# FCC RF Test Report

| | | |
|---|---|---|
| APPLICANT | : | Getac Technology Corporation. |
| EQUIPMENT | : | WLAN module |
| BRAND NAME | : | Getac |
| MODEL NAME | : | 8265NGW |
| FCC ID | : | QYL8265NG |
| STANDARD | : | FCC Part 15 Subpart E §15.407 |
| CLASSIFICATION | : | (NII) Unlicensed National Information Infrastructure |

**This is a partial report. The product testing was completed on Jul. 07, 2018. We, Sporton International (Shenzhen) Inc., would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.**

**This report contains data that were produced under subcontract by Laboratory SPORTON INTERNATIONAL INC.**

**The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International (Shenzhen) Inc., the test report shall not be reproduced except in full.**

Eric Shih

TESTING
NVLAP LAB CODE 600156-0

**Approved by: Eric Shih / Manager**

***Sporton International (Shenzhen) Inc.***
***1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan Shenzhen City Guangdong Province 518055 China***

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# REVISION HISTORY

| REPORT NO. | VERSION | DESCRIPTION | ISSUED DATE |
|---|---|---|---|
| FR570164-39E | Rev. 01 | Initial issue of report | Jul. 31, 2018 |
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# SUMMARY OF TEST RESULT

| Report Section | FCC Rule | Description | Limit | Result | Remark |
|---|---|---|---|---|---|
| 3.1 | 15.407(a) | Maximum Conducted Output Power | ≤ 30 dBm | Pass | - |
| 3.2 | 15.407(b) | Unwanted Emissions | 15.407(b)(4)(i) &15.209(a) | Pass | Under limit 12.16 dB at 570.290 MHz |
| 3.3 | 15.203 & 15.407(a) | Antenna Requirement | N/A | Pass | - |
| **Remark:** Except Conducted output power and Unwanted Emissions is carrying out, For other test data please refer to Intel Report No.: 160321-01.TR01 for WLAN module (Model: 8265NGW). | | | | | |

# 1 General Description

## 1.1 Applicant

**Getac Technology Corporation.**
5F., Building A, No. 209, Sec.1, Nangang Rd.,Nangang Dist., Taipei City 11568, Taiwan, R.O.C.

## 1.2 Product Feature of Equipment Under Test

WCDMA/LTE, Bluetooth, Wi-Fi 2.4GHz 802.11b/g/n, Wi-Fi 5GHz 802.11a/n/ac, NFC, GNSS and Digitizer.

| Product Specification subjective to this standard | |
|---|---|
| **Antenna Type** | WWAN: PIFA Antenna<br>WLAN: PIFA Antenna<br>Bluetooth: PIFA Antenna<br>GPS: PATCH Antenna<br>NFC: Loop Antenna<br>Digitizer: Loop Antenna |

The product was installed into Tablet (Brand Name: Getac, Model Name: RX10) during test, and all tests were performed with SKU A

| SKU Table | | |
|---|---|---|
| RX10 SKU | | |
| | SKU A | SKU B |
| CPU | i5 | M3 |
| DDR | 8G | 4G |
| SSD | 256GB | 128GB |
| Panel | FHD | FHD |
| Digitizer | Support | Not Support |
| WLAN/BT | Support | Not Support |
| WWAN | Support | Not Support |
| GPS | Support | Not Support |
| RFID | Support | Not Support |
| Battery | 5800mAh & 2160mAh | 2160mAh |

## 1.3 Modification of EUT

No modifications are made to the EUT during all test items.

## 1.4 Testing Location

SPORTON INTERNATIONAL INC. is accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code : 1190) and under the FCC-recognized accredited testing laboratories by Mutual Recognition Agreement (MRA) in FCC Test.

| | | | |
|---|---|---|---|
| **Test Site** | SPORTON INTERNATIONAL INC. | | |
| **Test Site Location** | No.52, Huaya 1st Rd., Guishan Dist. Taoyuan City Taiwan<br>Tel: 886-3-327-3456<br>FAX: +886-3-327-0978 | | |
| **Test Site No.** | **Sporton Site No.** | **FCC designation No.** | **FCC Test Firm Registration No.** |
| | TH05-HY | TW1190 | 553509 |

**Note:** Test data subcontracted Conducted power in section 3.1 of this report.

Sporton International (Shenzhen) Inc. is accredited to ISO 17025 by National Voluntary Laboratory Accreditation Program (NVLAP code: 600156-0) and the FCC designation No is CN5019.

| | | |
|---|---|---|
| **Test Site** | Sporton International (Shenzhen) Inc. | |
| **Test Site Location** | No. 3 Bldg the third floor of south, Shahe River west, Fengzeyuan Warehouse, Nanshan District Shenzhen City Guangdong Province 518055 China<br>TEL: +86-755-3320-2398 | |
| **Test Site No.** | **Sporton Site No.** | **FCC Test Firm Registration No.** |
| | 03CH01-SZ | 577730 |

**Note:** The test site complies with ANSI C63.4 2014 requirement.

## 1.5 Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- FCC Part 15 Subpart E
- FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
- FCC KDB 662911 D01 Multiple Transmitter Output v02r01.
- ANSI C63.10-2013

**Remark:**

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.

# 2 Test Configuration of Equipment Under Test

a. The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: radiation emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower). For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (X plane for Ant. 1, Y Plane for Ant. 2 and MIMO Ant. 1+2) were recorded in this report.

## 2.1 Carrier Frequency and Channel

| Frequency Band | Channel | Freq. (MHz) | Channel | Freq. (MHz) |
|---|---|---|---|---|
| 5725-5850 MHz Band 4 (U-NII-3) | 149 | 5745 | 157 | 5785 |
| | 151* | 5755 | 159* | 5795 |
| | 153 | 5765 | 161 | 5805 |
| | 155# | 5775 | 165 | 5825 |

**Note:**

1. The above Frequency and Channel in "*" were 802.11n HT40 and 802.11ac VHT40.
2. The above Frequency and Channel in "#" were 802.11ac VHT80.

## 2.2 Test Mode

**Final test modes are considering the modulation and worse data rates as below table.**

**Single Mode**

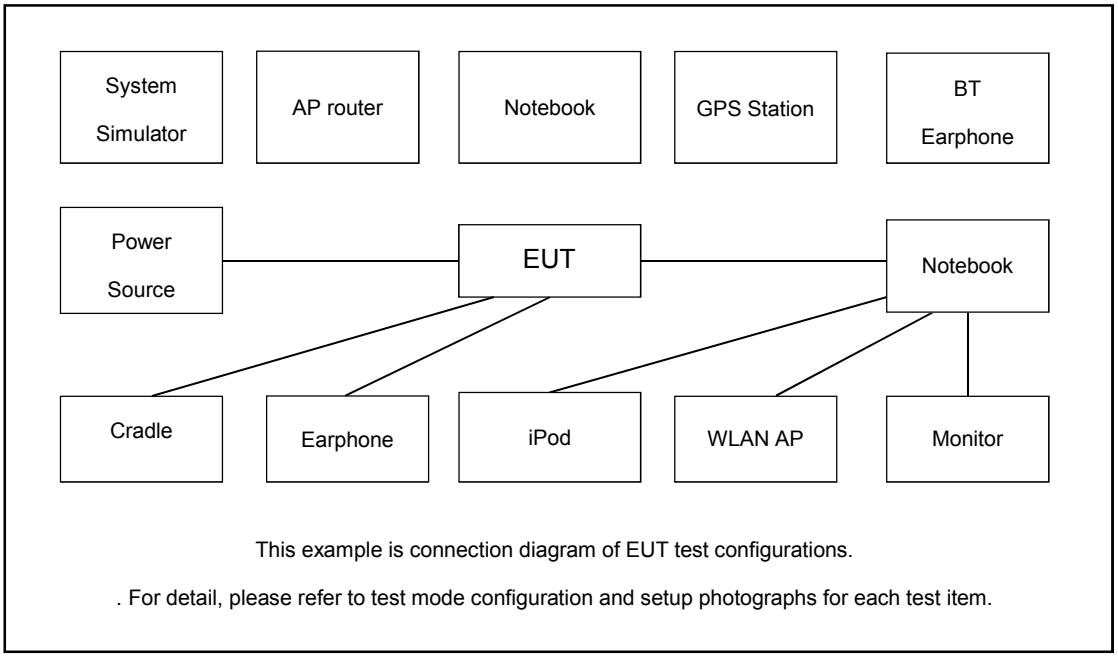
| Modulation | Data Rate |
|---|---|
| 802.11a | 6 Mbps |
| 802.11n HT20 | MCS0 |

**MIMO Mode**

| Modulation | Data Rate |
|---|---|
| 802.11n HT20 | MCS0 |

| Ch. # | | Band IV：5725-5850 MHz | |
|---|---|---|---|
| | | 802.11a | 802.11n HT20 |
| L | Low | | |
| M | Middle | 157 | 157 |
| H | High | | |

## 2.3 Connection Diagram of Test System




## 2.4 Support Unit used in test configuration and system

| Item | Equipment | Trade Name | Model Name | FCC ID | Data Cable | Power Cord |
|---|---|---|---|---|---|---|
| 1. | Earphone | Apple | MC690ZP/A | N/A | Shielded, 1.0m | N/A |

## 2.5 EUT Operation Test Setup

The RF test items, utility “DRTU” was installed in Notebook which was programmed in order to make the EUT provide channel selection, power level, data rate and the application type and for continuous transmitting signals.

# 3 Test Result

## 3.1 Maximum Conducted Output Power Measurement

### 3.1.1 Limit of Maximum Conducted Output Power

For the band 5.725–5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W.

If transmitting antennas of directional gain greater than 6 dBi are used, the peak output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

### 3.1.2 Measuring Instruments

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

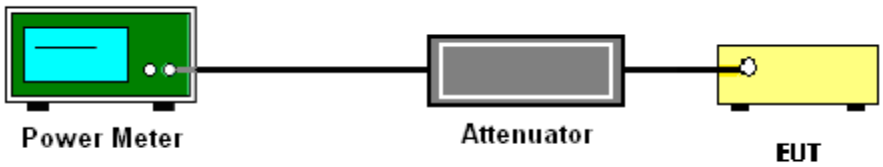
### 3.1.3 Test Procedures

The testing follows Method PM of FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.

Method PM (Measurement using an RF average power meter):

1. Measurement is performed using a wideband RF power meter.
2. The EUT is configured to transmit continuously with a consistent duty cycle at its maximum power control level.
3. Measure the average power of the transmitter, and the average power is corrected with duty factor, 10 log(1/x), where x is the duty cycle.

### 3.1.4 Test Setup




### 3.1.5 Test Result of Maximum Conducted Output Power

Please refer to Appendix A.

## 3.2 Unwanted Emissions Measurement

This section is to measure unwanted emissions through radiated measurement for band edge spurious emissions and out of band emissions measurement.

### 3.2.1 Limit of Unwanted Emissions

(1) For transmitters operating in the 5.725-5.85 GHz band:

15.407(b)(4)(i) All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

(2) Unwanted spurious emissions fallen in restricted bands shall comply with the general field strength limits as below table,

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

| EIRP (dBm) | Field Strength at 3m (dBμV/m) |
|---|---|
| - 27 | 68.2 |

**Note:** The following formula is used to convert the EIRP to field strength.

$$EIRP = E_{Meas} + 20\log(d_{Meas}) - 104.7$$

where

EIRP is the equivalent isotropically radiated power, in dBm

$E_{Meas}$ is the field strength of the emission at the measurement distance, in dBμV/m

$d_{Meas}$ is the measurement distance, in m

### 3.2.2 Measuring Instruments

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

### 3.2.3 Test Procedures

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01. Section G) Unwanted emissions measurement.

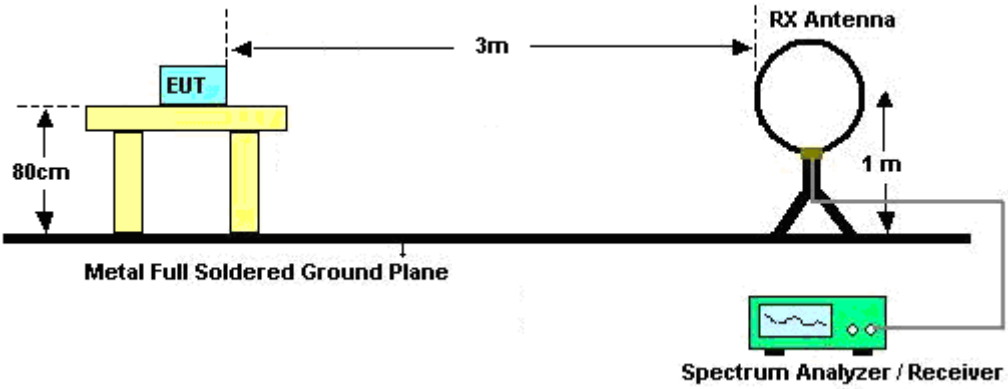
   (1) Procedure for Unwanted Emissions Measurements Below 1000MHz
   - RBW = 120 kHz
   - VBW = 300 kHz
   - Detector = Peak
   - Trace mode = max hold

   (2) Procedure for Peak Unwanted Emissions Measurements Above 1000 MHz
   - RBW = 1 MHz
   - VBW ≥ 3 MHz
   - Detector = Peak
   - Sweep time = auto
   - Trace mode = max hold

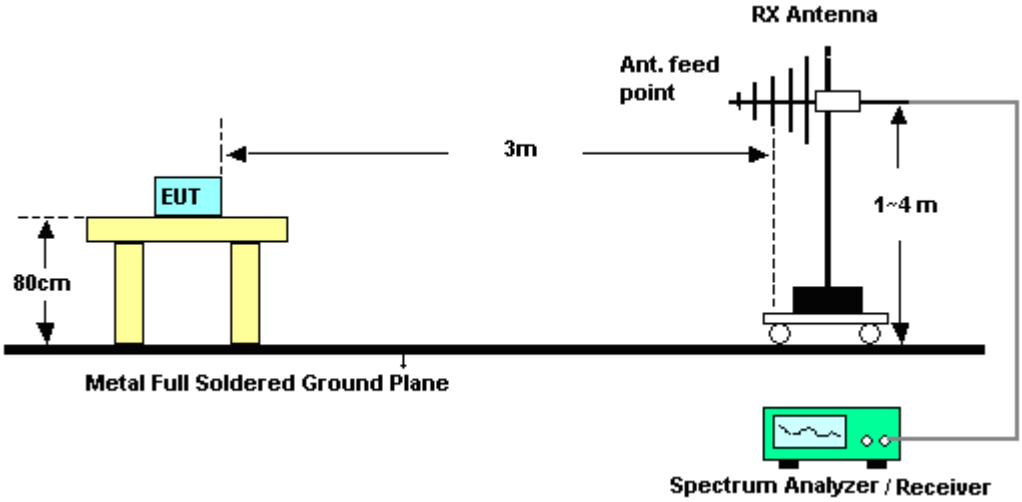
   (3) Procedures for Average Unwanted Emissions Measurements Above 1000MHz
   - RBW = 1 MHz
   - VBW = 10 Hz, when duty cycle is no less than 98 percent.
   - VBW ≥ 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.
2. 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.
3. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
4. The antenna is a broadband antenna and its height is adjusted between one meter and four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
5. For each suspected emission, the EUT was arranged to its worst case and then adjust the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
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.

### 3.2.4 Test Setup

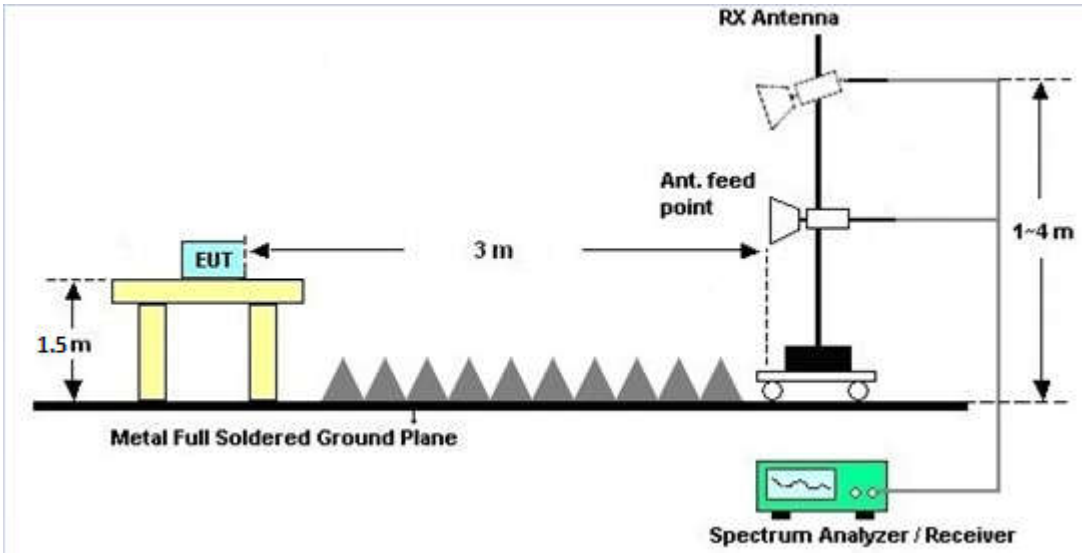
**For radiated emissions below 30MHz**




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



**For radiated emissions above 1GHz**




### 3.2.5 Test Results of Radiated Emissions (9 kHz ~ 30 MHz)

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.

There is a comparison data of both open-field test site and semi-Anechoic chamber, and the result came out very similar.

### 3.2.6 Test Result of Radiated Band Edges

Please refer to Appendix B and C.

### 3.2.7 Duty Cycle

Please refer to Appendix D.

### 3.2.8 Test Result of Unwanted Radiated Emission (30MHz ~ 10th Harmonic)

Please refer to Appendix B and C.

## 3.3 Antenna Requirements

### 3.3.1 Standard Applicable

If transmitting antenna directional gain is greater than 6 dBi, both the peak transmit power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

### 3.3.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

### 3.3.3 Antenna Gain

<CDD Modes >

FCC KDB 662911 D01 Multiple Transmitter Output v02r01

For CDD transmissions, directional gain is calculated as

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

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

Array Gain = 10 log(NANT/NSS=1) dB.

For power measurements on IEEE 802.11 devices,

Array Gain = 0 dB (i.e., no array gain) for NANT ≤ 4.

Directional gain may be calculated by using the formulas applicable to equal gain antennas with GANT 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.

| | Ant. 1 (dBi) | Ant. 2 (dBi) | DG for Power (dBi) | DG for PSD (dBi) | Power Limit Reduction (dB) | PSD Limit Reduction (dB) |
|---|---|---|---|---|---|---|
| **Band IV** | 0.28 | -0.36 | 0.28 | 0.28 | 0.00 | 0.00 |

*Power Limit Reduction = DG(Power) – 6dBi, ( min = 0 )*

*PSD Limit Reduction = DG(PSD) – 6dBi, ( 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 | Jun. 20, 2018 | Mar. 05, 2019 | Conducted (TH05-HY) |
| Power Meter | Anritsu | ML2495A | 1240001 | N/A | Sep. 07, 2017 | Jun. 20, 2018 | Sep. 06, 2018 | Conducted (TH05-HY) |
| Power Sensor | Anritsu | MA2411B | 1207349 | 300MHz~40GHz | Sep. 07, 2017 | Jun. 20, 2018 | Sep. 06, 2018 | Conducted (TH05-HY) |
| Spectrum Analyzer | Rohde & Schwarz | FSP40 | 100057 | 9kHz-40GHz | Nov. 21, 2017 | Jun. 20, 2018 | Nov. 20, 2018 | Conducted (TH05-HY) |
| Switch Box & RF Cable | Burgeon | ETF-058 | EC1300484 | N/A | Mar. 01, 2018 | Jun. 20, 2018 | Feb. 28, 2019 | Conducted (TH05-HY) |
| EMI Test Receiver&SA | Agilent | N9038A | MY52260185 | 20Hz~26.5GHz | Apr. 19, 2018 | Jul. 06, 2018~ Jul. 07, 2018 | Apr. 18, 2019 | Radiation (03CH01-SZ) |
| Loop Antenna | R&S | HFH2-Z2 | 100354 | 9kHz~30MHz | May 14, 2018 | Jul. 06, 2018~ Jul. 07, 2018 | May 13, 2019 | Radiation (03CH01-SZ) |
| Bilog Antenna | TeseQ | CBL6112D | 35408 | 30MHz-2GHz | Apr. 19, 2018 | Jul. 06, 2018~ Jul. 07, 2018 | Apr. 18, 2019 | Radiation (03CH01-SZ) |
| Double Ridge Horn Antenna | ETS Lindgren | 3117 | 119436 | 1GHz~18GHz | Jul. 28, 2017 | Jul. 06, 2018~ Jul. 07, 2018 | Jul. 27, 2018 | Radiation (03CH01-SZ) |
| SHF-EHF Horn | com-power | AH-840 | 101071 | 18Ghz-40GHz | Mar. 30, 2018 | Jul. 06, 2018~ Jul. 07, 2018 | Mar. 29, 2019 | Radiation (03CH01-SZ) |
| LF Amplifier | Burgeon | BPA-530 | 102209 | 0.01~3000Mhz | Apr. 19, 2018 | Jul. 06, 2018~ Jul. 07, 2018 | Apr. 18, 2019 | Radiation (03CH01-SZ) |
| HF Amplifier | MITEQ | AMF-7D-00101800-30-10P-R | 1707137 | 1GHz~18GHz | Oct. 19, 2017 | Jul. 06, 2018~ Jul. 07, 2018 | Oct. 18, 2018 | Radiation (03CH01-SZ) |
| HF Amplifier | KEYSIGHT | 83017A | MY53270104 | 0.5GHz~26.5Ghz | Oct. 19, 2017 | Jul. 06, 2018~ Jul. 07, 2018 | Oct. 18, 2018 | Radiation (03CH01-SZ) |
| HF Amplifier | MITEQ | TTA1840-35-HG | 1871923 | 18GHz~40GHz | Jul. 18, 2017 | Jul. 06, 2018~ Jul. 07, 2018 | Jul. 17, 2018 | Radiation (03CH01-SZ) |
| AC Power Source | Chroma | 61601 | 616010001985 | N/A | NCR | Jul. 06, 2018~ Jul. 07, 2018 | NCR | Radiation (03CH01-SZ) |
| Turn Table | EM | EM1000 | N/A | 0~360 degree | NCR | Jul. 06, 2018~ Jul. 07, 2018 | NCR | Radiation (03CH01-SZ) |

NCR: No Calibration Required

# 5 Uncertainty of Evaluation

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

| | |
|---|---|
| Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y)) | 4.8 dB |

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

| | |
|---|---|
| Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y)) | 5.0 dB |

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

| | |
|---|---|
| Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y)) | 4.3 dB |

# Appendix A. Test Result of Conducted Test Items

| | | | | |
|---|---|---|---|---|
| Test Engineer: | Lena Lo | Temperature: | 21~25 | °C |
| Test Date: | 2018/6/20 | Relative Humidity: | 51~54 | % |

# ***TEST RESULTS DATA***
## ***Average Power Table***

| Band IV | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mod. | Data Rate | NTX | CH. | Freq. (MHz) | Duty Factor (dB) | | Average Conducted Power (dBm) | | | FCC Conducted Power Limit (dBm) | | DG (dBi) | | Pass/Fail |
| | | | | | Ant 1 | Ant 2 | Ant 1 | Ant 2 | SUM | Ant 1 | Ant 2 | Ant 1 | Ant 2 | |
| 11a | 6Mbps | 1 | 149 | 5745 | 0.04 | 0.06 | 13.32 | 13.42 | | 30.00 | 30.00 | 0.28 | -0.36 | Pass |
| 11a | 6Mbps | 1 | 157 | 5785 | 0.04 | 0.06 | 13.47 | 13.48 | | 30.00 | 30.00 | 0.28 | -0.36 | Pass |
| 11a | 6Mbps | 1 | 165 | 5825 | 0.04 | 0.06 | 13.49 | 13.17 | | 30.00 | 30.00 | 0.28 | -0.36 | Pass |
| HT20 | MCS0 | 1 | 149 | 5745 | 0.09 | 0.07 | 13.37 | 13.38 | | 30.00 | 30.00 | 0.28 | -0.36 | Pass |
| HT20 | MCS0 | 1 | 157 | 5785 | 0.09 | 0.07 | 13.43 | 13.46 | | 30.00 | 30.00 | 0.28 | -0.36 | Pass |
| HT20 | MCS0 | 1 | 165 | 5825 | 0.09 | 0.07 | 13.49 | 13.49 | | 30.00 | 30.00 | 0.28 | -0.36 | Pass |
| HT40 | MCS0 | 1 | 151 | 5755 | 0.11 | 0.14 | 13.40 | 13.48 | | 30.00 | 30.00 | 0.28 | -0.36 | Pass |
| HT40 | MCS0 | 1 | 159 | 5795 | 0.11 | 0.14 | 13.44 | 13.32 | | 30.00 | 30.00 | 0.28 | -0.36 | Pass |
| VHT20 | MCS0 | 1 | 149 | 5745 | 0.07 | 0.07 | 13.33 | 13.36 | | 30.00 | 30.00 | 0.28 | -0.36 | Pass |
| VHT20 | MCS0 | 1 | 157 | 5785 | 0.07 | 0.07 | 13.42 | 13.44 | | 30.00 | 30.00 | 0.28 | -0.36 | Pass |
| VHT20 | MCS0 | 1 | 165 | 5825 | 0.07 | 0.07 | 13.47 | 13.48 | | 30.00 | 30.00 | 0.28 | -0.36 | Pass |
| VHT40 | MCS0 | 1 | 151 | 5755 | 0.14 | 0.14 | 13.38 | 13.48 | | 30.00 | 30.00 | 0.28 | -0.36 | Pass |
| VHT40 | MCS0 | 1 | 159 | 5795 | 0.14 | 0.14 | 13.43 | 13.26 | | 30.00 | 30.00 | 0.28 | -0.36 | Pass |
| VHT80 | MCS0 | 1 | 155 | 5775 | 0.24 | 0.26 | 13.45 | 13.49 | | 30.00 | 30.00 | 0.28 | -0.36 | Pass |
| HT20 | MCS0 | 2 | 149 | 5745 | 0.11 | 0.11 | 10.47 | 10.24 | 13.37 | 30.00 | | 0.28 | | Pass |
| HT20 | MCS0 | 2 | 157 | 5785 | 0.11 | 0.11 | 10.31 | 10.45 | 13.39 | 30.00 | | 0.28 | | Pass |
| HT20 | MCS0 | 2 | 165 | 5825 | 0.11 | 0.11 | 10.39 | 10.48 | 13.45 | 30.00 | | 0.28 | | Pass |
| HT40 | MCS0 | 2 | 151 | 5755 | 0.16 | 0.16 | 10.37 | 10.52 | 13.46 | 30.00 | | 0.28 | | Pass |
| HT40 | MCS0 | 2 | 159 | 5795 | 0.16 | 0.16 | 10.39 | 10.23 | 13.32 | 30.00 | | 0.28 | | Pass |
| VHT20 | MCS0 | 2 | 149 | 5745 | 0.15 | 0.15 | 10.19 | 10.23 | 13.22 | 30.00 | | 0.28 | | Pass |
| VHT20 | MCS0 | 2 | 157 | 5785 | 0.15 | 0.15 | 10.30 | 10.44 | 13.38 | 30.00 | | 0.28 | | Pass |
| VHT20 | MCS0 | 2 | 165 | 5825 | 0.15 | 0.15 | 10.37 | 10.47 | 13.43 | 30.00 | | 0.28 | | Pass |
| VHT40 | MCS0 | 2 | 151 | 5755 | 0.30 | 0.29 | 10.06 | 10.50 | 13.30 | 30.00 | | 0.28 | | Pass |
| VHT40 | MCS0 | 2 | 159 | 5795 | 0.30 | 0.29 | 10.11 | 10.22 | 13.18 | 30.00 | | 0.28 | | Pass |
| VHT80 | MCS0 | 2 | 155 | 5775 | 0.54 | 0.57 | 10.06 | 10.64 | 13.37 | 30.00 | | 0.28 | | Pass |

# Appendix B. Radiated Spurious Emission

| | | | |
|---|---|---|---|
| **Test Engineer :** | Vikki He | **Temperature :** | 24~25°C |
| | | **Relative Humidity :** | 48~49% |

## Band 4 - 5725~5850MHz

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

| WIFI Ant. | Note | Frequency | Level | Over Limit | Limit Line | Read Level | Antenna Factor | Cable Loss | Preamp Factor | Ant Pos | Table Pos | Peak Avg. | Pol. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | ( MHz ) | ( dBμV/m ) | ( dB ) | ( dBμV/m ) | ( dBμV ) | ( dB/m ) | ( dB ) | ( dB ) | ( cm ) | ( deg ) | (P/A) | (H/V) |
| 802.11n HT20 CH 157 5785MHz | | 5621.8 | 49.92 | -18.28 | 68.2 | 38.49 | 32.3 | 12.23 | 33.1 | 100 | 22 | P | H |
| | | 5682.4 | 50.47 | -41.74 | 92.21 | 38.9 | 32.3 | 12.37 | 33.1 | 100 | 22 | P | H |
| | | 5714.6 | 51.86 | -57.43 | 109.29 | 40.15 | 32.3 | 12.51 | 33.1 | 100 | 22 | P | H |
| | | 5724.6 | 50.53 | -70.76 | 121.29 | 38.82 | 32.3 | 12.51 | 33.1 | 100 | 22 | P | H |
| | * | 5785 | 99.05 | - | - | 87.06 | 32.3 | 12.79 | 33.1 | 100 | 22 | P | H |
| | * | 5785 | 92.53 | - | - | 80.54 | 32.3 | 12.79 | 33.1 | 100 | 22 | A | H |
| | | 5854.2 | 48.96 | -63.66 | 112.62 | 36.88 | 32.3 | 12.88 | 33.1 | 100 | 22 | P | H |
| | | 5870.4 | 49.59 | -56.9 | 106.49 | 37.42 | 32.3 | 12.97 | 33.1 | 100 | 22 | P | H |
| | | 5907.8 | 49.66 | -31.23 | 80.89 | 37.41 | 32.3 | 13.05 | 33.1 | 100 | 22 | P | H |
| | | 5943.2 | 50.23 | -17.97 | 68.2 | 37.89 | 32.3 | 13.14 | 33.1 | 100 | 22 | P | H |
| | | 5647.4 | 49.86 | -18.34 | 68.2 | 38.43 | 32.3 | 12.23 | 33.1 | 229 | 186 | P | V |
| | | 5692.4 | 50.22 | -49.38 | 99.6 | 38.65 | 32.3 | 12.37 | 33.1 | 229 | 186 | P | V |
| | | 5713.4 | 50.44 | -58.51 | 108.95 | 38.73 | 32.3 | 12.51 | 33.1 | 229 | 186 | P | V |
| | | 5724.2 | 49.64 | -70.74 | 120.38 | 37.93 | 32.3 | 12.51 | 33.1 | 229 | 186 | P | V |
| | * | 5785 | 98.4 | - | - | 86.41 | 32.3 | 12.79 | 33.1 | 229 | 186 | P | V |
| | * | 5785 | 91.75 | - | - | 79.76 | 32.3 | 12.79 | 33.1 | 229 | 186 | A | V |
| | | 5851 | 48.99 | -70.93 | 119.92 | 36.91 | 32.3 | 12.88 | 33.1 | 229 | 186 | P | V |
| | | 5859.2 | 49.98 | -59.64 | 109.62 | 37.81 | 32.3 | 12.97 | 33.1 | 229 | 186 | P | V |
| | | 5893.6 | 49.45 | -41.95 | 91.4 | 37.28 | 32.3 | 12.97 | 33.1 | 229 | 186 | P | V |
| | | 5935.2 | 50.6 | -17.6 | 68.2 | 38.26 | 32.3 | 13.14 | 33.1 | 229 | 186 | P | V |
| Remark | 1. No other spurious found.<br>2. All results are PASS against limit line. | | | | | | | | | | | | |

## Band 4 5725~5850MHz

## WIFI 802.11n HT20 (Harmonic @ 3m)

| WIFI Ant. 1 | Note | Frequency ( MHz ) | Level ( dBμV/m ) | Over Limit ( dB ) | Limit Line ( dBμV/m ) | Read Level ( dBμV ) | Antenna Factor ( dB/m ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Peak Avg. (P/A) | Pol. (H/V) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 802.11n HT20 CH 157 5785MHz | | 11570 | 50.85 | -23.15 | 74 | 51.06 | 40.13 | 14.9 | 55.24 | 175 | 198 | P | H |
| | | 17355 | 54.53 | -13.67 | 68.2 | 51.44 | 41.49 | 18.18 | 56.58 | 175 | 198 | P | H |
| | | 11570 | 50.66 | -23.34 | 74 | 50.87 | 40.13 | 14.9 | 55.24 | 175 | 198 | P | V |
| | | 17355 | 54.65 | -13.55 | 68.2 | 51.56 | 41.49 | 18.18 | 56.58 | 175 | 198 | P | V |
| Remark | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. | | | | | | | | | | | | |

## Band 4 - 5725~5850MHz

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

| WIFI Ant. | Note | Frequency | Level | Over Limit | Limit Line | Read Level | Antenna Factor | Cable Loss | Preamp Factor | Ant Pos | Table Pos | Peak Avg. | Pol. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | | ( MHz ) | ( dBμV/m ) | ( dB ) | ( dBμV/m ) | ( dBμV ) | ( dB/m ) | ( dB ) | ( dB ) | ( cm ) | ( deg ) | (P/A) | (H/V) |
| 802.11n HT20 CH 157 5785MHz | | 5616.2 | 49.27 | -18.93 | 68.2 | 37.98 | 32.3 | 12.09 | 33.1 | 262 | 323 | P | H |
| | | 5689.6 | 50.32 | -47.21 | 97.53 | 38.75 | 32.3 | 12.37 | 33.1 | 262 | 323 | P | H |
| | | 5710.8 | 50.14 | -58.09 | 108.23 | 38.43 | 32.3 | 12.51 | 33.1 | 262 | 323 | P | H |
| | | 5721 | 50.37 | -62.71 | 113.08 | 38.66 | 32.3 | 12.51 | 33.1 | 262 | 323 | P | H |
| | * | 5785 | 95.74 | - | - | 83.75 | 32.3 | 12.79 | 33.1 | 262 | 323 | P | H |
| | * | 5785 | 89.14 | - | - | 77.15 | 32.3 | 12.79 | 33.1 | 262 | 323 | A | H |
| | | 5852.4 | 49.76 | -66.97 | 116.73 | 37.68 | 32.3 | 12.88 | 33.1 | 262 | 323 | P | H |
| | | 5860.4 | 49.3 | -59.99 | 109.29 | 37.13 | 32.3 | 12.97 | 33.1 | 262 | 323 | P | H |
| | | 5895.4 | 49.56 | -40.51 | 90.07 | 37.31 | 32.3 | 13.05 | 33.1 | 262 | 323 | P | H |
| | | 5943.2 | 49.33 | -18.87 | 68.2 | 36.99 | 32.3 | 13.14 | 33.1 | 262 | 323 | P | H |
| | | 5639.6 | 51.26 | -16.94 | 68.2 | 39.83 | 32.3 | 12.23 | 33.1 | 288 | 199 | P | V |
| | | 5689.8 | 52.91 | -44.77 | 97.68 | 41.34 | 32.3 | 12.37 | 33.1 | 288 | 199 | P | V |
| | | 5703.8 | 51.7 | -54.57 | 106.27 | 39.99 | 32.3 | 12.51 | 33.1 | 288 | 199 | P | V |
| | | 5722.8 | 52.56 | -64.62 | 117.18 | 40.85 | 32.3 | 12.51 | 33.1 | 288 | 199 | P | V |
| | * | 5785 | 102.73 | - | - | 90.74 | 32.3 | 12.79 | 33.1 | 288 | 199 | P | V |
| | * | 5785 | 96.11 | - | - | 84.12 | 32.3 | 12.79 | 33.1 | 288 | 199 | A | V |
| | | 5851.6 | 50.87 | -67.68 | 118.55 | 38.79 | 32.3 | 12.88 | 33.1 | 288 | 199 | P | V |
| | | 5870.6 | 50.15 | -56.28 | 106.43 | 37.98 | 32.3 | 12.97 | 33.1 | 288 | 199 | P | V |
| | | 5887.2 | 51.37 | -44.77 | 96.14 | 39.2 | 32.3 | 12.97 | 33.1 | 288 | 199 | P | V |
| | | 5947 | 50.34 | -17.86 | 68.2 | 38 | 32.3 | 13.14 | 33.1 | 288 | 199 | P | V |
| Remark | 1. No other spurious found.<br>2. All results are PASS against limit line. | | | | | | | | | | | | |

## Band 4 5725~5850MHz

## WIFI 802.11n HT20 (Harmonic @ 3m)

| WIFI Ant. 2 | Note | Frequency ( MHz ) | Level ( dBμV/m ) | Over Limit ( dB ) | Limit Line ( dBμV/m ) | Read Level ( dBμV ) | Antenna Factor ( dB/m ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Peak Avg. (P/A) | Pol. (H/V) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 802.11n HT20 CH 157 5785MHz | | 11570 | 50.44 | -23.56 | 74 | 50.65 | 40.13 | 14.9 | 55.24 | 175 | 198 | P | H |
| | | 17355 | 55.79 | -12.41 | 68.2 | 52.7 | 41.49 | 18.18 | 56.58 | 175 | 198 | P | H |
| | | 11570 | 50.16 | -23.84 | 74 | 50.37 | 40.13 | 14.9 | 55.24 | 175 | 198 | P | V |
| | | 17355 | 55.07 | -13.13 | 68.2 | 51.98 | 41.49 | 18.18 | 56.58 | 175 | 198 | P | V |
| Remark | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. | | | | | | | | | | | | |

## Band 4 - 5725~5850MHz

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

| WIFI Ant. | Note | Frequency | Level | Over Limit | Limit Line | Read Level | Antenna Factor | Cable Loss | Preamp Factor | Ant Pos | Table Pos | Peak Avg. | Pol. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1+2 | | ( MHz ) | ( dBμV/m ) | ( dB ) | ( dBμV/m ) | ( dBμV ) | ( dB/m ) | ( dB ) | ( dB ) | ( cm ) | ( deg ) | (P/A) | (H/V) |
| 802.11n HT20 CH 157 5785MHz | | 5611.4 | 49.51 | -18.69 | 68.2 | 38.22 | 32.3 | 12.09 | 33.1 | 200 | 147 | P | H |
| | | 5696 | 49.54 | -52.71 | 102.25 | 37.97 | 32.3 | 12.37 | 33.1 | 200 | 147 | P | H |
| | | 5709.6 | 49.55 | -58.34 | 107.89 | 37.84 | 32.3 | 12.51 | 33.1 | 200 | 147 | P | H |
| | | 5721.6 | 49.65 | -64.8 | 114.45 | 37.94 | 32.3 | 12.51 | 33.1 | 200 | 147 | P | H |
| | * | 5785 | 98.08 | - | - | 86.09 | 32.3 | 12.79 | 33.1 | 200 | 147 | P | H |
| | * | 5785 | 91.55 | - | - | 79.56 | 32.3 | 12.79 | 33.1 | 200 | 147 | A | H |
| | | 5853.2 | 48.94 | -65.96 | 114.9 | 36.86 | 32.3 | 12.88 | 33.1 | 200 | 147 | P | H |
| | | 5870.2 | 50 | -56.54 | 106.54 | 37.83 | 32.3 | 12.97 | 33.1 | 200 | 147 | P | H |
| | | 5923 | 49.88 | -19.79 | 69.67 | 37.63 | 32.3 | 13.05 | 33.1 | 200 | 147 | P | H |
| | | 5945.4 | 50.03 | -18.17 | 68.2 | 37.69 | 32.3 | 13.14 | 33.1 | 200 | 147 | P | H |
| | | 5618.2 | 49.5 | -18.7 | 68.2 | 38.21 | 32.3 | 12.09 | 33.1 | 197 | 196 | P | V |
| | | 5685.4 | 50.44 | -43.99 | 94.43 | 38.87 | 32.3 | 12.37 | 33.1 | 197 | 196 | P | V |
| | | 5709.8 | 50.01 | -57.94 | 107.95 | 38.3 | 32.3 | 12.51 | 33.1 | 197 | 196 | P | V |
| | | 5721.2 | 49.85 | -63.69 | 113.54 | 38.14 | 32.3 | 12.51 | 33.1 | 197 | 196 | P | V |
| | * | 5785 | 103.07 | - | - | 91.08 | 32.3 | 12.79 | 33.1 | 197 | 196 | P | V |
| | * | 5785 | 96.75 | - | - | 84.76 | 32.3 | 12.79 | 33.1 | 197 | 196 | A | V |
| | | 5850.6 | 49.52 | -71.31 | 120.83 | 37.44 | 32.3 | 12.88 | 33.1 | 197 | 196 | P | V |
| | | 5870.8 | 50.98 | -55.39 | 106.37 | 38.81 | 32.3 | 12.97 | 33.1 | 197 | 196 | P | V |
| | | 5913.2 | 49.47 | -27.43 | 76.9 | 37.22 | 32.3 | 13.05 | 33.1 | 197 | 196 | P | V |
| | | 5942.4 | 49.87 | -18.33 | 68.2 | 37.53 | 32.3 | 13.14 | 33.1 | 197 | 196 | P | V |
| Remark | 1. No other spurious found.<br>2. All results are PASS against limit line. | | | | | | | | | | | | |

## Band 4 5725~5850MHz

## WIFI 802.11n HT20 (Harmonic @ 3m)

| WIFI Ant. 1+2 | Note | Frequency ( MHz ) | Level ( dBμV/m ) | Over Limit ( dB ) | Limit Line ( dBμV/m ) | Read Level ( dBμV ) | Antenna Factor ( dB/m ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Peak Avg. (P/A) | Pol. (H/V) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 802.11n HT20 CH 157 5785MHz | | 11570 | 50.5 | -23.5 | 74 | 50.71 | 40.13 | 14.9 | 55.24 | 175 | 198 | P | H |
| | | 17355 | 55.02 | -13.18 | 68.2 | 51.93 | 41.49 | 18.18 | 56.58 | 175 | 198 | P | H |
| | | 11570 | 50.77 | -23.23 | 74 | 50.98 | 40.13 | 14.9 | 55.24 | 175 | 198 | P | V |
| | | 17355 | 55.49 | -12.71 | 68.2 | 52.4 | 41.49 | 18.18 | 56.58 | 175 | 198 | P | V |
| Remark | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. | | | | | | | | | | | | |

## Band 4 5725~5850MHz

## Emission below 1GHz

## 5GHz WIFI 802.11n HT20 (LF @ 3m)

| WIFI Ant. 2 | Note | Frequency ( MHz ) | Level ( dBμV/m ) | Over Limit ( dB ) | Limit Line ( dBμV/m ) | Read Level (dBμV) | Antenna Factor ( dB/m ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Peak Avg. (P/A) | Pol. (H/V) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5GHz 802.11n HT20 LF | | 30 | 22.69 | -17.31 | 40 | 29.76 | 24.3 | 0.23 | 31.6 | | | P | H |
| | | 263.77 | 32.15 | -13.85 | 46 | 41.48 | 19.79 | 1.91 | 31.03 | | | P | H |
| | | 288.99 | 32.38 | -13.62 | 46 | 42.43 | 19.03 | 2 | 31.08 | 100 | 47 | P | H |
| | | 386.96 | 31.77 | -14.23 | 46 | 39.14 | 21.38 | 2.35 | 31.1 | | | P | H |
| | | 418.97 | 28.19 | -17.81 | 46 | 34.78 | 22.05 | 2.46 | 31.1 | | | P | H |
| | | 700.27 | 30.55 | -15.45 | 46 | 33.38 | 25.1 | 3.27 | 31.2 | | | P | H |
| | | 70.74 | 23.24 | -16.76 | 40 | 41.56 | 12.69 | 0.59 | 31.6 | | | P | V |
| | | 263.77 | 30.48 | -15.52 | 46 | 39.81 | 19.79 | 1.91 | 31.03 | | | P | V |
| | | 386.96 | 29.94 | -16.06 | 46 | 37.31 | 21.38 | 2.35 | 31.1 | | | P | V |
| | | 570.29 | 33.84 | -12.16 | 46 | 37.79 | 24.34 | 2.91 | 31.2 | 100 | 28 | P | V |
| | | 638.19 | 29.65 | -16.35 | 46 | 32.88 | 24.85 | 3.12 | 31.2 | | | P | V |
| | | 835.1 | 29.51 | -16.49 | 46 | 30.77 | 26.37 | 3.67 | 31.3 | | | P | V |
| Remark | 1. No other spurious found.<br>2. All results are PASS against limit line. | | | | | | | | | | | | |

**Band 4 5725~5850MHz**

**Note symbol**

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

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

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

1. Level(dBμV/m) =

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

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

**For Peak Limit @ 2390MHz:**

1. Level(dBμV/m)

= Antenna Factor(dB/m) + Cable 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) + Cable 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”.**

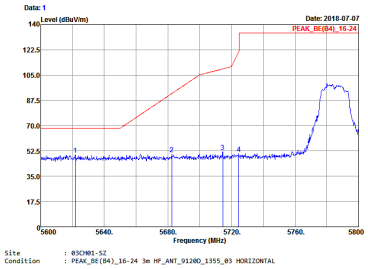
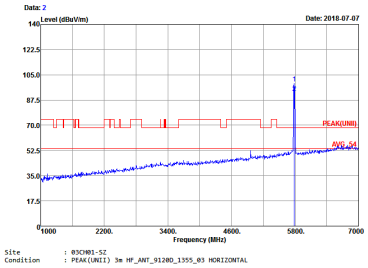
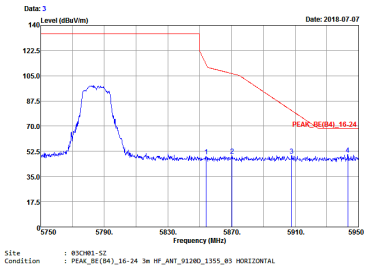
# Appendix C. Radiated Spurious Emission Plots

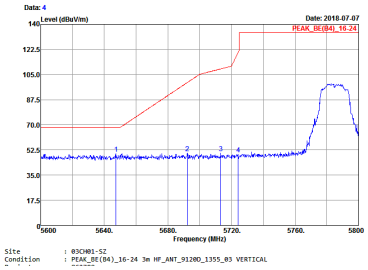
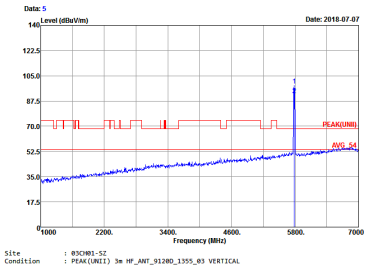
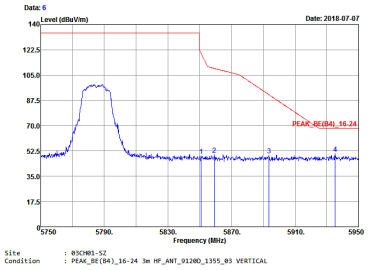
## Note symbol

| | |
|---|---|
| -L | **Low channel location** |
| -R | **High channel location** |

## Band 4 - 5725~5850MHz

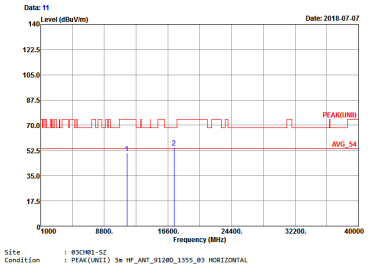
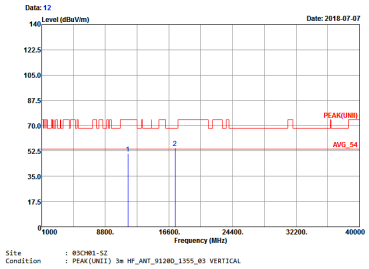
## WIFI 802.11n HT20 (Band Edge @ 3m)

| WIFI | Band 4 5725~5850MHz Band Edge @ 3m | |
|---|---|---|
| ANT | 802.11n HT20 CH157 5785MHz | |
| 1 | Horizontal | Fundamental |
| Peak |  |  |
| Peak |  | |

| WIFI | Band 4 5725~5850MHz Band Edge @ 3m | |
|---|---|---|
| ANT | 802.11n HT20 CH157 5785MHz | |
| 1 | Vertical | Fundamental |
| Peak |  |  |
| Peak |  | |

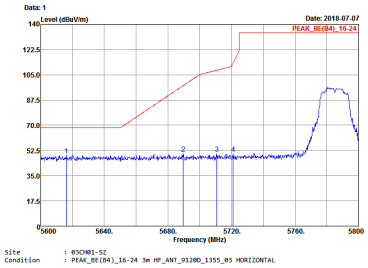
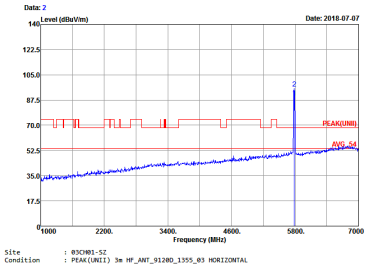
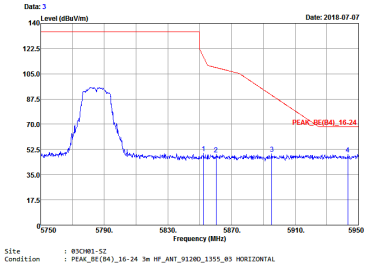
## Band 4 - 5725~5850MHz

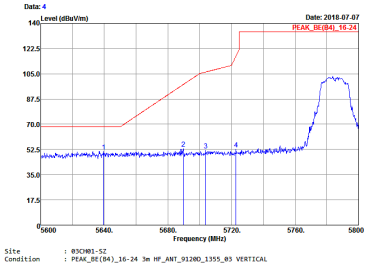
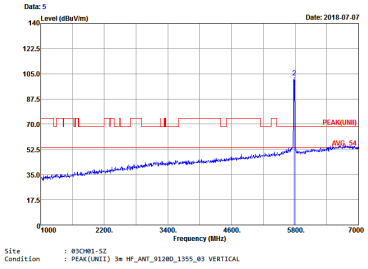
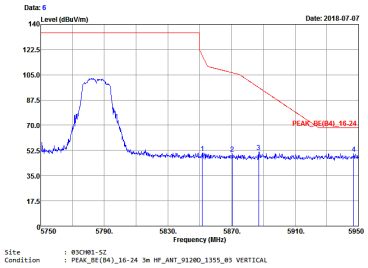
## WIFI 802.11n HT20 (Harmonic @ 3m)

| WIFI | Band 4 5725~5850MHz Harmonic @ 3m | |
|---|---|---|
| ANT | 802.11n HT20 CH157 5785MHz | |
| 1 | Horizontal | Vertical |
| Peak<br>Avg. |  |  |

## Band 4 - 5725~5850MHz

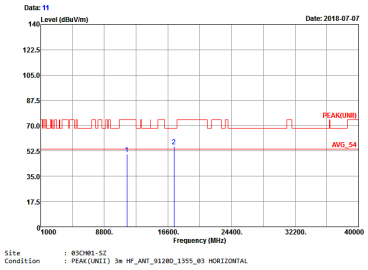
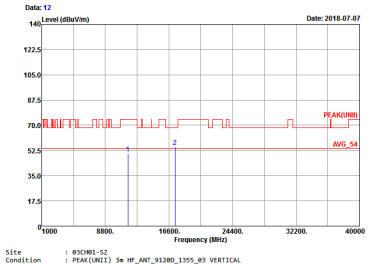
## WIFI 802.11a (Band Edge @ 3m)

| WIFI | Band 4 5725~5850MHz Band Edge @ 3m | |
|---|---|---|
| ANT | 802.11a CH157 5785MHz | |
| 2 | Horizontal | Fundamental |
| Peak |  |  |
| Peak |  | |

| WIFI | Band 4 5725~5850MHz Band Edge @ 3m | |
|---|---|---|
| ANT | 802.11a CH157 5785MHz | |
| 2 | Vertical | Fundamental |
| Peak |  |  |
| Peak |  | |

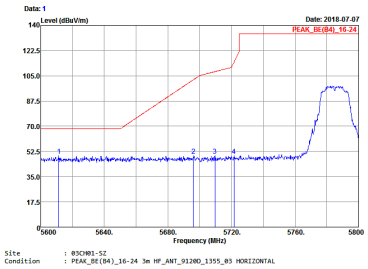
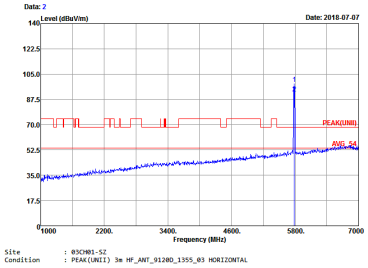
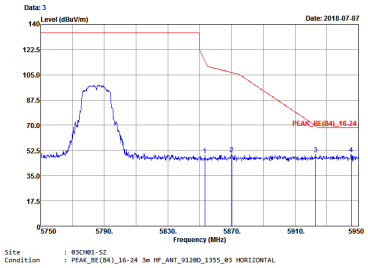
## Band 4 - 5725~5850MHz

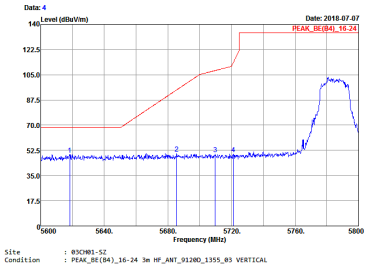
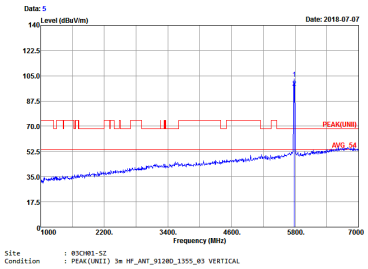
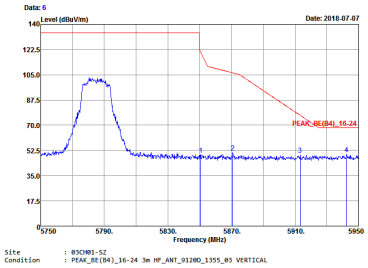
## WIFI 802.11a (Harmonic @ 3m)

| WIFI | Band 4 5725~5850MHz Harmonic @ 3m | |
|---|---|---|
| ANT | 802.11a CH157 5785MHz | |
| 2 | Horizontal | Vertical |
| Peak<br>Avg. |  |  |

## Band 4 - 5725~5850MHz

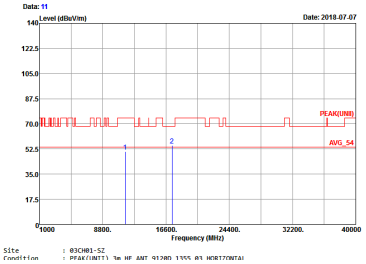
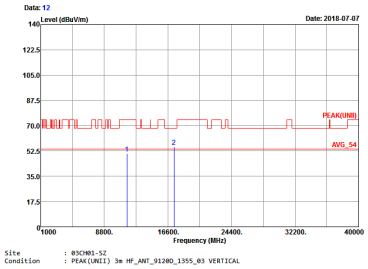
## WIFI 802.11n HT20 (Band Edge @ 3m)

| WIFI | Band 4 5725~5850MHz Band Edge @ 3m | |
|---|---|---|
| ANT | 802.11n HT20 CH157 5785MHz | |
| 1+2 | Horizontal | Fundamental |
| Peak |  |  |
| Peak |  | |

| WIFI | Band 4 5725~5850MHz Band Edge @ 3m | |
|---|---|---|
| ANT | 802.11n HT20 CH157 5785MHz | |
| 1+2 | Vertical | Fundamental |
| Peak |  |  |
| Peak |  | |

## Band 4 - 5725~5850MHz

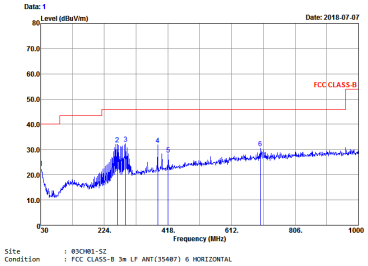
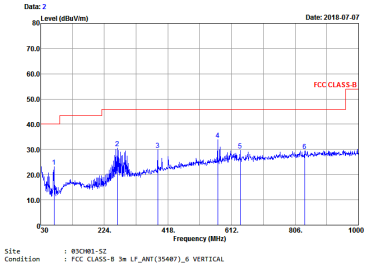
## WIFI 802.11n HT20 (Harmonic @ 3m)

| WIFI | Band 4 5725~5850MHz Harmonic @ 3m | |
|---|---|---|
| ANT | 802.11n HT20 CH157 5785MHz | |
| 1+2 | Horizontal | Vertical |
| Peak<br>Avg. |  |  |

## Band 4 5725~5850MHz

## Emission below 1GHz

## 5GHz WIFI 802.11a (LF)

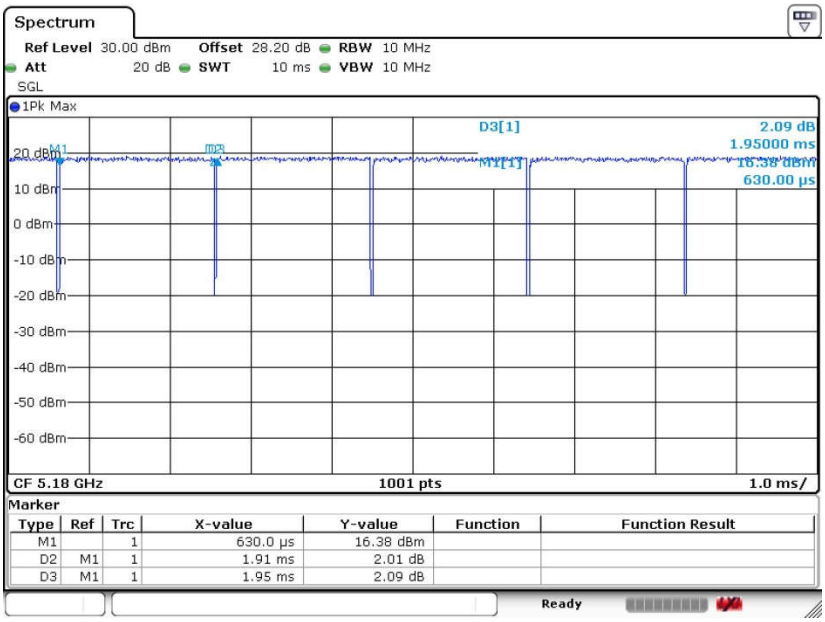
| WIFI | 5GHz 5725~5850MHz | |
|---|---|---|
| ANT | 802.11a LF | |
| 2 | Horizontal | Vertical |
| QP / Peak |  |  |

# Appendix D. Duty Cycle Plots

| Antenna | Band | Duty Cycle(%) | T(us) | 1/T(kHz) | VBW Setting |
|---|---|---|---|---|---|
| 1 | 5GHz 802.11n HT20 | 97.95 | 1.910 | 0.524 | 1KHz |
| 2 | 802.11a | 98.56 | - | - | 10Hz |
| 1+2 | 5GHz 802.11n HT20 for Ant.1 | 97.45 | 1.910 | 0.524 | 1KHz |
| 1+2 | 5GHz 802.11n HT20 for Ant.2 | 97.45 | 1.910 | 0.524 | 1KHz |

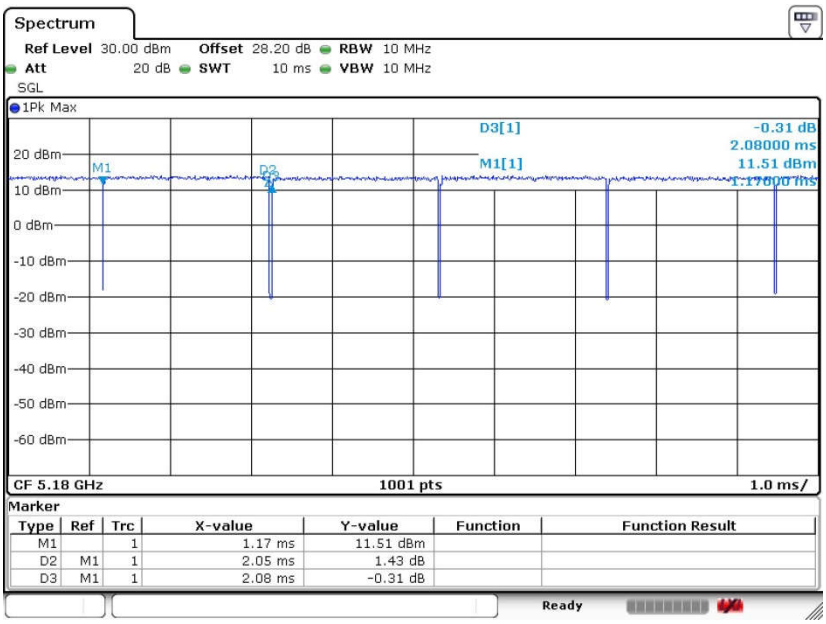
**<Ant. 1>**

**802.11n HT20**




**<Ant. 2>**

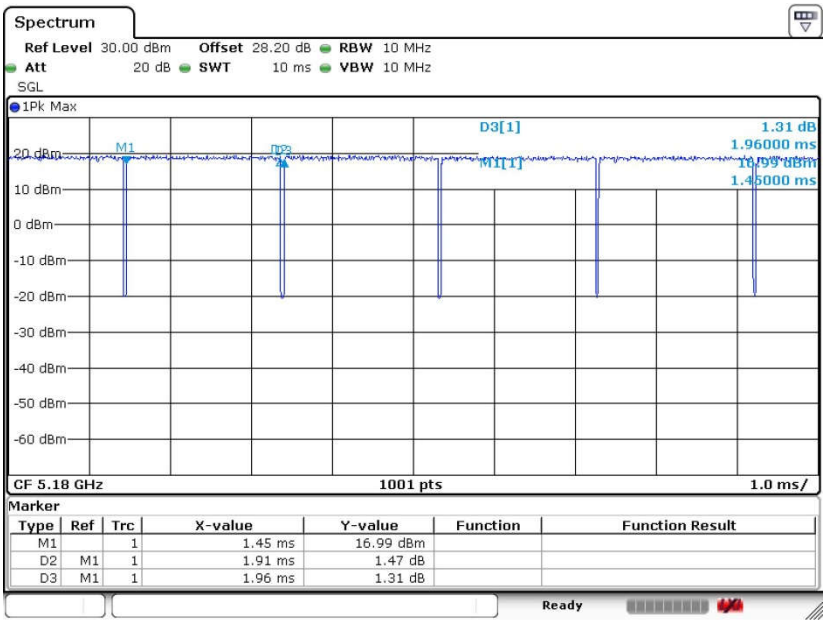
**802.11a**

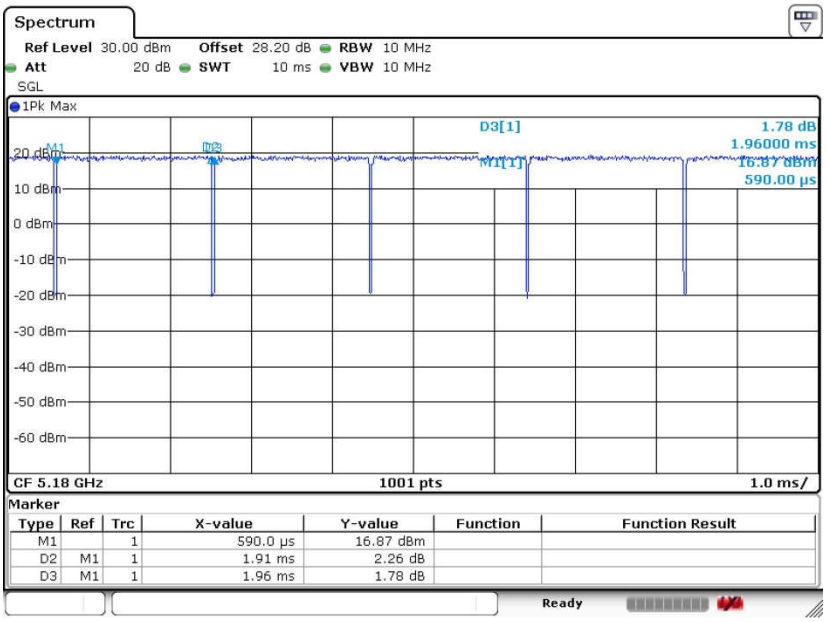



Date: 19.JUN.2018 11:52:27

**<MIMO Ant. 1>**

**802.11n HT20**




**<MIMO Ant. 2>**

**802.11n HT20**