

## 10.5 POWER SPECTRAL DENSITY

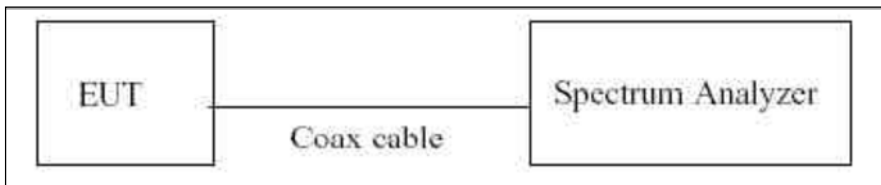
The peak power density is measured with a spectrum analyzer connected to the antenna terminal while the EUT is operating in transmission mode at the appropriate frequencies.

### ■ Limit

#### Power Spectral Density

| Band    | Mode         | Limit          |
|---------|--------------|----------------|
| UNII 1  | 802.11a,n,ac | 11 dBm/MHz     |
| UNII 2A | 802.11a,n,ac | 11 dBm/MHz     |
| UNII 2C | 802.11a,n,ac | 11 dBm/MHz     |
| UNII 3  | 802.11a,n,ac | 30 dBm/500 kHz |

### ■ TEST CONFIGURATION



### ■ TEST PROCEDURE

We tested according to Method in KDB 789033 D02 v02r01.

The spectrum analyzer is set to :

1. Set span to encompass the entire emission bandwidth(EBW) of the signal.
2. RBW = 1 MHz(510 kHz for UNII 3)
3. VBW  $\geq$  3 MHz
4. Number of points in sweep  $\geq 2 \times \text{span} / \text{RBW}$ .
5. Sweep time = auto.
6. Detector = RMS(i.e., power averaging), if available. Otherwise, use sample detector mode.
7. Do not use sweep triggering. Allow the sweep to "free run".
8. Trace average at least 100 traces in power averaging(RMS) mode
9. Use the peak search function on the spectrum analyzer to find the peak of the spectrum.
10. If Method SA-2 was used, add  $10 \log(1/x)$ , where x is the duty cycle, to the peak of the spectrum.

**■ SAMPLE CALCULATION**

PSD = Reading Value + ATT loss + Cable loss(1 ea) + Duty Cycle Factor

Ex) PSD = -3 dBm + 10 dB + 0.8 dB + 0.2 dB = 8.0 dBm

Note :

1. Spectrum reading values are not plot data. The PSD results in plot is already including the actual values of loss for the attenuator and cable combination.
2. Spectrum offset = Attenuator loss + Cable loss
3. We apply to the offset in the 5.2 GHz, 5.3 GHz and 5.6 GHz range that was rounded off to the closest tenth dB. Actual value of loss for the attenuator and cable combination is below table.

Internal

| Band       | Loss(dB) |
|------------|----------|
| UNII 1, 2A | 12       |
| UNII 2C    | 12.1     |
| UNII 3     | 12.2     |

External

| Band       | Loss(dB) |
|------------|----------|
| UNII 1, 2A | 14.7     |
| UNII 2C    | 13.3     |
| UNII 3     | 14.1     |

(Actual value of loss for the attenuator and cable combination)

**Internal Ant**
**■ TEST RESULTS**
**Conducted Power Density Measurements**

| Frequency<br>(MHz) | Channel<br>No. | Mode    | Test Result                           |                                 |                                                       |                |           |
|--------------------|----------------|---------|---------------------------------------|---------------------------------|-------------------------------------------------------|----------------|-----------|
|                    |                |         | Measured<br>Power<br>Density<br>(dBm) | Duty<br>Cycle<br>Factor<br>(dB) | Measured<br>Power(dBm) +<br>Duty Cycle<br>Factor (dB) | Limit<br>(dBm) | Pass/Fail |
| 5180               | 36             | 802.11a | -2.578                                | 0.214                           | -2.364                                                | 11             | Pass      |
| 5200               | 40             |         | -2.743                                | 0.214                           | -2.529                                                | 11             | Pass      |
| 5240               | 48             |         | -2.888                                | 0.214                           | -2.674                                                | 11             | Pass      |
| 5260               | 52             |         | -2.518                                | 0.214                           | -2.304                                                | 11             | Pass      |
| 5300               | 60             |         | -2.484                                | 0.214                           | -2.270                                                | 11             | Pass      |
| 5320               | 64             |         | -2.313                                | 0.214                           | -2.099                                                | 11             | Pass      |

**External Ant**
**■ TEST RESULTS**
**Conducted Power Density Measurements**

| Frequency<br>(MHz) | Channel<br>No. | Mode    | Test Result                           |                                 |                                                       |                |           |
|--------------------|----------------|---------|---------------------------------------|---------------------------------|-------------------------------------------------------|----------------|-----------|
|                    |                |         | Measured<br>Power<br>Density<br>(dBm) | Duty<br>Cycle<br>Factor<br>(dB) | Measured<br>Power(dBm) +<br>Duty Cycle<br>Factor (dB) | Limit<br>(dBm) | Pass/Fail |
| 5180               | 36             | 802.11a | 1.917                                 | 0.399                           | 2.316                                                 | 11             | Pass      |
| 5200               | 40             |         | 1.906                                 | 0.399                           | 2.305                                                 | 11             | Pass      |
| 5240               | 48             |         | 1.726                                 | 0.399                           | 2.125                                                 | 11             | Pass      |
| 5260               | 52             |         | 1.696                                 | 0.399                           | 2.095                                                 | 11             | Pass      |
| 5300               | 60             |         | 2.087                                 | 0.399                           | 2.486                                                 | 11             | Pass      |
| 5320               | 64             |         | 1.999                                 | 0.399                           | 2.398                                                 | 11             | Pass      |

■ TEST Plot for 802.11a 20 MHz BW

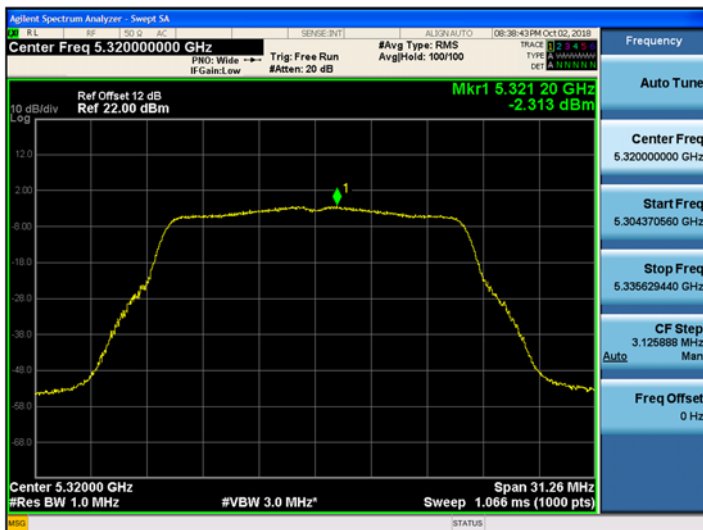
802.11a UNII 1 BAND PSD CH 36\_Internal Ant



802.11a UNII 1 BAND PSD CH 40\_External Ant



802.11a UNII 2A BAND PSD CH 64\_Internal Ant



802.11a UNII 2A BAND PSD CH 60\_External Ant



**Internal Ant**
**■ TEST RESULTS**
**Conducted Power Density Measurements**

| Frequency<br>(MHz) | Channel<br>No. | Mode                   | Test Result                           |                                 |                                                       |                |           |
|--------------------|----------------|------------------------|---------------------------------------|---------------------------------|-------------------------------------------------------|----------------|-----------|
|                    |                |                        | Measured<br>Power<br>Density<br>(dBm) | Duty<br>Cycle<br>Factor<br>(dB) | Measured<br>Power(dBm) +<br>Duty Cycle<br>Factor (dB) | Limit<br>(dBm) | Pass/Fail |
| 5180               | 36             | 802.11n<br>20MHz<br>BW | -3.507                                | 0.215                           | -3.292                                                | 11             | Pass      |
| 5200               | 40             |                        | -3.116                                | 0.215                           | -2.901                                                | 11             | Pass      |
| 5240               | 48             |                        | -3.085                                | 0.215                           | -2.870                                                | 11             | Pass      |
| 5260               | 52             |                        | -3.304                                | 0.215                           | -3.089                                                | 11             | Pass      |
| 5300               | 60             |                        | -2.723                                | 0.215                           | -2.508                                                | 11             | Pass      |
| 5320               | 64             |                        | -2.879                                | 0.215                           | -2.664                                                | 11             | Pass      |

**External Ant**
**■ TEST RESULTS**
**Conducted Power Density Measurements**

| Frequency<br>(MHz) | Channel<br>No. | Mode                   | Test Result                           |                                 |                                                       |                |           |
|--------------------|----------------|------------------------|---------------------------------------|---------------------------------|-------------------------------------------------------|----------------|-----------|
|                    |                |                        | Measured<br>Power<br>Density<br>(dBm) | Duty<br>Cycle<br>Factor<br>(dB) | Measured<br>Power(dBm) +<br>Duty Cycle<br>Factor (dB) | Limit<br>(dBm) | Pass/Fail |
| 5180               | 36             | 802.11n<br>20MHz<br>BW | 1.301                                 | 0.614                           | 1.915                                                 | 11             | Pass      |
| 5200               | 40             |                        | 1.589                                 | 1.604                           | 3.193                                                 | 11             | Pass      |
| 5240               | 48             |                        | 1.383                                 | 0.614                           | 1.997                                                 | 11             | Pass      |
| 5260               | 52             |                        | 1.356                                 | 0.614                           | 1.970                                                 | 11             | Pass      |
| 5300               | 60             |                        | 1.478                                 | 0.614                           | 2.092                                                 | 11             | Pass      |
| 5320               | 64             |                        | 1.331                                 | 0.614                           | 1.945                                                 | 11             | Pass      |

■ Sum Data of Internal Ant and External Ant

■ TEST RESULTS

Conducted Power Density Measurements

| Mode              | Frequency<br>[MHz] | Channel<br>No. | Duty<br>Cycle<br>Factor<br>(dB) | Measured Power [dBm] |                     |       | Result<br>(dBm) | Limit<br>(dBm) |
|-------------------|--------------------|----------------|---------------------------------|----------------------|---------------------|-------|-----------------|----------------|
|                   |                    |                |                                 | Internal<br>Antenna  | External<br>Antenna | Sum   |                 |                |
| 802.11n<br>(HT20) | 5180               | 36             | 0.428                           | -5.570               | -7.567              | -3.44 | -3.02           | 11.00          |
|                   | 5200               | 40             | 0.428                           | -5.265               | -6.839              | -2.97 | -2.54           | 11.00          |
|                   | 5240               | 48             | 0.428                           | -5.049               | -6.658              | -2.77 | -2.34           | 11.00          |
|                   | 5260               | 52             | 0.428                           | -4.683               | -5.751              | -2.17 | -1.75           | 11.00          |
|                   | 5300               | 60             | 0.428                           | -4.513               | -4.823              | -1.65 | -1.23           | 11.00          |
|                   | 5320               | 64             | 0.428                           | -4.448               | -4.880              | -1.65 | -1.22           | 11.00          |

■ TEST Plot for 802.11n\_HT20

802.11n\_HT20 UNII 1 BAND PSD CH 48\_Internal Ant



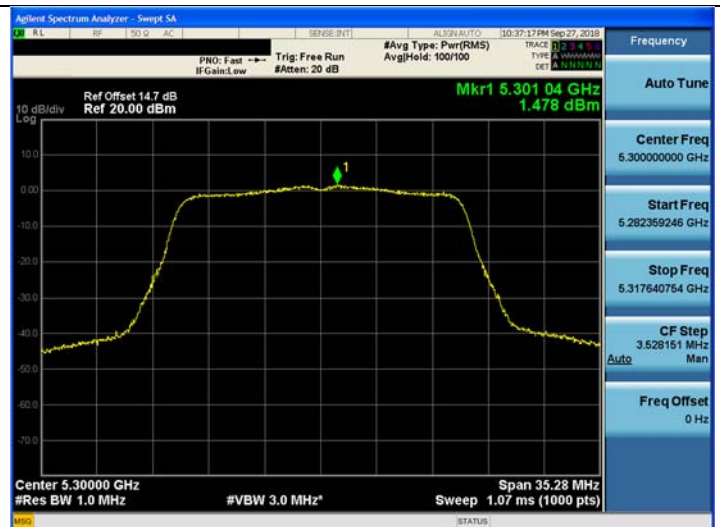
802.11n\_HT20 UNII 1 BAND PSD CH 40\_External Ant



802.11n\_HT20 UNII 2A BAND PSD CH 60\_Internal Ant



802.11n\_HT20 UNII 2A BAND PSD CH 60\_External Ant



**Internal Ant**

■ **TEST RESULTS**

**Conducted Power Density Measurements**

| Frequency<br>(MHz) | Channel<br>No. | Mode                 | Test Result                           |                                 |                                                       |                |           |
|--------------------|----------------|----------------------|---------------------------------------|---------------------------------|-------------------------------------------------------|----------------|-----------|
|                    |                |                      | Measured<br>Power<br>Density<br>(dBm) | Duty<br>Cycle<br>Factor<br>(dB) | Measured<br>Power(dBm) +<br>Duty Cycle<br>Factor (dB) | Limit<br>(dBm) | Pass/Fail |
| 5180               | 36             | 802.11ac<br>20MHz BW | -3.243                                | 0.223                           | -3.020                                                | 11             | Pass      |
| 5200               | 40             |                      | -3.199                                | 0.223                           | -2.976                                                | 11             | Pass      |
| 5240               | 48             |                      | -3.047                                | 0.223                           | -2.824                                                | 11             | Pass      |
| 5260               | 52             |                      | -2.705                                | 0.223                           | -2.482                                                | 11             | Pass      |
| 5300               | 60             |                      | -3.123                                | 0.223                           | -2.900                                                | 11             | Pass      |
| 5320               | 64             |                      | -2.920                                | 0.223                           | -2.697                                                | 11             | Pass      |

**External Ant**

■ **TEST RESULTS**

**Conducted Power Density Measurements**

| Frequency<br>(MHz) | Channel<br>No. | Mode                 | Test Result                           |                                 |                                                       |                |           |
|--------------------|----------------|----------------------|---------------------------------------|---------------------------------|-------------------------------------------------------|----------------|-----------|
|                    |                |                      | Measured<br>Power<br>Density<br>(dBm) | Duty<br>Cycle<br>Factor<br>(dB) | Measured<br>Power(dBm) +<br>Duty Cycle<br>Factor (dB) | Limit<br>(dBm) | Pass/Fail |
| 5180               | 36             | 802.11ac<br>20MHz BW | 0.916                                 | 0.610                           | 1.526                                                 | 11             | Pass      |
| 5200               | 40             |                      | 1.512                                 | 0.610                           | 2.122                                                 | 11             | Pass      |
| 5240               | 48             |                      | 1.069                                 | 0.610                           | 1.679                                                 | 11             | Pass      |
| 5260               | 52             |                      | 1.182                                 | 0.610                           | 1.792                                                 | 11             | Pass      |
| 5300               | 60             |                      | 1.810                                 | 0.610                           | 2.420                                                 | 11             | Pass      |
| 5320               | 64             |                      | 1.144                                 | 0.610                           | 1.754                                                 | 11             | Pass      |

■ Sum Data of Internal Ant and External Ant

■ TEST RESULTS

Conducted Power Density Measurements

| Mode             | Frequency [MHz] | Channel No. | Duty Cycle Factor (dB) | Measured Power [dBm] |                  |       | Result (dBm) | Limit (dBm) |
|------------------|-----------------|-------------|------------------------|----------------------|------------------|-------|--------------|-------------|
|                  |                 |             |                        | Internal Antenna     | External Antenna | Sum   |              |             |
| 802.11ac (VHT20) | 5180            | 36          | 0.422                  | -5.248               | -7.047           | -3.04 | -2.62        | 11.00       |
|                  | 5200            | 40          | 0.422                  | -5.442               | -7.115           | -3.19 | -2.77        | 11.00       |
|                  | 5240            | 48          | 0.422                  | -4.910               | -6.638           | -2.68 | -2.26        | 11.00       |
|                  | 5260            | 52          | 0.422                  | -5.136               | -5.841           | -2.46 | -2.04        | 11.00       |
|                  | 5300            | 60          | 0.422                  | -4.538               | -5.288           | -1.89 | -1.46        | 11.00       |
|                  | 5320            | 64          | 0.422                  | -4.724               | -4.818           | -1.76 | -1.34        | 11.00       |

■ TEST Plot for 802.11ac\_VHT20

802.11ac\_VHT20 UNII 1 BAND PSD CH 48\_Internal Ant



802.11ac\_VHT20 UNII 1 BAND PSD CH 40\_External Ant



802.11ac\_VHT20 UNII 2A BAND PSD CH 52\_Internal Ant

802.11ac\_VHT20 UNII 2A BAND PSD CH 60\_External Ant



**Internal Ant**
**■ TEST RESULTS**
**Conducted Power Density Measurements**

| Frequency<br>(MHz) | Channel<br>No. | Mode                   | Test Result                           |                                 |                                                       |                |           |
|--------------------|----------------|------------------------|---------------------------------------|---------------------------------|-------------------------------------------------------|----------------|-----------|
|                    |                |                        | Measured<br>Power<br>Density<br>(dBm) | Duty<br>Cycle<br>Factor<br>(dB) | Measured<br>Power(dBm) +<br>Duty Cycle<br>Factor (dB) | Limit<br>(dBm) | Pass/Fail |
| 5190               | 38             | 802.11n<br>40MHz<br>BW | -5.838                                | 0.443                           | -5.395                                                | 11             | Pass      |
| 5230               | 46             |                        | -5.376                                | 0.443                           | -4.933                                                | 11             | Pass      |
| 5270               | 54             |                        | -5.503                                | 0.443                           | -5.060                                                | 11             | Pass      |
| 5310               | 62             |                        | -5.647                                | 0.443                           | -5.204                                                | 11             | Pass      |

**External Ant**
**■ TEST RESULTS**
**Conducted Power Density Measurements**

| Frequency<br>(MHz) | Channel<br>No. | Mode                   | Test Result                           |                                 |                                                       |                |           |
|--------------------|----------------|------------------------|---------------------------------------|---------------------------------|-------------------------------------------------------|----------------|-----------|
|                    |                |                        | Measured<br>Power<br>Density<br>(dBm) | Duty<br>Cycle<br>Factor<br>(dB) | Measured<br>Power(dBm) +<br>Duty Cycle<br>Factor (dB) | Limit<br>(dBm) | Pass/Fail |
| 5190               | 38             | 802.11n<br>40MHz<br>BW | -3.013                                | 1.409                           | -1.604                                                | 11             | Pass      |
| 5230               | 46             |                        | -3.341                                | 2.533                           | -0.808                                                | 11             | Pass      |
| 5270               | 54             |                        | -2.609                                | 2.533                           | -0.076                                                | 11             | Pass      |
| 5310               | 62             |                        | -3.678                                | 2.533                           | -1.145                                                | 11             | Pass      |

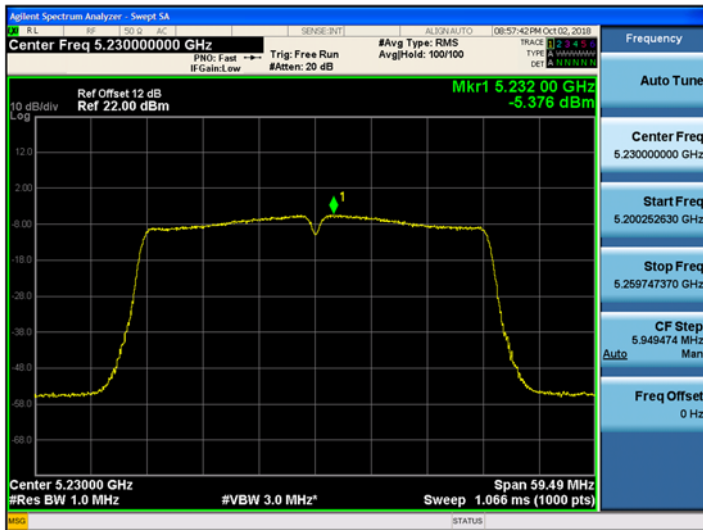
- Sum Data of Internal Ant and External Ant
- TEST RESULTS

Conducted Power Density Measurements

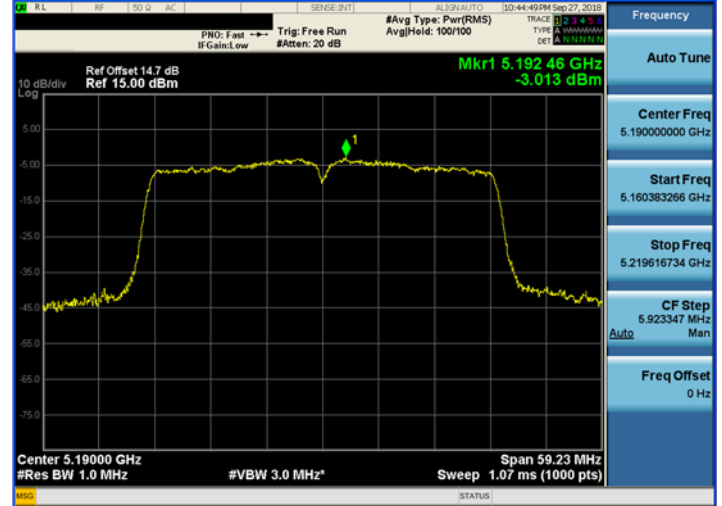
| Mode           | Frequency [MHz] | Channel No. | Duty Cycle Factor (dB) | Measured Power [dBm] |                  |       | Result (dBm) | Limit (dBm) |
|----------------|-----------------|-------------|------------------------|----------------------|------------------|-------|--------------|-------------|
|                |                 |             |                        | Internal Antenna     | External Antenna | Sum   |              |             |
| 802.11n (HT40) | 5190            | 38          | 0.804                  | -7.897               | -9.824           | -5.74 | -4.94        | 11.00       |
|                | 5230            | 46          | 0.804                  | -7.804               | -9.288           | -5.47 | -4.67        | 11.00       |
|                | 5270            | 54          | 0.804                  | -7.682               | -8.535           | -5.08 | -4.27        | 11.00       |
|                | 5310            | 62          | 0.804                  | -7.527               | -7.634           | -4.57 | -3.77        | 11.00       |

■ TEST Plot for 802.11n\_HT40

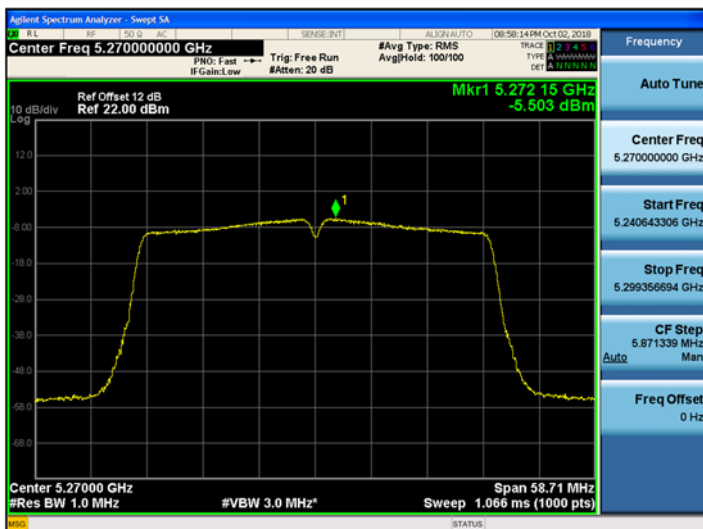
802.11n\_HT40 UNII 1 BAND PSD CH 46\_Internal Ant



802.11n\_HT40 UNII 1 BAND PSD CH 38\_External Ant



802.11n\_HT40 UNII 2A BAND PSD CH 54\_Internal Ant



802.11n\_HT40 UNII 2A BAND PSD CH 54\_External Ant



**Internal Ant**

■ **TEST RESULTS**

**Conducted Power Density Measurements**

| Frequency<br>(MHz) | Channel<br>No. | Mode                 | Test Result                           |                                 |                                                       |                |           |
|--------------------|----------------|----------------------|---------------------------------------|---------------------------------|-------------------------------------------------------|----------------|-----------|
|                    |                |                      | Measured<br>Power<br>Density<br>(dBm) | Duty<br>Cycle<br>Factor<br>(dB) | Measured<br>Power(dBm) +<br>Duty Cycle<br>Factor (dB) | Limit<br>(dBm) | Pass/Fail |
| 5190               | 38             | 802.11ac<br>40MHz BW | -5.697                                | 0.442                           | -5.255                                                | 11             | Pass      |
| 5230               | 46             |                      | -5.141                                | 0.442                           | -4.699                                                | 11             | Pass      |
| 5270               | 54             |                      | -5.646                                | 0.442                           | -5.204                                                | 11             | Pass      |
| 5310               | 62             |                      | -5.710                                | 0.442                           | -5.268                                                | 11             | Pass      |

**External Ant**

■ **TEST RESULTS**

**Conducted Power Density Measurements**

| Frequency<br>(MHz) | Channel<br>No. | Mode                 | Test Result                           |                                 |                                                       |                |           |
|--------------------|----------------|----------------------|---------------------------------------|---------------------------------|-------------------------------------------------------|----------------|-----------|
|                    |                |                      | Measured<br>Power<br>Density<br>(dBm) | Duty<br>Cycle<br>Factor<br>(dB) | Measured<br>Power(dBm) +<br>Duty Cycle<br>Factor (dB) | Limit<br>(dBm) | Pass/Fail |
| 5190               | 38             | 802.11ac<br>40MHz BW | -2.744                                | 1.389                           | -1.355                                                | 11             | Pass      |
| 5230               | 46             |                      | -1.427                                | 2.798                           | 1.371                                                 | 11             | Pass      |
| 5270               | 54             |                      | -2.235                                | 2.798                           | 0.563                                                 | 11             | Pass      |
| 5310               | 62             |                      | -3.455                                | 2.798                           | -0.657                                                | 11             | Pass      |

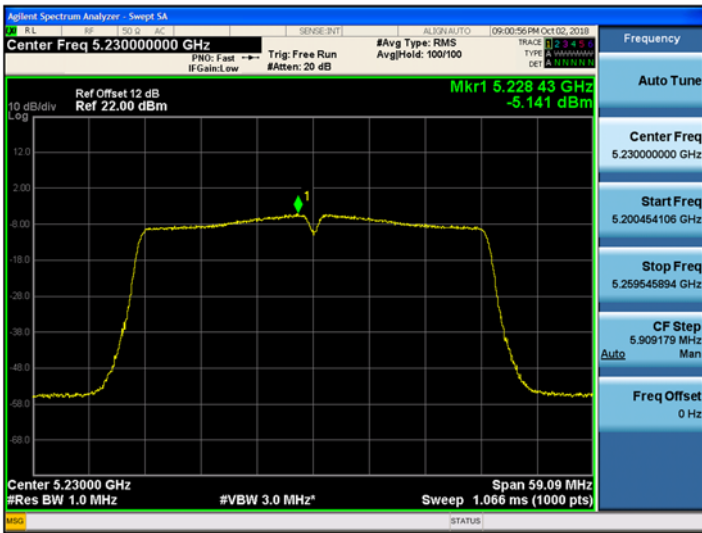
- Sum Data of Internal Ant and External Ant
- TEST RESULTS

Conducted Power Density Measurements

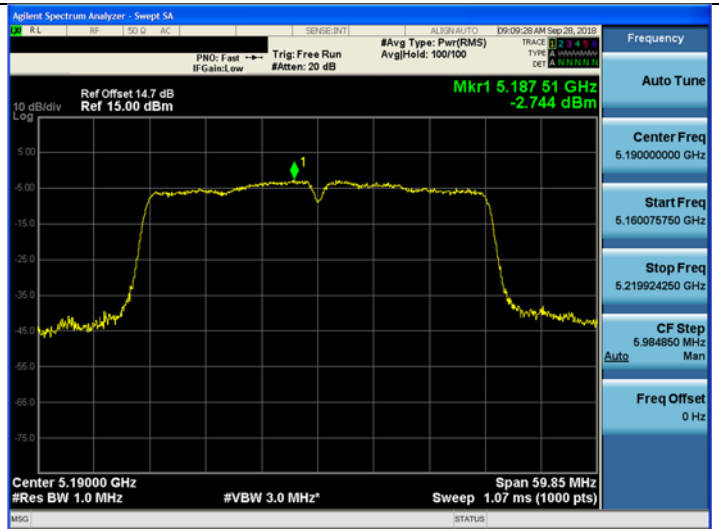
| Mode             | Frequency [MHz] | Channel No. | Duty Cycle Factor (dB) | Measured Power [dBm] |                  |       | Result (dBm) | Limit (dBm) |
|------------------|-----------------|-------------|------------------------|----------------------|------------------|-------|--------------|-------------|
|                  |                 |             |                        | Internal Antenna     | External Antenna | Sum   |              |             |
| 802.11ac (VHT40) | 5190            | 38          | 0.797                  | -7.665               | -9.750           | -5.57 | -4.78        | 11.00       |
|                  | 5230            | 46          | 0.797                  | -7.886               | -9.221           | -5.49 | -4.70        | 11.00       |
|                  | 5270            | 54          | 0.797                  | -7.912               | -8.275           | -5.08 | -4.28        | 11.00       |
|                  | 5310            | 62          | 0.797                  | -7.562               | -7.673           | -4.61 | -3.81        | 11.00       |

■ TEST Plot for 802.11ac\_VHT40

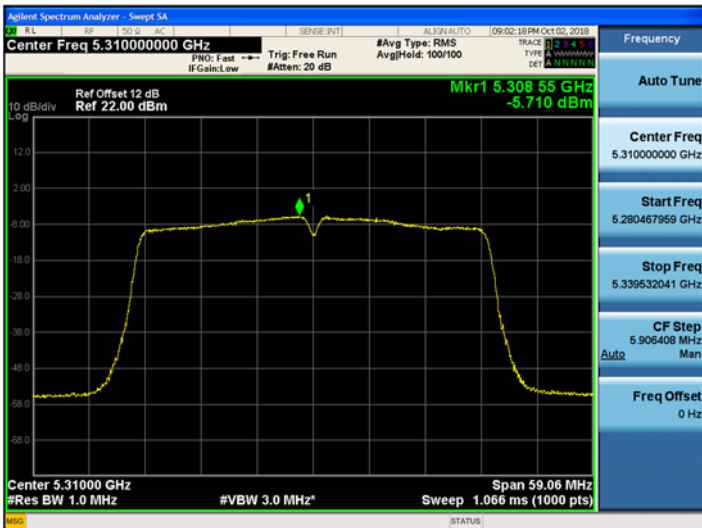
802.11ac\_VHT40 UNII 1 BAND PSD CH 46\_Internal Ant



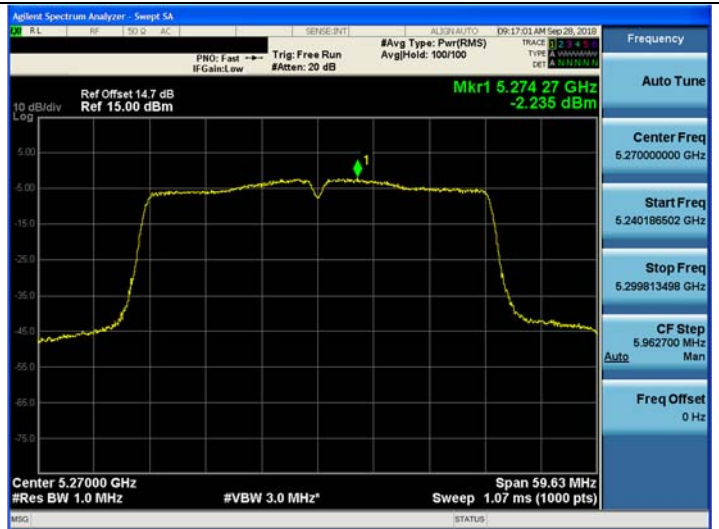
802.11ac\_VHT40 UNII 1 BAND PSD CH 38\_External Ant



802.11ac\_VHT40 UNII 2A BAND PSD CH 62\_Internal Ant



802.11ac\_VHT40 UNII 2A BAND PSD CH 54\_External Ant



**Internal Ant**

**■ TEST RESULTS**

**Conducted Power Density Measurements**

| Frequency (MHz) | Channel No. | Mode     | Test Result                  |                        |                                              |             |           |
|-----------------|-------------|----------|------------------------------|------------------------|----------------------------------------------|-------------|-----------|
|                 |             |          | Measured Power Density (dBm) | Duty Cycle Factor (dB) | Measured Power(dBm) + Duty Cycle Factor (dB) | Limit (dBm) | Pass/Fail |
| 5210            | 42          | 802.11ac | -9.049                       | 0.860                  | -8.189                                       | 11          | Pass      |
| 5290            | 58          | 80MHz BW | -8.740                       | 0.860                  | -7.880                                       | 11          | Pass      |

**External Ant**

**■ TEST RESULTS**

**Conducted Power Density Measurements**

| Frequency (MHz) | Channel No. | Mode     | Test Result                  |                        |                                              |             |           |
|-----------------|-------------|----------|------------------------------|------------------------|----------------------------------------------|-------------|-----------|
|                 |             |          | Measured Power Density (dBm) | Duty Cycle Factor (dB) | Measured Power(dBm) + Duty Cycle Factor (dB) | Limit (dBm) | Pass/Fail |
| 5210            | 42          | 802.11ac | -8.646                       | 2.259                  | -6.387                                       | 11          | Pass      |
| 5290            | 58          | 80MHz BW | -7.159                       | 3.843                  | -3.316                                       | 11          | Pass      |

**■ Sum Data of Internal Ant and External Ant**

**■ TEST RESULTS**

**Conducted Power Density Measurements**

| Mode             | Frequency [MHz] | Channel No. | Duty Cycle Factor (dB) | Measured Power [dBm] |                  |       | Result (dBm) | Limit (dBm) |
|------------------|-----------------|-------------|------------------------|----------------------|------------------|-------|--------------|-------------|
|                  |                 |             |                        | Internal Antenna     | External Antenna | Sum   |              |             |
| 802.11ac (VHT80) | 5210            | 42          | 1.447                  | -11.607              | -13.147          | -9.30 | -7.85        | 11.00       |
|                  | 5290            | 58          | 1.447                  | -10.606              | -12.059          | -8.26 | -6.81        | 11.00       |

■ TEST Plot for 802.11ac\_VHT80

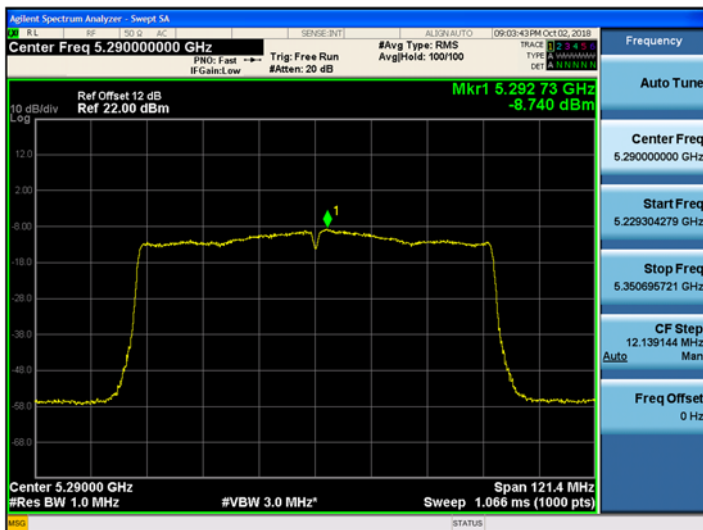
802.11ac\_VHT80 UNII 1 BAND PSD CH 42\_Internal Ant



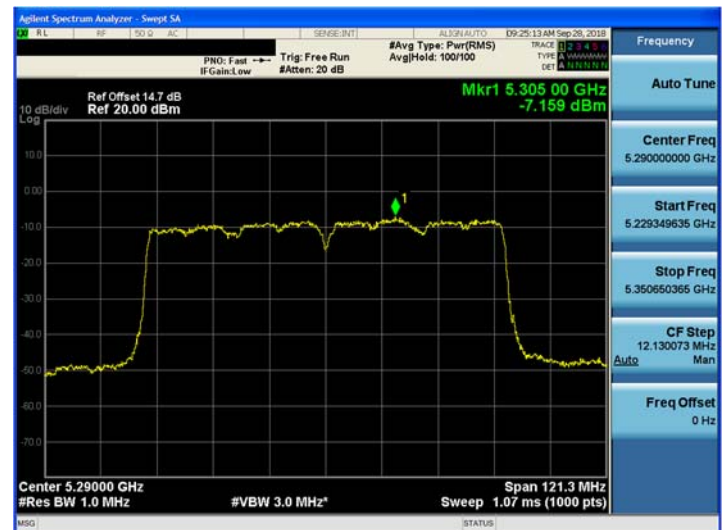
802.11ac\_VHT80 UNII 1 BAND PSD CH 42\_External Ant



802.11ac\_VHT80 UNII 2A BAND PSD CH 58\_Internal Ant



802.11ac\_VHT80 UNII 2A BAND PSD CH 58\_External Ant



# Internal Ant

## ■ TEST RESULTS

### Conducted Power Density Measurements

| Frequency<br>(MHz) | Channel<br>No. | Mode    | Test Result                           |                              |                                                                |                |           |
|--------------------|----------------|---------|---------------------------------------|------------------------------|----------------------------------------------------------------|----------------|-----------|
|                    |                |         | Measured<br>Power<br>Density<br>(dBm) | Duty Cycle<br>Factor<br>(dB) | Measured<br>Power<br>Density(dBm)<br>+<br>Duty Cycle<br>Factor | Limit<br>(dBm) | Pass/Fail |
| 5500               | 100            | 802.11a | 4.136                                 | 0.205                        | 4.341                                                          | 11             | Pass      |
| 5580               | 116            |         | 9.533                                 | 0.205                        | 9.738                                                          |                | Pass      |
| 5720               | 144            |         | 9.370                                 | 0.205                        | 9.575                                                          |                | Pass      |
| 5745               | 149            |         | 6.304                                 | 0.205                        | 6.509                                                          | 30             | Pass      |
| 5785               | 157            |         | 6.631                                 | 0.205                        | 6.836                                                          |                | Pass      |
| 5825               | 165            |         | 6.784                                 | 0.205                        | 6.989                                                          |                | Pass      |

# External Ant

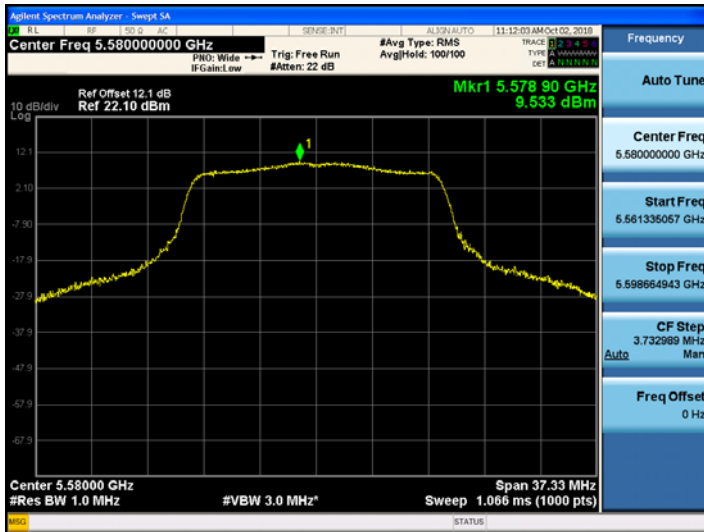
## ■ TEST RESULTS

### Conducted Power Density Measurements

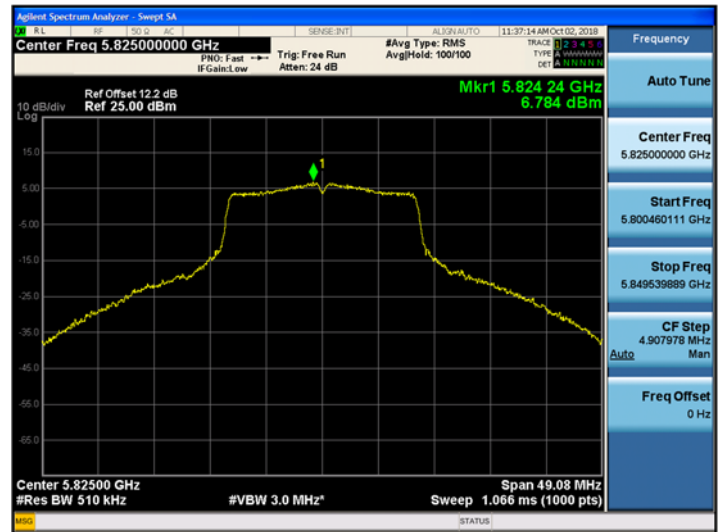
| Frequency<br>(MHz) | Channel<br>No. | Mode    | Test Result                           |                              |                                                                |                |           |
|--------------------|----------------|---------|---------------------------------------|------------------------------|----------------------------------------------------------------|----------------|-----------|
|                    |                |         | Measured<br>Power<br>Density<br>(dBm) | Duty Cycle<br>Factor<br>(dB) | Measured<br>Power<br>Density(dBm)<br>+<br>Duty Cycle<br>Factor | Limit<br>(dBm) | Pass/Fail |
| 5500               | 100            | 802.11a | 8.682                                 | 0.399                        | 9.081                                                          | 11             | Pass      |
| 5580               | 116            |         | 8.292                                 | 0.399                        | 8.691                                                          |                | Pass      |
| 5720               | 144            |         | 6.992                                 | 0.399                        | 7.391                                                          |                | Pass      |
| 5745               | 149            |         | 5.367                                 | 0.399                        | 5.766                                                          | 30             | Pass      |
| 5785               | 157            |         | 4.889                                 | 0.399                        | 5.288                                                          |                | Pass      |
| 5825               | 165            |         | 3.477                                 | 0.399                        | 3.876                                                          |                | Pass      |

■ TEST Plot for 802.11a 20MHz BW\_Internal Ant

802.11a UNII 2C BAND PSD CH 116

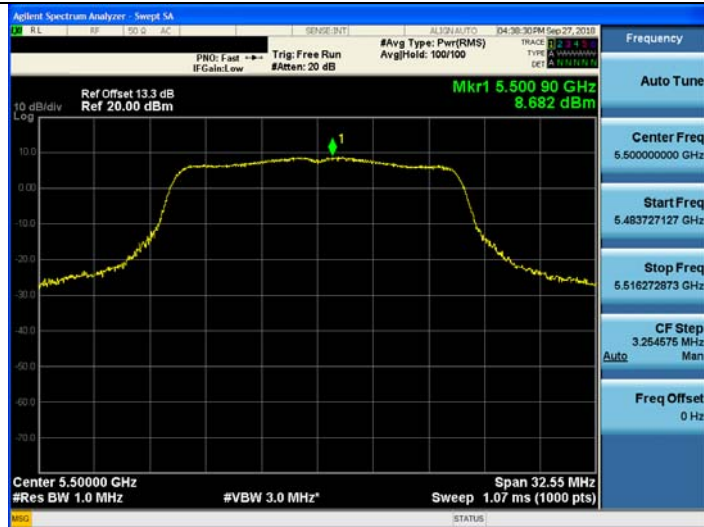


802.11a UNII 3 BAND PSD CH 165

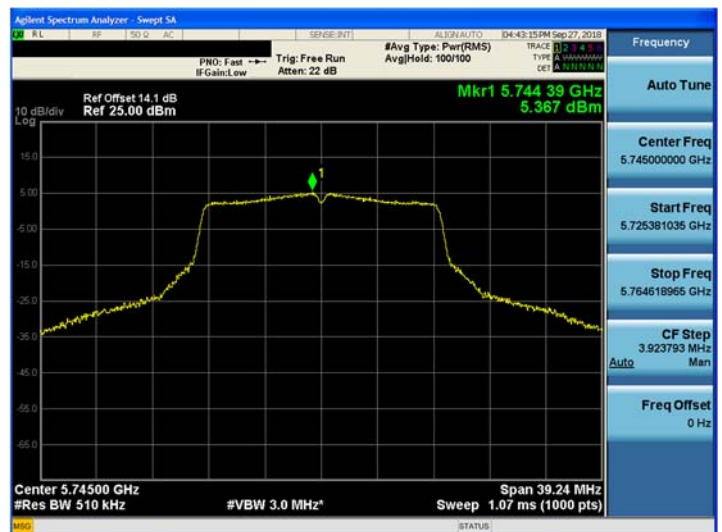


■ TEST Plot for 802.11a 20MHz BW\_External Ant

802.11a UNII 2C BAND PSD CH 100



802.11a UNII 3 BAND PSD CH 149



# Internal Ant

## ■ TEST RESULTS

### Conducted Power Density Measurements

| Frequency<br>(MHz) | Channel<br>No. | Mode             | Test Result                           |                              |                                                                |                |           |
|--------------------|----------------|------------------|---------------------------------------|------------------------------|----------------------------------------------------------------|----------------|-----------|
|                    |                |                  | Measured<br>Power<br>Density<br>(dBm) | Duty Cycle<br>Factor<br>(dB) | Measured<br>Power<br>Density(dBm)<br>+<br>Duty Cycle<br>Factor | Limit<br>(dBm) | Pass/Fail |
| 5500               | 100            | 802.11n_<br>HT20 | 3.479                                 | 0.222                        | 3.701                                                          | 11             | Pass      |
| 5580               | 116            |                  | 8.910                                 | 0.222                        | 9.132                                                          |                | Pass      |
| 5720               | 144            |                  | 9.022                                 | 0.222                        | 9.244                                                          |                | Pass      |
| 5745               | 149            |                  | 6.208                                 | 0.222                        | 6.430                                                          | 30             | Pass      |
| 5785               | 157            |                  | 5.882                                 | 0.222                        | 6.104                                                          |                | Pass      |
| 5825               | 165            |                  | 6.179                                 | 0.222                        | 6.401                                                          |                | Pass      |

# External Ant

## ■ TEST RESULTS

### Conducted Power Density Measurements

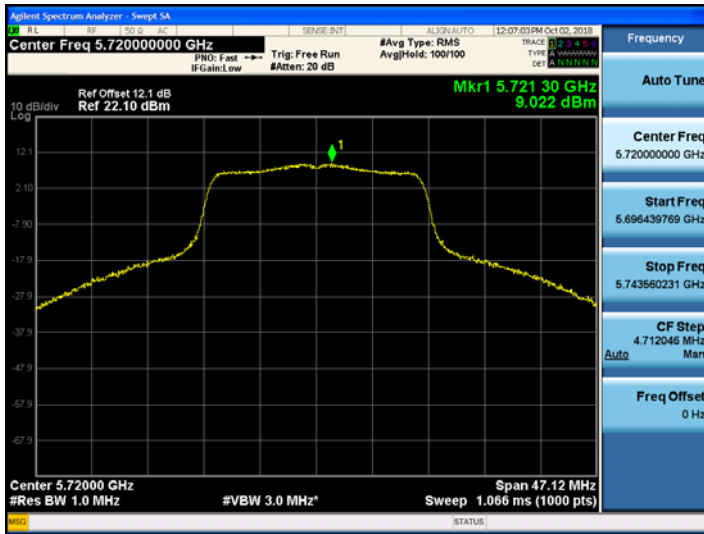
| Frequency<br>(MHz) | Channel<br>No. | Mode             | Test Result                           |                              |                                                                |                |           |
|--------------------|----------------|------------------|---------------------------------------|------------------------------|----------------------------------------------------------------|----------------|-----------|
|                    |                |                  | Measured<br>Power<br>Density<br>(dBm) | Duty Cycle<br>Factor<br>(dB) | Measured<br>Power<br>Density(dBm)<br>+<br>Duty Cycle<br>Factor | Limit<br>(dBm) | Pass/Fail |
| 5500               | 100            | 802.11n_<br>HT20 | 8.705                                 | 0.614                        | 9.319                                                          | 11             | Pass      |
| 5580               | 116            |                  | 8.058                                 | 0.614                        | 8.672                                                          |                | Pass      |
| 5720               | 144            |                  | 6.286                                 | 0.614                        | 6.900                                                          |                | Pass      |
| 5745               | 149            |                  | 4.900                                 | 0.614                        | 5.514                                                          | 30             | Pass      |
| 5785               | 157            |                  | 4.179                                 | 0.614                        | 4.793                                                          |                | Pass      |
| 5825               | 165            |                  | 4.241                                 | 0.614                        | 4.855                                                          |                | Pass      |

☒ **Sum Data of Internal Ant and External Ant**
☒ **TEST RESULTS**
**Conducted Power Density Measurements**

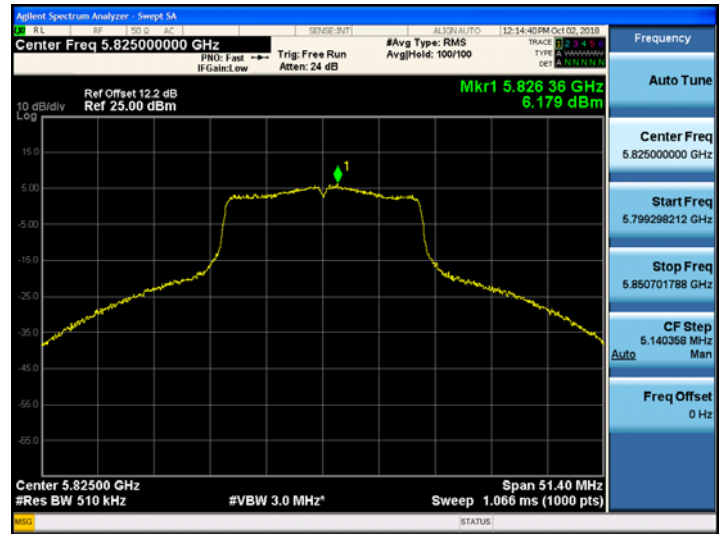
| Mode              | Frequency<br>[MHz] | Channel<br>No. | Duty<br>Cycle<br>Factor<br>(dB) | Measured Power [dBm] |                     |      | Result<br>(dBm) | Limit<br>(dBm) |
|-------------------|--------------------|----------------|---------------------------------|----------------------|---------------------|------|-----------------|----------------|
|                   |                    |                |                                 | Internal<br>Antenna  | External<br>Antenna | Sum  |                 |                |
| 802.11n<br>(HT20) | 5500               | 100            | 0.428                           | 3.619                | 3.722               | 6.68 | 7.11            | 11.00          |
|                   | 5580               | 116            | 0.428                           | 6.425                | 6.119               | 9.28 | 9.71            | 11.00          |
|                   | 5720               | 144            | 0.428                           | 6.848                | 5.195               | 9.11 | 9.54            | 11.00          |
|                   | 5745               | 149            | 0.428                           | 5.790                | 5.426               | 8.62 | 9.05            | 30.00          |
|                   | 5785               | 157            | 0.428                           | 5.753                | 4.714               | 8.27 | 8.70            | 30.00          |
|                   | 5825               | 165            | 0.428                           | 5.784                | 4.040               | 8.01 | 8.44            | 30.00          |

■ TEST Plot for 802.11n\_HT20\_Internal Ant

802.11n\_HT20 UNII 2C BAND PSD CH 144



802.11n\_HT20 UNII 3 BAND PSD CH 165



■ TEST Plot for 802.11n\_HT20\_External Ant

802.11n\_HT20 UNII 2C BAND PSD CH 100



802.11n\_HT20 UNII 3 BAND PSD CH 149



# Internal Ant

## ■ TEST RESULTS

### Conducted Power Density Measurements

| Frequency<br>(MHz) | Channel<br>No. | Mode               | Test Result                           |                              |                                                                |                |           |
|--------------------|----------------|--------------------|---------------------------------------|------------------------------|----------------------------------------------------------------|----------------|-----------|
|                    |                |                    | Measured<br>Power<br>Density<br>(dBm) | Duty Cycle<br>Factor<br>(dB) | Measured<br>Power<br>Density(dBm)<br>+<br>Duty Cycle<br>Factor | Limit<br>(dBm) | Pass/Fail |
| 5500               | 100            | 802.11ac<br>_VHT20 | 3.406                                 | 0.223                        | 3.629                                                          | 11             | Pass      |
| 5580               | 116            |                    | 9.064                                 | 0.223                        | 9.287                                                          |                | Pass      |
| 5720               | 144            |                    | 8.777                                 | 0.223                        | 9.000                                                          |                | Pass      |
| 5745               | 149            |                    | 6.371                                 | 0.223                        | 6.594                                                          | 30             | Pass      |
| 5785               | 157            |                    | 6.059                                 | 0.223                        | 6.282                                                          |                | Pass      |
| 5825               | 165            |                    | 3.751                                 | 0.223                        | 3.974                                                          |                | Pass      |

# External Ant

## ■ TEST RESULTS

### Conducted Power Density Measurements

| Frequency<br>(MHz) | Channel<br>No. | Mode               | Test Result                           |                              |                                                                |                |           |
|--------------------|----------------|--------------------|---------------------------------------|------------------------------|----------------------------------------------------------------|----------------|-----------|
|                    |                |                    | Measured<br>Power<br>Density<br>(dBm) | Duty Cycle<br>Factor<br>(dB) | Measured<br>Power<br>Density(dBm)<br>+<br>Duty Cycle<br>Factor | Limit<br>(dBm) | Pass/Fail |
| 5500               | 100            | 802.11ac<br>_VHT20 | 8.342                                 | 0.610                        | 8.952                                                          | 11             | Pass      |
| 5580               | 116            |                    | 7.702                                 | 0.610                        | 8.312                                                          |                | Pass      |
| 5720               | 144            |                    | 6.350                                 | 0.610                        | 6.960                                                          |                | Pass      |
| 5745               | 149            |                    | 4.544                                 | 0.610                        | 5.154                                                          | 30             | Pass      |
| 5785               | 157            |                    | 3.972                                 | 0.610                        | 4.582                                                          |                | Pass      |
| 5825               | 165            |                    | 4.166                                 | 0.610                        | 4.776                                                          |                | Pass      |

■ Sum Data of Internal Ant and External Ant

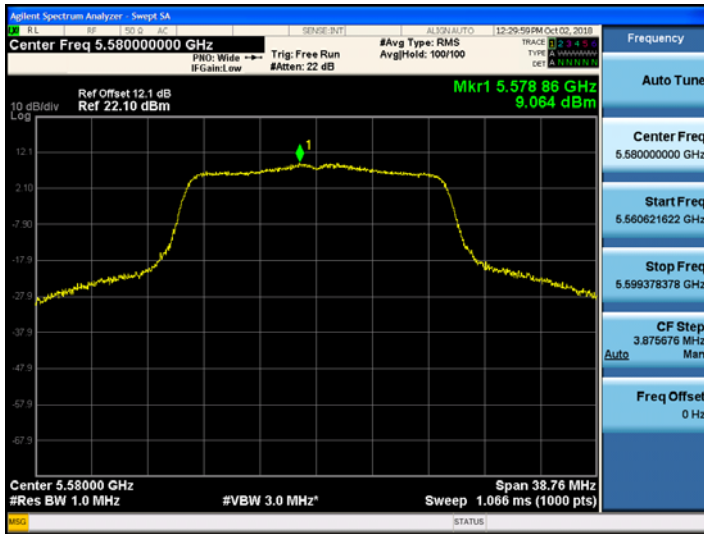
■ TEST RESULTS

Conducted Power Density Measurements

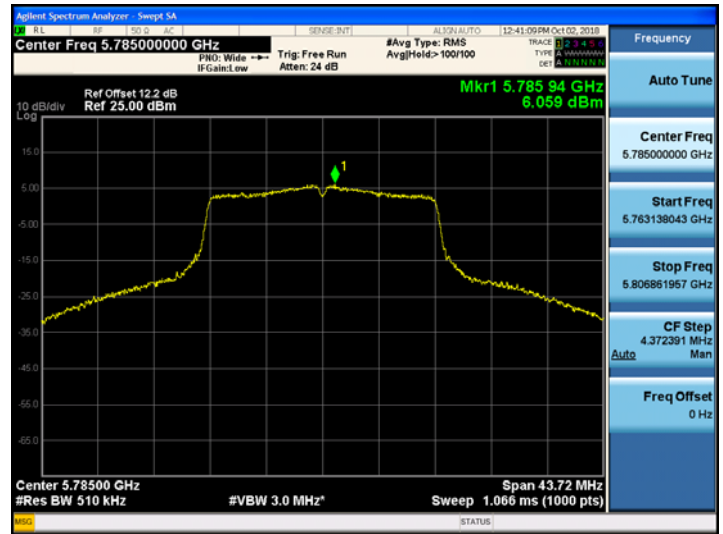
| Mode                | Frequency<br>[MHz] | Channel<br>No. | Duty<br>Cycle<br>Factor<br>(dB) | Measured Power [dBm] |                     |      | Result<br>(dBm) | Limit<br>(dBm) |
|---------------------|--------------------|----------------|---------------------------------|----------------------|---------------------|------|-----------------|----------------|
|                     |                    |                |                                 | Internal<br>Antenna  | External<br>Antenna | Sum  |                 |                |
| 802.11ac<br>(VHT20) | 5500               | 100            | 0.422                           | 3.721                | 3.542               | 6.64 | 7.06            | 11.00          |
|                     | 5580               | 116            | 0.422                           | 6.725                | 6.410               | 9.58 | 10.00           | 11.00          |
|                     | 5720               | 144            | 0.422                           | 6.813                | 4.948               | 8.99 | 9.41            | 11.00          |
|                     | 5745               | 149            | 0.422                           | 6.035                | 5.301               | 8.69 | 9.12            | 30.00          |
|                     | 5785               | 157            | 0.422                           | 5.653                | 4.779               | 8.25 | 8.67            | 30.00          |
|                     | 5825               | 165            | 0.422                           | 5.872                | 4.265               | 8.15 | 8.57            | 30.00          |

■ TEST Plot for 802.11ac\_VHT20\_Internal Ant

802.11ac\_VHT20 UNII 2C BAND PSD CH 116



802.11ac\_VHT20 UNII 3 BAND PSD CH 157

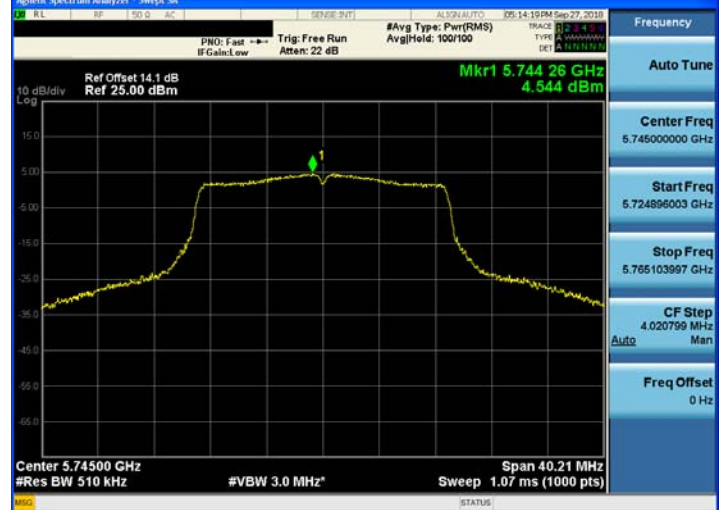


■ TEST Plot for 802.11ac\_VHT20\_External Ant

802.11ac\_VHT20 UNII 2C BAND PSD CH 100



802.11ac\_VHT20 UNII 3 BAND PSD CH 149



# Internal Ant

## ■ TEST RESULTS

### Conducted Power Density Measurements

| Frequency<br>(MHz) | Channel<br>No. | Mode             | Test Result                           |                              |                                                                |                |           |
|--------------------|----------------|------------------|---------------------------------------|------------------------------|----------------------------------------------------------------|----------------|-----------|
|                    |                |                  | Measured<br>Power<br>Density<br>(dBm) | Duty Cycle<br>Factor<br>(dB) | Measured<br>Power<br>Density(dBm)<br>+<br>Duty Cycle<br>Factor | Limit<br>(dBm) | Pass/Fail |
| 5510               | 102            | 802.11n<br>_HT40 | -2.042                                | 0.446                        | -1.596                                                         | 11             | Pass      |
| 5500               | 110            |                  | 5.557                                 | 0.446                        | 6.003                                                          |                | Pass      |
| 5710               | 142            |                  | 6.297                                 | 0.446                        | 6.743                                                          |                | Pass      |
| 5755               | 151            |                  | 3.010                                 | 0.446                        | 3.456                                                          | 30             | Pass      |
| 5795               | 159            |                  | 2.658                                 | 0.446                        | 3.104                                                          |                | Pass      |

# External Ant

## ■ TEST RESULTS

### Conducted Power Density Measurements

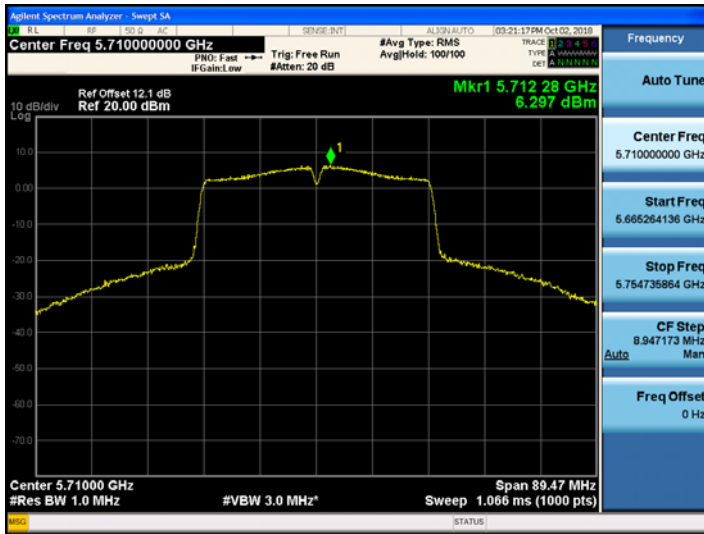
| Frequency<br>(MHz) | Channel<br>No. | Mode             | Test Result                           |                              |                                                                |                |           |
|--------------------|----------------|------------------|---------------------------------------|------------------------------|----------------------------------------------------------------|----------------|-----------|
|                    |                |                  | Measured<br>Power<br>Density<br>(dBm) | Duty Cycle<br>Factor<br>(dB) | Measured<br>Power<br>Density(dBm)<br>+<br>Duty Cycle<br>Factor | Limit<br>(dBm) | Pass/Fail |
| 5510               | 102            | 802.11n<br>_HT40 | 1.253                                 | 1.409                        | 2.662                                                          | 11             | Pass      |
| 5500               | 110            |                  | 2.570                                 | 2.533                        | 5.103                                                          |                | Pass      |
| 5710               | 142            |                  | 2.200                                 | 1.409                        | 3.609                                                          |                | Pass      |
| 5755               | 151            |                  | 0.810                                 | 1.409                        | 2.219                                                          | 30             | Pass      |
| 5795               | 159            |                  | 0.228                                 | 1.409                        | 1.637                                                          |                | Pass      |

☒ **Sum Data of Internal Ant and External Ant**
☒ **TEST RESULTS**
**Conducted Power Density Measurements**

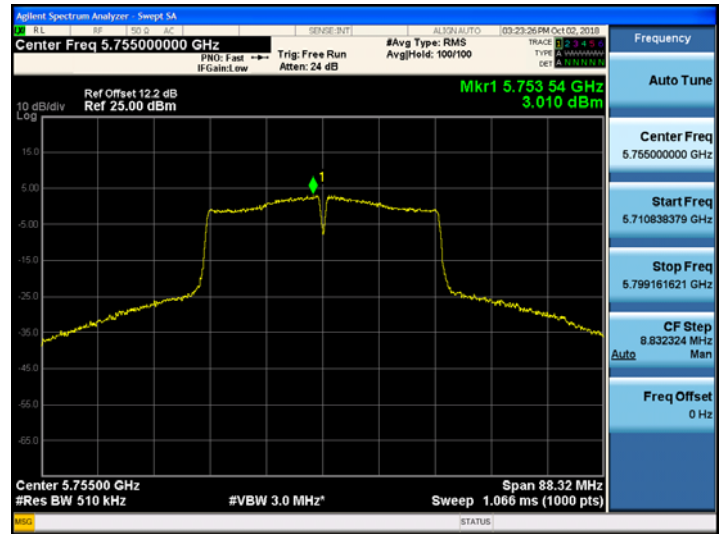
| Mode              | Frequency<br>[MHz] | Channel<br>No. | Duty<br>Cycle<br>Factor<br>(dB) | Measured Power [dBm] |                     |      | Result<br>(dBm) | Limit<br>(dBm) |
|-------------------|--------------------|----------------|---------------------------------|----------------------|---------------------|------|-----------------|----------------|
|                   |                    |                |                                 | Internal<br>Antenna  | External<br>Antenna | Sum  |                 |                |
| 802.11n<br>(HT40) | 5510               | 102            | 0.804                           | -2.630               | -2.772              | 0.31 | 1.11            | 11.00          |
|                   | 5500               | 110            | 0.804                           | 5.074                | 4.581               | 7.84 | 8.65            | 11.00          |
|                   | 5710               | 142            | 0.804                           | 4.978                | 3.489               | 7.31 | 8.11            | 30.00          |
|                   | 5755               | 151            | 0.804                           | 2.165                | 1.899               | 5.04 | 5.85            | 30.00          |
|                   | 5795               | 159            | 0.804                           | 2.151                | 1.381               | 4.79 | 5.60            | 30.00          |

■ TEST Plot for 802.11n\_HT40\_Internal Ant

802.11n\_HT40 UNII 2C BAND PSD CH 142



802.11n\_HT40 UNII 3 BAND PSD CH 151



■ TEST Plot for 802.11n\_HT40\_External Ant

802.11n\_HT40 UNII 2C BAND PSD CH 110



802.11n\_HT40 UNII 3 BAND PSD CH 151



**Internal Ant**

**■ TEST RESULTS**

**Conducted Power Density Measurements**

| Frequency<br>(MHz) | Channel<br>No. | Mode               | Test Result                           |                              |                                                                |                |           |
|--------------------|----------------|--------------------|---------------------------------------|------------------------------|----------------------------------------------------------------|----------------|-----------|
|                    |                |                    | Measured<br>Power<br>Density<br>(dBm) | Duty Cycle<br>Factor<br>(dB) | Measured<br>Power<br>Density(dBm)<br>+<br>Duty Cycle<br>Factor | Limit<br>(dBm) | Pass/Fail |
| 5510               | 102            | 802.11ac<br>_VHT40 | -2.459                                | 0.442                        | -2.017                                                         | 11             | Pass      |
| 5550               | 110            |                    | 5.715                                 | 0.442                        | 6.157                                                          |                | Pass      |
| 5710               | 142            |                    | 6.010                                 | 0.442                        | 6.452                                                          |                | Pass      |
| 5755               | 151            |                    | 2.558                                 | 0.442                        | 3.000                                                          | 30             | Pass      |
| 5795               | 159            |                    | 2.693                                 | 0.442                        | 3.135                                                          |                | Pass      |

**External Ant**

**■ TEST RESULTS**

**Conducted Power Density Measurements**

| Frequency<br>(MHz) | Channel<br>No. | Mode               | Test Result                           |                              |                                                                |                |           |
|--------------------|----------------|--------------------|---------------------------------------|------------------------------|----------------------------------------------------------------|----------------|-----------|
|                    |                |                    | Measured<br>Power<br>Density<br>(dBm) | Duty Cycle<br>Factor<br>(dB) | Measured<br>Power<br>Density(dBm)<br>+<br>Duty Cycle<br>Factor | Limit<br>(dBm) | Pass/Fail |
| 5510               | 102            | 802.11ac<br>_VHT40 | 0.394                                 | 2.798                        | 3.192                                                          | 11             | Pass      |
| 5550               | 110            |                    | 2.692                                 | 2.798                        | 5.490                                                          |                | Pass      |
| 5710               | 142            |                    | 2.292                                 | 1.389                        | 3.681                                                          |                | Pass      |
| 5755               | 151            |                    | 0.600                                 | 1.389                        | 1.989                                                          | 30             | Pass      |
| 5795               | 159            |                    | -0.934                                | 2.798                        | 1.864                                                          |                | Pass      |

■ Sum Data of Internal Ant and External Ant

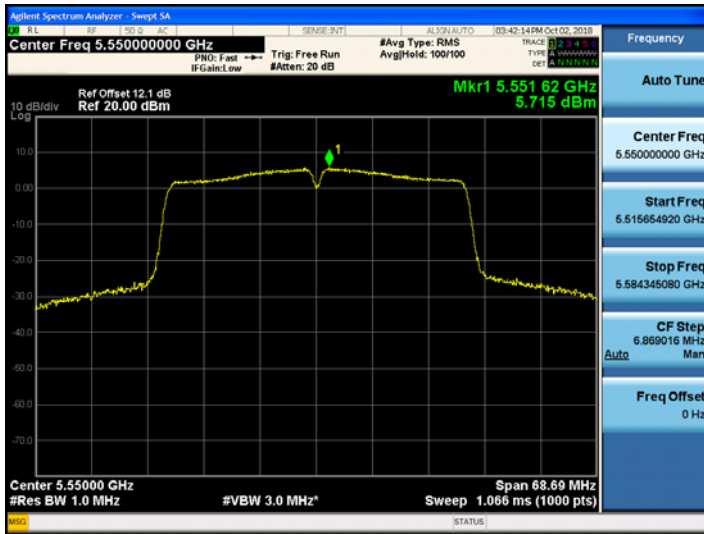
■ TEST RESULTS

Conducted Power Density Measurements

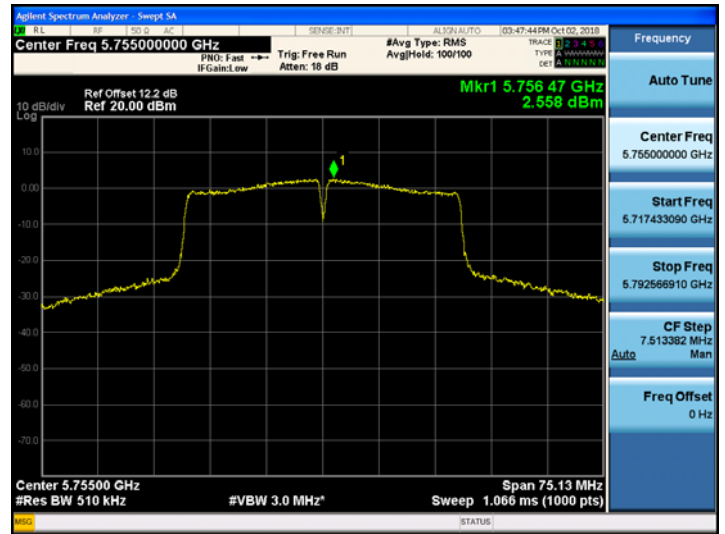
| Mode                | Frequency<br>[MHz] | Channel<br>No. | Duty<br>Cycle<br>Factor<br>(dB) | Measured Power [dBm] |                     |      | Result<br>(dBm) | Limit<br>(dBm) |
|---------------------|--------------------|----------------|---------------------------------|----------------------|---------------------|------|-----------------|----------------|
|                     |                    |                |                                 | Internal<br>Antenna  | External<br>Antenna | Sum  |                 |                |
| 802.11ac<br>(VHT40) | 5510               | 102            | 0.797                           | -2.477               | -2.884              | 0.33 | 1.13            | 11.00          |
|                     | 5500               | 110            | 0.797                           | 4.877                | 4.700               | 7.80 | 8.60            | 11.00          |
|                     | 5710               | 142            | 0.797                           | 5.036                | 3.444               | 7.32 | 8.12            | 30.00          |
|                     | 5755               | 151            | 0.797                           | 2.166                | 2.032               | 5.11 | 5.91            | 30.00          |
|                     | 5795               | 159            | 0.797                           | 1.191                | 1.215               | 4.21 | 5.01            | 30.00          |

■ TEST Plot for 802.11ac\_VHT40\_Internal Ant

802.11ac\_VHT40 UNII 2C BAND PSD CH 110



802.11ac\_VHT40 UNII 3 BAND PSD CH 151



■ TEST Plot for 802.11ac\_VHT40\_External Ant

802.11ac\_VHT40 UNII 2C BAND PSD CH 110



802.11ac\_VHT40 UNII 3 BAND PSD CH 151



# Internal Ant

## ■ TEST RESULTS

### Conducted Power Density Measurements

| Frequency<br>(MHz) | Channel<br>No. | Mode               | Test Result                           |                              |                                                                |                |           |
|--------------------|----------------|--------------------|---------------------------------------|------------------------------|----------------------------------------------------------------|----------------|-----------|
|                    |                |                    | Measured<br>Power<br>Density<br>(dBm) | Duty Cycle<br>Factor<br>(dB) | Measured<br>Power<br>Density(dBm)<br>+<br>Duty Cycle<br>Factor | Limit<br>(dBm) | Pass/Fail |
| 5530               | 106            | 802.11ac<br>_VHT80 | -7.844                                | 0.861                        | -6.983                                                         | 11             | Pass      |
| 5610               | 122            |                    | 2.269                                 | 0.861                        | 3.130                                                          |                | Pass      |
| 5690               | 138            |                    | 2.331                                 | 0.861                        | 3.192                                                          |                | Pass      |
| 5775               | 155            |                    | -1.383                                | 0.861                        | -0.522                                                         | 30             | Pass      |

# External Ant

## ■ TEST RESULTS

### Conducted Power Density Measurements

| Frequency<br>(MHz) | Channel<br>No. | Mode               | Test Result                           |                              |                                                                |                |           |
|--------------------|----------------|--------------------|---------------------------------------|------------------------------|----------------------------------------------------------------|----------------|-----------|
|                    |                |                    | Measured<br>Power<br>Density<br>(dBm) | Duty Cycle<br>Factor<br>(dB) | Measured<br>Power<br>Density(dBm)<br>+<br>Duty Cycle<br>Factor | Limit<br>(dBm) | Pass/Fail |
| 5530               | 106            | 802.11ac<br>_VHT80 | -6.741                                | 3.843                        | -2.898                                                         | 11             | Pass      |
| 5610               | 122            |                    | -2.821                                | 3.843                        | 1.022                                                          |                | Pass      |
| 5690               | 138            |                    | -3.992                                | 3.843                        | -0.149                                                         |                | Pass      |
| 5775               | 155            |                    | -4.546                                | 3.843                        | -0.703                                                         | 30             | Pass      |

■ Sum Data of Internal Ant and External Ant

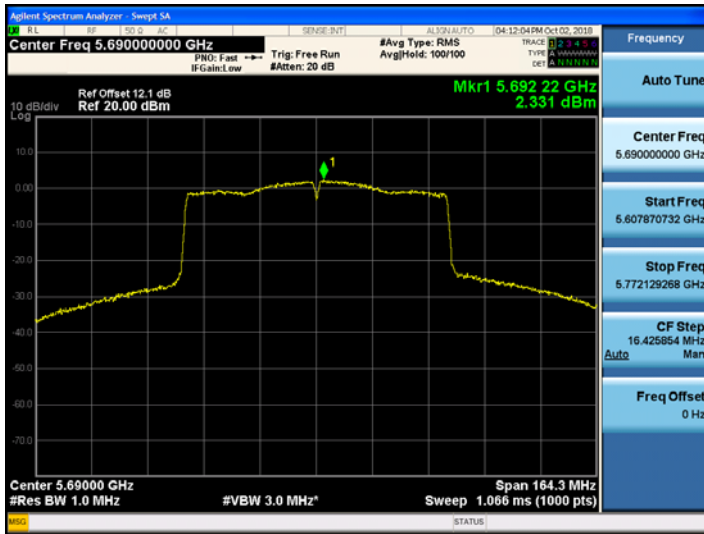
■ TEST RESULTS

Conducted Power Density Measurements

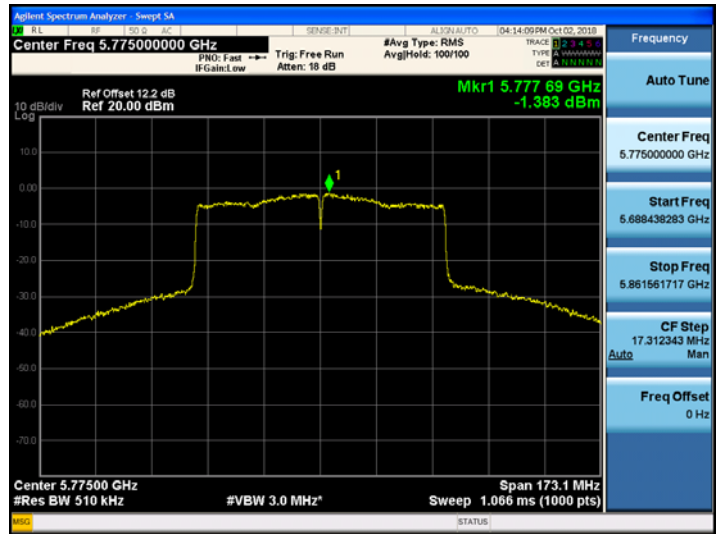
| Mode                | Frequency<br>[MHz] | Channel<br>No. | Duty<br>Cycle<br>Factor<br>(dB) | Measured Power [dBm] |                     |       | Result<br>(dBm) | Limit<br>(dBm) |
|---------------------|--------------------|----------------|---------------------------------|----------------------|---------------------|-------|-----------------|----------------|
|                     |                    |                |                                 | Internal<br>Antenna  | External<br>Antenna | Sum   |                 |                |
| 802.11ac<br>(VHT80) | 5530               | 106            | 1.447                           | -8.612               | -8.569              | -5.58 | -4.13           | 11.00          |
|                     | 5610               | 122            | 1.447                           | 0.878                | 0.498               | 3.70  | 5.15            | 11.00          |
|                     | 5690               | 138            | 1.447                           | 0.747                | 0.107               | 3.45  | 4.90            | 11.00          |
|                     | 5775               | 155            | 1.447                           | -1.841               | -2.008              | 1.09  | 2.53            | 30.00          |

■ TEST Plot for 802.11ac\_VHT80\_Internal Ant

802.11ac\_VHT80 UNII 2C BAND PSD CH 138



802.11ac\_VHT80 UNII 3 BAND PSD CH 155



■ TEST Plot for 802.11ac\_VHT80\_External Ant

802.11ac\_VHT80 UNII 2C BAND PSD CH 122



802.11ac\_VHT80 UNII 3 BAND PSD CH 155



**■ Straddle channels TEST RESULTS for 802.11a/n\_HT20/ac\_VHT20\_Internal Ant**
**Conducted Power Density Measurements (UNII 2C Band 5720MHz)**

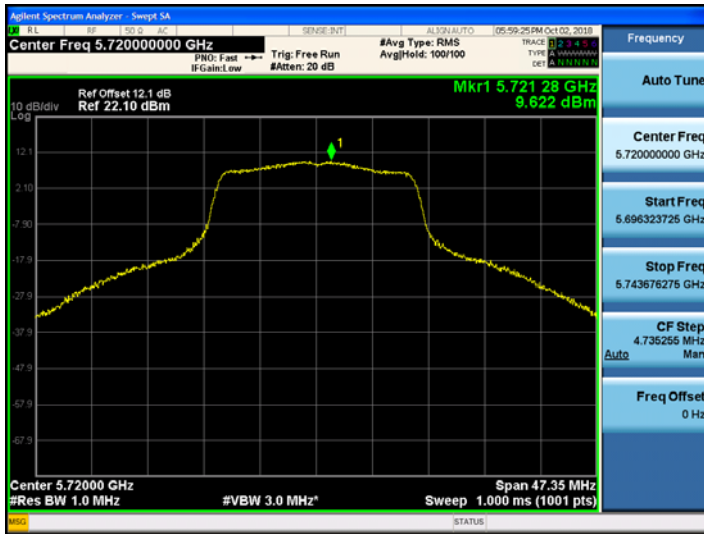
| Frequency<br>(MHz) | Channel<br>No. | Mode     | Test Result                           |                              |                                                                |                |           |
|--------------------|----------------|----------|---------------------------------------|------------------------------|----------------------------------------------------------------|----------------|-----------|
|                    |                |          | Measured<br>Power<br>Density<br>(dBm) | Duty Cycle<br>Factor<br>(dB) | Measured<br>Power<br>Density(dBm)<br>+<br>Duty Cycle<br>Factor | Limit<br>(dBm) | Pass/Fail |
| 5720               | 144            | 802.11a  | 9.622                                 | 0.205                        | 9.827                                                          | 11.00          | Pass      |
|                    |                | 802.11n  | 9.167                                 | 0.222                        | 9.389                                                          | 11.00          | Pass      |
|                    |                | 802.11ac | 9.547                                 | 0.223                        | 9.770                                                          | 11.00          | Pass      |

**Conducted Power Density Measurements (UNII 3 Band 5720MHz)**

| Frequency<br>(MHz) | Channel<br>No. | Mode     | Test Result                           |                              |                                                                |                |           |
|--------------------|----------------|----------|---------------------------------------|------------------------------|----------------------------------------------------------------|----------------|-----------|
|                    |                |          | Measured<br>Power<br>Density<br>(dBm) | Duty Cycle<br>Factor<br>(dB) | Measured<br>Power<br>Density(dBm)<br>+<br>Duty Cycle<br>Factor | Limit<br>(dBm) | Pass/Fail |
| 5720               | 144            | 802.11a  | 4.208                                 | 0.205                        | 4.413                                                          | 30.00          | Pass      |
|                    |                | 802.11n  | 4.089                                 | 0.222                        | 4.311                                                          | 30.00          | Pass      |
|                    |                | 802.11ac | 4.567                                 | 0.223                        | 4.790                                                          | 30.00          | Pass      |

■ Straddle channels TEST Plot for 802.11a/n\_HT20/ac\_VHT20\_Internal Ant

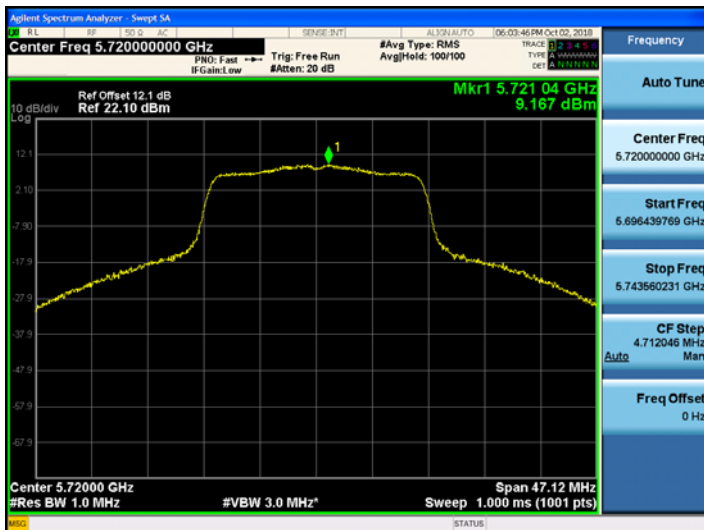
802.11a UNII 2C Band PSD CH.144



802.11a UNII 3 Band PSD CH.144



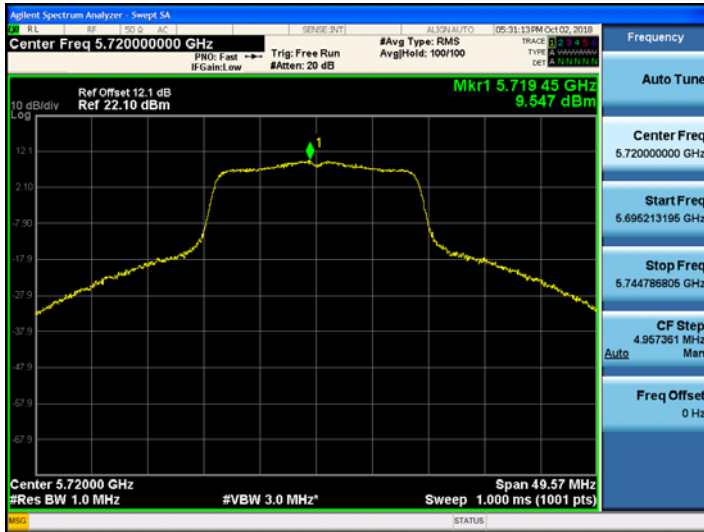
802.11n\_HT20 UNII 2C Band PSD CH.144



802.11n\_HT20 UNII 3 Band PSD CH.144



802.11ac\_VHT20 UNII 2C Band PSD CH.144



802.11ac\_VHT20 UNII 3 Band PSD CH.144



**■ Straddle channels TEST RESULTS for 802.11a/n\_HT20/ac\_VHT20\_External Ant**
**Conducted Power Density Measurements (UNII 2C Band 5720MHz)**

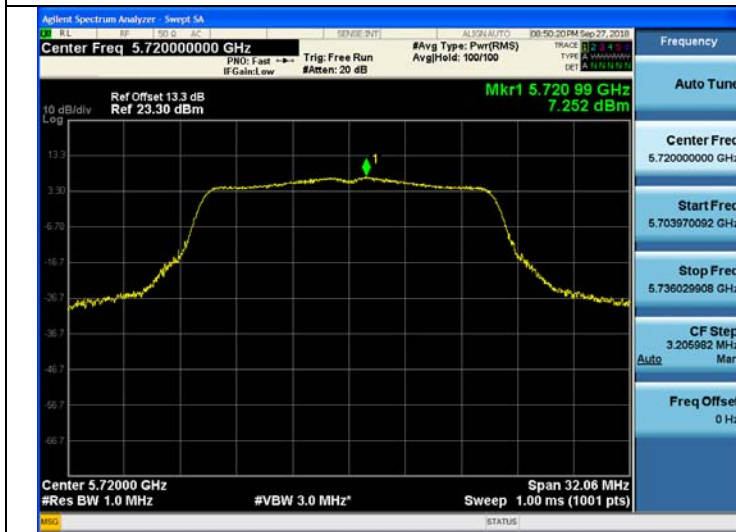
| Frequency<br>(MHz) | Channel<br>No. | Mode     | Test Result                           |                              |                                                                |                |           |
|--------------------|----------------|----------|---------------------------------------|------------------------------|----------------------------------------------------------------|----------------|-----------|
|                    |                |          | Measured<br>Power<br>Density<br>(dBm) | Duty Cycle<br>Factor<br>(dB) | Measured<br>Power<br>Density(dBm)<br>+<br>Duty Cycle<br>Factor | Limit<br>(dBm) | Pass/Fail |
| 5720               | 144            | 802.11a  | 7.252                                 | 0.399                        | 7.651                                                          | 11.00          | Pass      |
|                    |                | 802.11n  | 6.469                                 | 0.614                        | 7.083                                                          | 11.00          | Pass      |
|                    |                | 802.11ac | 6.408                                 | 0.610                        | 7.018                                                          | 11.00          | Pass      |

**Conducted Power Density Measurements (UNII 3 Band 5720MHz)**

| Frequency<br>(MHz) | Channel<br>No. | Mode     | Test Result                           |                              |                                                                |                |           |
|--------------------|----------------|----------|---------------------------------------|------------------------------|----------------------------------------------------------------|----------------|-----------|
|                    |                |          | Measured<br>Power<br>Density<br>(dBm) | Duty Cycle<br>Factor<br>(dB) | Measured<br>Power<br>Density(dBm)<br>+<br>Duty Cycle<br>Factor | Limit<br>(dBm) | Pass/Fail |
| 5720               | 144            | 802.11a  | 1.962                                 | 0.399                        | 2.361                                                          | 30.00          | Pass      |
|                    |                | 802.11n  | 1.207                                 | 0.614                        | 1.821                                                          | 30.00          | Pass      |
|                    |                | 802.11ac | 1.572                                 | 0.610                        | 2.182                                                          | 30.00          | Pass      |

■ Straddle channels TEST Plot for 802.11a/n\_HT20/ac\_VHT20\_External Ant

802.11a UNII 2C Band PSD CH.144



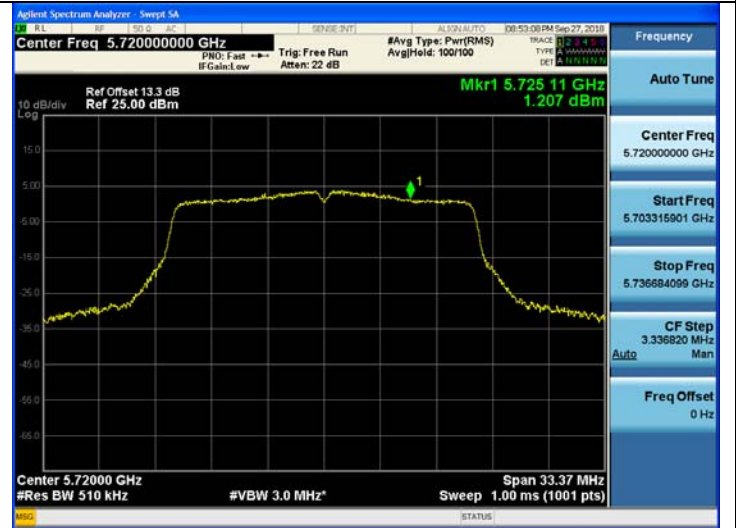
802.11a UNII 3 Band PSD CH.144



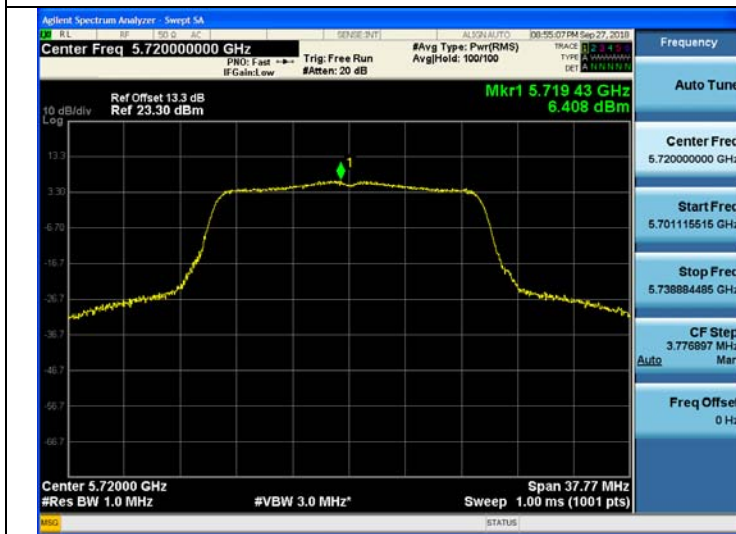
802.11n\_HT20 UNII 2C Band PSD CH.144



802.11n\_HT20 UNII 3 Band PSD CH.144



**802.11ac\_VHT20 UNII 2C Band PSD CH.144**



**802.11ac\_VHT20 UNII 3 Band PSD CH.144**



**■ Straddle channels TEST RESULTS for 802.11n\_HT40/ac\_VHT40\_Internal Ant**
**Conducted Power Density Measurements (UNII 2C Band 5710MHz)**

| Frequency<br>(MHz) | Channel<br>No. | Mode     | Test Result                           |                              |                                                                |                |           |
|--------------------|----------------|----------|---------------------------------------|------------------------------|----------------------------------------------------------------|----------------|-----------|
|                    |                |          | Measured<br>Power<br>Density<br>(dBm) | Duty Cycle<br>Factor<br>(dB) | Measured<br>Power<br>Density(dBm)<br>+<br>Duty Cycle<br>Factor | Limit<br>(dBm) | Pass/Fail |
| 5710               | 142            | 802.11n  | 6.367                                 | 0.446                        | 6.813                                                          | 11.00          | Pass      |
|                    |                | 802.11ac | 6.373                                 | 0.442                        | 6.815                                                          | 11.00          | Pass      |

**Conducted Power Density Measurements (UNII 3 Band 5710MHz)**

| Frequency<br>(MHz) | Channel<br>No. | Mode     | Test Result                           |                              |                                                                |                |           |
|--------------------|----------------|----------|---------------------------------------|------------------------------|----------------------------------------------------------------|----------------|-----------|
|                    |                |          | Measured<br>Power<br>Density<br>(dBm) | Duty Cycle<br>Factor<br>(dB) | Measured<br>Power<br>Density(dBm)<br>+<br>Duty Cycle<br>Factor | Limit<br>(dBm) | Pass/Fail |
| 5710               | 142            | 802.11n  | -0.199                                | 0.446                        | 0.247                                                          | 30.00          | Pass      |
|                    |                | 802.11ac | -0.048                                | 0.442                        | 0.394                                                          | 30.00          | Pass      |

■ Straddle channels TEST Plot for 802.11n\_HT40/ac\_VHT40\_Internal Ant

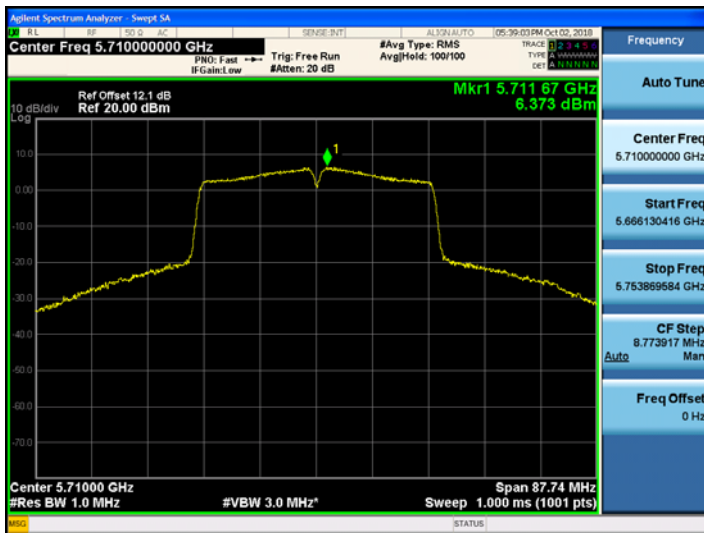
802.11n\_HT40 UNII 2C Band PSD CH.142



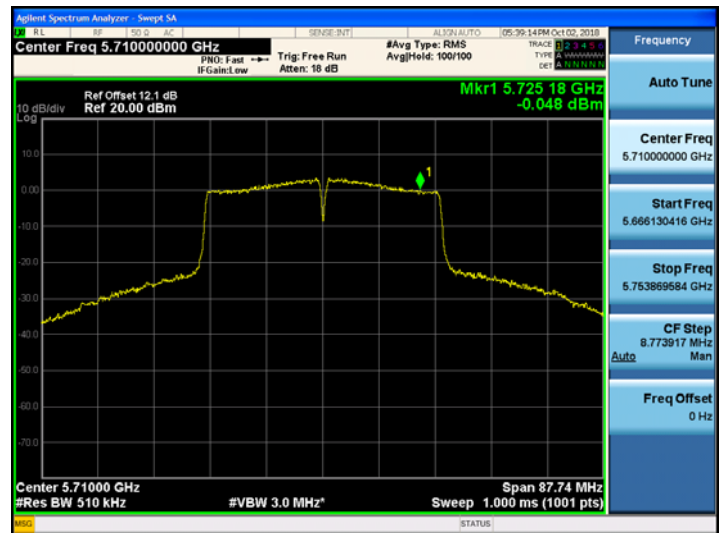
802.11n\_HT40 UNII 3 Band PSD CH.142



802.11ac\_VHT40 UNII 2C Band PSD CH.142



802.11ac\_VHT40 UNII 3 Band PSD CH.142



**■ Straddle channels TEST RESULTS for 802.11n\_HT40/ac\_VHT40\_External Ant**
**Conducted Power Density Measurements (UNII 2C Band 5710MHz)**

| Frequency<br>(MHz) | Channel<br>No. | Mode     | Test Result                           |                              |                                                                |                |           |
|--------------------|----------------|----------|---------------------------------------|------------------------------|----------------------------------------------------------------|----------------|-----------|
|                    |                |          | Measured<br>Power<br>Density<br>(dBm) | Duty Cycle<br>Factor<br>(dB) | Measured<br>Power<br>Density(dBm)<br>+<br>Duty Cycle<br>Factor | Limit<br>(dBm) | Pass/Fail |
| 5710               | 142            | 802.11n  | 2.062                                 | 1.409                        | 3.471                                                          | 11.00          | Pass      |
|                    |                | 802.11ac | 2.368                                 | 1.389                        | 3.757                                                          | 11.00          | Pass      |

**Conducted Power Density Measurements (UNII 3 Band 5710MHz)**

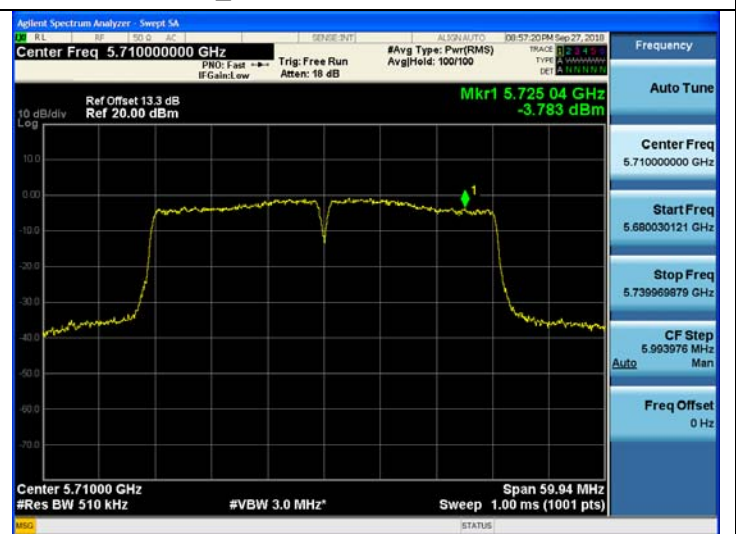
| Frequency<br>(MHz) | Channel<br>No. | Mode   | Test Result                           |                              |                                                                |                |           |
|--------------------|----------------|--------|---------------------------------------|------------------------------|----------------------------------------------------------------|----------------|-----------|
|                    |                |        | Measured<br>Power<br>Density<br>(dBm) | Duty Cycle<br>Factor<br>(dB) | Measured<br>Power<br>Density(dBm)<br>+<br>Duty Cycle<br>Factor | Limit<br>(dBm) | Pass/Fail |
| 5710               | 142            | -3.783 | 1.409                                 | -2.374                       | -3.783                                                         | 30.00          | Pass      |
|                    |                | -3.608 | 1.389                                 | -2.219                       | -3.608                                                         | 30.00          | Pass      |

■ Straddle channels TEST Plot for 802.11n\_HT40/ac\_VHT40\_External Ant

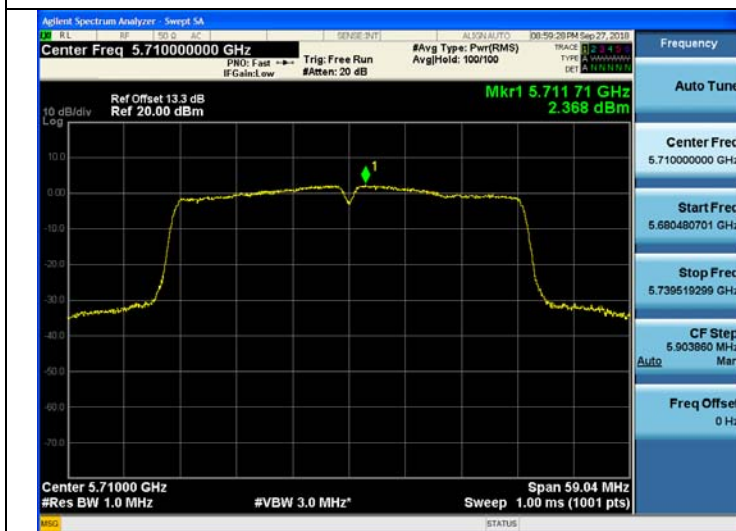
802.11n\_HT40 UNII 2C Band PSD CH.142



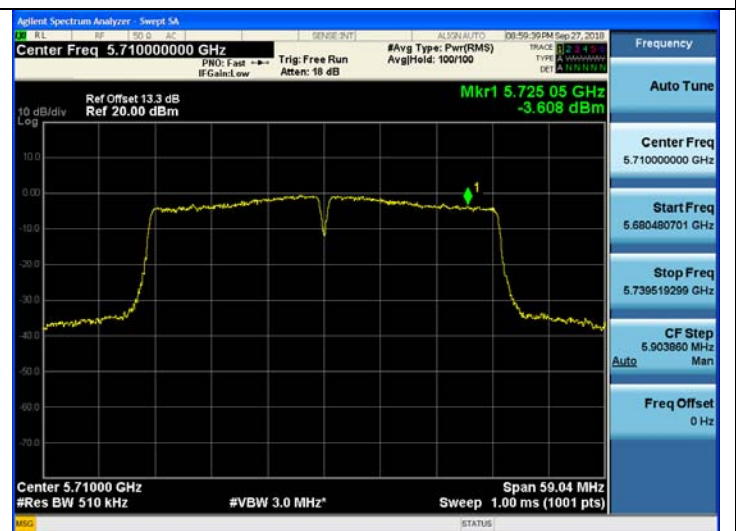
802.11n\_HT40 UNII 3 Band PSD CH.142



802.11ac\_VHT40 UNII 2C Band PSD CH.142



802.11ac\_VHT40 UNII 3 Band PSD CH.142



■ Straddle channels TEST RESULTS\_Internal Ant

Conducted Power Density Measurements (UNII 2C Band 5690MHz)

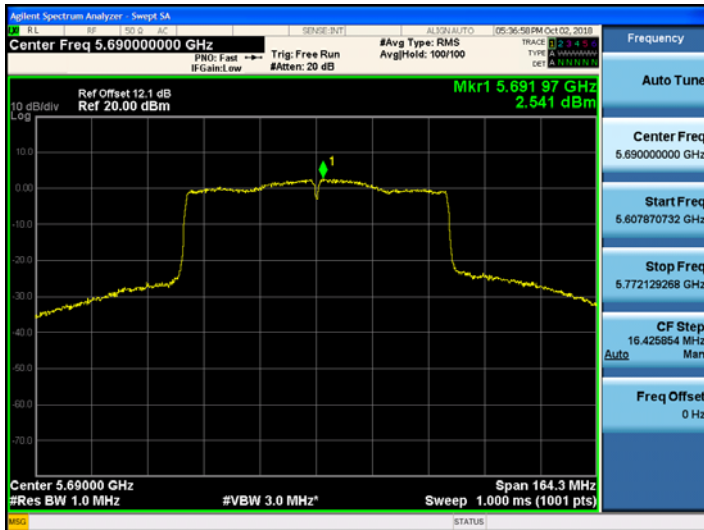
| Frequency (MHz) | Channel No. | Mode     | Test Result                  |                        |                                                 |             |           |
|-----------------|-------------|----------|------------------------------|------------------------|-------------------------------------------------|-------------|-----------|
|                 |             |          | Measured Power Density (dBm) | Duty Cycle Factor (dB) | Measured Power Density(dBm) + Duty Cycle Factor | Limit (dBm) | Pass/Fail |
| 5690            | 138         | 802.11ac | 2.541                        | 0.861                  | 3.402                                           | 11.00       | Pass      |

Conducted Power Density Measurements (UNII 3 Band 5690MHz)

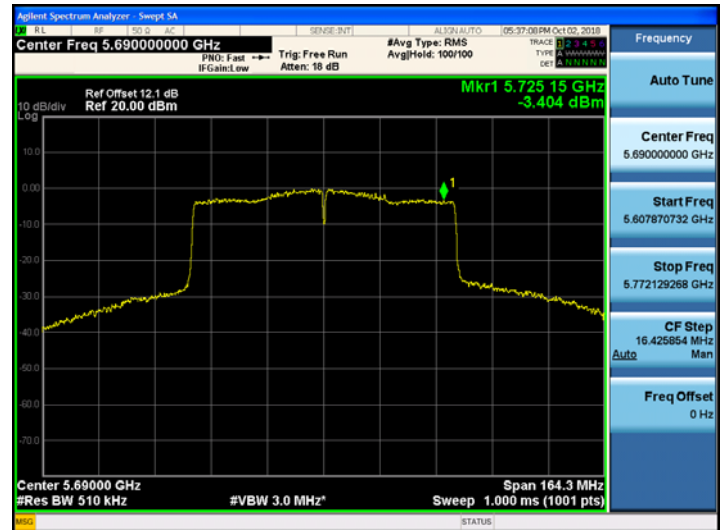
| Frequency (MHz) | Channel No. | Mode     | Test Result                  |                        |                                                 |             |           |
|-----------------|-------------|----------|------------------------------|------------------------|-------------------------------------------------|-------------|-----------|
|                 |             |          | Measured Power Density (dBm) | Duty Cycle Factor (dB) | Measured Power Density(dBm) + Duty Cycle Factor | Limit (dBm) | Pass/Fail |
| 5690            | 138         | 802.11ac | -3.404                       | 0.861                  | -2.543                                          | 30.00       | Pass      |

■ Straddle channels TEST Plot for 802.11ac\_VHT80\_Internal Ant

802.11ac\_VHT80 UNII 2C Band PSD CH.138



802.11ac\_VHT80 UNII 3 Band PSD CH.138



■ Straddle channels TEST RESULTS\_External Ant

Conducted Power Density Measurements (UNII 2C Band 5690MHz)

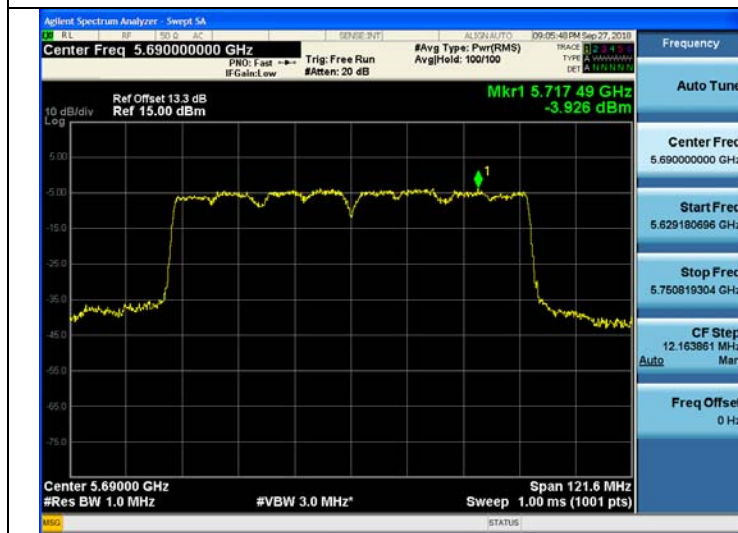
| Frequency (MHz) | Channel No. | Mode     | Test Result                  |                        |                                                 |             |           |
|-----------------|-------------|----------|------------------------------|------------------------|-------------------------------------------------|-------------|-----------|
|                 |             |          | Measured Power Density (dBm) | Duty Cycle Factor (dB) | Measured Power Density(dBm) + Duty Cycle Factor | Limit (dBm) | Pass/Fail |
| 5690            | 138         | 802.11ac | -3.926                       | 3.843                  | -0.083                                          | 11.00       | Pass      |

Conducted Power Density Measurements (UNII 3 Band 5690MHz)

| Frequency (MHz) | Channel No. | Mode     | Test Result                  |                        |                                                 |             |           |
|-----------------|-------------|----------|------------------------------|------------------------|-------------------------------------------------|-------------|-----------|
|                 |             |          | Measured Power Density (dBm) | Duty Cycle Factor (dB) | Measured Power Density(dBm) + Duty Cycle Factor | Limit (dBm) | Pass/Fail |
| 5690            | 138         | 802.11ac | -8.250                       | 3.843                  | -4.407                                          | 30.00       | Pass      |

■ Straddle channels TEST Plot for 802.11ac\_VHT80\_External Ant

802.11ac\_VHT80 UNII 2C Band PSD CH.138



802.11ac\_VHT80 UNII 3 Band PSD CH.138



## 10.6 FREQUENCY STABILITY

The EUT was placed inside an environmental chamber as the temperature in the chamber was varied between -30 °C and 50 °C. The temperature was incremented by 10 °C intervals and the unit was allowed to stabilize at each temperature before each measurement. The center frequency of the transmitting channel was evaluated at each temperature and the frequency deviation from the channel's center frequency was recorded.

### [Internal Ant]

#### 20 MHz BW\_ Startup

|                      |                  |
|----------------------|------------------|
| OPERATING BAND:      | UNII Band 1      |
| OPERATING FREQUENCY: | 5,180,000,000 Hz |
| CHANNEL:             | 36               |
| REFERENCE VOLTAGE:   | 12.0 VDC         |

| Voltage (%) | Power (VDC) | Temp. (°C) | Frequency (kHz) | Frequency Error (kHz) |
|-------------|-------------|------------|-----------------|-----------------------|
| 100%        | 12.00       | +20(Ref)   | 5180089.35      | 89.35                 |
| 100%        |             | -30        | 5180049.46      | 49.46                 |
| 100%        |             | -20        | 5180054.64      | 54.64                 |
| 100%        |             | -10        | 5180094.50      | 94.50                 |
| 100%        |             | 0          | 5180031.74      | 31.74                 |
| 100%        |             | +10        | 5180052.52      | 52.52                 |
| 100%        |             | +30        | 5180057.68      | 57.68                 |
| 100%        |             | +40        | 5180060.25      | 60.25                 |
| 100%        |             | +50        | 5180051.15      | 51.15                 |
| Max.        | 16.00       | +20        | 5180046.21      | 46.21                 |
| Min.        | 9.00        | +20        | 5180084.59      | 84.59                 |

### Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

OPERATING BAND: UNII Band 2A  
 OPERATING FREQUENCY: 5,260,000,000 Hz  
 CHANNEL: 52  
 REFERENCE VOLTAGE: 12.0 VDC

| Voltage (%) | Power (VDC) | Temp. (°C) | Frequency (kHz) | Frequency Error (kHz) |
|-------------|-------------|------------|-----------------|-----------------------|
| 100%        | 12.00       | +20(Ref)   | 5260008.04      | 8.04                  |
| 100%        |             | -30        | 5260040.11      | 40.11                 |
| 100%        |             | -20        | 5260081.17      | 81.17                 |
| 100%        |             | -10        | 5260025.65      | 25.65                 |
| 100%        |             | 0          | 5260037.70      | 37.7                  |
| 100%        |             | +10        | 5260011.63      | 11.63                 |
| 100%        |             | +30        | 5260083.51      | 83.51                 |
| 100%        |             | +40        | 5260016.80      | 16.8                  |
| 100%        |             | +50        | 5260048.10      | 48.10                 |
| Max.        | 16.00       | +20        | 5260004.28      | 4.28                  |
| Min.        | 9.00        | +20        | 5260046.63      | 46.63                 |

#### Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

|                      |                  |
|----------------------|------------------|
| OPERATING BAND:      | UNII Band 2C     |
| OPERATING FREQUENCY: | 5,500,000,000 Hz |
| CHANNEL:             | 100              |
| REFERENCE VOLTAGE:   | 12.0 VDC         |

| Voltage (%) | Power (VDC) | Temp. (°C) | Frequency (kHz) | Frequency Error (kHz) |
|-------------|-------------|------------|-----------------|-----------------------|
| 100%        | 12.00       | +20(Ref)   | 5500053.26      | 53.26                 |
| 100%        |             | -30        | 5500049.41      | 49.41                 |
| 100%        |             | -20        | 5500047.67      | 47.67                 |
| 100%        |             | -10        | 5500061.12      | 61.12                 |
| 100%        |             | 0          | 5500023.07      | 23.07                 |
| 100%        |             | +10        | 5500009.51      | 9.51                  |
| 100%        |             | +30        | 5500053.71      | 53.71                 |
| 100%        |             | +40        | 5500023.24      | 23.24                 |
| 100%        |             | +50        | 5500004.14      | 4.14                  |
| Max.        | 16.00       | +20        | 5500071.03      | 71.03                 |
| Min.        | 9.00        | +20        | 5500009.93      | 9.93                  |

#### Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

|                      |                  |
|----------------------|------------------|
| OPERATING BAND:      | UNII Band 3      |
| OPERATING FREQUENCY: | 5,745,000,000 Hz |
| CHANNEL:             | 149              |
| REFERENCE VOLTAGE:   | 12.0 VDC         |

| Voltage (%) | Power (VDC) | Temp. (°C) | Frequency (kHz) | Frequency Error (kHz) |
|-------------|-------------|------------|-----------------|-----------------------|
| 100%        | 12.00       | +20(Ref)   | 5745096.20      | 96.20                 |
| 100%        |             | -30        | 5745086.82      | 86.82                 |
| 100%        |             | -20        | 5745058.88      | 58.88                 |
| 100%        |             | -10        | 5745002.73      | 2.73                  |
| 100%        |             | 0          | 5745089.07      | 89.07                 |
| 100%        |             | +10        | 5745013.60      | 13.6                  |
| 100%        |             | +30        | 5745017.10      | 17.1                  |
| 100%        |             | +40        | 5745067.54      | 67.54                 |
| 100%        |             | +50        | 5745058.80      | 58.80                 |
| Max.        | 16.00       | +20        | 5745056.70      | 56.70                 |
| Min.        | 9.00        | +20        | 5745064.67      | 64.67                 |

#### Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

## 2 minutes

OPERATING BAND: UNII Band 1  
 OPERATING FREQUENCY: 5,180,000,000 Hz  
 CHANNEL: 36  
 REFERENCE VOLTAGE: 12.0 VDC

| Voltage (%) | Power (VDC) | Temp. (°C) | Frequency (kHz) | Frequency Error (kHz) |
|-------------|-------------|------------|-----------------|-----------------------|
| 100%        | 12.00       | +20(Ref)   | 5180030.22      | 30.22                 |
| 100%        |             | -30        | 5180090.78      | 90.78                 |
| 100%        |             | -20        | 5180001.10      | 1.10                  |
| 100%        |             | -10        | 5180024.42      | 24.42                 |
| 100%        |             | 0          | 5180063.83      | 63.83                 |
| 100%        |             | +10        | 5180005.23      | 5.23                  |
| 100%        |             | +30        | 5180056.86      | 56.86                 |
| 100%        |             | +40        | 5180098.63      | 98.63                 |
| 100%        |             | +50        | 5180068.71      | 68.71                 |
| Max.        | 16.00       | +20        | 5180038.13      | 38.13                 |
| Min.        | 9.00        | +20        | 5180056.53      | 56.53                 |

## Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

OPERATING BAND: UNII Band 2A  
 OPERATING FREQUENCY: 5,260,000,000 Hz  
 CHANNEL: 52  
 REFERENCE VOLTAGE: 12.0 VDC

| Voltage (%) | Power (VDC) | Temp. (°C) | Frequency (kHz) | Frequency Error (kHz) |
|-------------|-------------|------------|-----------------|-----------------------|
| 100%        | 12.00       | +20(Ref)   | 5260071.83      | 71.83                 |
| 100%        |             | -30        | 5260035.35      | 35.35                 |
| 100%        |             | -20        | 5260076.44      | 76.44                 |
| 100%        |             | -10        | 5260056.59      | 56.59                 |
| 100%        |             | 0          | 5260008.40      | 8.4                   |
| 100%        |             | +10        | 5260097.67      | 97.67                 |
| 100%        |             | +30        | 5260023.15      | 23.15                 |
| 100%        |             | +40        | 5260037.44      | 37.44                 |
| 100%        |             | +50        | 5260070.31      | 70.31                 |
| Max.        | 16.00       | +20        | 5260086.64      | 86.64                 |
| Min.        | 9.00        | +20        | 5260099.32      | 99.32                 |

#### Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

|                      |                  |
|----------------------|------------------|
| OPERATING BAND:      | UNII Band 2C     |
| OPERATING FREQUENCY: | 5,500,000,000 Hz |
| CHANNEL:             | 100              |
| REFERENCE VOLTAGE:   | 12.0 VDC         |

| Voltage (%) | Power (VDC) | Temp. (°C) | Frequency (kHz) | Frequency Error (kHz) |
|-------------|-------------|------------|-----------------|-----------------------|
| 100%        | 12.00       | +20(Ref)   | 5500008.81      | 8.81                  |
| 100%        |             | -30        | 5500076.70      | 76.70                 |
| 100%        |             | -20        | 5500056.24      | 56.24                 |
| 100%        |             | -10        | 5500060.49      | 60.49                 |
| 100%        |             | 0          | 5500039.96      | 39.96                 |
| 100%        |             | +10        | 5500034.61      | 34.61                 |
| 100%        |             | +30        | 5500048.75      | 48.75                 |
| 100%        |             | +40        | 5500095.54      | 95.54                 |
| 100%        |             | +50        | 5500053.13      | 53.13                 |
| Max.        | 16.00       | +20        | 5500060.78      | 60.78                 |
| Min.        | 9.00        | +20        | 5500051.98      | 51.98                 |

#### Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

OPERATING BAND: UNII Band 3  
 OPERATING FREQUENCY: 5,745,000,000 Hz  
 CHANNEL: 149  
 REFERENCE VOLTAGE: 12.0 VDC

| Voltage (%) | Power (VDC) | Temp. (°C) | Frequency (kHz) | Frequency Error (kHz) |
|-------------|-------------|------------|-----------------|-----------------------|
| 100%        | 12.00       | +20(Ref)   | 5745025.81      | 25.81                 |
| 100%        |             | -30        | 5745029.57      | 29.57                 |
| 100%        |             | -20        | 5745031.96      | 31.96                 |
| 100%        |             | -10        | 5745041.90      | 41.9                  |
| 100%        |             | 0          | 5745040.19      | 40.19                 |
| 100%        |             | +10        | 5745052.43      | 52.43                 |
| 100%        |             | +30        | 5745065.32      | 65.32                 |
| 100%        |             | +40        | 5745030.90      | 30.9                  |
| 100%        |             | +50        | 5745001.49      | 1.49                  |
| Max.        | 16.00       | +20        | 5745035.87      | 35.87                 |
| Min.        | 9.00        | +20        | 5745008.09      | 8.09                  |

#### Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

### 5 minutes

OPERATING BAND: UNII Band 1  
 OPERATING FREQUENCY: 5,180,000,000 Hz  
 CHANNEL: 36  
 REFERENCE VOLTAGE: 12.0 VDC

| Voltage (%) | Power (VDC) | Temp. (°C) | Frequency (kHz) | Frequency Error (kHz) |
|-------------|-------------|------------|-----------------|-----------------------|
| 100%        | 12.00       | +20(Ref)   | 5180085.61      | 85.61                 |
| 100%        |             | -30        | 5180095.02      | 95.02                 |
| 100%        |             | -20        | 5180076.27      | 76.27                 |
| 100%        |             | -10        | 5180054.89      | 54.89                 |
| 100%        |             | 0          | 5180028.35      | 28.35                 |
| 100%        |             | +10        | 5180053.61      | 53.61                 |
| 100%        |             | +30        | 5180006.84      | 6.84                  |
| 100%        |             | +40        | 5180038.97      | 38.97                 |
| 100%        |             | +50        | 5180069.48      | 69.48                 |
| Max.        | 16.00       | +20        | 5180088.46      | 88.46                 |
| Min.        | 9.00        | +20        | 5180015.26      | 15.26                 |

### Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

OPERATING BAND: UNII Band 2A  
 OPERATING FREQUENCY: 5,260,000,000 Hz  
 CHANNEL: 52  
 REFERENCE VOLTAGE: 12.0 VDC

| Voltage (%) | Power (VDC) | Temp. (°C) | Frequency (kHz) | Frequency Error (kHz) |
|-------------|-------------|------------|-----------------|-----------------------|
| 100%        | 12.00       | +20(Ref)   | 5260096.68      | 96.68                 |
| 100%        |             | -30        | 5260019.54      | 19.54                 |
| 100%        |             | -20        | 5260075.81      | 75.81                 |
| 100%        |             | -10        | 5260054.39      | 54.39                 |
| 100%        |             | 0          | 5260070.82      | 70.82                 |
| 100%        |             | +10        | 5260023.25      | 23.25                 |
| 100%        |             | +30        | 5260089.97      | 89.97                 |
| 100%        |             | +40        | 5260091.36      | 91.36                 |
| 100%        |             | +50        | 5260095.22      | 95.22                 |
| Max.        | 16.00       | +20        | 5260011.11      | 11.11                 |
| Min.        | 9.00        | +20        | 5260036.44      | 36.44                 |

#### Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

OPERATING BAND: UNII Band 2C  
 OPERATING FREQUENCY: 5,500,000,000 Hz  
 CHANNEL: 100  
 REFERENCE VOLTAGE: 12.0 VDC

| Voltage (%) | Power (VDC) | Temp. (°C) | Frequency (kHz) | Frequency Error (kHz) |
|-------------|-------------|------------|-----------------|-----------------------|
| 100%        | 12.00       | +20(Ref)   | 5500014.74      | 14.74                 |
| 100%        |             | -30        | 5500038.97      | 38.97                 |
| 100%        |             | -20        | 5500003.94      | 3.94                  |
| 100%        |             | -10        | 5500058.58      | 58.58                 |
| 100%        |             | 0          | 5500033.61      | 33.61                 |
| 100%        |             | +10        | 5500036.71      | 36.71                 |
| 100%        |             | +30        | 5500099.17      | 99.17                 |
| 100%        |             | +40        | 5500052.23      | 52.23                 |
| 100%        |             | +50        | 5500045.09      | 45.09                 |
| Max.        | 16.00       | +20        | 5500057.44      | 57.44                 |
| Min.        | 9.00        | +20        | 5500094.07      | 94.07                 |

#### Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

OPERATING BAND: UNII Band 3  
 OPERATING FREQUENCY: 5,745,000,000 Hz  
 CHANNEL: 149  
 REFERENCE VOLTAGE: 12.0 VDC

| Voltage (%) | Power (VDC) | Temp. (°C) | Frequency (kHz) | Frequency Error (kHz) |
|-------------|-------------|------------|-----------------|-----------------------|
| 100%        | 12.00       | +20(Ref)   | 5745067.87      | 67.87                 |
| 100%        |             | -30        | 5745043.83      | 43.83                 |
| 100%        |             | -20        | 5745055.15      | 55.15                 |
| 100%        |             | -10        | 5745041.95      | 41.95                 |
| 100%        |             | 0          | 5745080.57      | 80.57                 |
| 100%        |             | +10        | 5745029.68      | 29.68                 |
| 100%        |             | +30        | 5745018.32      | 18.32                 |
| 100%        |             | +40        | 5745060.39      | 60.39                 |
| 100%        |             | +50        | 5745050.05      | 50.05                 |
| Max.        | 16.00       | +20        | 5745042.38      | 42.38                 |
| Min.        | 9.00        | +20        | 5745063.64      | 63.64                 |

#### Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

**10 minutes**

OPERATING BAND: UNII Band 1  
 OPERATING FREQUENCY: 5,180,000,000 Hz  
 CHANNEL: 36  
 REFERENCE VOLTAGE: 12.0 VDC

| Voltage (%) | Power (VDC) | Temp. (°C) | Frequency (kHz) | Frequency Error (kHz) |
|-------------|-------------|------------|-----------------|-----------------------|
| 100%        | 12.00       | +20(Ref)   | 5180039.51      | 39.51                 |
| 100%        |             | -30        | 5180094.41      | 94.41                 |
| 100%        |             | -20        | 5180072.55      | 72.55                 |
| 100%        |             | -10        | 5180067.36      | 67.36                 |
| 100%        |             | 0          | 5180048.55      | 48.55                 |
| 100%        |             | +10        | 5180066.20      | 66.20                 |
| 100%        |             | +30        | 5180062.07      | 62.07                 |
| 100%        |             | +40        | 5180077.64      | 77.64                 |
| 100%        |             | +50        | 5180045.08      | 45.08                 |
| Max.        | 16.00       | +20        | 5180017.63      | 17.63                 |
| Min.        | 9.00        | +20        | 5180004.13      | 4.13                  |

**Note:**

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

OPERATING BAND: UNII Band 2A  
 OPERATING FREQUENCY: 5,260,000,000 Hz  
 CHANNEL: 52  
 REFERENCE VOLTAGE: 12.0 VDC

| Voltage (%) | Power (VDC) | Temp. (°C) | Frequency (kHz) | Frequency Error (kHz) |
|-------------|-------------|------------|-----------------|-----------------------|
| 100%        | 12.00       | +20(Ref)   | 5260021.74      | 21.74                 |
| 100%        |             | -30        | 5260018.35      | 18.35                 |
| 100%        |             | -20        | 5260066.20      | 66.2                  |
| 100%        |             | -10        | 5260049.62      | 49.62                 |
| 100%        |             | 0          | 5260067.03      | 67.03                 |
| 100%        |             | +10        | 5260024.83      | 24.83                 |
| 100%        |             | +30        | 5260028.11      | 28.11                 |
| 100%        |             | +40        | 5260006.62      | 6.62                  |
| 100%        |             | +50        | 5260070.53      | 70.53                 |
| Max.        | 16.00       | +20        | 5260083.98      | 83.98                 |
| Min.        | 9.00        | +20        | 5260086.40      | 86.4                  |

#### Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

|                      |                  |
|----------------------|------------------|
| OPERATING BAND:      | UNII Band 2C     |
| OPERATING FREQUENCY: | 5,500,000,000 Hz |
| CHANNEL:             | 100              |
| REFERENCE VOLTAGE:   | 12.0 VDC         |

| Voltage (%) | Power (VDC) | Temp. (°C) | Frequency (kHz) | Frequency Error (kHz) |
|-------------|-------------|------------|-----------------|-----------------------|
| 100%        | 12.00       | +20(Ref)   | 5500095.37      | 95.37                 |
| 100%        |             | -30        | 5500080.70      | 80.70                 |
| 100%        |             | -20        | 5500099.72      | 99.72                 |
| 100%        |             | -10        | 5500017.72      | 17.72                 |
| 100%        |             | 0          | 5500027.18      | 27.18                 |
| 100%        |             | +10        | 5500007.65      | 7.65                  |
| 100%        |             | +30        | 5500069.38      | 69.38                 |
| 100%        |             | +40        | 5500088.05      | 88.05                 |
| 100%        |             | +50        | 5500015.66      | 15.66                 |
| Max.        | 16.00       | +20        | 5500064.74      | 64.74                 |
| Min.        | 9.00        | +20        | 5500025.09      | 25.09                 |

#### Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

OPERATING BAND: UNII Band 3  
 OPERATING FREQUENCY: 5,745,000,000 Hz  
 CHANNEL: 149  
 REFERENCE VOLTAGE: 12.0 VDC

| Voltage (%) | Power (VDC) | Temp. (°C) | Frequency (kHz) | Frequency Error (kHz) |
|-------------|-------------|------------|-----------------|-----------------------|
| 100%        | 12.00       | +20(Ref)   | 5745074.44      | 74.44                 |
| 100%        |             | -30        | 5745002.74      | 2.74                  |
| 100%        |             | -20        | 5745083.25      | 83.25                 |
| 100%        |             | -10        | 5745022.19      | 22.19                 |
| 100%        |             | 0          | 5745031.96      | 31.96                 |
| 100%        |             | +10        | 5745026.89      | 26.89                 |
| 100%        |             | +30        | 5745037.63      | 37.63                 |
| 100%        |             | +40        | 5745040.13      | 40.13                 |
| 100%        |             | +50        | 5745092.65      | 92.65                 |
| Max.        | 16.00       | +20        | 5745086.61      | 86.61                 |
| Min.        | 9.00        | +20        | 5745092.52      | 92.52                 |

#### Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

#### 40 MHz BW\_ Startup

OPERATING BAND: UNII Band 1  
 OPERATING FREQUENCY: 5,190,000,000 Hz  
 CHANNEL: 38  
 REFERENCE VOLTAGE: 12.0 VDC

| Voltage (%) | Power (VDC) | Temp. (°C) | Frequency (kHz) | Frequency Error (kHz) |
|-------------|-------------|------------|-----------------|-----------------------|
| 100%        | 12.00       | +20(Ref)   | 5190093.15      | 93.15                 |
| 100%        |             | -30        | 5190087.67      | 87.67                 |
| 100%        |             | -20        | 5190034.33      | 34.33                 |
| 100%        |             | -10        | 5190041.53      | 41.53                 |
| 100%        |             | 0          | 5190070.42      | 70.42                 |
| 100%        |             | +10        | 5190083.30      | 83.30                 |
| 100%        |             | +30        | 5190070.74      | 70.74                 |
| 100%        |             | +40        | 5190030.06      | 30.06                 |
| 100%        |             | +50        | 5190095.28      | 95.28                 |
| Max.        | 16.00       | +20        | 5190003.04      | 3.04                  |
| Min.        | 9.00        | +20        | 5190085.65      | 85.65                 |

#### Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

OPERATING BAND: UNII Band 2A  
 OPERATING FREQUENCY: 5,270,000,000 Hz  
 CHANNEL: 54  
 REFERENCE VOLTAGE: 12.0 VDC

| Voltage (%) | Power (VDC) | Temp. (°C) | Frequency (kHz) | Frequency Error (kHz) |
|-------------|-------------|------------|-----------------|-----------------------|
| 100%        | 12.00       | +20(Ref)   | 5270038.05      | 38.05                 |
| 100%        |             | -30        | 5270045.81      | 45.81                 |
| 100%        |             | -20        | 5270063.69      | 63.69                 |
| 100%        |             | -10        | 5270046.63      | 46.63                 |
| 100%        |             | 0          | 5270018.29      | 18.29                 |
| 100%        |             | +10        | 5270037.69      | 37.69                 |
| 100%        |             | +30        | 5270071.31      | 71.31                 |
| 100%        |             | +40        | 5270014.98      | 14.98                 |
| 100%        |             | +50        | 5270089.79      | 89.79                 |
| Max.        | 16.00       | +20        | 5270021.62      | 21.62                 |
| Min.        | 9.00        | +20        | 5270051.60      | 51.6                  |

#### Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

OPERATING BAND: UNII Band 2C  
 OPERATING FREQUENCY: 5,510,000,000 Hz  
 CHANNEL: 102  
 REFERENCE VOLTAGE: 12.0 VDC

| Voltage (%) | Power (VDC) | Temp. (°C) | Frequency (kHz) | Frequency Error (kHz) |
|-------------|-------------|------------|-----------------|-----------------------|
| 100%        | 12.00       | +20(Ref)   | 5510044.79      | 44.79                 |
| 100%        |             | -30        | 5510086.21      | 86.21                 |
| 100%        |             | -20        | 5510038.33      | 38.33                 |
| 100%        |             | -10        | 5510031.99      | 31.99                 |
| 100%        |             | 0          | 5510010.57      | 10.57                 |
| 100%        |             | +10        | 5510009.05      | 9.05                  |
| 100%        |             | +30        | 5510026.70      | 26.7                  |
| 100%        |             | +40        | 5510001.52      | 1.52                  |
| 100%        |             | +50        | 5510033.03      | 33.03                 |
| Max.        | 16.00       | +20        | 5510042.40      | 42.40                 |
| Min.        | 9.00        | +20        | 5510006.46      | 6.46                  |

#### Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

OPERATING BAND: UNII Band 3  
 OPERATING FREQUENCY: 5,755,000,000 Hz  
 CHANNEL: 151  
 REFERENCE VOLTAGE: 12.0 VDC

| Voltage (%) | Power (VDC) | Temp. (°C) | Frequency (kHz) | Frequency Error (kHz) |
|-------------|-------------|------------|-----------------|-----------------------|
| 100%        | 12.00       | +20(Ref)   | 5755008.31      | 8.31                  |
| 100%        |             | -30        | 5755008.63      | 8.63                  |
| 100%        |             | -20        | 5755023.82      | 23.82                 |
| 100%        |             | -10        | 5755021.66      | 21.66                 |
| 100%        |             | 0          | 5755021.68      | 21.68                 |
| 100%        |             | +10        | 5755016.59      | 16.59                 |
| 100%        |             | +30        | 5755019.20      | 19.2                  |
| 100%        |             | +40        | 5755035.21      | 35.21                 |
| 100%        |             | +50        | 5755022.27      | 22.27                 |
| Max.        | 16.00       | +20        | 5755059.45      | 59.45                 |
| Min.        | 9.00        | +20        | 5755088.17      | 88.17                 |

#### Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

## 2 minutes

OPERATING BAND: UNII Band 1  
 OPERATING FREQUENCY: 5,190,000,000 Hz  
 CHANNEL: 38  
 REFERENCE VOLTAGE: 12.0 VDC

| Voltage (%) | Power (VDC) | Temp. (°C) | Frequency (kHz) | Frequency Error (kHz) |
|-------------|-------------|------------|-----------------|-----------------------|
| 100%        | 12.00       | +20(Ref)   | 5190035.95      | 35.95                 |
| 100%        |             | -30        | 5190022.16      | 22.16                 |
| 100%        |             | -20        | 5190041.28      | 41.28                 |
| 100%        |             | -10        | 5190095.94      | 95.94                 |
| 100%        |             | 0          | 5190034.64      | 34.64                 |
| 100%        |             | +10        | 5190017.36      | 17.36                 |
| 100%        |             | +30        | 5190027.05      | 27.05                 |
| 100%        |             | +40        | 5190003.20      | 3.20                  |
| 100%        |             | +50        | 5190019.16      | 19.16                 |
| Max.        | 16.00       | +20        | 5190063.49      | 63.49                 |
| Min.        | 9.00        | +20        | 5190087.14      | 87.14                 |

## Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

OPERATING BAND: UNII Band 2A  
 OPERATING FREQUENCY: 5,270,000,000 Hz  
 CHANNEL: 54  
 REFERENCE VOLTAGE: 12.0 VDC

| Voltage (%) | Power (VDC) | Temp. (°C) | Frequency (kHz) | Frequency Error (kHz) |
|-------------|-------------|------------|-----------------|-----------------------|
| 100%        | 12.00       | +20(Ref)   | 5270022.52      | 22.52                 |
| 100%        |             | -30        | 5270017.84      | 17.84                 |
| 100%        |             | -20        | 5270006.07      | 6.07                  |
| 100%        |             | -10        | 5270065.96      | 65.96                 |
| 100%        |             | 0          | 5270034.09      | 34.09                 |
| 100%        |             | +10        | 5270010.18      | 10.18                 |
| 100%        |             | +30        | 5270026.06      | 26.06                 |
| 100%        |             | +40        | 5270072.81      | 72.81                 |
| 100%        |             | +50        | 5270056.34      | 56.34                 |
| Max.        | 16.00       | +20        | 5270078.77      | 78.77                 |
| Min.        | 9.00        | +20        | 5270061.58      | 61.58                 |

#### Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

|                      |                  |
|----------------------|------------------|
| OPERATING BAND:      | UNII Band 2C     |
| OPERATING FREQUENCY: | 5,510,000,000 Hz |
| CHANNEL:             | 102              |
| REFERENCE VOLTAGE:   | 12.0 VDC         |

| Voltage (%) | Power (VDC) | Temp. (°C) | Frequency (kHz) | Frequency Error (kHz) |
|-------------|-------------|------------|-----------------|-----------------------|
| 100%        | 12.00       | +20(Ref)   | 5510010.23      | 10.23                 |
| 100%        |             | -30        | 5510025.44      | 25.44                 |
| 100%        |             | -20        | 5510061.63      | 61.63                 |
| 100%        |             | -10        | 5510080.43      | 80.43                 |
| 100%        |             | 0          | 5510064.35      | 64.35                 |
| 100%        |             | +10        | 5510004.88      | 4.88                  |
| 100%        |             | +30        | 5510034.55      | 34.55                 |
| 100%        |             | +40        | 5510058.19      | 58.19                 |
| 100%        |             | +50        | 5510040.66      | 40.66                 |
| Max.        | 16.00       | +20        | 5510006.59      | 6.59                  |
| Min.        | 9.00        | +20        | 5510085.47      | 85.47                 |

#### Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

OPERATING BAND: UNII Band 3  
 OPERATING FREQUENCY: 5,755,000,000 Hz  
 CHANNEL: 151  
 REFERENCE VOLTAGE: 12.0 VDC

| Voltage (%) | Power (VDC) | Temp. (°C) | Frequency (kHz) | Frequency Error (kHz) |
|-------------|-------------|------------|-----------------|-----------------------|
| 100%        | 12.00       | +20(Ref)   | 5755050.51      | 50.51                 |
| 100%        |             | -30        | 5755037.37      | 37.37                 |
| 100%        |             | -20        | 5755058.59      | 58.59                 |
| 100%        |             | -10        | 5755033.96      | 33.96                 |
| 100%        |             | 0          | 5755061.31      | 61.31                 |
| 100%        |             | +10        | 5755034.04      | 34.04                 |
| 100%        |             | +30        | 5755081.31      | 81.31                 |
| 100%        |             | +40        | 5755082.99      | 82.99                 |
| 100%        |             | +50        | 5755025.68      | 25.68                 |
| Max.        | 16.00       | +20        | 5755079.58      | 79.58                 |
| Min.        | 9.00        | +20        | 5755040.12      | 40.12                 |

#### Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

### 5 minutes

OPERATING BAND: UNII Band 1  
 OPERATING FREQUENCY: 5,190,000,000 Hz  
 CHANNEL: 38  
 REFERENCE VOLTAGE: 12.0 VDC

| Voltage (%) | Power (VDC) | Temp. (°C) | Frequency (kHz) | Frequency Error (kHz) |
|-------------|-------------|------------|-----------------|-----------------------|
| 100%        | 12.00       | +20(Ref)   | 5190040.97      | 40.97                 |
| 100%        |             | -30        | 5190027.48      | 27.48                 |
| 100%        |             | -20        | 5190020.60      | 20.60                 |
| 100%        |             | -10        | 5190061.25      | 61.25                 |
| 100%        |             | 0          | 5190014.12      | 14.12                 |
| 100%        |             | +10        | 5190059.41      | 59.41                 |
| 100%        |             | +30        | 5190053.78      | 53.78                 |
| 100%        |             | +40        | 5190038.52      | 38.52                 |
| 100%        |             | +50        | 5190025.77      | 25.77                 |
| Max.        | 16.00       | +20        | 5190013.42      | 13.42                 |
| Min.        | 9.00        | +20        | 5190077.19      | 77.19                 |

### Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

OPERATING BAND: UNII Band 2A  
 OPERATING FREQUENCY: 5,270,000,000 Hz  
 CHANNEL: 54  
 REFERENCE VOLTAGE: 12.0 VDC

| Voltage (%) | Power (VDC) | Temp. (°C) | Frequency (kHz) | Frequency Error (kHz) |
|-------------|-------------|------------|-----------------|-----------------------|
| 100%        | 12.00       | +20(Ref)   | 5270060.52      | 60.52                 |
| 100%        |             | -30        | 5270003.80      | 3.80                  |
| 100%        |             | -20        | 5270047.26      | 47.26                 |
| 100%        |             | -10        | 5270084.42      | 84.42                 |
| 100%        |             | 0          | 5270064.40      | 64.4                  |
| 100%        |             | +10        | 5270051.83      | 51.83                 |
| 100%        |             | +30        | 5270025.67      | 25.67                 |
| 100%        |             | +40        | 5270021.64      | 21.64                 |
| 100%        |             | +50        | 5270071.46      | 71.46                 |
| Max.        | 16.00       | +20        | 5270015.08      | 15.08                 |
| Min.        | 9.00        | +20        | 5270074.39      | 74.39                 |

#### Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

|                      |                  |
|----------------------|------------------|
| OPERATING BAND:      | UNII Band 2C     |
| OPERATING FREQUENCY: | 5,510,000,000 Hz |
| CHANNEL:             | 102              |
| REFERENCE VOLTAGE:   | 12.0 VDC         |

| Voltage (%) | Power (VDC) | Temp. (°C) | Frequency (kHz) | Frequency Error (kHz) |
|-------------|-------------|------------|-----------------|-----------------------|
| 100%        | 12.00       | +20(Ref)   | 5510026.73      | 26.73                 |
| 100%        |             | -30        | 5510065.78      | 65.78                 |
| 100%        |             | -20        | 5510003.96      | 3.96                  |
| 100%        |             | -10        | 5510058.38      | 58.38                 |
| 100%        |             | 0          | 5510072.53      | 72.53                 |
| 100%        |             | +10        | 5510088.63      | 88.63                 |
| 100%        |             | +30        | 5510029.33      | 29.33                 |
| 100%        |             | +40        | 5510060.22      | 60.22                 |
| 100%        |             | +50        | 5510044.98      | 44.98                 |
| Max.        | 16.00       | +20        | 5510036.79      | 36.79                 |
| Min.        | 9.00        | +20        | 5510008.91      | 8.91                  |

#### Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.