



## Test Report

**FCC ID: LDK102099**

**AIR-AP3802E-B-K9, AIR-AP3802E-UXK9**

**AIR-AP2802E-B-K9, AIR-AP2802E-UXK9**

**IC: 2461B-102099**

**AIR-AP3802E-A-K9, AIR-AP3802E-UXK9**

**AIR-AP2802E-A-K9, AIR-AP2802E-UXK9**

Cisco Aironet 802.11ac Dual Band Access Points

**5725-5850 MHz**

**Against the following Specifications:**

**CFR47 Part 15.407**

**RSS-247**

**Cisco Systems**

170 West Tasman Drive

San Jose, CA 95134

|                                                                                     |                                                                                                        |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
|  |                    |
| <b>Author:</b> Jose Aguirre<br><b>Tested By</b>                                     | <b>Approved By:</b> Jim Nicholson<br><b>Title:</b> Technical Leader, Engineering<br><b>Revision:</b> 3 |

This report replaces any previously entered test report under EDCS – **1552002**. This test report has been electronically authorized and archived using the CISCO Engineering Document Control system.



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## Section 1: Overview

The samples were assessed against the tests detailed in section 3 under the requirements of the following specifications:

| Specifications:                                                             |
|-----------------------------------------------------------------------------|
| CFR47 Part 15.407<br>RSS-247 Issue 1: May 2015<br>RSS-Gen Issue 4: Nov 2014 |

Measurements were made in accordance with

- ANSI C63.10:2013
- KDB 789033 D02 General UNII Test Procedures New Rules v01r01
- KDB 662911 D01 Multiple Transmitter Output v02r01



## Section 2: Assessment Information

### 2.1 General

This report contains an assessment of an apparatus against Electromagnetic Compatibility Standards based upon tests carried out on the samples submitted. The testing was performed by and for the use of Cisco systems Inc:

With regard to this assessment, the following points should be noted:

- a) The results contained in this report relate only to the items tested and were obtained in the period between the date of the initial assessment and the date of issue of the report. Manufactured products will not necessarily give identical results due to production and measurement tolerances.
- b) The apparatus was set up and exercised using the configuration and modes of operation defined in this report only.
- c) Where relevant, the apparatus was only assessed using the susceptibility criteria defined in this report and the Test Assessment Plan (TAP).
- d) All testing was performed under the following environmental conditions:

|                      |                                      |
|----------------------|--------------------------------------|
| Temperature          | 15°C to 35°C (54°F to 95°F)          |
| Atmospheric Pressure | 860mbar to 1060mbar (25.4" to 31.3") |
| Humidity             | 10% to 75*%                          |
- e) All AC testing was performed at one or more of the following supply voltages:

|                     |
|---------------------|
| 110V 60 Hz (+/-20%) |
|---------------------|

### Units of Measurement

The units of measurements defined in the appendices are reported in specific terms, which are test dependent. Where radiated measurements are concerned these are defined at a particular distance. Basic voltage measurements are defined in units of [dBuV]

As an example, the basic calculation for all measurements is as follows:

$$\text{Emission level [dBuV]} = \text{Indicated voltage level [dBuV]} + \text{Cable Loss [dB]} + \text{Other correction factors [dB]}$$

The combinations of correction factors are dependent upon the exact test configurations [see test equipment lists for further details] and may include:-

Antenna Factors, Pre Amplifier Gain, LISN Loss, Pulse Limiter Loss and Filter Insertion Loss

Note: to convert the results from dBuV/m to uV/m use the following formula:-

$$\text{Level in uV/m} = \text{Common Antilogarithm} [(X \text{ dBuV/m})/20] = Y \text{ uV/m}$$



## Measurement Uncertainty Values

|                                   |                         |
|-----------------------------------|-------------------------|
| voltage and power measurements    | $\pm 2$ dB              |
| conducted EIRP measurements       | $\pm 1.4$ dB            |
| radiated measurements             | $\pm 3.2$ dB            |
| frequency measurements            | $\pm 2.4 \cdot 10^{-7}$ |
| temperature measurements          | $\pm 0.54^\circ$        |
| humidity measurements             | $\pm 2.3\%$             |
| DC and low frequency measurements | $\pm 2.5\%$             |

Where relevant measurement uncertainty levels have been estimated for tests performed on the apparatus. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of  $k=2$ .

## Radiated emissions (expanded uncertainty, confidence interval 95%)

|                    |            |
|--------------------|------------|
| 30 MHz - 300 MHz   | +/- 3.8 dB |
| 300 MHz - 1000 MHz | +/- 4.3 dB |
| 1 GHz - 10 GHz     | +/- 4.0 dB |
| 10 GHz - 18GHz     | +/- 8.2 dB |
| 18GHz - 26.5GHz    | +/- 4.1 dB |
| 26.5GHz - 40GHz    | +/- 3.9 dB |

## Conducted emissions (expanded uncertainty, confidence interval 95%)

|                |             |
|----------------|-------------|
| 30 MHz – 40GHz | +/- 0.38 dB |
|----------------|-------------|

A product is considered to comply with a requirement if the nominal measured value is below the limit line. The product is considered to not be in compliance in case the nominal measured value is above the limit line.

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**2.2 Date of testing**

01-Jan-16 - 03-Mar-16

**2.3 Report Issue Date**

04-March-2016

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**2.4 Testing facilities**

This assessment was performed by:

**Testing Laboratory**

Cisco Systems, Inc.,  
125 West Tasman Drive  
San Jose, CA 95134, USA

**Registration Numbers for Industry Canada**

| <b>Cisco System Site</b> | <b>Address</b>                                    | <b>Site Identifier</b> |
|--------------------------|---------------------------------------------------|------------------------|
| Building P, 10m Chamber  | 125 West Tasman Dr<br>San Jose, CA 95134          | Company #: 2461N-2     |
| Building P, 5m Chamber   | 125 West Tasman Dr<br>San Jose, CA 95134          | Company #: 2461N-1     |
| Building I, 5m Chamber   | 285 W. Tasman Drive<br>San Jose, California 95134 | Company #: 2461M-1     |

**Test Engineers**

Jose Aguirre

**2.5 Equipment Assessed (EUT)**

AIR-AP3802E-B-K9 Series



## 2.6 EUT Description

The Cisco Aironet 802.11ac Radio supports the following modes of operation. The modes are further defined in the radio Theory of Operation. The modes included in this report represent the worst case data for all modes.

802.11n/ac - Non HT20, One Antenna, 6 to 54 Mbps  
802.11n/ac - Non HT20, Two Antennas, 6 to 54 Mbps  
802.11n/ac - Non HT20, Three Antennas, 6 to 54 Mbps  
802.11n/ac - Non HT20, Four Antennas, 6 to 54 Mbps

802.11n/ac - Non HT20 Beam Forming, Two Antennas, 6 to 54 Mbps  
802.11n/ac - Non HT20 Beam Forming, Three Antennas, 6 to 54 Mbps  
802.11n/ac - Non HT20 Beam Forming, Four Antennas, 6 to 54 Mbps

802.11n/ac - HT/VHT20, One Antenna, M0 to M7  
802.11n/ac - HT/VHT20, Two Antennas, M0 to M7  
802.11n/ac - HT/VHT20, Two Antennas, M8 to M15  
802.11n/ac - HT/VHT20, Three Antennas, M0 to M7  
802.11n/ac - HT/VHT20, Three Antennas, M8 to M15  
802.11n/ac - HT/VHT20, Three Antennas, M16 to M23  
802.11n/ac - HT/VHT20, Four Antennas, M0 to M7  
802.11n/ac - HT/VHT20, Four Antennas, M8 to M15  
802.11n/ac - HT/VHT20, Four Antennas, M16 to M23

802.11n/ac - HT/VHT20 Beam Forming, Two Antennas, M0 to M7  
802.11n/ac - HT/VHT20 Beam Forming, Two Antennas, M8 to M15  
802.11n/ac - HT/VHT20 Beam Forming, Three Antennas, M0 to M7  
802.11n/ac - HT/VHT20 Beam Forming, Three Antennas, M8 to M15  
802.11n/ac - HT/VHT20 Beam Forming, Three Antennas, M16 to M23  
802.11n/ac - HT/VHT20 Beam Forming, Four Antennas, M0 to M7  
802.11n/ac - HT/VHT20 Beam Forming, Four Antennas, M8 to M15  
802.11n/ac - HT/VHT20 Beam Forming, Four Antennas, M16 to M23

802.11n/ac - HT/VHT20 STBC, Two Antennas, M0 to M7  
802.11n/ac - HT/VHT20 STBC, Three Antennas, M0 to M7  
802.11n/ac - HT/VHT20 STBC, Four Antennas, M0 to M7

802.11n/ac - Non HT40 Duplicate, One Antenna, 6 to 54 Mbps  
802.11n/ac - Non HT40 Duplicate, Two Antennas, 6 to 54 Mbps  
802.11n/ac - Non HT40 Duplicate, Three Antennas, 6 to 54 Mbps  
802.11n/ac - Non HT40 Duplicate, Four Antennas, 6 to 54 Mbps

802.11n/ac - HT/VHT40, One Antenna, M0 to M7  
802.11n/ac - HT/VHT40, Two Antennas, M0 to M7  
802.11n/ac - HT/VHT40, Two Antennas, M8 to M15  
802.11n/ac - HT/VHT40, Three Antennas, M0 to M7  
802.11n/ac - HT/VHT40, Three Antennas, M8 to M15  
802.11n/ac - HT/VHT40, Three Antennas, M16 to M23  
802.11n/ac - HT/VHT40, Four Antennas, M0 to M7  
802.11n/ac - HT/VHT40, Four Antennas, M8 to M15  
802.11n/ac - HT/VHT40, Four Antennas, M16 to M23



802.11n/ac - HT/VHT40 Beam Forming, Two Antennas, M0 to M7  
802.11n/ac - HT/VHT40 Beam Forming, Two Antennas, M8 to M15  
802.11n/ac - HT/VHT40 Beam Forming, Three Antennas, M0 to M7  
802.11n/ac - HT/VHT40 Beam Forming, Three Antennas, M8 to M15  
802.11n/ac - HT/VHT40 Beam Forming, Three Antennas, M16 to M23  
802.11n/ac - HT/VHT40 Beam Forming, Four Antennas, M0 to M7  
802.11n/ac - HT/VHT40 Beam Forming, Four Antennas, M8 to M15  
802.11n/ac - HT/VHT40 Beam Forming, Four Antennas, M16 to M23

802.11n/ac - HT/VHT40 STBC, Two Antennas, M0 to M7  
802.11n/ac - HT/VHT40 STBC, Three Antennas, M0 to M7  
802.11n/ac - HT/VHT40 STBC, Four Antennas, M0 to M7

802.11n/ac - Non HT80 Duplicate, One Antenna, 6 to 54 Mbps  
802.11n/ac - Non HT80 Duplicate, Two Antennas, 6 to 54 Mbps  
802.11n/ac - Non HT80 Duplicate, Three Antennas, 6 to 54 Mbps  
802.11n/ac - Non HT80 Duplicate, Four Antennas, 6 to 54 Mbps

802.11ac - VHT80, One Antenna, M0.1 to M9.1  
802.11ac - VHT80, Two Antennas, M0.1 to M9.1  
802.11ac - VHT80, Two Antennas, M0.2 to M9.2  
802.11ac - VHT80, Three Antennas, M0.1 to M9.1  
802.11ac - VHT80, Three Antennas, M0.2 to M9.2  
802.11ac - VHT80, Three Antennas, M0.3 to M9.3  
802.11ac - VHT80, Four Antennas, M0.1 to M9.1  
802.11ac - VHT80, Four Antennas, M0.2 to M9.2  
802.11ac - VHT80, Four Antennas, M0.3 to M9.3

802.11ac - VHT80 Beam Forming, Two Antennas, M0.1 to M9.1  
802.11ac - VHT80 Beam Forming, Two Antennas, M0.2 to M9.2  
802.11ac - VHT80 Beam Forming, Three Antennas, M0.1 to M9.1  
802.11ac - VHT80 Beam Forming, Three Antennas, M0.2 to M9.2  
802.11ac - VHT80 Beam Forming, Three Antennas, M0.3 to M9.3  
802.11ac - VHT80 Beam Forming, Four Antennas, M0.1 to M9.1  
802.11ac - VHT80 Beam Forming, Four Antennas, M0.2 to M9.2  
802.11ac - VHT80 Beam Forming, Four Antennas, M0.3 to M9.3

802.11ac - VHT80 STBC, Two Antennas, M0.1 to M9.1  
802.11ac - VHT80 STBC, Three Antennas, M0.1 to M9.1  
802.11ac - VHT80 STBC, Four Antennas, M0.1 to M9.1





The following antennas are supported by this product series.

The data included in this report represent the worst case data for all antennas.

| Frequency          | Part Number      | Antenna Type                                 | Antenna Gain (dBi) | Model       |
|--------------------|------------------|----------------------------------------------|--------------------|-------------|
| <b>5 GHz</b>       | AIR-ANT5140V-R   | MIMO 3-Element Omni                          | 4                  | 3800E       |
|                    | AIR-ANT5140NV-R  | MIMO Wall-Mount Omni Antenna                 | 4                  | 3800E       |
|                    | AIR-ANT5145V-R   | Diversity Omni-directional                   | 4.5                | 3800E       |
|                    | AIR-ANT5160NP-R  | MIMO 3-Element Patch                         | 6                  | 3800E       |
| <b>2.4 / 5 GHz</b> | AIR-ANT2451V-R   | Omni                                         | 2 / 3              | 3800E       |
|                    | AIR-ANT2451NV-R  | Omni                                         | 3 / 4              | 3800E       |
|                    | AIR-ANT2524DB-R  | Dual-resonant black dipole                   | 2 / 4              | 2800E/3800E |
|                    | AIR-ANT2524DW-R  | Dual-resonant white dipole                   | 2 / 4              | 2800E/3800E |
|                    | AIR-ANT2524DG-R  | Dual-resonant gray dipole                    | 2 / 4              | 2800E/3800E |
|                    | AIR-ANT2524V4C-R | Dual-resonant ceiling mount omni (4-pack)    | 2 / 4              | 2800E/3800E |
|                    | AIR-ANT2535SDW-R | Dual-resonant "stubby" monopole              | 3 / 5              | 2800E/3800E |
|                    | AIR-ANT2544V4M-R | Dual-resonant omni (4-pack)                  | 4 / 4              | 2800E/3800E |
|                    | AIR-ANT2566P4W-R | Dual-resonant "directional" antenna (4-pack) | 6 / 6              | 2800E/3800E |
|                    | AIR-ANT25-LOC-02 | Directional HL / Directional WiFi            | 4 / 4              | 2800E/3800E |
|                    | AIR-ANT25-LOC-03 | Linear HL / Omni WiFi                        | 1 / 3              | 2800E/3800E |
|                    | AIR-ANT25-LOC-04 | Omni HL / Omni WiFi                          | 1 / 3              | 2800E/3800E |



## Section 3: Result Summary

### 3.1 Results Summary Table

#### Conducted emissions

| Basic Standard                                               | Technical Requirements / Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Result |
|--------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| FCC 15.407<br>RSS-247                                        | <b>6dB Bandwidth:</b><br>Systems using digital modulation techniques may operate in the 2400-2483.5MHz band. The minimum 6dB bandwidth shall be at least 500 kHz.                                                                                                                                                                                                                                                                                                                                                                                                | Pass   |
| FCC 15.407<br>RSS-247                                        | <b>99% &amp; 26 dB Bandwidth:</b><br>The 99% occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers are each equal to 0.5% of the total mean power of the given emission. There is no limit for 99% OBW.<br><br>The 26 dB emission is the width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 26 dB relative to the maximum level measured in the fundamental emission. | Pass   |
| FCC 15.407<br>RSS-247                                        | <b>Output Power:</b><br>For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W.                                                                                                                                                                                                                                                                                                                                                                                                               | Pass   |
| FCC 15.407<br>RSS-247                                        | <b>Power Spectral Density:</b><br><b>15.407</b> The maximum power spectral density shall not exceed 30 dBm in any 500-kHz band.                                                                                                                                                                                                                                                                                                                                                                                                                                  | Pass   |
| FCC 15.407<br>RSS-247                                        | <b>Conducted Spurious Emissions / Band-Edge:</b><br>For transmitters operating in the 5.725-5.85 GHz band: All emissions within the frequency range from the band edge to 10 MHz above or below the band edge shall not exceed an e.i.r.p. of -17 dBm/MHz; for frequencies 10 MHz or greater above or below the band edge, emissions shall not exceed an e.i.r.p. of -27 dBm/MHz.                                                                                                                                                                                | Pass   |
| FCC 15.407<br>FCC 15.209<br>FCC 152.05<br>RSS-247<br>RSS-Gen | <b>Restricted band:</b><br>Unwanted emissions falling within the restricted bands, as defined in FCC 15.205 (a) must also comply with the radiated emission limits specified in FCC 15.209 (a).                                                                                                                                                                                                                                                                                                                                                                  | Pass   |

**Radiated Emissions (General requirements)**

| Basic Standard                                    | Technical Requirements / Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Result |
|---------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| FCC 15.407<br>FCC 15.209<br>FCC 15.205<br>RSS-Gen | <b>TX Spurious Emissions:</b><br>Except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the filed strength limits table in this section.                                                                                                                                                                                                                                                                                                   | Pass   |
| FCC 15.207<br>RSS-Gen                             | <b>AC conducted Emissions:</b><br>Except when the requirements applicable to a given device state otherwise, for any radio apparatus equipped to operate from the public utility AC power supply, either directly or indirectly (such as with a battery charger), the radio frequency voltage of emissions conducted back onto the AC power lines in the frequency range of 0.15 MHz to 30 MHz shall not exceed the limits shown in the table in these sections. The more stringent limit applies at the frequency range boundaries. | Pass   |

\* MPE calculation is recorded in a separate report



## Section 4: Sample Details

Note: Each sample was evaluated to ensure that its condition was suitable to be used as a test sample prior to the commencement of testing.

### 4.1 Sample Details

| Sample No. | Equipment Details         | Manufacturer  | Hardware Rev. | Firmware Rev.     | Software Rev. | Serial Number      |
|------------|---------------------------|---------------|---------------|-------------------|---------------|--------------------|
| S01        | AIR-AP3802E-B-K9 Series   | Cisco Systems | 01            | Linux ver 3.14.33 | U-boot        | FOC1945132D        |
| S02*       | PWR-CUBE-B 341-100460-001 | Delta         | A0            | NA                | NA            | Engineering sample |

(\*) S02 are support equipment Power supplies for EUT S01

### 4.2 System Details

| System # | Description             | Samples |
|----------|-------------------------|---------|
| 1        | AIR-AP3802E-B-K9 Series | S01     |
| 2        | PWR-CUBE-B              | S02     |

### 4.3 Mode of Operation Details

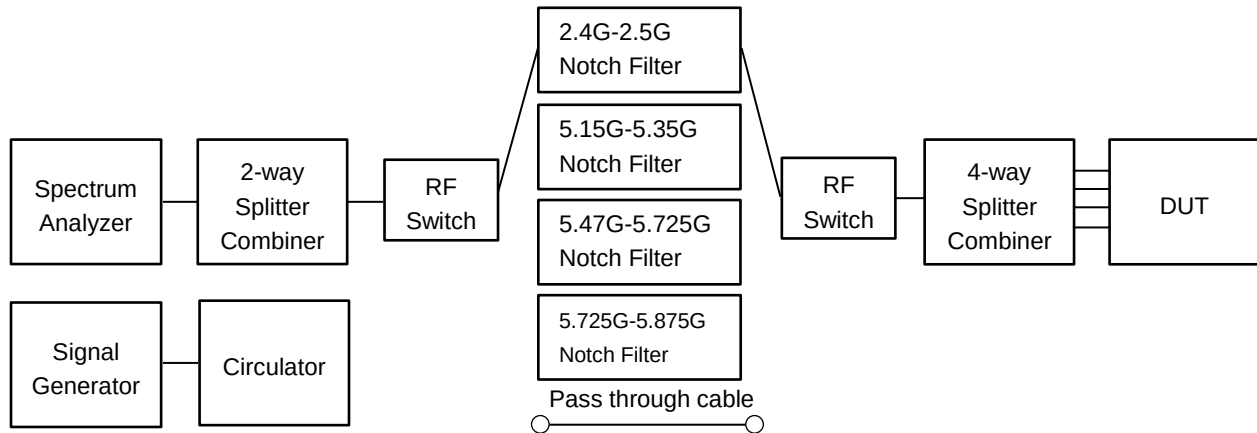
| Mode# | Description             | Comments                                |
|-------|-------------------------|-----------------------------------------|
| 1     | Continuous Transmitting | Continuous Transmitting ≥98% duty cycle |

All measurements were made in accordance with

- ANSI C63.10:2013
- KDB 789033 D02 General UNII Test Procedures New Rules v01r01
- KDB 662911 D01 Multiple Transmitter Output v02r01

## Appendix A: Emission Test Results

### Conducted Test Setup Diagram



### Target Maximum Channel Power

The following table details the maximum supported Total Channel Power for all operating modes.

| Operating Mode                                   | Maximum Channel Power (dBm) |      |      |
|--------------------------------------------------|-----------------------------|------|------|
|                                                  | Frequency (MHz)             |      |      |
|                                                  | 5745                        | 5785 | 5825 |
| Non HT20, 6 to 54 Mbps                           | 15                          | 23   | 16   |
| Non HT20 Beam Forming, 6 to 54 Mbps              | 12                          | 23   | 13   |
| HT/VHT20, M0 to M23, M0 to M9 1-0ss              | 16                          | 23   | 16   |
| HT/VHT20 Beam Forming, M0 to M23, M0 to M9 1-0ss | 16                          | 23   | 16   |
| HT/VHT20 STBC, M0 to M7                          | 16                          | 23   | 16   |
|                                                  | 5755                        | 5795 |      |
| Non HT40, 6 to 54 Mbps                           | 8                           | 22   |      |
| HT/VHT40, M0 to M23, M0 to M9 1-0ss              | 15                          | 23   |      |
| HT/VHT40 Beam Forming, M0 to M23, M0 to M9 1-0ss | 13                          | 23   |      |
| HT/VHT40 STBC, M0 to M7                          | 13                          | 23   |      |
|                                                  | 5775                        |      |      |
| Non HT80, 6 to 54 Mbps                           | 14                          |      |      |
| VHT80, M0 to M9, M0 to M9 1-0ss                  | 18                          |      |      |
| VHT80 Beam Forming, M0 to M9, M0 to M9 1-0ss     | 18                          |      |      |
| VHT80 STBC, M0.1 to M9.1                         | 18                          |      |      |

## A.1 6dB Bandwidth

**15.407** Within the 5.725-5.85 GHz band, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.

### Test Procedure

**Ref.** KDB 789033 D02 General UNII Test Procedures New Rules v01r01  
ANSI C63.10: 2013

#### 6 BW

##### Test Procedure

1. Set the radio in the continuous transmitting mode.
2. Allow the trace to stabilize.
3. Setting the x-dB bandwidth mode to -6dB within the measurement set up function.
4. Select the automatic OBW measurement function of an instrument to perform bandwidth measurement.
5. Capture graphs and record pertinent measurement data.

**Ref.** KDB 789033 D02 General UNII Test Procedures New Rules v01r01  
ANSI C63.10: 2013 section 11.8.2 Option 2

#### 6 BW

##### Test parameters

X dB BW = 6dB (using the OBW function of the spectrum analyzer)  
Span = Large enough to capture the entire EBW  
RBW = 100 KHz  
VBW  $\geq 3 \times$  RBW  
Sweep = Auto couple  
Detector = Peak or where practical sample shall be used  
Trace = Max. Hold

| System Number | Description | Samples | System under test                   | Support equipment                   |
|---------------|-------------|---------|-------------------------------------|-------------------------------------|
| 1             | EUT         | S01     | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
|               | Support     | S02     | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

#### Tested By :

Jose Aguirre

#### Date of testing:

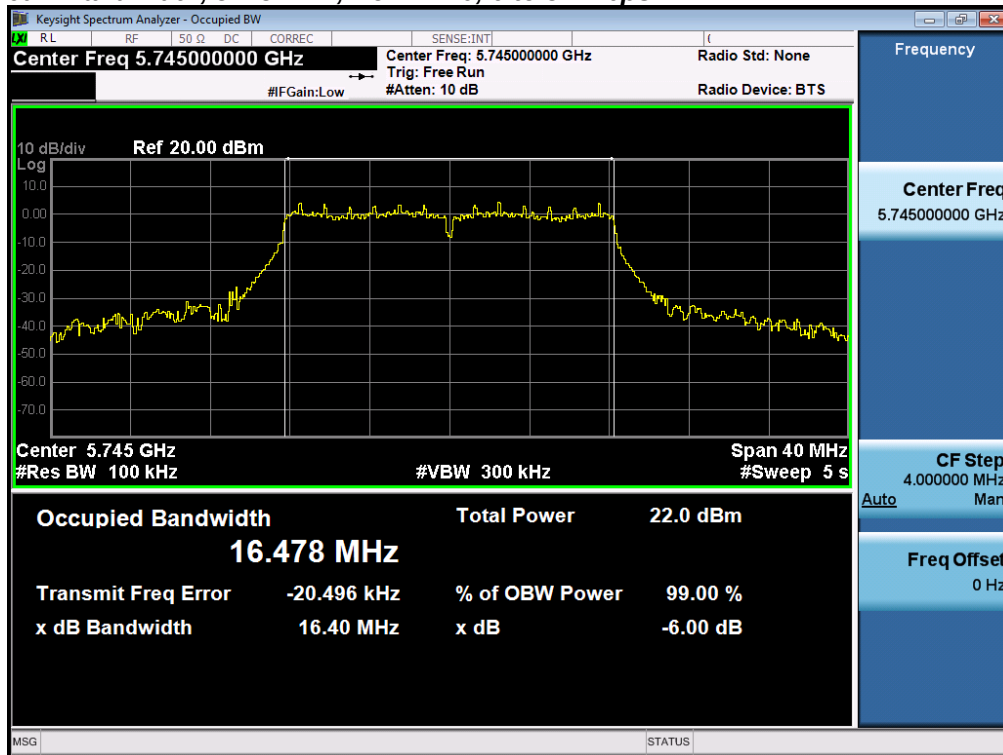
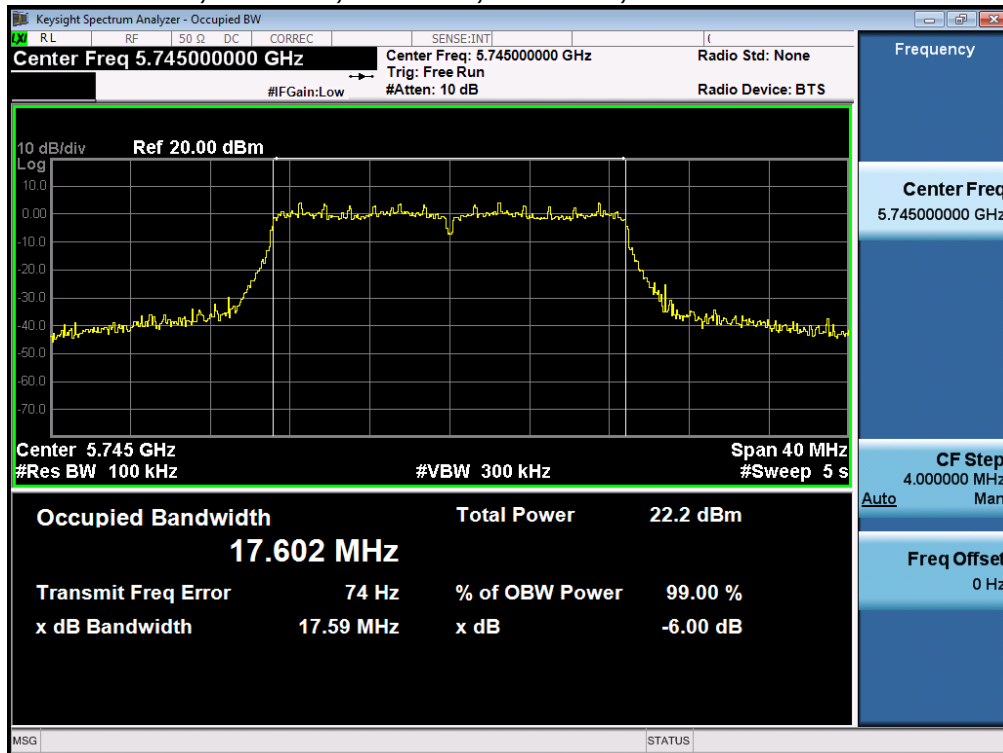
01-Jan-16 - 03-Mar-16

#### Test Result : PASS

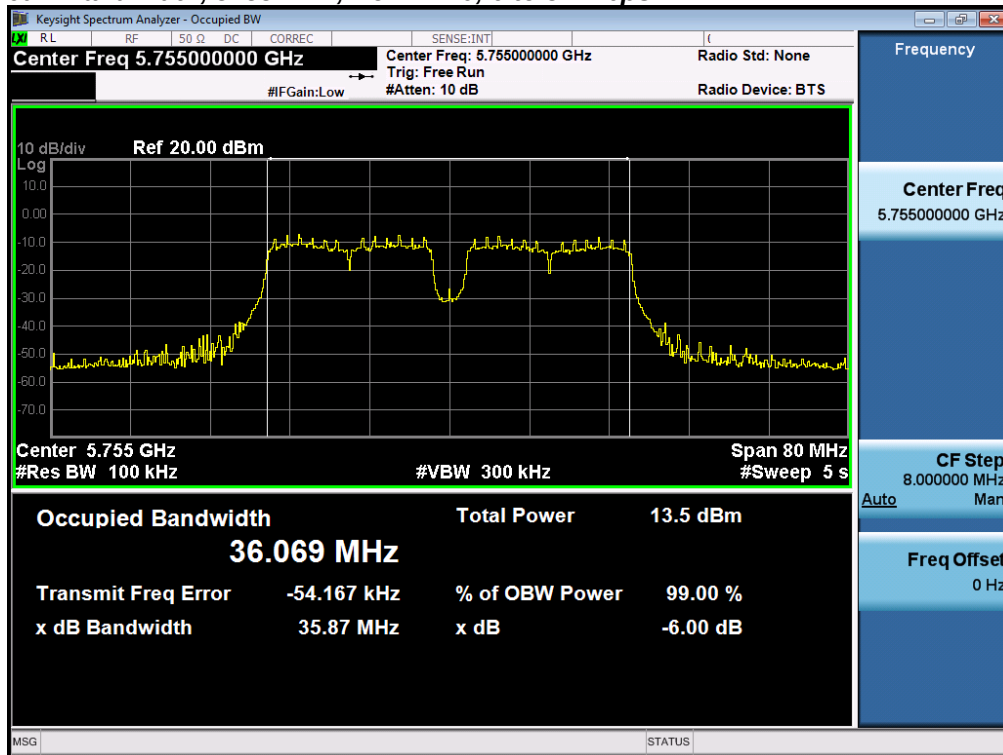
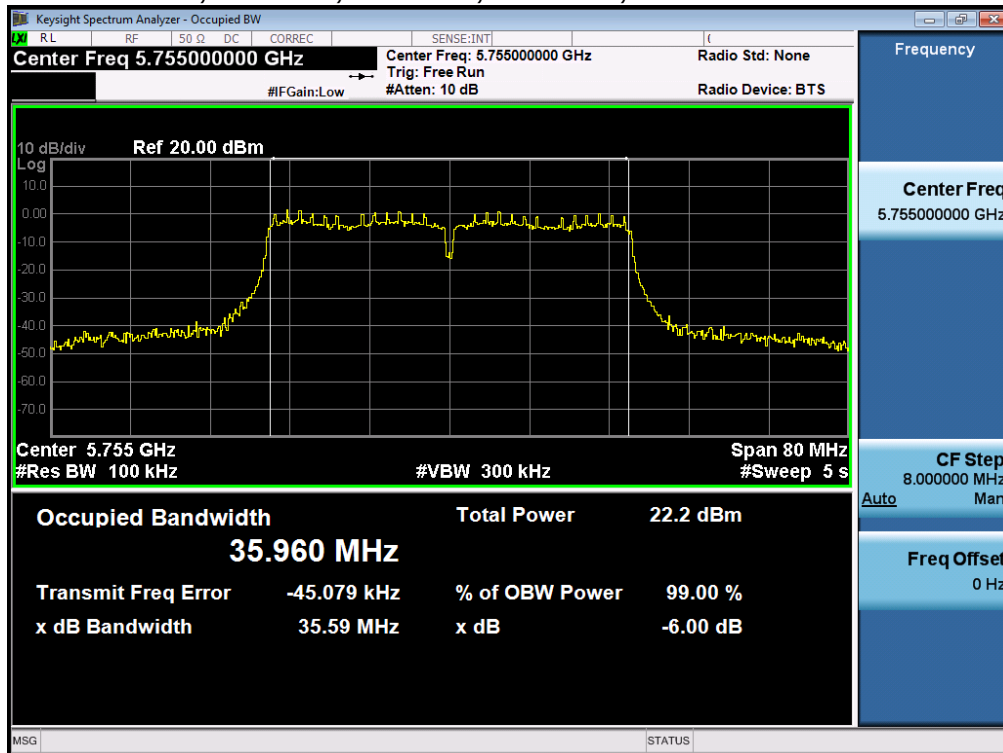
See Appendix C for list of test equipment

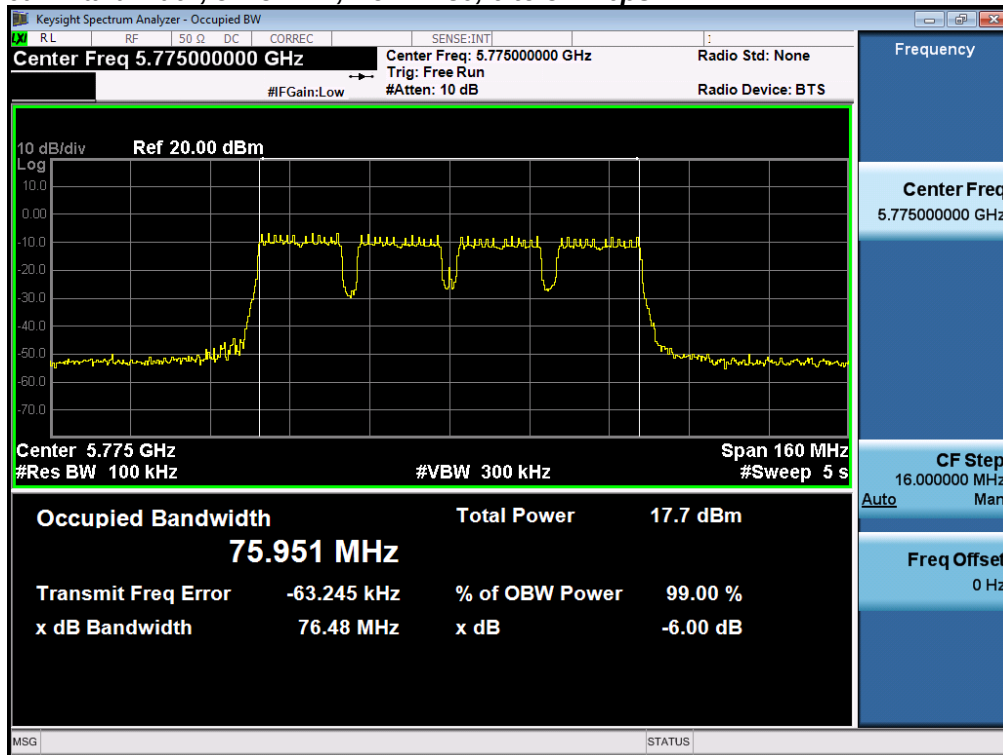
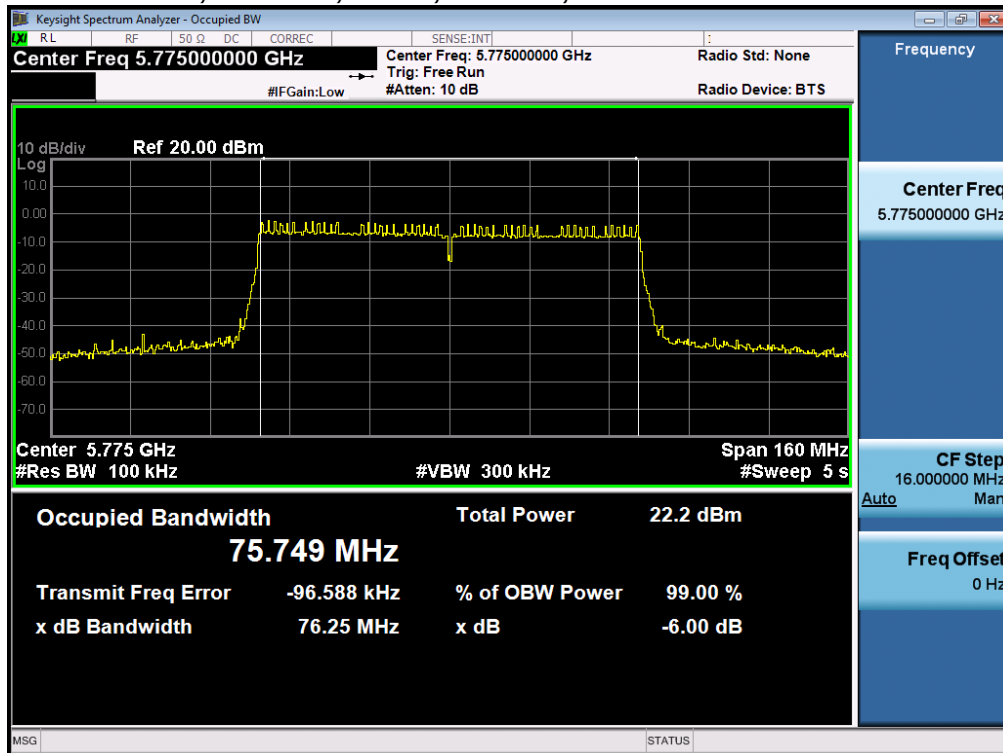


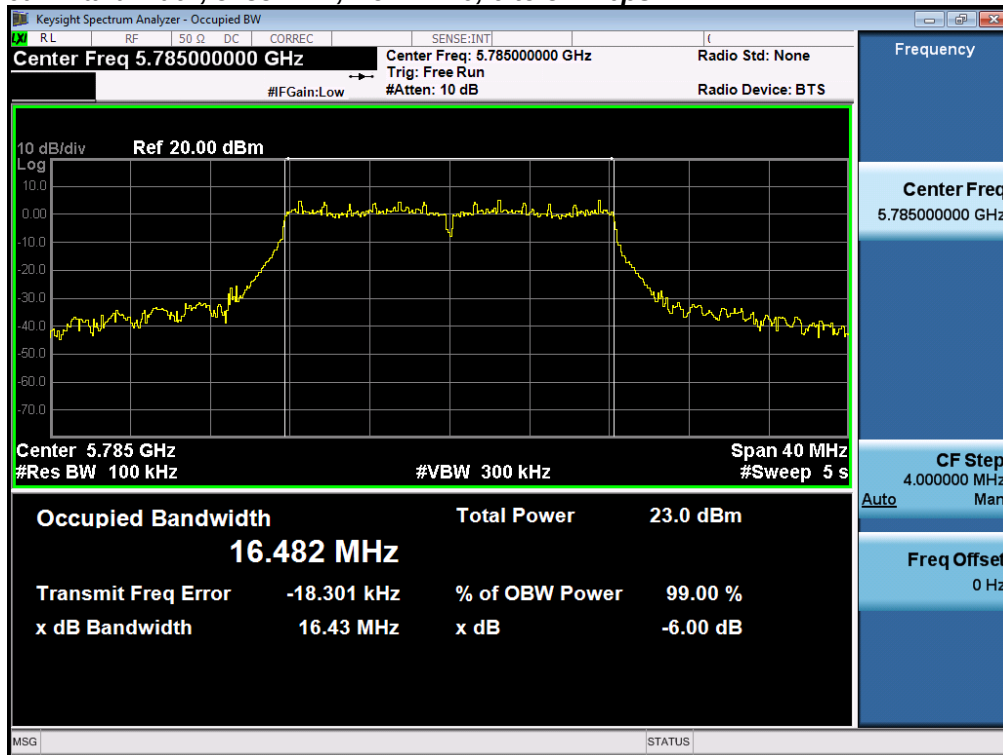
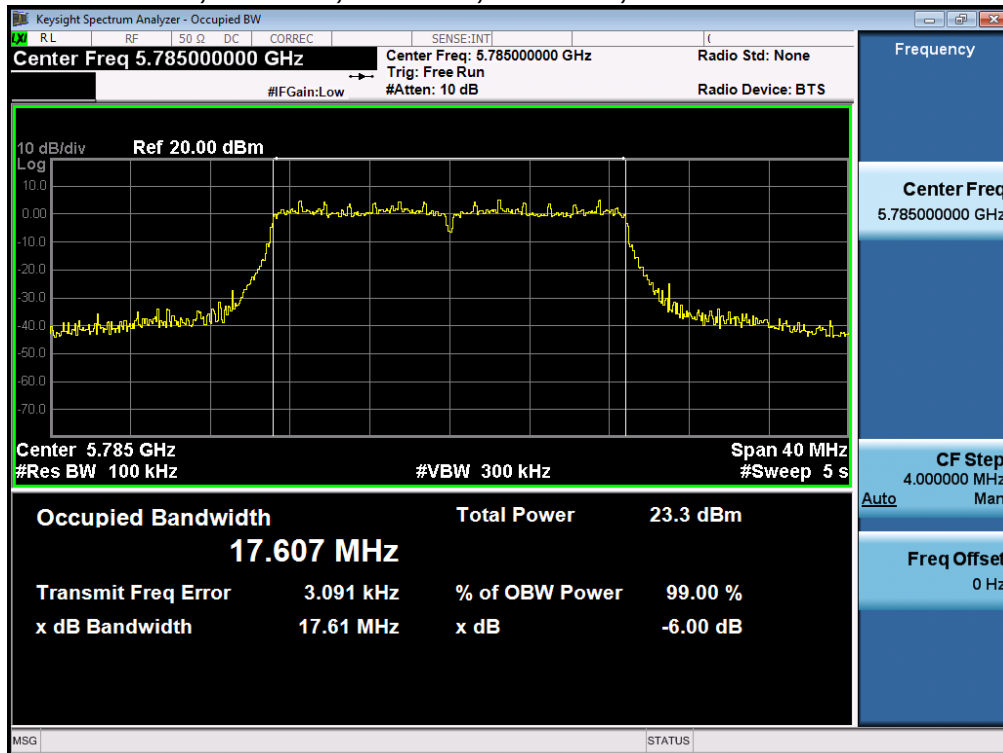
| Frequency (MHz) | Mode                                | Data Rate (Mbps) | 6dB BW (MHz) | Limit (kHz) | Margin (MHz) |
|-----------------|-------------------------------------|------------------|--------------|-------------|--------------|
| 5745            | Non HT20, 6 to 54 Mbps              | 6                | 16.4         | >500        | 15.9         |
|                 | HT/VHT20, M0 to M23, M0 to M9 1-0ss | m0               | 17.6         | >500        | 17.1         |
| 5755            | Non HT40, 6 to 54 Mbps              | 6                | 35.9         | >500        | 35.4         |
|                 | HT/VHT40, M0 to M23, M0 to M9 1-0ss | m0               | 35.6         | >500        | 35.1         |
| 5775            | Non HT80, 6 to 54 Mbps              | 6                | 76.5         | >500        | 76.0         |
|                 | VHT80, M0 to M9, M0 to M9 1-0ss     | m0x1             | 76.2         | >500        | 75.7         |
| 5785            | Non HT20, 6 to 54 Mbps              | 6                | 16.4         | >500        | 15.9         |
|                 | HT/VHT20, M0 to M23, M0 to M9 1-0ss | m0               | 17.6         | >500        | 17.1         |
| 5795            | Non HT40, 6 to 54 Mbps              | 6                | 35.8         | >500        | 35.3         |
|                 | HT/VHT40, M0 to M23, M0 to M9 1-0ss | m0               | 35.6         | >500        | 35.1         |
| 5825            | Non HT20, 6 to 54 Mbps              | 6                | 16.4         | >500        | 15.9         |
|                 | HT/VHT20, M0 to M23, M0 to M9 1-0ss | m0               | 17.6         | >500        | 17.1         |

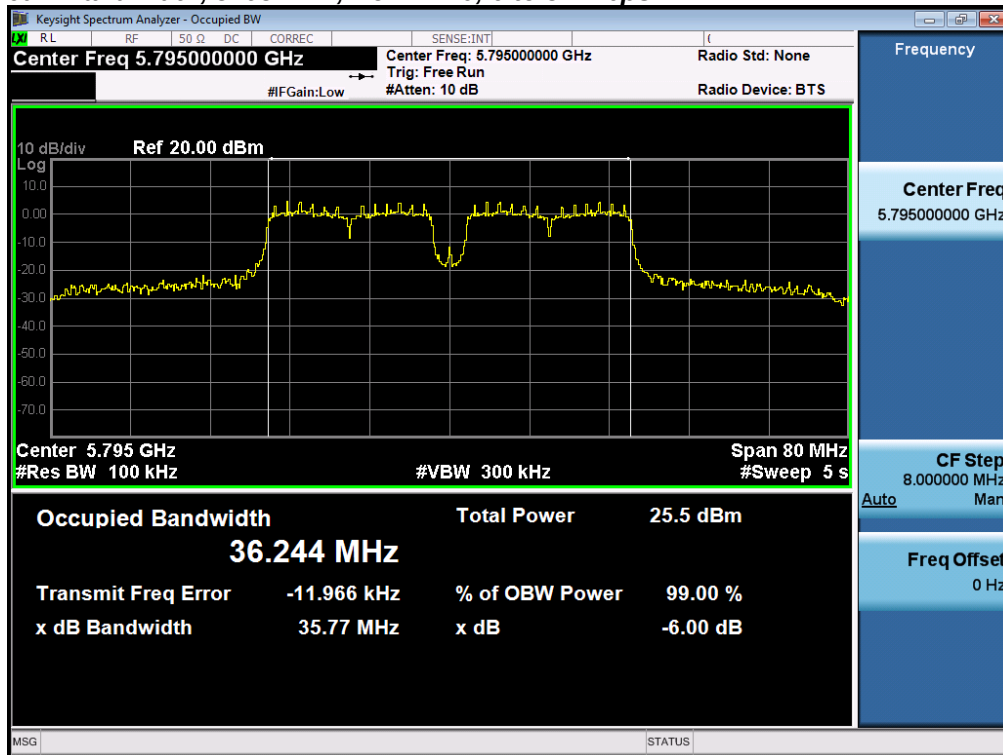
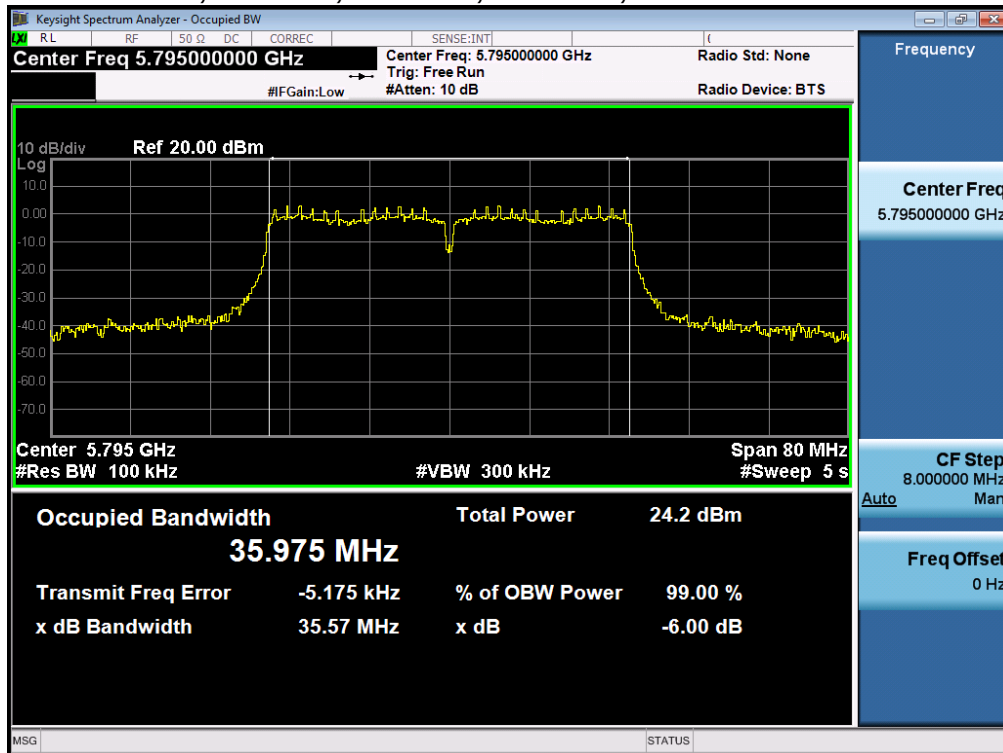
**6dB Bandwidth, 5745 MHz, Non HT20, 6 to 54 Mbps****6dB Bandwidth, 5745 MHz, HT/VHT20, M0 to M23, M0 to M9 1-0ss**

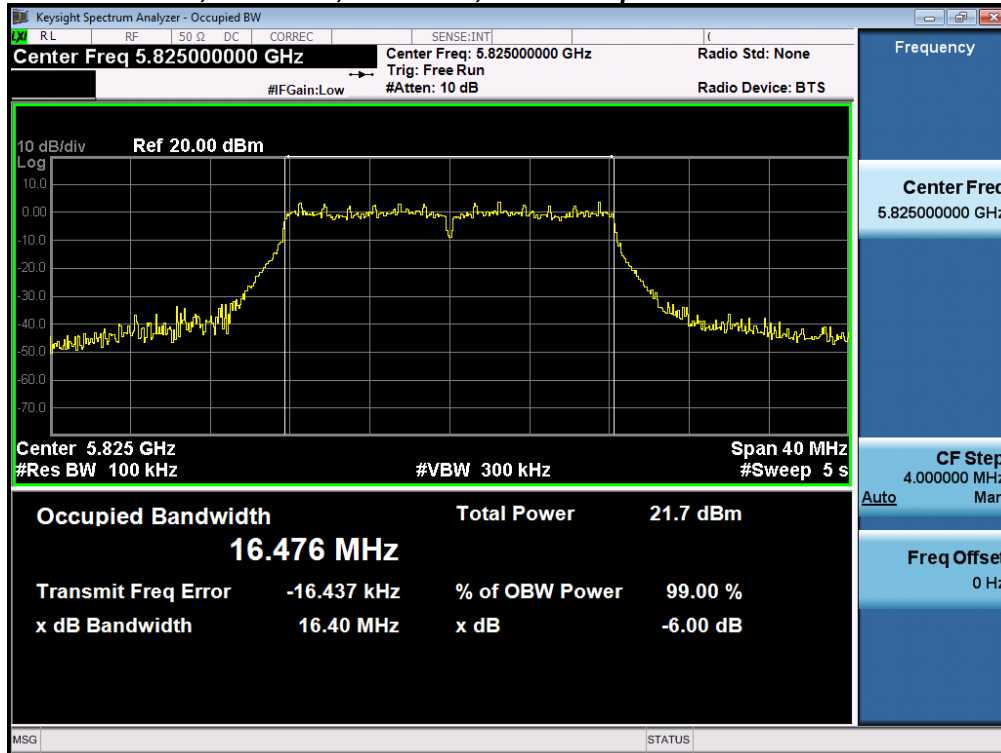
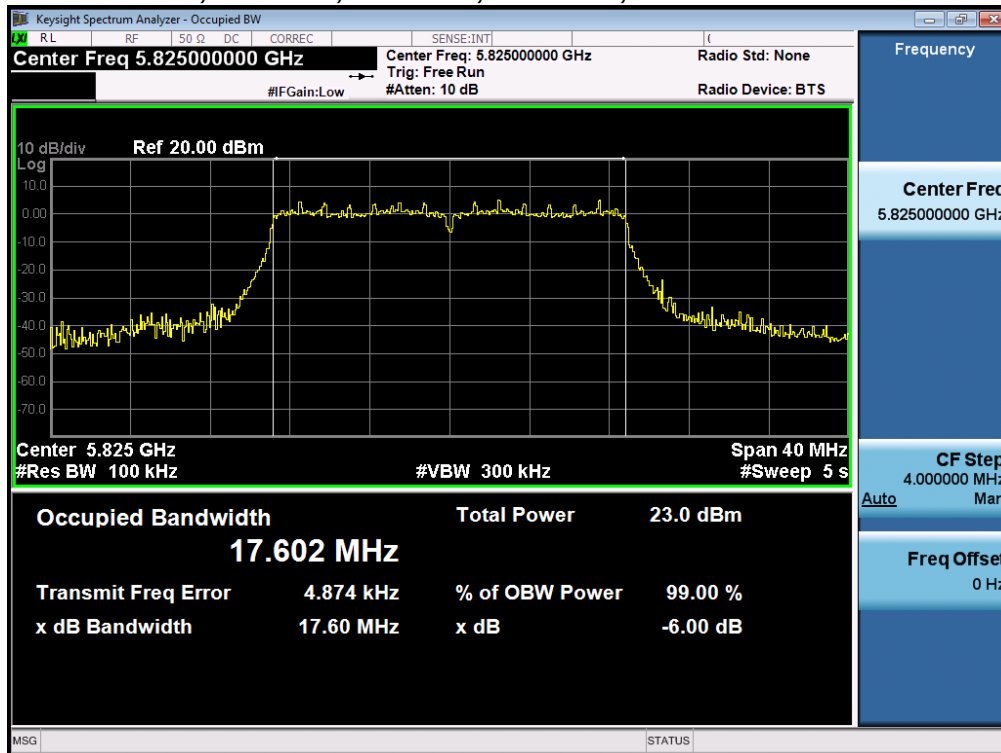


**6dB Bandwidth, 5755 MHz, Non HT40, 6 to 54 Mbps****6dB Bandwidth, 5755 MHz, HT/VHT40, M0 to M23, M0 to M9 1-0ss**

**6dB Bandwidth, 5775 MHz, Non HT80, 6 to 54 Mbps****6dB Bandwidth, 5775 MHz, VHT80, M0 to M9, M0 to M9 1-0ss**

**6dB Bandwidth, 5785 MHz, Non HT20, 6 to 54 Mbps****6dB Bandwidth, 5785 MHz, HT/VHT20, M0 to M23, M0 to M9 1-0ss**

**6dB Bandwidth, 5795 MHz, Non HT40, 6 to 54 Mbps****6dB Bandwidth, 5795 MHz, HT/VHT40, M0 to M23, M0 to M9 1-0ss**

**6dB Bandwidth, 5825 MHz, Non HT20, 6 to 54 Mbps****6dB Bandwidth, 5825 MHz, HT/VHT20, M0 to M23, M0 to M9 1-0ss**

## A.2 99% and 26dB Bandwidth

**FCC 15.407** The 99% occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers are each equal to 0.5% of the total mean power of the given emission. There is no limit for 99% OBW.

The 26 dB emission is the width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 26 dB relative to the maximum level measured in the fundamental emission.

### Test Procedure

Ref. ANSI C63.10: 2013 Section 6.9.3

#### 99% BW and EBW (-26dB)

##### Test Procedure

1. Set the radio in the continuous transmitting mode.
2. Allow the trace to stabilize.
3. Setting the x-dB bandwidth mode to -26dB and OBW power function to 99% within the measurement set up function.
4. Select the automatic OBW measurement function of an instrument to perform bandwidth measurement.
5. Capture graphs and record pertinent measurement data.

Ref. ANSI C63.10: 2013 Section 6.9.3

#### 99% BW and EBW (-26dB)

##### Test parameters

Span = 1.5 x to 5.0 times OBW

RBW = approx. 1% to 5% of the OBW

VBW  $\geq 3 \times$  RBW

Detector = Peak or where practical sample shall be used

Trace = Max. Hold

| System Number | Description | Samples | System under test                   | Support equipment                   |
|---------------|-------------|---------|-------------------------------------|-------------------------------------|
| 1             | EUT         | S01     | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
|               | Support     | S02     | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

#### Tested By :

Jose Aguirre

#### Date of testing:

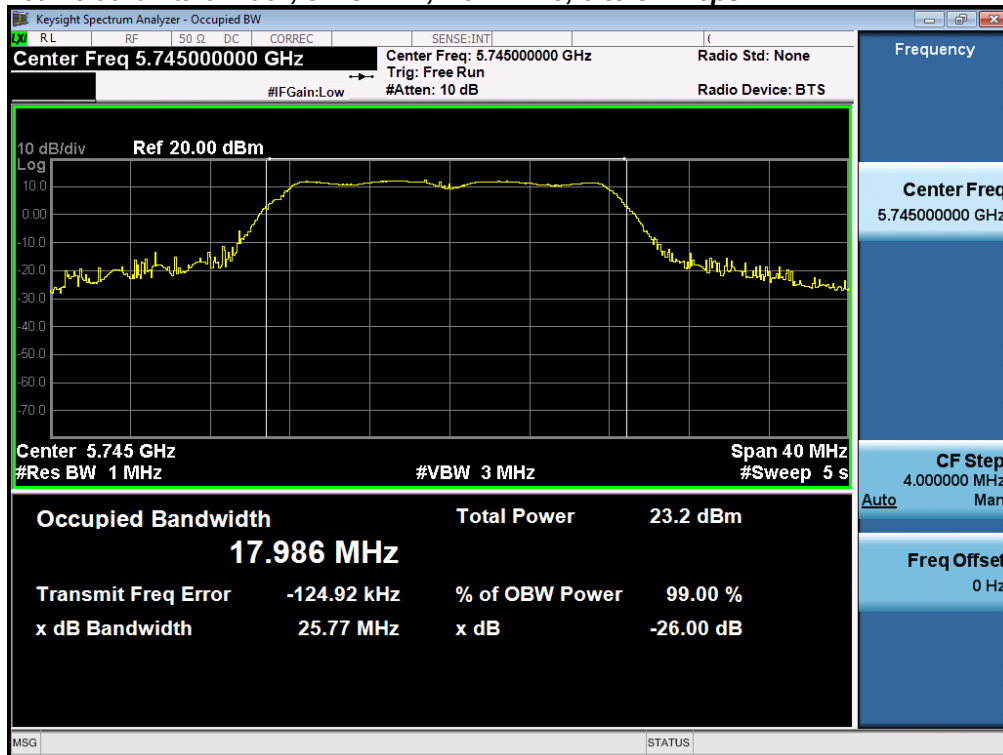
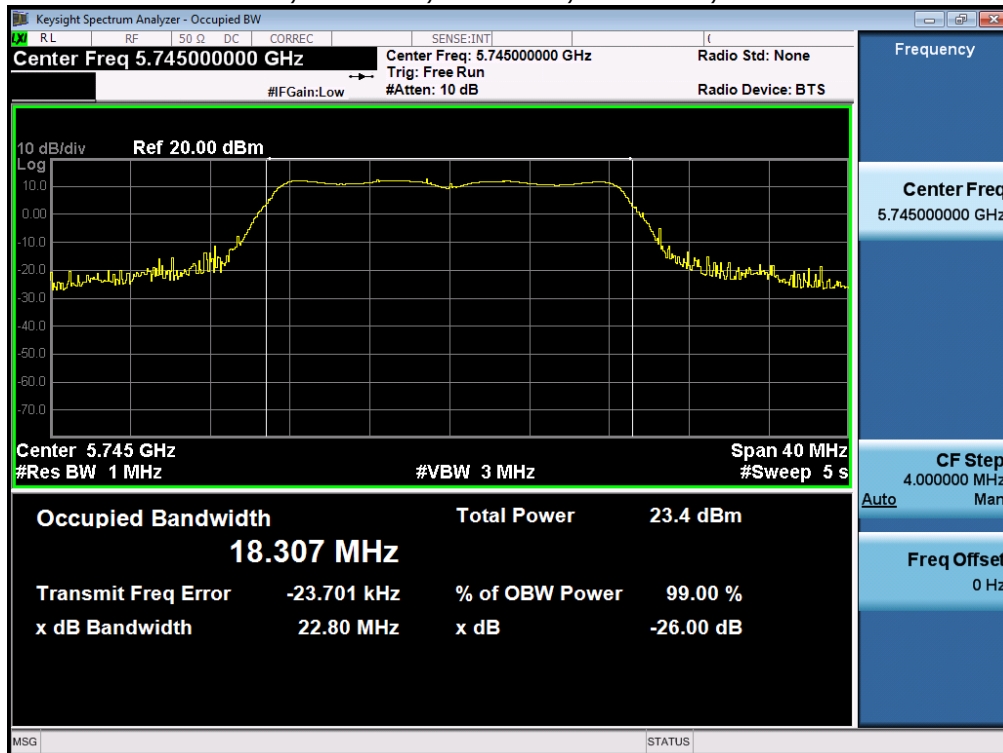
01-Jan-16 - 03-Mar-16

#### Test Result : PASS

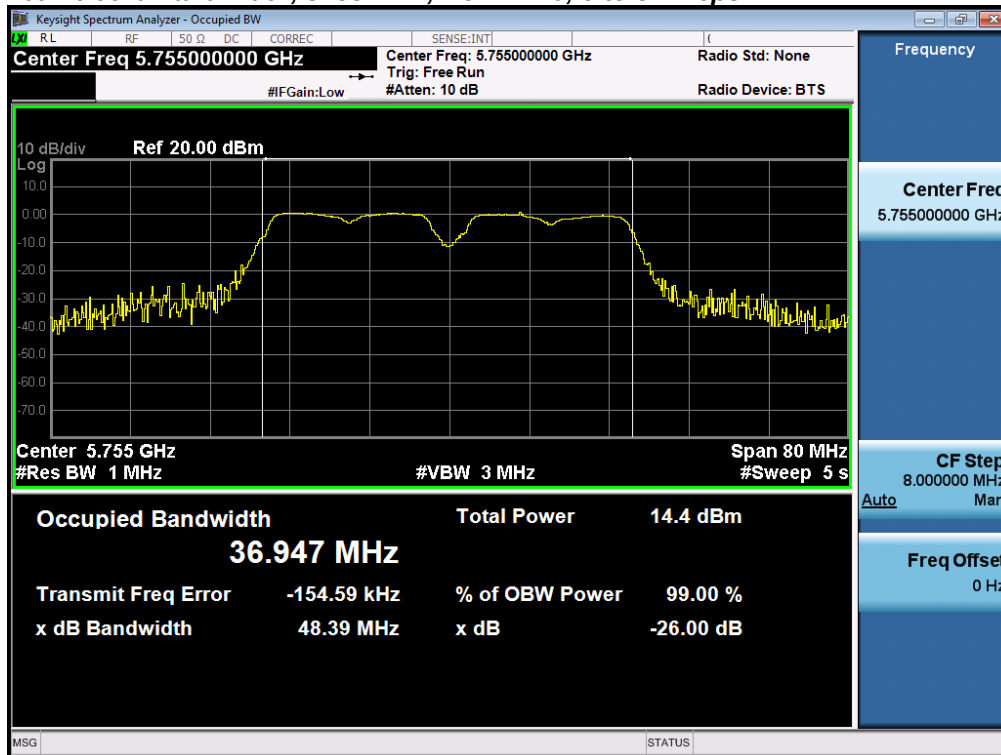
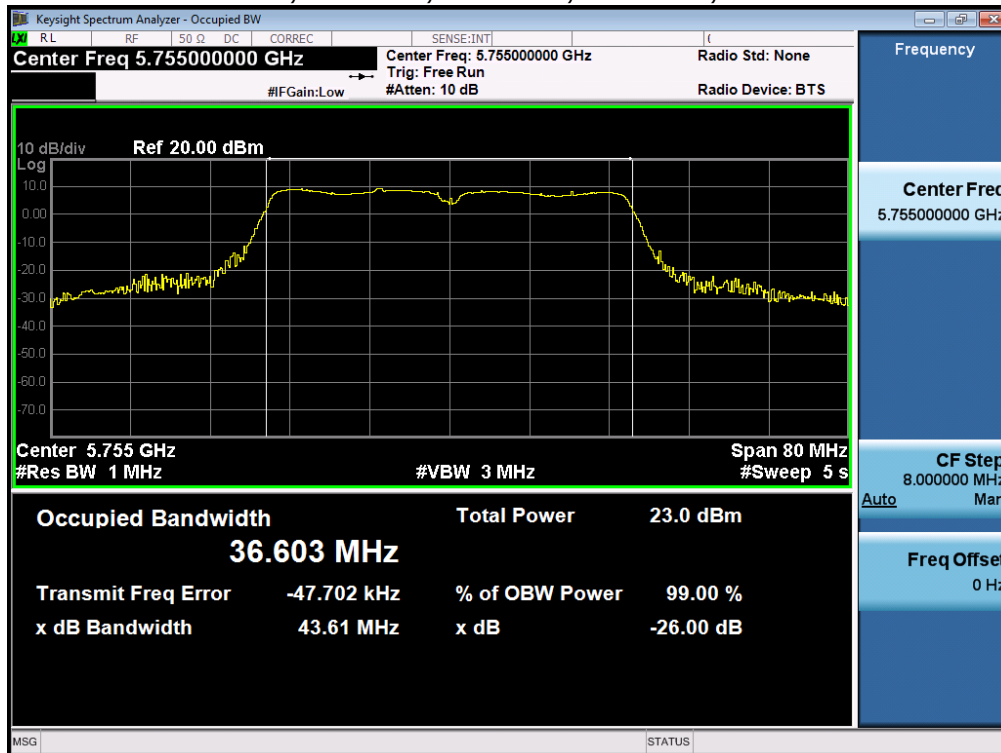
See Appendix C for list of test equipment

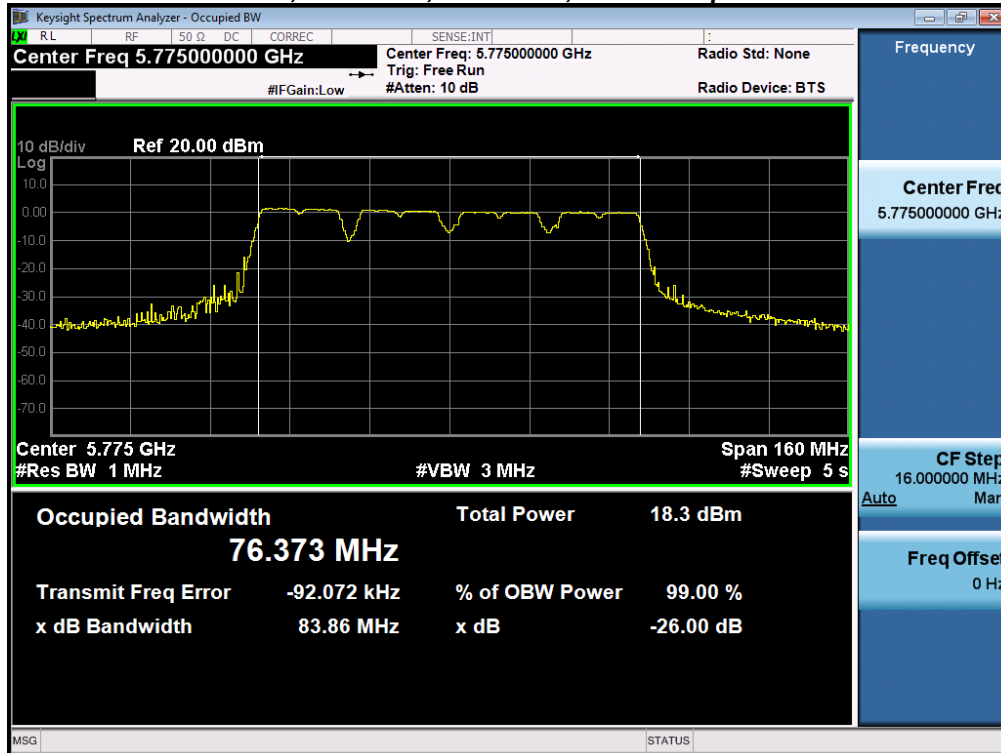
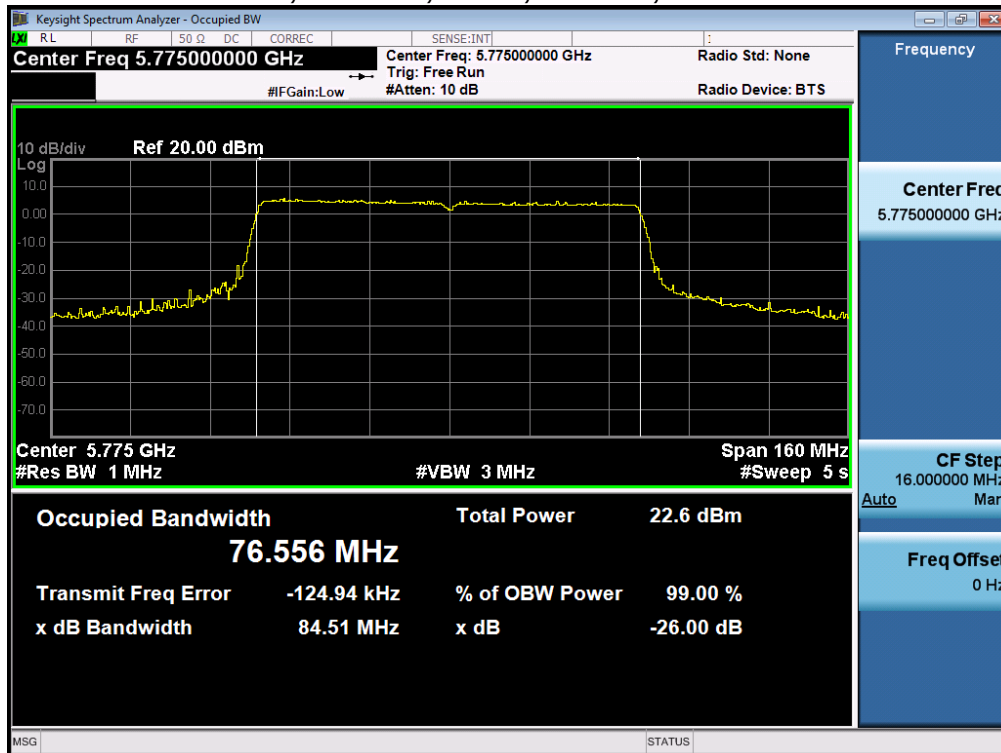


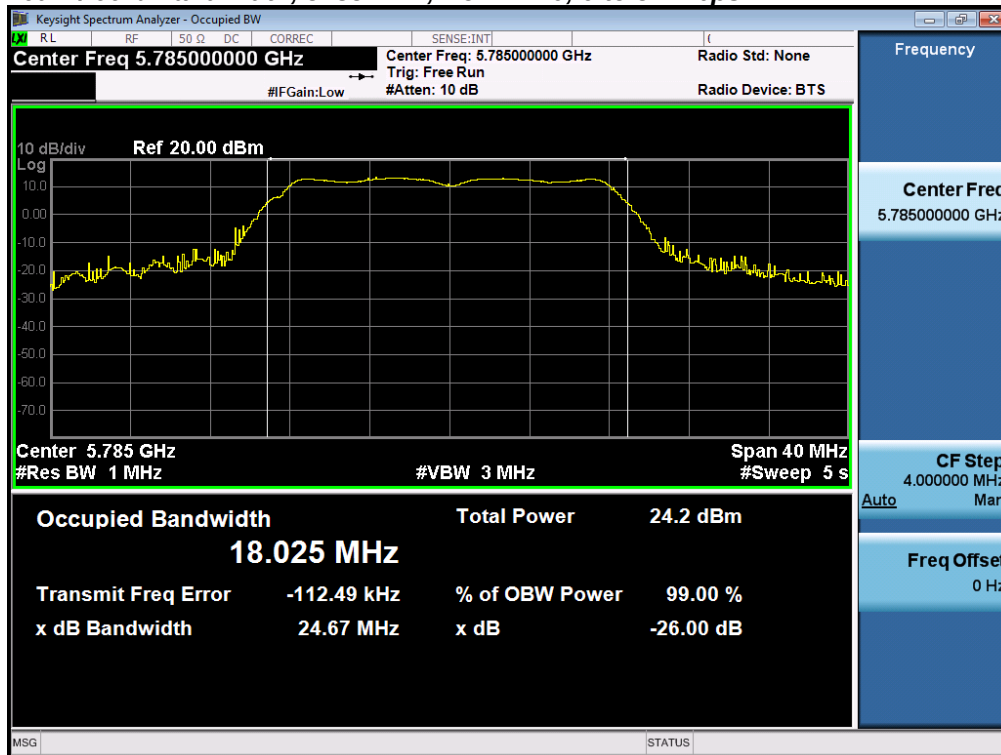
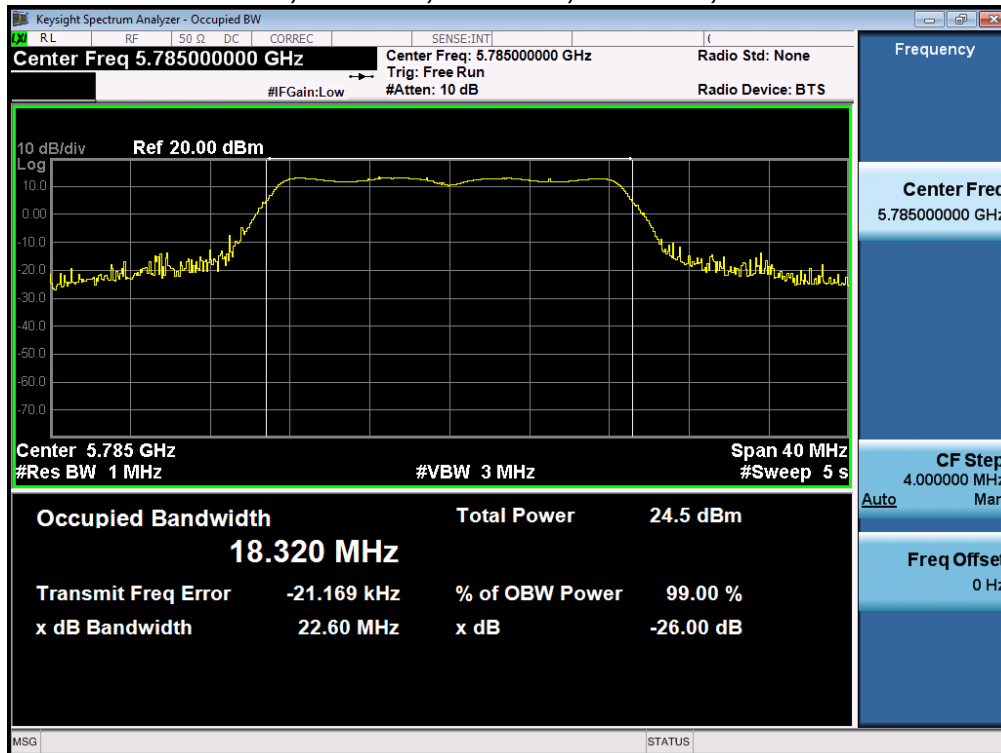
| Frequency (MHz) | Mode                                | Data Rate (Mbps) | 26dB BW (MHz) | 99% BW (MHz) |
|-----------------|-------------------------------------|------------------|---------------|--------------|
| 5745            | Non HT20, 6 to 54 Mbps              | 6                | 25.8          | 18.0         |
|                 | HT/VHT20, M0 to M23, M0 to M9 1-0ss | m0               | 22.8          | 18.3         |
| 5755            | Non HT40, 6 to 54 Mbps              | 6                | 48.4          | 36.9         |
|                 | HT/VHT40, M0 to M23, M0 to M9 1-0ss | m0               | 43.6          | 36.6         |
| 5775            | Non HT80, 6 to 54 Mbps              | 6                | 83.9          | 76.4         |
|                 | VHT80, M0 to M9, M0 to M9 1-0ss     | m0x1             | 84.5          | 76.6         |
| 5785            | Non HT20, 6 to 54 Mbps              | 6                | 24.0          | 18.0         |
|                 | HT/VHT20, M0 to M23, M0 to M9 1-0ss | m0               | 23.5          | 18.3         |
| 5795            | Non HT40, 6 to 54 Mbps              | 6                | 76.2          | 38.3         |
|                 | HT/VHT40, M0 to M23, M0 to M9 1-0ss | m0               | 43.8          | 36.6         |
| 5825            | Non HT20, 6 to 54 Mbps              | 6                | 22.1          | 17.9         |
|                 | HT/VHT20, M0 to M23, M0 to M9 1-0ss | m0               | 26.6          | 18.3         |

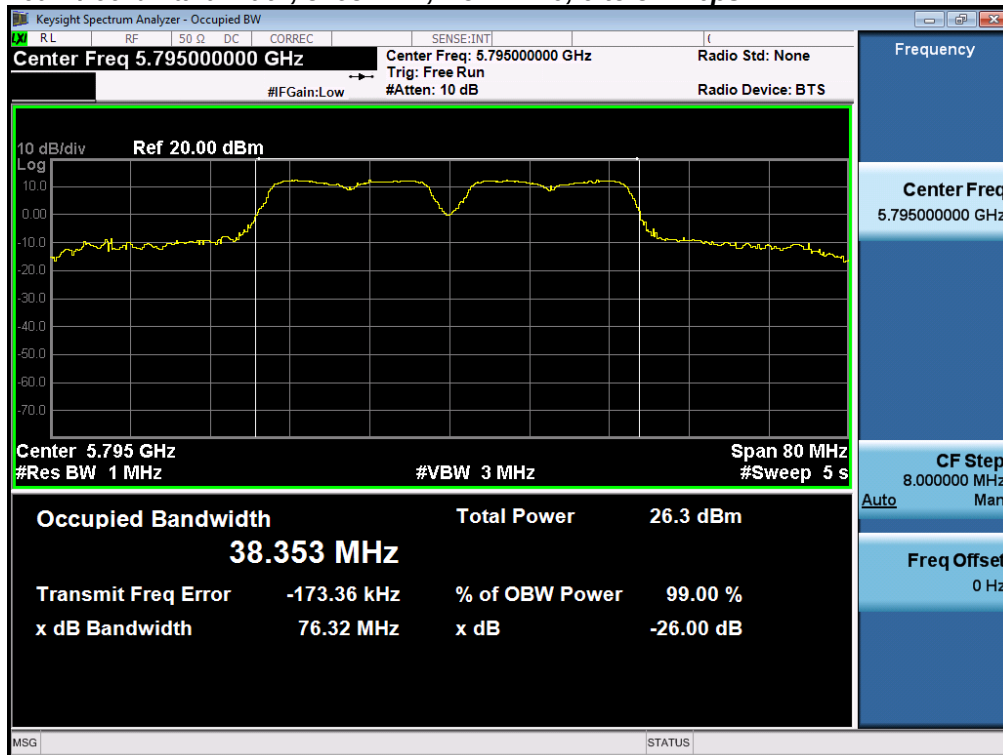
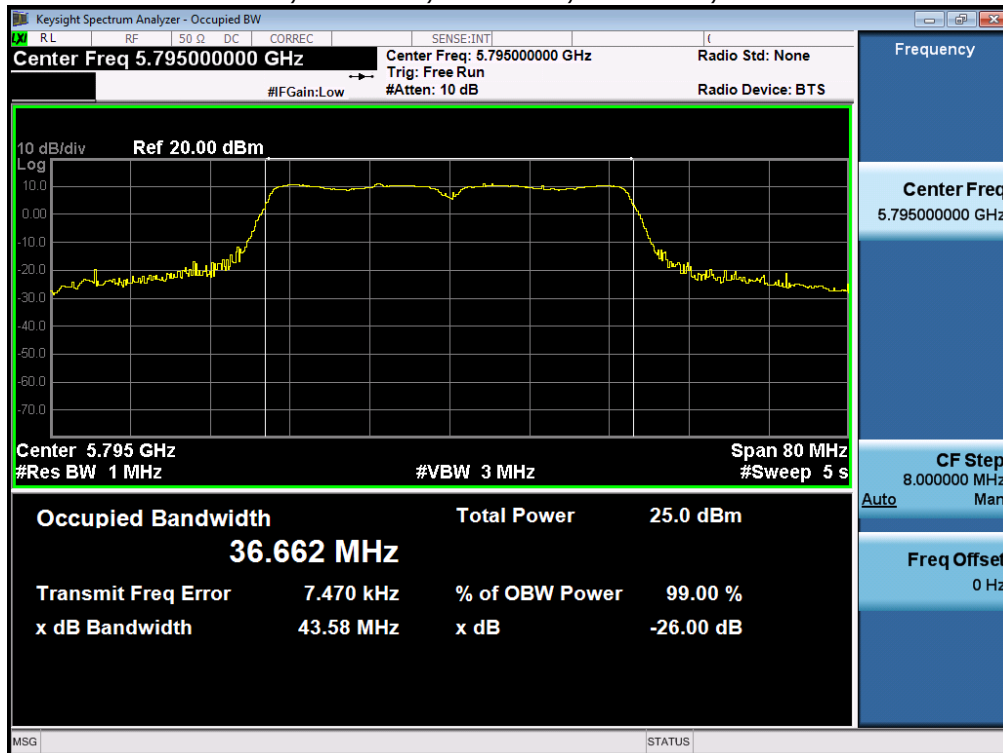
**26dB / 99% Bandwidth, 5745 MHz, Non HT20, 6 to 54 Mbps****26dB / 99% Bandwidth, 5745 MHz, HT/VHT20, M0 to M23, M0 to M9 1-0ss**

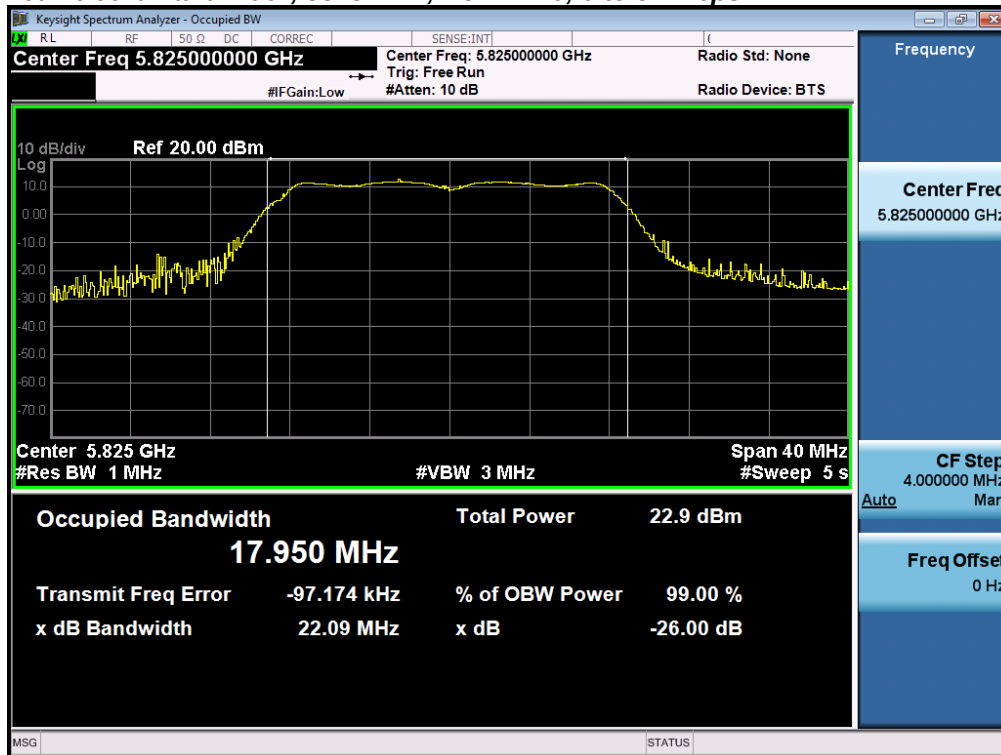
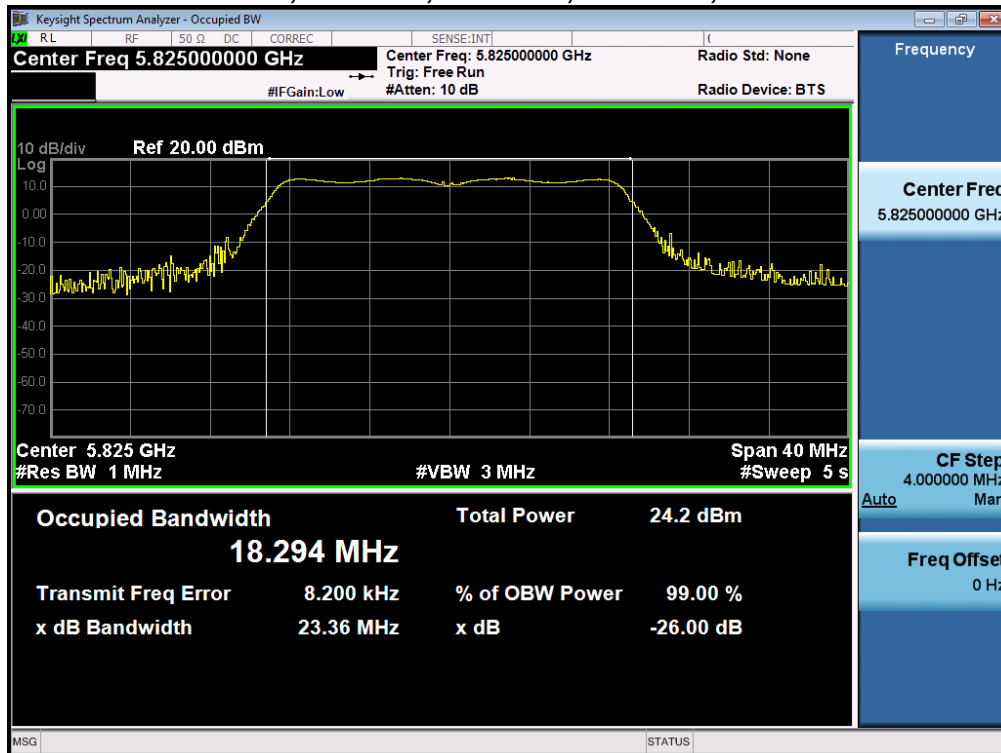


**26dB / 99% Bandwidth, 5755 MHz, Non HT40, 6 to 54 Mbps****26dB / 99% Bandwidth, 5755 MHz, HT/VHT40, M0 to M23, M0 to M9 1-0ss**

**26dB / 99% Bandwidth, 5775 MHz, Non HT80, 6 to 54 Mbps****26dB / 99% Bandwidth, 5775 MHz, VHT80, M0 to M9, M0 to M9 1-0ss**

**26dB / 99% Bandwidth, 5785 MHz, Non HT20, 6 to 54 Mbps****26dB / 99% Bandwidth, 5785 MHz, HT/VHT20, M0 to M23, M0 to M9 1-0ss**

**26dB / 99% Bandwidth, 5795 MHz, Non HT40, 6 to 54 Mbps****26dB / 99% Bandwidth, 5795 MHz, HT/VHT40, M0 to M23, M0 to M9 1-0ss**

**26dB / 99% Bandwidth, 5825 MHz, Non HT20, 6 to 54 Mbps****26dB / 99% Bandwidth, 5825 MHz, HT/VHT20, M0 to M23, M0 to M9 1-0ss**



### A.3 Maximum Conducted Output Power

**15.407** (3) For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

#### Test Procedure

Ref. KDB 789033 D02 General UNII Test Procedures New Rules v01r01  
ANSI C63.10: 2013

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Output Power</b><br>Test Procedure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <ol style="list-style-type: none"> <li>1. Set the radio in the continuous transmitting mode at full power</li> <li>2. Compute power by integrating the spectrum across the EBW (or alternatively entire 99% OBW) of the signal using the instrument's band power measurement function. The integration shall be performed using the spectrum analyzer band-power measurement function with band limits set equal to the EBW or the OBW band edges.</li> <li>3. Capture graphs and record pertinent measurement data.</li> </ol> |

Ref. KDB 789033 D02 General UNII Test Procedures New Rules v01r01  
ANSI C63.10: 2013 section 12.3.2.2 Method SA-1

|                                                                                                                                   |
|-----------------------------------------------------------------------------------------------------------------------------------|
| <b>Output Power</b><br>Test parameters                                                                                            |
| Span = >1.5 times the OBW<br>RBW = 1MHz<br>VBW ≥ 3 x RBW<br>Sweep = Auto couple<br>Detector = sample<br>Trace = Trace Average 100 |

The "measure-and-sum technique" is used for measuring in-band transmit power of a device. In the measure-and-sum approach, the conducted emission level is measured at each antenna port. The measured results at the various antenna ports are then summed mathematically to determine the total emission level from the device. Summing is performed in linear power units. (See ANSI C63.10 section 14.3.2.2)

| System Number | Description | Samples | System under test                   | Support equipment                   |
|---------------|-------------|---------|-------------------------------------|-------------------------------------|
| 1             | EUT         | S01     | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
|               | Support     | S02     | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

|                                    |                                                  |
|------------------------------------|--------------------------------------------------|
| <b>Tested By :</b><br>Jose Aguirre | <b>Date of testing:</b><br>01-Jan-16 - 03-Mar-16 |
| <b>Test Result : PASS</b>          |                                                  |

See Appendix C for list of test equipment



| Frequency (MHz) | Mode                                | Tx Paths | Correlated Antenna Gain (dBi) | Tx 1 Max Power (dBm) | Tx 2 Max Power (dBm) | Tx 3 Max Power (dBm) | Tx 4 Max Power (dBm) | Total Tx Channel Power (dBm) | Limit (dBm) | Margin (dB) |
|-----------------|-------------------------------------|----------|-------------------------------|----------------------|----------------------|----------------------|----------------------|------------------------------|-------------|-------------|
| 5745            | Non HT20, 6 to 54 Mbps              | 1        | 6                             | 15.2                 |                      |                      |                      | 15.2                         | 30.0        | 14.8        |
|                 | Non HT20, 6 to 54 Mbps              | 2        | 6                             | 12.1                 | 11.2                 |                      |                      | 14.7                         | 30.0        | 15.3        |
|                 | Non HT20, 6 to 54 Mbps              | 3        | 6                             | 10.2                 | 9.3                  | 8.6                  |                      | 14.2                         | 30.0        | 15.8        |
|                 | Non HT20, 6 to 54 Mbps              | 4        | 6                             | 9.3                  | 8.3                  | 7.7                  | 9.1                  | 14.7                         | 30.0        | 15.3        |
|                 | Non HT20 Beam Forming, 6 to 54 Mbps | 2        | 9                             | 9.3                  | 8.3                  |                      |                      | 11.8                         | 27.0        | 15.2        |
|                 | Non HT20 Beam Forming, 6 to 54 Mbps | 3        | 11                            | 6.2                  | 5.1                  | 4.7                  |                      | 10.2                         | 25.0        | 14.8        |
|                 | Non HT20 Beam Forming, 6 to 54 Mbps | 4        | 12                            | 3.3                  | 2.2                  | 1.8                  | 3.1                  | 8.7                          | 24.0        | 15.3        |
|                 | HT/VHT20, M0 to M7                  | 1        | 6                             | 15.3                 |                      |                      |                      | 15.3                         | 30.0        | 14.7        |
|                 | HT/VHT20, M0 to M7                  | 2        | 6                             | 13.1                 | 12.3                 |                      |                      | 15.7                         | 30.0        | 14.3        |
|                 | HT/VHT20, M8 to M15                 | 2        | 6                             | 13.1                 | 12.3                 |                      |                      | 15.7                         | 30.0        | 14.3        |
|                 | HT/VHT20, M0 to M7                  | 3        | 6                             | 11.3                 | 10.4                 | 9.8                  |                      | 15.3                         | 30.0        | 14.7        |
|                 | HT/VHT20, M8 to M15                 | 3        | 6                             | 11.3                 | 10.4                 | 9.8                  |                      | 15.3                         | 30.0        | 14.7        |
|                 | HT/VHT20, M16 to M23                | 3        | 6                             | 11.3                 | 10.4                 | 9.8                  |                      | 15.3                         | 30.0        | 14.7        |
|                 | HT/VHT20, M0 to M7                  | 4        | 6                             | 9.4                  | 8.5                  | 7.8                  | 9.3                  | 14.8                         | 30.0        | 15.2        |
|                 | HT/VHT20, M8 to M15                 | 4        | 6                             | 9.4                  | 8.5                  | 7.8                  | 9.3                  | 14.8                         | 30.0        | 15.2        |
|                 | HT/VHT20, M16 to M23                | 4        | 6                             | 9.4                  | 8.5                  | 7.8                  | 9.3                  | 14.8                         | 30.0        | 15.2        |
|                 | HT/VHT20 Beam Forming, M0 to M7     | 2        | 9                             | 9.4                  | 8.5                  |                      |                      | 12.0                         | 27.0        | 15.0        |
|                 | HT/VHT20 Beam Forming, M8 to M15    | 2        | 6                             | 13.1                 | 12.3                 |                      |                      | 15.7                         | 30.0        | 14.3        |
|                 | HT/VHT20 Beam Forming, M0 to M7     | 3        | 11                            | 6.3                  | 5.3                  | 4.8                  |                      | 10.3                         | 25.0        | 14.7        |
|                 | HT/VHT20 Beam Forming, M8 to M15    | 3        | 8                             | 9.4                  | 8.5                  | 7.8                  |                      | 13.4                         | 28.0        | 14.6        |
|                 | HT/VHT20 Beam Forming, M16 to M23   | 3        | 6                             | 11.3                 | 10.4                 | 9.8                  |                      | 15.3                         | 30.0        | 14.7        |
|                 | HT/VHT20 Beam Forming, M0 to M7     | 4        | 12                            | 3.5                  | 2.4                  | 1.9                  | 3.3                  | 8.8                          | 24.0        | 15.2        |
|                 | HT/VHT20 Beam Forming, M8 to M15    | 4        | 9                             | 6.3                  | 5.3                  | 4.8                  | 6.3                  | 11.7                         | 27.0        | 15.3        |
|                 | HT/VHT20 Beam Forming, M16 to M23   | 4        | 7                             | 8.1                  | 7.1                  | 6.7                  | 8.2                  | 13.6                         | 29.0        | 15.4        |
|                 | HT/VHT20 STBC, M0 to M7             | 2        | 6                             | 13.1                 | 12.3                 |                      |                      | 15.7                         | 30.0        | 14.3        |
|                 | HT/VHT20 STBC, M0 to M7             | 3        | 6                             | 11.3                 | 10.4                 | 9.8                  |                      | 15.3                         | 30.0        | 14.7        |
|                 | HT/VHT20 STBC, M0 to M7             | 4        | 6                             | 9.4                  | 8.5                  | 7.8                  | 9.3                  | 14.8                         | 30.0        | 15.2        |
| 5755            | Non HT40, 6 to 54 Mbps              | 1        | 6                             | 6.4                  |                      |                      |                      | 6.4                          | 30.0        | 23.6        |
|                 | Non HT40, 6 to 54 Mbps              | 2        | 6                             | 3.4                  | 2.6                  |                      |                      | 6.0                          | 30.0        | 24.0        |
|                 | Non HT40, 6 to 54 Mbps              | 3        | 6                             | 2.4                  | 1.4                  | 1.0                  |                      | 6.4                          | 30.0        | 23.6        |
|                 | Non HT40, 6 to 54 Mbps              | 4        | 6                             | 2.4                  | 1.4                  | 1.0                  | 2.2                  | 7.8                          | 30.0        | 22.2        |
|                 | HT/VHT40, M0 to M7                  | 1        | 6                             | 14.9                 |                      |                      |                      | 14.9                         | 30.0        | 15.1        |
|                 | HT/VHT40, M0 to M7                  | 2        | 6                             | 10.4                 | 9.2                  |                      |                      | 12.9                         | 30.0        | 17.1        |





|      |                                   |   |    |      |      |      |      |      |      |      |
|------|-----------------------------------|---|----|------|------|------|------|------|------|------|
|      | HT/VHT40, M8 to M15               | 2 | 6  | 10.4 | 9.2  |      |      | 12.9 | 30.0 | 17.1 |
|      | HT/VHT40, M0 to M7                | 3 | 6  | 8.1  | 7.2  | 6.9  |      | 12.2 | 30.0 | 17.8 |
|      | HT/VHT40, M8 to M15               | 3 | 6  | 8.1  | 7.2  | 6.9  |      | 12.2 | 30.0 | 17.8 |
|      | HT/VHT40, M16 to M23              | 3 | 6  | 8.1  | 7.2  | 6.9  |      | 12.2 | 30.0 | 17.8 |
|      | HT/VHT40, M0 to M7                | 4 | 6  | 6.2  | 5.3  | 5.0  | 6.1  | 11.7 | 30.0 | 18.3 |
|      | HT/VHT40, M8 to M15               | 4 | 6  | 6.2  | 5.3  | 5.0  | 6.1  | 11.7 | 30.0 | 18.3 |
|      | HT/VHT40, M16 to M23              | 4 | 6  | 6.2  | 5.3  | 5.0  | 6.1  | 11.7 | 30.0 | 18.3 |
|      | HT/VHT40 Beam Forming, M0 to M7   | 2 | 9  | 8.1  | 7.2  |      |      | 10.7 | 27.0 | 16.3 |
|      | HT/VHT40 Beam Forming, M8 to M15  | 2 | 6  | 10.4 | 9.2  |      |      | 12.9 | 30.0 | 17.1 |
|      | HT/VHT40 Beam Forming, M0 to M7   | 3 | 11 | 2.2  | 1.3  | 0.8  |      | 6.2  | 25.0 | 18.8 |
|      | HT/VHT40 Beam Forming, M8 to M15  | 3 | 8  | 5.2  | 4.3  | 4.1  |      | 9.3  | 28.0 | 18.7 |
|      | HT/VHT40 Beam Forming, M16 to M23 | 3 | 6  | 8.1  | 7.2  | 6.9  |      | 12.2 | 30.0 | 17.8 |
|      | HT/VHT40 Beam Forming, M0 to M7   | 4 | 12 | 1.2  | 0.3  | -0.2 | 1.1  | 6.7  | 24.0 | 17.3 |
|      | HT/VHT40 Beam Forming, M8 to M15  | 4 | 9  | 3.3  | 2.3  | 2.0  | 3.1  | 8.7  | 27.0 | 18.3 |
|      | HT/VHT40 Beam Forming, M16 to M23 | 4 | 7  | 5.2  | 4.3  | 4.1  | 5.1  | 10.7 | 29.0 | 18.3 |
|      | HT/VHT40 STBC, M0 to M7           | 2 | 6  | 10.4 | 9.2  |      |      | 12.9 | 30.0 | 17.1 |
|      | HT/VHT40 STBC, M0 to M7           | 3 | 6  | 8.1  | 7.2  | 6.9  |      | 12.2 | 30.0 | 17.8 |
|      | HT/VHT40 STBC, M0 to M7           | 4 | 6  | 6.2  | 5.3  | 5.0  | 6.1  | 11.7 | 30.0 | 18.3 |
| 5775 | Non HT80, 6 to 54 Mbps            | 1 | 6  | 10.3 |      |      |      | 10.3 | 30.0 | 19.7 |
|      | Non HT80, 6 to 54 Mbps            | 2 | 6  | 10.3 | 10.1 |      |      | 13.2 | 30.0 | 16.8 |
|      | Non HT80, 6 to 54 Mbps            | 3 | 6  | 7.5  | 8.5  | 8.8  |      | 13.1 | 30.0 | 16.9 |
|      | Non HT80, 6 to 54 Mbps            | 4 | 6  | 7.7  | 7.6  | 7.9  | 8.2  | 13.9 | 30.0 | 16.1 |
|      | VHT80, M0.1 to M9.1               | 1 | 6  | 14.2 |      |      |      | 14.2 | 30.0 | 15.8 |
|      | VHT80, M0.1 to M9.1               | 2 | 6  | 13.0 | 12.8 |      |      | 15.9 | 30.0 | 14.1 |
|      | VHT80, M0.2 to M9.2               | 2 | 6  | 13.0 | 12.8 |      |      | 15.9 | 30.0 | 14.1 |
|      | VHT80, M0.1 to M9.1               | 3 | 6  | 13.0 | 12.8 | 13.1 |      | 17.7 | 30.0 | 12.3 |
|      | VHT80, M0.2 to M9.2               | 3 | 6  | 13.0 | 12.8 | 13.1 |      | 17.7 | 30.0 | 12.3 |
|      | VHT80, M0.3 to M9.3               | 3 | 6  | 13.0 | 12.8 | 13.1 |      | 17.7 | 30.0 | 12.3 |
|      | VHT80, M0.1 to M9.1               | 4 | 6  | 10.1 | 9.8  | 10.3 | 10.4 | 16.2 | 30.0 | 13.8 |
|      | VHT80, M0.2 to M9.2               | 4 | 6  | 10.1 | 9.8  | 10.3 | 10.4 | 16.2 | 30.0 | 13.8 |
|      | VHT80, M0.3 to M9.3               | 4 | 6  | 10.1 | 9.8  | 10.3 | 10.4 | 16.2 | 30.0 | 13.8 |
|      | VHT80 Beam Forming, M0.1 to M9.1  | 2 | 6  | 13.0 | 12.8 |      |      | 15.9 | 30.0 | 14.1 |
|      | VHT80 Beam Forming, M0.2 to M9.2  | 2 | 6  | 13.0 | 12.8 |      |      | 15.9 | 30.0 | 14.1 |
|      | VHT80 Beam Forming, M0.1 to M9.1  | 3 | 6  | 13.0 | 12.8 | 13.1 |      | 17.7 | 30.0 | 12.3 |
|      | VHT80 Beam Forming, M0.2 to M9.2  | 3 | 6  | 13.0 | 12.8 | 13.1 |      | 17.7 | 30.0 | 12.3 |
|      | VHT80 Beam Forming, M0.3 to M9.3  | 3 | 6  | 13.0 | 12.8 | 13.1 |      | 17.7 | 30.0 | 12.3 |
|      | VHT80 Beam Forming, M0.1 to M9.1  | 4 | 6  | 10.1 | 9.8  | 10.3 | 10.4 | 16.2 | 30.0 | 13.8 |
|      | VHT80 Beam Forming, M0.2 to M9.2  | 4 | 6  | 10.1 | 9.8  | 10.3 | 10.4 | 16.2 | 30.0 | 13.8 |
|      | VHT80 Beam Forming, M0.3 to M9.3  | 4 | 6  | 10.1 | 9.8  | 10.3 | 10.4 | 16.2 | 30.0 | 13.8 |
|      | VHT80 STBC, M0.1 to M9.1          | 2 | 6  | 13.0 | 12.8 |      |      | 15.9 | 30.0 | 14.1 |





|      |                                     |   |    |      |      |      |      |      |      |      |
|------|-------------------------------------|---|----|------|------|------|------|------|------|------|
|      | VHT80 STBC, M0.1 to M9.1            | 3 | 6  | 13.0 | 12.8 | 13.1 |      | 17.7 | 30.0 | 12.3 |
|      | VHT80 STBC, M0.1 to M9.1            | 4 | 6  | 10.1 | 9.8  | 10.3 | 10.4 | 16.2 | 30.0 | 13.8 |
| 5785 | Non HT20, 6 to 54 Mbps              | 1 | 6  | 16.3 |      |      |      | 16.3 | 30.0 | 13.7 |
|      | Non HT20, 6 to 54 Mbps              | 2 | 6  | 16.3 | 16.1 |      |      | 19.2 | 30.0 | 10.8 |
|      | Non HT20, 6 to 54 Mbps              | 3 | 6  | 16.3 | 16.1 | 16.9 |      | 21.2 | 30.0 | 8.8  |
|      | Non HT20, 6 to 54 Mbps              | 4 | 6  | 16.3 | 16.1 | 16.9 | 16.6 | 22.5 | 30.0 | 7.5  |
|      | Non HT20 Beam Forming, 6 to 54 Mbps | 2 | 9  | 16.3 | 16.1 |      |      | 19.2 | 27.0 | 7.8  |
|      | Non HT20 Beam Forming, 6 to 54 Mbps | 3 | 11 | 16.3 | 16.1 | 16.9 |      | 21.2 | 25.0 | 3.8  |
|      | Non HT20 Beam Forming, 6 to 54 Mbps | 4 | 12 | 16.3 | 16.1 | 16.9 | 16.6 | 22.5 | 24.0 | 1.5  |
|      | HT/VHT20, M0 to M7                  | 1 | 6  | 16.5 |      |      |      | 16.5 | 30.0 | 13.5 |
|      | HT/VHT20, M0 to M7                  | 2 | 6  | 16.5 | 16.3 |      |      | 19.4 | 30.0 | 10.6 |
|      | HT/VHT20, M8 to M15                 | 2 | 6  | 16.5 | 16.3 |      |      | 19.4 | 30.0 | 10.6 |
|      | HT/VHT20, M0 to M7                  | 3 | 6  | 16.5 | 16.3 | 17.1 |      | 21.4 | 30.0 | 8.6  |
|      | HT/VHT20, M8 to M15                 | 3 | 6  | 16.5 | 16.3 | 17.1 |      | 21.4 | 30.0 | 8.6  |
|      | HT/VHT20, M16 to M23                | 3 | 6  | 16.5 | 16.3 | 17.1 |      | 21.4 | 30.0 | 8.6  |
|      | HT/VHT20, M0 to M7                  | 4 | 6  | 16.5 | 16.3 | 17.1 | 16.7 | 22.7 | 30.0 | 7.3  |
|      | HT/VHT20, M8 to M15                 | 4 | 6  | 16.5 | 16.3 | 17.1 | 16.7 | 22.7 | 30.0 | 7.3  |
|      | HT/VHT20, M16 to M23                | 4 | 6  | 16.5 | 16.3 | 17.1 | 16.7 | 22.7 | 30.0 | 7.3  |
|      | HT/VHT20 Beam Forming, M0 to M7     | 2 | 9  | 16.5 | 16.3 |      |      | 19.4 | 27.0 | 7.6  |
|      | HT/VHT20 Beam Forming, M8 to M15    | 2 | 6  | 16.5 | 16.3 |      |      | 19.4 | 30.0 | 10.6 |
|      | HT/VHT20 Beam Forming, M0 to M7     | 3 | 11 | 16.5 | 16.3 | 17.1 |      | 21.4 | 25.0 | 3.6  |
|      | HT/VHT20 Beam Forming, M8 to M15    | 3 | 8  | 16.5 | 16.3 | 17.1 |      | 21.4 | 28.0 | 6.6  |
|      | HT/VHT20 Beam Forming, M16 to M23   | 3 | 6  | 16.5 | 16.3 | 17.1 |      | 21.4 | 30.0 | 8.6  |
|      | HT/VHT20 Beam Forming, M0 to M7     | 4 | 12 | 16.5 | 16.3 | 17.1 | 16.7 | 22.7 | 24.0 | 1.3  |
|      | HT/VHT20 Beam Forming, M8 to M15    | 4 | 9  | 16.5 | 16.3 | 17.1 | 16.7 | 22.7 | 27.0 | 4.3  |
|      | HT/VHT20 Beam Forming, M16 to M23   | 4 | 7  | 16.5 | 16.3 | 17.1 | 16.7 | 22.7 | 29.0 | 6.3  |
|      | HT/VHT20 STBC, M0 to M7             | 2 | 6  | 16.5 | 16.3 |      |      | 19.4 | 30.0 | 10.6 |
|      | HT/VHT20 STBC, M0 to M7             | 3 | 6  | 16.5 | 16.3 | 17.1 |      | 21.4 | 30.0 | 8.6  |
|      | HT/VHT20 STBC, M0 to M7             | 4 | 6  | 16.5 | 16.3 | 17.1 | 16.7 | 22.7 | 30.0 | 7.3  |
| 5795 | Non HT40, 6 to 54 Mbps              | 1 | 6  | 18.4 |      |      |      | 18.4 | 30.0 | 11.6 |
|      | Non HT40, 6 to 54 Mbps              | 2 | 6  | 16.2 | 15.1 |      |      | 18.7 | 30.0 | 11.3 |
|      | Non HT40, 6 to 54 Mbps              | 3 | 6  | 16.2 | 15.1 | 16.0 |      | 20.6 | 30.0 | 9.4  |
|      | Non HT40, 6 to 54 Mbps              | 4 | 6  | 16.2 | 15.1 | 16.0 | 15.7 | 21.8 | 30.0 | 8.2  |
|      | HT/VHT40, M0 to M7                  | 1 | 6  | 17.0 |      |      |      | 17.0 | 30.0 | 13.0 |
|      | HT/VHT40, M0 to M7                  | 2 | 6  | 17.0 | 16.2 |      |      | 19.6 | 30.0 | 10.4 |
|      | HT/VHT40, M8 to M15                 | 2 | 6  | 17.0 | 16.2 |      |      | 19.6 | 30.0 | 10.4 |
|      | HT/VHT40, M0 to M7                  | 3 | 6  | 17.0 | 16.2 | 17.2 |      | 21.6 | 30.0 | 8.4  |
|      | HT/VHT40, M8 to M15                 | 3 | 6  | 17.0 | 16.2 | 17.2 |      | 21.6 | 30.0 | 8.4  |
|      | HT/VHT40, M16 to M23                | 3 | 6  | 17.0 | 16.2 | 17.2 |      | 21.6 | 30.0 | 8.4  |

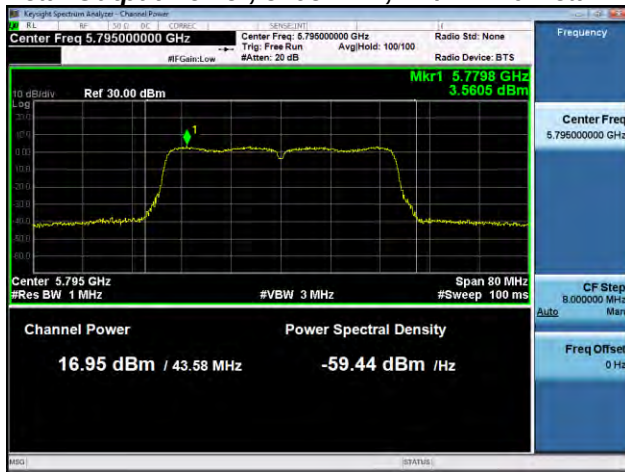


|      |                                        |          |           |             |             |             |             |             |             |            |
|------|----------------------------------------|----------|-----------|-------------|-------------|-------------|-------------|-------------|-------------|------------|
|      | HT/VHT40, M0 to M7                     | 4        | 6         | 17.0        | 16.2        | 17.2        | 16.8        | 22.8        | 30.0        | 7.2        |
|      | HT/VHT40, M8 to M15                    | 4        | 6         | 17.0        | 16.2        | 17.2        | 16.8        | 22.8        | 30.0        | 7.2        |
|      | HT/VHT40, M16 to M23                   | 4        | 6         | 17.0        | 16.2        | 17.2        | 16.8        | 22.8        | 30.0        | 7.2        |
|      | HT/VHT40 Beam Forming, M0 to M7        | 2        | 9         | 17.0        | 16.2        |             |             | 19.6        | 27.0        | 7.4        |
|      | HT/VHT40 Beam Forming, M8 to M15       | 2        | 6         | 17.0        | 16.2        |             |             | 19.6        | 30.0        | 10.4       |
|      | HT/VHT40 Beam Forming, M0 to M7        | 3        | 11        | 17.0        | 16.2        | 17.2        |             | 21.6        | 25.0        | 3.6        |
|      | HT/VHT40 Beam Forming, M8 to M15       | 3        | 8         | 17.0        | 16.2        | 17.2        |             | 21.6        | 28.0        | 6.4        |
|      | HT/VHT40 Beam Forming, M16 to M23      | 3        | 6         | 17.0        | 16.2        | 17.2        |             | 21.6        | 30.0        | 8.2        |
|      | <b>HT/VHT40 Beam Forming, M0 to M7</b> | <b>4</b> | <b>12</b> | <b>17.0</b> | <b>16.2</b> | <b>17.2</b> | <b>16.8</b> | <b>22.8</b> | <b>24.0</b> | <b>1.2</b> |
|      | HT/VHT40 Beam Forming, M8 to M15       | 4        | 9         | 17.0        | 16.2        | 17.2        | 16.8        | 22.8        | 27.0        | 4.2        |
|      | HT/VHT40 Beam Forming, M16 to M23      | 4        | 7         | 17.0        | 16.2        | 17.2        | 16.8        | 22.8        | 29.0        | 6.2        |
|      | HT/VHT40 STBC, M0 to M7                | 2        | 6         | 17.0        | 16.2        |             |             | 19.6        | 30.0        | 10.4       |
|      | HT/VHT40 STBC, M0 to M7                | 3        | 6         | 17.0        | 16.2        | 17.2        |             | 21.6        | 30.0        | 8.4        |
|      | HT/VHT40 STBC, M0 to M7                | 4        | 6         | 17.0        | 16.2        | 17.2        | 16.8        | 22.8        | 30.0        | 7.2        |
| 5825 | Non HT20, 6 to 54 Mbps                 | 1        | 6         | 15.0        |             |             |             | 15.0        | 30.0        | 15.0       |
|      | Non HT20, 6 to 54 Mbps                 | 2        | 6         | 12.6        | 13.0        |             |             | 15.8        | 30.0        | 14.2       |
|      | Non HT20, 6 to 54 Mbps                 | 3        | 6         | 10.7        | 11.1        | 11.4        |             | 15.8        | 30.0        | 14.2       |
|      | Non HT20, 6 to 54 Mbps                 | 4        | 6         | 9.8         | 10.0        | 10.5        | 10.4        | 16.2        | 30.0        | 13.8       |
|      | Non HT20 Beam Forming, 6 to 54 Mbps    | 2        | 9         | 9.8         | 10.0        |             |             | 12.9        | 27.0        | 14.1       |
|      | Non HT20 Beam Forming, 6 to 54 Mbps    | 3        | 11        | 5.6         | 5.8         | 6.3         |             | 10.7        | 25.0        | 14.3       |
|      | Non HT20 Beam Forming, 6 to 54 Mbps    | 4        | 12        | 2.7         | 2.9         | 3.3         | 3.4         | 9.1         | 24.0        | 14.9       |
|      | HT/VHT20, M0 to M7                     | 1        | 6         | 16.2        |             |             |             | 16.2        | 30.0        | 13.8       |
|      | HT/VHT20, M0 to M7                     | 2        | 6         | 12.7        | 13.1        |             |             | 15.9        | 30.0        | 14.1       |
|      | HT/VHT20, M8 to M15                    | 2        | 6         | 12.7        | 13.1        |             |             | 15.9        | 30.0        | 14.1       |
|      | HT/VHT20, M0 to M7                     | 3        | 6         | 10.7        | 11.2        | 11.5        |             | 15.9        | 30.0        | 14.1       |
|      | HT/VHT20, M8 to M15                    | 3        | 6         | 10.7        | 11.2        | 11.5        |             | 15.9        | 30.0        | 14.1       |
|      | HT/VHT20, M16 to M23                   | 3        | 6         | 10.7        | 11.2        | 11.5        |             | 15.9        | 30.0        | 14.1       |
|      | HT/VHT20, M0 to M7                     | 4        | 6         | 9.8         | 10.1        | 10.6        | 10.4        | 16.3        | 30.0        | 13.7       |
|      | HT/VHT20, M8 to M15                    | 4        | 6         | 9.8         | 10.1        | 10.6        | 10.4        | 16.3        | 30.0        | 13.7       |
|      | HT/VHT20, M16 to M23                   | 4        | 6         | 9.8         | 10.1        | 10.6        | 10.4        | 16.3        | 30.0        | 13.7       |
|      | HT/VHT20 Beam Forming, M0 to M7        | 2        | 9         | 8.9         | 9.1         |             |             | 12.0        | 27.0        | 15.0       |
|      | HT/VHT20 Beam Forming, M8 to M15       | 2        | 6         | 12.7        | 13.1        |             |             | 15.9        | 30.0        | 14.1       |
|      | HT/VHT20 Beam Forming, M0 to M7        | 3        | 11        | 6.6         | 6.9         | 7.4         |             | 11.8        | 25.0        | 13.2       |
|      | HT/VHT20 Beam Forming, M8 to M15       | 3        | 8         | 8.9         | 9.1         | 9.4         |             | 13.9        | 28.0        | 14.1       |
|      | HT/VHT20 Beam Forming, M16 to M23      | 3        | 6         | 10.7        | 11.2        | 11.5        |             | 15.9        | 30.0        | 14.1       |
|      | HT/VHT20 Beam Forming, M0 to M7        | 4        | 12        | 3.7         | 4.1         | 4.6         | 4.4         | 10.2        | 24.0        | 13.8       |
|      | HT/VHT20 Beam Forming, M8 to M15       | 4        | 9         | 6.6         | 6.9         | 7.4         | 7.4         | 13.1        | 27.0        | 13.9       |
|      | HT/VHT20 Beam Forming, M16 to M23      | 4        | 7         | 8.9         | 9.1         | 9.4         | 9.4         | 15.2        | 29.0        | 13.8       |
|      | HT/VHT20 STBC, M0 to M7                | 2        | 6         | 12.7        | 13.1        |             |             | 15.9        | 30.0        | 14.1       |
|      | HT/VHT20 STBC, M0 to M7                | 3        | 6         | 10.7        | 11.2        | 11.5        |             | 15.9        | 30.0        | 14.1       |

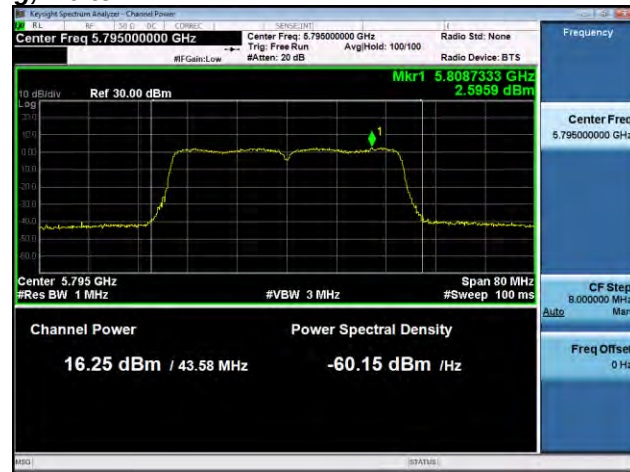


|                         |   |   |     |      |      |      |      |      |      |
|-------------------------|---|---|-----|------|------|------|------|------|------|
| HT/VHT20 STBC, M0 to M7 | 4 | 6 | 9.8 | 10.1 | 10.6 | 10.4 | 16.3 | 30.0 | 13.7 |
|-------------------------|---|---|-----|------|------|------|------|------|------|

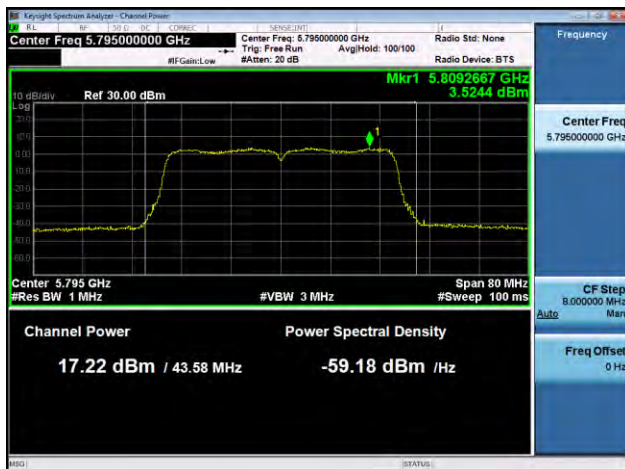
### Peak Output Power, 5795 MHz, HT/VHT40 Beam Forming, M0 to M7



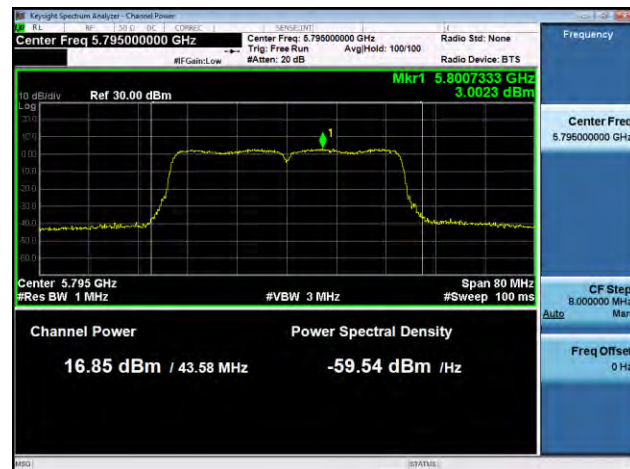
Antenna A



Antenna B



Antenna C



Antenna D

## A.4 Power Spectral Density

### 15.407

The power spectral density shall not exceed 30 dBm in any 500 kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

### Test Procedure

Ref. KDB 789033 D02 General UNII Test Procedures New Rules v01r01

|                                                                                                                                                                                                                                                                                                                                                            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Power Spectral Density</b>                                                                                                                                                                                                                                                                                                                              |
| Test Procedure                                                                                                                                                                                                                                                                                                                                             |
| <ol style="list-style-type: none"> <li>1. Connect the antenna port(s) to the spectrum analyzer input.</li> <li>2. Set the radio in the continuous transmitting mode at full power</li> <li>3. Configure Spectrum analyzer as per test parameters below and Peak search marker</li> <li>4. Capture graphs and record pertinent measurement data.</li> </ol> |

Ref. KDB 789033 D02 v01r01 section F.5

|                                                                                                                                                          |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Power Spectral Density</b>                                                                                                                            |
| Test parameters                                                                                                                                          |
| Span = >1.5 times the OBW<br>RBW = 500 kHz.<br>VBW $\geq 3 \times$ RBW<br>Sweep = 10s<br>Detector = Peak<br>Trace = Single Sweep<br>Marker = Peak Search |

The "Measure and add  $10 \log(N)$  dB technique", where N is the number of outputs, is used for measuring in-band Power Spectral Density. With this technique, spectrum measurements are performed at each output of the device, and the quantity  $10 \log(4)$  (or 6dB) is added to the worst case spectrum value before comparing to the emission limit. (ANSI C63.10 2013 section 14.3.2.3)

| System Number | Description | Samples | System under test                   | Support equipment                   |
|---------------|-------------|---------|-------------------------------------|-------------------------------------|
| 1             | EUT         | S01     | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
|               | Support     | S02     | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

|                                    |                                                  |
|------------------------------------|--------------------------------------------------|
| <b>Tested By :</b><br>Jose Aguirre | <b>Date of testing:</b><br>01-Jan-16 - 03-Mar-16 |
| <b>Test Result : PASS</b>          |                                                  |

See Appendix C for list of test equipment



| Frequency (MHz) | Mode                                | Tx Paths | Correlated Antenna Gain (dBi) | Tx 1 PSD (dBm/MHz) | Tx 2 PSD (dBm/MHz) | Tx 3 PSD (dBm/MHz) | Tx 4 PSD (dBm/MHz) | Total PSD (dBm/500MHz) | Limit (dBm/500MHz) | Margin (dB) |
|-----------------|-------------------------------------|----------|-------------------------------|--------------------|--------------------|--------------------|--------------------|------------------------|--------------------|-------------|
| 5745            | Non HT20, 6 to 54 Mbps              | 1        | 6                             | 2.0                |                    |                    |                    | 2.0                    | 30.0               | 28.0        |
|                 | Non HT20, 6 to 54 Mbps              | 2        | 9                             | -1.5               | -2.2               |                    |                    | 1.2                    | 27.0               | 25.8        |
|                 | Non HT20, 6 to 54 Mbps              | 3        | 11                            | -3.2               | -4.2               | -4.8               |                    | 0.8                    | 25.0               | 24.3        |
|                 | Non HT20, 6 to 54 Mbps              | 4        | 12                            | -4.3               | -5.1               | -5.9               | -4.0               | 1.3                    | 24.0               | 22.7        |
|                 | Non HT20 Beam Forming, 6 to 54 Mbps | 2        | 9                             | -4.3               | -5.1               |                    |                    | -1.7                   | 27.0               | 28.7        |
|                 | Non HT20 Beam Forming, 6 to 54 Mbps | 3        | 11                            | -6.9               | -8.4               | -8.7               |                    | -3.2                   | 25.0               | 28.2        |
|                 | Non HT20 Beam Forming, 6 to 54 Mbps | 4        | 12                            | -10.3              | -11.3              | -11.8              | -10.4              | -4.9                   | 24.0               | 28.9        |
|                 | HT/VHT20, M0 to M7                  | 1        | 6                             | 1.7                |                    |                    |                    | 1.7                    | 30.0               | 28.3        |
|                 | HT/VHT20, M0 to M7                  | 2        | 9                             | -0.6               | -1.4               |                    |                    | 2.0                    | 27.0               | 25.0        |
|                 | HT/VHT20, M8 to M15                 | 2        | 6                             | -0.6               | -1.4               |                    |                    | 2.0                    | 30.0               | 28.0        |
|                 | HT/VHT20, M0 to M7                  | 3        | 11                            | -2.4               | -3.4               | -3.9               |                    | 1.6                    | 25.0               | 23.4        |
|                 | HT/VHT20, M8 to M15                 | 3        | 8                             | -2.4               | -3.4               | -3.9               |                    | 1.6                    | 28.0               | 26.4        |
|                 | HT/VHT20, M16 to M23                | 3        | 6                             | -2.4               | -3.4               | -3.9               |                    | 1.6                    | 30.0               | 28.4        |
|                 | HT/VHT20, M0 to M7                  | 4        | 12                            | -4.3               | -5.3               | -5.8               | -4.2               | 1.2                    | 24.0               | 22.8        |
|                 | HT/VHT20, M8 to M15                 | 4        | 9                             | -4.3               | -5.3               | -5.8               | -4.2               | 1.2                    | 27.0               | 25.8        |
|                 | HT/VHT20, M16 to M23                | 4        | 7                             | -4.3               | -5.3               | -5.8               | -4.2               | 1.2                    | 29.0               | 27.8        |
|                 | HT/VHT20 Beam Forming, M0 to M7     | 2        | 9                             | -4.3               | -5.3               |                    |                    | -1.8                   | 27.0               | 28.8        |
|                 | HT/VHT20 Beam Forming, M8 to M15    | 2        | 6                             | -0.6               | -1.4               |                    |                    | 2.0                    | 30.0               | 28.0        |
|                 | HT/VHT20 Beam Forming, M0 to M7     | 3        | 11                            | -7.4               | -8.5               | -9.0               |                    | -3.5                   | 25.0               | 28.5        |
|                 | HT/VHT20 Beam Forming, M8 to M15    | 3        | 8                             | -4.3               | -5.3               | -5.8               |                    | -0.3                   | 28.0               | 28.4        |
|                 | HT/VHT20 Beam Forming, M16 to M23   | 3        | 6                             | -2.4               | -3.4               | -3.9               |                    | 1.6                    | 30.0               | 28.4        |
|                 | HT/VHT20 Beam Forming, M0 to M7     | 4        | 12                            | -9.7               | -11.4              | -12.0              | -10.3              | -4.7                   | 24.0               | 28.7        |
|                 | HT/VHT20 Beam Forming, M8 to M15    | 4        | 9                             | -7.4               | -8.5               | -9.0               | -7.4               | -2.0                   | 27.0               | 29.0        |
|                 | HT/VHT20 Beam Forming, M16 to M23   | 4        | 7                             | -5.2               | -6.7               | -6.6               | -5.6               | 0.0                    | 28.8               | 28.7        |
|                 | HT/VHT20 STBC, M0 to M7             | 2        | 6                             | -0.6               | -1.4               |                    |                    | 2.0                    | 30.0               | 28.0        |
|                 | HT/VHT20 STBC, M0 to M7             | 3        | 8                             | -2.4               | -3.4               | -3.9               |                    | 1.6                    | 28.0               | 26.5        |
|                 | HT/VHT20 STBC, M0 to M7             | 4        | 9                             | -4.3               | -5.3               | -5.8               | -4.2               | 1.2                    | 27.0               | 25.8        |
| 5755            | Non HT40, 6 to 54 Mbps              | 1        | 6                             | -9.7               |                    |                    |                    | -9.7                   | 30.0               | 39.7        |
|                 | Non HT40, 6 to 54 Mbps              | 2        | 9                             | -12.8              | -13.7              |                    |                    | -10.2                  | 27.0               | 37.2        |
|                 | Non HT40, 6 to 54 Mbps              | 3        | 11                            | -13.7              | -15.1              | -15.3              |                    | -9.9                   | 25.0               | 34.9        |
|                 | Non HT40, 6 to 54 Mbps              | 4        | 12                            | -13.7              | -15.1              | -15.3              | -13.7              | -8.4                   | 24.0               | 32.3        |
|                 | HT/VHT40, M0 to M7                  | 1        | 6                             | -1.8               |                    |                    |                    | -1.8                   | 30.0               | 31.8        |
|                 | HT/VHT40, M0 to M7                  | 2        | 9                             | -6.0               | -7.3               |                    |                    | -3.6                   | 27.0               | 30.6        |



|      |                                   |   |    |       |       |       |       |       |      |      |
|------|-----------------------------------|---|----|-------|-------|-------|-------|-------|------|------|
|      | HT/VHT40, M8 to M15               | 2 | 6  | -6.0  | -7.3  |       |       | -3.6  | 30.0 | 33.6 |
|      | HT/VHT40, M0 to M7                | 3 | 11 | -8.1  | -9.5  | -9.4  |       | -4.2  | 25.0 | 29.2 |
|      | HT/VHT40, M8 to M15               | 3 | 8  | -8.1  | -9.5  | -9.4  |       | -4.2  | 28.0 | 32.2 |
|      | HT/VHT40, M16 to M23              | 3 | 6  | -8.1  | -9.5  | -9.4  |       | -4.2  | 30.0 | 34.2 |
|      | HT/VHT40, M0 to M7                | 4 | 12 | -10.2 | -11.5 | -11.5 | -10.2 | -4.8  | 24.0 | 28.8 |
|      | HT/VHT40, M8 to M15               | 4 | 9  | -10.2 | -11.5 | -11.5 | -10.2 | -4.8  | 27.0 | 31.8 |
|      | HT/VHT40, M16 to M23              | 4 | 7  | -10.2 | -11.5 | -11.5 | -10.2 | -4.8  | 29.0 | 33.8 |
|      | HT/VHT40 Beam Forming, M0 to M7   | 2 | 9  | -8.1  | -9.5  |       |       | -5.7  | 27.0 | 32.7 |
|      | HT/VHT40 Beam Forming, M8 to M15  | 2 | 6  | -6.0  | -7.3  |       |       | -3.6  | 30.0 | 33.6 |
|      | HT/VHT40 Beam Forming, M0 to M7   | 3 | 11 | -14.5 | -15.5 | -15.9 |       | -10.5 | 25.0 | 35.5 |
|      | HT/VHT40 Beam Forming, M8 to M15  | 3 | 8  | -10.5 | -12.4 | -12.6 |       | -7.0  | 28.0 | 35.0 |
|      | HT/VHT40 Beam Forming, M16 to M23 | 3 | 6  | -8.1  | -9.5  | -9.4  |       | -4.2  | 30.0 | 34.2 |
|      | HT/VHT40 Beam Forming, M0 to M7   | 4 | 12 | -15.4 | -16.6 | -17.0 | -15.3 | -10.0 | 24.0 | 34.0 |
|      | HT/VHT40 Beam Forming, M8 to M15  | 4 | 9  | -13.1 | -14.6 | -14.6 | -12.9 | -7.7  | 27.0 | 34.7 |
|      | HT/VHT40 Beam Forming, M16 to M23 | 4 | 7  | -10.5 | -12.4 | -12.6 | -11.1 | -5.5  | 29.0 | 34.1 |
|      | HT/VHT40 STBC, M0 to M7           | 2 | 6  | -6.0  | -7.3  |       |       | -3.6  | 30.0 | 33.6 |
|      | HT/VHT40 STBC, M0 to M7           | 3 | 8  | -8.1  | -9.5  | -9.4  |       | -4.2  | 28.0 | 32.0 |
|      | HT/VHT40 STBC, M0 to M7           | 4 | 9  | -10.2 | -11.5 | -11.5 | -10.2 | -4.8  | 27.0 | 31.8 |
| 5775 | Non HT80, 6 to 54 Mbps            | 1 | 6  | -9.1  |       |       |       | -9.1  | 30.0 | 39.1 |
|      | Non HT80, 6 to 54 Mbps            | 2 | 9  | -9.1  | -9.5  |       |       | -6.3  | 27.0 | 33.3 |
|      | Non HT80, 6 to 54 Mbps            | 3 | 11 | -11.9 | -11.3 | -10.7 |       | -6.5  | 25.0 | 31.5 |
|      | Non HT80, 6 to 54 Mbps            | 4 | 12 | -11.3 | -12.1 | -11.6 | -11.4 | -5.6  | 24.0 | 29.5 |
|      | VHT80, M0.1 to M9.1               | 1 | 6  | -5.5  |       |       |       | -5.5  | 30.0 | 35.5 |
|      | VHT80, M0.1 to M9.1               | 2 | 6  | -6.9  | -7.5  |       |       | -4.2  | 30.0 | 34.2 |
|      | VHT80, M0.2 to M9.2               | 2 | 6  | -6.9  | -7.5  |       |       | -4.2  | 30.0 | 34.2 |
|      | VHT80, M0.1 to M9.1               | 3 | 6  | -6.9  | -7.5  | -6.7  |       | -2.2  | 30.0 | 32.2 |
|      | VHT80, M0.2 to M9.2               | 3 | 6  | -6.9  | -7.5  | -6.7  |       | -2.2  | 30.0 | 32.2 |
|      | VHT80, M0.3 to M9.3               | 3 | 6  | -6.9  | -7.5  | -6.7  |       | -2.2  | 30.0 | 32.2 |
|      | VHT80, M0.1 to M9.1               | 4 | 6  | -9.6  | -10.6 | -9.6  | -9.7  | -3.8  | 30.0 | 33.8 |
|      | VHT80, M0.2 to M9.2               | 4 | 6  | -9.6  | -10.6 | -9.6  | -9.7  | -3.8  | 30.0 | 33.8 |
|      | VHT80, M0.3 to M9.3               | 4 | 6  | -9.6  | -10.6 | -9.6  | -9.7  | -3.8  | 30.0 | 33.8 |
|      | VHT80 Beam Forming, M0.1 to M9.1  | 2 | 6  | -6.9  | -7.5  |       |       | -4.2  | 30.0 | 34.2 |
|      | VHT80 Beam Forming, M0.2 to M9.2  | 2 | 6  | -6.9  | -7.5  |       |       | -4.2  | 30.0 | 34.2 |
|      | VHT80 Beam Forming, M0.1 to M9.1  | 3 | 6  | -6.9  | -7.5  | -6.7  |       | -2.2  | 30.0 | 32.2 |
|      | VHT80 Beam Forming, M0.2 to M9.2  | 3 | 6  | -6.9  | -7.5  | -6.7  |       | -2.2  | 30.0 | 32.2 |
|      | VHT80 Beam Forming, M0.3 to M9.3  | 3 | 6  | -6.9  | -7.5  | -6.7  |       | -2.2  | 30.0 | 32.2 |
|      | VHT80 Beam Forming, M0.1 to M9.1  | 4 | 6  | -9.6  | -10.6 | -9.6  | -9.7  | -3.8  | 30.0 | 33.8 |
|      | VHT80 Beam Forming, M0.2 to M9.2  | 4 | 6  | -9.6  | -10.6 | -9.6  | -9.7  | -3.8  | 30.0 | 33.8 |
|      | VHT80 Beam Forming, M0.3 to M9.3  | 4 | 6  | -9.6  | -10.6 | -9.6  | -9.7  | -3.8  | 30.0 | 33.8 |
|      | VHT80 STBC, M0.1 to M9.1          | 2 | 6  | -6.9  | -7.5  |       |       | -4.2  | 30.0 | 34.2 |





|      |                                     |          |           |            |            |            |            |            |             |             |
|------|-------------------------------------|----------|-----------|------------|------------|------------|------------|------------|-------------|-------------|
|      | VHT80 STBC, M0.1 to M9.1            | 3        | 6         | -6.9       | -7.5       | -6.7       |            | -2.2       | 30.0        | 32.2        |
|      | VHT80 STBC, M0.1 to M9.1            | 4        | 6         | -9.6       | -10.6      | -9.6       | -9.7       | -3.8       | 30.0        | 33.8        |
| 5785 | Non HT20, 6 to 54 Mbps              | 1        | 6         | 2.9        |            |            |            | 2.9        | 30.0        | 27.1        |
|      | Non HT20, 6 to 54 Mbps              | 2        | 9         | 2.9        | 2.5        |            |            | 5.7        | 27.0        | 21.3        |
|      | Non HT20, 6 to 54 Mbps              | 3        | 11        | 2.9        | 2.5        | 3.6        |            | 7.8        | 25.0        | 17.2        |
|      | Non HT20, 6 to 54 Mbps              | 4        | 12        | 2.9        | 2.5        | 3.6        | 3.0        | 9.0        | 24.0        | 14.9        |
|      | Non HT20 Beam Forming, 6 to 54 Mbps | 2        | 9         | 2.9        | 2.5        |            |            | 5.7        | 27.0        | 21.3        |
|      | Non HT20 Beam Forming, 6 to 54 Mbps | 3        | 11        | 2.9        | 2.5        | 3.6        |            | 7.8        | 25.0        | 17.2        |
|      | Non HT20 Beam Forming, 6 to 54 Mbps | 4        | 12        | 2.9        | 2.5        | 3.6        | 3.0        | 9.0        | 24.0        | 14.9        |
|      | HT/VHT20, M0 to M7                  | 1        | 6         | 3.0        |            |            |            | 3.0        | 30.0        | 27.0        |
|      | HT/VHT20, M0 to M7                  | 2        | 9         | 3.0        | 2.5        |            |            | 5.8        | 27.0        | 21.2        |
|      | HT/VHT20, M8 to M15                 | 2        | 6         | 3.0        | 2.5        |            |            | 5.8        | 30.0        | 24.2        |
|      | HT/VHT20, M0 to M7                  | 3        | 11        | 3.0        | 2.5        | 3.5        |            | 7.8        | 25.0        | 17.2        |
|      | HT/VHT20, M8 to M15                 | 3        | 8         | 3.0        | 2.5        | 3.5        |            | 7.8        | 28.0        | 20.2        |
|      | HT/VHT20, M16 to M23                | 3        | 6         | 3.0        | 2.5        | 3.5        |            | 7.8        | 30.0        | 22.2        |
|      | <b>HT/VHT20, M0 to M7</b>           | <b>4</b> | <b>12</b> | <b>3.0</b> | <b>2.5</b> | <b>3.5</b> | <b>3.1</b> | <b>9.1</b> | <b>24.0</b> | <b>14.9</b> |
|      | HT/VHT20, M8 to M15                 | 4        | 9         | 3.0        | 2.5        | 3.5        | 3.1        | 9.1        | 27.0        | 17.9        |
|      | HT/VHT20, M16 to M23                | 4        | 7         | 3.0        | 2.5        | 3.5        | 3.1        | 9.1        | 29.0        | 19.9        |
|      | HT/VHT20 Beam Forming, M0 to M7     | 2        | 9         | 3.0        | 2.5        |            |            | 5.8        | 27.0        | 21.2        |
|      | HT/VHT20 Beam Forming, M8 to M15    | 2        | 6         | 3.0        | 2.5        |            |            | 5.8        | 30.0        | 24.2        |
|      | HT/VHT20 Beam Forming, M0 to M7     | 3        | 11        | 3.0        | 2.5        | 3.5        |            | 7.8        | 25.0        | 17.2        |
|      | HT/VHT20 Beam Forming, M8 to M15    | 3        | 8         | 3.0        | 2.5        | 3.5        |            | 7.8        | 28.0        | 20.2        |
|      | HT/VHT20 Beam Forming, M16 to M23   | 3        | 6         | 3.0        | 2.5        | 3.5        |            | 7.8        | 30.0        | 22.2        |
|      | HT/VHT20 Beam Forming, M0 to M7     | 4        | 12        | 3.0        | 2.5        | 3.5        | 3.1        | 9.1        | 24.0        | 14.9        |
|      | HT/VHT20 Beam Forming, M8 to M15    | 4        | 9         | 3.0        | 2.5        | 3.5        | 3.1        | 9.1        | 27.0        | 17.9        |
|      | HT/VHT20 Beam Forming, M16 to M23   | 4        | 7         | 3.0        | 2.5        | 3.5        | 3.1        | 9.1        | 29.0        | 19.9        |
|      | HT/VHT20 STBC, M0 to M7             | 2        | 6         | 3.0        | 2.5        |            |            | 5.8        | 30.0        | 24.2        |
|      | HT/VHT20 STBC, M0 to M7             | 3        | 8         | 3.0        | 2.5        | 3.5        |            | 7.8        | 28.0        | 20.2        |
|      | HT/VHT20 STBC, M0 to M7             | 4        | 9         | 3.0        | 2.5        | 3.5        | 3.1        | 9.1        | 27.0        | 17.9        |
| 5795 | Non HT40, 6 to 54 Mbps              | 1        | 6         | 1.8        |            |            |            | 1.8        | 30.0        | 28.2        |
|      | Non HT40, 6 to 54 Mbps              | 2        | 9         | -0.1       | -1.4       |            |            | 2.3        | 27.0        | 24.7        |
|      | Non HT40, 6 to 54 Mbps              | 3        | 11        | -0.1       | -1.4       | -0.3       |            | 4.2        | 25.0        | 20.8        |
|      | Non HT40, 6 to 54 Mbps              | 4        | 12        | -0.1       | -1.4       | -0.3       | -0.7       | 5.4        | 24.0        | 18.6        |
|      | HT/VHT40, M0 to M7                  | 1        | 6         | 0.4        |            |            |            | 0.4        | 30.0        | 29.6        |
|      | HT/VHT40, M0 to M7                  | 2        | 9         | 0.4        | -0.5       |            |            | 3.0        | 27.0        | 24.0        |
|      | HT/VHT40, M8 to M15                 | 2        | 6         | 0.4        | -0.5       |            |            | 3.0        | 30.0        | 27.0        |
|      | HT/VHT40, M0 to M7                  | 3        | 11        | 0.4        | -0.5       | 0.6        |            | 5.0        | 25.0        | 20.1        |
|      | HT/VHT40, M8 to M15                 | 3        | 8         | 0.4        | -0.5       | 0.6        |            | 5.0        | 28.0        | 23.1        |
|      | HT/VHT40, M16 to M23                | 3        | 6         | 0.4        | -0.5       | 0.6        |            | 5.0        | 30.0        | 25.0        |



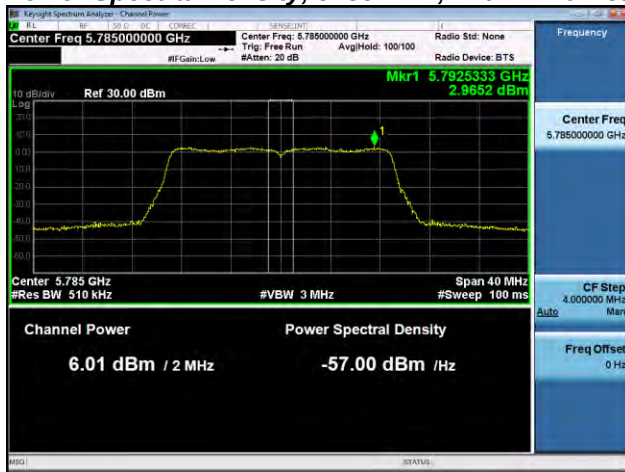
|      |                                     |   |    |       |       |       |       |      |      |      |
|------|-------------------------------------|---|----|-------|-------|-------|-------|------|------|------|
|      | HT/VHT40, M0 to M7                  | 4 | 12 | 0.4   | -0.5  | 0.6   | 0.1   | 6.2  | 24.0 | 17.8 |
|      | HT/VHT40, M8 to M15                 | 4 | 9  | 0.4   | -0.5  | 0.6   | 0.1   | 6.2  | 27.0 | 20.8 |
|      | HT/VHT40, M16 to M23                | 4 | 7  | 0.4   | -0.5  | 0.6   | 0.1   | 6.2  | 29.0 | 22.8 |
|      | HT/VHT40 Beam Forming, M0 to M7     | 2 | 9  | 0.4   | -0.5  |       |       | 3.0  | 27.0 | 24.0 |
|      | HT/VHT40 Beam Forming, M8 to M15    | 2 | 6  | 0.4   | -0.5  |       |       | 3.0  | 30.0 | 27.0 |
|      | HT/VHT40 Beam Forming, M0 to M7     | 3 | 11 | 0.4   | -0.5  | 0.6   |       | 5.0  | 25.0 | 20.0 |
|      | HT/VHT40 Beam Forming, M8 to M15    | 3 | 8  | 0.4   | -0.5  | 0.6   |       | 5.0  | 28.0 | 23.0 |
|      | HT/VHT40 Beam Forming, M16 to M23   | 3 | 6  | 0.4   | -0.5  | 0.6   |       | 5.0  | 30.0 | 25.0 |
|      | HT/VHT40 Beam Forming, M0 to M7     | 4 | 12 | 0.4   | -0.5  | 0.6   | 0.1   | 6.2  | 24.0 | 17.8 |
|      | HT/VHT40 Beam Forming, M8 to M15    | 4 | 9  | 0.4   | -0.5  | 0.6   | 0.1   | 6.2  | 27.0 | 20.8 |
|      | HT/VHT40 Beam Forming, M16 to M23   | 4 | 7  | 0.4   | -0.5  | 0.6   | 0.1   | 6.2  | 29.0 | 22.8 |
|      | HT/VHT40 STBC, M0 to M7             | 2 | 6  | 0.4   | -0.5  |       |       | 3.0  | 30.0 | 27.0 |
|      | HT/VHT40 STBC, M0 to M7             | 3 | 8  | 0.4   | -0.5  | 0.6   |       | 5.0  | 28.0 | 23.0 |
|      | HT/VHT40 STBC, M0 to M7             | 4 | 9  | 0.4   | -0.5  | 0.6   | 0.1   | 6.2  | 27.0 | 20.8 |
|      |                                     |   |    |       |       |       |       |      |      |      |
| 5825 | Non HT20, 6 to 54 Mbps              | 1 | 6  | 1.9   |       |       |       | 1.9  | 30.0 | 28.1 |
|      | Non HT20, 6 to 54 Mbps              | 2 | 9  | -0.8  | -0.4  |       |       | 2.4  | 27.0 | 24.6 |
|      | Non HT20, 6 to 54 Mbps              | 3 | 11 | -2.7  | -2.4  | -2.0  |       | 2.4  | 25.0 | 22.6 |
|      | Non HT20, 6 to 54 Mbps              | 4 | 12 | -3.7  | -3.4  | -3.0  | -3.1  | 2.7  | 24.0 | 21.3 |
|      | Non HT20 Beam Forming, 6 to 54 Mbps | 2 | 9  | -3.7  | -3.4  |       |       | -0.5 | 27.0 | 27.5 |
|      | Non HT20 Beam Forming, 6 to 54 Mbps | 3 | 11 | -7.7  | -7.7  | -6.8  |       | -2.6 | 25.0 | 27.6 |
|      | Non HT20 Beam Forming, 6 to 54 Mbps | 4 | 12 | -10.8 | -10.6 | -10.2 | -10.3 | -4.4 | 24.0 | 28.4 |
|      | HT/VHT20, M0 to M7                  | 1 | 6  | 2.7   |       |       |       | 2.7  | 30.0 | 27.3 |
|      | HT/VHT20, M0 to M7                  | 2 | 9  | -1.1  | -0.7  |       |       | 2.1  | 27.0 | 24.9 |
|      | HT/VHT20, M8 to M15                 | 2 | 6  | -1.1  | -0.7  |       |       | 2.1  | 30.0 | 27.9 |
|      | HT/VHT20, M0 to M7                  | 3 | 11 | -2.9  | -2.2  | -2.1  |       | 2.4  | 25.0 | 22.6 |
|      | HT/VHT20, M8 to M15                 | 3 | 8  | -2.9  | -2.2  | -2.1  |       | 2.4  | 28.0 | 25.7 |
|      | HT/VHT20, M16 to M23                | 3 | 6  | -2.9  | -2.2  | -2.1  |       | 2.4  | 30.0 | 27.6 |
|      | HT/VHT20, M0 to M7                  | 4 | 12 | -3.9  | -3.2  | -2.7  | -3.3  | 2.8  | 24.0 | 21.2 |
|      | HT/VHT20, M8 to M15                 | 4 | 9  | -3.9  | -3.2  | -2.7  | -3.3  | 2.8  | 27.0 | 24.2 |
|      | HT/VHT20, M16 to M23                | 4 | 7  | -3.9  | -3.2  | -2.7  | -3.3  | 2.8  | 29.0 | 26.2 |
|      | HT/VHT20 Beam Forming, M0 to M7     | 2 | 9  | -4.7  | -4.7  |       |       | -1.7 | 27.0 | 28.7 |
|      | HT/VHT20 Beam Forming, M8 to M15    | 2 | 6  | -1.1  | -0.7  |       |       | 2.1  | 30.0 | 27.9 |
|      | HT/VHT20 Beam Forming, M0 to M7     | 3 | 11 | -7.1  | -6.8  | -6.2  |       | -1.9 | 25.0 | 26.9 |
|      | HT/VHT20 Beam Forming, M8 to M15    | 3 | 8  | -4.7  | -4.7  | -3.9  |       | 0.4  | 28.0 | 27.6 |
|      | HT/VHT20 Beam Forming, M16 to M23   | 3 | 6  | -2.9  | -2.2  | -2.1  |       | 2.4  | 30.0 | 27.6 |
|      | HT/VHT20 Beam Forming, M0 to M7     | 4 | 12 | -9.5  | -9.5  | -8.4  | -9.2  | -3.1 | 24.0 | 27.1 |
|      | HT/VHT20 Beam Forming, M8 to M15    | 4 | 9  | -7.1  | -6.8  | -6.2  | -6.3  | -0.6 | 27.0 | 27.6 |
|      | HT/VHT20 Beam Forming, M16 to M23   | 4 | 7  | -4.7  | -4.7  | -3.9  | -4.0  | 1.7  | 29.0 | 27.3 |
|      | HT/VHT20 STBC, M0 to M7             | 2 | 6  | -1.1  | -0.7  |       |       | 2.1  | 30.0 | 27.9 |
|      | HT/VHT20 STBC, M0 to M7             | 3 | 8  | -2.9  | -2.2  | -2.1  |       | 2.4  | 28.0 | 25.7 |



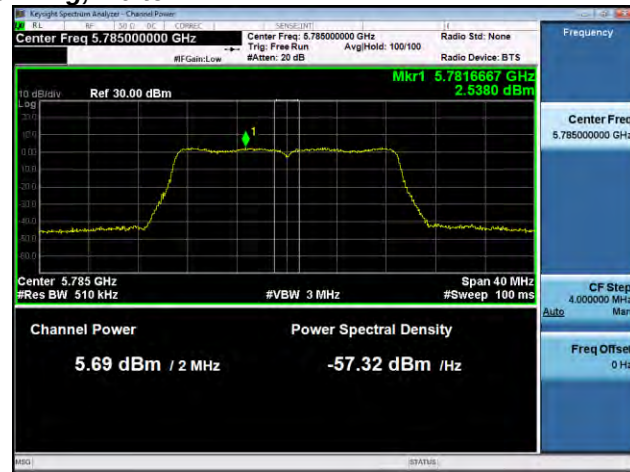


|                         |   |   |      |      |      |      |     |      |      |
|-------------------------|---|---|------|------|------|------|-----|------|------|
| HT/VHT20 STBC, M0 to M7 | 4 | 9 | -3.9 | -3.2 | -2.7 | -3.3 | 2.8 | 27.0 | 24.2 |
|-------------------------|---|---|------|------|------|------|-----|------|------|

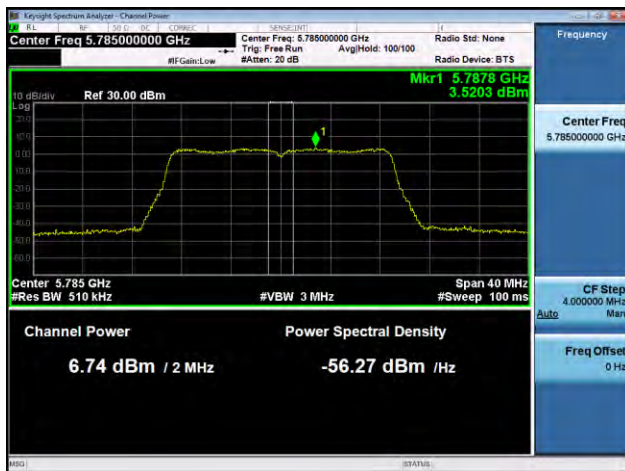
### Power Spectral Density, 5785 MHz, HT/VHT20 Beam Forming, M0 to M7



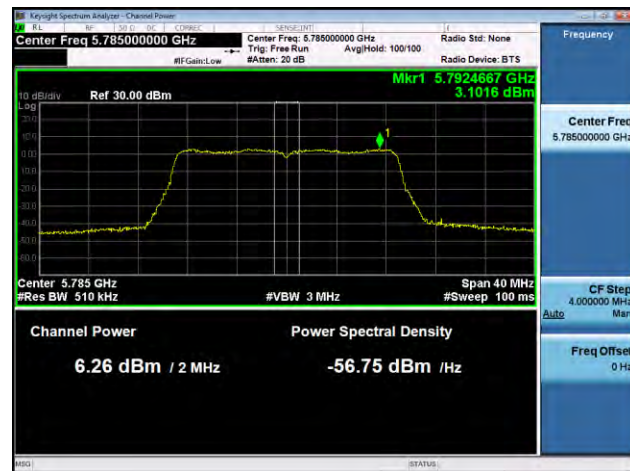
Antenna A



Antenna B



Antenna C



Antenna D

## A.5 Conducted Spurious Emissions

**15.407** (b) *Undesirable emission limits.* Except as shown in paragraph (b) (7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

(4) For transmitters operating in the 5.725-5.85 GHz band: All emissions within the frequency range from the band edge to 10 MHz above or below the band edge shall not exceed an e.i.r.p. of -17 dBm/MHz; for frequencies 10 MHz or greater above or below the band edge, emissions shall not exceed an e.i.r.p. of -27 dBm/MHz.

(6) Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in §15.209.

(7) The provisions of §15.205 apply to intentional radiators operating under this section.

### Test Procedure

Ref. KDB 789033 D02 General UNII Test Procedures New Rules v01r01  
ANSI C63.10: 2013

#### Conducted Spurious Emissions

##### Test Procedure

1. Connect the antenna port(s) to the spectrum analyzer input.
2. Place the radio in continuous transmit mode. Use the procedures in KDB 789033 D02 General UNII Test Procedures New Rules v01 to substitute conducted measurements in place of radiated measurements.
3. Configure Spectrum analyzer as per test parameters below (be sure to enter all losses between the transmitter output and the spectrum analyzer).
4. Record the marker waveform peak to spur difference. Also measure any emissions in the restricted bands.
5. The "measure-and-sum technique" is used for measuring in-band transmit power of a device. In the measure-and-sum approach, the conducted emission level is measured at each antenna port. The measured results at the various antenna ports are then summed mathematically to determine the total emission level from the device. Summing is performed in linear power units. The worst case output is recorded.
6. Capture graphs and record pertinent measurement data.

Ref. KDB 789033 D02 General UNII Test Procedures New Rules v01r01  
ANSI C63.10: 2013 section 12.7.7.3 (average) & 12.7.6 (peak)

#### Conducted Spurious Emissions

##### Test parameters

Span = 30MHz to 18GHz / 18GHz to 40GHz  
RBW = 1 MHz  
VBW  $\geq 3 \times$  RBW for Peak, 1kHz for Average  
Sweep = Auto couple  
Detector = Peak  
Trace = Max Hold.



| System Number | Description | Samples | System under test                   | Support equipment                   |
|---------------|-------------|---------|-------------------------------------|-------------------------------------|
| 1             | EUT         | S01     | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
|               | Support     | S02     | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

|                                    |                                                  |
|------------------------------------|--------------------------------------------------|
| <b>Tested By :</b><br>Jose Aguirre | <b>Date of testing:</b><br>01-Jan-16 - 03-Mar-16 |
| <b>Test Result : PASS</b>          |                                                  |

See Appendix C for list of test equipment



| Frequency (MHz) | Mode                                | Tx Paths | Correlated Antenna Gain (dBi) | Tx 1 Spur Power (dBm) | Tx 2 Spur Power (dBm) | Tx 3 Spur Power (dBm) | Tx 4 Spur Power (dBm) | Total Conducted Spur (dBm) | Limit (dBm) | Margin (dB) |
|-----------------|-------------------------------------|----------|-------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------------------------|-------------|-------------|
| 5745            | Non HT20, 6 to 54 Mbps              | 1        | 6                             | -68.2                 |                       |                       |                       | -62.2                      | -41.25      | 21.0        |
|                 | Non HT20, 6 to 54 Mbps              | 2        | 6                             | -68.2                 | -68.5                 |                       |                       | -59.3                      | -41.25      | 18.1        |
|                 | Non HT20, 6 to 54 Mbps              | 3        | 6                             | -68.2                 | -68.5                 | -68.2                 |                       | -57.5                      | -41.25      | 16.3        |
|                 | Non HT20, 6 to 54 Mbps              | 4        | 6                             | -68.2                 | -68.5                 | -68.2                 | -68.9                 | -56.4                      | -41.25      | 15.2        |
|                 | Non HT20 Beam Forming, 6 to 54 Mbps | 2        | 9                             | -68.2                 | -68.5                 |                       |                       | -56.3                      | -41.25      | 15.1        |
|                 | Non HT20 Beam Forming, 6 to 54 Mbps | 3        | 11                            | -68.2                 | -68.5                 | -68.2                 |                       | -52.7                      | -41.25      | 11.5        |
|                 | Non HT20 Beam Forming, 6 to 54 Mbps | 4        | 12                            | -68.2                 | -68.5                 | -68.2                 | -68.9                 | -50.4                      | -41.25      | 9.2         |
|                 | HT/VHT20, M0 to M7                  | 1        | 6                             | -66.7                 |                       |                       |                       | -60.7                      | -41.25      | 19.5        |
|                 | HT/VHT20, M0 to M7                  | 2        | 6                             | -66.7                 | -68.5                 |                       |                       | -58.5                      | -41.25      | 17.2        |
|                 | HT/VHT20, M8 to M15                 | 2        | 6                             | -66.7                 | -68.5                 |                       |                       | -58.5                      | -41.25      | 17.2        |
|                 | HT/VHT20, M0 to M7                  | 3        | 6                             | -66.7                 | -68.5                 | -68.2                 |                       | -57.0                      | -41.25      | 15.7        |
|                 | HT/VHT20, M8 to M15                 | 3        | 6                             | -66.7                 | -68.5                 | -68.2                 |                       | -57.0                      | -41.25      | 15.7        |
|                 | HT/VHT20, M16 to M23                | 3        | 6                             | -66.7                 | -68.5                 | -68.2                 |                       | -57.0                      | -41.25      | 15.7        |
|                 | HT/VHT20, M0 to M7                  | 4        | 6                             | -66.7                 | -68.5                 | -68.2                 | -68.8                 | -56.0                      | -41.25      | 14.7        |
|                 | HT/VHT20, M8 to M15                 | 4        | 6                             | -66.7                 | -68.5                 | -68.2                 | -68.8                 | -56.0                      | -41.25      | 14.7        |
|                 | HT/VHT20, M16 to M23                | 4        | 6                             | -66.7                 | -68.5                 | -68.2                 | -68.8                 | -56.0                      | -41.25      | 14.7        |
|                 | HT/VHT20 Beam Forming, M0 to M7     | 2        | 9                             | -66.7                 | -68.5                 |                       |                       | -55.5                      | -41.25      | 14.2        |
|                 | HT/VHT20 Beam Forming, M8 to M15    | 2        | 6                             | -66.7                 | -68.5                 |                       |                       | -58.5                      | -41.25      | 17.2        |
|                 | HT/VHT20 Beam Forming, M0 to M7     | 3        | 11                            | -66.7                 | -68.5                 | -68.2                 |                       | -52.2                      | -41.25      | 10.9        |
|                 | HT/VHT20 Beam Forming, M8 to M15    | 3        | 8                             | -66.7                 | -68.5                 | -68.2                 |                       | -55.2                      | -41.25      | 13.9        |
|                 | HT/VHT20 Beam Forming, M16 to M23   | 3        | 6                             | -66.7                 | -68.5                 | -68.2                 |                       | -57.0                      | -41.25      | 15.7        |
|                 | HT/VHT20 Beam Forming, M0 to M7     | 4        | 12                            | -66.7                 | -68.5                 | -68.2                 | -68.8                 | -50.0                      | -41.25      | 8.7         |
|                 | HT/VHT20 Beam Forming, M8 to M15    | 4        | 9                             | -66.7                 | -68.5                 | -68.2                 | -68.8                 | -53.0                      | -41.25      | 11.7        |
|                 | HT/VHT20 Beam Forming, M16 to M23   | 4        | 7                             | -66.7                 | -68.5                 | -68.2                 | -68.8                 | -54.8                      | -41.25      | 13.5        |
|                 | HT/VHT20 STBC, M0 to M7             | 2        | 6                             | -66.7                 | -68.5                 |                       |                       | -58.5                      | -41.25      | 17.2        |
|                 | HT/VHT20 STBC, M0 to M7             | 3        | 6                             | -66.7                 | -68.5                 | -68.2                 |                       | -57.0                      | -41.25      | 15.7        |
|                 | HT/VHT20 STBC, M0 to M7             | 4        | 6                             | -66.7                 | -68.5                 | -68.2                 | -68.8                 | -56.0                      | -41.25      | 14.7        |
| 5755            | Non HT40, 6 to 54 Mbps              | 1        | 6                             | -66.9                 |                       |                       |                       | -60.9                      | -41.25      | 19.7        |
|                 | Non HT40, 6 to 54 Mbps              | 2        | 6                             | -66.9                 | -68.3                 |                       |                       | -58.5                      | -41.25      | 17.3        |
|                 | Non HT40, 6 to 54 Mbps              | 3        | 6                             | -66.9                 | -68.3                 | -68.5                 |                       | -57.1                      | -41.25      | 15.8        |
|                 | Non HT40, 6 to 54 Mbps              | 4        | 6                             | -66.9                 | -68.3                 | -68.5                 | -68.9                 | -56.1                      | -41.25      | 14.8        |
|                 | HT/VHT40, M0 to M7                  | 1        | 6                             | -68.7                 |                       |                       |                       | -62.7                      | -41.25      | 21.5        |
|                 | HT/VHT40, M0 to M7                  | 2        | 6                             | -68.7                 | -68.9                 |                       |                       | -59.8                      | -41.25      | 18.5        |



|      |                                   |   |    |       |       |       |       |       |        |      |
|------|-----------------------------------|---|----|-------|-------|-------|-------|-------|--------|------|
|      | HT/VHT40, M8 to M15               | 2 | 6  | -68.7 | -68.9 |       |       | -59.8 | -41.25 | 18.5 |
|      | HT/VHT40, M0 to M7                | 3 | 6  | -68.7 | -68.9 | -68.7 |       | -58.0 | -41.25 | 16.7 |
|      | HT/VHT40, M8 to M15               | 3 | 6  | -68.7 | -68.9 | -68.7 |       | -58.0 | -41.25 | 16.7 |
|      | HT/VHT40, M16 to M23              | 3 | 6  | -68.7 | -68.9 | -68.7 |       | -58.0 | -41.25 | 16.7 |
|      | HT/VHT40, M0 to M7                | 4 | 6  | -68.7 | -68.9 | -68.7 | -69.1 | -56.8 | -41.25 | 15.6 |
|      | HT/VHT40, M8 to M15               | 4 | 6  | -68.7 | -68.9 | -68.7 | -69.1 | -56.8 | -41.25 | 15.6 |
|      | HT/VHT40, M16 to M23              | 4 | 6  | -68.7 | -68.9 | -68.7 | -69.1 | -56.8 | -41.25 | 15.6 |
|      | HT/VHT40 Beam Forming, M0 to M7   | 2 | 9  | -68.7 | -68.9 |       |       | -56.8 | -41.25 | 15.5 |
|      | HT/VHT40 Beam Forming, M8 to M15  | 2 | 6  | -68.7 | -68.9 |       |       | -59.8 | -41.25 | 18.5 |
|      | HT/VHT40 Beam Forming, M0 to M7   | 3 | 11 | -68.7 | -68.9 | -68.7 |       | -53.2 | -41.25 | 11.9 |
|      | HT/VHT40 Beam Forming, M8 to M15  | 3 | 8  | -68.7 | -68.9 | -68.7 |       | -56.2 | -41.25 | 14.9 |
|      | HT/VHT40 Beam Forming, M16 to M23 | 3 | 6  | -68.7 | -68.9 | -68.7 |       | -58.0 | -41.25 | 16.7 |
|      | HT/VHT40 Beam Forming, M0 to M7   | 4 | 12 | -68.7 | -68.9 | -68.7 | -69.1 | -50.8 | -41.25 | 9.6  |
|      | HT/VHT40 Beam Forming, M8 to M15  | 4 | 9  | -68.7 | -68.9 | -68.7 | -69.1 | -53.8 | -41.25 | 12.6 |
|      | HT/VHT40 Beam Forming, M16 to M23 | 4 | 7  | -68.7 | -68.9 | -68.7 | -69.1 | -55.6 | -41.25 | 14.4 |
|      | HT/VHT40 STBC, M0 to M7           | 2 | 6  | -68.7 | -68.9 |       |       | -59.8 | -41.25 | 18.5 |
|      | HT/VHT40 STBC, M0 to M7           | 3 | 6  | -68.7 | -68.9 | -68.7 |       | -58.0 | -41.25 | 16.7 |
|      | HT/VHT40 STBC, M0 to M7           | 4 | 6  | -68.7 | -68.9 | -68.7 | -69.1 | -56.8 | -41.25 | 15.6 |
| 5775 | Non HT80, 6 to 54 Mbps            | 1 | 6  | -68.9 |       |       |       | -62.9 | -41.25 | 21.7 |
|      | Non HT80, 6 to 54 Mbps            | 2 | 6  | -68.9 | -69.1 |       |       | -60.0 | -41.25 | 18.7 |
|      | Non HT80, 6 to 54 Mbps            | 3 | 6  | -68.9 | -69.1 | -69.0 |       | -58.2 | -41.25 | 17.0 |
|      | Non HT80, 6 to 54 Mbps            | 4 | 6  | -68.9 | -69.1 | -69.0 | -69.2 | -57.0 | -41.25 | 15.8 |
|      | VHT80, M0.1 to M9.1               | 1 | 6  | -69.1 |       |       |       | -63.1 | -41.25 | 21.9 |
|      | VHT80, M0.1 to M9.1               | 2 | 6  | -69.1 | -69.0 |       |       | -60.0 | -41.25 | 18.8 |
|      | VHT80, M0.2 to M9.2               | 2 | 6  | -69.1 | -69.0 |       |       | -60.0 | -41.25 | 18.8 |
|      | VHT80, M0.1 to M9.1               | 3 | 6  | -69.1 | -69.0 | -66.8 |       | -57.4 | -41.25 | 16.1 |
|      | VHT80, M0.2 to M9.2               | 3 | 6  | -69.1 | -69.0 | -66.8 |       | -57.4 | -41.25 | 16.1 |
|      | VHT80, M0.3 to M9.3               | 3 | 6  | -69.1 | -69.0 | -66.8 |       | -57.4 | -41.25 | 16.1 |
|      | VHT80, M0.1 to M9.1               | 4 | 6  | -69.1 | -69.0 | -66.8 | -69.1 | -56.4 | -41.25 | 15.1 |
|      | VHT80, M0.2 to M9.2               | 4 | 6  | -69.1 | -69.0 | -66.8 | -69.1 | -56.4 | -41.25 | 15.1 |
|      | VHT80, M0.3 to M9.3               | 4 | 6  | -69.1 | -69.0 | -66.8 | -69.1 | -56.4 | -41.25 | 15.1 |
|      | VHT80 Beam Forming, M0.1 to M9.1  | 2 | 6  | -69.1 | -69.0 |       |       | -60.0 | -41.25 | 18.8 |
|      | VHT80 Beam Forming, M0.2 to M9.2  | 2 | 6  | -69.1 | -69.0 |       |       | -60.0 | -41.25 | 18.8 |
|      | VHT80 Beam Forming, M0.1 to M9.1  | 3 | 6  | -69.1 | -69.0 | -66.8 |       | -57.4 | -41.25 | 16.1 |
|      | VHT80 Beam Forming, M0.2 to M9.2  | 3 | 6  | -69.1 | -69.0 | -66.8 |       | -57.4 | -41.25 | 16.1 |
|      | VHT80 Beam Forming, M0.3 to M9.3  | 3 | 6  | -69.1 | -69.0 | -66.8 |       | -57.4 | -41.25 | 16.1 |
|      | VHT80 Beam Forming, M0.1 to M9.1  | 4 | 6  | -69.1 | -69.0 | -66.8 | -69.1 | -56.4 | -41.25 | 15.1 |
|      | VHT80 Beam Forming, M0.2 to M9.2  | 4 | 6  | -69.1 | -69.0 | -66.8 | -69.1 | -56.4 | -41.25 | 15.1 |
|      | VHT80 Beam Forming, M0.3 to M9.3  | 4 | 6  | -69.1 | -69.0 | -66.8 | -69.1 | -56.4 | -41.25 | 15.1 |
|      | VHT80 STBC, M0.1 to M9.1          | 2 | 6  | -69.1 | -69.0 |       |       | -60.0 | -41.25 | 18.8 |



|      |                                     |   |    |       |       |       |       |       |        |      |
|------|-------------------------------------|---|----|-------|-------|-------|-------|-------|--------|------|
|      | VHT80 STBC, M0.1 to M9.1            | 3 | 6  | -69.1 | -69.0 | -66.8 |       | -57.4 | -41.25 | 16.1 |
|      | VHT80 STBC, M0.1 to M9.1            | 4 | 6  | -69.1 | -69.0 | -66.8 | -69.1 | -56.4 | -41.25 | 15.1 |
| 5785 | Non HT20, 6 to 54 Mbps              | 1 | 6  | -68.7 |       |       |       | -62.7 | -41.25 | 21.5 |
|      | Non HT20, 6 to 54 Mbps              | 2 | 6  | -68.7 | -67.9 |       |       | -59.3 | -41.25 | 18.0 |
|      | Non HT20, 6 to 54 Mbps              | 3 | 6  | -68.7 | -67.9 | -67.9 |       | -57.4 | -41.25 | 16.1 |
|      | Non HT20, 6 to 54 Mbps              | 4 | 6  | -68.7 | -67.9 | -67.9 | -68.9 | -56.3 | -41.25 | 15.1 |
|      | Non HT20 Beam Forming, 6 to 54 Mbps | 2 | 9  | -68.7 | -67.9 |       |       | -56.3 | -41.25 | 15.0 |
|      | Non HT20 Beam Forming, 6 to 54 Mbps | 3 | 11 | -68.7 | -67.9 | -67.9 |       | -52.6 | -41.25 | 11.3 |
|      | Non HT20 Beam Forming, 6 to 54 Mbps | 4 | 12 | -68.7 | -67.9 | -67.9 | -68.9 | -50.3 | -41.25 | 9.1  |
|      | HT/VHT20, M0 to M7                  | 1 | 6  | -68.6 |       |       |       | -62.6 | -41.25 | 21.4 |
|      | HT/VHT20, M0 to M7                  | 2 | 6  | -68.6 | -67.8 |       |       | -59.2 | -41.25 | 17.9 |
|      | HT/VHT20, M8 to M15                 | 2 | 6  | -68.6 | -67.8 |       |       | -59.2 | -41.25 | 17.9 |
|      | HT/VHT20, M0 to M7                  | 3 | 6  | -68.6 | -67.8 | -68.2 |       | -57.4 | -41.25 | 16.2 |
|      | HT/VHT20, M8 to M15                 | 3 | 6  | -68.6 | -67.8 | -68.2 |       | -57.4 | -41.25 | 16.2 |
|      | HT/VHT20, M16 to M23                | 3 | 6  | -68.6 | -67.8 | -68.2 |       | -57.4 | -41.25 | 16.2 |
|      | HT/VHT20, M0 to M7                  | 4 | 6  | -68.6 | -67.8 | -68.2 | -68.9 | -56.3 | -41.25 | 15.1 |
|      | HT/VHT20, M8 to M15                 | 4 | 6  | -68.6 | -67.8 | -68.2 | -68.9 | -56.3 | -41.25 | 15.1 |
|      | HT/VHT20, M16 to M23                | 4 | 6  | -68.6 | -67.8 | -68.2 | -68.9 | -56.3 | -41.25 | 15.1 |
|      | HT/VHT20 Beam Forming, M0 to M7     | 2 | 9  | -68.6 | -67.8 |       |       | -56.2 | -41.25 | 14.9 |
|      | HT/VHT20 Beam Forming, M8 to M15    | 2 | 6  | -68.6 | -67.8 |       |       | -59.2 | -41.25 | 17.9 |
|      | HT/VHT20 Beam Forming, M0 to M7     | 3 | 11 | -68.6 | -67.8 | -68.2 |       | -52.6 | -41.25 | 11.4 |
|      | HT/VHT20 Beam Forming, M8 to M15    | 3 | 8  | -68.6 | -67.8 | -68.2 |       | -55.6 | -41.25 | 14.4 |
|      | HT/VHT20 Beam Forming, M16 to M23   | 3 | 6  | -68.6 | -67.8 | -68.2 |       | -57.4 | -41.25 | 16.2 |
|      | HT/VHT20 Beam Forming, M0 to M7     | 4 | 12 | -68.6 | -67.8 | -68.2 | -68.9 | -50.3 | -41.25 | 9.1  |
|      | HT/VHT20 Beam Forming, M8 to M15    | 4 | 9  | -68.6 | -67.8 | -68.2 | -68.9 | -53.3 | -41.25 | 12.1 |
|      | HT/VHT20 Beam Forming, M16 to M23   | 4 | 7  | -68.6 | -67.8 | -68.2 | -68.9 | -55.1 | -41.25 | 13.9 |
|      | HT/VHT20 STBC, M0 to M7             | 2 | 6  | -68.6 | -67.8 |       |       | -59.2 | -41.25 | 17.9 |
|      | HT/VHT20 STBC, M0 to M7             | 3 | 6  | -68.6 | -67.8 | -68.2 |       | -57.4 | -41.25 | 16.2 |
|      | HT/VHT20 STBC, M0 to M7             | 4 | 6  | -68.6 | -67.8 | -68.2 | -68.9 | -56.3 | -41.25 | 15.1 |
| 5795 | Non HT40, 6 to 54 Mbps              | 1 | 6  | -69.1 |       |       |       | -63.1 | -41.25 | 21.9 |
|      | Non HT40, 6 to 54 Mbps              | 2 | 6  | -69.1 | -69.3 |       |       | -60.2 | -41.25 | 18.9 |
|      | Non HT40, 6 to 54 Mbps              | 3 | 6  | -69.1 | -69.3 | -67.1 |       | -57.6 | -41.25 | 16.4 |
|      | Non HT40, 6 to 54 Mbps              | 4 | 6  | -69.1 | -69.3 | -67.1 | -68.9 | -56.5 | -41.25 | 15.2 |
|      | HT/VHT40, M0 to M7                  | 1 | 6  | -69.0 |       |       |       | -63.0 | -41.25 | 21.8 |
|      | HT/VHT40, M0 to M7                  | 2 | 6  | -69.0 | -69.1 |       |       | -60.0 | -41.25 | 18.8 |
|      | HT/VHT40, M8 to M15                 | 2 | 6  | -69.0 | -69.1 |       |       | -60.0 | -41.25 | 18.8 |
|      | HT/VHT40, M0 to M7                  | 3 | 6  | -69.0 | -69.1 | -69.0 |       | -58.3 | -41.25 | 17.0 |
|      | HT/VHT40, M8 to M15                 | 3 | 6  | -69.0 | -69.1 | -69.0 |       | -58.3 | -41.25 | 17.0 |
|      | HT/VHT40, M16 to M23                | 3 | 6  | -69.0 | -69.1 | -69.0 |       | -58.3 | -41.25 | 17.0 |



|      |                                            |          |           |              |              |              |              |              |               |            |
|------|--------------------------------------------|----------|-----------|--------------|--------------|--------------|--------------|--------------|---------------|------------|
|      | HT/VHT40, M0 to M7                         | 4        | 6         | -69.0        | -69.1        | -69.0        | -69.2        | -57.1        | -41.25        | 15.8       |
|      | HT/VHT40, M8 to M15                        | 4        | 6         | -69.0        | -69.1        | -69.0        | -69.2        | -57.1        | -41.25        | 15.8       |
|      | HT/VHT40, M16 to M23                       | 4        | 6         | -69.0        | -69.1        | -69.0        | -69.2        | -57.1        | -41.25        | 15.8       |
|      | HT/VHT40 Beam Forming, M0 to M7            | 2        | 9         | -69.0        | -69.1        |              |              | -57.0        | -41.25        | 15.8       |
|      | HT/VHT40 Beam Forming, M8 to M15           | 2        | 6         | -69.0        | -69.1        |              |              | -60.0        | -41.25        | 18.8       |
|      | HT/VHT40 Beam Forming, M0 to M7            | 3        | 11        | -69.0        | -69.1        | -69.0        |              | -53.5        | -41.25        | 12.2       |
|      | HT/VHT40 Beam Forming, M8 to M15           | 3        | 8         | -69.0        | -69.1        | -69.0        |              | -56.5        | -41.25        | 15.2       |
|      | HT/VHT40 Beam Forming, M16 to M23          | 3        | 6         | -69.0        | -69.1        | -69.0        |              | -58.3        | -41.25        | 17.0       |
|      | HT/VHT40 Beam Forming, M0 to M7            | 4        | 12        | -69.0        | -69.1        | -69.0        | -69.2        | -51.1        | -41.25        | 9.8        |
|      | HT/VHT40 Beam Forming, M8 to M15           | 4        | 9         | -69.0        | -69.1        | -69.0        | -69.2        | -54.1        | -41.25        | 12.8       |
|      | HT/VHT40 Beam Forming, M16 to M23          | 4        | 7         | -69.0        | -69.1        | -69.0        | -69.2        | -55.9        | -41.25        | 14.6       |
|      | HT/VHT40 STBC, M0 to M7                    | 2        | 6         | -69.0        | -69.1        |              |              | -60.0        | -41.25        | 18.8       |
|      | HT/VHT40 STBC, M0 to M7                    | 3        | 6         | -69.0        | -69.1        | -69.0        |              | -58.3        | -41.25        | 17.0       |
|      | HT/VHT40 STBC, M0 to M7                    | 4        | 6         | -69.0        | -69.1        | -69.0        | -69.2        | -57.1        | -41.25        | 15.8       |
| 5825 | Non HT20, 6 to 54 Mbps                     | 1        | 6         | -68.6        |              |              |              | -62.6        | -41.25        | 21.4       |
|      | Non HT20, 6 to 54 Mbps                     | 2        | 6         | -68.6        | -66.5        |              |              | -58.4        | -41.25        | 17.2       |
|      | Non HT20, 6 to 54 Mbps                     | 3        | 6         | -68.6        | -66.5        | -66.8        |              | -56.4        | -41.25        | 15.2       |
|      | Non HT20, 6 to 54 Mbps                     | 4        | 6         | -68.6        | -66.5        | -66.8        | -66.8        | -55.1        | -41.25        | 13.8       |
|      | Non HT20 Beam Forming, 6 to 54 Mbps        | 2        | 9         | -68.6        | -66.5        |              |              | -55.4        | -41.25        | 14.2       |
|      | Non HT20 Beam Forming, 6 to 54 Mbps        | 3        | 11        | -68.6        | -66.5        | -66.8        |              | -51.6        | -41.25        | 10.4       |
|      | <b>Non HT20 Beam Forming, 6 to 54 Mbps</b> | <b>4</b> | <b>12</b> | <b>-68.6</b> | <b>-66.5</b> | <b>-66.8</b> | <b>-66.8</b> | <b>-49.1</b> | <b>-41.25</b> | <b>7.8</b> |
|      | HT/VHT20, M0 to M7                         | 1        | 6         | -68.3        |              |              |              | -62.3        | -41.25        | 21.1       |
|      | HT/VHT20, M0 to M7                         | 2        | 6         | -68.3        | -66.8        |              |              | -58.5        | -41.25        | 17.2       |
|      | HT/VHT20, M8 to M15                        | 2        | 6         | -68.3        | -66.8        |              |              | -58.5        | -41.25        | 17.2       |
|      | HT/VHT20, M0 to M7                         | 3        | 6         | -68.3        | -66.8        | -66.5        |              | -56.4        | -41.25        | 15.1       |
|      | HT/VHT20, M8 to M15                        | 3        | 6         | -68.3        | -66.8        | -66.5        |              | -56.4        | -41.25        | 15.1       |
|      | HT/VHT20, M16 to M23                       | 3        | 6         | -68.3        | -66.8        | -66.5        |              | -56.4        | -41.25        | 15.1       |
|      | HT/VHT20, M0 to M7                         | 4        | 6         | -68.3        | -66.8        | -66.5        | -68.4        | -55.4        | -41.25        | 14.1       |
|      | HT/VHT20, M8 to M15                        | 4        | 6         | -68.3        | -66.8        | -66.5        | -68.4        | -55.4        | -41.25        | 14.1       |
|      | HT/VHT20, M16 to M23                       | 4        | 6         | -68.3        | -66.8        | -66.5        | -68.4        | -55.4        | -41.25        | 14.1       |
|      | HT/VHT20 Beam Forming, M0 to M7            | 2        | 9         | -68.3        | -66.8        |              |              | -55.5        | -41.25        | 14.2       |
|      | HT/VHT20 Beam Forming, M8 to M15           | 2        | 6         | -68.3        | -66.8        |              |              | -58.5        | -41.25        | 17.2       |
|      | HT/VHT20 Beam Forming, M0 to M7            | 3        | 11        | -68.3        | -66.8        | -66.5        |              | -51.6        | -41.25        | 10.3       |
|      | HT/VHT20 Beam Forming, M8 to M15           | 3        | 8         | -68.3        | -66.8        | -66.5        |              | -54.6        | -41.25        | 13.3       |
|      | HT/VHT20 Beam Forming, M16 to M23          | 3        | 6         | -68.3        | -66.8        | -66.5        |              | -56.4        | -41.25        | 15.1       |
|      | HT/VHT20 Beam Forming, M0 to M7            | 4        | 12        | -68.3        | -66.8        | -66.5        | -68.4        | -49.4        | -41.25        | 8.1        |
|      | HT/VHT20 Beam Forming, M8 to M15           | 4        | 9         | -68.3        | -66.8        | -66.5        | -68.4        | -52.4        | -41.25        | 11.1       |
|      | HT/VHT20 Beam Forming, M16 to M23          | 4        | 7         | -68.3        | -66.8        | -66.5        | -68.4        | -54.2        | -41.25        | 12.9       |
|      | HT/VHT20 STBC, M0 to M7                    | 2        | 6         | -68.3        | -66.8        |              |              | -58.5        | -41.25        | 17.2       |
|      | HT/VHT20 STBC, M0 to M7                    | 3        | 6         | -68.3        | -66.8        | -66.5        |              | -56.4        | -41.25        | 15.1       |



|  |                         |   |   |       |       |       |       |       |        |      |
|--|-------------------------|---|---|-------|-------|-------|-------|-------|--------|------|
|  | HT/VHT20 STBC, M0 to M7 | 4 | 6 | -68.3 | -66.8 | -66.5 | -68.4 | -55.4 | -41.25 | 14.1 |
|--|-------------------------|---|---|-------|-------|-------|-------|-------|--------|------|





| Frequency (MHz) | Mode                                | Tx Paths | Correlated Antenna Gain (dBi) | Tx 1 Spur Power (dBm) | Tx 2 Spur Power (dBm) | Tx 3 Spur Power (dBm) | Tx 4 Spur Power (dBm) | Total Conducted Spur (dBm) | Limit (dBm) | Margin (dB) |
|-----------------|-------------------------------------|----------|-------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------------------------|-------------|-------------|
| 5745            | Non HT20, 6 to 54 Mbps              | 1        | 6                             | -58.9                 |                       |                       |                       | -52.9                      | -21.25      | 31.7        |
|                 | Non HT20, 6 to 54 Mbps              | 2        | 6                             | -58.9                 | -59.3                 |                       |                       | -50.1                      | -21.25      | 28.8        |
|                 | Non HT20, 6 to 54 Mbps              | 3        | 6                             | -58.9                 | -59.3                 | -58.4                 |                       | -48.1                      | -21.25      | 26.8        |
|                 | Non HT20, 6 to 54 Mbps              | 4        | 6                             | -58.9                 | -59.3                 | -58.4                 | -59.1                 | -46.9                      | -21.25      | 25.6        |
|                 | Non HT20 Beam Forming, 6 to 54 Mbps | 2        | 9                             | -58.9                 | -59.3                 |                       |                       | -47.1                      | -21.25      | 25.8        |
|                 | Non HT20 Beam Forming, 6 to 54 Mbps | 3        | 11                            | -58.9                 | -59.3                 | -58.4                 |                       | -43.3                      | -21.25      | 22.0        |
|                 | Non HT20 Beam Forming, 6 to 54 Mbps | 4        | 12                            | -58.9                 | -59.3                 | -58.4                 | -59.1                 | -40.9                      | -21.25      | 19.6        |
|                 | HT/VHT20, M0 to M7                  | 1        | 6                             | -59.6                 |                       |                       |                       | -53.6                      | -21.25      | 32.4        |
|                 | HT/VHT20, M0 to M7                  | 2        | 6                             | -59.6                 | -61.0                 |                       |                       | -51.2                      | -21.25      | 30.0        |
|                 | HT/VHT20, M8 to M15                 | 2        | 6                             | -59.6                 | -61.0                 |                       |                       | -51.2                      | -21.25      | 30.0        |
|                 | HT/VHT20, M0 to M7                  | 3        | 6                             | -59.6                 | -61.0                 | -60.7                 |                       | -49.6                      | -21.25      | 28.4        |
|                 | HT/VHT20, M8 to M15                 | 3        | 6                             | -59.6                 | -61.0                 | -60.7                 |                       | -49.6                      | -21.25      | 28.4        |
|                 | HT/VHT20, M16 to M23                | 3        | 6                             | -59.6                 | -61.0                 | -60.7                 |                       | -49.6                      | -21.25      | 28.4        |
|                 | HT/VHT20, M0 to M7                  | 4        | 6                             | -59.6                 | -61.0                 | -60.7                 | -58.8                 | -47.9                      | -21.25      | 26.7        |
|                 | HT/VHT20, M8 to M15                 | 4        | 6                             | -59.6                 | -61.0                 | -60.7                 | -58.8                 | -47.9                      | -21.25      | 26.7        |
|                 | HT/VHT20, M16 to M23                | 4        | 6                             | -59.6                 | -61.0                 | -60.7                 | -58.8                 | -47.9                      | -21.25      | 26.7        |
|                 | HT/VHT20 Beam Forming, M0 to M7     | 2        | 9                             | -59.6                 | -61.0                 |                       |                       | -48.2                      | -21.25      | 27.0        |
|                 | HT/VHT20 Beam Forming, M8 to M15    | 2        | 6                             | -59.6                 | -61.0                 |                       |                       | -51.2                      | -21.25      | 30.0        |
|                 | HT/VHT20 Beam Forming, M0 to M7     | 3        | 11                            | -59.6                 | -61.0                 | -60.7                 |                       | -44.8                      | -21.25      | 23.6        |
|                 | HT/VHT20 Beam Forming, M8 to M15    | 3        | 8                             | -59.6                 | -61.0                 | -60.7                 |                       | -47.8                      | -21.25      | 26.6        |
|                 | HT/VHT20 Beam Forming, M16 to M23   | 3        | 6                             | -59.6                 | -61.0                 | -60.7                 |                       | -49.6                      | -21.25      | 28.4        |
|                 | HT/VHT20 Beam Forming, M0 to M7     | 4        | 12                            | -59.6                 | -61.0                 | -60.7                 | -58.8                 | -41.9                      | -21.25      | 20.7        |
|                 | HT/VHT20 Beam Forming, M8 to M15    | 4        | 9                             | -59.6                 | -61.0                 | -60.7                 | -58.8                 | -44.9                      | -21.25      | 23.7        |
|                 | HT/VHT20 Beam Forming, M16 to M23   | 4        | 7                             | -59.6                 | -61.0                 | -60.7                 | -58.8                 | -46.7                      | -21.25      | 25.5        |
|                 | HT/VHT20 STBC, M0 to M7             | 2        | 6                             | -59.6                 | -61.0                 |                       |                       | -51.2                      | -21.25      | 30.0        |
|                 | HT/VHT20 STBC, M0 to M7             | 3        | 6                             | -59.6                 | -61.0                 | -60.7                 |                       | -49.6                      | -21.25      | 28.4        |
|                 | HT/VHT20 STBC, M0 to M7             | 4        | 6                             | -59.6                 | -61.0                 | -60.7                 | -58.8                 | -47.9                      | -21.25      | 26.7        |
| 5755            | Non HT40, 6 to 54 Mbps              | 1        | 6                             | -59.2                 |                       |                       |                       | -53.2                      | -21.25      | 32.0        |
|                 | Non HT40, 6 to 54 Mbps              | 2        | 6                             | -59.2                 | -59.4                 |                       |                       | -50.3                      | -21.25      | 29.0        |
|                 | Non HT40, 6 to 54 Mbps              | 3        | 6                             | -59.2                 | -59.4                 | -59.7                 |                       | -48.7                      | -21.25      | 27.4        |
|                 | Non HT40, 6 to 54 Mbps              | 4        | 6                             | -59.2                 | -59.4                 | -59.7                 | -58.4                 | -47.1                      | -21.25      | 25.9        |
|                 | HT/VHT40, M0 to M7                  | 1        | 6                             | -58.7                 |                       |                       |                       | -52.7                      | -21.25      | 31.5        |
|                 | HT/VHT40, M0 to M7                  | 2        | 6                             | -58.7                 | -60.7                 |                       |                       | -50.6                      | -21.25      | 29.3        |



|      |                                   |   |    |       |       |       |       |       |        |      |
|------|-----------------------------------|---|----|-------|-------|-------|-------|-------|--------|------|
|      | HT/VHT40, M8 to M15               | 2 | 6  | -58.7 | -60.7 |       |       | -50.6 | -21.25 | 29.3 |
|      | HT/VHT40, M0 to M7                | 3 | 6  | -58.7 | -60.7 | -59.9 |       | -48.9 | -21.25 | 27.7 |
|      | HT/VHT40, M8 to M15               | 3 | 6  | -58.7 | -60.7 | -59.9 |       | -48.9 | -21.25 | 27.7 |
|      | HT/VHT40, M16 to M23              | 3 | 6  | -58.7 | -60.7 | -59.9 |       | -48.9 | -21.25 | 27.7 |
|      | HT/VHT40, M0 to M7                | 4 | 6  | -58.7 | -60.7 | -59.9 | -59.8 | -47.7 | -21.25 | 26.4 |
|      | HT/VHT40, M8 to M15               | 4 | 6  | -58.7 | -60.7 | -59.9 | -59.8 | -47.7 | -21.25 | 26.4 |
|      | HT/VHT40, M16 to M23              | 4 | 6  | -58.7 | -60.7 | -59.9 | -59.8 | -47.7 | -21.25 | 26.4 |
|      | HT/VHT40 Beam Forming, M0 to M7   | 2 | 9  | -58.7 | -60.7 |       |       | -47.6 | -21.25 | 26.3 |
|      | HT/VHT40 Beam Forming, M8 to M15  | 2 | 6  | -58.7 | -60.7 |       |       | -50.6 | -21.25 | 29.3 |
|      | HT/VHT40 Beam Forming, M0 to M7   | 3 | 11 | -58.7 | -60.7 | -59.9 |       | -44.1 | -21.25 | 22.9 |
|      | HT/VHT40 Beam Forming, M8 to M15  | 3 | 8  | -58.7 | -60.7 | -59.9 |       | -47.1 | -21.25 | 25.9 |
|      | HT/VHT40 Beam Forming, M16 to M23 | 3 | 6  | -58.7 | -60.7 | -59.9 |       | -48.9 | -21.25 | 27.7 |
|      | HT/VHT40 Beam Forming, M0 to M7   | 4 | 12 | -58.7 | -60.7 | -59.9 | -59.8 | -41.7 | -21.25 | 20.4 |
|      | HT/VHT40 Beam Forming, M8 to M15  | 4 | 9  | -58.7 | -60.7 | -59.9 | -59.8 | -44.7 | -21.25 | 23.4 |
|      | HT/VHT40 Beam Forming, M16 to M23 | 4 | 7  | -58.7 | -60.7 | -59.9 | -59.8 | -46.5 | -21.25 | 25.2 |
|      | HT/VHT40 STBC, M0 to M7           | 2 | 6  | -58.7 | -60.7 |       |       | -50.6 | -21.25 | 29.3 |
|      | HT/VHT40 STBC, M0 to M7           | 3 | 6  | -58.7 | -60.7 | -59.9 |       | -48.9 | -21.25 | 27.7 |
|      | HT/VHT40 STBC, M0 to M7           | 4 | 6  | -58.7 | -60.7 | -59.9 | -59.8 | -47.7 | -21.25 | 26.4 |
| 5775 | Non HT80, 6 to 54 Mbps            | 1 | 6  | -59.9 |       |       |       | -53.9 | -21.25 | 32.7 |
|      | Non HT80, 6 to 54 Mbps            | 2 | 6  | -59.9 | -60.7 |       |       | -51.3 | -21.25 | 30.0 |
|      | Non HT80, 6 to 54 Mbps            | 3 | 6  | -59.9 | -60.7 | -58.7 |       | -48.9 | -21.25 | 27.7 |
|      | Non HT80, 6 to 54 Mbps            | 4 | 6  | -59.9 | -60.7 | -58.7 | -59.8 | -47.7 | -21.25 | 26.4 |
|      | VHT80, M0.1 to M9.1               | 1 | 6  | -57.7 |       |       |       | -51.7 | -21.25 | 30.5 |
|      | VHT80, M0.1 to M9.1               | 2 | 6  | -57.7 | -61.0 |       |       | -50.0 | -21.25 | 28.8 |
|      | VHT80, M0.2 to M9.2               | 2 | 6  | -57.7 | -61.0 |       |       | -50.0 | -21.25 | 28.8 |
|      | VHT80, M0.1 to M9.1               | 3 | 6  | -57.7 | -61.0 | -58.0 |       | -47.9 | -21.25 | 26.6 |
|      | VHT80, M0.2 to M9.2               | 3 | 6  | -57.7 | -61.0 | -58.0 |       | -47.9 | -21.25 | 26.6 |
|      | VHT80, M0.3 to M9.3               | 3 | 6  | -57.7 | -61.0 | -58.0 |       | -47.9 | -21.25 | 26.6 |
|      | VHT80, M0.1 to M9.1               | 4 | 6  | -57.7 | -61.0 | -58.0 | -58.9 | -46.7 | -21.25 | 25.5 |
|      | VHT80, M0.2 to M9.2               | 4 | 6  | -57.7 | -61.0 | -58.0 | -58.9 | -46.7 | -21.25 | 25.5 |
|      | VHT80, M0.3 to M9.3               | 4 | 6  | -57.7 | -61.0 | -58.0 | -58.9 | -46.7 | -21.25 | 25.5 |
|      | VHT80 Beam Forming, M0.1 to M9.1  | 2 | 6  | -57.7 | -61.0 |       |       | -50.0 | -21.25 | 28.8 |
|      | VHT80 Beam Forming, M0.2 to M9.2  | 2 | 6  | -57.7 | -61.0 |       |       | -50.0 | -21.25 | 28.8 |
|      | VHT80 Beam Forming, M0.1 to M9.1  | 3 | 6  | -57.7 | -61.0 | -58.0 |       | -47.9 | -21.25 | 26.6 |
|      | VHT80 Beam Forming, M0.2 to M9.2  | 3 | 6  | -57.7 | -61.0 | -58.0 |       | -47.9 | -21.25 | 26.6 |
|      | VHT80 Beam Forming, M0.3 to M9.3  | 3 | 6  | -57.7 | -61.0 | -58.0 |       | -47.9 | -21.25 | 26.6 |
|      | VHT80 Beam Forming, M0.1 to M9.1  | 4 | 6  | -57.7 | -61.0 | -58.0 | -58.9 | -46.7 | -21.25 | 25.5 |
|      | VHT80 Beam Forming, M0.2 to M9.2  | 4 | 6  | -57.7 | -61.0 | -58.0 | -58.9 | -46.7 | -21.25 | 25.5 |
|      | VHT80 Beam Forming, M0.3 to M9.3  | 4 | 6  | -57.7 | -61.0 | -58.0 | -58.9 | -46.7 | -21.25 | 25.5 |
|      | VHT80 STBC, M0.1 to M9.1          | 2 | 6  | -57.7 | -61.0 |       |       | -50.0 | -21.25 | 28.8 |



|      |                                     |   |    |       |       |       |       |       |        |      |
|------|-------------------------------------|---|----|-------|-------|-------|-------|-------|--------|------|
|      | VHT80 STBC, M0.1 to M9.1            | 3 | 6  | -57.7 | -61.0 | -58.0 |       | -47.9 | -21.25 | 26.6 |
|      | VHT80 STBC, M0.1 to M9.1            | 4 | 6  | -57.7 | -61.0 | -58.0 | -58.9 | -46.7 | -21.25 | 25.5 |
| 5785 | Non HT20, 6 to 54 Mbps              | 1 | 6  | -58.4 |       |       |       | -52.4 | -21.25 | 31.2 |
|      | Non HT20, 6 to 54 Mbps              | 2 | 6  | -58.4 | -60.3 |       |       | -50.2 | -21.25 | 29.0 |
|      | Non HT20, 6 to 54 Mbps              | 3 | 6  | -58.4 | -60.3 | -59.4 |       | -48.5 | -21.25 | 27.3 |
|      | Non HT20, 6 to 54 Mbps              | 4 | 6  | -58.4 | -60.3 | -59.4 | -59.6 | -47.4 | -21.25 | 26.1 |
|      | Non HT20 Beam Forming, 6 to 54 Mbps | 2 | 9  | -58.4 | -60.3 |       |       | -47.2 | -21.25 | 26.0 |
|      | Non HT20 Beam Forming, 6 to 54 Mbps | 3 | 11 | -58.4 | -60.3 | -59.4 |       | -43.7 | -21.25 | 22.5 |
|      | Non HT20 Beam Forming, 6 to 54 Mbps | 4 | 12 | -58.4 | -60.3 | -59.4 | -59.6 | -41.4 | -21.25 | 20.1 |
|      | HT/VHT20, M0 to M7                  | 1 | 6  | -56.9 |       |       |       | -50.9 | -21.25 | 29.7 |
|      | HT/VHT20, M0 to M7                  | 2 | 6  | -56.9 | -59.2 |       |       | -48.9 | -21.25 | 27.6 |
|      | HT/VHT20, M8 to M15                 | 2 | 6  | -56.9 | -59.2 |       |       | -48.9 | -21.25 | 27.6 |
|      | HT/VHT20, M0 to M7                  | 3 | 6  | -56.9 | -59.2 | -59.0 |       | -47.5 | -21.25 | 26.2 |
|      | HT/VHT20, M8 to M15                 | 3 | 6  | -56.9 | -59.2 | -59.0 |       | -47.5 | -21.25 | 26.2 |
|      | HT/VHT20, M16 to M23                | 3 | 6  | -56.9 | -59.2 | -59.0 |       | -47.5 | -21.25 | 26.2 |
|      | HT/VHT20, M0 to M7                  | 4 | 6  | -56.9 | -59.2 | -59.0 | -59.5 | -46.5 | -21.25 | 25.2 |
|      | HT/VHT20, M8 to M15                 | 4 | 6  | -56.9 | -59.2 | -59.0 | -59.5 | -46.5 | -21.25 | 25.2 |
|      | HT/VHT20, M16 to M23                | 4 | 6  | -56.9 | -59.2 | -59.0 | -59.5 | -46.5 | -21.25 | 25.2 |
|      | HT/VHT20 Beam Forming, M0 to M7     | 2 | 9  | -56.9 | -59.2 |       |       | -45.9 | -21.25 | 24.6 |
|      | HT/VHT20 Beam Forming, M8 to M15    | 2 | 6  | -56.9 | -59.2 |       |       | -48.9 | -21.25 | 27.6 |
|      | HT/VHT20 Beam Forming, M0 to M7     | 3 | 11 | -56.9 | -59.2 | -59.0 |       | -42.7 | -21.25 | 21.4 |
|      | HT/VHT20 Beam Forming, M8 to M15    | 3 | 8  | -56.9 | -59.2 | -59.0 |       | -45.7 | -21.25 | 24.4 |
|      | HT/VHT20 Beam Forming, M16 to M23   | 3 | 6  | -56.9 | -59.2 | -59.0 |       | -47.5 | -21.25 | 26.2 |
|      | HT/VHT20 Beam Forming, M0 to M7     | 4 | 12 | -56.9 | -59.2 | -59.0 | -59.5 | -40.5 | -21.25 | 19.2 |
|      | HT/VHT20 Beam Forming, M8 to M15    | 4 | 9  | -56.9 | -59.2 | -59.0 | -59.5 | -43.5 | -21.25 | 22.2 |
|      | HT/VHT20 Beam Forming, M16 to M23   | 4 | 7  | -56.9 | -59.2 | -59.0 | -59.5 | -45.3 | -21.25 | 24.0 |
|      | HT/VHT20 STBC, M0 to M7             | 2 | 6  | -56.9 | -59.2 |       |       | -48.9 | -21.25 | 27.6 |
|      | HT/VHT20 STBC, M0 to M7             | 3 | 6  | -56.9 | -59.2 | -59.0 |       | -47.5 | -21.25 | 26.2 |
|      | HT/VHT20 STBC, M0 to M7             | 4 | 6  | -56.9 | -59.2 | -59.0 | -59.5 | -46.5 | -21.25 | 25.2 |
| 5795 | Non HT40, 6 to 54 Mbps              | 1 | 6  | -60.0 |       |       |       | -54.0 | -21.25 | 32.8 |
|      | Non HT40, 6 to 54 Mbps              | 2 | 6  | -60.0 | -61.3 |       |       | -51.6 | -21.25 | 30.3 |
|      | Non HT40, 6 to 54 Mbps              | 3 | 6  | -60.0 | -61.3 | -57.8 |       | -48.7 | -21.25 | 27.4 |
|      | Non HT40, 6 to 54 Mbps              | 4 | 6  | -60.0 | -61.3 | -57.8 | -58.0 | -47.0 | -21.25 | 25.8 |
|      | HT/VHT40, M0 to M7                  | 1 | 6  | -59.8 |       |       |       | -53.8 | -21.25 | 32.6 |
|      | HT/VHT40, M0 to M7                  | 2 | 6  | -59.8 | -59.7 |       |       | -50.7 | -21.25 | 29.5 |
|      | HT/VHT40, M8 to M15                 | 2 | 6  | -59.8 | -59.7 |       |       | -50.7 | -21.25 | 29.5 |
|      | HT/VHT40, M0 to M7                  | 3 | 6  | -59.8 | -59.7 | -56.0 |       | -47.3 | -21.25 | 26.1 |
|      | HT/VHT40, M8 to M15                 | 3 | 6  | -59.8 | -59.7 | -56.0 |       | -47.3 | -21.25 | 26.1 |
|      | HT/VHT40, M16 to M23                | 3 | 6  | -59.8 | -59.7 | -56.0 |       | -47.3 | -21.25 | 26.1 |



|      |                                        |          |           |              |              |              |              |              |               |             |
|------|----------------------------------------|----------|-----------|--------------|--------------|--------------|--------------|--------------|---------------|-------------|
|      | HT/VHT40, M0 to M7                     | 4        | 6         | -59.8        | -59.7        | -56.0        | -58.5        | -46.2        | -21.25        | 24.9        |
|      | HT/VHT40, M8 to M15                    | 4        | 6         | -59.8        | -59.7        | -56.0        | -58.5        | -46.2        | -21.25        | 24.9        |
|      | HT/VHT40, M16 to M23                   | 4        | 6         | -59.8        | -59.7        | -56.0        | -58.5        | -46.2        | -21.25        | 24.9        |
|      | HT/VHT40 Beam Forming, M0 to M7        | 2        | 9         | -59.8        | -59.7        |              |              | -47.7        | -21.25        | 26.5        |
|      | HT/VHT40 Beam Forming, M8 to M15       | 2        | 6         | -59.8        | -59.7        |              |              | -50.7        | -21.25        | 29.5        |
|      | HT/VHT40 Beam Forming, M0 to M7        | 3        | 11        | -59.8        | -59.7        | -56.0        |              | -42.5        | -21.25        | 21.3        |
|      | HT/VHT40 Beam Forming, M8 to M15       | 3        | 8         | -59.8        | -59.7        | -56.0        |              | -45.5        | -21.25        | 24.3        |
|      | HT/VHT40 Beam Forming, M16 to M23      | 3        | 6         | -59.8        | -59.7        | -56.0        |              | -47.3        | -21.25        | 26.1        |
|      | <b>HT/VHT40 Beam Forming, M0 to M7</b> | <b>4</b> | <b>12</b> | <b>-59.8</b> | <b>-59.7</b> | <b>-56.0</b> | <b>-58.5</b> | <b>-40.2</b> | <b>-21.25</b> | <b>18.9</b> |
|      | HT/VHT40 Beam Forming, M8 to M15       | 4        | 9         | -59.8        | -59.7        | -56.0        | -58.5        | -43.2        | -21.25        | 21.9        |
|      | HT/VHT40 Beam Forming, M16 to M23      | 4        | 7         | -59.8        | -59.7        | -56.0        | -58.5        | -45.0        | -21.25        | 23.7        |
|      | HT/VHT40 STBC, M0 to M7                | 2        | 6         | -59.8        | -59.7        |              |              | -50.7        | -21.25        | 29.5        |
|      | HT/VHT40 STBC, M0 to M7                | 3        | 6         | -59.8        | -59.7        | -56.0        |              | -47.3        | -21.25        | 26.1        |
|      | HT/VHT40 STBC, M0 to M7                | 4        | 6         | -59.8        | -59.7        | -56.0        | -58.5        | -46.2        | -21.25        | 24.9        |
| 5825 | Non HT20, 6 to 54 Mbps                 | 1        | 6         | -60.8        |              |              |              | -54.8        | -21.25        | 33.6        |
|      | Non HT20, 6 to 54 Mbps                 | 2        | 6         | -60.8        | -57.5        |              |              | -49.8        | -21.25        | 28.6        |
|      | Non HT20, 6 to 54 Mbps                 | 3        | 6         | -60.8        | -57.5        | -58.7        |              | -48.0        | -21.25        | 26.8        |
|      | Non HT20, 6 to 54 Mbps                 | 4        | 6         | -60.8        | -57.5        | -58.7        | -58.8        | -46.8        | -21.25        | 25.5        |
|      | Non HT20 Beam Forming, 6 to 54 Mbps    | 2        | 9         | -60.8        | -57.5        |              |              | -46.8        | -21.25        | 25.6        |
|      | Non HT20 Beam Forming, 6 to 54 Mbps    | 3        | 11        | -60.8        | -57.5        | -58.7        |              | -43.2        | -21.25        | 22.0        |
|      | Non HT20 Beam Forming, 6 to 54 Mbps    | 4        | 12        | -60.8        | -57.5        | -58.7        | -58.8        | -40.8        | -21.25        | 19.5        |
|      | HT/VHT20, M0 to M7                     | 1        | 6         | -58.6        |              |              |              | -52.6        | -21.25        | 31.4        |
|      | HT/VHT20, M0 to M7                     | 2        | 6         | -58.6        | -59.0        |              |              | -49.8        | -21.25        | 28.5        |
|      | HT/VHT20, M8 to M15                    | 2        | 6         | -58.6        | -59.0        |              |              | -49.8        | -21.25        | 28.5        |
|      | HT/VHT20, M0 to M7                     | 3        | 6         | -58.6        | -59.0        | -58.4        |              | -47.9        | -21.25        | 26.6        |
|      | HT/VHT20, M8 to M15                    | 3        | 6         | -58.6        | -59.0        | -58.4        |              | -47.9        | -21.25        | 26.6        |
|      | HT/VHT20, M16 to M23                   | 3        | 6         | -58.6        | -59.0        | -58.4        |              | -47.9        | -21.25        | 26.6        |
|      | HT/VHT20, M0 to M7                     | 4        | 6         | -58.6        | -59.0        | -58.4        | -62.9        | -47.4        | -21.25        | 26.1        |
|      | HT/VHT20, M8 to M15                    | 4        | 6         | -58.6        | -59.0        | -58.4        | -62.9        | -47.4        | -21.25        | 26.1        |
|      | HT/VHT20, M16 to M23                   | 4        | 6         | -58.6        | -59.0        | -58.4        | -62.9        | -47.4        | -21.25        | 26.1        |
|      | HT/VHT20 Beam Forming, M0 to M7        | 2        | 9         | -58.6        | -59.0        |              |              | -46.8        | -21.25        | 25.5        |
|      | HT/VHT20 Beam Forming, M8 to M15       | 2        | 6         | -58.6        | -59.0        |              |              | -49.8        | -21.25        | 28.5        |
|      | HT/VHT20 Beam Forming, M0 to M7        | 3        | 11        | -58.6        | -59.0        | -58.4        |              | -43.1        | -21.25        | 21.8        |
|      | HT/VHT20 Beam Forming, M8 to M15       | 3        | 8         | -58.6        | -59.0        | -58.4        |              | -46.1        | -21.25        | 24.8        |
|      | HT/VHT20 Beam Forming, M16 to M23      | 3        | 6         | -58.6        | -59.0        | -58.4        |              | -47.9        | -21.25        | 26.6        |
|      | HT/VHT20 Beam Forming, M0 to M7        | 4        | 12        | -58.6        | -59.0        | -58.4        | -62.9        | -41.4        | -21.25        | 20.1        |
|      | HT/VHT20 Beam Forming, M8 to M15       | 4        | 9         | -58.6        | -59.0        | -58.4        | -62.9        | -44.4        | -21.25        | 23.1        |
|      | HT/VHT20 Beam Forming, M16 to M23      | 4        | 7         | -58.6        | -59.0        | -58.4        | -62.9        | -46.2        | -21.25        | 24.9        |
|      | HT/VHT20 STBC, M0 to M7                | 2        | 6         | -58.6        | -59.0        |              |              | -49.8        | -21.25        | 28.5        |
|      | HT/VHT20 STBC, M0 to M7                | 3        | 6         | -58.6        | -59.0        | -58.4        |              | -47.9        | -21.25        | 26.6        |

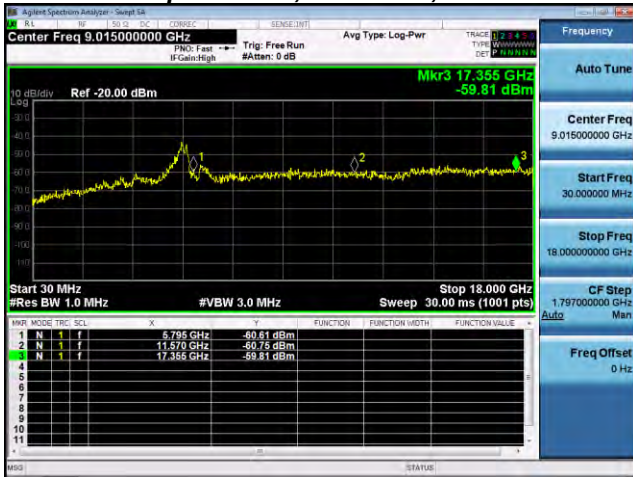
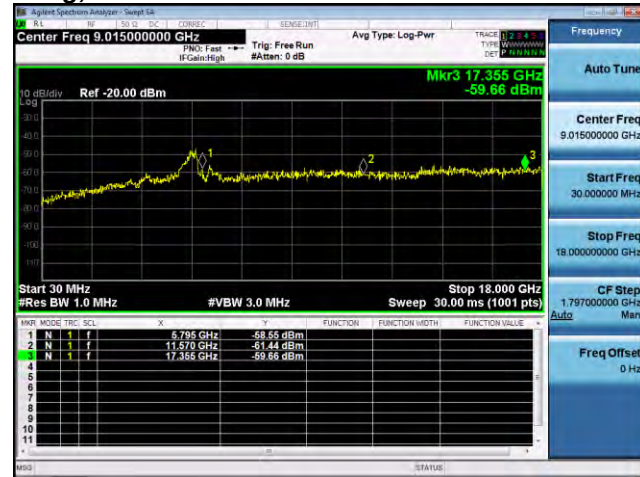
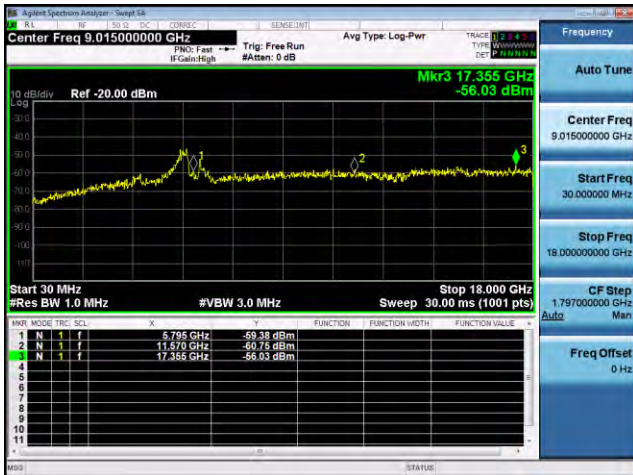
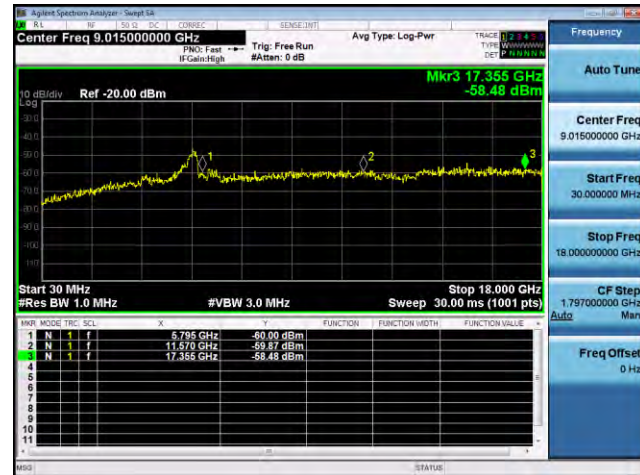


|  |                         |   |   |       |       |       |       |       |        |      |
|--|-------------------------|---|---|-------|-------|-------|-------|-------|--------|------|
|  | HT/VHT20 STBC, M0 to M7 | 4 | 6 | -58.6 | -59.0 | -58.4 | -62.9 | -47.4 | -21.25 | 26.1 |
|--|-------------------------|---|---|-------|-------|-------|-------|-------|--------|------|

**Conducted Spurs Average, All Antennas****Conducted Spurs Peak, All Antennas**



**Conducted Spurs Average, 5825 MHz, Non HT20 Beam Forming, 6 to 54 Mbps****Antenna A****Antenna B****Antenna C****Antenna D**

**Conducted Spurs Peak, 5795 MHz, HT/VHT40 Beam Forming, M0 to M7****Antenna A****Antenna B****Antenna C****Antenna D**





## A.6 Conducted Bandedge

**15.407 (b) Undesirable emission limits.** Except as shown in paragraph (b) (7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

(4) For transmitters operating in the 5.725-5.85 GHz band: All emissions within the frequency range from the band edge to 10 MHz above or below the band edge shall not exceed an e.i.r.p. of -17 dBm/MHz; for frequencies 10 MHz or greater above or below the band edge, emissions shall not exceed an e.i.r.p. of -27 dBm/MHz.

(6) Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in 15.209.

(7) The provisions of §15.205 apply to intentional radiators operating under this section.

(8) When measuring the emission limits, the nominal carrier frequency shall be adjusted as close to the upper and lower frequency band edges as the design of the equipment permits

### Test Procedure

Ref. KDB 789033 D02 General UNII Test Procedures New Rules v01r01

ANSI C63.10: 2013

| Conducted Bandedge                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test Procedure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <ol style="list-style-type: none"> <li>1. Connect the antenna port(s) to the spectrum analyzer input.</li> <li>2. Place the radio in continuous transmit mode. Use the procedures in ANSI C63.10: 2013 to substitute conducted measurements in place of radiated measurements.</li> <li>3. Configure Spectrum analyzer as per test parameters below (be sure to enter all losses between the transmitter output and the spectrum analyzer).</li> <li>4. Place a marker at the end of the restricted band closest to the transmit frequency to show compliance. Also measure any emissions in the restricted bands.</li> <li>5. The "measure-and-sum technique" is used for measuring in-band transmit power of a device. In the measure-and-sum approach, the conducted emission level is measured at each antenna port. The measured results at the various antenna ports are then summed mathematically to determine the total emission level from the device. Summing is performed in linear power units. The worst case output is recorded.</li> <li>6. Place a marker at the end of the restricted band closest to the transmit frequency to show compliance. Also measure any emissions in the restricted bands</li> <li>7. Capture graphs and record pertinent measurement data.</li> </ol> |

Ref. ANSI C63.10: 2013 section 12.7.6 (peak) & 12.7.7.3 (average, Method VB-A (Alternative))

| Conducted Bandedge                                                                                                      |
|-------------------------------------------------------------------------------------------------------------------------|
| Test parameters restricted Band                                                                                         |
| RBW = 1 MHz<br>VBW ≥ 3 x RBW for Peak, 100Hz for Average<br>Sweep = Auto couple<br>Detector = Peak<br>Trace = Max Hold. |

| System Number | Description | Samples | System under test                   | Support equipment                   |
|---------------|-------------|---------|-------------------------------------|-------------------------------------|
| 1             | EUT         | S01     | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
|               | Support     | S02     | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

|                             |                                           |
|-----------------------------|-------------------------------------------|
| Tested By :<br>Jose Aguirre | Date of testing:<br>01-Jan-16 - 03-Mar-16 |
| Test Result : PASS          |                                           |

See Appendix C for list of test equipment



| Frequency (MHz) | Mode                                    | Tx Paths | Correlated Antenna Gain (dBi) | Tx 1 Bandedge Level (dBm) | Tx 2 Bandedge Level (dBm) | Tx 3 Bandedge Level (dBm) | Tx 4 Bandedge Level (dBm) | Total Tx Bandedge Level (dBm) | Limit (dBm)   | Margin (dB) |
|-----------------|-----------------------------------------|----------|-------------------------------|---------------------------|---------------------------|---------------------------|---------------------------|-------------------------------|---------------|-------------|
| 5745            | Non HT20, 6 to 54 Mbps                  | 1        | 6                             | -33.6                     |                           |                           |                           | -27.6                         | -27.00        | 0.6         |
|                 | Non HT20, 6 to 54 Mbps                  | 2        | 6                             | -35.9                     | -38.2                     |                           |                           | -27.9                         | -27.00        | 0.9         |
|                 | Non HT20, 6 to 54 Mbps                  | 3        | 6                             | -37.9                     | -39.6                     | -39.8                     |                           | -28.2                         | -27.00        | 1.2         |
|                 | Non HT20, 6 to 54 Mbps                  | 4        | 6                             | -38.8                     | -40.6                     | -40.1                     | -38.7                     | -27.5                         | -27.00        | 0.5         |
|                 | Non HT20 Beam Forming, 6 to 54 Mbps     | 2        | 9                             | -38.8                     | -40.6                     |                           |                           | -27.6                         | -27.00        | 0.6         |
|                 | Non HT20 Beam Forming, 6 to 54 Mbps     | 3        | 11                            | -41.9                     | -44.7                     | -43.6                     |                           | -27.7                         | -27.00        | 0.7         |
|                 | Non HT20 Beam Forming, 6 to 54 Mbps     | 4        | 12                            | -44.7                     | -45.6                     | -45.9                     | -45.3                     | -27.3                         | -27.00        | 0.3         |
|                 | HT/VHT20, M0 to M7                      | 1        | 6                             | -33.6                     |                           |                           |                           | -27.6                         | -27.00        | 0.6         |
|                 | HT/VHT20, M0 to M7                      | 2        | 6                             | -35.2                     | -37.3                     |                           |                           | -27.1                         | -27.00        | 0.1         |
|                 | HT/VHT20, M8 to M15                     | 2        | 6                             | -35.2                     | -37.3                     |                           |                           | -27.1                         | -27.00        | 0.1         |
|                 | HT/VHT20, M0 to M7                      | 3        | 6                             | -37.2                     | -38.8                     | -38.4                     |                           | -27.3                         | -27.00        | 0.3         |
|                 | HT/VHT20, M8 to M15                     | 3        | 6                             | -37.2                     | -38.8                     | -38.4                     |                           | -27.3                         | -27.00        | 0.3         |
|                 | HT/VHT20, M16 to M23                    | 3        | 6                             | -37.2                     | -38.8                     | -38.4                     |                           | -27.3                         | -27.00        | 0.3         |
|                 | HT/VHT20, M0 to M7                      | 4        | 6                             | -38.7                     | -40.1                     | -40.1                     | -39.0                     | -27.4                         | -27.00        | 0.4         |
|                 | HT/VHT20, M8 to M15                     | 4        | 6                             | -38.7                     | -40.1                     | -40.1                     | -39.0                     | -27.4                         | -27.00        | 0.4         |
|                 | HT/VHT20, M16 to M23                    | 4        | 6                             | -38.7                     | -40.1                     | -40.1                     | -39.0                     | -27.4                         | -27.00        | 0.4         |
|                 | HT/VHT20 Beam Forming, M0 to M7         | 2        | 9                             | -38.7                     | -40.1                     |                           |                           | -27.3                         | -27.00        | 0.3         |
|                 | HT/VHT20 Beam Forming, M8 to M15        | 2        | 6                             | -35.2                     | -37.3                     |                           |                           | -27.1                         | -27.00        | 0.1         |
|                 | HT/VHT20 Beam Forming, M0 to M7         | 3        | 11                            | -41.7                     | -44.4                     | -43.7                     |                           | -27.5                         | -27.00        | 0.5         |
|                 | <b>HT/VHT20 Beam Forming, M8 to M15</b> | <b>3</b> | <b>8</b>                      | <b>-38.7</b>              | <b>-40.1</b>              | <b>-40.1</b>              |                           | <b>-27.0</b>                  | <b>-27.00</b> | <b>0.0</b>  |
|                 | HT/VHT20 Beam Forming, M16 to M23       | 3        | 6                             | -37.2                     | -38.8                     | -38.4                     |                           | -27.3                         | -27.00        | 0.3         |
|                 | HT/VHT20 Beam Forming, M0 to M7         | 4        | 12                            | -44.3                     | -45.6                     | -46.0                     | -44.8                     | -27.1                         | -27.00        | 0.1         |
|                 | HT/VHT20 Beam Forming, M8 to M15        | 4        | 9                             | -41.7                     | -44.4                     | -43.7                     | -41.3                     | -27.6                         | -27.00        | 0.6         |
|                 | HT/VHT20 Beam Forming, M16 to M23       | 4        | 7                             | -39.7                     | -42.3                     | -41.1                     | -40.3                     | -27.5                         | -27.00        | 0.5         |
|                 | HT/VHT20 STBC, M0 to M7                 | 2        | 6                             | -35.2                     | -37.3                     |                           |                           | -27.1                         | -27.00        | 0.1         |
|                 | HT/VHT20 STBC, M0 to M7                 | 3        | 6                             | -37.2                     | -38.8                     | -38.4                     |                           | -27.3                         | -27.00        | 0.3         |
|                 | HT/VHT20 STBC, M0 to M7                 | 4        | 6                             | -38.7                     | -40.1                     | -40.1                     | -39.0                     | -27.4                         | -27.00        | 0.4         |
| 5755            | Non HT40, 6 to 54 Mbps                  | 1        | 6                             | -34.2                     |                           |                           |                           | -28.2                         | -27.00        | 1.2         |
|                 | Non HT40, 6 to 54 Mbps                  | 2        | 6                             | -36.9                     | -35.4                     |                           |                           | -27.1                         | -27.00        | 0.1         |
|                 | Non HT40, 6 to 54 Mbps                  | 3        | 6                             | -39.2                     | -41.0                     | -38.6                     |                           | -28.7                         | -27.00        | 1.7         |
|                 | Non HT40, 6 to 54 Mbps                  | 4        | 6                             | -39.2                     | -41.0                     | -38.6                     | -39.0                     | -27.3                         | -27.00        | 0.3         |
|                 | HT/VHT40, M0 to M7                      | 1        | 6                             | -33.0                     |                           |                           |                           | -27.0                         | -27.00        | 0.0         |



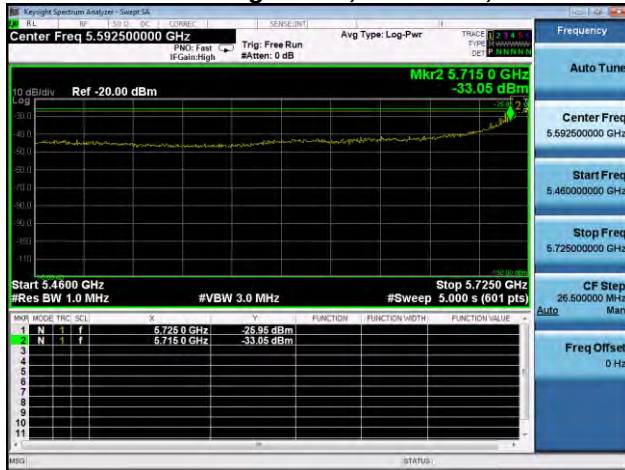
|      |                                   |   |    |       |       |       |       |       |        |     |
|------|-----------------------------------|---|----|-------|-------|-------|-------|-------|--------|-----|
|      | HT/VHT40, M0 to M7                | 2 | 6  | -35.1 | -37.3 |       |       | -27.1 | -27.00 | 0.1 |
|      | HT/VHT40, M8 to M15               | 2 | 6  | -35.1 | -37.3 |       |       | -27.1 | -27.00 | 0.1 |
|      | HT/VHT40, M0 to M7                | 3 | 6  | -41.4 | -39.1 | -36.7 |       | -27.9 | -27.00 | 0.9 |
|      | HT/VHT40, M8 to M15               | 3 | 6  | -41.4 | -39.1 | -36.7 |       | -27.9 | -27.00 | 0.9 |
|      | HT/VHT40, M16 to M23              | 3 | 6  | -41.4 | -39.1 | -36.7 |       | -27.9 | -27.00 | 0.9 |
|      | HT/VHT40, M0 to M7                | 4 | 6  | -38.2 | -41.6 | -38.8 | -40.6 | -27.6 | -27.00 | 0.6 |
|      | HT/VHT40, M8 to M15               | 4 | 6  | -38.2 | -41.6 | -38.8 | -40.6 | -27.6 | -27.00 | 0.6 |
|      | HT/VHT40, M16 to M23              | 4 | 6  | -38.2 | -41.6 | -38.8 | -40.6 | -27.6 | -27.00 | 0.6 |
|      | HT/VHT40 Beam Forming, M0 to M7   | 2 | 9  | -41.4 | -39.1 |       |       | -28.1 | -27.00 | 1.1 |
|      | HT/VHT40 Beam Forming, M8 to M15  | 2 | 6  | -35.1 | -37.3 |       |       | -27.1 | -27.00 | 0.1 |
|      | HT/VHT40 Beam Forming, M0 to M7   | 3 | 11 | -44.3 | -46.2 | -48.4 |       | -30.4 | -27.00 | 3.4 |
|      | HT/VHT40 Beam Forming, M8 to M15  | 3 | 8  | -40.3 | -42.8 | -41.6 |       | -28.9 | -27.00 | 1.9 |
|      | HT/VHT40 Beam Forming, M16 to M23 | 3 | 6  | -41.4 | -39.1 | -36.7 |       | -27.9 | -27.00 | 0.9 |
|      | HT/VHT40 Beam Forming, M0 to M7   | 4 | 12 | -44.1 | -46.9 | -48.4 | -43.2 | -27.1 | -27.00 | 0.1 |
|      | HT/VHT40 Beam Forming, M8 to M15  | 4 | 9  | -39.4 | -46.5 | -41.9 | -43.7 | -27.1 | -27.00 | 0.1 |
|      | HT/VHT40 Beam Forming, M16 to M23 | 4 | 7  | -40.3 | -42.8 | -41.6 | -40.8 | -28.1 | -27.00 | 1.1 |
|      | HT/VHT40 STBC, M0 to M7           | 2 | 6  | -35.1 | -37.3 |       |       | -27.1 | -27.00 | 0.1 |
|      | HT/VHT40 STBC, M0 to M7           | 3 | 6  | -41.4 | -39.1 | -36.7 |       | -27.9 | -27.00 | 0.9 |
|      | HT/VHT40 STBC, M0 to M7           | 4 | 6  | -38.2 | -41.6 | -38.8 | -40.6 | -27.6 | -27.00 | 0.6 |
| 5775 | Non HT80, 6 to 54 Mbps            | 1 | 6  | -39.2 |       |       |       | -33.2 | -27.00 | 6.2 |
|      | Non HT80, 6 to 54 Mbps            | 2 | 6  | -39.2 | -34.5 |       |       | -27.2 | -27.00 | 0.2 |
|      | Non HT80, 6 to 54 Mbps            | 3 | 6  | -41.9 | -37.5 | -36.7 |       | -27.4 | -27.00 | 0.4 |
|      | Non HT80, 6 to 54 Mbps            | 4 | 6  | -42.6 | -36.7 | -43.2 | -41.6 | -28.1 | -27.00 | 1.1 |
|      | VHT80, M0.1 to M9.1               | 1 | 6  | -35.5 |       |       |       | -29.5 | -27.00 | 2.5 |
|      | VHT80, M0.1 to M9.1               | 2 | 6  | -37.3 | -38.2 |       |       | -28.7 | -27.00 | 1.7 |
|      | VHT80, M0.2 to M9.2               | 2 | 6  | -37.3 | -38.2 |       |       | -28.7 | -27.00 | 1.7 |
|      | VHT80, M0.1 to M9.1               | 3 | 6  | -37.3 | -38.2 | -38.0 |       | -27.0 | -27.00 | 0.0 |
|      | VHT80, M0.2 to M9.2               | 3 | 6  | -37.3 | -38.2 | -38.0 |       | -27.0 | -27.00 | 0.0 |
|      | VHT80, M0.3 to M9.3               | 3 | 6  | -37.3 | -38.2 | -38.0 |       | -27.0 | -27.00 | 0.0 |
|      | VHT80, M0.1 to M9.1               | 4 | 6  | -40.4 | -40.7 | -40.9 | -37.0 | -27.4 | -27.00 | 0.4 |
|      | VHT80, M0.2 to M9.2               | 4 | 6  | -40.4 | -40.7 | -40.9 | -37.0 | -27.4 | -27.00 | 0.4 |
|      | VHT80, M0.3 to M9.3               | 4 | 6  | -40.4 | -40.7 | -40.9 | -37.0 | -27.4 | -27.00 | 0.4 |
|      | VHT80 Beam Forming, M0.1 to M9.1  | 2 | 6  | -37.3 | -38.2 |       |       | -28.7 | -27.00 | 1.7 |
|      | VHT80 Beam Forming, M0.2 to M9.2  | 2 | 6  | -37.3 | -38.2 |       |       | -28.7 | -27.00 | 1.7 |
|      | VHT80 Beam Forming, M0.1 to M9.1  | 3 | 6  | -37.3 | -38.2 | -38.0 |       | -27.0 | -27.00 | 0.0 |
|      | VHT80 Beam Forming, M0.2 to M9.2  | 3 | 6  | -37.3 | -38.2 | -38.0 |       | -27.0 | -27.00 | 0.0 |
|      | VHT80 Beam Forming, M0.3 to M9.3  | 3 | 6  | -37.3 | -38.2 | -38.0 |       | -27.0 | -27.00 | 0.0 |
|      | VHT80 Beam Forming, M0.1 to M9.1  | 4 | 6  | -40.4 | -40.7 | -40.9 | -37.0 | -27.4 | -27.00 | 0.4 |
|      | VHT80 Beam Forming, M0.2 to M9.2  | 4 | 6  | -40.4 | -40.7 | -40.9 | -37.0 | -27.4 | -27.00 | 0.4 |
|      | VHT80 Beam Forming, M0.3 to M9.3  | 4 | 6  | -40.4 | -40.7 | -40.9 | -37.0 | -27.4 | -27.00 | 0.4 |

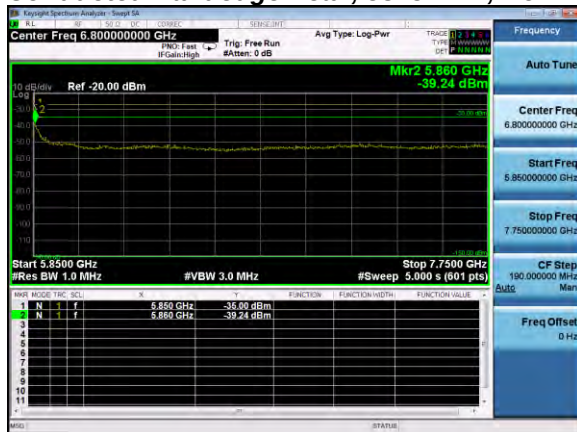
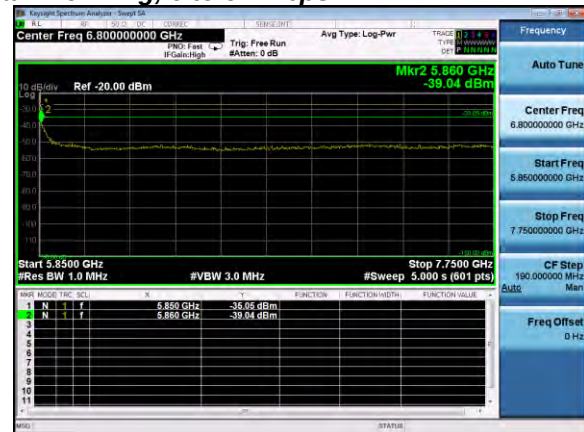


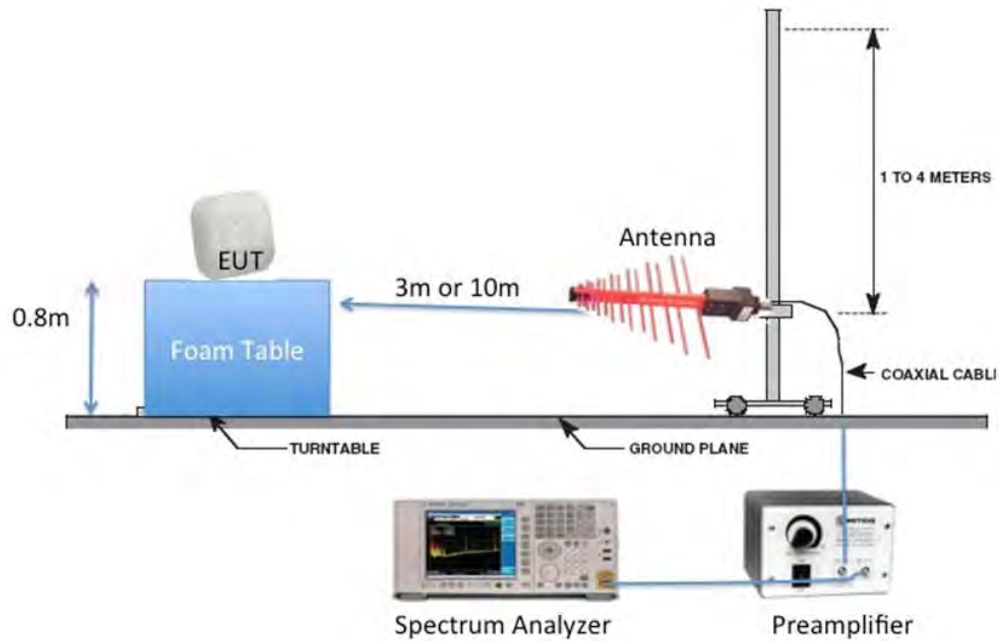
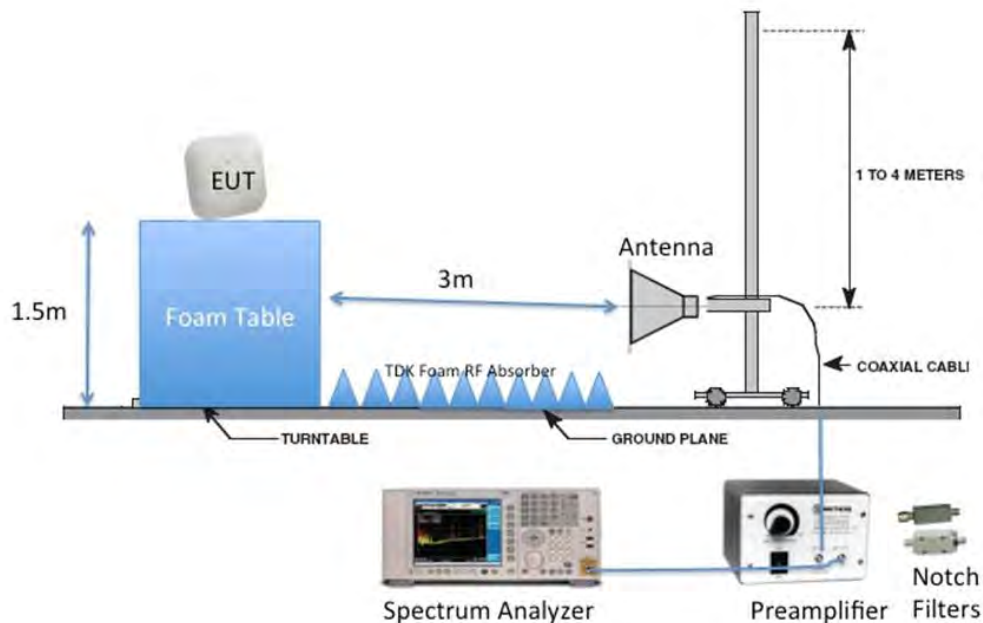
|      |                                            |          |          |              |              |       |       |              |               |            |
|------|--------------------------------------------|----------|----------|--------------|--------------|-------|-------|--------------|---------------|------------|
|      | VHT80 STBC, M0.1 to M9.1                   | 2        | 6        | -37.3        | -38.2        |       |       | -28.7        | -27.00        | 1.7        |
|      | VHT80 STBC, M0.1 to M9.1                   | 3        | 6        | -37.3        | -38.2        | -38.0 |       | -27.0        | -27.00        | 0.0        |
|      | VHT80 STBC, M0.1 to M9.1                   | 4        | 6        | -40.4        | -40.7        | -40.9 | -37.0 | -27.4        | -27.00        | 0.4        |
| 5795 | Non HT40, 6 to 54 Mbps                     | 1        | 6        | -36.4        |              |       |       | -30.4        | -27.00        | 3.4        |
|      | Non HT40, 6 to 54 Mbps                     | 2        | 6        | -40.5        | -46.1        |       |       | -33.4        | -27.00        | 6.4        |
|      | Non HT40, 6 to 54 Mbps                     | 3        | 6        | -40.5        | -46.1        | -44.2 |       | -32.2        | -27.00        | 5.2        |
|      | Non HT40, 6 to 54 Mbps                     | 4        | 6        | -40.5        | -46.1        | -44.2 | -39.7 | -29.9        | -27.00        | 2.9        |
|      | HT/VHT40, M0 to M7                         | 1        | 6        | -52.2        |              |       |       | -46.2        | -27.00        | 19.2       |
|      | HT/VHT40, M0 to M7                         | 2        | 6        | -52.2        | -51.7        |       |       | -42.9        | -27.00        | 15.9       |
|      | HT/VHT40, M8 to M15                        | 2        | 6        | -52.2        | -51.7        |       |       | -42.9        | -27.00        | 15.9       |
|      | HT/VHT40, M0 to M7                         | 3        | 6        | -52.2        | -51.7        | -46.4 |       | -38.5        | -27.00        | 11.5       |
|      | HT/VHT40, M8 to M15                        | 3        | 6        | -52.2        | -51.7        | -46.4 |       | -38.5        | -27.00        | 11.5       |
|      | HT/VHT40, M16 to M23                       | 3        | 6        | -52.2        | -51.7        | -46.4 |       | -38.5        | -27.00        | 11.5       |
|      | HT/VHT40, M0 to M7                         | 4        | 6        | -52.2        | -51.7        | -46.4 | -44.4 | -35.4        | -27.00        | 8.4        |
|      | HT/VHT40, M8 to M15                        | 4        | 6        | -52.2        | -51.7        | -46.4 | -44.4 | -35.4        | -27.00        | 8.4        |
|      | HT/VHT40, M16 to M23                       | 4        | 6        | -52.2        | -51.7        | -46.4 | -44.4 | -35.4        | -27.00        | 8.4        |
|      | HT/VHT40 Beam Forming, M0 to M7            | 2        | 9        | -52.2        | -51.7        |       |       | -39.9        | -27.00        | 12.9       |
|      | HT/VHT40 Beam Forming, M8 to M15           | 2        | 6        | -52.2        | -51.7        |       |       | -42.9        | -27.00        | 15.9       |
|      | HT/VHT40 Beam Forming, M0 to M7            | 3        | 11       | -52.2        | -51.7        | -46.4 |       | -33.7        | -27.00        | 6.7        |
|      | HT/VHT40 Beam Forming, M8 to M15           | 3        | 8        | -52.2        | -51.7        | -46.4 |       | -36.7        | -27.00        | 9.7        |
|      | HT/VHT40 Beam Forming, M16 to M23          | 3        | 6        | -52.2        | -51.7        | -46.4 |       | -38.5        | -27.00        | 11.5       |
|      | HT/VHT40 Beam Forming, M0 to M7            | 4        | 12       | -52.2        | -51.7        | -46.4 | -44.4 | -29.4        | -27.00        | 2.4        |
|      | HT/VHT40 Beam Forming, M8 to M15           | 4        | 9        | -52.2        | -51.7        | -46.4 | -44.4 | -32.4        | -27.00        | 5.4        |
|      | HT/VHT40 Beam Forming, M16 to M23          | 4        | 7        | -52.2        | -51.7        | -46.4 | -44.4 | -34.2        | -27.00        | 7.2        |
|      | HT/VHT40 STBC, M0 to M7                    | 2        | 6        | -52.2        | -51.7        |       |       | -42.9        | -27.00        | 15.9       |
|      | HT/VHT40 STBC, M0 to M7                    | 3        | 6        | -52.2        | -51.7        | -46.4 |       | -38.5        | -27.00        | 11.5       |
|      | HT/VHT40 STBC, M0 to M7                    | 4        | 6        | -52.2        | -51.7        | -46.4 | -44.4 | -35.4        | -27.00        | 8.4        |
| 5825 | Non HT20, 6 to 54 Mbps                     | 1        | 6        | -34.5        |              |       |       | -28.5        | -27.00        | 1.5        |
|      | Non HT20, 6 to 54 Mbps                     | 2        | 6        | -36.7        | -36.5        |       |       | -27.6        | -27.00        | 0.6        |
|      | Non HT20, 6 to 54 Mbps                     | 3        | 6        | -38.7        | -37.8        | -38.9 |       | -27.7        | -27.00        | 0.7        |
|      | Non HT20, 6 to 54 Mbps                     | 4        | 6        | -39.2        | -39.0        | -39.9 | -40.5 | -27.6        | -27.00        | 0.6        |
|      | <b>Non HT20 Beam Forming, 6 to 54 Mbps</b> | <b>2</b> | <b>9</b> | <b>-39.2</b> | <b>-39.0</b> |       |       | <b>-27.1</b> | <b>-27.00</b> | <b>0.1</b> |
|      | Non HT20 Beam Forming, 6 to 54 Mbps        | 3        | 11       | -43.0        | -43.2        | -43.8 |       | -27.7        | -27.00        | 0.7        |
|      | Non HT20 Beam Forming, 6 to 54 Mbps        | 4        | 12       | -45.6        | -45.8        | -46.3 | -46.3 | -28.0        | -27.00        | 1.0        |
|      | HT/VHT20, M0 to M7                         | 1        | 6        | -33.2        |              |       |       | -27.2        | -27.00        | 0.2        |
|      | HT/VHT20, M0 to M7                         | 2        | 6        | -36.8        | -36.5        |       |       | -27.6        | -27.00        | 0.6        |
|      | HT/VHT20, M8 to M15                        | 2        | 6        | -36.8        | -36.5        |       |       | -27.6        | -27.00        | 0.6        |
|      | HT/VHT20, M0 to M7                         | 3        | 6        | -39.0        | -38.3        | -38.9 |       | -28.0        | -27.00        | 1.0        |
|      | HT/VHT20, M8 to M15                        | 3        | 6        | -39.0        | -38.3        | -38.9 |       | -28.0        | -27.00        | 1.0        |



|                                   |   |    |       |       |       |       |       |        |     |
|-----------------------------------|---|----|-------|-------|-------|-------|-------|--------|-----|
| HT/VHT20, M16 to M23              | 3 | 6  | -39.0 | -38.3 | -38.9 |       | -28.0 | -27.00 | 1.0 |
| HT/VHT20, M0 to M7                | 4 | 6  | -38.7 | -39.1 | -40.0 | -40.5 | -27.5 | -27.00 | 0.5 |
| HT/VHT20, M8 to M15               | 4 | 6  | -38.7 | -39.1 | -40.0 | -40.5 | -27.5 | -27.00 | 0.5 |
| HT/VHT20, M16 to M23              | 4 | 6  | -38.7 | -39.1 | -40.0 | -40.5 | -27.5 | -27.00 | 0.5 |
| HT/VHT20 Beam Forming, M0 to M7   | 2 | 9  | -40.3 | -40.1 |       |       | -28.2 | -27.00 | 1.2 |
| HT/VHT20 Beam Forming, M8 to M15  | 2 | 6  | -36.8 | -36.5 |       |       | -27.6 | -27.00 | 0.6 |
| HT/VHT20 Beam Forming, M0 to M7   | 3 | 11 | -42.0 | -42.9 | -43.2 |       | -27.1 | -27.00 | 0.1 |
| HT/VHT20 Beam Forming, M8 to M15  | 3 | 8  | -40.3 | -40.1 | -41.0 |       | -27.9 | -27.00 | 0.9 |
| HT/VHT20 Beam Forming, M16 to M23 | 3 | 6  | -39.0 | -38.3 | -38.9 |       | -28.0 | -27.00 | 1.0 |
| HT/VHT20 Beam Forming, M0 to M7   | 4 | 12 | -45.0 | -44.6 | -44.8 | -46.5 | -27.1 | -27.00 | 0.1 |
| HT/VHT20 Beam Forming, M8 to M15  | 4 | 9  | -42.0 | -42.9 | -43.2 | -43.7 | -27.9 | -27.00 | 0.9 |
| HT/VHT20 Beam Forming, M16 to M23 | 4 | 7  | -40.3 | -40.1 | -41.0 | -41.4 | -27.4 | -27.00 | 0.4 |
| HT/VHT20 STBC, M0 to M7           | 2 | 6  | -36.8 | -36.5 |       |       | -27.6 | -27.00 | 0.6 |
| HT/VHT20 STBC, M0 to M7           | 3 | 6  | -39.0 | -38.3 | -38.9 |       | -28.0 | -27.00 | 1.0 |
| HT/VHT20 STBC, M0 to M7           | 4 | 6  | -38.7 | -39.1 | -40.0 | -40.5 | -27.5 | -27.00 | 0.5 |

**Conducted Bandedge Peak, 5755 MHz, HT/VHT40, M0 to M7****Antenna A**

**Conducted Bandedge Peak, 5825 MHz, Non HT20 Beam Forming, 6 to 54 Mbps****Antenna A****Antenna B**

**Appendix B: Emission Test Results****Testing Laboratory:** Cisco Systems, Inc., 125 West Tasman Drive, San Jose, CA 95134, USA**Radiated Emission Setup Diagram-Below 1G****Radiated Emission Setup Diagram-Above 1G**





## B.1 Radiated Spurious Emissions

**15.407** (b) *Undesirable emission limits.* Except as shown in paragraph (b) (7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

- (4) For transmitters operating in the 5.725-5.85 GHz band: All emissions within the frequency range from the band edge to 10 MHz above or below the band edge shall not exceed an e.i.r.p. of -17 dBm/MHz; for frequencies 10 MHz or greater above or below the band edge, emissions shall not exceed an e.i.r.p. of -27 dBm/MHz.
- (6) Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in 15.209.
- (7) The provisions of §15.205 apply to intentional radiators operating under this section.
- (8) When measuring the emission limits, the nominal carrier frequency shall be adjusted as close to the upper and lower frequency band edges as the design of the equipment permits

**Ref.** ANSI C63.10: 2013 section 12.7.6 (peak) & 12.7.7.3 (average)

Using Vasona, configure the spectrum analyzer as shown below (be sure to enter all losses between the transmitter output and the spectrum analyzer). Place the radio in continuous transmit mode.

|                       |                                     |
|-----------------------|-------------------------------------|
| Span:                 | 1GHz – 18 GHz/18GHz-26G/26GHz-40GHz |
| Reference Level:      | 80 dBuV                             |
| Attenuation:          | 10 dB                               |
| Sweep Time:           | Coupled                             |
| Resolution Bandwidth: | 1MHz                                |
| Video Bandwidth:      | 3 MHz for peak, 1 KHz for average   |
| Detector:             | Peak                                |

Terminate the access Point RF ports with 50 ohm loads.

Maximize Turntable (find worst case table angle), Maximize Antenna (find worst case height)

Save 2 plots: 1) Average plot (Vertical and Horizontal), Limit= 54dBuV/m @3m  
2) Peak plot (Vertical and Horizontal), Limit = 74dBuV/m @3m

Place a marker at the end of the restricted band closest to the transmit frequency to show compliance.  
Also measure any emissions in the restricted bands.

This report represents the worst case data for all supported operating modes and antennas. There are no measurable emissions above 18 GHz.

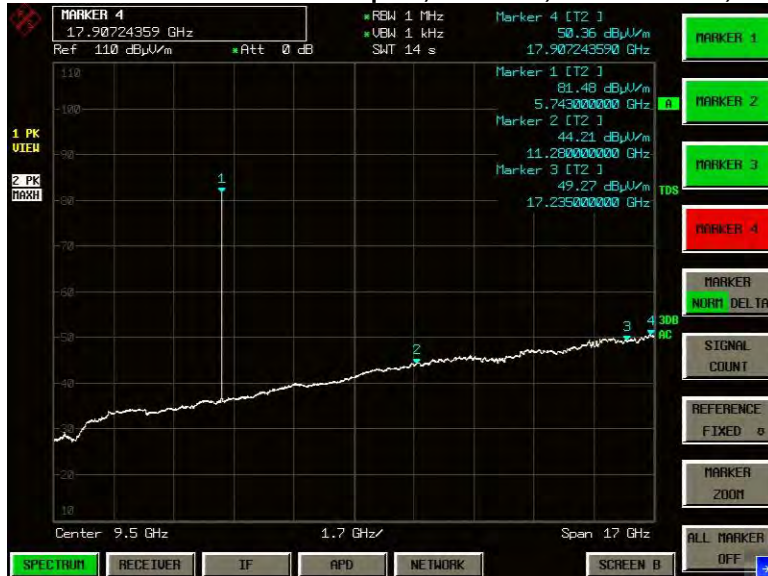
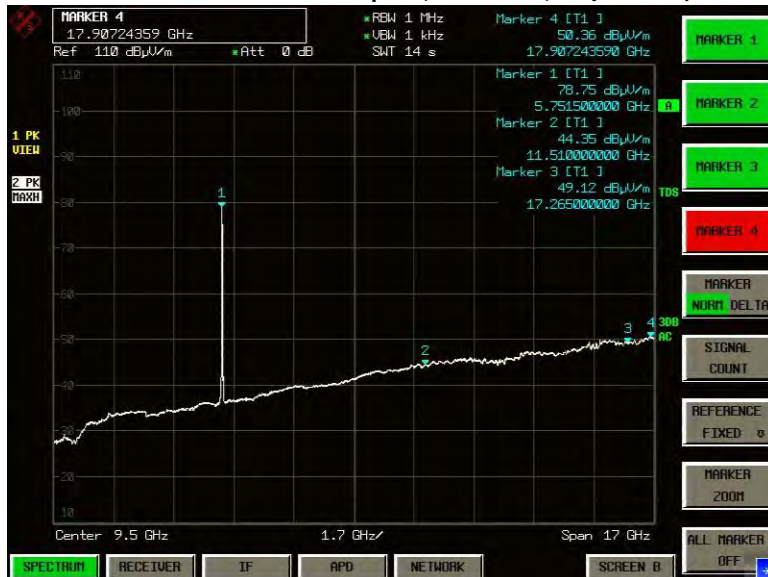
| System Number | Description | Samples | System under test                   | Support equipment                   |
|---------------|-------------|---------|-------------------------------------|-------------------------------------|
| 2             | EUT         | S03     | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
|               | Support     | S04     | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

|                                    |                                                  |
|------------------------------------|--------------------------------------------------|
| <b>Tested By :</b><br>Jose Aguirre | <b>Date of testing:</b><br>01-Jan-16 - 03-Mar-16 |
| <b>Test Result : PASS</b>          |                                                  |

See Appendix C for list of test equipment

**B.1.A Transmitter Radiated Spurious Emissions-Average worst case**

| Frequency (MHz) | Mode                             | Data Rate (Mbps) | Spurious Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (MHz) |
|-----------------|----------------------------------|------------------|----------------------------------|----------------|--------------|
| 5745            | Non HT/VHT20, 6 to 54 Mbps       | 6                | 50.4                             | 54.0           | 3.6          |
| 5755            | HT/VHT40, M0 to M7, M0 to M9 1ss | m0               | 50.4                             | 54.0           | 3.6          |
| 5775            | HT/VHT80, M0 to M7, M0 to M9 1ss | m0x1             | 50.5                             | 54.0           | 3.5          |
| 5785            | Non HT/VHT20, 6 to 54 Mbps       | 6                | 50.3                             | 54.0           | 3.7          |
| 5795            | HT/VHT40, M0 to M7, M0 to M9 1ss | m0               | 50.4                             | 54.0           | 3.6          |
| 5825            | Non HT/VHT20, 6 to 54 Mbps       | 6                | 50.5                             | 54.0           | 3.5          |

**B.1.A.1 Radiated Transmitter Spurs, 5745 MHz, Non HT/VHT20, 6 to 54 Mbps, Average (1-18GHz)****B.1.A.2 Radiated Transmitter Spurs, 5755 MHz, HT/VHT40, M0 to M7, M0 to M9 1ss Average (1-18GHz)**

**B.1.A.3 Radiated Transmitter Spurs, 5775 MHz, HT/VHT80, M0 to M7, M0 to M9 1ss, Average (1-18GHz)****B.1.A.4 Radiated Transmitter Spurs, 5785 MHz, Non HT/VHT20, 6 to 54 Mbps, Average (1-18GHz)**

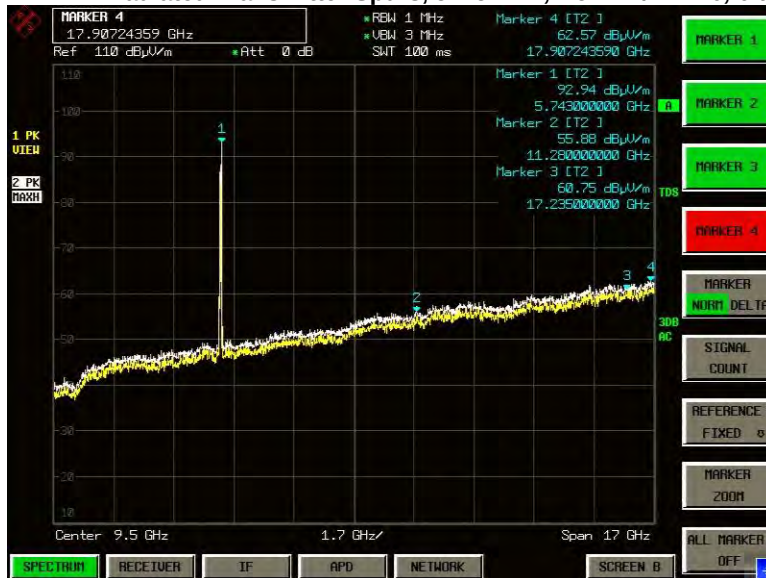
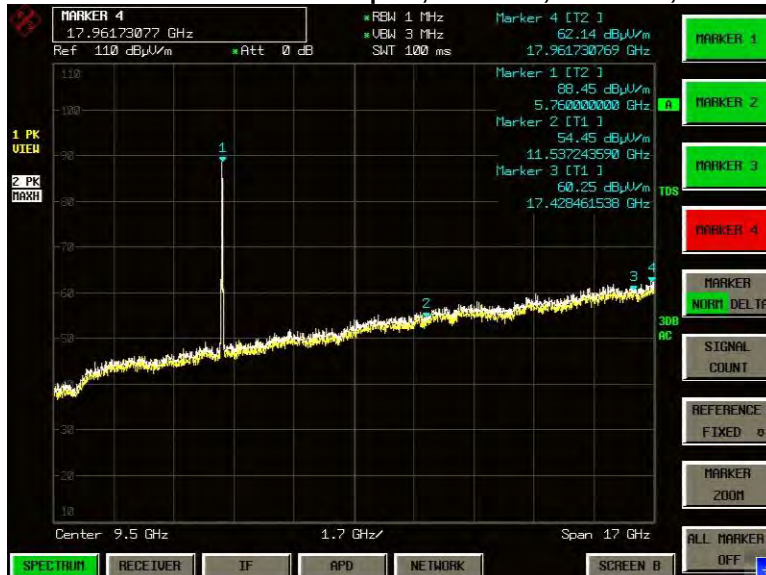
**B.1.A.5 Radiated Transmitter Spurs, 5795 MHz, HT/VHT40, M0 to M7, M0 to M9 1ss, Average (1-18GHz)****B.1.A.6 Radiated Transmitter Spurs, 5825 MHz, Non HT/VHT20, 6 to 54 Mbps, Average (1-18GHz)**



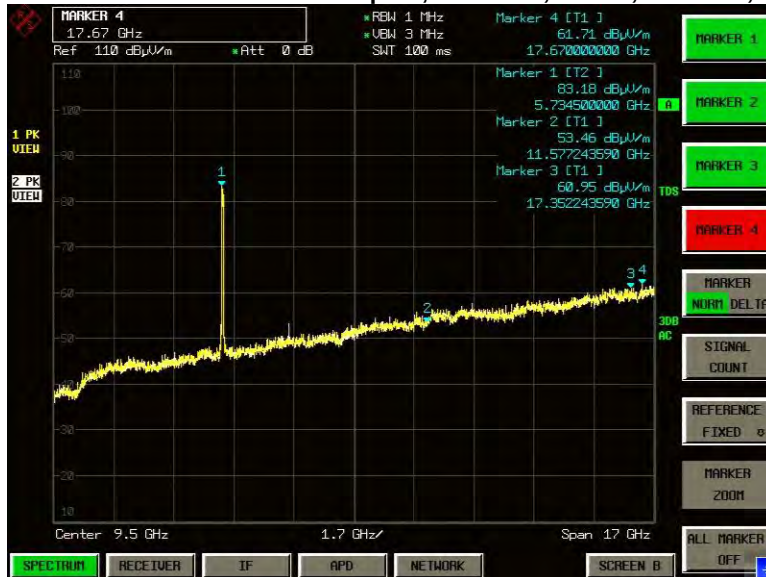
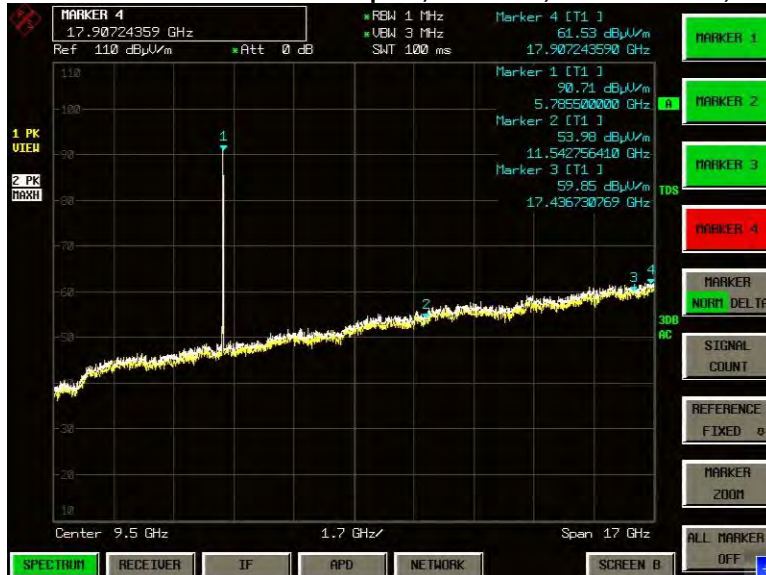
**B.1.A.7 Radiated Transmitter Spurs, All rate, All modes, Average (18-26.5GHz)****B.1.A.8 Radiated Transmitter Spurs, All rate, All modes, Average (26.5- 40GHz)**

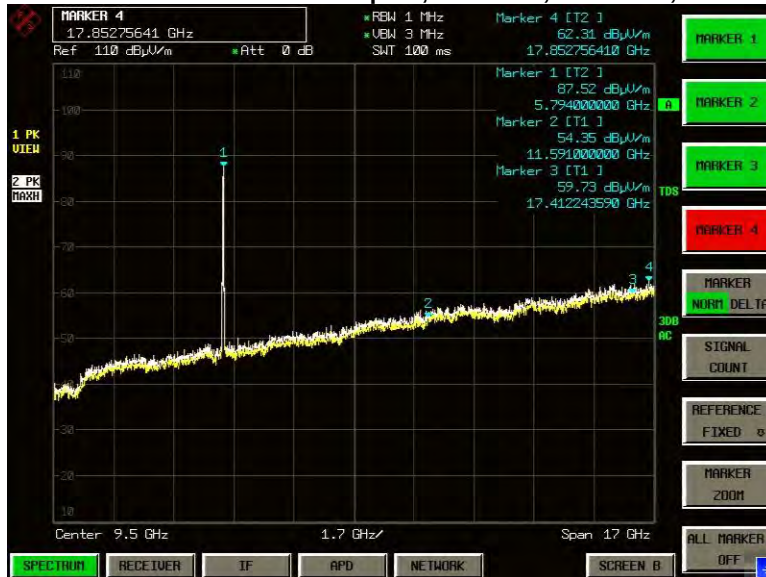
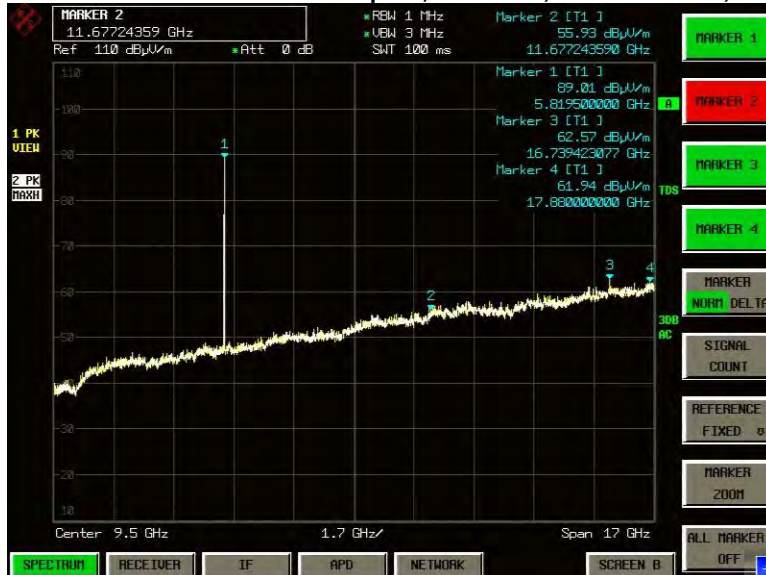
**B.1.P Transmitter Radiated Spurious Emissions-Peak worst case**

| Frequency (MHz) | Mode                             | Data Rate (Mbps) | Spurious Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (MHz) |
|-----------------|----------------------------------|------------------|----------------------------------|----------------|--------------|
| 5745            | Non HT/VHT20, 6 to 54 Mbps       | 6                | 62.6                             | 74.0           | 11.4         |
| 5755            | HT/VHT40, M0 to M7, M0 to M9 1ss | m0               | 62.2                             | 74.0           | 11.8         |
| 5775            | HT/VHT80, M0 to M7, M0 to M9 1ss | m0x1             | 62.8                             | 74.0           | 11.2         |
| 5785            | Non HT/VHT20, 6 to 54 Mbps       | 6                | 61.6                             | 74.0           | 12.4         |
| 5795            | HT/VHT40, M0 to M7, M0 to M9 1ss | m0               | 62.3                             | 74.0           | 11.7         |
| 5825            | Non HT/VHT20, 6 to 54 Mbps       | 6                | 62.0                             | 74.0           | 12.0         |

**B.1.P.1 Radiated Transmitter Spurs, 5745 MHz, Non HT/VHT20, 6 to 54 Mbps, (1-18GHz)****B.1.P.2 Radiated Transmitter Spurs, 5755 MHz, HT/VHT40, M0 to M7, M0 to M9 1ss, Peak (1-18GHz)**



**B.1.P.3 Radiated Transmitter Spurs, 5775 MHz, VHT80, M0 to M9, M0 to M9 1.1, Peak (1-18GHz)****B.1.P.4 Radiated Transmitter Spurs, 5785 MHz, Non HT/VHT20, 6 to 54 Mbps, Peak (1-18GHz)**

**B.1.P.5 Radiated Transmitter Spurs, 5795 MHz, HT/VHT40, M0 to M7, M0 to M9 1ss, Peak (1-18GHz)****B.1.P.6 Radiated Transmitter Spurs, 5825 MHz, Non HT/VHT20, 6 to 54 Mbps, Peak (1-18GHz)**

**B.1.P.7 Radiated Transmitter Spurs, All rate, All modes, Peak (18-26.5GHz)****B.1.P.8 Radiated Transmitter Spurs, All rate, All modes, Peak (26.5-40GHz)**



## B.2 Radiated Receiver Spurious Emissions

**RSS-GEN:** Receivers, are required to comply with the limits of spurious emissions as set out in this section. Receiver emission measurements are to be performed as per the normative test method referenced in Section 3.

For emissions at frequencies below 1 GHz, measurements shall be performed using a CISPR quasi-peak detector and the related measurement bandwidth. At frequencies above 1 GHz, measurements shall be performed using a linear average detector with a minimum resolution bandwidth of 1 MHz.

**Ref. ANSI C63.10:** 2013 section 12.7.6 (peak) & 12.7.7.3 (average)

Using Vasona, configure the spectrum analyzer as shown below (be sure to enter all losses between the transmitter output and the spectrum analyzer). Place the radio in continuous transmit mode.

|                       |                                     |
|-----------------------|-------------------------------------|
| Span:                 | 1GHz – 18 GHz/18GHz-26G/26GHz-40GHz |
| Reference Level:      | 80 dBuV                             |
| Attenuation:          | 10 dB                               |
| Sweep Time:           | Coupled                             |
| Resolution Bandwidth: | 1MHz                                |
| Video Bandwidth:      | 3 MHz for peak, 1 KHz for average   |
| Detector:             | Peak                                |

Terminate the access Point RF ports with 50 ohm loads.

Maximize Turntable (find worst case table angle), Maximize Antenna (find worst case height)

Save 2 plots: 1) Average plot (Vertical and Horizontal), Limit= 54dBuV/m @3m  
2) Peak plot (Vertical and Horizontal), Limit = 74dBuV/m @3m

Place a marker at the end of the restricted band closest to the transmit frequency to show compliance. Also measure any emissions in the restricted bands.

This report represents the worst case data for all supported operating modes and antennas. There are no measurable emissions above 18 GHz.

| System Number | Description | Samples | System under test                   | Support equipment                   |
|---------------|-------------|---------|-------------------------------------|-------------------------------------|
| 1             | EUT         | S01     | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
|               | Support     | S02     | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

|                                    |                                                  |
|------------------------------------|--------------------------------------------------|
| <b>Tested By :</b><br>Jose Aguirre | <b>Date of testing:</b><br>01-Jan-16 - 22-Feb-16 |
| <b>Test Result : PASS</b>          |                                                  |

See Appendix C for list of test equipment

## B.2.A Receiver Radiated Spurious Emissions Average Measurements

### B.2.A.1 Radiated Receiver Spurs, All rates, All Mode, Average (1-18GHz)



### B.2.A.2 Radiated Receiver Spurs, All rates, All Mode, Average (18-26.5GHz)





**B.2.A.3 Radiated Receiver Spurs, All rates, All Mode, Average (26.5-40GHz)**



## B.2.P Receiver Radiated Spurious Emissions Peak Measurements

### B.2.P.1 Radiated Receiver Spurs, All rates, All Mode, Peak (1-18GHz)



### B.2.P.2 Radiated Receiver Spurs, All rates, All Mode, Peak (18-26.5GHz)





Agilent Spectrum Analyzer - LMSoft Vintana: LHM Intention Software

10-29-11 AM Feb-23, 2016

Marker 1 39.957812500000 GHz

PNO: Fast Trig: Free Run Avg Type: Voltage

IFGain: Low #Atten: 4 dB

TRACE 1 39.958 GHz

TYPE MEASUREMENT

DEF P P P P P

10 dB/div Ref 100.00 dBμV

Log

30.0

20.0

10.0

0.0

39.958 GHz 57.08 dBμV

Start 26.500 GHz

#Res BW (CISPR) 1 MHz

#VBW 3.0 MHz

Stop 40.000 GHz

Sweep 27.41 ms (1601 pts)

MSO STATUS



## B.3 Radiated Emissions 30MHz to 1GHz

### 15.205 / 15.209 / RSS-Gen:

Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), and RSS-Gen sec 8.10 must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)) and RSS-Gen sec 8.9

**Ref.** ANSI C63.10: 2013 section 6.5

Using Vasona, configure the spectrum analyzer as shown below (be sure to enter all losses between the transmitter output and the spectrum analyzer). Place the radio in continuous transmit mode.

|                       |                               |
|-----------------------|-------------------------------|
| Span:                 | 30MHz – 1GHz                  |
| Reference Level:      | 80 dBuV                       |
| Attenuation:          | 10 dB                         |
| Sweep Time:           | Coupled                       |
| Resolution Bandwidth: | 100kHz                        |
| Video Bandwidth:      | 300kHz                        |
| Detector:             | Peak for Pre-scan, Quasi-Peak |

Compliance shall be determined using CISPR quasi-peak detection; however, peak detection is permitted as an alternative to quasi-peak detection.

Terminate the access Point RF ports with 50 ohm loads.

Maximize Turntable (find worst case table angle), Maximize Antenna (find worst case height)

This report represents the worst case data for all supported operating modes and antennas.

| System Number | Description | Samples | System under test                   | Support equipment                   |
|---------------|-------------|---------|-------------------------------------|-------------------------------------|
| 1             | EUT         | S01     | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
|               | Support     | S02     | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

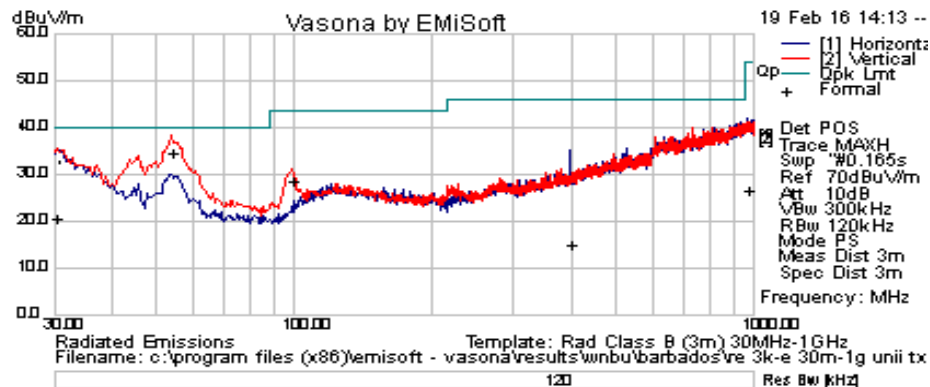
|                                    |                                                   |
|------------------------------------|---------------------------------------------------|
| <b>Tested By :</b><br>Jose Aguirre | <b>Date of testing:</b><br>10-Feb-16 to 22-Feb-16 |
| <b>Test Result : PASS</b>          |                                                   |

See Appendix C for list of test equipment



### Graphical Test Results

Note that the data displayed on the plots detailed in this appendix were measured using a 'Peak Detector'. Please refer to the results table for the detectors used during formal measurements



### Test Results

| Frequency<br>MHz | Raw<br>dBuV | Cable<br>Loss | AF dB | Level<br>dBuV/m | Measurement<br>Type | P<br>ol | Hgt<br>cm | Azt<br>Deg | Limit<br>dBuV/m | Margin<br>dB | Pass<br>/Fail |
|------------------|-------------|---------------|-------|-----------------|---------------------|---------|-----------|------------|-----------------|--------------|---------------|
| 967.505          | 0.54        | 2.96          | 23.1  | 26.6            | Quasi Max           | H       | 389       | 52         | 54              | -27.4        | Pass          |
| 53.998           | 26.59       | 0.7           | 7.35  | 34.65           | Quasi Max           | V       | 110       | 142        | 40              | -5.35        | Pass          |
| 98.87            | 18.09       | 0.93          | 9.89  | 28.92           | Quasi Max           | V       | 157       | 194        | 43.5            | -14.58       | Pass          |
| 398.115          | -1.71       | 1.89          | 15.06 | 15.24           | Quasi Max           | H       | 326       | 200        | 46              | -30.76       | Pass          |
| 30.485           | -0.96       | 0.49          | 21.27 | 20.81           | Quasi Max           | V       | 355       | 350        | 40              | -19.19       | Pass          |



## B.4 AC Conducted Emissions

**FCC 15.207** Except when the requirements applicable to a given device state otherwise, for any radio apparatus equipped to operate from the public utility AC power supply, either directly or indirectly (such as with a battery charger), the radio frequency voltage of emissions conducted back onto the AC power lines in the frequency range of 0.15 MHz to 30 MHz shall not exceed the limits shown in the table in these sections. The more stringent limit applies at the frequency range boundaries.

### Measurement Procedure

Accordance with ANSI C63.10:2013 section 6.2

Using Vasona, configure the spectrum analyzer as shown below (be sure to enter all losses between the transmitter output and the spectrum analyzer). Place the radio in continuous transmit mode.

Span: 150 KHz – 30 MHz  
Attenuation: 10 dB  
Sweep Time: Coupled  
Resolution Bandwidth: 9 KHz  
Video Bandwidth: 30 KHz  
Detector: Quasi-Peak / Average

| System Number | Description | Samples | System under test                   | Support equipment                   |
|---------------|-------------|---------|-------------------------------------|-------------------------------------|
| 1             | EUT         | S01     | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
|               | Support     | S02     | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

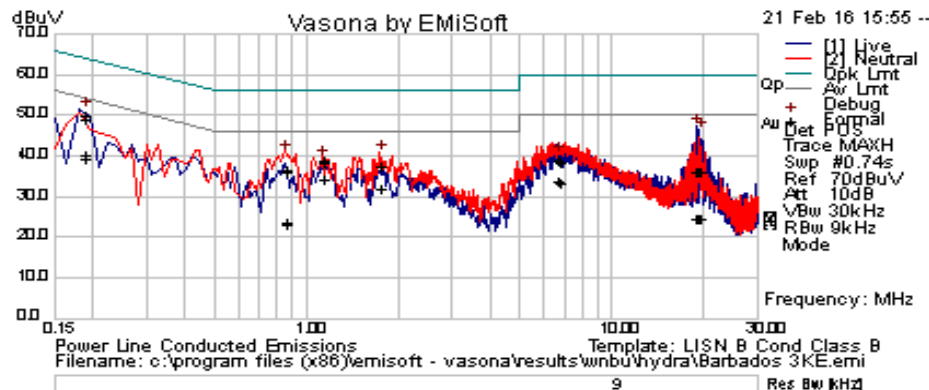
|                                    |                                                   |
|------------------------------------|---------------------------------------------------|
| <b>Tested By :</b><br>Jose Aguirre | <b>Date of testing:</b><br>10-Feb-16 to 22-Feb-16 |
| <b>Test Result : PASS</b>          |                                                   |

See Appendix C for list of test equipment



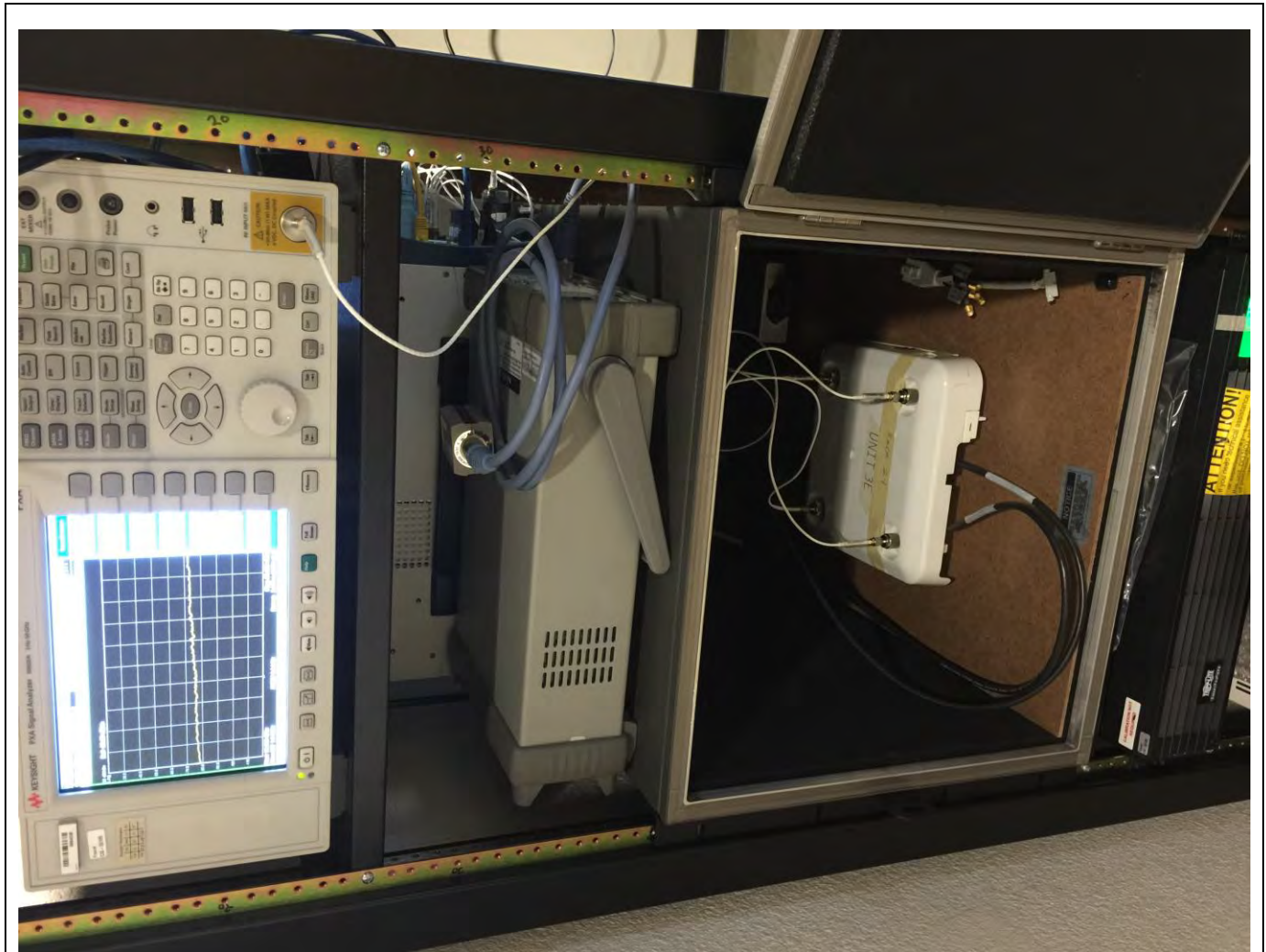
### Graphical Test Results

Note that the data displayed on the plots detailed in this appendix were measured using a 'Peak Detector'. Please refer to the results table for the detectors used during formal measurements



### Test Results

| Frequency MHz | Raw dBuV | Cable Loss | Factors dB | Level dBuV | Measurement Type | Line    | Limit dBuV | Margin dB | Pass /Fail |
|---------------|----------|------------|------------|------------|------------------|---------|------------|-----------|------------|
| 0.857757      | 16.19    | 19.91      | 0.03       | 36.14      | Quasi Peak       | Live    | 56         | -19.86    | Pass       |
| 0.187244      | 29.09    | 20.91      | 0.06       | 50.06      | Quasi Peak       | Live    | 64.16      | -14.1     | Pass       |
| 19.007406     | 15.87    | 20.3       | 0.2        | 36.37      | Quasi Peak       | Live    | 60         | -23.63    | Pass       |
| 1.755417      | 17.64    | 19.9       | 0.03       | 37.57      | Quasi Peak       | Live    | 56         | -18.43    | Pass       |
| 19.383573     | 15.92    | 20.3       | 0.2        | 36.42      | Quasi Peak       | Live    | 60         | -23.58    | Pass       |
| 6.724028      | 18.68    | 20.01      | 0.07       | 38.76      | Quasi Peak       | Live    | 60         | -21.24    | Pass       |
| 1.131699      | 18.77    | 19.9       | 0.04       | 38.71      | Quasi Peak       | Live    | 56         | -17.29    | Pass       |
| 19.029708     | 16       | 20.3       | 0.2        | 36.5       | Quasi Peak       | Neutral | 60         | -23.5     | Pass       |
| 0.856911      | 16.86    | 19.91      | 0.03       | 36.81      | Quasi Peak       | Neutral | 56         | -19.19    | Pass       |
| 19.384527     | 15.97    | 20.3       | 0.2        | 36.47      | Quasi Peak       | Neutral | 60         | -23.53    | Pass       |
| 0.190178      | 28.11    | 20.9       | 0.06       | 49.06      | Quasi Peak       | Neutral | 64.03      | -14.97    | Pass       |
| 1.133571      | 19.28    | 19.9       | 0.04       | 39.22      | Quasi Peak       | Neutral | 56         | -16.78    | Pass       |
| 1.756893      | 17.73    | 19.9       | 0.03       | 37.66      | Quasi Peak       | Neutral | 56         | -18.34    | Pass       |
| 6.712994      | 19.08    | 20.01      | 0.07       | 39.16      | Quasi Peak       | Neutral | 60         | -20.84    | Pass       |
| 0.857757      | 4.02     | 19.91      | 0.03       | 23.97      | Average          | Live    | 46         | -22.03    | Pass       |
| 0.187244      | 19.33    | 20.91      | 0.06       | 40.3       | Average          | Live    | 54.16      | -13.86    | Pass       |
| 19.007406     | 4.14     | 20.3       | 0.2        | 24.65      | Average          | Live    | 50         | -25.35    | Pass       |
| 1.755417      | 12.41    | 19.9       | 0.03       | 32.34      | Average          | Live    | 46         | -13.66    | Pass       |
| 19.383573     | 4.45     | 20.3       | 0.2        | 24.95      | Average          | Live    | 50         | -25.05    | Pass       |
| 6.724028      | 13.39    | 20.01      | 0.07       | 33.47      | Average          | Live    | 50         | -16.53    | Pass       |
| 1.131699      | 14.43    | 19.9       | 0.04       | 34.37      | Average          | Live    | 46         | -11.63    | Pass       |
| 19.029708     | 4.05     | 20.3       | 0.2        | 24.55      | Average          | Neutral | 50         | -25.45    | Pass       |
| 0.856911      | 3.62     | 19.91      | 0.03       | 23.57      | Average          | Neutral | 46         | -22.43    | Pass       |
| 19.384527     | 4.22     | 20.3       | 0.2        | 24.72      | Average          | Neutral | 50         | -25.28    | Pass       |
| 0.190178      | 18.8     | 20.9       | 0.06       | 39.75      | Average          | Neutral | 54.03      | -14.28    | Pass       |
| 1.133571      | 14.69    | 19.9       | 0.04       | 34.63      | Average          | Neutral | 46         | -11.37    | Pass       |
| 1.756893      | 12.41    | 19.9       | 0.03       | 32.34      | Average          | Neutral | 46         | -13.66    | Pass       |
| 6.712994      | 13.86    | 20.01      | 0.07       | 33.94      | Average          | Neutral | 50         | -16.06    | Pass       |

**Photographs of setup****Title: Conducted Test Setup**

This is a dual band 2.4GHz / 5GHz device. All ports in this test set up photo are connected as all testing is automated. Section 2.6 of this test report given an overview of the different Tx antenna combinations used by this device.

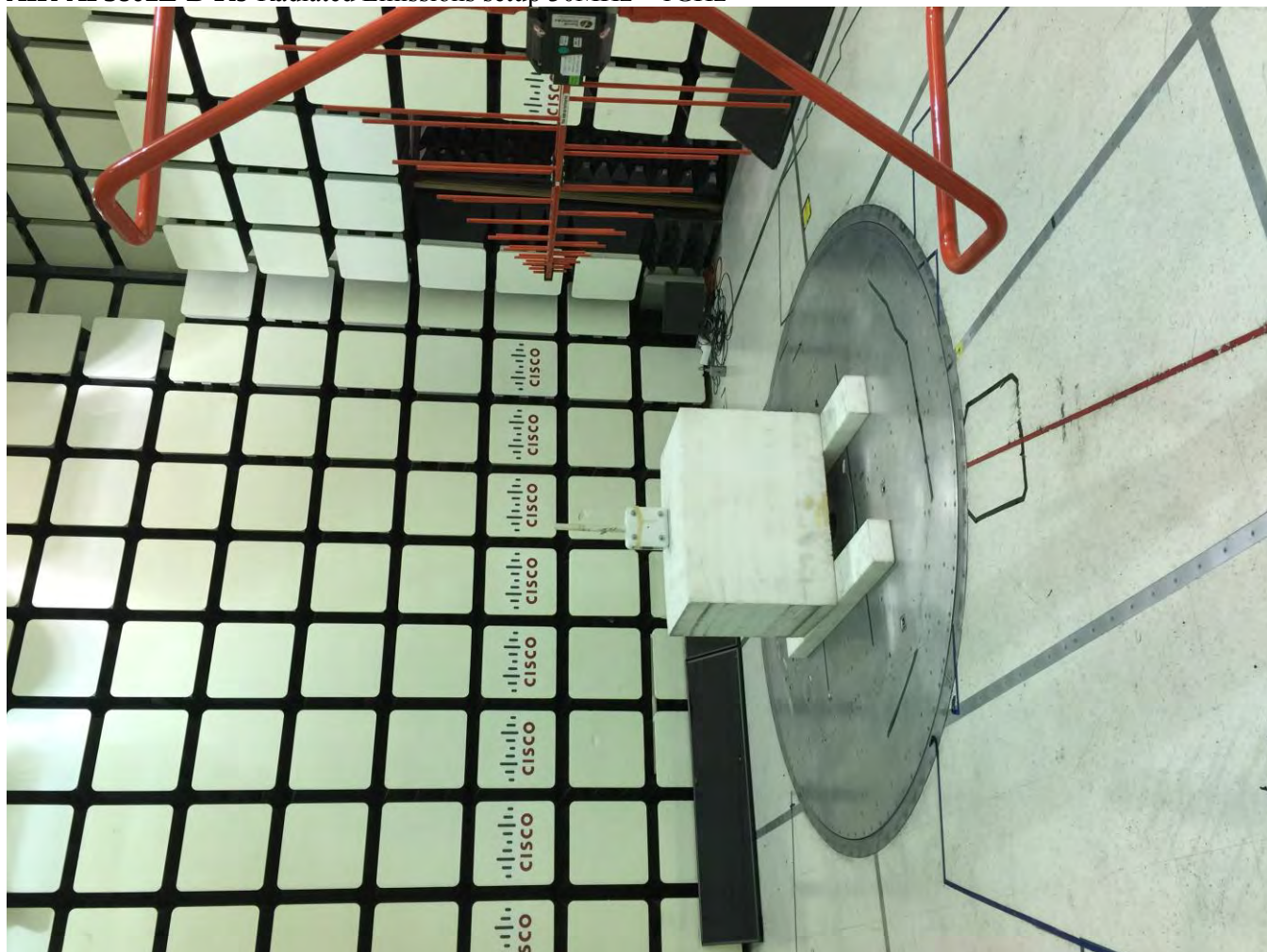


**AIR-AP3802E-B-K9 AC Mains Conducted Emissions setup**

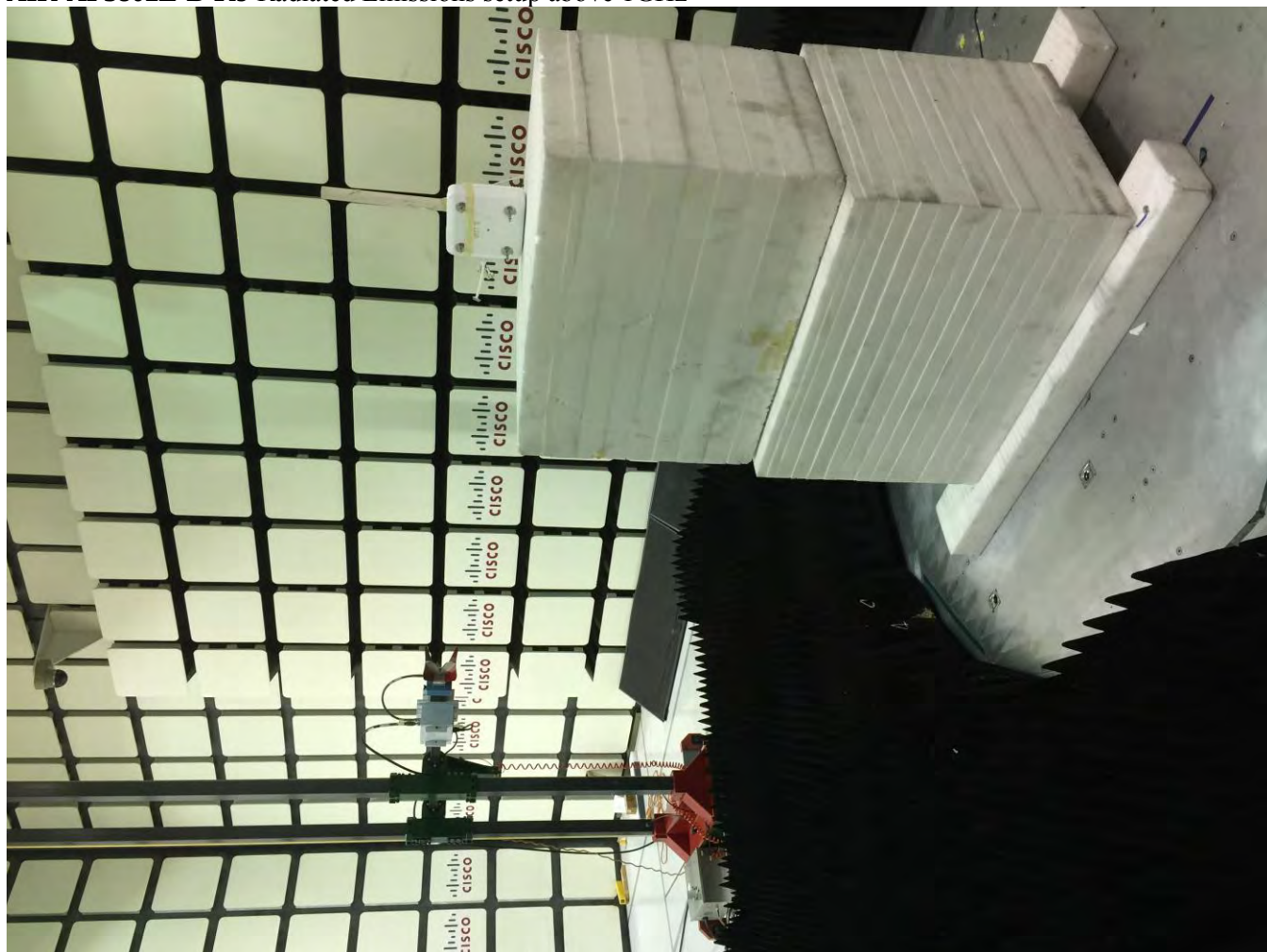




**AIR-AP3802E-B-K9 Radiated Emissions setup 30MHz – 1GHz**



**AIR-AP3802E-B-K9 Radiated Emissions setup above 1GHz**





## Appendix C: List of Test Equipment Used to perform the test

| Equip#                                            | Manufacturer/ Model                 | Description                                 | Last Cal            | Next Due            | Test Item |
|---------------------------------------------------|-------------------------------------|---------------------------------------------|---------------------|---------------------|-----------|
| <b>Test Equipment used for Radiated Emissions</b> |                                     |                                             |                     |                     |           |
| CIS005691                                         | NSP1800-25-S1<br>Miteq              | Broadband Preamplifier (1-18GHz)            | 25-Jun-15           | 25-Jun-16           | B.1       |
| CIS008448                                         | NSA 5m Chamber<br>Cisco             | NSA 5m Chamber                              | 9-Oct-15            | 9-Oct-16            | B.2       |
| CIS021117                                         | UFB311A-0-2484-520520<br>Micro-Coax | RF Coaxial Cable, to 18GHz, 248.4 in        | 24-Aug-15           | 24-Aug-16           | B.1, B.2  |
| CIS034075                                         | RSG 2000<br>Schaffner               | Reference Spectrum Generator, 1-18GHz       | Cal Not<br>Required | Cal Not<br>Required | B.1       |
| CIS035284                                         | 3117<br>ETS-Lindgren                | Double Ridged Waveguide Horn Antenna        | 30-Sep-15           | 30-Sep-16           | B.1       |
| CIS037236                                         | 50CB-015<br>JFW                     | GPIB Control Box                            | Cal Not<br>Required | Cal Not<br>Required | B.1       |
| CIS040597                                         | Above 1GHz Site Cal<br>Cisco        | Above 1GHz Cisp Site Verification           | 25-Sep-15           | 25-Sep-16           | B.1       |
| CIS041979                                         | 1840<br>Cisco                       | 18-40GHz EMI Test Head/Verification Fixture | 13-Jul-15           | 13-Jul-16           | B.1       |
| CIS042266                                         | JB1<br>Sunol Sciences               | Combination Antenna                         | 21-Apr-15           | 21-Apr-16           | B.2       |
| CIS044940                                         | ESU40<br>Rohde & Schwarz            | EMI Test Receiver, 20Hz-40GHz               | 2-Nov-15            | 2-Nov-16            | B.1       |
| CIS054230                                         | iBTHP-5-DB9<br>Newport              | 5 inch Temp/RH/Press Sensor w/20ft cable    | 10-Feb-16           | 10-Feb-17           | B.1, B.2  |

| <b>Test Equipment used for AC Mains Conducted Emissions</b> |                                                          |                                        |                     |                     |           |
|-------------------------------------------------------------|----------------------------------------------------------|----------------------------------------|---------------------|---------------------|-----------|
| Equip No                                                    | Model<br>Manufacturer                                    | Description                            | Last Cal            | Next Cal            | Test Item |
| CIS002464                                                   | FCC-801-M2-16<br>Fischer Custom Communications           | CDN, 2-LINE, 16A                       | 12-Mar-15           | 12-Mar-16           | B.3       |
| CIS049532                                                   | H785-150K-50-21378<br>TTE                                | High Pass Filter                       | 8-May-15            | 8-May-16            | B.3       |
| CIS020913                                                   | FCC-LISN-PA-NEMA-5-15<br>Fischer Custom Communications   | AC Adapter                             | 8-May-15            | 8-May-16            | B.3       |
| CIS007704                                                   | FCC-LISN-50/250-50-2-01<br>Fischer Custom Communications | LISN                                   | 8-May-15            | 8-May-16            | B.3       |
| CIS008185                                                   | FCC-450B-2.4-N<br>Fischer Custom Communications          | Instrumentation Limiter                | 28-Jul-15           | 28-Jul-16           | B.3       |
| CIS051756                                                   | 5-T-MB<br>Bird                                           | 5W 50 Ohm BNC Termination 4GHz         | 6-Aug-15            | 6-Aug-16            | B.3       |
| CIS049563                                                   | Sucoflex 106A<br>Huber + Suhner                          | N Type Cable 18GHz                     | 24-Aug-15           | 24-Aug-16           | B.3       |
| CIS021117                                                   | UFB311A-0-2484-520520<br>Micro-Coax                      | RF Coaxial Cable, to 18GHz, 248.4 in   | 24-Aug-15           | 24-Aug-16           | B.3       |
| CIS044940                                                   | ESU40<br>Rohde & Schwarz                                 | EMI Test Receiver, 20Hz-40GHz          | 2-Nov-15            | 2-Nov-16            | B.3       |
| CIS054647                                                   | 33-605<br>Stanley                                        | 10meter Measuring Tape                 | Cal not<br>required | Cal not<br>required | B.3       |
| CIS018963                                                   | CNE V<br>York                                            | Comparison Noise Emitter, 30 - 1000MHz | Cal not<br>required | Cal not<br>required | B.3       |

| <b>Test Equipment used for RF Conducted Tests</b> |                       |             |          |          |           |
|---------------------------------------------------|-----------------------|-------------|----------|----------|-----------|
| Equip No                                          | Model<br>Manufacturer | Description | Last Cal | Next Cal | Test Item |



|           |                                     |                                           |                  |                  |            |
|-----------|-------------------------------------|-------------------------------------------|------------------|------------------|------------|
| CIS050721 | N9030A<br>Keysight                  | PXA Signal Analyzer                       | 13-Apr-15        | 13-Apr-16        | A1 thru A6 |
| CIS054662 | SF18-S1S1-36<br>MegaPhase           | SMA 36" cable                             | 24-Sep-15        | 24-Sep-16        | A1 thru A6 |
| CIS054663 | F120-S1S1-48<br>MegaPhase           | SMA 48" Cable                             | 25-Sep-15        | 25-Sep-16        | A1 thru A6 |
| CIS054665 | RA08-S1S1-24<br>MegaPhase           | SMA 24" Cable                             | 25-Sep-15        | 25-Sep-16        | A1 thru A6 |
| CIS054666 | RA08-S1S1-18<br>MegaPhase           | SMA 18" Cable                             | 25-Sep-15        | 25-Sep-16        | A1 thru A6 |
| CIS054667 | RA08-S1S1-18<br>MegaPhase           | SMA 18" Cable                             | 25-Sep-15        | 25-Sep-16        | A1 thru A6 |
| CIS054668 | RA08-S1S1-18<br>MegaPhase           | SMA 18" Cable                             | 25-Sep-15        | 25-Sep-16        | A1 thru A6 |
| CIS054669 | RA08-S1S1-18<br>MegaPhase           | SMA 18" Cable                             | 25-Sep-15        | 25-Sep-16        | A1 thru A6 |
| CIS054670 | RA08-S1S1-12<br>MegaPhase           | SMA 12" Cable                             | 25-Sep-15        | 25-Sep-16        | A1 thru A6 |
| CIS054671 | RA08-S1S1-12<br>MegaPhase           | SMA 12" Cable                             | 25-Sep-15        | 25-Sep-16        | A1 thru A6 |
| CIS054672 | RA08-S1S1-12<br>MegaPhase           | SMA 12" Cable                             | 25-Sep-15        | 25-Sep-16        | A1 thru A6 |
| CIS054673 | RA08-S1S1-12<br>MegaPhase           | SMA 12" Cable                             | 25-Sep-15        | 25-Sep-16        | A1 thru A6 |
| CIS054674 | RA08-S1S1-12<br>MegaPhase           | SMA 12" Cable                             | 25-Sep-15        | 25-Sep-16        | A1 thru A6 |
| CIS054675 | RA08-S1S1-12<br>MegaPhase           | SMA 12" Cable                             | 25-Sep-15        | 25-Sep-16        | A1 thru A6 |
| CIS054677 | RA08-S1S1-12<br>MegaPhase           | SMA 12" Cable                             | 25-Sep-15        | 25-Sep-16        | A1 thru A6 |
| CIS054678 | RA08-S1S1-12<br>MegaPhase           | SMA 12" Cable                             | 25-Sep-15        | 25-Sep-16        | A1 thru A6 |
| CIS054686 | NI PXI-2796<br>National Instruments | Plug-in switch module                     | 6-Oct-15         | 6-Oct-16         | A1 thru A6 |
| CIS055094 | PXI-1042<br>National Instruments    | Chassis                                   | Cal Not Required | Cal Not Required | A1 thru A6 |
| CIS055117 | RFLT2WDC40G<br>RF Lambda            | 2 Way 40GHz Splitter                      | 11-Nov-15        | 11-Nov-16        | A1 thru A6 |
| CIS055166 | RFLT4WDC40GK<br>RF Lambda           | 4 Way Power Divider 40GHz                 | 23-Nov-15        | 23-Nov-16        | A1 thru A6 |
| CIS054656 | BRC50705-02<br>Micro-Tronics        | Band Reject Filter                        | 24-Sep-15        | 24-Sep-16        | A1 thru A6 |
| CIS054655 | BRC50704-02<br>Micro-Tronics        | Notch Filter, SB:5.470-5.725GHz, to 12GHz | 24-Sep-15        | 24-Sep-16        | A1 thru A6 |
| CIS054654 | BRC50703-02<br>Micro-Tronics        | Notch Filter, SB:5.150-5.350GHz, to 11GHz | 24-Sep-15        | 24-Sep-16        | A1 thru A6 |
| CIS054653 | BRM50702-02<br>Micro-Tronics        | Notch Filter, SB:2.400-2.500GHz, to 18GHz | 24-Sep-15        | 24-Sep-16        | A1 thru A6 |
| CIS054637 | BWS30-W2/ Aeroflex                  | SMA 30dB Attenuator                       | 02-June-15       | 02-June-16       | A1 thru A6 |
| CIS054636 | BWS20-W2/ Aeroflex                  | 20dB SMA Attenuator                       | 02-June-15       | 02-June-16       | A1 thru A6 |



## Appendix E: Abbreviation Key and Definitions

The following table defines abbreviations used within this test report.

| Abbreviation | Description                                                          | Abbreviation | Description                         |
|--------------|----------------------------------------------------------------------|--------------|-------------------------------------|
| EMC          | Electro Magnetic Compatibility                                       | °F           | Degrees Fahrenheit                  |
| EMI          | Electro Magnetic Interference                                        | °C           | Degrees Celsius                     |
| EUT          | Equipment Under Test                                                 | Temp         | Temperature                         |
| ITE          | Information Technology Equipment                                     | S/N          | Serial Number                       |
| TAP          | Test Assessment Schedule                                             | Qty          | Quantity                            |
| ESD          | Electro Static Discharge                                             | emf          | Electromotive force                 |
| EFT          | Electric Fast Transient                                              | RMS          | Root mean square                    |
| EDCS         | Engineering Document Control System                                  | Qp           | Quasi Peak                          |
| Config       | Configuration                                                        | Av           | Average                             |
| CIS#         | Cisco Number (unique identification number for Cisco test equipment) | Pk           | Peak                                |
| Cal          | Calibration                                                          | kHz          | Kilohertz ( $1 \times 10^3$ )       |
| EN           | European Norm                                                        | MHz          | MegaHertz ( $1 \times 10^6$ )       |
| IEC          | International Electro technical Commission                           | GHz          | Gigahertz ( $1 \times 10^9$ )       |
| CISPR        | International Special Committee on Radio Interference                | H            | Horizontal                          |
| CDN          | Coupling/Decoupling Network                                          | V            | Vertical                            |
| LISN         | Line Impedance Stabilization Network                                 | dB           | decibel                             |
| PE           | Protective Earth                                                     | V            | Volt                                |
| GND          | Ground                                                               | kV           | Kilovolt ( $1 \times 10^3$ )        |
| L1           | Line 1                                                               | μV           | Microvolt ( $1 \times 10^{-6}$ )    |
| L2           | Line2                                                                | A            | Amp                                 |
| L3           | Line 3                                                               | μA           | Micro Amp ( $1 \times 10^{-6}$ )    |
| DC           | Direct Current                                                       | mS           | Milli Second ( $1 \times 10^{-3}$ ) |
| RAW          | Uncorrected measurement value, as indicated by the measuring device  | μS           | Micro Second ( $1 \times 10^{-6}$ ) |
| RF           | Radio Frequency                                                      | μS           | Micro Second ( $1 \times 10^{-6}$ ) |
| SLCE         | Signal Line Conducted Emissions                                      | m            | Meter                               |
| Meas dist    | Measurement distance                                                 | Spec dist    | Specification distance              |
| N/A or NA    | Not Applicable                                                       | SL           | Signal Line (or Telecom Line)       |
| P            | Power Line                                                           | L            | Live Line                           |
| N            | Neutral Line                                                         | R            | Return                              |
| S            | Supply                                                               | AC           | Alternating Current                 |



**End**