



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 C §15.247
CLASSIFICATION : (DTS) Digital Transmission System

This is a partial report. The product testing was completed on Jul. 08, 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.



Approved by: Eric Shih / Manager

Sporton International (Shenzhen) Inc.

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SUMMARY OF TEST RESULT

| Report Section | FCC Rule | Description | Limit | Result | Remark |
|----------------|--------------------|--|-----------------------|--------|------------------------------------|
| 3.1 | 15.247(b) | Power Output Measurement | ≤ 30dBm | Pass | - |
| 3.2 | 15.247(d) | Radiated Band Edges and Radiated Spurious Emission | 15.209(a) & 15.247(d) | Pass | Under limit 8.59 dB at 2390.00 MHz |
| 3.3 | 15.203 & 15.247(b) | Antenna Requirement | N/A | Pass | - |

Remark: Except Conducted output power and Radiated Spurious Emission is carrying out, for the other test data please refer to modular report “160321-01.TR02”.



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 WLAN: PIFA Antenna Bluetooth: PIFA Antenna GPS: PATCH Antenna NFC: Loop Antenna 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 Tel: 886-3-327-3456 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 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 C §15.247
- FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v04
- FCC KDB 662911 D01 Multiple Transmitter Output v02r01.
- ANSI C63.10-2013

Remark: All test items were verified and recorded according to the standards and without any deviation during the test.



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 (Y plane) were recorded in this report.

2.1 Carrier Frequency and Channel

| Frequency Band | Channel | Freq. (MHz) | Channel | Freq. (MHz) |
|-----------------|---------|-------------|---------|-------------|
| 2400-2483.5 MHz | 1 | 2412 | 7 | 2442 |
| | 2 | 2417 | 8 | 2447 |
| | 3 | 2422 | 9 | 2452 |
| | 4 | 2427 | 10 | 2457 |
| | 5 | 2432 | 11 | 2462 |
| | 6 | 2437 | | |

2.2 Test Mode

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

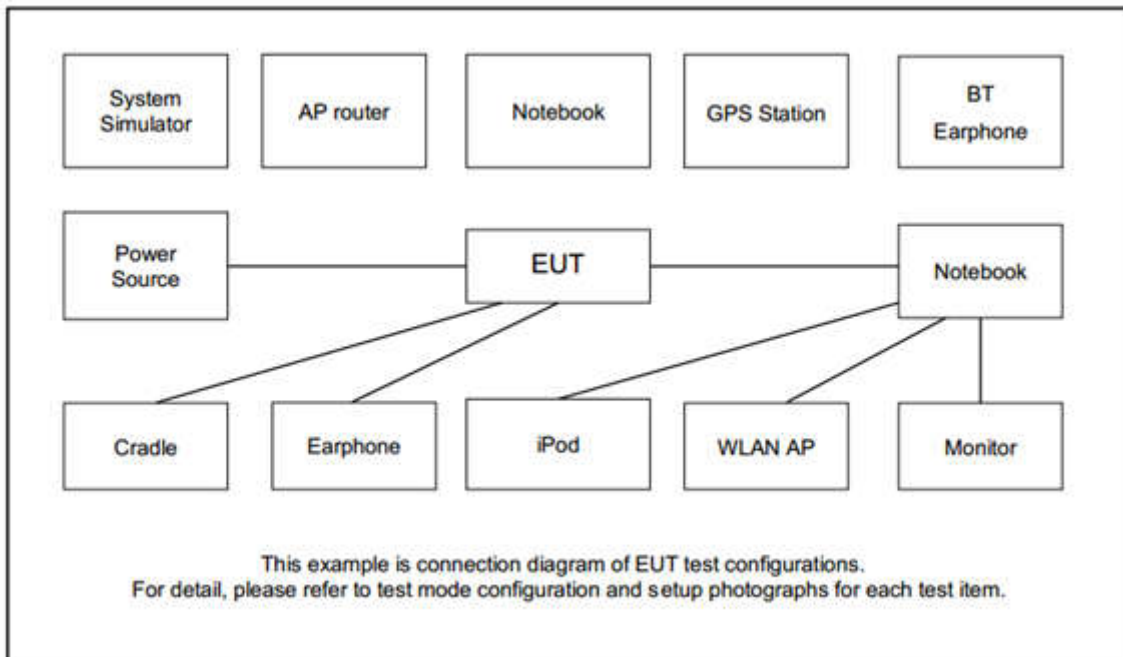
Single Antenna

| Modulation | Data Rate |
|------------|-----------|
| 802.11b | 1 Mbps |
| 802.11g | 6 Mbps |

MIMO Antenna

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

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

For WLAN RF test items, an engineering test program was provided and enabled to make EUT continuous transmit/receive.

3 Test Result

3.1 Output Power Measurement

3.1.1 Limit of Output Power

For systems using digital modulation in the 2400-2483.5MHz, the limit for peak output power is 30dBm. If transmitting antenna with directional gain greater than 6dBi is used, the peak output power from the intentional radiator shall be reduced below the above stated value by the amount in dB that the directional gain of the antenna exceeds 6 dBi. In case of point-to-point operation, the limit has to be reduced by 1dB for every 3dB that the directional gain of the antenna exceeds 6dBi.

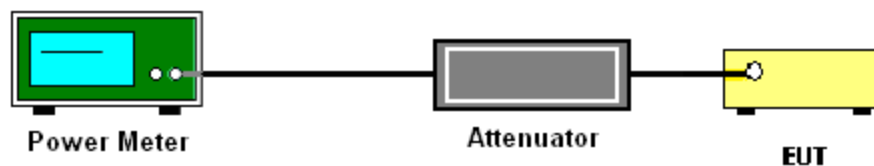
3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

1. The testing follows the Measurement Procedure of FCC KDB No. 558074 DTS D01 Meas. Guidance v04 section 9.1.3 PKPM1 Peak power meter method.
2. The RF output of EUT was connected to the power meter by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Measure the conducted output power and record the results in the test report.
5. For MIMO mode, calculation method follows FCC KDB 662911 D01 Multiple Transmitter Output v02r01.

3.1.4 Test Setup



3.1.5 Test Result of Peak Output Power

Please refer to Appendix A.

3.1.6 Test Result of Average output Power (Reporting Only)

Please refer to Appendix A.



3.2 Radiated Band Edges and Spurious Emission Measurement

3.2.1 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.

| 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 |

3.2.2 Measuring Instruments

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

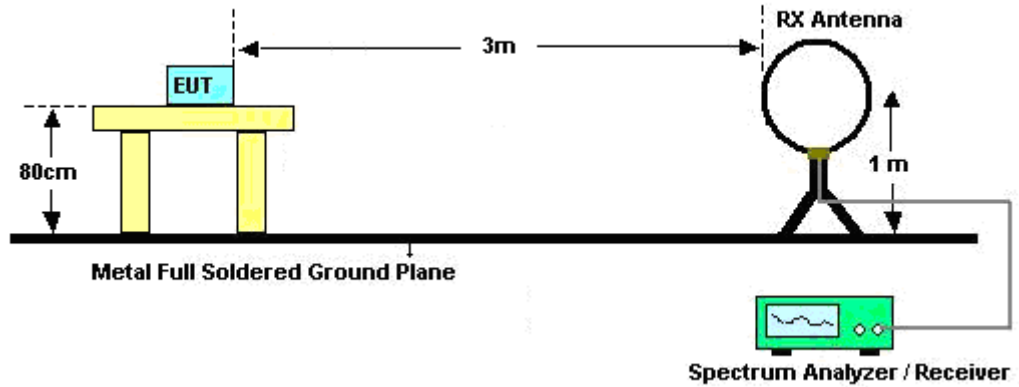


3.2.3 Test Procedures

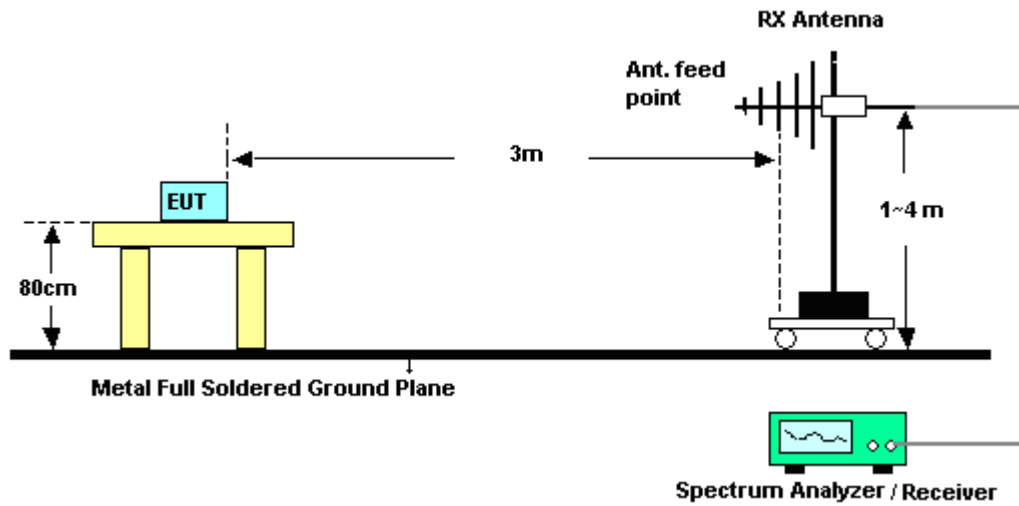
1. The testing follows FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v04.
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test 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.

3.2.4 Test Setup

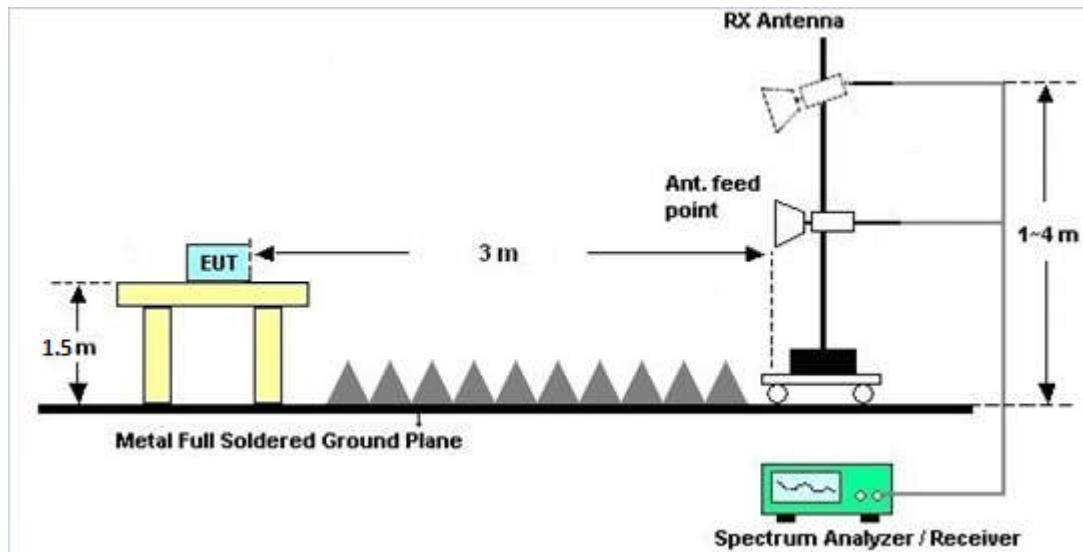
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



3.2.5 Test Results of Radiated 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.

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 Spurious at 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 Radiated Spurious Emission (30MHz ~ 10th Harmonic)

Please refer to Appendix B and C.



3.3 Antenna Requirements

3.3.1 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. 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.

3.3.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

3.3.3 Antenna Gain

FCC KDB 662911 D01 Multiple Transmitter Output v02r01

For CDD transmissions, directional gain is calculated as

Directional gain = $G_{ANT} + \text{Array Gain}$, 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.

| <CDD Modes> | | | | | | |
|--------------------------|-------------------------|-------------------------|---------------------------------------|-------------------------------------|---|---|
| | | | DG for Power (dBi) | DG for PSD (dBi) | Power Limit Reduction (dB) | PSD Limit Reduction (dB) |
| | Ant. 1 (dBi) | Ant. 2 (dBi) | | | | |
| 2.4 GHz | 2.35 | -0.28 | 2.35 | 4.14 | 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 |
|---------------------------|-----------------|------------------------------|--------------|-----------------|------------------|---------------------------------|---------------|-----------------------|
| Power Meter | Anritsu | ML2495A | 1240001 | N/A | Sep. 07, 2017 | Jun. 15, 2018 | Sep. 06, 2018 | Conducted (TH05-HY) |
| Power Sensor | Anritsu | MA2411B | 1207349 | 300MHz~40GHz | Sep. 07, 2017 | Jun. 15, 2018 | Sep. 06, 2018 | Conducted (TH05-HY) |
| Spectrum Analyzer | Rohde & Schwarz | FSP40 | 100057 | 9kHz~40GHz | Nov. 21, 2017 | Jun. 15, 2018 | Nov. 20, 2018 | Conducted (TH05-HY) |
| Switch Box & RF Cable | Burgeon | ETF-058 | EC1300484 | N/A | Mar. 01, 2018 | Jun. 15, 2018 | Feb. 28, 2019 | Conducted (TH05-HY) |
| EMI Test Receiver&SA | Agilent | N9038A | MY52260185 | 20Hz~26.5GHz | Apr. 19, 2018 | Jul. 06, 2018~ Jul. 08, 2018 | Apr. 18, 2019 | Radiation (03CH01-SZ) |
| Loop Antenna | R&S | HFH2-Z2 | 100354 | 9kHz~30MHz | May. 14, 2018 | Jul. 06, 2018~ Jul. 08, 2018 | May. 13, 2019 | Radiation (03CH01-SZ) |
| Bilog Antenna | TeseQ | CBL6112D | 35408 | 30MHz~2GHz | Apr. 19, 2018 | Jul. 06, 2018~ Jul. 08, 2018 | Apr. 18, 2019 | Radiation (03CH01-SZ) |
| Double Ridge Horn Antenna | ETS Lindgren | 3117 | 119436 | 1GHz~18GHz | Jul. 28, 2017 | Jul. 06, 2018~ Jul. 08, 2018 | Jul. 27, 2018 | Radiation (03CH01-SZ) |
| SHF-EHF Horn | com-power | AH-840 | 101071 | 18GHz~40GHz | Mar. 30, 2018 | Jul. 06, 2018~ Jul. 08, 2018 | Mar. 29, 2019 | Radiation (03CH01-SZ) |
| LF Amplifier | Burgeon | BPA-530 | 102209 | 0.01~3000Mhz | Apr. 19, 2018 | Jul. 06, 2018~ Jul. 08, 2018 | Apr. 18, 2019 | Radiation (03CH01-SZ) |
| HF Amplifier | MITEQ | AMF-7D-0010 1800-30-10P-R | 1707137 | 1GHz~18GHz | Oct. 19, 2017 | Jul. 06, 2018~ Jul. 08, 2018 | Oct 18, 2018 | Radiation (03CH01-SZ) |
| HF Amplifier | KEYSIGHT | 83017A | MY53270104 | 0.5GHz~26.5GHz | Oct. 19, 2017 | Jul. 06, 2018~ Jul. 08, 2018 | Oct 18, 2018 | Radiation (03CH01-SZ) |
| HF Amplifier | MITEQ | TTA1840-35-HG | 1871923 | 18GHz~40GHz | Jul. 18, 2017 | Jul. 06, 2018~ Jul. 08, 2018 | Jul. 17, 2018 | Radiation (03CH01-SZ) |
| AC Power Source | Chroma | 61601 | 616010001985 | N/A | NCR | Jul. 06, 2018~ Jul. 08, 2018 | NCR | Radiation (03CH01-SZ) |
| Turn Table | EM | EM1000 | N/A | 0~360 degree | NCR | Jul. 06, 2018~ Jul. 08, 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% ($U = 2Uc(y)$) | 4.8dB |
|---|-------|

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

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

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

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

Appendix A. Test Result of Conducted Test Items

| | | | | |
|----------------|-------------|--------------------|-------|----|
| Test Engineer: | Eason Huang | Temperature: | 21~25 | °C |
| Test Date: | 2018/6/15 | Relative Humidity: | 51~54 | % |

TEST RESULTS DATA
Peak Output Power

| 2.4GHz Band | | | | | | | | | | | | | | | | |
|-------------|-----------|-----|-----|-------------|----------------------------|-------|-------|-----------------------------|-------|----------|-------|------------------|-------|------------------------|-------|------------|
| Mod. | Data Rate | NTX | 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 | 17.59 | 17.55 | - | 30.00 | 30.00 | 2.35 | -0.28 | 19.94 | 17.27 | 36.00 | 36.00 | Pass |
| 11b | 1Mbps | 1 | 6 | 2437 | 17.65 | 17.64 | - | 30.00 | 30.00 | 2.35 | -0.28 | 20.00 | 17.36 | 36.00 | 36.00 | Pass |
| 11b | 1Mbps | 1 | 11 | 2462 | 17.71 | 17.62 | - | 30.00 | 30.00 | 2.35 | -0.28 | 20.06 | 17.34 | 36.00 | 36.00 | Pass |
| 11g | 6Mbps | 1 | 1 | 2412 | 20.37 | 20.24 | - | 30.00 | 30.00 | 2.35 | -0.28 | 22.72 | 19.96 | 36.00 | 36.00 | Pass |
| 11g | 6Mbps | 1 | 6 | 2437 | 20.22 | 20.21 | - | 30.00 | 30.00 | 2.35 | -0.28 | 22.57 | 19.93 | 36.00 | 36.00 | Pass |
| 11g | 6Mbps | 1 | 11 | 2462 | 20.20 | 20.18 | - | 30.00 | 30.00 | 2.35 | -0.28 | 22.55 | 19.90 | 36.00 | 36.00 | Pass |
| HT20 | MCS0 | 1 | 1 | 2412 | 20.45 | 20.34 | - | 30.00 | 30.00 | 2.35 | -0.28 | 22.80 | 20.06 | 36.00 | 36.00 | Pass |
| HT20 | MCS0 | 1 | 6 | 2437 | 20.43 | 20.31 | - | 30.00 | 30.00 | 2.35 | -0.28 | 22.78 | 20.03 | 36.00 | 36.00 | Pass |
| HT20 | MCS0 | 1 | 11 | 2462 | 20.34 | 20.36 | - | 30.00 | 30.00 | 2.35 | -0.28 | 22.69 | 20.08 | 36.00 | 36.00 | Pass |
| HT40 | MCS0 | 1 | 3 | 2422 | 19.28 | 19.26 | - | 30.00 | 30.00 | 2.35 | -0.28 | 21.63 | 18.98 | 36.00 | 36.00 | Pass |
| HT40 | MCS0 | 1 | 6 | 2437 | 19.32 | 19.22 | - | 30.00 | 30.00 | 2.35 | -0.28 | 21.67 | 18.94 | 36.00 | 36.00 | Pass |
| HT40 | MCS0 | 1 | 9 | 2452 | 19.34 | 19.32 | - | 30.00 | 30.00 | 2.35 | -0.28 | 21.69 | 19.04 | 36.00 | 36.00 | Pass |
| VHT20 | | 1 | 1 | 2412 | - | - | - | 30.00 | 30.00 | 2.35 | -0.28 | - | - | - | - | Pass |
| VHT20 | | 1 | 6 | 2437 | - | - | - | 30.00 | 30.00 | 2.35 | -0.28 | - | - | - | - | Pass |
| VHT20 | | 1 | 11 | 2462 | - | - | - | 30.00 | 30.00 | 2.35 | -0.28 | - | - | - | - | Pass |
| VHT40 | | 1 | 3 | 2422 | - | - | - | 30.00 | 30.00 | 2.35 | -0.28 | - | - | - | - | Pass |
| VHT40 | | 1 | 6 | 2437 | - | - | - | 30.00 | 30.00 | 2.35 | -0.28 | - | - | - | - | Pass |
| VHT40 | | 1 | 9 | 2452 | - | - | - | 30.00 | 30.00 | 2.35 | -0.28 | - | - | - | - | Pass |
| 11b | 1Mbps | 2 | 1 | 2412 | - | - | - | 30.00 | | 2.35 | | - | | - | | Pass |
| 11b | 1Mbps | 2 | 6 | 2437 | - | - | - | 30.00 | | 2.35 | | - | | - | | Pass |
| 11b | 1Mbps | 2 | 11 | 2462 | - | - | - | 30.00 | | 2.35 | | - | | - | | Pass |
| 11g | 6Mbps | 2 | 1 | 2412 | - | - | - | 30.00 | | 2.35 | | - | | - | | Pass |
| 11g | 6Mbps | 2 | 6 | 2437 | - | - | - | 30.00 | | 2.35 | | - | | - | | Pass |
| 11g | 6Mbps | 2 | 11 | 2462 | - | - | - | 30.00 | | 2.35 | | - | | - | | Pass |
| HT20 | MCS0 | 2 | 1 | 2412 | 17.23 | 17.21 | 20.23 | 30.00 | | 2.35 | | 22.58 | | 36.00 | | Pass |
| HT20 | MCS0 | 2 | 6 | 2437 | 17.34 | 17.12 | 20.24 | 30.00 | | 2.35 | | 22.59 | | 36.00 | | Pass |
| HT20 | MCS0 | 2 | 11 | 2462 | 17.25 | 17.18 | 20.23 | 30.00 | | 2.35 | | 22.58 | | 36.00 | | Pass |
| HT40 | MCS0 | 2 | 3 | 2422 | 15.50 | 15.49 | 18.51 | 30.00 | | 2.35 | | 20.86 | | 36.00 | | Pass |
| HT40 | MCS0 | 2 | 6 | 2437 | 15.53 | 15.50 | 18.53 | 30.00 | | 2.35 | | 20.88 | | 36.00 | | Pass |
| HT40 | MCS0 | 2 | 9 | 2452 | 15.54 | 15.55 | 18.56 | 30.00 | | 2.35 | | 20.91 | | 36.00 | | Pass |
| VHT20 | MCS0 | 2 | 1 | 2412 | - | - | - | 30.00 | | 2.35 | | - | | - | | Pass |
| VHT20 | MCS0 | 2 | 6 | 2437 | - | - | - | 30.00 | | 2.35 | | - | | - | | Pass |
| VHT20 | MCS0 | 2 | 11 | 2462 | - | - | - | 30.00 | | 2.35 | | - | | - | | Pass |
| VHT40 | MCS0 | 2 | 3 | 2422 | - | - | - | 30.00 | | 2.35 | | - | | - | | Pass |
| VHT40 | MCS0 | 2 | 6 | 2437 | - | - | - | 30.00 | | 2.35 | | - | | - | | Pass |
| VHT40 | MCS0 | 2 | 9 | 2452 | - | - | - | 30.00 | | 2.35 | | - | | - | | Pass |

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

TEST RESULTS DATA
Average Output Power

| 2.4GHz Band | | | | | | | | | | |
|-------------|-----------|-----------------|-----|-------------|------------------|-------|-------------------------------|-------|-------|-------|
| Mod. | Data Rate | N _{TX} | CH. | Freq. (MHz) | Duty Factor (dB) | | Average Conducted Power (dBm) | | SUM | |
| | | | | | Ant 1 | Ant 2 | Ant 1 | Ant 2 | | |
| 11b | 1Mbps | 1 | 1 | 2412 | 0.05 | 0.05 | 14.90 | 14.86 | | |
| 11b | 1Mbps | 1 | 6 | 2437 | 0.05 | 0.05 | 14.91 | 14.90 | | |
| 11b | 1Mbps | 1 | 11 | 2462 | 0.05 | 0.05 | 14.92 | 14.85 | | |
| 11g | 6Mbps | 1 | 1 | 2412 | 0.06 | 0.06 | 14.99 | 14.89 | | |
| 11g | 6Mbps | 1 | 6 | 2437 | 0.06 | 0.06 | 14.95 | 14.93 | | |
| 11g | 6Mbps | 1 | 11 | 2462 | 0.06 | 0.06 | 14.93 | 14.91 | | |
| HT20 | MCS0 | 1 | 1 | 2412 | 0.06 | 0.07 | 14.92 | 14.89 | | |
| HT20 | MCS0 | 1 | 6 | 2437 | 0.06 | 0.07 | 14.94 | 14.87 | | |
| HT20 | MCS0 | 1 | 11 | 2462 | 0.06 | 0.07 | 14.90 | 14.89 | | |
| HT40 | MCS0 | 1 | 3 | 2422 | 0.12 | 0.14 | 14.88 | 14.87 | | |
| HT40 | MCS0 | 1 | 6 | 2437 | 0.12 | 0.14 | 14.89 | 14.82 | | |
| HT40 | MCS0 | 1 | 9 | 2452 | 0.12 | 0.14 | 14.92 | 14.91 | | |
| HT20 | MCS0 | 2 | 1 | 2412 | 0.08 | 0.08 | 11.91 | 11.88 | | 14.91 |
| HT20 | MCS0 | 2 | 6 | 2437 | 0.08 | 0.08 | 12.02 | 11.79 | | 14.92 |
| HT20 | MCS0 | 2 | 11 | 2462 | 0.08 | 0.08 | 11.90 | 11.85 | 14.89 | |
| HT40 | MCS0 | 2 | 3 | 2422 | 0.16 | 0.16 | 11.84 | 11.83 | 14.85 | |
| HT40 | MCS0 | 2 | 6 | 2437 | 0.16 | 0.16 | 11.86 | 11.84 | 14.86 | |
| HT40 | MCS0 | 2 | 9 | 2452 | 0.16 | 0.16 | 11.83 | 11.94 | 14.90 | |

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



Appendix B. Radiated Spurious Emission

2.4GHz 2400~2483.5MHz

WIFI 802.11b (Band Edge @ 3m)

| 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 06 2437MHz | | 2386.72 | 53.27 | -20.73 | 74 | 52.02 | 27.23 | 6.81 | 32.79 | 133 | 136 | P | H |
| | | 2387 | 43.92 | -10.08 | 54 | 42.67 | 27.23 | 6.81 | 32.79 | 133 | 136 | A | H |
| | * | 2437 | 103.71 | - | - | 102.21 | 27.37 | 6.86 | 32.73 | 133 | 136 | P | H |
| | * | 2437 | 101.88 | - | - | 100.38 | 27.37 | 6.86 | 32.73 | 133 | 136 | A | H |
| | | 2496.08 | 53.2 | -20.8 | 74 | 51.46 | 27.5 | 6.91 | 32.67 | 133 | 136 | P | H |
| | | 2485.79 | 45.31 | -8.69 | 54 | 43.63 | 27.46 | 6.91 | 32.69 | 133 | 136 | A | H |
| | | 2380.7 | 51.85 | -22.15 | 74 | 50.74 | 27.19 | 6.73 | 32.81 | 134 | 11 | P | V |
| | | 2387.14 | 41.47 | -12.53 | 54 | 40.22 | 27.23 | 6.81 | 32.79 | 134 | 11 | A | V |
| | * | 2437 | 99.85 | - | - | 98.35 | 27.37 | 6.86 | 32.73 | 134 | 11 | P | V |
| | * | 2437 | 97.97 | - | - | 96.47 | 27.37 | 6.86 | 32.73 | 134 | 11 | A | V |
| | | 2490.34 | 53.25 | -20.75 | 74 | 51.51 | 27.5 | 6.91 | 32.67 | 134 | 11 | P | V |
| | | 2485.86 | 42.92 | -11.08 | 54 | 41.24 | 27.46 | 6.91 | 32.69 | 134 | 11 | A | V |



2.4GHz 2400~2483.5MHz
WIFI 802.11b (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) |
|-----------------------------|---|-------------------|------------------|-------------------|-----------------------|---------------------|-------------------------|-------------------|----------------------|----------------|-------------------|-----------------|------------|
| 802.11b CH 06 2437MHz | | 4874 | 41.65 | -32.35 | 74 | 57.05 | 31.78 | 10.92 | 58.1 | 165 | 106 | P | H |
| | | 7311 | 48.77 | -25.23 | 74 | 57.74 | 35.66 | 13.29 | 57.92 | 174 | 100 | P | H |
| | | 4874 | 40.99 | -33.01 | 74 | 56.39 | 31.78 | 10.92 | 58.1 | 165 | 106 | P | V |
| | | 7311 | 48.17 | -25.83 | 74 | 57.14 | 35.66 | 13.29 | 57.92 | 174 | 100 | P | V |
| Remark | 1. No other spurious found. 2. All results are PASS against Peak and Average limit line. | | | | | | | | | | | | |



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

Table with 14 columns: 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). Rows include test data for 802.11g CH 11 at 2462MHz and 2483.52MHz.



2.4GHz 2400~2483.5MHz
WIFI 802.11g (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) |
|-----------------------------|---|-------------------|------------------|-------------------|-----------------------|---------------------|-------------------------|-------------------|----------------------|----------------|-------------------|-----------------|------------|
| 802.11g CH 11 2462MHz | | 4924 | 41.78 | -32.22 | 74 | 56.98 | 31.83 | 10.99 | 58.02 | 150 | 285 | P | H |
| | | 7386 | 48.32 | -25.68 | 74 | 57.04 | 35.81 | 13.12 | 57.65 | 155 | 274 | P | H |
| | | 4924 | 42.54 | -31.46 | 74 | 57.74 | 31.83 | 10.99 | 58.02 | 150 | 285 | P | V |
| | | 7386 | 50.51 | -23.49 | 74 | 59.23 | 35.81 | 13.12 | 57.65 | 155 | 274 | P | V |
| Remark | 1. No other spurious found. 2. All results are PASS against Peak and Average limit line. | | | | | | | | | | | | |



2.4GHz 2400~2483.5MHz
WIFI 802.11n HT20 (Band Edge @ 3m)

Table with 14 columns: 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). Rows include data for 802.11n HT20 CH 01 2412MHz across various frequencies and antenna positions.



2.4GHz 2400~2483.5MHz
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 01 2412MHz | | 4824 | 41.65 | -32.35 | 74 | 57.22 | 31.73 | 10.89 | 58.19 | 185 | 255 | P | H |
| | | 4824 | 42.1 | -31.9 | 74 | 57.67 | 31.73 | 10.89 | 58.19 | 185 | 255 | P | V |
| Remark | 1. No other spurious found. 2. All results are PASS against Peak and Average limit line. | | | | | | | | | | | | |



2.4GHz 2400~2483.5MHz

Emission below 1GHz

2.4GHz WIFI 802.11n HT20 (LF)

| 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+2 | | (MHz) | (dBμV/m) | (dB) | (dBμV/m) | (dBμV) | (dB/m) | (dB) | (dB) | (cm) | (deg) | (P/A) | (H/V) |
| 2.4GHz 802.11n HT20 LF | | 30 | 24.61 | -15.39 | 40 | 31.68 | 24.3 | 0.23 | 31.6 | 100 | 36 | P | H |
| | | 140.58 | 22.18 | -21.32 | 43.5 | 35.04 | 17.33 | 1.23 | 31.42 | - | - | P | H |
| | | 257.95 | 26.18 | -19.82 | 46 | 35.55 | 19.76 | 1.89 | 31.02 | - | - | P | H |
| | | 354.95 | 26.93 | -19.07 | 46 | 35.21 | 20.58 | 2.24 | 31.1 | - | - | P | H |
| | | 581.93 | 29.72 | -16.28 | 46 | 33.49 | 24.48 | 2.95 | 31.2 | - | - | P | H |
| | | 610.06 | 29.9 | -16.1 | 46 | 33.32 | 24.74 | 3.04 | 31.2 | - | - | P | H |
| | | 33.88 | 28.19 | -11.81 | 40 | 37.55 | 21.94 | 0.3 | 31.6 | 100 | 45 | P | V |
| | | 106.63 | 22.88 | -20.62 | 43.5 | 36.26 | 17.2 | 0.91 | 31.49 | - | - | P | V |
| | | 241.46 | 18.98 | -27.02 | 46 | 30.46 | 17.74 | 1.82 | 31.04 | - | - | P | V |
| | | 357.86 | 25.07 | -20.93 | 46 | 33.26 | 20.66 | 2.25 | 31.1 | - | - | P | V |
| | | 570.29 | 28.87 | -17.13 | 46 | 32.82 | 24.34 | 2.91 | 31.2 | - | - | P | V |
| | 741.98 | 32.07 | -13.93 | 46 | 34.37 | 25.56 | 3.43 | 31.29 | - | - | P | V | |
| Remark | 1. No other spurious found. 2. All results are PASS against limit line. | | | | | | | | | | | | |



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 | Peak or Average |
| H/V | Horizontal or Vertical |



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 | | 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 |

- Level(dBμV/m) =
Antenna Factor(dB/m) + Cable Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)
- Over Limit(dB) = Level(dBμV/m) – Limit Line(dBμV/m)

For Peak Limit @ 2390MHz:

- 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)
- Over Limit(dB)
= Level(dBμV/m) – Limit Line(dBμV/m)
= 55.45(dBμV/m) – 74(dBμV/m)
= -18.55(dB)

For Average Limit @ 2390MHz:

- 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)
- 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

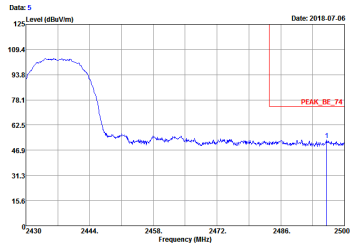
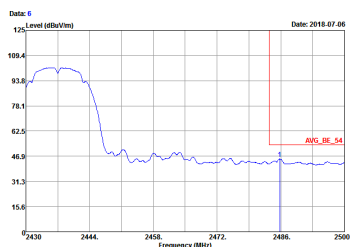
| | |
|-----------|------------------------------|
| -L | Low channel location |
| -R | High channel location |



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

| WIFI | 2.4GHz 2400~2483.5MHz Band Edge @ 3m | |
|------|--|---|
| ANT | 802.11b CH06 2437MHz - L | |
| 1 | Horizontal | Fundamental |
| Peak | <p>Date: 1 Date: 2018-07-06</p> <p>Site : 83C8B1-S2 Condition : PEAK_80_74 3m HF_ANT_91280_1355_03 HORIZONTAL RBU:1000.0000KHz VBW:1000.0000KHz Project : 862789 Mode : Mode 5 SN : 83X080026 Plane : Y With Accessory IM Power setting 14.625 ANT 1</p> | <p>Date: 3 Date: 2018-07-06</p> <p>Site : 83C8B1-S2 Condition : PEAK_74 3m HF_ANT_91280_1355_03 HORIZONTAL RBU:1000.0000KHz VBW:1000.0000KHz Project : 862789 Mode : Mode 5 SN : 83X080026 Plane : Y With Accessory IM Power setting 14.625 ANT 1</p> |
| Avg. | <p>Date: 2 Date: 2018-07-06</p> <p>Site : 83C8B1-S2 Condition : AVG_80_54 3m HF_ANT_91280_1355_03 HORIZONTAL RBU:1000.0000KHz VBW:0.0100KHz Project : 862789 Mode : Mode 5 SN : 83X080026 Plane : Y With Accessory IM Power setting 14.625 ANT 1</p> | <p>Date: 4 Date: 2018-07-06</p> <p>Site : 83C8B1-S2 Condition : AVG_54 3m HF_ANT_91280_1355_03 HORIZONTAL RBU:1000.0000KHz VBW:0.0100KHz Project : 862789 Mode : Mode 5 SN : 83X080026 Plane : Y With Accessory IM Power setting 14.625 ANT 1</p> |

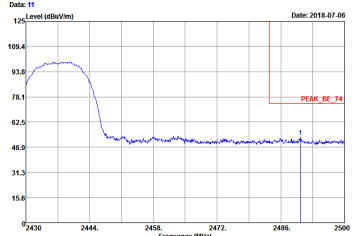
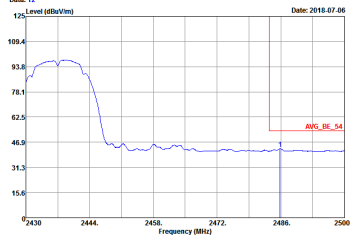


| WIFI | 2.4GHz 2400~2483.5MHz Band Edge @ 3m | |
|--------------------|---|-------------|
| ANT | 802.11b CH06 2437MHz - R | |
| 1 | Horizontal | Fundamental |
| <p>Peak</p> |  <p> Date: 5 Date: 2018-07-06 120 Level (dBuV/m) 105.4 93.8 78.1 62.5 46.9 31.3 15.6 2430 2444 2458 2472 2486 2500 Frequency (MHz) Site : 03CM1-52 Condition : PEAK_BE_74 3m HF_ANT_91280_1355_03 HORIZONTAL Project : R0411000_000000_V001-0000_000000 Mode : 062700 Plane : Mode 2 SN : 07X0R0026 Y : With Accessory Plane : 10 Power setting 14.625 ANT 1 </p> | <p>-</p> |
| <p>Avg.</p> |  <p> Date: 6 Date: 2018-07-06 120 Level (dBuV/m) 105.4 93.8 78.1 62.5 46.9 31.3 15.6 2430 2444 2458 2472 2486 2500 Frequency (MHz) Site : 03CM1-52 Condition : AVG_BE_54 3m HF_ANT_91280_1355_03 HORIZONTAL Project : R0411000_000000_V001-0000_000000 Mode : 062700 Plane : Mode 5 SN : 07X0R0026 Y : With Accessory Plane : 10 Power setting 14.625 ANT 1 </p> | <p>-</p> |



| WIFI | 2.4GHz 2400~2483.5MHz Band Edge @ 3m | |
|------|--|--|
| ANT | 802.11b CH06 2437MHz - L | |
| 1 | Vertical | Fundamental |
| Peak | <p>Date: 7 Level (dBuV/m) Date: 2018-07-06</p> <p>Site : 83C081-S2 Condition : PEAK_24 3m HF_ANT_91280_1355_83 VERTICAL RBU:1800.0000Hz VBW:0.01000Hz Project : 862789 Mode : Mode 5 SN : 87X08R026 Plane : Y With Accessory IM Power setting 14.625 ANT 1</p> | <p>Date: 9 Level (dBuV/m) Date: 2018-07-06</p> <p>Site : 83C081-S2 Condition : PEAK_24 3m HF_ANT_91280_1355_83 VERTICAL RBU:1800.0000Hz VBW:0.01000Hz Project : 862789 Mode : Mode 5 SN : 87X08R026 Plane : Y With Accessory IM Power setting 14.625 ANT 1</p> |
| Avg. | <p>Date: 8 Level (dBuV/m) Date: 2018-07-06</p> <p>Site : 83C081-S2 Condition : AVG_24 3m HF_ANT_91280_1355_83 VERTICAL RBU:1800.0000Hz VBW:0.01000Hz Project : 862789 Mode : Mode 5 SN : 87X08R026 Plane : Y With Accessory IM Power setting 14.625 ANT 1</p> | <p>Date: 10 Level (dBuV/m) Date: 2018-07-06</p> <p>Site : 83C081-S2 Condition : AVG_24 3m HF_ANT_91280_1355_83 VERTICAL RBU:1800.0000Hz VBW:0.01000Hz Project : 862789 Mode : Mode 5 SN : 87X08R026 Plane : Y With Accessory IM Power setting 14.625 ANT 1</p> |



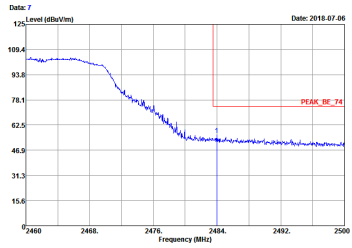
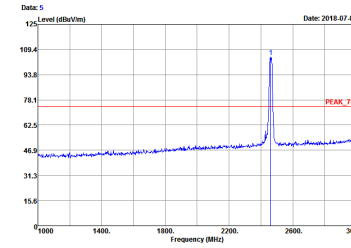
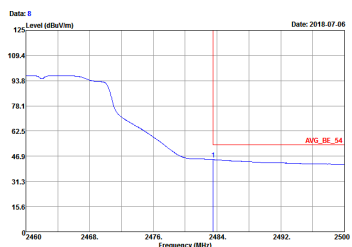
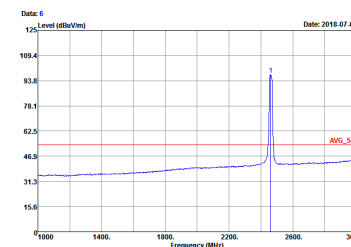
| WIFI | 2.4GHz 2400~2483.5MHz Band Edge @ 3m | |
|------|---|-------------|
| ANT | 802.11b CH06 2437MHz - R | |
| 1 | Vertical | Fundamental |
| Peak |  <p>Date: 11 Date: 2018-07-06</p> <p>120 Level (dBm/Vm)</p> <p>93.8 78.1 62.5 46.9 31.3 15.6</p> <p>2430 2444 2458 2472 2486 2500</p> <p>Frequency (MHz)</p> <p>PEAK_BE_74</p> <p>Site : 03C081-S2 Condition : PEAK_BE_74 3m HF_ANT_01200_1355_03 VERTICAL R00:1000.000000Hz VBW:0.000000Hz Project : 062709 Mode : Mode 2 SN : 07X0R0026 Plane : Y With Accessory : 10 Power setting 14.625 : ANT 1</p> | - |
| Avg. |  <p>Date: 12 Date: 2018-07-06</p> <p>120 Level (dBm/Vm)</p> <p>93.8 78.1 62.5 46.9 31.3 15.6</p> <p>2430 2444 2458 2472 2486 2500</p> <p>Frequency (MHz)</p> <p>Avg_BE_54</p> <p>Site : 03C081-S2 Condition : Avg_BE_54 3m HF_ANT_01200_1355_03 VERTICAL R00:1000.000000Hz VBW:0.010000Hz Project : 062709 Mode : Mode 5 SN : 07X0R0026 Plane : Y With Accessory : 10 Power setting 14.625 : ANT 1</p> | - |



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

| IFI | 2.4GHz 2400~2483.5MHz Band Edge @ 3m | |
|------|---|--|
| ANT | 802.11g CH11 2462MHz | |
| 2 | Horizontal | Fundamental |
| Peak | <p>Site : 83CMB1-S2 Condition : PEAK_BE_74 3m HF_ANT_91280_1355_03 HORIZONTAL RBU:1000.000kHz VBW:3000.000kHz Project : 862789 Mode : Mode 6 SM : 83X08026 Plane : Y With Accessory OR Power setting 15 ANT : 2</p> | <p>Site : 83CMB1-S2 Condition : PEAK_74 3m HF_ANT_91280_1355_03 HORIZONTAL RBU:1000.000kHz VBW:3000.000kHz Project : 862789 Mode : Mode 6 SM : 83X08026 Plane : Y With Accessory OR Power setting 15 ANT : 2</p> |
| Avg. | <p>Site : 83CMB1-S2 Condition : AVG_BE_54 3m HF_ANT_91280_1355_03 HORIZONTAL RBU:1000.000kHz VBW:0.010kHz Project : 862789 Mode : Mode 6 SM : 83X08026 Plane : Y With Accessory OR Power setting 15 ANT : 2</p> | <p>Site : 83CMB1-S2 Condition : AVG_54 3m HF_ANT_91280_1355_03 HORIZONTAL RBU:1000.000kHz VBW:0.010kHz Project : 862789 Mode : Mode 6 SM : 83X08026 Plane : Y With Accessory OR Power setting 15 ANT : 2</p> |



| WIFI | 2.4GHz 2400~2483.5MHz Band Edge @ 3m | |
|------|--|--|
| ANT | 802.11g CH11 2462MHz | |
| 2 | Vertical | Fundamental |
| Peak |  <p>Site : 83C8B1-S2 Condition : PEAK_BE_74 3m HF_ANT_91280_1355_03 VERTICAL R80:1800.0000Hz VBW:0.0100Hz Project : 862789 Mode : Mode 6 SN : 87X08R026 Plane : Y With Accessory OR Power setting 15 ANT 2</p> |  <p>Site : 83C8B1-S2 Condition : PEAK_74 3m HF_ANT_91280_1355_03 VERTICAL R80:1800.0000Hz VBW:0.0100Hz Project : 862789 Mode : Mode 6 SN : 87X08R026 Plane : Y With Accessory OR Power setting 15 ANT 2</p> |
| Avg. |  <p>Site : 83C8B1-S2 Condition : AVG_BE_54 3m HF_ANT_91280_1355_03 VERTICAL R80:1800.0000Hz VBW:0.0100Hz Project : 862789 Mode : Mode 6 SN : 87X08R026 Plane : Y With Accessory OR Power setting 15 ANT 2</p> |  <p>Site : 83C8B1-S2 Condition : AVG_54 3m HF_ANT_91280_1355_03 VERTICAL R80:1800.0000Hz VBW:0.0100Hz Project : 862789 Mode : Mode 6 SN : 87X08R026 Plane : Y With Accessory OR Power setting 15 ANT 2</p> |



2.4GHz 2400~2483.5MHz

WIFI 802.11n HT20 (Band Edge @ 3m)

| WIFI | 2.4GHz 2400~2483.5MHz Band Edge @ 3m | |
|------|---|---|
| ANT | 802.11n HT20 CH01 2412MHz | |
| 1+2 | Horizontal | Fundamental |
| Peak | <p>Date: 1 Level (dBuV/m) Date: 2018-07-07</p> <p>Site : 83CH81-S2 Condition : PEAK_74 3m HF_ANT_91200_1355_03 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz Project : 862789 Mode : Mode 7 SN : 83X000026 Plane : Y_Mish_Accessory PCSR Power setting 11.25/11.25 ANT 1+2</p> | <p>Date: 3 Level (dBuV/m) Date: 2018-07-07</p> <p>Site : 83CH81-S2 Condition : PEAK_74 3m HF_ANT_91200_1355_03 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz Project : 862789 Mode : Mode 7 SN : 83X000026 Plane : Y_Mish_Accessory PCSR Power setting 11.25/11.25 ANT 1+2</p> |
| Avg. | <p>Date: 2 Level (dBuV/m) Date: 2018-07-08</p> <p>Site : 83CH81-S2 Condition : AVG_54 3m HF_ANT_91200_1355_03 HORIZONTAL RBW:1000.000KHz VBW:0.010KHz Project : 862789 Mode : Mode 7 SN : 83X000026 Plane : Y_Mish_Accessory PCSR Power setting 11.25/11.25 ANT 1+2</p> | <p>Date: 4 Level (dBuV/m) Date: 2018-07-07</p> <p>Site : 83CH81-S2 Condition : AVG_54 3m HF_ANT_91200_1355_03 HORIZONTAL RBW:1000.000KHz VBW:0.010KHz Project : 862789 Mode : Mode 7 SN : 83X000026 Plane : Y_Mish_Accessory PCSR Power setting 11.25/11.25 ANT 1+2</p> |



| WIFI | 2.4GHz 2400~2483.5MHz Band Edge @ 3m | |
|------|---|--|
| ANT | 802.11n HT20 CH01 2412MHz | |
| 1+2 | Vertical | Fundamental |
| Peak | <p>Date: 5 Date: 2018-07-07</p> <p>Site : 83C081-S2 Condition : PEAK_BE_74 3m HF_ANT_91280_1355_83 VERTICAL RBU:1800.0000Hz VBW:3000.0000Hz Project : 862789 Mode : Mode 7 SN : 87X080826 Plane : V With Accessory MCS9 Power setting 11.25/11.25 ANT 1+2</p> | <p>Date: 7 Date: 2018-07-07</p> <p>Site : 83C081-S2 Condition : PEAK_74 3m HF_ANT_91280_1355_83 VERTICAL RBU:1800.0000Hz VBW:3000.0000Hz Project : 862789 Mode : Mode 7 SN : 87X080826 Plane : V With Accessory MCS9 Power setting 11.25/11.25 ANT 1+2</p> |
| Avg. | <p>Date: 6 Date: 2018-07-08</p> <p>Site : 83C081-S2 Condition : AVG_BE_54 3m HF_ANT_91280_1355_83 VERTICAL RBU:1800.0000Hz VBW:0.01800Hz Project : 862789 Mode : Mode 7 SN : 87X080826 Plane : V With Accessory MCS9 Power setting 11.25/11.25 ANT 1+2</p> | <p>Date: 8 Date: 2018-07-07</p> <p>Site : 83C081-S2 Condition : AVG_54 3m HF_ANT_91280_1355_83 VERTICAL RBU:1800.0000Hz VBW:0.01800Hz Project : 862789 Mode : Mode 7 SN : 87X080826 Plane : V With Accessory MCS9 Power setting 11.25/11.25 ANT 1+2</p> |



.4GHz 2400~2483.5MHz

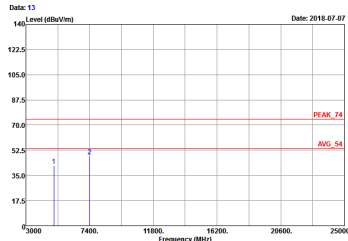
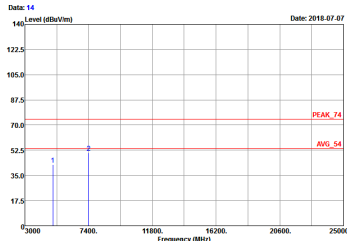
WIFI 802.11b (Harmonic @ 3m)

| WIFI | 2.4GHz 2400~2483.5MHz Harmonic @ 3m | |
|--------------|---|---|
| ANT | 802.11b CH06 2437MHz | |
| 1 | Horizontal | Vertical |
| Peak Avg. | <p>Date: 17 140 Level (dBuV/m) Date: 2018-07-07</p> <p>Site : B5CH01-S2 Condition : PEAK_74 3m HF_ANT_91280_1355_03 HORIZONTAL Project : 862780 Mode : Mode 5 SN : 825600006 Plane : Y With Accessory : 1M Power setting 14.025 : ANT 1</p> | <p>Date: 18 140 Level (dBuV/m) Date: 2018-07-07</p> <p>Site : B5CH01-S2 Condition : PEAK_74 3m HF_ANT_91280_1355_03 VERTICAL Project : 862780 Mode : Mode 5 SN : 825600006 Plane : Y With Accessory : 1M Power setting 14.025 : ANT 1</p> |



2.4GHz 2400~2483.5MHz

WIFI 802.11g (Harmonic @ 3m)

| | | |
|--------------|--|---|
| IFI | 2.4GHz 2400~2483.5MHz Harmonic @ 3m | |
| ANT | 802.11g CH11 2462MHz | |
| 2 | Horizontal | Vertical |
| Peak Avg. |  <p>Site : B5CH01-S2 Condition : PEAK_74 3m HF_ANT_91280_1355_83 HORIZONTAL Project : 862780 Mode : Mode 6 SN : 812628006 Plane : Y With Accessory : Off Power setting 15 : ANT 2</p> |  <p>Site : B5CH01-S2 Condition : PEAK_74 3m HF_ANT_91280_1355_83 VERTICAL Project : 862780 Mode : Mode 6 SN : 812628006 Plane : Y With Accessory : Off Power setting 15 : ANT 2</p> |



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

| WIFI | 2.4GHz 2400~2483.5MHz Harmonic @ 3m | |
|--------------|---|---|
| ANT | 802.11n HT20 CH01 2412MHz | |
| 1+2 | Horizontal | Vertical |
| Peak Avg. | <p>Date: 13 Level (dBuV/m)</p> <p>Date: 2018-07-07</p> <p>Site : 815CH01-S2 Condition : PEAK_74 3m HF_ANT_91280_1355_83 HORIZONTAL Project : 862789 Mode : Mode 7 SN : 8152008006 Plane : Y With Accessory : HCSR Power setting 11.25/11.25 : ANT 1+2</p> | <p>Date: 14 Level (dBuV/m)</p> <p>Date: 2018-07-07</p> <p>Site : 815CH01-S2 Condition : PEAK_74 3m HF_ANT_91280_1355_83 VERTICAL Project : 862789 Mode : Mode 7 SN : 8152008006 Plane : Y With Accessory : HCSR Power setting 11.25/11.25 : ANT 1+2</p> |



Emission below 1GHz
2.4GHz WIFI 802.11g (LF)

Table with 2 columns: Horizontal and Vertical. Each column contains a graph of Level (dBuV/m) vs Frequency (MHz) for a QP / Peak measurement. The graphs show a blue signal line and a red FCC CLASS B limit line. Metadata for both graphs includes Site: BYCHM1-SZ, Condition: FCC CLASS-B 3m LF_ANT(35487)_6, and Date: 2018-07-08.



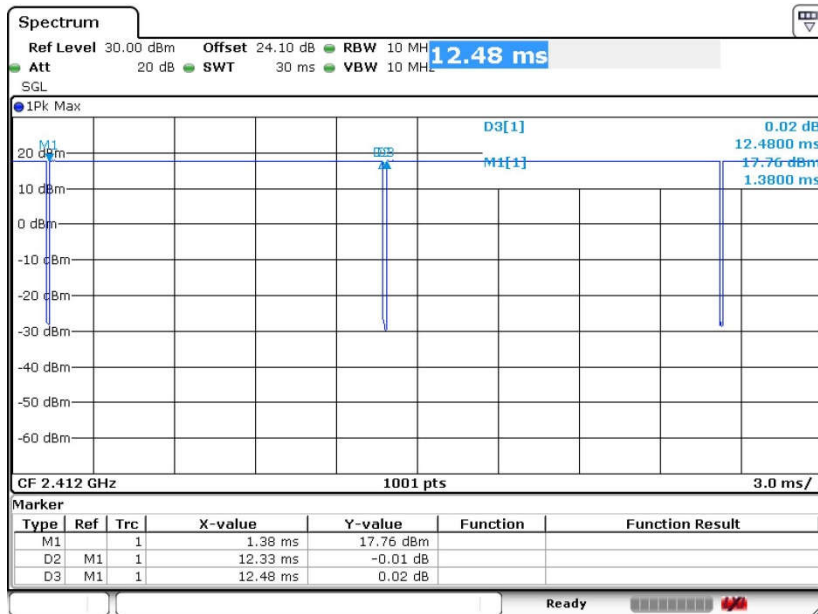
Appendix D. Duty Cycle Plots

| Antenna | Band | Duty Cycle(%) | T(us) | 1/T(kHz) | VBW Setting | Duty Factor(dB) |
|---------|---------------------------|---------------|-------|----------|-------------|-----------------|
| 1 | 802.11b | 98.80 | - | - | 10Hz | 0.05 |
| 2 | 802.11g | 98.56 | - | - | 10Hz | 0.06 |
| 1+2 | 2.4GHz 802.11n HT20 Ant.1 | 98.20 | - | - | 10Hz | 0.08 |
| 1+2 | 2.4GHz 802.11n HT20 Ant.2 | 98.20 | - | - | 10Hz | 0.08 |



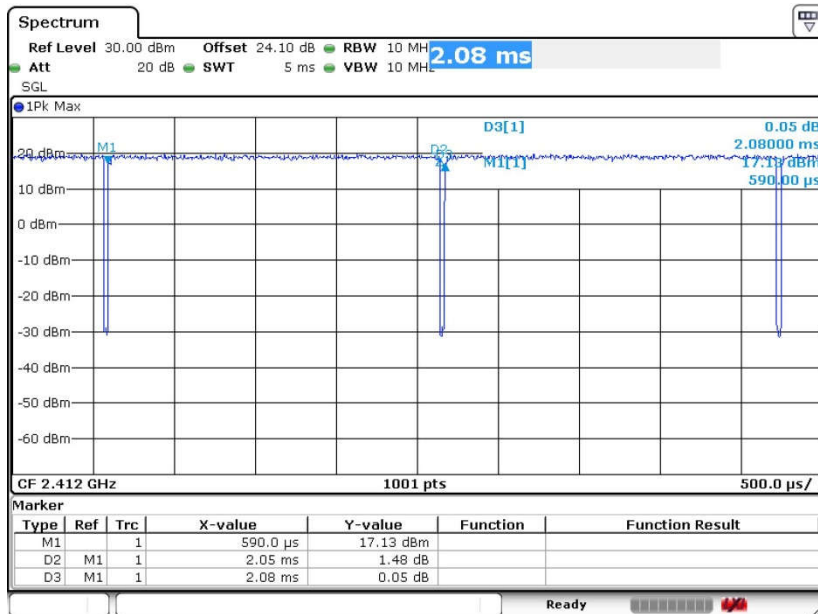
<Ant. 1>

802.11b



<Ant. 2>

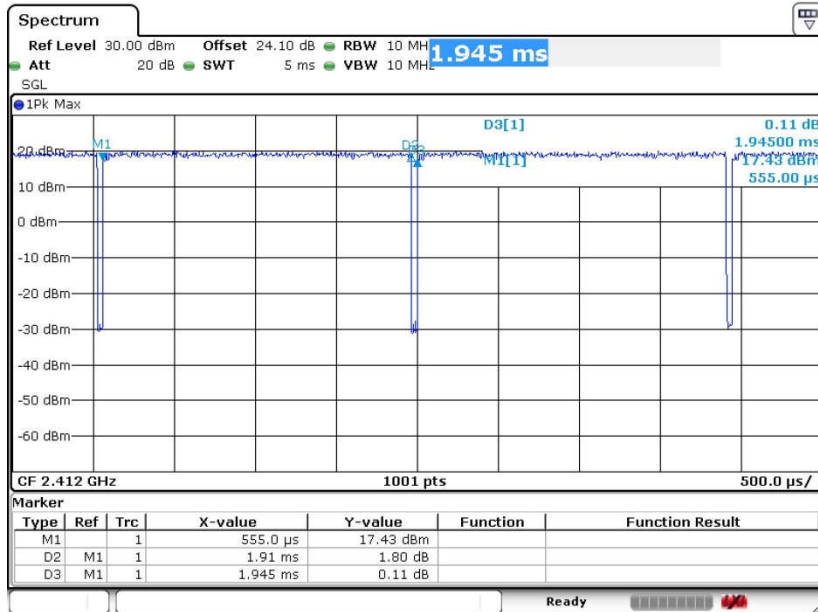
802.11b





MIMO <Ant. 1>

802.11n HT20



MIMO <Ant. 2>

802.11n HT20

