

# TEST REPORT

Product Name: Agricultural unmanned aircraft  
FCC ID: 2BCSK3WWDZ-35B  
Trademark:   
Model Number: 3WWDZ-35B, 3WWDZ-35A  
Prepared For: Topxgun (Nanjing) Robotics Co., Ltd.  
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Sample Received Date: Aug. 29, 2023  
Sample tested Date: Aug. 29, 2023 to Sep. 22, 2023  
Issue Date: Sep. 22, 2023  
Report No.: CTB230906009RFX  
Test Standards: FCC Part15.247  
ANSI C63.10:2013  
Test Results: PASS  
Remark: This is WIFI-2.4GHz band radio test report.  
Compiled by: Reviewed by: Approved by:

Zhou Kui

Zhou Kui

Arron Liu

Arron Liu



Bin Mei / Director

Note: If there is any objection to the inspection results in this report, please submit a written report to the company within 15 days from the date of receiving the report. The test report is effective only with both signature and specialized stamp. This result(s) shown in this report refer only to the sample(s) tested. Without written approval of Shenzhen CTB Testing Technology Co., Ltd. this report can't be reproduced except in full. The tested sample(s) and the sample information are provided by the client. "\*" indicates the testing items were fulfilled by subcontracted lab. "#" indicates the items are not in CNAS accreditation scope.

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(Note: N/A means not applicable)

**1. VERSION**

| Report No.      | Issue Date    | Description | Approved |
|-----------------|---------------|-------------|----------|
| CTB230906009RFX | Sep. 22, 2023 | Original    | Valid    |

## 2. TEST SUMMARY

The Product has been tested according to the following specifications:

| Test Item                                     | Test Requirement                                          | Test method                                   | Result |
|-----------------------------------------------|-----------------------------------------------------------|-----------------------------------------------|--------|
| AC Power Line Conducted Emission              | 47 CFR Part 15 Subpart C Section 15.207                   | ANSI C63.10-2013                              | PASS   |
| Radiated Spurious emissions                   | 47 CFR Part 15 Subpart C Section 15.205/15.209            | ANSI C63.10-2013                              | PASS   |
| Band edge and RF Conducted Spurious Emissions | 47 CFR Part 15 Subpart C Section 15.247(d)/15.205(a)      | ANSI C63.10-2013                              | PASS   |
| Conducted Peak Output Power                   | 47 CFR Part 15 Subpart C Section 15.247 (b)(3)            | ANSI C63.10-2013                              | PASS   |
| 6dB Occupied Bandwidth                        | 47 CFR Part 15 Subpart C Section 15.247 (a)(2)            | ANSI C63.10-2013                              | PASS   |
| Power Spectral Density                        | 47 CFR Part 15 Subpart C Section 15.247 (e)               | ANSI C63.10-2013/<br>KDB 558074 D01<br>v05r02 | PASS   |
| Antenna Requirement                           | 47 CFR Part 15 Subpart C Section 15.203/15.247 (b)        | /                                             | PASS   |
| RF Exposure Evaluation                        | 47 CFR Part 15 Subpart C Section 15.247 (i)/1.1310/2.1091 | KDB447498D01v06                               | PASS   |

Remark:

Test according to ANSI C63.10-2013.

### 3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the Product as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

| Item                                                 | Uncertainty |
|------------------------------------------------------|-------------|
| Occupancy bandwidth                                  | U=±54.3Hz   |
| Conducted output power<br>Above 1G                   | U=±1.0dB    |
| Conducted output power<br>below 1G                   | U=±0.9dB    |
| Power Spectral Density , Conduction                  | U=±1.0dB    |
| Conduction spurious emissions                        | U=±2.8dB    |
| Out of band emission                                 | U=±54Hz     |
| 3m chamber Radiated spurious<br>emission(9KHz-30MHz) | U=±4.8dB    |
| 3m chamber Radiated spurious<br>emission(30MHz-1GHz) | U=±4.3dB    |
| 3m chamber Radiated spurious<br>emission(1GHz-18GHz) | U=±4.5dB    |
| 3m chamber Radiated spurious<br>emission(1GHz-40GHz) | U=±4.8dB    |
| humidity uncertainty                                 | U=±5.3%     |
| Temperature uncertainty                              | U=±0.59°C   |
| Supply voltages                                      | U=±3%       |
| Time                                                 | U=±5%       |
| Conducted Emission (9KHz-30MHz)                      | 3.2 dB      |

#### 4. PRODUCT INFORMATION AND TEST SETUP

##### 4.1 Product Information

|                       |                                                                                                     |
|-----------------------|-----------------------------------------------------------------------------------------------------|
| Model(s):             | 3WWDZ-35B, 3WWDZ-35A                                                                                |
| Model Description:    | All the model are the same circuit and RF module, only for model name. Test sample model: 3WWDZ-35B |
| Wi-Fi Specification:  | IEEE 802.11b/g/n                                                                                    |
| Hardware Version:     | V1.0                                                                                                |
| Software Version:     | V1.0                                                                                                |
| Operation Frequency:  | WiFi: IEEE 802.11b/g/n 20: 2412-2462MHz/ 11 channel<br>IEEE 802.11n 40: 2422-2452MHz/ 7 channel     |
| Max. RF output power: | WiFi (2.4G) : 17.430dBm                                                                             |
| Type of Modulation:   | WiFi: DSSS, OFDM, CCK                                                                               |
| Antenna installation: | WiFi: External antenna                                                                              |
| Antenna Gain:         | WiFi (2.4G) : Ant1:3.46dBi<br>Ant2: 3.46dBi                                                         |
| Ratings:              | AC 100~260V /50-60Hz<br>DC 51.8V battery                                                            |

##### 4.2 Test Setup Configuration

See test photographs attached in EUT TEST SETUP PHOTOGRAPHS for the actual connections between Product and support equipment

##### 4.3 Support Equipment

| Item | Equipment | Mfr/Brand | Model/Type No. | Series No. | Note |
|------|-----------|-----------|----------------|------------|------|
|      |           |           |                |            |      |

##### Notes:

1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

#### 4.4 Channel List

| CH | Frequency (MHz) | CH | Frequency (MHz) | CH | Frequency (MHz) | CH | Frequency (MHz) |
|----|-----------------|----|-----------------|----|-----------------|----|-----------------|
| 1  | 2412            | 2  | 2417            | 3  | 2422            | 4  | 2427            |
| 5  | 2432            | 6  | 2437            | 7  | 2442            | 8  | 2447            |
| 9  | 2452            | 10 | 2457            | 11 | 2462            |    |                 |

#### 4.5 Test Mode

All test mode(s) and condition(s) mentioned were considered and evaluated respectively by performing full tests, the worst data were recorded and reported.

ANT 1, ANT 2

| Test mode                   | Low channel | Middle channel | High channel |
|-----------------------------|-------------|----------------|--------------|
| Transmitting(802.11b/g/n20) | 2412MHz     | 2437MHz        | 2462MHz      |
| Transmitting(802.11n40)     | 2422MHz     | 2437MHz        | 2452MHz      |

MIMO(ANT 1+ANT 2)

| Test mode               | Low channel | Middle channel | High channel |
|-------------------------|-------------|----------------|--------------|
| Transmitting(802.11n20) | 2412MHz     | 2437MHz        | 2462MHz      |
| Transmitting(802.11n40) | 2422MHz     | 2437MHz        | 2452MHz      |

EUT has two External antenna with Max Antenna Gain 3.46dBi on every antenna, CDD device with two spatial streams, according to KDB662911 D01 v02r01,

Directional gain= GANT + Array Gain, where Array Gain is as follows.

1) For power spectral density(PSD) measurements,

Array Gain=10log(NANT/NSS)dB=10log(2/1)=3.01dB,

So the directional gain for PSD is 6.47dBi

2) For power measurements,

The Array gain=0 dB for NANT≤4,

So the directional gain for Power measurements is 3.46dBi

NOTE: Dutycycle>98%.

| Test mode | Rate |
|-----------|------|
| 802.11b   | 11M  |
| 802.11g   | 54M  |
| 802.11n20 | 65M  |
| 802.11n40 | 65M  |

#### 4.6 Test Environment

|                            |     |
|----------------------------|-----|
| Humidity(%):               | 54  |
| Atmospheric Pressure(kPa): | 101 |
| Normal Voltage(AC):        | 120 |
| Normal Temperature(°C)     | 23  |
| Low Temperature(°C)        | 0   |
| High Temperature(°C)       | 50  |

## 5. TEST FACILITY AND TEST INSTRUMENT USED

### 5.1 Test Facility

All measurement facilities used to collect the measurement data are located at 1&2F., Building A, No. 26, Xinghe Road, Xinqiao, Xinqiao Street, Bao'an District, Shenzhen, Guangdong, China. The site and apparatus are constructed in conformance with the requirements of ANSI C63.4 and CISPR 16-1-1 other equivalent standards.

### 5.2 Test Instrument Used

| Item | Equipment                                 | Manufacturer | Type No.              | Serial No.   | Calibrated until |
|------|-------------------------------------------|--------------|-----------------------|--------------|------------------|
| 1    | Spectrum Analyzer                         | Agilent      | N9020A                | MY52090073   | 2024.07.05       |
| 2    | Power Sensor                              | Agilent      | U2021XA               | MY56120032   | 2024.07.05       |
| 3    | Power Sensor                              | Agilent      | U2021XA               | MY56120034   | 2024.07.05       |
| 4    | Communication test set                    | R&S          | CMW500                | 108058       | 2024.07.05       |
| 5    | Spectrum Analyzer                         | KEYSIGHT     | N9020A                | MY51289897   | 2024.07.05       |
| 6    | Signal Generator                          | Agilent      | N5181A                | MY50140365   | 2024.07.05       |
| 7    | Vector signal generator                   | Agilent      | N5182A                | MY47420195   | 2024.07.05       |
| 8    | Communication test set                    | Agilent      | E5515C                | MY50102567   | 2024.07.06       |
| 9    | 2.4 GHz Filter                            | Shenxiang    | MSF2400-2483.5MS-1154 | 20181015001  | 2024.07.05       |
| 10   | 5 GHz Filter                              | Shenxiang    | MSF5150-5850 MS-1155  | 20181015001  | 2024.07.06       |
| 11   | Filter                                    | Xingbo       | XBLBQ-DZA120          | 190821-1-1   | 2024.07.06       |
| 12   | BT&WI-FI Automatic test software          | Microwave    | MTS8000               | Ver. 2.0.0.0 | /                |
| 13   | Rohde & Schwarz SFU Broadcast Test System | R&S          | SFU                   | 101017       | 2023.10.30       |
| 14   | Temperature humidity chamber              | Hongjing     | TH-80CH               | DG-15174     | 2024.07.05       |
| 15   | 234G Automatic test software              | Microwave    | MTS8200               | Ver. 2.0.0.0 | /                |
| 16   | 966 chamber                               | C.R.T.       | 966                   | /            | 2024.08.11       |
| 17   | Receiver                                  | R&S          | ESPI                  | 100362       | 2024.07.05       |
| 18   | Amplifier                                 | HP           | 8447E                 | 2945A02747   | 2024.07.05       |
| 19   | Amplifier                                 | Agilent      | 8449B                 | 3008A01838   | 2024.07.05       |
| 20   | TRILOG Broadband Antenna                  | Schwarzbeck  | VULB 9168             | 00869        | 2024.07.08       |

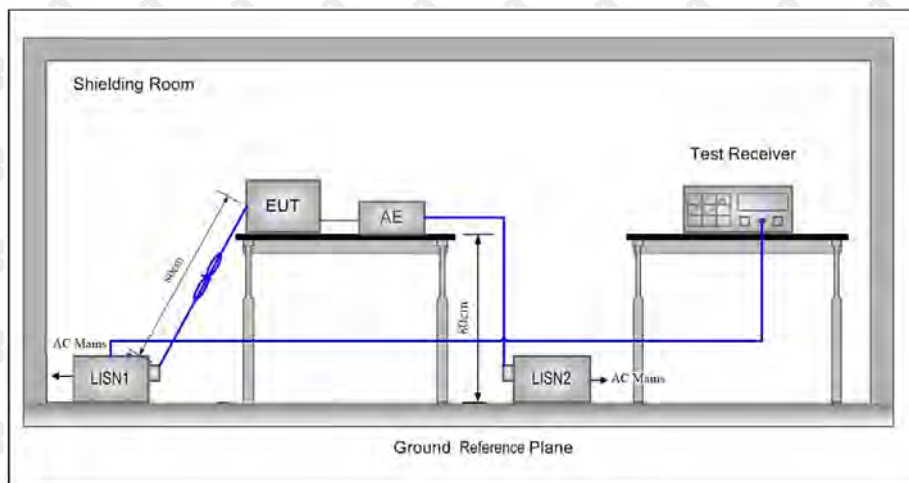
|    |                                      |             |            |            |            |
|----|--------------------------------------|-------------|------------|------------|------------|
| 21 | Double Ridged Broadband Horn Antenna | Schwarzbeck | BBHA9120D  | 01911      | 2024.07.08 |
| 22 | EMI test software                    | Fala        | EZ-EMC     | FA-03A2 RE | /          |
| 23 | Loop Antenna                         | Schwarzbeck | FMZB 1519B | 1519B-224  | 2024.07.08 |
| 24 | loop antenna                         | ZHINAN      | ZN30900A   | GTS534     | /          |
| 25 | 40G Horn antenna                     | A/H/System  | SAS-574    | 588        | 2023.10.30 |
| 26 | Amplifier                            | AEROFLEX    | Aeroflex   | 097        | 2023.10.30 |

| Continuous disturbance |                        |               |                    |            |                  |
|------------------------|------------------------|---------------|--------------------|------------|------------------|
| No.                    | Equipment              | Manufacturer  | Model No.          | Serial No. | Calibrated until |
| 1                      | LISN                   | ROHDE&SCHWARZ | ESH3-Z5            | 100318     | 2024.07.05       |
| 2                      | Pulse limiter          | ROHDE&SCHWARZ | ESH3Z2             | 357881052  | 2024.07.05       |
| 3                      | EMI TEST RECEIVER      | ROHDE&SCHWARZ | ESCI               | 100428/003 | 2024.07.05       |
| 4                      | Coaxial cable          | ZDECL         | Z302S-NJ-SMA J-12M | 18091905   | 2024.07.05       |
| 5                      | ISN                    | Schwarzbeck   | NTFM8158           | 183        | 2024.07.05       |
| 6                      | Communication test set | Agilent       | E5515C             | MY50102567 | 2024.07.05       |
| 7                      | Communication test set | R&S           | CMW500             | 108058     | 2024.07.05       |
| 8                      | EZ-EMC                 | Frad          | EMC-con3A1.1       | /          | /                |

| Radiated emission |                                      |               |                        |            |                  |
|-------------------|--------------------------------------|---------------|------------------------|------------|------------------|
| No.               | Equipment                            | Manufacturer  | Model No.              | Serial No. | Calibrated until |
| 1                 | Double Ridged Broadband Horn Antenna | Schwarzbeck   | BBHA 9120 D            | 01911      | 2024.07.08       |
| 2                 | TRILOG Broadband Antenna             | Schwarzbeck   | VULB 9168              | 00869      | 2024.07.08       |
| 3                 | Amplifier                            | Agilent       | 8449B                  | 3008A01838 | 2024.07.05       |
| 4                 | Amplifier                            | HP            | 8447E                  | 2945A02747 | 2024.07.05       |
| 5                 | EMI TEST RECEIVER                    | ROHDE&SCHWARZ | ESCI                   | 100428/003 | 2024.07.05       |
| 6                 | Coaxial cable                        | ETS           | RFC-SNS-100-NMS-80 NI  | /          | 2024.07.05       |
| 7                 | Coaxial cable                        | ETS           | RFC-SNS-100-NMS-20 NI  | /          | 2024.07.05       |
| 8                 | Coaxial cable                        | ETS           | RFC-SNS-100-SMS-20 NI  | /          | 2024.07.05       |
| 9                 | Coaxial cable                        | ETS           | RFC-NNS-100-NMS-300 NI | /          | 2024.07.05       |
| 10                | Communication test set               | Agilent       | E5515C                 | MY50102567 | 2024.07.05       |
| 11                | Communication test set               | R&S           | CMW500                 | 108058     | 2024.07.05       |
| 12                | EZ-EMC                               | Frad          | EMC-con3A1.1           | /          | /                |

## 6. AC POWER LINE CONDUCTED EMISSION

### 6.1 Block Diagram Of Test Setup



### 6.2 Limit

Table 4 – AC power-line conducted emissions limits

| Frequency (MHz) | Conducted limit (dBμV)     |                            |
|-----------------|----------------------------|----------------------------|
|                 | Quasi-peak                 | Average                    |
| 0.15 - 0.5      | 66 to 56 <sup>Note 1</sup> | 56 to 46 <sup>Note 1</sup> |
| 0.5 - 5         | 56                         | 46                         |
| 5 - 30          | 60                         | 50                         |

**Note 1:** The level decreases linearly with the logarithm of the frequency.

\* Decreasing linearly with the logarithm of the frequency

### 6.3 Test procedure

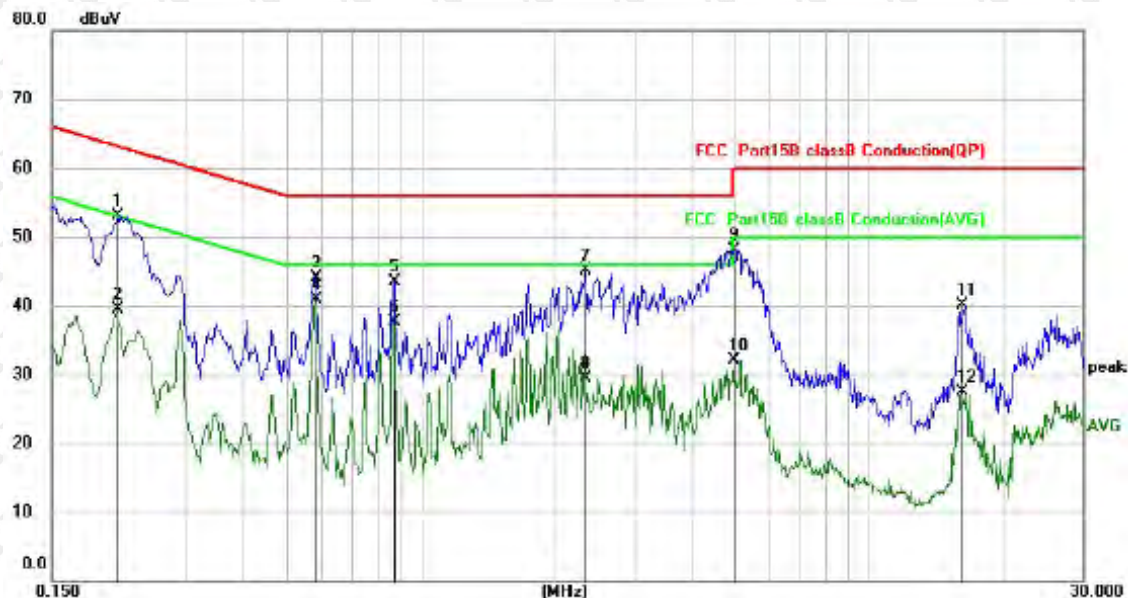
- 1) The mains terminal disturbance voltage test was conducted in a shielded room.
- 2) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a 50Ω/50μH + 5Ω linear impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was bonded to the ground reference plane in the same way as the LISN 1 for the unit being measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was not exceeded.
- 3) The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane,
- 4) The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0,4 m from the vertical ground reference plane. The vertical ground reference plane was bonded to the horizontal ground reference plane. The LISN 1 was placed 0,8 m from the boundary of the unit under test and bonded to a ground reference plane for LISNs mounted on top of the ground reference plane.

This distance was between the closest points of the LISN 1 and the EUT. All other units of the EUT and associated equipment was at least 0,8 m from the LISN 2.

- 5) In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10 on conducted measurement.

## 6.4 Test Result

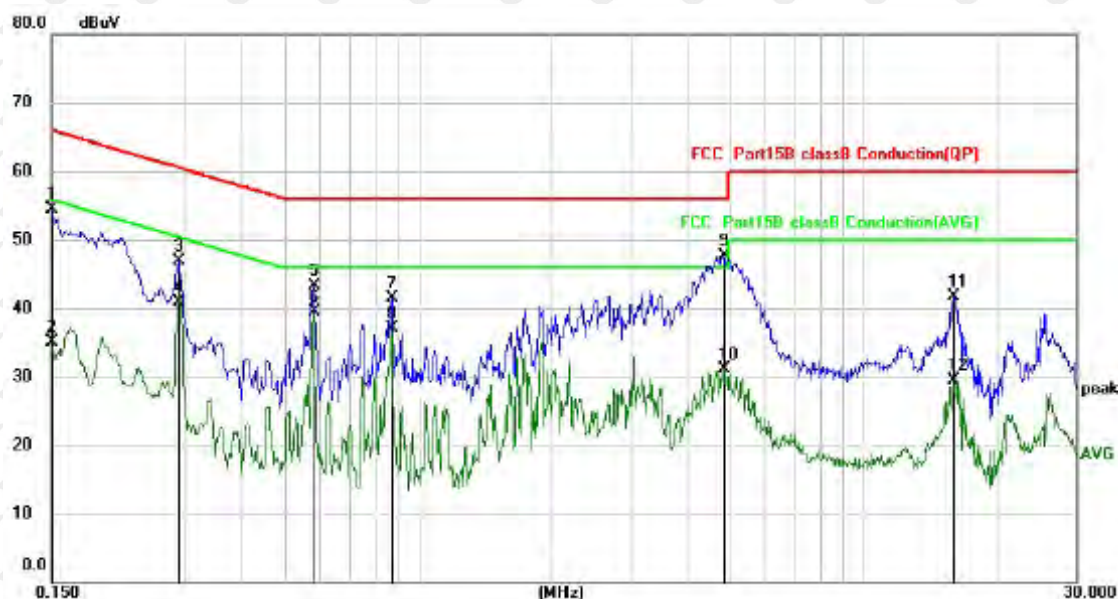
Test Specification: Line  
AC 120V 60Hz



| 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 |
|-----|-----|--------------|--------------------------|-------------------------|--------------------------|---------------|------------|----------|
| 1   |     | 0.2106       | 43.10                    | 10.00                   | 53.10                    | 63.18         | -10.08     | QP       |
| 2   |     | 0.2106       | 29.53                    | 10.00                   | 39.53                    | 53.18         | -13.65     | AVG      |
| 3   |     | 0.5818       | 34.10                    | 9.97                    | 44.07                    | 56.00         | -11.93     | QP       |
| 4   | *   | 0.5818       | 30.94                    | 9.97                    | 40.91                    | 46.00         | -5.09      | AVG      |
| 5   |     | 0.8700       | 33.46                    | 9.98                    | 43.44                    | 56.00         | -12.56     | QP       |
| 6   |     | 0.8700       | 27.82                    | 9.98                    | 37.80                    | 46.00         | -8.20      | AVG      |
| 7   |     | 2.3220       | 35.14                    | 10.04                   | 45.18                    | 56.00         | -10.82     | QP       |
| 8   |     | 2.3220       | 19.50                    | 10.04                   | 29.54                    | 46.00         | -16.46     | AVG      |
| 9   |     | 4.9939       | 37.97                    | 10.17                   | 48.14                    | 56.00         | -7.86      | QP       |
| 10  |     | 4.9939       | 21.99                    | 10.17                   | 32.16                    | 46.00         | -13.84     | AVG      |
| 11  |     | 16.1339      | 29.54                    | 10.48                   | 40.02                    | 60.00         | -19.98     | QP       |
| 12  |     | 16.1339      | 16.98                    | 10.48                   | 27.46                    | 50.00         | -22.54     | AVG      |

Remark: Factor = Cable loss + LISN factor, Margin = Measurement – Limit

Test Specification: Neutral  
AC 120V 60Hz



| 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 |
|-----|-----|--------------|--------------------------|-------------------------|--------------------------|---------------|------------|----------|
| 1   |     | 0.1500       | 44.55                    | 10.01                   | 54.56                    | 66.00         | -11.44     | QP       |
| 2   |     | 0.1500       | 25.11                    | 10.01                   | 35.12                    | 56.00         | -20.88     | AVG      |
| 3   |     | 0.2900       | 36.85                    | 9.99                    | 46.84                    | 60.52         | -13.68     | QP       |
| 4   |     | 0.2900       | 30.97                    | 9.99                    | 40.96                    | 50.52         | -9.56      | AVG      |
| 5   |     | 0.5819       | 33.27                    | 9.97                    | 43.24                    | 56.00         | -12.76     | QP       |
| 6   | *   | 0.5819       | 29.50                    | 9.97                    | 39.47                    | 46.00         | -6.53      | AVG      |
| 7   |     | 0.8700       | 31.54                    | 9.98                    | 41.52                    | 56.00         | -14.48     | QP       |
| 8   |     | 0.8700       | 27.13                    | 9.98                    | 37.11                    | 46.00         | -8.89      | AVG      |
| 9   |     | 4.8379       | 37.47                    | 10.16                   | 47.63                    | 56.00         | -8.37      | QP       |
| 10  |     | 4.8379       | 21.01                    | 10.16                   | 31.17                    | 46.00         | -14.83     | AVG      |
| 11  |     | 15.9419      | 31.21                    | 10.48                   | 41.69                    | 60.00         | -18.31     | QP       |
| 12  |     | 15.9419      | 19.10                    | 10.48                   | 29.58                    | 50.00         | -20.42     | AVG      |

Remark: Factor = Cable loss + LISN factor, Margin = Measurement – Limit

## 7. RADIATED SPURIOUS EMISSION

### 7.1 Block Diagram Of Test Setup

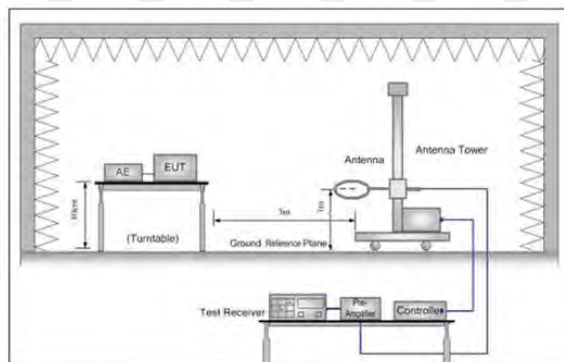


Figure 1. Below 30MHz

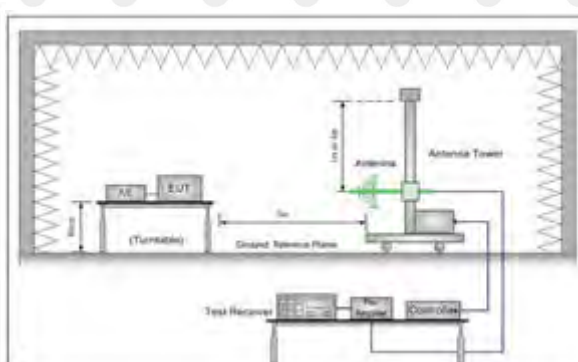


Figure 2. 30MHz to 1GHz

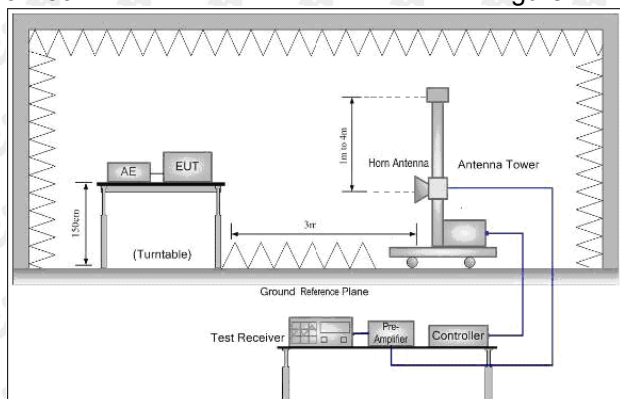


Figure 3. Above 1GHz

### 7.2 Limit

Spurious Emissions:

| Frequency         | Field strength (microvolt/meter) | Limit (dB $\mu$ V/m ) | Remark     | Measurement distance (m) |
|-------------------|----------------------------------|-----------------------|------------|--------------------------|
| 0.009MHz-0.490MHz | 2400/F (kHz)                     | -                     | -          | 300                      |
| 0.490MHz-1.705MHz | 24000/F (kHz)                    | -                     | -          | 30                       |
| 1.705MHz-30MHz    | 30                               | -                     | -          | 30                       |
| 30MHz-88MHz       | 100                              | 40.0                  | Quasi-peak | 3                        |
| 88MHz-216MHz      | 150                              | 43.5                  | Quasi-peak | 3                        |
| 216MHz-960MHz     | 200                              | 46.0                  | Quasi-peak | 3                        |
| 960MHz-1GHz       | 500                              | 54.0                  | Quasi-peak | 3                        |
| Above 1GHz        | 500                              | 54.0                  | Average    | 3                        |

Note: 15.35(b), Unless otherwise specified, the limit on peak radio frequency emissions is 20dB above the maximum permitted average emission limit applicable to the equipment under test. This peak limit applies to the total peak emission level radiated by the device.

### 7.3 Test procedure

#### Below 1GHz test procedure as below:

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rota table table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

#### Above 1GHz test procedure as below:

- g. Different between above is the test site, change from Semi- Anechoic Chamber to fully Anechoic Chamber and change form table 0.8 meter to 1.5 meter( Above 18GHz the distance is 1 meter and table is 1.5 meter).
- h. Test the EUT in the lowest channel ,the middle channel ,the Highest channel
- j. Repeat above procedures until all frequencies measured was complete.

Receiver set:

| Frequency         | Detector   | RBW     | VBW    | Remark     |
|-------------------|------------|---------|--------|------------|
| 0.009MHz-0.090MHz | Peak       | 10kHz   | 30KHz  | Peak       |
| 0.009MHz-0.090MHz | Average    | 10kHz   | 30KHz  | Average    |
| 0.090MHz-0.110MHz | Quasi-peak | 10kHz   | 30KHz  | Quasi-peak |
| 0.110MHz-0.490MHz | Peak       | 10kHz   | 30KHz  | Peak       |
| 0.110MHz-0.490MHz | Average    | 10kHz   | 30KHz  | Average    |
| 0.490MHz -30MHz   | Quasi-peak | 10kHz   | 30kHz  | Quasi-peak |
| 30MHz-1GHz        | Quasi-peak | 120 kHz | 300KHz | Quasi-peak |
| Above 1GHz        | Peak       | 1MHz    | 3MHz   | Peak       |
|                   | Peak       | 1MHz    | 10Hz   | Average    |

The EUT was pretested with 3 orientations placed on the table for the radiated emission measurement –X, Y, and Z-plane. The X-plane results were found as the worst case and were shown in this report.

## 7.4 Test Result

After pre-scanning three directions, the report recorded the worst case

Below 1GHz Test Results:

Antenna polarity: H



| No. | Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV/m | Limit<br>dB/m | Over<br>dB | Detector |
|-----|-----|--------------|--------------------------|-------------------------|----------------------------|---------------|------------|----------|
| 1   |     | 33.6212      | 33.43                    | -6.70                   | 26.73                      | 40.00         | -13.27     | QP       |
| 2   |     | 117.7724     | 42.60                    | -8.13                   | 34.47                      | 43.50         | -9.03      | QP       |
| 3   |     | 164.3300     | 38.82                    | -5.99                   | 32.83                      | 43.50         | -10.67     | QP       |
| 4   |     | 263.8190     | 46.15                    | -7.17                   | 38.98                      | 46.00         | -7.02      | QP       |
| 5   | *   | 401.8383     | 44.89                    | -2.59                   | 42.30                      | 46.00         | -3.70      | QP       |
| 6   |     | 722.9923     | 32.41                    | 4.30                    | 36.71                      | 46.00         | -9.29      | QP       |

Remark: Factor = Cable lose + Antenna factor - Pre-amplifier; Margin = Limit – Level

Antenna polarity: V



| No. | Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV/m | Limit<br>dB/m | Over<br>dB | Detector |
|-----|-----|--------------|--------------------------|-------------------------|----------------------------|---------------|------------|----------|
| 1   |     | 34.5172      | 37.78                    | -6.65                   | 31.13                      | 40.00         | -8.87      | QP       |
| 2   | !   | 158.6673     | 44.75                    | -5.47                   | 39.28                      | 43.50         | -4.22      | QP       |
| 3   | !   | 211.8976     | 48.81                    | -9.15                   | 39.66                      | 43.50         | -3.84      | QP       |
| 4   | !   | 266.1419     | 48.83                    | -7.06                   | 41.77                      | 46.00         | -4.23      | QP       |
| 5   | !   | 405.3765     | 45.15                    | -2.50                   | 42.65                      | 46.00         | -3.35      | QP       |
| 6   | *   | 742.2586     | 38.17                    | 4.67                    | 42.84                      | 46.00         | -3.16      | QP       |

Remark: Factor = Cable lose + Antenna factor - Pre-amplifier; Margin = Limit – Level

1. The margin of 9K-30MH measurement exceeds 20dB, so the test chart is not included.

2. All modes have been tested, and the test results show that ANT2 b-mode data is the worst, only ANT2 b-mode test chart is put.

# Above 1 GHz Test Results:

ANT1 LOW CH1 (802.11b Mode)/2412

Horizontal:

| Frequency | Meter Reading | Factor | Emission Level | Limits   | Margin | Detector Type |
|-----------|---------------|--------|----------------|----------|--------|---------------|
| (MHz)     | (dBμV)        | (dB)   | (dBμV/m)       | (dBμV/m) | (dB)   |               |
| 4824      | 63.91         | -3.64  | 60.27          | 74       | -13.73 | peak          |
| 4824      | 49.31         | -3.64  | 45.67          | 54       | -8.33  | AVG           |
| 7236      | 56.75         | -0.95  | 55.80          | 74       | -18.20 | peak          |
| 7236      | 44.50         | -0.95  | 43.55          | 54       | -10.45 | AVG           |

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits

Vertical:

| Frequency | Meter Reading | Factor | Emission Level | Limits   | Margin | Detector Type |
|-----------|---------------|--------|----------------|----------|--------|---------------|
| (MHz)     | (dBμV)        | (dB)   | (dBμV/m)       | (dBμV/m) | (dB)   |               |
| 4824      | 65.90         | -3.64  | 62.26          | 74       | -11.74 | peak          |
| 4824      | 47.18         | -3.64  | 43.54          | 54       | -10.46 | AVG           |
| 7236      | 58.03         | -0.95  | 57.08          | 74       | -16.92 | peak          |
| 7236      | 44.28         | -0.95  | 43.33          | 54       | -10.67 | AVG           |

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits

# ANT1 MID CH6 (802.11b Mode)/2437

## Horizontal:

| Frequency                                                                                                                                | Meter Reading | Factor | Emission Level | Limits   | Margin | Detector Type |
|------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------|----------------|----------|--------|---------------|
| (MHz)                                                                                                                                    | (dBμV)        | (dB)   | (dBμV/m)       | (dBμV/m) | (dB)   |               |
| 4874                                                                                                                                     | 65.87         | -3.51  | 62.36          | 74       | -11.64 | peak          |
| 4874                                                                                                                                     | 48.65         | -3.51  | 45.14          | 54       | -8.86  | AVG           |
| 7311                                                                                                                                     | 59.59         | -0.82  | 58.77          | 74       | -15.23 | peak          |
| 7311                                                                                                                                     | 45.04         | -0.82  | 44.22          | 54       | -9.78  | AVG           |
| Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits |               |        |                |          |        |               |

## Vertical:

| Frequency                                                                                                                                | Meter Reading | Factor | Emission Level | Limits   | Margin | Detector Type |
|------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------|----------------|----------|--------|---------------|
| (MHz)                                                                                                                                    | (dBμV)        | (dB)   | (dBμV/m)       | (dBμV/m) | (dB)   |               |
| 4874                                                                                                                                     | 65.27         | -3.51  | 61.76          | 74       | -12.24 | peak          |
| 4874                                                                                                                                     | 47.04         | -3.51  | 43.53          | 54       | -10.47 | AVG           |
| 7311                                                                                                                                     | 57.86         | -0.82  | 57.04          | 74       | -16.96 | peak          |
| 7311                                                                                                                                     | 44.85         | -0.82  | 44.03          | 54       | -9.97  | AVG           |
| Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits |               |        |                |          |        |               |

# ANT1 HIGH CH11 (802.11b Mode)/2462

Horizontal:

| Frequency                                                                                                                                | Meter Reading | Factor | Emission Level | Limits   | Margin | Detector Type |
|------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------|----------------|----------|--------|---------------|
| (MHz)                                                                                                                                    | (dBμV)        | (dB)   | (dBμV/m)       | (dBμV/m) | (dB)   |               |
| 4924                                                                                                                                     | 63.92         | -3.43  | 60.49          | 74       | -13.51 | peak          |
| 4924                                                                                                                                     | 46.68         | -3.43  | 43.25          | 54       | -10.75 | AVG           |
| 7386                                                                                                                                     | 58.28         | -0.75  | 57.53          | 74       | -16.47 | peak          |
| 7386                                                                                                                                     | 42.42         | -0.75  | 41.67          | 54       | -12.33 | AVG           |
| Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits |               |        |                |          |        |               |

Vertical:

| Frequency                                                                                                                                | Meter Reading | Factor | Emission Level | Limits   | Margin | Detector Type |
|------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------|----------------|----------|--------|---------------|
| (MHz)                                                                                                                                    | (dBμV)        | (dB)   | (dBμV/m)       | (dBμV/m) | (dB)   |               |
| 4924                                                                                                                                     | 62.99         | -3.43  | 59.56          | 74       | -14.44 | peak          |
| 4924                                                                                                                                     | 46.74         | -3.43  | 43.31          | 54       | -10.69 | AVG           |
| 7386                                                                                                                                     | 57.18         | -0.75  | 56.43          | 74       | -17.57 | peak          |
| 7386                                                                                                                                     | 42.80         | -0.75  | 42.05          | 54       | -11.95 | AVG           |
| Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits |               |        |                |          |        |               |

## Remark:

- (1). Measuring frequencies from 9KHz to the 25 GHz. The test range is 9K ~10 times the main wave, and other spurious below the limit of 20dB will not be reflected in the report
- (2) \* denotes emission frequency which appearing within the Restricted Bands specified in provision of 15.205, then the general radiated emission limits in 15.209 apply.
- (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.
- (4) When the test results of Peak Detected below the limits of Average Detected, the Average Detected is not need completed. For example: Top Channel at Fundamental 73.16dBuV/m(PK Value) <93.98(AV Limit), at harmonic 53.20 dBuV/m(PK Value) <54 dBuV/m(AV Limit), the Average Detected not need to completed.

ANT1 LOW CH1 (802.11g Mode)/2412

Horizontal:

| Frequency                                                                                                                                | Meter Reading | Factor | Emission Level | Limits   | Margin | Detector Type |
|------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------|----------------|----------|--------|---------------|
| (MHz)                                                                                                                                    | (dBμV)        | (dB)   | (dBμV/m)       | (dBμV/m) | (dB)   |               |
| 4824                                                                                                                                     | 65.17         | -3.64  | 61.53          | 74       | -12.47 | peak          |
| 4824                                                                                                                                     | 50.98         | -3.64  | 47.34          | 54       | -6.66  | AVG           |
| 7236                                                                                                                                     | 57.19         | -0.95  | 56.24          | 74       | -17.76 | peak          |
| 7236                                                                                                                                     | 45.04         | -0.95  | 44.09          | 54       | -9.91  | AVG           |
| Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits |               |        |                |          |        |               |

Vertical:

| Frequency                                                                                                                                | Meter Reading | Factor | Emission Level | Limits   | Margin | Detector Type |
|------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------|----------------|----------|--------|---------------|
| (MHz)                                                                                                                                    | (dBμV)        | (dB)   | (dBμV/m)       | (dBμV/m) | (dB)   |               |
| 4824                                                                                                                                     | 66.27         | -3.64  | 62.63          | 74       | -11.37 | peak          |
| 4824                                                                                                                                     | 48.90         | -3.64  | 45.26          | 54       | -8.74  | AVG           |
| 7236                                                                                                                                     | 58.85         | -0.95  | 57.90          | 74       | -16.10 | peak          |
| 7236                                                                                                                                     | 44.10         | -0.95  | 43.15          | 54       | -10.85 | AVG           |
| Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits |               |        |                |          |        |               |

# ANT1 MID CH6 (802.11g Mode)/2437

## Horizontal:

| Frequency                                                                                                                                | Meter Reading | Factor | Emission Level | Limits   | Margin | Detector Type |
|------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------|----------------|----------|--------|---------------|
| (MHz)                                                                                                                                    | (dBμV)        | (dB)   | (dBμV/m)       | (dBμV/m) | (dB)   |               |
| 4874                                                                                                                                     | 66.13         | -3.51  | 62.62          | 74       | -11.38 | peak          |
| 4874                                                                                                                                     | 48.09         | -3.51  | 44.58          | 54       | -9.42  | AVG           |
| 7311                                                                                                                                     | 58.70         | -0.82  | 57.88          | 74       | -16.12 | peak          |
| 7311                                                                                                                                     | 43.19         | -0.82  | 42.37          | 54       | -11.63 | AVG           |
| Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits |               |        |                |          |        |               |

## Vertical:

| Frequency                                                                                                                                | Meter Reading | Factor | Emission Level | Limits   | Margin | Detector Type |
|------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------|----------------|----------|--------|---------------|
| (MHz)                                                                                                                                    | (dBμV)        | (dB)   | (dBμV/m)       | (dBμV/m) | (dB)   |               |
| 4874                                                                                                                                     | 65.01         | -3.51  | 61.50          | 74       | -12.50 | peak          |
| 4874                                                                                                                                     | 47.76         | -3.51  | 44.25          | 54       | -9.75  | AVG           |
| 7311                                                                                                                                     | 59.83         | -0.82  | 59.01          | 74       | -14.99 | peak          |
| 7311                                                                                                                                     | 43.03         | -0.82  | 42.21          | 54       | -11.79 | AVG           |
| Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits |               |        |                |          |        |               |

# ANT1 HIGH CH11 (802.11g Mode)/2462

## Horizontal:

| Frequency                                                                                                                                | Meter Reading | Factor | Emission Level | Limits   | Margin | Detector Type |
|------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------|----------------|----------|--------|---------------|
| (MHz)                                                                                                                                    | (dBμV)        | (dB)   | (dBμV/m)       | (dBμV/m) | (dB)   |               |
| 4924                                                                                                                                     | 62.34         | -3.43  | 58.91          | 74       | -15.09 | peak          |
| 4924                                                                                                                                     | 46.16         | -3.43  | 42.73          | 54       | -11.27 | AVG           |
| 7386                                                                                                                                     | 59.86         | -0.75  | 59.11          | 74       | -14.89 | peak          |
| 7386                                                                                                                                     | 44.16         | -0.75  | 43.41          | 54       | -10.59 | AVG           |
| Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits |               |        |                |          |        |               |

## Vertical:

| Frequency                                                                                                                                | Meter Reading | Factor | Emission Level | Limits   | Margin | Detector Type |
|------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------|----------------|----------|--------|---------------|
| (MHz)                                                                                                                                    | (dBμV)        | (dB)   | (dBμV/m)       | (dBμV/m) | (dB)   |               |
| 4924                                                                                                                                     | 64.98         | -3.43  | 61.55          | 74       | -12.45 | peak          |
| 4924                                                                                                                                     | 46.82         | -3.43  | 43.39          | 54       | -10.61 | AVG           |
| 7386                                                                                                                                     | 57.79         | -0.75  | 57.04          | 74       | -16.96 | peak          |
| 7386                                                                                                                                     | 44.04         | -0.75  | 43.29          | 54       | -10.71 | AVG           |
| Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits |               |        |                |          |        |               |

### Remark:

- (1). Measuring frequencies from 9KHz to the 25 GHz. The test range is 9K ~10 times the main wave, and other spurious below the limit of 20dB will not be reflected in the report
- (2) \* denotes emission frequency which appearing within the Restricted Bands specified in provision of 15.205, then the general radiated emission limits in 15.209 apply.
- (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.
- (4) When the test results of Peak Detected below the limits of Average Detected, the Average Detected is not need completed. For example: Top Channel at Fundamental 73.16dBuV/m(PK Value) <93.98(AV Limit), at harmonic 53.20 dBuV/m(PK Value) <54 dBuV/m(AV Limit), the Average Detected not need to completed.

Above 1GHz ANT1+ANT2 :

LOW CH1 (802.11n/H20 Mode)/2412

Horizontal:

| Frequency | Meter Reading | Factor | Emission Level | Limits   | Margin | Detector Type |
|-----------|---------------|--------|----------------|----------|--------|---------------|
| (MHz)     | (dBμV)        | (dB)   | (dBμV/m)       | (dBμV/m) | (dB)   |               |
| 4824      | 65.60         | -3.64  | 61.96          | 74       | -12.04 | peak          |
| 4824      | 48.10         | -3.64  | 44.46          | 54       | -9.54  | AVG           |
| 7236      | 56.70         | -0.95  | 55.75          | 74       | -18.25 | peak          |
| 7236      | 44.08         | -0.95  | 43.13          | 54       | -10.87 | AVG           |

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor,  
Margin = Emission level - Limits

Vertical:

| Frequency | Meter Reading | Factor | Emission Level | Limits   | Margin | Detector Type |
|-----------|---------------|--------|----------------|----------|--------|---------------|
| (MHz)     | (dBμV)        | (dB)   | (dBμV/m)       | (dBμV/m) | (dB)   |               |
| 4824      | 65.44         | -3.64  | 61.80          | 74       | -12.20 | peak          |
| 4824      | 49.32         | -3.64  | 45.68          | 54       | -8.32  | AVG           |
| 7236      | 57.39         | -0.95  | 56.44          | 74       | -17.56 | peak          |
| 7236      | 45.38         | -0.95  | 44.43          | 54       | -9.57  | AVG           |

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor,  
Margin = Emission level - Limits

LOW CH1 (802.11n/H20 Mode)/2437

Horizontal:

| Frequency                                                                                                                                | Meter Reading | Factor | Emission Level | Limits   | Margin | Detector Type |
|------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------|----------------|----------|--------|---------------|
| (MHz)                                                                                                                                    | (dBμV)        | (dB)   | (dBμV/m)       | (dBμV/m) | (dB)   |               |
| 4874                                                                                                                                     | 65.34         | -3.51  | 61.83          | 74       | -12.17 | peak          |
| 4874                                                                                                                                     | 48.87         | -3.51  | 45.36          | 54       | -8.64  | AVG           |
| 7311                                                                                                                                     | 57.70         | -0.82  | 56.88          | 74       | -17.12 | peak          |
| 7311                                                                                                                                     | 45.26         | -0.82  | 44.44          | 54       | -9.56  | AVG           |
| Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits |               |        |                |          |        |               |

Vertical:

| Frequency                                                                                                                                | Meter Reading | Factor | Emission Level | Limits   | Margin | Detector Type |
|------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------|----------------|----------|--------|---------------|
| (MHz)                                                                                                                                    | (dBμV)        | (dB)   | (dBμV/m)       | (dBμV/m) | (dB)   |               |
| 4874                                                                                                                                     | 64.57         | -3.51  | 61.06          | 74       | -12.94 | peak          |
| 4874                                                                                                                                     | 47.56         | -3.51  | 44.05          | 54       | -9.95  | AVG           |
| 7311                                                                                                                                     | 59.68         | -0.82  | 58.86          | 74       | -15.14 | peak          |
| 7311                                                                                                                                     | 44.45         | -0.82  | 43.63          | 54       | -10.37 | AVG           |
| Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits |               |        |                |          |        |               |

LOW CH1 (802.11n/H20 Mode)/2462

Horizontal:

| Frequency                                                                                                                                | Meter Reading | Factor | Emission Level | Limits   | Margin | Detector Type |
|------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------|----------------|----------|--------|---------------|
| (MHz)                                                                                                                                    | (dBμV)        | (dB)   | (dBμV/m)       | (dBμV/m) | (dB)   |               |
| 4924                                                                                                                                     | 64.36         | -3.43  | 60.93          | 74       | -13.07 | peak          |
| 4924                                                                                                                                     | 46.68         | -3.43  | 43.25          | 54       | -10.75 | AVG           |
| 7386                                                                                                                                     | 59.13         | -0.75  | 58.38          | 74       | -15.62 | peak          |
| 7386                                                                                                                                     | 45.14         | -0.75  | 44.39          | 54       | -9.61  | AVG           |
| Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits |               |        |                |          |        |               |

Vertical:

| Frequency                                                                                                                                | Meter Reading | Factor | Emission Level | Limits   | Margin | Detector Type |
|------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------|----------------|----------|--------|---------------|
| (MHz)                                                                                                                                    | (dBμV)        | (dB)   | (dBμV/m)       | (dBμV/m) | (dB)   |               |
| 4924                                                                                                                                     | 63.82         | -3.43  | 60.39          | 74       | -13.61 | peak          |
| 4924                                                                                                                                     | 47.04         | -3.43  | 43.61          | 54       | -10.39 | AVG           |
| 7386                                                                                                                                     | 57.31         | -0.75  | 56.56          | 74       | -17.44 | peak          |
| 7386                                                                                                                                     | 43.01         | -0.75  | 42.26          | 54       | -11.74 | AVG           |
| Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits |               |        |                |          |        |               |

Remark:

- (1). Measuring frequencies from 9KHz to the 25 GHz. The test range is 9K ~10 times the main wave, and other spurious below the limit of 20dB will not be reflected in the report
- (2) \* denotes emission frequency which appearing within the Restricted Bands specified in provision of 15.205, then the general radiated emission limits in 15.209 apply.
- (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.
- (4) When the test results of Peak Detected below the limits of Average Detected, the Average Detected is not need completed. For example: Top Channel at Fundamental 73.16dBuV/m(PK Value) <93.98(AV Limit), at harmonic 53.20 dBuV/m(PK Value) <54 dBuV/m(AV Limit), the Average Detected not need to completed.

# ANT1+ANT2 LOW CH3 (802.11n/H40 Mode)/2422

Horizontal:

| Frequency                                                                                                                                | Meter Reading | Factor | Emission Level | Limits   | Margin | Detector Type |
|------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------|----------------|----------|--------|---------------|
| (MHz)                                                                                                                                    | (dBμV)        | (dB)   | (dBμV/m)       | (dBμV/m) | (dB)   |               |
| 4844                                                                                                                                     | 63.04         | -3.63  | 59.41          | 74       | -14.59 | peak          |
| 4844                                                                                                                                     | 48.41         | -3.63  | 44.78          | 54       | -9.22  | AVG           |
| 7266                                                                                                                                     | 57.66         | -0.94  | 56.72          | 74       | -17.28 | peak          |
| 7266                                                                                                                                     | 46.63         | -0.94  | 45.69          | 54       | -8.31  | AVG           |
| Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits |               |        |                |          |        |               |

Vertical:

| Frequency                                                                                                                                | Meter Reading | Factor | Emission Level | Limits   | Margin | Detector Type |
|------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------|----------------|----------|--------|---------------|
| (MHz)                                                                                                                                    | (dBμV)        | (dB)   | (dBμV/m)       | (dBμV/m) | (dB)   |               |
| 4844                                                                                                                                     | 64.33         | -3.63  | 60.70          | 74       | -13.30 | peak          |
| 4844                                                                                                                                     | 48.02         | -3.63  | 44.39          | 54       | -9.61  | AVG           |
| 7266                                                                                                                                     | 58.79         | -0.94  | 57.85          | 74       | -16.15 | peak          |
| 7266                                                                                                                                     | 45.34         | -0.94  | 44.40          | 54       | -9.60  | AVG           |
| Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits |               |        |                |          |        |               |

## ANT1+ANT2 MID CH6 (802.11n/H40 Mode)/2437

Horizontal:

| Frequency                                                                                                                                | Meter Reading | Factor | Emission Level | Limits   | Margin | Detector Type |
|------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------|----------------|----------|--------|---------------|
| (MHz)                                                                                                                                    | (dBμV)        | (dB)   | (dBμV/m)       | (dBμV/m) | (dB)   |               |
| 4874                                                                                                                                     | 65.20         | -3.51  | 61.69          | 74       | -12.31 | peak          |
| 4874                                                                                                                                     | 49.56         | -3.51  | 46.05          | 54       | -7.95  | AVG           |
| 7311                                                                                                                                     | 58.17         | -0.82  | 57.35          | 74       | -16.65 | peak          |
| 7311                                                                                                                                     | 45.60         | -0.82  | 44.78          | 54       | -9.22  | AVG           |
| Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits |               |        |                |          |        |               |

Vertical:

| Frequency                                                                                                                                | Meter Reading | Factor | Emission Level | Limits   | Margin | Detector Type |
|------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------|----------------|----------|--------|---------------|
| (MHz)                                                                                                                                    | (dBμV)        | (dB)   | (dBμV/m)       | (dBμV/m) | (dB)   |               |
| 4874                                                                                                                                     | 62.25         | -3.51  | 58.74          | 74       | -15.26 | peak          |
| 4874                                                                                                                                     | 46.44         | -3.51  | 42.93          | 54       | -11.07 | AVG           |
| 7311                                                                                                                                     | 56.66         | -0.82  | 55.84          | 74       | -18.16 | peak          |
| 7311                                                                                                                                     | 43.35         | -0.82  | 42.53          | 54       | -11.47 | AVG           |
| Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits |               |        |                |          |        |               |

ANT1+ANT2 HIGH CH9 (802.11n/H40 Mode)/2452

Horizontal:

| Frequency<br>(MHz) | Meter Reading<br>(dBμV) | Factor<br>(dB) | Emission Level<br>(dBμV/m) | Limits<br>(dBμV/m) | Margin<br>(dB) | Detector Type |
|--------------------|-------------------------|----------------|----------------------------|--------------------|----------------|---------------|
| 4904               | 62.29                   | -3.43          | 58.86                      | 74                 | -15.14         | peak          |
| 4904               | 48.71                   | -3.43          | 45.28                      | 54                 | -8.72          | AVG           |
| 7356               | 57.87                   | -0.75          | 57.12                      | 74                 | -16.88         | peak          |
| 7356               | 42.19                   | -0.75          | 41.44                      | 54                 | -12.56         | AVG           |

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor,  
Margin = Emission level - Limits

Vertical:

| Frequency<br>(MHz) | Meter Reading<br>(dBμV) | Factor<br>(dB) | Emission Level<br>(dBμV/m) | Limits<br>(dBμV/m) | Margin<br>(dB) | Detector Type |
|--------------------|-------------------------|----------------|----------------------------|--------------------|----------------|---------------|
| 4904               | 62.38                   | -3.43          | 58.95                      | 74                 | -15.05         | peak          |
| 4904               | 45.53                   | -3.43          | 42.10                      | 54                 | -11.90         | AVG           |
| 7356               | 56.83                   | -0.75          | 56.08                      | 74                 | -17.92         | peak          |
| 7356               | 44.29                   | -0.75          | 43.54                      | 54                 | -10.46         | AVG           |

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor,  
Margin = Emission level - Limits

Remark:

- (1). Measuring frequencies from 9KHz to the 25 GHz. The test range is 9K ~10 times the main wave, and other spurious below the limit of 20dB will not be reflected in the report
- (2) \* denotes emission frequency which appearing within the Restricted Bands specified in provision of 15.205, then the general radiated emission limits in 15.209 apply.
- (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.
- (4) When the test results of Peak Detected below the limits of Average Detected, the Average Detected is not need completed. For example: Top Channel at Fundamental 73.16dBuV/m(PK Value) <93.98(AV Limit), at harmonic 53.20 dBuV/m(PK Value) <54 dBuV/m(AV Limit), the Average Detected not need to completed.

### Restricted bands around fundamental frequency (Radiated)

Operation Mode:

ANT 1 802.11b Mode TX CH Low (2412MHz)

Horizontal

| Frequency                                                                                                                                | Meter Reading | Factor | Emission Level | Limits   | Margin | Detector Type |
|------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------|----------------|----------|--------|---------------|
| (MHz)                                                                                                                                    | (dBμV)        | (dB)   | (dBμV/m)       | (dBμV/m) | (dB)   |               |
| 2390                                                                                                                                     | 57.67         | -5.81  | 51.86          | 74       | -22.14 | peak          |
| 2390                                                                                                                                     | /             | -5.81  | /              | 54       | /      | AVG           |
| 2399                                                                                                                                     | 65.12         | -5.84  | 59.28          | 74       | -14.72 | peak          |
| 2399                                                                                                                                     | 49.25         | -5.84  | 43.41          | 54       | -10.59 | AVG           |
| Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits |               |        |                |          |        |               |

Vertical:

| Frequency                                                                                                                                | Meter Reading | Factor | Emission Level | Limits   | Margin | Detector Type |
|------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------|----------------|----------|--------|---------------|
| (MHz)                                                                                                                                    | (dBμV)        | (dB)   | (dBμV/m)       | (dBμV/m) | (dB)   |               |
| 2390                                                                                                                                     | 55.97         | -5.81  | 50.16          | 74       | -23.84 | peak          |
| 2390                                                                                                                                     | /             | -5.81  | /              | 54       | /      | AVG           |
| 2399                                                                                                                                     | 62.51         | -5.84  | 56.67          | 74       | -17.33 | peak          |
| 2399                                                                                                                                     | 47.14         | -5.84  | 41.30          | 54       | -12.70 | AVG           |
| Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits |               |        |                |          |        |               |

When the peak value is smaller than the AVG limit, AVG is not reflected.

Operation Mode:

ANT1 802.11b Mode TX CH High (2462MHz)

Horizontal

| Frequency                                                                                                                                | Meter Reading | Factor | Emission Level | Limits   | Margin | Detector Type |
|------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------|----------------|----------|--------|---------------|
| (MHz)                                                                                                                                    | (dBμV)        | (dB)   | (dBμV/m)       | (dBμV/m) | (dB)   |               |
| 2483.5                                                                                                                                   | 56.50         | -5.65  | 50.85          | 74       | -23.15 | peak          |
| 2483.5                                                                                                                                   | /             | -5.65  | /              | 54       | /      | AVG           |
| Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits |               |        |                |          |        |               |

Vertical:

| Frequency                                                                                                                                | Meter Reading | Factor | Emission Level | Limits   | Margin | Detector Type |
|------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------|----------------|----------|--------|---------------|
| (MHz)                                                                                                                                    | (dBμV)        | (dB)   | (dBμV/m)       | (dBμV/m) | (dB)   |               |
| 2483.5                                                                                                                                   | 56.19         | -5.65  | 50.54          | 74       | -23.46 | peak          |
| 2483.5                                                                                                                                   | /             | -5.65  | /              | 54       | /      | AVG           |
| Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits |               |        |                |          |        |               |
| Remark: All the other emissions not reported were too low to read and deemed to comply with FCC limit.                                   |               |        |                |          |        |               |

Operation Mode:

ANT1 802.11g Mode TX CH Low (2412MHz)

Horizontal

| Frequency                                                                                                                                   | Meter Reading | Factor | Emission Level | Limits   | Margin | Detector Type |
|---------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------|----------------|----------|--------|---------------|
| (MHz)                                                                                                                                       | (dBμV)        | (dB)   | (dBμV/m)       | (dBμV/m) | (dB)   |               |
| 2390                                                                                                                                        | 58.45         | -5.81  | 52.64          | 74       | -21.36 | peak          |
| 2390                                                                                                                                        | /             | -5.81  | /              | 54       | /      | AVG           |
| 2399                                                                                                                                        | 61.64         | -5.84  | 55.80          | 74       | -18.20 | peak          |
| 2399                                                                                                                                        | 45.83         | -5.84  | 39.99          | 54       | -14.01 | AVG           |
| Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor,<br>Margin = Emission level - Limits |               |        |                |          |        |               |

Vertical:

| Frequency                                                                                                                                   | Meter Reading | Factor | Emission Level | Limits   | Margin | Detector Type |
|---------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------|----------------|----------|--------|---------------|
| (MHz)                                                                                                                                       | (dBμV)        | (dB)   | (dBμV/m)       | (dBμV/m) | (dB)   |               |
| 2390                                                                                                                                        | 57.44         | -5.81  | 51.63          | 74       | -22.37 | peak          |
| 2390                                                                                                                                        | /             | -5.81  | /              | 54       | /      | AVG           |
| 2399                                                                                                                                        | 63.13         | -5.84  | 57.29          | 74       | -16.71 | peak          |
| 2399                                                                                                                                        | 46.14         | -5.84  | 40.30          | 54       | -13.70 | AVG           |
| Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor,<br>Margin = Emission level - Limits |               |        |                |          |        |               |

Operation Mode:

ANT1 802.11g Mode TX CH High (2462MHz)

Horizontal

| Frequency                                                                                                                                | Meter Reading | Factor | Emission Level | Limits   | Margin | Detector Type |
|------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------|----------------|----------|--------|---------------|
| (MHz)                                                                                                                                    | (dBμV)        | (dB)   | (dBμV/m)       | (dBμV/m) | (dB)   |               |
| 2483.5                                                                                                                                   | 57.07         | -5.65  | 51.42          | 74       | -22.58 | peak          |
| 2483.5                                                                                                                                   | /             | -5.65  | /              | 54       | /      | AVG           |
| Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits |               |        |                |          |        |               |

Vertical:

| Frequency                                                                                                                                | Meter Reading | Factor | Emission Level | Limits   | Margin | Detector Type |
|------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------|----------------|----------|--------|---------------|
| (MHz)                                                                                                                                    | (dBμV)        | (dB)   | (dBμV/m)       | (dBμV/m) | (dB)   |               |
| 2483.5                                                                                                                                   | 57.32         | -5.65  | 52.14          | 74       | -21.86 | peak          |
| 2483.5                                                                                                                                   | /             | -5.65  | /              | 54       | /      | AVG           |
| Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits |               |        |                |          |        |               |
| Remark: All the other emissions not reported were too low to read and deemed to comply with FCC limit.                                   |               |        |                |          |        |               |

Operation Mode:

ANT1+ANT2 802.11n/H20 Mode TX CH Low (2412MHz)

Horizontal

| Frequency                                                                                                                                | Meter Reading | Factor | Emission Level | Limits   | Margin | Detector Type |
|------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------|----------------|----------|--------|---------------|
| (MHz)                                                                                                                                    | (dBμV)        | (dB)   | (dBμV/m)       | (dBμV/m) | (dB)   |               |
| 2390                                                                                                                                     | 56.52         | -5.81  | 50.71          | 74       | -23.29 | peak          |
| 2390                                                                                                                                     | /             | -5.81  | /              | 54       | /      | AVG           |
| 2399                                                                                                                                     | 63.33         | -5.84  | 57.49          | 74       | -16.51 | peak          |
| 2399                                                                                                                                     | 47.29         | -5.84  | 41.45          | 54       | -12.55 | AVG           |
| Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits |               |        |                |          |        |               |

Vertical:

| Frequency                                                                                                                                | Meter Reading | Factor | Emission Level | Limits   | Margin | Detector Type |
|------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------|----------------|----------|--------|---------------|
| (MHz)                                                                                                                                    | (dBμV)        | (dB)   | (dBμV/m)       | (dBμV/m) | (dB)   |               |
| 2390                                                                                                                                     | 56.05         | -5.81  | 50.24          | 74       | -23.76 | peak          |
| 2390                                                                                                                                     | /             | -5.81  | /              | 54       | /      | AVG           |
| 2399                                                                                                                                     | 61.40         | -5.84  | 55.56          | 74       | -18.44 | peak          |
| 2399                                                                                                                                     | 46.65         | -5.84  | 40.81          | 54       | -13.19 | AVG           |
| Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits |               |        |                |          |        |               |

Operation Mode:

ANT1+ANT2 802.11n/H20 Mode TX CH High (2462MHz)

Horizontal

| Frequency                                                                                                                                | Meter Reading | Factor | Emission Level | Limits   | Margin | Detector Type |
|------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------|----------------|----------|--------|---------------|
| (MHz)                                                                                                                                    | (dBμV)        | (dB)   | (dBμV/m)       | (dBμV/m) | (dB)   |               |
| 2483.5                                                                                                                                   | 56.04         | -5.65  | 50.39          | 74       | -23.61 | peak          |
| 2483.5                                                                                                                                   | /             | -5.65  | /              | 54       | /      | AVG           |
| Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits |               |        |                |          |        |               |

Vertical:

| Frequency                                                                                                                                | Meter Reading | Factor | Emission Level | Limits   | Margin | Detector Type |
|------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------|----------------|----------|--------|---------------|
| (MHz)                                                                                                                                    | (dBμV)        | (dB)   | (dBμV/m)       | (dBμV/m) | (dB)   |               |
| 2483.5                                                                                                                                   | 55.38         | -5.65  | 49.73          | 74       | -24.27 | peak          |
| 2483.5                                                                                                                                   | /             | -5.65  | /              | 54       | /      | AVG           |
| Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits |               |        |                |          |        |               |
| Remark: All the other emissions not reported were too low to read and deemed to comply with FCC limit.                                   |               |        |                |          |        |               |

Operation Mode:

ANT1+ANT2 802.11n/H40 Mode TX CH Low (2422MHz)

Horizontal

| Frequency | Meter Reading | Factor | Emission Level | Limits   | Margin | Detector Type |
|-----------|---------------|--------|----------------|----------|--------|---------------|
| (MHz)     | (dBμV)        | (dB)   | (dBμV/m)       | (dBμV/m) | (dB)   |               |
| 2390      | 57.44         | -5.81  | 51.63          | 74       | -22.37 | peak          |
| 2390      | /             | -5.81  | /              | 54       | /      | AVG           |
| 2399      | 63.14         | -5.84  | 57.30          | 74       | -16.70 | peak          |
| 2399      | 47.18         | -5.84  | 41.34          | 54       | -12.66 | AVG           |

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor,  
Margin = Emission level - Limits

Vertical:

| Frequency | Meter Reading | Factor | Emission Level | Limits   | Margin | Detector Type |
|-----------|---------------|--------|----------------|----------|--------|---------------|
| (MHz)     | (dBμV)        | (dB)   | (dBμV/m)       | (dBμV/m) | (dB)   |               |
| 2390      | 58.10         | -5.81  | 52.29          | 74       | -21.71 | peak          |
| 2390      | /             | -5.81  | /              | 54       | /      | AVG           |
| 2399      | 62.08         | -5.84  | 56.24          | 74       | -17.76 | peak          |
| 2399      | 46.74         | -5.84  | 40.90          | 54       | -13.10 | AVG           |

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor,  
Margin = Emission level - Limits

Operation Mode:

ANT1+ANT2 802.11n/H40 Mode TX CH High (2452MHz)

Horizontal

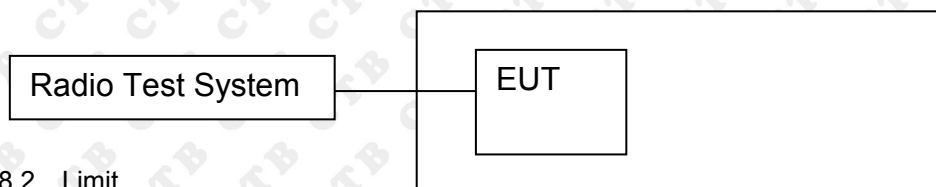
| Frequency                                                                                                                                | Meter Reading | Factor | Emission Level | Limits   | Margin | Detector Type |
|------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------|----------------|----------|--------|---------------|
| (MHz)                                                                                                                                    | (dBμV)        | (dB)   | (dBμV/m)       | (dBμV/m) | (dB)   |               |
| 2483.5                                                                                                                                   | 57.22         | -5.65  | 51.57          | 74       | -22.43 | peak          |
| 2483.5                                                                                                                                   | /             | -5.65  | /              | 54       | /      | AVG           |
| Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits |               |        |                |          |        |               |

Vertical:

| Frequency                                                                                                                                | Meter Reading | Factor | Emission Level | Limits   | Margin | Detector Type |
|------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------|----------------|----------|--------|---------------|
| (MHz)                                                                                                                                    | (dBμV)        | (dB)   | (dBμV/m)       | (dBμV/m) | (dB)   |               |
| 2483.5                                                                                                                                   | 57.87         | -5.65  | 52.22          | 74       | -21.78 | peak          |
| 2483.5                                                                                                                                   | /             | -5.65  | /              | 54       | /      | AVG           |
| Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier. Emission level = Reading Result + Factor, Margin = Emission level - Limits |               |        |                |          |        |               |
| Remark: All the other emissions not reported were too low to read and deemed to comply with FCC limit.                                   |               |        |                |          |        |               |

## 8. BAND EDGE AND RF CONDUCTED SPURIOUS EMISSIONS

### 8.1 Block Diagram Of Test Setup



### 8.2 Limit

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated 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, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, 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)).

### 8.3 Test procedure

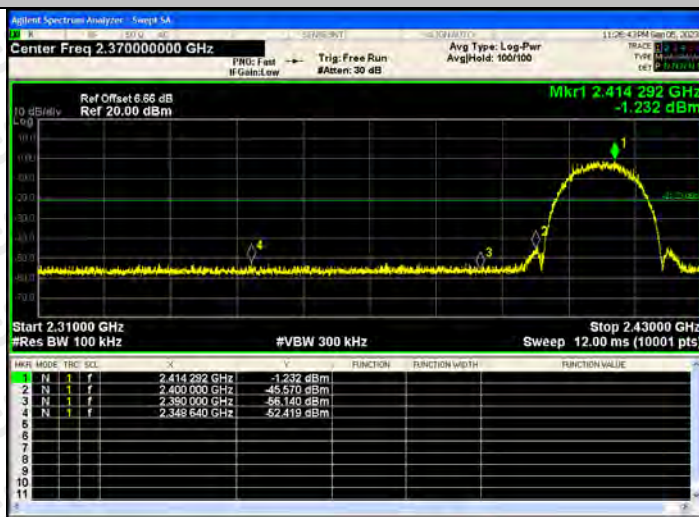
1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum;
2. Set the spectrum analyzer:  
 Below 30MHz:  
 RBW = 100kHz, VBW = 300kHz, Sweep = auto  
 Detector function = peak, Trace = max hold  
 Above 30MHz:  
 RBW = 100KHz, VBW = 300KHz, Sweep = auto  
 Detector function = peak, Trace = max hold

## 8.4 Test Result

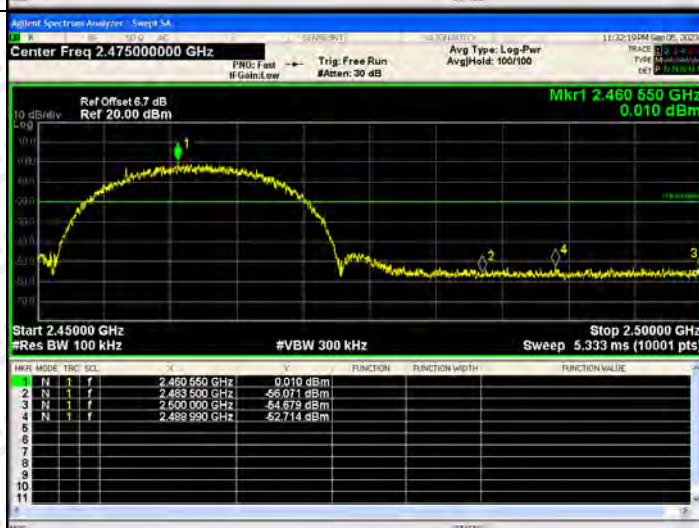
### ANT1:

#### BAND EDGE Graphs

802.11b/LCH

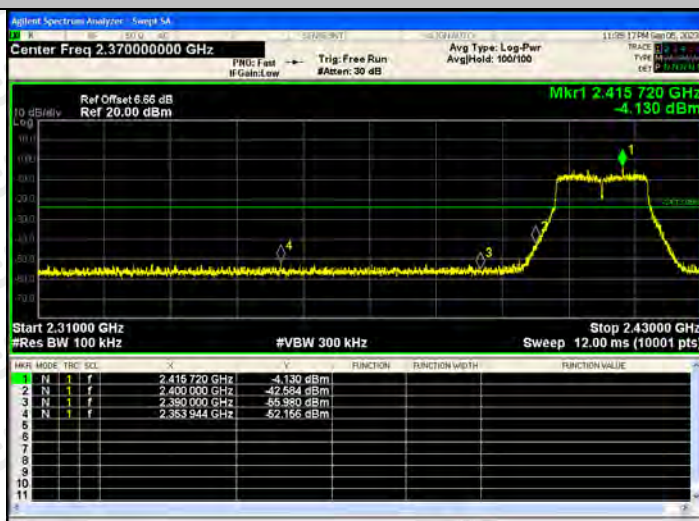


802.11b/HCH

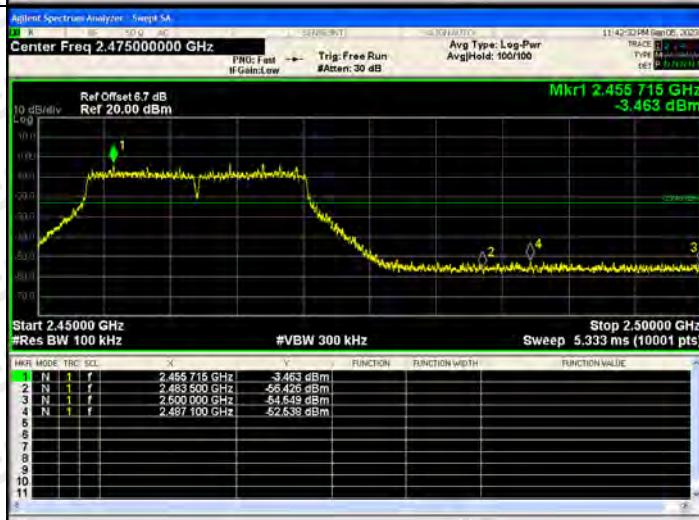


# BAND EDGE Graphs

802.11g/LCH

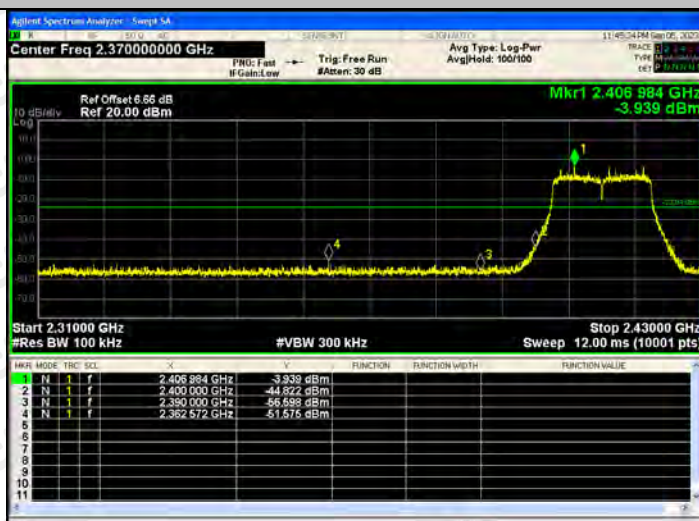


802.11g/HCH

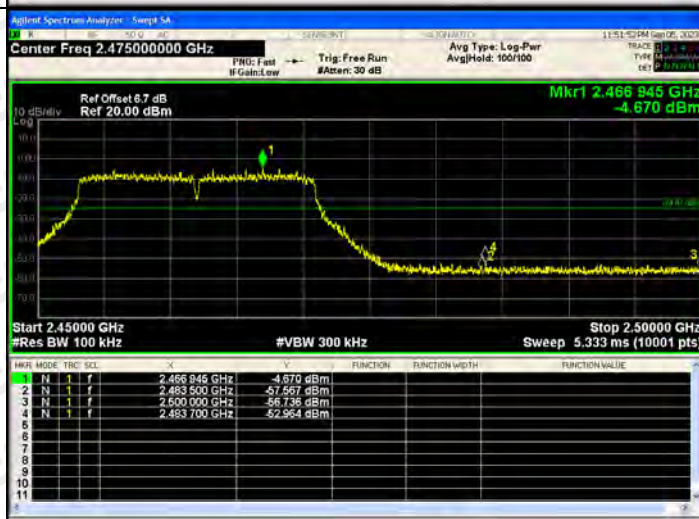


# BAND EDGE Graphs

802.11n(HT20)/L  
CH

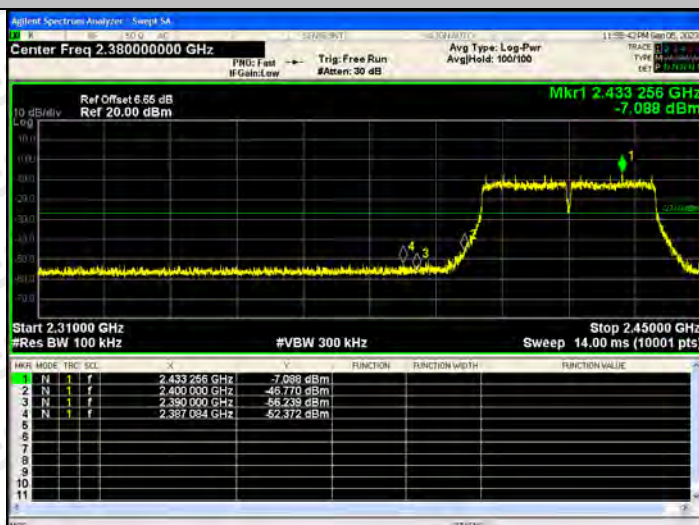


802.11n(HT20)/H  
CH

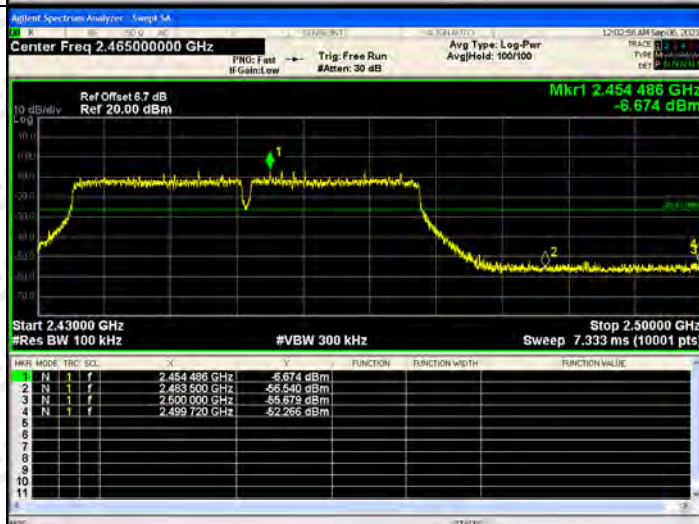


# BAND EDGE Graphs

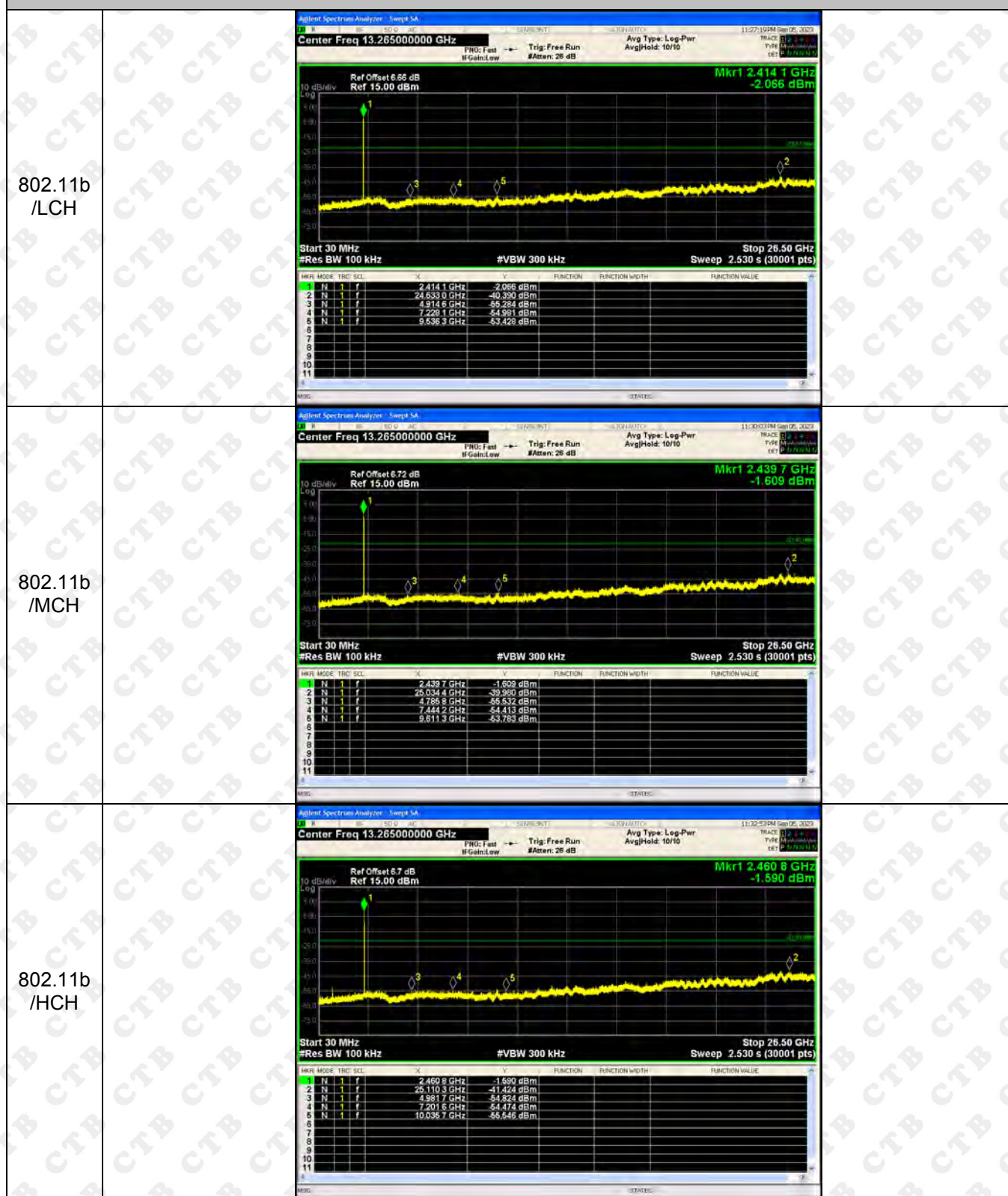
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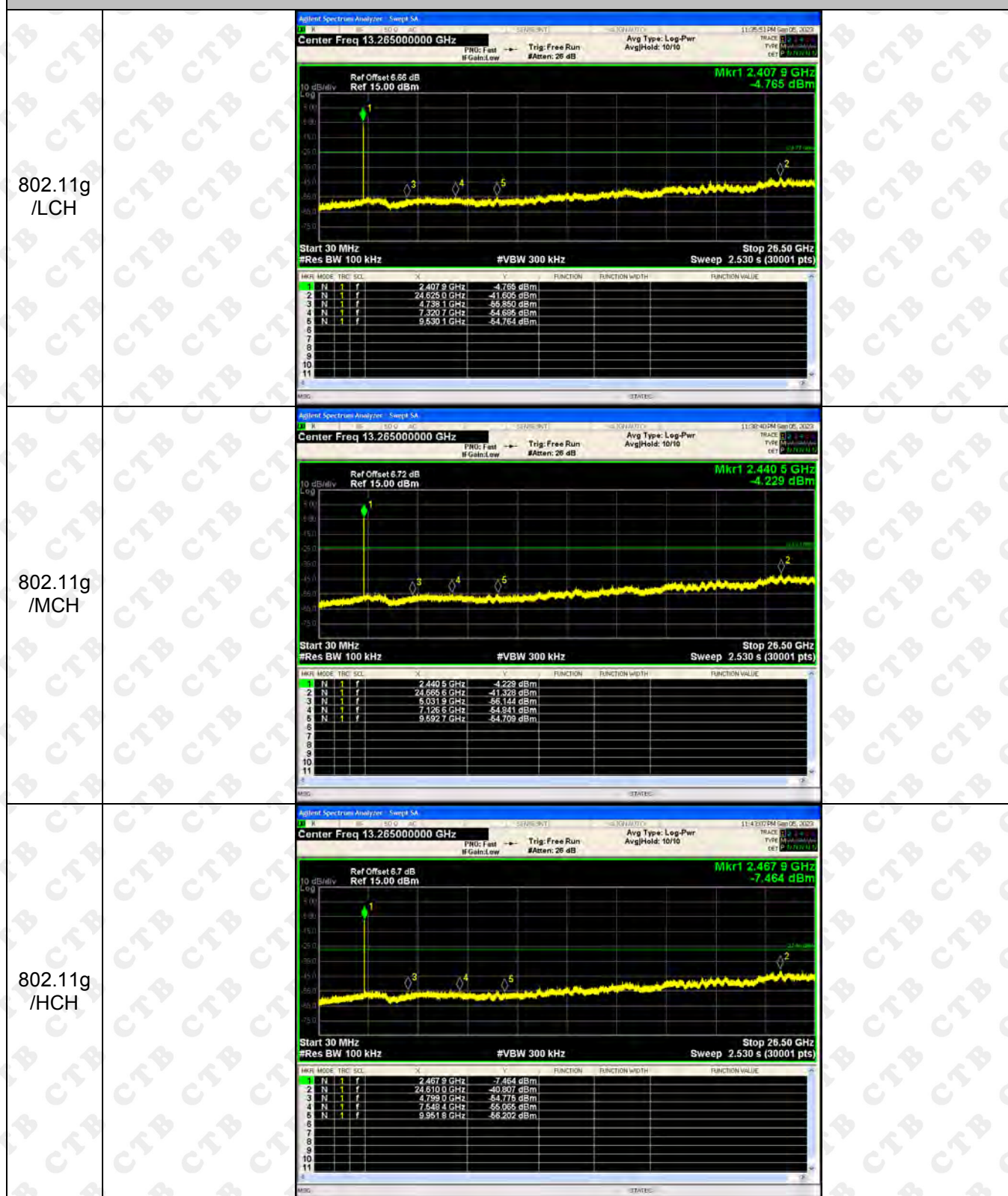
802.11n(HT40)/H  
CH



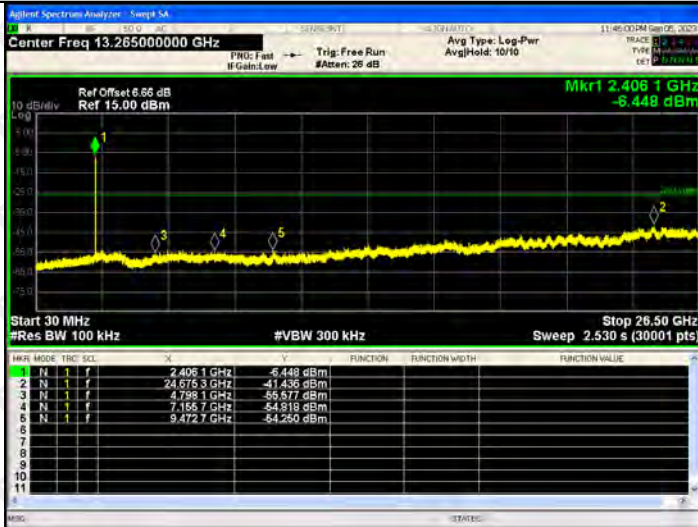
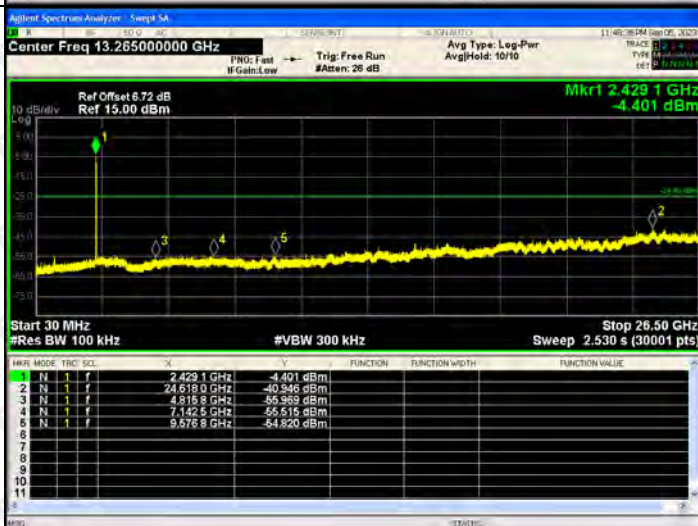
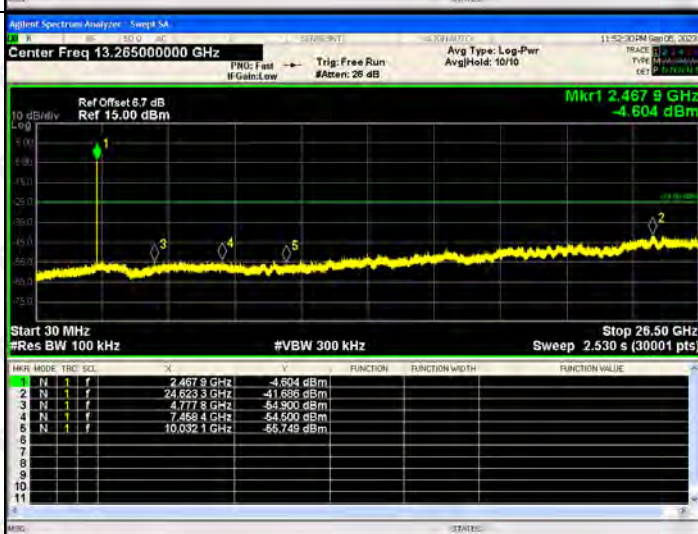
## RF Conducted Spurious Emissions Graphs

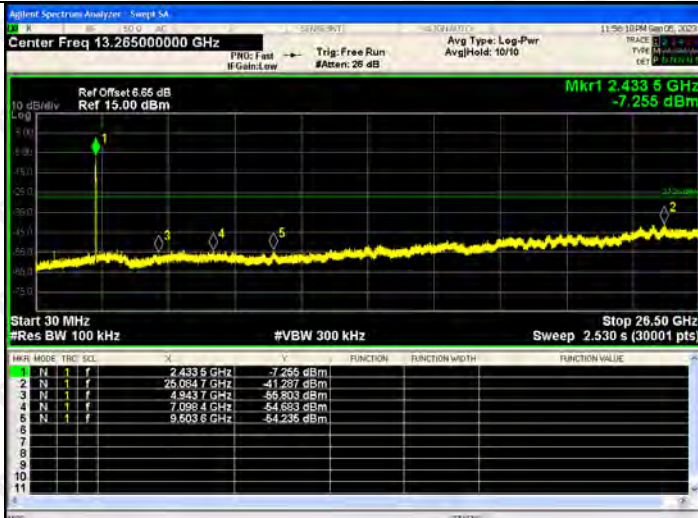


## RF Conducted Spurious Emissions Graphs



## RF Conducted Spurious Emissions Graphs

| 802.11n<br>(HT20)/<br>LCH |  <p>Agilent Spectrum Analyzer - Sweep 5A</p> <p>Center Freq 13.265000000 GHz</p> <p>Ref Offset 6.66 dB<br/>Ref 15.00 dBm</p> <p>Mkr1 2.406 1 GHz<br/>-6.448 dBm</p> <p>Start 30 MHz<br/>#Res BW 100 kHz<br/>#VBW 300 kHz<br/>Stop 26.50 GHz<br/>Sweep 2.530 s (30001 pts)</p> <table><tr><th>Mkr</th><th>Mode</th><th>Freq</th><th>Power</th></tr><tr><td>1</td><td>N</td><td>2.406 1 GHz</td><td>-6.448 dBm</td></tr><tr><td>2</td><td>N</td><td>24.675 3 GHz</td><td>-41.436 dBm</td></tr><tr><td>3</td><td>N</td><td>4.788 1 GHz</td><td>-55.677 dBm</td></tr><tr><td>4</td><td>N</td><td>7.155 7 GHz</td><td>-54.918 dBm</td></tr><tr><td>5</td><td>N</td><td>9.472 7 GHz</td><td>-54.250 dBm</td></tr></table>   | Mkr          | Mode        | Freq | Power | 1 | N | 2.406 1 GHz | -6.448 dBm | 2 | N | 24.675 3 GHz | -41.436 dBm | 3 | N | 4.788 1 GHz | -55.677 dBm | 4 | N | 7.155 7 GHz | -54.918 dBm | 5 | N | 9.472 7 GHz  | -54.250 dBm |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------------|------|-------|---|---|-------------|------------|---|---|--------------|-------------|---|---|-------------|-------------|---|---|-------------|-------------|---|---|--------------|-------------|
| Mkr                       | Mode                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Freq         | Power       |      |       |   |   |             |            |   |   |              |             |   |   |             |             |   |   |             |             |   |   |              |             |
| 1                         | N                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 2.406 1 GHz  | -6.448 dBm  |      |       |   |   |             |            |   |   |              |             |   |   |             |             |   |   |             |             |   |   |              |             |
| 2                         | N                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 24.675 3 GHz | -41.436 dBm |      |       |   |   |             |            |   |   |              |             |   |   |             |             |   |   |             |             |   |   |              |             |
| 3                         | N                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 4.788 1 GHz  | -55.677 dBm |      |       |   |   |             |            |   |   |              |             |   |   |             |             |   |   |             |             |   |   |              |             |
| 4                         | N                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 7.155 7 GHz  | -54.918 dBm |      |       |   |   |             |            |   |   |              |             |   |   |             |             |   |   |             |             |   |   |              |             |
| 5                         | N                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 9.472 7 GHz  | -54.250 dBm |      |       |   |   |             |            |   |   |              |             |   |   |             |             |   |   |             |             |   |   |              |             |
| 802.11<br>n(HT20)<br>/MCH |  <p>Agilent Spectrum Analyzer - Sweep 5A</p> <p>Center Freq 13.265000000 GHz</p> <p>Ref Offset 6.72 dB<br/>Ref 15.00 dBm</p> <p>Mkr1 2.429 1 GHz<br/>-4.401 dBm</p> <p>Start 30 MHz<br/>#Res BW 100 kHz<br/>#VBW 300 kHz<br/>Stop 26.50 GHz<br/>Sweep 2.530 s (30001 pts)</p> <table><tr><th>Mkr</th><th>Mode</th><th>Freq</th><th>Power</th></tr><tr><td>1</td><td>N</td><td>2.429 1 GHz</td><td>-4.401 dBm</td></tr><tr><td>2</td><td>N</td><td>24.618 0 GHz</td><td>-40.346 dBm</td></tr><tr><td>3</td><td>N</td><td>4.815 8 GHz</td><td>-55.989 dBm</td></tr><tr><td>4</td><td>N</td><td>7.142 5 GHz</td><td>-55.515 dBm</td></tr><tr><td>5</td><td>N</td><td>9.575 8 GHz</td><td>-54.520 dBm</td></tr></table>  | Mkr          | Mode        | Freq | Power | 1 | N | 2.429 1 GHz | -4.401 dBm | 2 | N | 24.618 0 GHz | -40.346 dBm | 3 | N | 4.815 8 GHz | -55.989 dBm | 4 | N | 7.142 5 GHz | -55.515 dBm | 5 | N | 9.575 8 GHz  | -54.520 dBm |
| Mkr                       | Mode                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Freq         | Power       |      |       |   |   |             |            |   |   |              |             |   |   |             |             |   |   |             |             |   |   |              |             |
| 1                         | N                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 2.429 1 GHz  | -4.401 dBm  |      |       |   |   |             |            |   |   |              |             |   |   |             |             |   |   |             |             |   |   |              |             |
| 2                         | N                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 24.618 0 GHz | -40.346 dBm |      |       |   |   |             |            |   |   |              |             |   |   |             |             |   |   |             |             |   |   |              |             |
| 3                         | N                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 4.815 8 GHz  | -55.989 dBm |      |       |   |   |             |            |   |   |              |             |   |   |             |             |   |   |             |             |   |   |              |             |
| 4                         | N                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 7.142 5 GHz  | -55.515 dBm |      |       |   |   |             |            |   |   |              |             |   |   |             |             |   |   |             |             |   |   |              |             |
| 5                         | N                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 9.575 8 GHz  | -54.520 dBm |      |       |   |   |             |            |   |   |              |             |   |   |             |             |   |   |             |             |   |   |              |             |
| 802.11<br>n(HT20)<br>/HCH |  <p>Agilent Spectrum Analyzer - Sweep 5A</p> <p>Center Freq 13.265000000 GHz</p> <p>Ref Offset 6.7 dB<br/>Ref 15.00 dBm</p> <p>Mkr1 2.467 9 GHz<br/>-4.604 dBm</p> <p>Start 30 MHz<br/>#Res BW 100 kHz<br/>#VBW 300 kHz<br/>Stop 26.50 GHz<br/>Sweep 2.530 s (30001 pts)</p> <table><tr><th>Mkr</th><th>Mode</th><th>Freq</th><th>Power</th></tr><tr><td>1</td><td>N</td><td>2.467 9 GHz</td><td>-4.604 dBm</td></tr><tr><td>2</td><td>N</td><td>24.823 3 GHz</td><td>-41.696 dBm</td></tr><tr><td>3</td><td>N</td><td>4.777 8 GHz</td><td>-54.900 dBm</td></tr><tr><td>4</td><td>N</td><td>7.458 4 GHz</td><td>-54.600 dBm</td></tr><tr><td>5</td><td>N</td><td>10.032 1 GHz</td><td>-55.749 dBm</td></tr></table> | Mkr          | Mode        | Freq | Power | 1 | N | 2.467 9 GHz | -4.604 dBm | 2 | N | 24.823 3 GHz | -41.696 dBm | 3 | N | 4.777 8 GHz | -54.900 dBm | 4 | N | 7.458 4 GHz | -54.600 dBm | 5 | N | 10.032 1 GHz | -55.749 dBm |
| Mkr                       | Mode                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Freq         | Power       |      |       |   |   |             |            |   |   |              |             |   |   |             |             |   |   |             |             |   |   |              |             |
| 1                         | N                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 2.467 9 GHz  | -4.604 dBm  |      |       |   |   |             |            |   |   |              |             |   |   |             |             |   |   |             |             |   |   |              |             |
| 2                         | N                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 24.823 3 GHz | -41.696 dBm |      |       |   |   |             |            |   |   |              |             |   |   |             |             |   |   |             |             |   |   |              |             |
| 3                         | N                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 4.777 8 GHz  | -54.900 dBm |      |       |   |   |             |            |   |   |              |             |   |   |             |             |   |   |             |             |   |   |              |             |
| 4                         | N                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 7.458 4 GHz  | -54.600 dBm |      |       |   |   |             |            |   |   |              |             |   |   |             |             |   |   |             |             |   |   |              |             |
| 5                         | N                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 10.032 1 GHz | -55.749 dBm |      |       |   |   |             |            |   |   |              |             |   |   |             |             |   |   |             |             |   |   |              |             |

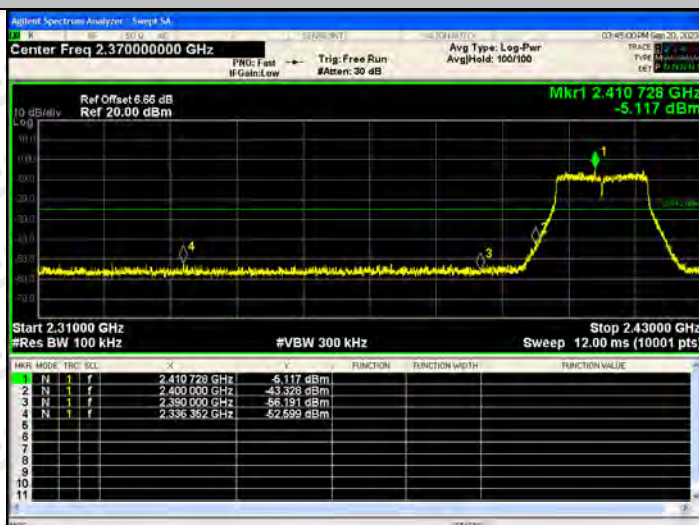
| 802.11n<br>(HT40)/<br>LCH |  <table><tr><th>N</th><th>F</th><th>F</th><th>V</th><th>FUNCTION</th><th>FUNCTION WIDTH</th><th>FUNCTION VALUE</th></tr><tr><td>1</td><td>N</td><td>1</td><td>f</td><td>2.433 5 GHz</td><td></td><td>-7.255 dBm</td></tr><tr><td>2</td><td>N</td><td>1</td><td>f</td><td>25.084 7 GHz</td><td></td><td>-41.287 dBm</td></tr><tr><td>3</td><td>N</td><td>1</td><td>f</td><td>4.843 7 GHz</td><td></td><td>-56.833 dBm</td></tr><tr><td>4</td><td>N</td><td>1</td><td>f</td><td>7.098 4 GHz</td><td></td><td>-54.693 dBm</td></tr><tr><td>5</td><td>N</td><td>1</td><td>f</td><td>9.603 6 GHz</td><td></td><td>-54.235 dBm</td></tr></table>   | N | F | F            | V              | FUNCTION       | FUNCTION WIDTH | FUNCTION VALUE | 1 | N | 1 | f | 2.433 5 GHz |  | -7.255 dBm | 2 | N | 1 | f | 25.084 7 GHz |  | -41.287 dBm | 3 | N | 1 | f | 4.843 7 GHz |  | -56.833 dBm | 4 | N | 1 | f | 7.098 4 GHz |  | -54.693 dBm | 5 | N | 1 | f | 9.603 6 GHz |  | -54.235 dBm |
|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|---|--------------|----------------|----------------|----------------|----------------|---|---|---|---|-------------|--|------------|---|---|---|---|--------------|--|-------------|---|---|---|---|-------------|--|-------------|---|---|---|---|-------------|--|-------------|---|---|---|---|-------------|--|-------------|
| N                         | F                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | F | V | FUNCTION     | FUNCTION WIDTH | FUNCTION VALUE |                |                |   |   |   |   |             |  |            |   |   |   |   |              |  |             |   |   |   |   |             |  |             |   |   |   |   |             |  |             |   |   |   |   |             |  |             |
| 1                         | N                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 1 | f | 2.433 5 GHz  |                | -7.255 dBm     |                |                |   |   |   |   |             |  |            |   |   |   |   |              |  |             |   |   |   |   |             |  |             |   |   |   |   |             |  |             |   |   |   |   |             |  |             |
| 2                         | N                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 1 | f | 25.084 7 GHz |                | -41.287 dBm    |                |                |   |   |   |   |             |  |            |   |   |   |   |              |  |             |   |   |   |   |             |  |             |   |   |   |   |             |  |             |   |   |   |   |             |  |             |
| 3                         | N                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 1 | f | 4.843 7 GHz  |                | -56.833 dBm    |                |                |   |   |   |   |             |  |            |   |   |   |   |              |  |             |   |   |   |   |             |  |             |   |   |   |   |             |  |             |   |   |   |   |             |  |             |
| 4                         | N                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 1 | f | 7.098 4 GHz  |                | -54.693 dBm    |                |                |   |   |   |   |             |  |            |   |   |   |   |              |  |             |   |   |   |   |             |  |             |   |   |   |   |             |  |             |   |   |   |   |             |  |             |
| 5                         | N                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 1 | f | 9.603 6 GHz  |                | -54.235 dBm    |                |                |   |   |   |   |             |  |            |   |   |   |   |              |  |             |   |   |   |   |             |  |             |   |   |   |   |             |  |             |   |   |   |   |             |  |             |
| 802.11<br>n(HT40)<br>/MCH |  <table><tr><th>N</th><th>F</th><th>F</th><th>V</th><th>FUNCTION</th><th>FUNCTION WIDTH</th><th>FUNCTION VALUE</th></tr><tr><td>1</td><td>N</td><td>1</td><td>f</td><td>2.439 7 GHz</td><td></td><td>-8.106 dBm</td></tr><tr><td>2</td><td>N</td><td>1</td><td>f</td><td>24.670 9 GHz</td><td></td><td>-40.985 dBm</td></tr><tr><td>3</td><td>N</td><td>1</td><td>f</td><td>4.708 5 GHz</td><td></td><td>-56.353 dBm</td></tr><tr><td>4</td><td>N</td><td>1</td><td>f</td><td>7.332 2 GHz</td><td></td><td>-54.679 dBm</td></tr><tr><td>5</td><td>N</td><td>1</td><td>f</td><td>9.607 7 GHz</td><td></td><td>-56.117 dBm</td></tr></table>  | N | F | F            | V              | FUNCTION       | FUNCTION WIDTH | FUNCTION VALUE | 1 | N | 1 | f | 2.439 7 GHz |  | -8.106 dBm | 2 | N | 1 | f | 24.670 9 GHz |  | -40.985 dBm | 3 | N | 1 | f | 4.708 5 GHz |  | -56.353 dBm | 4 | N | 1 | f | 7.332 2 GHz |  | -54.679 dBm | 5 | N | 1 | f | 9.607 7 GHz |  | -56.117 dBm |
| N                         | F                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | F | V | FUNCTION     | FUNCTION WIDTH | FUNCTION VALUE |                |                |   |   |   |   |             |  |            |   |   |   |   |              |  |             |   |   |   |   |             |  |             |   |   |   |   |             |  |             |   |   |   |   |             |  |             |
| 1                         | N                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 1 | f | 2.439 7 GHz  |                | -8.106 dBm     |                |                |   |   |   |   |             |  |            |   |   |   |   |              |  |             |   |   |   |   |             |  |             |   |   |   |   |             |  |             |   |   |   |   |             |  |             |
| 2                         | N                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 1 | f | 24.670 9 GHz |                | -40.985 dBm    |                |                |   |   |   |   |             |  |            |   |   |   |   |              |  |             |   |   |   |   |             |  |             |   |   |   |   |             |  |             |   |   |   |   |             |  |             |
| 3                         | N                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 1 | f | 4.708 5 GHz  |                | -56.353 dBm    |                |                |   |   |   |   |             |  |            |   |   |   |   |              |  |             |   |   |   |   |             |  |             |   |   |   |   |             |  |             |   |   |   |   |             |  |             |
| 4                         | N                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 1 | f | 7.332 2 GHz  |                | -54.679 dBm    |                |                |   |   |   |   |             |  |            |   |   |   |   |              |  |             |   |   |   |   |             |  |             |   |   |   |   |             |  |             |   |   |   |   |             |  |             |
| 5                         | N                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 1 | f | 9.607 7 GHz  |                | -56.117 dBm    |                |                |   |   |   |   |             |  |            |   |   |   |   |              |  |             |   |   |   |   |             |  |             |   |   |   |   |             |  |             |   |   |   |   |             |  |             |
| 802.11<br>n(HT40)<br>/HCH |  <table><tr><th>N</th><th>F</th><th>F</th><th>V</th><th>FUNCTION</th><th>FUNCTION WIDTH</th><th>FUNCTION VALUE</th></tr><tr><td>1</td><td>N</td><td>1</td><td>f</td><td>2.440 5 GHz</td><td></td><td>-8.609 dBm</td></tr><tr><td>2</td><td>N</td><td>1</td><td>f</td><td>24.615 3 GHz</td><td></td><td>-41.445 dBm</td></tr><tr><td>3</td><td>N</td><td>1</td><td>f</td><td>5.075 1 GHz</td><td></td><td>-55.345 dBm</td></tr><tr><td>4</td><td>N</td><td>1</td><td>f</td><td>7.441 3 GHz</td><td></td><td>-56.034 dBm</td></tr><tr><td>5</td><td>N</td><td>1</td><td>f</td><td>9.644 8 GHz</td><td></td><td>-56.307 dBm</td></tr></table> | N | F | F            | V              | FUNCTION       | FUNCTION WIDTH | FUNCTION VALUE | 1 | N | 1 | f | 2.440 5 GHz |  | -8.609 dBm | 2 | N | 1 | f | 24.615 3 GHz |  | -41.445 dBm | 3 | N | 1 | f | 5.075 1 GHz |  | -55.345 dBm | 4 | N | 1 | f | 7.441 3 GHz |  | -56.034 dBm | 5 | N | 1 | f | 9.644 8 GHz |  | -56.307 dBm |
| N                         | F                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | F | V | FUNCTION     | FUNCTION WIDTH | FUNCTION VALUE |                |                |   |   |   |   |             |  |            |   |   |   |   |              |  |             |   |   |   |   |             |  |             |   |   |   |   |             |  |             |   |   |   |   |             |  |             |
| 1                         | N                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 1 | f | 2.440 5 GHz  |                | -8.609 dBm     |                |                |   |   |   |   |             |  |            |   |   |   |   |              |  |             |   |   |   |   |             |  |             |   |   |   |   |             |  |             |   |   |   |   |             |  |             |
| 2                         | N                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 1 | f | 24.615 3 GHz |                | -41.445 dBm    |                |                |   |   |   |   |             |  |            |   |   |   |   |              |  |             |   |   |   |   |             |  |             |   |   |   |   |             |  |             |   |   |   |   |             |  |             |
| 3                         | N                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 1 | f | 5.075 1 GHz  |                | -55.345 dBm    |                |                |   |   |   |   |             |  |            |   |   |   |   |              |  |             |   |   |   |   |             |  |             |   |   |   |   |             |  |             |   |   |   |   |             |  |             |
| 4                         | N                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 1 | f | 7.441 3 GHz  |                | -56.034 dBm    |                |                |   |   |   |   |             |  |            |   |   |   |   |              |  |             |   |   |   |   |             |  |             |   |   |   |   |             |  |             |   |   |   |   |             |  |             |
| 5                         | N                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 1 | f | 9.644 8 GHz  |                | -56.307 dBm    |                |                |   |   |   |   |             |  |            |   |   |   |   |              |  |             |   |   |   |   |             |  |             |   |   |   |   |             |  |             |   |   |   |   |             |  |             |

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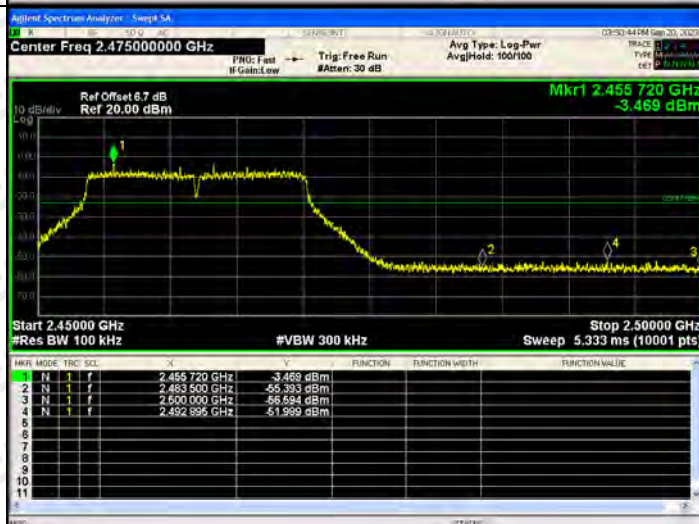


# BAND EDGE Graphs

802.11g/LCH

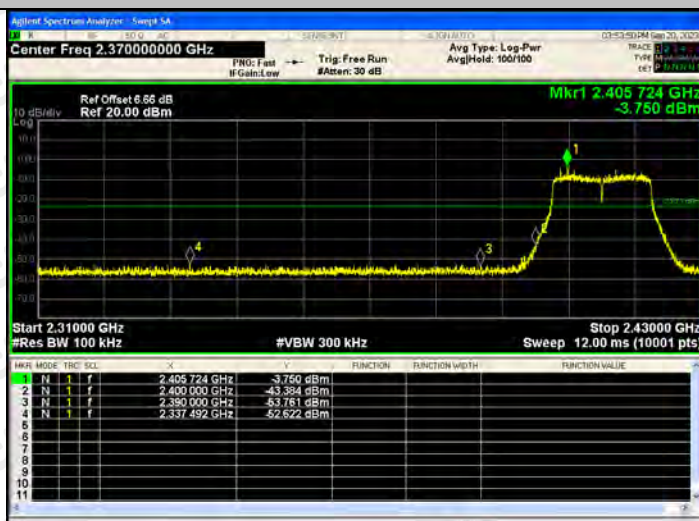


802.11g/HCH



# BAND EDGE Graphs

802.11n(HT20)/L  
CH

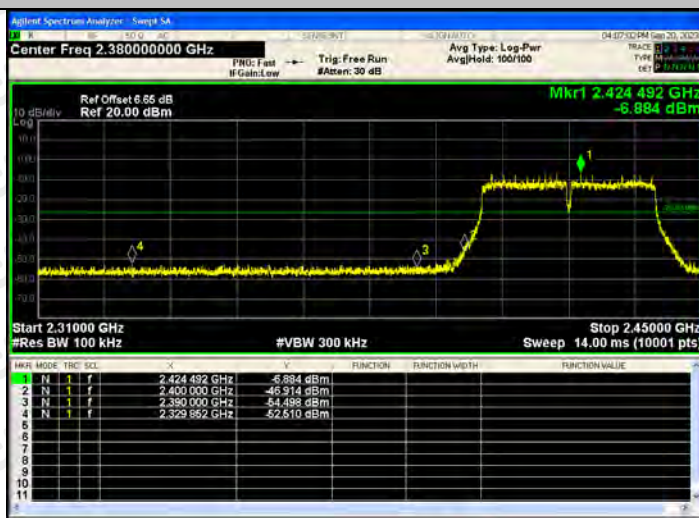


802.11n(HT20)/H  
CH



# BAND EDGE Graphs

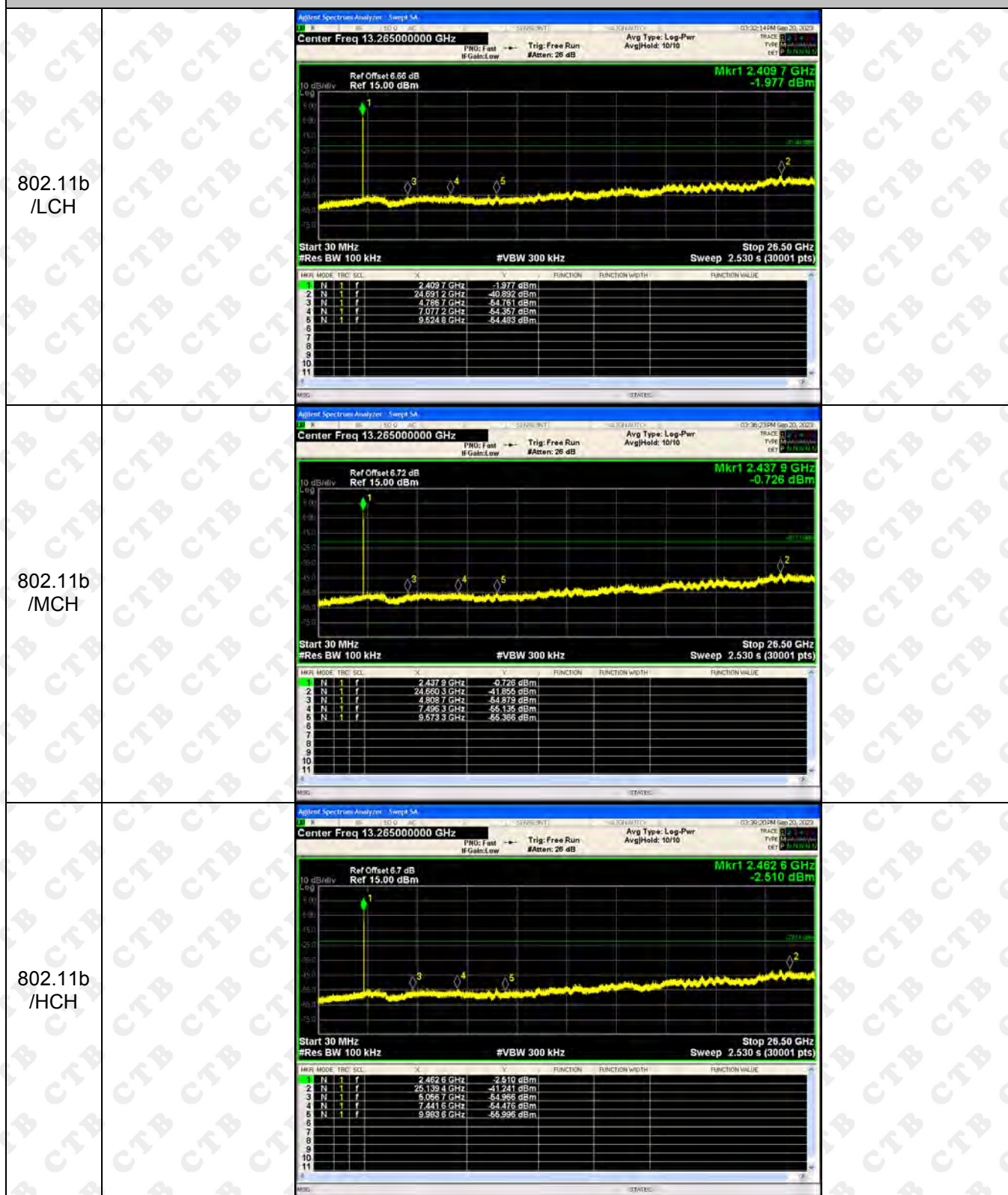
802.11n(HT40)/L  
CH



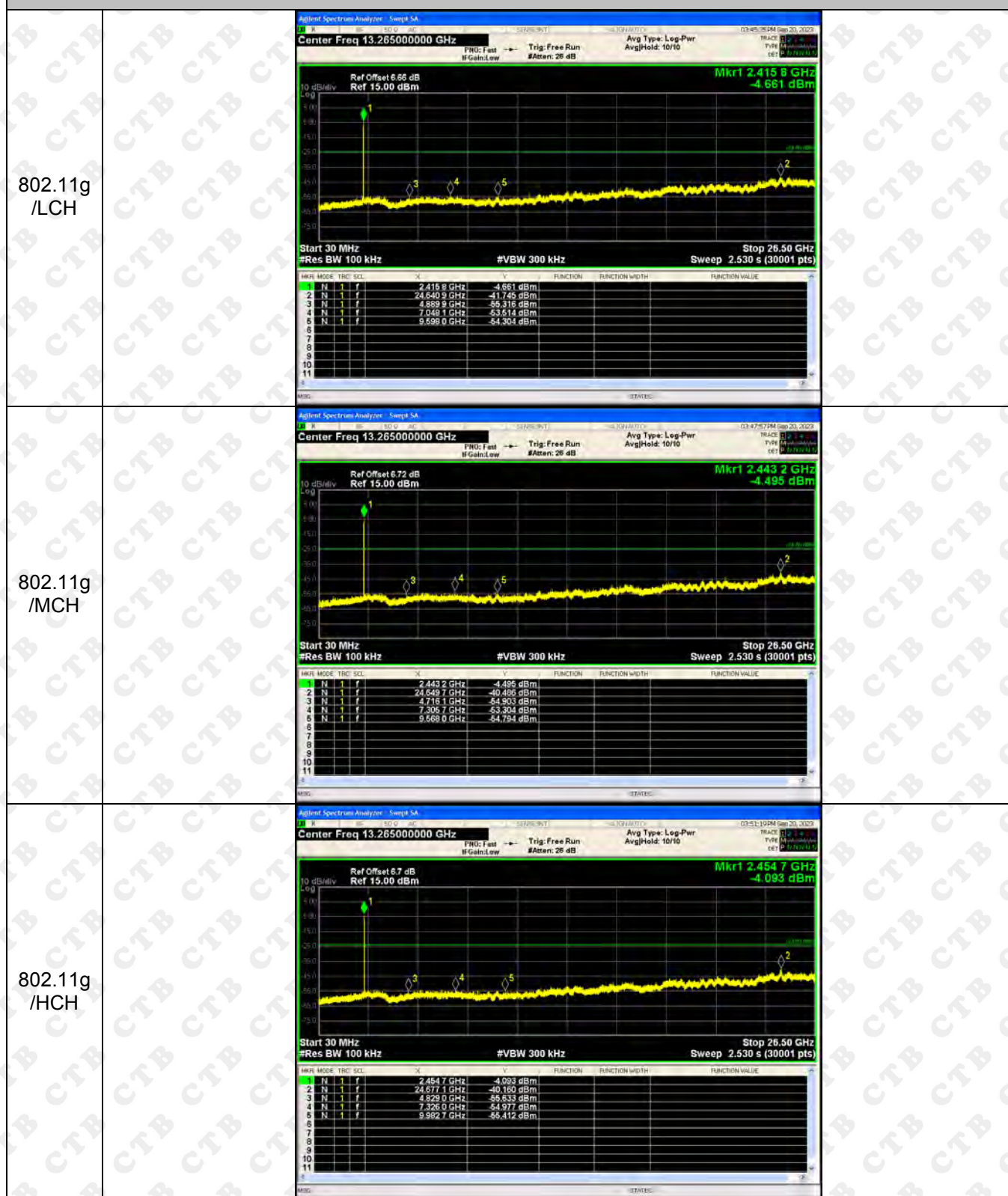
802.11n(HT40)/H  
CH



## RF Conducted Spurious Emissions Graphs



## RF Conducted Spurious Emissions Graphs



## RF Conducted Spurious Emissions Graphs

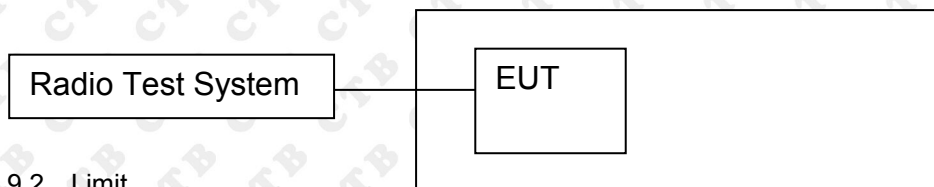
| 802.11n<br>(HT20)/<br>LCH | <table><tr><th>CH</th><th>Freq</th><th>Power</th></tr><tr><td>1</td><td>2.4167 GHz</td><td>-5.961 dBm</td></tr><tr><td>2</td><td>24.6374 GHz</td><td>-41.281 dBm</td></tr><tr><td>3</td><td>4.8705 GHz</td><td>-54.923 dBm</td></tr><tr><td>4</td><td>7.4098 GHz</td><td>-54.745 dBm</td></tr><tr><td>5</td><td>9.5777 GHz</td><td>-54.512 dBm</td></tr></table> | CH          | Freq | Power | 1 | 2.4167 GHz | -5.961 dBm | 2 | 24.6374 GHz | -41.281 dBm | 3 | 4.8705 GHz | -54.923 dBm | 4 | 7.4098 GHz | -54.745 dBm | 5 | 9.5777 GHz | -54.512 dBm |
|---------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|------|-------|---|------------|------------|---|-------------|-------------|---|------------|-------------|---|------------|-------------|---|------------|-------------|
| CH                        | Freq                                                                                                                                                                                                                                                                                                                                                             | Power       |      |       |   |            |            |   |             |             |   |            |             |   |            |             |   |            |             |
| 1                         | 2.4167 GHz                                                                                                                                                                                                                                                                                                                                                       | -5.961 dBm  |      |       |   |            |            |   |             |             |   |            |             |   |            |             |   |            |             |
| 2                         | 24.6374 GHz                                                                                                                                                                                                                                                                                                                                                      | -41.281 dBm |      |       |   |            |            |   |             |             |   |            |             |   |            |             |   |            |             |
| 3                         | 4.8705 GHz                                                                                                                                                                                                                                                                                                                                                       | -54.923 dBm |      |       |   |            |            |   |             |             |   |            |             |   |            |             |   |            |             |
| 4                         | 7.4098 GHz                                                                                                                                                                                                                                                                                                                                                       | -54.745 dBm |      |       |   |            |            |   |             |             |   |            |             |   |            |             |   |            |             |
| 5                         | 9.5777 GHz                                                                                                                                                                                                                                                                                                                                                       | -54.512 dBm |      |       |   |            |            |   |             |             |   |            |             |   |            |             |   |            |             |
| 802.11<br>n(HT20)<br>/MCH | <table><tr><th>CH</th><th>Freq</th><th>Power</th></tr><tr><td>1</td><td>2.4317 GHz</td><td>-4.826 dBm</td></tr><tr><td>2</td><td>24.6833 GHz</td><td>-41.248 dBm</td></tr><tr><td>3</td><td>4.9678 GHz</td><td>-56.633 dBm</td></tr><tr><td>4</td><td>7.4478 GHz</td><td>-54.237 dBm</td></tr><tr><td>5</td><td>9.5768 GHz</td><td>-54.920 dBm</td></tr></table> | CH          | Freq | Power | 1 | 2.4317 GHz | -4.826 dBm | 2 | 24.6833 GHz | -41.248 dBm | 3 | 4.9678 GHz | -56.633 dBm | 4 | 7.4478 GHz | -54.237 dBm | 5 | 9.5768 GHz | -54.920 dBm |
| CH                        | Freq                                                                                                                                                                                                                                                                                                                                                             | Power       |      |       |   |            |            |   |             |             |   |            |             |   |            |             |   |            |             |
| 1                         | 2.4317 GHz                                                                                                                                                                                                                                                                                                                                                       | -4.826 dBm  |      |       |   |            |            |   |             |             |   |            |             |   |            |             |   |            |             |
| 2                         | 24.6833 GHz                                                                                                                                                                                                                                                                                                                                                      | -41.248 dBm |      |       |   |            |            |   |             |             |   |            |             |   |            |             |   |            |             |
| 3                         | 4.9678 GHz                                                                                                                                                                                                                                                                                                                                                       | -56.633 dBm |      |       |   |            |            |   |             |             |   |            |             |   |            |             |   |            |             |
| 4                         | 7.4478 GHz                                                                                                                                                                                                                                                                                                                                                       | -54.237 dBm |      |       |   |            |            |   |             |             |   |            |             |   |            |             |   |            |             |
| 5                         | 9.5768 GHz                                                                                                                                                                                                                                                                                                                                                       | -54.920 dBm |      |       |   |            |            |   |             |             |   |            |             |   |            |             |   |            |             |
| 802.11<br>n(HT20)<br>/HCH | <table><tr><th>CH</th><th>Freq</th><th>Power</th></tr><tr><td>1</td><td>2.4661 GHz</td><td>-8.188 dBm</td></tr><tr><td>2</td><td>25.1209 GHz</td><td>-41.281 dBm</td></tr><tr><td>3</td><td>4.7984 GHz</td><td>-56.403 dBm</td></tr><tr><td>4</td><td>7.3931 GHz</td><td>-53.901 dBm</td></tr><tr><td>5</td><td>9.7860 GHz</td><td>-56.567 dBm</td></tr></table> | CH          | Freq | Power | 1 | 2.4661 GHz | -8.188 dBm | 2 | 25.1209 GHz | -41.281 dBm | 3 | 4.7984 GHz | -56.403 dBm | 4 | 7.3931 GHz | -53.901 dBm | 5 | 9.7860 GHz | -56.567 dBm |
| CH                        | Freq                                                                                                                                                                                                                                                                                                                                                             | Power       |      |       |   |            |            |   |             |             |   |            |             |   |            |             |   |            |             |
| 1                         | 2.4661 GHz                                                                                                                                                                                                                                                                                                                                                       | -8.188 dBm  |      |       |   |            |            |   |             |             |   |            |             |   |            |             |   |            |             |
| 2                         | 25.1209 GHz                                                                                                                                                                                                                                                                                                                                                      | -41.281 dBm |      |       |   |            |            |   |             |             |   |            |             |   |            |             |   |            |             |
| 3                         | 4.7984 GHz                                                                                                                                                                                                                                                                                                                                                       | -56.403 dBm |      |       |   |            |            |   |             |             |   |            |             |   |            |             |   |            |             |
| 4                         | 7.3931 GHz                                                                                                                                                                                                                                                                                                                                                       | -53.901 dBm |      |       |   |            |            |   |             |             |   |            |             |   |            |             |   |            |             |
| 5                         | 9.7860 GHz                                                                                                                                                                                                                                                                                                                                                       | -56.567 dBm |      |       |   |            |            |   |             |             |   |            |             |   |            |             |   |            |             |

## RF Conducted Spurious Emissions Graphs



## 9. COUDUCTED OUTPUT POWER

### 9.1 Block Diagram Of Test Setup



### 9.2 Limit

| FCC Part15 (15.247) , Subpart C |                   |                 |                       |        |
|---------------------------------|-------------------|-----------------|-----------------------|--------|
| Section                         | Test Item         | Limit           | Frequency Range (MHz) | Result |
| 15.247(b)(3)                    | Peak Output Power | 1 watt or 30dBm | 2400-2483.5           | PASS   |

### 9.3 Test procedure

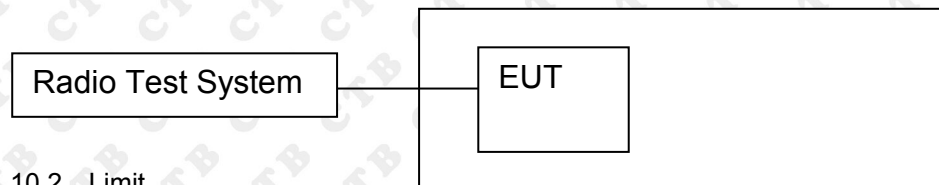
1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum.
2. Set the spectrum analyzer: RBW = 1MHz. VBW = 3MHz. Sweep = auto; Detector Function = Peak. Channel power function is used
3. Keep the EUT in transmitting at lowest, middle and highest channel individually. Record the max value.

#### 9.4 Test Result

| Mode          | Channel. | Maximum Peak Power [dBm] ant 1 | Maximum Peak Power [dBm] ant 2 | Total Power Peak Output Power(dBm) | Limit[dBm] |
|---------------|----------|--------------------------------|--------------------------------|------------------------------------|------------|
| 802.11b       | LCH      | 14.648                         | 14.738                         | /                                  | 30         |
|               | MCH      | 14.102                         | 14.896                         | /                                  | 30         |
|               | HCH      | 14.806                         | 14.867                         | /                                  | 30         |
| 802.11g       | LCH      | 14.263                         | 14.377                         | /                                  | 30         |
|               | MCH      | 14.449                         | 14.663                         | /                                  | 30         |
|               | HCH      | 14.494                         | 14.44                          | /                                  | 30         |
| 802.11n(HT20) | LCH      | 14.181                         | 14.125                         | 17.163                             | 30         |
|               | MCH      | 14.455                         | 14.385                         | 17.430                             | 30         |
|               | HCH      | 14.383                         | 14.226                         | 17.316                             | 30         |
| 802.11n(HT40) | LCH      | 13.801                         | 13.874                         | 16.848                             | 30         |
|               | MCH      | 14.01                          | 13.86                          | 16.946                             | 30         |
|               | HCH      | 14.025                         | 13.621                         | 16.838                             | 30         |

## 10. 6DB OCCUPIED BANDWIDTH

### 10.1 Block Diagram Of Test Setup



### 10.2 Limit

| FCC Part15 (15.247) , Subpart C |           |                                         |                       |        |
|---------------------------------|-----------|-----------------------------------------|-----------------------|--------|
| Section                         | Test Item | Limit                                   | Frequency Range (MHz) | Result |
| 15.247(a)(2)                    | Bandwidth | $\geq 500\text{KHz}$<br>(6dB bandwidth) | 2400-2483.5           | PASS   |

### 10.3 Test procedure

1. Rem1. Set RBW = 100 kHz.
2. Set the video bandwidth (VBW)  $\geq 3 \times \text{RBW}$ .
3. Detector = Peak.
4. Trace mode = max hold.
5. Sweep = auto couple.
6. Allow the trace to stabilize.
7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

#### 10.4 Test Result

ANT1:

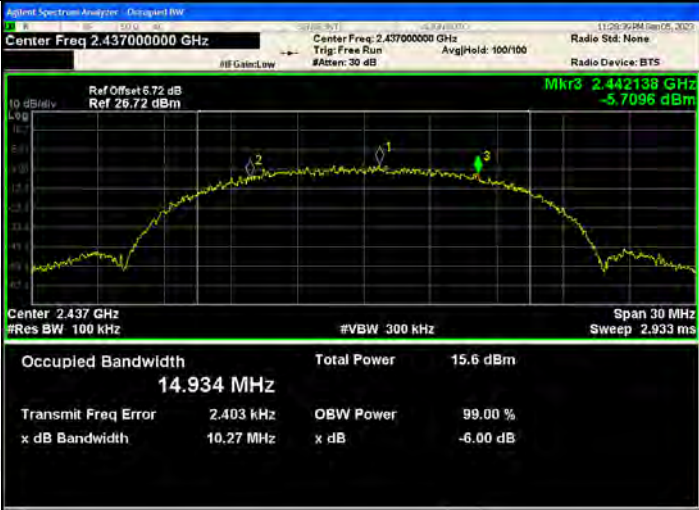
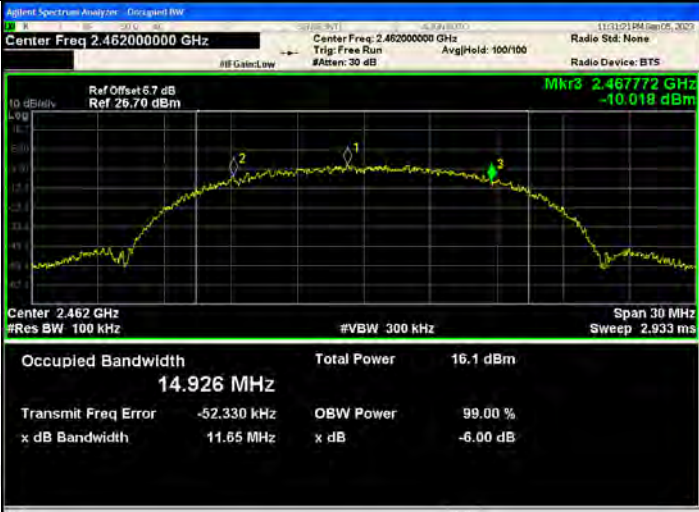
| Test Mode     | Frequency | 6dB Bandwidth (MHz) | Limit(kHz) | Result |
|---------------|-----------|---------------------|------------|--------|
| 802.11b       | LCH       | 10.614              | 500        | PASS   |
|               | MCH       | 10.272              | 500        | PASS   |
|               | HCH       | 11.649              | 500        | PASS   |
| 802.11g       | LCH       | 16.349              | 500        | PASS   |
|               | MCH       | 16.41               | 500        | PASS   |
|               | HCH       | 16.39               | 500        | PASS   |
| 802.11n(HT20) | LCH       | 17.206              | 500        | PASS   |
|               | MCH       | 17.103              | 500        | PASS   |
|               | HCH       | 17.588              | 500        | PASS   |
| 802.11n(HT40) | LCH       | 35.528              | 500        | PASS   |
|               | MCH       | 35.647              | 500        | PASS   |
|               | HCH       | 35.965              | 500        | PASS   |

ANT2:

| Test Mode     | Frequency | 6dB Bandwidth (MHz) | Limit(kHz) | Result |
|---------------|-----------|---------------------|------------|--------|
| 802.11b       | LCH       | 9.976               | 500        | PASS   |
|               | MCH       | 9.629               | 500        | PASS   |
|               | HCH       | 9.759               | 500        | PASS   |
| 802.11g       | LCH       | 16.301              | 500        | PASS   |
|               | MCH       | 16.392              | 500        | PASS   |
|               | HCH       | 16.43               | 500        | PASS   |
| 802.11n(HT20) | LCH       | 17.349              | 500        | PASS   |
|               | MCH       | 16.974              | 500        | PASS   |
|               | HCH       | 17.536              | 500        | PASS   |
| 802.11n(HT40) | LCH       | 35.439              | 500        | PASS   |
|               | MCH       | 35.733              | 500        | PASS   |
|               | HCH       | 35.781              | 500        | PASS   |

ANT1:

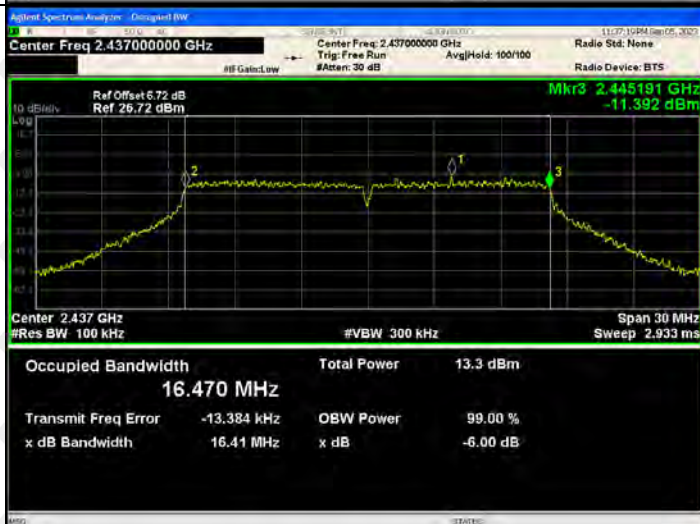
Test Graph:

| Graphs       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 802.11b /LCH |  <p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 2.412000000 GHz</p> <p>Ref Offset: 6.66 dB<br/>Ref: 26.66 dBm</p> <p>Mkr3: 2.417259 GHz<br/>-9.9486 dBm</p> <p>Center: 2.412 GHz<br/>#Res BW: 100 kHz<br/>#VBW: 300 kHz<br/>Span: 30 MHz<br/>Sweep: 2.933 ms</p> <p>Occupied Bandwidth: 14.913 MHz</p> <p>Total Power: 16.2 dBm</p> <p>Transmit Freq Error: -47.893 kHz</p> <p>OBW Power: 99.00 %</p> <p>x dB Bandwidth: 10.61 MHz</p> <p>x dB: -6.00 dB</p>  |
| 802.11b /MCH |  <p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 2.437000000 GHz</p> <p>Ref Offset: 6.72 dB<br/>Ref: 26.72 dBm</p> <p>Mkr3: 2.442138 GHz<br/>-5.7096 dBm</p> <p>Center: 2.437 GHz<br/>#Res BW: 100 kHz<br/>#VBW: 300 kHz<br/>Span: 30 MHz<br/>Sweep: 2.933 ms</p> <p>Occupied Bandwidth: 14.934 MHz</p> <p>Total Power: 15.6 dBm</p> <p>Transmit Freq Error: 2.403 kHz</p> <p>OBW Power: 99.00 %</p> <p>x dB Bandwidth: 10.27 MHz</p> <p>x dB: -6.00 dB</p>   |
| 802.11b/HCH  |  <p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 2.462000000 GHz</p> <p>Ref Offset: 6.7 dB<br/>Ref: 26.70 dBm</p> <p>Mkr3: 2.467772 GHz<br/>-10.018 dBm</p> <p>Center: 2.462 GHz<br/>#Res BW: 100 kHz<br/>#VBW: 300 kHz<br/>Span: 30 MHz<br/>Sweep: 2.933 ms</p> <p>Occupied Bandwidth: 14.926 MHz</p> <p>Total Power: 16.1 dBm</p> <p>Transmit Freq Error: -52.330 kHz</p> <p>OBW Power: 99.00 %</p> <p>x dB Bandwidth: 11.65 MHz</p> <p>x dB: -6.00 dB</p> |

802.11g/LCH

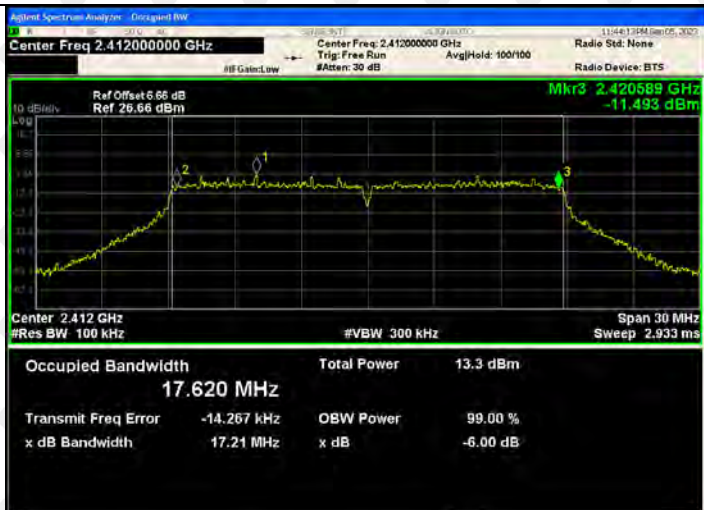


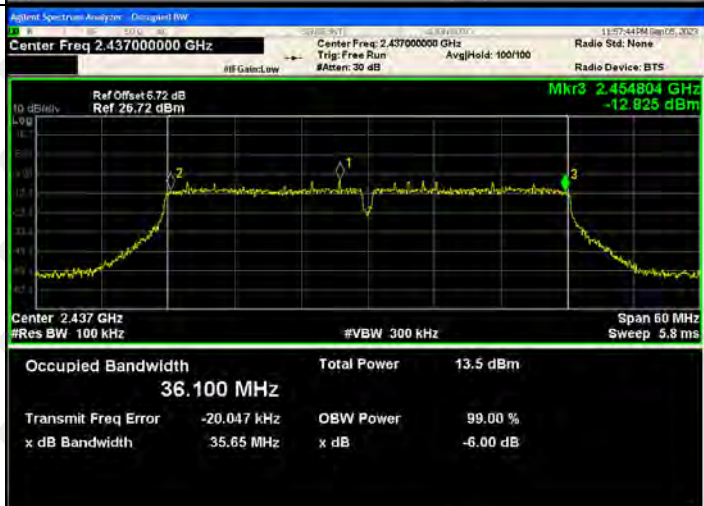
802.11g/MCH



802.11g/HCH

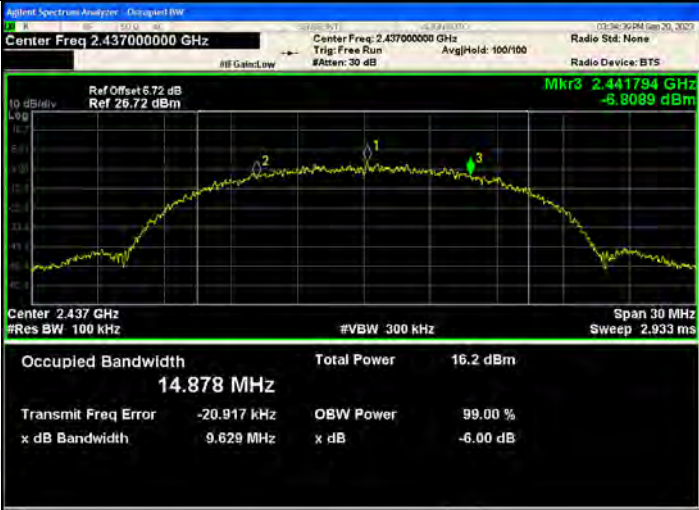


|                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                    |             |          |            |  |  |                     |           |         |             |      |          |                |  |  |           |  |  |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-------------|----------|------------|--|--|---------------------|-----------|---------|-------------|------|----------|----------------|--|--|-----------|--|--|
| 802.11n(HT20)/LC<br>H |  <p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 2.41200000 GHz</p> <p>Ref Offset: 6.66 dB<br/>Ref: 26.66 dBm</p> <p>Mkr3: 2.420589 GHz<br/>-11.493 dBm</p> <p>Center: 2.412 GHz<br/>#Res BW: 100 kHz</p> <p>#VBW: 300 kHz</p> <p>Span: 30 MHz<br/>Sweep: 2.933 ms</p> <table><tr><td>Occupied Bandwidth</td><td>Total Power</td><td>13.3 dBm</td></tr><tr><td>17.620 MHz</td><td></td><td></td></tr><tr><td>Transmit Freq Error</td><td>OBW Power</td><td>99.00 %</td></tr><tr><td>-14.267 kHz</td><td>x dB</td><td>-6.00 dB</td></tr><tr><td>x dB Bandwidth</td><td></td><td></td></tr><tr><td>17.21 MHz</td><td></td><td></td></tr></table>  | Occupied Bandwidth | Total Power | 13.3 dBm | 17.620 MHz |  |  | Transmit Freq Error | OBW Power | 99.00 % | -14.267 kHz | x dB | -6.00 dB | x dB Bandwidth |  |  | 17.21 MHz |  |  |
| Occupied Bandwidth    | Total Power                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 13.3 dBm           |             |          |            |  |  |                     |           |         |             |      |          |                |  |  |           |  |  |
| 17.620 MHz            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                    |             |          |            |  |  |                     |           |         |             |      |          |                |  |  |           |  |  |
| Transmit Freq Error   | OBW Power                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 99.00 %            |             |          |            |  |  |                     |           |         |             |      |          |                |  |  |           |  |  |
| -14.267 kHz           | x dB                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | -6.00 dB           |             |          |            |  |  |                     |           |         |             |      |          |                |  |  |           |  |  |
| x dB Bandwidth        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                    |             |          |            |  |  |                     |           |         |             |      |          |                |  |  |           |  |  |
| 17.21 MHz             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                    |             |          |            |  |  |                     |           |         |             |      |          |                |  |  |           |  |  |
| 802.11n(HT20)/MC<br>H |  <p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 2.43700000 GHz</p> <p>Ref Offset: 6.72 dB<br/>Ref: 26.72 dBm</p> <p>Mkr3: 2.445546 GHz<br/>-9.4413 dBm</p> <p>Center: 2.437 GHz<br/>#Res BW: 100 kHz</p> <p>#VBW: 300 kHz</p> <p>Span: 30 MHz<br/>Sweep: 2.933 ms</p> <table><tr><td>Occupied Bandwidth</td><td>Total Power</td><td>13.5 dBm</td></tr><tr><td>17.616 MHz</td><td></td><td></td></tr><tr><td>Transmit Freq Error</td><td>OBW Power</td><td>99.00 %</td></tr><tr><td>-5.374 kHz</td><td>x dB</td><td>-6.00 dB</td></tr><tr><td>x dB Bandwidth</td><td></td><td></td></tr><tr><td>17.10 MHz</td><td></td><td></td></tr></table>  | Occupied Bandwidth | Total Power | 13.5 dBm | 17.616 MHz |  |  | Transmit Freq Error | OBW Power | 99.00 % | -5.374 kHz  | x dB | -6.00 dB | x dB Bandwidth |  |  | 17.10 MHz |  |  |
| Occupied Bandwidth    | Total Power                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 13.5 dBm           |             |          |            |  |  |                     |           |         |             |      |          |                |  |  |           |  |  |
| 17.616 MHz            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                    |             |          |            |  |  |                     |           |         |             |      |          |                |  |  |           |  |  |
| Transmit Freq Error   | OBW Power                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 99.00 %            |             |          |            |  |  |                     |           |         |             |      |          |                |  |  |           |  |  |
| -5.374 kHz            | x dB                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | -6.00 dB           |             |          |            |  |  |                     |           |         |             |      |          |                |  |  |           |  |  |
| x dB Bandwidth        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                    |             |          |            |  |  |                     |           |         |             |      |          |                |  |  |           |  |  |
| 17.10 MHz             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                    |             |          |            |  |  |                     |           |         |             |      |          |                |  |  |           |  |  |
| 802.11n(HT20)/HC<br>H |  <p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 2.46200000 GHz</p> <p>Ref Offset: 6.7 dB<br/>Ref: 26.70 dBm</p> <p>Mkr3: 2.470776 GHz<br/>-11.096 dBm</p> <p>Center: 2.462 GHz<br/>#Res BW: 100 kHz</p> <p>#VBW: 300 kHz</p> <p>Span: 30 MHz<br/>Sweep: 2.933 ms</p> <table><tr><td>Occupied Bandwidth</td><td>Total Power</td><td>13.4 dBm</td></tr><tr><td>17.619 MHz</td><td></td><td></td></tr><tr><td>Transmit Freq Error</td><td>OBW Power</td><td>99.00 %</td></tr><tr><td>-17.969 kHz</td><td>x dB</td><td>-6.00 dB</td></tr><tr><td>x dB Bandwidth</td><td></td><td></td></tr><tr><td>17.59 MHz</td><td></td><td></td></tr></table> | Occupied Bandwidth | Total Power | 13.4 dBm | 17.619 MHz |  |  | Transmit Freq Error | OBW Power | 99.00 % | -17.969 kHz | x dB | -6.00 dB | x dB Bandwidth |  |  | 17.59 MHz |  |  |
| Occupied Bandwidth    | Total Power                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 13.4 dBm           |             |          |            |  |  |                     |           |         |             |      |          |                |  |  |           |  |  |
| 17.619 MHz            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                    |             |          |            |  |  |                     |           |         |             |      |          |                |  |  |           |  |  |
| Transmit Freq Error   | OBW Power                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 99.00 %            |             |          |            |  |  |                     |           |         |             |      |          |                |  |  |           |  |  |
| -17.969 kHz           | x dB                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | -6.00 dB           |             |          |            |  |  |                     |           |         |             |      |          |                |  |  |           |  |  |
| x dB Bandwidth        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                    |             |          |            |  |  |                     |           |         |             |      |          |                |  |  |           |  |  |
| 17.59 MHz             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                    |             |          |            |  |  |                     |           |         |             |      |          |                |  |  |           |  |  |

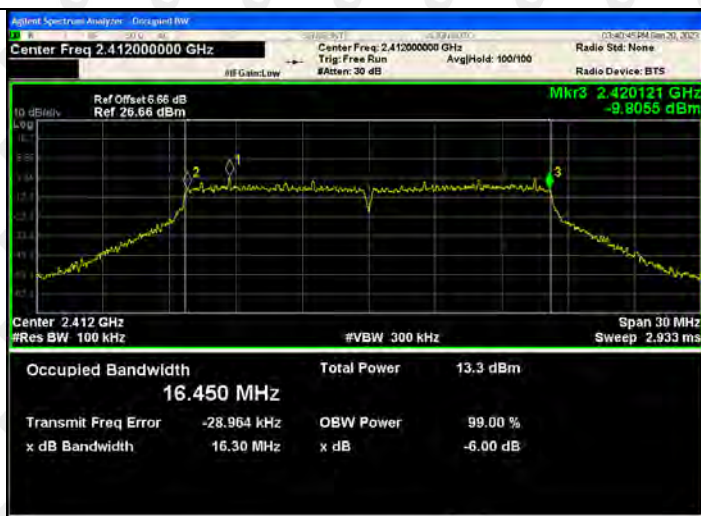
|                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                    |             |          |            |  |  |                     |           |         |             |      |          |                |  |  |           |  |  |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-------------|----------|------------|--|--|---------------------|-----------|---------|-------------|------|----------|----------------|--|--|-----------|--|--|
| 802.11n(HT40)/LC<br>H |  <p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 2.422000000 GHz</p> <p>Ref Offset: 6.65 dB<br/>Ref: 26.65 dBm</p> <p>Mkr3: 2.43975 GHz<br/>-13.347 dBm</p> <p>Center: 2.422 GHz<br/>#Res BW: 100 kHz</p> <p>#VBW: 300 kHz</p> <p>Span: 60 MHz<br/>Sweep: 5.8 ms</p> <table><tr><td>Occupied Bandwidth</td><td>Total Power</td><td>13.4 dBm</td></tr><tr><td>36.079 MHz</td><td></td><td></td></tr><tr><td>Transmit Freq Error</td><td>OBW Power</td><td>99.00 %</td></tr><tr><td>-14.262 kHz</td><td>x dB</td><td>-6.00 dB</td></tr><tr><td>x dB Bandwidth</td><td></td><td></td></tr><tr><td>35.53 MHz</td><td></td><td></td></tr></table>   | Occupied Bandwidth | Total Power | 13.4 dBm | 36.079 MHz |  |  | Transmit Freq Error | OBW Power | 99.00 % | -14.262 kHz | x dB | -6.00 dB | x dB Bandwidth |  |  | 35.53 MHz |  |  |
| Occupied Bandwidth    | Total Power                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 13.4 dBm           |             |          |            |  |  |                     |           |         |             |      |          |                |  |  |           |  |  |
| 36.079 MHz            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                    |             |          |            |  |  |                     |           |         |             |      |          |                |  |  |           |  |  |
| Transmit Freq Error   | OBW Power                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 99.00 %            |             |          |            |  |  |                     |           |         |             |      |          |                |  |  |           |  |  |
| -14.262 kHz           | x dB                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | -6.00 dB           |             |          |            |  |  |                     |           |         |             |      |          |                |  |  |           |  |  |
| x dB Bandwidth        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                    |             |          |            |  |  |                     |           |         |             |      |          |                |  |  |           |  |  |
| 35.53 MHz             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                    |             |          |            |  |  |                     |           |         |             |      |          |                |  |  |           |  |  |
| 802.11n(HT40)/MC<br>H |  <p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 2.437000000 GHz</p> <p>Ref Offset: 6.72 dB<br/>Ref: 26.72 dBm</p> <p>Mkr3: 2.454804 GHz<br/>-12.925 dBm</p> <p>Center: 2.437 GHz<br/>#Res BW: 100 kHz</p> <p>#VBW: 300 kHz</p> <p>Span: 60 MHz<br/>Sweep: 5.8 ms</p> <table><tr><td>Occupied Bandwidth</td><td>Total Power</td><td>13.5 dBm</td></tr><tr><td>36.100 MHz</td><td></td><td></td></tr><tr><td>Transmit Freq Error</td><td>OBW Power</td><td>99.00 %</td></tr><tr><td>-20.047 kHz</td><td>x dB</td><td>-6.00 dB</td></tr><tr><td>x dB Bandwidth</td><td></td><td></td></tr><tr><td>35.65 MHz</td><td></td><td></td></tr></table> | Occupied Bandwidth | Total Power | 13.5 dBm | 36.100 MHz |  |  | Transmit Freq Error | OBW Power | 99.00 % | -20.047 kHz | x dB | -6.00 dB | x dB Bandwidth |  |  | 35.65 MHz |  |  |
| Occupied Bandwidth    | Total Power                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 13.5 dBm           |             |          |            |  |  |                     |           |         |             |      |          |                |  |  |           |  |  |
| 36.100 MHz            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                    |             |          |            |  |  |                     |           |         |             |      |          |                |  |  |           |  |  |
| Transmit Freq Error   | OBW Power                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 99.00 %            |             |          |            |  |  |                     |           |         |             |      |          |                |  |  |           |  |  |
| -20.047 kHz           | x dB                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | -6.00 dB           |             |          |            |  |  |                     |           |         |             |      |          |                |  |  |           |  |  |
| x dB Bandwidth        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                    |             |          |            |  |  |                     |           |         |             |      |          |                |  |  |           |  |  |
| 35.65 MHz             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                    |             |          |            |  |  |                     |           |         |             |      |          |                |  |  |           |  |  |
| 802.11n(HT40)/HC<br>H |  <p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 2.452000000 GHz</p> <p>Ref Offset: 6.7 dB<br/>Ref: 26.70 dBm</p> <p>Mkr3: 2.469962 GHz<br/>-15.241 dBm</p> <p>Center: 2.452 GHz<br/>#Res BW: 100 kHz</p> <p>#VBW: 300 kHz</p> <p>Span: 60 MHz<br/>Sweep: 5.8 ms</p> <table><tr><td>Occupied Bandwidth</td><td>Total Power</td><td>13.4 dBm</td></tr><tr><td>36.103 MHz</td><td></td><td></td></tr><tr><td>Transmit Freq Error</td><td>OBW Power</td><td>99.00 %</td></tr><tr><td>-20.081 kHz</td><td>x dB</td><td>-6.00 dB</td></tr><tr><td>x dB Bandwidth</td><td></td><td></td></tr><tr><td>35.96 MHz</td><td></td><td></td></tr></table> | Occupied Bandwidth | Total Power | 13.4 dBm | 36.103 MHz |  |  | Transmit Freq Error | OBW Power | 99.00 % | -20.081 kHz | x dB | -6.00 dB | x dB Bandwidth |  |  | 35.96 MHz |  |  |
| Occupied Bandwidth    | Total Power                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 13.4 dBm           |             |          |            |  |  |                     |           |         |             |      |          |                |  |  |           |  |  |
| 36.103 MHz            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                    |             |          |            |  |  |                     |           |         |             |      |          |                |  |  |           |  |  |
| Transmit Freq Error   | OBW Power                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 99.00 %            |             |          |            |  |  |                     |           |         |             |      |          |                |  |  |           |  |  |
| -20.081 kHz           | x dB                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | -6.00 dB           |             |          |            |  |  |                     |           |         |             |      |          |                |  |  |           |  |  |
| x dB Bandwidth        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                    |             |          |            |  |  |                     |           |         |             |      |          |                |  |  |           |  |  |
| 35.96 MHz             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                    |             |          |            |  |  |                     |           |         |             |      |          |                |  |  |           |  |  |

ANT2:

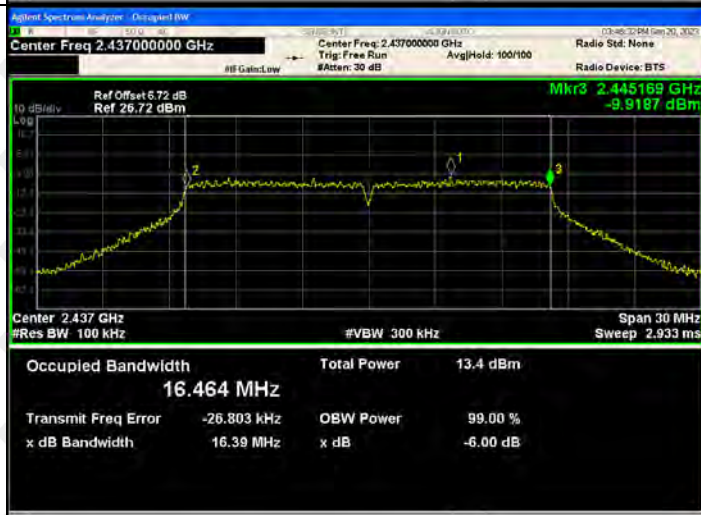
Test Graph:

| Graphs       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 802.11b /LCH |  <p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.412000000 GHz</p> <p>Center Freq: 2.412000000 GHz</p> <p>Trig: Free Run</p> <p>Avg/Hold: 100/100</p> <p>Radio Std: None</p> <p>Radio Device: BTS</p> <p>Ref Offset 6.66 dB</p> <p>Ref 26.66 dBm</p> <p>Mkr3 2.416969 GHz</p> <p>-7.1882 dBm</p> <p>Center 2.412 GHz</p> <p>#Res BW 100 kHz</p> <p>#VBW 300 kHz</p> <p>Span 30 MHz</p> <p>Sweep 2.933 ms</p> <p>Occupied Bandwidth 14.842 MHz</p> <p>Total Power 16.1 dBm</p> <p>Transmit Freq Error -19.026 kHz</p> <p>OBW Power 99.00 %</p> <p>x dB Bandwidth 9.976 MHz</p> <p>x dB -6.00 dB</p>  |
| 802.11b /MCH |  <p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.437000000 GHz</p> <p>Center Freq: 2.437000000 GHz</p> <p>Trig: Free Run</p> <p>Avg/Hold: 100/100</p> <p>Radio Std: None</p> <p>Radio Device: BTS</p> <p>Ref Offset 6.72 dB</p> <p>Ref 26.72 dBm</p> <p>Mkr3 2.441794 GHz</p> <p>-6.8089 dBm</p> <p>Center 2.437 GHz</p> <p>#Res BW 100 kHz</p> <p>#VBW 300 kHz</p> <p>Span 30 MHz</p> <p>Sweep 2.933 ms</p> <p>Occupied Bandwidth 14.878 MHz</p> <p>Total Power 16.2 dBm</p> <p>Transmit Freq Error -20.917 kHz</p> <p>OBW Power 99.00 %</p> <p>x dB Bandwidth 9.629 MHz</p> <p>x dB -6.00 dB</p> |
| 802.11b/HCH  |  <p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.462000000 GHz</p> <p>Center Freq: 2.462000000 GHz</p> <p>Trig: Free Run</p> <p>Avg/Hold: 100/100</p> <p>Radio Std: None</p> <p>Radio Device: BTS</p> <p>Ref Offset 6.7 dB</p> <p>Ref 26.70 dBm</p> <p>Mkr3 2.466773 GHz</p> <p>-6.6590 dBm</p> <p>Center 2.462 GHz</p> <p>#Res BW 100 kHz</p> <p>#VBW 300 kHz</p> <p>Span 30 MHz</p> <p>Sweep 2.933 ms</p> <p>Occupied Bandwidth 14.810 MHz</p> <p>Total Power 16.3 dBm</p> <p>Transmit Freq Error -106.54 kHz</p> <p>OBW Power 99.00 %</p> <p>x dB Bandwidth 9.759 MHz</p> <p>x dB -6.00 dB</p> |

802.11g/LCH

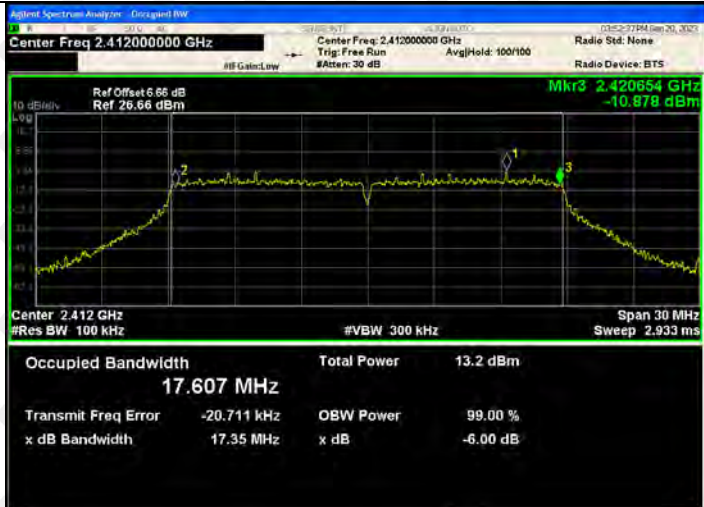
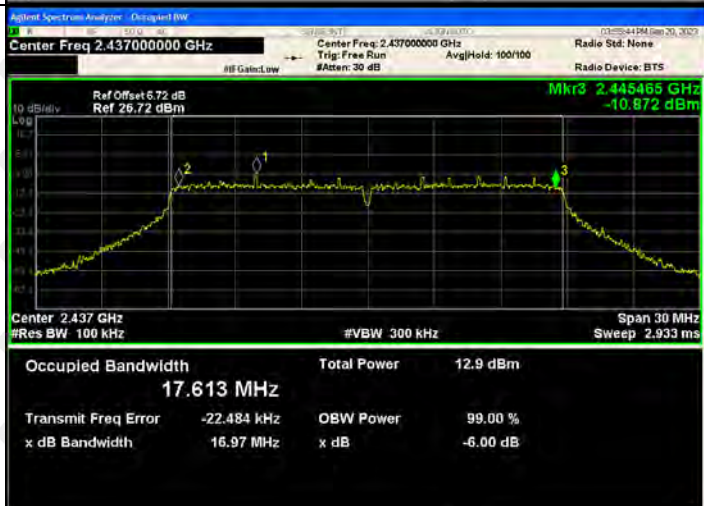
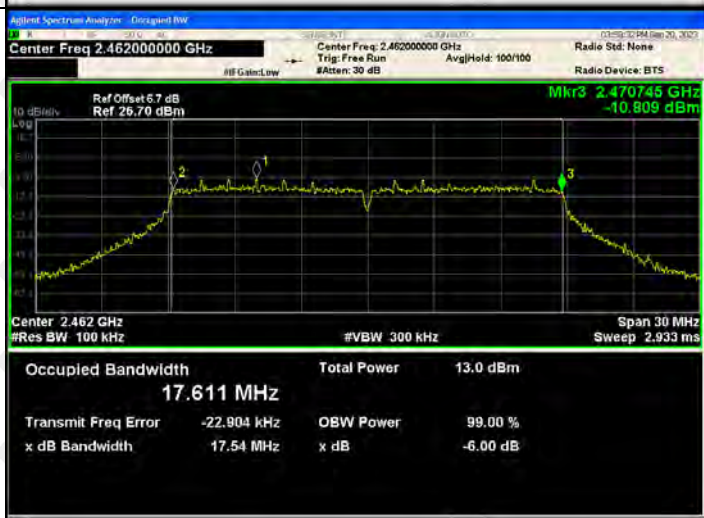


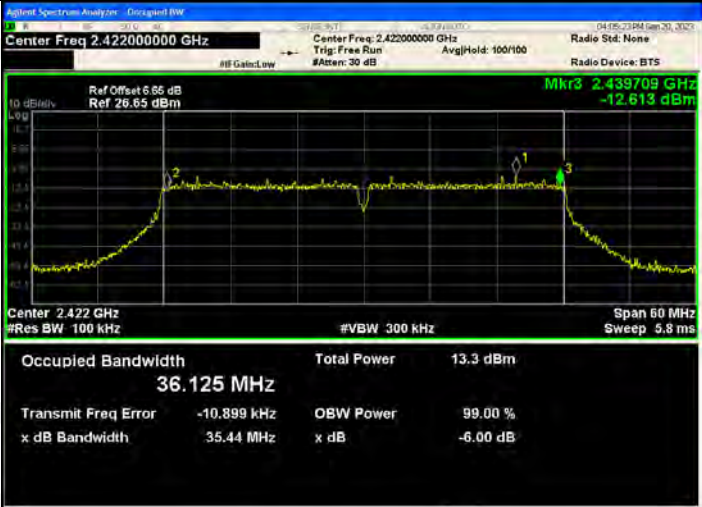
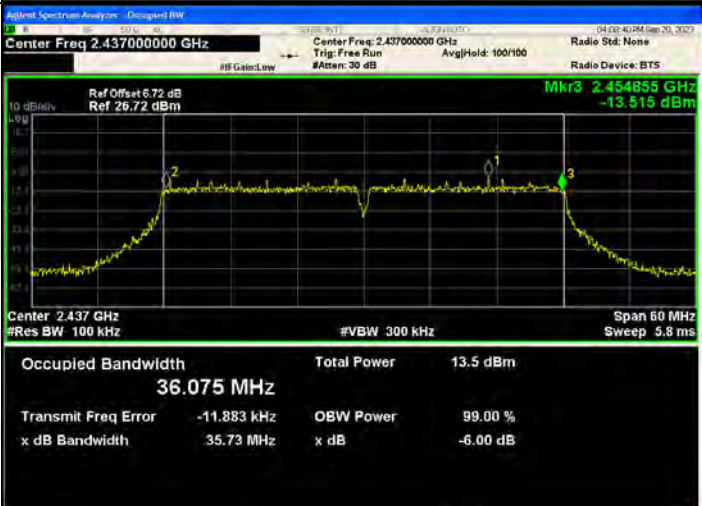
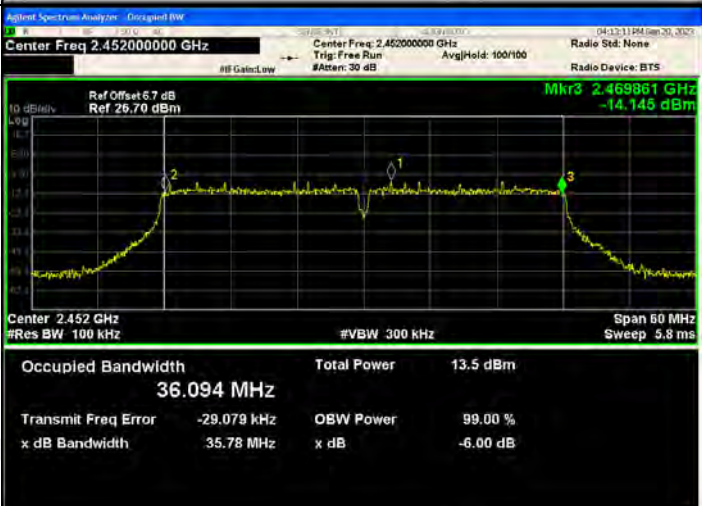
802.11g/MCH



802.11g/HCH

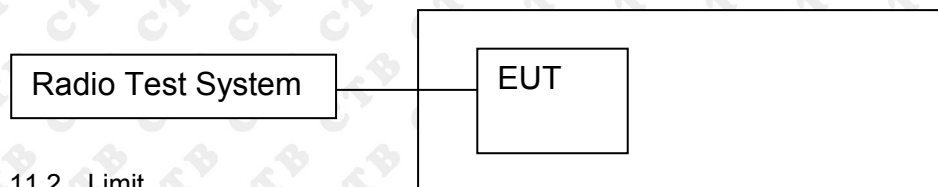


|                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                    |             |          |            |  |  |                     |           |         |             |      |          |                |  |  |           |  |  |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-------------|----------|------------|--|--|---------------------|-----------|---------|-------------|------|----------|----------------|--|--|-----------|--|--|
| 802.11n(HT20)/LC<br>H |  <p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 2.41200000 GHz</p> <p>Ref Offset: 6.66 dB<br/>Ref: 26.66 dBm</p> <p>Mkr3: 2.420654 GHz<br/>-10.878 dBm</p> <p>Center: 2.412 GHz<br/>#Res BW: 100 kHz<br/>#VBW: 300 kHz<br/>Span: 30 MHz<br/>Sweep: 2.933 ms</p> <table><tr><td>Occupied Bandwidth</td><td>Total Power</td><td>13.2 dBm</td></tr><tr><td>17.607 MHz</td><td></td><td></td></tr><tr><td>Transmit Freq Error</td><td>OBW Power</td><td>99.00 %</td></tr><tr><td>-20.711 kHz</td><td>x dB</td><td>-6.00 dB</td></tr><tr><td>x dB Bandwidth</td><td></td><td></td></tr><tr><td>17.35 MHz</td><td></td><td></td></tr></table>  | Occupied Bandwidth | Total Power | 13.2 dBm | 17.607 MHz |  |  | Transmit Freq Error | OBW Power | 99.00 % | -20.711 kHz | x dB | -6.00 dB | x dB Bandwidth |  |  | 17.35 MHz |  |  |
| Occupied Bandwidth    | Total Power                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 13.2 dBm           |             |          |            |  |  |                     |           |         |             |      |          |                |  |  |           |  |  |
| 17.607 MHz            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                    |             |          |            |  |  |                     |           |         |             |      |          |                |  |  |           |  |  |
| Transmit Freq Error   | OBW Power                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 99.00 %            |             |          |            |  |  |                     |           |         |             |      |          |                |  |  |           |  |  |
| -20.711 kHz           | x dB                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | -6.00 dB           |             |          |            |  |  |                     |           |         |             |      |          |                |  |  |           |  |  |
| x dB Bandwidth        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                    |             |          |            |  |  |                     |           |         |             |      |          |                |  |  |           |  |  |
| 17.35 MHz             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                    |             |          |            |  |  |                     |           |         |             |      |          |                |  |  |           |  |  |
| 802.11n(HT20)/MC<br>H |  <p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 2.43700000 GHz</p> <p>Ref Offset: 6.72 dB<br/>Ref: 26.72 dBm</p> <p>Mkr3: 2.445465 GHz<br/>-10.872 dBm</p> <p>Center: 2.437 GHz<br/>#Res BW: 100 kHz<br/>#VBW: 300 kHz<br/>Span: 30 MHz<br/>Sweep: 2.933 ms</p> <table><tr><td>Occupied Bandwidth</td><td>Total Power</td><td>12.9 dBm</td></tr><tr><td>17.613 MHz</td><td></td><td></td></tr><tr><td>Transmit Freq Error</td><td>OBW Power</td><td>99.00 %</td></tr><tr><td>-22.484 kHz</td><td>x dB</td><td>-6.00 dB</td></tr><tr><td>x dB Bandwidth</td><td></td><td></td></tr><tr><td>16.97 MHz</td><td></td><td></td></tr></table> | Occupied Bandwidth | Total Power | 12.9 dBm | 17.613 MHz |  |  | Transmit Freq Error | OBW Power | 99.00 % | -22.484 kHz | x dB | -6.00 dB | x dB Bandwidth |  |  | 16.97 MHz |  |  |
| Occupied Bandwidth    | Total Power                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 12.9 dBm           |             |          |            |  |  |                     |           |         |             |      |          |                |  |  |           |  |  |
| 17.613 MHz            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                    |             |          |            |  |  |                     |           |         |             |      |          |                |  |  |           |  |  |
| Transmit Freq Error   | OBW Power                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 99.00 %            |             |          |            |  |  |                     |           |         |             |      |          |                |  |  |           |  |  |
| -22.484 kHz           | x dB                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | -6.00 dB           |             |          |            |  |  |                     |           |         |             |      |          |                |  |  |           |  |  |
| x dB Bandwidth        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                    |             |          |            |  |  |                     |           |         |             |      |          |                |  |  |           |  |  |
| 16.97 MHz             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                    |             |          |            |  |  |                     |           |         |             |      |          |                |  |  |           |  |  |
| 802.11n(HT20)/HC<br>H |  <p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 2.46200000 GHz</p> <p>Ref Offset: 6.7 dB<br/>Ref: 26.70 dBm</p> <p>Mkr3: 2.470745 GHz<br/>-10.809 dBm</p> <p>Center: 2.462 GHz<br/>#Res BW: 100 kHz<br/>#VBW: 300 kHz<br/>Span: 30 MHz<br/>Sweep: 2.933 ms</p> <table><tr><td>Occupied Bandwidth</td><td>Total Power</td><td>13.0 dBm</td></tr><tr><td>17.611 MHz</td><td></td><td></td></tr><tr><td>Transmit Freq Error</td><td>OBW Power</td><td>99.00 %</td></tr><tr><td>-22.904 kHz</td><td>x dB</td><td>-6.00 dB</td></tr><tr><td>x dB Bandwidth</td><td></td><td></td></tr><tr><td>17.54 MHz</td><td></td><td></td></tr></table> | Occupied Bandwidth | Total Power | 13.0 dBm | 17.611 MHz |  |  | Transmit Freq Error | OBW Power | 99.00 % | -22.904 kHz | x dB | -6.00 dB | x dB Bandwidth |  |  | 17.54 MHz |  |  |
| Occupied Bandwidth    | Total Power                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 13.0 dBm           |             |          |            |  |  |                     |           |         |             |      |          |                |  |  |           |  |  |
| 17.611 MHz            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                    |             |          |            |  |  |                     |           |         |             |      |          |                |  |  |           |  |  |
| Transmit Freq Error   | OBW Power                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 99.00 %            |             |          |            |  |  |                     |           |         |             |      |          |                |  |  |           |  |  |
| -22.904 kHz           | x dB                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | -6.00 dB           |             |          |            |  |  |                     |           |         |             |      |          |                |  |  |           |  |  |
| x dB Bandwidth        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                    |             |          |            |  |  |                     |           |         |             |      |          |                |  |  |           |  |  |
| 17.54 MHz             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                    |             |          |            |  |  |                     |           |         |             |      |          |                |  |  |           |  |  |

|                               |                                                                                      |
|-------------------------------|--------------------------------------------------------------------------------------|
| <p>802.11n(HT40)/LC<br/>H</p> |    |
| <p>802.11n(HT40)/MC<br/>H</p> |   |
| <p>802.11n(HT40)/HC<br/>H</p> |  |

## 11. POWER SPECTRAL DENSITY

### 11.1 Block Diagram Of Test Setup



### 11.2 Limit

| FCC Part15 (15.247) , Subpart C |                        |                        |                       |        |
|---------------------------------|------------------------|------------------------|-----------------------|--------|
| Section                         | Test Item              | Limit                  | Frequency Range (MHz) | Result |
| 15.247                          | Power Spectral Density | 8 dBm<br>(in any 3KHz) | 2400-2483.5           | PASS   |

### 11.3 Test procedure

1. Set analyzer center frequency to DTS channel center frequency.
2. Set the span to 1.5 times the DTS bandwidth.
3. Set the RBW to:  $3\text{ kHz} \leq \text{RBW} \leq 100\text{ kHz}$ .
4. Set the VBW  $\geq 3 \times \text{RBW}$ .
5. Detector = Peak.
6. Sweep time = auto couple.
7. Trace mode = max hold.
8. Allow trace to fully stabilize.
9. Use the peak marker function to determine the maximum amplitude level within the RBW.
10. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

## 11.4 Test Result

| Mode           | Channel. | Power Spectral Density [dBm /3KHz] ANT 1 | Power Spectral Density [dBm /3KHz] ANT 2 | Power Spectral Density [dBm /3KHz] Total | Limit(dBm) |
|----------------|----------|------------------------------------------|------------------------------------------|------------------------------------------|------------|
| 802.11b        | LCH      | -14.349                                  | -15.553                                  | /                                        | 8          |
|                | MCH      | -15.214                                  | -14.822                                  | /                                        | 8          |
|                | HCH      | -14.48                                   | -15.4                                    | /                                        | 8          |
| 802.11g        | LCH      | -18.188                                  | -17.575                                  | /                                        | 8          |
|                | MCH      | -17.819                                  | -17.588                                  | /                                        | 8          |
|                | HCH      | -17.505                                  | -17.235                                  | /                                        | 8          |
| 802.11n(H T20) | LCH      | -17.768                                  | -18.085                                  | -14.913                                  | 8          |
|                | MCH      | -17.929                                  | -17.589                                  | -14.745                                  | 8          |
|                | HCH      | -17.974                                  | -18.287                                  | -15.117                                  | 8          |
| 802.11n(H T40) | LCH      | -19.602                                  | -21.359                                  | -17.382                                  | 8          |
|                | MCH      | -22.002                                  | -21.368                                  | -18.663                                  | 8          |
|                | HCH      | -21.283                                  | -21.526                                  | -18.393                                  | 8          |

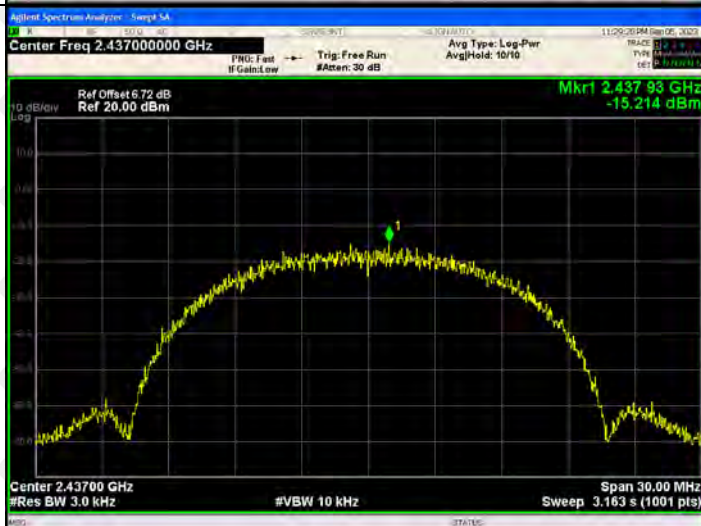
# ANT1: Test Graph

## Graphs

802.11b /LCH

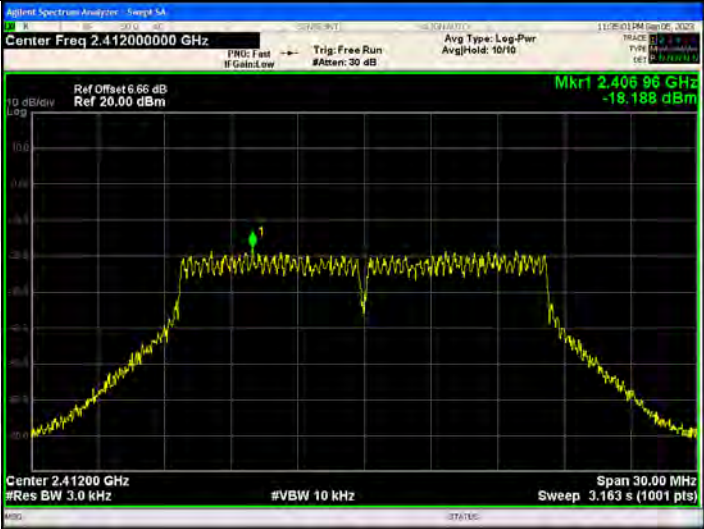


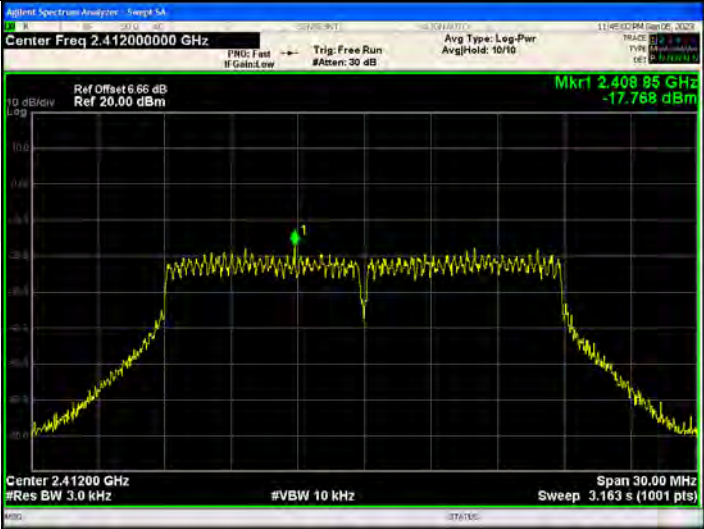
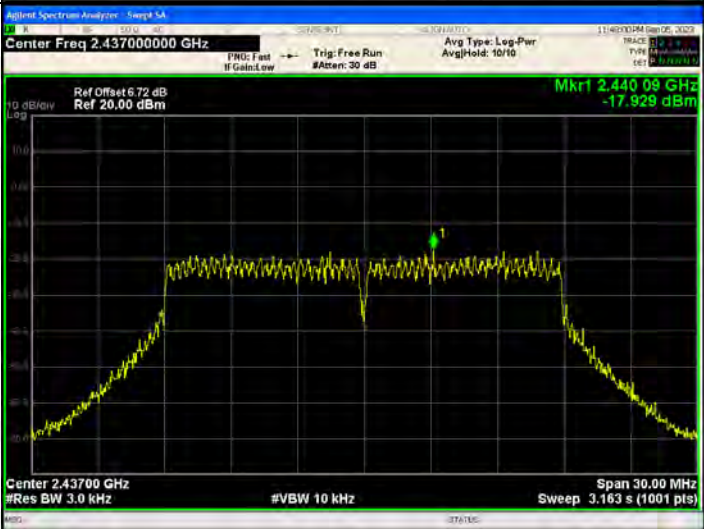
802.11b /MCH

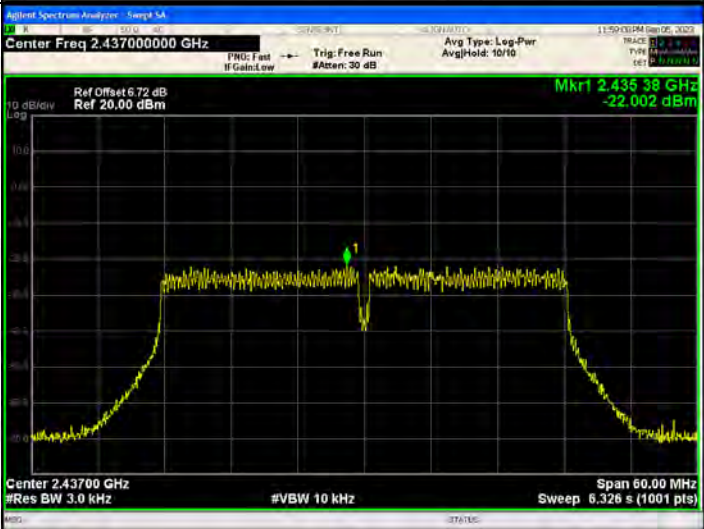
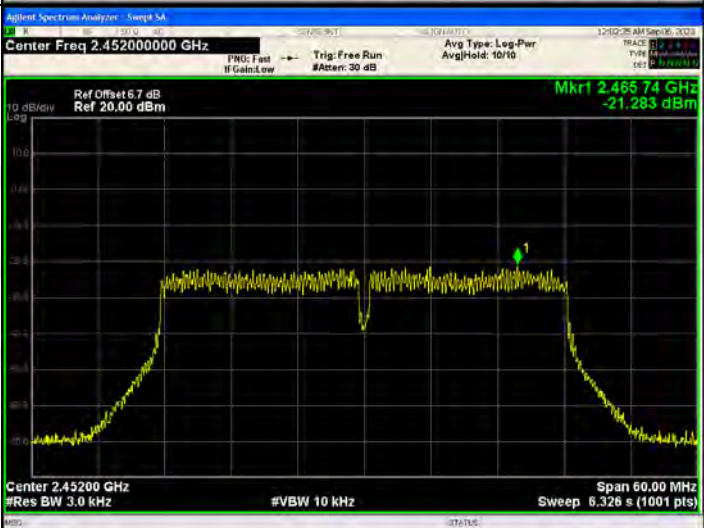


802.11b/HCH

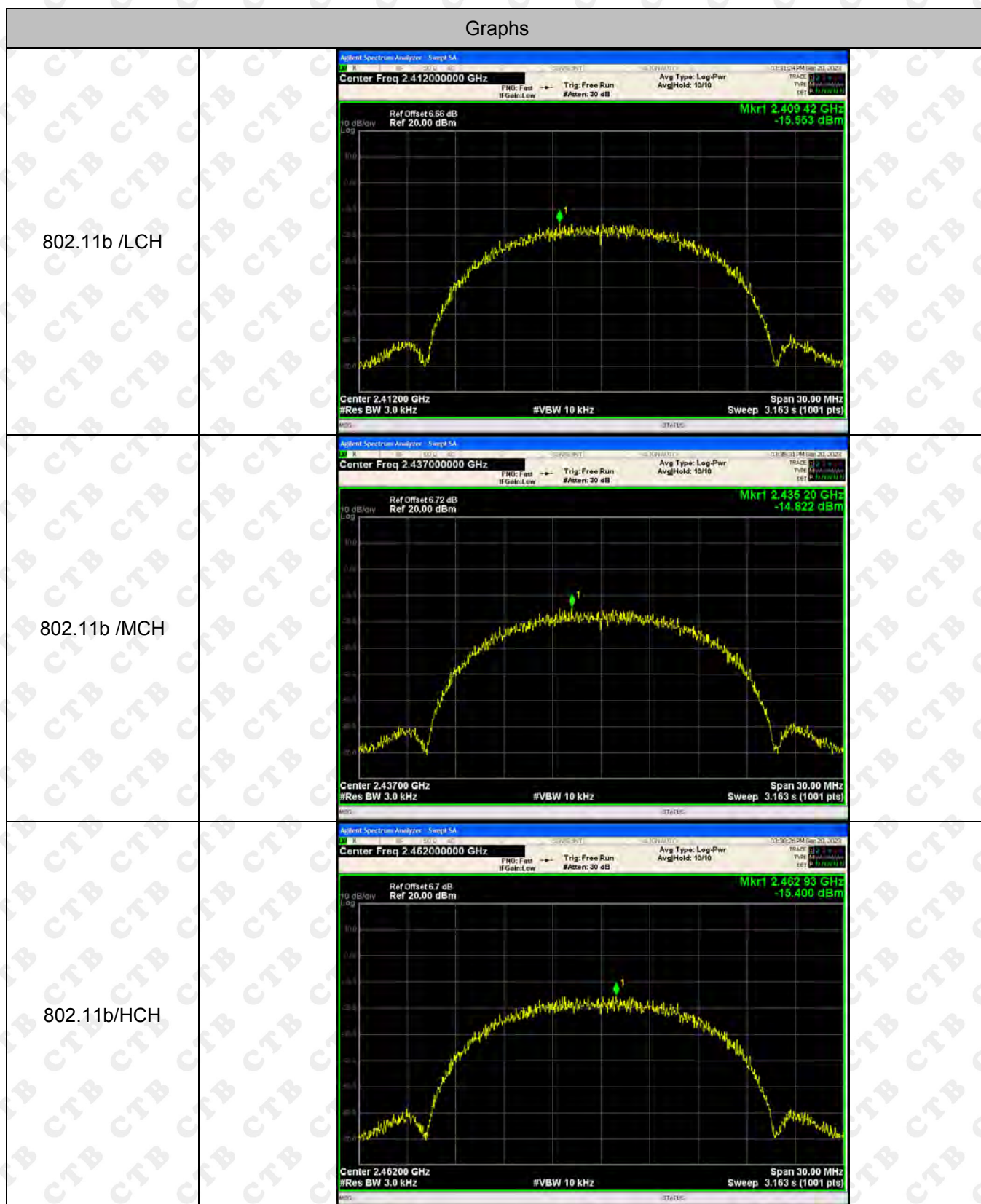


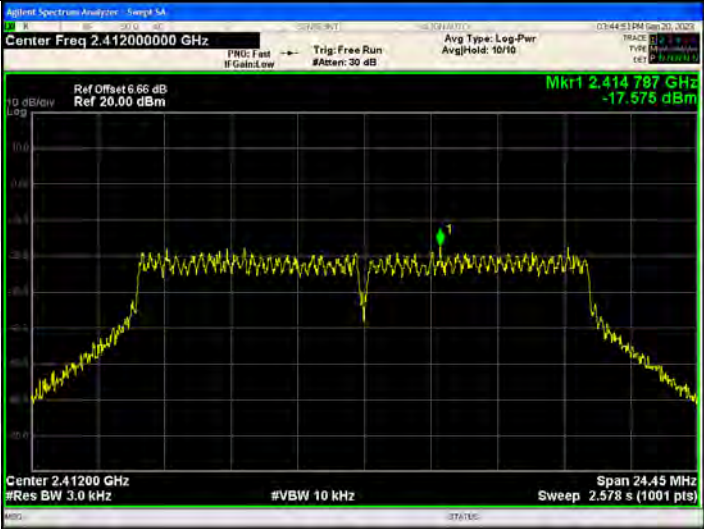
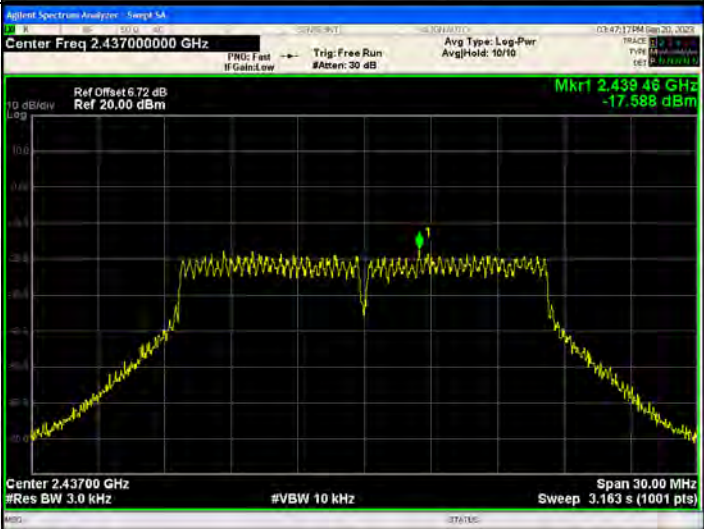
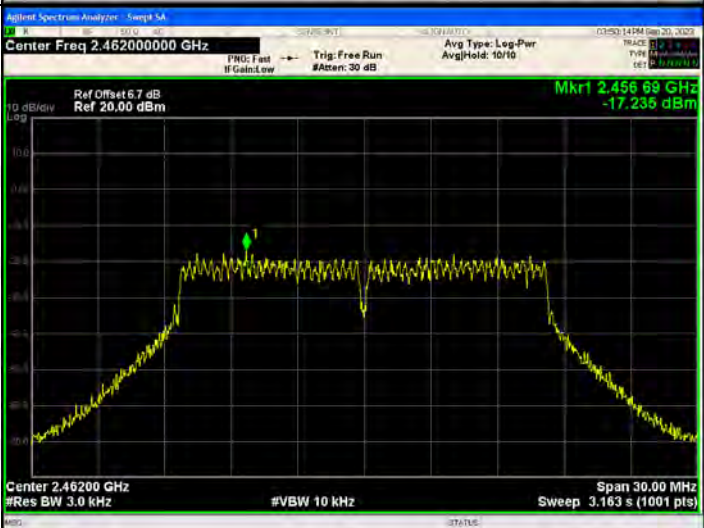
|             |                                                                                      |
|-------------|--------------------------------------------------------------------------------------|
| 802.11g/LCH |    |
| 802.11g/MCH |   |
| 802.11g/HCH |  |

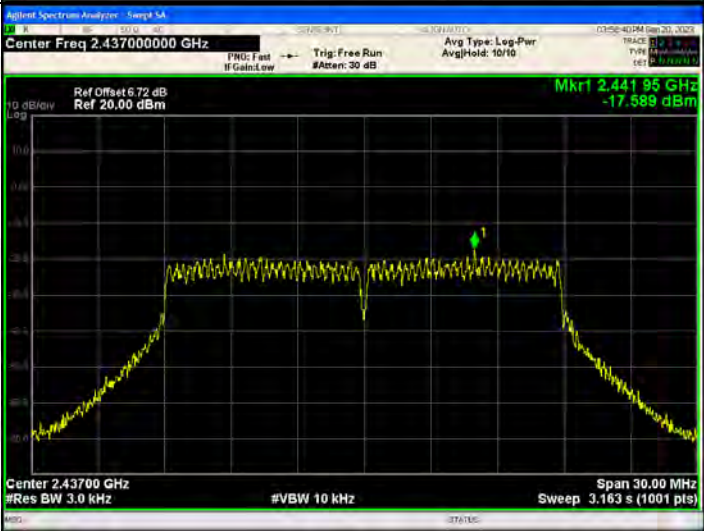
|                               |                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>802.11n(HT20)/LC<br/>H</p> |  <p>Agilent Spectrum Analyzer - Sweep SA</p> <p>Center Freq 2.41200000 GHz</p> <p>Ref Offset 6.86 dB<br/>Ref 20.00 dBm</p> <p>Mkr1 2.40885 GHz<br/>-17.768 dBm</p> <p>Center 2.41200 GHz<br/>#Res BW 3.0 kHz</p> <p>#VBW 10 kHz</p> <p>Span 30.00 MHz<br/>Sweep 3.163 s (1001 pts)</p>  |
| <p>802.11n(HT20)/MC<br/>H</p> |  <p>Agilent Spectrum Analyzer - Sweep SA</p> <p>Center Freq 2.43700000 GHz</p> <p>Ref Offset 6.72 dB<br/>Ref 20.00 dBm</p> <p>Mkr1 2.44009 GHz<br/>-17.929 dBm</p> <p>Center 2.43700 GHz<br/>#Res BW 3.0 kHz</p> <p>#VBW 10 kHz</p> <p>Span 30.00 MHz<br/>Sweep 3.163 s (1001 pts)</p> |
| <p>802.11n(HT20)/HC<br/>H</p> |  <p>Agilent Spectrum Analyzer - Sweep SA</p> <p>Center Freq 2.46200000 GHz</p> <p>Ref Offset 6.7 dB<br/>Ref 20.00 dBm</p> <p>Mkr1 2.46947 GHz<br/>-17.974 dBm</p> <p>Center 2.46200 GHz<br/>#Res BW 3.0 kHz</p> <p>#VBW 10 kHz</p> <p>Span 30.00 MHz<br/>Sweep 3.163 s (1001 pts)</p> |

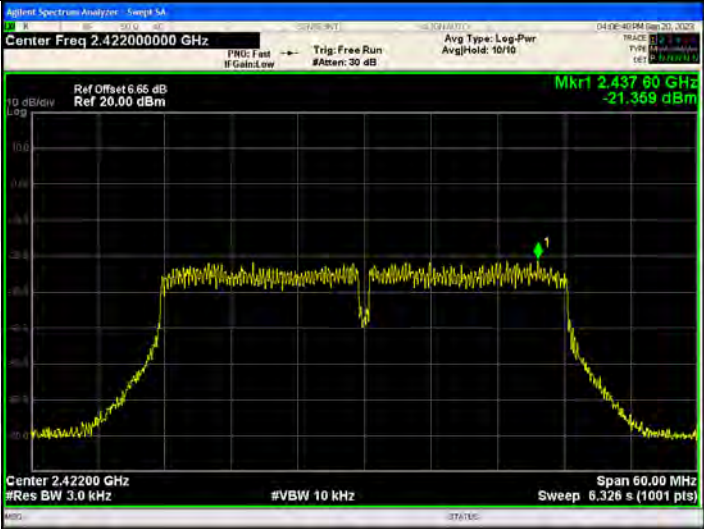
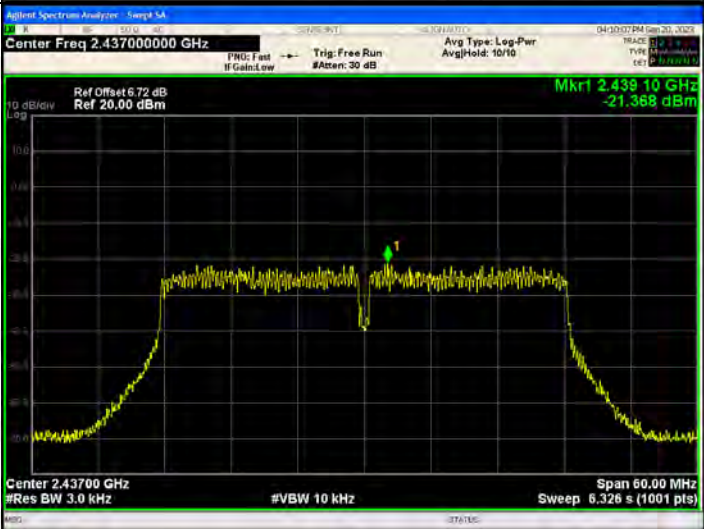
|                               |                                                                                      |
|-------------------------------|--------------------------------------------------------------------------------------|
| <p>802.11n(HT40)/LC<br/>H</p> |    |
| <p>802.11n(HT40)/MC<br/>H</p> |   |
| <p>802.11n(HT40)/HC<br/>H</p> |  |

# ANT 2: Test Graph



|             |                                                                                      |
|-------------|--------------------------------------------------------------------------------------|
| 802.11g/LCH |    |
| 802.11g/MCH |   |
| 802.11g/HCH |  |

|                               |                                                                                      |
|-------------------------------|--------------------------------------------------------------------------------------|
| <p>802.11n(HT20)/LC<br/>H</p> |    |
| <p>802.11n(HT20)/MC<br/>H</p> |   |
| <p>802.11n(HT20)/HC<br/>H</p> |  |

|                               |                                                                                      |
|-------------------------------|--------------------------------------------------------------------------------------|
| <p>802.11n(HT40)/LC<br/>H</p> |    |
| <p>802.11n(HT40)/MC<br/>H</p> |   |
| <p>802.11n(HT40)/HC<br/>H</p> |  |

## 12. ANTENNA REQUIREMENT

### 15.203 requirement:

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, 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.

### 15.247(b) (4) requirement:

The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

### EUT Antenna:

The antenna is External antenna and no consideration of replacement. The best case gain of the antenna is 3.46dBi.

### 13. EUT TEST SETUP PHOTOGRAPHS

#### Radiated Emission

Below 1G



Above 1G



# Conducted Emission



※※※※※ END OF REPORT ※※※※※