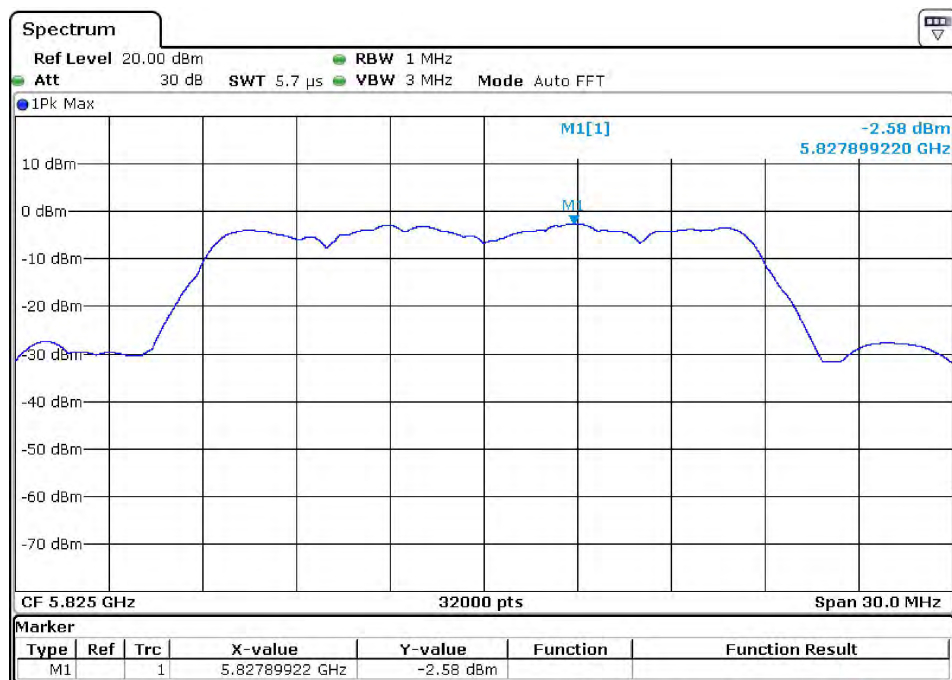
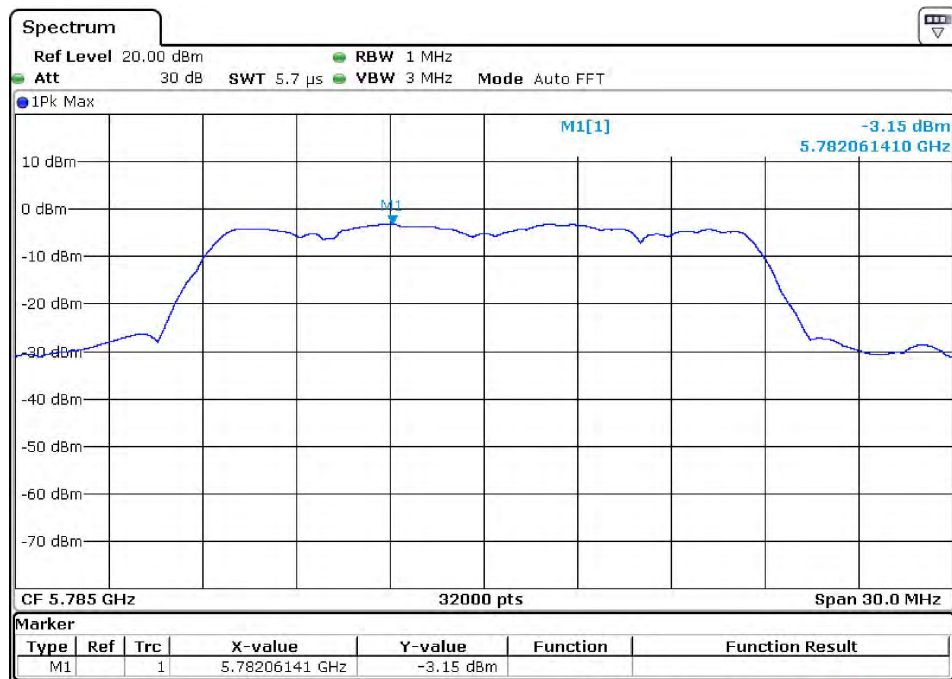
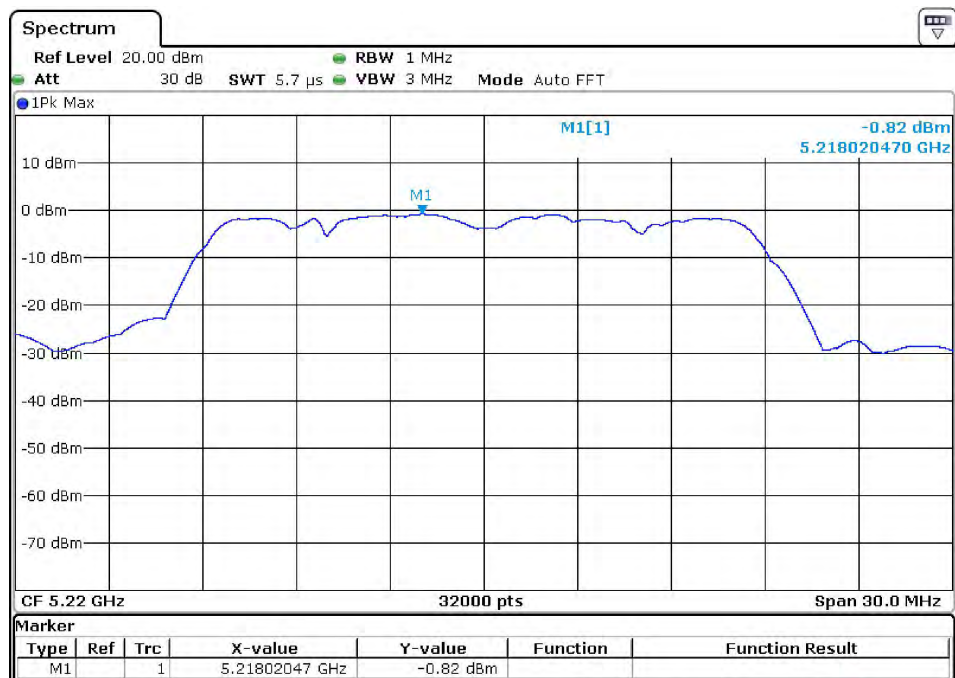
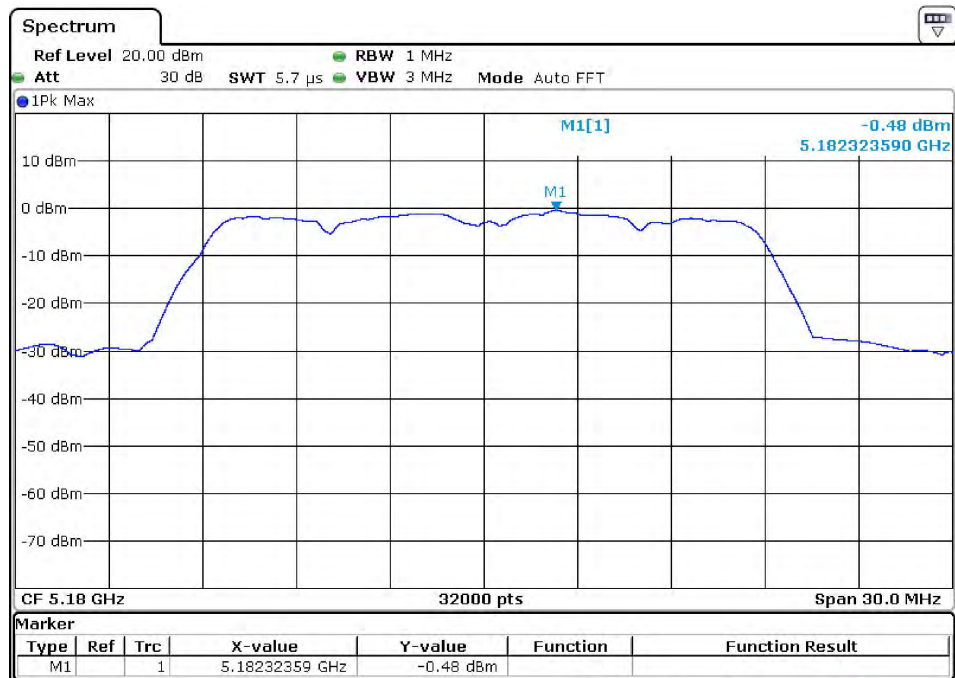
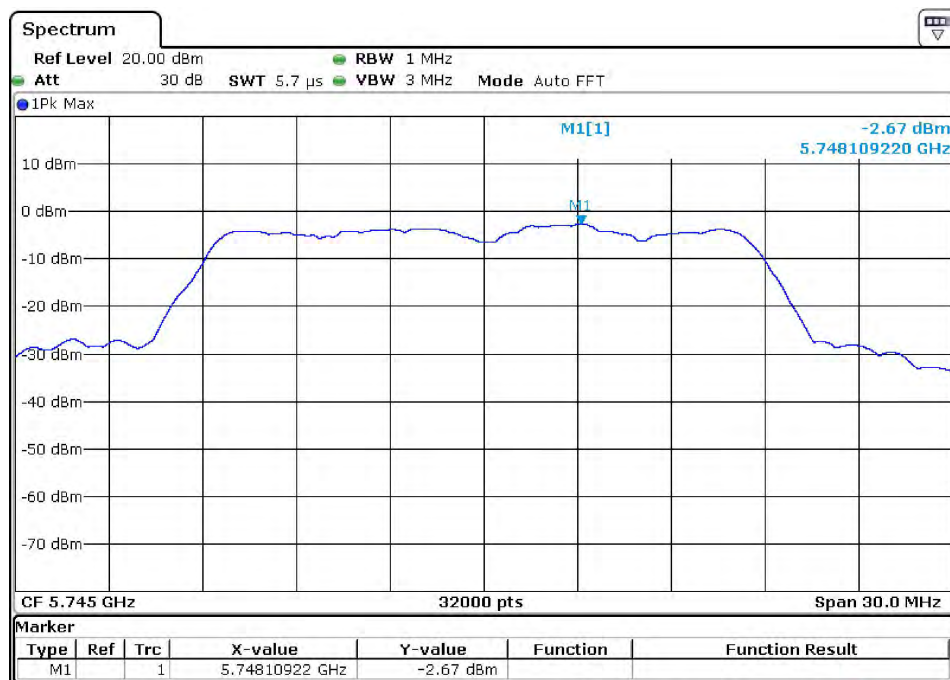
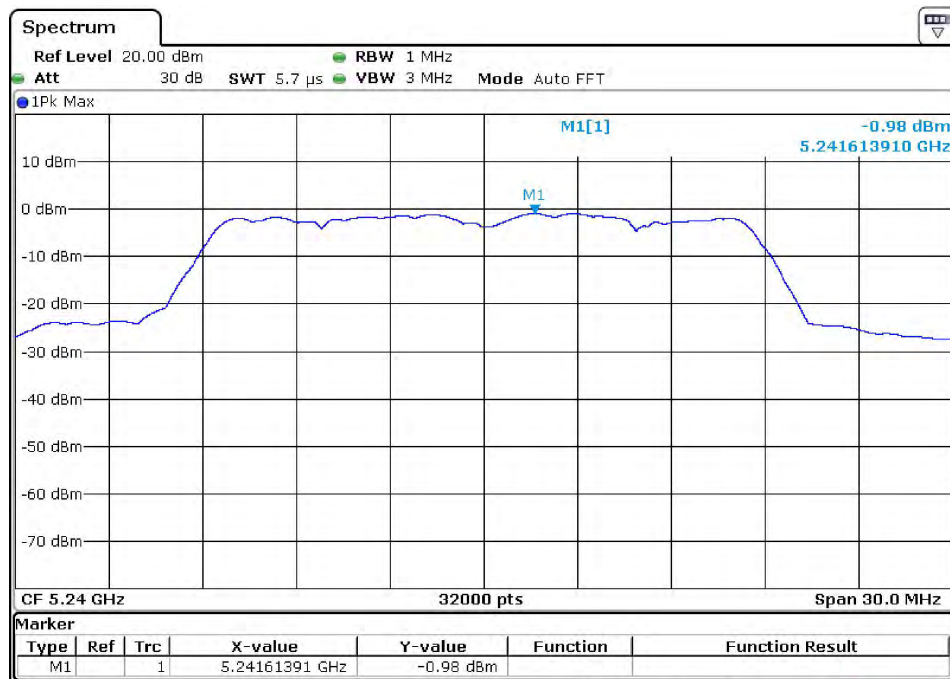
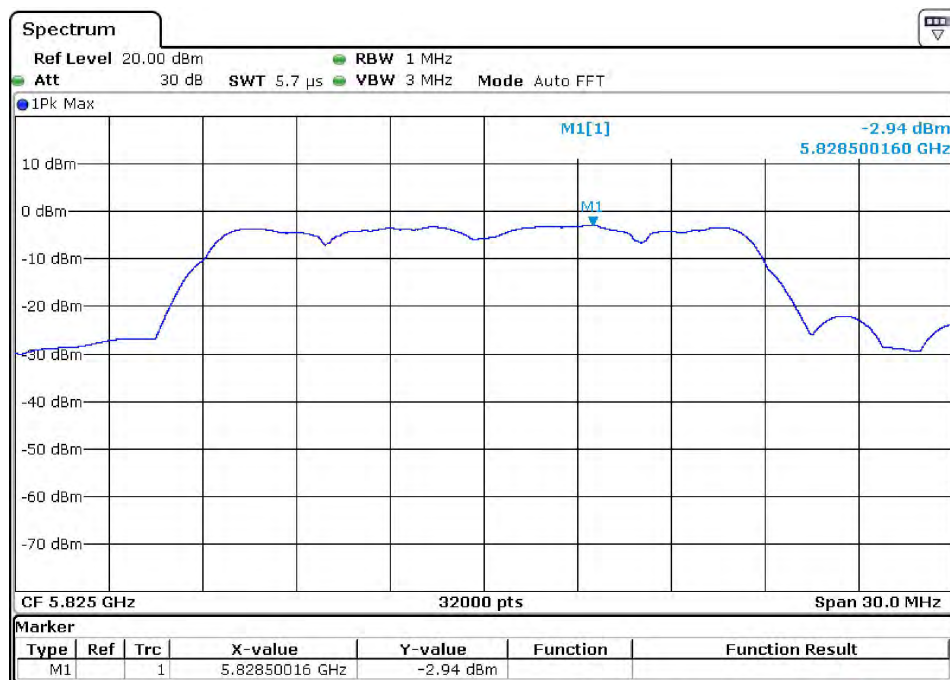
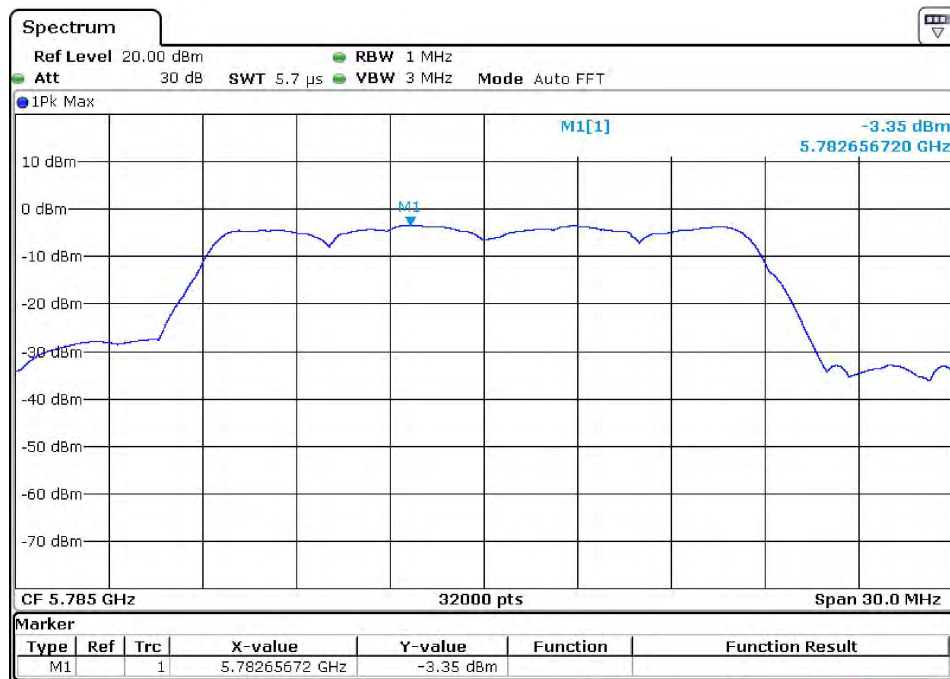




### Ant 802.11 n20

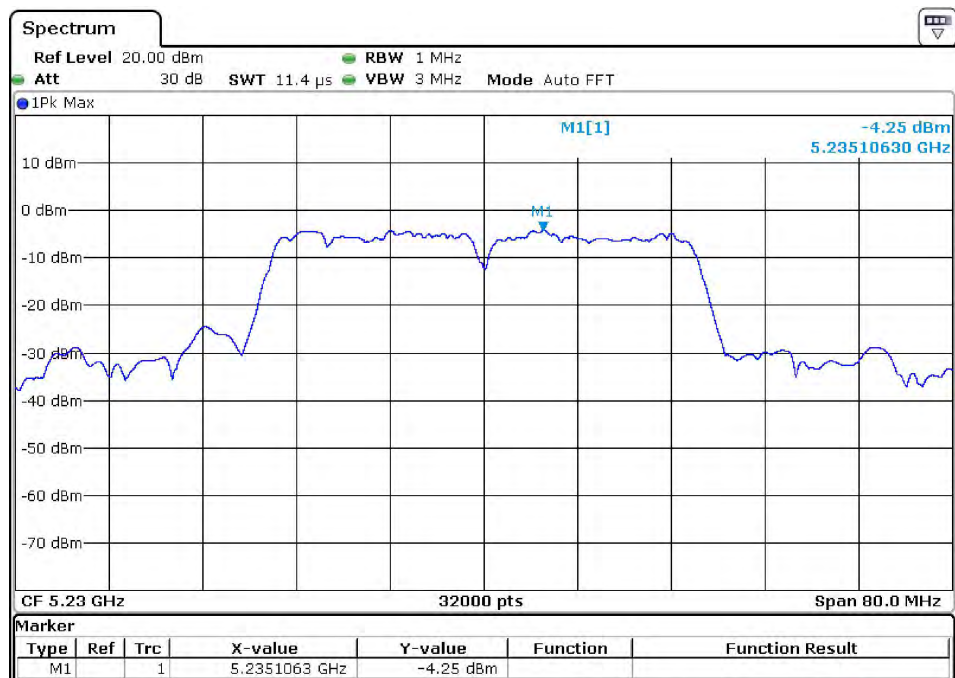
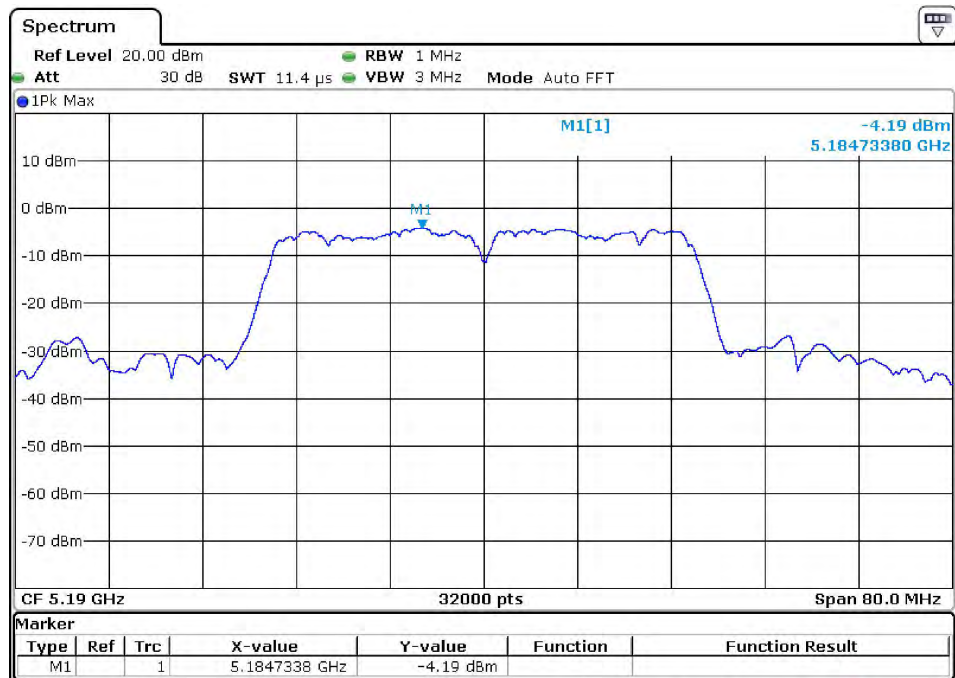


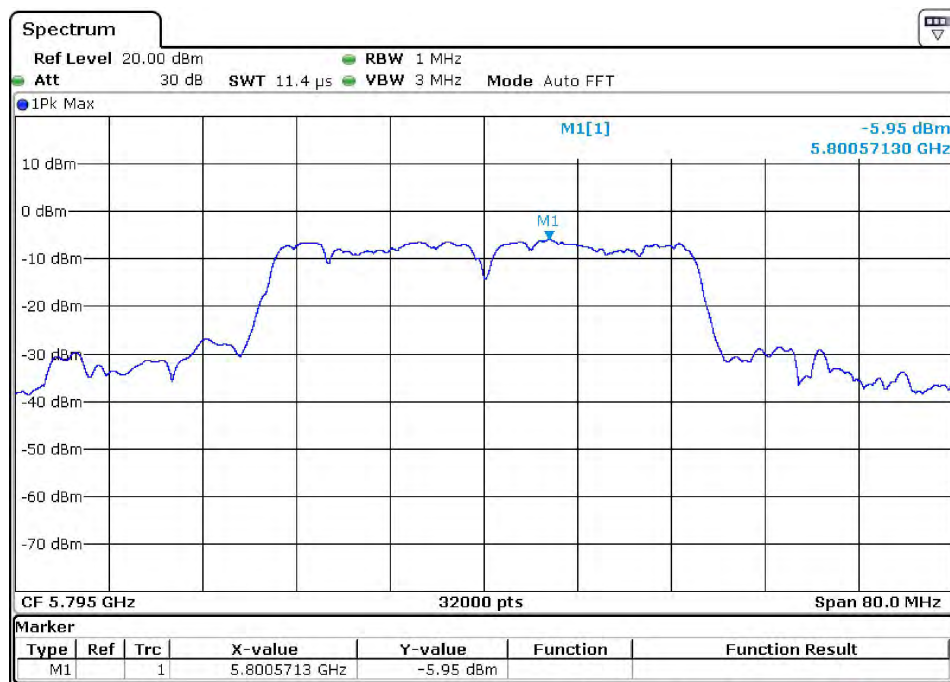
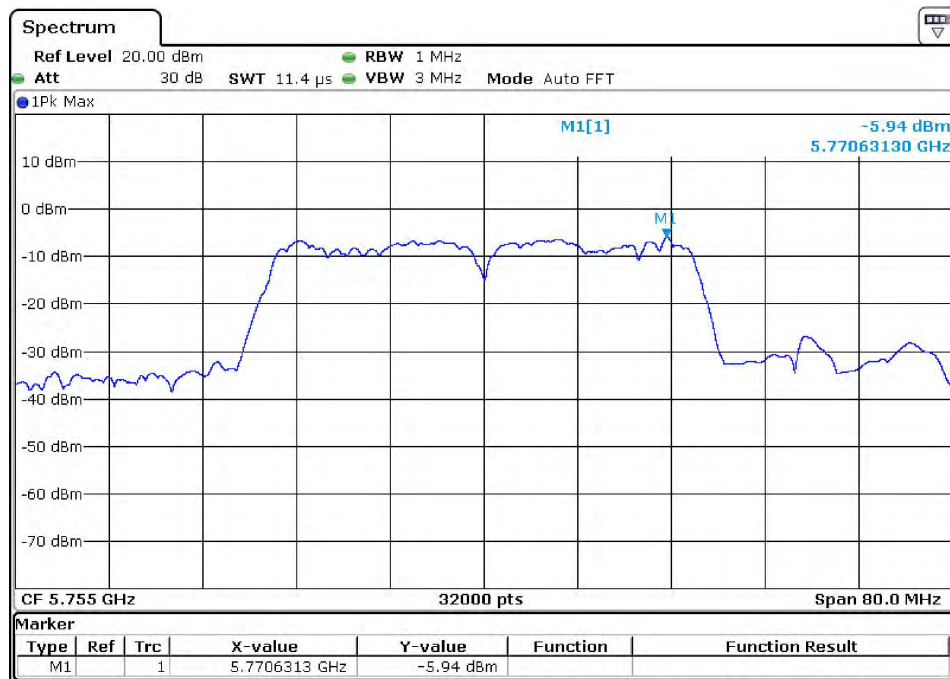




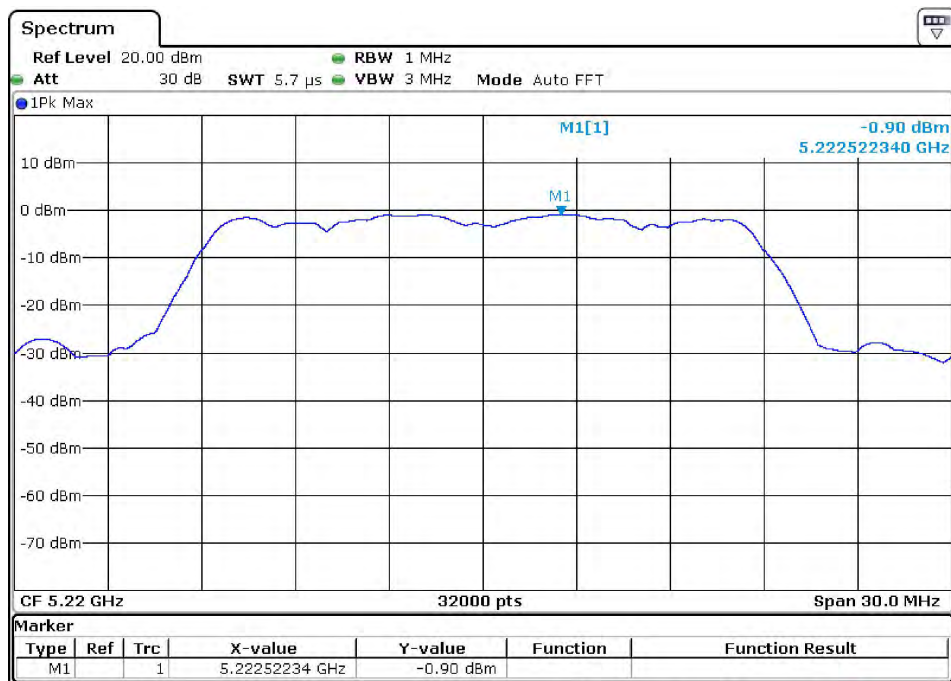
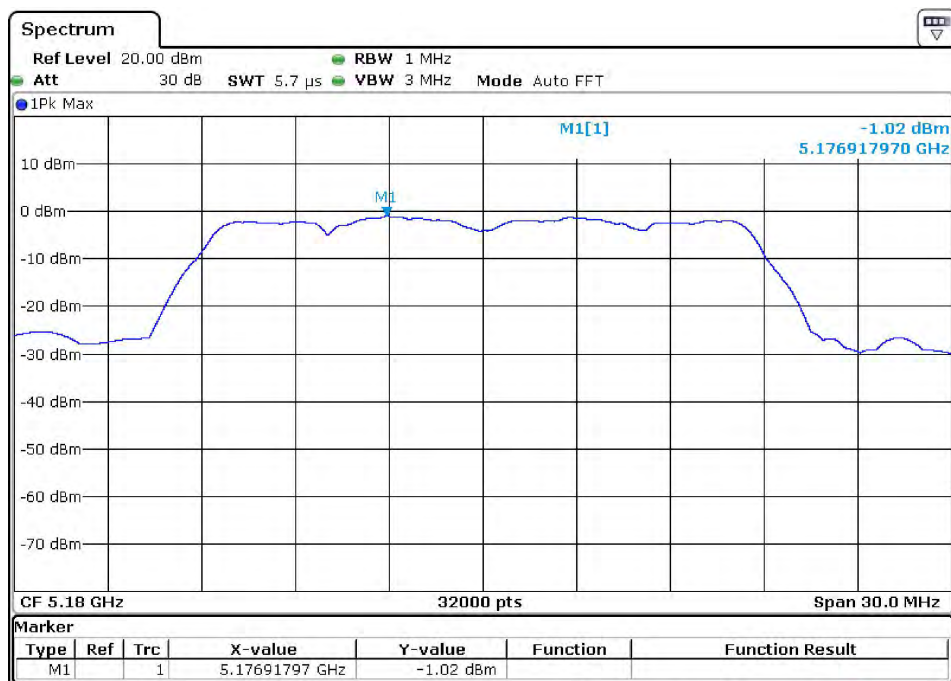


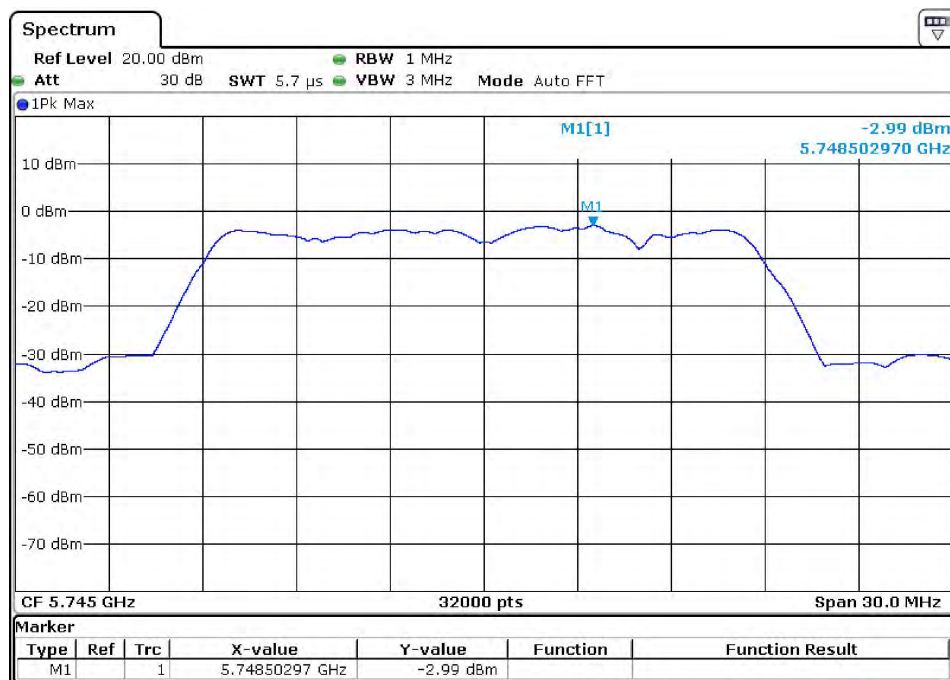
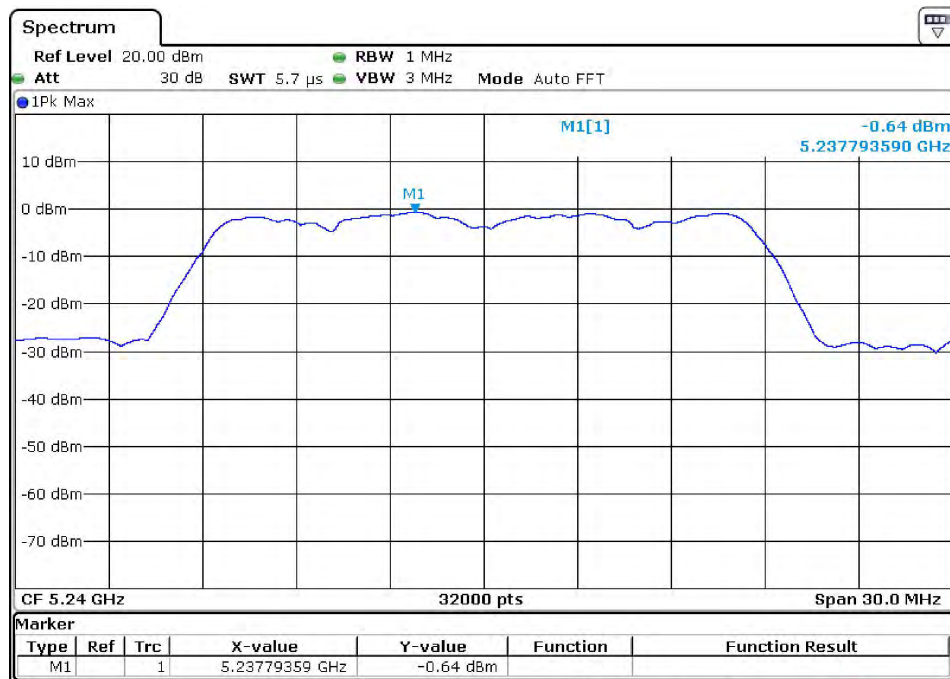
### Ant 802.11 n40

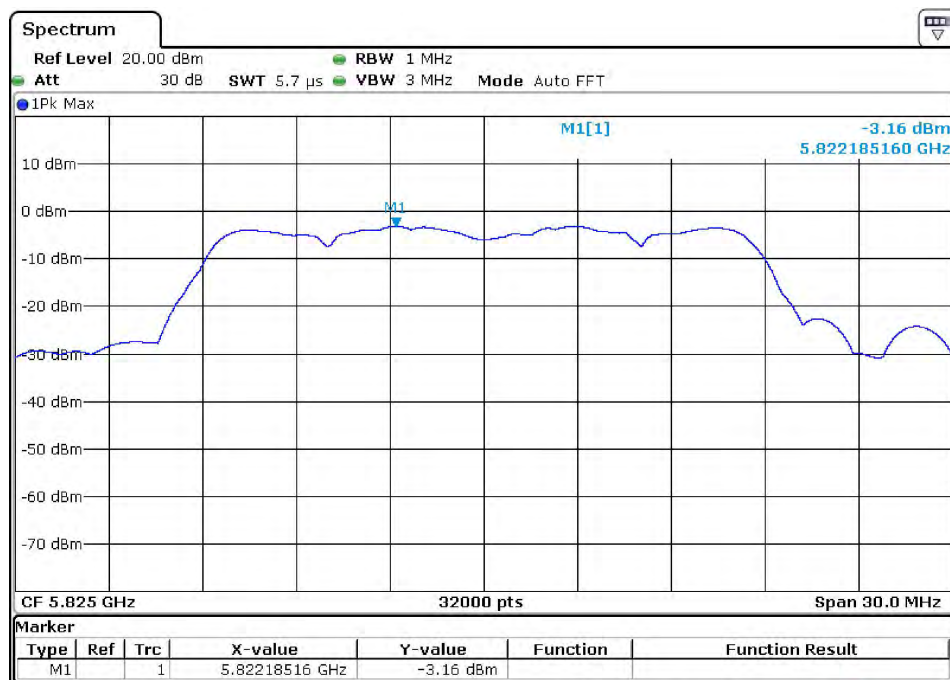
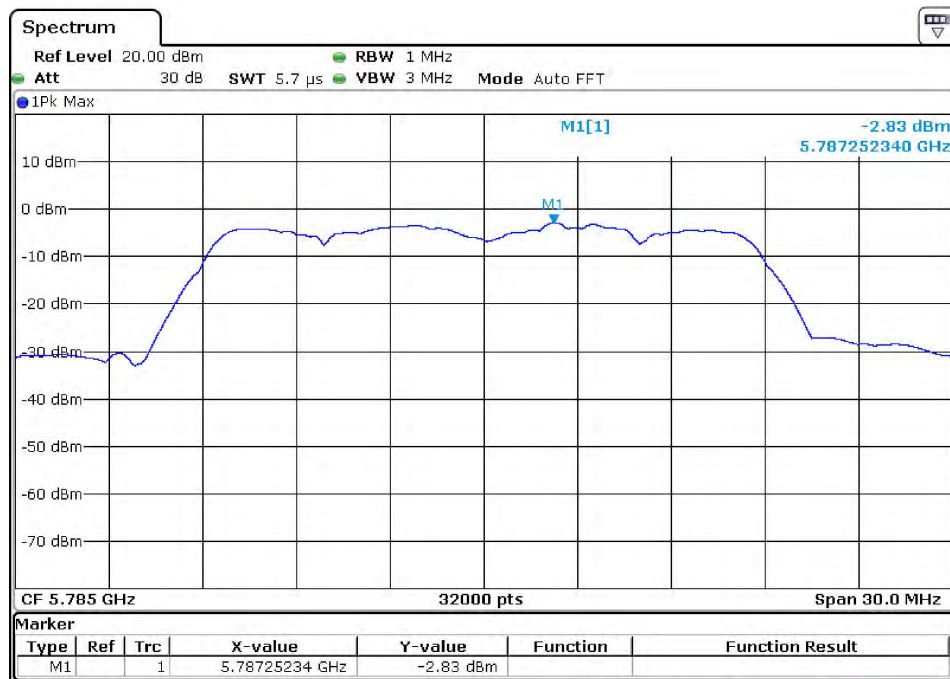




### Ant 802.11 ac20

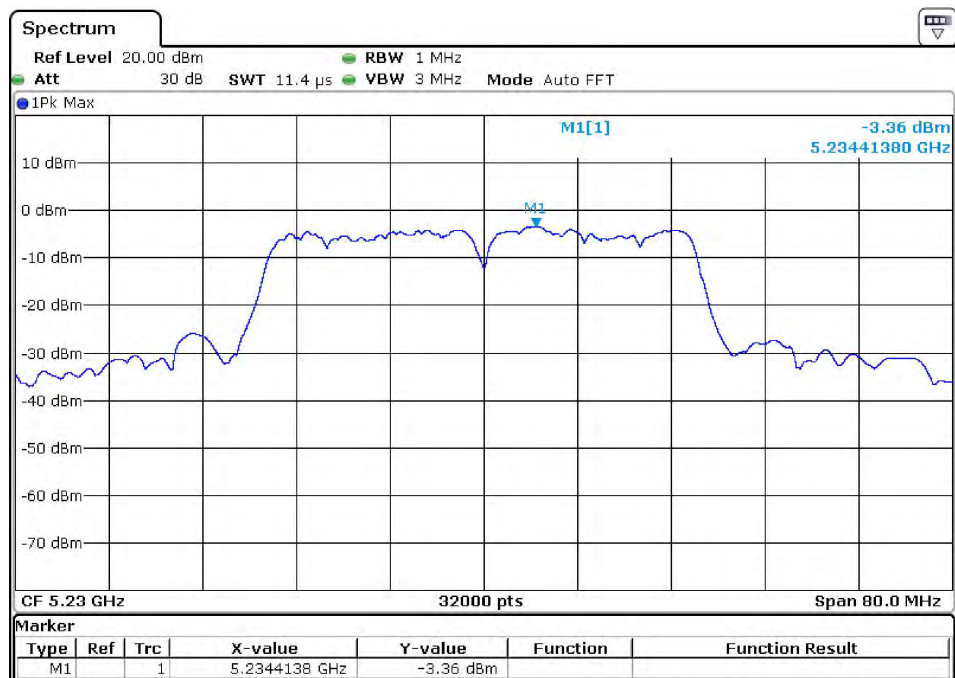
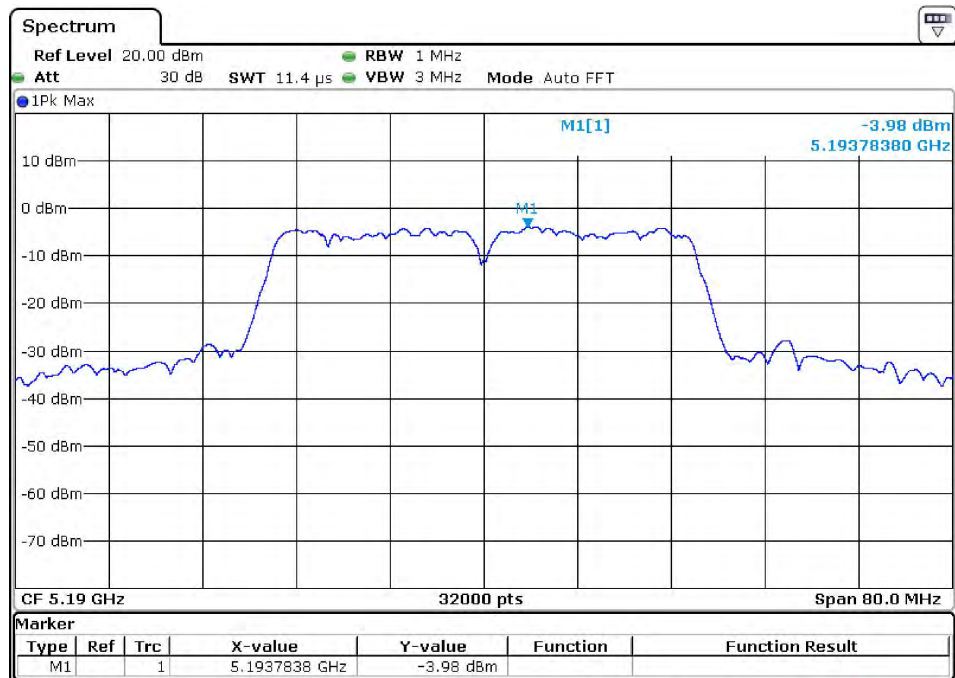


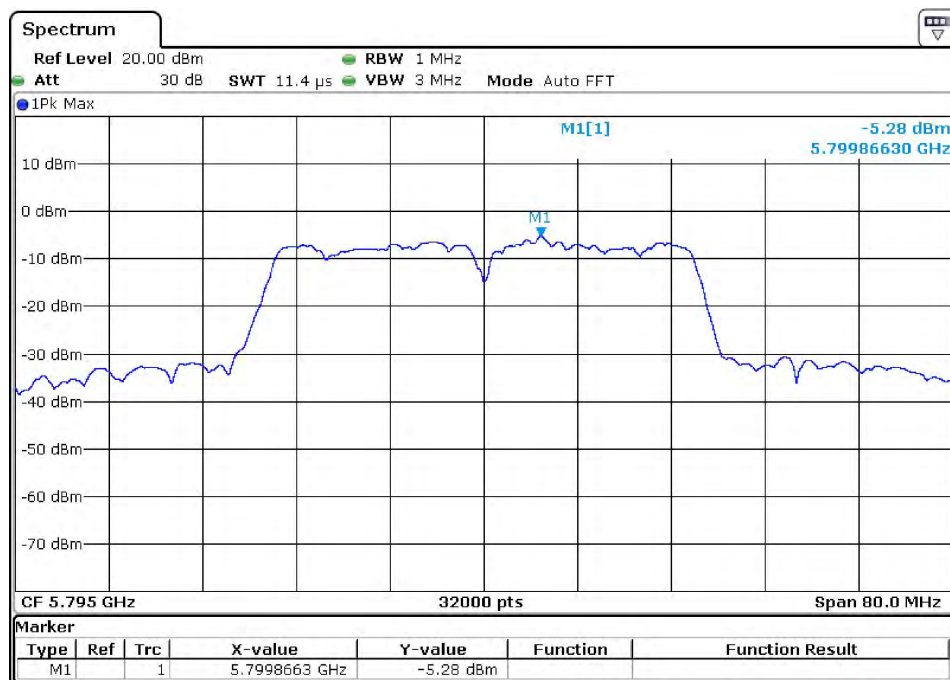
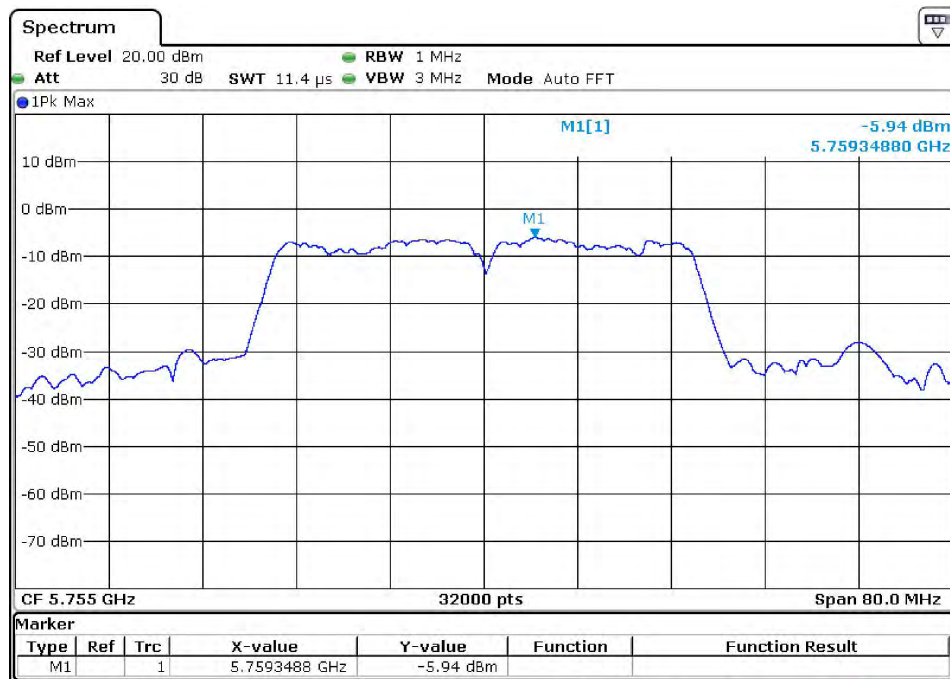






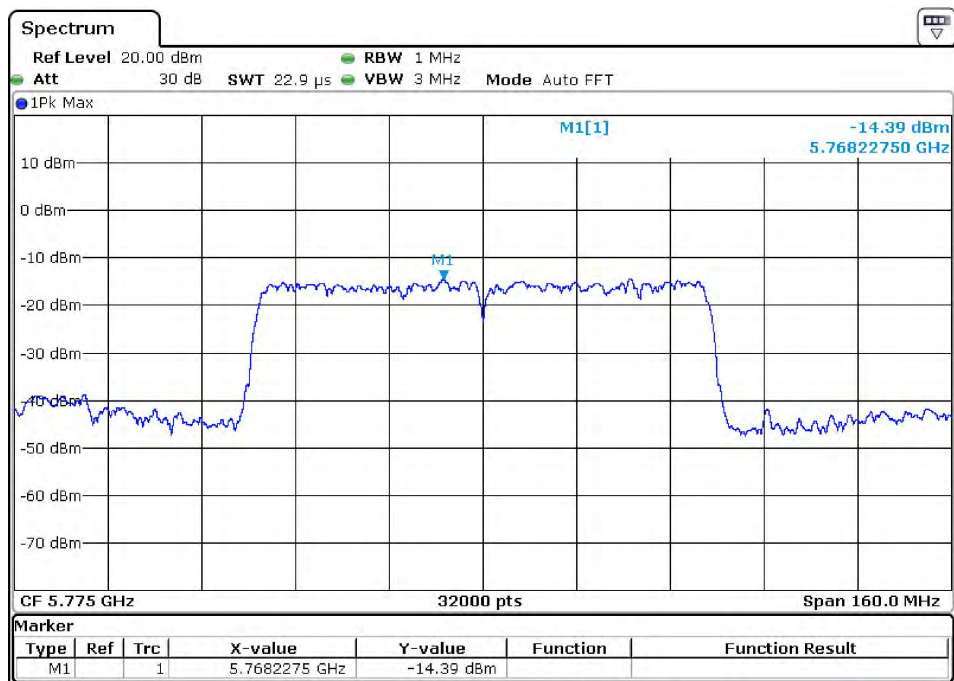
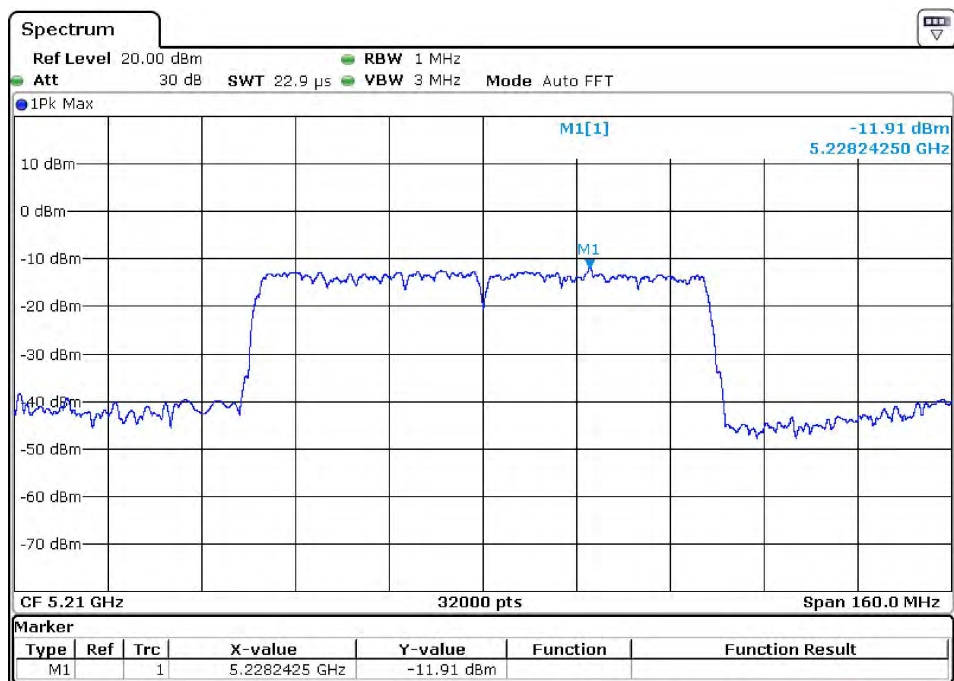
### Ant 802.11 ac40







## Ant 802.11 ac80





## 5.6 Maximum Peak Output Power

### 5.6.1 Applied procedures / Limit

For client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

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

#### FCC Part15 (15.407) , Subpart E

| Section               | Test Item            | Limit                      | Frequency<br>Range (MHz) | Result |
|-----------------------|----------------------|----------------------------|--------------------------|--------|
| 15.407(E)<br>(ii)/(3) | Peak Output<br>Power | 0.25 watt or<br>23.9794dBm | 5150-5250                | PASS   |
|                       |                      | 1 watt or 30dBm            | 5725-5850                | PASS   |

### 5.6.2 Test procedure

KDB 789033 D02v01r01 - Section E) 3) b) Method PM-G

The EUT was directly connected to the Power Sensor & Power meter.

Average power measurements were performed only when the EUT was transmitting at its maximum power control level using a broadband power meter with a pulse sensor. The power meter implemented triggering and gating capabilities which were set up such that power measurements were recorded only during the ON time of the transmitter. The trace was averaged over 100 traces to obtain the final measured average power.



### 5.6.3 Test Setup



### 5.6.4 Deviation from standard

No deviation.



### 5.6.5 Test results

| Test Mode  | Data Rate (Mbps) | Channel No. | Freq. (MHz) | Ant Average Power (dBm) | Limit ≤(dBm) | Result |
|------------|------------------|-------------|-------------|-------------------------|--------------|--------|
| 11a        | 6                | 36          | 5180        | 6.72                    | 23.9794      | Pass   |
| 11a        | 6                | 44          | 5220        | 6.48                    | 23.9794      | Pass   |
| 11a        | 6                | 48          | 5240        | 6.51                    | 23.9794      | Pass   |
| 11a        | 6                | 149         | 5745        | 5.65                    | 30           | Pass   |
| 11a        | 6                | 157         | 5785        | 5.34                    | 30           | Pass   |
| 11a        | 6                | 165         | 5825        | 5.27                    | 30           | Pass   |
| 11n-HT20   | 7.2              | 36          | 5180        | 6.65                    | 23.9794      | Pass   |
| 11n-HT20   | 7.2              | 44          | 5220        | 6.33                    | 23.9794      | Pass   |
| 11n-HT20   | 7.2              | 48          | 5240        | 6.26                    | 23.9794      | Pass   |
| 11n-HT20   | 7.2              | 149         | 5745        | 5.71                    | 30           | Pass   |
| 11n-HT20   | 7.2              | 157         | 5785        | 5.45                    | 30           | Pass   |
| 11n-HT20   | 7.2              | 165         | 5825        | 5.36                    | 30           | Pass   |
| 11n-HT40   | 15               | 38          | 5190        | 6.19                    | 23.9794      | Pass   |
| 11n-HT40   | 15               | 46          | 5230        | 6.68                    | 23.9794      | Pass   |
| 11n-HT40   | 15               | 151         | 5755        | 5.52                    | 30           | Pass   |
| 11n-HT40   | 15               | 159         | 5795        | 5.33                    | 30           | Pass   |
| 11ac-VHT20 | 7.2              | 36          | 5180        | 6.29                    | 23.9794      | Pass   |
| 11ac-VHT20 | 7.2              | 44          | 5220        | 6.46                    | 23.9794      | Pass   |
| 11ac-VHT20 | 7.2              | 48          | 5240        | 6.35                    | 23.9794      | Pass   |
| 11ac-VHT20 | 7.2              | 149         | 5745        | 5.74                    | 30           | Pass   |
| 11ac-VHT20 | 7.2              | 157         | 5785        | 5.48                    | 30           | Pass   |
| 11ac-VHT20 | 7.2              | 165         | 5825        | 5.50                    | 30           | Pass   |
| 11ac-VHT40 | 15               | 38          | 5190        | 6.13                    | 23.9794      | Pass   |
| 11ac-VHT40 | 15               | 46          | 5230        | 6.69                    | 23.9794      | Pass   |
| 11ac-VHT40 | 15               | 151         | 5755        | 5.25                    | 30           | Pass   |
| 11ac-VHT40 | 15               | 159         | 5795        | 5.34                    | 30           | Pass   |
| 11ac-VHT80 | 32.5             | 42          | 5210        | 6.68                    | 23.9794      | Pass   |
| 11ac-VHT80 | 32.5             | 155         | 5775        | 6.45                    | 30           | Pass   |



## **5.7 FREQUENCY STABILITY MEASUREMENT**

### **5.7.1 Applied procedures / Limit**

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an Emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

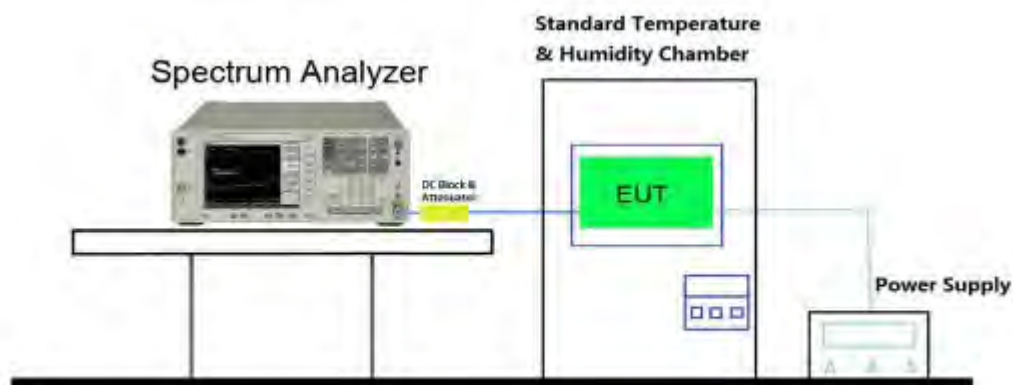
### **5.7.2 Test procedure**

1. The equipment under test was connected to an external AC or DC power supply and input rated voltage. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators. The EUT was placed inside the temperature chamber. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 20oC operating frequency as reference frequency. Turn EUT off and set the chamber temperature to  $-20^{\circ}\text{C}$ . After the temperature stabilized for approximately 30 minutes recorded the frequency. Repeat step measure with  $10^{\circ}\text{C}$  increased per stage until the highest temperature of  $+50^{\circ}\text{C}$  reached.

### **5.7.3 Deviation from standard**

No deviation.

### **5.7.4 Test setup**



### 5.7.5 Test results

IEEE 802.11a MHz mode / 5180 ~ 5240MHz

(Low)

| Environment Temperature<br>( °C ) | Voltage<br>(V) | Measured Frequency<br>(MHz) | limit Range | Test Result |
|-----------------------------------|----------------|-----------------------------|-------------|-------------|
| 50                                | 120            | 5179.998838                 | 5150-5250   | PASS        |
| 40                                | 120            | 5179.979562                 | 5150-5250   | PASS        |
| 30                                | 120            | 5179.979616                 | 5150-5250   | PASS        |
| 20                                | 120            | 5179.987415                 | 5150-5250   | PASS        |
| 10                                | 120            | 5179.998410                 | 5150-5250   | PASS        |
| 0                                 | 120            | 5179.970613                 | 5150-5250   | PASS        |
| -10                               | 120            | 5179.965460                 | 5150-5250   | PASS        |
| -20                               | 120            | 5179.973370                 | 5150-5250   | PASS        |

| Environment Temperature<br>( °C ) | Voltage<br>(V) | Measured Frequency<br>(MHz) | limit Range | Test Result |
|-----------------------------------|----------------|-----------------------------|-------------|-------------|
| 20                                | 108            | 5179.951656                 | 5150-5250   | PASS        |
|                                   | 120            | 5179.987415                 | 5150-5250   | PASS        |
|                                   | 132            | 5179.956744                 | 5150-5250   | PASS        |



**IEEE 802.11a MHz mode / 5180 ~ 5240MHz**

**(High)**

| Environment Temperature<br>( °C ) | Voltage<br>(V) | Measured Frequency<br>(MHz) | limit Range | Test Result |
|-----------------------------------|----------------|-----------------------------|-------------|-------------|
| 50                                | 120            | 5239.999987                 | 5150-5250   | PASS        |
| 40                                | 120            | 5239.995417                 | 5150-5250   | PASS        |
| 30                                | 120            | 5239.984878                 | 5150-5250   | PASS        |
| 20                                | 120            | 5239.997872                 | 5150-5250   | PASS        |
| 10                                | 120            | 5239.995883                 | 5150-5250   | PASS        |
| 0                                 | 120            | 5239.963186                 | 5150-5250   | PASS        |
| -10                               | 120            | 5239.984254                 | 5150-5250   | PASS        |
| -20                               | 120            | 5239.988093                 | 5150-5250   | PASS        |

| Environment Temperature<br>( °C ) | Voltage<br>(V) | Measured Frequency<br>(MHz) | limit Range | Test Result |
|-----------------------------------|----------------|-----------------------------|-------------|-------------|
| 20                                | 108            | 5239.949056                 | 5150-5250   | PASS        |
|                                   | 120            | 5239.997872                 | 5150-5250   | PASS        |
|                                   | 132            | 5239.975631                 | 5150-5250   | PASS        |

**IEEE 802.11n HT 20 MHz mode / 5180 ~ 5240MHz**

**(Low)**

| Environment Temperature<br>( °C ) | Voltage<br>(V) | Measured Frequency<br>(MHz) | limit Range | Test Result |
|-----------------------------------|----------------|-----------------------------|-------------|-------------|
| 50                                | 120            | 5179.967292                 | 5150-5250   | PASS        |
| 40                                | 120            | 5179.990257                 | 5150-5250   | PASS        |
| 30                                | 120            | 5179.950633                 | 5150-5250   | PASS        |
| 20                                | 120            | 5179.985548                 | 5150-5250   | PASS        |
| 10                                | 120            | 5179.974787                 | 5150-5250   | PASS        |
| 0                                 | 120            | 5179.957973                 | 5150-5250   | PASS        |
| -10                               | 120            | 5179.960728                 | 5150-5250   | PASS        |
| -20                               | 120            | 5179.954783                 | 5150-5250   | PASS        |

| Environment Temperature<br>( °C ) | Voltage<br>(V) | Measured Frequency<br>(MHz) | limit Range | Test Result |
|-----------------------------------|----------------|-----------------------------|-------------|-------------|
|-----------------------------------|----------------|-----------------------------|-------------|-------------|



|    |     |             |           |      |
|----|-----|-------------|-----------|------|
| 20 | 108 | 5179.981091 | 5150-5250 | PASS |
|    | 120 | 5179.985548 | 5150-5250 | PASS |
|    | 132 | 5179.975077 | 5150-5250 | PASS |

**IEEE 802.11n HT 20 MHz mode / 5180 ~ 5240MHz (High)**

| Environment Temperature<br>( °C ) | Voltage<br>(V) | Measured Frequency<br>(MHz) | limit Range | Test Result |
|-----------------------------------|----------------|-----------------------------|-------------|-------------|
| 50                                | 120            | 5239.962559                 | 5150-5250   | PASS        |
| 40                                | 120            | 5239.985396                 | 5150-5250   | PASS        |
| 30                                | 120            | 5239.958948                 | 5150-5250   | PASS        |
| 20                                | 120            | 5239.987657                 | 5150-5250   | PASS        |
| 10                                | 120            | 5239.962840                 | 5150-5250   | PASS        |
| 0                                 | 120            | 5239.959431                 | 5150-5250   | PASS        |
| -10                               | 120            | 5239.998319                 | 5150-5250   | PASS        |
| -20                               | 120            | 5239.971121                 | 5150-5250   | PASS        |

| Environment Temperature<br>( °C ) | Voltage<br>(V) | Measured Frequency<br>(MHz) | limit Range | Test Result |
|-----------------------------------|----------------|-----------------------------|-------------|-------------|
| 20                                | 108            | 5239.967188                 | 5150-5250   | PASS        |
|                                   | 120            | 5239.987657                 | 5150-5250   | PASS        |
|                                   | 132            | 5239.993788                 | 5150-5250   | PASS        |

**IEEE 802.11ac 20 mode / 5180 ~ 5240MHz (Low)**

| Environment Temperature<br>( °C ) | Voltage<br>(V) | Measured Frequency<br>(MHz) | limit Range | Test Result |
|-----------------------------------|----------------|-----------------------------|-------------|-------------|
| 50                                | 120            | 5179.983216                 | 5150-5250   | PASS        |
| 40                                | 120            | 5179.955431                 | 5150-5250   | PASS        |
| 30                                | 120            | 5179.958831                 | 5150-5250   | PASS        |
| 20                                | 120            | 5179.987545                 | 5150-5250   | PASS        |
| 10                                | 120            | 5179.981680                 | 5150-5250   | PASS        |
| 0                                 | 120            | 5179.984304                 | 5150-5250   | PASS        |



|     |     |             |           |      |
|-----|-----|-------------|-----------|------|
| -10 | 120 | 5179.978107 | 5150-5250 | PASS |
| -20 | 120 | 5179.997610 | 5150-5250 | PASS |

| Environment Temperature<br>( °C ) | Voltage<br>(V) | Measured Frequency<br>(MHz) | limit Range | Test Result |
|-----------------------------------|----------------|-----------------------------|-------------|-------------|
| 20                                | 108            | 5179.988376                 | 5150-5250   | PASS        |
|                                   | 120            | 5179.987545                 | 5150-5250   | PASS        |
|                                   | 132            | 5179.976338                 | 5150-5250   | PASS        |

**IEEE 802.11ac 20 mode / 5180 ~ 5240MHz**

**(High)**

| Environment Temperature<br>( °C ) | Voltage<br>(V) | Measured Frequency<br>(MHz) | limit Range | Test Result |
|-----------------------------------|----------------|-----------------------------|-------------|-------------|
| 50                                | 120            | 5239.981818                 | 5150-5250   | PASS        |
| 40                                | 120            | 5239.986557                 | 5150-5250   | PASS        |
| 30                                | 120            | 5239.989892                 | 5150-5250   | PASS        |
| 20                                | 120            | 5239.974154                 | 5150-5250   | PASS        |
| 10                                | 120            | 5239.973712                 | 5150-5250   | PASS        |
| 0                                 | 120            | 5239.982016                 | 5150-5250   | PASS        |
| -10                               | 120            | 5239.977760                 | 5150-5250   | PASS        |
| -20                               | 120            | 5239.978661                 | 5150-5250   | PASS        |

| Environment Temperature<br>( °C ) | Voltage<br>(V) | Measured Frequency<br>(MHz) | limit Range | Test Result |
|-----------------------------------|----------------|-----------------------------|-------------|-------------|
| 20                                | 108            | 5239.964758                 | 5150-5250   | PASS        |
|                                   | 120            | 5239.974154                 | 5150-5250   | PASS        |
|                                   | 132            | 5239.971184                 | 5150-5250   | PASS        |

**IEEE 802.11ac 20 mode / 5745 ~ 5825MHz**

**(Low)**

| Environment Temperature<br>( °C ) | Voltage<br>(V) | Measured Frequency<br>(MHz) | limit Range | Test Result |
|-----------------------------------|----------------|-----------------------------|-------------|-------------|
| 50                                | 120            | 5744.978968                 | 5725-5850   | PASS        |



|     |     |             |           |      |
|-----|-----|-------------|-----------|------|
| 40  | 120 | 5744.992524 | 5725-5850 | PASS |
| 30  | 120 | 5744.950921 | 5725-5850 | PASS |
| 20  | 120 | 5744.983746 | 5725-5850 | PASS |
| 10  | 120 | 5744.976956 | 5725-5850 | PASS |
| 0   | 120 | 5744.971181 | 5725-5850 | PASS |
| -10 | 120 | 5744.986537 | 5725-5850 | PASS |
| -20 | 120 | 5744.974432 | 5725-5850 | PASS |

| Environment Temperature<br>( °C ) | Voltage<br>(V) | Measured Frequency<br>(MHz) | limit Range | Test Result |
|-----------------------------------|----------------|-----------------------------|-------------|-------------|
| 20                                | 108            | 5744.977376                 | 5725-5850   | PASS        |
|                                   | 120            | 5744.983746                 | 5725-5850   | PASS        |
|                                   | 132            | 5744.989210                 | 5725-5850   | PASS        |

**IEEE 802.11ac 20 mode / 5745 ~ 5825MHz**

**(High)**

| Environment Temperature<br>( °C ) | Voltage<br>(V) | Measured Frequency<br>(MHz) | limit Range | Test Result |
|-----------------------------------|----------------|-----------------------------|-------------|-------------|
| 50                                | 120            | 5824.967914                 | 5725-5850   | PASS        |
| 40                                | 120            | 5824.992893                 | 5725-5850   | PASS        |
| 30                                | 120            | 5824.983970                 | 5725-5850   | PASS        |
| 20                                | 120            | 5824.975459                 | 5725-5850   | PASS        |
| 10                                | 120            | 5824.951921                 | 5725-5850   | PASS        |
| 0                                 | 120            | 5824.953549                 | 5725-5850   | PASS        |
| -10                               | 120            | 5824.952827                 | 5725-5850   | PASS        |
| -20                               | 120            | 5824.971984                 | 5725-5850   | PASS        |

| Environment Temperature<br>( °C ) | Voltage<br>(V) | Measured Frequency<br>(MHz) | limit Range | Test Result |
|-----------------------------------|----------------|-----------------------------|-------------|-------------|
| 20                                | 108            | 5824.991185                 | 5725-5850   | PASS        |
|                                   | 120            | 5824.975459                 | 5725-5850   | PASS        |
|                                   | 132            | 5824.960776                 | 5725-5850   | PASS        |



**IEEE 802.11n HT 40 MHz mode / 5190 ~ 5230MHz (Low)**

| Environment Temperature<br>( °C ) | Voltage<br>(V) | Measured Frequency<br>(MHz) | limit Range | Test Result |
|-----------------------------------|----------------|-----------------------------|-------------|-------------|
| 50                                | 120            | 5189.974578                 | 5150-5250   | PASS        |
| 40                                | 120            | 5189.960791                 | 5150-5250   | PASS        |
| 30                                | 120            | 5189.962831                 | 5150-5250   | PASS        |
| 20                                | 120            | 5189.997841                 | 5150-5250   | PASS        |
| 10                                | 120            | 5189.985305                 | 5150-5250   | PASS        |
| 0                                 | 120            | 5189.975458                 | 5150-5250   | PASS        |
| -10                               | 120            | 5189.967396                 | 5150-5250   | PASS        |
| -20                               | 120            | 5189.960960                 | 5150-5250   | PASS        |

| Environment Temperature<br>( °C ) | Voltage<br>(V) | Measured Frequency<br>(MHz) | limit Range | Test Result |
|-----------------------------------|----------------|-----------------------------|-------------|-------------|
| 20                                | 108            | 5189.965901                 | 5150-5250   | PASS        |
|                                   | 120            | 5189.997841                 | 5150-5250   | PASS        |
|                                   | 132            | 5189.973252                 | 5150-5250   | PASS        |

**IEEE 802.11n HT 40 MHz mode / 5190 ~ 5230MHz (High)**

| Environment Temperature<br>( °C ) | Voltage<br>(V) | Measured Frequency<br>(MHz) | limit Range | Test Result |
|-----------------------------------|----------------|-----------------------------|-------------|-------------|
| 50                                | 120            | 5229.994150                 | 5150-5250   | PASS        |
| 40                                | 120            | 5229.954451                 | 5150-5250   | PASS        |
| 30                                | 120            | 5229.980414                 | 5150-5250   | PASS        |
| 20                                | 120            | 5230.000145                 | 5150-5250   | PASS        |
| 10                                | 120            | 5229.985715                 | 5150-5250   | PASS        |
| 0                                 | 120            | 5229.957876                 | 5150-5250   | PASS        |
| -10                               | 120            | 5229.985975                 | 5150-5250   | PASS        |
| -20                               | 120            | 5229.996253                 | 5150-5250   | PASS        |



| Environment Temperature<br>( °C ) | Voltage<br>(V) | Measured Frequency<br>(MHz) | limit Range | Test Result |
|-----------------------------------|----------------|-----------------------------|-------------|-------------|
| 20                                | 108            | 5229.962177                 | 5150-5250   | PASS        |
|                                   | 120            | 5230.000145                 | 5150-5250   | PASS        |
|                                   | 132            | 5229.988734                 | 5150-5250   | PASS        |

**IEEE 802.11ac 40 mode / 5190 ~ 5230MHz**

**(Low)**

| Environment Temperature<br>( °C ) | Voltage<br>(V) | Measured Frequency<br>(MHz) | limit Range | Test Result |
|-----------------------------------|----------------|-----------------------------|-------------|-------------|
| 50                                | 120            | 5189.979889                 | 5150-5250   | PASS        |
| 40                                | 120            | 5189.966334                 | 5150-5250   | PASS        |
| 30                                | 120            | 5189.981578                 | 5150-5250   | PASS        |
| 20                                | 120            | 5189.987645                 | 5150-5250   | PASS        |
| 10                                | 120            | 5189.990829                 | 5150-5250   | PASS        |
| 0                                 | 120            | 5189.959028                 | 5150-5250   | PASS        |
| -10                               | 120            | 5189.970527                 | 5150-5250   | PASS        |
| -20                               | 120            | 5189.964728                 | 5150-5250   | PASS        |

| Environment Temperature<br>( °C ) | Voltage<br>(V) | Measured Frequency<br>(MHz) | limit Range | Test Result |
|-----------------------------------|----------------|-----------------------------|-------------|-------------|
| 20                                | 108            | 5189.971344                 | 5150-5250   | PASS        |
|                                   | 120            | 5189.987645                 | 5150-5250   | PASS        |
|                                   | 132            | 5189.970353                 | 5150-5250   | PASS        |

**IEEE 802.11ac 40 mode / 5190 ~ 5230MHz**

**(High)**

| Environment Temperature<br>( °C ) | Voltage<br>(V) | Measured Frequency<br>(MHz) | limit Range | Test Result |
|-----------------------------------|----------------|-----------------------------|-------------|-------------|
| 50                                | 120            | 5229.960523                 | 5150-5250   | PASS        |
| 40                                | 120            | 5229.966570                 | 5150-5250   | PASS        |
| 30                                | 120            | 5229.970923                 | 5150-5250   | PASS        |
| 20                                | 120            | 5230.000475                 | 5150-5250   | PASS        |



|     |     |             |           |      |
|-----|-----|-------------|-----------|------|
| 10  | 120 | 5229.993170 | 5150-5250 | PASS |
| 0   | 120 | 5229.973519 | 5150-5250 | PASS |
| -10 | 120 | 5229.992659 | 5150-5250 | PASS |
| -20 | 120 | 5229.998211 | 5150-5250 | PASS |

| Environment Temperature<br>( °C ) | Voltage<br>(V) | Measured Frequency<br>(MHz) | limit Range | Test Result |
|-----------------------------------|----------------|-----------------------------|-------------|-------------|
| 20                                | 108            | 5229.959336                 | 5150-5250   | PASS        |
|                                   | 120            | 5230.000475                 | 5150-5250   | PASS        |
|                                   | 132            | 5229.955831                 | 5150-5250   | PASS        |

**IEEE 802.11n HT 40 MHz mode / 5755 ~ 5795MHz (Low)**

| Environment Temperature<br>( °C ) | Voltage<br>(V) | Measured Frequency<br>(MHz) | limit Range | Test Result |
|-----------------------------------|----------------|-----------------------------|-------------|-------------|
| 50                                | 120            | 5754.974714                 | 5725-5850   | PASS        |
| 40                                | 120            | 5754.973631                 | 5725-5850   | PASS        |
| 30                                | 120            | 5754.999826                 | 5725-5850   | PASS        |
| 20                                | 120            | 5754.984645                 | 5725-5850   | PASS        |
| 10                                | 120            | 5754.981964                 | 5725-5850   | PASS        |
| 0                                 | 120            | 5754.966515                 | 5725-5850   | PASS        |
| -10                               | 120            | 5754.998670                 | 5725-5850   | PASS        |
| -20                               | 120            | 5754.988421                 | 5725-5850   | PASS        |

| Environment Temperature<br>( °C ) | Voltage<br>(V) | Measured Frequency<br>(MHz) | limit Range | Test Result |
|-----------------------------------|----------------|-----------------------------|-------------|-------------|
| 20                                | 108            | 5754.999329                 | 5725-5850   | PASS        |
|                                   | 120            | 5754.984645                 | 5725-5850   | PASS        |
|                                   | 132            | 5754.976591                 | 5725-5850   | PASS        |

**IEEE 802.11n HT 40 MHz mode / 5755 ~ 5795MHz (High)**



| Environment Temperature<br>( °C ) | Voltage<br>(V) | Measured Frequency<br>(MHz) | limit Range | Test Result |
|-----------------------------------|----------------|-----------------------------|-------------|-------------|
| 50                                | 120            | 5794.961012                 | 5725-5850   | PASS        |
| 40                                | 120            | 5794.978656                 | 5725-5850   | PASS        |
| 30                                | 120            | 5794.976621                 | 5725-5850   | PASS        |
| 20                                | 120            | 5794.987215                 | 5725-5850   | PASS        |
| 10                                | 120            | 5794.975233                 | 5725-5850   | PASS        |
| 0                                 | 120            | 5794.980287                 | 5725-5850   | PASS        |
| -10                               | 120            | 5794.950711                 | 5725-5850   | PASS        |
| -20                               | 120            | 5794.962329                 | 5725-5850   | PASS        |

| Environment Temperature<br>( °C ) | Voltage<br>(V) | Measured Frequency<br>(MHz) | limit Range | Test Result |
|-----------------------------------|----------------|-----------------------------|-------------|-------------|
| 20                                | 108            | 5794.978922                 | 5725-5850   | PASS        |
|                                   | 120            | 5794.987215                 | 5725-5850   | PASS        |
|                                   | 132            | 5794.988281                 | 5725-5850   | PASS        |

IEEE 802.11ac 40 mode / 5755 ~ 5795MHz

(Low)

| Environment Temperature<br>( °C ) | Voltage<br>(V) | Measured Frequency<br>(MHz) | limit Range | Test Result |
|-----------------------------------|----------------|-----------------------------|-------------|-------------|
| 50                                | 120            | 5754.988732                 | 5725-5850   | PASS        |
| 40                                | 120            | 5754.993614                 | 5725-5850   | PASS        |
| 30                                | 120            | 5754.990652                 | 5725-5850   | PASS        |
| 20                                | 120            | 5754.994756                 | 5725-5850   | PASS        |
| 10                                | 120            | 5754.991209                 | 5725-5850   | PASS        |
| 0                                 | 120            | 5754.984227                 | 5725-5850   | PASS        |
| -10                               | 120            | 5754.974453                 | 5725-5850   | PASS        |
| -20                               | 120            | 5754.950140                 | 5725-5850   | PASS        |

| Environment Temperature<br>( °C ) | Voltage<br>(V) | Measured Frequency<br>(MHz) | limit Range | Test Result |
|-----------------------------------|----------------|-----------------------------|-------------|-------------|
|-----------------------------------|----------------|-----------------------------|-------------|-------------|



|    |     |             |           |      |
|----|-----|-------------|-----------|------|
| 20 | 108 | 5754.995734 | 5725-5850 | PASS |
|    | 120 | 5754.994756 | 5725-5850 | PASS |
|    | 132 | 5754.964884 | 5725-5850 | PASS |

**IEEE 802.11ac 40 mode / 5755 ~ 5795MHz**

**(High)**

| Environment Temperature<br>( °C ) | Voltage<br>(V) | Measured Frequency<br>(MHz) | limit Range | Test Result |
|-----------------------------------|----------------|-----------------------------|-------------|-------------|
| 50                                | 120            | 5794.977008                 | 5725-5850   | PASS        |
| 40                                | 120            | 5794.973173                 | 5725-5850   | PASS        |
| 30                                | 120            | 5794.973431                 | 5725-5850   | PASS        |
| 20                                | 120            | 5794.987452                 | 5725-5850   | PASS        |
| 10                                | 120            | 5794.957045                 | 5725-5850   | PASS        |
| 0                                 | 120            | 5794.983121                 | 5725-5850   | PASS        |
| -10                               | 120            | 5794.995805                 | 5725-5850   | PASS        |
| -20                               | 120            | 5794.966283                 | 5725-5850   | PASS        |

| Environment Temperature<br>( °C ) | Voltage<br>(V) | Measured Frequency<br>(MHz) | limit Range | Test Result |
|-----------------------------------|----------------|-----------------------------|-------------|-------------|
| 20                                | 108            | 5794.955326                 | 5725-5850   | PASS        |
|                                   | 120            | 5794.987452                 | 5725-5850   | PASS        |
|                                   | 132            | 5794.967645                 | 5725-5850   | PASS        |

**IEEE 802.11ac 80 mode / 5210MHz**

| Environment Temperature<br>( °C ) | Voltage<br>(V) | Measured Frequency<br>(MHz) | limit Range | Test Result |
|-----------------------------------|----------------|-----------------------------|-------------|-------------|
| 50                                | 120            | 5209.974043                 | 5150-5250   | PASS        |
| 40                                | 120            | 5209.991321                 | 5150-5250   | PASS        |
| 30                                | 120            | 5209.966412                 | 5150-5250   | PASS        |
| 20                                | 120            | 5210.000485                 | 5150-5250   | PASS        |
| 10                                | 120            | 5209.990034                 | 5150-5250   | PASS        |
| 0                                 | 120            | 5209.983925                 | 5150-5250   | PASS        |



|     |     |             |           |      |
|-----|-----|-------------|-----------|------|
| -10 | 120 | 5209.970924 | 5150-5250 | PASS |
| -20 | 120 | 5209.967610 | 5150-5250 | PASS |

| Environment Temperature<br>( °C ) | Voltage<br>(V) | Measured Frequency<br>(MHz) | limit Range | Test Result |
|-----------------------------------|----------------|-----------------------------|-------------|-------------|
| 20                                | 108            | 5209.983722                 | 5150-5250   | PASS        |
|                                   | 120            | 5210.000485                 | 5150-5250   | PASS        |
|                                   | 132            | 5209.988563                 | 5150-5250   | PASS        |

**IEEE 802.11ac 80 mode / 5775MHz**

| Environment Temperature<br>( °C ) | Voltage<br>(V) | Measured Frequency<br>(MHz) | limit Range | Test Result |
|-----------------------------------|----------------|-----------------------------|-------------|-------------|
| 50                                | 120            | 5774.977670                 | 5725-5850   | PASS        |
| 40                                | 120            | 5774.973364                 | 5725-5850   | PASS        |
| 30                                | 120            | 5774.989754                 | 5725-5850   | PASS        |
| 20                                | 120            | 5774.987712                 | 5725-5850   | PASS        |
| 10                                | 120            | 5774.969725                 | 5725-5850   | PASS        |
| 0                                 | 120            | 5774.956768                 | 5725-5850   | PASS        |
| -10                               | 120            | 5774.977992                 | 5725-5850   | PASS        |
| -20                               | 120            | 5774.966302                 | 5725-5850   | PASS        |

| Environment Temperature<br>( °C ) | Voltage<br>(V) | Measured Frequency<br>(MHz) | limit Range | Test Result |
|-----------------------------------|----------------|-----------------------------|-------------|-------------|
| 20                                | 108            | 5774.997993                 | 5725-5850   | PASS        |
|                                   | 120            | 5774.987712                 | 5725-5850   | PASS        |
|                                   | 132            | 5774.981728                 | 5725-5850   | PASS        |



## **5.8 AUTOMATICALLY DISCONTINUE TRANSMISSION**

### **5.8.1 LIMIT OF AUTOMATICALLY DISCONTINUE TRANSMISSION**

The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure. These provisions are not intended to preclude the transmission of control or signaling information or the use of repetitive codes used by certain digital technologies to complete frame or burst intervals. Applicants shall include in their application for equipment authorization to describe how this requirement is met.

### **5.8.2 TEST RESULT OF AUTOMATICALLY DISCONTINUE TRANSMISSION**

During no any information transmission, the EUT can automatically discontinue transmission and become standby mode for power saving. The EUT can detect the controlling signal of ACK message transmitting from remote device and verify whether it shall resend or discontinue transmission

## **5.9 ANTENNA REQUIREMENT**

### **5.9.1 STANDARD REQUIREMENT**

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

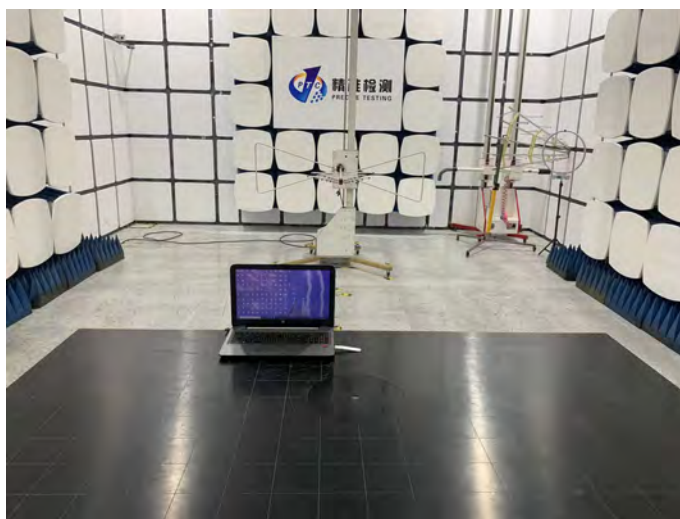
### **5.9.2 EUT ANTENNA**

The EUT'S antenna, permanent attached antenna, is PCB Antenna. The antenna's gain is 2dBi and meets the requirement.

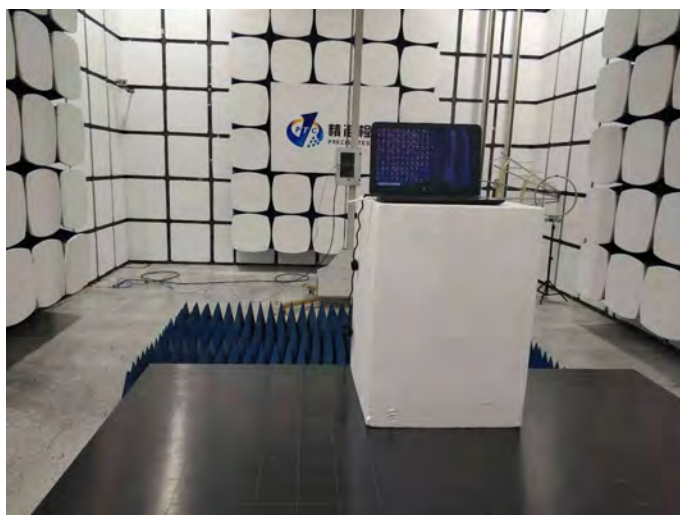
## 6 Photographs

### 6.1 Radiated Emission Test Setup

**Below 1G**



**Above 1G**



## 6.2 Conduction Emission Test Setup





Report No.: PTC21112400103E-FC02

## 6.3 EUT Constructional Details

Reference file "EUT photo"

**\*\*End of report\*\***