

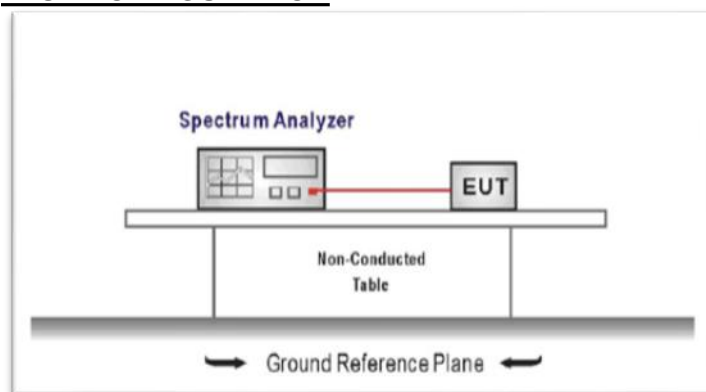
### 3.6. Band edge and Spurious Emission (conducted)

#### LIMIT

#### **FCC CFR Title 47 Part 15 Subpart C Section 15.247 (d):**

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

#### **TEST CONFIGURATION**



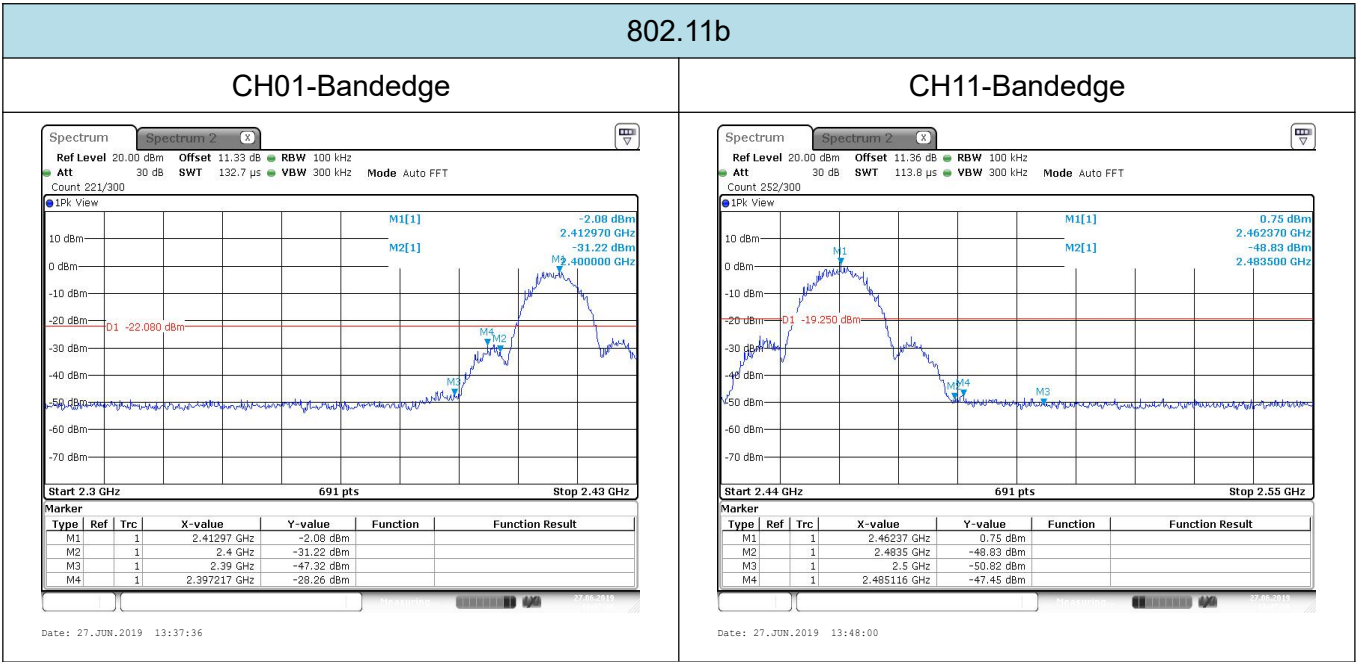
#### **TEST PROCEDURE**

1. Connect the antenna port(s) to the spectrum analyzer input.
2. Establish a reference level by using the following procedure  
 Center frequency=DTS channel center frequency  
 The span = 1.5 times the DTS bandwidth.  
 RBW = 100 kHz, VBW  $\geq 3 \times$  RBW  
 Detector = peak, Sweep time = auto couple, Trace mode = max hold  
 Allow trace to fully stabilize  
 Use the peak marker function to determine the maximum PSD level  
  
 Note: the channel found to contain the maximum PSD level can be used to establish the reference level.
3. Emission level measurement  
 Set the center frequency and span to encompass frequency range to be measured  
 RBW = 100 kHz, VBW  $\geq 3 \times$  RBW  
 Detector = peak, Sweep time = auto couple, Trace mode = max hold  
 Allow trace to fully stabilize  
 Use the peak marker function to determine the maximum amplitude level.
4. Place the radio in continuous transmit mode, allow the trace to stabilize, view the transmitter waveform on the spectrum analyzer.
5. Ensure that the amplitude of all unwanted emissions outside of the authorized frequency band excluding restricted frequency bands) are attenuated by at least the minimum requirements specified (at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz). Report the three highest emissions relative to the limit.

#### **TEST MODE:**

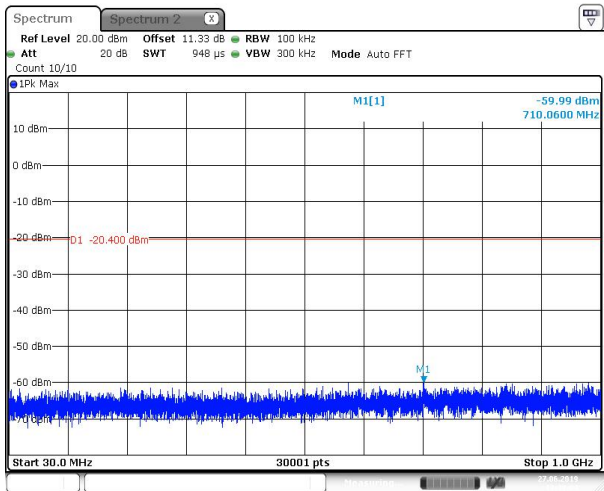
Please refer to the clause 2.3.

#### **TEST RESULTS**

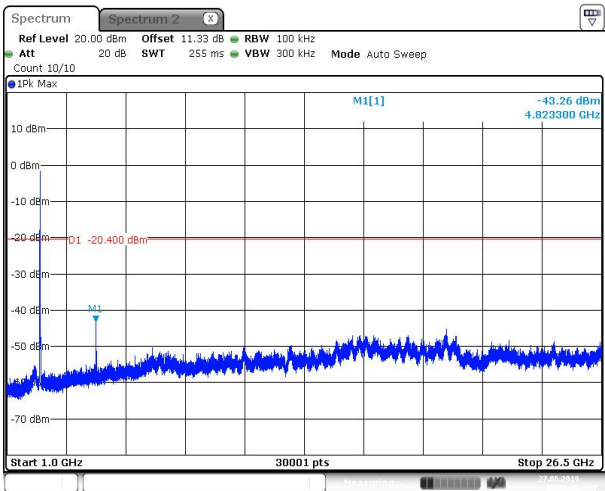


802.11b

CH01-SE

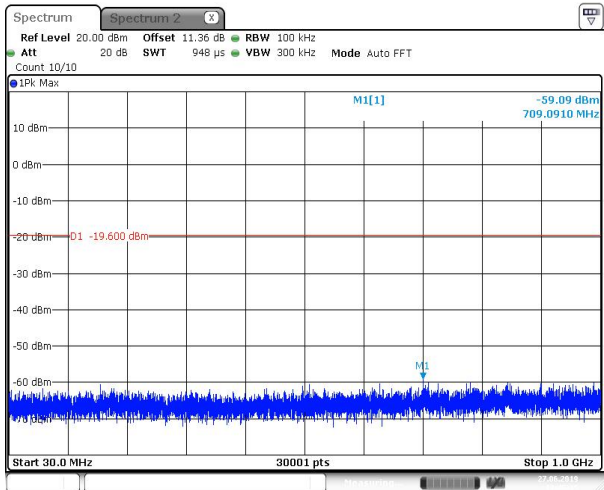


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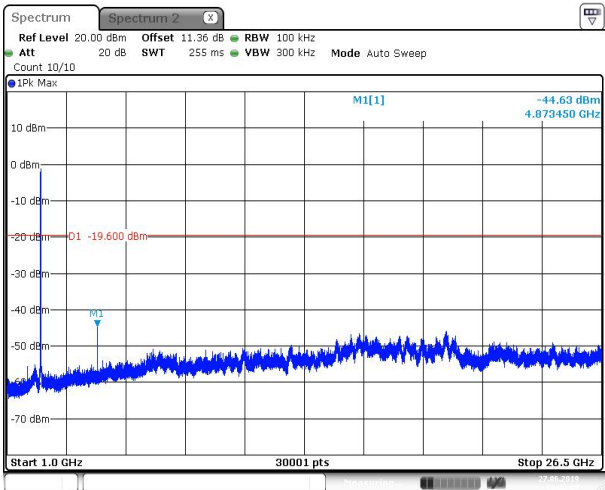


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CH06-SE

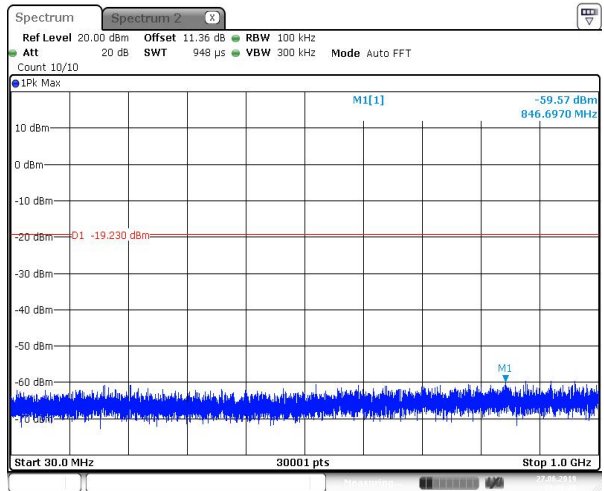


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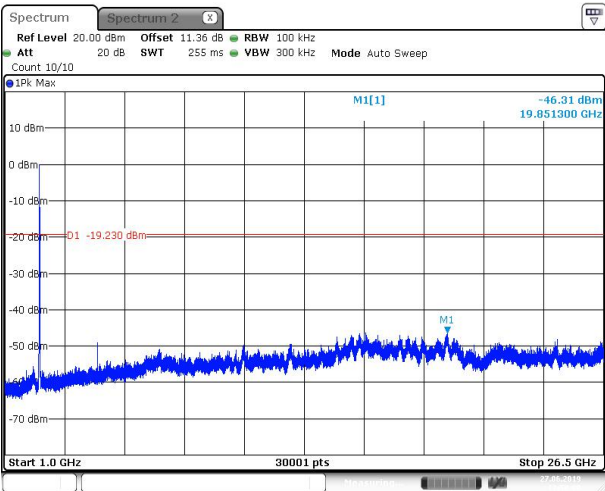


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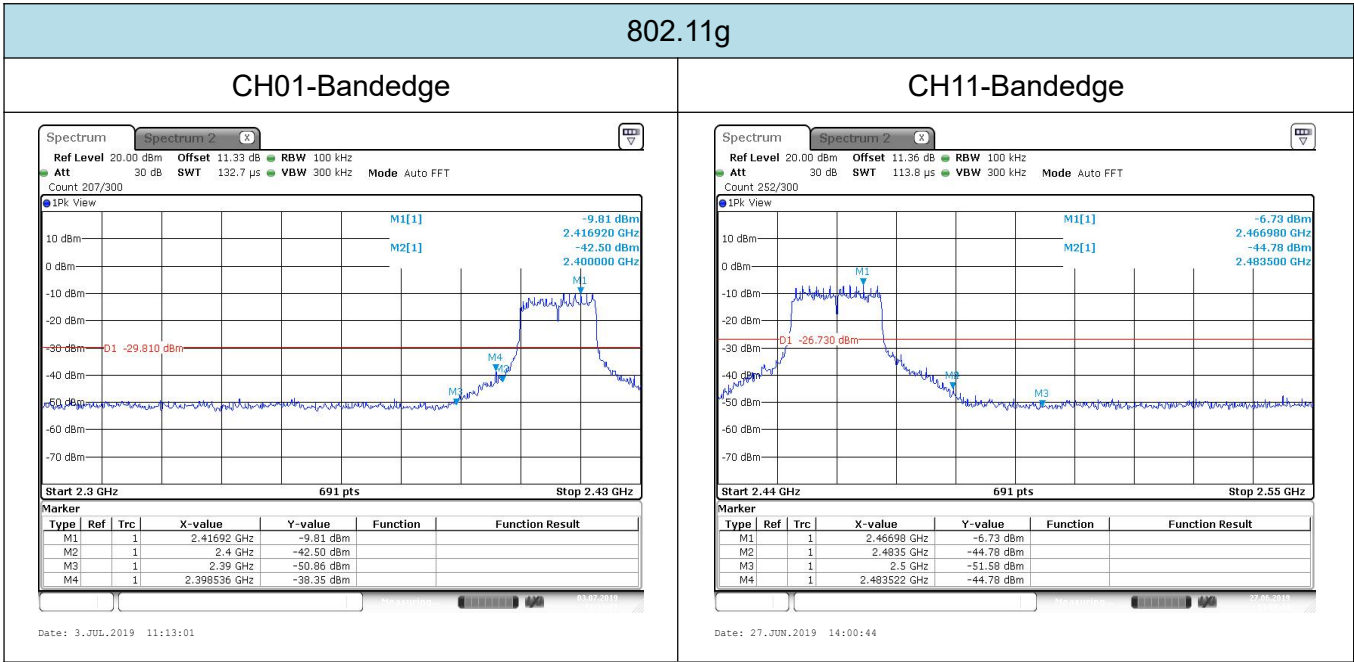
CH11-SE



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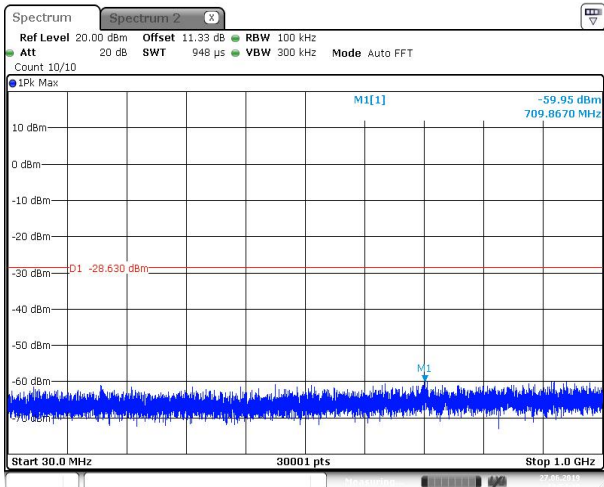


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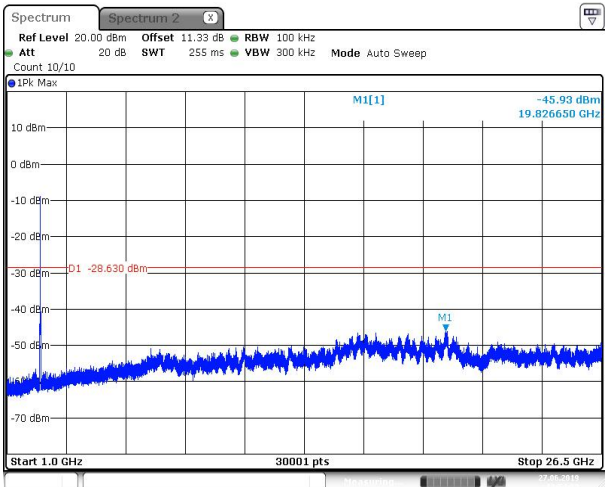


802.11g

CH01-SE

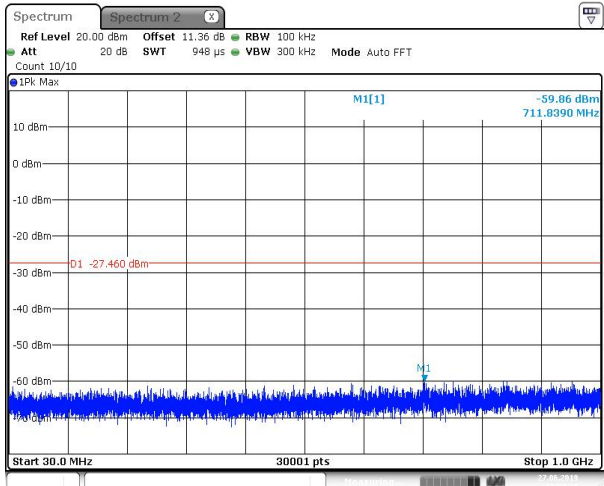


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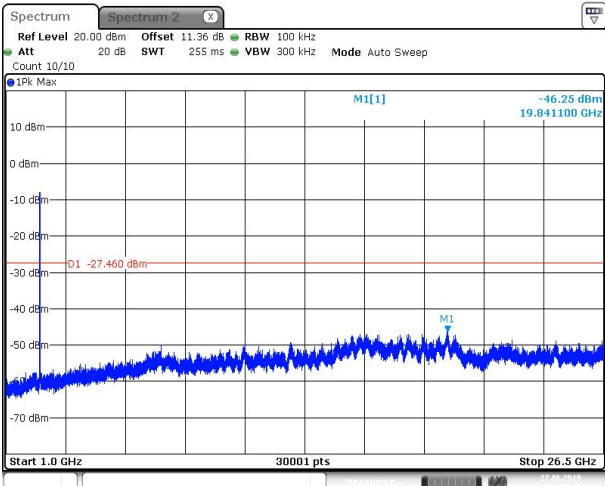


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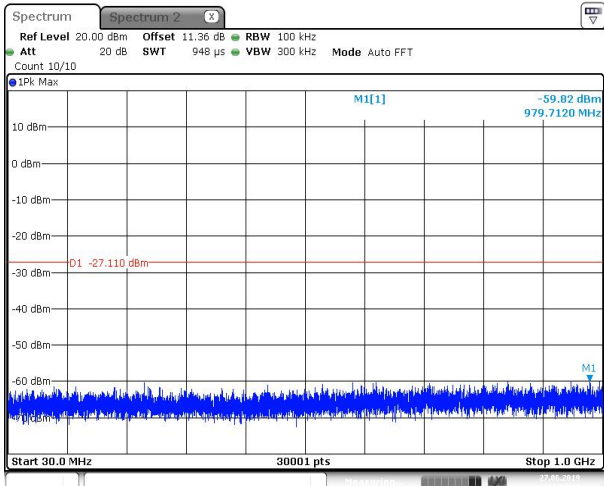


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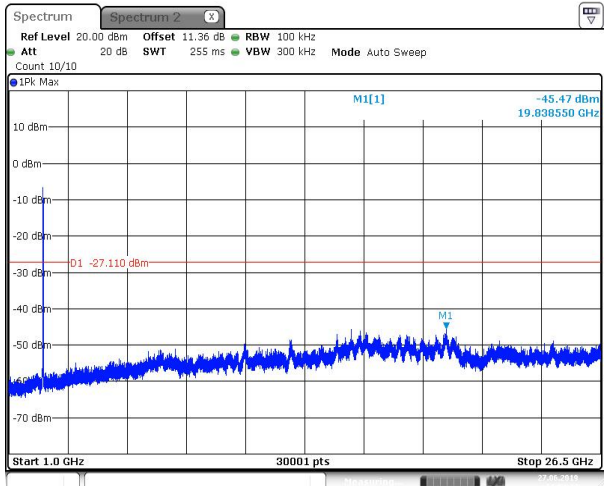


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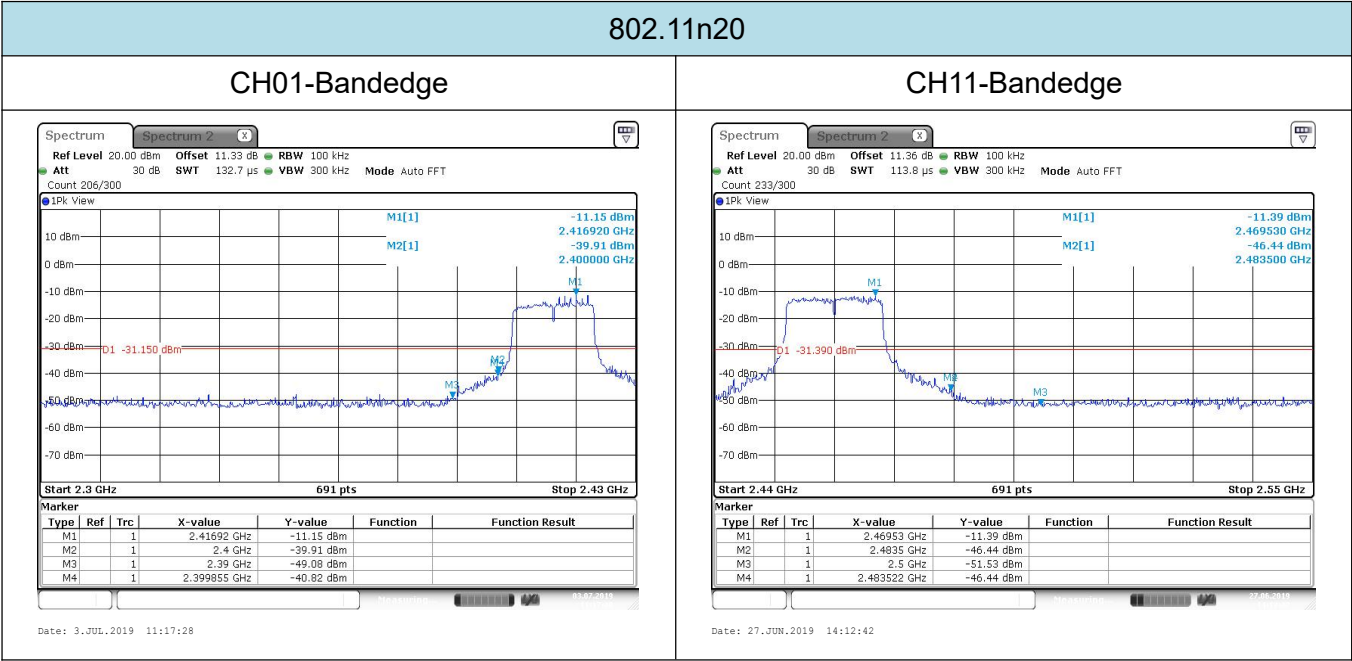
CH11-SE



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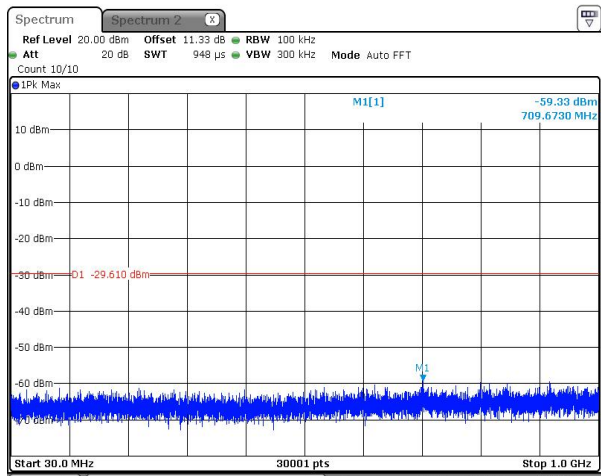


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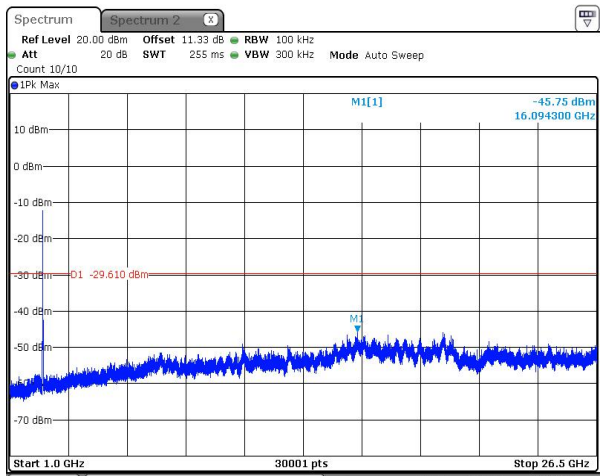


802.11n20

CH01-SE

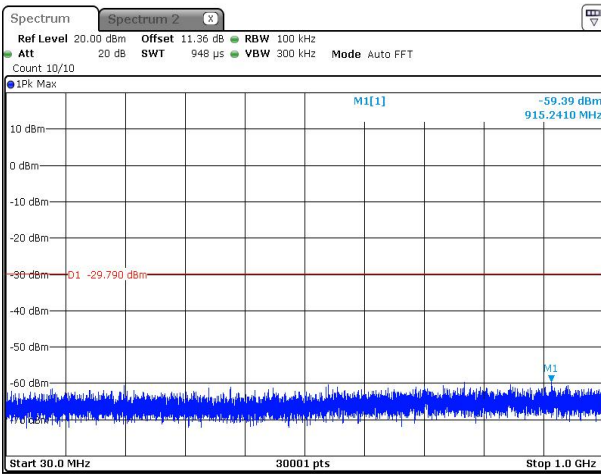


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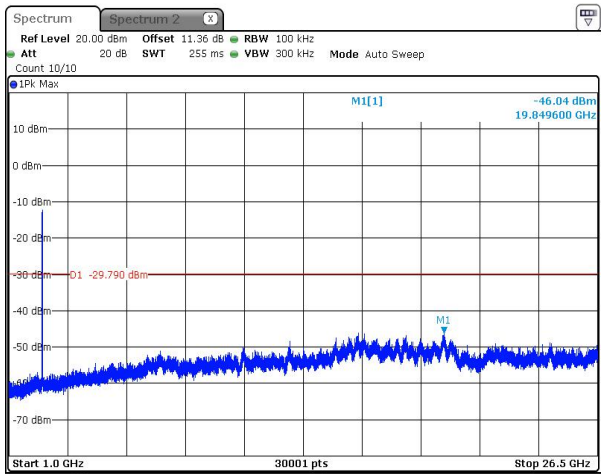


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CH06-SE

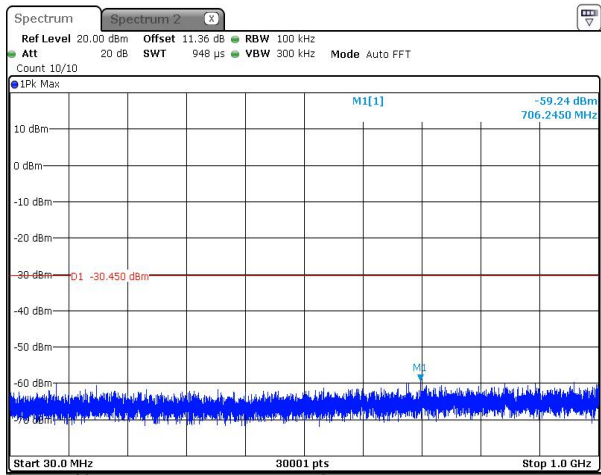


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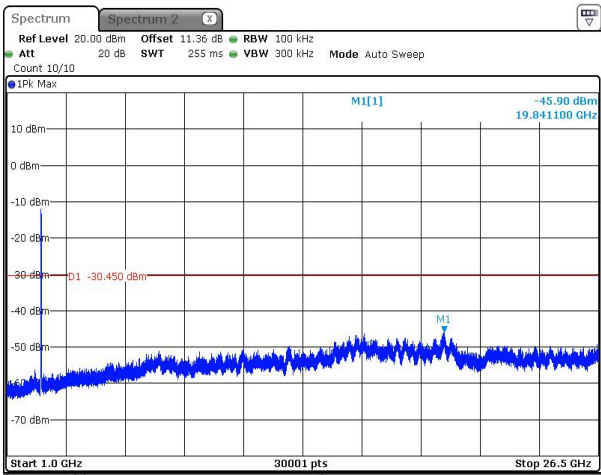


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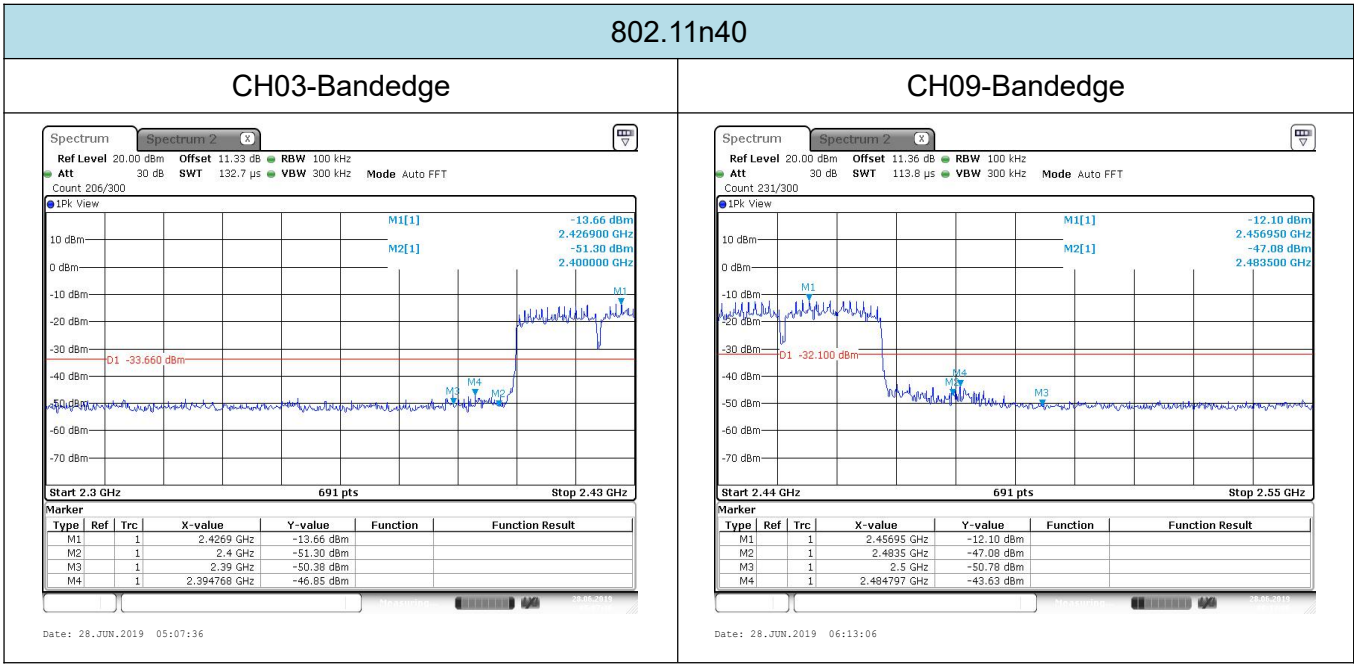
CH11-SE



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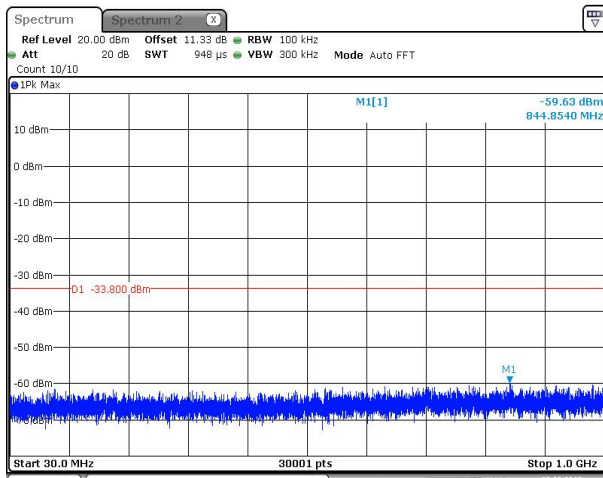


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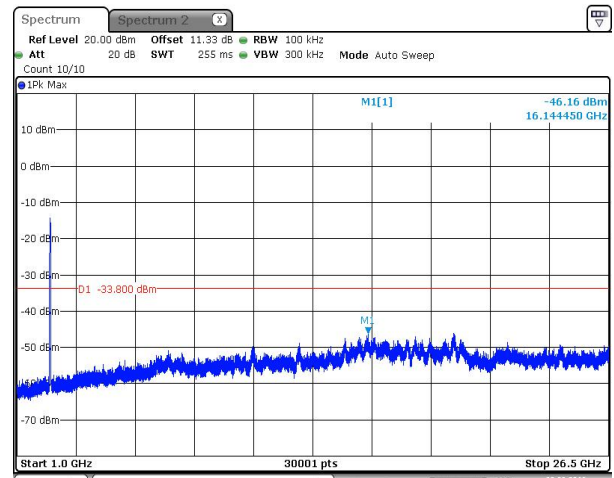


802.11n40

CH03-SE

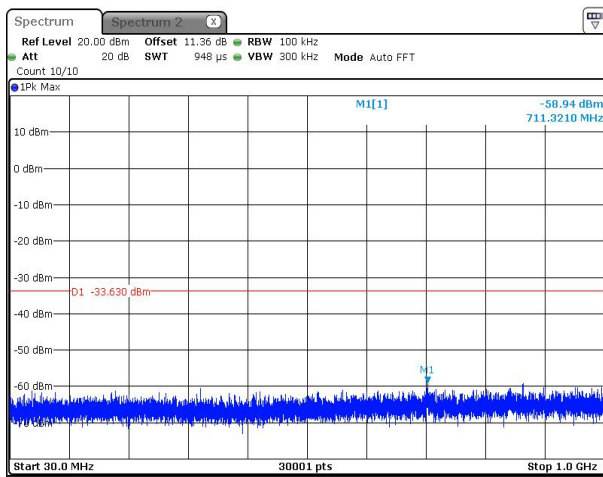


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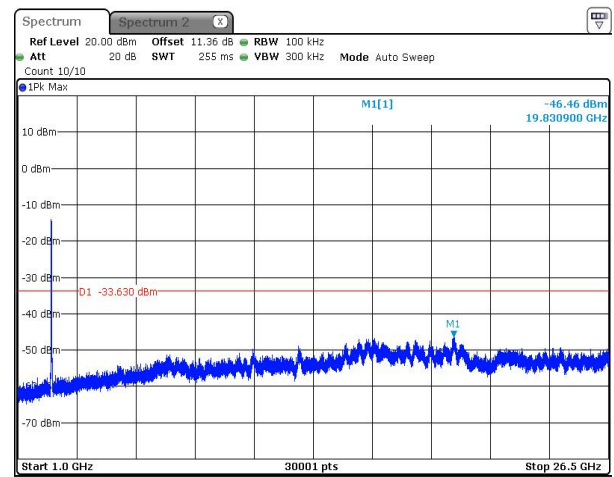


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CH06-SE

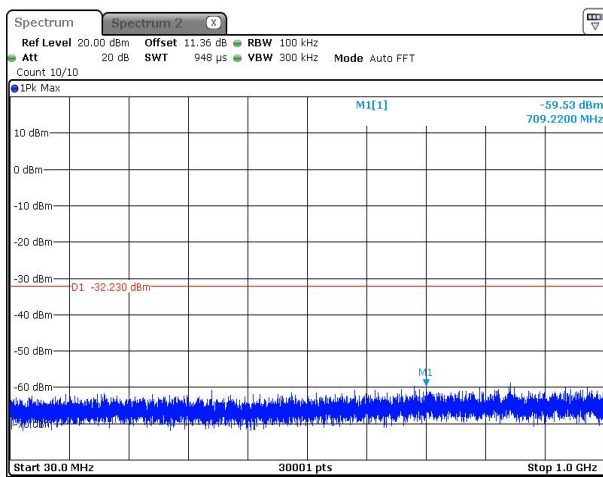


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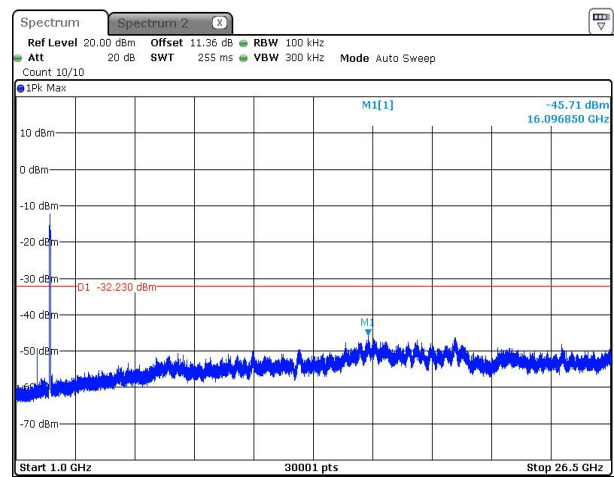


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CH09-SE



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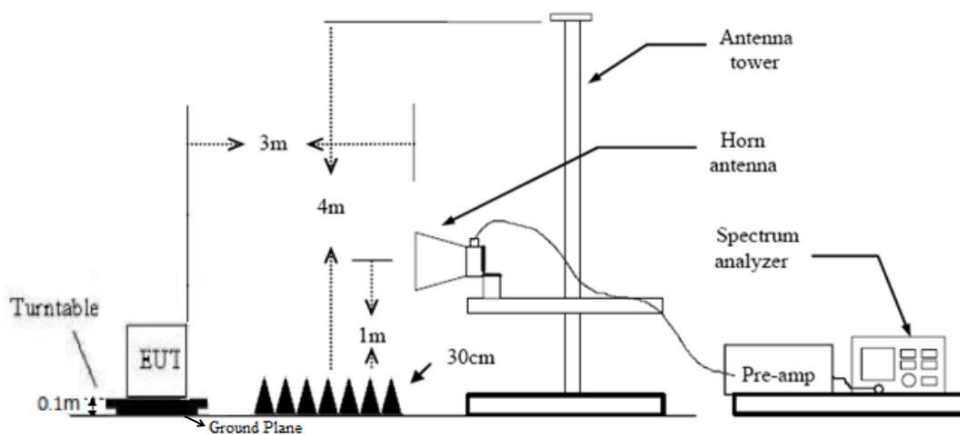
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### 3.7. Band Edge Emissions

#### Limit

| Restricted Frequency Band (MHz)                                                       | (dBuV/m)(at 3m) |         |
|---------------------------------------------------------------------------------------|-----------------|---------|
|                                                                                       | Peak            | Average |
| 2310 ~2390                                                                            | 74              | 54      |
| 2483.5 ~2500                                                                          | 74              | 54      |
| <b>Note: All restriction bands have been tested, only the worst case is reported.</b> |                 |         |

#### Test Configuration



#### Test Procedure

1. The EUT was setup and tested according to ANSI C63.10:2013 requirements.
2. The EUT is placed on a turn table which is 0.1 meter above ground. The turn table is rotated 360 degrees to determine the position of the maximum emission level.
3. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.
4. The antenna is scanned from 1 meter to 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10:2013 on radiated measurement.
5. The receiver set as follow:  
 RBW=1MHz, VBW=3MHz PEAK detector for Peak value.  
 RBW=1MHz, VBW=10Hz with PEAK Detector for Average Value.

#### Test Mode

Please refer to the clause 2.3.

#### Test Results

☒ **Passed** ☐ **Not Applicable**

Note:

- 1) Final level= Read level + Antenna Factor + Cable Loss - Preamp Factor

| 802.11b         |                   |                       |                 |                          | CH01           |                     |             |              |            |
|-----------------|-------------------|-----------------------|-----------------|--------------------------|----------------|---------------------|-------------|--------------|------------|
| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Margin (dB) | Polarization | Test value |
| 2310            | 19.69             | 26.01                 | 4.52            | 0                        | 50.22          | 74                  | -23.78      | Vertical     | Peak       |
| 2390            | 20.74             | 26.84                 | 4.89            | 0                        | 52.47          | 74                  | -21.53      | Vertical     |            |
| 2310            | 13.22             | 26.01                 | 4.52            | 0                        | 43.75          | 54                  | -10.25      | Vertical     | Average    |
| 2390            | 14.21             | 26.84                 | 4.89            | 0                        | 45.94          | 54                  | -8.06       | Vertical     |            |
| 2310            | 17.64             | 26.11                 | 4.52            | 0                        | 48.27          | 74                  | -25.73      | Horizontal   | Peak       |
| 2390            | 18.23             | 26.75                 | 4.89            | 0                        | 49.87          | 74                  | -24.13      | Horizontal   |            |
| 2310            | 15.42             | 26.11                 | 4.52            | 0                        | 46.05          | 54                  | -7.95       | Horizontal   | Average    |
| 2390            | 15.86             | 26.75                 | 4.89            | 0                        | 47.50          | 54                  | -6.50       | Horizontal   |            |

| 802.11b         |                   |                       |                 |                          | CH11           |                     |             |              |            |
|-----------------|-------------------|-----------------------|-----------------|--------------------------|----------------|---------------------|-------------|--------------|------------|
| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Margin (dB) | Polarization | Test value |
| 2483.78         | 21.32             | 26.01                 | 4.52            | 0                        | 51.85          | 74                  | -22.15      | Vertical     | Peak       |
| 2500            | 20.96             | 26.84                 | 4.89            | 0                        | 52.69          | 74                  | -21.31      | Vertical     |            |
| 2483.62         | 16.21             | 26.01                 | 4.52            | 0                        | 46.74          | 54                  | -7.26       | Vertical     | Average    |
| 2500            | 15.1              | 26.84                 | 4.89            | 0                        | 46.83          | 54                  | -7.17       | Vertical     |            |
| 2483.79         | 19.78             | 26.11                 | 4.52            | 0                        | 50.41          | 74                  | -23.59      | Horizontal   | Peak       |
| 2500            | 20.14             | 26.75                 | 4.89            | 0                        | 51.78          | 74                  | -22.22      | Horizontal   |            |
| 2483.61         | 15.47             | 26.11                 | 4.52            | 0                        | 46.1           | 54                  | -7.90       | Horizontal   | Average    |
| 2500            | 15.63             | 26.75                 | 4.89            | 0                        | 47.27          | 54                  | -6.73       | Horizontal   |            |

| 802.11g         |                   |                       |                 |                          | CH01           |                     |             |              |            |
|-----------------|-------------------|-----------------------|-----------------|--------------------------|----------------|---------------------|-------------|--------------|------------|
| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Margin (dB) | Polarization | Test value |
| 2310            | 23.12             | 26.01                 | 4.52            | 0                        | 53.65          | 74                  | -20.35      | Vertical     | Peak       |
| 2390            | 22.41             | 26.84                 | 4.89            | 0                        | 54.14          | 74                  | -19.86      | Vertical     |            |
| 2310            | 18.1              | 26.01                 | 4.52            | 0                        | 48.63          | 54                  | -5.37       | Vertical     | Average    |
| 2390            | 16.21             | 26.84                 | 4.89            | 0                        | 47.94          | 54                  | -6.06       | Vertical     |            |
| 2310            | 19.73             | 26.11                 | 4.52            | 0                        | 50.36          | 74                  | -23.64      | Horizontal   | Peak       |
| 2390            | 20.52             | 26.75                 | 4.89            | 0                        | 52.16          | 74                  | -21.84      | Horizontal   |            |
| 2310            | 18.74             | 26.11                 | 4.52            | 0                        | 49.37          | 54                  | -4.63       | Horizontal   | Average    |
| 2390            | 15.94             | 26.75                 | 4.89            | 0                        | 47.58          | 54                  | -6.42       | Horizontal   |            |

| 802.11g         |                   |                       |                 |                          | CH11           |                     |             |              |            |
|-----------------|-------------------|-----------------------|-----------------|--------------------------|----------------|---------------------|-------------|--------------|------------|
| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Margin (dB) | Polarization | Test value |
| 2483.63         | 20.44             | 26.01                 | 4.52            | 0                        | 50.97          | 74                  | -23.03      | Vertical     | Peak       |
| 2500            | 20.69             | 26.84                 | 4.89            | 0                        | 52.42          | 74                  | -21.58      | Vertical     |            |
| 2483.64         | 15.72             | 26.01                 | 4.52            | 0                        | 46.25          | 54                  | -7.75       | Vertical     | Average    |
| 2500            | 15.13             | 26.84                 | 4.89            | 0                        | 46.86          | 54                  | -7.14       | Vertical     |            |
| 2483.53         | 19.63             | 26.11                 | 4.52            | 0                        | 50.26          | 74                  | -23.74      | Horizontal   | Peak       |
| 2500            | 21.31             | 26.75                 | 4.89            | 0                        | 52.95          | 74                  | -21.05      | Horizontal   |            |
| 2483.71         | 16.42             | 26.11                 | 4.52            | 0                        | 47.05          | 54                  | -6.95       | Horizontal   | Average    |
| 2500            | 16.84             | 26.75                 | 4.89            | 0                        | 48.48          | 54                  | -5.52       | Horizontal   |            |

| 802.11n(H20)    |                   |                       |                 |                          | CH01           |                     |             |              |            |
|-----------------|-------------------|-----------------------|-----------------|--------------------------|----------------|---------------------|-------------|--------------|------------|
| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Margin (dB) | Polarization | Test value |
| 2310            | 19.31             | 26.01                 | 4.52            | 0                        | 49.84          | 74                  | -24.16      | Vertical     | Peak       |
| 2390            | 20.45             | 26.84                 | 4.89            | 0                        | 52.18          | 74                  | -21.82      | Vertical     |            |
| 2310            | 20.20             | 25.05                 | 4.52            | 0                        | 49.77          | 54                  | -4.23       | Vertical     | Average    |
| 2390            | 19.34             | 25.08                 | 4.89            | 0                        | 49.31          | 54                  | -4.69       | Vertical     |            |
| 2310            | 20.41             | 26.11                 | 4.52            | 0                        | 51.04          | 74                  | -22.96      | Horizontal   | Peak       |
| 2390            | 21.38             | 26.75                 | 4.89            | 0                        | 53.02          | 74                  | -20.98      | Horizontal   |            |
| 2310            | 14.2              | 26.11                 | 4.52            | 0                        | 44.83          | 54                  | -9.17       | Horizontal   | Average    |
| 2390            | 15.31             | 26.75                 | 4.89            | 0                        | 46.95          | 54                  | -7.05       | Horizontal   |            |

| 802.11n(H20)    |                   |                       |                 |                          | CH11           |                     |             |              |            |
|-----------------|-------------------|-----------------------|-----------------|--------------------------|----------------|---------------------|-------------|--------------|------------|
| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Margin (dB) | Polarization | Test value |
| 2483.6          | 20.31             | 26.01                 | 4.52            | 0                        | 50.84          | 74                  | -23.16      | Vertical     | Peak       |
| 2500            | 20.67             | 26.84                 | 4.89            | 0                        | 52.4           | 74                  | -21.6       | Vertical     |            |
| 2483.53         | 16.23             | 26.01                 | 4.52            | 0                        | 46.76          | 54                  | -7.24       | Vertical     | Average    |
| 2500            | 16.12             | 26.84                 | 4.89            | 0                        | 47.85          | 54                  | -6.15       | Vertical     |            |
| 2483.68         | 18.45             | 26.11                 | 4.52            | 0                        | 49.08          | 74                  | -24.92      | Horizontal   | Peak       |
| 2500            | 20.51             | 26.75                 | 4.89            | 0                        | 52.15          | 74                  | -21.85      | Horizontal   |            |
| 2483.67         | 15.75             | 26.11                 | 4.52            | 0                        | 46.38          | 54                  | -7.62       | Horizontal   | Average    |
| 2500            | 15.49             | 26.75                 | 4.89            | 0                        | 47.13          | 54                  | -6.87       | Horizontal   |            |

| 802.11n(N40)    |                   |                       |                 |                          | CH03           |                     |             |              |            |
|-----------------|-------------------|-----------------------|-----------------|--------------------------|----------------|---------------------|-------------|--------------|------------|
| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Margin (dB) | Polarization | Test value |
| 2310            | 20.64             | 26.01                 | 4.52            | 0                        | 51.17          | 74                  | -22.83      | Vertical     | Peak       |
| 2390            | 20.38             | 26.84                 | 4.89            | 0                        | 52.11          | 74                  | -21.89      | Vertical     |            |
| 2310            | 15.23             | 26.01                 | 4.52            | 0                        | 45.76          | 54                  | -8.24       | Vertical     | Average    |
| 2390            | 14.31             | 26.84                 | 4.89            | 0                        | 46.04          | 54                  | -7.96       | Vertical     |            |
| 2310            | 20.81             | 26.11                 | 4.52            | 0                        | 51.44          | 74                  | -22.56      | Horizontal   | Peak       |
| 2390            | 21.4              | 26.75                 | 4.89            | 0                        | 53.04          | 74                  | -20.96      | Horizontal   |            |
| 2310            | 14.62             | 26.11                 | 4.52            | 0                        | 45.25          | 54                  | -8.75       | Horizontal   | Average    |
| 2390            | 15.36             | 26.75                 | 4.89            | 0                        | 47             | 54                  | -7.00       | Horizontal   |            |

| 802.11n(H40)    |                   |                       |                 |                          | CH09           |                     |             |              |            |
|-----------------|-------------------|-----------------------|-----------------|--------------------------|----------------|---------------------|-------------|--------------|------------|
| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Margin (dB) | Polarization | Test value |
| 2483.60         | 20.34             | 26.01                 | 4.52            | 0                        | 50.87          | 74                  | -23.13      | Vertical     | Peak       |
| 2500            | 20.65             | 26.84                 | 4.89            | 0                        | 52.38          | 74                  | -21.62      | Vertical     |            |
| 2483.60         | 14.68             | 26.01                 | 4.52            | 0                        | 45.21          | 54                  | -8.79       | Vertical     | Average    |
| 2500            | 14.86             | 26.84                 | 4.89            | 0                        | 46.59          | 54                  | -7.41       | Vertical     |            |
| 2483.60         | 20.43             | 26.11                 | 4.52            | 0                        | 51.06          | 74                  | -22.94      | Horizontal   | Peak       |
| 2500            | 21.59             | 26.75                 | 4.89            | 0                        | 53.23          | 74                  | -20.77      | Horizontal   |            |
| 2483.60         | 15.32             | 26.11                 | 4.52            | 0                        | 45.95          | 54                  | -8.05       | Horizontal   | Average    |
| 2500            | 15.68             | 26.75                 | 4.89            | 0                        | 47.32          | 54                  | -6.68       | Horizontal   |            |

### 3.8. Spurious Emission (Radiated)

#### Limit

**Radiated Emission Limits (9 kHz~1000 MHz)**

| Frequency (MHz) | Field Strength (microvolt/meter) | Measurement Distance (meters) |
|-----------------|----------------------------------|-------------------------------|
| 0.009~0.490     | 2400/F(KHz)                      | 300                           |
| 0.490~1.705     | 24000/F(KHz)                     | 30                            |
| 1.705~30.0      | 30                               | 30                            |
| 30~88           | 100                              | 3                             |
| 88~216          | 150                              | 3                             |
| 216~960         | 200                              | 3                             |
| Above 960       | 500                              | 3                             |

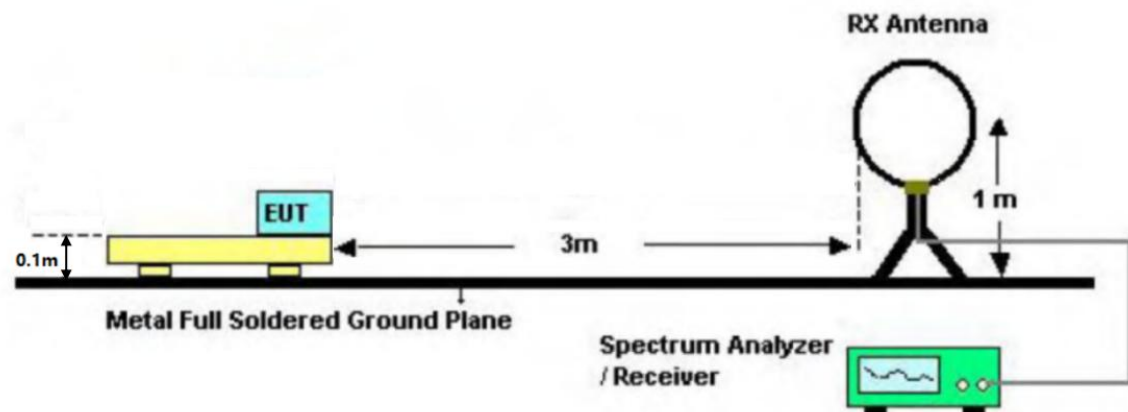
**Radiated Emission Limit (Above 1000MHz)**

| Frequency (MHz) | Distance Meters(at 3m) |         |
|-----------------|------------------------|---------|
|                 | Peak                   | Average |
| Above 1000      | 74                     | 54      |

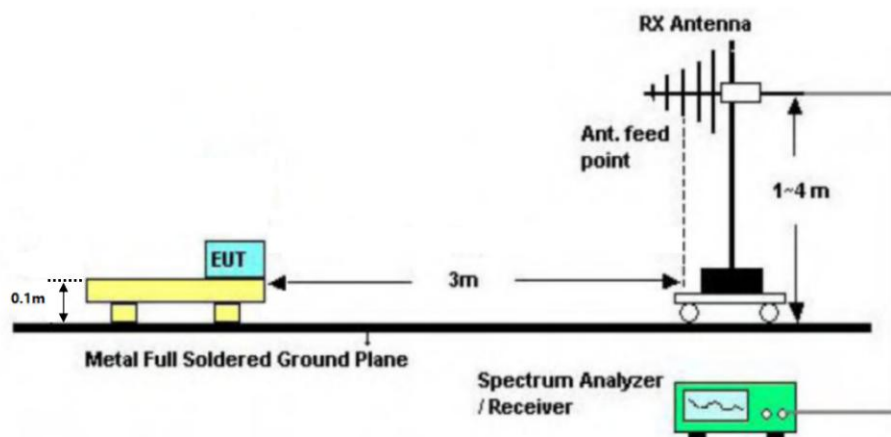
**Note:**

- (1) The tighter limit applies at the band edges.
- (2) Emission Level (dBuV/m)=20log Emission Level (uV/m).

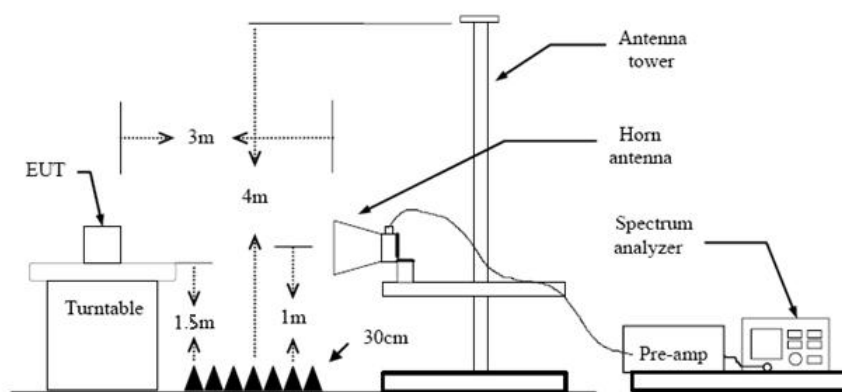
#### Test Configuration



Below 30MHz Test Setup



Below 1000MHz Test Setup



Above 1GHz Test Setup

### **Test Procedure**

1. The EUT was setup and tested according to ANSI C63.10:2013
2. The EUT is placed on a turn table which is 0.1 meter above ground for below 1 GHz, and 0.1m for above 1 GHz. The turn table is rotated 360 degrees to determine the position of the maximum emission level.
3. The EUT was set 3 meters from the receiving antenna, which was mounted on the top of a variable height antenna tower.
4. For each suspected emission, the EUT was arranged to its worst case and then tune the Antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level to comply with the guidelines.
5. Set to the maximum power setting and enable the EUT transmit continuously.
6. Use the following spectrum analyzer settings
  - (1) Span shall wide enough to fully capture the emission being measured;
  - (2) Below 1 GHz:  
RBW=120 kHz, VBW=300 kHz, Sweep=auto, Detector function=peak, Trace=max hold;  
If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.
  - (3) From 1 GHz to 10<sup>th</sup> harmonic:  
RBW=1MHz, VBW=3MHz Peak detector for Peak value.  
RBW=1MHz, VBW=10Hz RMS detector for Average value.

### **Test Mode**

Please refer to the clause 2.3.

### **Test Result**

#### **9 KHz~30 MHz and 18GHz~25GHz**

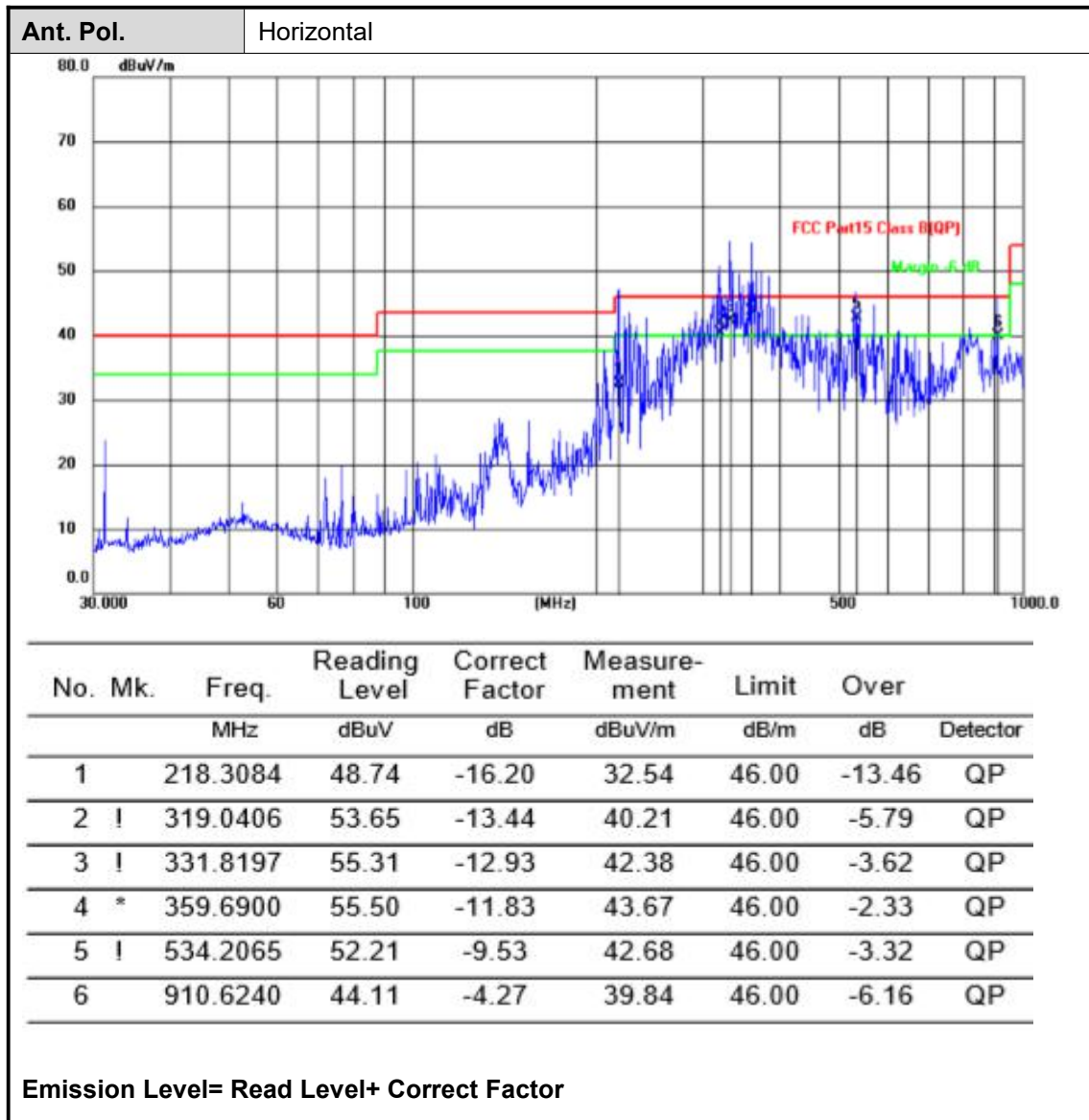
From 9 KHz~30 MHz and 18GHz~25GHz: Conclusion: PASS

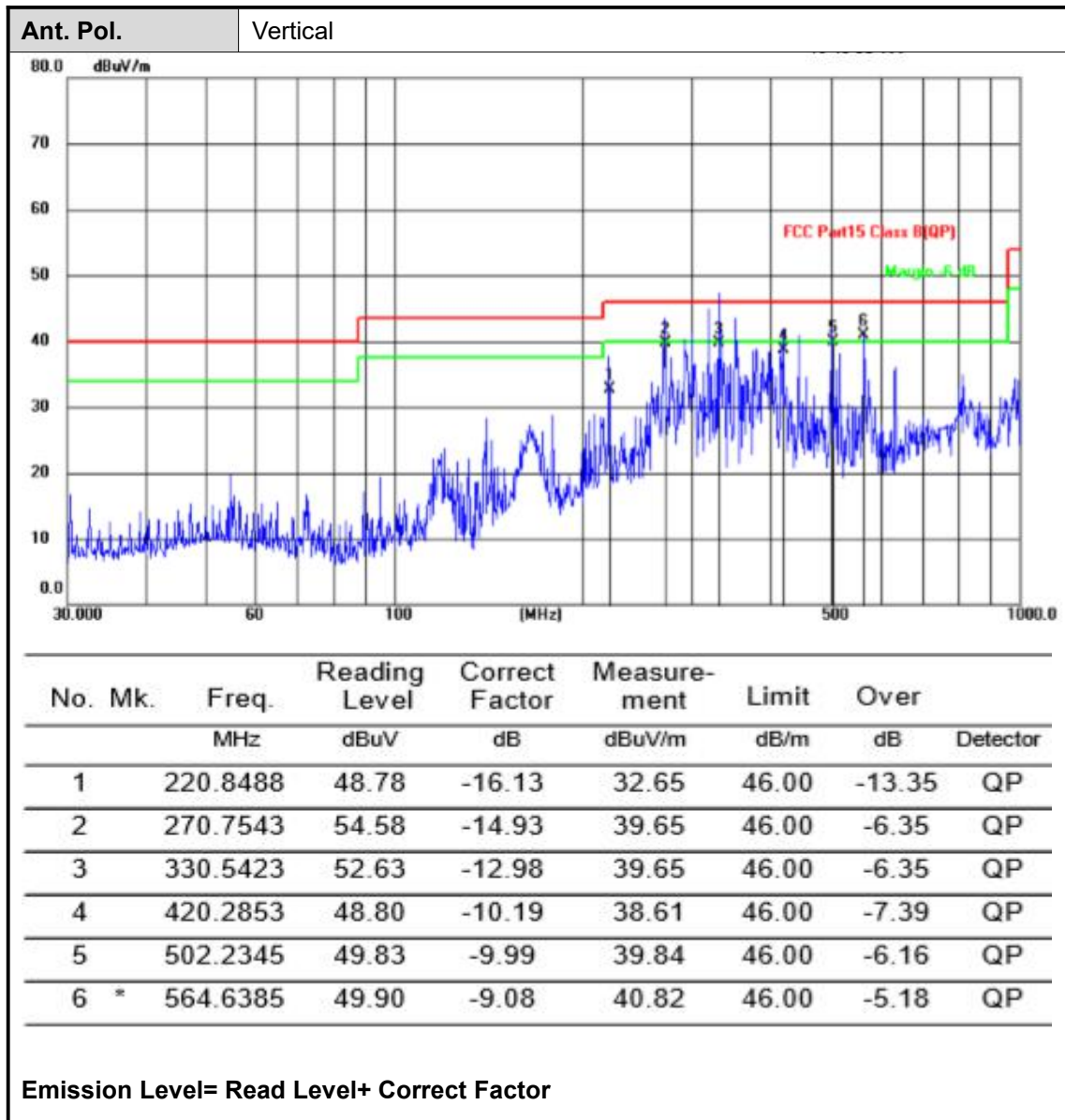
Note: The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

Note:

- 1) Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
- 2) The emission levels of other frequencies are very lower than the limit and not show in test report.

## 30MHz-1GHz





## Adobe 1GHz

| 802.11b         |                   |                       |                 |                    | CH01           |                     |             |              |            |
|-----------------|-------------------|-----------------------|-----------------|--------------------|----------------|---------------------|-------------|--------------|------------|
| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Margin (dB) | Polarization | Test value |
| 1593.44         | 41.32             | 24.99                 | 3.36            | 26.38              | 43.29          | 74                  | -30.71      | Vertical     | Peak       |
| 2135.64         | 42.44             | 26.94                 | 3.74            | 37.33              | 35.79          | 74                  | -38.21      | Vertical     |            |
| 4824.51         | 39.68             | 31.74                 | 6.27            | 36.26              | 41.43          | 74                  | -32.57      | Vertical     |            |
| 6729.22         | 38.34             | 34.14                 | 6.5             | 35.12              | 43.86          | 74                  | -30.14      | Vertical     |            |
| 1752.41         | 37.48             | 25.3                  | 3.39            | 37.04              | 29.13          | 74                  | -44.87      | Horizontal   |            |
| 2126.2          | 39.61             | 26.94                 | 3.68            | 37.33              | 32.9           | 74                  | -41.10      | Horizontal   |            |
| 4826.38         | 41.22             | 31.44                 | 5.8             | 37.01              | 41.45          | 74                  | -32.55      | Horizontal   |            |
| 6628.1          | 40.65             | 34.2                  | 6.74            | 35.31              | 46.28          | 74                  | -27.72      | Horizontal   |            |

| 802.11b         |                   |                       |                 |                    | CH06           |                     |             |              |            |
|-----------------|-------------------|-----------------------|-----------------|--------------------|----------------|---------------------|-------------|--------------|------------|
| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Margin (dB) | Polarization | Test value |
| 1441.2          | 40.1              | 24.99                 | 3.36            | 26.38              | 42.07          | 74                  | -31.93      | Vertical     | Peak       |
| 2120.56         | 41.28             | 26.94                 | 3.74            | 37.33              | 34.63          | 74                  | -39.37      | Vertical     |            |
| 4874.48         | 37.51             | 31.74                 | 6.27            | 36.26              | 39.26          | 74                  | -34.74      | Vertical     |            |
| 7586.22         | 39.22             | 34.14                 | 6.5             | 35.12              | 44.74          | 74                  | -29.26      | Vertical     |            |
| 1750.82         | 39.12             | 25.3                  | 3.39            | 37.04              | 30.77          | 74                  | -43.23      | Horizontal   |            |
| 2129.74         | 40.44             | 26.94                 | 3.68            | 37.33              | 33.73          | 74                  | -40.27      | Horizontal   |            |
| 3578.61         | 38.28             | 31.44                 | 5.8             | 37.01              | 38.51          | 74                  | -35.49      | Horizontal   |            |
| 4874.29         | 42.01             | 34.2                  | 6.74            | 35.31              | 47.64          | 74                  | -26.36      | Horizontal   |            |

| 802.11b         |                   |                       |                 |                    | CH11           |                     |             |              |            |
|-----------------|-------------------|-----------------------|-----------------|--------------------|----------------|---------------------|-------------|--------------|------------|
| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Margin (dB) | Polarization | Test value |
| 1209.41         | 41.3              | 24.99                 | 3.36            | 26.38              | 43.27          | 74                  | -30.73      | Vertical     | Peak       |
| 2125.47         | 40.28             | 26.94                 | 3.74            | 37.33              | 33.63          | 74                  | -40.37      | Vertical     |            |
| 4923.93         | 38.12             | 31.74                 | 6.27            | 36.26              | 39.87          | 74                  | -34.13      | Vertical     |            |
| 7612.1          | 39.55             | 34.14                 | 6.5             | 35.12              | 45.07          | 74                  | -28.93      | Vertical     |            |
| 1259.56         | 38.61             | 25.3                  | 3.39            | 37.04              | 30.26          | 74                  | -43.74      | Horizontal   |            |
| 1706.29         | 40.24             | 26.94                 | 3.68            | 37.33              | 33.53          | 74                  | -40.47      | Horizontal   |            |
| 3217.21         | 39.28             | 31.44                 | 5.8             | 37.01              | 39.51          | 74                  | -34.49      | Horizontal   |            |
| 4923.55         | 42.95             | 34.2                  | 6.74            | 35.31              | 48.58          | 74                  | -25.42      | Horizontal   |            |

| 802.11g         |                   |                       |                 |                    | CH01           |                     |             |              |            |
|-----------------|-------------------|-----------------------|-----------------|--------------------|----------------|---------------------|-------------|--------------|------------|
| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Margin (dB) | Polarization | Test value |
| 1583.48         | 40.61             | 24.99                 | 3.36            | 26.38              | 42.58          | 74                  | -31.42      | Vertical     | Peak       |
| 2133.69         | 40.7              | 26.94                 | 3.74            | 37.33              | 34.05          | 74                  | -39.95      | Vertical     |            |
| 4824.62         | 38.57             | 31.74                 | 6.27            | 36.26              | 40.32          | 74                  | -33.68      | Vertical     |            |
| 5631.21         | 39.62             | 34.14                 | 6.5             | 35.12              | 45.14          | 74                  | -28.86      | Vertical     |            |
| 1595.47         | 39.1              | 25.3                  | 3.39            | 37.04              | 30.75          | 74                  | -43.25      | Horizontal   |            |
| 2128.4          | 42.65             | 26.94                 | 3.68            | 37.33              | 35.94          | 74                  | -38.06      | Horizontal   |            |
| 4824.39         | 41.3              | 31.44                 | 5.8             | 37.01              | 41.53          | 74                  | -32.47      | Horizontal   |            |
| 6698.62         | 42.51             | 34.2                  | 6.74            | 35.31              | 48.14          | 74                  | -25.86      | Horizontal   |            |

| 802.11g         |                   |                       |                 |                    | CH06           |                     |             |              |            |
|-----------------|-------------------|-----------------------|-----------------|--------------------|----------------|---------------------|-------------|--------------|------------|
| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Margin (dB) | Polarization | Test value |
| 1645.15         | 41.22             | 24.99                 | 3.36            | 26.38              | 43.19          | 74                  | -30.81      | Vertical     | Peak       |
| 2136.27         | 40.69             | 26.94                 | 3.74            | 37.33              | 34.04          | 74                  | -39.96      | Vertical     |            |
| 4824.58         | 39.54             | 31.74                 | 6.27            | 36.26              | 41.29          | 74                  | -32.71      | Vertical     |            |
| 5527.33         | 38.36             | 34.14                 | 6.5             | 35.12              | 43.88          | 74                  | -30.12      | Vertical     |            |
| 1598.62         | 40.21             | 25.3                  | 3.39            | 37.04              | 31.86          | 74                  | -42.14      | Horizontal   |            |
| 2120.34         | 41.59             | 26.94                 | 3.68            | 37.33              | 34.88          | 74                  | -39.12      | Horizontal   |            |
| 4824.71         | 42.67             | 31.44                 | 5.8             | 37.01              | 42.9           | 74                  | -31.10      | Horizontal   |            |
| 5112.67         | 43.2              | 34.2                  | 6.74            | 35.31              | 48.83          | 74                  | -25.17      | Horizontal   |            |

| 802.11g         |                   |                       |                 |                    | CH11           |                     |             |              |            |
|-----------------|-------------------|-----------------------|-----------------|--------------------|----------------|---------------------|-------------|--------------|------------|
| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Margin (dB) | Polarization | Test value |
| 1588.26         | 42.34             | 24.99                 | 3.36            | 26.38              | 44.31          | 74                  | -29.69      | Vertical     | Peak       |
| 3182.59         | 41.26             | 26.94                 | 3.74            | 37.33              | 34.61          | 74                  | -39.39      | Vertical     |            |
| 4824.21         | 39.47             | 31.74                 | 6.27            | 36.26              | 41.22          | 74                  | -32.78      | Vertical     |            |
| 6594.28         | 38.96             | 34.14                 | 6.5             | 35.12              | 44.48          | 74                  | -29.52      | Vertical     |            |
| 1588.31         | 40.2              | 25.3                  | 3.39            | 37.04              | 31.85          | 74                  | -42.15      | Horizontal   |            |
| 1684.55         | 41.56             | 26.94                 | 3.68            | 37.33              | 34.85          | 74                  | -39.15      | Horizontal   |            |
| 2119.07         | 42.7              | 31.44                 | 5.8             | 37.01              | 42.93          | 74                  | -31.07      | Horizontal   |            |
| 4824.67         | 43.25             | 34.2                  | 6.74            | 35.31              | 48.88          | 74                  | -25.12      | Horizontal   |            |

| 802.11n(H20)    |                   |                       |                 |                    | CH01           |                     |             |              |            |
|-----------------|-------------------|-----------------------|-----------------|--------------------|----------------|---------------------|-------------|--------------|------------|
| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Margin (dB) | Polarization | Test value |
| 1683.26         | 42.59             | 24.99                 | 3.36            | 26.38              | 44.56          | 74                  | -29.44      | Vertical     | Peak       |
| 2145.21         | 41.67             | 26.94                 | 3.74            | 37.33              | 35.02          | 74                  | -38.98      | Vertical     |            |
| 4824.89         | 38.34             | 31.74                 | 6.27            | 36.26              | 40.09          | 74                  | -33.91      | Vertical     |            |
| 6954.11         | 38.67             | 34.14                 | 6.5             | 35.12              | 44.19          | 74                  | -29.81      | Vertical     |            |
| 1705.1          | 40.26             | 25.3                  | 3.39            | 37.04              | 31.91          | 74                  | -42.09      | Horizontal   |            |
| 3184.46         | 41.47             | 26.94                 | 3.68            | 37.33              | 34.76          | 74                  | -39.24      | Horizontal   |            |
| 4824.69         | 42.74             | 31.44                 | 5.8             | 37.01              | 42.97          | 74                  | -31.03      | Horizontal   |            |
| 6997.33         | 41.36             | 34.2                  | 6.74            | 35.31              | 46.99          | 74                  | -27.01      | Horizontal   |            |

| 802.11n(H20)    |                   |                       |                 |                    | CH06           |                     |             |              |            |
|-----------------|-------------------|-----------------------|-----------------|--------------------|----------------|---------------------|-------------|--------------|------------|
| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Margin (dB) | Polarization | Test value |
| 1749.36         | 41.36             | 24.99                 | 3.36            | 26.38              | 43.33          | 74                  | -30.67      | Vertical     | Peak       |
| 2253.69         | 42.77             | 26.94                 | 3.74            | 37.33              | 36.12          | 74                  | -37.88      | Vertical     |            |
| 4824.65         | 39.54             | 31.74                 | 6.27            | 36.26              | 41.29          | 74                  | -32.71      | Vertical     |            |
| 7238.36         | 38.41             | 34.14                 | 6.5             | 35.12              | 43.93          | 74                  | -30.07      | Vertical     |            |
| 1758.96         | 40.64             | 25.3                  | 3.39            | 37.04              | 32.29          | 74                  | -41.71      | Horizontal   |            |
| 3157.29         | 42.33             | 26.94                 | 3.68            | 37.33              | 35.62          | 74                  | -38.38      | Horizontal   |            |
| 4824.18         | 40.26             | 31.44                 | 5.8             | 37.01              | 40.49          | 74                  | -33.51      | Horizontal   |            |
| 6974.26         | 42.37             | 34.2                  | 6.74            | 35.31              | 48             | 74                  | -26.00      | Horizontal   |            |

| 802.11n(H20)    |                   |                       |                 |                    | CH11           |                     |             |              |            |
|-----------------|-------------------|-----------------------|-----------------|--------------------|----------------|---------------------|-------------|--------------|------------|
| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Margin (dB) | Polarization | Test value |
| 2196.47         | 40.67             | 24.99                 | 3.36            | 26.38              | 42.64          | 74                  | -31.36      | Vertical     | Peak       |
| 3188.61         | 41.68             | 26.94                 | 3.74            | 37.33              | 35.03          | 74                  | -38.97      | Vertical     |            |
| 4824.1          | 39.62             | 31.74                 | 6.27            | 36.26              | 41.37          | 74                  | -32.63      | Vertical     |            |
| 6881.36         | 38.1              | 34.14                 | 6.5             | 35.12              | 43.62          | 74                  | -30.38      | Vertical     |            |
| 1238.3          | 40.39             | 25.3                  | 3.39            | 37.04              | 32.04          | 74                  | -41.96      | Horizontal   |            |
| 1664.29         | 42.65             | 26.94                 | 3.68            | 37.33              | 35.94          | 74                  | -38.06      | Horizontal   |            |
| 4824.29         | 41.3              | 31.44                 | 5.8             | 37.01              | 41.53          | 74                  | -32.47      | Horizontal   |            |
| 6994.21         | 42.41             | 34.2                  | 6.74            | 35.31              | 48.04          | 74                  | -25.96      | Horizontal   |            |

| 802.11n(H40)    |                   |                       |                 |                    | CH03           |                     |             |              |            |
|-----------------|-------------------|-----------------------|-----------------|--------------------|----------------|---------------------|-------------|--------------|------------|
| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Margin (dB) | Polarization | Test value |
| 1684.39         | 41.24             | 24.99                 | 3.36            | 26.38              | 43.21          | 74                  | -30.79      | Vertical     | Peak       |
| 2146.31         | 39.43             | 26.94                 | 3.74            | 37.33              | 32.78          | 74                  | -41.22      | Vertical     |            |
| 4824.68         | 36.22             | 31.74                 | 6.27            | 36.26              | 37.97          | 74                  | -36.03      | Vertical     |            |
| 6953.27         | 38.24             | 34.14                 | 6.5             | 35.12              | 43.76          | 74                  | -30.24      | Vertical     |            |
| 1707.2          | 41.04             | 25.3                  | 3.39            | 37.04              | 32.69          | 74                  | -41.31      | Horizontal   |            |
| 3184.01         | 42.7              | 26.94                 | 3.68            | 37.33              | 35.99          | 74                  | -38.01      | Horizontal   |            |
| 4824.39         | 39.25             | 31.44                 | 5.8             | 37.01              | 39.48          | 74                  | -34.52      | Horizontal   |            |
| 6997.72         | 42.22             | 34.2                  | 6.74            | 35.31              | 47.85          | 74                  | -26.15      | Horizontal   |            |

| 802.11n(H40)    |                   |                       |                 |                    | CH06           |                     |             |              |            |
|-----------------|-------------------|-----------------------|-----------------|--------------------|----------------|---------------------|-------------|--------------|------------|
| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Margin (dB) | Polarization | Test value |
| 1748.21         | 40.36             | 24.99                 | 3.36            | 26.38              | 42.33          | 74                  | -31.67      | Vertical     | Peak       |
| 2250.63         | 39.89             | 26.94                 | 3.74            | 37.33              | 33.24          | 74                  | -40.76      | Vertical     |            |
| 4824.39         | 37.33             | 31.74                 | 6.27            | 36.26              | 39.08          | 74                  | -34.92      | Vertical     |            |
| 7237.56         | 38.14             | 34.14                 | 6.5             | 35.12              | 43.66          | 74                  | -30.34      | Vertical     |            |
| 1758.25         | 40.26             | 25.3                  | 3.39            | 37.04              | 31.91          | 74                  | -42.09      | Horizontal   |            |
| 3157.47         | 41.29             | 26.94                 | 3.68            | 37.33              | 34.58          | 74                  | -39.42      | Horizontal   |            |
| 4824.24         | 37.32             | 31.44                 | 5.8             | 37.01              | 37.55          | 74                  | -36.45      | Horizontal   |            |
| 6974.48         | 42.28             | 34.2                  | 6.74            | 35.31              | 47.91          | 74                  | -26.09      | Horizontal   |            |

| 802.11n(H40)    |                   |                       |                 |                    | CH09           |                     |             |              |            |
|-----------------|-------------------|-----------------------|-----------------|--------------------|----------------|---------------------|-------------|--------------|------------|
| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Margin (dB) | Polarization | Test value |
| 2198.26         | 40.49             | 24.99                 | 3.36            | 26.38              | 42.46          | 74                  | -31.54      | Vertical     | Peak       |
| 3189.33         | 39.92             | 26.94                 | 3.74            | 37.33              | 33.27          | 74                  | -40.73      | Vertical     |            |
| 4824.61         | 37.74             | 31.74                 | 6.27            | 36.26              | 39.49          | 74                  | -34.51      | Vertical     |            |
| 6882.14         | 38.59             | 34.14                 | 6.5             | 35.12              | 44.11          | 74                  | -29.89      | Vertical     |            |
| 1249.36         | 41.64             | 25.3                  | 3.39            | 37.04              | 33.29          | 74                  | -40.71      | Horizontal   |            |
| 1665.69         | 41.28             | 26.94                 | 3.68            | 37.33              | 34.57          | 74                  | -39.43      | Horizontal   |            |
| 4824.45         | 37.71             | 31.44                 | 5.8             | 37.01              | 37.94          | 74                  | -36.06      | Horizontal   |            |
| 6994.33         | 42.64             | 34.2                  | 6.74            | 35.31              | 48.27          | 74                  | -25.73      | Horizontal   |            |

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss - Preamplifier Factor
2. The peak level is lower than average limit(54 dBuV/m), this data is the too weak instrument of signal is unable to test.
3. The emission levels of other frequencies are very lower than the limit and not show in test report.

## **4.EUT TEST PHOTOS**

Reference to the document No.: Test Photos

## 5. PHOTOGRAPHS OF EUT CONSTRUCTIONAL

Reference to the document No.: External Photos and Internal Photos.