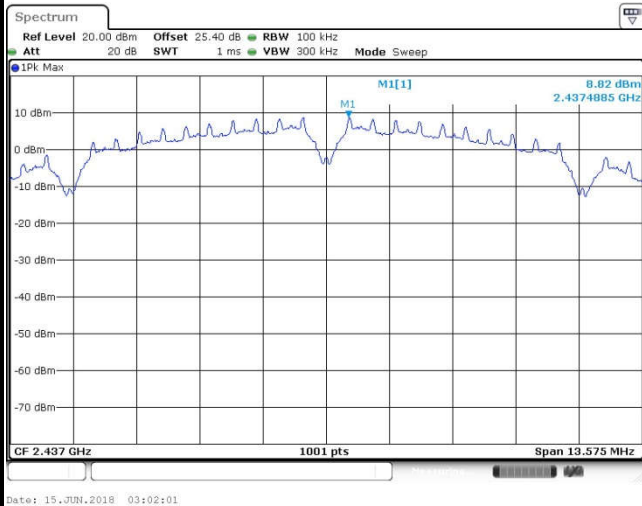


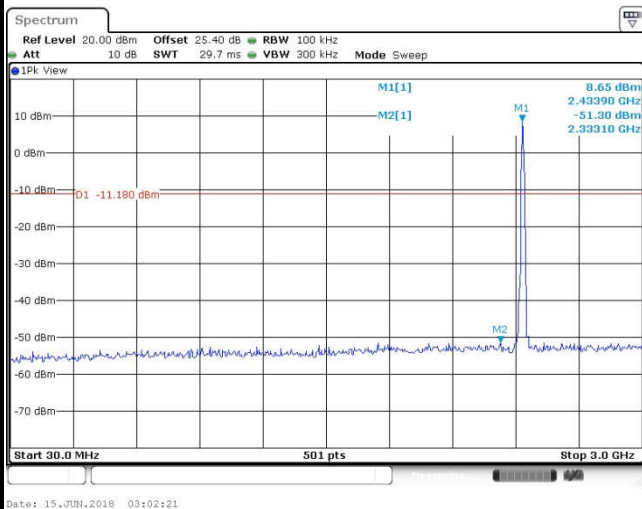


|             |         |                |    |
|-------------|---------|----------------|----|
| Test Mode : | 802.11b | Test Channel : | 06 |
|-------------|---------|----------------|----|

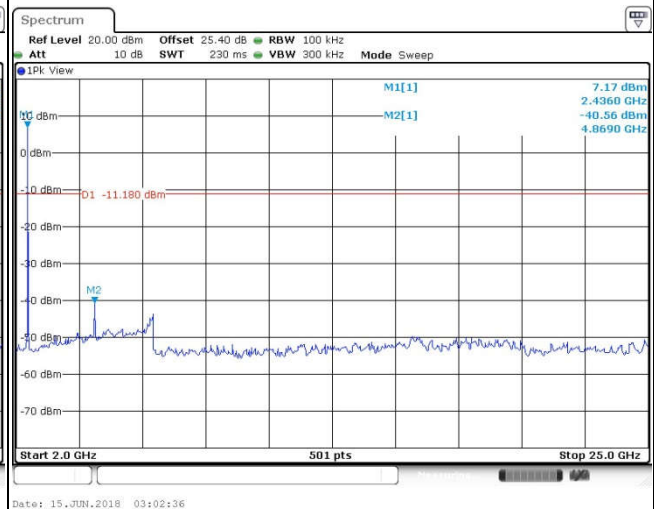
## 100kHz PSD reference Level



## Spurious Emission 30MHz~3GHz

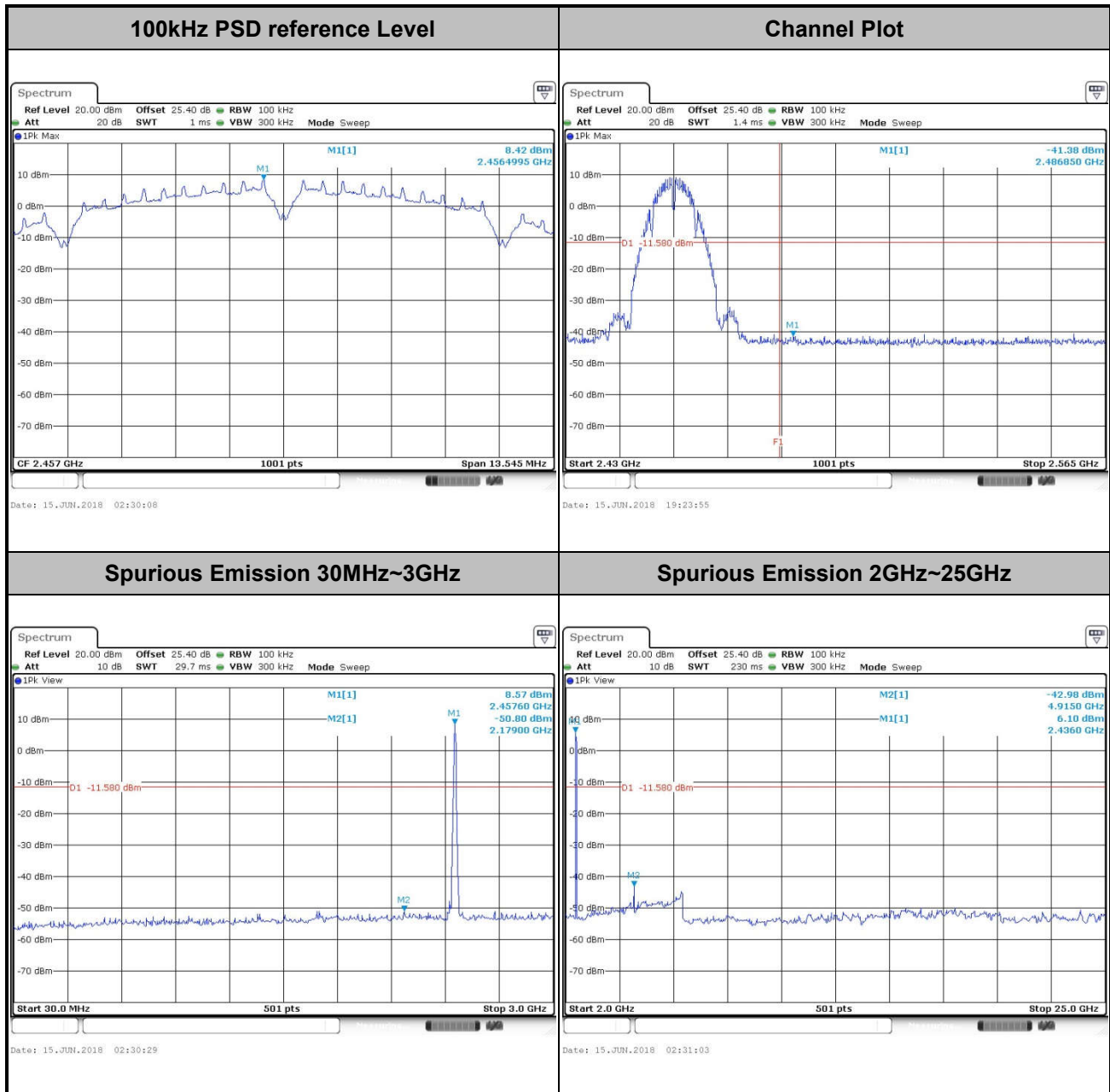


## Spurious Emission 2GHz~25GHz



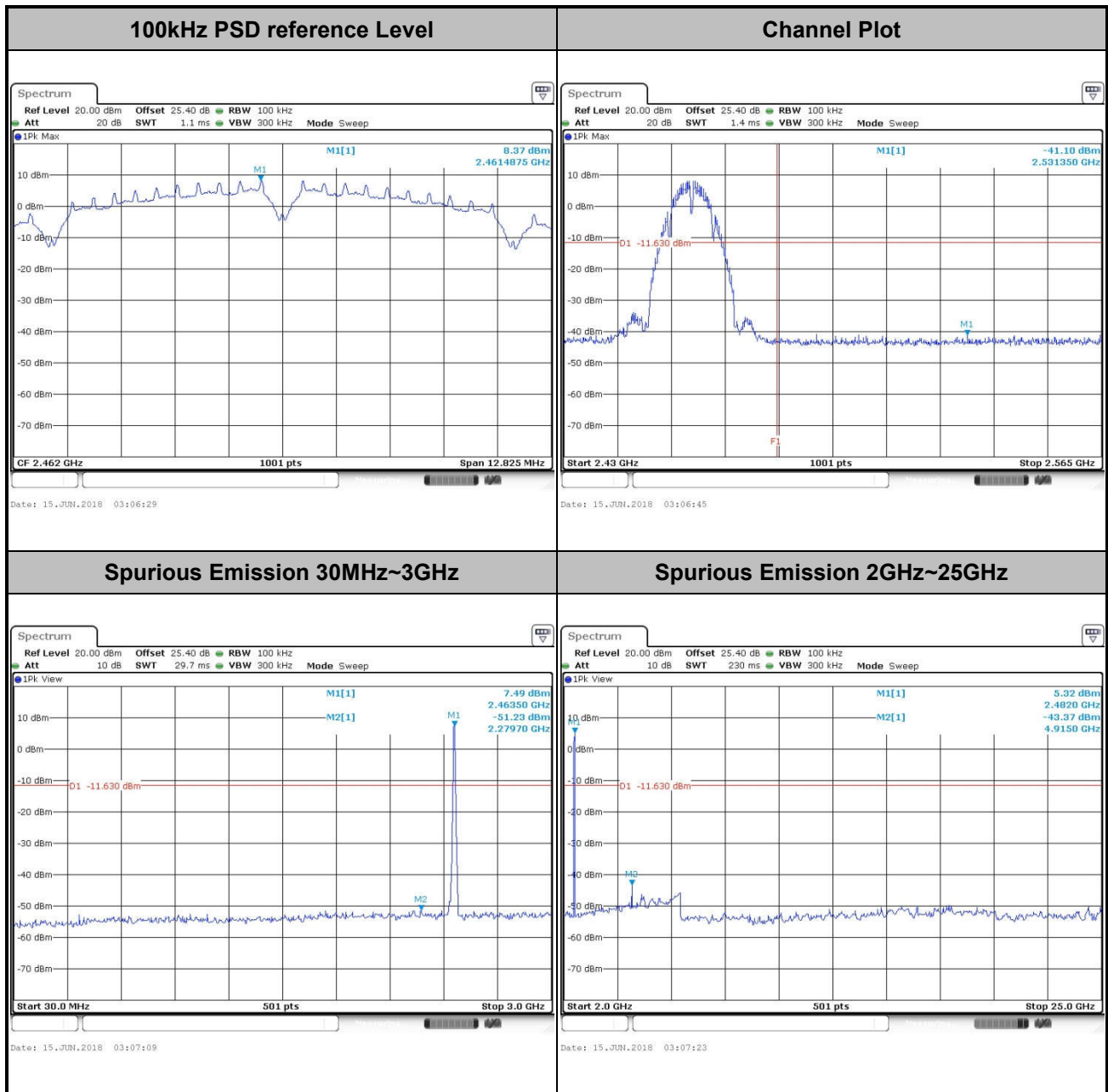


|             |         |                |    |
|-------------|---------|----------------|----|
| Test Mode : | 802.11b | Test Channel : | 10 |
|-------------|---------|----------------|----|



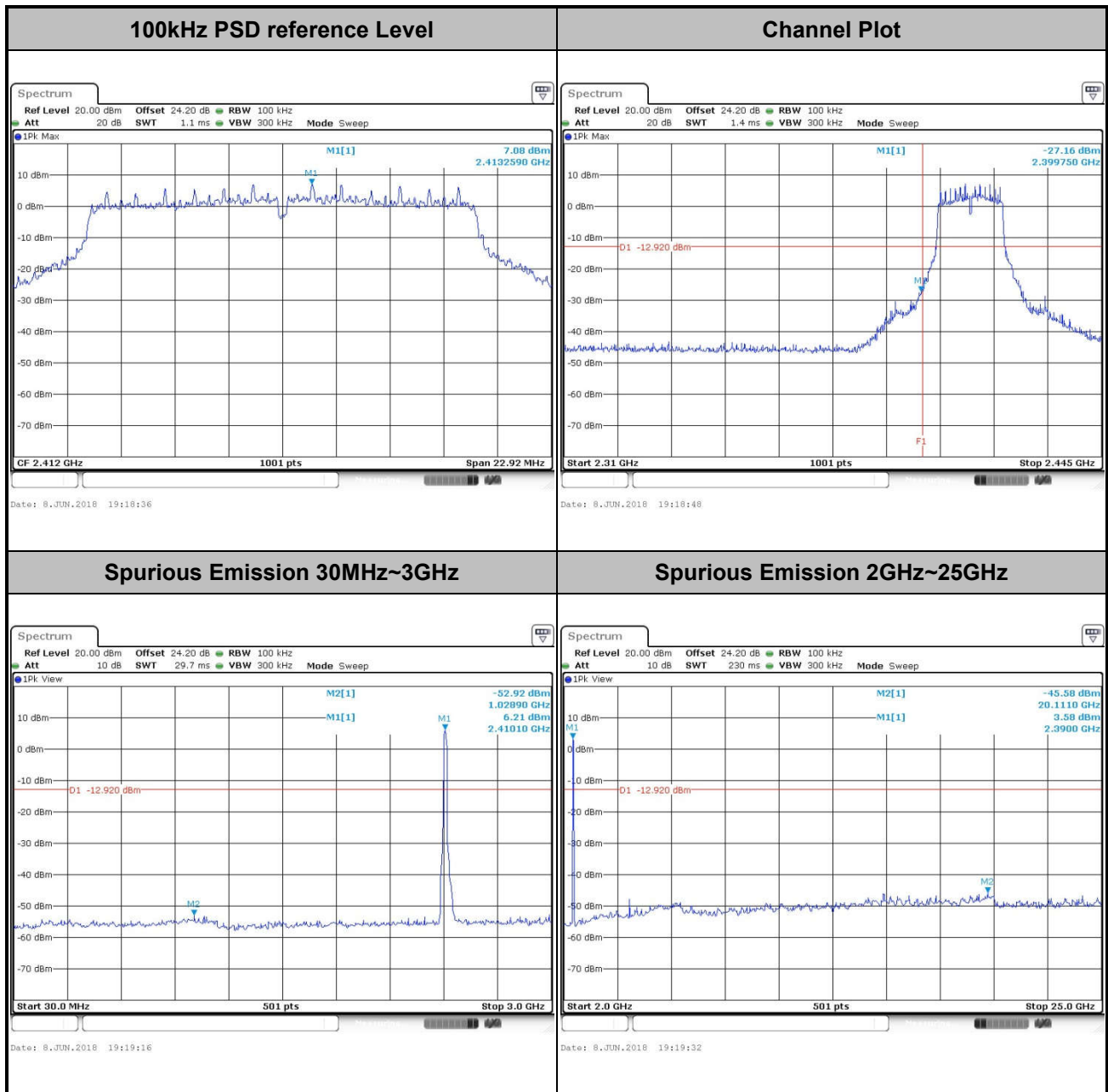


|             |         |                |    |
|-------------|---------|----------------|----|
| Test Mode : | 802.11b | Test Channel : | 11 |
|-------------|---------|----------------|----|



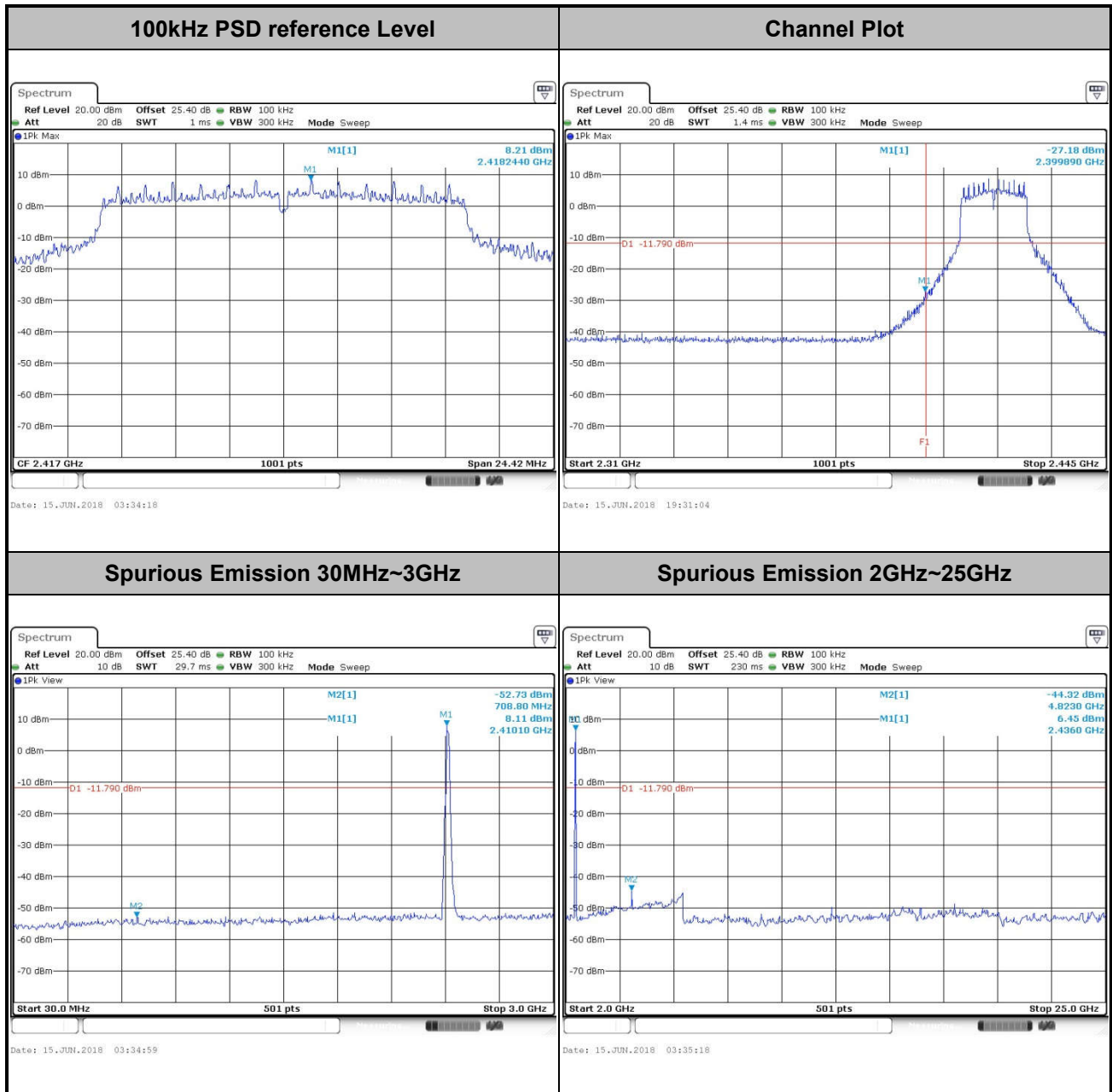


|                    |         |                       |    |
|--------------------|---------|-----------------------|----|
| <b>Test Mode :</b> | 802.11g | <b>Test Channel :</b> | 01 |
|--------------------|---------|-----------------------|----|





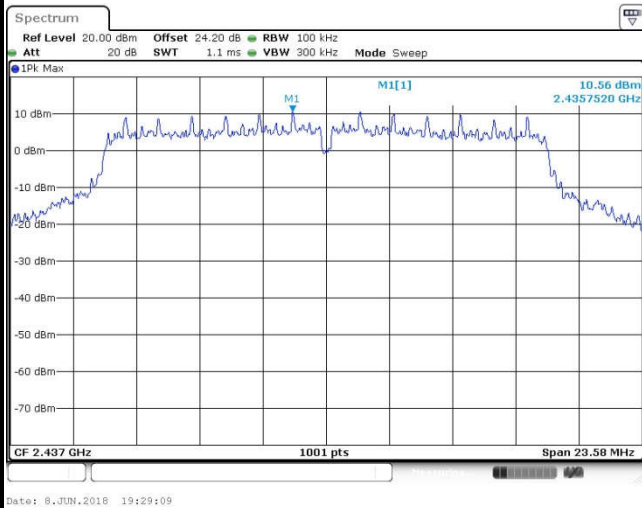
|             |         |                |    |
|-------------|---------|----------------|----|
| Test Mode : | 802.11g | Test Channel : | 02 |
|-------------|---------|----------------|----|



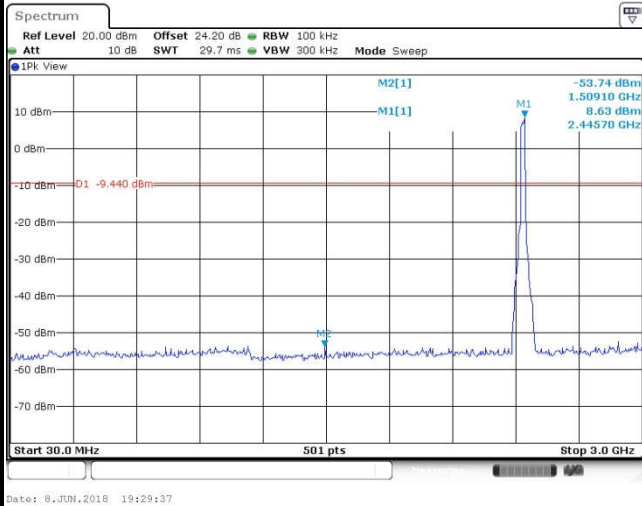


|             |         |                |    |
|-------------|---------|----------------|----|
| Test Mode : | 802.11g | Test Channel : | 06 |
|-------------|---------|----------------|----|

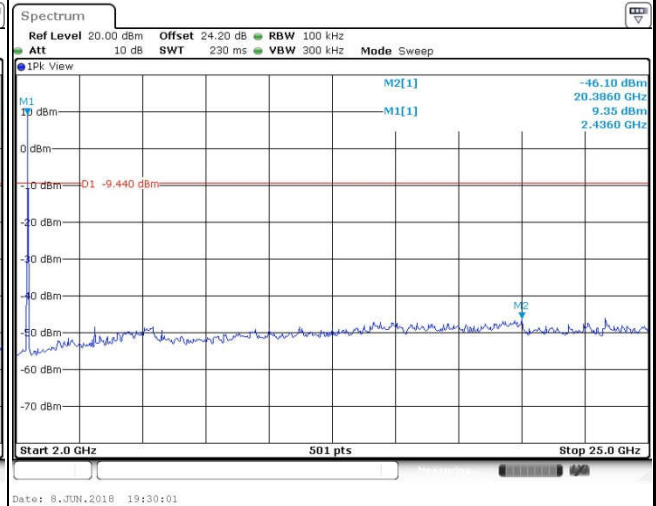
## 100kHz PSD reference Level



## Spurious Emission 30MHz~3GHz

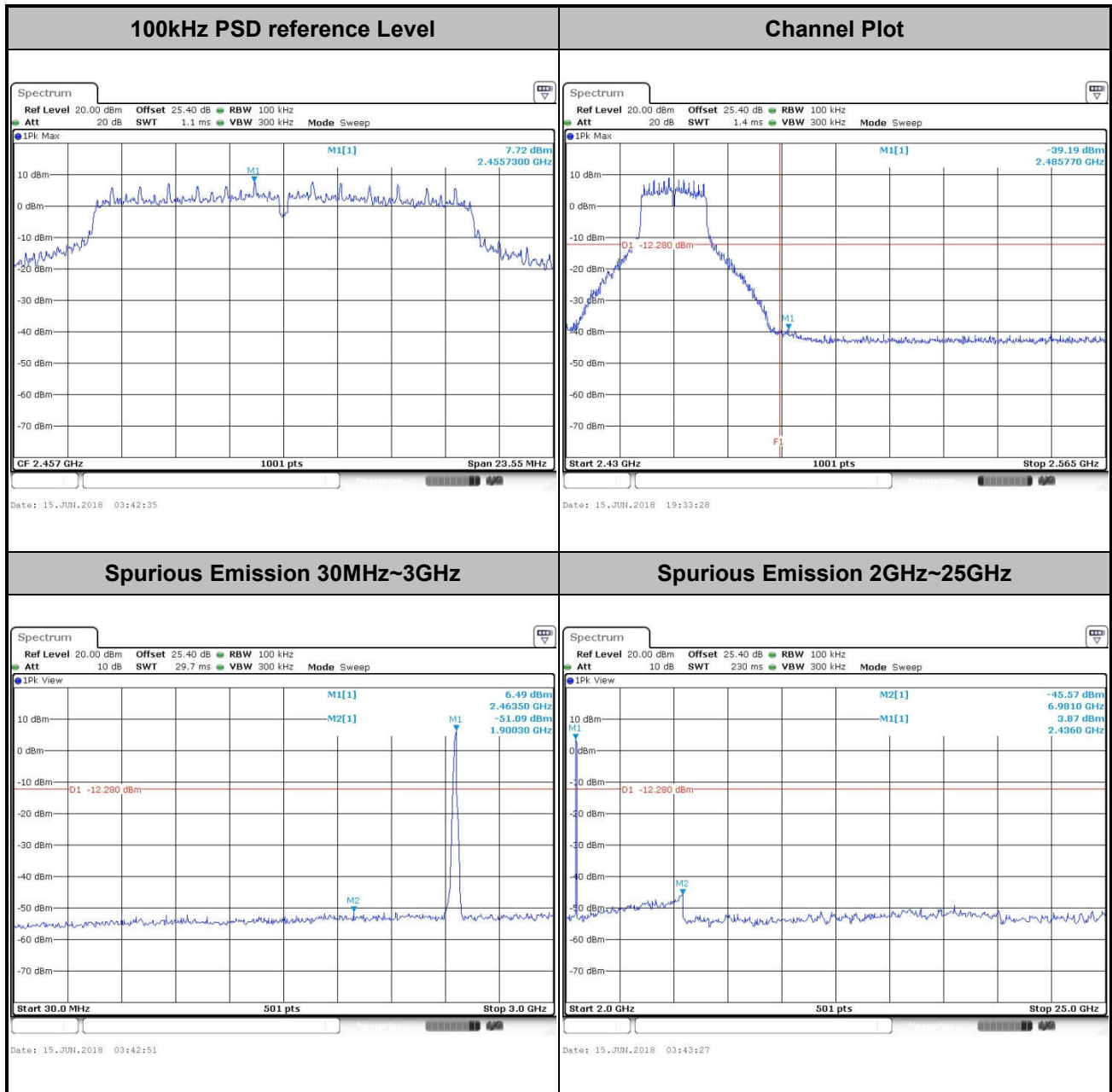


## Spurious Emission 2GHz~25GHz



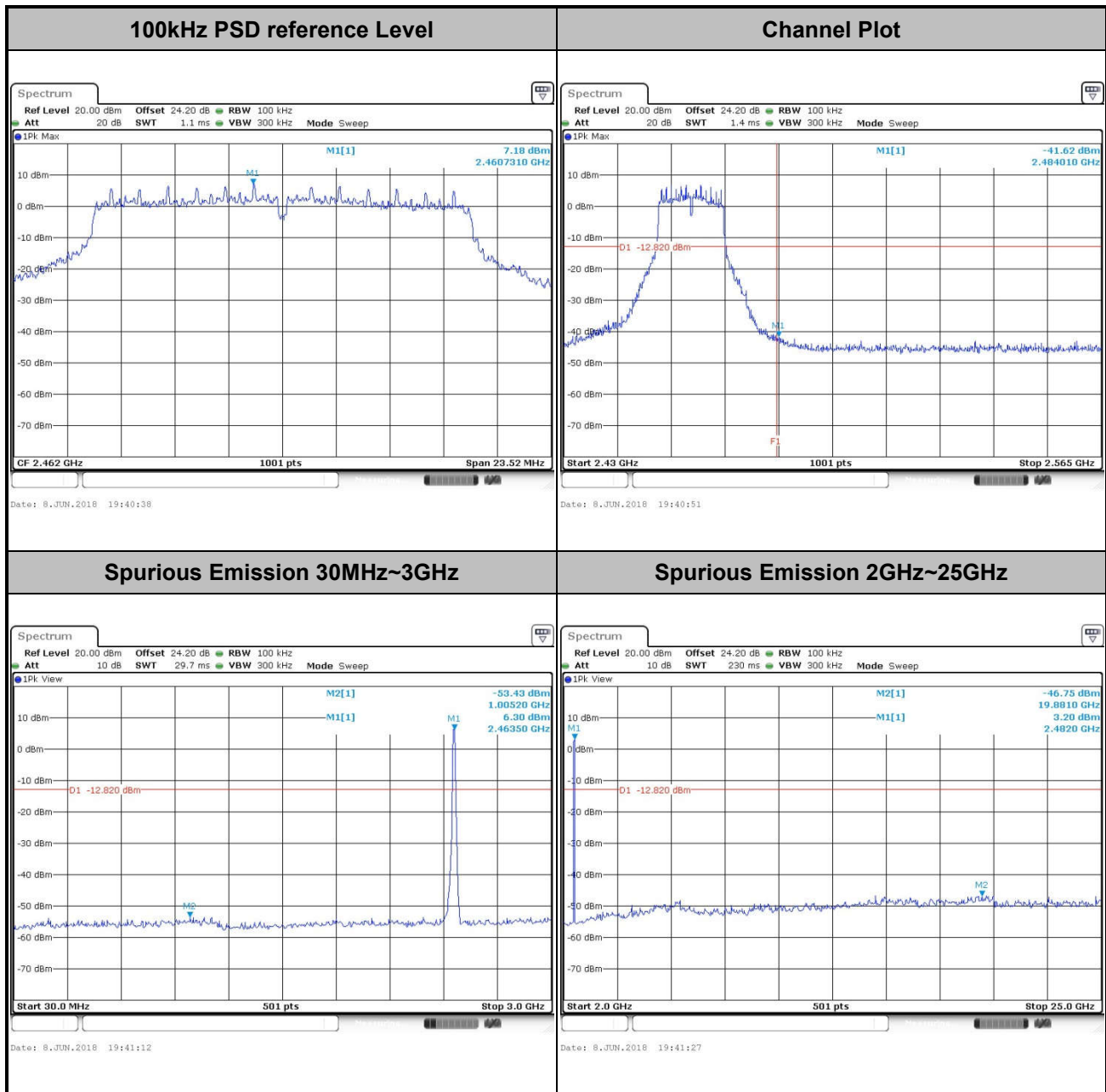


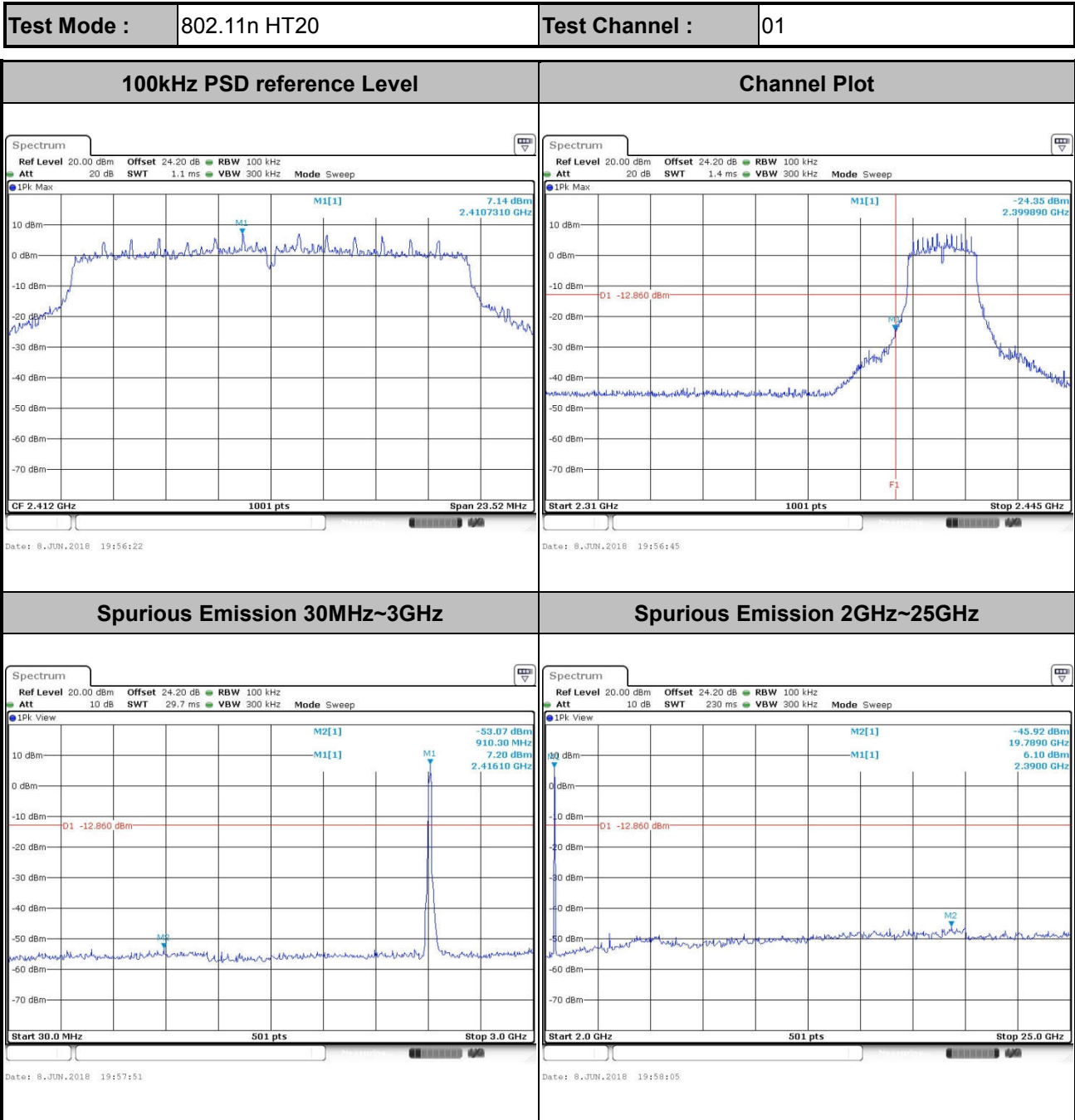
|             |         |                |    |
|-------------|---------|----------------|----|
| Test Mode : | 802.11g | Test Channel : | 10 |
|-------------|---------|----------------|----|

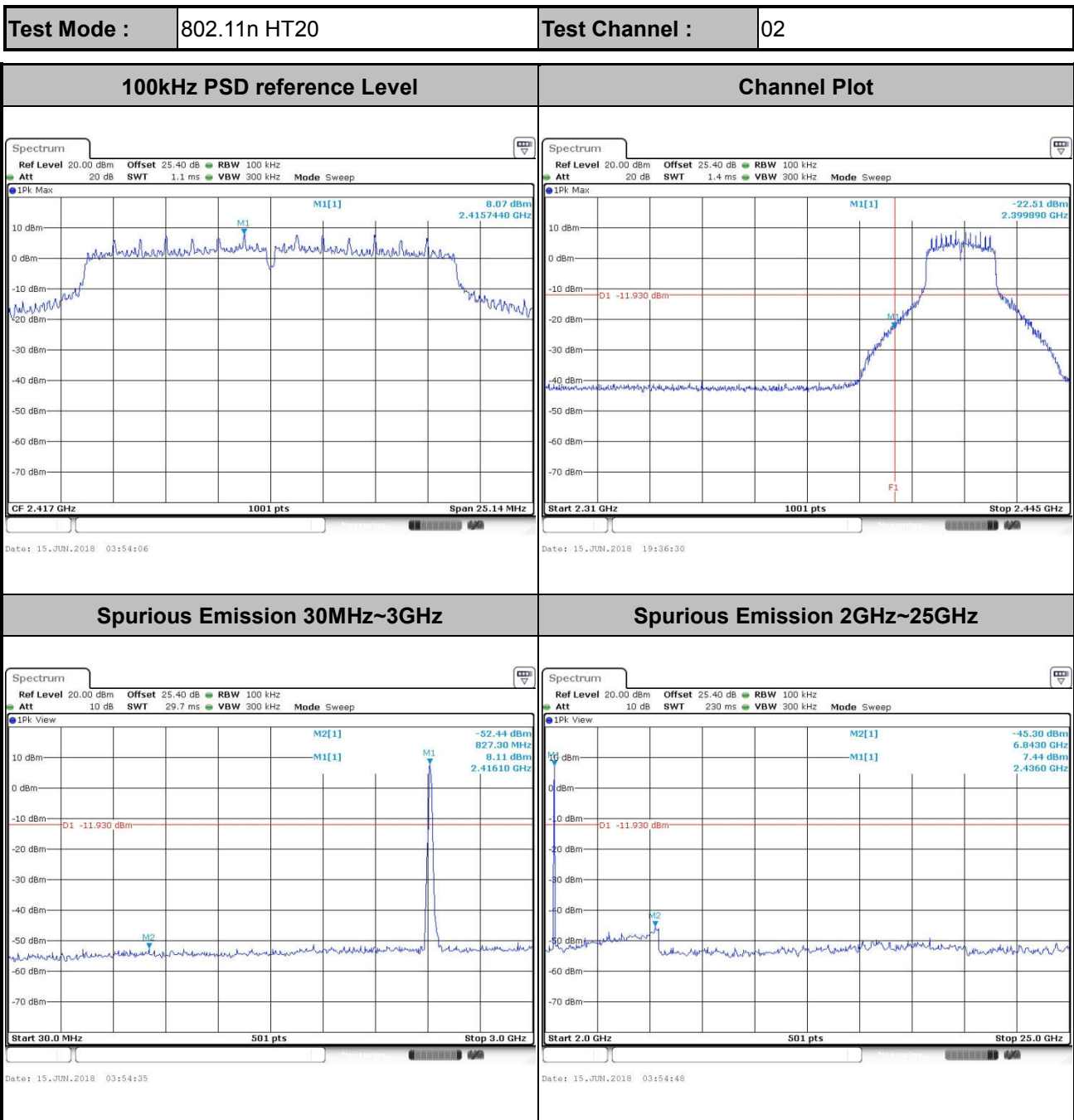




|             |         |                |    |
|-------------|---------|----------------|----|
| Test Mode : | 802.11g | Test Channel : | 11 |
|-------------|---------|----------------|----|





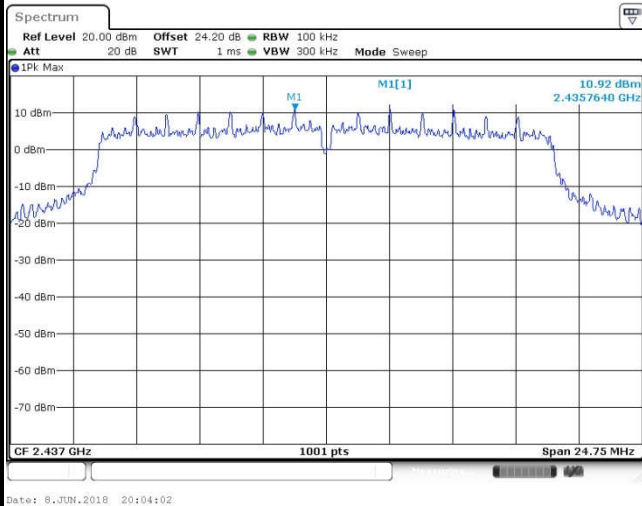




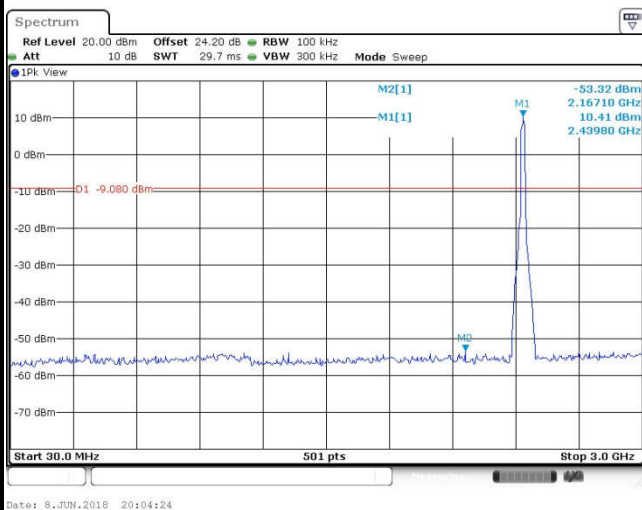
Test Mode : 802.11n HT20

Test Channel : 06

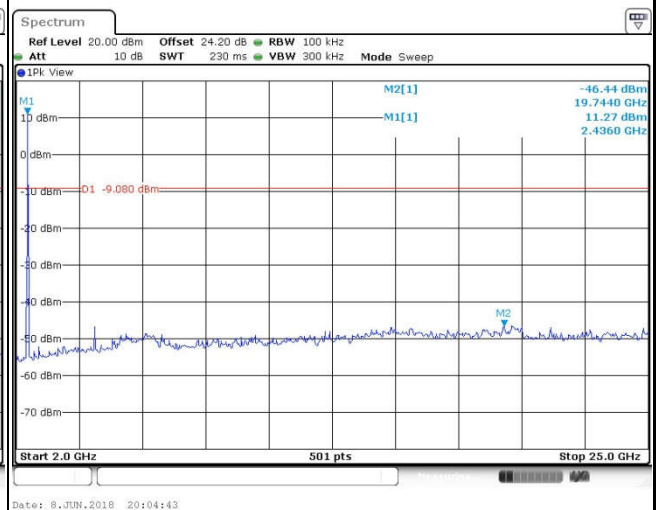
## 100kHz PSD reference Level

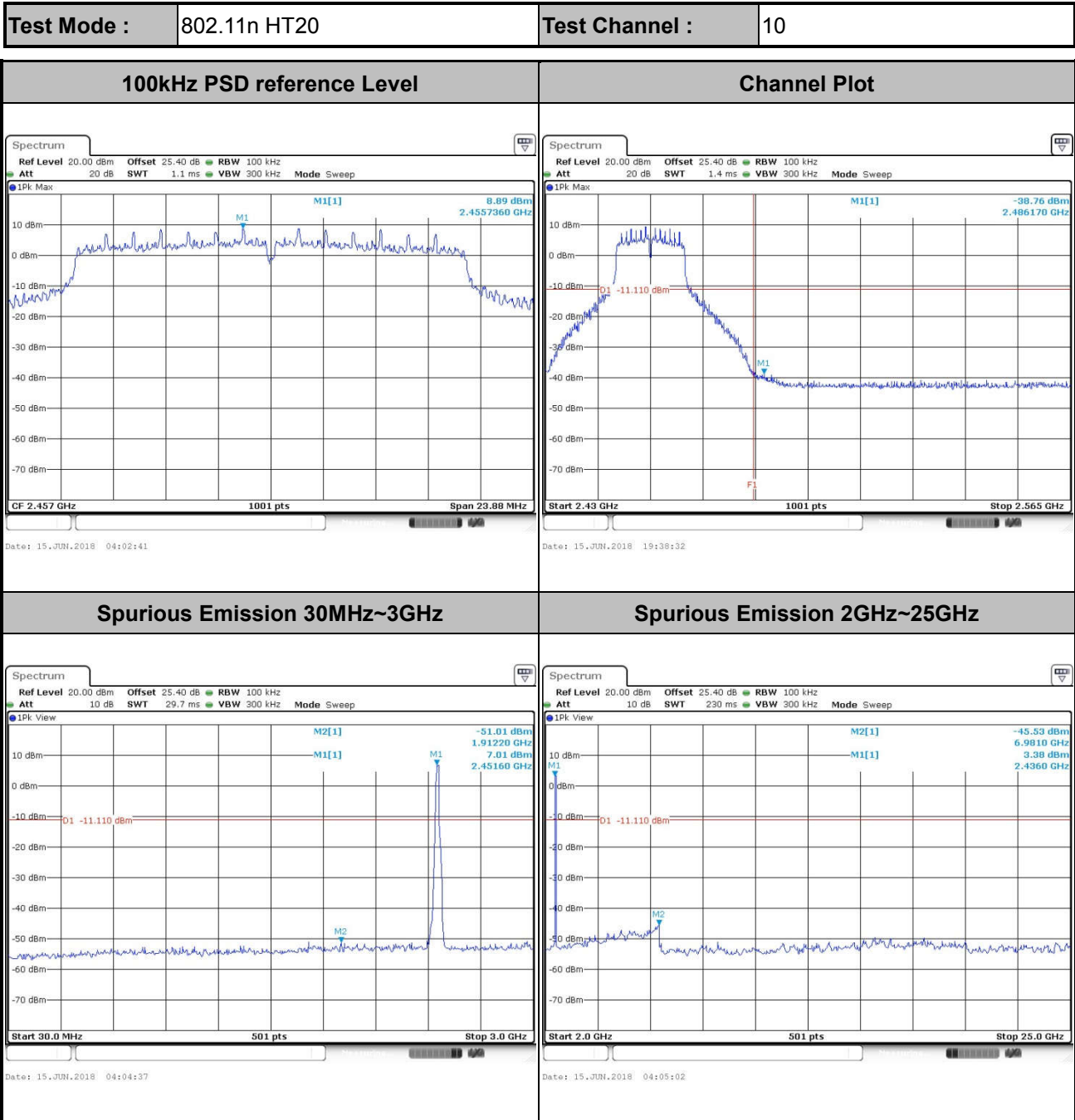


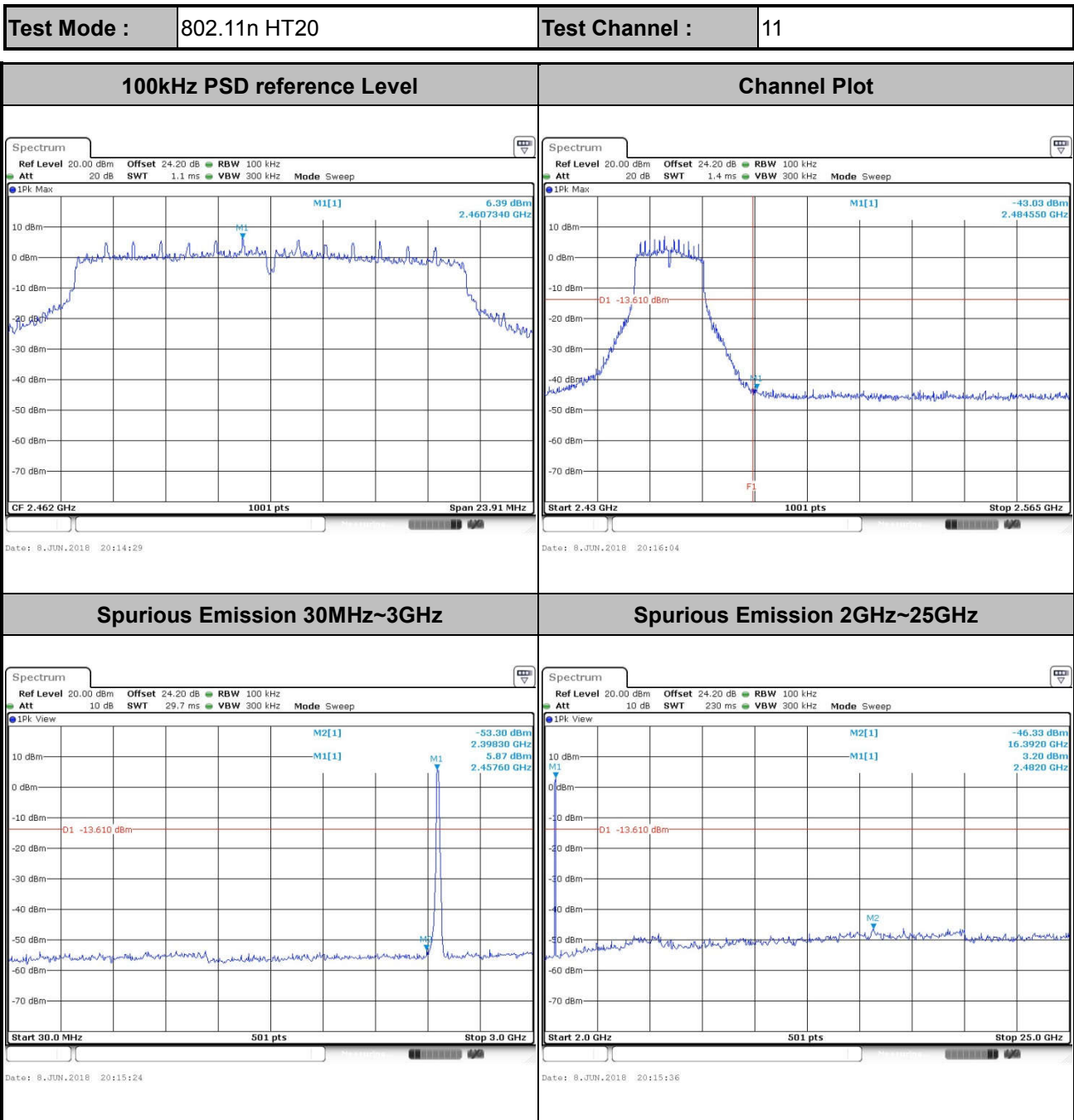
## Spurious Emission 30MHz~3GHz



## Spurious Emission 2GHz~25GHz







### **3.5 Radiated Band Edges and Spurious Emission Measurement**

#### **3.5.1 Limit of Radiated band edge and Spurious Emission Measurement**

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

| <b>Frequency<br/>(MHz)</b> | <b>Field Strength<br/>(microvolts/meter)</b> | <b>Measurement Distance<br/>(meters)</b> |
|----------------------------|----------------------------------------------|------------------------------------------|
| 0.009 – 0.490              | 2400/F(kHz)                                  | 300                                      |
| 0.490 – 1.705              | 24000/F(kHz)                                 | 30                                       |
| 1.705 – 30.0               | 30                                           | 30                                       |
| 30 – 88                    | 100                                          | 3                                        |
| 88 – 216                   | 150                                          | 3                                        |
| 216 - 960                  | 200                                          | 3                                        |
| Above 960                  | 500                                          | 3                                        |

#### **3.5.2 Measuring Instruments**

The measuring equipment is listed in the section 4 of this test report.



### 3.5.3 Test Procedures

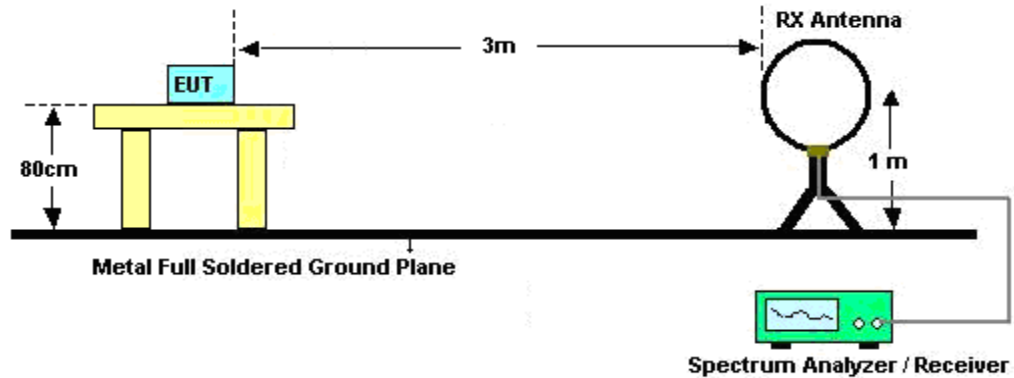
1. The testing follows FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v04.
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level.
3. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
5. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level
6. For testing below 1GHz, if the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then peak values of EUT will be reported, otherwise, the emissions will be repeated one by one using the CISPR quasi-peak method and reported.
7. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in average mode also complies with the limit in average mode), then peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
8. Use the following spectrum analyzer settings:
  - (1) Span shall wide enough to fully capture the emission being measured;
  - (2) Set RBW=100 kHz for  $f < 1$  GHz; VBW  $\geq$  RBW; Sweep = auto; Detector function = peak; Trace = max hold;
  - (3) Set RBW = 1 MHz, VBW= 3MHz for  $f \geq 1$  GHz for peak measurement.

For average measurement:

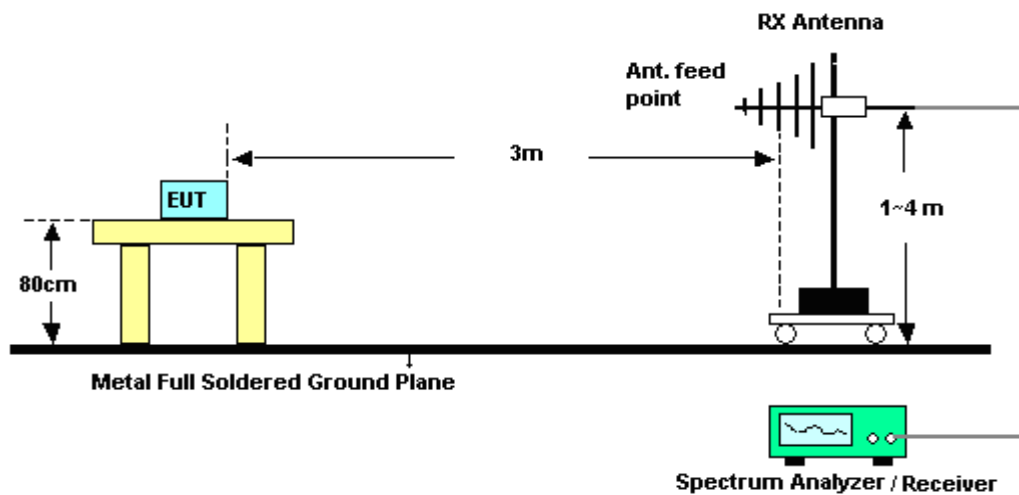
    - VBW = 10 Hz, when duty cycle is no less than 98 percent.
    - VBW  $\geq 1/T$ , when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

### 3.5.4 Test Setup

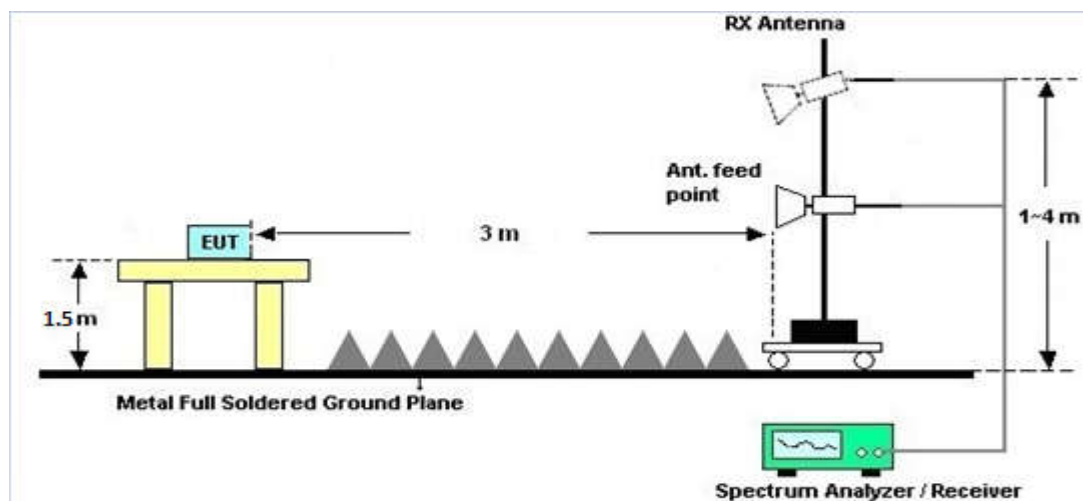
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



**3.5.5 Test Results of Radiated Spurious Emissions (9kHz ~ 30MHz)**

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line was not reported.

**3.5.6 Test Result of Radiated Spurious at Band Edges**

Please refer to Appendix C.

**3.5.7 Duty Cycle**

Please refer to Appendix D.

**3.5.8 Test Result of Radiated Spurious Emission (30MHz ~ 10<sup>th</sup> Harmonic)**

Please refer to Appendix C.

### 3.6 AC Conducted Emission Measurement

#### 3.6.1 Limit of AC Conducted Emission

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

| Frequency of Emission<br>(MHz) | Conducted Limit (dB $\mu$ V) |           |
|--------------------------------|------------------------------|-----------|
|                                | Quasi-Peak                   | Average   |
| 0.15-0.5                       | 66 to 56*                    | 56 to 46* |
| 0.5-5                          | 56                           | 46        |
| 5-30                           | 60                           | 50        |

\*Decreases with the logarithm of the frequency.

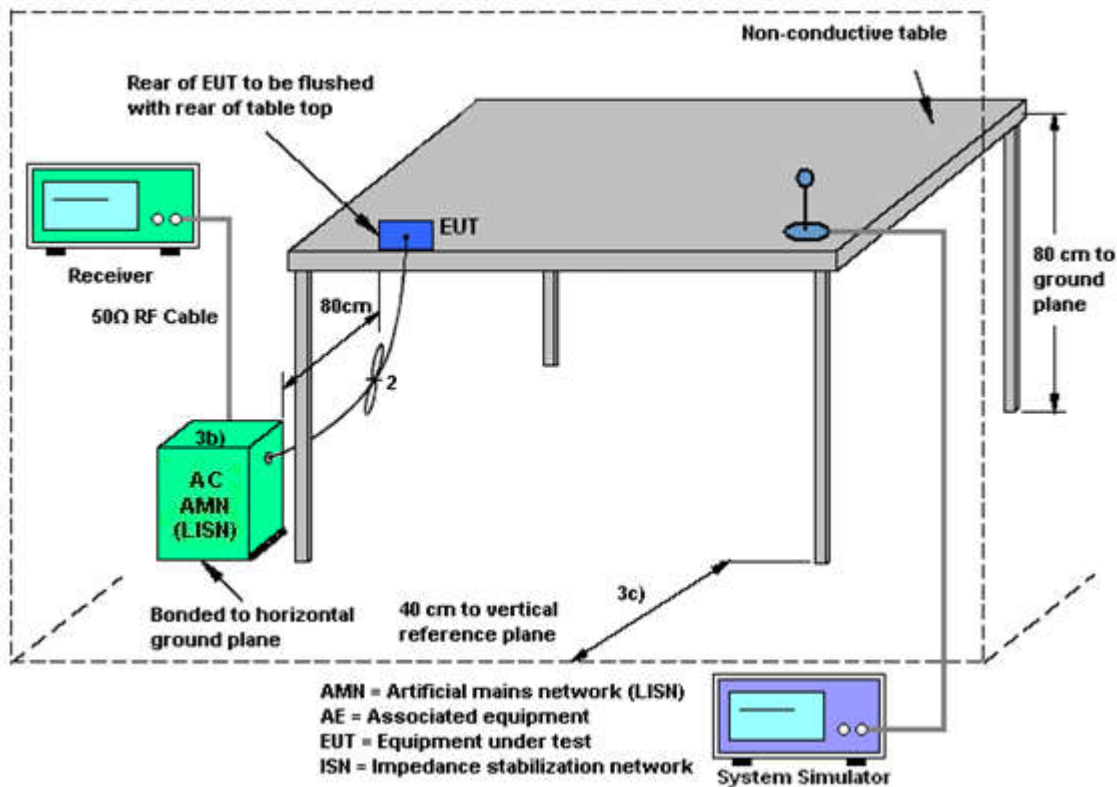
#### 3.6.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

#### 3.6.3 Test Procedures

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

### 3.6.4 Test Setup



### 3.6.5 Test Result of AC Conducted Emission

Please refer to Appendix B.

### 3.7 Antenna Requirements

#### 3.7.1 Standard Applicable

If directional gain of transmitting Antennas is greater than 6dBi, the power shall be reduced by the same level in dB comparing to gain minus 6dBi. For the fixed point-to-point operation, the power shall be reduced by one dB for every 3 dB that the directional gain of the Antenna exceeds 6 dBi. The use of a permanently attached Antenna or of an Antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the rule.

#### 3.7.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

#### 3.7.3 Antenna Gain

<CDD Modes >

FCC KDB 662911 D01 Multiple Transmitter Output v02r01

For CDD transmissions, directional gain is calculated as

Directional gain =  $G_{ANT}$  + Array Gain, where Array Gain is as follows.

For power spectral density (PSD) measurements on all devices,

Array Gain =  $10 \log(N_{ANT}/N_{SS}=1)$  dB.

For power measurements on IEEE 802.11 devices,

Array Gain = 0 dB (i.e., no array gain) for  $N_{ANT} \leq 4$ .

Directional gain may be calculated by using the formulas applicable to equal gain antennas with  $G_{ANT}$  set equal to the gain of the antenna having the highest gain;

The EUT supports CDD mode.

For power, the directional gain  $G_{ANT}$  is set equal to the antenna having the highest gain, i.e., F)2)f)i).

For PSD, the directional gain calculation is following F)2)f)ii) of KDB 662911 D01 v02r01.

The power and PSD limit should be modified if the directional gain of EUT is over 6 dBi,

The directional gain "DG" is calculated as following table.

|         |                 |                 | DG<br>for<br>Power<br>(dBi) | DG<br>for<br>PSD<br>(dBi) | Power<br>Limit<br>Reduction<br>(dB) | PSD<br>Limit<br>Reduction<br>(dB) |
|---------|-----------------|-----------------|-----------------------------|---------------------------|-------------------------------------|-----------------------------------|
|         | Ant. 1<br>(dBi) | Ant. 2<br>(dBi) |                             |                           |                                     |                                   |
| 2.4 GHz | -1.66           | -1.85           | 1.66                        | 1.26                      | 0.00                                | 0.00                              |
|         |                 |                 |                             |                           |                                     |                                   |

*Power Limit Reduction =  $DG(\text{Power}) - 6\text{dBi}$ , ( min = 0 )*

*PSD Limit Reduction =  $DG(\text{PSD}) - 6\text{dBi}$ , ( min = 0 )*



## 4 List of Measuring Equipment

| Instrument           | Manufacturer      | Model No.                      | Serial No.         | Characteristics                     | Calibration Date | Test Date                       | Due Date      | Remark                   |
|----------------------|-------------------|--------------------------------|--------------------|-------------------------------------|------------------|---------------------------------|---------------|--------------------------|
| Hygrometer           | Testo             | DTM-303A                       | TP157075           | N/A                                 | Mar. 06, 2018    | May 26, 2018~<br>Jun. 15, 2018  | Mar. 05, 2019 | Conducted<br>(TH05-HY)   |
| Power Meter          | Agilent           | E4416A                         | GB4129234<br>4     | N/A                                 | Dec. 20, 2017    | May 26, 2018~<br>Jun. 15, 2018  | Dec. 19, 2018 | Conducted<br>(TH05-HY)   |
| Power Sensor         | Agilent           | E9327A                         | US40441548         | 50MHz~18GHz                         | Dec. 20, 2017    | May 26, 2018~<br>Jun. 15, 2018  | Dec. 19, 2018 | Conducted<br>(TH05-HY)   |
| Spectrum Analyzer    | Rohde & Schwarz   | FSP40                          | 100057             | 9kHz-40GHz                          | Nov. 21, 2017    | May 26, 2018~<br>Jun. 15, 2018  | Nov. 20, 2018 | Conducted<br>(TH05-HY)   |
| Amplifier            | MITEQ             | TTA1840-35-HG                  | 1871923            | 18GHz~40GHz,<br>VSWR : 2.5:1<br>max | Jul. 18, 2017    | Jun. 08, 2018~<br>Jun. 15, 2018 | Jul. 17, 2018 | Radiation<br>(03CH12-HY) |
| EMI Test Receiver    | Rohde & Schwarz   | ESU26                          | 100390             | 20Hz~26.5GHz                        | Dec. 25, 2017    | Jun. 08, 2018~<br>Jun. 15, 2018 | Dec. 24, 2018 | Radiation<br>(03CH12-HY) |
| Loop Antenna         | Rohde & Schwarz   | HFH2-Z2                        | 100488             | 9 kHz~30 MHz                        | Nov. 23, 2017    | Jun. 08, 2018~<br>Jun. 15, 2018 | Nov. 22, 2018 | Radiation<br>(03CH12-HY) |
| Bilog Antenna        | TESEQ             | CBL<br>6111D&N-6-<br>06        | 35414&AT-N<br>0602 | 30MHz~1GHz                          | Oct. 14, 2017    | Jun. 08, 2018~<br>Jun. 15, 2018 | Oct. 13, 2018 | Radiation<br>(03CH12-HY) |
| Horn Antenna         | SCHWARZBECK       | BBHA<br>9120D                  | 9120D-1328         | 1GHz ~ 18GHz                        | Oct. 20, 2017    | Jun. 08, 2018~<br>Jun. 15, 2018 | Oct. 19, 2018 | Radiation<br>(03CH12-HY) |
| SHF-EHF Horn Antenna | SCHWARZBECK       | BBHA 9170                      | BBHA91705<br>84    | 18GHz ~ 40GHz                       | Nov. 27, 2017    | Jun. 08, 2018~<br>Jun. 15, 2018 | Nov. 26, 2018 | Radiation<br>(03CH12-HY) |
| Hygrometer           | TECPEL            | DTM-303B                       | TP140349           | N/A                                 | Oct. 12, 2017    | Jun. 08, 2018~<br>Jun. 15, 2018 | Oct. 11, 2018 | Radiation<br>(03CH12-HY) |
| Preamplifier         | COM-POWER         | PA-103                         | 161075             | 10MHz~1GHz                          | Mar. 26, 2018    | Jun. 08, 2018~<br>Jun. 15, 2018 | Mar. 25, 2019 | Radiation<br>(03CH12-HY) |
| Preamplifier         | MITEQ             | AMF-7D-001<br>01800-30-10<br>P | 1590074            | 1GHz~18GHz                          | May 21, 2018     | Jun. 08, 2018~<br>Jun. 15, 2018 | May 20, 2019  | Radiation<br>(03CH12-HY) |
| Preamplifier         | Keysight          | 83017A                         | MY5327014<br>8     | 1GHz~26.5GHz                        | Jan. 15, 2018    | Jun. 08, 2018~<br>Jun. 15, 2018 | Jan. 14, 2019 | Radiation<br>(03CH12-HY) |
| Controller           | EMEC              | EM1000                         | N/A                | Control Turn<br>table & Ant Mast    | NCR              | Jun. 08, 2018~<br>Jun. 15, 2018 | NCR           | Radiation<br>(03CH12-HY) |
| Turn Table           | EMEC              | TT2000                         | N/A                | 0~360 Degree                        | NCR              | Jun. 08, 2018~<br>Jun. 15, 2018 | NCR           | Radiation<br>(03CH12-HY) |
| Antenna Mast         | EMEC              | AM-BS-4500<br>-B               | N/A                | 1m~4m                               | NCR              | Jun. 08, 2018~<br>Jun. 15, 2018 | NCR           | Radiation<br>(03CH12-HY) |
| AC Power Source      | ChainTek          | APC-1000W                      | N/A                | N/A                                 | NCR              | Jun. 10, 2018                   | NCR           | Conduction<br>(CO05-HY)  |
| EMI Test Receiver    | Rohde & Schwarz   | ESR3                           | 102388             | 3.6GHz                              | Dec. 08, 2017    | Jun. 10, 2018                   | Dec. 07, 2018 | Conduction<br>(CO05-HY)  |
| Hygrometer           | Testo             | 608-H1                         | 34913912           | N/A                                 | Mar. 06, 2018    | Jun. 10, 2018                   | Mar. 05, 2019 | Conduction<br>(CO05-HY)  |
| LISN                 | Rohde & Schwarz   | ENV216                         | 100080             | 9kHz~30MHz                          | Nov. 30, 2017    | Jun. 10, 2018                   | Nov. 29, 2018 | Conduction<br>(CO05-HY)  |
| LF Cable             | HUBER +<br>SUHNER | RG-214/U                       | LF01               | N/A                                 | Jan. 03, 2018    | Jun. 10, 2018                   | Jan. 02, 2019 | Conduction<br>(CO05-HY)  |



|               |                 |         |        |     |               |               |               |                         |
|---------------|-----------------|---------|--------|-----|---------------|---------------|---------------|-------------------------|
| Pulse Limiter | Rohde & Schwarz | ESH3-Z2 | 100851 | N/A | Jan. 03, 2018 | Jun. 10, 2018 | Jan. 02, 2019 | Conduction<br>(CO05-HY) |
|---------------|-----------------|---------|--------|-----|---------------|---------------|---------------|-------------------------|

NCR: No Calibration Required

## 5 Uncertainty of Evaluation

### Uncertainty of Conducted Emission Measurement (150kHz ~ 30MHz)

|                                                                         |       |
|-------------------------------------------------------------------------|-------|
| Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ ) | 2.7dB |
|-------------------------------------------------------------------------|-------|

### Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

|                                                                         |        |
|-------------------------------------------------------------------------|--------|
| Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ ) | 5.1 dB |
|-------------------------------------------------------------------------|--------|

### Uncertainty of Radiated Emission Measurement (1000 MHz ~ 18000 MHz)

|                                                                         |        |
|-------------------------------------------------------------------------|--------|
| Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ ) | 5.2 dB |
|-------------------------------------------------------------------------|--------|

### Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)

|                                                                         |        |
|-------------------------------------------------------------------------|--------|
| Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ ) | 4.7 dB |
|-------------------------------------------------------------------------|--------|

**Appendix A. Test Result of Conducted Test Items**

|                |                                        |                    |       |    |
|----------------|----------------------------------------|--------------------|-------|----|
| Test Engineer: | Kai Liao/Lena Lo/Derek Hsu/Shiang Wang | Temperature:       | 21~25 | °C |
| Test Date:     | 2018/5/25~2018/06/15                   | Relative Humidity: | 51~54 | %  |

**TEST RESULTS DATA**  
**6dB and 99% Occupied Bandwidth**

| 2.4GHz Band |           |     |     |             |                       |       |              |       |                    |           |
|-------------|-----------|-----|-----|-------------|-----------------------|-------|--------------|-------|--------------------|-----------|
| Mod.        | Data Rate | NTX | CH. | Freq. (MHz) | 99% Occupied BW (MHz) |       | 6dB BW (MHz) |       | 6dB BW Limit (MHz) | Pass/Fail |
|             |           |     |     |             | Ant 1                 | Ant 2 | Ant 1        | Ant 2 |                    |           |
| 11b         | 1Mbps     | 2   | 1   | 2412        | 14.09                 | 13.84 | 9.05         | 8.53  | 0.50               | Pass      |
| 11b         | 1Mbps     | 2   | 2   | 2417        | 14.39                 | 14.39 | 9.03         | 9.03  | 0.50               | Pass      |
| 11b         | 1Mbps     | 2   | 6   | 2437        | 13.94                 | 14.04 | 8.53         | 9.05  | 0.50               | Pass      |
| 11b         | 1Mbps     | 2   | 10  | 2457        | 14.09                 | 14.04 | 9.03         | 9.03  | 0.50               | Pass      |
| 11b         | 1Mbps     | 2   | 11  | 2462        | 14.04                 | 14.09 | 9.03         | 8.55  | 0.50               | Pass      |
| 11g         | 6Mbps     | 2   | 1   | 2412        | 16.93                 | 16.78 | 15.44        | 15.28 | 0.50               | Pass      |
| 11g         | 6Mbps     | 2   | 2   | 2417        | 17.23                 | 18.58 | 15.72        | 16.28 | 0.50               | Pass      |
| 11g         | 6Mbps     | 2   | 6   | 2437        | 17.28                 | 19.58 | 15.34        | 15.72 | 0.50               | Pass      |
| 11g         | 6Mbps     | 2   | 10  | 2457        | 17.08                 | 17.78 | 15.44        | 15.70 | 0.50               | Pass      |
| 11g         | 6Mbps     | 2   | 11  | 2462        | 17.28                 | 19.88 | 15.52        | 15.68 | 0.50               | Pass      |
| HT20        | MCS0      | 2   | 1   | 2412        | 18.03                 | 17.98 | 15.94        | 15.68 | 0.50               | Pass      |
| HT20        | MCS0      | 2   | 2   | 2417        | 18.28                 | 19.38 | 15.96        | 16.76 | 0.50               | Pass      |
| HT20        | MCS0      | 2   | 6   | 2437        | 18.78                 | 22.63 | 15.94        | 16.50 | 0.50               | Pass      |
| HT20        | MCS0      | 2   | 10  | 2457        | 18.23                 | 19.13 | 16.22        | 15.92 | 0.50               | Pass      |
| HT20        | MCS0      | 2   | 11  | 2462        | 17.88                 | 17.93 | 15.94        | 15.94 | 0.50               | Pass      |

**TEST RESULTS DATA**  
**Peak Output Power**

| 2.4GHz Band |           |      |     |             |                            |       |       |                             |       |          |       |                  |       |                        |       |            |
|-------------|-----------|------|-----|-------------|----------------------------|-------|-------|-----------------------------|-------|----------|-------|------------------|-------|------------------------|-------|------------|
| Mod.        | Data Rate | N/TX | CH. | Freq. (MHz) | Peak Conducted Power (dBm) |       |       | Conducted Power Limit (dBm) |       | DG (dBi) |       | EIRP Power (dBm) |       | EIRP Power Limit (dBm) |       | Pass /Fail |
|             |           |      |     |             | Ant 1                      | Ant 2 | SUM   | Ant 1                       | Ant 2 | Ant 1    | Ant 2 | Ant 1            | Ant 2 | Ant 1                  | Ant 2 |            |
| 11b         | 1Mbps     | 1    | 1   | 2412        | 20.50                      | 19.21 | -     | 30.00                       | 30.00 | -1.66    | -1.85 | 18.84            | 17.36 | 36.00                  | 36.00 | Pass       |
| 11b         | 1Mbps     | 1    | 2   | 2417        | 20.49                      | 19.28 | -     | 30.00                       | 30.00 | -1.66    | -1.85 | 18.83            | 17.43 | 36.00                  | 36.00 | Pass       |
| 11b         | 1Mbps     | 1    | 6   | 2437        | 20.57                      | 20.93 | -     | 30.00                       | 30.00 | -1.66    | -1.85 | 18.91            | 19.08 | 36.00                  | 36.00 | Pass       |
| 11b         | 1Mbps     | 1    | 10  | 2457        | 19.99                      | 20.41 | -     | 30.00                       | 30.00 | -1.66    | -1.85 | 18.33            | 18.56 | 36.00                  | 36.00 | Pass       |
| 11b         | 1Mbps     | 1    | 11  | 2462        | 20.59                      | 20.38 | -     | 30.00                       | 30.00 | -1.66    | -1.85 | 18.93            | 18.53 | 36.00                  | 36.00 | Pass       |
| 11g         | 6Mbps     | 1    | 1   | 2412        | 21.33                      | 21.47 | -     | 30.00                       | 30.00 | -1.66    | -1.85 | 19.67            | 19.62 | 36.00                  | 36.00 | Pass       |
| 11g         | 6Mbps     | 1    | 2   | 2417        | 22.87                      | 23.76 | -     | 30.00                       | 30.00 | -1.66    | -1.85 | 21.21            | 21.91 | 36.00                  | 36.00 | Pass       |
| 11g         | 6Mbps     | 1    | 6   | 2437        | 24.30                      | 23.36 | -     | 30.00                       | 30.00 | -1.66    | -1.85 | 22.64            | 21.51 | 36.00                  | 36.00 | Pass       |
| 11g         | 6Mbps     | 1    | 10  | 2457        | 22.32                      | 22.39 | -     | 30.00                       | 30.00 | -1.66    | -1.85 | 20.66            | 20.54 | 36.00                  | 36.00 | Pass       |
| 11g         | 6Mbps     | 1    | 11  | 2462        | 21.34                      | 20.98 | -     | 30.00                       | 30.00 | -1.66    | -1.85 | 19.68            | 19.13 | 36.00                  | 36.00 | Pass       |
| HT20        | MCS0      | 1    | 1   | 2412        | 21.40                      | 21.79 | -     | 30.00                       | 30.00 | -1.66    | -1.85 | 19.74            | 19.94 | 36.00                  | 36.00 | Pass       |
| HT20        | MCS0      | 1    | 2   | 2417        | 22.49                      | 24.30 | -     | 30.00                       | 30.00 | -1.66    | -1.85 | 20.83            | 22.45 | 36.00                  | 36.00 | Pass       |
| HT20        | MCS0      | 1    | 6   | 2437        | 24.90                      | 23.81 | -     | 30.00                       | 30.00 | -1.66    | -1.85 | 23.24            | 21.96 | 36.00                  | 36.00 | Pass       |
| HT20        | MCS0      | 1    | 10  | 2457        | 23.34                      | 24.59 | -     | 30.00                       | 30.00 | -1.66    | -1.85 | 21.68            | 22.74 | 36.00                  | 36.00 | Pass       |
| HT20        | MCS0      | 1    | 11  | 2462        | 20.85                      | 20.90 | -     | 30.00                       | 30.00 | -1.66    | -1.85 | 19.19            | 19.05 | 36.00                  | 36.00 | Pass       |
| 11b         | 1Mbps     | 2    | 1   | 2412        | 20.65                      | 19.44 | 23.10 | 30.00                       |       | -1.66    |       | 21.44            |       | 36.00                  |       | Pass       |
| 11b         | 1Mbps     | 2    | 2   | 2417        | 21.22                      | 19.84 | 23.59 | 30.00                       |       | -1.66    |       | 21.93            |       | 36.00                  |       | Pass       |
| 11b         | 1Mbps     | 2    | 6   | 2437        | 20.78                      | 21.00 | 23.90 | 30.00                       |       | -1.66    |       | 22.24            |       | 36.00                  |       | Pass       |
| 11b         | 1Mbps     | 2    | 10  | 2457        | 20.01                      | 20.55 | 23.30 | 30.00                       |       | -1.66    |       | 21.64            |       | 36.00                  |       | Pass       |
| 11b         | 1Mbps     | 2    | 11  | 2462        | 21.35                      | 20.44 | 23.93 | 30.00                       |       | -1.66    |       | 22.27            |       | 36.00                  |       | Pass       |
| 11g         | 6Mbps     | 2    | 1   | 2412        | 21.67                      | 21.52 | 24.61 | 30.00                       |       | -1.66    |       | 22.95            |       | 36.00                  |       | Pass       |
| 11g         | 6Mbps     | 2    | 2   | 2417        | 23.64                      | 24.11 | 26.89 | 30.00                       |       | -1.66    |       | 25.23            |       | 36.00                  |       | Pass       |
| 11g         | 6Mbps     | 2    | 6   | 2437        | 24.46                      | 24.50 | 27.49 | 30.00                       |       | -1.66    |       | 25.83            |       | 36.00                  |       | Pass       |
| 11g         | 6Mbps     | 2    | 10  | 2457        | 22.86                      | 22.95 | 25.92 | 30.00                       |       | -1.66    |       | 24.26            |       | 36.00                  |       | Pass       |
| 11g         | 6Mbps     | 2    | 11  | 2462        | 21.36                      | 21.02 | 24.20 | 30.00                       |       | -1.66    |       | 22.54            |       | 36.00                  |       | Pass       |
| HT20        | MCS0      | 2    | 1   | 2412        | 21.44                      | 21.82 | 24.64 | 30.00                       |       | -1.66    |       | 22.98            |       | 36.00                  |       | Pass       |
| HT20        | MCS0      | 2    | 2   | 2417        | 23.70                      | 24.32 | 27.03 | 30.00                       |       | -1.66    |       | 25.37            |       | 36.00                  |       | Pass       |
| HT20        | MCS0      | 2    | 6   | 2437        | 24.93                      | 25.22 | 28.09 | 30.00                       |       | -1.66    |       | 26.43            |       | 36.00                  |       | Pass       |
| HT20        | MCS0      | 2    | 10  | 2457        | 24.14                      | 24.68 | 27.43 | 30.00                       |       | -1.66    |       | 25.77            |       | 36.00                  |       | Pass       |
| HT20        | MCS0      | 2    | 11  | 2462        | 20.91                      | 20.94 | 23.94 | 30.00                       |       | -1.66    |       | 22.28            |       | 36.00                  |       | Pass       |

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

**TEST RESULTS DATA**  
**Average Output Power**

| 2.4GHz Band |           |     |     |             |                  |       |                               |       |       |
|-------------|-----------|-----|-----|-------------|------------------|-------|-------------------------------|-------|-------|
| Mod.        | Data Rate | NTX | CH. | Freq. (MHz) | Duty Factor (dB) |       | Average Conducted Power (dBm) |       |       |
|             |           |     |     |             | Ant 1            | Ant 2 | Ant 1                         | Ant 2 | SUM   |
| 11b         | 1Mbps     | 1   | 1   | 2412        | 0.04             | 0.04  | 18.28                         | 17.08 | -     |
| 11b         | 1Mbps     | 1   | 2   | 2417        | 0.04             | 0.04  | 18.19                         | 17.01 |       |
| 11b         | 1Mbps     | 1   | 6   | 2437        | 0.04             | 0.04  | 18.42                         | 18.66 |       |
| 11b         | 1Mbps     | 1   | 10  | 2457        | 0.04             | 0.04  | 17.73                         | 18.12 |       |
| 11b         | 1Mbps     | 1   | 11  | 2462        | 0.04             | 0.04  | 18.41                         | 18.03 |       |
| 11g         | 6Mbps     | 1   | 1   | 2412        | 0.08             | 0.08  | 16.57                         | 16.61 |       |
| 11g         | 6Mbps     | 1   | 2   | 2417        | 0.08             | 0.08  | 18.67                         | 18.98 |       |
| 11g         | 6Mbps     | 1   | 6   | 2437        | 0.08             | 0.08  | 19.82                         | 18.98 |       |
| 11g         | 6Mbps     | 1   | 10  | 2457        | 0.08             | 0.08  | 18.03                         | 18.31 |       |
| 11g         | 6Mbps     | 1   | 11  | 2462        | 0.08             | 0.08  | 16.58                         | 16.59 |       |
| HT20        | MCS0      | 1   | 1   | 2412        | 0.09             | 0.09  | 16.30                         | 16.50 |       |
| HT20        | MCS0      | 1   | 2   | 2417        | 0.09             | 0.09  | 18.12                         | 18.92 |       |
| HT20        | MCS0      | 1   | 6   | 2437        | 0.09             | 0.09  | 20.03                         | 18.94 |       |
| HT20        | MCS0      | 1   | 10  | 2457        | 0.09             | 0.09  | 18.28                         | 18.93 |       |
| HT20        | MCS0      | 1   | 11  | 2462        | 0.09             | 0.09  | 15.91                         | 15.94 |       |
| 11b         | 1Mbps     | 2   | 1   | 2412        | 0.04             | 0.04  | 18.52                         | 17.26 | 20.95 |
| 11b         | 1Mbps     | 2   | 2   | 2417        | 0.04             | 0.04  | 18.86                         | 17.36 | 21.18 |
| 11b         | 1Mbps     | 2   | 6   | 2437        | 0.04             | 0.04  | 18.44                         | 18.67 | 21.57 |
| 11b         | 1Mbps     | 2   | 10  | 2457        | 0.04             | 0.04  | 17.74                         | 18.16 | 20.97 |
| 11b         | 1Mbps     | 2   | 11  | 2462        | 0.04             | 0.04  | 18.99                         | 18.04 | 21.55 |
| 11g         | 6Mbps     | 2   | 1   | 2412        | 0.12             | 0.12  | 16.65                         | 16.68 | 19.68 |
| 11g         | 6Mbps     | 2   | 2   | 2417        | 0.12             | 0.12  | 18.71                         | 19.26 | 22.00 |
| 11g         | 6Mbps     | 2   | 6   | 2437        | 0.12             | 0.12  | 20.00                         | 20.04 | 23.03 |
| 11g         | 6Mbps     | 2   | 10  | 2457        | 0.12             | 0.12  | 18.77                         | 19.28 | 22.04 |
| 11g         | 6Mbps     | 2   | 11  | 2462        | 0.12             | 0.12  | 16.63                         | 16.66 | 19.66 |
| HT20        | MCS0      | 2   | 1   | 2412        | 0.09             | 0.09  | 16.33                         | 16.52 | 19.44 |
| HT20        | MCS0      | 2   | 2   | 2417        | 0.09             | 0.09  | 18.49                         | 19.44 | 22.00 |
| HT20        | MCS0      | 2   | 6   | 2437        | 0.09             | 0.09  | 20.32                         | 20.38 | 23.36 |
| HT20        | MCS0      | 2   | 10  | 2457        | 0.09             | 0.09  | 18.82                         | 19.78 | 22.34 |
| HT20        | MCS0      | 2   | 11  | 2462        | 0.09             | 0.09  | 15.95                         | 15.96 | 18.97 |

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

**TEST RESULTS DATA**  
**Peak Power Spectral Density**

| 2.4GHz Band |           |                 |     |             |                     |        |              |          |       |                           |       |           |
|-------------|-----------|-----------------|-----|-------------|---------------------|--------|--------------|----------|-------|---------------------------|-------|-----------|
| Mod.        | Data Rate | N <sub>TX</sub> | CH. | Freq. (MHz) | Peak PSD (dBm/3kHz) |        |              | DG (dBi) |       | Peak PSD Limit (dBm/3kHz) |       | Pass/Fail |
|             |           |                 |     |             | Ant 1               | Ant 2  | Worse + 3.01 | Ant 1    | Ant 2 | Ant 1                     | Ant 2 |           |
| 11b         | 1Mbps     | 2               | 1   | 2412        | -3.74               | -5.53  | -0.73        | 1.26     |       | 8.00                      |       | Pass      |
| 11b         | 1Mbps     | 2               | 2   | 2417        | -2.08               | -2.14  | 0.93         | 1.26     |       | 8.00                      |       | Pass      |
| 11b         | 1Mbps     | 2               | 6   | 2437        | -5.21               | -5.96  | -2.20        | 1.26     |       | 8.00                      |       | Pass      |
| 11b         | 1Mbps     | 2               | 10  | 2457        | -5.40               | -5.67  | -2.39        | 1.26     |       | 8.00                      |       | Pass      |
| 11b         | 1Mbps     | 2               | 11  | 2462        | -3.63               | -6.64  | -0.62        | 1.26     |       | 8.00                      |       | Pass      |
| 11g         | 6Mbps     | 2               | 1   | 2412        | -9.67               | -9.71  | -6.66        | 1.26     |       | 8.00                      |       | Pass      |
| 11g         | 6Mbps     | 2               | 2   | 2417        | -7.49               | -6.33  | -3.32        | 1.26     |       | 8.00                      |       | Pass      |
| 11g         | 6Mbps     | 2               | 6   | 2437        | -6.84               | -5.55  | -2.54        | 1.26     |       | 8.00                      |       | Pass      |
| 11g         | 6Mbps     | 2               | 10  | 2457        | -6.79               | -6.05  | -3.04        | 1.26     |       | 8.00                      |       | Pass      |
| 11g         | 6Mbps     | 2               | 11  | 2462        | -9.58               | -9.53  | -6.52        | 1.26     |       | 8.00                      |       | Pass      |
| HT20        | MCS0      | 2               | 1   | 2412        | -8.91               | -9.14  | -5.90        | 1.26     |       | 8.00                      |       | Pass      |
| HT20        | MCS0      | 2               | 2   | 2417        | -6.76               | -7.19  | -3.75        | 1.26     |       | 8.00                      |       | Pass      |
| HT20        | MCS0      | 2               | 6   | 2437        | -6.02               | -4.67  | -1.66        | 1.26     |       | 8.00                      |       | Pass      |
| HT20        | MCS0      | 2               | 10  | 2457        | -6.88               | -7.00  | -3.87        | 1.26     |       | 8.00                      |       | Pass      |
| HT20        | MCS0      | 2               | 11  | 2462        | -10.01              | -10.23 | -7.00        | 1.26     |       | 8.00                      |       | Pass      |

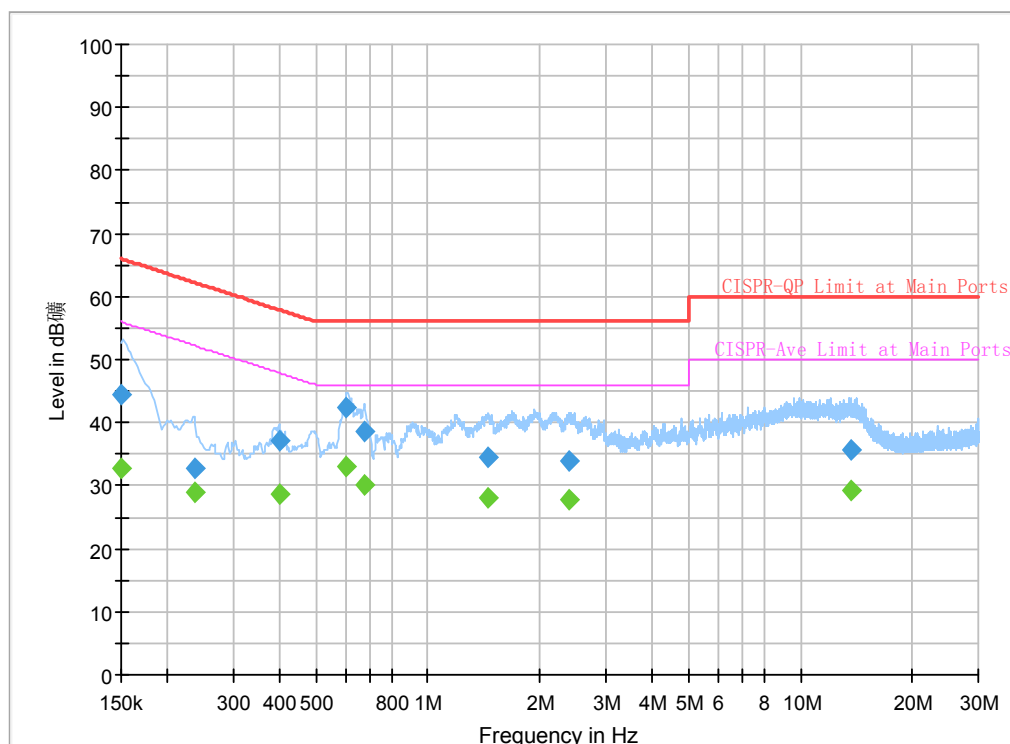
Measured power density (dBm) has offset with cable loss.



## Appendix B. AC Conducted Emission Test Results

|                 |               |                     |         |
|-----------------|---------------|---------------------|---------|
| Test Engineer : | Arthur Hsieh  | Temperature :       | 21~25°C |
|                 |               | Relative Humidity : | 51~55%  |
| Test Voltage :  | 120Vac / 60Hz | Phase :             | Line    |

Full Spectrum



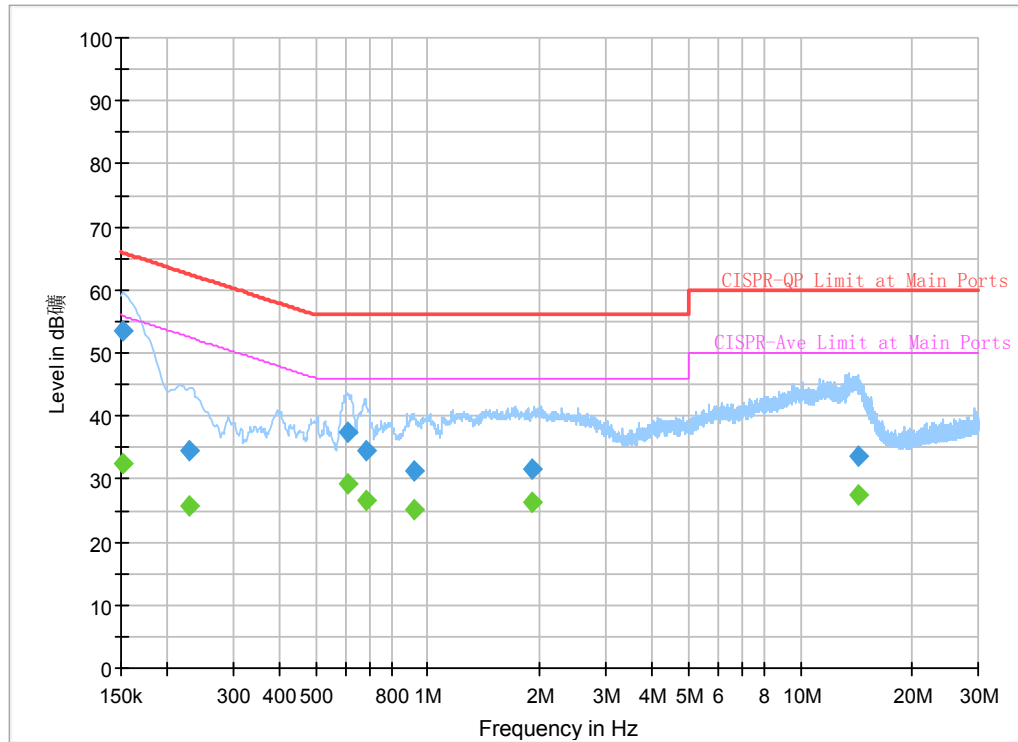
## Final Result

| Frequency (MHz) | Quasi-Peak (dBμV) | CAverage (dBμV) | Limit (dBμV) | Margin (dB) | Line | Filter | Corr. (dB) |
|-----------------|-------------------|-----------------|--------------|-------------|------|--------|------------|
| 0.150000        | ---               | 32.73           | 56.00        | 23.27       | L1   | OFF    | 19.5       |
| 0.150000        | 44.32             | ---             | 66.00        | 21.68       | L1   | OFF    | 19.5       |
| 0.235500        | ---               | 28.88           | 52.25        | 23.37       | L1   | OFF    | 19.5       |
| 0.235500        | 32.73             | ---             | 62.25        | 29.52       | L1   | OFF    | 19.5       |
| 0.397500        | ---               | 28.74           | 47.91        | 19.17       | L1   | OFF    | 19.5       |
| 0.397500        | 37.05             | ---             | 57.91        | 20.86       | L1   | OFF    | 19.5       |
| 0.604500        | ---               | 33.01           | 46.00        | 12.99       | L1   | OFF    | 19.6       |
| 0.604500        | 42.26             | ---             | 56.00        | 13.74       | L1   | OFF    | 19.6       |
| 0.676500        | ---               | 30.06           | 46.00        | 15.94       | L1   | OFF    | 19.6       |
| 0.676500        | 38.69             | ---             | 56.00        | 17.31       | L1   | OFF    | 19.6       |
| 1.450500        | ---               | 28.21           | 46.00        | 17.79       | L1   | OFF    | 19.6       |
| 1.450500        | 34.46             | ---             | 56.00        | 21.54       | L1   | OFF    | 19.6       |
| 2.404500        | ---               | 27.86           | 46.00        | 18.14       | L1   | OFF    | 19.6       |
| 2.404500        | 33.88             | ---             | 56.00        | 22.12       | L1   | OFF    | 19.6       |
| 13.701750       | ---               | 29.12           | 50.00        | 20.88       | L1   | OFF    | 20.0       |
| 13.701750       | 35.63             | ---             | 60.00        | 24.37       | L1   | OFF    | 20.0       |



|                        |               |                            |         |
|------------------------|---------------|----------------------------|---------|
| <b>Test Engineer :</b> | Arthur Hsieh  | <b>Temperature :</b>       | 21~25°C |
|                        |               | <b>Relative Humidity :</b> | 51~55%  |
| <b>Test Voltage :</b>  | 120Vac / 60Hz | <b>Phase :</b>             | Neutral |

Full Spectrum



### Final Result

| Frequency (MHz) | Quasi-Peak (dBμV) | CAverage (dBμV) | Limit (dBμV) | Margin (dB) | Line | Filter | Corr. (dB) |
|-----------------|-------------------|-----------------|--------------|-------------|------|--------|------------|
| 0.152250        | ---               | 32.38           | 55.88        | 23.50       | N    | OFF    | 19.5       |
| 0.152250        | 53.54             | ---             | 65.88        | 12.34       | N    | OFF    | 19.5       |
| 0.228750        | ---               | 25.73           | 52.50        | 26.77       | N    | OFF    | 19.5       |
| 0.228750        | 34.38             | ---             | 62.50        | 28.12       | N    | OFF    | 19.5       |
| 0.606750        | ---               | 29.16           | 46.00        | 16.84       | N    | OFF    | 19.6       |
| 0.606750        | 37.55             | ---             | 56.00        | 18.45       | N    | OFF    | 19.6       |
| 0.681000        | ---               | 26.49           | 46.00        | 19.51       | N    | OFF    | 19.6       |
| 0.681000        | 34.36             | ---             | 56.00        | 21.64       | N    | OFF    | 19.6       |
| 0.917250        | ---               | 25.25           | 46.00        | 20.75       | N    | OFF    | 19.6       |
| 0.917250        | 31.21             | ---             | 56.00        | 24.79       | N    | OFF    | 19.6       |
| 1.914000        | ---               | 26.31           | 46.00        | 19.69       | N    | OFF    | 19.6       |
| 1.914000        | 31.57             | ---             | 56.00        | 24.43       | N    | OFF    | 19.6       |
| 14.226000       | ---               | 27.42           | 50.00        | 22.58       | N    | OFF    | 20.1       |
| 14.226000       | 33.73             | ---             | 60.00        | 26.27       | N    | OFF    | 20.1       |



## Appendix C. Radiated Spurious Emission

|                        |                 |                            |         |
|------------------------|-----------------|----------------------------|---------|
| <b>Test Engineer :</b> | Watt, Karl, Ken | <b>Temperature :</b>       | 22~25°C |
|                        |                 | <b>Relative Humidity :</b> | 62~65%  |



## 2.4GHz 2400~2483.5MHz

## WIFI 802.11b (Band Edge @ 3m)

| WIFI                        | Note                                                                                        | Frequency | Level      | Over   | Limit      | Read     | Antenna  | Path   | Preamp | Ant    | Table   | Peak  | Pol.  |
|-----------------------------|---------------------------------------------------------------------------------------------|-----------|------------|--------|------------|----------|----------|--------|--------|--------|---------|-------|-------|
| Ant.                        |                                                                                             |           |            | Limit  | Line       | Level    | Factor   | Loss   | Factor | Pos    | Pos     | Avg.  |       |
| 1+2                         |                                                                                             | ( MHz )   | ( dBμV/m ) | ( dB ) | ( dBμV/m ) | ( dBμV ) | ( dB/m ) | ( dB ) | ( dB ) | ( cm ) | ( deg ) | (P/A) | (H/V) |
| 802.11b<br>CH 01<br>2412MHz |                                                                                             | 2368.905  | 59.59      | -14.41 | 74         | 47.41    | 27.11    | 16.65  | 31.58  | 350    | 323     | P     | H     |
|                             |                                                                                             | 2387.805  | 47.55      | -6.45  | 54         | 35.3     | 27.15    | 16.68  | 31.58  | 350    | 323     | A     | H     |
|                             | *                                                                                           | 2412      | 108.33     | -      | -          | 95.99    | 27.19    | 16.72  | 31.57  | 350    | 323     | P     | H     |
|                             | *                                                                                           | 2412      | 104.17     | -      | -          | 91.83    | 27.19    | 16.72  | 31.57  | 350    | 323     | A     | H     |
|                             |                                                                                             | 2381.4    | 60.09      | -13.91 | 74         | 47.89    | 27.11    | 16.67  | 31.58  | 122    | 114     | P     | V     |
|                             |                                                                                             | 2389.065  | 47.69      | -6.31  | 54         | 35.44    | 27.15    | 16.68  | 31.58  | 122    | 114     | A     | V     |
|                             | *                                                                                           | 2412      | 107.8      | -      | -          | 95.46    | 27.19    | 16.72  | 31.57  | 122    | 114     | P     | V     |
|                             | *                                                                                           | 2412      | 103.65     | -      | -          | 91.31    | 27.19    | 16.72  | 31.57  | 122    | 114     | A     | V     |
| 802.11b<br>CH 02<br>2417MHz |                                                                                             | 2388.68   | 60.14      | -13.86 | 74         | 47.89    | 27.15    | 16.68  | 31.58  | 121    | 57      | P     | H     |
|                             |                                                                                             | 2389.94   | 47.54      | -6.46  | 54         | 35.28    | 27.15    | 16.68  | 31.57  | 121    | 57      | A     | H     |
|                             | *                                                                                           | 2417      | 111.15     | -      | -          | 98.81    | 27.19    | 16.72  | 31.57  | 121    | 57      | P     | H     |
|                             | *                                                                                           | 2417      | 106.22     | -      | -          | 93.88    | 27.19    | 16.72  | 31.57  | 121    | 57      | A     | H     |
|                             |                                                                                             | 2350.6    | 59.87      | -14.13 | 74         | 47.79    | 27.03    | 16.63  | 31.58  | 240    | 71      | P     | V     |
|                             |                                                                                             | 2389.8    | 47.42      | -6.58  | 54         | 35.16    | 27.15    | 16.68  | 31.57  | 240    | 71      | A     | V     |
|                             | *                                                                                           | 2417      | 107.19     | -      | -          | 94.85    | 27.19    | 16.72  | 31.57  | 240    | 71      | P     | V     |
|                             | *                                                                                           | 2417      | 103.19     | -      | -          | 90.85    | 27.19    | 16.72  | 31.57  | 240    | 71      | A     | V     |
| Remark                      | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |           |            |        |            |          |          |        |        |        |         |       |       |



| WIFI<br>Ant.<br>1+2         | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>( P/A ) | Pol.<br>( H/V ) |
|-----------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| 802.11b<br>CH 06<br>2437MHz |                                                                                             | 2319.52              | 59.73               | -14.27                  | 74                          | 47.75                     | 26.99                         | 16.58                  | 31.59                      | 110                  | 134                     | P                       | H               |
|                             |                                                                                             | 2389.94              | 47.42               | -6.58                   | 54                          | 35.16                     | 27.15                         | 16.68                  | 31.57                      | 110                  | 134                     | A                       | H               |
|                             | *                                                                                           | 2437                 | 110.71              | -                       | -                           | 98.25                     | 27.28                         | 16.75                  | 31.57                      | 110                  | 134                     | P                       | H               |
|                             | *                                                                                           | 2437                 | 106.62              | -                       | -                           | 94.16                     | 27.28                         | 16.75                  | 31.57                      | 110                  | 134                     | A                       | H               |
|                             |                                                                                             | 2484.39              | 60.64               | -13.36                  | 74                          | 48.02                     | 27.36                         | 16.82                  | 31.56                      | 110                  | 134                     | P                       | H               |
|                             |                                                                                             | 2500                 | 47.82               | -6.18                   | 54                          | 35.12                     | 27.4                          | 16.85                  | 31.55                      | 110                  | 134                     | A                       | H               |
|                             |                                                                                             | 2347.94              | 59.66               | -14.34                  | 74                          | 47.59                     | 27.03                         | 16.62                  | 31.58                      | 148                  | 100                     | P                       | V               |
|                             |                                                                                             | 2384.76              | 47.45               | -6.55                   | 54                          | 35.24                     | 27.11                         | 16.68                  | 31.58                      | 148                  | 100                     | A                       | V               |
|                             | *                                                                                           | 2437                 | 109.56              | -                       | -                           | 97.1                      | 27.28                         | 16.75                  | 31.57                      | 148                  | 100                     | P                       | V               |
|                             | *                                                                                           | 2437                 | 105.03              | -                       | -                           | 92.57                     | 27.28                         | 16.75                  | 31.57                      | 148                  | 100                     | A                       | V               |
|                             |                                                                                             | 2490.06              | 60.16               | -13.84                  | 74                          | 47.49                     | 27.4                          | 16.83                  | 31.56                      | 148                  | 100                     | P                       | V               |
|                             |                                                                                             | 2497.83              | 47.84               | -6.16                   | 54                          | 35.15                     | 27.4                          | 16.84                  | 31.55                      | 148                  | 100                     | A                       | V               |
| 802.11b<br>CH 10<br>2457MHz | *                                                                                           | 2457                 | 110.74              | -                       | -                           | 98.2                      | 27.32                         | 16.78                  | 31.56                      | 101                  | 55                      | P                       | H               |
|                             | *                                                                                           | 2457                 | 106.63              | -                       | -                           | 94.09                     | 27.32                         | 16.78                  | 31.56                      | 101                  | 55                      | A                       | H               |
|                             |                                                                                             | 2498.74              | 59.77               | -14.23                  | 74                          | 47.08                     | 27.4                          | 16.84                  | 31.55                      | 101                  | 55                      | P                       | H               |
|                             |                                                                                             | 2483.68              | 48.08               | -5.92                   | 54                          | 35.46                     | 27.36                         | 16.82                  | 31.56                      | 101                  | 55                      | A                       | H               |
|                             | *                                                                                           | 2457                 | 109.38              | -                       | -                           | 96.84                     | 27.32                         | 16.78                  | 31.56                      | 193                  | 99                      | P                       | V               |
|                             | *                                                                                           | 2457                 | 104.62              | -                       | -                           | 92.08                     | 27.32                         | 16.78                  | 31.56                      | 193                  | 99                      | A                       | V               |
|                             |                                                                                             | 2496.58              | 60.68               | -13.32                  | 74                          | 47.99                     | 27.4                          | 16.84                  | 31.55                      | 193                  | 99                      | P                       | V               |
|                             |                                                                                             | 2485.24              | 47.95               | -6.05                   | 54                          | 35.33                     | 27.36                         | 16.82                  | 31.56                      | 193                  | 99                      | A                       | V               |
| Remark                      | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         |                 |



| WIFI<br>Ant.<br>1+2         | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>( P/A ) | Pol.<br>( H/V ) |
|-----------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| 802.11b<br>CH 11<br>2462MHz | *                                                                                           | 2462                 | 111.46              | -                       | -                           | 98.91                     | 27.32                         | 16.79                  | 31.56                      | 125                  | 42                      | P                       | H               |
|                             | *                                                                                           | 2462                 | 107.39              | -                       | -                           | 94.84                     | 27.32                         | 16.79                  | 31.56                      | 125                  | 42                      | A                       | H               |
|                             |                                                                                             | 2483.84              | 60.3                | -13.7                   | 74                          | 47.68                     | 27.36                         | 16.82                  | 31.56                      | 125                  | 42                      | P                       | H               |
|                             |                                                                                             | 2486.04              | 48.05               | -5.95                   | 54                          | 35.43                     | 27.36                         | 16.82                  | 31.56                      | 125                  | 42                      | A                       | H               |
|                             | *                                                                                           | 2462                 | 110.31              | -                       | -                           | 97.76                     | 27.32                         | 16.79                  | 31.56                      | 212                  | 100                     | P                       | V               |
|                             | *                                                                                           | 2462                 | 105.5               | -                       | -                           | 92.95                     | 27.32                         | 16.79                  | 31.56                      | 212                  | 100                     | A                       | V               |
|                             |                                                                                             | 2485.52              | 60.11               | -13.89                  | 74                          | 47.49                     | 27.36                         | 16.82                  | 31.56                      | 212                  | 100                     | P                       | V               |
|                             |                                                                                             | 2483.64              | 48.28               | -5.72                   | 54                          | 35.66                     | 27.36                         | 16.82                  | 31.56                      | 212                  | 100                     | A                       | V               |
| Remark                      | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         |                 |



## 2.4GHz 2400~2483.5MHz

## WIFI 802.11b (Harmonic @ 3m)

| WIFI<br>Ant.<br>1+2         | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>( P/A ) | Pol.<br>( H/V ) |
|-----------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| 802.11b<br>CH 01<br>2412MHz |                                                                                             | 4824                 | 52.25               | -21.75                  | 74                          | 68.01                     | 31.36                         | 10.43                  | 57.55                      | 275                  | 3                       | P                       | H               |
|                             |                                                                                             | 4824                 | 48.89               | -5.11                   | 54                          | 64.65                     | 31.36                         | 10.43                  | 57.55                      | 275                  | 3                       | A                       | H               |
|                             |                                                                                             | 4824                 | 48.85               | -25.15                  | 74                          | 64.61                     | 31.36                         | 10.43                  | 57.55                      | 100                  | 0                       | P                       | V               |
| 802.11b<br>CH 02<br>2417MHz |                                                                                             | 4834                 | 53.72               | -20.28                  | 74                          | 69.42                     | 31.39                         | 10.44                  | 57.53                      | 278                  | 4                       | P                       | H               |
|                             |                                                                                             | 4834                 | 50.44               | -3.56                   | 54                          | 66.14                     | 31.39                         | 10.44                  | 57.53                      | 278                  | 4                       | A                       | H               |
|                             |                                                                                             | 7251                 | 45.64               | -28.36                  | 74                          | 54.01                     | 35.97                         | 12.86                  | 57.2                       | 100                  | 0                       | P                       | H               |
|                             |                                                                                             | 4834                 | 51.96               | -22.04                  | 74                          | 67.66                     | 31.39                         | 10.44                  | 57.53                      | 116                  | 320                     | P                       | V               |
|                             |                                                                                             | 4834                 | 48.22               | -5.78                   | 54                          | 63.92                     | 31.39                         | 10.44                  | 57.53                      | 116                  | 320                     | A                       | V               |
|                             |                                                                                             | 7251                 | 44.96               | -29.04                  | 74                          | 53.33                     | 35.97                         | 12.86                  | 57.2                       | 100                  | 0                       | P                       | V               |
| 802.11b<br>CH 06<br>2437MHz |                                                                                             | 4874                 | 54.7                | -19.3                   | 74                          | 70.22                     | 31.46                         | 10.47                  | 57.45                      | 258                  | 3                       | P                       | H               |
|                             |                                                                                             | 4874                 | 51.85               | -2.15                   | 54                          | 67.37                     | 31.46                         | 10.47                  | 57.45                      | 258                  | 3                       | A                       | H               |
|                             |                                                                                             | 7311                 | 46.49               | -27.51                  | 74                          | 54.85                     | 36.11                         | 12.8                   | 57.27                      | 100                  | 0                       | P                       | H               |
|                             |                                                                                             | 4874                 | 52.83               | -21.17                  | 74                          | 68.35                     | 31.46                         | 10.47                  | 57.45                      | 134                  | 286                     | P                       | V               |
|                             |                                                                                             | 4874                 | 49.45               | -4.55                   | 54                          | 64.97                     | 31.46                         | 10.47                  | 57.45                      | 134                  | 286                     | A                       | V               |
|                             |                                                                                             | 7311                 | 45.82               | -28.18                  | 74                          | 54.18                     | 36.11                         | 12.8                   | 57.27                      | 100                  | 0                       | P                       | V               |
| Remark                      | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         |                 |



| WIFI<br>Ant.<br>1+2         | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>( P/A ) | Pol.<br>( H/V ) |
|-----------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| 802.11b<br>CH 10<br>2467MHz |                                                                                             | 4914                 | 52.69               | -21.31                  | 74                          | 68.05                     | 31.53                         | 10.48                  | 57.37                      | 267                  | 5                       | P                       | H               |
|                             |                                                                                             | 4914                 | 49.21               | -4.79                   | 54                          | 64.57                     | 31.53                         | 10.48                  | 57.37                      | 267                  | 5                       | A                       | H               |
|                             |                                                                                             | 7371                 | 44.55               | -29.45                  | 74                          | 52.88                     | 36.29                         | 12.73                  | 57.35                      | 100                  | 0                       | P                       | H               |
|                             |                                                                                             | 4914                 | 52.08               | -21.92                  | 74                          | 67.44                     | 31.53                         | 10.48                  | 57.37                      | 101                  | 319                     | P                       | V               |
|                             |                                                                                             | 4914                 | 48.99               | -5.01                   | 54                          | 64.35                     | 31.53                         | 10.48                  | 57.37                      | 101                  | 319                     | A                       | V               |
|                             |                                                                                             | 7371                 | 45.03               | -28.97                  | 74                          | 53.36                     | 36.29                         | 12.73                  | 57.35                      | 100                  | 0                       | P                       | V               |
| 802.11b<br>CH 11<br>2462MHz |                                                                                             | 4924                 | 53.88               | -20.12                  | 74                          | 69.18                     | 31.56                         | 10.49                  | 57.35                      | 268                  | 3                       | P                       | H               |
|                             |                                                                                             | 4924                 | 50.62               | -3.38                   | 54                          | 65.92                     | 31.56                         | 10.49                  | 57.35                      | 268                  | 3                       | A                       | H               |
|                             |                                                                                             | 7386                 | 46.1                | -27.9                   | 74                          | 54.42                     | 36.33                         | 12.71                  | 57.36                      | 100                  | 0                       | P                       | H               |
|                             |                                                                                             | 4924                 | 52.1                | -21.9                   | 74                          | 67.4                      | 31.56                         | 10.49                  | 57.35                      | 106                  | 319                     | P                       | V               |
|                             |                                                                                             | 4924                 | 49.05               | -4.95                   | 54                          | 64.35                     | 31.56                         | 10.49                  | 57.35                      | 106                  | 319                     | A                       | V               |
|                             |                                                                                             | 7386                 | 45.56               | -28.44                  | 74                          | 53.88                     | 36.33                         | 12.71                  | 57.36                      | 100                  | 0                       | P                       | V               |
| Remark                      | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         |                 |



**2.4GHz 2400~2483.5MHz**  
**WIFI 802.11g (Band Edge @ 3m)**

| WIFI<br>Ant.<br>1+2                  | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>( P/A ) | Pol.<br>( H/V ) |
|--------------------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| <b>802.11g<br/>CH 01<br/>2412MHz</b> |                                                                                             | 2389.485             | 60.78               | -13.22                  | 74                          | 48.53                     | 27.15                         | 16.68                  | 31.58                      | 105                  | 42                      | P                       | H               |
|                                      |                                                                                             | 2390                 | 50.66               | -3.34                   | 54                          | 38.39                     | 27.15                         | 16.69                  | 31.57                      | 105                  | 42                      | A                       | H               |
|                                      | *                                                                                           | 2412                 | 110.03              | -                       | -                           | 97.69                     | 27.19                         | 16.72                  | 31.57                      | 105                  | 42                      | P                       | H               |
|                                      | *                                                                                           | 2412                 | 100.3               | -                       | -                           | 87.96                     | 27.19                         | 16.72                  | 31.57                      | 105                  | 42                      | A                       | H               |
|                                      |                                                                                             | 2389.8               | 60.26               | -13.74                  | 74                          | 48                        | 27.15                         | 16.68                  | 31.57                      | 126                  | 119                     | P                       | V               |
|                                      |                                                                                             | 2390                 | 49.2                | -4.8                    | 54                          | 36.93                     | 27.15                         | 16.69                  | 31.57                      | 126                  | 119                     | A                       | V               |
|                                      | *                                                                                           | 2412                 | 110.82              | -                       | -                           | 98.48                     | 27.19                         | 16.72                  | 31.57                      | 126                  | 119                     | P                       | V               |
|                                      | *                                                                                           | 2412                 | 100.66              | -                       | -                           | 88.32                     | 27.19                         | 16.72                  | 31.57                      | 126                  | 119                     | A                       | V               |
| <b>802.11g<br/>CH 02<br/>2417MHz</b> |                                                                                             | 2389.52              | 61.91               | -12.09                  | 74                          | 49.66                     | 27.15                         | 16.68                  | 31.58                      | 122                  | 40                      | P                       | H               |
|                                      |                                                                                             | 2389.66              | 50.19               | -3.81                   | 54                          | 37.94                     | 27.15                         | 16.68                  | 31.58                      | 122                  | 40                      | A                       | H               |
|                                      | *                                                                                           | 2417                 | 113.45              | -                       | -                           | 101.11                    | 27.19                         | 16.72                  | 31.57                      | 122                  | 40                      | P                       | H               |
|                                      | *                                                                                           | 2417                 | 103.37              | -                       | -                           | 91.03                     | 27.19                         | 16.72                  | 31.57                      | 122                  | 40                      | A                       | H               |
|                                      |                                                                                             | 2389.94              | 60.39               | -13.61                  | 74                          | 48.13                     | 27.15                         | 16.68                  | 31.57                      | 148                  | 112                     | P                       | V               |
|                                      |                                                                                             | 2389.94              | 49.34               | -4.66                   | 54                          | 37.08                     | 27.15                         | 16.68                  | 31.57                      | 148                  | 112                     | A                       | V               |
|                                      | *                                                                                           | 2417                 | 114.21              | -                       | -                           | 101.87                    | 27.19                         | 16.72                  | 31.57                      | 148                  | 112                     | P                       | V               |
|                                      | *                                                                                           | 2417                 | 103.82              | -                       | -                           | 91.48                     | 27.19                         | 16.72                  | 31.57                      | 148                  | 112                     | A                       | V               |
| <b>Remark</b>                        | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         |                 |



| WIFI<br>Ant.<br>1+2                  | Note                                                         | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>( P/A ) | Pol.<br>( H/V ) |
|--------------------------------------|--------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| <b>802.11g<br/>CH 06<br/>2437MHz</b> |                                                              | 2333.24              | 60.18               | -13.82                  | 74                          | 48.18                     | 26.99                         | 16.6                   | 31.59                      | 112                  | 42                      | P                       | H               |
|                                      |                                                              | 2388.4               | 48.33               | -5.67                   | 54                          | 36.08                     | 27.15                         | 16.68                  | 31.58                      | 112                  | 42                      | A                       | H               |
|                                      | *                                                            | 2437                 | 113.57              | -                       | -                           | 101.1                     | 27.28                         | 16.76                  | 31.57                      | 112                  | 42                      | P                       | H               |
|                                      | *                                                            | 2437                 | 103.94              | -                       | -                           | 91.48                     | 27.28                         | 16.75                  | 31.57                      | 112                  | 42                      | A                       | H               |
|                                      |                                                              | 2488.38              | 59.93               | -14.07                  | 74                          | 47.26                     | 27.4                          | 16.83                  | 31.56                      | 112                  | 42                      | P                       | H               |
|                                      |                                                              | 2484.18              | 48.75               | -5.25                   | 54                          | 36.13                     | 27.36                         | 16.82                  | 31.56                      | 112                  | 42                      | A                       | H               |
|                                      |                                                              | 2342.2               | 60.28               | -13.72                  | 74                          | 48.22                     | 27.03                         | 16.61                  | 31.58                      | 115                  | 119                     | P                       | V               |
|                                      |                                                              | 2389.66              | 48.34               | -5.66                   | 54                          | 36.09                     | 27.15                         | 16.68                  | 31.58                      | 115                  | 119                     | A                       | V               |
|                                      | *                                                            | 2437                 | 114.2               | -                       | -                           | 101.74                    | 27.28                         | 16.75                  | 31.57                      | 115                  | 119                     | P                       | V               |
|                                      | *                                                            | 2437                 | 104.05              | -                       | -                           | 91.59                     | 27.28                         | 16.75                  | 31.57                      | 115                  | 119                     | A                       | V               |
|                                      |                                                              | 2491.11              | 60.86               | -13.14                  | 74                          | 48.19                     | 27.4                          | 16.83                  | 31.56                      | 115                  | 119                     | P                       | V               |
|                                      |                                                              | 2486.98              | 48.72               | -5.28                   | 54                          | 36.09                     | 27.36                         | 16.83                  | 31.56                      | 115                  | 119                     | A                       | V               |
| <b>802.11g<br/>CH 10<br/>2457MHz</b> | *                                                            | 2457                 | 113.85              | -                       | -                           | 101.31                    | 27.32                         | 16.78                  | 31.56                      | 332                  | 52                      | P                       | H               |
|                                      | *                                                            | 2457                 | 104.29              | -                       | -                           | 91.75                     | 27.32                         | 16.78                  | 31.56                      | 332                  | 52                      | A                       | H               |
|                                      |                                                              | 2484.46              | 63.11               | -10.89                  | 74                          | 50.49                     | 27.36                         | 16.82                  | 31.56                      | 332                  | 52                      | P                       | H               |
|                                      |                                                              | 2484.4               | 50.59               | -3.41                   | 54                          | 37.97                     | 27.36                         | 16.82                  | 31.56                      | 332                  | 52                      | A                       | H               |
|                                      | *                                                            | 2457                 | 113.81              | -                       | -                           | 101.27                    | 27.32                         | 16.78                  | 31.56                      | 186                  | 112                     | P                       | V               |
|                                      | *                                                            | 2457                 | 103.74              | -                       | -                           | 91.2                      | 27.32                         | 16.78                  | 31.56                      | 186                  | 112                     | A                       | V               |
|                                      |                                                              | 2484.28              | 62.02               | -11.98                  | 74                          | 49.4                      | 27.36                         | 16.82                  | 31.56                      | 186                  | 112                     | P                       | V               |
|                                      |                                                              | 2483.56              | 50.17               | -3.83                   | 54                          | 37.55                     | 27.36                         | 16.82                  | 31.56                      | 186                  | 112                     | A                       | V               |
| <b>Remark</b>                        | 1. No other spurious found.                                  |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         |                 |
|                                      | 2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         |                 |



| WIFI<br>Ant.<br>1+2                  | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>( P/A ) | Pol.<br>( H/V ) |
|--------------------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| <b>802.11g<br/>CH 11<br/>2462MHz</b> | *                                                                                           | 2462                 | 110.47              | -                       | -                           | 97.92                     | 27.32                         | 16.79                  | 31.56                      | 131                  | 42                      | P                       | H               |
|                                      | *                                                                                           | 2462                 | 100.21              | -                       | -                           | 87.66                     | 27.32                         | 16.79                  | 31.56                      | 131                  | 42                      | A                       | H               |
|                                      |                                                                                             | 2484.84              | 61.19               | -12.81                  | 74                          | 48.57                     | 27.36                         | 16.82                  | 31.56                      | 131                  | 42                      | P                       | H               |
|                                      |                                                                                             | 2483.52              | 50.29               | -3.71                   | 54                          | 37.67                     | 27.36                         | 16.82                  | 31.56                      | 131                  | 42                      | A                       | H               |
|                                      | *                                                                                           | 2462                 | 110.03              | -                       | -                           | 97.48                     | 27.32                         | 16.79                  | 31.56                      | 104                  | 126                     | P                       | V               |
|                                      | *                                                                                           | 2462                 | 100.18              | -                       | -                           | 87.63                     | 27.32                         | 16.79                  | 31.56                      | 104                  | 126                     | A                       | V               |
|                                      |                                                                                             | 2483.6               | 60.88               | -13.12                  | 74                          | 48.26                     | 27.36                         | 16.82                  | 31.56                      | 104                  | 126                     | P                       | V               |
|                                      |                                                                                             | 2483.64              | 50.21               | -3.79                   | 54                          | 37.59                     | 27.36                         | 16.82                  | 31.56                      | 104                  | 126                     | A                       | V               |
| <b>Remark</b>                        | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         |                 |



## 2.4GHz 2400~2483.5MHz

## WIFI 802.11g (Harmonic @ 3m)

| WIFI<br>Ant.<br>1+2         | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>( P/A ) | Pol.<br>( H/V ) |
|-----------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| 802.11g<br>CH 01<br>2412MHz |                                                                                             | 4824                 | 47.7                | -26.3                   | 74                          | 63.46                     | 31.36                         | 10.43                  | 57.55                      | 100                  | 0                       | P                       | H               |
|                             |                                                                                             | 4824                 | 46.3                | -27.7                   | 74                          | 62.06                     | 31.36                         | 10.43                  | 57.55                      | 100                  | 0                       | P                       | V               |
| 802.11g<br>CH 02<br>2417MHz |                                                                                             | 4834                 | 53.62               | -20.38                  | 74                          | 69.32                     | 31.39                         | 10.44                  | 57.53                      | 113                  | 340                     | P                       | H               |
|                             |                                                                                             | 4834                 | 38.95               | -15.05                  | 54                          | 54.65                     | 31.39                         | 10.44                  | 57.53                      | 113                  | 340                     | A                       | H               |
|                             |                                                                                             | 7251                 | 44.58               | -29.42                  | 74                          | 52.95                     | 35.97                         | 12.86                  | 57.2                       | 100                  | 0                       | P                       | H               |
|                             |                                                                                             | 4834                 | 49.43               | -24.57                  | 74                          | 65.13                     | 31.39                         | 10.44                  | 57.53                      | 100                  | 0                       | P                       | V               |
|                             |                                                                                             | 7251                 | 45.2                | -28.8                   | 74                          | 53.57                     | 35.97                         | 12.86                  | 57.2                       | 100                  | 0                       | A                       | V               |
| 802.11g<br>CH 06<br>2437MHz |                                                                                             | 4874                 | 53.09               | -20.91                  | 74                          | 68.61                     | 31.46                         | 10.47                  | 57.45                      | 258                  | 2                       | P                       | H               |
|                             |                                                                                             | 4874                 | 39.44               | -14.56                  | 54                          | 54.96                     | 31.46                         | 10.47                  | 57.45                      | 258                  | 2                       | A                       | H               |
|                             |                                                                                             | 7311                 | 45.82               | -28.18                  | 74                          | 54.18                     | 36.11                         | 12.8                   | 57.27                      | 100                  | 0                       | P                       | H               |
|                             |                                                                                             | 4874                 | 52.83               | -21.17                  | 74                          | 68.35                     | 31.46                         | 10.47                  | 57.45                      | 100                  | 298                     | P                       | V               |
|                             |                                                                                             | 4874                 | 38.14               | -15.86                  | 54                          | 53.66                     | 31.46                         | 10.47                  | 57.45                      | 100                  | 298                     | A                       | V               |
|                             |                                                                                             | 7311                 | 45.43               | -28.57                  | 74                          | 53.79                     | 36.11                         | 12.8                   | 57.27                      | 100                  | 0                       | P                       | V               |
| Remark                      | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         |                 |



| WIFI<br>Ant.<br>1+2         | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>( P/A ) | Pol.<br>( H/V ) |
|-----------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| 802.11g<br>CH 10<br>2457MHz |                                                                                             | 4914                 | 49.95               | -24.05                  | 74                          | 65.31                     | 31.53                         | 10.48                  | 57.37                      | 100                  | 0                       | P                       | H               |
|                             |                                                                                             | 7371                 | 44.58               | -29.42                  | 74                          | 52.91                     | 36.29                         | 12.73                  | 57.35                      | 100                  | 0                       | P                       | H               |
|                             |                                                                                             | 4914                 | 49.57               | -24.43                  | 74                          | 64.93                     | 31.53                         | 10.48                  | 57.37                      | 100                  | 0                       | P                       | V               |
|                             |                                                                                             | 7371                 | 44.48               | -29.52                  | 74                          | 52.81                     | 36.29                         | 12.73                  | 57.35                      | 100                  | 0                       | P                       | V               |
| 802.11g<br>CH 11<br>2462MHz |                                                                                             | 4924                 | 46.32               | -27.68                  | 74                          | 61.62                     | 31.56                         | 10.49                  | 57.35                      | 100                  | 0                       | P                       | H               |
|                             |                                                                                             | 7386                 | 44.68               | -29.32                  | 74                          | 53                        | 36.33                         | 12.71                  | 57.36                      | 100                  | 0                       | P                       | H               |
|                             |                                                                                             | 4924                 | 46.48               | -27.52                  | 74                          | 61.78                     | 31.56                         | 10.49                  | 57.35                      | 100                  | 0                       | P                       | V               |
|                             |                                                                                             | 7386                 | 43.83               | -30.17                  | 74                          | 52.15                     | 36.33                         | 12.71                  | 57.36                      | 100                  | 0                       | P                       | V               |
| Remark                      | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         |                 |



## 2.4GHz 2400~2483.5MHz

## WIFI 802.11n HT20 (Band Edge @ 3m)

| WIFI<br>Ant.<br>1+2                 | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>( P/A ) | Pol.<br>( H/V ) |
|-------------------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| 802.11n<br>HT20<br>CH 01<br>2412MHz |                                                                                             | 2388.96              | 60.96               | -13.04                  | 74                          | 48.71                     | 27.15                         | 16.68                  | 31.58                      | 118                  | 43                      | P                       | H               |
|                                     |                                                                                             | 2389.38              | 50.47               | -3.53                   | 54                          | 38.22                     | 27.15                         | 16.68                  | 31.58                      | 118                  | 43                      | A                       | H               |
|                                     | *                                                                                           | 2412                 | 108.83              | -                       | -                           | 96.49                     | 27.19                         | 16.72                  | 31.57                      | 118                  | 43                      | P                       | H               |
|                                     | *                                                                                           | 2412                 | 98.91               | -                       | -                           | 86.57                     | 27.19                         | 16.72                  | 31.57                      | 118                  | 43                      | A                       | H               |
|                                     |                                                                                             | 2389.905             | 61.51               | -12.49                  | 74                          | 49.25                     | 27.15                         | 16.68                  | 31.57                      | 124                  | 117                     | P                       | V               |
|                                     |                                                                                             | 2389.905             | 51                  | -3                      | 54                          | 38.74                     | 27.15                         | 16.68                  | 31.57                      | 124                  | 117                     | A                       | V               |
|                                     | *                                                                                           | 2412                 | 110.87              | -                       | -                           | 98.53                     | 27.19                         | 16.72                  | 31.57                      | 124                  | 117                     | P                       | V               |
|                                     | *                                                                                           | 2412                 | 100.57              | -                       | -                           | 88.23                     | 27.19                         | 16.72                  | 31.57                      | 124                  | 117                     | A                       | V               |
| 802.11n<br>HT20<br>CH 02<br>2417MHz |                                                                                             | 2389.66              | 62.09               | -11.91                  | 74                          | 49.84                     | 27.15                         | 16.68                  | 31.58                      | 357                  | 49                      | P                       | H               |
|                                     |                                                                                             | 2389.66              | 49.86               | -4.14                   | 54                          | 37.61                     | 27.15                         | 16.68                  | 31.58                      | 357                  | 49                      | A                       | H               |
|                                     | *                                                                                           | 2417                 | 114.5               | -                       | -                           | 102.16                    | 27.19                         | 16.72                  | 31.57                      | 357                  | 49                      | P                       | H               |
|                                     | *                                                                                           | 2417                 | 104.12              | -                       | -                           | 91.78                     | 27.19                         | 16.72                  | 31.57                      | 357                  | 49                      | A                       | H               |
|                                     |                                                                                             | 2388.82              | 60.98               | -13.02                  | 74                          | 48.73                     | 27.15                         | 16.68                  | 31.58                      | 133                  | 100                     | P                       | V               |
|                                     |                                                                                             | 2389.94              | 48.51               | -5.49                   | 54                          | 36.25                     | 27.15                         | 16.68                  | 31.57                      | 133                  | 100                     | A                       | V               |
|                                     | *                                                                                           | 2417                 | 112.23              | -                       | -                           | 99.89                     | 27.19                         | 16.72                  | 31.57                      | 133                  | 100                     | P                       | V               |
|                                     | *                                                                                           | 2417                 | 102.27              | -                       | -                           | 89.93                     | 27.19                         | 16.72                  | 31.57                      | 133                  | 100                     | A                       | V               |
| Remark                              | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         |                 |



| WIFI<br>Ant.<br>1+2                 | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>( P/A ) | Pol.<br>( H/V ) |
|-------------------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| 802.11n<br>HT20<br>CH 06<br>2437MHz |                                                                                             | 2359.98              | 60.18               | -13.82                  | 74                          | 48.05                     | 27.07                         | 16.64                  | 31.58                      | 113                  | 42                      | P                       | H               |
|                                     |                                                                                             | 2388.54              | 48.58               | -5.42                   | 54                          | 36.33                     | 27.15                         | 16.68                  | 31.58                      | 113                  | 42                      | A                       | H               |
|                                     | *                                                                                           | 2437                 | 114.95              | -                       | -                           | 102.49                    | 27.28                         | 16.75                  | 31.57                      | 113                  | 42                      | P                       | H               |
|                                     | *                                                                                           | 2437                 | 104.38              | -                       | -                           | 91.92                     | 27.28                         | 16.75                  | 31.57                      | 113                  | 42                      | A                       | H               |
|                                     |                                                                                             | 2486.77              | 60.48               | -13.52                  | 74                          | 47.85                     | 27.36                         | 16.83                  | 31.56                      | 113                  | 42                      | P                       | H               |
|                                     |                                                                                             | 2483.97              | 48.91               | -5.09                   | 54                          | 36.29                     | 27.36                         | 16.82                  | 31.56                      | 113                  | 42                      | A                       | H               |
|                                     |                                                                                             | 2388.82              | 59.64               | -14.36                  | 74                          | 47.39                     | 27.15                         | 16.68                  | 31.58                      | 115                  | 120                     | P                       | V               |
|                                     |                                                                                             | 2389.66              | 48.65               | -5.35                   | 54                          | 36.4                      | 27.15                         | 16.68                  | 31.58                      | 115                  | 120                     | A                       | V               |
|                                     | *                                                                                           | 2437                 | 112.47              | -                       | -                           | 100.01                    | 27.28                         | 16.75                  | 31.57                      | 115                  | 120                     | P                       | V               |
|                                     | *                                                                                           | 2437                 | 102.49              | -                       | -                           | 90.03                     | 27.28                         | 16.75                  | 31.57                      | 115                  | 120                     | A                       | V               |
|                                     |                                                                                             | 2489.64              | 59.92               | -14.08                  | 74                          | 47.25                     | 27.4                          | 16.83                  | 31.56                      | 115                  | 120                     | P                       | V               |
|                                     |                                                                                             | 2490.9               | 48.79               | -5.21                   | 54                          | 36.12                     | 27.4                          | 16.83                  | 31.56                      | 115                  | 120                     | A                       | V               |
| 802.11n<br>HT20<br>CH 10<br>2457MHz | *                                                                                           | 2457                 | 114.22              | -                       | -                           | 101.68                    | 27.32                         | 16.78                  | 31.56                      | 150                  | 44                      | P                       | H               |
|                                     | *                                                                                           | 2457                 | 103.51              | -                       | -                           | 90.97                     | 27.32                         | 16.78                  | 31.56                      | 150                  | 44                      | A                       | H               |
|                                     |                                                                                             | 2483.74              | 61.98               | -12.02                  | 74                          | 49.36                     | 27.36                         | 16.82                  | 31.56                      | 150                  | 44                      | P                       | H               |
|                                     |                                                                                             | 2483.8               | 50.57               | -3.43                   | 54                          | 37.95                     | 27.36                         | 16.82                  | 31.56                      | 150                  | 44                      | A                       | H               |
|                                     | *                                                                                           | 2457                 | 112.63              | -                       | -                           | 100.09                    | 27.32                         | 16.78                  | 31.56                      | 185                  | 99                      | P                       | V               |
|                                     | *                                                                                           | 2457                 | 102.23              | -                       | -                           | 89.69                     | 27.32                         | 16.78                  | 31.56                      | 185                  | 99                      | A                       | V               |
|                                     |                                                                                             | 2484.64              | 63.02               | -10.98                  | 74                          | 50.4                      | 27.36                         | 16.82                  | 31.56                      | 185                  | 99                      | P                       | V               |
|                                     |                                                                                             | 2483.74              | 50.51               | -3.49                   | 54                          | 37.89                     | 27.36                         | 16.82                  | 31.56                      | 185                  | 99                      | A                       | V               |
| Remark                              | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         |                 |



| WIFI<br>Ant.<br>1+2                 | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>( P/A ) | Pol.<br>( H/V ) |
|-------------------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| 802.11n<br>HT20<br>CH 11<br>2462MHz | *                                                                                           | 2462                 | 108.38              | -                       | -                           | 95.83                     | 27.32                         | 16.79                  | 31.56                      | 108                  | 42                      | P                       | H               |
|                                     | *                                                                                           | 2462                 | 98.85               | -                       | -                           | 86.3                      | 27.32                         | 16.79                  | 31.56                      | 108                  | 42                      | A                       | H               |
|                                     |                                                                                             | 2484.44              | 61.91               | -12.09                  | 74                          | 49.29                     | 27.36                         | 16.82                  | 31.56                      | 108                  | 42                      | P                       | H               |
|                                     |                                                                                             | 2483.52              | 50.43               | -3.57                   | 54                          | 37.81                     | 27.36                         | 16.82                  | 31.56                      | 108                  | 42                      | A                       | H               |
|                                     | *                                                                                           | 2462                 | 109.16              | -                       | -                           | 96.61                     | 27.32                         | 16.79                  | 31.56                      | 100                  | 125                     | P                       | V               |
|                                     | *                                                                                           | 2462                 | 98.75               | -                       | -                           | 86.2                      | 27.32                         | 16.79                  | 31.56                      | 100                  | 125                     | A                       | V               |
|                                     |                                                                                             | 2484.08              | 61.72               | -12.28                  | 74                          | 49.1                      | 27.36                         | 16.82                  | 31.56                      | 100                  | 125                     | P                       | V               |
|                                     |                                                                                             | 2483.6               | 50.36               | -3.64                   | 54                          | 37.74                     | 27.36                         | 16.82                  | 31.56                      | 100                  | 125                     | A                       | V               |
| Remark                              | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         |                 |



**2.4GHz 2400~2483.5MHz**  
**WIFI 802.11n HT20 (Harmonic @ 3m)**

| WIFI<br>Ant.<br>1+2                 | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>(P/A) | Pol.<br>(H/V) |
|-------------------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-----------------------|---------------|
| 802.11n<br>HT20<br>CH 01<br>2412MHz |                                                                                             | 4824                 | 48.48               | -25.52                  | 74                          | 64.24                     | 31.36                         | 10.43                  | 57.55                      | 100                  | 0                       | P                     | H             |
|                                     |                                                                                             | 4824                 | 46.64               | -27.36                  | 74                          | 62.4                      | 31.36                         | 10.43                  | 57.55                      | 100                  | 0                       | P                     | V             |
| 802.11n<br>HT20<br>CH 02<br>2417MHz |                                                                                             | 4834                 | 53.52               | -20.48                  | 74                          | 69.22                     | 31.39                         | 10.44                  | 57.53                      | 272                  | 339                     | P                     | H             |
|                                     |                                                                                             | 4834                 | 38.82               | -15.18                  | 54                          | 54.52                     | 31.39                         | 10.44                  | 57.53                      | 272                  | 339                     | A                     | H             |
|                                     |                                                                                             | 7251                 | 45.44               | -28.56                  | 74                          | 53.81                     | 35.97                         | 12.86                  | 57.2                       | 100                  | 0                       | P                     | H             |
|                                     |                                                                                             | 4834                 | 53.62               | -20.38                  | 74                          | 69.32                     | 31.39                         | 10.44                  | 57.53                      | 386                  | 308                     | P                     | V             |
|                                     |                                                                                             | 4834                 | 37.46               | -16.54                  | 54                          | 53.16                     | 31.39                         | 10.44                  | 57.53                      | 386                  | 308                     | A                     | V             |
|                                     |                                                                                             | 7251                 | 45.33               | -28.67                  | 74                          | 53.7                      | 35.97                         | 12.86                  | 57.2                       | 100                  | 0                       | P                     | V             |
| 802.11n<br>HT20<br>CH 06<br>2437MHz |                                                                                             | 4874                 | 55.06               | -18.94                  | 74                          | 70.58                     | 31.46                         | 10.47                  | 57.45                      | 161                  | 357                     | P                     | H             |
|                                     |                                                                                             | 4874                 | 39.05               | -14.95                  | 54                          | 54.57                     | 31.46                         | 10.47                  | 57.45                      | 161                  | 357                     | A                     | H             |
|                                     |                                                                                             | 7311                 | 53.7                | -20.3                   | 74                          | 62.06                     | 36.11                         | 12.8                   | 57.27                      | 100                  | 342                     | P                     | H             |
|                                     |                                                                                             | 7311                 | 38.99               | -15.01                  | 54                          | 47.35                     | 36.11                         | 12.8                   | 57.27                      | 100                  | 342                     | A                     | H             |
|                                     |                                                                                             | 4874                 | 49.62               | -24.38                  | 74                          | 65.14                     | 31.46                         | 10.47                  | 57.45                      | 100                  | 0                       | P                     | V             |
|                                     |                                                                                             | 7311                 | 47.97               | -26.03                  | 74                          | 56.33                     | 36.11                         | 12.8                   | 57.27                      | 100                  | 0                       | P                     | V             |
| Remark                              | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                       |               |



| WIFI<br>Ant.<br>1+2                 | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>( P/A ) | Pol.<br>( H/V ) |
|-------------------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| 802.11n<br>HT20<br>CH 10<br>2457MHz |                                                                                             | 4914                 | 52.98               | -21.02                  | 74                          | 68.34                     | 31.53                         | 10.48                  | 57.37                      | 269                  | 3                       | P                       | H               |
|                                     |                                                                                             | 4914                 | 38.16               | -15.84                  | 54                          | 53.52                     | 31.53                         | 10.48                  | 57.37                      | 269                  | 3                       | A                       | H               |
|                                     |                                                                                             | 7371                 | 44.81               | -29.19                  | 74                          | 53.14                     | 36.29                         | 12.73                  | 57.35                      | 100                  | 0                       | P                       | H               |
|                                     |                                                                                             | 4914                 | 52.52               | -21.48                  | 74                          | 67.88                     | 31.53                         | 10.48                  | 57.37                      | 186                  | 327                     | P                       | V               |
|                                     |                                                                                             | 4914                 | 37.15               | -16.85                  | 54                          | 52.51                     | 31.53                         | 10.48                  | 57.37                      | 186                  | 327                     | A                       | V               |
|                                     |                                                                                             | 7371                 | 46.24               | -27.76                  | 74                          | 54.57                     | 36.29                         | 12.73                  | 57.35                      | 100                  | 0                       | P                       | V               |
| 802.11n<br>HT20<br>CH 11<br>2462MHz |                                                                                             | 4924                 | 47.58               | -26.42                  | 74                          | 62.88                     | 31.56                         | 10.49                  | 57.35                      | 100                  | 0                       | P                       | H               |
|                                     |                                                                                             | 7386                 | 44.03               | -29.97                  | 74                          | 52.35                     | 36.33                         | 12.71                  | 57.36                      | 100                  | 0                       | P                       | H               |
|                                     |                                                                                             | 4924                 | 45.26               | -28.74                  | 74                          | 60.56                     | 31.56                         | 10.49                  | 57.35                      | 100                  | 0                       | P                       | V               |
|                                     |                                                                                             | 7386                 | 45.27               | -28.73                  | 74                          | 53.59                     | 36.33                         | 12.71                  | 57.36                      | 100                  | 0                       | P                       | V               |
| Remark                              | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         |                 |



## Emission below 1GHz

## 2.4GHz WIFI 802.11b (LF)

| WIFI                    | Note                                                                       | Frequency | Level      | Over   | Limit      | Read     | Antenna  | Path   | Preamp | Ant    | Table   | Peak    | Pol.    |
|-------------------------|----------------------------------------------------------------------------|-----------|------------|--------|------------|----------|----------|--------|--------|--------|---------|---------|---------|
| Ant.                    |                                                                            |           |            | Limit  | Line       | Level    | Factor   | Loss   | Factor | Pos    | Pos     | Avg.    |         |
| 1+2                     |                                                                            | ( MHz )   | ( dBμV/m ) | ( dB ) | ( dBμV/m ) | ( dBμV ) | ( dB/m ) | ( dB ) | ( dB ) | ( cm ) | ( deg ) | ( P/A ) | ( H/V ) |
| 2.4GHz<br>802.11b<br>LF |                                                                            | 53.49     | 25.53      | -14.47 | 40         | 42       | 12.98    | 1.02   | 30.47  | -      | -       | P       | H       |
|                         |                                                                            | 59.16     | 24.71      | -15.29 | 40         | 42.43    | 11.65    | 1.09   | 30.46  | -      | -       | P       | H       |
|                         |                                                                            | 162.57    | 25.58      | -17.92 | 43.5       | 38.06    | 15.98    | 1.9    | 30.36  | -      | -       | P       | H       |
|                         |                                                                            | 477.8     | 25.95      | -20.05 | 46         | 29.32    | 23.42    | 3.03   | 29.82  | -      | -       | P       | H       |
|                         |                                                                            | 586.3     | 29.3       | -16.7  | 46         | 30.13    | 25.43    | 3.39   | 29.65  | -      | -       | P       | H       |
|                         |                                                                            | 766.9     | 32.26      | -13.74 | 46         | 29.81    | 27.94    | 3.88   | 29.37  | 100    | 0       | P       | H       |
|                         |                                                                            | 33.78     | 34.75      | -5.25  | 40         | 41.92    | 22.31    | 0.76   | 30.24  | -      | -       | P       | V       |
|                         |                                                                            | 42.69     | 35.45      | -4.55  | 40         | 47.32    | 17.61    | 0.89   | 30.37  | 100    | 0       | P       | V       |
|                         |                                                                            | 47.55     | 24.94      | -15.06 | 40         | 39.12    | 15.31    | 0.95   | 30.44  | -      | -       | P       | V       |
|                         |                                                                            | 455.4     | 26.83      | -19.17 | 46         | 30.66    | 23.08    | 2.96   | 29.87  | -      | -       | P       | V       |
|                         |                                                                            | 587.7     | 28.98      | -17.02 | 46         | 29.81    | 25.43    | 3.39   | 29.65  | -      | -       | P       | V       |
|                         |                                                                            | 809.6     | 32.04      | -13.96 | 46         | 29.39    | 27.94    | 3.99   | 29.28  | -      | -       | P       | V       |
| Remark                  | 1. No other spurious found.<br>2. All results are PASS against limit line. |           |            |        |            |          |          |        |        |        |         |         |         |



**Note symbol**

|     |                                                                                                                                                          |
|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| *   | <b>Fundamental Frequency</b> which can be ignored. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency. |
| !   | Test result is <b>over limit</b> line.                                                                                                                   |
| P/A | <b>P</b> eak or <b>A</b> verage                                                                                                                          |
| H/V | <b>H</b> orizontal or <b>V</b> ertical                                                                                                                   |



A calculation example for radiated spurious emission is shown as below:

| WIFI    | Note | Frequency | Level      | Over   | Limit      | Read     | Antenna  | Path   | Preamp | Ant    | Table   | Peak    | Pol.    |
|---------|------|-----------|------------|--------|------------|----------|----------|--------|--------|--------|---------|---------|---------|
| Ant.    |      |           |            | Limit  | Line       | Level    | Factor   | Loss   | Factor | Pos    | Pos     | Avg.    |         |
| 1+2     |      | ( MHz )   | ( dBμV/m ) | ( dB ) | ( dBμV/m ) | ( dBμV ) | ( dB/m ) | ( dB ) | ( dB ) | ( cm ) | ( deg ) | ( P/A ) | ( H/V ) |
| 802.11b |      | 2390      | 55.45      | -18.55 | 74         | 54.51    | 32.22    | 4.58   | 35.86  | 103    | 308     | P       | H       |
| CH 01   |      |           |            |        |            |          |          |        |        |        |         |         |         |
| 2412MHz |      | 2390      | 43.54      | -10.46 | 54         | 42.6     | 32.22    | 4.58   | 35.86  | 103    | 308     | A       | H       |

1. Path Loss(dB) = Cable loss(dB) + Filter loss(dB) + Attenuator loss(dB)

2. Level(dBμV/m) =

Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)

3. Over Limit(dB) = Level(dBμV/m) – Limit Line(dBμV/m)

#### For Peak Limit @ 2390MHz:

1. Level(dBμV/m)

= Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)

= 32.22(dB/m) + 4.58(dB) + 54.51(dBμV) – 35.86 (dB)

= 55.45 (dBμV/m)

2. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 55.45(dBμV/m) – 74(dBμV/m)

= -18.55(dB)

#### For Average Limit @ 2390MHz:

1. Level(dBμV/m)

= Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)

= 32.22(dB/m) + 4.58(dB) + 42.6(dBμV) – 35.86 (dB)

= 43.54 (dBμV/m)

2. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 43.54(dBμV/m) – 54(dBμV/m)

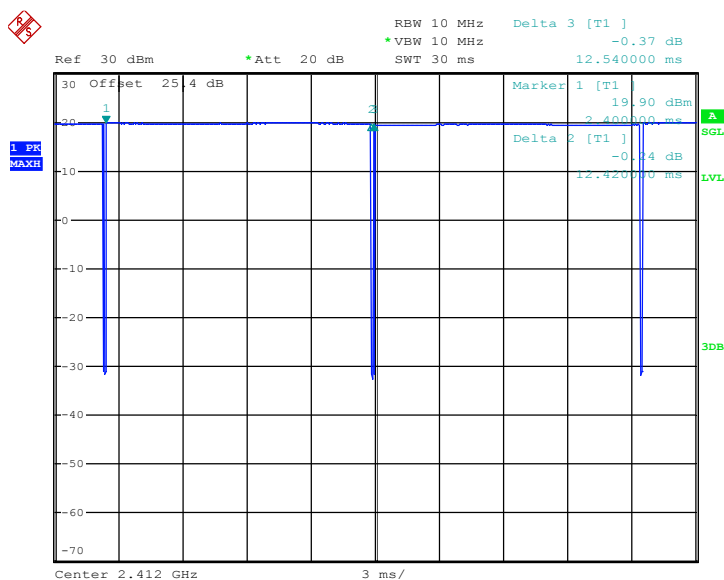
= -10.46(dB)

Both peak and average measured complies with the limit line, so test result is “PASS”.

## Appendix D. Duty Cycle Plots

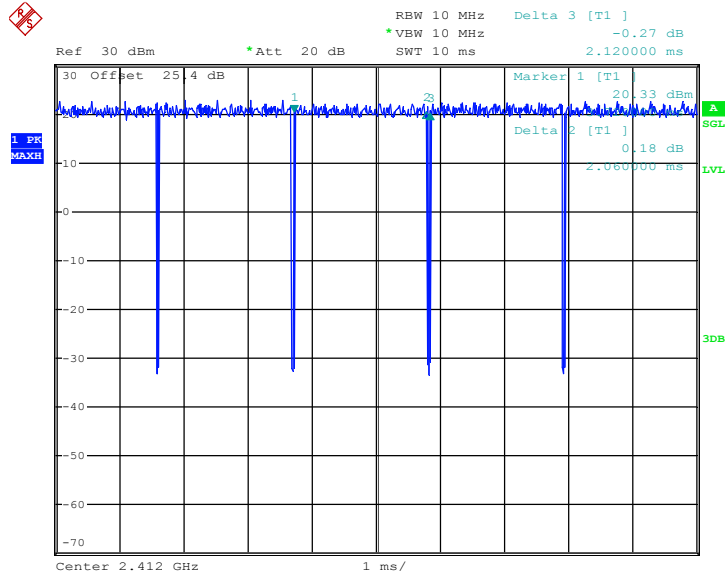
| ANT | Band         | Duty Cycle(%) | T(ms) | 1/T(kHz) | VBW Setting |
|-----|--------------|---------------|-------|----------|-------------|
| 1+2 | 802.11b      | 99.04         | -     | -        | 10Hz        |
| 1+2 | 802.11g      | 97.17         | 2.060 | 0.49     | 1kHz        |
| 1+2 | 802.11n HT20 | 97.96         | 1.920 | 0.52     | 1kHz        |

### 802.11b





802.11g



802.11n HT20

