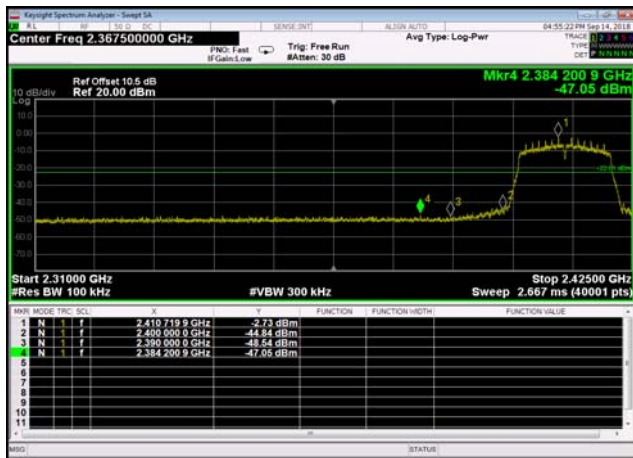
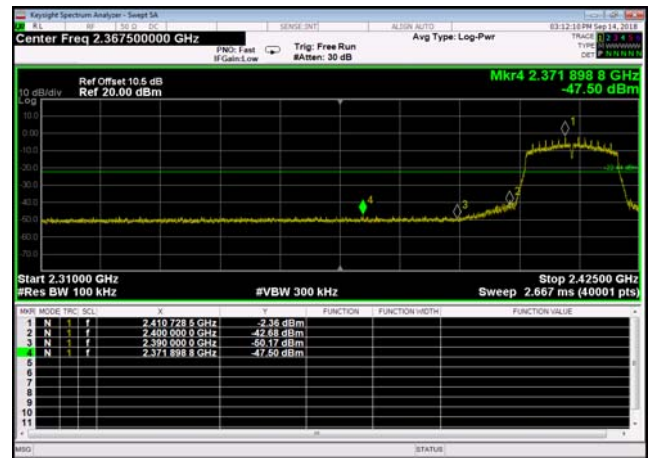


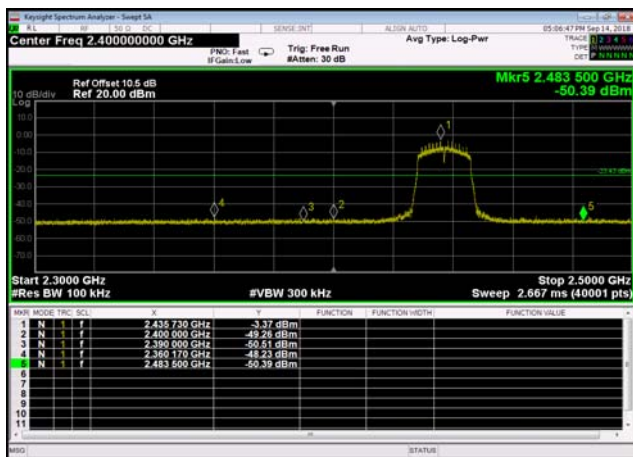
Band Edge-802.11n(HT20)  
,2412MHz,Ant0



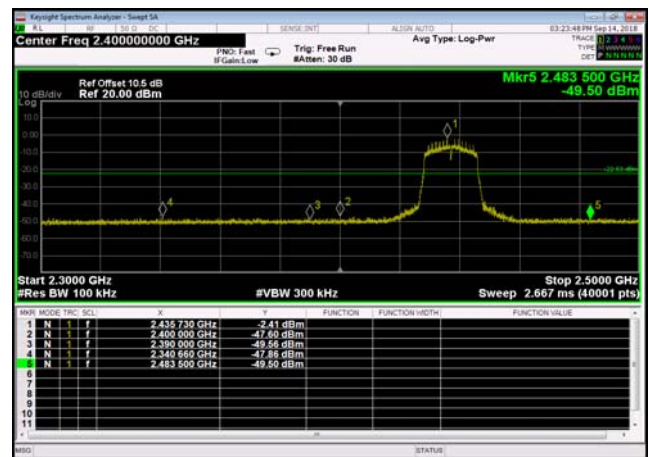
Band Edge-802.11n(HT20)  
,2412MHz,Ant1



Band Edge-802.11n(HT20)  
,2437MHz,Ant0



Band Edge-802.11n(HT20)  
,2437MHz,Ant1



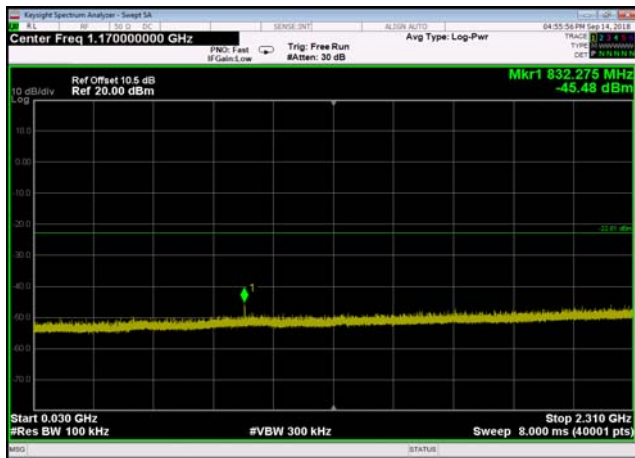
Band Edge-802.11n(HT20)  
,2462MHz,Ant0



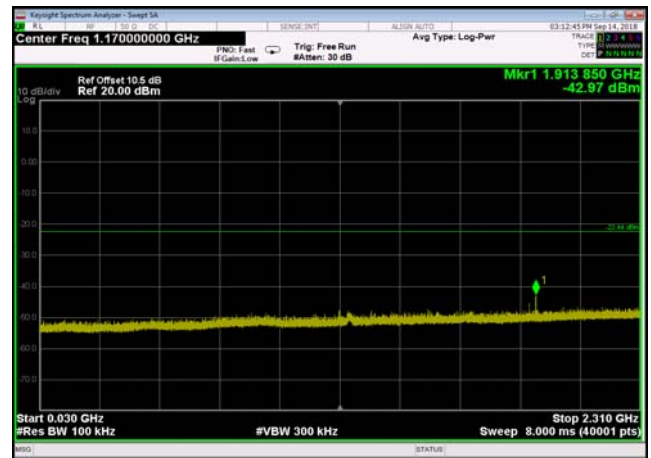
Band Edge-802.11n(HT20)  
,2462MHz,Ant1



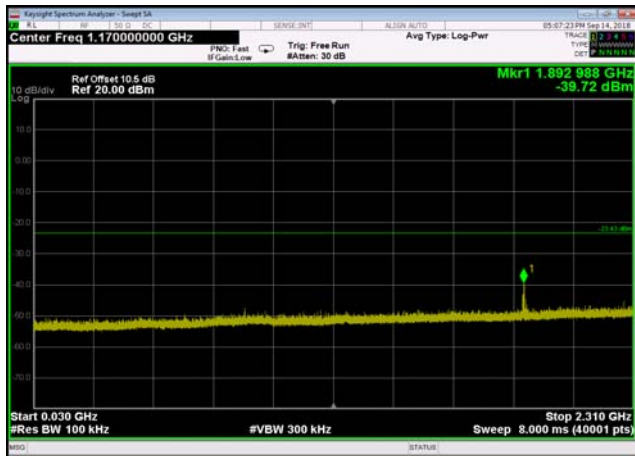
30MHz~2310MHz-802.11n(HT20)  
,2412MHz,Ant0



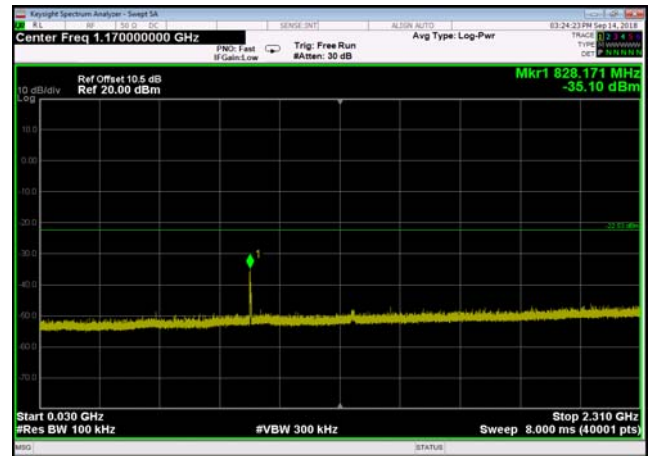
30MHz~2310MHz-802.11n(HT20)  
,2412MHz,Ant1



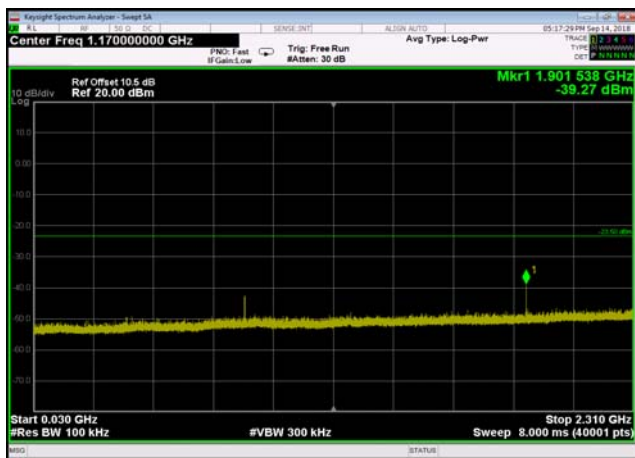
30MHz~2310MHz-802.11n(HT20)  
,2437MHz,Ant0



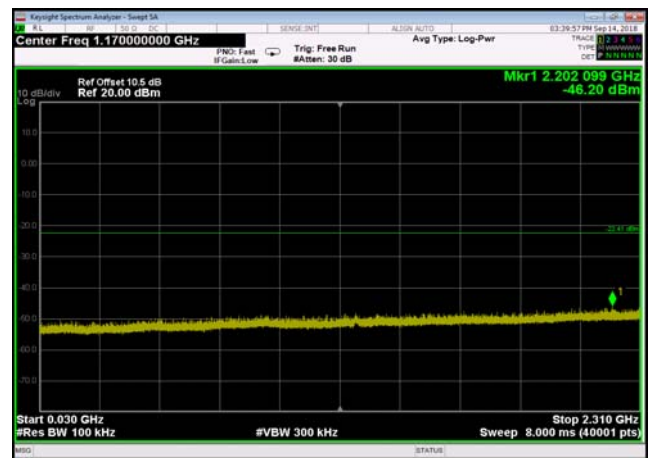
30MHz~2310MHz-802.11n(HT20)  
,2437MHz,Ant1



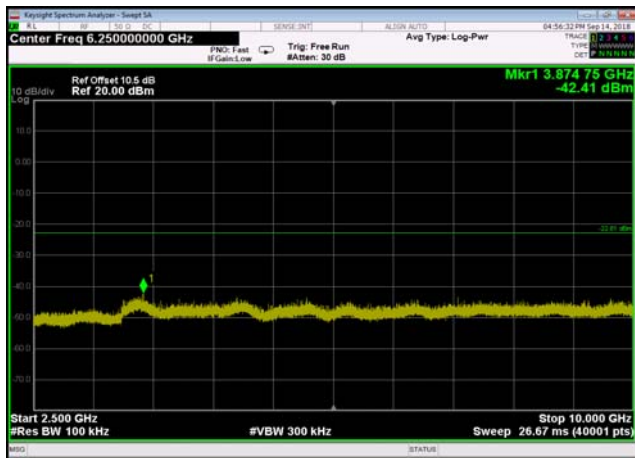
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,2462MHz,Ant0



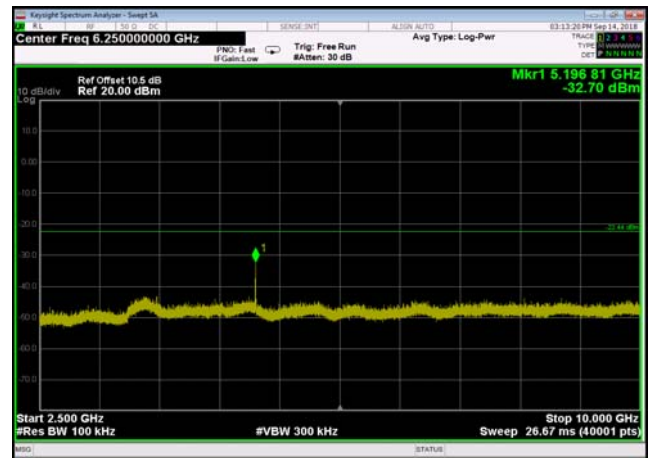
30MHz~2310MHz-802.11n(HT20)  
,2462MHz,Ant1



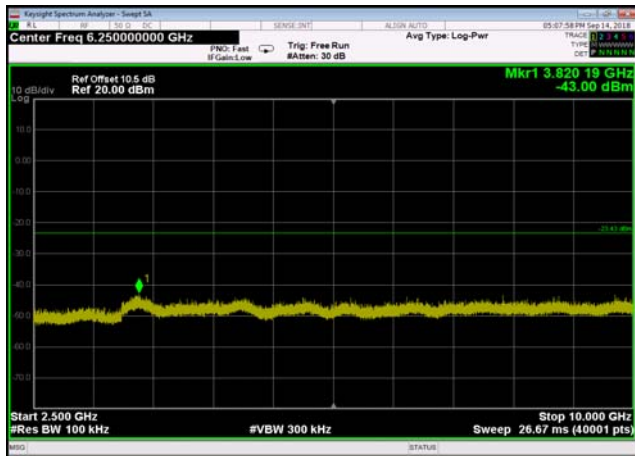
2500MHz~10000MHz-802.11n(HT20  
) ,2412MHz,Ant0



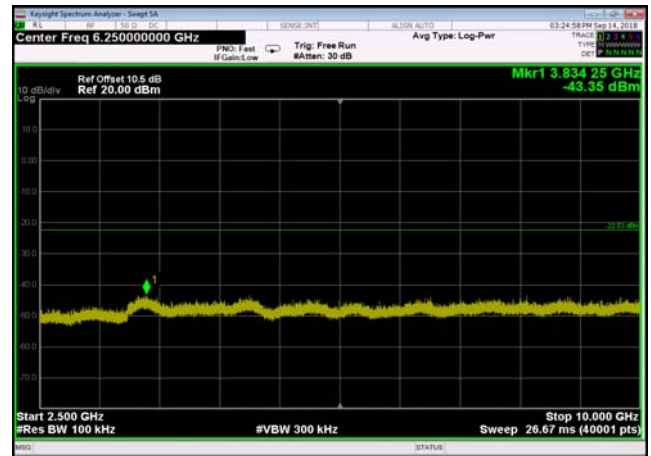
2500MHz~10000MHz-802.11n(HT20  
) ,2412MHz,Ant1



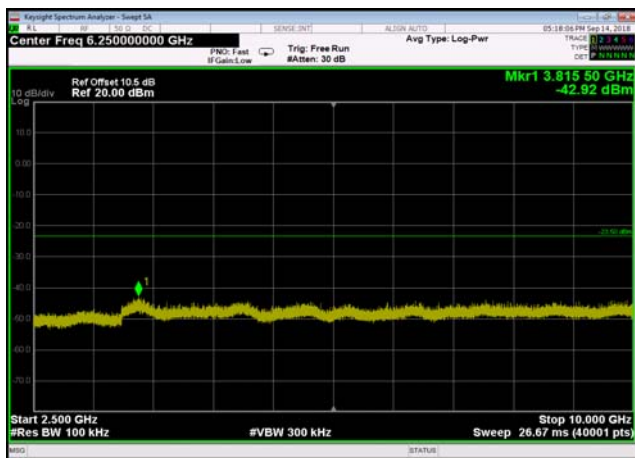
2500MHz~10000MHz-802.11n(HT20  
) ,2437MHz,Ant0



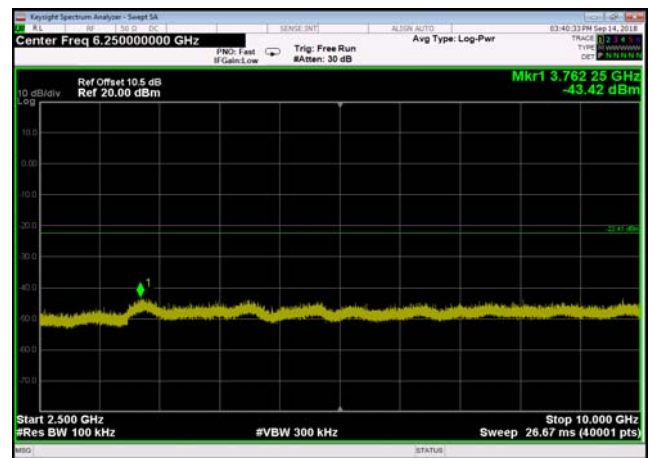
2500MHz~10000MHz-802.11n(HT20  
) ,2437MHz,Ant1



2500MHz~10000MHz-802.11n(HT20  
) ,2462MHz,Ant0

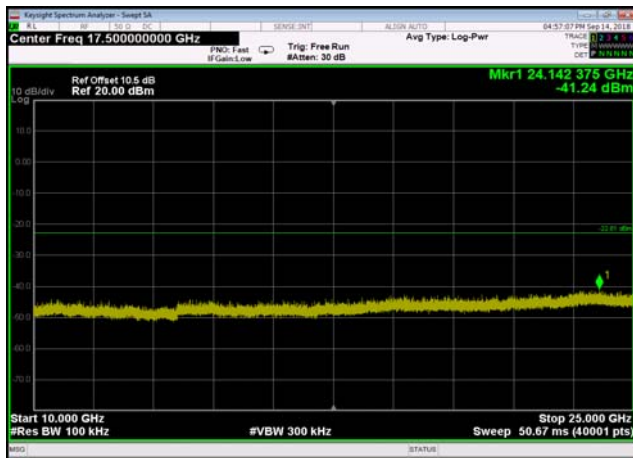


2500MHz~10000MHz-802.11n(HT20  
) ,2462MHz,Ant1

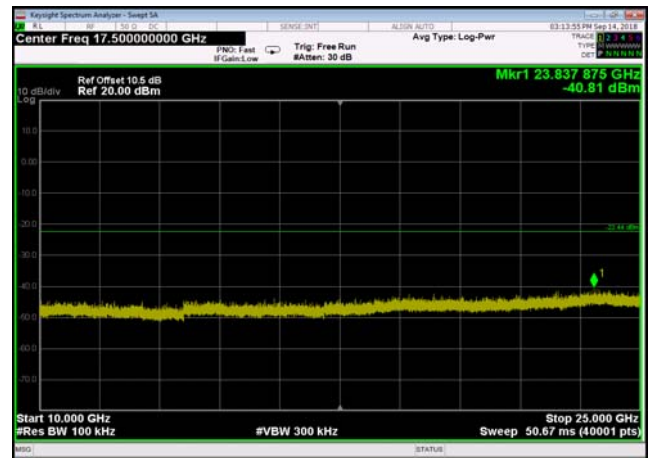




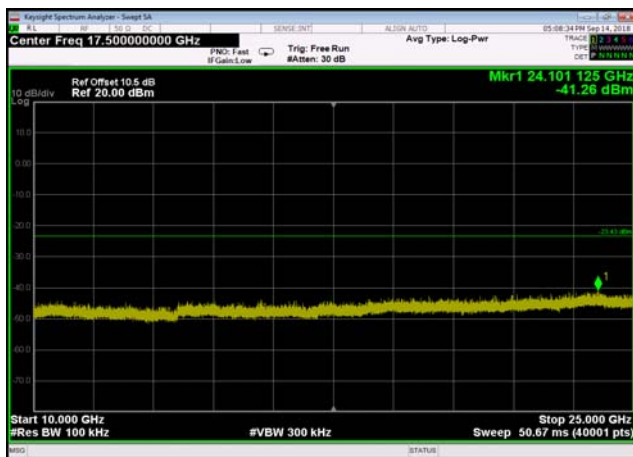
10000MHz~25000MHz-802.11n(HT2  
0),2412MHz,Ant0



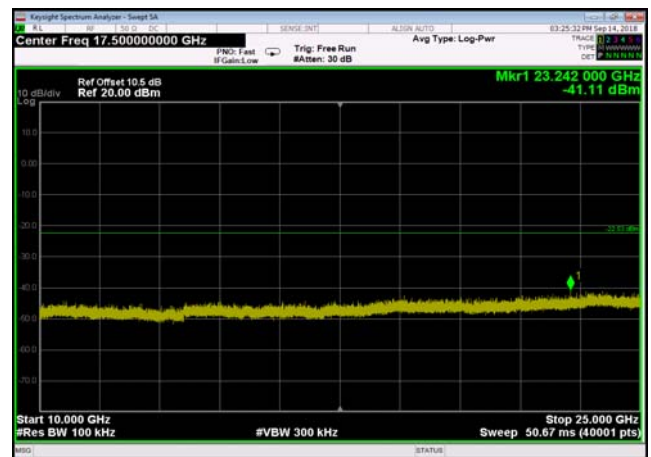
10000MHz~25000MHz-802.11n(HT2  
0),2412MHz,Ant1



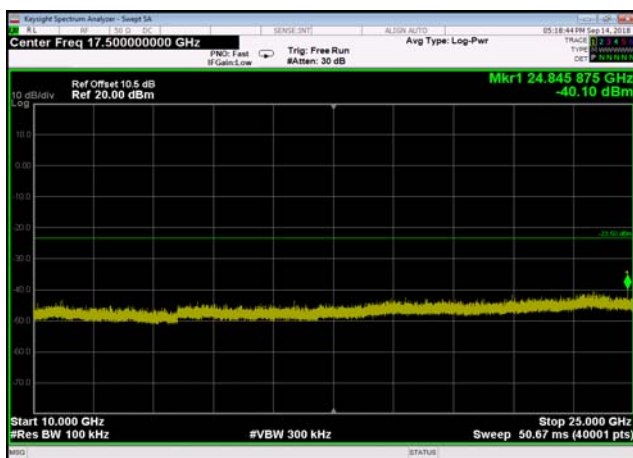
10000MHz~25000MHz-802.11n(HT2  
0),2437MHz,Ant0



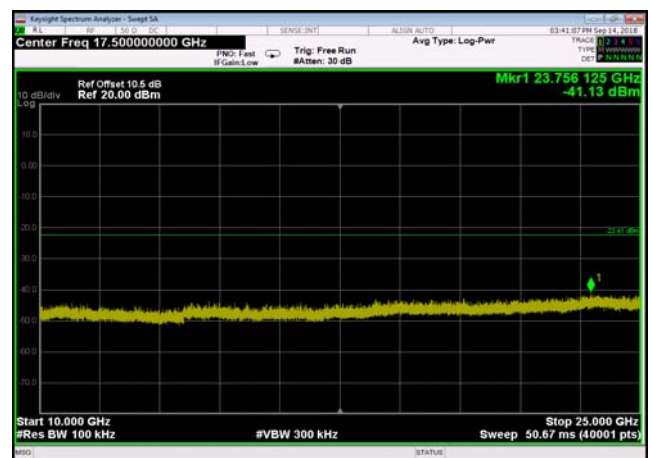
10000MHz~25000MHz-802.11n(HT2  
0),2437MHz,Ant1



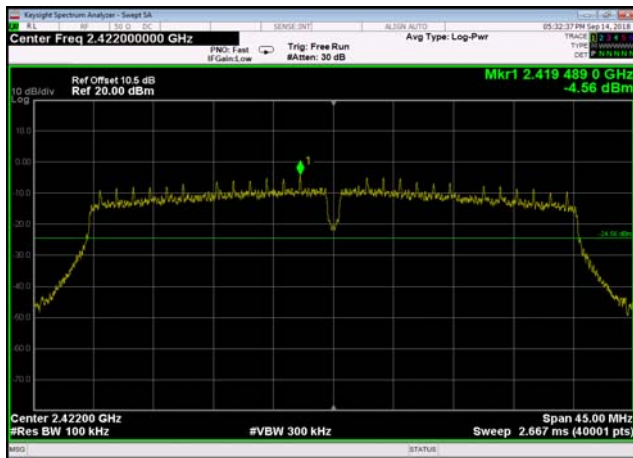
10000MHz~25000MHz-802.11n(HT2  
0),2462MHz,Ant0



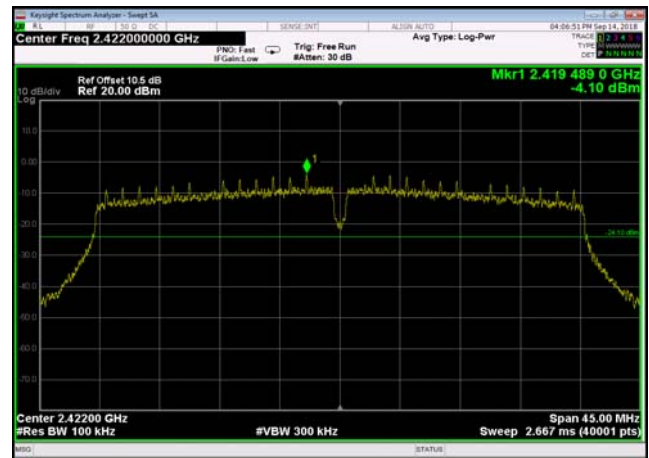
10000MHz~25000MHz-802.11n(HT2  
0),2462MHz,Ant1



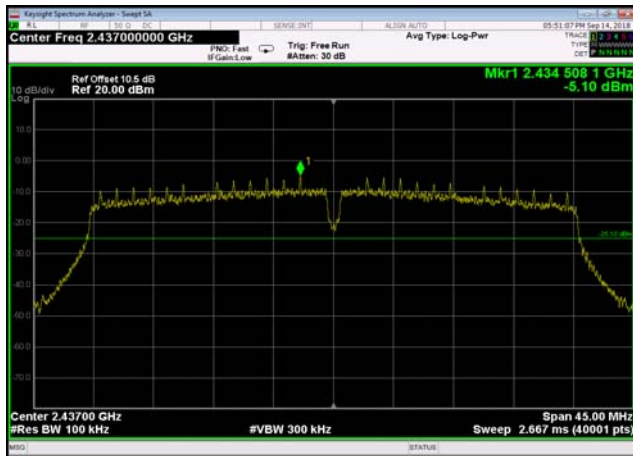
Reference Level-802.11n(HT40)  
,2422MHz,Ant0



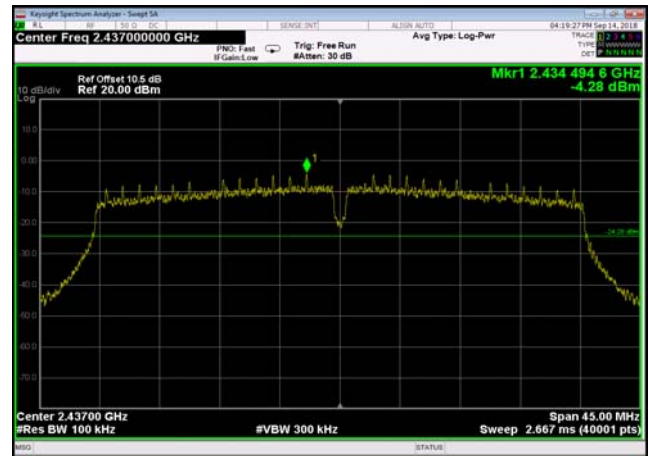
Reference Level-802.11n(HT40)  
,2422MHz,Ant1



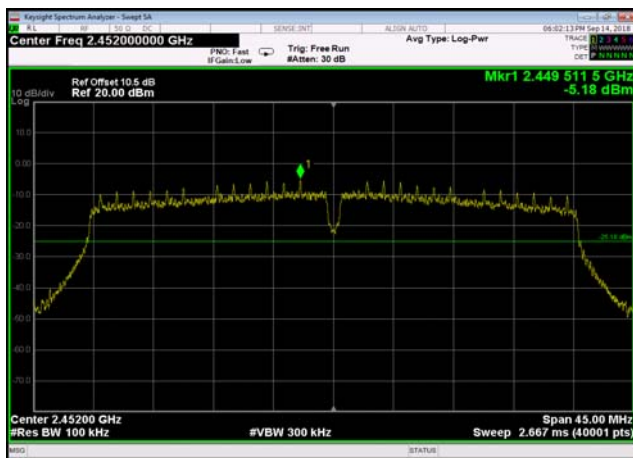
Reference Level-802.11n(HT40)  
,2437MHz,Ant0



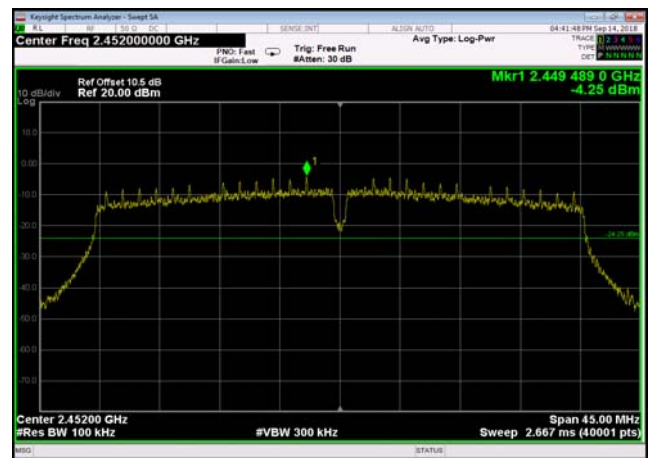
Reference Level-802.11n(HT40)  
,2437MHz,Ant1



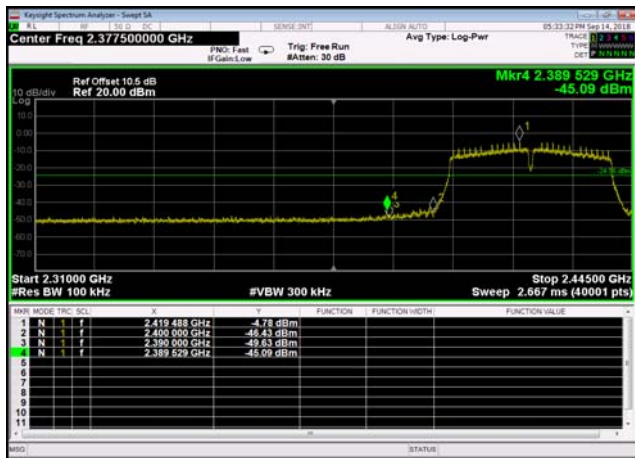
Reference Level-802.11n(HT40)  
,2452MHz,Ant0



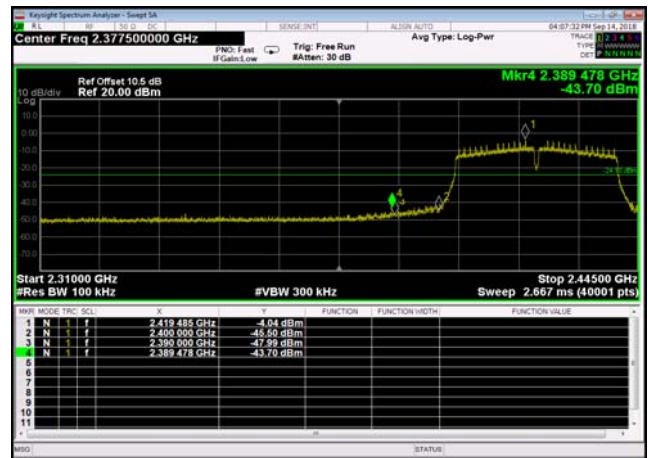
Reference Level-802.11n(HT40)  
,2452MHz,Ant1



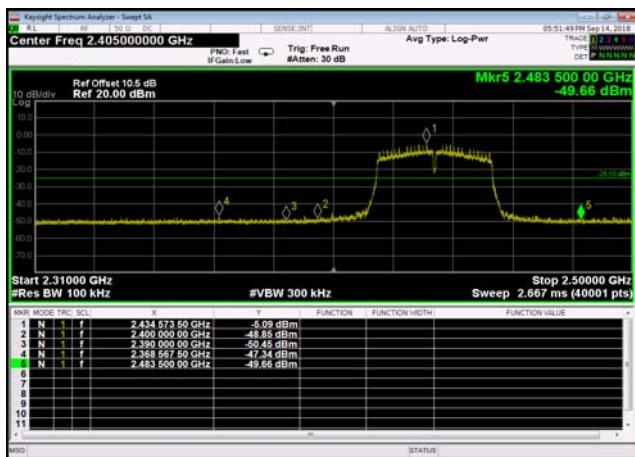
Band Edge-802.11n(HT40)  
,2422MHz,Ant0



Band Edge-802.11n(HT40)  
,2422MHz,Ant1



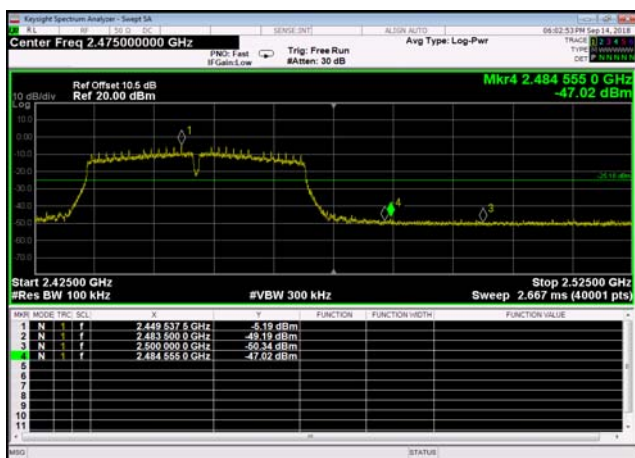
Band Edge-802.11n(HT40)  
,2437MHz,Ant0



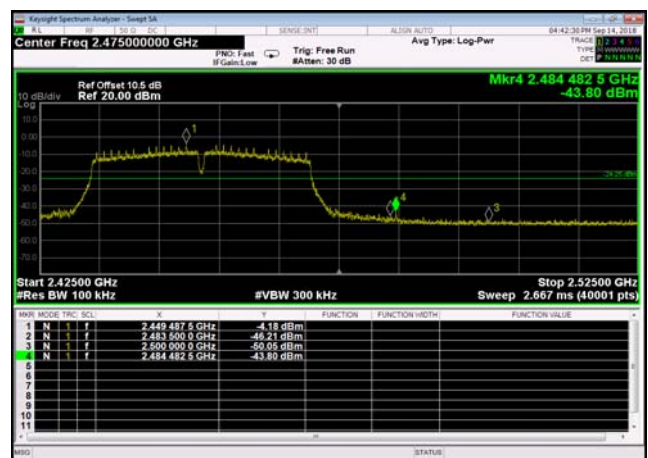
Band Edge-802.11n(HT40)  
,2437MHz,Ant1



Band Edge-802.11n(HT40)  
,2452MHz,Ant0

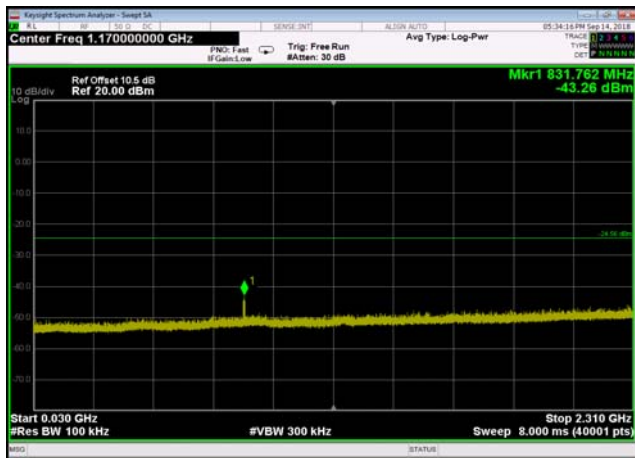


Band Edge-802.11n(HT40)  
,2452MHz,Ant1

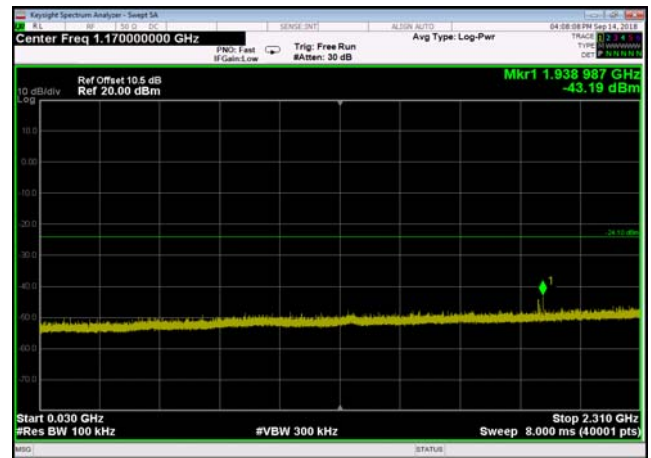




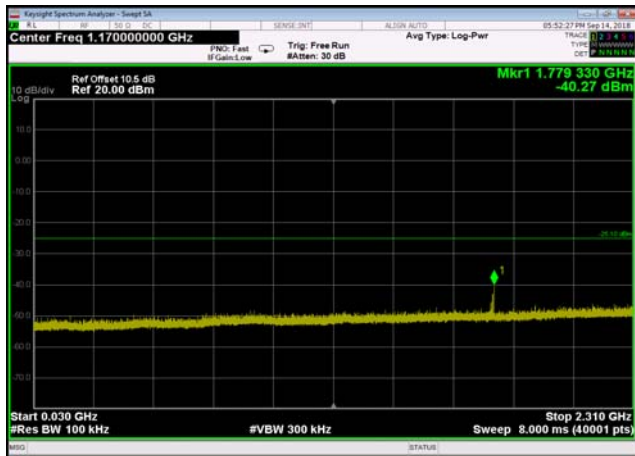
30MHz~2310MHz-802.11n(HT40)  
,2422MHz,Ant0



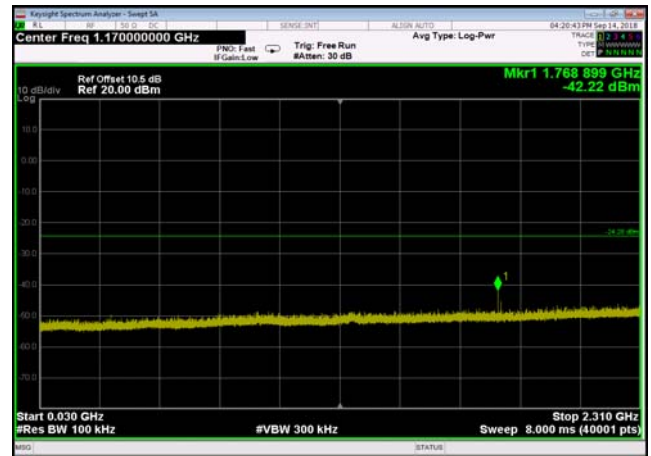
30MHz~2310MHz-802.11n(HT40)  
,2422MHz,Ant1



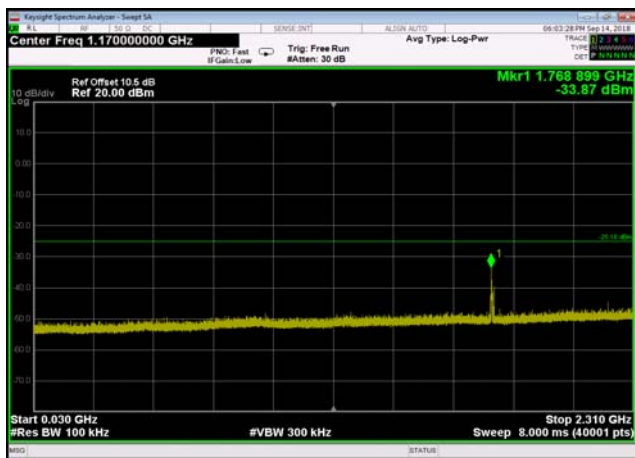
30MHz~2310MHz-802.11n(HT40)  
,2437MHz,Ant0



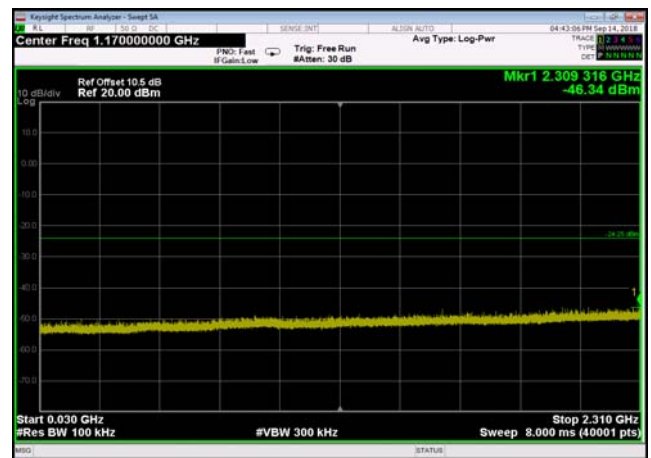
30MHz~2310MHz-802.11n(HT40)  
,2437MHz,Ant1



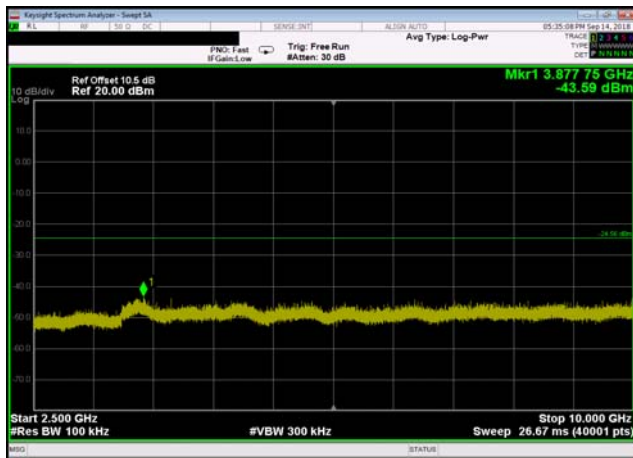
30MHz~2310MHz-802.11n(HT40)  
,2452MHz,Ant0



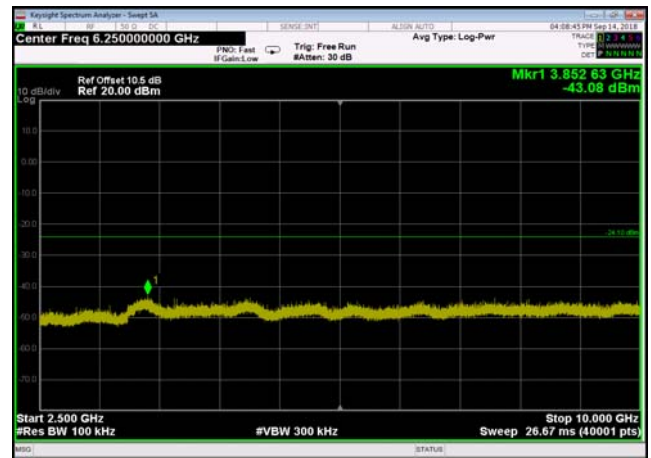
30MHz~2310MHz-802.11n(HT40)  
,2452MHz,Ant1



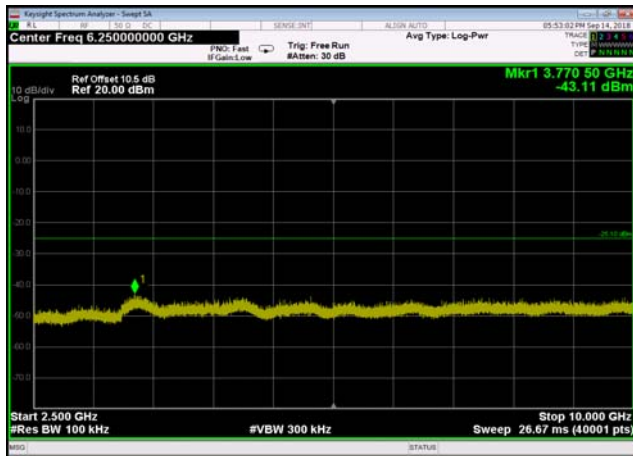
2500MHz~10000MHz-802.11n(HT40  
) ,2422MHz,Ant0



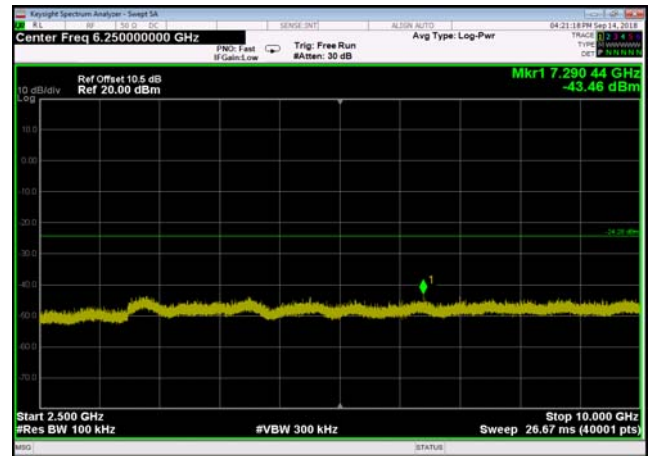
2500MHz~10000MHz-802.11n(HT40  
) ,2422MHz,Ant1



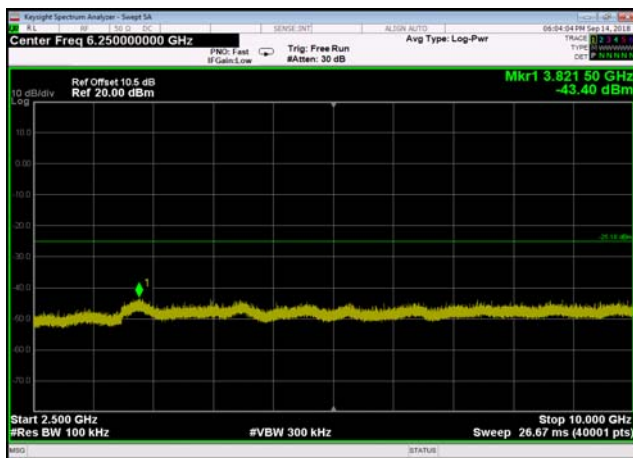
2500MHz~10000MHz-802.11n(HT40  
) ,2437MHz,Ant0



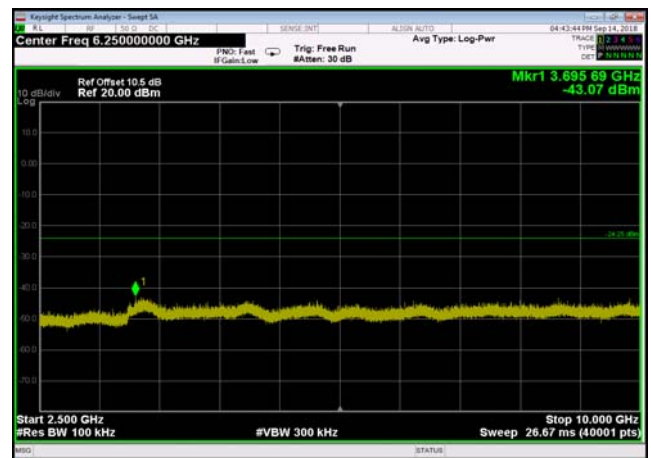
2500MHz~10000MHz-802.11n(HT40  
) ,2437MHz,Ant1



2500MHz~10000MHz-802.11n(HT40  
) ,2452MHz,Ant0

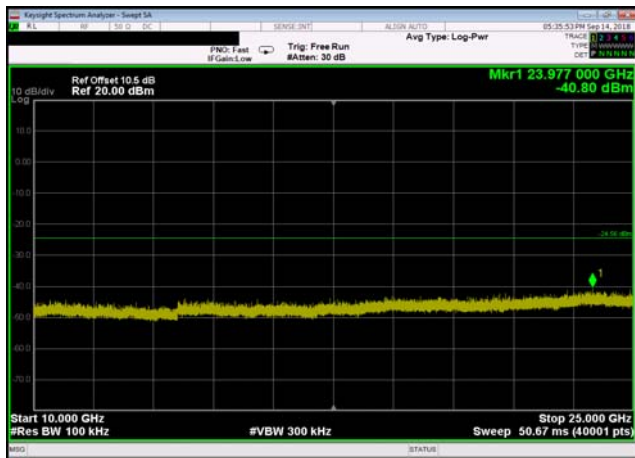


2500MHz~10000MHz-802.11n(HT40  
) ,2452MHz,Ant1

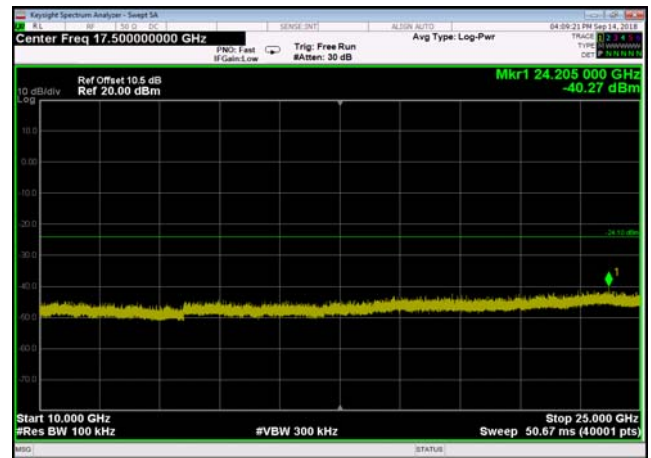




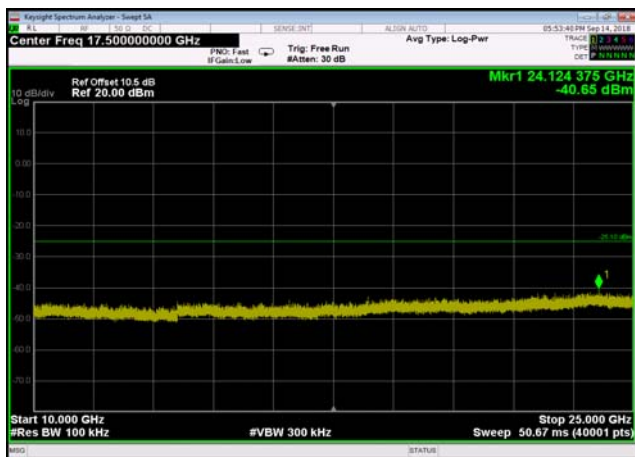
10000MHz~25000MHz-802.11n(HT4  
0),2422MHz,Ant0



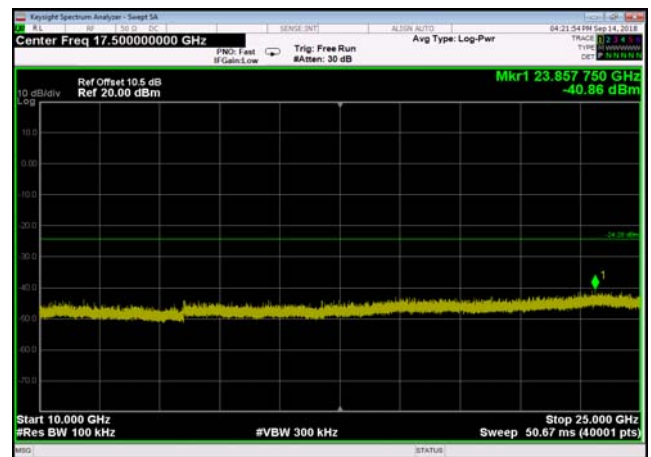
10000MHz~25000MHz-802.11n(HT4  
0),2422MHz,Ant1



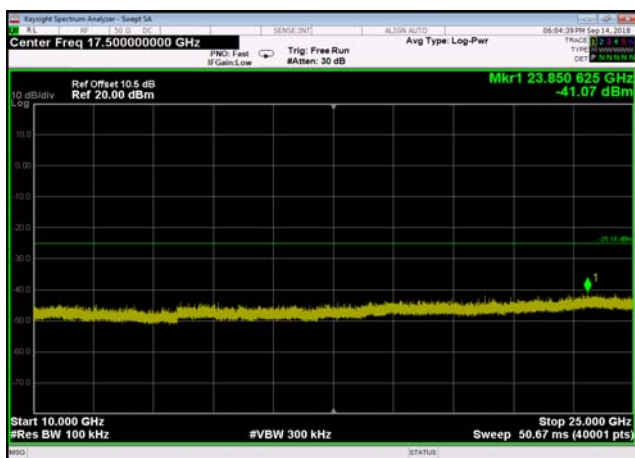
10000MHz~25000MHz-802.11n(HT4  
0),2437MHz,Ant0



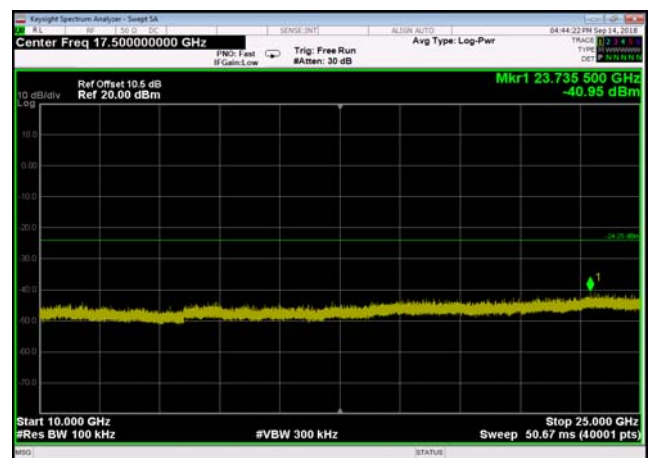
10000MHz~25000MHz-802.11n(HT4  
0),2437MHz,Ant1



10000MHz~25000MHz-802.11n(HT4  
0),2452MHz,Ant0



10000MHz~25000MHz-802.11n(HT4  
0),2452MHz,Ant1



## 2.5. Power spectral density (PSD)

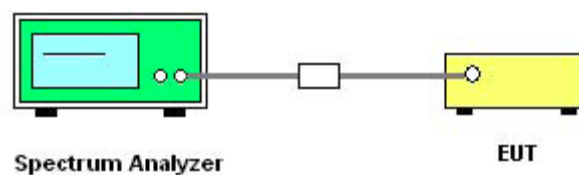
### 2.5.1. Limit of Power Spectral Density

The peak power spectral density shall not be greater than 8dBm in any 3kHz band at any time interval of continuous transmission.

### 2.5.2. Measuring Instruments

The measuring equipment is listed in the section 3 of this test report.

### 2.5.3. Test Setup



### 2.5.4. Test Procedures

1. The testing follows Measurement Procedure 10.2 Method PKPSD of FCC KDB558074 D01 DTS Meas Guidance v05.

2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.

3. Set to the maximum power setting and enable the EUT transmit continuously.

4. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 3 kHz.

Video bandwidth VBW = 10 kHz In order to make an accurate measurement, set the span to 1.5 times DTS Channel Bandwidth. (6dB BW)

5. Detector = peak, Sweep time = auto couple, Trace mode = max hold, Allow trace to fully stabilize. Use the peak marker function to determine the maximum power level.

6. Measure and record the results in the test report.

### 2.5.5. Test Results of Power spectral density

| Spectral power density (dBm) (Ant. 0) |         |                 |                |                  |         |
|---------------------------------------|---------|-----------------|----------------|------------------|---------|
| Test mode                             | Channel | Frequency (MHz) | PSD/3kHz (dBm) | Limit (dBm/3kHz) | Verdict |
| 802.11b                               | 1       | 2412            | -11.888        | 8                | PASS    |
|                                       | 6       | 2437            | -11.708        |                  | PASS    |
|                                       | 11      | 2462            | -13.208        |                  | PASS    |
| 802.11g                               | 1       | 2412            | -17.358        |                  | PASS    |
|                                       | 6       | 2437            | -15.790        |                  | PASS    |
|                                       | 11      | 2462            | -17.023        |                  | PASS    |
| 802.11n20                             | 1       | 2412            | -17.174        |                  | PASS    |
|                                       | 6       | 2437            | -18.084        |                  | PASS    |
|                                       | 11      | 2462            | -18.727        |                  | PASS    |
| 802.11n40                             | 3       | 2422            | -20.167        |                  | PASS    |
|                                       | 6       | 2437            | -20.659        |                  | PASS    |
|                                       | 9       | 2452            | -20.155        |                  | PASS    |
| Measurement uncertainty: ±1.3dB       |         |                 |                |                  |         |

| Spectral power density (dBm) (Ant. 1) |         |                 |                |                  |         |
|---------------------------------------|---------|-----------------|----------------|------------------|---------|
| Test mode                             | Channel | Frequency (MHz) | PSD/3kHz (dBm) | Limit (dBm/3kHz) | Verdict |
| 802.11b                               | 1       | 2412            | -12.844        | 8                | PASS    |
|                                       | 6       | 2437            | -13.554        |                  | PASS    |
|                                       | 11      | 2462            | -13.652        |                  | PASS    |
| 802.11g                               | 1       | 2412            | -18.622        |                  | PASS    |
|                                       | 6       | 2437            | -17.979        |                  | PASS    |
|                                       | 11      | 2462            | -18.271        |                  | PASS    |
| 802.11n20                             | 1       | 2412            | -17.712        |                  | PASS    |
|                                       | 6       | 2437            | -17.212        |                  | PASS    |
|                                       | 11      | 2462            | -18.432        |                  | PASS    |
| 802.11n40                             | 3       | 2422            | -19.263        |                  | PASS    |
|                                       | 6       | 2437            | -20.177        |                  | PASS    |
|                                       | 9       | 2452            | -19.692        |                  | PASS    |
| Measurement uncertainty: ±1.3dB       |         |                 |                |                  |         |

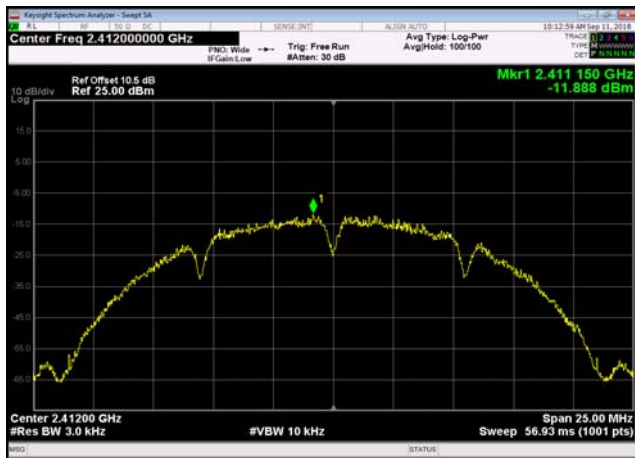


| Spectral power density (dBm) (Ant. 0+1) |         |                 |                |                  |         |
|-----------------------------------------|---------|-----------------|----------------|------------------|---------|
| Test mode                               | Channel | Frequency (MHz) | PSD/3kHz (dBm) | Limit (dBm/3kHz) | Verdict |
| 802.11n20                               | 1       | 2412            | -14.42         | 5.99             | PASS    |
|                                         | 6       | 2437            | -14.62         |                  | PASS    |
|                                         | 11      | 2462            | -15.57         |                  | PASS    |
| 802.11n40                               | 3       | 2422            | -16.68         |                  | PASS    |
|                                         | 6       | 2437            | -17.40         |                  | PASS    |
|                                         | 9       | 2452            | -16.91         |                  | PASS    |
| Measurement uncertainty: ±1.3dB         |         |                 |                |                  |         |

Note:1. Measured power density (dBm) has offset with cable loss.

Note 2.: For 802.11n20/n40 mode, antenna 1, 2 can transmit/receive simultaneously (MIMO mode), the directional gain of the transmitting antenna exceeds 6 dBi, the applicable Spectral power density limit shall be calculated as follows:  $PSD_{limit}-(G_{TX}-6)=8-(8.01-6)=5.99\text{dBm/3kHz}$

## Test Results (plots) of Power spectral density

Power spectral density-802.11b  
,2412MHz,Ant0

Power spectral density-802.11b  
,2412MHz,Ant1

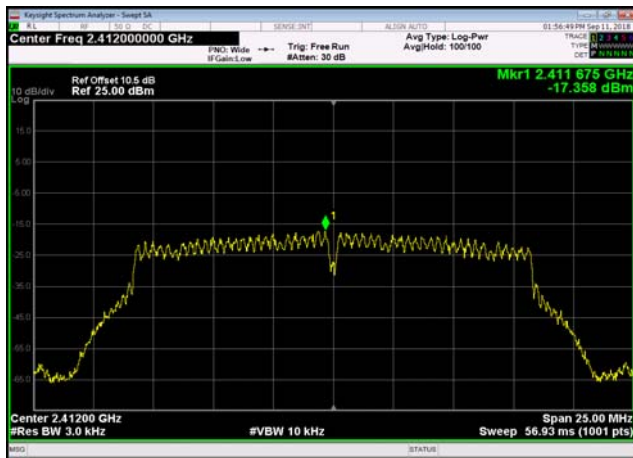
Power spectral density-802.11b  
,2437MHz,Ant0

Power spectral density-802.11b  
,2437MHz,Ant1

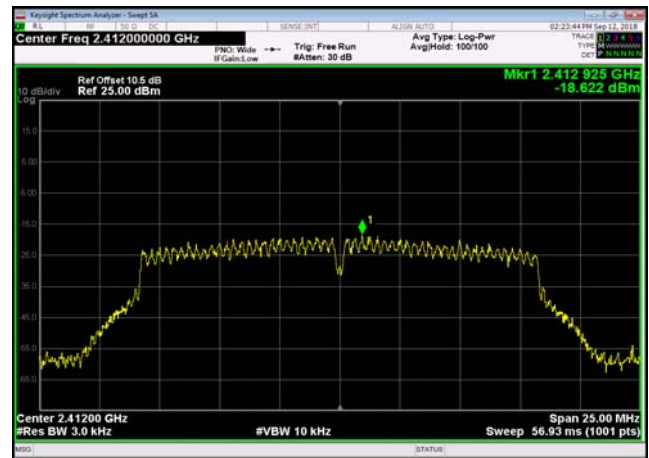
Power spectral density-802.11b  
,2462MHz,Ant0

Power spectral density-802.11b  
,2462MHz,Ant1

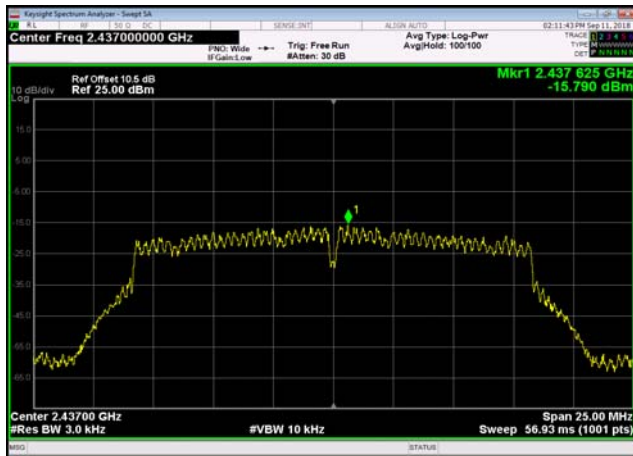

Power spectral density-802.11g  
,2412MHz,Ant0



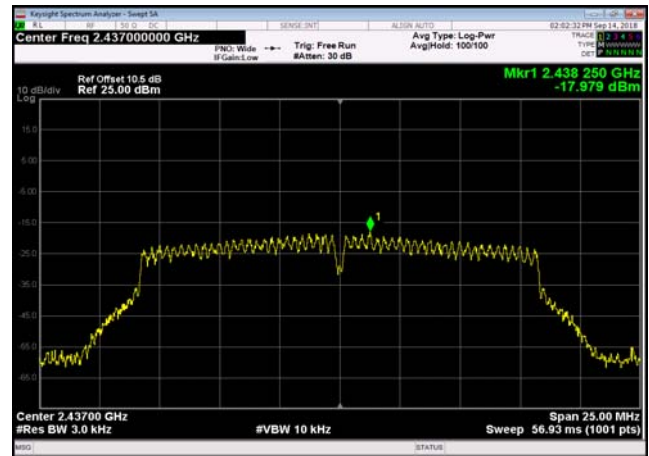
Power spectral density-802.11g  
,2412MHz,Ant1



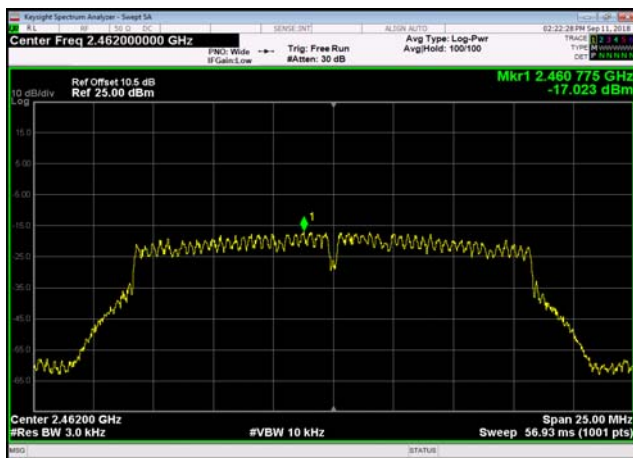
Power spectral density-802.11g  
,2437MHz,Ant0



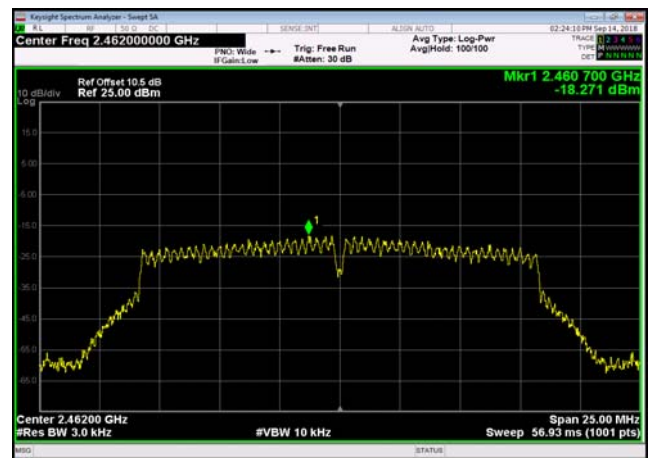
Power spectral density-802.11g  
,2437MHz,Ant1



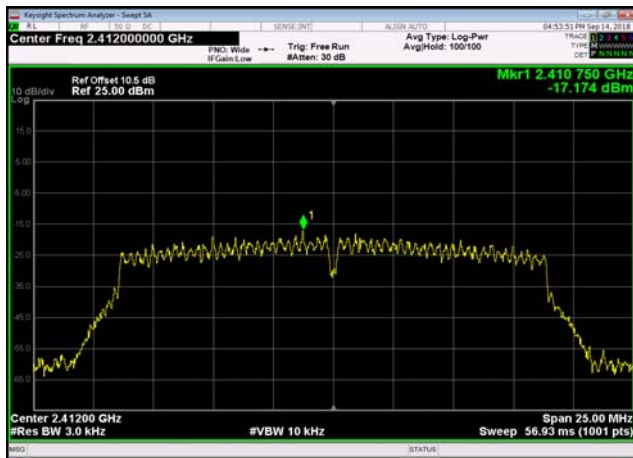
Power spectral density-802.11g  
,2462MHz,Ant0



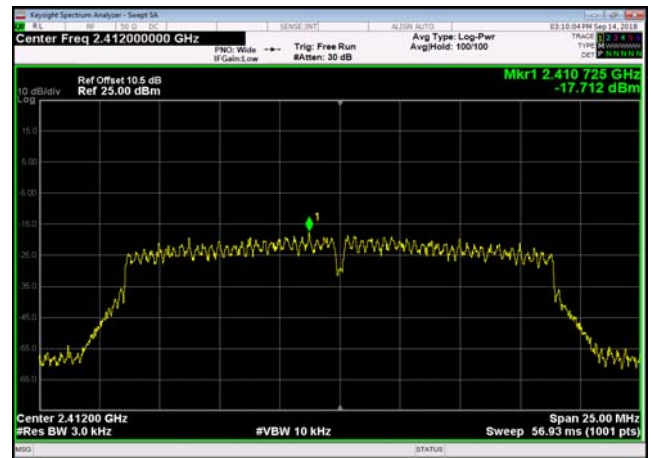
Power spectral density-802.11g  
,2462MHz,Ant1



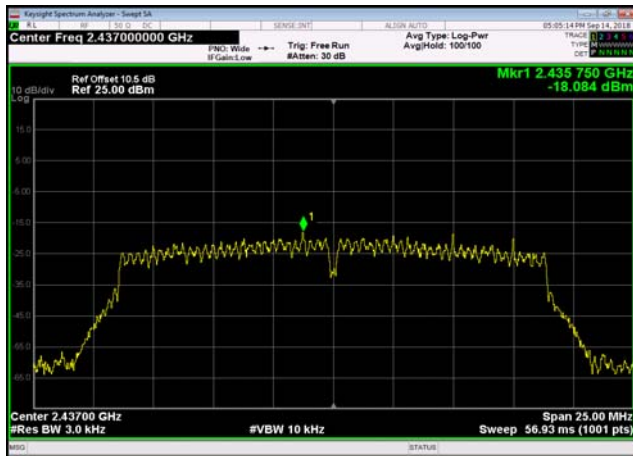
Power spectral density-802.11n(HT20)  
,2412MHz,Ant0



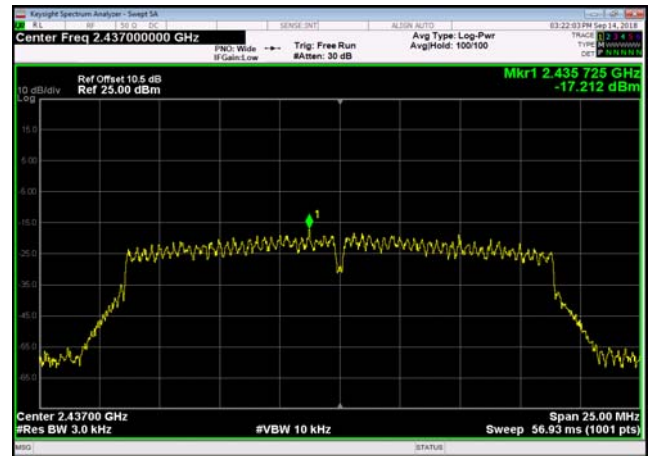
Power spectral density-802.11n(HT20)  
,2412MHz,Ant1



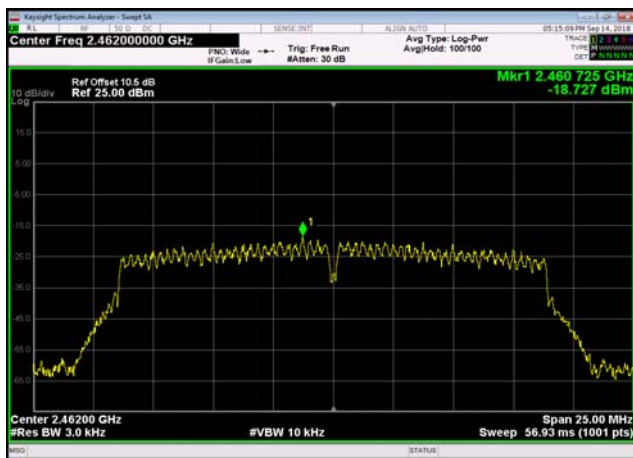
Power spectral density-802.11n(HT20)  
,2437MHz,Ant0



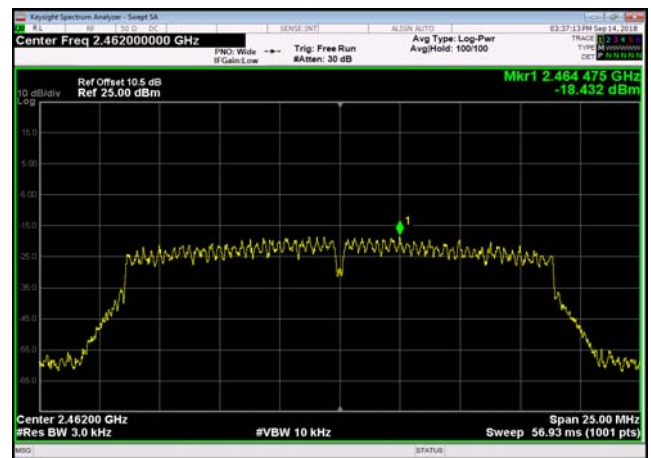
Power spectral density-802.11n(HT20)  
,2437MHz,Ant1



Power spectral density-802.11n(HT20)  
,2462MHz,Ant0

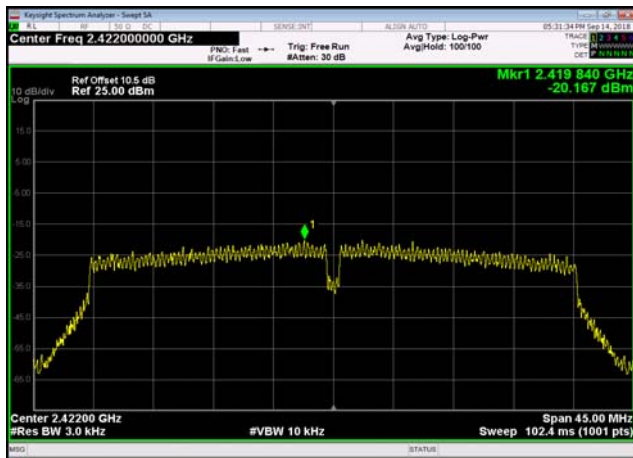


Power spectral density-802.11n(HT20)  
,2462MHz,Ant1

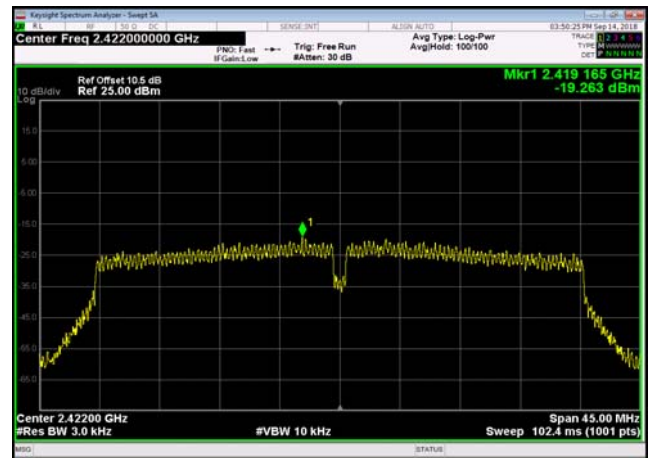




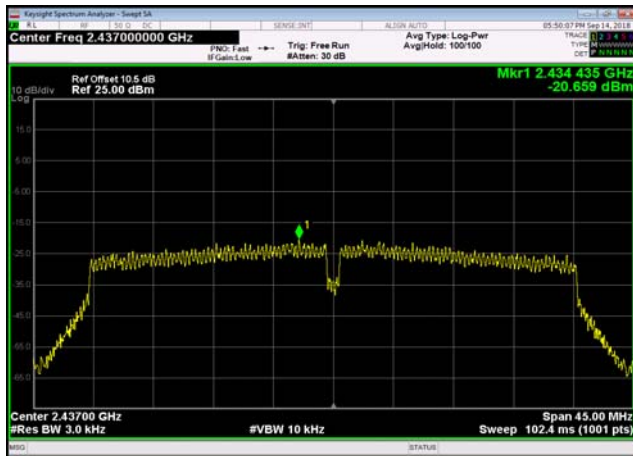
Power spectral density-802.11n(HT40)  
,2422MHz,Ant0



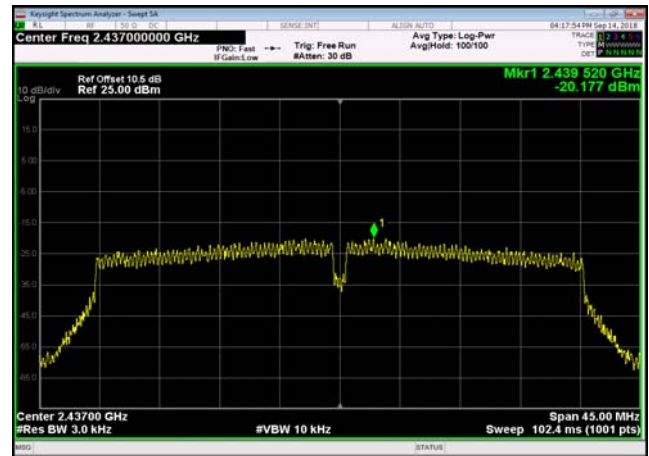
Power spectral density-802.11n(HT40)  
,2422MHz,Ant1



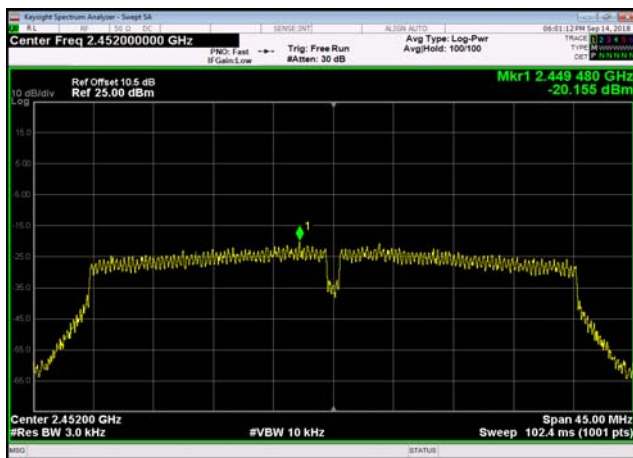
Power spectral density-802.11n(HT40)  
,2437MHz,Ant0



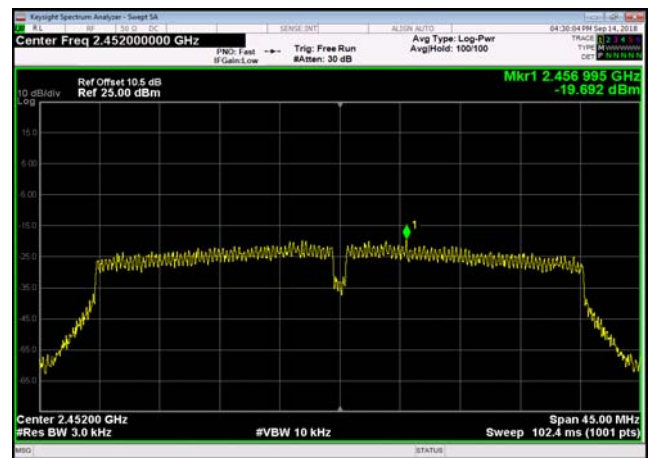
Power spectral density-802.11n(HT40)  
,2437MHz,Ant1



Power spectral density-802.11n(HT40)  
,2452MHz,Ant0



Power spectral density-802.11n(HT40)  
,2452MHz,Ant1



## 2.6. Radiated Band Edge and Spurious Emission

### 2.6.1. Limit of Radiated Band Edges and Spurious Emission

In any 100 kHz bandwidth outside the intentional radiator frequency band, all harmonics/spurious must be at least 20 dB below the highest emission level within the authorized band. If the output power of this device was measured by spectrum analyzer, the attenuation under this paragraph shall be 30 dB instead of 20 dB. In addition, radiated emissions which fall in the restricted bands must also comply with the FCC section 15.209 limits as below.

Note: Wireless charger configuration was evaluated.

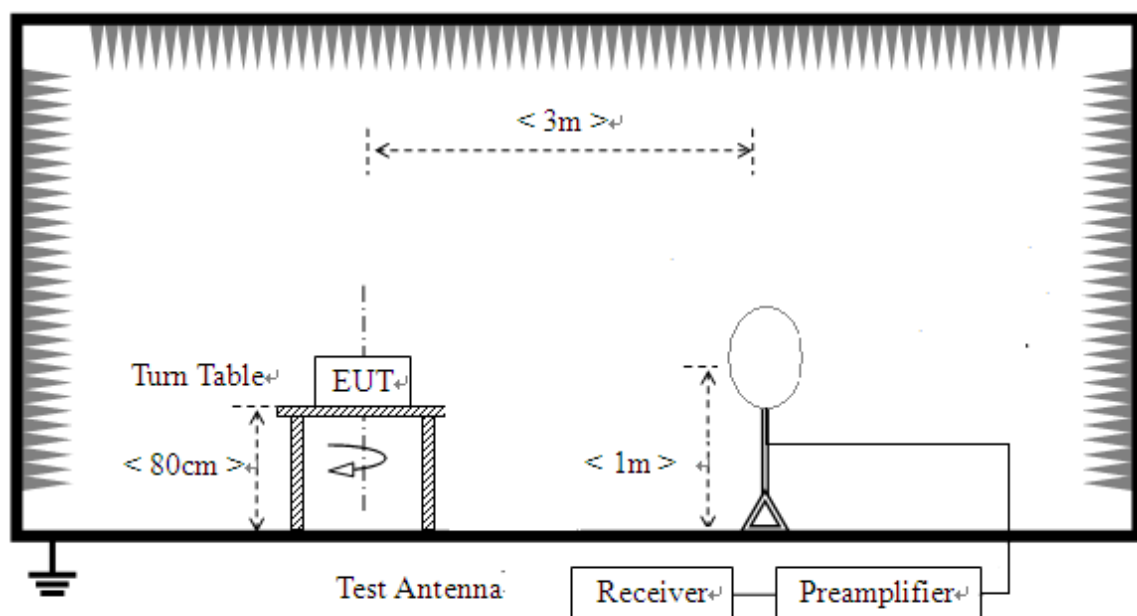
| Frequency (MHz) | Field Strength ( $\mu\text{V/m}$ ) | Measurement Distance (m) |
|-----------------|------------------------------------|--------------------------|
| 0.009 - 0.490   | $2400/F(\text{kHz})$               | 300                      |
| 0.490 - 1.705   | $24000/F(\text{kHz})$              | 30                       |
| 1.705 - 30.0    | 30                                 | 30                       |
| 30 - 88         | 100                                | 3                        |
| 88 - 216        | 150                                | 3                        |
| 216 - 960       | 200                                | 3                        |
| Above 960       | 500                                | 3                        |

### 2.6.2. Measuring Instruments

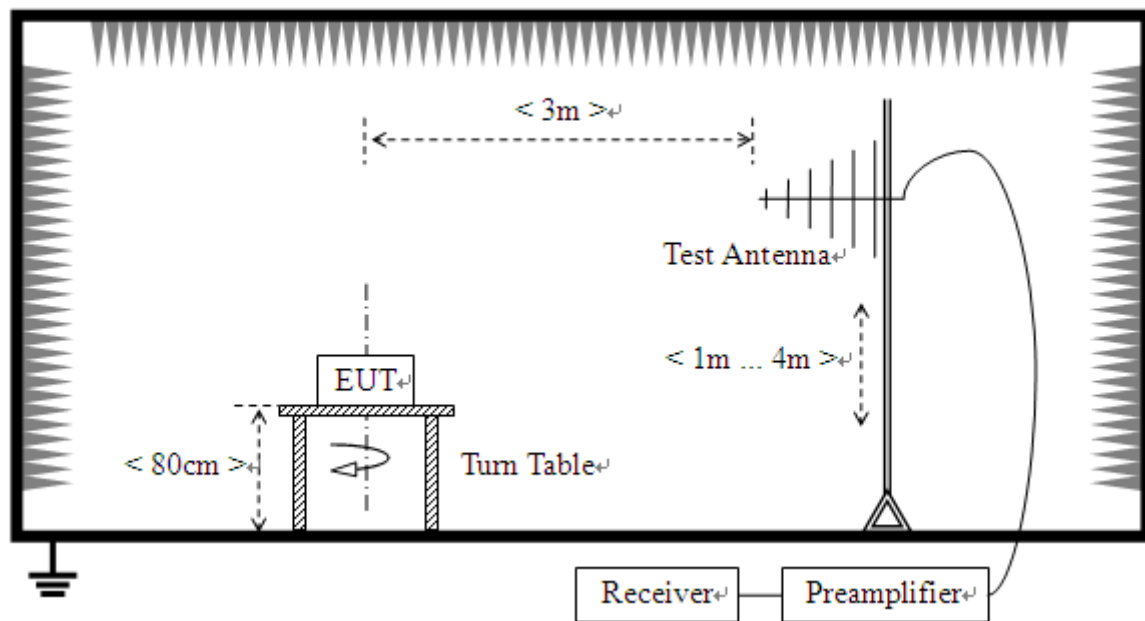
The measuring equipment is listed in the section 3 of this test report.

### 2.6.3. Test Setup

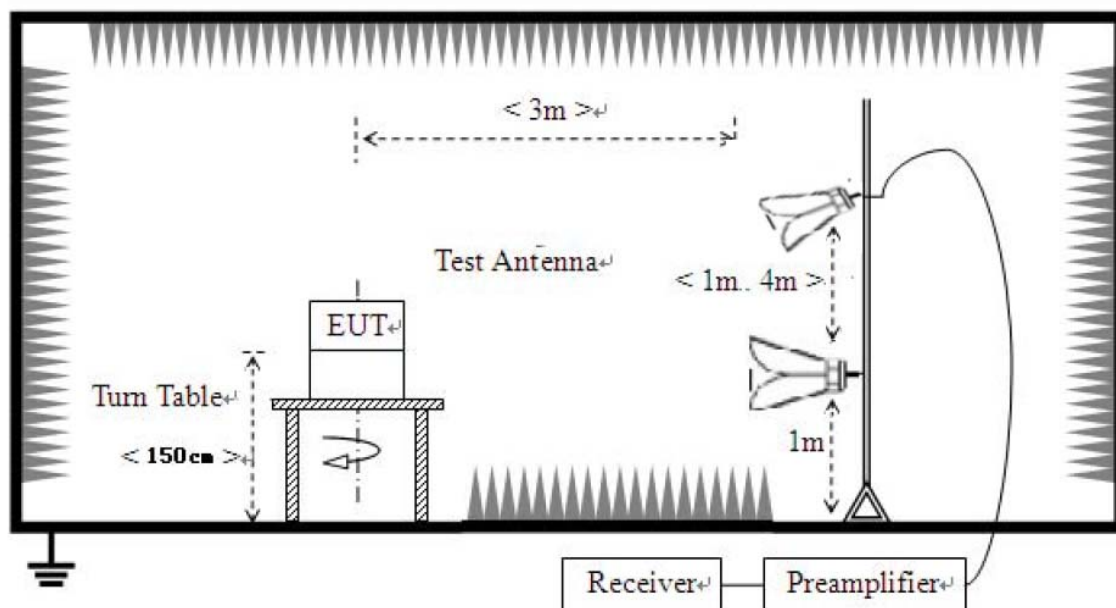
For radiated emissions from 9 KHz to 30 MHz



### For radiated emissions from 30MHz to 1GHz



### For radiated emissions above 1GHz



#### 2.6.4. Test Procedures

1. The EUT was placed on the top of a rotating table 0.8 meters (for below 1GHz) / 1.5 meters (for above 1GHz) above the ground at a 3 meters semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
3. Height of receiving antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
6. If the emission level of the EUT in peak mode was lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported.  
  
Otherwise the emissions would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.
7. For the radiated emission test above 1GHz:  
  
Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane.



## NOTE:

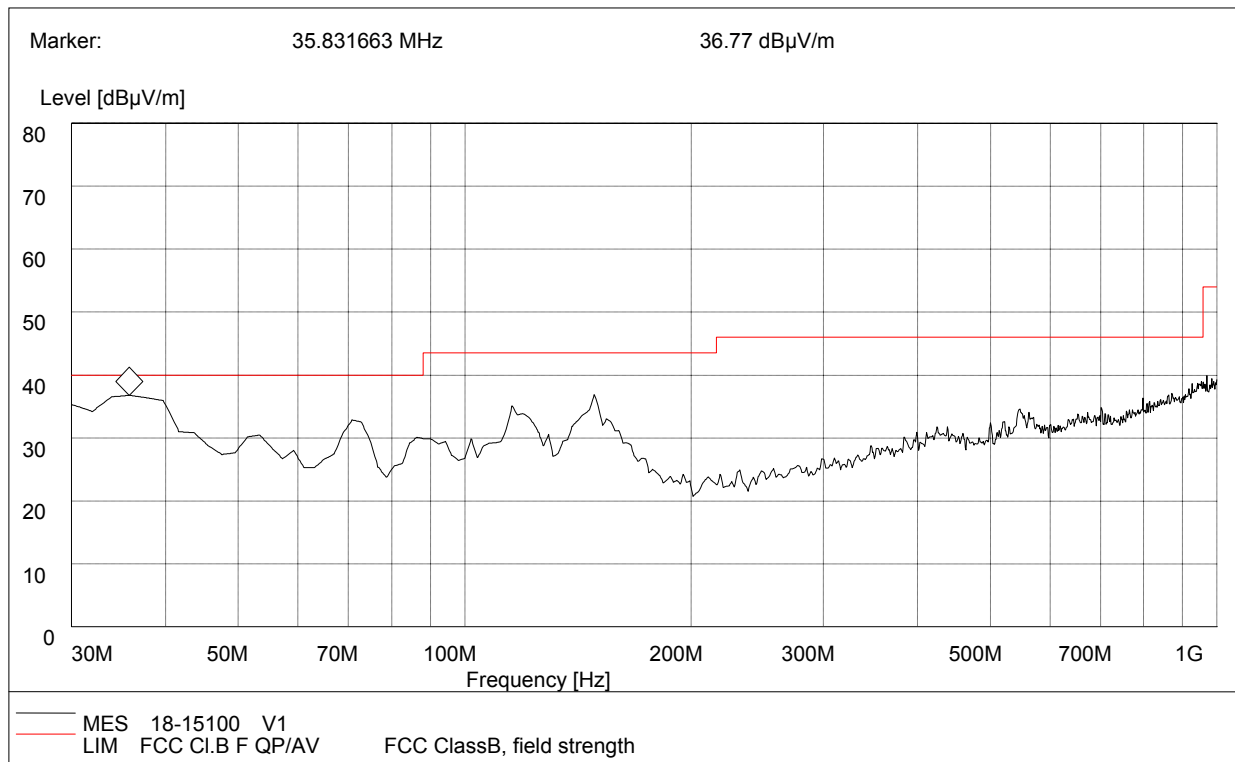
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is  $\geq 1/T$  (Duty cycle  $< 98\%$ ) or 10Hz (Duty cycle  $> 98\%$ ) for Average detection (AV) at frequency above 1GHz.
4. All radiated emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.
5. For 11B and 11G mode the worst mode of antenna 0 reported only, for 11N mode the mimo mode was the worst mode reported only.

## 2.6.5. Test Results of Radiated Band Edge and Spurious Emission

### For 9 kHz to 30MHz

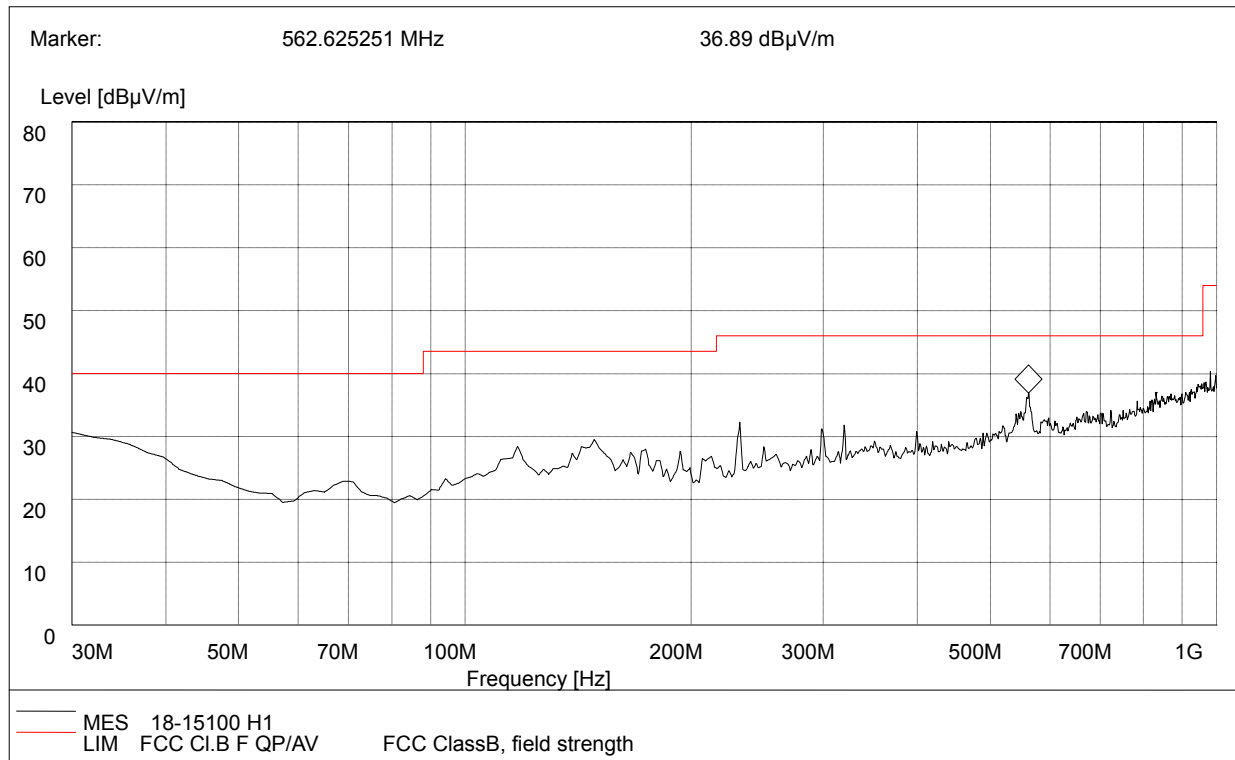
The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

### For 30MHz to 1000 MHz



### 30MHz to 1GHz, Antenna Vertical

| Frequency (MHz) | QuasiPeak (dB $\mu$ V/m) | Bandwidth (kHz) | Antenna height (cm) | Limit (dB $\mu$ V/m) | Antenna  | Verdict |
|-----------------|--------------------------|-----------------|---------------------|----------------------|----------|---------|
| 37.880000       | 34.64                    | 120.000         | 100.0               | 40.0                 | Vertical | Pass    |
| 72.760000       | 31.52                    | 120.000         | 100.0               | 40.0                 | Vertical | Pass    |
| 116.120000      | 33.51                    | 120.000         | 100.0               | 43.5                 | Vertical | Pass    |
| 148.530000      | 34.86                    | 120.000         | 100.0               | 43.5                 | Vertical | Pass    |
| 545.130000      | 34.49                    | 120.000         | 100.0               | 46.0                 | Vertical | Pass    |
| 797.840000      | 36.37                    | 120.000         | 100.0               | 46.0                 | Vertical | Pass    |



### 30MHz to 1GHz, Antenna Horizontal

| Frequency (MHz) | QuasiPeak (dB $\mu$ V/m) | Bandwidth (kHz) | Antenna height (cm) | Limit (dB $\mu$ V/m) | Antenna    | Verdict |
|-----------------|--------------------------|-----------------|---------------------|----------------------|------------|---------|
| 30.000000       | 30.63                    | 120.000         | 100.0               | 40.0                 | Horizontal | Pass    |
| 117.470000      | 28.42                    | 120.000         | 100.0               | 43.5                 | Horizontal | Pass    |
| 148.570000      | 29.48                    | 120.000         | 100.0               | 43.5                 | Horizontal | Pass    |
| 232.160000      | 32.25                    | 120.000         | 100.0               | 46.0                 | Horizontal | Pass    |
| 319.640000      | 31.77                    | 120.000         | 100.0               | 46.0                 | Horizontal | Pass    |
| 562.630000      | 36.89                    | 120.000         | 100.0               | 46.0                 | Horizontal | Pass    |

**For 1GHz to 25 GHz**
**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11b\_2412MHz)**

| No. | Fre.<br>(MHz) | Emission<br>Level<br>(dBuV/m) |    | Limit<br>(dBuV/m) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV/m) | Cab.<br>Loss<br>(dB) | Ant.<br>Factor<br>(dB) | Pre.<br>Amp.<br>(dB) | Cor.<br>Factor<br>(dB/m) |
|-----|---------------|-------------------------------|----|-------------------|----------------|--------------------------|----------------------------|--------------------------|----------------------|------------------------|----------------------|--------------------------|
| 1   | 2390.00       | 51.38                         | PK | 74.00             | -22.62         | 1.50                     | 100.00                     | 50.08                    | 5.20                 | 28.60                  | 32.50                | 1.30                     |
| 2   | 2390.00       | 41.32                         | AV | 54.00             | -12.68         | 1.50                     | 100.00                     | 40.02                    | 5.20                 | 28.60                  | 32.50                | 1.30                     |
| 3   | 4824.00       | 47.65                         | PK | 74.00             | -26.35         | 2.00                     | 180.00                     | 41.25                    | 7.40                 | 30.40                  | 31.40                | 6.40                     |
| 4   | 4824.00       | 37.51                         | AV | 54.00             | -16.49         | 2.00                     | 180.00                     | 31.11                    | 7.40                 | 30.40                  | 31.40                | 6.40                     |
| 5   | 7236.00       | 49.35                         | PK | 74.00             | -24.65         | 1.80                     | 360.00                     | 38.85                    | 11.50                | 31.20                  | 32.20                | 10.50                    |
| 6   | 7236.00       | 38.81                         | AV | 54.00             | -15.19         | 1.80                     | 360.00                     | 28.31                    | 11.50                | 31.20                  | 32.20                | 10.50                    |

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11b\_2412MHz)**

| No. | Frequency<br>(MHz) | Emission<br>Level<br>(dBuV/m) |    | Limit<br>(dBuV/m) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV/m) | Cab.<br>Loss<br>(dB) | Ant.<br>Factor<br>(dB) | Pre.<br>Amp.<br>(dB) | Cor.<br>Factor<br>(dB/m) |
|-----|--------------------|-------------------------------|----|-------------------|----------------|--------------------------|----------------------------|--------------------------|----------------------|------------------------|----------------------|--------------------------|
| 1   | 2390.00            | 52.08                         | PK | 74.00             | -21.92         | 1.50                     | 180.00                     | 50.78                    | 5.20                 | 28.60                  | 32.50                | 1.30                     |
| 2   | 2390.00            | 42.10                         | AV | 54.00             | -11.90         | 1.50                     | 180.00                     | 40.80                    | 5.20                 | 28.60                  | 32.50                | 1.30                     |
| 3   | 4824.00            | 48.24                         | PK | 74.00             | -25.76         | 1.20                     | 360.00                     | 41.84                    | 7.40                 | 30.40                  | 31.40                | 6.40                     |
| 4   | 4824.00            | 38.39                         | AV | 54.00             | -15.61         | 1.20                     | 360.00                     | 31.99                    | 7.40                 | 30.40                  | 31.40                | 6.40                     |
| 5   | 7236.00            | 49.25                         | PK | 74.00             | -24.75         | 1.50                     | 360.00                     | 38.75                    | 11.50                | 31.20                  | 32.20                | 10.50                    |
| 6   | 7236.00            | 39.13                         | AV | 54.00             | -14.87         | 1.50                     | 360.00                     | 28.63                    | 11.50                | 31.20                  | 32.20                | 10.50                    |



**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11b\_2437MHz)**

| No. | Fre.<br>(MHz) | Emission<br>Level<br>(dBuV/m) |    | Limit<br>(dBuV/m) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV/m) | Cab.<br>Loss<br>(dB) | Ant.<br>Factor<br>(dB) | Pre.<br>Amp.<br>(dB) | Cor.<br>Factor<br>(dB/m) |
|-----|---------------|-------------------------------|----|-------------------|----------------|--------------------------|----------------------------|--------------------------|----------------------|------------------------|----------------------|--------------------------|
| 1   | 4874.00       | 48.47                         | PK | 74.00             | -25.53         | 1.50                     | 0.00                       | 42.07                    | 6.70                 | 30.40                  | 31.30                | 6.40                     |
| 2   | 4874.00       | 38.42                         | AV | 54.00             | -15.58         | 1.50                     | 0.00                       | 32.02                    | 6.70                 | 30.40                  | 31.30                | 6.40                     |
| 3   | 7311.00       | 50.14                         | PK | 74.00             | -23.86         | 1.50                     | 360.00                     | 39.34                    | 11.80                | 31.20                  | 32.20                | 10.80                    |
| 4   | 7311.00       | 40.44                         | AV | 54.00             | -13.56         | 1.50                     | 360.00                     | 29.64                    | 11.80                | 31.20                  | 32.20                | 10.80                    |

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11b\_2437MHz)**

| No. | Frequency<br>(MHz) | Emission<br>Level<br>(dBuV/m) |    | Limit<br>(dBuV/m) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV/m) | Cab.<br>Loss<br>(dB) | Ant.<br>Factor<br>(dB) | Pre.<br>Amp.<br>(dB) | Cor.<br>Factor<br>(dB/m) |
|-----|--------------------|-------------------------------|----|-------------------|----------------|--------------------------|----------------------------|--------------------------|----------------------|------------------------|----------------------|--------------------------|
| 1   | 4874.00            | 48.87                         | PK | 74.00             | -25.13         | 1.50                     | 40.00                      | 42.47                    | 6.70                 | 30.40                  | 31.30                | 6.40                     |
| 2   | 4874.00            | 39.17                         | AV | 54.00             | -14.83         | 1.50                     | 40.00                      | 32.77                    | 6.70                 | 30.40                  | 31.30                | 6.40                     |
| 3   | 7311.00            | 49.57                         | PK | 74.00             | -24.43         | 1.00                     | 50.00                      | 38.77                    | 11.80                | 31.20                  | 32.20                | 10.80                    |
| 4   | 7311.00            | 39.77                         | AV | 54.00             | -14.23         | 1.00                     | 50.00                      | 28.97                    | 11.80                | 31.20                  | 32.20                | 10.80                    |

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11b\_2462MHz)**

| No. | Frequency (MHz) | Emssion Level (dBuV/m) |    | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV/m) | Cab. Loss (dB) | Ant. Factor (dB) | Pre. Amp. (dB) | Cor. Factor (dB/m) |
|-----|-----------------|------------------------|----|----------------|-------------|--------------------|----------------------|--------------------|----------------|------------------|----------------|--------------------|
| 1   | 2483.50         | 53.62                  | PK | 74.00          | -20.38      | 1.50               | 100.00               | 52.02              | 5.30           | 28.70            | 32.40          | 1.60               |
| 2   | 2483.50         | 43.92                  | AV | 54.00          | -10.08      | 1.50               | 100.00               | 42.32              | 5.30           | 28.70            | 32.40          | 1.60               |
| 3   | 4924.00         | 48.85                  | PK | 74.00          | -25.15      | 1.50               | 180.00               | 43.15              | 6.70           | 30.50            | 31.50          | 5.70               |
| 4   | 4924.00         | 39.03                  | AV | 54.00          | -14.97      | 1.50               | 180.00               | 33.33              | 6.70           | 30.50            | 31.50          | 5.70               |
| 5   | 7386.00         | 49.07                  | PK | 74.00          | -24.93      | 1.50               | 360.00               | 38.27              | 11.80          | 31.20            | 32.20          | 10.80              |
| 6   | 7386.00         | 39.12                  | AV | 54.00          | -14.88      | 1.50               | 360.00               | 28.32              | 11.80          | 31.20            | 32.20          | 10.80              |

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11b\_2462MHz)**

| No. | Frequency (MHz) | Emssion Level (dBuV/m) |    | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV/m) | Cab. Loss (dB) | Ant. Factor (dB) | Pre. Amp. (dB) | Cor. Factor (dB/m) |
|-----|-----------------|------------------------|----|----------------|-------------|--------------------|----------------------|--------------------|----------------|------------------|----------------|--------------------|
| 1   | 2483.50         | 53.26                  | PK | 74.00          | -21.54      | 1.20               | 320.00               | 51.66              | 5.30           | 28.70            | 32.40          | 1.60               |
| 2   | 2483.50         | 43.47                  | AV | 54.00          | -11.60      | 1.20               | 320.00               | 41.87              | 5.30           | 28.70            | 32.40          | 1.60               |
| 3   | 4924.00         | 48.47                  | PK | 74.00          | -25.53      | 1.50               | 200.00               | 42.77              | 6.70           | 30.50            | 31.50          | 5.70               |
| 4   | 4924.00         | 38.67                  | AV | 54.00          | -15.33      | 1.50               | 200.00               | 32.97              | 6.70           | 30.50            | 31.50          | 5.70               |
| 5   | 7386.00         | 49.17                  | PK | 74.00          | -24.83      | 2.00               | 200.00               | 38.37              | 11.80          | 31.20            | 32.20          | 10.80              |
| 6   | 7386.00         | 39.39                  | AV | 54.00          | -14.61      | 2.00               | 200.00               | 28.59              | 11.80          | 31.20            | 32.20          | 10.80              |

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11g\_2412MHz)**

| No. | Frequency (MHz) | Emssion Level (dBuV/m) |    | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV/m) | Cab. Loss (dB) | Ant. Factor (dB) | Pre. Amp. (dB) | Cor. Factor (dB/m) |
|-----|-----------------|------------------------|----|----------------|-------------|--------------------|----------------------|--------------------|----------------|------------------|----------------|--------------------|
| 1   | 2390.00         | 50.24                  | PK | 74.00          | -23.76      | 1.50               | 36.00                | 48.94              | 5.20           | 28.60            | 32.50          | 1.30               |
| 2   | 2390.00         | 40.59                  | AV | 54.00          | -13.41      | 1.50               | 36.00                | 39.29              | 5.20           | 28.60            | 32.50          | 1.30               |
| 3   | 4824.00         | 48.75                  | PK | 74.00          | -25.25      | 1.50               | 50.00                | 42.35              | 7.40           | 30.40            | 31.40          | 6.40               |
| 4   | 4824.00         | 39.00                  | AV | 54.00          | -15.00      | 1.50               | 50.00                | 32.60              | 7.40           | 30.40            | 31.40          | 6.40               |
| 5   | 7236.00         | 49.35                  | PK | 74.00          | -24.65      | 1.20               | 250.00               | 38.85              | 11.50          | 31.20            | 32.20          | 10.50              |
| 6   | 7236.00         | 39.53                  | AV | 54.00          | -14.47      | 1.20               | 250.00               | 29.03              | 11.50          | 31.20            | 32.20          | 10.50              |

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11g\_2412MHz)**

| No. | Frequency (MHz) | Emssion Level (dBuV/m) |    | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV/m) | Cab. Loss (dB) | Ant. Factor (dB) | Pre. Amp. (dB) | Cor. Factor (dB/m) |
|-----|-----------------|------------------------|----|----------------|-------------|--------------------|----------------------|--------------------|----------------|------------------|----------------|--------------------|
| 1   | 2390.00         | 55.29                  | PK | 74.00          | -18.71      | 1.50               | 36.00                | 53.99              | 5.20           | 28.60            | 32.50          | 1.30               |
| 2   | 2390.00         | 45.63                  | AV | 54.00          | -8.37       | 1.50               | 36.00                | 44.33              | 5.20           | 28.60            | 32.50          | 1.30               |
| 3   | 4824.00         | 49.87                  | PK | 74.00          | -24.13      | 1.50               | 40.00                | 43.47              | 7.40           | 30.40            | 31.40          | 6.40               |
| 4   | 4824.00         | 40.23                  | AV | 54.00          | -13.77      | 1.50               | 40.00                | 33.83              | 7.40           | 30.40            | 31.40          | 6.40               |
| 5   | 7236.00         | 50.14                  | PK | 74.00          | -23.86      | 1.50               | 320.00               | 39.94              | 11.50          | 31.20            | 32.20          | 10.20              |
| 6   | 7236.00         | 40.72                  | AV | 54.00          | -13.28      | 1.50               | 320.00               | 30.52              | 11.50          | 31.20            | 32.20          | 10.20              |

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11g\_2437MHz)**

| No. | Frequency (MHz) | Emission Level (dBuV/m) |    | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV/m) | Cab. Loss (dB) | Ant. Factor (dB) | Pre. Amp. (dB) | Cor. Factor (dB/m) |
|-----|-----------------|-------------------------|----|----------------|-------------|--------------------|----------------------|--------------------|----------------|------------------|----------------|--------------------|
| 1   | 4874.00         | 49.00                   | PK | 74.00          | -25.00      | 1.50               | 52.00                | 43.20              | 6.70           | 30.40            | 31.30          | 5.80               |
| 2   | 4874.00         | 39.93                   | AV | 54.00          | -14.07      | 1.50               | 52.00                | 34.13              | 6.70           | 30.40            | 31.30          | 5.80               |
| 3   | 7311.00         | 50.32                   | PK | 74.00          | -23.68      | 1.60               | 360.00               | 39.52              | 11.80          | 31.20            | 32.20          | 10.80              |
| 4   | 7311.00         | 41.15                   | AV | 54.00          | -12.85      | 1.60               | 360.00               | 30.35              | 11.80          | 31.20            | 32.20          | 10.80              |

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11g\_2437MHz)**

| No. | Frequency (MHz) | Emission Level (dBuV/m) |    | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV/m) | Cab. Loss (dB) | Ant. Factor (dB) | Pre. Amp. (dB) | Cor. Factor (dB/m) |
|-----|-----------------|-------------------------|----|----------------|-------------|--------------------|----------------------|--------------------|----------------|------------------|----------------|--------------------|
| 1   | 4874.00         | 48.87                   | PK | 74.00          | -25.13      | 1.50               | 180.00               | 43.07              | 6.70           | 30.40            | 31.30          | 5.80               |
| 2   | 4874.00         | 40.72                   | AV | 54.00          | -13.28      | 1.50               | 180.00               | 34.92              | 6.70           | 30.40            | 31.30          | 5.80               |
| 3   | 7311.00         | 50.00                   | PK | 74.00          | -24.00      | 1.00               | 0.00                 | 39.20              | 11.80          | 31.20            | 32.20          | 10.80              |
| 4   | 7311.00         | 40.75                   | AV | 54.00          | -13.25      | 1.00               | 0.00                 | 29.95              | 11.80          | 31.20            | 32.20          | 10.80              |

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11g\_2462MHz)**

| No. | Frequency (MHz) | Emssion Level (dBuV/m) |    | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV/m) | Cab. Loss (dB) | Ant. Factor (dB) | Pre. Amp. (dB) | Cor. Factor (dB/m) |
|-----|-----------------|------------------------|----|----------------|-------------|--------------------|----------------------|--------------------|----------------|------------------|----------------|--------------------|
| 1   | 2483.50         | 53.42                  | PK | 74.00          | -20.58      | 1.50               | 150.00               | 51.82              | 5.30           | 28.70            | 32.40          | 1.60               |
| 2   | 2483.50         | 45.28                  | AV | 54.00          | -8.72       | 1.50               | 150.00               | 43.68              | 5.30           | 28.70            | 32.40          | 1.60               |
| 3   | 4924.00         | 49.35                  | PK | 74.00          | -24.65      | 1.00               | 150.00               | 43.65              | 6.70           | 30.50            | 31.50          | 5.70               |
| 4   | 4924.00         | 41.20                  | AV | 54.00          | -12.80      | 1.00               | 150.00               | 35.50              | 6.70           | 30.50            | 31.50          | 5.70               |
| 5   | 7386.00         | 49.97                  | PK | 74.00          | -24.03      | 1.50               | 360.00               | 39.17              | 11.80          | 31.20            | 32.20          | 10.80              |
| 6   | 7386.00         | 41.52                  | AV | 54.00          | -12.48      | 1.50               | 360.00               | 30.72              | 11.80          | 31.20            | 32.20          | 10.80              |

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11g\_2462MHz)**

| No. | Frequency (MHz) | Emssion Level (dBuV/m) |    | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV/m) | Cab. Loss (dB) | Ant. Factor (dB) | Pre. Amp. (dB) | Cor. Factor (dB/m) |
|-----|-----------------|------------------------|----|----------------|-------------|--------------------|----------------------|--------------------|----------------|------------------|----------------|--------------------|
| 1   | 2483.50         | 53.58                  | PK | 74.00          | -20.42      | 1.00               | 180.00               | 51.98              | 5.30           | 28.70            | 32.40          | 1.60               |
| 2   | 2483.50         | 44.44                  | AV | 54.00          | -9.56       | 1.00               | 180.00               | 42.84              | 5.30           | 28.70            | 32.40          | 1.60               |
| 3   | 4924.00         | 49.27                  | PK | 74.00          | -24.73      | 1.50               | 0.00                 | 43.57              | 6.70           | 30.50            | 31.50          | 5.70               |
| 4   | 4924.00         | 40.19                  | AV | 54.00          | -13.81      | 1.50               | 0.00                 | 34.49              | 6.70           | 30.50            | 31.50          | 5.70               |
| 5   | 7386.00         | 50.32                  | PK | 74.00          | -23.68      | 1.80               | 360.00               | 39.52              | 11.80          | 31.20            | 32.20          | 10.80              |
| 6   | 7386.00         | 41.12                  | AV | 54.00          | -12.88      | 1.80               | 360.00               | 30.32              | 11.80          | 31.20            | 32.20          | 10.80              |



**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11n20\_2412MHz)**

| No. | Frequency (MHz) | Emssion Level (dBuV/m) |    | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV/m) | Cab. Loss (dB) | Ant. Factor (dB) | Pre. Amp. (dB) | Cor. Factor (dB/m) |
|-----|-----------------|------------------------|----|----------------|-------------|--------------------|----------------------|--------------------|----------------|------------------|----------------|--------------------|
| 1   | 2390.00         | 52.11                  | PK | 74.00          | -21.89      | 1.30               | 100.00               | 50.81              | 5.20           | 28.60            | 32.50          | 1.30               |
| 2   | 2390.00         | 43.46                  | AV | 54.00          | -10.54      | 1.30               | 100.00               | 42.16              | 5.20           | 28.60            | 32.50          | 1.30               |
| 3   | 4824.00         | 48.14                  | PK | 74.00          | -25.86      | 1.50               | 180.00               | 41.74              | 7.40           | 30.40            | 31.40          | 6.40               |
| 4   | 4824.00         | 39.89                  | AV | 54.00          | -14.11      | 1.50               | 180.00               | 33.49              | 7.40           | 30.40            | 31.40          | 6.40               |
| 5   | 7236.00         | 48.87                  | PK | 74.00          | -25.13      | 1.20               | 250.00               | 38.37              | 11.50          | 31.20            | 32.20          | 10.50              |
| 6   | 7236.00         | 40.75                  | AV | 54.00          | -13.25      | 1.20               | 250.00               | 30.25              | 11.50          | 31.20            | 32.20          | 10.50              |

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11n20\_2412MHz)**

| No. | Frequency (MHz) | Emssion Level (dBuV/m) |    | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV/m) | Cab. Loss (dB) | Ant. Factor (dB) | Pre. Amp. (dB) | Cor. Factor (dB/m) |
|-----|-----------------|------------------------|----|----------------|-------------|--------------------|----------------------|--------------------|----------------|------------------|----------------|--------------------|
| 1   | 2390.00         | 52.60                  | PK | 74.00          | -21.40      | 1.30               | 150.00               | 51.30              | 5.20           | 28.60            | 32.50          | 1.30               |
| 2   | 2390.00         | 44.26                  | AV | 54.00          | -9.74       | 1.30               | 150.00               | 42.96              | 5.20           | 28.60            | 32.50          | 1.30               |
| 3   | 4824.00         | 49.58                  | PK | 74.00          | -24.42      | 1.50               | 360.00               | 43.18              | 7.40           | 30.40            | 31.40          | 6.40               |
| 4   | 4824.00         | 41.23                  | AV | 54.00          | -12.77      | 1.50               | 360.00               | 34.83              | 7.40           | 30.40            | 31.40          | 6.40               |
| 5   | 7236.00         | 48.87                  | PK | 74.00          | -25.13      | 1.50               | 200.00               | 38.37              | 11.50          | 31.20            | 32.20          | 10.50              |
| 6   | 7236.00         | 40.40                  | AV | 54.00          | -13.60      | 1.50               | 200.00               | 29.90              | 11.50          | 31.20            | 32.20          | 10.50              |

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11n20\_2437MHz)**

| No. | Frequency<br>(MHz) | Emssion<br>Level<br>(dBuV/m) |    | Limit<br>(dBuV/m) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV/m) | Cab.<br>Loss<br>(dB) | Ant.<br>Factor<br>(dB) | Pre.<br>Amp.<br>(dB) | Cor.<br>Factor<br>(dB/m) |
|-----|--------------------|------------------------------|----|-------------------|----------------|--------------------------|----------------------------|--------------------------|----------------------|------------------------|----------------------|--------------------------|
| 1   | 4874.00            | 48.87                        | PK | 74.00             | -25.13         | 1.50                     | 180.00                     | 43.07                    | 6.70                 | 30.40                  | 31.30                | 5.80                     |
| 2   | 4874.00            | 40.92                        | AV | 54.00             | -13.08         | 1.50                     | 180.00                     | 35.12                    | 6.70                 | 30.40                  | 31.30                | 5.80                     |
| 3   | 7311.00            | 49.05                        | PK | 74.00             | -24.95         | 1.60                     | 320.00                     | 38.25                    | 11.80                | 31.20                  | 32.20                | 10.80                    |
| 4   | 7311.00            | 40.69                        | AV | 54.00             | -13.31         | 1.60                     | 320.00                     | 29.89                    | 11.80                | 31.20                  | 32.20                | 10.80                    |

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11n20\_2437MHz)**

| No. | Frequency<br>(MHz) | Emssion<br>Level<br>(dBuV/m) |    | Limit<br>(dBuV/m) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV/m) | Cab.<br>Loss<br>(dB) | Ant.<br>Factor<br>(dB) | Pre.<br>Amp.<br>(dB) | Cor.<br>Factor<br>(dB/m) |
|-----|--------------------|------------------------------|----|-------------------|----------------|--------------------------|----------------------------|--------------------------|----------------------|------------------------|----------------------|--------------------------|
| 1   | 4874.00            | 49.03                        | PK | 74.00             | -24.97         | 2.00                     | 100.00                     | 42.63                    | 6.70                 | 31.20                  | 31.50                | 6.40                     |
| 2   | 4874.00            | 40.76                        | AV | 54.00             | -13.24         | 2.00                     | 100.00                     | 34.36                    | 6.70                 | 31.20                  | 31.50                | 6.40                     |
| 3   | 7311.00            | 50.01                        | PK | 74.00             | -23.99         | 1.00                     | 180.00                     | 39.21                    | 11.80                | 31.20                  | 32.20                | 10.80                    |
| 4   | 7311.00            | 41.66                        | AV | 54.00             | -12.34         | 1.00                     | 180.00                     | 30.86                    | 11.80                | 31.20                  | 32.20                | 10.80                    |

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11n20\_2462MHz)**

| No. | Frequency<br>(MHz) | Emssion<br>Level<br>(dBuV/m) |    | Limit<br>(dBuV/m) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV/m) | Cab.<br>Loss<br>(dB) | Ant.<br>Factor<br>(dB) | Pre.<br>Amp.<br>(dB) | Cor.<br>Factor<br>(dB/m) |
|-----|--------------------|------------------------------|----|-------------------|----------------|--------------------------|----------------------------|--------------------------|----------------------|------------------------|----------------------|--------------------------|
| 1   | 2483.50            | 54.32                        | PK | 74.00             | -19.68         | 2.00                     | 120.00                     | 52.72                    | 5.30                 | 28.70                  | 32.40                | 1.60                     |
| 2   | 2483.50            | 45.96                        | AV | 54.00             | -8.04          | 2.00                     | 120.00                     | 44.36                    | 5.30                 | 28.70                  | 32.40                | 1.60                     |
| 3   | 4924.00            | 48.88                        | PK | 74.00             | -25.12         | 1.00                     | 200.00                     | 43.18                    | 6.70                 | 30.50                  | 31.50                | 5.70                     |
| 4   | 4924.00            | 40.53                        | AV | 54.00             | -13.47         | 1.00                     | 200.00                     | 34.83                    | 6.70                 | 30.50                  | 31.50                | 5.70                     |
| 5   | 7386.00            | 46.36                        | PK | 74.00             | -27.64         | 1.50                     | 360.00                     | 35.56                    | 11.80                | 31.20                  | 32.20                | 10.80                    |
| 6   | 7386.00            | 38.11                        | AV | 54.00             | -15.89         | 1.50                     | 360.00                     | 27.31                    | 11.80                | 31.20                  | 32.20                | 10.80                    |

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11n20\_2462MHz)**

| No. | Frequency<br>(MHz) | Emssion<br>Level<br>(dBuV/m) |    | Limit<br>(dBuV/m) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV/m) | Cab.<br>Loss<br>(dB) | Ant.<br>Factor<br>(dB) | Pre.<br>Amp.<br>(dB) | Cor.<br>Factor<br>(dB/m) |
|-----|--------------------|------------------------------|----|-------------------|----------------|--------------------------|----------------------------|--------------------------|----------------------|------------------------|----------------------|--------------------------|
| 1   | 2483.50            | 54.26                        | PK | 74.00             | -19.74         | 1.50                     | 180.00                     | 52.66                    | 5.30                 | 28.70                  | 32.40                | 1.60                     |
| 2   | 2483.50            | 46.02                        | AV | 54.00             | -7.98          | 1.50                     | 180.00                     | 44.42                    | 5.30                 | 28.70                  | 32.40                | 1.60                     |
| 3   | 4924.00            | 49.33                        | PK | 74.00             | -24.67         | 1.50                     | 100.00                     | 43.63                    | 6.70                 | 30.50                  | 31.50                | 5.70                     |
| 4   | 4924.00            | 40.94                        | AV | 54.00             | -13.06         | 1.50                     | 100.00                     | 35.24                    | 6.70                 | 30.50                  | 31.50                | 5.70                     |
| 5   | 7386.00            | 50.14                        | PK | 74.00             | -23.86         | 1.80                     | 180.00                     | 39.34                    | 11.80                | 31.20                  | 32.20                | 10.80                    |
| 6   | 7386.00            | 41.32                        | AV | 54.00             | -12.68         | 1.80                     | 180.00                     | 30.52                    | 11.80                | 31.20                  | 32.20                | 10.80                    |

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11n40\_2422MHz)**

| No. | Frequency (MHz) | Emssion Level (dBuV/m) |    | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV/m) | Cab. Loss (dB) | Ant. Factor (dB) | Pre. Amp. (dB) | Cor. Factor (dB/m) |
|-----|-----------------|------------------------|----|----------------|-------------|--------------------|----------------------|--------------------|----------------|------------------|----------------|--------------------|
| 1   | 2390.00         | 51.18                  | PK | 74.00          | -22.82      | 1.50               | 180.00               | 49.88              | 5.20           | 28.60            | 32.50          | 1.30               |
| 2   | 2390.00         | 42.93                  | AV | 54.00          | -11.07      | 1.50               | 180.00               | 41.63              | 5.20           | 28.60            | 32.50          | 1.30               |
| 3   | 4844.00         | 49.35                  | PK | 74.00          | -24.65      | 1.50               | 200.00               | 42.95              | 7.40           | 30.40            | 31.40          | 6.40               |
| 4   | 4844.00         | 41.21                  | AV | 54.00          | -12.79      | 1.50               | 200.00               | 34.81              | 7.40           | 30.40            | 31.40          | 6.40               |
| 5   | 7266.00         | 50.32                  | PK | 74.00          | -23.68      | 1.20               | 250.00               | 39.82              | 11.50          | 31.20            | 32.20          | 10.50              |
| 6   | 7266.00         | 40.78                  | AV | 54.00          | -13.22      | 1.20               | 250.00               | 30.28              | 11.50          | 31.20            | 32.20          | 10.50              |

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11n40\_2422MHz)**

| No. | Frequency (MHz) | Emssion Level (dBuV/m) |    | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV/m) | Cab. Loss (dB) | Ant. Factor (dB) | Pre. Amp. (dB) | Cor. Factor (dB/m) |
|-----|-----------------|------------------------|----|----------------|-------------|--------------------|----------------------|--------------------|----------------|------------------|----------------|--------------------|
| 1   | 2390.00         | 57.15                  | PK | 74.00          | -16.85      | 1.50               | 180.00               | 55.85              | 5.20           | 28.60            | 32.50          | 1.30               |
| 2   | 2390.00         | 48.92                  | AV | 54.00          | -5.08       | 1.50               | 180.00               | 47.62              | 5.20           | 28.60            | 32.50          | 1.30               |
| 3   | 4824.00         | 48.87                  | PK | 74.00          | -25.13      | 1.50               | 360.00               | 42.47              | 7.40           | 30.40            | 31.40          | 6.40               |
| 4   | 4824.00         | 40.58                  | AV | 54.00          | -13.42      | 1.50               | 360.00               | 34.18              | 7.40           | 30.40            | 31.40          | 6.40               |
| 5   | 7266.00         | 49.78                  | PK | 74.00          | -24.22      | 1.50               | 320.00               | 39.28              | 11.50          | 31.20            | 32.20          | 10.50              |
| 6   | 7266.00         | 41.43                  | AV | 54.00          | -12.57      | 1.50               | 320.00               | 30.93              | 11.50          | 31.20            | 32.20          | 10.50              |

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11n40\_2437MHz)**

| No. | Frequency<br>(MHz) | Emssion<br>Level<br>(dBuV/m) |    | Limit<br>(dBuV/m) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV/m) | Cab.<br>Loss<br>(dB) | Ant.<br>Factor<br>(dB) | Pre.<br>Amp.<br>(dB) | Cor.<br>Factor<br>(dB/m) |
|-----|--------------------|------------------------------|----|-------------------|----------------|--------------------------|----------------------------|--------------------------|----------------------|------------------------|----------------------|--------------------------|
| 1   | 4874.00            | 48.99                        | PK | 74.00             | -25.01         | 1.50                     | 40.00                      | 42.59                    | 6.70                 | 31.20                  | 31.50                | 6.40                     |
| 2   | 4874.00            | 40.56                        | AV | 54.00             | -13.44         | 1.50                     | 40.00                      | 34.16                    | 6.70                 | 31.20                  | 31.50                | 6.40                     |
| 3   | 7311.00            | 49.71                        | PK | 74.00             | -24.29         | 1.60                     | 230.00                     | 38.91                    | 11.80                | 31.20                  | 32.20                | 10.80                    |
| 4   | 7311.00            | 41.51                        | AV | 54.00             | -12.49         | 1.60                     | 230.00                     | 30.71                    | 11.80                | 31.20                  | 32.20                | 10.80                    |

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11n40\_2437MHz)**

| No. | Frequency<br>(MHz) | Emssion<br>Level<br>(dBuV/m) |    | Limit<br>(dBuV/m) | Margin<br>(dB) | Antenna<br>Height<br>(m) | Table<br>Angle<br>(Degree) | Raw<br>Value<br>(dBuV/m) | Cab.<br>Loss<br>(dB) | Ant.<br>Factor<br>(dB) | Pre.<br>Amp.<br>(dB) | Cor.<br>Factor<br>(dB/m) |
|-----|--------------------|------------------------------|----|-------------------|----------------|--------------------------|----------------------------|--------------------------|----------------------|------------------------|----------------------|--------------------------|
| 1   | 4874.00            | 49.36                        | PK | 74.00             | -24.64         | 1.50                     | 180.00                     | 42.96                    | 6.70                 | 31.20                  | 31.50                | 6.40                     |
| 2   | 4874.00            | 41.13                        | AV | 54.00             | -12.87         | 1.50                     | 180.00                     | 34.73                    | 6.70                 | 31.20                  | 31.50                | 6.40                     |
| 3   | 7311.00            | 50.17                        | PK | 74.00             | -23.83         | 1.00                     | 260.00                     | 39.37                    | 11.80                | 31.20                  | 32.20                | 10.80                    |
| 4   | 7311.00            | 42.09                        | AV | 54.00             | -11.91         | 1.00                     | 260.00                     | 31.29                    | 11.80                | 31.20                  | 32.20                | 10.80                    |

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11n40\_2452MHz)**

| No. | Frequency (MHz) | Emission Level (dBuV/m) |    | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV/m) | Cab. Loss (dB) | Ant. Factor (dB) | Pre. Amp. (dB) | Cor. Factor (dB/m) |
|-----|-----------------|-------------------------|----|----------------|-------------|--------------------|----------------------|--------------------|----------------|------------------|----------------|--------------------|
| 1   | 2483.50         | 55.04                   | PK | 74.00          | -18.96      | 2.00               | 100.00               | 53.44              | 5.30           | 28.70            | 32.40          | 1.60               |
| 2   | 2483.50         | 46.70                   | AV | 54.00          | -7.30       | 2.00               | 100.00               | 45.10              | 5.30           | 28.70            | 32.40          | 1.60               |
| 3   | 4904.00         | 48.87                   | PK | 74.00          | -25.13      | 1.50               | 120.00               | 43.17              | 6.70           | 30.50            | 31.50          | 5.70               |
| 4   | 4904.00         | 40.75                   | AV | 54.00          | -13.25      | 1.50               | 120.00               | 35.05              | 6.70           | 30.50            | 31.50          | 5.70               |
| 5   | 7356.00         | 49.33                   | PK | 74.00          | -24.67      | 1.50               | 360.00               | 38.53              | 11.80          | 31.20            | 32.20          | 10.80              |
| 6   | 7356.00         | 41.03                   | AV | 54.00          | -12.97      | 1.50               | 360.00               | 30.23              | 11.80          | 31.20            | 32.20          | 10.80              |

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11n40\_2452MHz)**

| No. | Frequency (MHz) | Emission Level (dBuV/m) |    | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV/m) | Cab. Loss (dB) | Ant. Factor (dB) | Pre. Amp. (dB) | Cor. Factor (dB/m) |
|-----|-----------------|-------------------------|----|----------------|-------------|--------------------|----------------------|--------------------|----------------|------------------|----------------|--------------------|
| 1   | 2483.50         | 55.03                   | PK | 74.00          | -18.97      | 1.50               | 180.00               | 53.43              | 5.30           | 28.70            | 32.40          | 1.60               |
| 2   | 2483.50         | 47.05                   | AV | 54.00          | -6.95       | 1.50               | 180.00               | 45.45              | 5.30           | 28.70            | 32.40          | 1.60               |
| 3   | 4904.00         | 49.54                   | PK | 74.00          | -24.46      | 1.50               | 360.00               | 43.84              | 6.70           | 30.50            | 31.50          | 5.70               |
| 4   | 4904.00         | 41.19                   | AV | 54.00          | -12.81      | 1.50               | 360.00               | 35.49              | 6.70           | 30.50            | 31.50          | 5.70               |
| 5   | 7356.00         | 51.03                   | PK | 74.00          | -22.97      | 1.50               | 180.00               | 40.23              | 11.80          | 31.20            | 32.20          | 10.80              |
| 6   | 7356.00         | 43.04                   | AV | 54.00          | -10.96      | 1.50               | 180.00               | 32.24              | 11.80          | 31.20            | 32.20          | 10.80              |

**REMARKS:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)  
- Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level - Limit value
5. " \* ": Fundamental frequency.



## 2.7. Conducted Emission

### 2.7.1. Limit of Conducted Emission

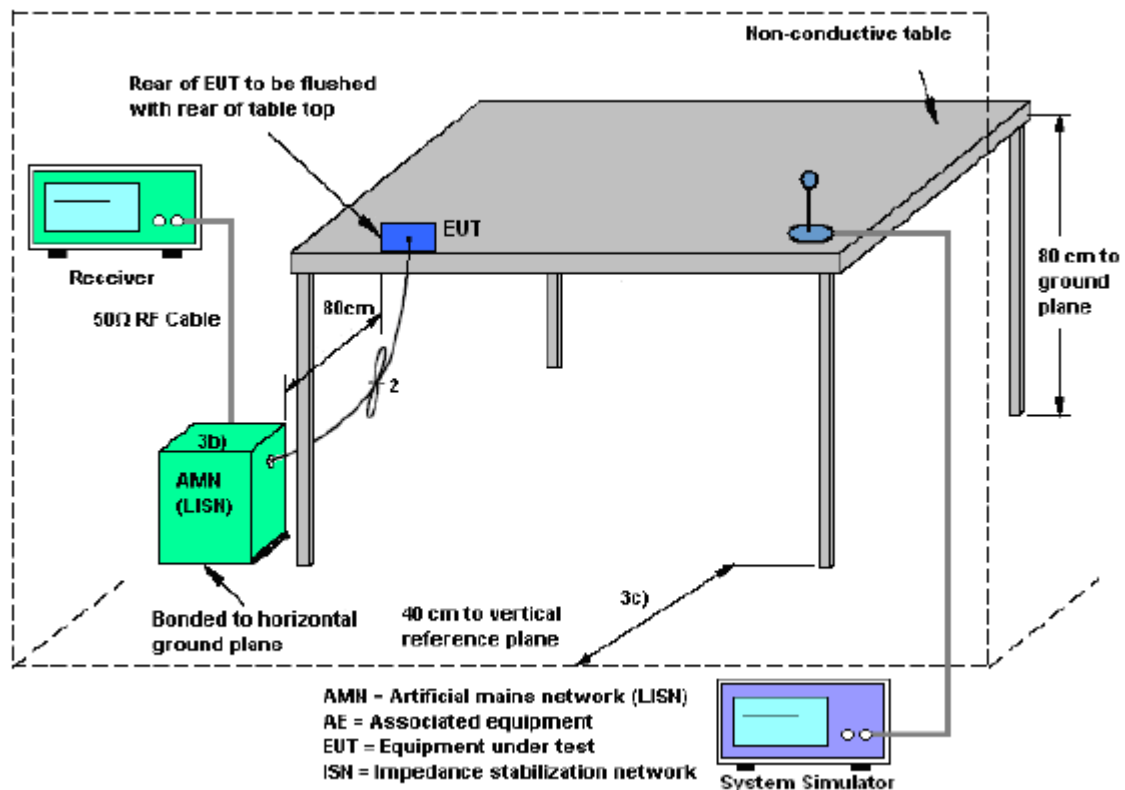
For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table.

| Frequency range (MHz) | Conducted Limit (dB $\mu$ V) |          |
|-----------------------|------------------------------|----------|
|                       | Quai-peak                    | Average  |
| 0.15 - 0.50           | 66 to 56                     | 56 to 46 |
| 0.50 - 5              | 56                           | 46       |
| 5 - 30                | 60                           | 50       |

### 2.7.2. Measuring Instruments

The measuring equipment is listed in the section 3 of this test report.

### 2.7.3. Test Setup

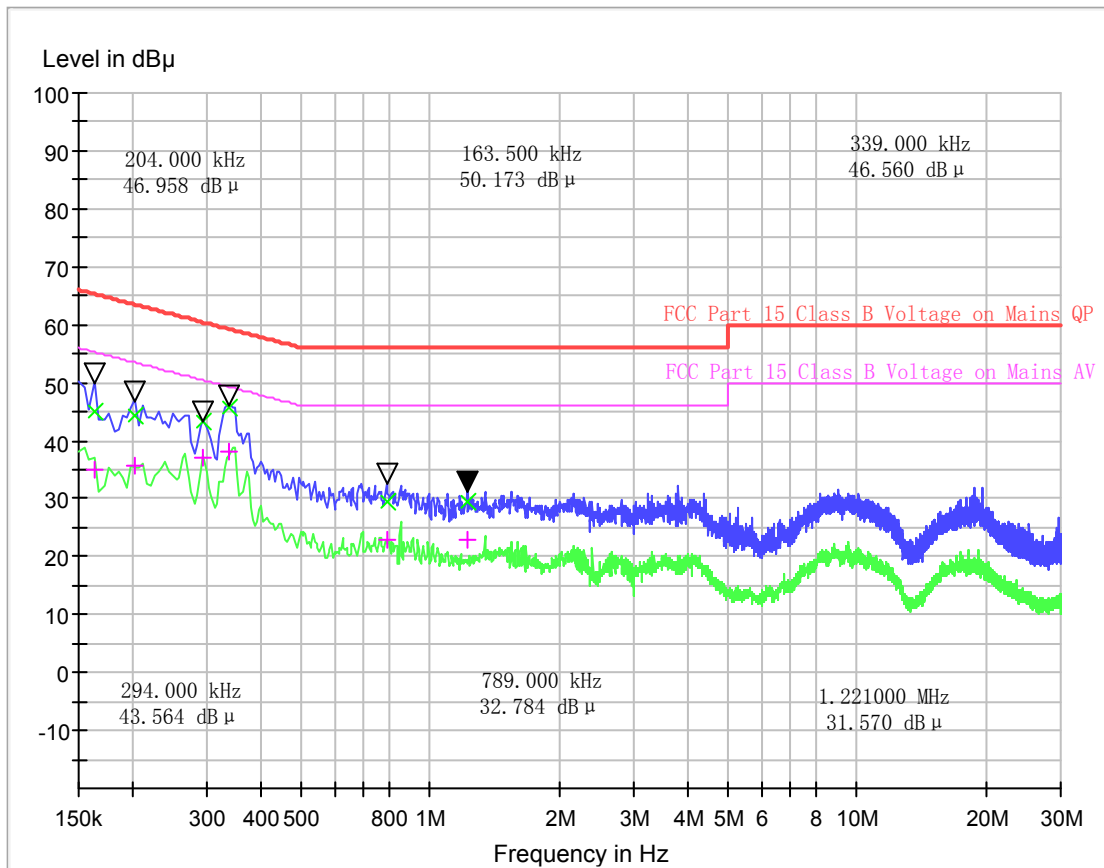


#### **2.7.4. Test Procedures**

1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
5. The FCC states that a 50 ohm, 50 micrometry LISN should be used.
6. Both sides of AC line were checked for maximum conducted interference.
7. The frequency range from 150 kHz to 30 MHz was searched.
8. Set the test-receiver system to Peak Detect Function and specified bandwidth (IF Bandwidth = 9kHz) with Maximum Hold Mode. Then measurement is also conducted by Average Detector and Quasi-Peak Detector Function respectively.

#### **2.7.5. Test Results of Conducted Emission**

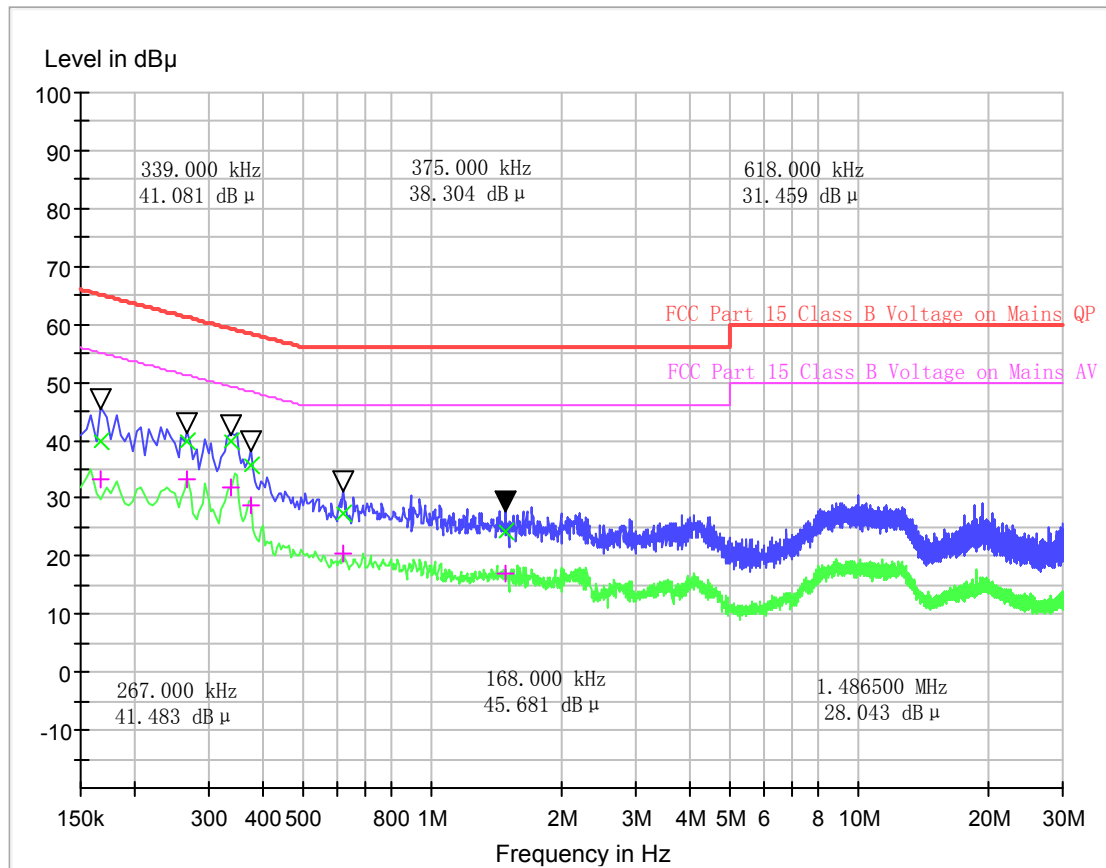
1. The EUT configuration of the emission tests is 2.4G WLAN Link + Adapter



(Plot A: L Phase)

| Conducted Disturbance at Mains Terminals |               |                          |                 |               |                          |
|------------------------------------------|---------------|--------------------------|-----------------|---------------|--------------------------|
| L Test Data                              |               |                          |                 |               |                          |
| QP                                       |               |                          | AV              |               |                          |
| Frequency (MHz)                          | Limits (dBμV) | Measurement Value (dBμV) | Frequency (MHz) | Limits (dBμV) | Measurement Value (dBμV) |
| 0.163500                                 | 65.3          | 44.88                    | 0.163500        | 55.3          | 35.10                    |
| 0.204000                                 | 63.4          | 44.30                    | 0.204000        | 53.4          | 35.76                    |
| 0.294000                                 | 60.4          | 43.32                    | 0.294000        | 50.4          | 37.11                    |
| 0.339000                                 | 59.2          | 45.71                    | 0.339000        | 49.2          | 38.25                    |
| 0.789000                                 | 56.0          | 29.62                    | 0.789000        | 46.0          | 23.02                    |
| 1.221000                                 | 56.0          | 29.62                    | 1.221000        | 46.0          | 23.05                    |

**Test Result: PASS**



(Plot B: N Phase)

| Conducted Disturbance at Mains Terminals |               |                          |                 |               |                          |
|------------------------------------------|---------------|--------------------------|-----------------|---------------|--------------------------|
| N Test Data                              |               |                          |                 |               |                          |
| QP                                       |               |                          | AV              |               |                          |
| Frequency (MHz)                          | Limits (dBμV) | Measurement Value (dBμV) | Frequency (MHz) | Limits (dBμV) | Measurement Value (dBμV) |
| 0.168000                                 | 65.1          | 39.88                    | 0.168000        | 55.1          | 33.28                    |
| 0.267000                                 | 61.2          | 39.92                    | 0.267000        | 51.2          | 33.25                    |
| 0.339000                                 | 59.2          | 39.90                    | 0.339000        | 49.2          | 32.02                    |
| 0.375000                                 | 58.4          | 35.59                    | 0.375000        | 48.4          | 28.91                    |
| 0.618000                                 | 56.0          | 27.49                    | 0.618000        | 46.0          | 20.52                    |
| 1.486500                                 | 56.0          | 24.29                    | 1.486500        | 46.0          | 17.10                    |

Test Result: PASS

### 3. List of measuring equipment

| Radiated Emission |                         |                              |                        |            |            |
|-------------------|-------------------------|------------------------------|------------------------|------------|------------|
| Item              | Test Equipment          | Manufacturer                 | Model No.              | Serial No. | Last Cal   |
| 1                 | Ultra-Broadband Antenna | ShwarzBeck                   | VULB9163               | 538        | 11/12/2017 |
| 2                 | EMI TEST RECEIVER       | Rohde&Schwarz                | ESI 26                 | 100009     | 11/12/2017 |
| 3                 | EMI TEST Software       | Audix                        | E3                     | N/A        | N/A        |
| 4                 | TURNTABLE               | ETS                          | 2088                   | 2149       | N/A        |
| 5                 | ANTENNA MAST            | ETS                          | 2075                   | 2346       | N/A        |
| 6                 | EMI TEST Software       | Rohde&Schwarz                | ESK1                   | N/A        | N/A        |
| 7                 | HORNANTENNA             | ShwarzBeck                   | 9120D                  | 1011       | 11/12/2017 |
| 8                 | Amplifer                | Sonoma                       | 310N                   | E009-13    | 11/12/2017 |
| 9                 | JS amplifer             | Rohde&Schwarz                | JS4-00101800-28<br>-5A | F201504    | 11/12/2017 |
| 10                | High pass filter        | Compliance Direction systems | BSU-6                  | 34202      | 11/12/2017 |
| 11                | HORNANTENNA             | ShwarzBeck                   | 9120D                  | 1012       | 11/12/2017 |
| 12                | Amplifer                | Compliance Direction systems | PAP1-4060              | 120        | 11/12/2017 |
| 13                | Loop Antenna            | Rohde&Schwarz                | HFH2-Z2                | 100020     | 11/12/2017 |
| 14                | TURNTABLE               | MATURO                       | TT2.0                  | ----       | N/A        |
| 15                | ANTENNA MAST            | MATURO                       | TAM-4.0-P              | ----       | N/A        |
| 16                | Horn Antenna            | SCHWARZBECK                  | BBHA9170               | 25841      | 11/12/2017 |
| 17                | ULTRA-BROADBAND ANTENNA | Rohde&Schwarz                | HL562                  | 100015     | 11/12/2017 |

Maximum Peak Output Power / Power Spectral Density / 6dB Bandwidth / Band Edge Compliance of RF Emission / Spurious RF Conducted Emission

| Item | Test Equipment    | Manufacturer  | Model No. | Serial No.   | Last Cal   |
|------|-------------------|---------------|-----------|--------------|------------|
| 1    | Spectrum Analyzer | Rohde&Schwarz | FSP       | 1164.4391.40 | 11/12/2017 |
| 2    | Spectrum Analyzer | Keysight      | N9030A    | ATO-67098    | 10/09/2017 |
| 3    | Power Meter       | Anritsu       | ML2480B   | 100798       | 11/12/2017 |
| 4    | Power Sensor      | Anritsu       | MA2411B   | 100258       | 11/12/2017 |

The calibration interval was one year.

**\*\* END OF REPORT \*\***