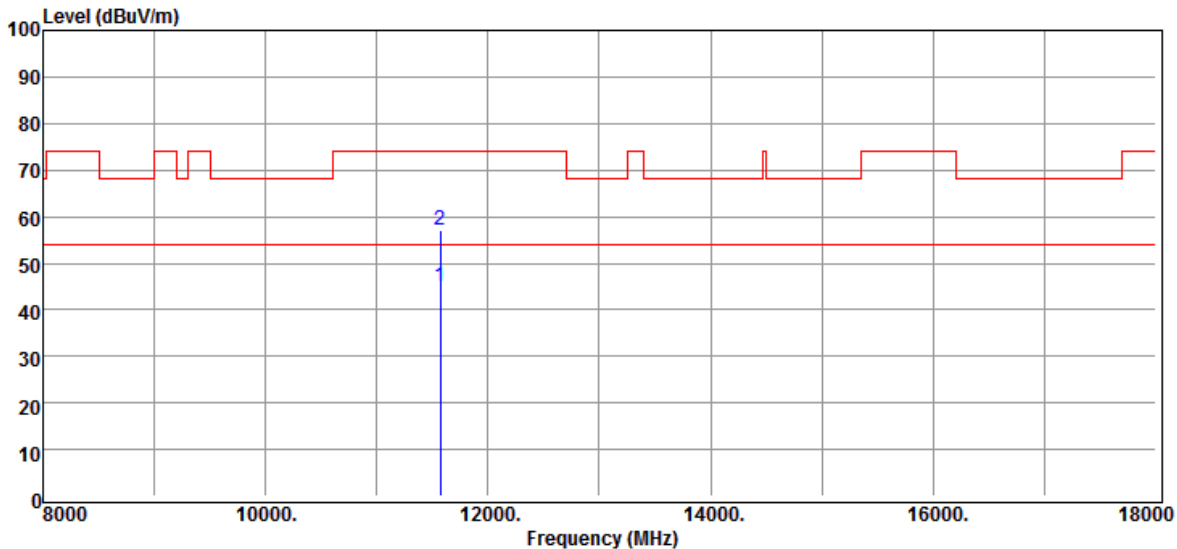
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|                |                   |              |             |
|----------------|-------------------|--------------|-------------|
| Operation Mode | :802.11a / Band 4 | Test Date    | :2018-07-18 |
| Test Mode      | :TX CH MID        | Temp./Humi.  | :24/62      |
| EUT Pol        | :E1 Plan          | Antenna Pol. | :HORIZONTAL |
| Test Channel   | :5785 MHz         | Engineer     | :Enzo       |



| Freq.    | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|----------|----------|---------------|--------|--------|--------|--------|
| MHz      | Mode     | Reading Level |        | FS     | @3m    |        |
| MHz      | PK/QP/AV | dBμV          | dB     | dBμV/m | dBμV/m | dB     |
| 11570.00 | Average  | 19.02         | 25.87  | 44.89  | 54.00  | -9.11  |
| 11570.00 | Peak     | 31.24         | 25.87  | 57.11  | 74.00  | -16.89 |

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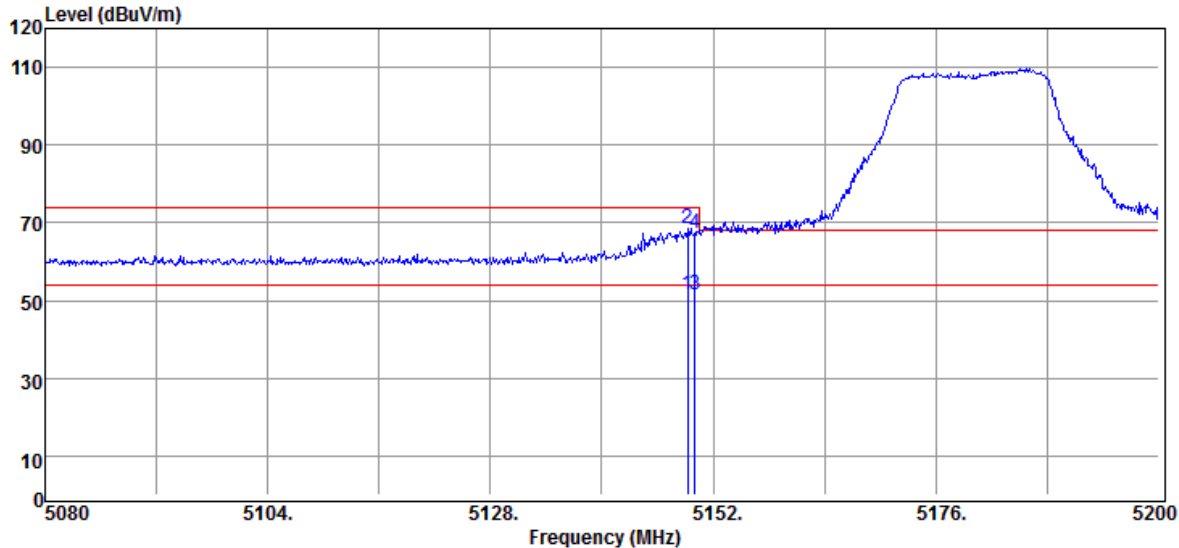
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## Band edge falling to restricted band

### 802.11a mode

|                |                   |              |             |
|----------------|-------------------|--------------|-------------|
| Operation Mode | :802.11a / Band 1 | Test Date    | :2018-07-04 |
| Test Mode      | :BE CH LOW        | Temp./Humi.  | :25/60      |
| EUT Pol        | :E1 Plan          | Antenna Pol. | :VERTICAL   |
| Test Channel   | :5180 MHz         | Engineer     | :Enzo       |



| Freq.   | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|---------|----------|---------------|--------|--------|--------|--------|
| MHz     | Mode     | Reading Level |        | FS     | @3m    |        |
| MHz     | PK/QP/AV | dBuV          | dB     | dBuV/m | dBuV/m | dB     |
| 5149.24 | Average  | 37.94         | 13.63  | 51.57  | 54.00  | -2.43  |
| 5149.24 | Peak     | 54.99         | 13.63  | 68.62  | 74.00  | -5.38  |
| 5150.00 | Average  | 38.01         | 13.65  | 51.66  | 54.00  | -2.34  |
| 5150.00 | Peak     | 53.46         | 13.65  | 67.11  | 74.00  | -6.89  |

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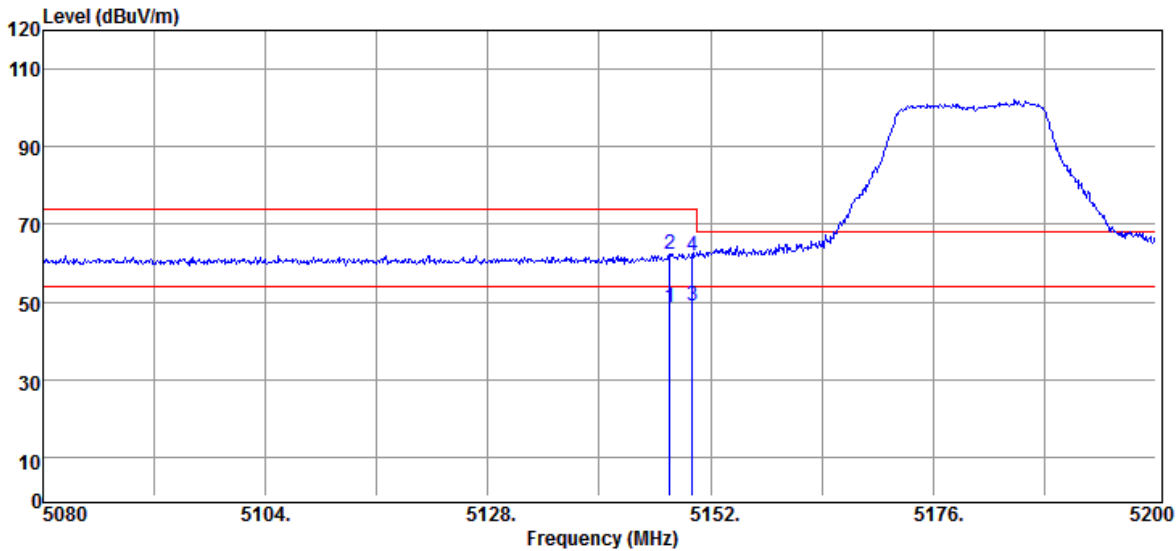
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|                |                   |              |             |
|----------------|-------------------|--------------|-------------|
| Operation Mode | :802.11a / Band 1 | Test Date    | :2018-07-04 |
| Test Mode      | :BE CH LOW        | Temp./Humi.  | :25/60      |
| EUT Pol        | :E1 Plan          | Antenna Pol. | :HORIZONTAL |
| Test Channel   | :5180 MHz         | Engineer     | :Enzo       |



| Freq.   | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|---------|----------|---------------|--------|--------|--------|--------|
| MHz     | Mode     | Reading Level |        | FS     | @3m    |        |
| MHz     | PK/QP/AV | dBμV          | dB     | dBμV/m | dBμV/m | dB     |
| 5147.56 | Average  | 35.01         | 13.63  | 48.64  | 54.00  | -5.36  |
| 5147.56 | Peak     | 48.85         | 13.63  | 62.48  | 74.00  | -11.52 |
| 5150.00 | Average  | 35.35         | 13.65  | 49.00  | 54.00  | -5.00  |
| 5150.00 | Peak     | 48.42         | 13.65  | 62.07  | 74.00  | -11.93 |

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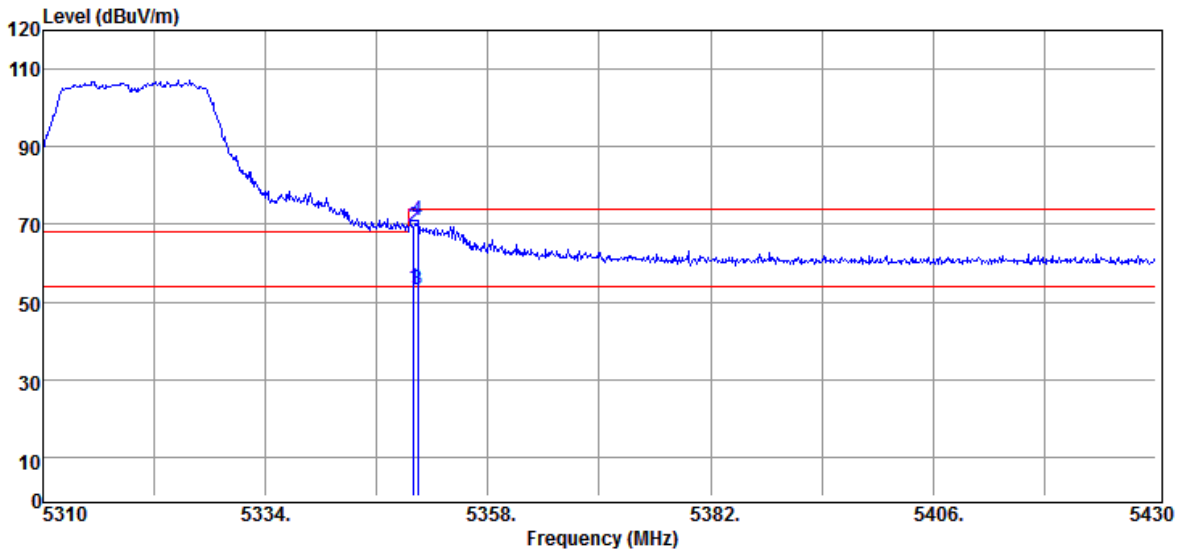
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|----------------|-------------------|--------------|-------------|
| Operation Mode | :802.11a / Band 2 | Test Date    | :2018-07-06 |
| Test Mode      | :BE CH HIGH       | Temp./Humi.  | :25/60      |
| EUT Pol        | :H Plan           | Antenna Pol. | :VERTICAL   |
| Test Channel   | :5320 MHz         | Engineer     | :Enzo       |



| Freq.   | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|---------|----------|---------------|--------|--------|--------|--------|
| MHz     | Mode     | Reading Level |        | FS     | @3m    |        |
| MHz     | PK/QP/AV | dBuV          | dB     | dBuV/m | dBuV/m | dB     |
| 5350.00 | Average  | 39.26         | 14.16  | 53.42  | 54.00  | -0.58  |
| 5350.00 | Peak     | 55.14         | 14.16  | 69.30  | 74.00  | -4.70  |
| 5350.44 | Average  | 39.10         | 14.17  | 53.27  | 54.00  | -0.73  |
| 5350.44 | Peak     | 56.73         | 14.17  | 70.90  | 74.00  | -3.10  |

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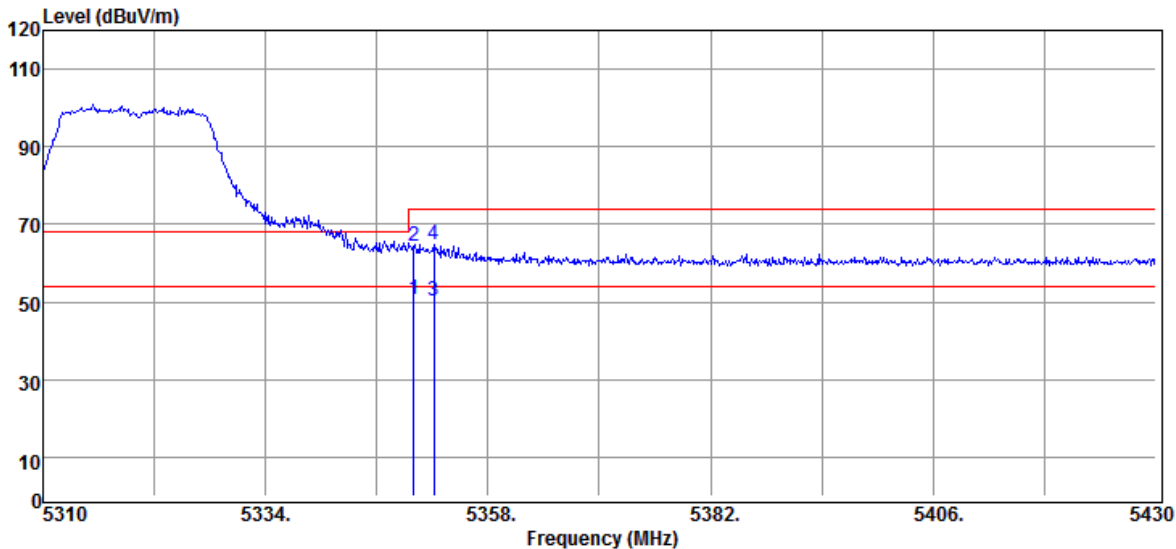
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|----------------|-------------------|--------------|-------------|
| Operation Mode | :802.11a / Band 2 | Test Date    | :2018-07-04 |
| Test Mode      | :BE CH HIGH       | Temp./Humi.  | :25/60      |
| EUT Pol        | :H Plan           | Antenna Pol. | :HORIZONTAL |
| Test Channel   | :5320 MHz         | Engineer     | :Enzo       |



| Freq.   | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|---------|----------|---------------|--------|--------|--------|--------|
| MHz     | Mode     | Reading Level |        | FS     | @3m    |        |
| MHz     | PK/QP/AV | dBμV          | dB     | dBμV/m | dBμV/m | dB     |
| 5350.00 | Average  | 36.51         | 14.16  | 50.67  | 54.00  | -3.33  |
| 5350.00 | Peak     | 50.15         | 14.16  | 64.31  | 74.00  | -9.69  |
| 5352.12 | Average  | 36.13         | 14.17  | 50.30  | 54.00  | -3.70  |
| 5352.12 | Peak     | 50.70         | 14.17  | 64.87  | 74.00  | -9.13  |

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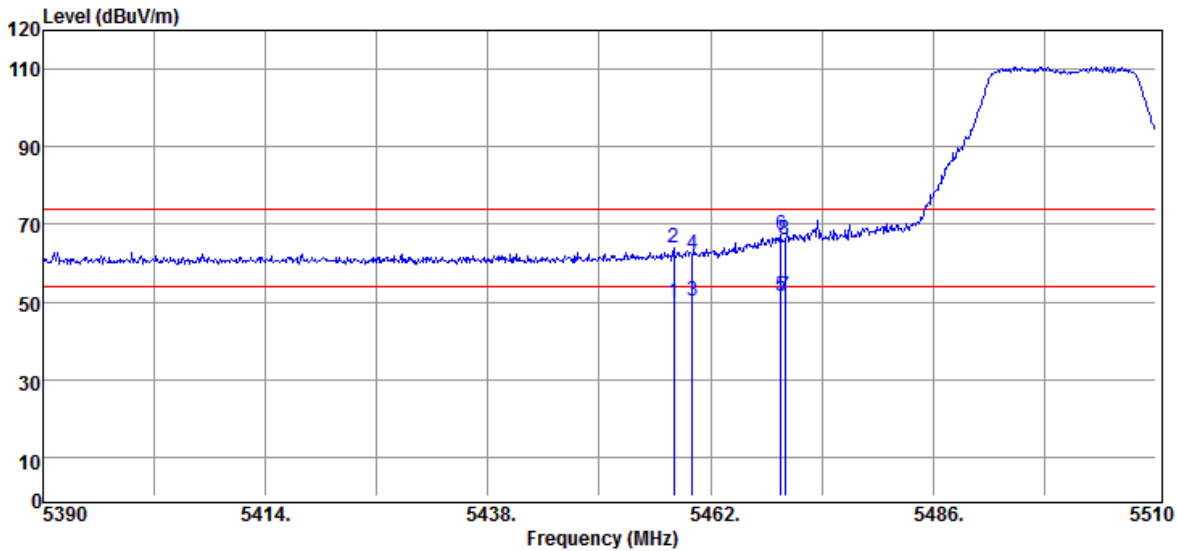
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|----------------|-------------------|--------------|-------------|
| Operation Mode | :802.11a / Band 3 | Test Date    | :2018-07-04 |
| Test Mode      | :BE CH LOW        | Temp./Humi.  | :25/60      |
| EUT Pol        | :H Plan           | Antenna Pol. | :VERTICAL   |
| Test Channel   | :5500 MHz         | Engineer     | :Enzo       |



| Freq.   | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|---------|----------|---------------|--------|--------|--------|--------|
| Mode    | Mode     | Reading Level |        | FS     | @3m    |        |
| MHz     | PK/QP/AV | dBuV          | dB     | dBuV/m | dBuV/m | dB     |
| 5458.04 | Average  | 35.60         | 14.31  | 49.91  | 54.00  | -4.09  |
| 5458.04 | Peak     | 49.64         | 14.31  | 63.95  | 74.00  | -10.05 |
| 5460.00 | Average  | 35.77         | 14.31  | 50.08  | 54.00  | -3.92  |
| 5460.00 | Peak     | 48.08         | 14.31  | 62.39  | 74.00  | -11.61 |
| 5469.56 | Average  | 37.11         | 14.31  | 51.42  | 54.00  | -2.58  |
| 5469.56 | Peak     | 52.89         | 14.31  | 67.20  | 74.00  | -6.80  |
| 5470.00 | Average  | 37.17         | 14.31  | 51.48  | 54.00  | -2.52  |
| 5470.00 | Peak     | 51.50         | 14.31  | 65.81  | 74.00  | -8.19  |

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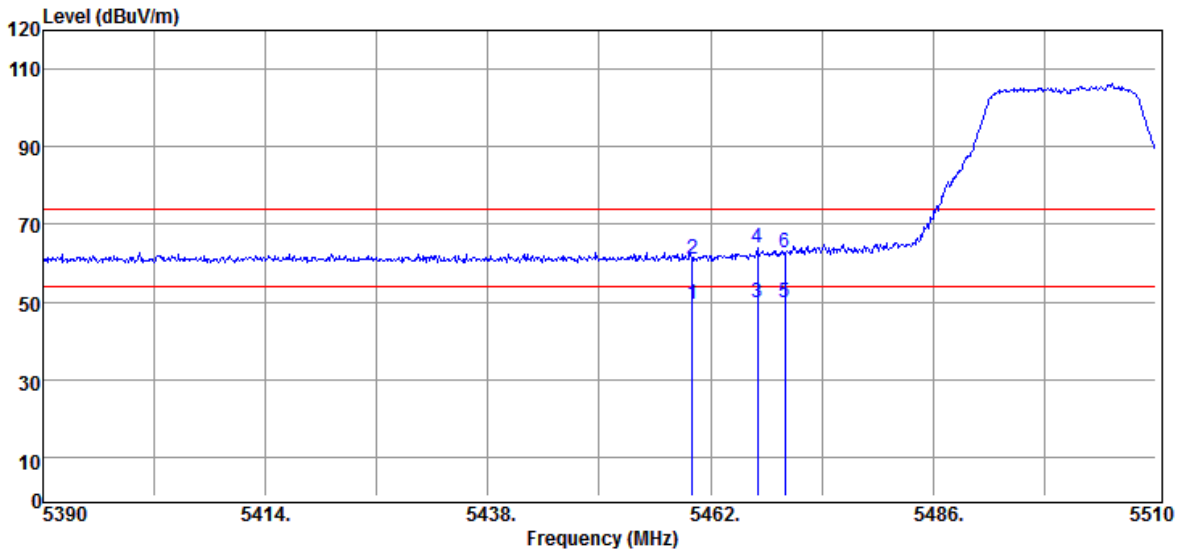
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|                |                   |              |             |
|----------------|-------------------|--------------|-------------|
| Operation Mode | :802.11a / Band 3 | Test Date    | :2018-07-04 |
| Test Mode      | :BE CH LOW        | Temp./Humi.  | :25/60      |
| EUT Pol        | :H Plan           | Antenna Pol. | :HORIZONTAL |
| Test Channel   | :5500 MHz         | Engineer     | :Enzo       |



| Freq.   | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|---------|----------|---------------|--------|--------|--------|--------|
| MHz     | Mode     | Reading Level |        | FS     | @3m    |        |
| MHz     | PK/QP/AV | dBμV          | dB     | dBμV/m | dBμV/m | dB     |
| 5460.00 | Average  | 34.92         | 14.31  | 49.23  | 54.00  | -4.77  |
| 5460.00 | Peak     | 46.73         | 14.31  | 61.04  | 74.00  | -12.96 |
| 5467.04 | Average  | 35.31         | 14.32  | 49.63  | 54.00  | -4.37  |
| 5467.04 | Peak     | 49.46         | 14.32  | 63.78  | 74.00  | -10.22 |
| 5470.00 | Average  | 35.48         | 14.31  | 49.79  | 54.00  | -4.21  |
| 5470.00 | Peak     | 48.44         | 14.31  | 62.75  | 74.00  | -11.25 |

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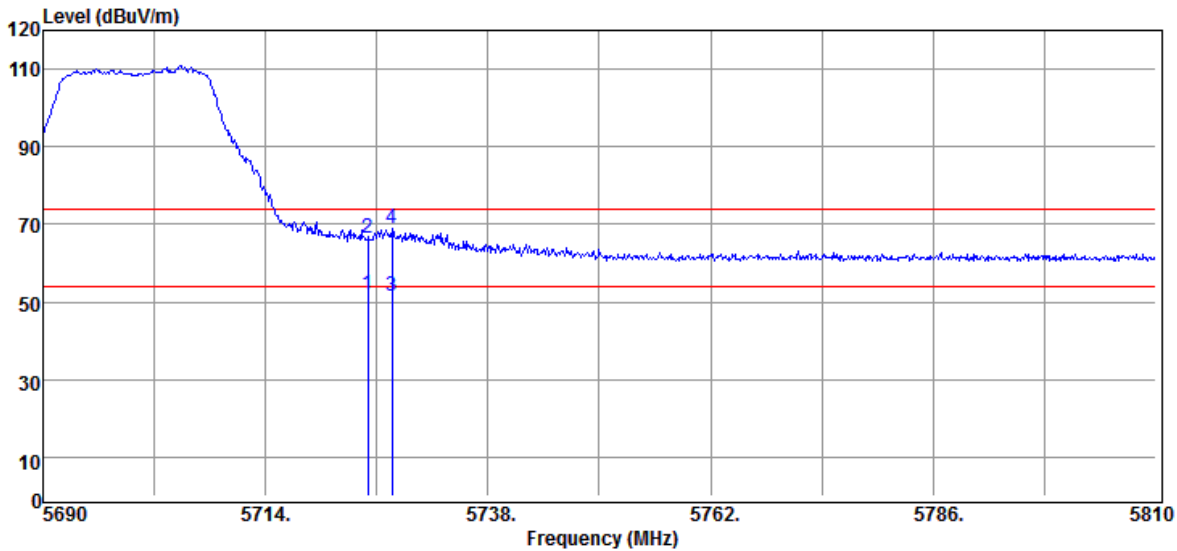
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|----------------|-------------------|--------------|-------------|
| Operation Mode | :802.11a / Band 3 | Test Date    | :2018-07-04 |
| Test Mode      | :BE CH HIGH       | Temp./Humi.  | :25/60      |
| EUT Pol        | :H Plan           | Antenna Pol. | :VERTICAL   |
| Test Channel   | :5700 MHz         | Engineer     | :Enzo       |



| Freq.   | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|---------|----------|---------------|--------|--------|--------|--------|
| MHz     | Mode     | Reading Level |        | FS     | @3m    |        |
| MHz     | PK/QP/AV | dBμV          | dB     | dBμV/m | dBμV/m | dB     |
| 5725.00 | Average  | 37.23         | 14.50  | 51.73  | 54.00  | -2.27  |
| 5725.00 | Peak     | 52.02         | 14.50  | 66.52  | 74.00  | -7.48  |
| 5727.68 | Average  | 37.05         | 14.50  | 51.55  | 54.00  | -2.45  |
| 5727.68 | Peak     | 54.45         | 14.50  | 68.95  | 74.00  | -5.05  |

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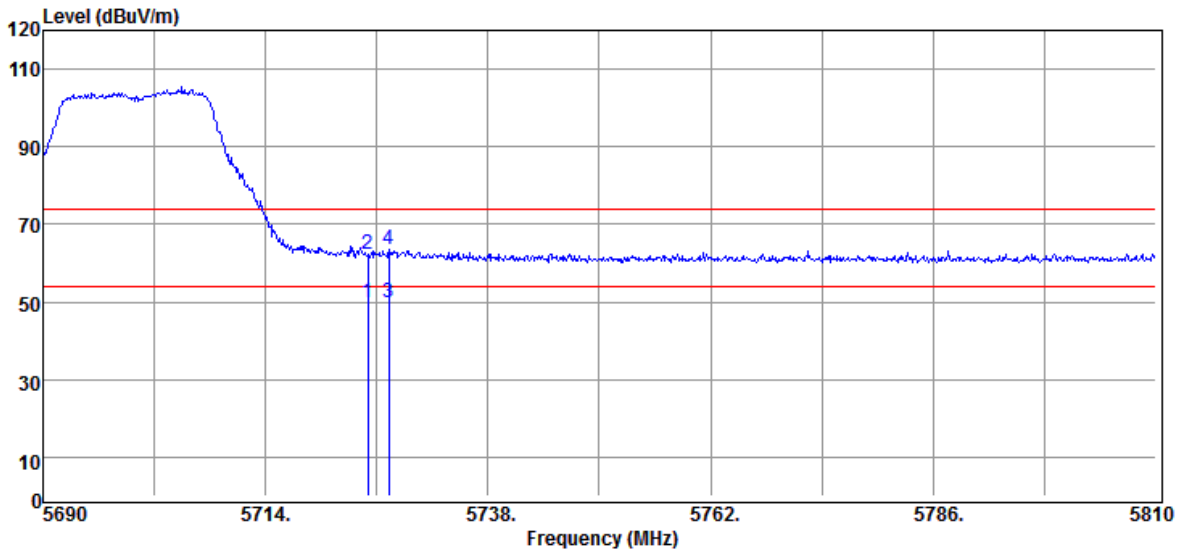
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|----------------|-------------------|--------------|-------------|
| Operation Mode | :802.11a / Band 3 | Test Date    | :2018-07-04 |
| Test Mode      | :BE CH HIGH       | Temp./Humi.  | :25/60      |
| EUT Pol        | :H Plan           | Antenna Pol. | :HORIZONTAL |
| Test Channel   | :5700 MHz         | Engineer     | :Enzo       |



| Freq.   | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|---------|----------|---------------|--------|--------|--------|--------|
| MHz     | Mode     | Reading Level |        | FS     | @3m    |        |
| MHz     | PK/QP/AV | dBμV          | dB     | dBμV/m | dBμV/m | dB     |
| 5725.00 | Average  | 35.36         | 14.50  | 49.86  | 54.00  | -4.14  |
| 5725.00 | Peak     | 47.99         | 14.50  | 62.49  | 74.00  | -11.51 |
| 5727.32 | Average  | 35.36         | 14.50  | 49.86  | 54.00  | -4.14  |
| 5727.32 | Peak     | 48.87         | 14.50  | 63.37  | 74.00  | -10.63 |

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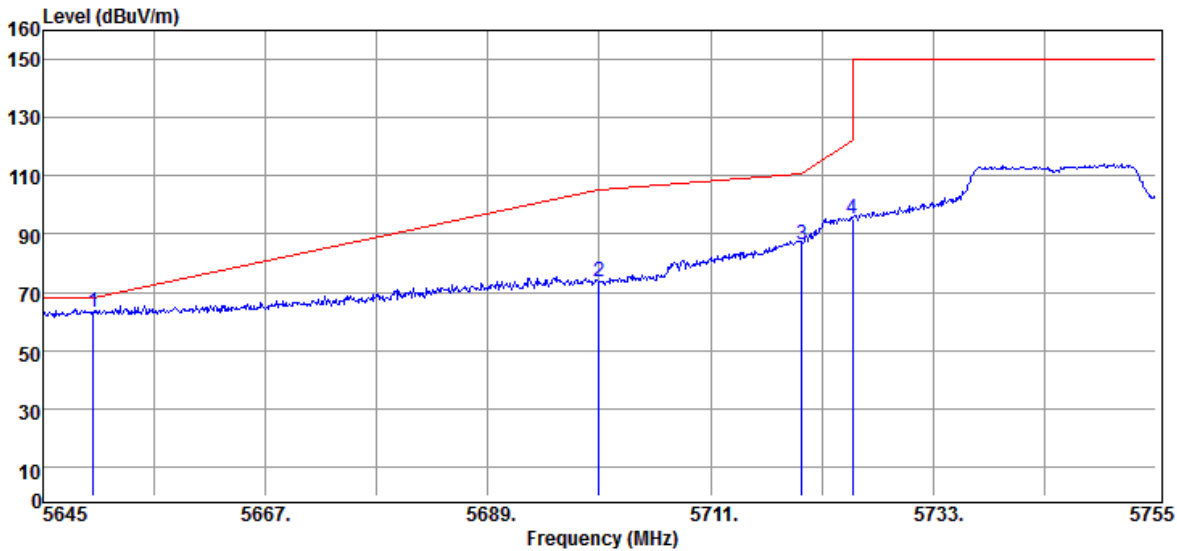
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|----------------|-------------------|--------------|-------------|
| Operation Mode | :802.11a / Band 4 | Test Date    | :2018-07-04 |
| Test Mode      | :BE CH LOW        | Temp./Humi.  | :25/60      |
| EUT Pol        | :H Plan           | Antenna Pol. | :VERTICAL   |
| Test Channel   | :5745 MHz         | Engineer     | :Enzo       |



| Freq.   | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|---------|----------|---------------|--------|--------|--------|--------|
| MHz     | Mode     | Reading Level |        | FS     | @3m    |        |
| MHz     | PK/QP/AV | dBμV          | dB     | dBμV/m | dBμV/m | dB     |
| 5650.00 | Peak     | 48.79         | 14.42  | 63.21  | 68.20  | -4.99  |
| 5700.00 | Peak     | 59.11         | 14.47  | 73.58  | 105.20 | -31.62 |
| 5720.00 | Peak     | 71.98         | 14.49  | 86.47  | 110.80 | -24.33 |
| 5725.00 | Peak     | 80.87         | 14.50  | 95.37  | 122.20 | -26.83 |

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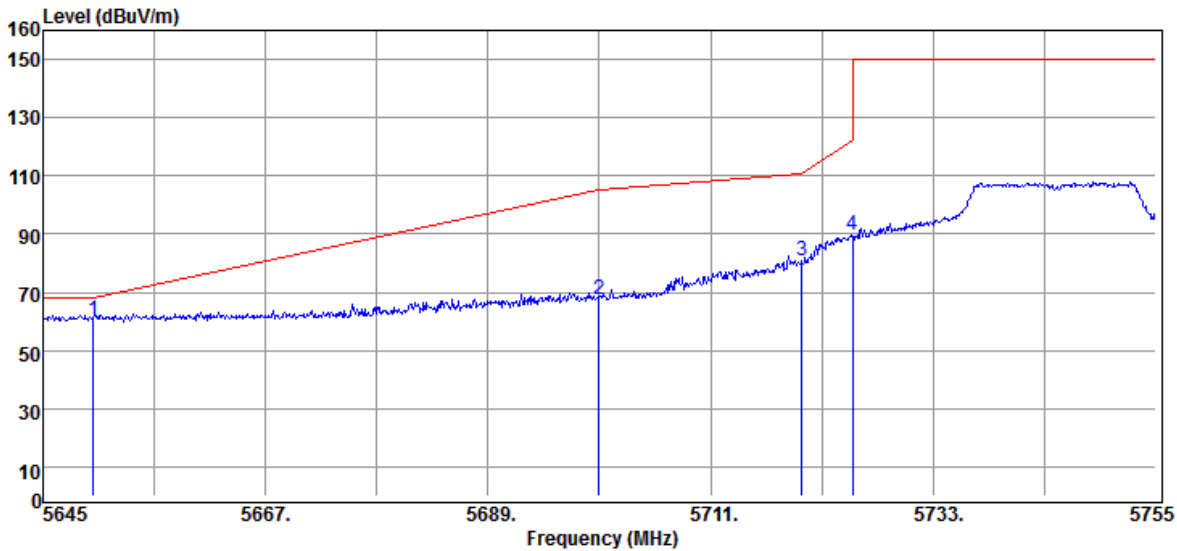
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|----------------|-------------------|--------------|-------------|
| Operation Mode | :802.11a / Band 4 | Test Date    | :2018-07-04 |
| Test Mode      | :BE CH LOW        | Temp./Humi.  | :25/60      |
| EUT Pol        | :H Plan           | Antenna Pol. | :HORIZONTAL |
| Test Channel   | :5745 MHz         | Engineer     | :Enzo       |



| Freq.   | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|---------|----------|---------------|--------|--------|--------|--------|
| MHz     | Mode     | Reading Level |        | FS     | @3m    |        |
|         | PK/QP/AV | dBμV          | dB     | dBμV/m | dBμV/m | dB     |
| 5650.00 | Peak     | 45.92         | 14.42  | 60.34  | 68.20  | -7.86  |
| 5700.00 | Peak     | 53.13         | 14.47  | 67.60  | 105.20 | -37.60 |
| 5720.00 | Peak     | 66.40         | 14.49  | 80.89  | 110.80 | -29.91 |
| 5725.00 | Peak     | 75.28         | 14.50  | 89.78  | 122.20 | -32.42 |

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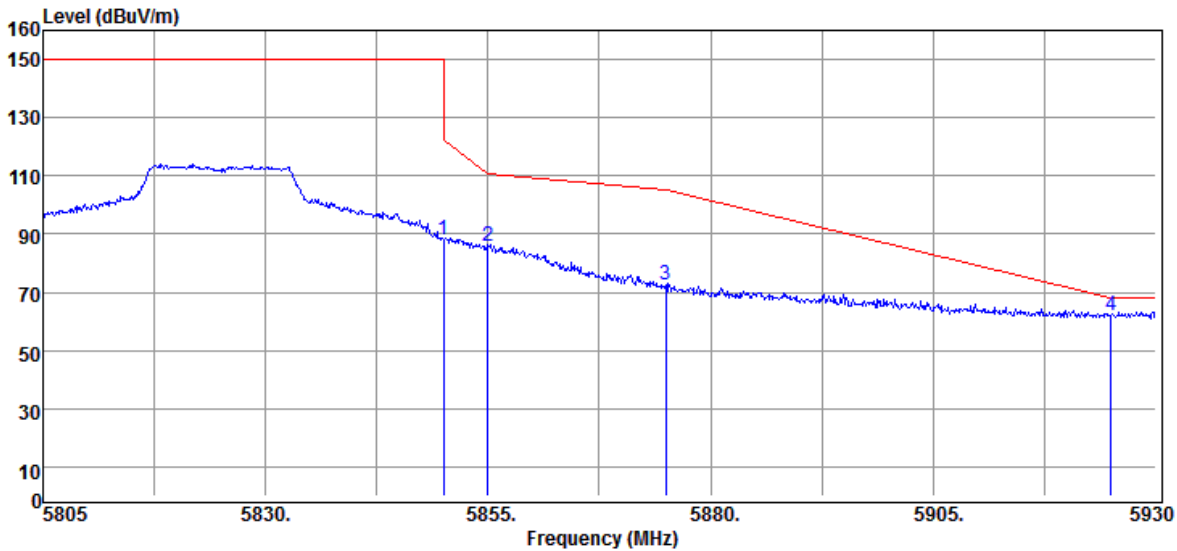
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|                |                   |              |             |
|----------------|-------------------|--------------|-------------|
| Operation Mode | :802.11a / Band 4 | Test Date    | :2018-07-04 |
| Test Mode      | :BE CH HIGH       | Temp./Humi.  | :25/60      |
| EUT Pol        | :H Plan           | Antenna Pol. | :VERTICAL   |
| Test Channel   | :5825 MHz         | Engineer     | :Enzo       |



| Freq.   | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|---------|----------|---------------|--------|--------|--------|--------|
| MHz     | Mode     | Reading Level |        | FS     | @3m    |        |
|         | PK/QP/AV | dBμV          | dB     | dBμV/m | dBμV/m | dB     |
| 5850.00 | Peak     | 73.41         | 14.72  | 88.13  | 122.20 | -34.07 |
| 5855.00 | Peak     | 70.89         | 14.73  | 85.62  | 110.80 | -25.18 |
| 5875.00 | Peak     | 57.96         | 14.78  | 72.74  | 105.20 | -32.46 |
| 5925.00 | Peak     | 47.09         | 14.91  | 62.00  | 68.20  | -6.20  |

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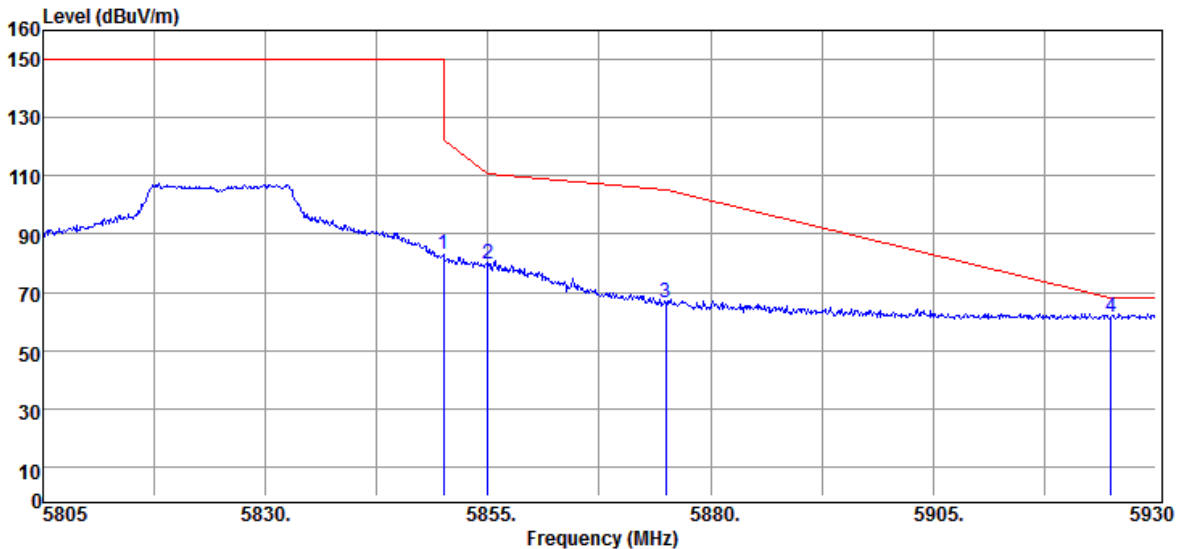
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|                |                   |              |             |
|----------------|-------------------|--------------|-------------|
| Operation Mode | :802.11a / Band 4 | Test Date    | :2018-07-04 |
| Test Mode      | :BE CH HIGH       | Temp./Humi.  | :25/60      |
| EUT Pol        | :H Plan           | Antenna Pol. | :HORIZONTAL |
| Test Channel   | :5825 MHz         | Engineer     | :Enzo       |



| Freq.   | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|---------|----------|---------------|--------|--------|--------|--------|
| MHz     | Mode     | Reading Level |        | FS     | @3m    |        |
|         | PK/QP/AV | dBμV          | dB     | dBμV/m | dBμV/m | dB     |
| 5850.00 | Peak     | 68.29         | 14.72  | 83.01  | 122.20 | -39.19 |
| 5855.00 | Peak     | 65.05         | 14.73  | 79.78  | 110.80 | -31.02 |
| 5875.00 | Peak     | 51.60         | 14.78  | 66.38  | 105.20 | -38.82 |
| 5925.00 | Peak     | 46.76         | 14.91  | 61.67  | 68.20  | -6.53  |

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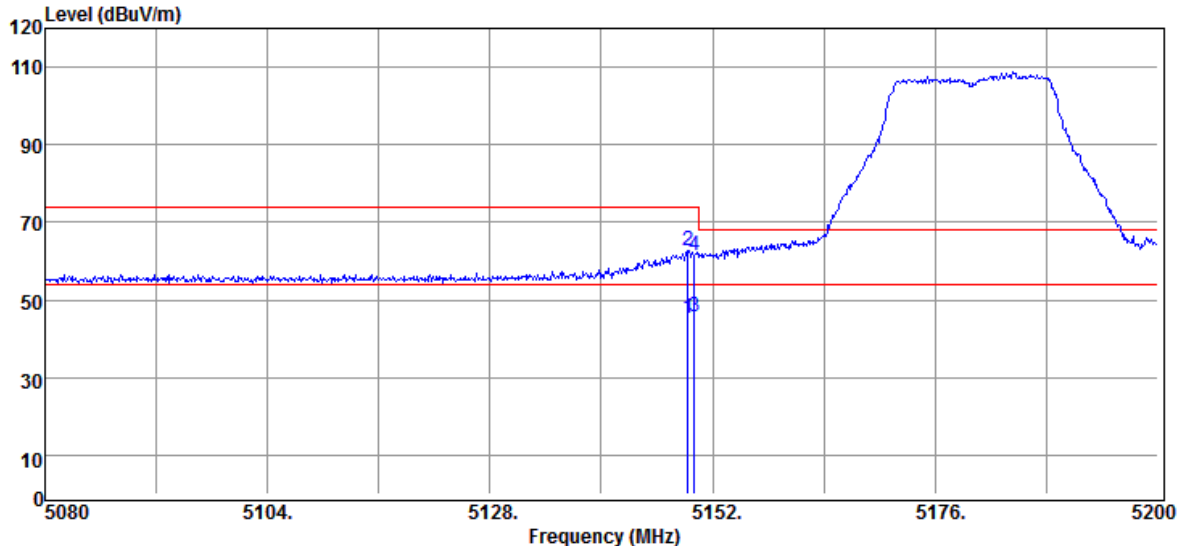
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## Band edge falling to restricted band

### 802.11n\_HT20 mode

Operation Mode :802.11n20 / Band 1  
Test Mode :BE CH LOW  
EUT Pol :H Plan  
Test Channel :5180 MHz

Test Date :2018-07-03  
Temp./Humi. :25/60  
Antenna Pol. :VERTICAL  
Engineer :Enzo



| Freq.   | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|---------|----------|---------------|--------|--------|--------|--------|
| MHz     | Mode     | Reading Level |        | FS     | @3m    |        |
| MHz     | PK/QP/AV | dBμV          | dB     | dBμV/m | dBμV/m | dB     |
| 5149.36 | Average  | 31.73         | 13.64  | 45.37  | 54.00  | -8.63  |
| 5149.36 | Peak     | 49.15         | 13.64  | 62.79  | 74.00  | -11.21 |
| 5150.00 | Average  | 31.89         | 13.65  | 45.54  | 54.00  | -8.46  |
| 5150.00 | Peak     | 47.89         | 13.65  | 61.54  | 74.00  | -12.46 |

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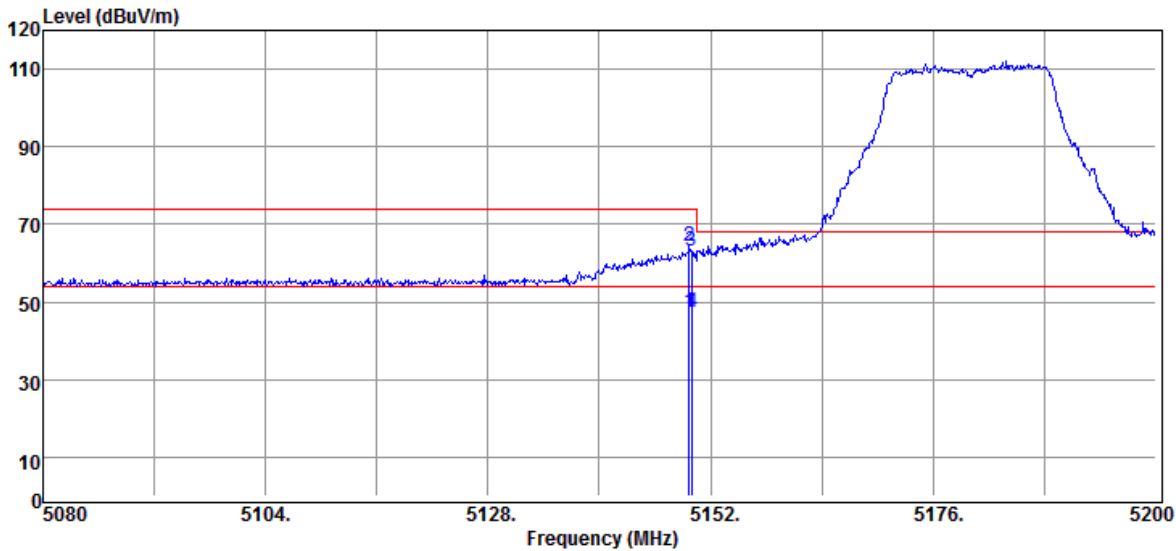
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|                |                     |              |             |
|----------------|---------------------|--------------|-------------|
| Operation Mode | :802.11n20 / Band 1 | Test Date    | :2018-07-04 |
| Test Mode      | :BE CH LOW          | Temp./Humi.  | :25/60      |
| EUT Pol        | :H Plan             | Antenna Pol. | :HORIZONTAL |
| Test Channel   | :5180 MHz           | Engineer     | :Enzo       |



| Freq.   | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|---------|----------|---------------|--------|--------|--------|--------|
| MHz     | Mode     | Reading Level |        | FS     | @3m    |        |
| MHz     | PK/QP/AV | dBμV          | dB     | dBμV/m | dBμV/m | dB     |
| 5149.72 | Average  | 33.72         | 13.64  | 47.36  | 54.00  | -6.64  |
| 5149.72 | Peak     | 50.82         | 13.64  | 64.46  | 74.00  | -9.54  |
| 5149.96 | Peak     | 49.27         | 13.65  | 62.92  | 74.00  | -11.08 |
| 5150.00 | Average  | 33.73         | 13.65  | 47.38  | 54.00  | -6.62  |

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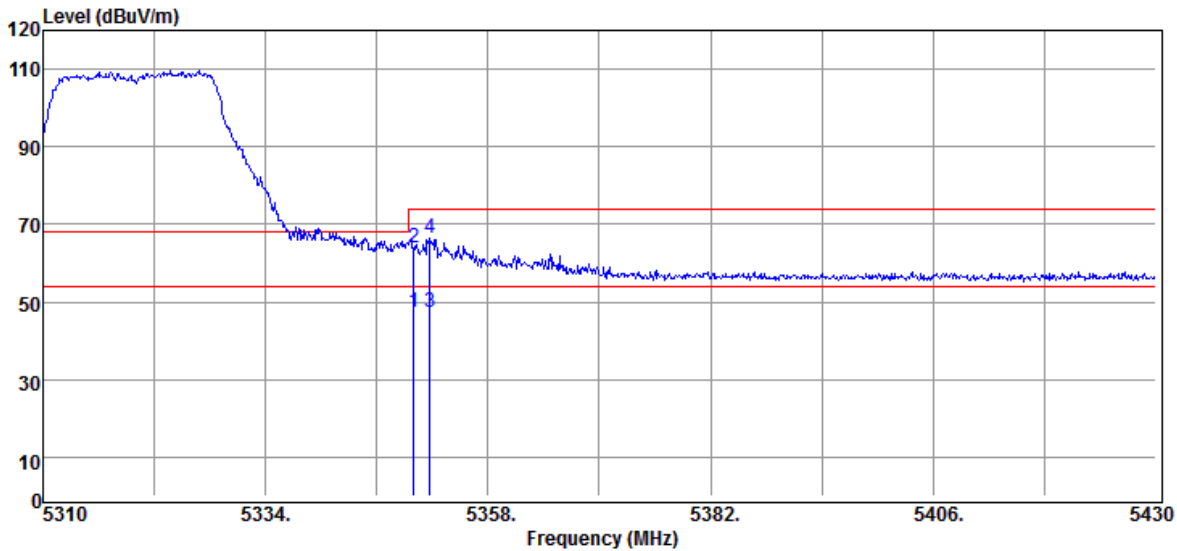
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|                |                     |              |             |
|----------------|---------------------|--------------|-------------|
| Operation Mode | :802.11n20 / Band 2 | Test Date    | :2018-07-03 |
| Test Mode      | :BE CH HIGH         | Temp./Humi.  | :25/60      |
| EUT Pol        | :H Plan             | Antenna Pol. | :VERTICAL   |
| Test Channel   | :5320 MHz           | Engineer     | :Enzo       |



| Freq.   | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|---------|----------|---------------|--------|--------|--------|--------|
| MHz     | Mode     | Reading Level |        | FS     | @3m    |        |
| MHz     | PK/QP/AV | dBuV          | dB     | dBuV/m | dBuV/m | dB     |
| 5350.00 | Average  | 33.31         | 14.16  | 47.47  | 54.00  | -6.53  |
| 5350.00 | Peak     | 49.61         | 14.16  | 63.77  | 74.00  | -10.23 |
| 5351.76 | Average  | 33.08         | 14.17  | 47.25  | 54.00  | -6.75  |
| 5351.76 | Peak     | 52.33         | 14.17  | 66.50  | 74.00  | -7.50  |

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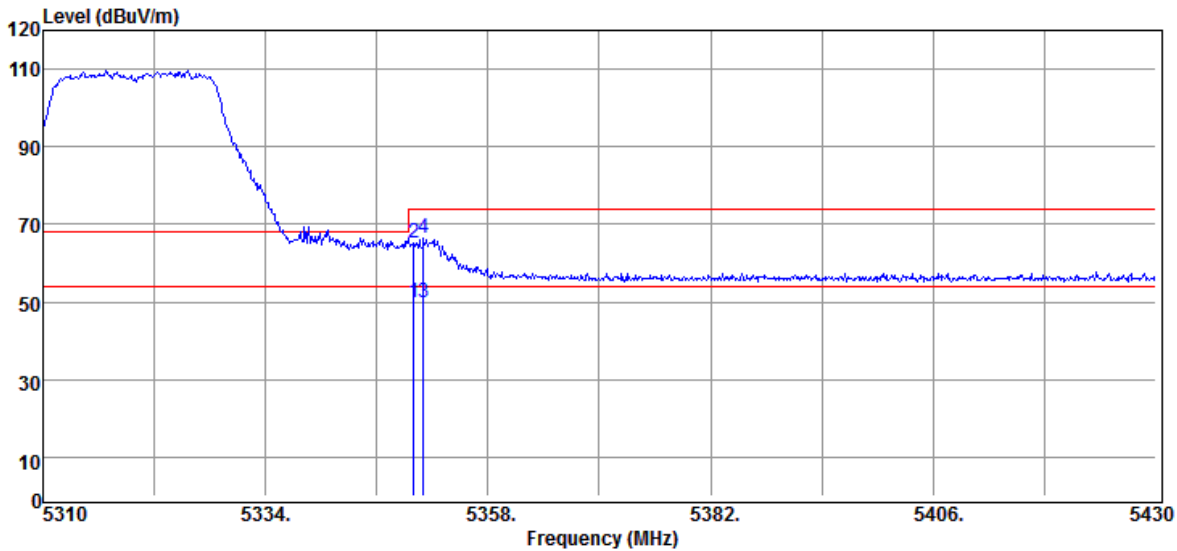
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|----------------|---------------------|--------------|-------------|
| Operation Mode | :802.11n20 / Band 2 | Test Date    | :2018-07-04 |
| Test Mode      | :BE CH HIGH         | Temp./Humi.  | :25/60      |
| EUT Pol        | :H Plan             | Antenna Pol. | :HORIZONTAL |
| Test Channel   | :5320 MHz           | Engineer     | :Enzo       |



| Freq.   | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|---------|----------|---------------|--------|--------|--------|--------|
| MHz     | Mode     | Reading Level |        | FS     | @3m    |        |
| MHz     | PK/QP/AV | dBμV          | dB     | dBμV/m | dBμV/m | dB     |
| 5350.00 | Average  | 35.85         | 14.16  | 50.01  | 54.00  | -3.99  |
| 5350.00 | Peak     | 51.22         | 14.16  | 65.38  | 74.00  | -8.62  |
| 5351.04 | Average  | 35.48         | 14.17  | 49.65  | 54.00  | -4.35  |
| 5351.04 | Peak     | 52.06         | 14.17  | 66.23  | 74.00  | -7.77  |

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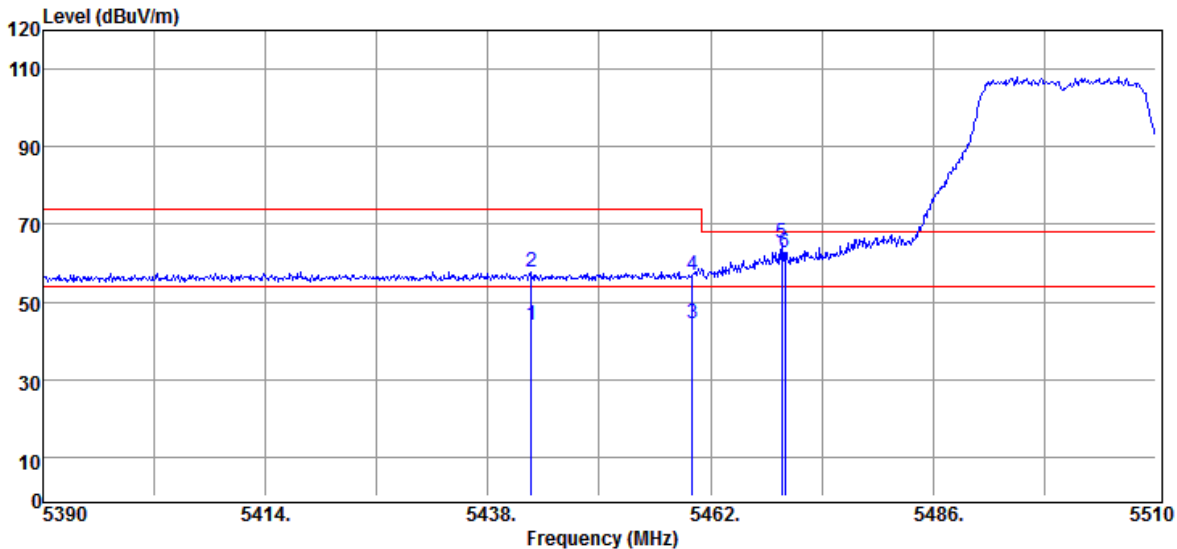
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|----------------|---------------------|--------------|-------------|
| Operation Mode | :802.11n20 / Band 3 | Test Date    | :2018-07-03 |
| Test Mode      | :BE CH LOW          | Temp./Humi.  | :25/60      |
| EUT Pol        | :H Plan             | Antenna Pol. | :VERTICAL   |
| Test Channel   | :5500 MHz           | Engineer     | :Enzo       |



| Freq.   | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|---------|----------|---------------|--------|--------|--------|--------|
| MHz     | Mode     | Reading Level |        | FS     | @3m    |        |
| MHz     | PK/QP/AV | dBuV          | dB     | dBuV/m | dBuV/m | dB     |
| 5442.68 | Average  | 29.88         | 14.31  | 44.19  | 54.00  | -9.81  |
| 5442.68 | Peak     | 43.50         | 14.31  | 57.81  | 74.00  | -16.19 |
| 5460.00 | Average  | 30.24         | 14.31  | 44.55  | 54.00  | -9.45  |
| 5460.00 | Peak     | 42.64         | 14.31  | 56.95  | 74.00  | -17.05 |
| 5469.68 | Peak     | 51.04         | 14.31  | 65.35  | 68.20  | -2.85  |
| 5470.00 | Peak     | 48.21         | 14.31  | 62.52  | 68.20  | -5.68  |

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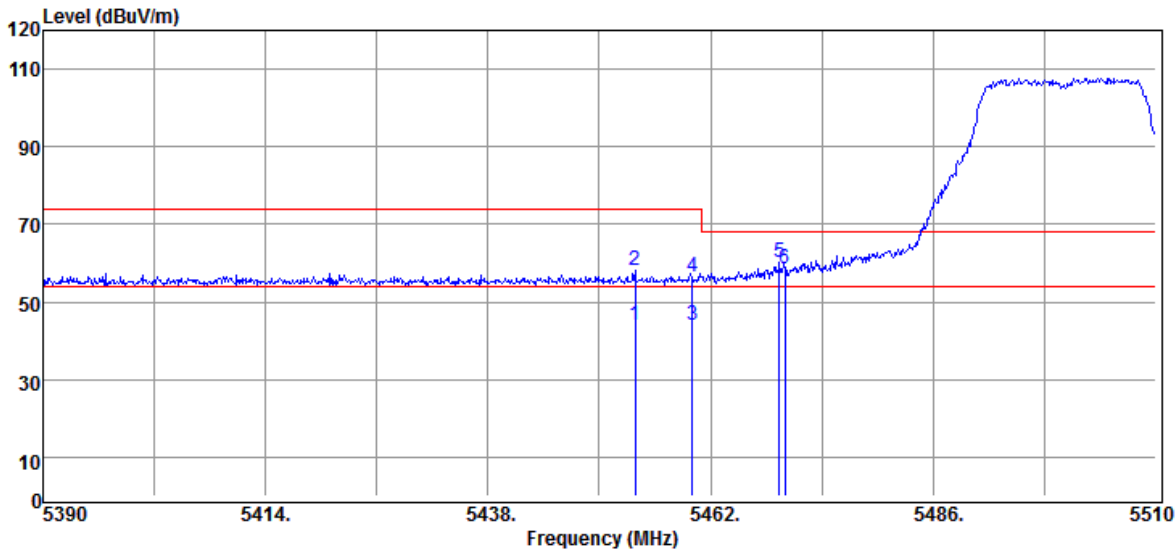
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|----------------|---------------------|--------------|-------------|
| Operation Mode | :802.11n20 / Band 3 | Test Date    | :2018-07-03 |
| Test Mode      | :BE CH LOW          | Temp./Humi.  | :25/60      |
| EUT Pol        | :H Plan             | Antenna Pol. | :HORIZONTAL |
| Test Channel   | :5500 MHz           | Engineer     | :Enzo       |



| Freq.   | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|---------|----------|---------------|--------|--------|--------|--------|
| MHz     | Mode     | Reading Level |        | FS     | @3m    |        |
| MHz     | PK/QP/AV | dBuV          | dB     | dBuV/m | dBuV/m | dB     |
| 5453.84 | Average  | 29.75         | 14.32  | 44.07  | 54.00  | -9.93  |
| 5453.84 | Peak     | 43.85         | 14.32  | 58.17  | 74.00  | -15.83 |
| 5460.00 | Average  | 29.84         | 14.31  | 44.15  | 54.00  | -9.85  |
| 5460.00 | Peak     | 42.20         | 14.31  | 56.51  | 74.00  | -17.49 |
| 5469.44 | Peak     | 46.04         | 14.31  | 60.35  | 68.20  | -7.85  |
| 5470.00 | Peak     | 44.32         | 14.31  | 58.63  | 68.20  | -9.57  |

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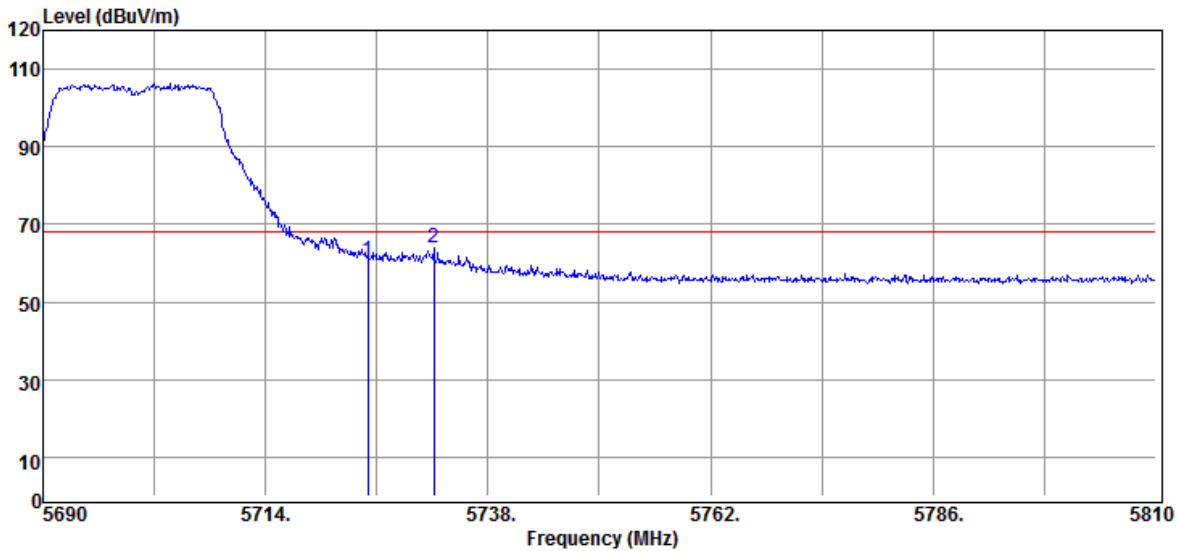
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|                |                     |              |             |
|----------------|---------------------|--------------|-------------|
| Operation Mode | :802.11n20 / Band 3 | Test Date    | :2018-07-03 |
| Test Mode      | :BE CH HIGH         | Temp./Humi.  | :25/60      |
| EUT Pol        | :H Plan             | Antenna Pol. | :VERTICAL   |
| Test Channel   | :5700 MHz           | Engineer     | :Enzo       |



| Freq.   | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|---------|----------|---------------|--------|--------|--------|--------|
| MHz     | Mode     | Reading Level |        | FS     | @3m    |        |
|         | PK/QP/AV | dBuV          | dB     | dBuV/m | dBuV/m | dB     |
| 5725.00 | Peak     | 46.16         | 14.50  | 60.66  | 68.20  | -7.54  |
| 5732.12 | Peak     | 49.24         | 14.51  | 63.75  | 68.20  | -4.45  |

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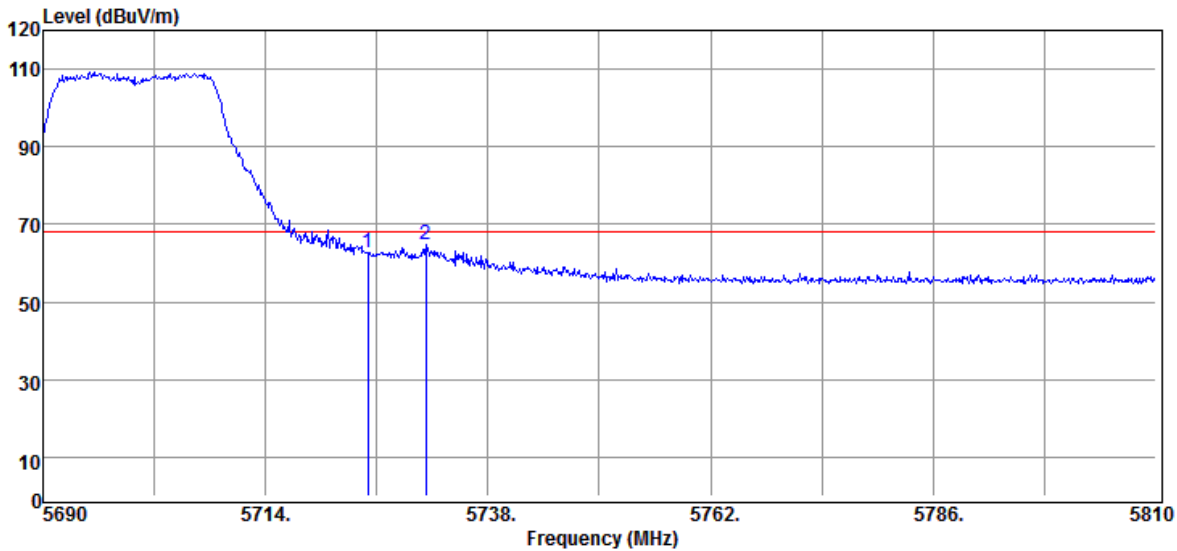
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|----------------|---------------------|--------------|-------------|
| Operation Mode | :802.11n20 / Band 3 | Test Date    | :2018-07-03 |
| Test Mode      | :BE CH HIGH         | Temp./Humi.  | :25/60      |
| EUT Pol        | :H Plan             | Antenna Pol. | :HORIZONTAL |
| Test Channel   | :5700 MHz           | Engineer     | :Enzo       |



| Freq.   | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|---------|----------|---------------|--------|--------|--------|--------|
| MHz     | Mode     | Reading Level |        | FS     | @3m    |        |
|         | PK/QP/AV | dBμV          | dB     | dBμV/m | dBμV/m | dB     |
| 5725.00 | Peak     | 48.04         | 14.50  | 62.54  | 68.20  | -5.66  |
| 5731.28 | Peak     | 50.11         | 14.50  | 64.61  | 68.20  | -3.59  |

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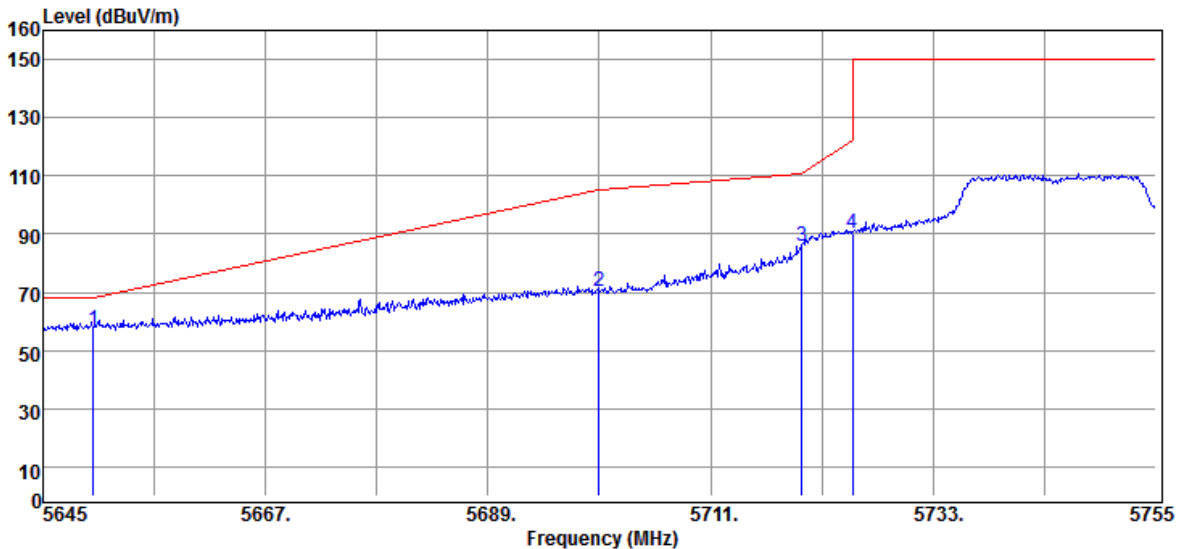
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|----------------|---------------------|--------------|-------------|
| Operation Mode | :802.11n20 / Band 4 | Test Date    | :2018-07-03 |
| Test Mode      | :BE CH LOW          | Temp./Humi.  | :25/60      |
| EUT Pol        | :H Plan             | Antenna Pol. | :VERTICAL   |
| Test Channel   | :5745 MHz           | Engineer     | :Enzo       |



| Freq.   | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|---------|----------|---------------|--------|--------|--------|--------|
| MHz     | Mode     | Reading Level |        | FS     | @3m    |        |
|         | PK/QP/AV | dBμV          | dB     | dBμV/m | dBμV/m | dB     |
| 5650.00 | Peak     | 42.70         | 14.42  | 57.12  | 68.20  | -11.08 |
| 5700.00 | Peak     | 55.67         | 14.47  | 70.14  | 105.20 | -35.06 |
| 5720.00 | Peak     | 71.42         | 14.49  | 85.91  | 110.80 | -24.89 |
| 5725.00 | Peak     | 75.80         | 14.50  | 90.30  | 122.20 | -31.90 |

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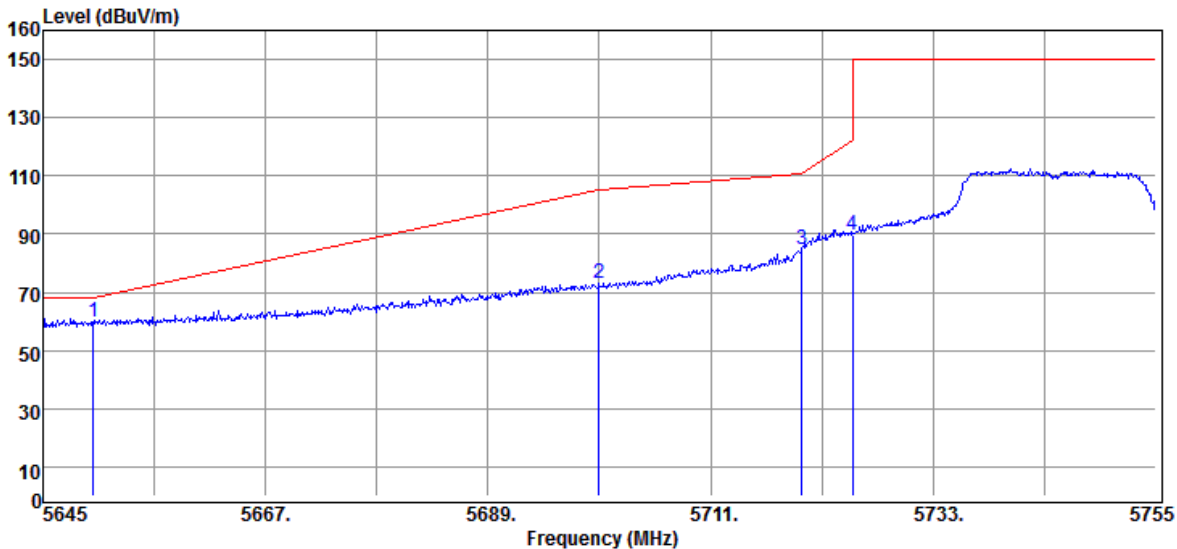
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|----------------|---------------------|--------------|-------------|
| Operation Mode | :802.11n20 / Band 4 | Test Date    | :2018-07-03 |
| Test Mode      | :BE CH LOW          | Temp./Humi.  | :25/60      |
| EUT Pol        | :H Plan             | Antenna Pol. | :HORIZONTAL |
| Test Channel   | :5745 MHz           | Engineer     | :Enzo       |



| Freq.   | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|---------|----------|---------------|--------|--------|--------|--------|
| MHz     | Mode     | Reading Level |        | FS     | @3m    |        |
|         | PK/QP/AV | dBμV          | dB     | dBμV/m | dBμV/m | dB     |
| 5650.00 | Peak     | 45.22         | 14.42  | 59.64  | 68.20  | -8.56  |
| 5700.00 | Peak     | 58.42         | 14.47  | 72.89  | 105.20 | -32.31 |
| 5720.00 | Peak     | 70.42         | 14.49  | 84.91  | 110.80 | -25.89 |
| 5725.00 | Peak     | 74.94         | 14.50  | 89.44  | 122.20 | -32.76 |

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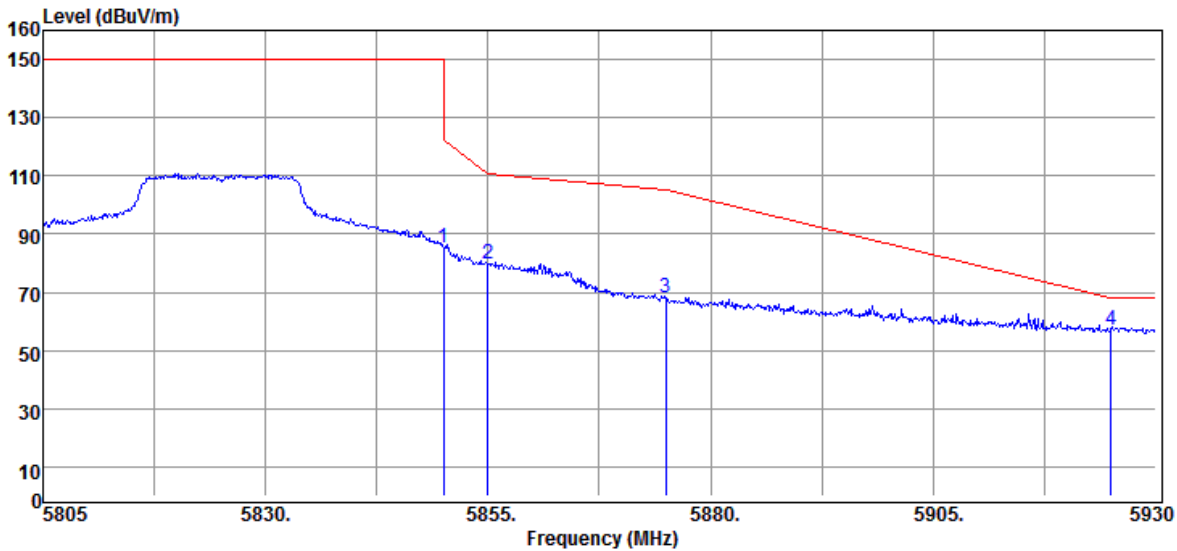
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|----------------|---------------------|--------------|-------------|
| Operation Mode | :802.11n20 / Band 4 | Test Date    | :2018-07-03 |
| Test Mode      | :BE CH HIGH         | Temp./Humi.  | :25/60      |
| EUT Pol        | :H Plan             | Antenna Pol. | :VERTICAL   |
| Test Channel   | :5825 MHz           | Engineer     | :Enzo       |



| Freq.   | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|---------|----------|---------------|--------|--------|--------|--------|
| MHz     | Mode     | Reading Level |        | FS     | @3m    |        |
| MHz     | PK/QP/AV | dBμV          | dB     | dBμV/m | dBμV/m | dB     |
| 5850.00 | Peak     | 70.30         | 14.72  | 85.02  | 122.20 | -37.18 |
| 5855.00 | Peak     | 64.96         | 14.73  | 79.69  | 110.80 | -31.11 |
| 5875.00 | Peak     | 53.21         | 14.78  | 67.99  | 105.20 | -37.21 |
| 5925.00 | Peak     | 41.86         | 14.91  | 56.77  | 68.20  | -11.43 |

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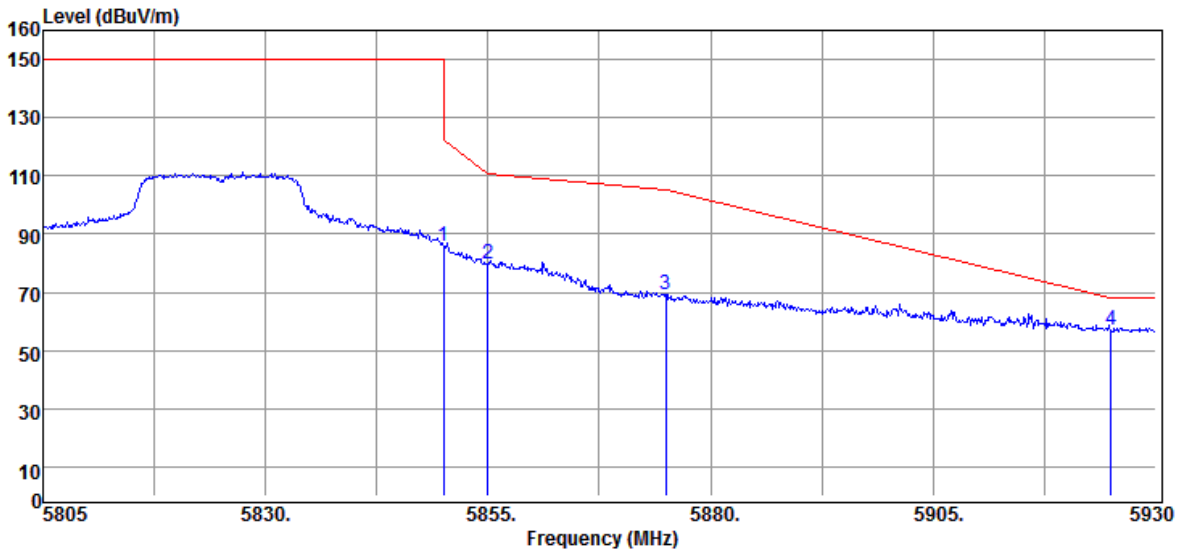
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|----------------|---------------------|--------------|-------------|
| Operation Mode | :802.11n20 / Band 4 | Test Date    | :2018-07-03 |
| Test Mode      | :BE CH HIGH         | Temp./Humi.  | :25/60      |
| EUT Pol        | :H Plan             | Antenna Pol. | :HORIZONTAL |
| Test Channel   | :5825 MHz           | Engineer     | :Enzo       |



| Freq.   | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|---------|----------|---------------|--------|--------|--------|--------|
| MHz     | Mode     | Reading Level |        | FS     | @3m    |        |
| MHz     | PK/QP/AV | dBμV          | dB     | dBμV/m | dBμV/m | dB     |
| 5850.00 | Peak     | 70.83         | 14.72  | 85.55  | 122.20 | -36.65 |
| 5855.00 | Peak     | 65.15         | 14.73  | 79.88  | 110.80 | -30.92 |
| 5875.00 | Peak     | 54.16         | 14.78  | 68.94  | 105.20 | -36.26 |
| 5925.00 | Peak     | 42.05         | 14.91  | 56.96  | 68.20  | -11.24 |

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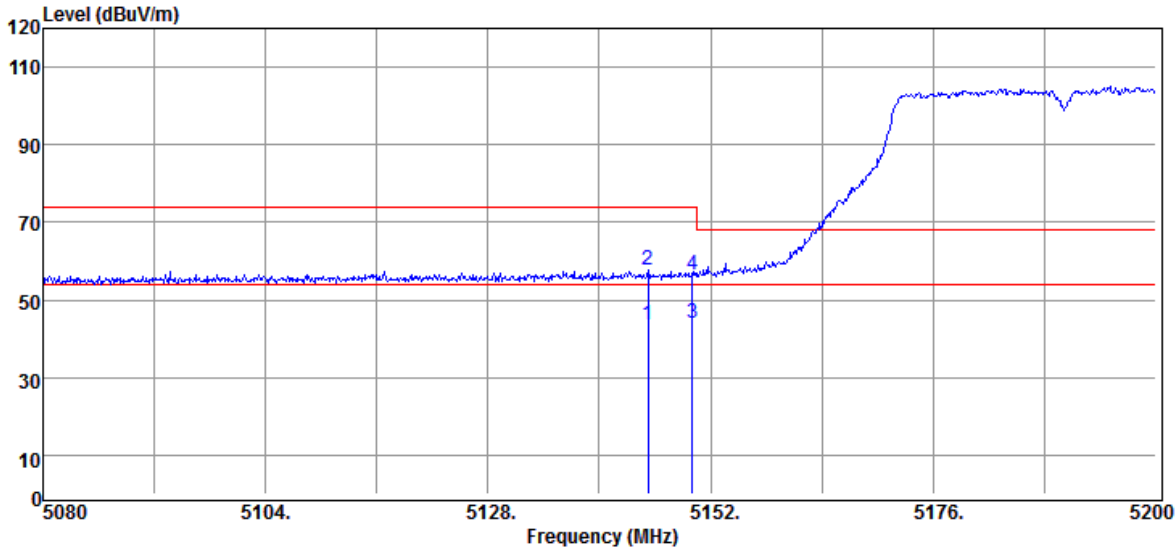
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## Band edge falling to restricted band

### 802.11n\_HT40 mode

Operation Mode :802.11n40 / Band 1  
Test Mode :BE CH LOW  
EUT Pol :H Plan  
Test Channel :5190 MHz

Test Date :2018-07-03  
Temp./Humi. :25/60  
Antenna Pol. :VERTICAL  
Engineer :Enzo



| Freq.   | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|---------|----------|---------------|--------|--------|--------|--------|
| MHz     | Mode     | Reading Level |        | FS     | @3m    |        |
| MHz     | PK/QP/AV | dBμV          | dB     | dBμV/m | dBμV/m | dB     |
| 5145.28 | Average  | 30.13         | 13.63  | 43.76  | 54.00  | -10.24 |
| 5145.28 | Peak     | 44.10         | 13.63  | 57.73  | 74.00  | -16.27 |
| 5150.00 | Average  | 30.47         | 13.65  | 44.12  | 54.00  | -9.88  |
| 5150.00 | Peak     | 42.73         | 13.65  | 56.38  | 74.00  | -17.62 |

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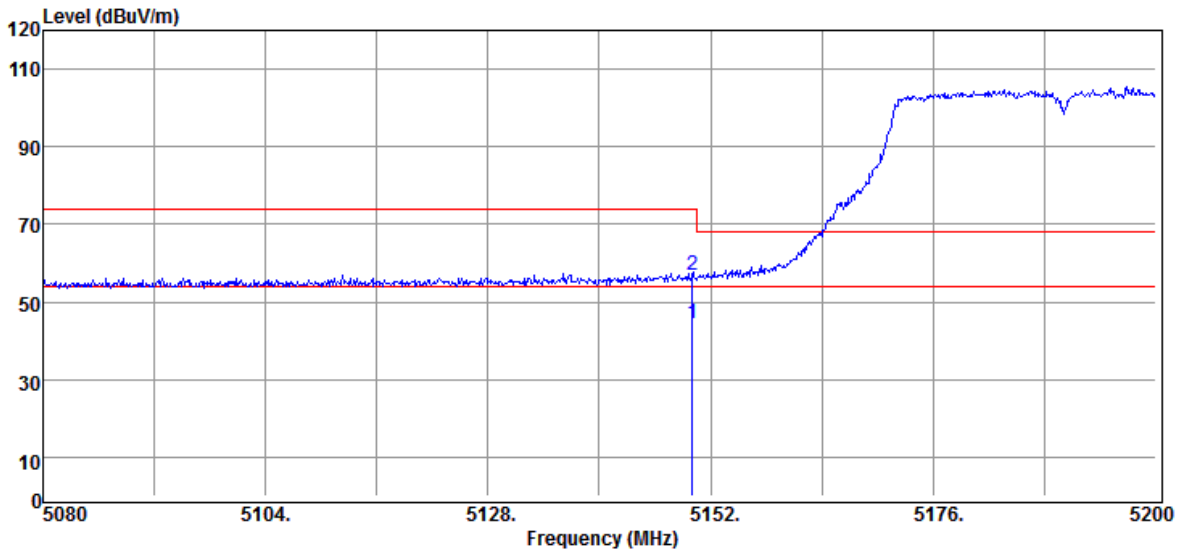
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|----------------|---------------------|--------------|-------------|
| Operation Mode | :802.11n40 / Band 1 | Test Date    | :2018-07-03 |
| Test Mode      | :BE CH LOW          | Temp./Humi.  | :25/60      |
| EUT Pol        | :H Plan             | Antenna Pol. | :HORIZONTAL |
| Test Channel   | :5190 MHz           | Engineer     | :Enzo       |



| Freq.   | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|---------|----------|---------------|--------|--------|--------|--------|
| MHz     | Mode     | Reading Level |        | FS     | @3m    |        |
| MHz     | PK/QP/AV | dBμV          | dB     | dBμV/m | dBμV/m | dB     |
| 5150.00 | Average  | 30.66         | 13.65  | 44.31  | 54.00  | -9.69  |
| 5150.00 | Peak     | 43.21         | 13.65  | 56.86  | 74.00  | -17.14 |

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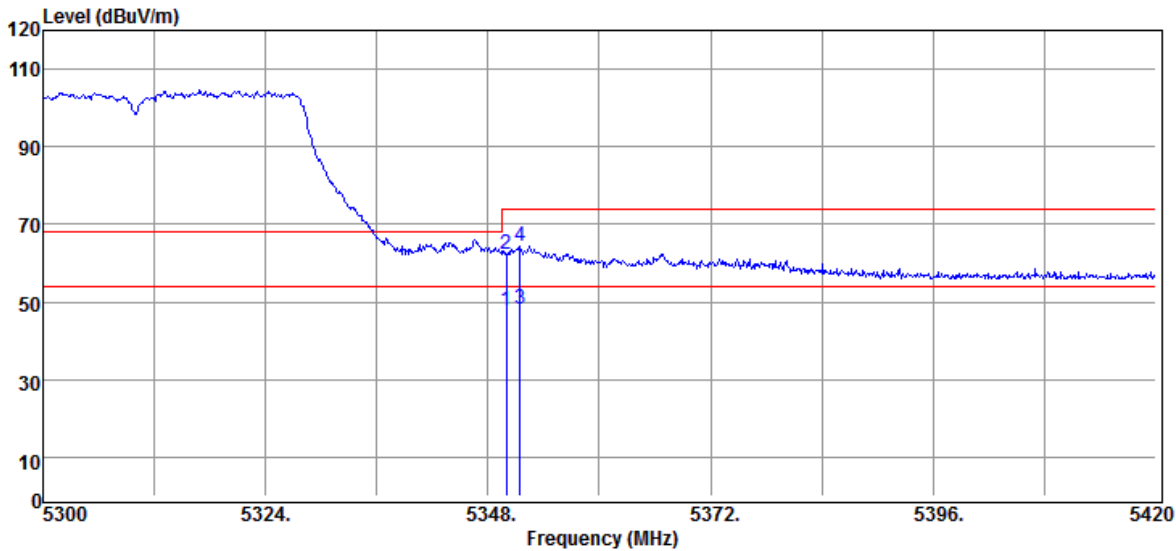
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|                |                     |              |             |
|----------------|---------------------|--------------|-------------|
| Operation Mode | :802.11n40 / Band 2 | Test Date    | :2018-07-03 |
| Test Mode      | :BE CH HIGH         | Temp./Humi.  | :25/60      |
| EUT Pol        | :H Plan             | Antenna Pol. | :VERTICAL   |
| Test Channel   | :5310 MHz           | Engineer     | :Enzo       |



| Freq.   | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|---------|----------|---------------|--------|--------|--------|--------|
| MHz     | Mode     | Reading Level |        | FS     | @3m    |        |
| MHz     | PK/QP/AV | dBuV          | dB     | dBuV/m | dBuV/m | dB     |
| 5350.00 | Average  | 33.74         | 14.16  | 47.90  | 54.00  | -6.10  |
| 5350.00 | Peak     | 48.12         | 14.16  | 62.28  | 74.00  | -11.72 |
| 5351.48 | Average  | 33.94         | 14.17  | 48.11  | 54.00  | -5.89  |
| 5351.48 | Peak     | 50.01         | 14.17  | 64.18  | 74.00  | -9.82  |

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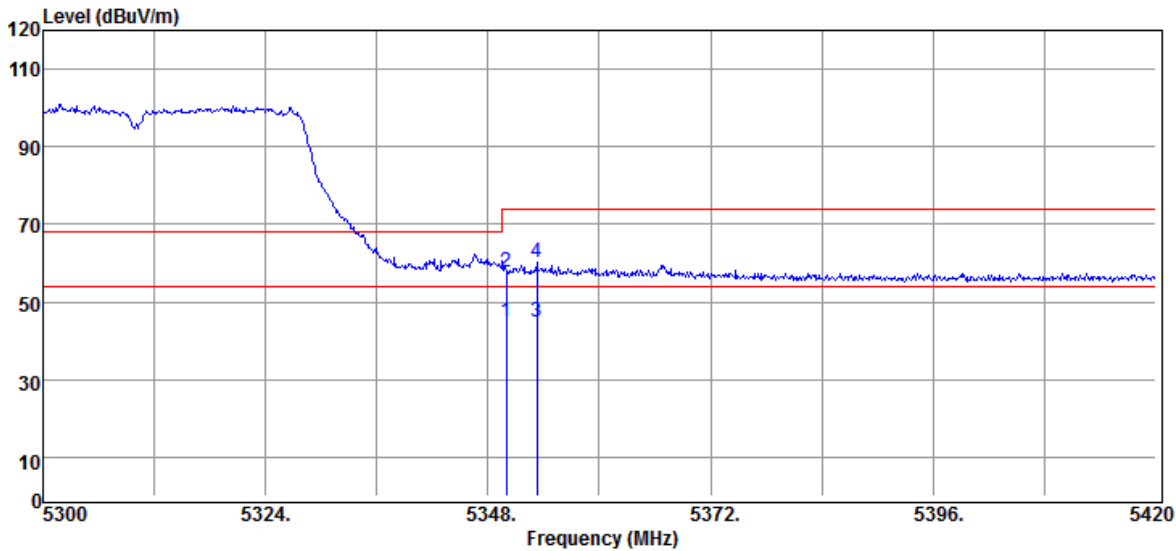
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|----------------|---------------------|--------------|-------------|
| Operation Mode | :802.11n40 / Band 2 | Test Date    | :2018-07-03 |
| Test Mode      | :BE CH HIGH         | Temp./Humi.  | :25/60      |
| EUT Pol        | :H Plan             | Antenna Pol. | :HORIZONTAL |
| Test Channel   | :5310 MHz           | Engineer     | :Enzo       |



| Freq.   | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|---------|----------|---------------|--------|--------|--------|--------|
| MHz     | Mode     | Reading Level |        | FS     | @3m    |        |
|         | PK/QP/AV | dBuV          | dB     | dBuV/m | dBuV/m | dB     |
| 5350.00 | Average  | 30.87         | 14.16  | 45.03  | 54.00  | -8.97  |
| 5350.00 | Peak     | 43.66         | 14.16  | 57.82  | 74.00  | -16.18 |
| 5353.28 | Average  | 30.72         | 14.17  | 44.89  | 54.00  | -9.11  |
| 5353.28 | Peak     | 45.85         | 14.17  | 60.02  | 74.00  | -13.98 |

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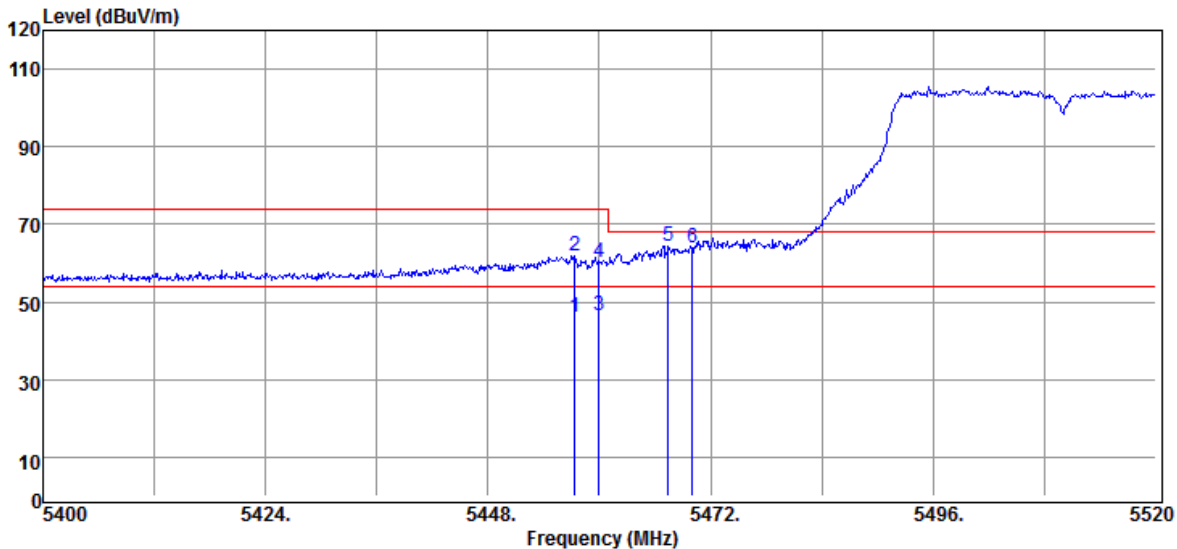
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|----------------|---------------------|--------------|-------------|
| Operation Mode | :802.11n40 / Band 3 | Test Date    | :2018-07-03 |
| Test Mode      | :BE CH LOW          | Temp./Humi.  | :25/60      |
| EUT Pol        | :H Plan             | Antenna Pol. | :VERTICAL   |
| Test Channel   | :5510 MHz           | Engineer     | :Enzo       |



| Freq.   | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|---------|----------|---------------|--------|--------|--------|--------|
| MHz     | Mode     | Reading Level |        | FS     | @3m    |        |
| MHz     | PK/QP/AV | dBμV          | dB     | dBμV/m | dBμV/m | dB     |
| 5457.36 | Average  | 31.70         | 14.31  | 46.01  | 54.00  | -7.99  |
| 5457.36 | Peak     | 47.61         | 14.31  | 61.92  | 74.00  | -12.08 |
| 5460.00 | Average  | 32.14         | 14.31  | 46.45  | 54.00  | -7.55  |
| 5460.00 | Peak     | 45.83         | 14.31  | 60.14  | 74.00  | -13.86 |
| 5467.44 | Peak     | 49.95         | 14.32  | 64.27  | 68.20  | -3.93  |
| 5470.00 | Peak     | 49.51         | 14.31  | 63.82  | 68.20  | -4.38  |

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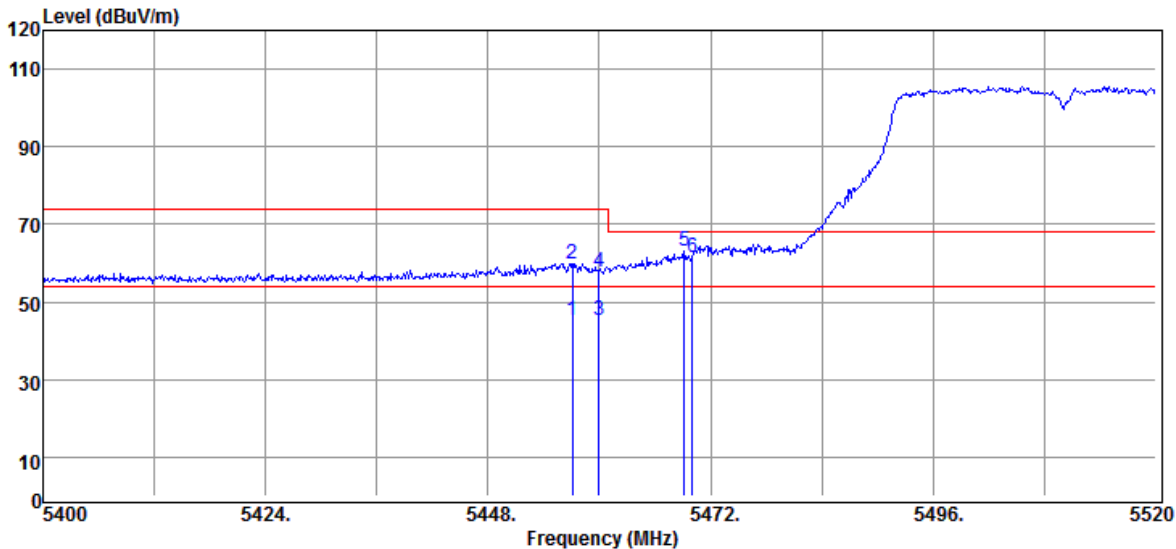
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|----------------|---------------------|--------------|-------------|
| Operation Mode | :802.11n40 / Band 3 | Test Date    | :2018-07-03 |
| Test Mode      | :BE CH LOW          | Temp./Humi.  | :25/60      |
| EUT Pol        | :H Plan             | Antenna Pol. | :HORIZONTAL |
| Test Channel   | :5510 MHz           | Engineer     | :Enzo       |



| Freq.   | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|---------|----------|---------------|--------|--------|--------|--------|
|         | Mode     | Reading Level |        | FS     | @3m    |        |
| MHz     | PK/QP/AV | dBuV          | dB     | dBuV/m | dBuV/m | dB     |
| 5457.12 | Average  | 30.80         | 14.31  | 45.11  | 54.00  | -8.89  |
| 5457.12 | Peak     | 45.65         | 14.31  | 59.96  | 74.00  | -14.04 |
| 5460.00 | Average  | 31.00         | 14.31  | 45.31  | 54.00  | -8.69  |
| 5460.00 | Peak     | 43.60         | 14.31  | 57.91  | 74.00  | -16.09 |
| 5469.12 | Peak     | 48.74         | 14.32  | 63.06  | 68.20  | -5.14  |
| 5470.00 | Peak     | 47.31         | 14.31  | 61.62  | 68.20  | -6.58  |

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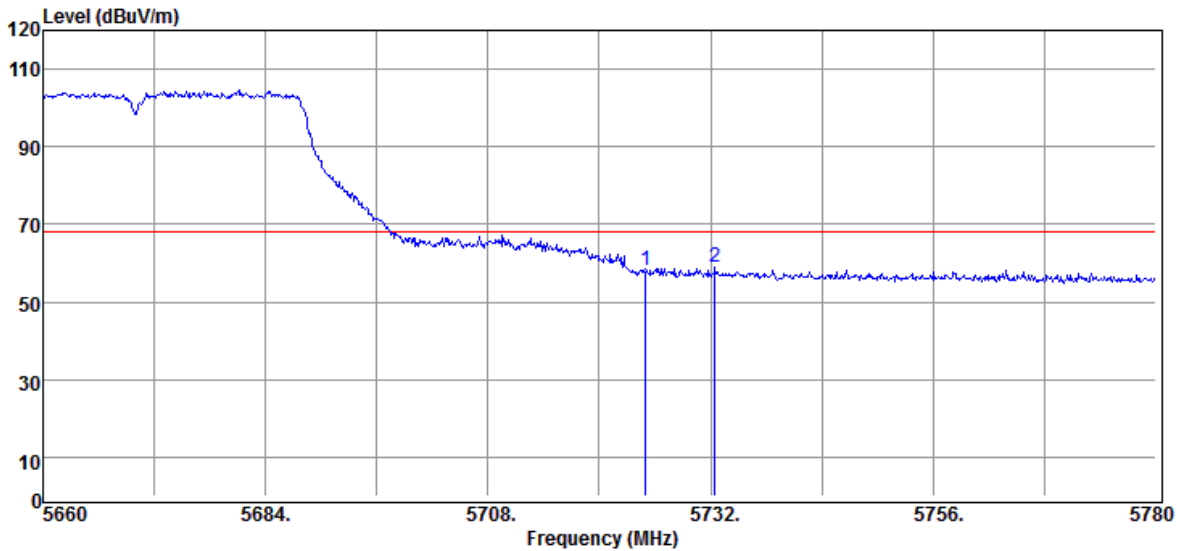
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|                |                     |              |             |
|----------------|---------------------|--------------|-------------|
| Operation Mode | :802.11n40 / Band 3 | Test Date    | :2018-07-03 |
| Test Mode      | :BE CH HIGH         | Temp./Humi.  | :25/60      |
| EUT Pol        | :H Plan             | Antenna Pol. | :VERTICAL   |
| Test Channel   | :5670 MHz           | Engineer     | :Enzo       |



| Freq.   | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|---------|----------|---------------|--------|--------|--------|--------|
| MHz     | Mode     | Reading Level |        | FS     | @3m    |        |
|         | PK/QP/AV | dBμV          | dB     | dBμV/m | dBμV/m | dB     |
| 5725.00 | Peak     | 43.80         | 14.50  | 58.30  | 68.20  | -9.90  |
| 5732.48 | Peak     | 44.28         | 14.51  | 58.79  | 68.20  | -9.41  |

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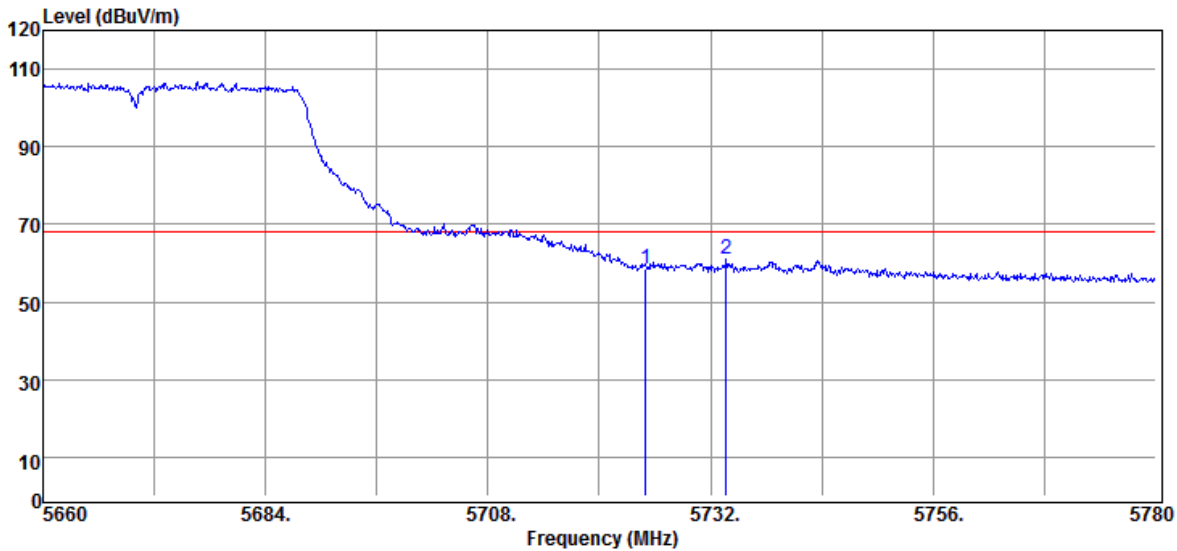
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|----------------|---------------------|--------------|-------------|
| Operation Mode | :802.11n40 / Band 3 | Test Date    | :2018-07-03 |
| Test Mode      | :BE CH HIGH         | Temp./Humi.  | :25/60      |
| EUT Pol        | :H Plan             | Antenna Pol. | :HORIZONTAL |
| Test Channel   | :5670 MHz           | Engineer     | :Enzo       |



| Freq.   | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|---------|----------|---------------|--------|--------|--------|--------|
| MHz     | Mode     | Reading Level |        | FS     | @3m    |        |
|         | PK/QP/AV | dBμV          | dB     | dBμV/m | dBμV/m | dB     |
| 5725.00 | Peak     | 44.10         | 14.50  | 58.60  | 68.20  | -9.60  |
| 5733.68 | Peak     | 46.66         | 14.52  | 61.18  | 68.20  | -7.02  |

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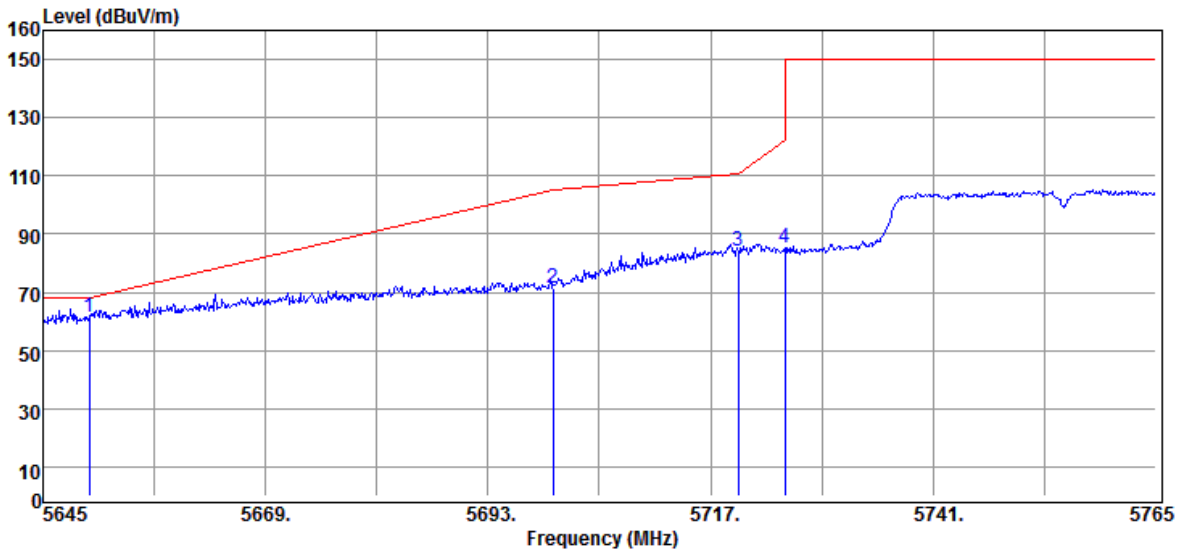
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|----------------|---------------------|--------------|-------------|
| Operation Mode | :802.11n40 / Band 4 | Test Date    | :2018-07-03 |
| Test Mode      | :BE CH LOW          | Temp./Humi.  | :25/60      |
| EUT Pol        | :H Plan             | Antenna Pol. | :VERTICAL   |
| Test Channel   | :5755 MHz           | Engineer     | :Enzo       |



| Freq.   | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|---------|----------|---------------|--------|--------|--------|--------|
| MHz     | Mode     | Reading Level |        | FS     | @3m    |        |
|         | PK/QP/AV | dBμV          | dB     | dBμV/m | dBμV/m | dB     |
| 5650.00 | Peak     | 46.96         | 14.42  | 61.38  | 68.20  | -6.82  |
| 5700.00 | Peak     | 56.68         | 14.47  | 71.15  | 105.20 | -34.05 |
| 5720.00 | Peak     | 69.56         | 14.49  | 84.05  | 110.80 | -26.75 |
| 5725.00 | Peak     | 70.95         | 14.50  | 85.45  | 122.20 | -36.75 |

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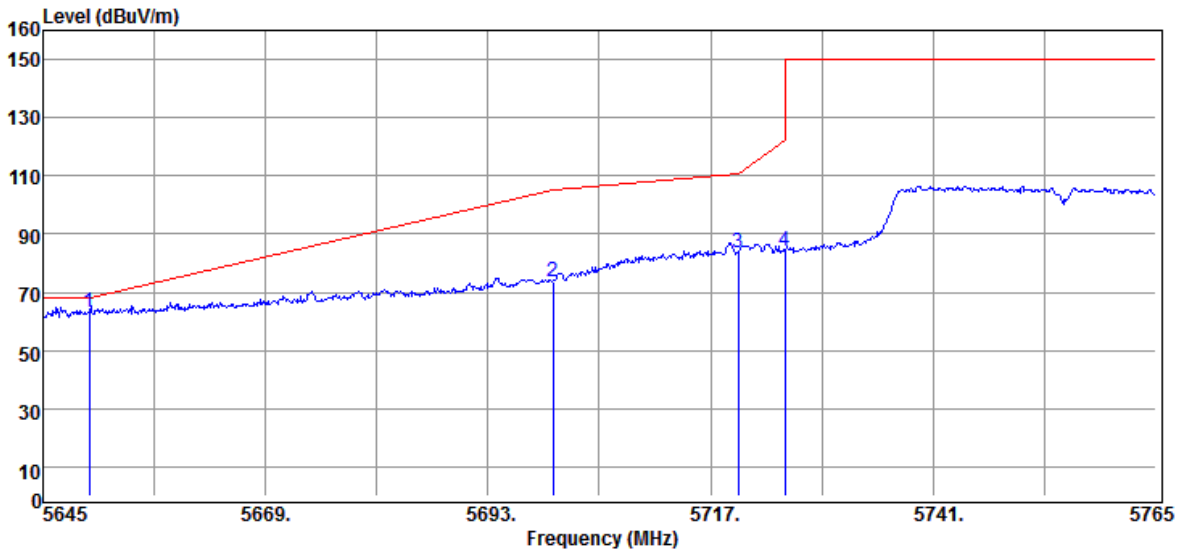
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|----------------|---------------------|--------------|-------------|
| Operation Mode | :802.11n40 / Band 4 | Test Date    | :2018-07-03 |
| Test Mode      | :BE CH LOW          | Temp./Humi.  | :25/60      |
| EUT Pol        | :H Plan             | Antenna Pol. | :HORIZONTAL |
| Test Channel   | :5755 MHz           | Engineer     | :Enzo       |



| Freq.   | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|---------|----------|---------------|--------|--------|--------|--------|
| MHz     | Mode     | Reading Level |        | FS     | @3m    |        |
|         | PK/QP/AV | dBμV          | dB     | dBμV/m | dBμV/m | dB     |
| 5650.00 | Peak     | 48.88         | 14.42  | 63.30  | 68.20  | -4.90  |
| 5700.00 | Peak     | 59.16         | 14.47  | 73.63  | 105.20 | -31.57 |
| 5720.00 | Peak     | 69.24         | 14.49  | 83.73  | 110.80 | -27.07 |
| 5725.00 | Peak     | 69.48         | 14.50  | 83.98  | 122.20 | -38.22 |

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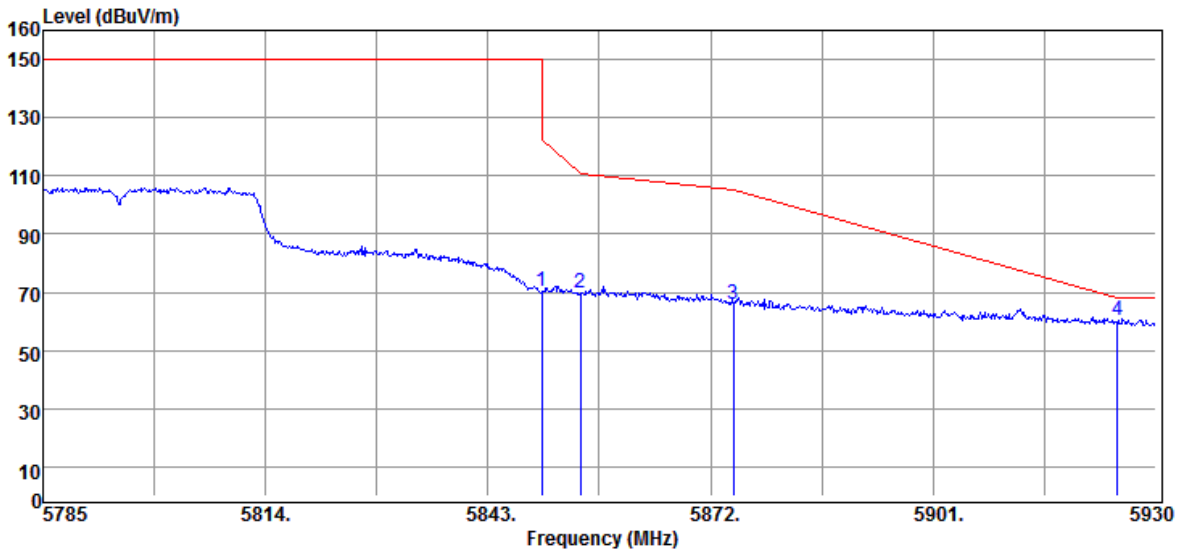
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|----------------|---------------------|--------------|-------------|
| Operation Mode | :802.11n40 / Band 4 | Test Date    | :2018-07-03 |
| Test Mode      | :BE CH HIGH         | Temp./Humi.  | :25/60      |
| EUT Pol        | :H Plan             | Antenna Pol. | :VERTICAL   |
| Test Channel   | :5795 MHz           | Engineer     | :Enzo       |



| Freq.   | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|---------|----------|---------------|--------|--------|--------|--------|
| MHz     | Mode     | Reading Level |        | FS     | @3m    |        |
|         | PK/QP/AV | dBμV          | dB     | dBμV/m | dBμV/m | dB     |
| 5850.00 | Peak     | 55.54         | 14.72  | 70.26  | 122.20 | -51.94 |
| 5855.00 | Peak     | 55.02         | 14.73  | 69.75  | 110.80 | -41.05 |
| 5875.00 | Peak     | 51.23         | 14.78  | 66.01  | 105.20 | -39.19 |
| 5925.00 | Peak     | 45.27         | 14.91  | 60.18  | 68.20  | -8.02  |

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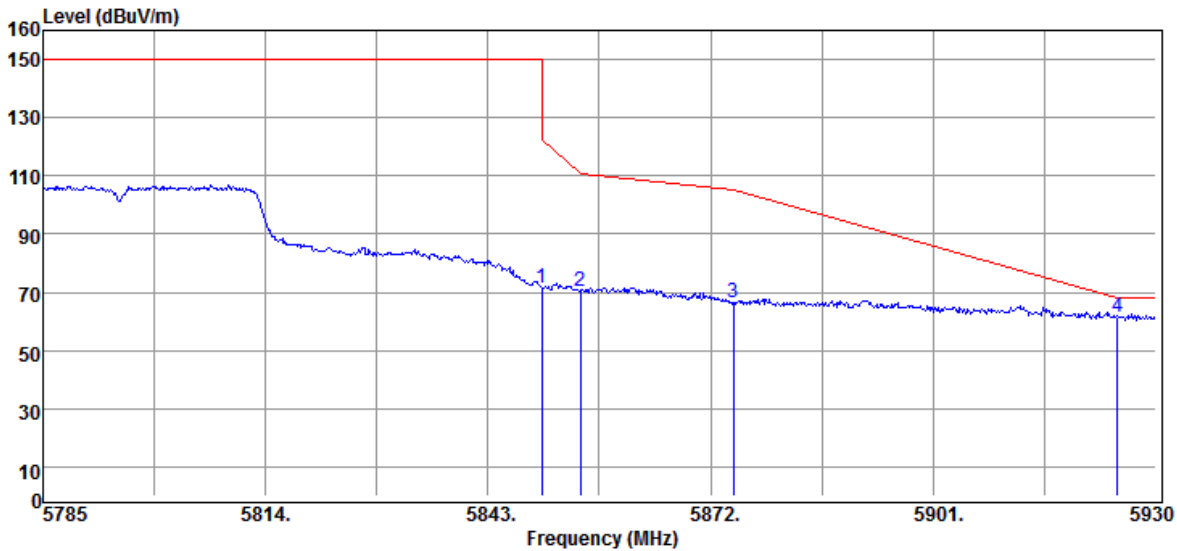
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|                |                     |              |             |
|----------------|---------------------|--------------|-------------|
| Operation Mode | :802.11n40 / Band 4 | Test Date    | :2018-07-03 |
| Test Mode      | :BE CH HIGH         | Temp./Humi.  | :25/60      |
| EUT Pol        | :H Plan             | Antenna Pol. | :HORIZONTAL |
| Test Channel   | :5795 MHz           | Engineer     | :Enzo       |



| Freq.   | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|---------|----------|---------------|--------|--------|--------|--------|
| MHz     | Mode     | Reading Level |        | FS     | @3m    |        |
|         | PK/QP/AV | dBμV          | dB     | dBμV/m | dBμV/m | dB     |
| 5850.00 | Peak     | 56.74         | 14.72  | 71.46  | 122.20 | -50.74 |
| 5855.00 | Peak     | 55.56         | 14.73  | 70.29  | 110.80 | -40.51 |
| 5875.00 | Peak     | 51.68         | 14.78  | 66.46  | 105.20 | -38.74 |
| 5925.00 | Peak     | 46.57         | 14.91  | 61.48  | 68.20  | -6.72  |

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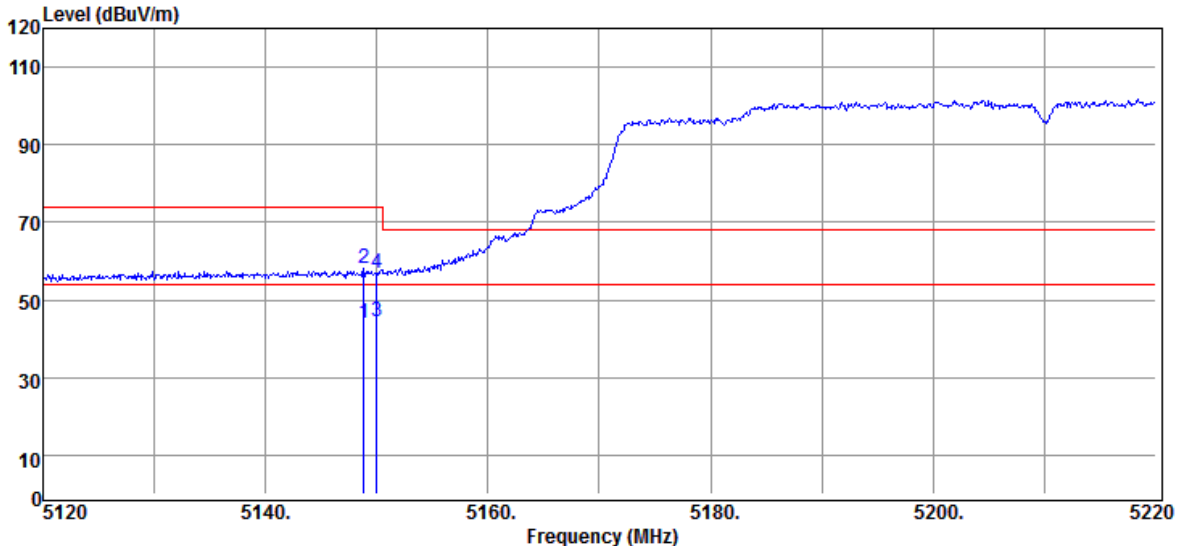
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## Band edge falling to restricted band

### 802.11ac\_VHT80 mode

Operation Mode :802.11ac80 / Band 1  
Test Mode :BE CH LOW  
EUT Pol :H Plan  
Test Channel :5210 MHz

Test Date :2018-07-03  
Temp./Humi. :25/60  
Antenna Pol. :VERTICAL  
Engineer :Enzo



| Freq.   | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|---------|----------|---------------|--------|--------|--------|--------|
| MHz     | Mode     | Reading Level |        | FS     | @3m    |        |
| MHz     | PK/QP/AV | dBuV          | dB     | dBuV/m | dBuV/m | dB     |
| 5148.80 | Average  | 30.50         | 13.63  | 44.13  | 54.00  | -9.87  |
| 5148.80 | Peak     | 44.33         | 13.63  | 57.96  | 74.00  | -16.04 |
| 5150.00 | Average  | 30.67         | 13.65  | 44.32  | 54.00  | -9.68  |
| 5150.00 | Peak     | 43.08         | 13.65  | 56.73  | 74.00  | -17.27 |

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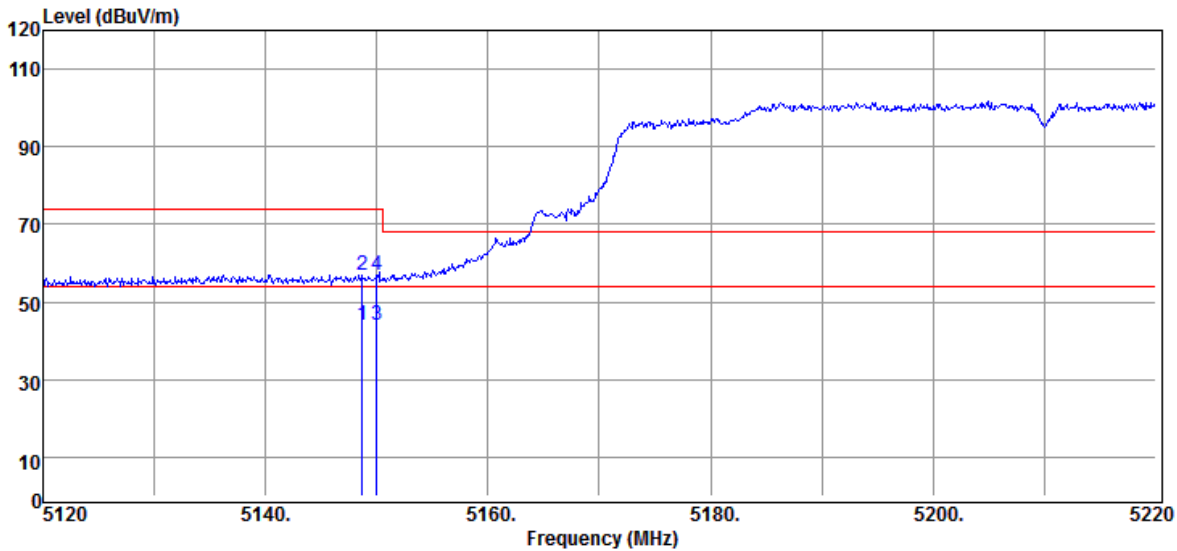
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|----------------|----------------------|--------------|-------------|
| Operation Mode | :802.11ac80 / Band 1 | Test Date    | :2018-07-03 |
| Test Mode      | :BE CH LOW           | Temp./Humi.  | :25/60      |
| EUT Pol        | :H Plan              | Antenna Pol. | :HORIZONTAL |
| Test Channel   | :5210 MHz            | Engineer     | :Enzo       |



| Freq.   | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|---------|----------|---------------|--------|--------|--------|--------|
| MHz     | Mode     | Reading Level |        | FS     | @3m    |        |
| MHz     | PK/QP/AV | dBuV          | dB     | dBuV/m | dBuV/m | dB     |
| 5148.70 | Average  | 30.38         | 13.63  | 44.01  | 54.00  | -9.99  |
| 5148.70 | Peak     | 43.27         | 13.63  | 56.90  | 74.00  | -17.10 |
| 5150.00 | Average  | 30.48         | 13.65  | 44.13  | 54.00  | -9.87  |
| 5150.00 | Peak     | 43.19         | 13.65  | 56.84  | 74.00  | -17.16 |

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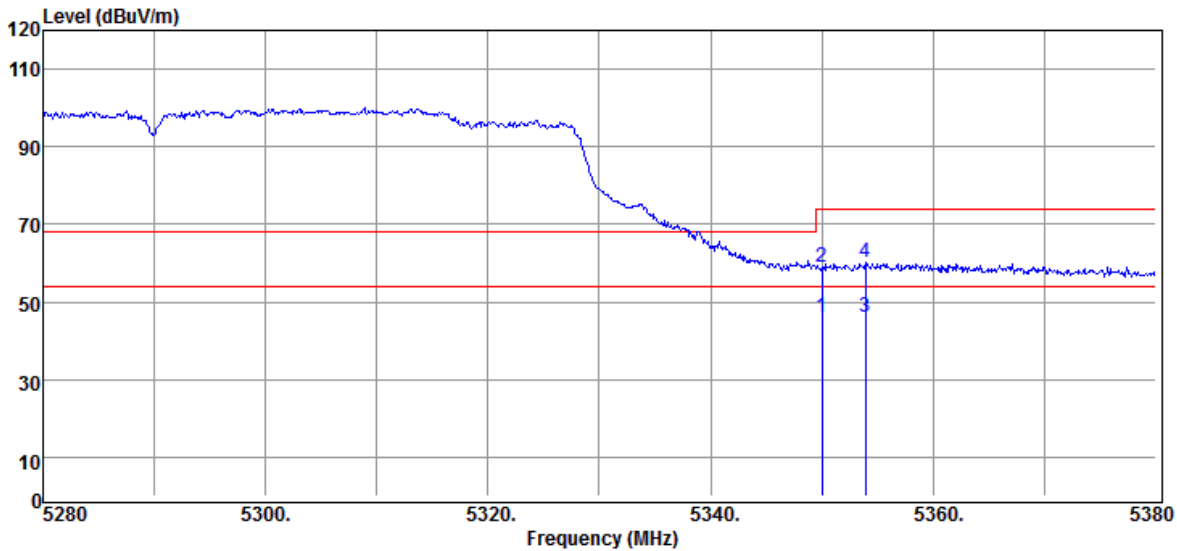
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|----------------|----------------------|--------------|-------------|
| Operation Mode | :802.11ac80 / Band 2 | Test Date    | :2018-07-03 |
| Test Mode      | :BE CH HIGH          | Temp./Humi.  | :25/60      |
| EUT Pol        | :H Plan              | Antenna Pol. | :VERTICAL   |
| Test Channel   | :5290 MHz            | Engineer     | :Enzo       |



| Freq.   | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|---------|----------|---------------|--------|--------|--------|--------|
|         | Mode     | Reading Level |        | FS     | @3m    |        |
| MHz     | PK/QP/AV | dBμV          | dB     | dBμV/m | dBμV/m | dB     |
| 5350.00 | Average  | 31.81         | 14.16  | 45.97  | 54.00  | -8.03  |
| 5350.00 | Peak     | 44.61         | 14.16  | 58.77  | 74.00  | -15.23 |
| 5353.90 | Average  | 31.72         | 14.17  | 45.89  | 54.00  | -8.11  |
| 5353.90 | Peak     | 46.18         | 14.17  | 60.35  | 74.00  | -13.65 |

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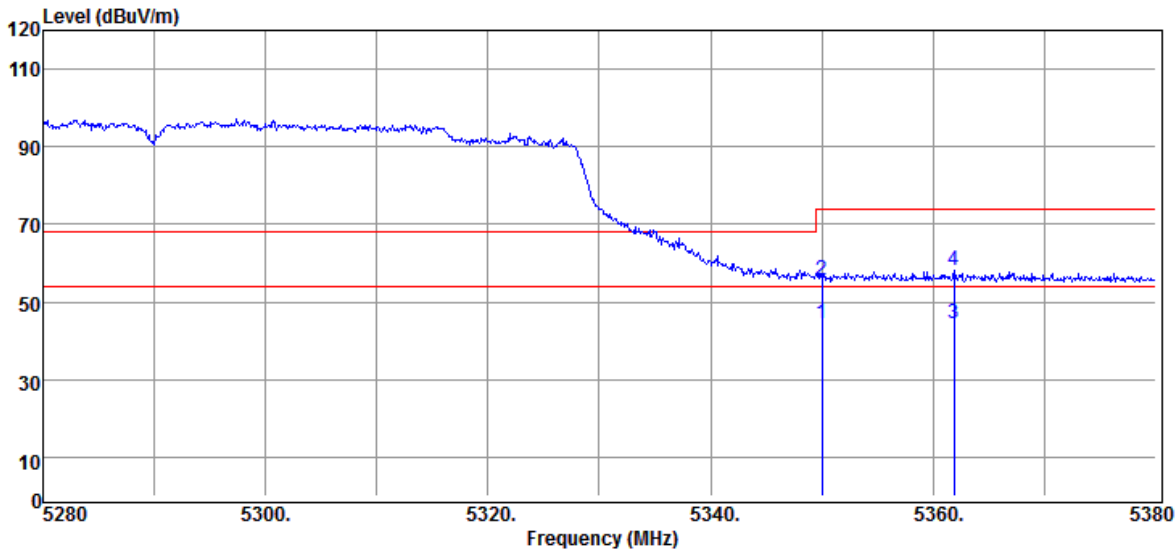
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|----------------|----------------------|--------------|-------------|
| Operation Mode | :802.11ac80 / Band 2 | Test Date    | :2018-07-03 |
| Test Mode      | :BE CH HIGH          | Temp./Humi.  | :25/60      |
| EUT Pol        | :H Plan              | Antenna Pol. | :HORIZONTAL |
| Test Channel   | :5290 MHz            | Engineer     | :Enzo       |



| Freq.   | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|---------|----------|---------------|--------|--------|--------|--------|
|         | Mode     | Reading Level |        | FS     | @3m    |        |
| MHz     | PK/QP/AV | dBμV          | dB     | dBμV/m | dBμV/m | dB     |
| 5350.00 | Average  | 30.15         | 14.16  | 44.31  | 54.00  | -9.69  |
| 5350.00 | Peak     | 41.63         | 14.16  | 55.79  | 74.00  | -18.21 |
| 5361.90 | Average  | 30.12         | 14.19  | 44.31  | 54.00  | -9.69  |
| 5361.90 | Peak     | 43.87         | 14.19  | 58.06  | 74.00  | -15.94 |

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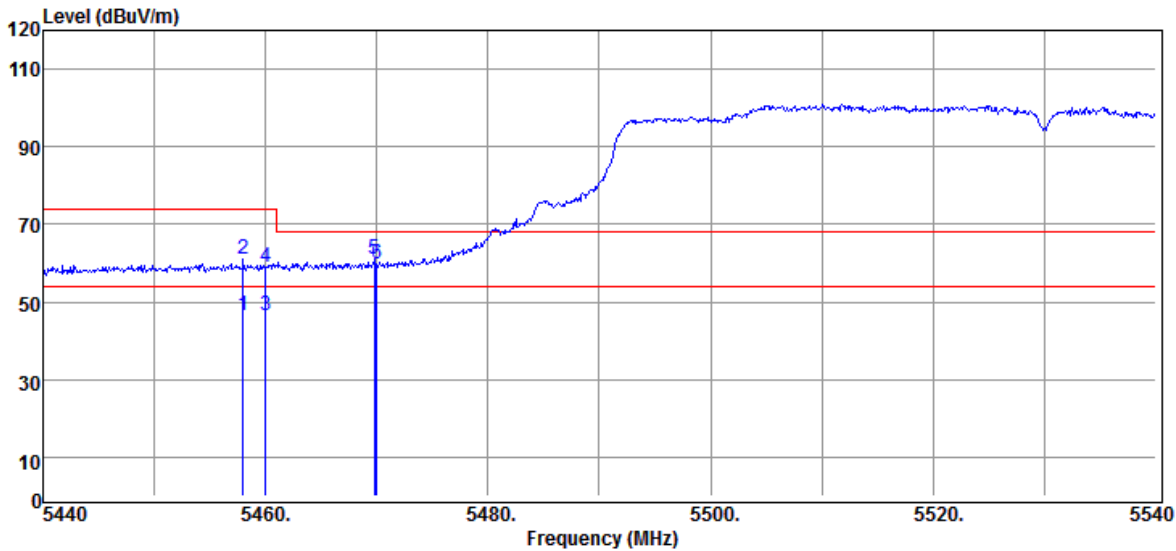
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|----------------|----------------------|--------------|-------------|
| Operation Mode | :802.11ac80 / Band 3 | Test Date    | :2018-07-03 |
| Test Mode      | :BE CH LOW           | Temp./Humi.  | :25/60      |
| EUT Pol        | :H Plan              | Antenna Pol. | :VERTICAL   |
| Test Channel   | :5530 MHz            | Engineer     | :Enzo       |



| Freq.   | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|---------|----------|---------------|--------|--------|--------|--------|
| MHz     | Mode     | Reading Level |        | FS     | @3m    |        |
| MHz     | PK/QP/AV | dBμV          | dB     | dBμV/m | dBμV/m | dB     |
| 5458.00 | Average  | 32.00         | 14.31  | 46.31  | 54.00  | -7.69  |
| 5458.00 | Peak     | 46.83         | 14.31  | 61.14  | 74.00  | -12.86 |
| 5460.00 | Average  | 32.29         | 14.31  | 46.60  | 54.00  | -7.40  |
| 5460.00 | Peak     | 44.47         | 14.31  | 58.78  | 74.00  | -15.22 |
| 5469.80 | Peak     | 46.56         | 14.31  | 60.87  | 68.20  | -7.33  |
| 5470.00 | Peak     | 45.69         | 14.31  | 60.00  | 68.20  | -8.20  |

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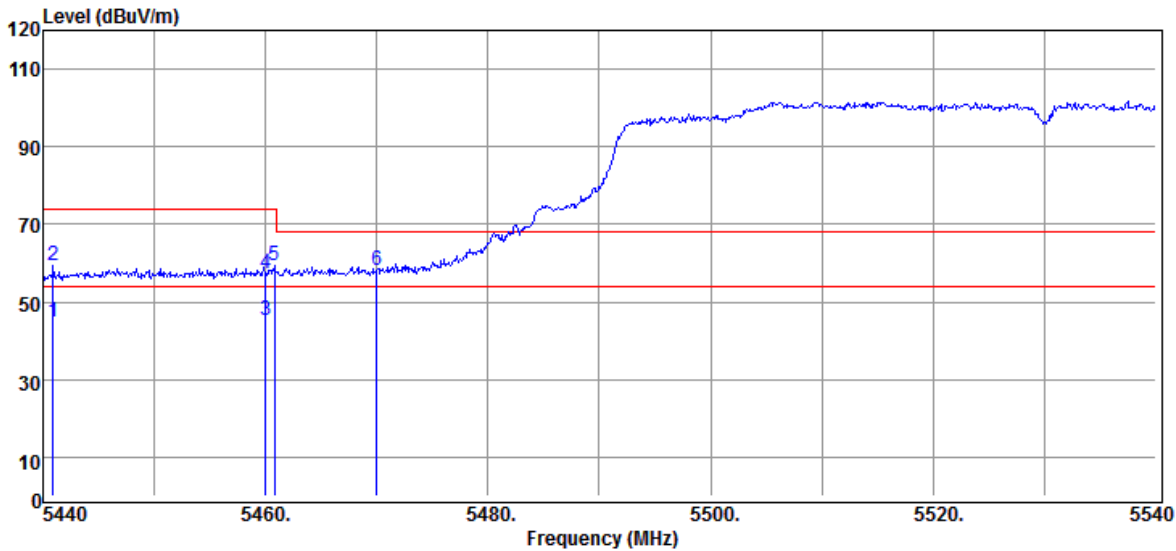
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|----------------|----------------------|--------------|-------------|
| Operation Mode | :802.11ac80 / Band 3 | Test Date    | :2018-07-03 |
| Test Mode      | :BE CH LOW           | Temp./Humi.  | :25/60      |
| EUT Pol        | :H Plan              | Antenna Pol. | :HORIZONTAL |
| Test Channel   | :5530 MHz            | Engineer     | :Enzo       |



| Freq.   | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|---------|----------|---------------|--------|--------|--------|--------|
| MHz     | Mode     | Reading Level |        | FS     | @3m    |        |
| MHz     | PK/QP/AV | dBuV          | dB     | dBuV/m | dBuV/m | dB     |
| 5440.90 | Average  | 30.35         | 14.30  | 44.65  | 54.00  | -9.35  |
| 5440.90 | Peak     | 44.89         | 14.30  | 59.19  | 74.00  | -14.81 |
| 5460.00 | Average  | 31.14         | 14.31  | 45.45  | 54.00  | -8.55  |
| 5460.00 | Peak     | 43.07         | 14.31  | 57.38  | 74.00  | -16.62 |
| 5460.80 | Peak     | 45.06         | 14.31  | 59.37  | 68.20  | -8.83  |
| 5470.00 | Peak     | 43.92         | 14.31  | 58.23  | 68.20  | -9.97  |

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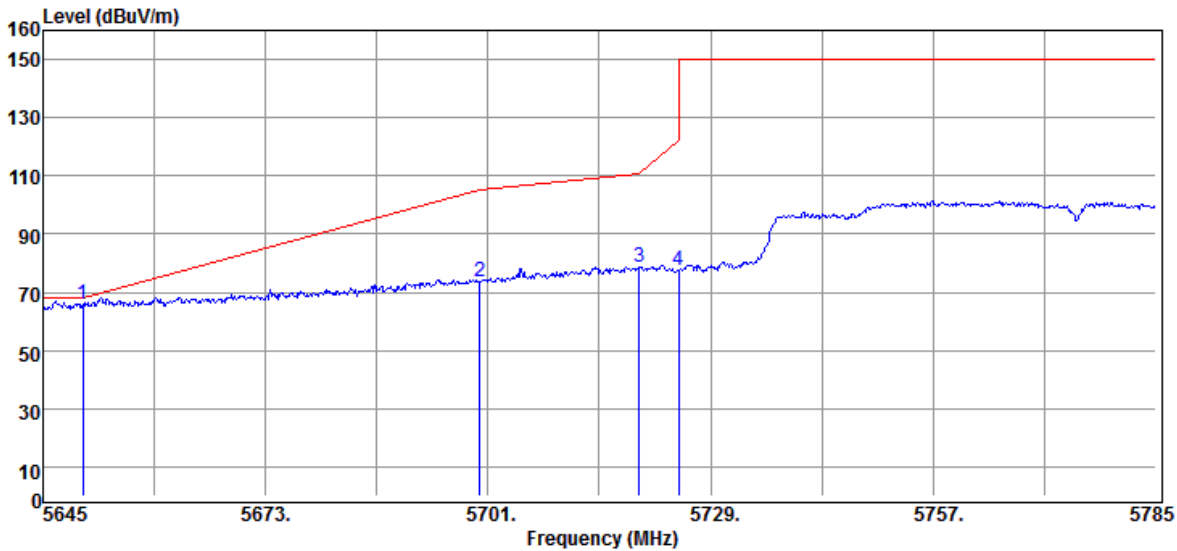
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|----------------|----------------------|--------------|-------------|
| Operation Mode | :802.11ac80 / Band 4 | Test Date    | :2018-07-03 |
| Test Mode      | :BE CH LOW           | Temp./Humi.  | :25/60      |
| EUT Pol        | :H Plan              | Antenna Pol. | :VERTICAL   |
| Test Channel   | :5775 MHz            | Engineer     | :Enzo       |



| Freq.   | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|---------|----------|---------------|--------|--------|--------|--------|
| MHz     | Mode     | Reading Level |        | FS     | @3m    |        |
| MHz     | PK/QP/AV | dBμV          | dB     | dBμV/m | dBμV/m | dB     |
| 5650.00 | Peak     | 51.53         | 14.42  | 65.95  | 68.20  | -2.25  |
| 5700.00 | Peak     | 59.34         | 14.47  | 73.81  | 105.20 | -31.39 |
| 5720.00 | Peak     | 63.94         | 14.49  | 78.43  | 110.80 | -32.37 |
| 5725.00 | Peak     | 62.90         | 14.50  | 77.40  | 122.20 | -44.80 |

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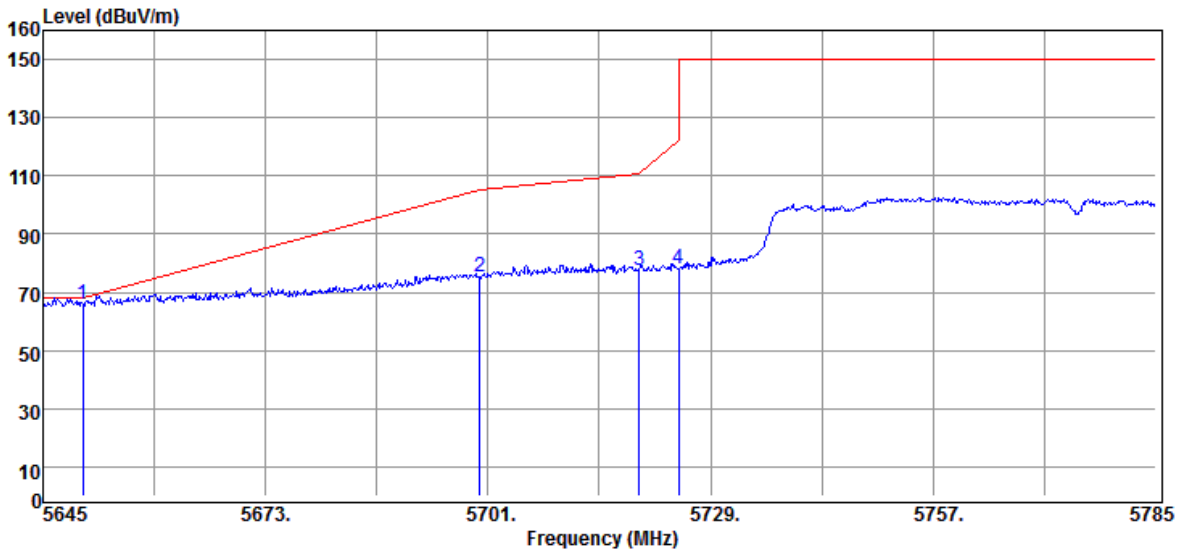
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|                |                      |              |             |
|----------------|----------------------|--------------|-------------|
| Operation Mode | :802.11ac80 / Band 4 | Test Date    | :2018-07-03 |
| Test Mode      | :BE CH LOW           | Temp./Humi.  | :25/60      |
| EUT Pol        | :H Plan              | Antenna Pol. | :HORIZONTAL |
| Test Channel   | :5775 MHz            | Engineer     | :Enzo       |



| Freq.   | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|---------|----------|---------------|--------|--------|--------|--------|
| MHz     | Mode     | Reading Level |        | FS     | @3m    |        |
| MHz     | PK/QP/AV | dBμV          | dB     | dBμV/m | dBμV/m | dB     |
| 5650.00 | Peak     | 51.34         | 14.42  | 65.76  | 68.20  | -2.44  |
| 5700.00 | Peak     | 61.01         | 14.47  | 75.48  | 105.20 | -29.72 |
| 5720.00 | Peak     | 63.22         | 14.49  | 77.71  | 110.80 | -33.09 |
| 5725.00 | Peak     | 63.36         | 14.50  | 77.86  | 122.20 | -44.34 |

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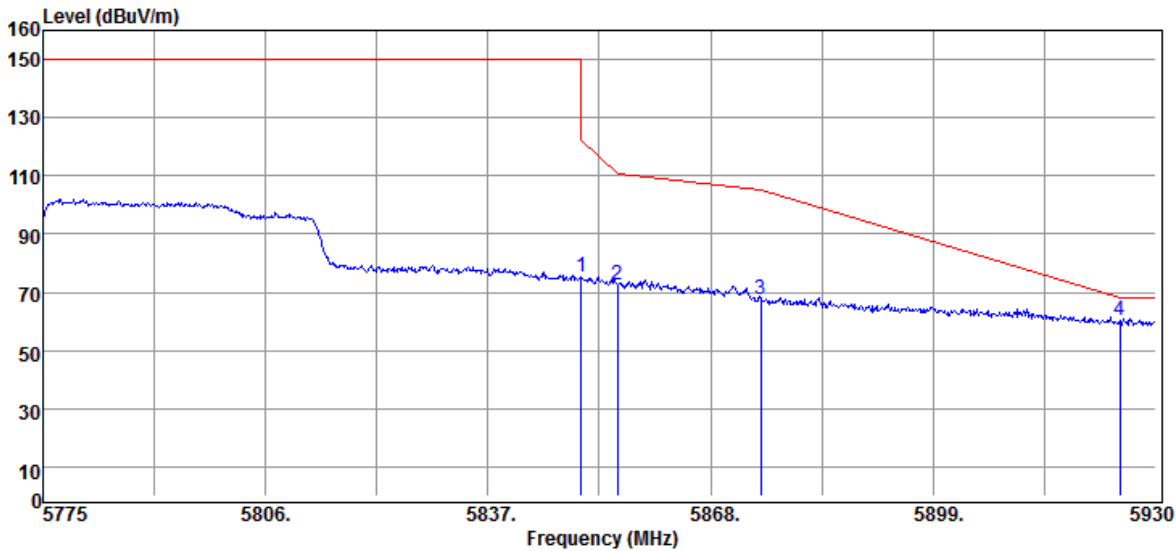
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|                |                      |              |             |
|----------------|----------------------|--------------|-------------|
| Operation Mode | :802.11ac80 / Band 4 | Test Date    | :2018-07-03 |
| Test Mode      | :BE CH HIGH          | Temp./Humi.  | :25/60      |
| EUT Pol        | :H Plan              | Antenna Pol. | :VERTICAL   |
| Test Channel   | :5775 MHz            | Engineer     | :Enzo       |



| Freq.   | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|---------|----------|---------------|--------|--------|--------|--------|
| MHz     | Mode     | Reading Level |        | FS     | @3m    |        |
|         | PK/QP/AV | dBμV          | dB     | dBμV/m | dBμV/m | dB     |
| 5850.00 | Peak     | 60.38         | 14.72  | 75.10  | 122.20 | -47.10 |
| 5855.00 | Peak     | 57.52         | 14.73  | 72.25  | 110.80 | -38.55 |
| 5875.00 | Peak     | 52.87         | 14.78  | 67.65  | 105.20 | -37.55 |
| 5925.00 | Peak     | 45.62         | 14.91  | 60.53  | 68.20  | -7.67  |

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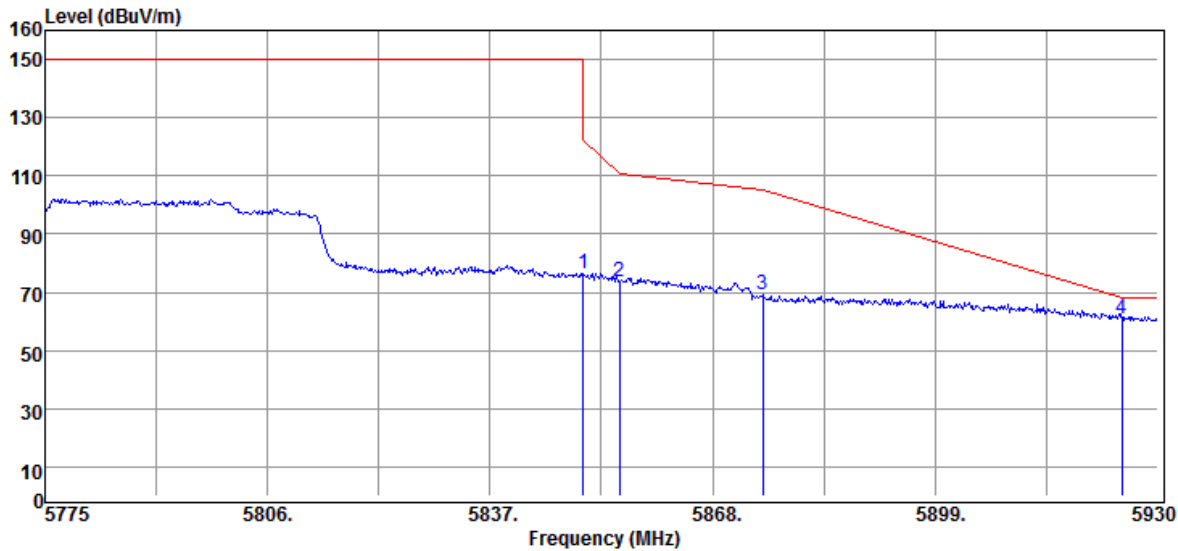
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|                |                      |              |             |
|----------------|----------------------|--------------|-------------|
| Operation Mode | :802.11ac80 / Band 4 | Test Date    | :2018-07-03 |
| Test Mode      | :BE CH HIGH          | Temp./Humi.  | :25/60      |
| EUT Pol        | :H Plan              | Antenna Pol. | :HORIZONTAL |
| Test Channel   | :5775 MHz            | Engineer     | :Enzo       |



| Freq.   | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|---------|----------|---------------|--------|--------|--------|--------|
| MHz     | Mode     | Reading Level |        | FS     | @3m    |        |
| MHz     | PK/QP/AV | dBμV          | dB     | dBμV/m | dBμV/m | dB     |
| 5850.00 | Peak     | 61.68         | 14.72  | 76.40  | 122.20 | -45.80 |
| 5855.00 | Peak     | 59.13         | 14.73  | 73.86  | 110.80 | -36.94 |
| 5875.00 | Peak     | 54.25         | 14.78  | 69.03  | 105.20 | -36.17 |
| 5925.00 | Peak     | 46.00         | 14.91  | 60.91  | 68.20  | -7.29  |

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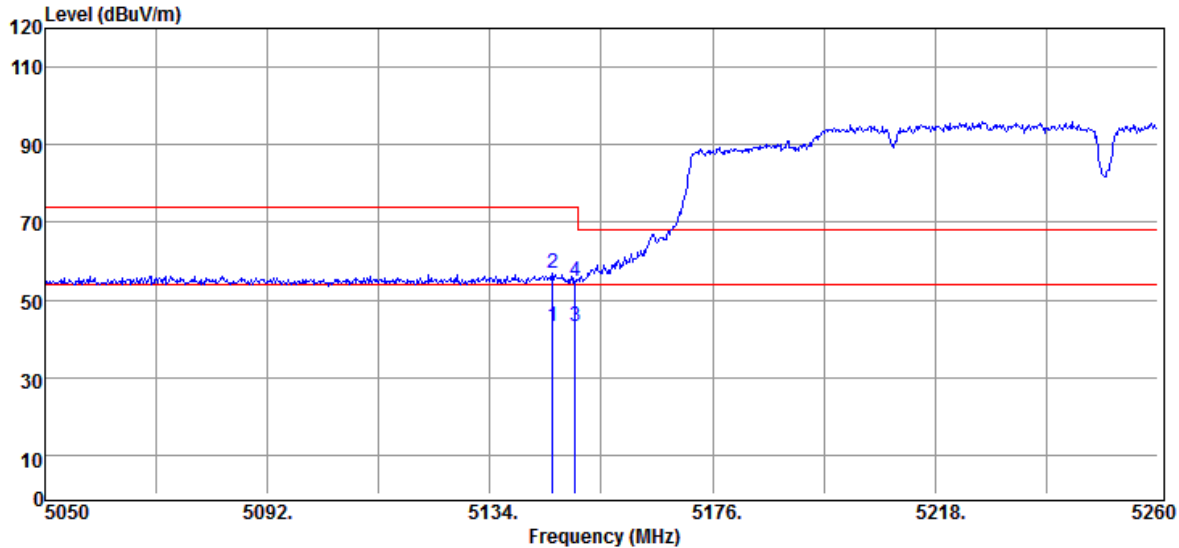
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## Band edge falling to restricted band

### 802.11ac\_VHT160 mode

Operation Mode :802.11ac160 / Band 1  
Test Mode :BE CH LOW  
EUT Pol :H Plan  
Test Channel :5250 MHz

Test Date :2018-07-03  
Temp./Humi. :25/60  
Antenna Pol. :VERTICAL  
Engineer :Enzo



| Freq.   | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|---------|----------|---------------|--------|--------|--------|--------|
| MHz     | Mode     | Reading Level |        | FS     | @3m    |        |
| MHz     | PK/QP/AV | dBuV          | dB     | dBuV/m | dBuV/m | dB     |
| 5145.76 | Average  | 29.67         | 13.63  | 43.30  | 54.00  | -10.70 |
| 5145.76 | Peak     | 43.24         | 13.63  | 56.87  | 74.00  | -17.13 |
| 5150.00 | Average  | 29.62         | 13.65  | 43.27  | 54.00  | -10.73 |
| 5150.00 | Peak     | 41.32         | 13.65  | 54.97  | 74.00  | -19.03 |

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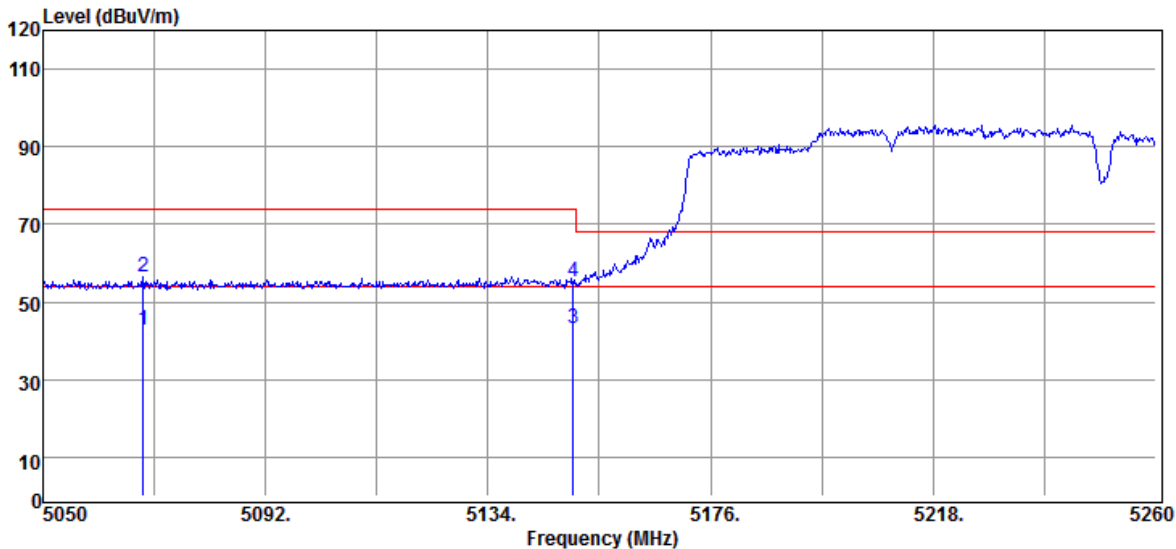
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|                |                       |              |             |
|----------------|-----------------------|--------------|-------------|
| Operation Mode | :802.11ac160 / Band 1 | Test Date    | :2018-07-03 |
| Test Mode      | :BE CH LOW            | Temp./Humi.  | :25/60      |
| EUT Pol        | :H Plan               | Antenna Pol. | :HORIZONTAL |
| Test Channel   | :5250 MHz             | Engineer     | :Enzo       |



| Freq.   | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|---------|----------|---------------|--------|--------|--------|--------|
|         | Mode     | Reading Level |        | FS     | @3m    |        |
| MHz     | PK/QP/AV | dBμV          | dB     | dBμV/m | dBμV/m | dB     |
| 5068.90 | Average  | 29.27         | 13.35  | 42.62  | 54.00  | -11.38 |
| 5068.90 | Peak     | 43.11         | 13.35  | 56.46  | 74.00  | -17.54 |
| 5150.00 | Average  | 29.52         | 13.65  | 43.17  | 54.00  | -10.83 |
| 5150.00 | Peak     | 41.40         | 13.65  | 55.05  | 74.00  | -18.95 |

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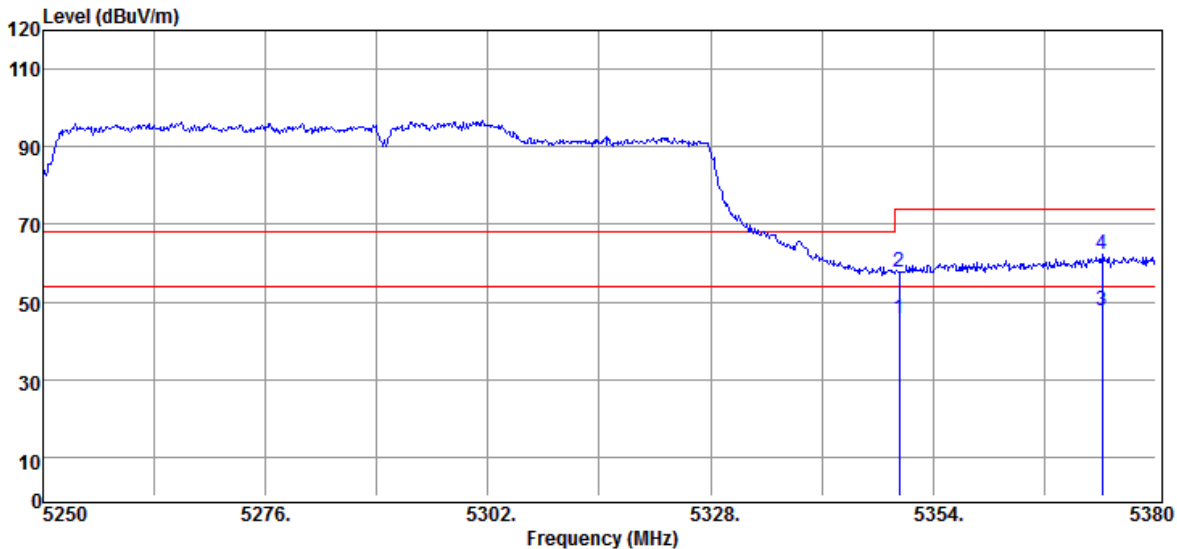
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|----------------|-----------------------|--------------|-------------|
| Operation Mode | :802.11ac160 / Band 2 | Test Date    | :2018-07-03 |
| Test Mode      | :BE CH HIGH           | Temp./Humi.  | :25/60      |
| EUT Pol        | :H Plan               | Antenna Pol. | :VERTICAL   |
| Test Channel   | :5250 MHz             | Engineer     | :Enzo       |



| Freq.   | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|---------|----------|---------------|--------|--------|--------|--------|
| MHz     | Mode     | Reading Level |        | FS     | @3m    |        |
| MHz     | PK/QP/AV | dBμV          | dB     | dBμV/m | dBμV/m | dB     |
| 5350.00 | Average  | 31.52         | 14.16  | 45.68  | 54.00  | -8.32  |
| 5350.00 | Peak     | 43.70         | 14.16  | 57.86  | 74.00  | -16.14 |
| 5373.76 | Average  | 33.62         | 14.22  | 47.84  | 54.00  | -6.16  |
| 5373.76 | Peak     | 48.20         | 14.22  | 62.42  | 74.00  | -11.58 |

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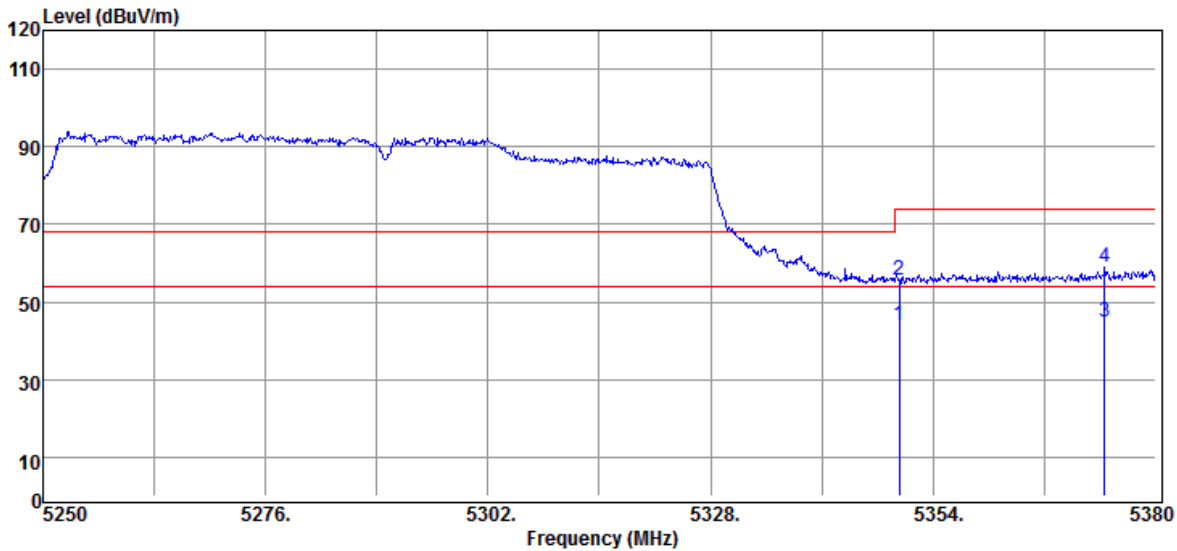
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|----------------|-----------------------|--------------|-------------|
| Operation Mode | :802.11ac160 / Band 2 | Test Date    | :2018-07-03 |
| Test Mode      | :BE CH HIGH           | Temp./Humi.  | :25/60      |
| EUT Pol        | :H Plan               | Antenna Pol. | :HORIZONTAL |
| Test Channel   | :5250 MHz             | Engineer     | :Enzo       |



| Freq.   | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|---------|----------|---------------|--------|--------|--------|--------|
| MHz     | Mode     | Reading Level |        | FS     | @3m    |        |
| MHz     | PK/QP/AV | dBμV          | dB     | dBμV/m | dBμV/m | dB     |
| 5350.00 | Average  | 29.86         | 14.16  | 44.02  | 54.00  | -9.98  |
| 5350.00 | Peak     | 41.55         | 14.16  | 55.71  | 74.00  | -18.29 |
| 5374.02 | Average  | 30.48         | 14.22  | 44.70  | 54.00  | -9.30  |
| 5374.02 | Peak     | 44.68         | 14.22  | 58.90  | 74.00  | -15.10 |

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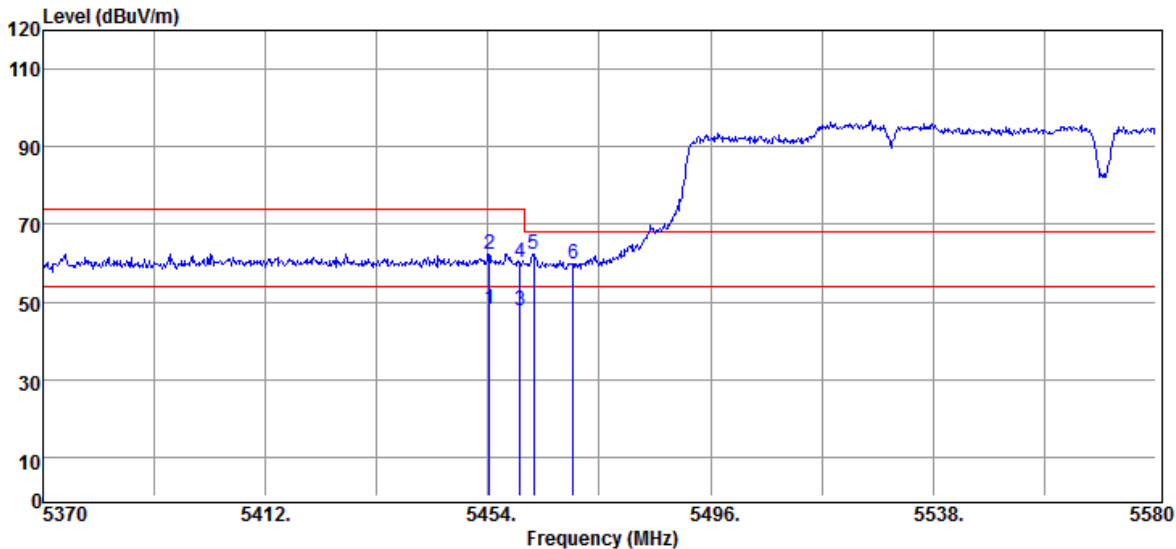
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|----------------|-----------------------|--------------|-------------|
| Operation Mode | :802.11ac160 / Band 3 | Test Date    | :2018-07-03 |
| Test Mode      | :BE CH LOW            | Temp./Humi.  | :25/60      |
| EUT Pol        | :H Plan               | Antenna Pol. | :VERTICAL   |
| Test Channel   | :5570 MHz             | Engineer     | :Enzo       |



| Freq.   | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|---------|----------|---------------|--------|--------|--------|--------|
| MHz     | Mode     | Reading Level |        | FS     | @3m    |        |
| MHz     | PK/QP/AV | dBμV          | dB     | dBμV/m | dBμV/m | dB     |
| 5454.21 | Average  | 33.77         | 14.32  | 48.09  | 54.00  | -5.91  |
| 5454.21 | Peak     | 48.07         | 14.32  | 62.39  | 74.00  | -11.61 |
| 5460.00 | Average  | 33.31         | 14.31  | 47.62  | 54.00  | -6.38  |
| 5460.00 | Peak     | 45.71         | 14.31  | 60.02  | 74.00  | -13.98 |
| 5462.61 | Peak     | 48.17         | 14.31  | 62.48  | 68.20  | -5.72  |
| 5470.00 | Peak     | 45.67         | 14.31  | 59.98  | 68.20  | -8.22  |

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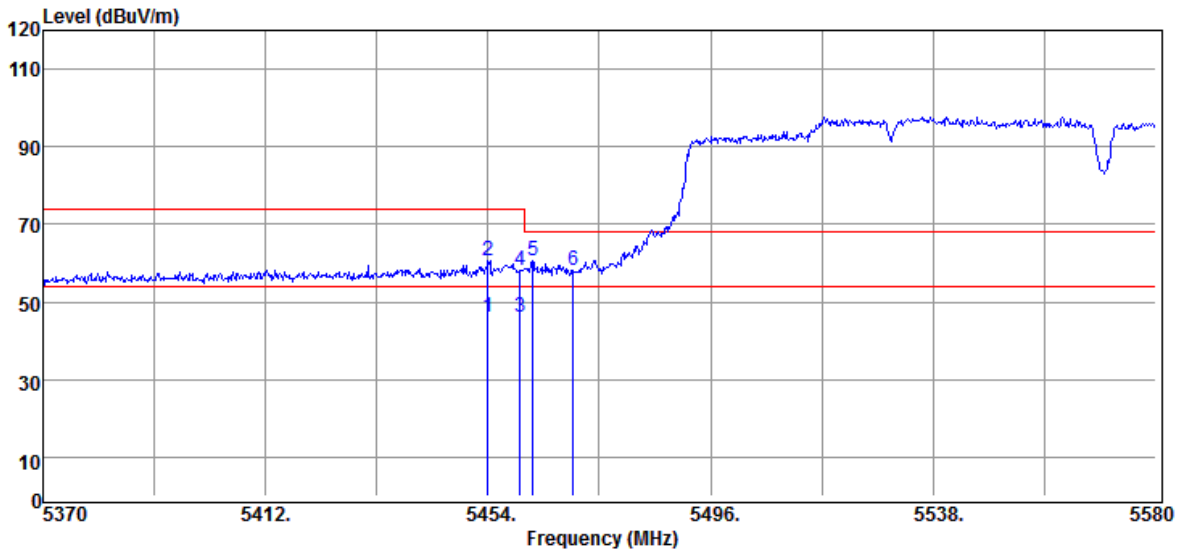
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|                |                       |              |             |
|----------------|-----------------------|--------------|-------------|
| Operation Mode | :802.11ac160 / Band 3 | Test Date    | :2018-07-03 |
| Test Mode      | :BE CH LOW            | Temp./Humi.  | :25/60      |
| EUT Pol        | :H Plan               | Antenna Pol. | :HORIZONTAL |
| Test Channel   | :5570 MHz             | Engineer     | :Enzo       |



| Freq.   | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|---------|----------|---------------|--------|--------|--------|--------|
| MHz     | Mode     | Reading Level |        | FS     | @3m    |        |
| MHz     | PK/QP/AV | dBuV          | dB     | dBuV/m | dBuV/m | dB     |
| 5454.00 | Average  | 31.80         | 14.32  | 46.12  | 54.00  | -7.88  |
| 5454.00 | Peak     | 46.43         | 14.32  | 60.75  | 74.00  | -13.25 |
| 5460.00 | Average  | 31.84         | 14.31  | 46.15  | 54.00  | -7.85  |
| 5460.00 | Peak     | 43.86         | 14.31  | 58.17  | 74.00  | -15.83 |
| 5462.40 | Peak     | 46.31         | 14.32  | 60.63  | 68.20  | -7.57  |
| 5470.00 | Peak     | 43.73         | 14.31  | 58.04  | 68.20  | -10.16 |

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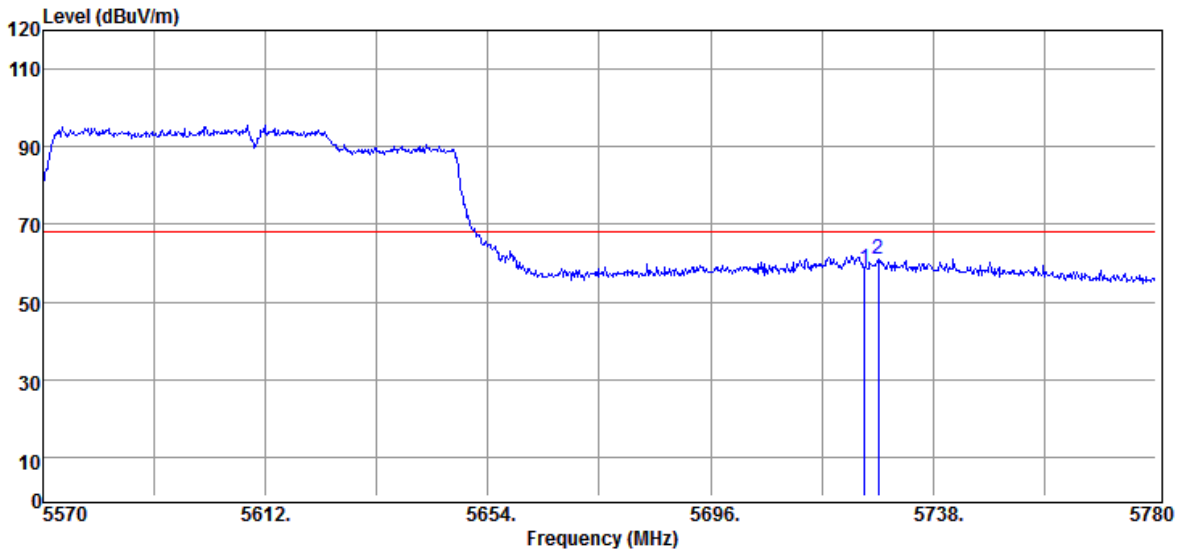
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|                |                       |              |             |
|----------------|-----------------------|--------------|-------------|
| Operation Mode | :802.11ac160 / Band 3 | Test Date    | :2018-07-03 |
| Test Mode      | :BE CH HIGH           | Temp./Humi.  | :25/60      |
| EUT Pol        | :H Plan               | Antenna Pol. | :VERTICAL   |
| Test Channel   | :5570 MHz             | Engineer     | :Enzo       |



| Freq.   | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|---------|----------|---------------|--------|--------|--------|--------|
| MHz     | Mode     | Reading Level |        | FS     | @3m    |        |
|         | PK/QP/AV | dBμV          | dB     | dBμV/m | dBμV/m | dB     |
| 5725.00 | Peak     | 44.07         | 14.50  | 58.57  | 68.20  | -9.63  |
| 5727.71 | Peak     | 46.59         | 14.50  | 61.09  | 68.20  | -7.11  |

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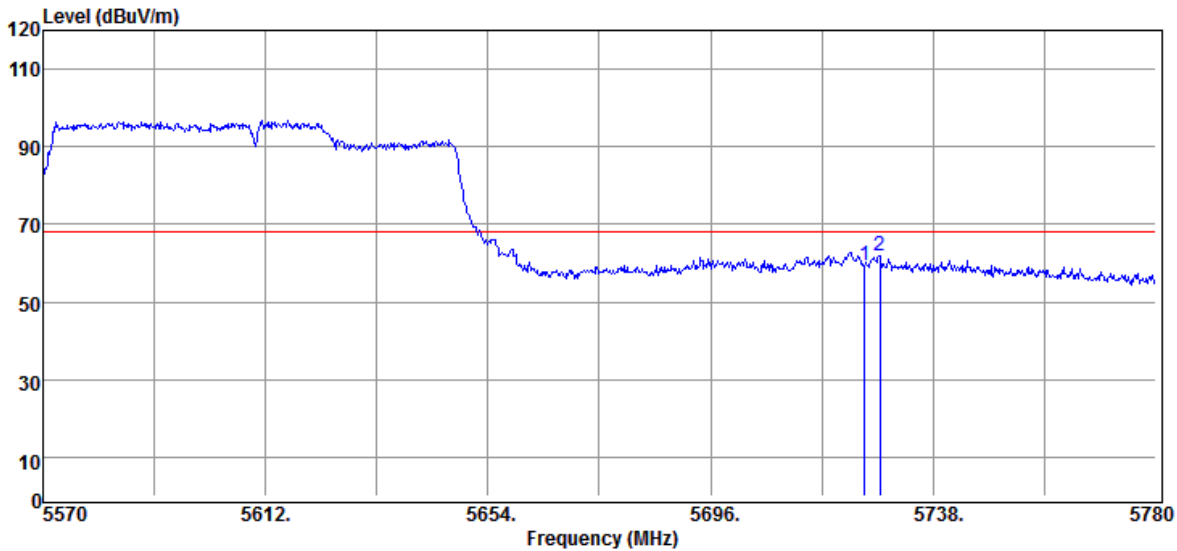
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|                |                       |              |             |
|----------------|-----------------------|--------------|-------------|
| Operation Mode | :802.11ac160 / Band 3 | Test Date    | :2018-07-03 |
| Test Mode      | :BE CH HIGH           | Temp./Humi.  | :25/60      |
| EUT Pol        | :H Plan               | Antenna Pol. | :HORIZONTAL |
| Test Channel   | :5570 MHz             | Engineer     | :Enzo       |



| Freq.   | Detector | Spectrum      | Factor | Actual | Limit  | Margin |
|---------|----------|---------------|--------|--------|--------|--------|
| MHz     | Mode     | Reading Level |        | FS     | @3m    |        |
|         | PK/QP/AV | dBuV          | dB     | dBuV/m | dBuV/m | dB     |
| 5725.00 | Peak     | 44.91         | 14.50  | 59.41  | 68.20  | -8.79  |
| 5727.92 | Peak     | 47.52         | 14.50  | 62.02  | 68.20  | -6.18  |

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## 8. ANTENNA REQUIREMENT

### 8.1 Standard Applicable

For intentional device, according to §15.203, an intentional radiator shall be designed to ensure that no antenna other than furnished by the responsible party shall be used with the device.

If the transmitting antenna is greater than 6dBi, the power shall be reduced by the same level in dB comparing to gain minus 6dBi.

### 8.2 Antenna Connected Construction

The antenna is designed as permanently attached and no consideration of replacement. Please see EUT photo for details.

*~ End of Report ~*

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