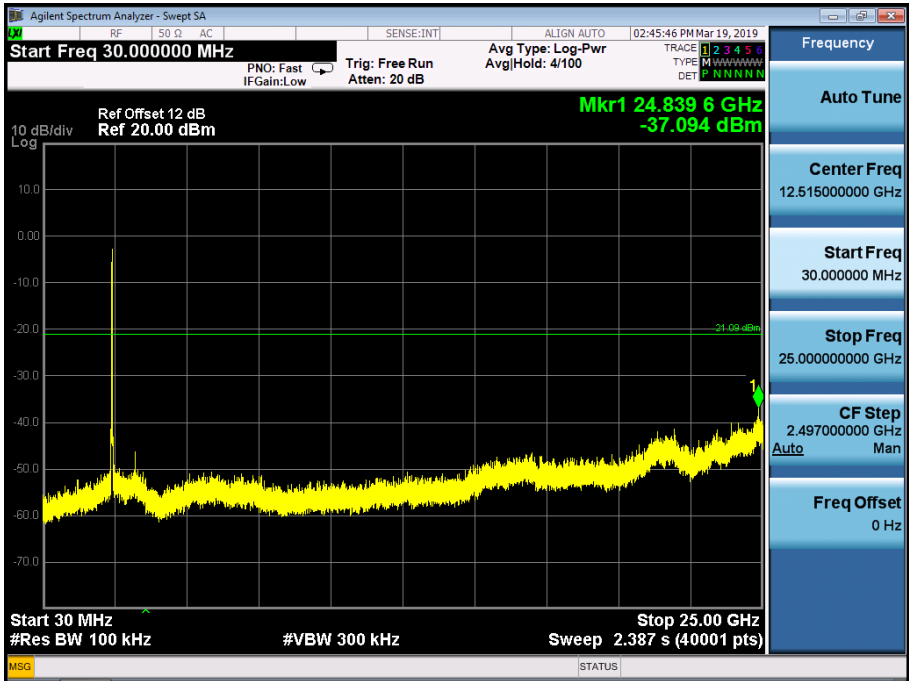




Test Model  802.11b  802.11g  802.11n(HT20)  802.11n(HT40)   
 Channel 1: 2412MHz  Channel 3: 2422MHz Mode: MIMO

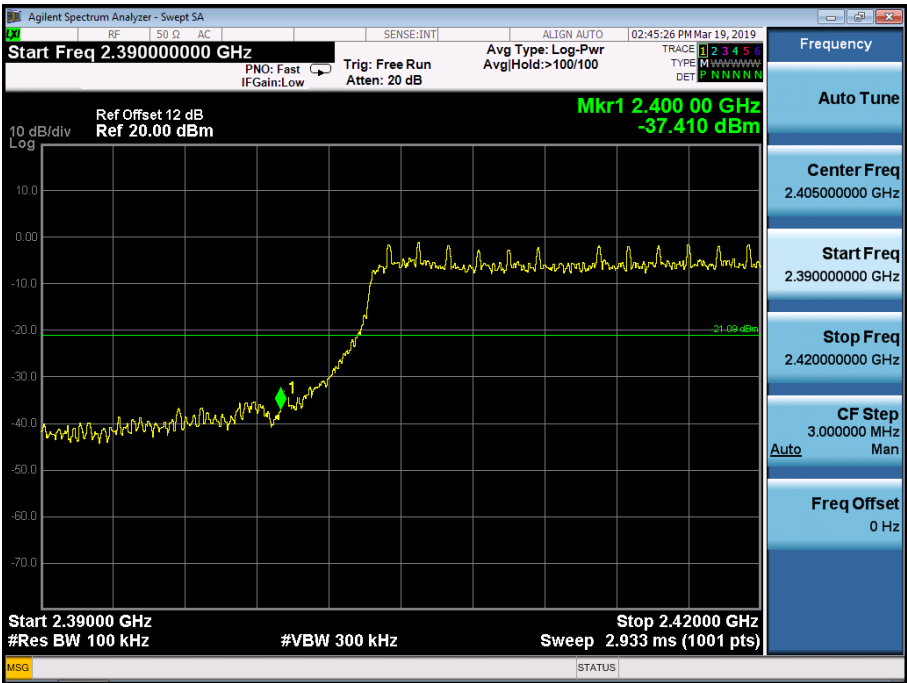


Test Model  802.11b  802.11g  802.11n(HT20)  802.11n(HT40)   
 Channel 1: 2412MHz  Channel 3: 2422MHz Mode: MIMO



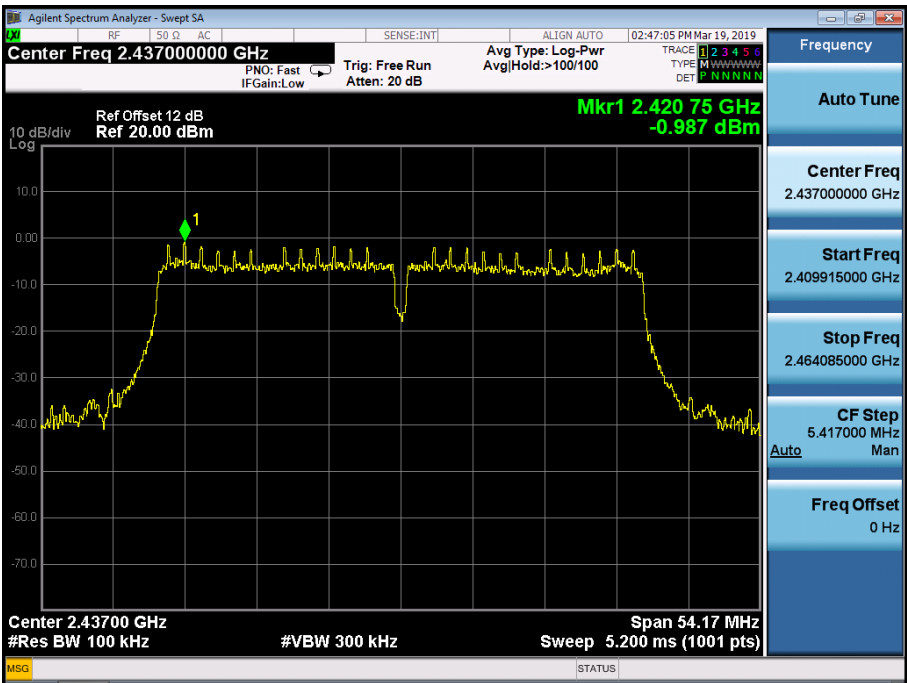
Test Model  802.11b  802.11g  802.11n(HT20)  802.11n(HT40)  
 Channel 1: 2412MHz  Channel 3: 2422MHz Mode: MIMO

Band edge



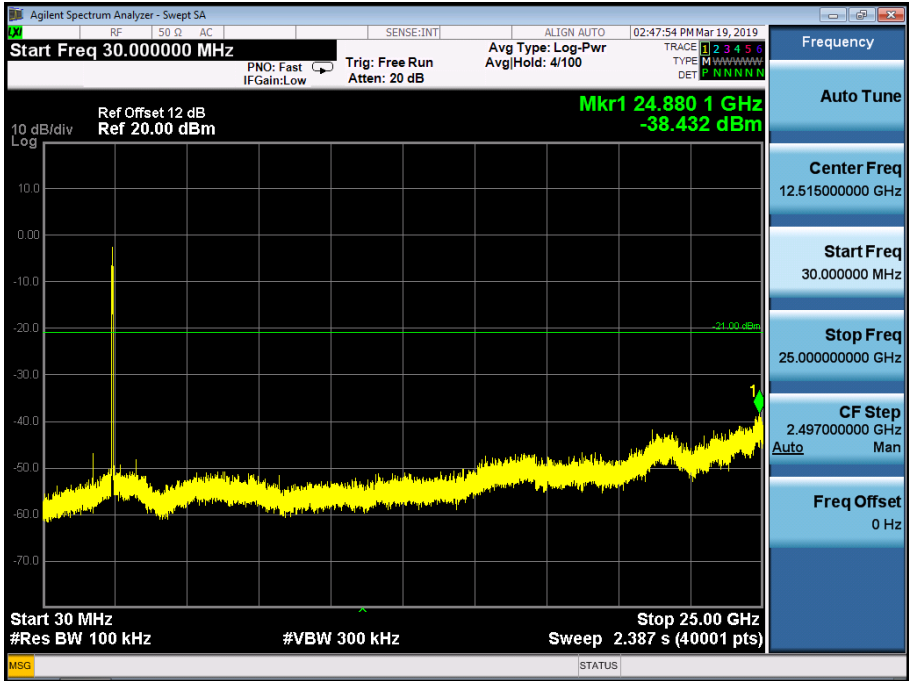
Test Model  802.11b  802.11g  802.11n(HT20)  802.11n(HT40)  
Channel 6: 2437MHz Mode: MIMO

PSD(Power Spectral Density ) RBW=100kHz



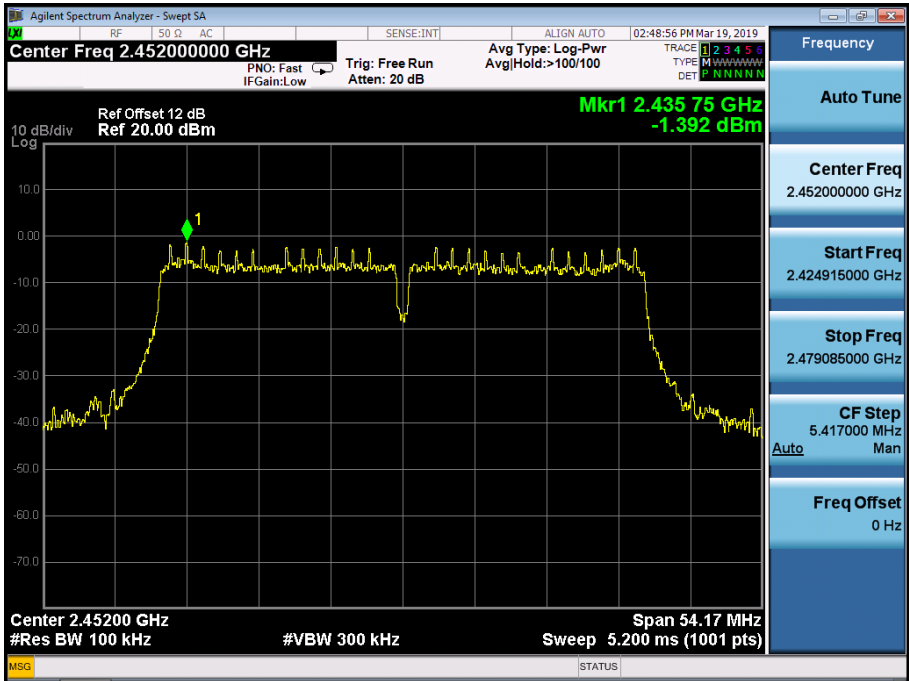
**Unwanted Emissions In Non-Restricted Frequency Bands**

Test Model       802.11b       802.11g       802.11n(HT20)       802.11n(HT40)  
 Channel 6: 2437MHz      Mode: MIMO



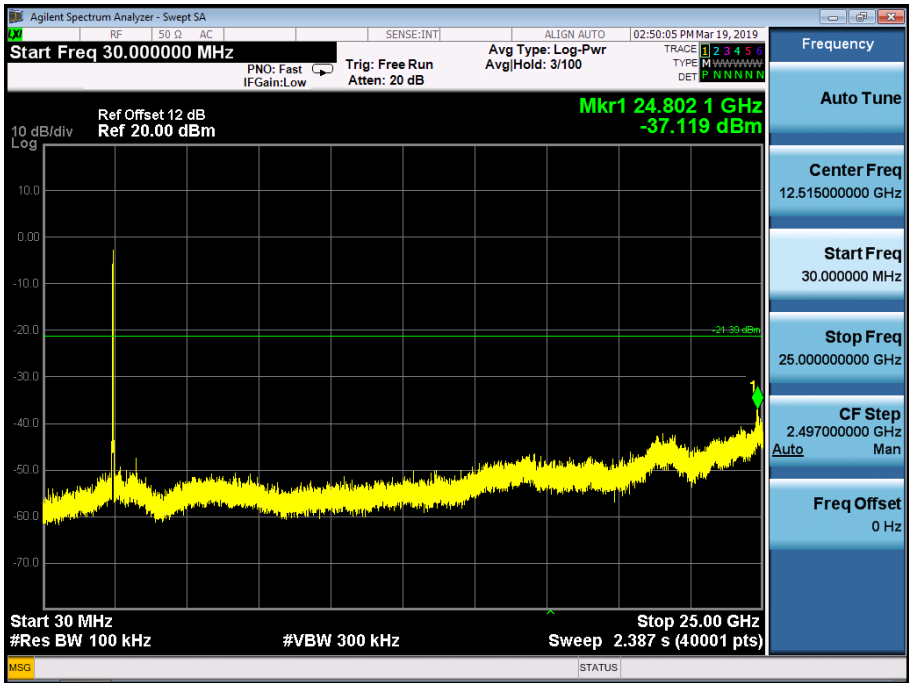
**PSD(Power Spectral Density ) RBW=100kHz**

Test Model       802.11b       802.11g       802.11n(HT20)       802.11n(HT40)  
 Channel 11: 2462MHz       Channel 9: 2452MHz      Mode: MIMO



**Unwanted Emissions In Non-Restricted Frequency Bands**

Test Model       802.11b       802.11g       802.11n(HT20)       802.11n(HT40)  
 Channel 11: 2462MHz       Channel 9: 2452MHz      Mode: MIMO



**Band edge**

Test Model       802.11b       802.11g       802.11n(HT20)       802.11n(HT40)  
 Channel 11: 2462MHz       Channel 9: 2452MHz      Mode: MIMO



## 8.5 RADIATED SPURIOUS EMISSION

### 8.5.1 Applicable Standard

According to FCC Part 15.247(d) and 15.209 and FCC KDB 558074 D01 Meas Guidance v05

### 8.5.2 Conformance Limit

According to FCC Part 15.247(d): radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

According to FCC Part 15.205, Restricted bands

| MHz               | MHz                 | MHz           | GHz         |
|-------------------|---------------------|---------------|-------------|
| 0.090-0.110       | 16.42-16.423        | 399.9-410     | 4.5-5.15    |
| 10.495-0.505      | 16.69475-16.69525   | 608-614       | 5.35-5.46   |
| 2.1735-2.1905     | 16.80425-16.80475   | 960-1240      | 7.25-7.75   |
| 4.125-4.128       | 25.5-25.67          | 1300-1427     | 8.025-8.5   |
| 4.17725-4.17775   | 37.5-38.25          | 1435-1626.5   | 9.0-9.2     |
| 4.20725-4.20775   | 73-74.6             | 1645.5-1646.5 | 9.3-9.5     |
| 6.215-6.218       | 74.8-75.2           | 1660-1710     | 10.6-12.7   |
| 6.26775-6.26825   | 123-138             | 2200-2300     | 14.47-14.5  |
| 8.291-8.294       | 149.9-150.05        | 2310-2390     | 15.35-16.2  |
| 8.362-8.366       | 156.52475-156.52525 | 2483.5-2500   | 17.7-21.4   |
| 8.37625-8.38675   | 156.7-156.9         | 2690-2900     | 22.01-23.12 |
| 8.41425-8.41475   | 162.0125-167.17     | 3260-3267     | 23.6-24.0   |
| 12.29-12.293      | 167.72-173.2        | 3332-3339     | 31.2-31.8   |
| 12.51975-12.52025 | 240-285             | 3345.8-3358   | 36.43-36.5  |
| 12.57675-12.57725 | 322-335.4           | 3600-4400     | (2)         |
| 13.36-13.41       |                     |               |             |

According to FCC Part 15.205, the level of any transmitter spurious emission in Restricted bands shall not exceed the level of the emission specified in the following table

| Restricted Frequency(MHz) | Field Strength ( $\mu\text{V}/\text{m}$ ) | Field Strength ( $\text{dB}\mu\text{V}/\text{m}$ ) | Measurement Distance |
|---------------------------|---|--|----------------------|
| 0.009-0.490               | 2400/F(KHz)                               | 20 log ( $\mu\text{V}/\text{m}$ )                  | 300                  |
| 0.490-1.705               | 2400/F(KHz)                               | 20 log ( $\mu\text{V}/\text{m}$ )                  | 30                   |
| 1.705-30                  | 30  | 29.5   | 30                   |
| 30-88                     | 100                                       | 40   | 3                    |
| 88-216                    | 150                                       | 43.5   | 3                    |
| 216-960                   | 200                                       | 46   | 3                    |
| Above 960                 | 500                                       | 54   | 3                    |

### 8.5.3 Test Configuration

Test according to clause 7.2 radio frequency test setup 2

### 8.5.4 Test Procedure

This test is required for any spurious emission that falls in a Restricted Band, as defined in Section 15.205. It must be performed with the highest gain of each type of antenna proposed for use with the EUT. Use the following spectrum analyzer settings:

The EUT was placed on a turn table which is 0.8m above ground plane.

Maximum procedure was performed on the highest emissions to ensure EUT compliance.

Span = wide enough to fully capture the emission being measured

RBW = 1 MHz for  $f \geq 1$  GHz (1GHz to 25GHz), 100 kHz for  $f < 1$  GHz (30MHz to 1GHz), 200Hz for  $f < 150$  KHz (9KHz to 150KHz), 9KHz for  $f < 30$  MHz (150KHz to 30KHz)

VBW  $\geq$  RBW

Sweep = auto

Detector function = peak

Trace = max hold

Follow the guidelines in ANSI C63.10-2013 with respect to maximizing the emission by rotating the EUT,



Temperature : 26°C  
 Humidity : 60 %  
 Test mode: 802.11b

Test By: King Kong  
 Frequency: Channel 6: 2437MHz  
 Mode: SISO antenna 0

| Freq. (MHz) | Ant.Pol. H/V | Emission Level(dBuV/m) |       | Limit 3m(dBuV/m) |       | Over(dB) |        |
|-------------|--------------|------------------------|-------|------------------|-------|----------|--------|
|             |              | PK                     | AV    | PK               | AV    | PK       | AV     |
| 4874.30     | V            | 59.66                  | 43.88 | 74.00            | 54.00 | -14.34   | -10.12 |
| 11746.55    | V            | 53.09                  | 34.82 | 74.00            | 54.00 | -20.91   | -19.18 |
| 13676.05    | V            | 53.43                  | 35.25 | 74.00            | 54.00 | -20.57   | -18.75 |
| 4873.45     | H            | 55.98                  | 42.69 | 74.00            | 54.00 | -18.02   | -11.31 |
| 7864.60     | H            | 51.95                  | 34.52 | 74.00            | 54.00 | -22.05   | -19.48 |
| 13478.85    | H            | 53.41                  | 35.04 | 74.00            | 54.00 | -20.59   | -18.96 |

Temperature : 26°C  
 Humidity : 60 %  
 Test mode: 802.11b

Test By: King Kong  
 Frequency: Channel 11: 2462MHz  
 Mode: SISO antenna 0

| Freq. (MHz) | Ant.Pol. H/V | Emission Level(dBuV/m) |       | Limit 3m(dBuV/m) |       | Over(dB) |        |
|-------------|--------------|------------------------|-------|------------------|-------|----------|--------|
|             |              | PK                     | AV    | PK               | AV    | PK       | AV     |
| 4824.15     | V            | 59.82                  | 41.2  | 74.00            | 54.00 | -14.18   | -12.80 |
| 7076.65     | V            | 51.42                  | 35.91 | 74.00            | 54.00 | -22.58   | -18.09 |
| 12348.35    | V            | 53.85                  | 36.56 | 74.00            | 54.00 | -20.15   | -17.44 |
| 4824.15     | H            | 56.02                  | 41.54 | 74.00            | 54.00 | -17.98   | -12.46 |
| 10193.60    | H            | 51.67                  | 35.41 | 74.00            | 54.00 | -22.33   | -18.59 |
| 11589.30    | H            | 53.03                  | 35.27 | 74.00            | 54.00 | -20.97   | -18.73 |

- Note:** (1) All Readings are Peak Value (VBW=3MHz) and Average Value (VBW=10Hz).  
 (2) Emission Level= Reading Level + Probe Factor +Cable Loss.  
 (3) Data of measurement within this frequency range shown "--" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.



Temperature : 26°C  
 Humidity : 60 %  
 Test mode: 802.11g

Test By: King Kong  
 Frequency: Channel 1: 2412MHz  
 Mode: SISO antenna 0

| Freq. (MHz) | Ant.Pol. H/V | Emission Level(dBuV/m) |       | Limit 3m(dBuV/m) |       | Over(dB) |        |
|-------------|--------------|------------------------|-------|------------------|-------|----------|--------|
|             |              | PK                     | AV    | PK               | AV    | PK       | AV     |
| 4831.69     | V            | 57.51                  | 43.00 | 74.00            | 54.00 | -16.49   | -11.00 |
| 9556.31     | V            | 52.75                  | 34.57 | 74.00            | 54.00 | -21.25   | -19.43 |
| 11469.22    | V            | 52.88                  | 34.67 | 74.00            | 54.00 | -21.12   | -19.33 |
| 4830.58     | H            | 55.63                  | 41.10 | 74.00            | 54.00 | -18.37   | -12.90 |
| 10394.68    | H            | 52.45                  | 34.52 | 74.00            | 54.00 | -21.55   | -19.48 |
| 14345.08    | H            | 52.70                  | 34.61 | 74.00            | 54.00 | -21.30   | -19.39 |

Temperature : 26°C  
 Humidity : 60 %  
 Test mode: 802.11g

Test By: King Kong  
 Frequency: Channel 6: 2437MHz  
 Mode: SISO antenna 0

| Freq. (MHz) | Ant.Pol. H/V | Emission Level(dBuV/m) |       | Limit 3m(dBuV/m) |       | Over(dB) |        |
|-------------|--------------|------------------------|-------|------------------|-------|----------|--------|
|             |              | PK                     | AV    | PK               | AV    | PK       | AV     |
| 4895.17     | V            | 58.22                  | 42.27 | 74.00            | 54.00 | -15.78   | -11.73 |
| 9437.25     | V            | 52.74                  | 34.80 | 74.00            | 54.00 | -21.26   | -19.20 |
| 11389.48    | V            | 53.15                  | 35.07 | 74.00            | 54.00 | -20.85   | -18.93 |
| 4880.84     | H            | 55.15                  | 41.71 | 74.00            | 54.00 | -18.85   | -12.29 |
| 10293.51    | H            | 51.63                  | 34.34 | 74.00            | 54.00 | -22.37   | -19.66 |
| 14237.83    | H            | 52.61                  | 34.81 | 74.00            | 54.00 | -21.39   | -19.19 |

Temperature : 26°C  
 Humidity : 60 %  
 Test mode: 802.11g

Test By: King Kong  
 Frequency: Channel 11: 2462MHz  
 Mode: SISO antenna 0

| Freq. (MHz) | Ant.Pol. H/V | Emission Level(dBuV/m) |       | Limit 3m(dBuV/m) |       | Over(dB) |        |
|-------------|--------------|------------------------|-------|------------------|-------|----------|--------|
|             |              | PK                     | AV    | PK               | AV    | PK       | AV     |
| 4916.97     | V            | 58.48                  | 40.33 | 74.00            | 54.00 | -15.52   | -13.67 |
| 9401.07     | V            | 50.76                  | 35.11 | 74.00            | 54.00 | -23.24   | -18.89 |
| 11486.34    | V            | 52.97                  | 35.58 | 74.00            | 54.00 | -21.03   | -18.42 |
| 4942.03     | H            | 54.76                  | 41.43 | 74.00            | 54.00 | -19.24   | -12.57 |
| 10422.84    | H            | 50.75                  | 34.54 | 74.00            | 54.00 | -23.25   | -19.46 |
| 14383.36    | H            | 52.51                  | 34.55 | 74.00            | 54.00 | -21.49   | -19.45 |

- Note:** (1) All Readings are Peak Value (VBW=3MHz) and Average Value (VBW=10Hz).  
 (2) Emission Level= Reading Level + Probe Factor +Cable Loss.  
 (3) Data of measurement within this frequency range shown "--" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

Temperature : 26°C                      Test By: King Kong  
 Humidity : 60 %                      Frequency: Channel 1: 2412MHz  
 Test mode: 802.11n20(HT20)              Mode: MIMO

| Freq.<br>(MHz) | Ant.Pol.<br>H/V | Emission Level(dBuV/m) |       | Limit 3m(dBuV/m) |       | Over(dB) |        |
|----------------|-----------------|------------------------|-------|------------------|-------|----------|--------|
|                |                 | PK                     | AV    | PK               | AV    | PK       | AV     |
| 4803.22        | V               | 56.01                  | 41.04 | 74.00            | 54.00 | -17.99   | -12.96 |
| 9630.86        | V               | 52.73                  | 35.32 | 74.00            | 54.00 | -21.27   | -18.68 |
| 11361.38       | V               | 52.38                  | 34.61 | 74.00            | 54.00 | -21.62   | -19.39 |
| 4826.53        | H               | 53.75                  | 40.03 | 74.00            | 54.00 | -20.25   | -13.97 |
| 10225.70       | H               | 52.38                  | 35.16 | 74.00            | 54.00 | -21.62   | -18.84 |
| 14335.79       | H               | 52.30                  | 34.09 | 74.00            | 54.00 | -21.70   | -19.91 |

Temperature : 26°C                      Test By: King Kong  
 Humidity : 60 %                      Frequency: Channel 6: 2437MHz  
 Test mode: 802.11n(HT20)              Mode: MIMO

| Freq.<br>(MHz) | Ant.Pol.<br>H/V | Emission Level(dBuV/m) |       | Limit 3m(dBuV/m) |       | Over(dB) |        |
|----------------|-----------------|------------------------|-------|------------------|-------|----------|--------|
|                |                 | PK                     | AV    | PK               | AV    | PK       | AV     |
| 4884.66        | V               | 55.73                  | 40.51 | 74.00            | 54.00 | -18.27   | -13.49 |
| 9636.34        | V               | 52.49                  | 34.21 | 74.00            | 54.00 | -21.51   | -19.79 |
| 11354.30       | V               | 53.13                  | 34.55 | 74.00            | 54.00 | -20.87   | -19.45 |
| 4851.52        | H               | 52.40                  | 39.75 | 74.00            | 54.00 | -21.60   | -14.25 |
| 10369.05       | H               | 51.26                  | 33.85 | 74.00            | 54.00 | -22.74   | -20.15 |
| 14340.07       | H               | 52.49                  | 34.12 | 74.00            | 54.00 | -21.51   | -19.88 |

Temperature : 26°C                      Test By: King Kong  
 Humidity : 60 %                      Frequency: Channel 11: 2462MHz  
 Test mode: 802.11n(HT20)              Mode: MIMO

| Freq.<br>(MHz) | Ant.Pol.<br>H/V | Emission Level(dBuV/m) |       | Limit 3m(dBuV/m) |       | Over(dB) |        |
|----------------|-----------------|------------------------|-------|------------------|-------|----------|--------|
|                |                 | PK                     | AV    | PK               | AV    | PK       | AV     |
| 4938.26        | V               | 55.98                  | 39.76 | 74.00            | 54.00 | -18.02   | -14.24 |
| 9563.08        | V               | 50.60                  | 35.81 | 74.00            | 54.00 | -23.40   | -18.19 |
| 11312.49       | V               | 53.55                  | 36.00 | 74.00            | 54.00 | -20.45   | -18.00 |
| 4902.65        | H               | 51.81                  | 39.01 | 74.00            | 54.00 | -22.19   | -14.99 |
| 10462.94       | H               | 51.54                  | 34.45 | 74.00            | 54.00 | -22.46   | -19.55 |
| 14290.13       | H               | 52.59                  | 34.65 | 74.00            | 54.00 | -21.41   | -19.35 |

- Note:** (1) All Readings are Peak Value (VBW=3MHz) and Average Value (VBW=10Hz).  
 (2) Emission Level= Reading Level + Probe Factor +Cable Loss.  
 (3) Data of measurement within this frequency range shown "--" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

Temperature : 26°C                      Test By: King Kong  
 Humidity : 60 %                      Frequency: Channel 3: 2422MHz  
 Test mode: 802.11n20(HT40)              Mode: MIMO

| Freq.<br>(MHz) | Ant.Pol.<br>H/V | Emission Level(dBuV/m) |       | Limit 3m(dBuV/m) |       | Over(dB) |        |
|----------------|-----------------|------------------------|-------|------------------|-------|----------|--------|
|                |                 | PK                     | AV    | PK               | AV    | PK       | AV     |
| 4845.78        | V               | 53.53                  | 40.80 | 74.00            | 54.00 | -19.47   | -13.20 |
| 9511.72        | V               | 52.25                  | 34.76 | 74.00            | 54.00 | -21.75   | -19.24 |
| 11471.60       | V               | 52.47                  | 34.49 | 74.00            | 54.00 | -21.53   | -19.51 |
| 4840.79        | H               | 52.47                  | 39.33 | 74.00            | 54.00 | -21.53   | -14.67 |
| 10411.94       | H               | 52.35                  | 34.57 | 74.00            | 54.00 | -21.65   | -19.43 |
| 14393.91       | H               | 53.09                  | 34.39 | 74.00            | 54.00 | -20.91   | -19.61 |

Temperature : 26°C                      Test By: King Kong  
 Humidity : 60 %                      Frequency: Channel 6: 2437MHz  
 Test mode: 802.11n(HT40)              Mode: MIMO

| Freq.<br>(MHz) | Ant.Pol.<br>H/V | Emission Level(dBuV/m) |       | Limit 3m(dBuV/m) |       | Over(dB) |        |
|----------------|-----------------|------------------------|-------|------------------|-------|----------|--------|
|                |                 | PK                     | AV    | PK               | AV    | PK       | AV     |
| 4861.80        | V               | 54.38                  | 39.54 | 74.00            | 54.00 | -18.62   | -14.46 |
| 9539.38        | V               | 52.39                  | 34.40 | 74.00            | 54.00 | -21.61   | -19.60 |
| 11277.16       | V               | 53.35                  | 35.23 | 74.00            | 54.00 | -20.65   | -18.77 |
| 4876.87        | H               | 52.90                  | 39.05 | 74.00            | 54.00 | -21.10   | -14.95 |
| 10244.12       | H               | 51.55                  | 34.01 | 74.00            | 54.00 | -22.45   | -19.99 |
| 14285.16       | H               | 53.03                  | 34.61 | 74.00            | 54.00 | -20.97   | -19.39 |

Temperature : 26°C                      Test By: King Kong  
 Humidity : 60 %                      Frequency: Channel 9: 2452MHz  
 Test mode: 802.11n(HT40)              Mode: MIMO

| Freq.<br>(MHz) | Ant.Pol.<br>H/V | Emission Level(dBuV/m) |       | Limit 3m(dBuV/m) |       | Over(dB) |        |
|----------------|-----------------|------------------------|-------|------------------|-------|----------|--------|
|                |                 | PK                     | AV    | PK               | AV    | PK       | AV     |
| 4889.67        | V               | 53.98                  | 38.54 | 74.00            | 54.00 | -20.02   | -15.46 |
| 9582.36        | V               | 50.62                  | 34.95 | 74.00            | 54.00 | -23.38   | -19.05 |
| 11277.20       | V               | 53.20                  | 36.46 | 74.00            | 54.00 | -20.80   | -17.54 |
| 4901.75        | H               | 51.00                  | 39.60 | 74.00            | 54.00 | -23.00   | -14.40 |
| 10367.18       | H               | 50.68                  | 34.97 | 74.00            | 54.00 | -23.32   | -19.03 |
| 14405.83       | H               | 52.92                  | 34.34 | 74.00            | 54.00 | -21.08   | -19.66 |

- Note:** (1) All Readings are Peak Value (VBW=3MHz) and Average Value (VBW=10Hz).  
 (2) Emission Level= Reading Level + Probe Factor +Cable Loss.  
 (3) Data of measurement within this frequency range shown "--" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

- Spurious Emission in Restricted Band 2310-2390MHz and 2483.5-2500MHz
- 2.4G 802.11b/g/n SISO and MIMO modes have been tested, and the worst case recorded was report as below:

|               |         |            |                    |
|---------------|---------|------------|--------------------|
| Temperature : | 26°C    | Test By:   | King Kong          |
| Humidity :    | 60 %    | Frequency: | Channel 1: 2412MHz |
| Test mode:    | 802.11b | Mode:      | SISO Antenna 0     |

| Frequency (MHz) | Polarity | PK(dBuV/m) (VBW=3MHz) | Limit 3m (dBuV/m) | Margin (dB) | AV(dBuV/m) (VBW=10Hz) | Limit 3m (dBuV/m) | Margin (dB) |
|-----------------|----------|-----------------------|-------------------|-------------|-----------------------|-------------------|-------------|
| 2384.67         | H        | 50.68                 | 74.00             | -23.32      | 36.40                 | 54.00             | -17.60      |
| 2389.62         | V        | 50.83                 | 74.00             | -23.17      | 35.10                 | 54.00             | -18.90      |

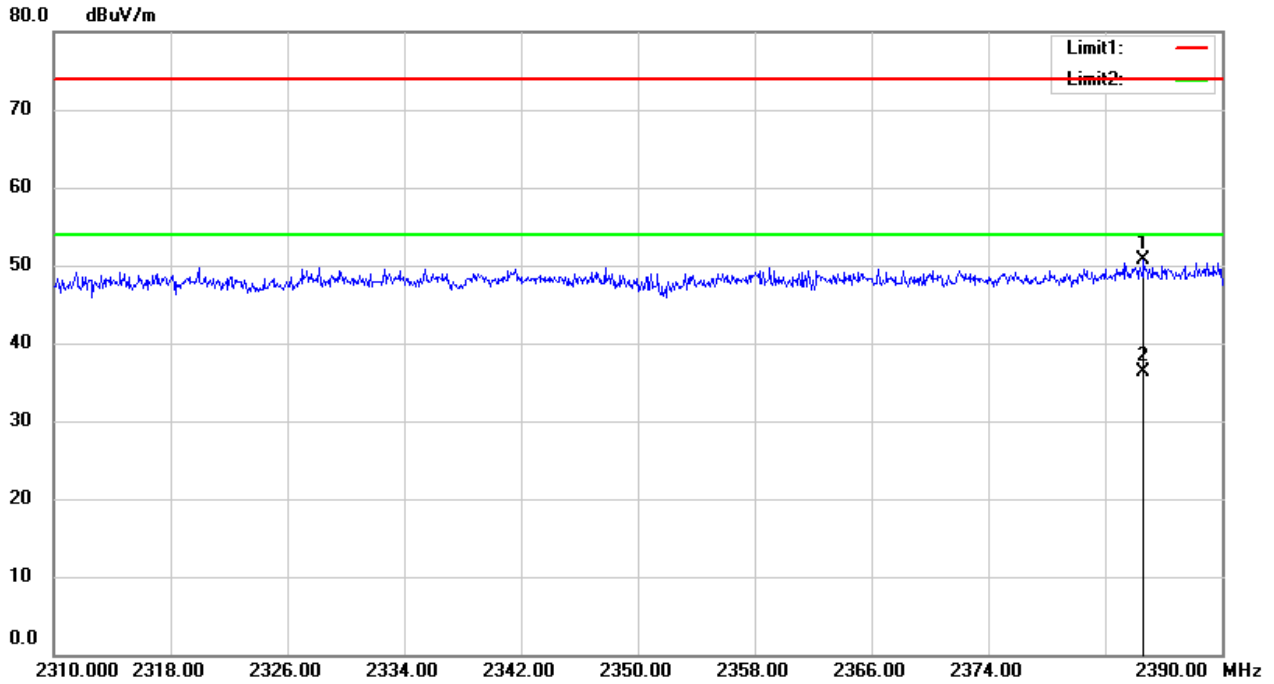
|               |         |            |                     |
|---------------|---------|------------|---------------------|
| Temperature : | 26°C    | Test By:   | King Kong           |
| Humidity :    | 60 %    | Frequency: | Channel 11: 2462MHz |
| Test mode:    | 802.11b | Mode:      | SISO Antenna 0      |

| Frequency (MHz) | Polarity | PK(dBuV/m) (VBW=3MHz) | Limit 3m (dBuV/m) | Margin (dB) | AV(dBuV/m) (VBW=10Hz) | Limit 3m (dBuV/m) | Margin (dB) |
|-----------------|----------|-----------------------|-------------------|-------------|-----------------------|-------------------|-------------|
| 2483.98         | H        | 50.89                 | 74.00             | -23.11      | 35.70                 | 54.00             | -18.30      |
| 2485.33         | V        | 52.07                 | 74.00             | -21.93      | 37.20                 | 54.00             | -16.80      |

- Note:**
- (1) All Readings are Peak Value (VBW=3MHz) and Average Value (VBW=10Hz).
  - (2) Emission Level= Reading Level+Probe Factor +Cable Loss.
  - (3) Data of measurement within this frequency range shown " -- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

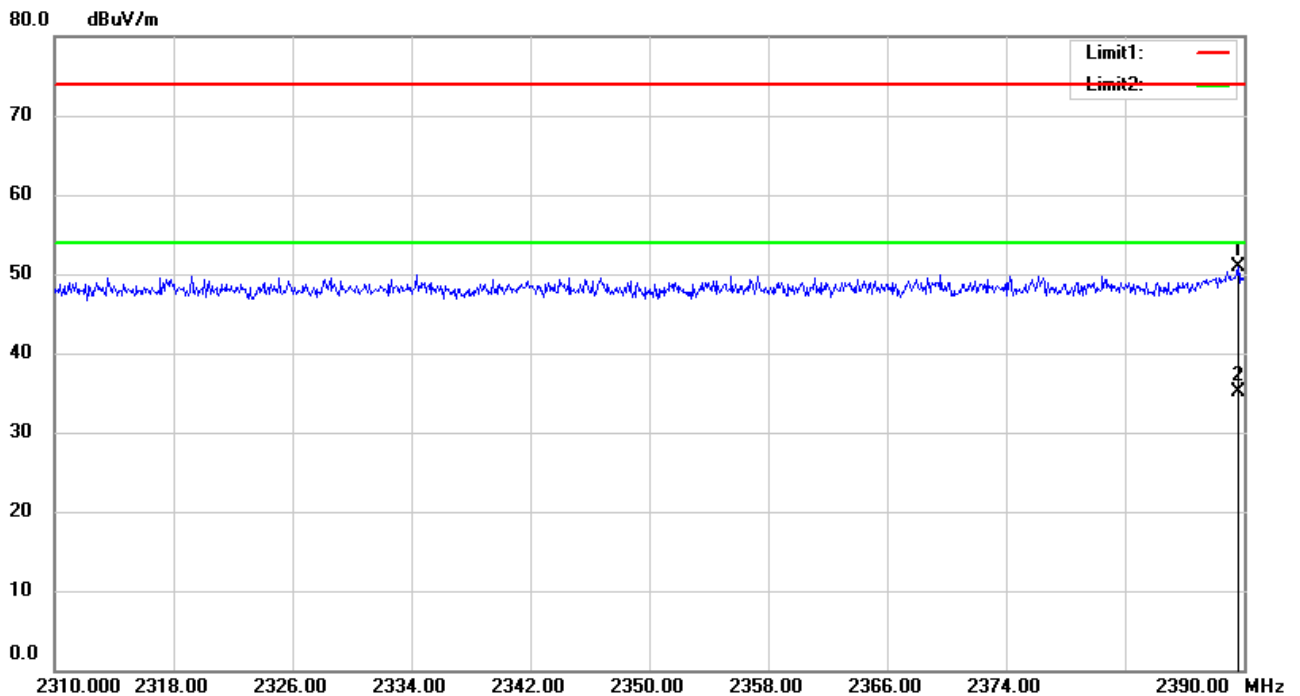
**Spurious Emission in Restricted Band 2310-2390MHz**

|            |  |   |  |  |
|------------|--|---|--|--|
| Test Model | <input checked="" type="checkbox"/> 802.11b            | <input type="checkbox"/> 802.11g            | <input type="checkbox"/> 802.11n(HT20) | <input type="checkbox"/> 802.11n(HT40) |
|            | <input checked="" type="checkbox"/> Channel 1: 2412MHz | <input type="checkbox"/> Channel 3: 2422MHz |  | Polarity: H                            |
|            | VBW=3MHz   |   | Test By: King Kong                     |  |



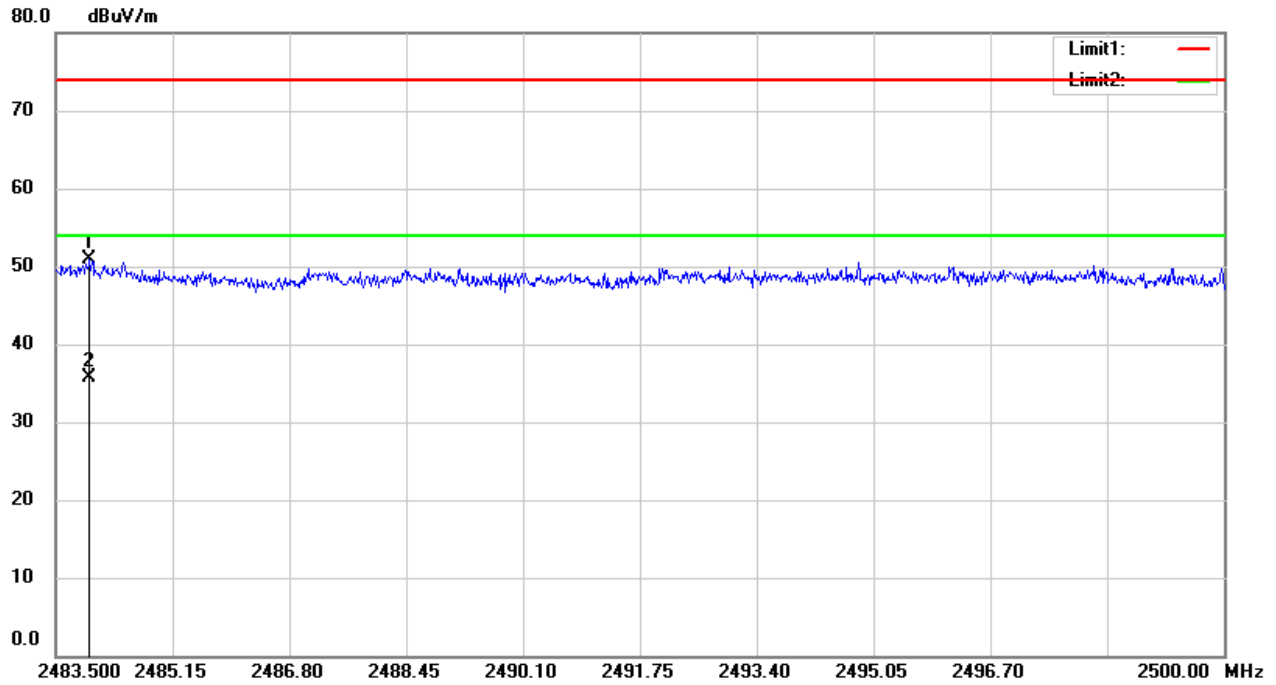
**Spurious Emission in Restricted Band 2310-2390MHz**

|            |  |   |  |  |
|------------|--|---|--|--|
| Test Model | <input checked="" type="checkbox"/> 802.11b            | <input type="checkbox"/> 802.11g            | <input type="checkbox"/> 802.11n(HT20) | <input type="checkbox"/> 802.11n(HT40) |
|            | <input checked="" type="checkbox"/> Channel 1: 2412MHz | <input type="checkbox"/> Channel 3: 2422MHz |  | Polarity: V                            |
|            | VBW=3MHz   |   | Test By: King Kong                     |  |



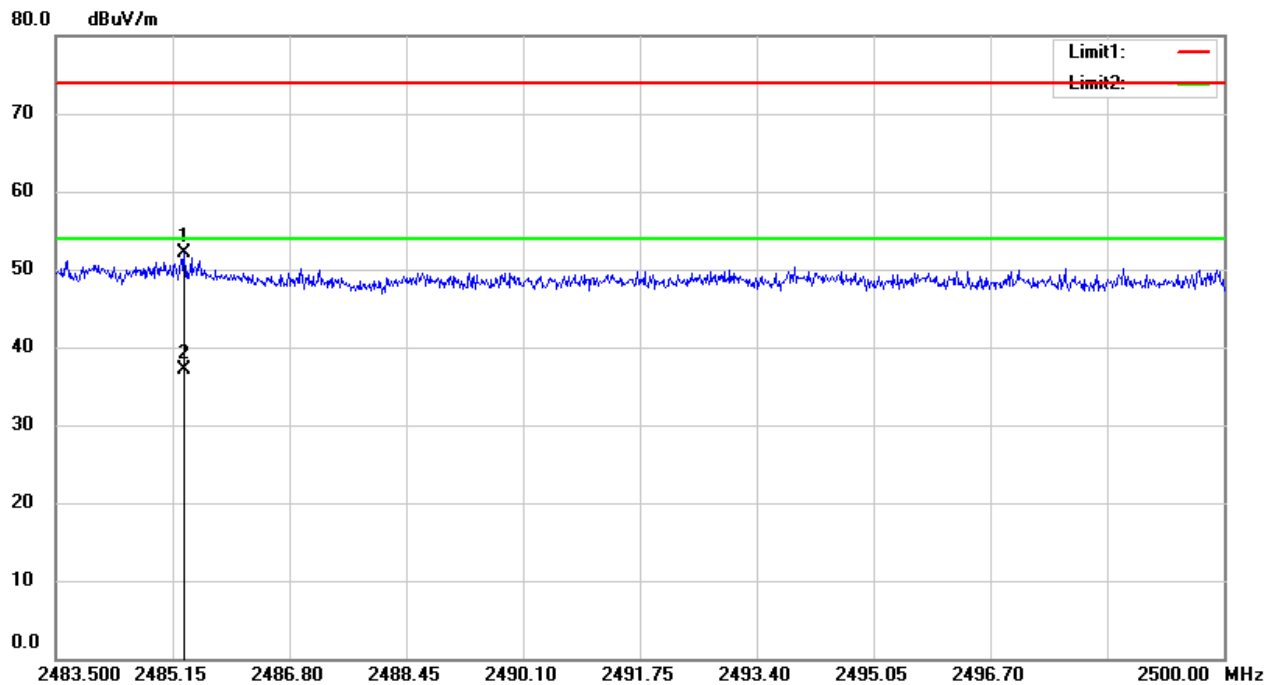
**Spurious Emission in Restricted Band 2483.5-2500MHz**

|            |   |   |  |  |
|------------|---|---|--|--|
| Test Model | <input checked="" type="checkbox"/> 802.11b             | <input type="checkbox"/> 802.11g            | <input type="checkbox"/> 802.11n(HT20) | <input type="checkbox"/> 802.11n(HT40) |
|            | <input checked="" type="checkbox"/> Channel 11: 2462MHz | <input type="checkbox"/> Channel 9: 2452MHz | Polarity: H                            |  |
|            | VBW=3MHz  | Test By: King Kong                          |  |  |



**Spurious Emission in Restricted Band 2483.5-2500MHz**

|            |   |   |  |  |
|------------|---|---|--|--|
| Test Model | <input checked="" type="checkbox"/> 802.11b             | <input type="checkbox"/> 802.11g            | <input type="checkbox"/> 802.11n(HT20) | <input type="checkbox"/> 802.11n(HT40) |
|            | <input checked="" type="checkbox"/> Channel 11: 2462MHz | <input type="checkbox"/> Channel 9: 2452MHz | Polarity: V                            |  |
|            | VBW=3MHz  | Test By: King Kong                          |  |  |



Temperature : 26°C  
 Humidity : 60 %  
 Test mode: 802.11g

Test By: King Kong  
 Frequency: Channel 1: 2412MHz  
 Mode: SISO Antenna 0

| Frequency (MHz) | Polarity | PK(dBuV/m) (VBW=3MHz) | Limit 3m (dBuV/m) | Margin (dB) | AV(dBuV/m) (VBW=10Hz) | Limit 3m (dBuV/m) | Margin (dB) |
|-----------------|----------|-----------------------|-------------------|-------------|-----------------------|-------------------|-------------|
| 2388.99         | H        | 50.26                 | 74.00             | -23.74      | 36.47                 | 54.00             | -17.53      |
| 2389.62         | V        | 50.33                 | 74.00             | -23.67      | 35.27                 | 54.00             | -18.73      |

Temperature : 26°C  
 Humidity : 60 %  
 Test mode: 802.11g

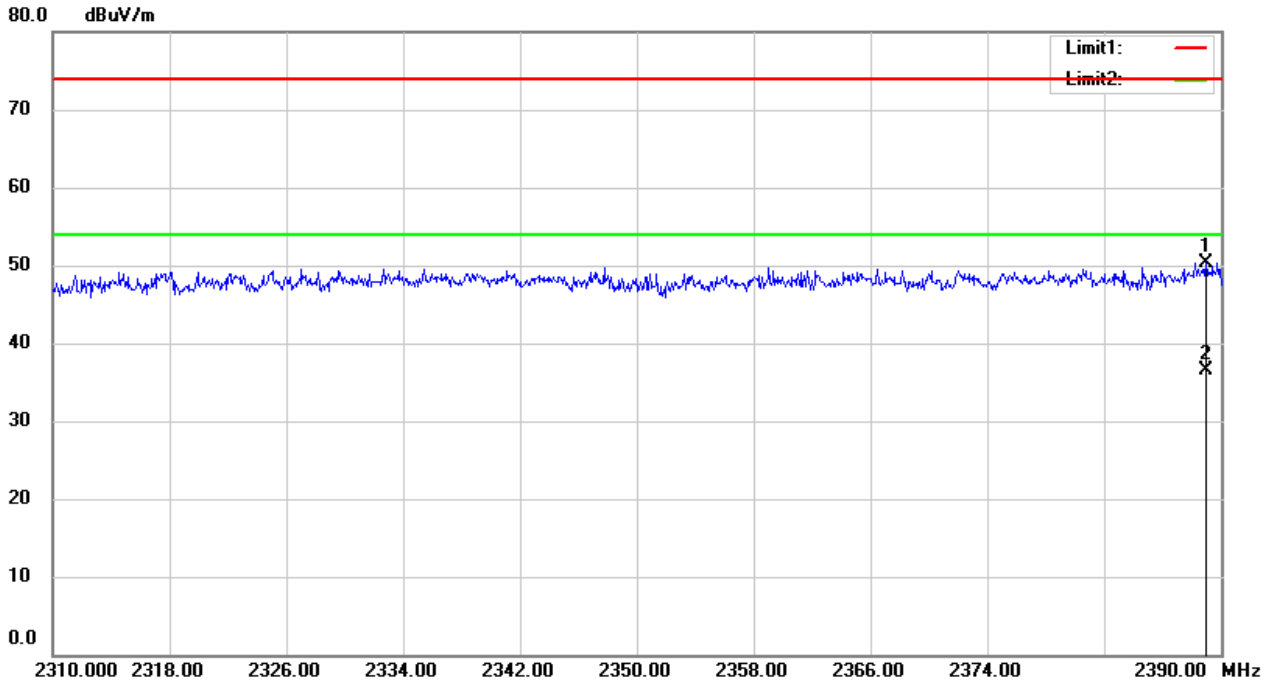
Test By: King Kong  
 Frequency: Channel 11: 2462MHz  
 Mode: SISO Antenna 0

| Frequency (MHz) | Polarity | PK(dBuV/m) (VBW=3MHz) | Limit 3m (dBuV/m) | Margin (dB) | AV(dBuV/m) (VBW=10Hz) | Limit 3m (dBuV/m) | Margin (dB) |
|-----------------|----------|-----------------------|-------------------|-------------|-----------------------|-------------------|-------------|
| 2484.04         | H        | 50.51                 | 74.00             | -23.49      | 35.25                 | 54.00             | -18.75      |
| 2484.65         | V        | 51.40                 | 74.00             | -22.60      | 35.41                 | 54.00             | -18.59      |

- Note:**
- (1) All Readings are Peak Value (VBW=3MHz) and Average Value (VBW=10Hz).
  - (2) Emission Level= Reading Level+Probe Factor +Cable Loss.
  - (3) Data of measurement within this frequency range shown “ -- ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

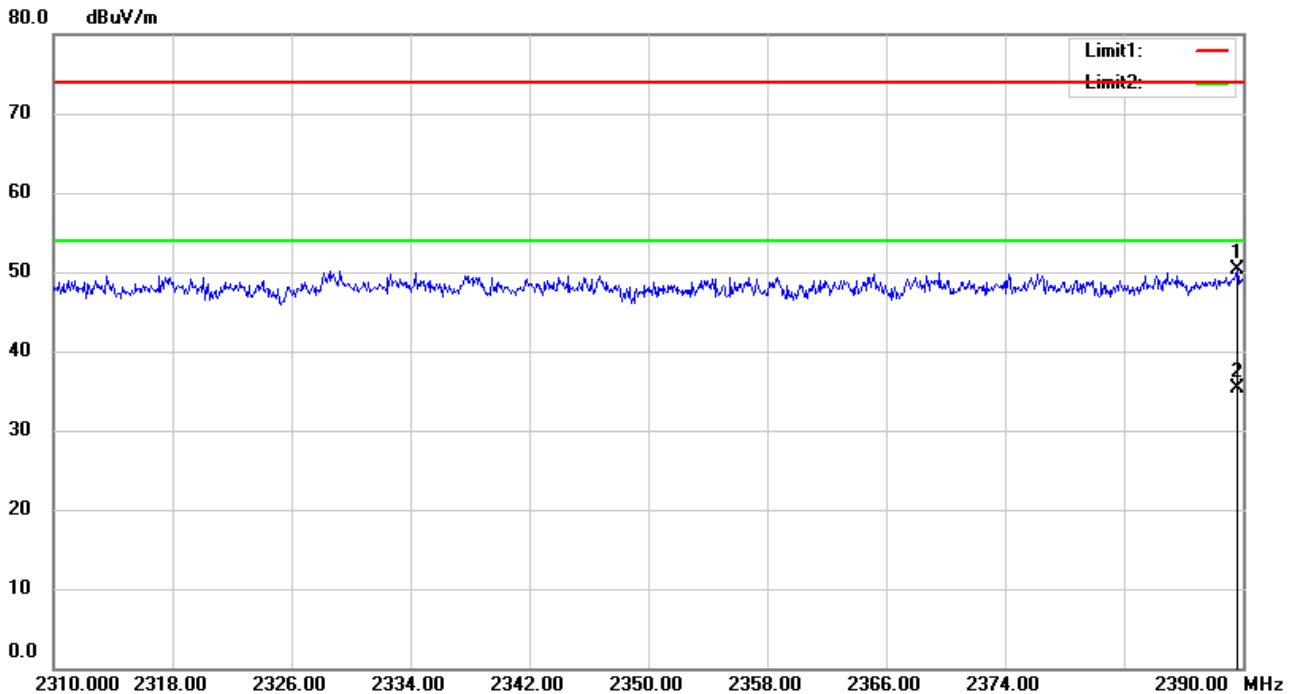
**Spurious Emission in Restricted Band 2310-2390MHz**

|            |  |   |  |  |
|------------|--|---|--|--|
| Test Model | <input type="checkbox"/> 802.11b                       | <input checked="" type="checkbox"/> 802.11g | <input type="checkbox"/> 802.11n(HT20) | <input type="checkbox"/> 802.11n(HT40) |
|            | <input checked="" type="checkbox"/> Channel 1: 2412MHz | <input type="checkbox"/> Channel 3: 2422MHz | Polarity: H                            |  |
|            | VBW=3MHz   | Test By: King Kong                          |  |  |



**Spurious Emission in Restricted Band 2310-2390MHz**

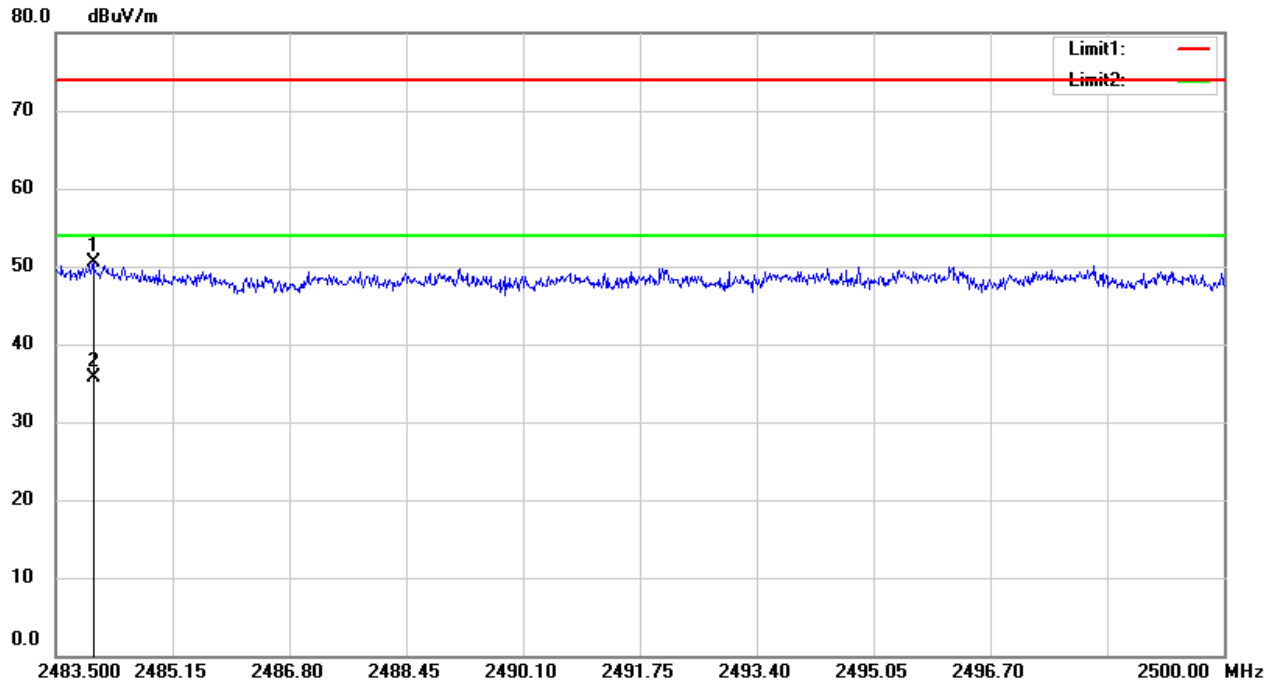
|            |  |   |  |  |
|------------|--|---|--|--|
| Test Model | <input type="checkbox"/> 802.11b                       | <input checked="" type="checkbox"/> 802.11g | <input type="checkbox"/> 802.11n(HT20) | <input type="checkbox"/> 802.11n(HT40) |
|            | <input checked="" type="checkbox"/> Channel 1: 2412MHz | <input type="checkbox"/> Channel 3: 2422MHz | Polarity: V                            |  |
|            | VBW=3MHz   | Test By: King Kong                          |  |  |





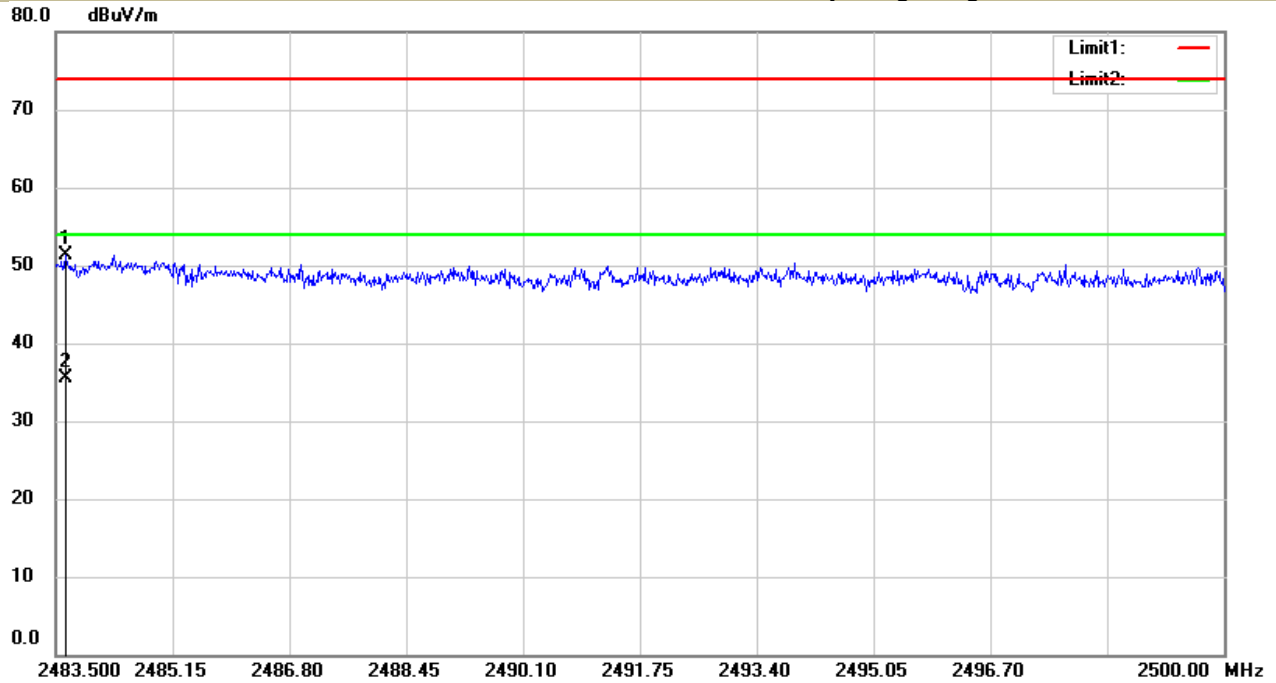
**Spurious Emission in Restricted Band 2483.5-2500MHz**

|            |   |   |  |  |
|------------|---|---|--|--|
| Test Model | <input type="checkbox"/> 802.11b                        | <input checked="" type="checkbox"/> 802.11g | <input type="checkbox"/> 802.11n(HT20) | <input type="checkbox"/> 802.11n(HT40) |
|            | <input checked="" type="checkbox"/> Channel 11: 2462MHz | <input type="checkbox"/> Channel 9: 2452MHz | Polarity: H                            |  |
|            | VBW=3MHz  | Test By: King Kong                          |  |  |



**Spurious Emission in Restricted Band 2483.5-2500MHz**

|            |   |   |  |  |
|------------|---|---|--|--|
| Test Model | <input type="checkbox"/> 802.11b                        | <input checked="" type="checkbox"/> 802.11g | <input type="checkbox"/> 802.11n(HT20) | <input type="checkbox"/> 802.11n(HT40) |
|            | <input checked="" type="checkbox"/> Channel 11: 2462MHz | <input type="checkbox"/> Channel 9: 2452MHz | Polarity: V                            |  |
|            | VBW=3MHz  | Test By: King Kong                          |  |  |



Temperature : 26°C  
 Humidity : 60 %  
 Test mode: 802.11n (HT20)

Test By: King Kong  
 Frequency: Channel 1: 2412MHz  
 Mode: MIMO

| Frequency (MHz) | Polarity | PK(dBuV/m) (VBW=3MHz) | Limit 3m (dBuV/m) | Margin (dB) | AV(dBuV/m) (VBW=10Hz) | Limit 3m (dBuV/m) | Margin (dB) |
|-----------------|----------|-----------------------|-------------------|-------------|-----------------------|-------------------|-------------|
| 2389.69         | H        | 50.33                 | 74.00             | -23.67      | 34.97                 | 54.00             | -19.03      |
| 2389.62         | V        | 50.83                 | 74.00             | -23.17      | 35.67                 | 54.00             | -18.33      |

Temperature : 26°C  
 Humidity : 60 %  
 Test mode: 802.11n (HT20)

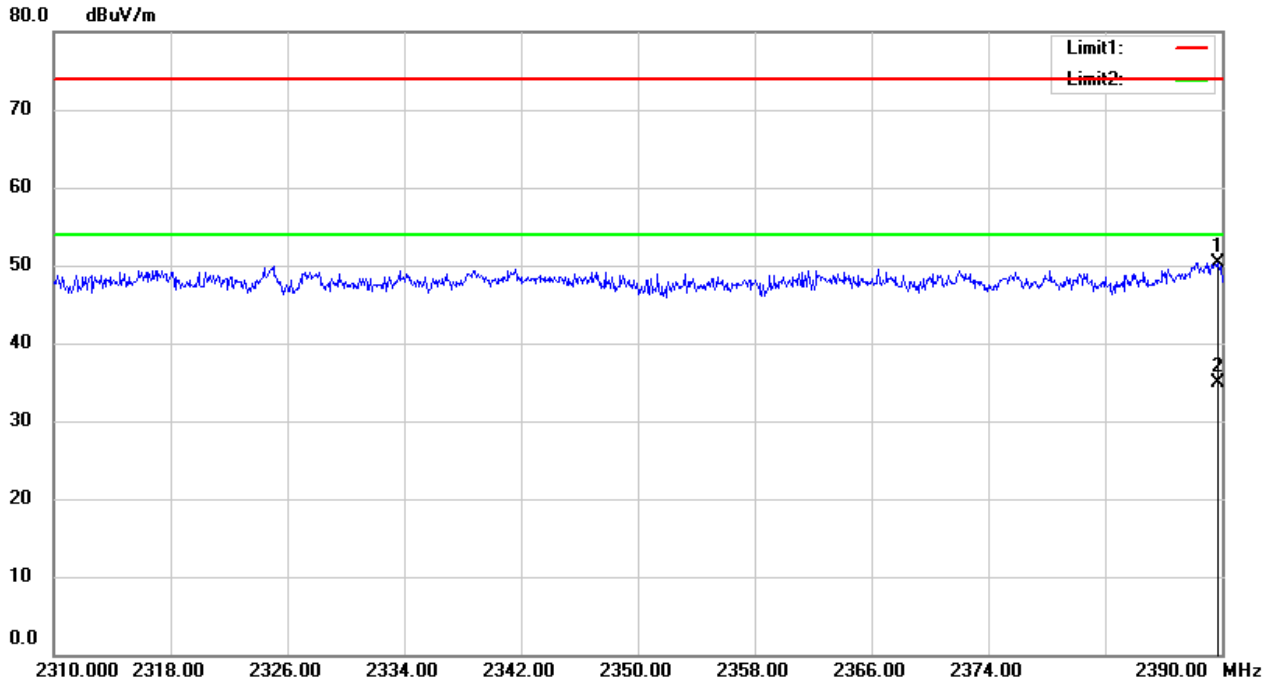
Test By: King Kong  
 Frequency: Channel 11: 2462MHz  
 Mode: MIMO

| Frequency (MHz) | Polarity | PK(dBuV/m) (VBW=3MHz) | Limit 3m (dBuV/m) | Margin (dB) | AV(dBuV/m) (VBW=10Hz) | Limit 3m (dBuV/m) | Margin (dB) |
|-----------------|----------|-----------------------|-------------------|-------------|-----------------------|-------------------|-------------|
| 2483.98         | H        | 50.39                 | 74.00             | -23.61      | 35.76                 | 54.00             | -18.24      |
| 2389.62         | V        | 50.98                 | 74.00             | -23.02      | 36.14                 | 54.00             | -17.86      |

- Note:**
- (1) All Readings are Peak Value (VBW=3MHz) and Average Value (VBW=10Hz).
  - (2) Emission Level= Reading Level+Probe Factor +Cable Loss.
  - (3) Data of measurement within this frequency range shown “ -- ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

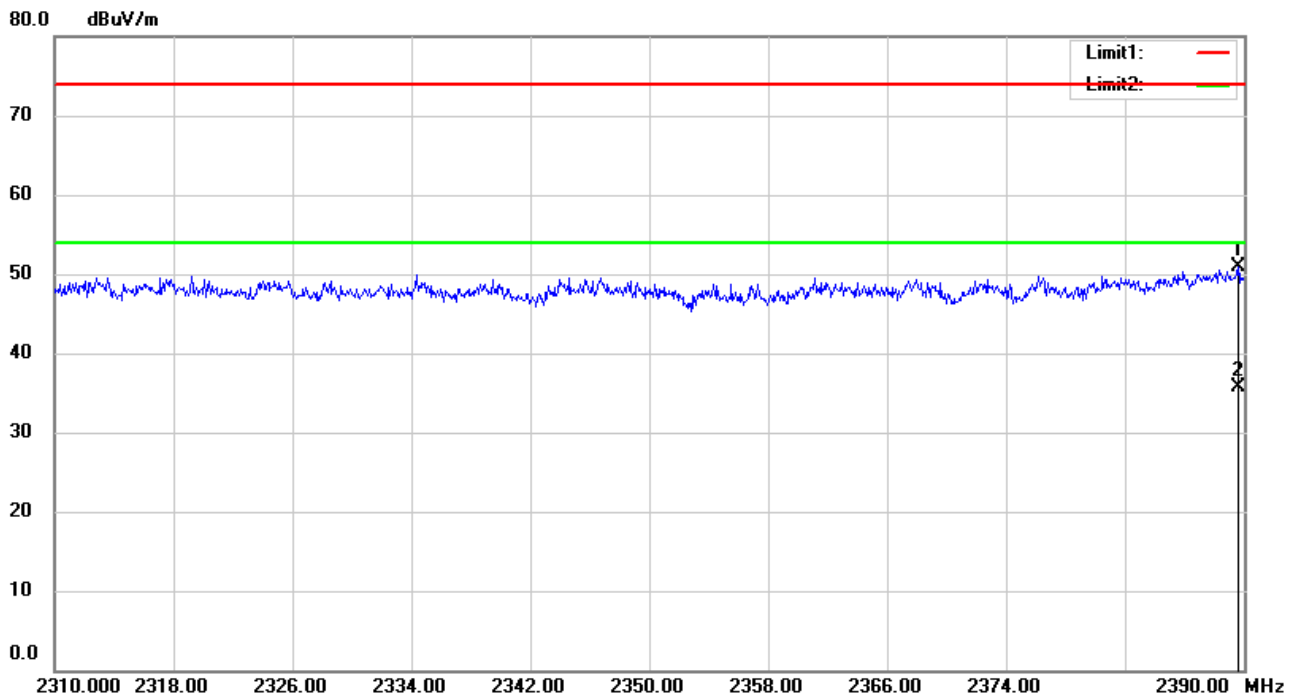
**Spurious Emission in Restricted Band 2310-2390MHz**

|            |  |   |   |  |
|------------|--|---|---|--|
| Test Model | <input type="checkbox"/> 802.11b                       | <input type="checkbox"/> 802.11g            | <input checked="" type="checkbox"/> 802.11n(HT20) | <input type="checkbox"/> 802.11n(HT40) |
|            | <input checked="" type="checkbox"/> Channel 1: 2412MHz | <input type="checkbox"/> Channel 3: 2422MHz |   | Polarity: H                            |
|            | VBW=3MHz   |   | Test By: King Kong                                |  |



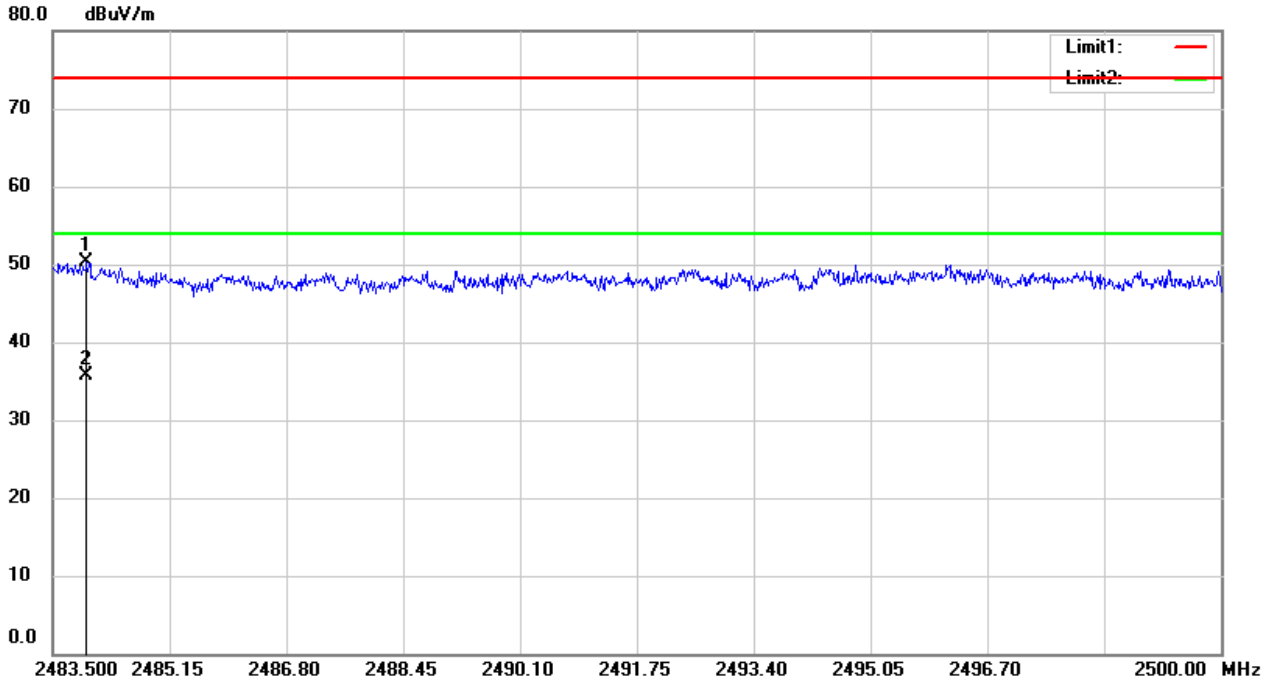
**Spurious Emission in Restricted Band 2310-2390MHz**

|            |  |   |   |  |
|------------|--|---|---|--|
| Test Model | <input type="checkbox"/> 802.11b                       | <input type="checkbox"/> 802.11g            | <input checked="" type="checkbox"/> 802.11n(HT20) | <input type="checkbox"/> 802.11n(HT40) |
|            | <input checked="" type="checkbox"/> Channel 1: 2412MHz | <input type="checkbox"/> Channel 3: 2422MHz |   | Polarity: V                            |
|            | VBW=3MHz   |   | Test By: King Kong                                |  |



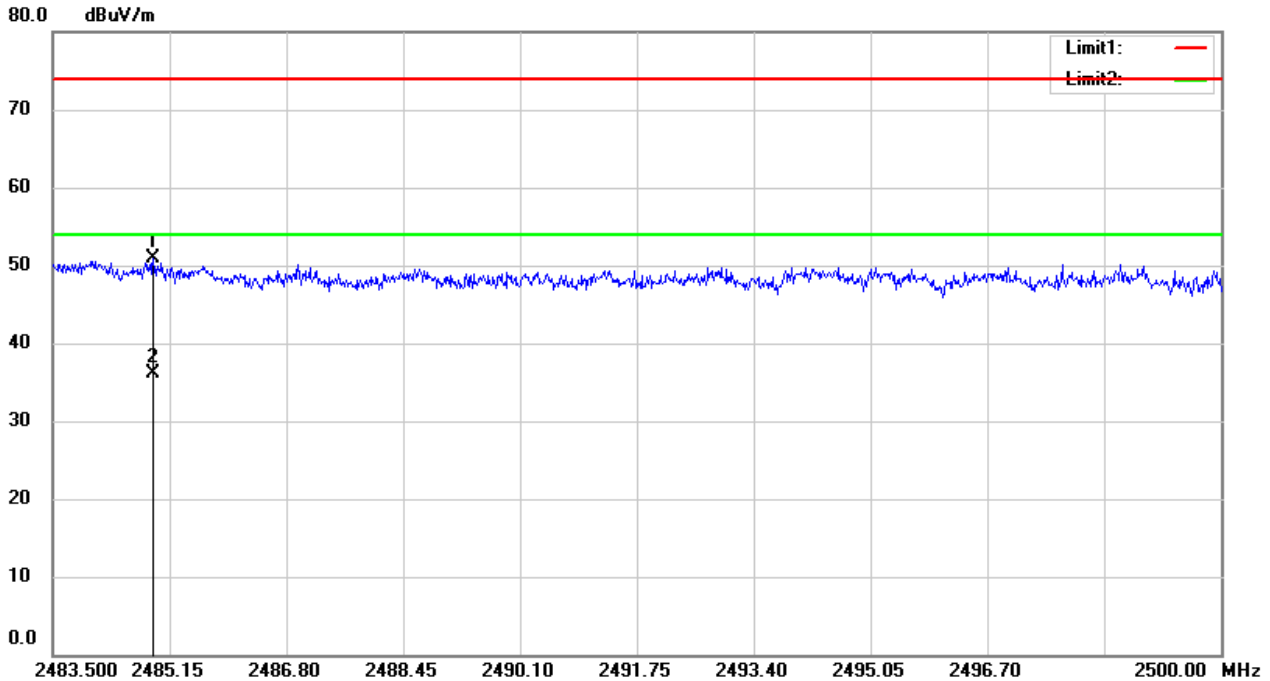
**Spurious Emission in Restricted Band 2483.5-2500MHz**

|            |   |   |   |  |
|------------|---|---|---|--|
| Test Model | <input type="checkbox"/> 802.11b                        | <input type="checkbox"/> 802.11g            | <input checked="" type="checkbox"/> 802.11n(HT20) | <input type="checkbox"/> 802.11n(HT40) |
|            | <input checked="" type="checkbox"/> Channel 11: 2462MHz | <input type="checkbox"/> Channel 9: 2452MHz | Polarity: H                                       |  |
|            | VBW=3MHz  | Test By: King Kong                          |   |  |



**Spurious Emission in Restricted Band 2483.5-2500MHz**

|            |   |   |   |  |
|------------|---|---|---|--|
| Test Model | <input type="checkbox"/> 802.11b                        | <input type="checkbox"/> 802.11g            | <input checked="" type="checkbox"/> 802.11n(HT20) | <input type="checkbox"/> 802.11n(HT40) |
|            | <input checked="" type="checkbox"/> Channel 11: 2462MHz | <input type="checkbox"/> Channel 9: 2452MHz | Polarity: V                                       |  |
|            | VBW=3MHz  | Test By: King Kong                          |   |  |



Temperature : 26°C  
 Humidity : 60 %  
 Test mode: 802.11n (HT40)

Test By: King Kong  
 Frequency: Channel 3: 2422MHz  
 Mode: MIMO

| Frequency (MHz) | Polarity | PK(dBuV/m) (VBW=3MHz) | Limit 3m (dBuV/m) | Margin (dB) | AV(dBuV/m) (VBW=10Hz) | Limit 3m (dBuV/m) | Margin (dB) |
|-----------------|----------|-----------------------|-------------------|-------------|-----------------------|-------------------|-------------|
| 2389.81         | H        | 50.25                 | 74.00             | -23.75      | 34.78                 | 54.00             | -19.22      |
| 2389.62         | V        | 50.33                 | 74.00             | -23.67      | 35.62                 | 54.00             | -18.38      |

Temperature : 26°C  
 Humidity : 60 %  
 Test mode: 802.11n (HT40)

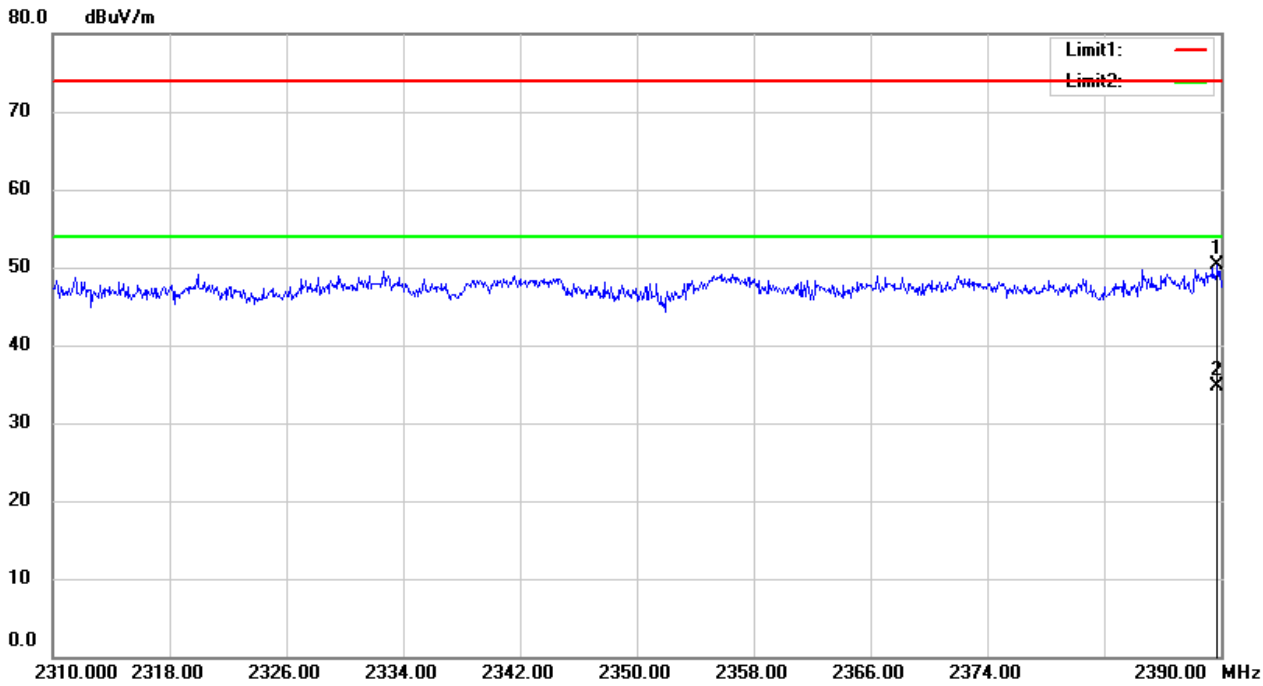
Test By: King Kong  
 Frequency: Channel 9: 2462MHz  
 Mode: MIMO

| Frequency (MHz) | Polarity | PK(dBuV/m) (VBW=3MHz) | Limit 3m (dBuV/m) | Margin (dB) | AV(dBuV/m) (VBW=10Hz) | Limit 3m (dBuV/m) | Margin (dB) |
|-----------------|----------|-----------------------|-------------------|-------------|-----------------------|-------------------|-------------|
| 2483.59         | H        | 50.56                 | 74.00             | -23.44      | 34.80                 | 54.00             | -19.20      |
| 2483.65         | V        | 51.40                 | 74.00             | -22.60      | 35.28                 | 54.00             | -18.72      |

- Note:**
- (1) All Readings are Peak Value (VBW=3MHz) and Average Value (VBW=10Hz).
  - (2) Emission Level= Reading Level + Probe Factor +Cable Loss.
  - (3) Data of measurement within this frequency range shown “ -- ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

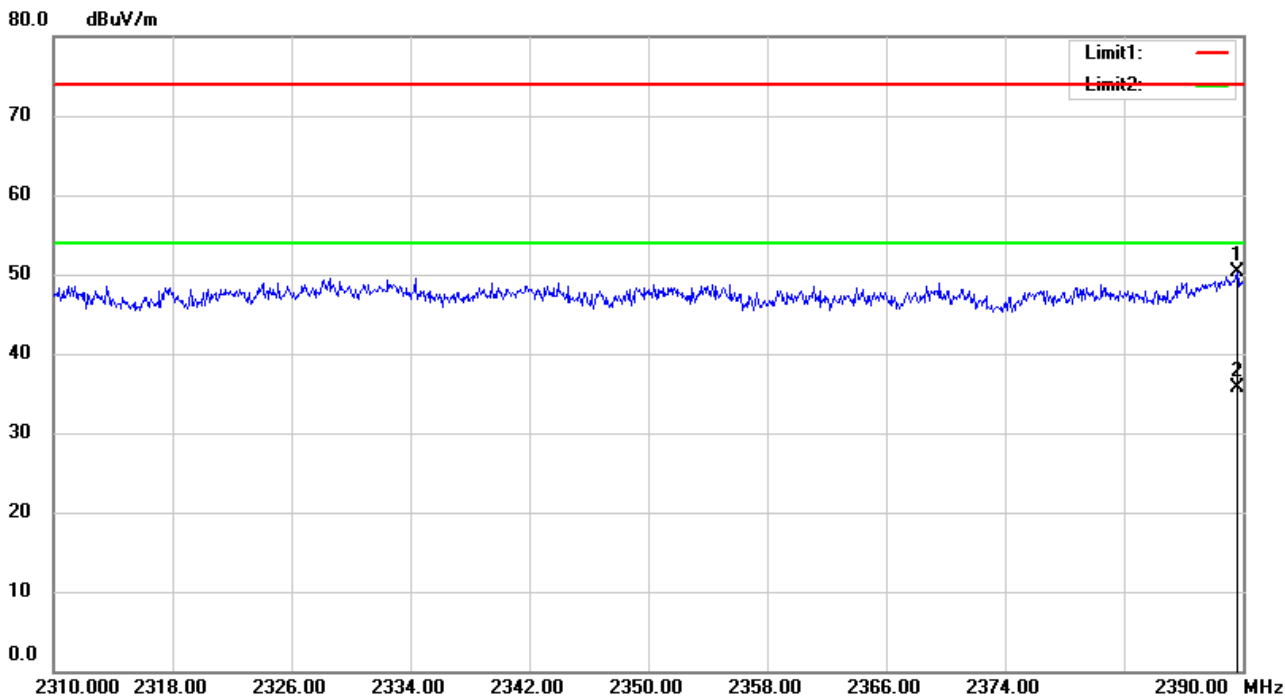
**Spurious Emission in Restricted Band 2310-2390MHz**

|            |   |  |  |   |
|------------|---|--|--|---|
| Test Model | <input type="checkbox"/> 802.11b            | <input type="checkbox"/> 802.11g                       | <input type="checkbox"/> 802.11n(HT20) | <input checked="" type="checkbox"/> 802.11n(HT40) |
|            | <input type="checkbox"/> Channel 1: 2412MHz | <input checked="" type="checkbox"/> Channel 3: 2422MHz |  | Polarity: H                                       |
|            | VBW=3MHz                                    |  |  | Test By: King Kong                                |



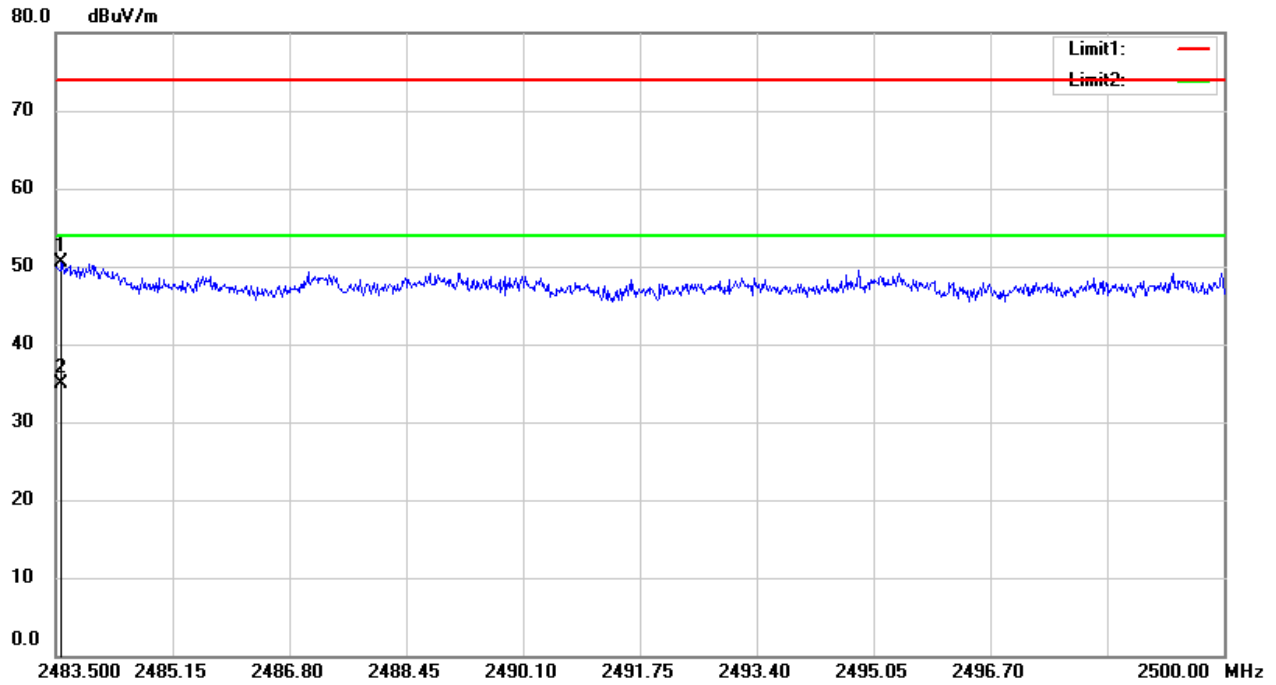
**Spurious Emission in Restricted Band 2310-2390MHz**

|            |   |  |  |   |
|------------|---|--|--|---|
| Test Model | <input type="checkbox"/> 802.11b            | <input type="checkbox"/> 802.11g                       | <input type="checkbox"/> 802.11n(HT20) | <input checked="" type="checkbox"/> 802.11n(HT40) |
|            | <input type="checkbox"/> Channel 1: 2412MHz | <input checked="" type="checkbox"/> Channel 3: 2422MHz |  | Polarity: V                                       |
|            | VBW=3MHz                                    |  |  | Test By: King Kong                                |



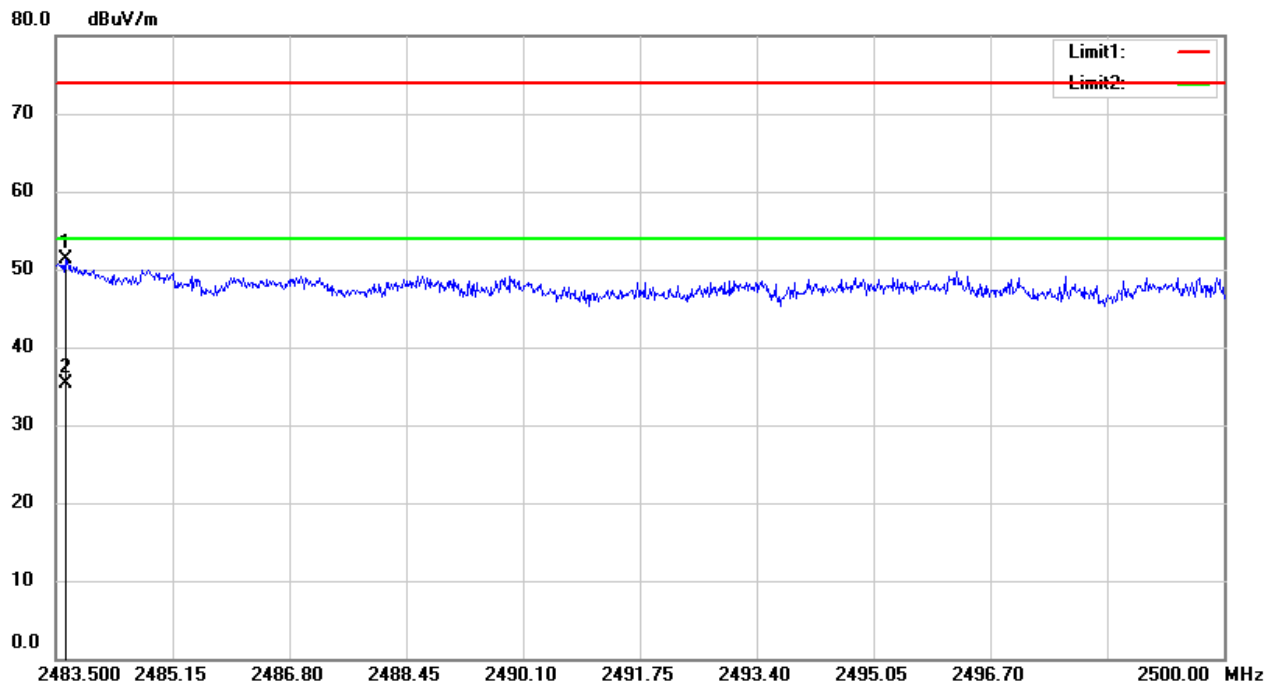
**Spurious Emission in Restricted Band 2483.5-2500MHz**

|            |  |  |  |   |
|------------|--|--|--|---|
| Test Model | <input type="checkbox"/> 802.11b             | <input type="checkbox"/> 802.11g                       | <input type="checkbox"/> 802.11n(HT20) | <input checked="" type="checkbox"/> 802.11n(HT40) |
|            | <input type="checkbox"/> Channel 11: 2462MHz | <input checked="" type="checkbox"/> Channel 9: 2452MHz |  | Polarity: H                                       |
|            | VBW=3MHz                                     |  | Test By: King Kong                     |   |

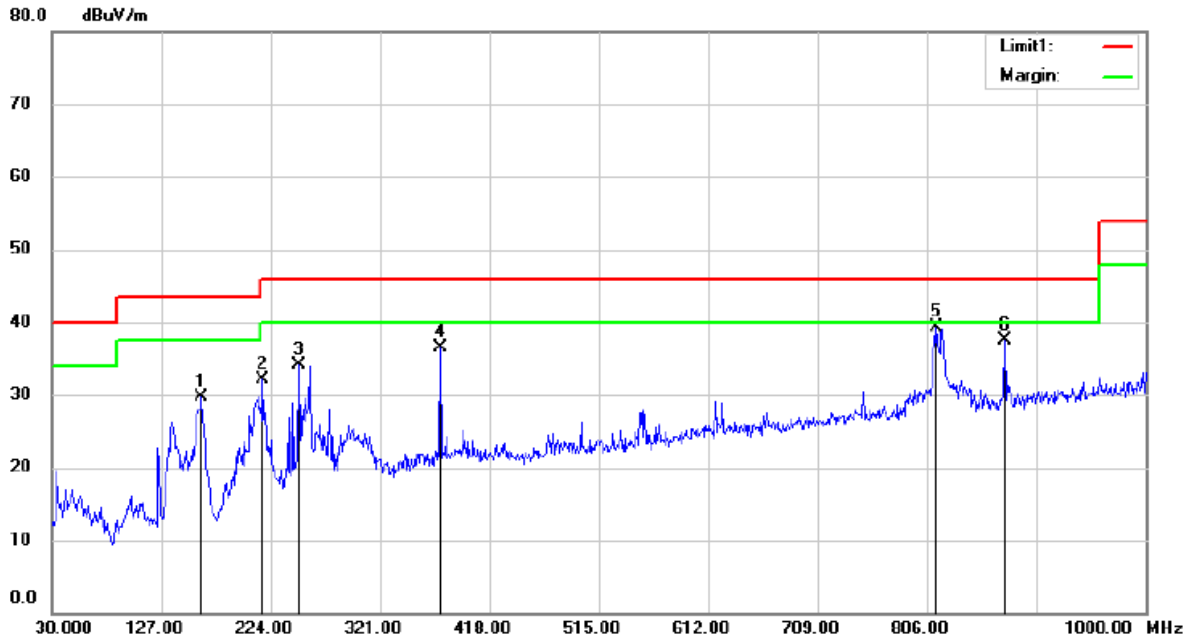


**Spurious Emission in Restricted Band 2483.5-2500MHz**

|            |  |  |  |   |
|------------|--|--|--|---|
| Test Model | <input type="checkbox"/> 802.11b             | <input type="checkbox"/> 802.11g                       | <input type="checkbox"/> 802.11n(HT20) | <input checked="" type="checkbox"/> 802.11n(HT40) |
|            | <input type="checkbox"/> Channel 11: 2462MHz | <input checked="" type="checkbox"/> Channel 9: 2452MHz |  | Polarity: V                                       |
|            | VBW=3MHz                                     |  | Test By: King Kong                     |   |



- Spurious Emission below 1GHz (30MHz to 1GHz)  
All modes have been tested, and the worst results (802.11a siso mode antenna 0) have been recorded in the report.



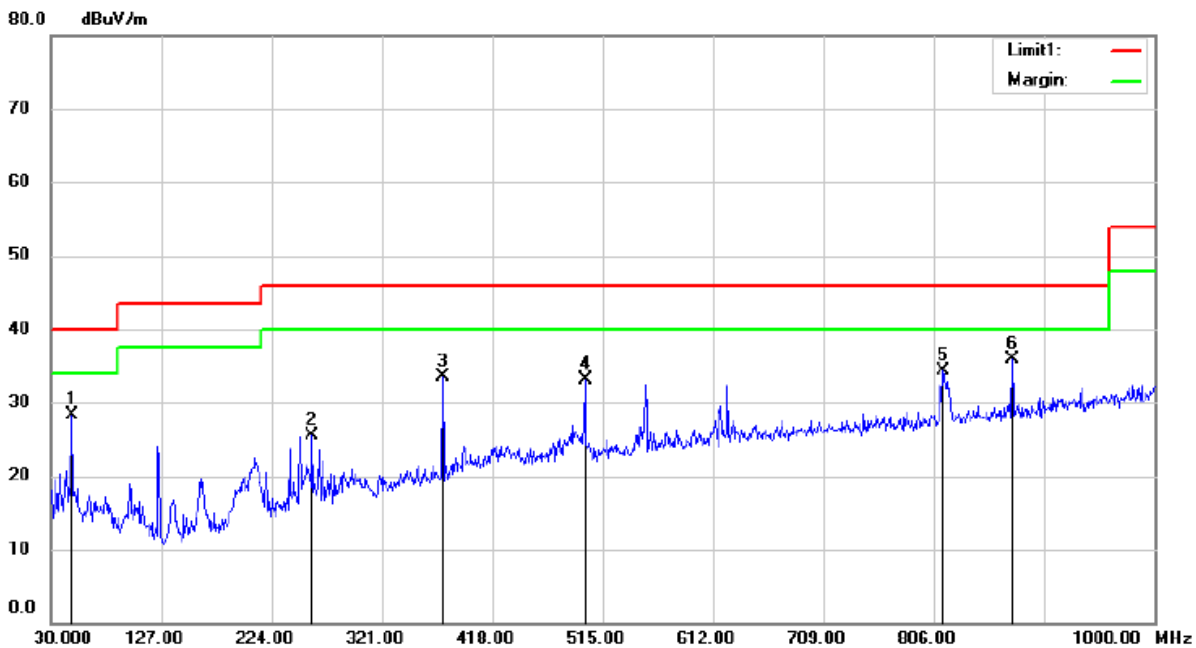
Site 3m Chamber 1# Polarization: **Horizontal** Temperature: 27 C  
 Limit: (RE)FCC PART 15C Power: AC 120V/60Hz Humidity: 43 %  
 Mode: 11B 2412  
 Note:

| No. | Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV/m | Limit<br>dBuV/m | Over<br>dB | Antenna<br>Height<br>cm | Table<br>Degree<br>degree | Comment |
|-----|-----|--------------|--------------------------|-------------------------|----------------------------|-----------------|------------|-------------------------|---------------------------|---------|
| 1   |     | 163.4962     | 44.17                    | -14.48                  | 29.69                      | 43.50           | -13.81     |                         |                           | peak    |
| 2   |     | 217.9375     | 43.42                    | -11.29                  | 32.13                      | 46.00           | -13.87     |                         |                           | peak    |
| 3   |     | 249.9474     | 43.96                    | -9.89                   | 34.07                      | 46.00           | -11.93     |                         |                           | peak    |
| 4   |     | 374.9562     | 43.18                    | -6.70                   | 36.48                      | 46.00           | -9.52      |                         |                           | peak    |
| 5   | *   | 814.8512     | 38.91                    | 0.43                    | 39.34                      | 46.00           | -6.66      |                         |                           | peak    |
| 6   |     | 875.1124     | 35.86                    | 1.55                    | 37.41                      | 46.00           | -8.59      |                         |                           | peak    |

\*:Maximum data x:Over limit !:over margin

Operator: XZC



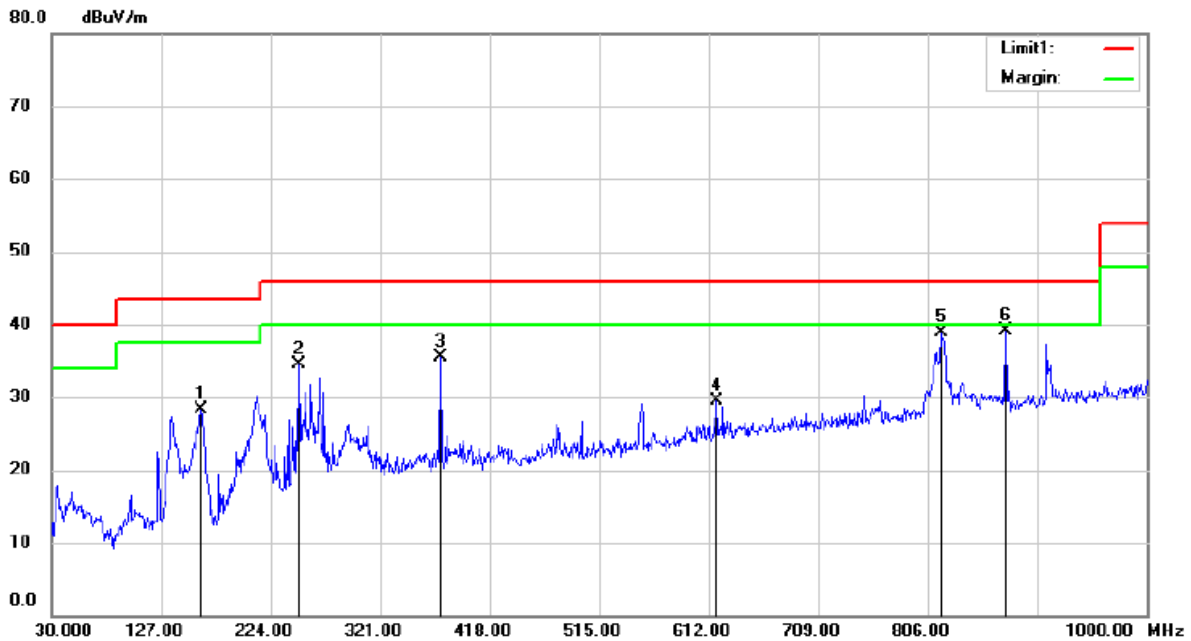


Site 3m Chamber 1#      Polarization: **Vertical**      Temperature: 27 C  
 Limit: (RE)FCC PART 15C      Power: AC 120V/60Hz      Humidity: 43 %  
 Mode: 11B 2412  
 Note:

| No. | Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV/m | Limit<br>dBuV/m | Over<br>dB | Antenna<br>Height<br>cm | Table<br>Degree<br>degree | Comment |
|-----|-----|--------------|--------------------------|-------------------------|----------------------------|-----------------|------------|-------------------------|---------------------------|---------|
| 1   |     | 49.1574      | 39.58                    | -11.23                  | 28.35                      | 40.00           | -11.65     |                         |                           | peak    |
| 2   |     | 260.0111     | 35.08                    | -9.49                   | 25.59                      | 46.00           | -20.41     |                         |                           | peak    |
| 3   |     | 374.9562     | 40.16                    | -6.70                   | 33.46                      | 46.00           | -12.54     |                         |                           | peak    |
| 4   |     | 499.9650     | 37.92                    | -4.74                   | 33.18                      | 46.00           | -12.82     |                         |                           | peak    |
| 5   |     | 815.4573     | 33.80                    | 0.43                    | 34.23                      | 46.00           | -11.77     |                         |                           | peak    |
| 6   | *   | 875.1124     | 34.39                    | 1.55                    | 35.94                      | 46.00           | -10.06     |                         |                           | peak    |

\*:Maximum data    x:Over limit    !:over margin

Operator: XZC

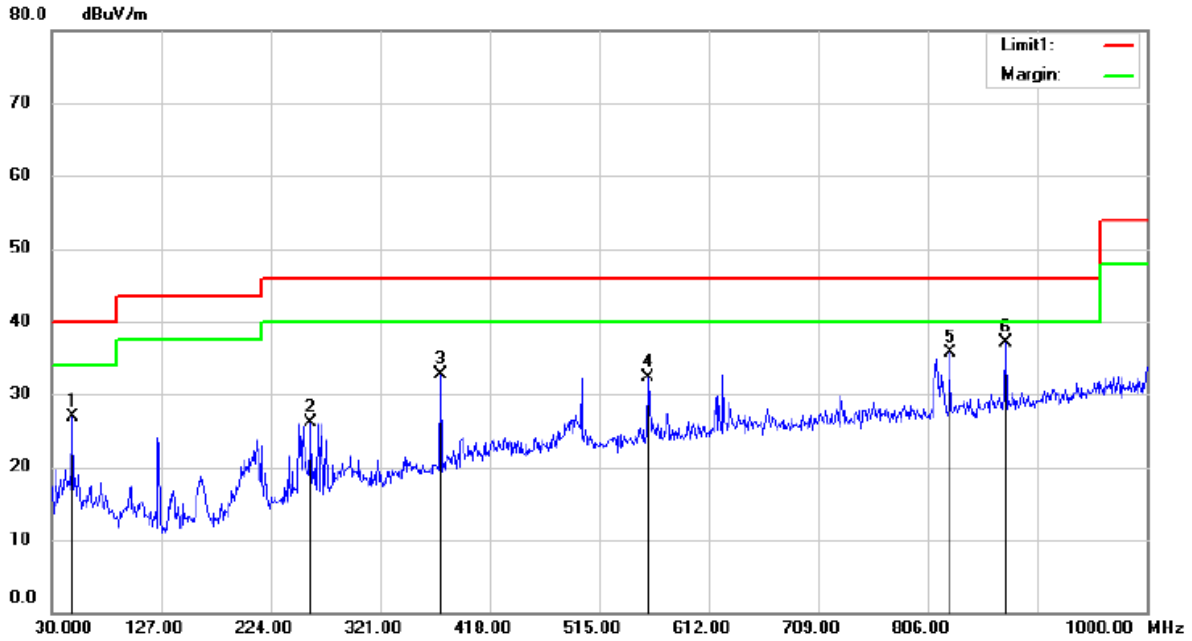


Site 3m Chamber 1#      Polarization: *Horizontal*      Temperature: 27 C  
 Limit: (RE)FCC PART 15C      Power: AC 120V/60Hz      Humidity: 43 %  
 Mode: 11B 2437  
 Note:

| No. | Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV/m | Limit<br>dBuV/m | Over<br>dB | Antenna<br>Height<br>cm | Table<br>Degree | Comment |
|-----|-----|--------------|--------------------------|-------------------------|----------------------------|-----------------|------------|-------------------------|-----------------|---------|
| 1   |     | 163.4962     | 42.87                    | -14.48                  | 28.39                      | 43.50           | -15.11     |                         |                 | peak    |
| 2   |     | 249.9474     | 44.40                    | -9.89                   | 34.51                      | 46.00           | -11.49     |                         |                 | peak    |
| 3   |     | 374.9562     | 42.12                    | -6.70                   | 35.42                      | 46.00           | -10.58     |                         |                 | peak    |
| 4   |     | 619.1537     | 31.39                    | -1.92                   | 29.47                      | 46.00           | -16.53     |                         |                 | peak    |
| 5   |     | 817.8825     | 38.38                    | 0.43                    | 38.81                      | 46.00           | -7.19      |                         |                 | peak    |
| 6   | *   | 875.1124     | 37.46                    | 1.55                    | 39.01                      | 46.00           | -6.99      |                         |                 | peak    |

\*:Maximum data    x:Over limit    !:over margin

Operator: XZC

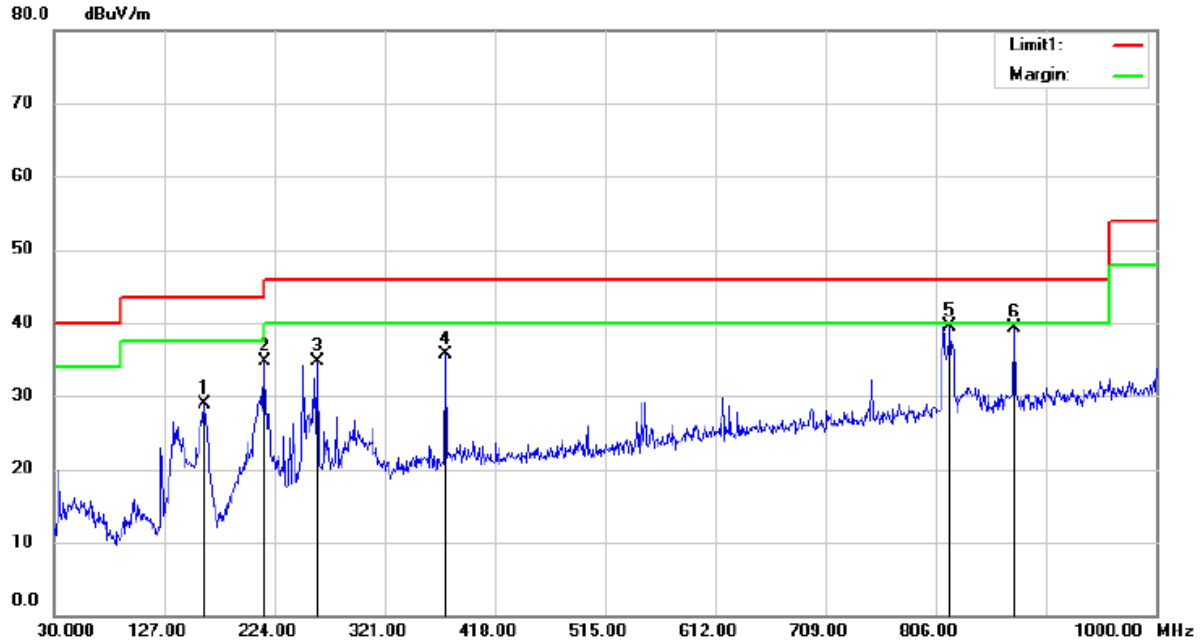


Site 3m Chamber 1#      Polarization: **Vertical**      Temperature: 27 C  
 Limit: (RE)FCC PART 15C      Power: AC 120V/60Hz      Humidity: 43 %  
 Mode: 11B 2437  
 Note:

| No. | Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV/m | Limit<br>dBuV/m | Over<br>dB | Detector | Antenna<br>Height<br>cm | Table<br>Degree | Comment |
|-----|-----|--------------|--------------------------|-------------------------|----------------------------|-----------------|------------|----------|-------------------------|-----------------|---------|
| 1   |     | 49.1574      | 38.16                    | -11.23                  | 26.93                      | 40.00           | -13.07     | peak     |                         |                 |         |
| 2   |     | 260.0111     | 35.52                    | -9.49                   | 26.03                      | 46.00           | -19.97     | peak     |                         |                 |         |
| 3   |     | 374.9562     | 39.45                    | -6.70                   | 32.75                      | 46.00           | -13.25     | peak     |                         |                 |         |
| 4   |     | 558.4074     | 35.94                    | -3.63                   | 32.31                      | 46.00           | -13.69     | peak     |                         |                 |         |
| 5   |     | 825.8850     | 35.25                    | 0.52                    | 35.77                      | 46.00           | -10.23     | peak     |                         |                 |         |
| 6   | *   | 875.1124     | 35.51                    | 1.55                    | 37.06                      | 46.00           | -8.94      | peak     |                         |                 |         |

\*:Maximum data    x:Over limit    !:over margin

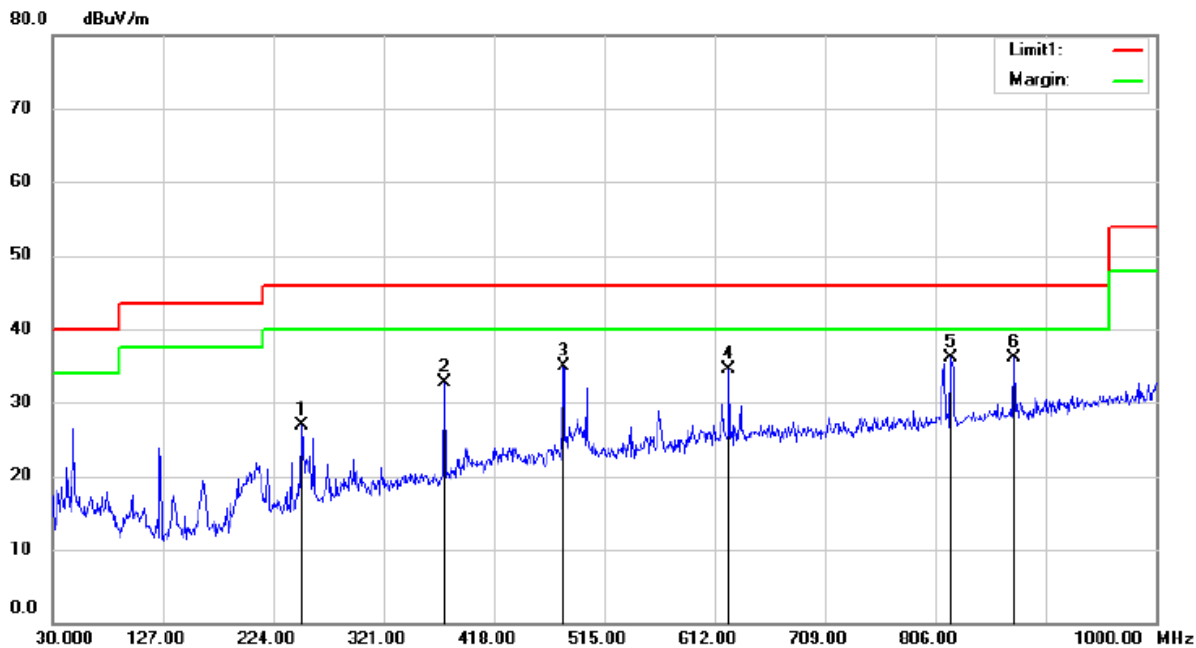
Operator: XZC



Site: 3m Chamber 1#      Polarization: **Horizontal**      Temperature: 27 C  
 Limit: (RE)FCC PART 15C      Power: AC 120V/60Hz      Humidity: 43 %  
 Mode: 11B 2412  
 Note:

| No. | Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV/m | Limit<br>dBuV/m | Over<br>dB | Detector | Antenna<br>Height<br>cm | Table<br>Degree<br>degree | Comment |
|-----|-----|--------------|--------------------------|-------------------------|----------------------------|-----------------|------------|----------|-------------------------|---------------------------|---------|
| 1   |     | 162.6475     | 43.48                    | -14.54                  | 28.94                      | 43.50           | -14.56     | peak     |                         |                           |         |
| 2   |     | 215.3912     | 46.24                    | -11.50                  | 34.74                      | 43.50           | -8.76      | peak     |                         |                           |         |
| 3   |     | 262.4362     | 44.10                    | -9.42                   | 34.68                      | 46.00           | -11.32     | peak     |                         |                           |         |
| 4   |     | 374.9562     | 42.33                    | -6.70                   | 35.63                      | 46.00           | -10.37     | peak     |                         |                           |         |
| 5   | *   | 818.8524     | 39.15                    | 0.44                    | 39.59                      | 46.00           | -6.41      | peak     |                         |                           |         |
| 6   |     | 875.1124     | 37.78                    | 1.55                    | 39.33                      | 46.00           | -6.67      | peak     |                         |                           |         |

\*:Maximum data    x:Over limit    !:over margin      Operator: XZC



Site 3m Chamber 1#      Polarization: *Vertical*      Temperature: 27 C  
 Limit: (RE)FCC PART 15C      Power: AC 120V/60Hz      Humidity: 43 %  
 Mode: 11B 2462  
 Note:

| No. | Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV/m | Limit<br>dBuV/m | Over<br>dB | Antenna<br>Height<br>cm | Table<br>Degree<br>degree | Comment |
|-----|-----|--------------|--------------------------|-------------------------|----------------------------|-----------------|------------|-------------------------|---------------------------|---------|
| 1   |     | 249.9474     | 36.73                    | -9.89                   | 26.84                      | 46.00           | -19.16     |                         |                           | peak    |
| 2   |     | 374.9562     | 39.31                    | -6.70                   | 32.61                      | 46.00           | -13.39     |                         |                           | peak    |
| 3   |     | 479.9587     | 39.91                    | -5.03                   | 34.88                      | 46.00           | -11.12     |                         |                           | peak    |
| 4   |     | 624.9737     | 36.48                    | -1.89                   | 34.59                      | 46.00           | -11.41     |                         |                           | peak    |
| 5   |     | 820.4287     | 35.65                    | 0.44                    | 36.09                      | 46.00           | -9.91      |                         |                           | peak    |
| 6   | *   | 875.1124     | 34.57                    | 1.55                    | 36.12                      | 46.00           | -9.88      |                         |                           | peak    |

\*:Maximum data    x:Over limit    !:over margin

Operator: XZC

## 8.6 CONDUCTED EMISSIONS TEST

### 8.6.1 Applicable Standard

According to FCC Part 15.207(a)

### 8.6.2 Conformance Limit

| Frequency(MHz) | Conducted Emission Limit |         |
|----------------|--------------------------|---------|
|                | Quasi-peak               | Average |
| 0.15-0.5       | 66-56                    | 56-46   |
| 0.5-5.0        | 56                       | 46      |
| 5.0-30.0       | 60                       | 50      |

Note: 1. The lower limit shall apply at the transition frequencies  
 2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

### 8.6.3 Test Configuration

Test according to clause 7.3conducted emission test setup

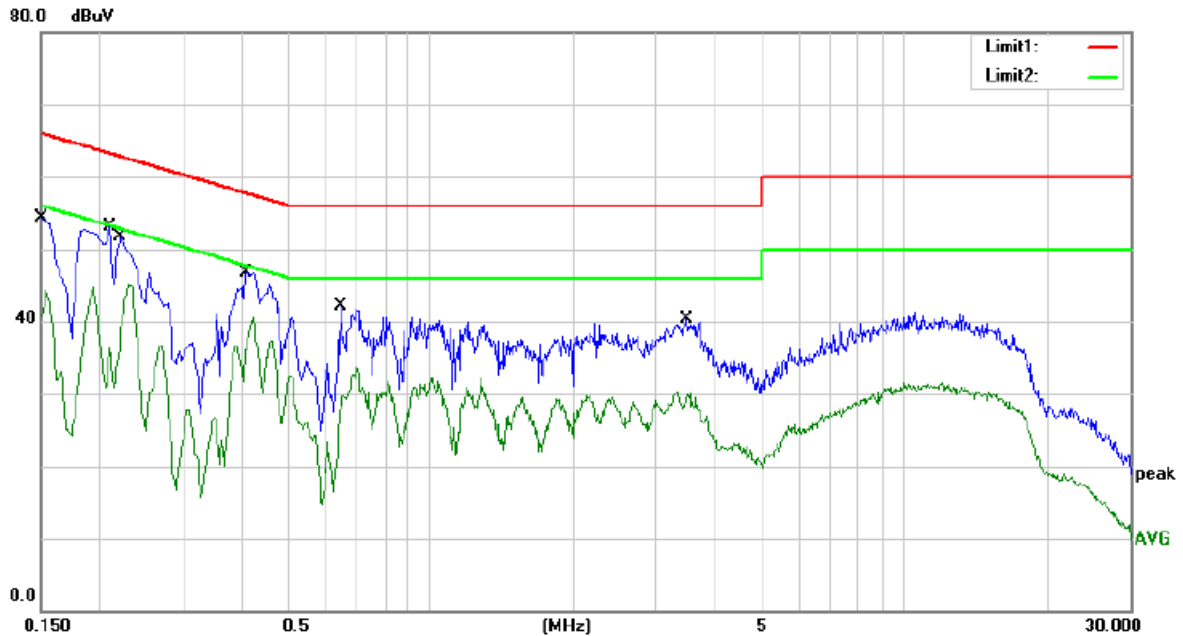
### 8.6.4 Test Procedure

The EUT was placed on a table which is 0.8m above ground plane.  
 Maximum procedure was performed on the highest emissions to ensure EUT compliance.  
 Repeat above procedures until all frequency measured were complete.

### 8.6.5 Test Results

Pass

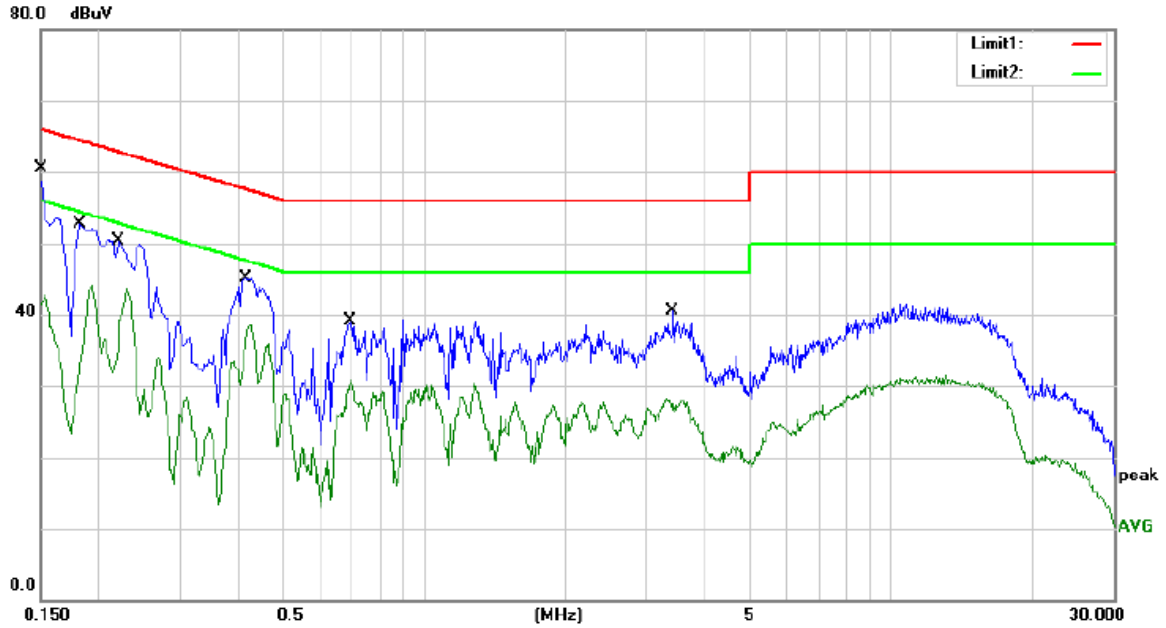
All modes have been tested, and the worst results (802.11a siso mode antenna 0) have been recorded in the report



Site Conduction #1 Phase: **L1** Temperature: 24.9  
 Limit: (CE)FCC PART 15 class B\_QP Power: AC 120V/60Hz Humidity: 54 %  
 Mode: 802.11 b Low channel  
 Note:

| No. | Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV | Limit<br>dBuV | Over<br>dB | Detector | Comment |
|-----|-----|--------------|--------------------------|-------------------------|--------------------------|---------------|------------|----------|---------|
| 1   |     | 0.1500       | 44.70                    | 9.67                    | 54.37                    | 66.00         | -11.63     | QP       |         |
| 2   |     | 0.1500       | 34.62                    | 9.67                    | 44.29                    | 56.00         | -11.71     | AVG      |         |
| 3   |     | 0.2100       | 43.47                    | 9.55                    | 53.02                    | 63.21         | -10.19     | QP       |         |
| 4   |     | 0.2100       | 35.25                    | 9.55                    | 44.80                    | 53.21         | -8.41      | AVG      |         |
| 5   |     | 0.2220       | 42.24                    | 9.55                    | 51.79                    | 62.74         | -10.95     | QP       |         |
| 6   |     | 0.2220       | 35.48                    | 9.55                    | 45.03                    | 52.74         | -7.71      | AVG      |         |
| 7   |     | 0.4100       | 37.13                    | 9.57                    | 46.70                    | 57.65         | -10.95     | QP       |         |
| 8   | *   | 0.4100       | 30.86                    | 9.57                    | 40.43                    | 47.65         | -7.22      | AVG      |         |
| 9   |     | 0.6460       | 32.47                    | 9.57                    | 42.04                    | 56.00         | -13.96     | QP       |         |
| 10  |     | 0.6460       | 24.08                    | 9.57                    | 33.65                    | 46.00         | -12.35     | AVG      |         |
| 11  |     | 3.4820       | 30.73                    | 9.63                    | 40.36                    | 56.00         | -15.64     | QP       |         |
| 12  |     | 3.4820       | 20.69                    | 9.63                    | 30.32                    | 46.00         | -15.68     | AVG      |         |

!:Maximum data x:Over limit !:over margin Comment: Factor build in receiver. Operator: gkm



Site Conduction #1

Phase: *N*

Temperature: 24.9

Limit: (CE)FCC PART 15 class B\_QP

Power: AC 120V/60Hz

Humidity: 54 %

Mode: 802.11 b Low channel

Note:

| No. | Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV | Limit<br>dBuV | Over<br>dB | Detector | Comment |
|-----|-----|--------------|--------------------------|-------------------------|--------------------------|---------------|------------|----------|---------|
| 1   | *   | 0.1516       | 47.42                    | 9.66                    | 57.08                    | 65.91         | -8.83      | QP       |         |
| 2   |     | 0.1516       | 33.07                    | 9.66                    | 42.73                    | 55.91         | -13.18     | AVG      |         |
| 3   |     | 0.1820       | 43.17                    | 9.55                    | 52.72                    | 64.39         | -11.67     | QP       |         |
| 4   |     | 0.1820       | 34.50                    | 9.55                    | 44.05                    | 54.39         | -10.34     | AVG      |         |
| 5   |     | 0.2220       | 40.82                    | 9.55                    | 50.37                    | 62.74         | -12.37     | QP       |         |
| 6   |     | 0.2220       | 34.18                    | 9.55                    | 43.73                    | 52.74         | -9.01      | AVG      |         |
| 7   |     | 0.4140       | 35.54                    | 9.57                    | 45.11                    | 57.57         | -12.46     | QP       |         |
| 8   |     | 0.4140       | 28.96                    | 9.57                    | 38.53                    | 47.57         | -9.04      | AVG      |         |
| 9   |     | 0.6900       | 29.58                    | 9.57                    | 39.15                    | 56.00         | -16.85     | QP       |         |
| 10  |     | 0.6900       | 21.33                    | 9.57                    | 30.90                    | 46.00         | -15.10     | AVG      |         |
| 11  |     | 3.4100       | 30.91                    | 9.63                    | 40.54                    | 56.00         | -15.46     | QP       |         |
| 12  |     | 3.4100       | 18.63                    | 9.63                    | 28.26                    | 46.00         | -17.74     | AVG      |         |

!:Maximum data    x:Over limit    !:over margin    Comment: Factor build in receiver.    Operator: gkm



**8.7 ANTENNA APPLICATION**

8.7.1 Antenna Requirement

| Standard           | Requirement  |
|--------------------|--|
| FCC CRF Part15.203 | An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of §15.211, §15.213, §15.217, §15.219, or §15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with §15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded. |

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

8.7.2 Result

The EUT'S with 2.4G WIFI function has two external PCB antennas. The antenna0's gain is 5.0dBi, The antenna1's gain is 5.0dBi, and the two antennas can't be replaced by the user which in accordance to section 15.203, please refer to the photos.