MODEL NAME

FCC RF Test Report

APPLICANT : TCL Communication Ltd.

: 9015B

EQUIPMENT : Tablet PC BRAND NAME : alcatel

MARKETING NAME : Alcatel POP™ 7 LTE

FCC ID : 2ACCJB066

STANDARD : FCC Part 15 Subpart E §15.407

CLASSIFICATION: (NII) Unlicensed National Information Infrastructure

The product was received on Jul. 05, 2016 and testing was completed on Aug. 02, 2016. 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.

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.

Prepared by: Ken Chen / Manager

lon Cher

Approved by: Jones Tsai / Manager

SPORTON INTERNATIONAL (SHENZHEN) INC.

1F & 2F, Building A, Morning Business Center, No. 4003 ShiGu Rd., Xili Town, Nanshan District, Shenzhen, Guangdong, P. R. China

SPORTON INTERNATIONAL (SHENZHEN) INC.

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Testing Laboratory

Report No.: FR670507E

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REVISION HISTORY

| REPORT NO. | VERSION | DESCRIPTION | ISSUED DATE |
|------------|---------|-------------------------|---------------|
| FR670507E | Rev. 01 | Initial issue of report | Aug. 16, 2016 |
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SUMMARY OF TEST RESULT

| Report Section | FCC Rule | IC Rule | Description | Limit | Result | Remark |
|-------------------|-----------------------|----------------------|--|-------------------------------|--------|---|
| 3.1 | 15.403(i) | RSS-247 Section 6 | 6dB, 26dB and 99% Occupied Bandwidth | > 500kHz | Pass | - |
| 3.2 | 15.407(a) | RSS-247 Section 6 | Maximum Conducted Output Power | ≤ 30 dBm | Pass | - |
| 3.3 | 15.407(a) | RSS-247 Section 6 | Power Spectral Density | ≤ 30 dBm/500kHz | Pass | - |
| 3.4 | 15.407(b) | RSS-247 Section 6 | Unwanted Emissions | 15.407(b)(4)(i) &15.209(a) | Pass | Under limit 5.7 dB at 42.610 MHz |
| 3.5 | 15.207 | RSS-Gen 8.8 | AC Conducted Emission | 15.207(a) | Pass | Under limit 16.67 dB at 0.510 MHz |
| 3.6 | 15.407(g) | - | Frequency Stability | Within Operation Band | Pass | - |
| 3.7 | 15.407(c) | RSS-247 6.4(2) | Automatically Discontinue Transmission | Discontinue Transmission | Pass | - |
| 3.8 | 15.203 & 15.407(a) | N/A | Antenna Requirement | N/A | Pass | - |

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1 General Description

1.1 Applicant

TCL Communication Ltd.

5F, C-Tower, No. 232, Liang Jing Road, ZhangJiang High-Tech Park, Pudong Area, Shanghai, 201203, P. R. China

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1.2 Manufacturer

TCL Communication Ltd.

5F, C-Tower, No. 232, Liang Jing Road, ZhangJiang High-Tech Park, Pudong Area, Shanghai, 201203, P. R. China

1.3 Feature of Equipment Under Test

| reature of Equipment officer rest | | | | |
|-----------------------------------|---|--|--|--|
| Product Feature & Specification | | | | |
| Equipment | Tablet PC | | | |
| Brand Name | alcatel | | | |
| Model Name | 9015B | | | |
| Marketing Name | Alcatel POP™ 7 LTE | | | |
| FCC ID | 2ACCJB066 | | | |
| | GPRS/EGPRS/WCDMA/HSPA/DC-HSDPA/ | | | |
| | HSPA+(16QAM uplink is not supported)/LTE/ | | | |
| EUT supports Radios application | WLAN 2.4GHz 802.11b/g/n HT20 | | | |
| | WLAN 5GHz 802.11a/n HT20/HT40 | | | |
| | Bluetooth v3.0 + EDR/Bluetooth v4.1 LE | | | |
| | Conducted: 014732000100067 | | | |
| IMEI Code | Radiation: NA | | | |
| | Conduction: 014732000100075 | | | |
| HW Version | Pixi4-7 4G TMO_MAIN_V03 | | | |
| SW Version | 5RA2 | | | |
| EUT Stage | Production Unit | | | |

Remark: The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

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1.4 Product Specification of Equipment Under Test

| Product Specification subjective to this standard | | | | | |
|---|---|--|--|--|--|
| Tx/Rx Channel Frequency Range | Tx/Rx Channel Frequency Range 5745 MHz ~ 5805 MHz | | | | |
| | 802.11a: 13.19 dBm / 0.0208 W | | | | |
| Maximum Output Power | 802.11n HT20 : 13.26 dBm / 0.0212 W | | | | |
| | 802.11n HT40 : 12.20 dBm / 0.0166 W | | | | |
| | 802.11a : 23.88 MHz | | | | |
| 99% Occupied Bandwidth | 802.11n HT20 : 26.72 MHz | | | | |
| | 802.11n HT40 : 58.64 MHz | | | | |
| Antenna Type / Gain | PIFA Antenna with gain -3.00 dBi | | | | |
| Type of Modulation | 802.11a/n: OFDM (BPSK / QPSK / 16QAM / 64QAM) | | | | |

1.5 Modification of EUT

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

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1.6 Testing Location

| 9 | | | | | |
|---------------------|--|----------|--|--|--|
| Test Site | SPORTON INTERNATIONAL (SHENZHEN) INC. | | | | |
| | 1F & 2F, Building A, Morning Business Center, No. 4003 ShiGu Rd., Xili Town, | | | | |
| Total Olfo Location | Nanshan District, Shenzhen, Guangdong, P. R. China | | | | |
| Test Site Location | TEL: +86-755-8637-9589 | | | | |
| | FAX: +86-755-8637-9595 | | | | |
| Took Cita No | Sportor | Site No. | | | |
| Test Site No. | TH01-SZ | CO01-SZ | | | |

| Test Site | SPORTON INTERNATIONAL (SHENZHEN) INC. | | | |
|--------------------|--|-------------------------|--|--|
| | No. 3 Building, the third floor of south, Shahe River west, Fengzeyuan | | | |
| Test Site Location | warehouse, Nanshan District, Shenzhen, Guangdong, P. R. China | | | |
| | TEL: +86-755- 3320-2398 | | | |
| Took Site No | Sporton Site No. | FCC/IC Registration No. | | |
| Test Site No. | 03CH03-SZ | 565805/4086F | | |

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

1.7 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 v01r02
- ANSI C63.10-2013

Remark:

- 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.

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2 Test Configuration of Equipment Under Test

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: conducted emission (150 kHz to 30 MHz) and radiated 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) were recorded in this report.

2.1 Carrier Frequency and Channel

| carrier respectively and criainies | | | | | | |
|------------------------------------|---------|----------------|---------|----------------|--|--|
| Frequency Band | Channel | Freq. (MHz) | Channel | Freq. (MHz) | | |
| | 149 | 5745 | 159 | 5795 | | |
| 5745-5805 MHz Band 4 | 151 | 5755 | 161 | 5805 | | |
| (U-NII-3) | 153 | 5765 | 165 | 5825 | | |
| (3.411.6) | 157 | 5785 | | | | |

Note: The above Frequency and Channel in boldface were 802.11n HT40.

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2.2 Test Mode

Final test mode of conducted test items and radiated spurious emissions are considering the modulation and worse data rates as below table.

| Modulation | Data Rate |
|--------------|-----------|
| 802.11a | 6 Mbps |
| 802.11n HT20 | MCS0 |
| 802.11n HT40 | MCS0 |

| AC | Mode 1 : GPRS850 Idle + Bluetooth Link + WLAN (5GHz) Link + USB Cable (Charging from Adapter) |
|-----------|---|
| Conducted | + Earphone |
| Emission | + Larphone |
| | |

Remark: For Radiated TCs, the tests were performed with Adapter, Earphone and USB Cable.

| | Ch. # | | Band IV: 5745 ~ 5805 MHz | |
|---|--------|---------|--------------------------|--------------|
| | Cn. # | 802.11a | 802.11n HT20 | 802.11n HT40 |
| L | Low | 149 | 149 | 151 |
| M | Middle | 157 | 157 | - |
| Н | High | 161 | 161 | 159 |

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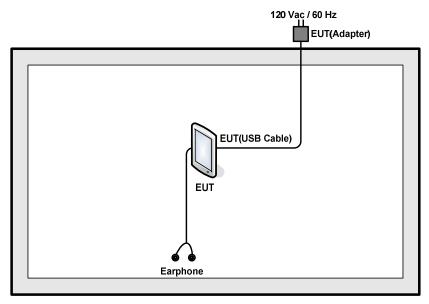
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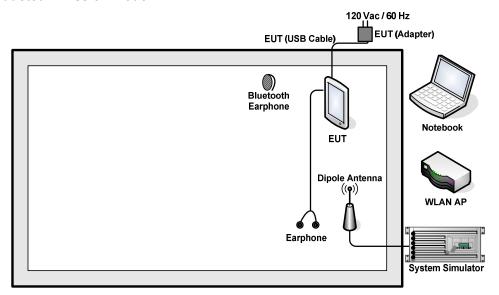
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2.3 Connection Diagram of Test System <WLAN Tx Mode>



<AC Conducted Emission Mode>



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2.4 Support Unit used in test configuration and system

| Item | Equipment | Trade Name | Model Name | FCC ID | Data Cable | Power Cord |
|------|-----------------------|------------|------------|-------------|-----------------|--|
| 1. | Notebook | Lenovo | E540 | FCC DoC | N/A | AC I/P: Unshielded, 1.8 m DC O/P: Shielded, 1.8 m |
| 2. | WLAN AP | D-Link | DIR-820L | KA2IR810LA1 | N/A | Unshielded, 1.8 m |
| 3. | System Simulator | Anritsu | MT8820C | N/A | N/A | Unshielded, 1.8 m |
| 4. | Bluetooth Earphone | Nokia | BH-108 | PYAHS-107W | N/A | N/A |
| 5. | DC Power Supply | GW INSTEK | GPD-2303S | N/A | N/A | Unshielded, 1.8 m |
| 6. | SD Card | SanDisk | 4G class 4 | FCC DoC | N/A | N/A |
| 7. | Earphone | Apple | MC525 ZP/A | N/A | Shielded,1.0m | N/A |
| 8. | iPod Earphone | Apple | MC690 ZP/A | FCC DoC | Shielded, 1.6 m | N/A |

2.5 EUT Operation Test Setup

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

For AC power line conducted emissions, the EUT was set to connect with the Notebook under large package sizes transmission.

2.6 Measurement Results Explanation Example

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuator factor between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

Example:

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

Offset = RF cable loss + attenuator factor.

Following shows an offset computation example with cable loss 6.5 dB and 10dB attenuator.

Offset(dB) = RF cable loss(dB) + attenuator factor(dB). = 6.5 + 10 = 16.5 (dB)

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3 Test Result

3.1 6dB and 26dB and 99% Occupied Bandwidth Measurement

3.1.1 Description of 6dB and 26dB and 99% Occupied Bandwidth

The minimum 6 dB bandwidth shall be at least 500 kHz.

26dB and 99% Occupied bandwidth are reporting only.

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 FCC KDB 789033 D02 General UNII Test Procedures New Rules v01r02.
 Section C) Emission bandwidth for the band 5.725-5.85GHz
- 2. Set RBW = 100kHz.
- Set the VBW ≥ 3 x RBW.
- Detector = Peak.
- 5. Trace mode = max hold
- 6. Measure the maximum width of the emission that is 6 dB down from the peak of the emission.
- 7. Measure and record the results in the test report.

3.1.4 Test Setup



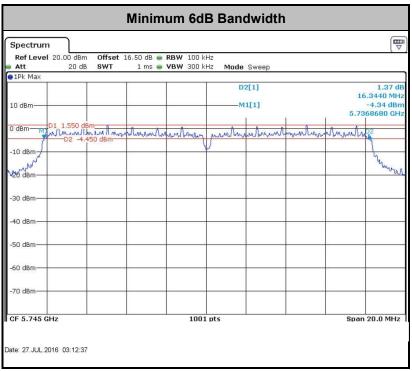
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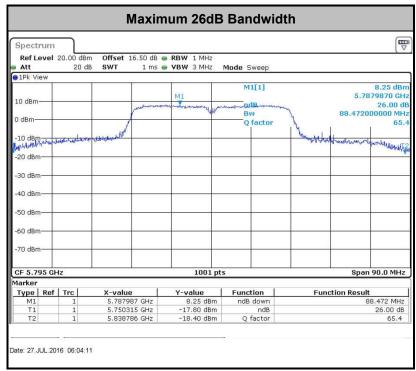
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3.1.5 Test Result of 6dB Bandwidth

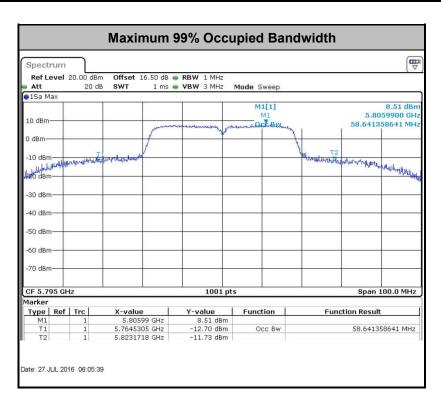
Please refer to Appendix A.





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Note: The occupied channel bandwidth is maintained within the band of operation for all of the modulations.

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3.2 Maximum Conducted Output Power Measurement

3.2.1 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.

3.2.2 Measuring Instruments

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

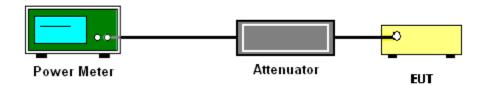
3.2.3 Test Procedures

The testing follows Method PM of FCC KDB 789033 D02 General UNII Test Procedures New Rules v01r02.

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.

3.2.4 Test Setup



3.2.5 Test Result of Maximum Conducted Output Power

Please refer to Appendix A.

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3.3 Power Spectral Density Measurement

3.3.1 Limit of Power Spectral Density

For the band 5.725–5.85 GHz, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band.

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.

3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v01r02. Section F) Maximum power spectral density.

Method SA-2

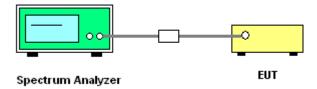
(trace averaging across on and off times of the EUT transmissions, followed by duty cycle correction).

- 1. The testing follows Method SA-2 of FCC KDB 789033 D02 General UNII Test Procedures New Rules v01r02.
 - Measure the duty cycle.
 - Set span to encompass the entire emission bandwidth (EBW) of the signal.
 - Set RBW = 300 kHz.
 - Set VBW ≥ 1 MHz.
 - Number of points in sweep ≥ 2 Span / RBW.
 - Sweep time = auto.
 - Detector = RMS
 - Trace average at least 100 traces in power averaging mode.
 - Add 10 log(500kHz/RBW) to the test result.
 - Add 10 log(1/x), where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times. For example, add 10 log(1/0.25) = 6 dB if the duty cycle is 25 percent.

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- 2. The RF output of EUT was connected to the spectrum analyzer by a low loss cable.
- 3. Each plot has already offset with cable loss, and attenuator loss. Measure the PPSD and record it.

3.3.4 Test Setup



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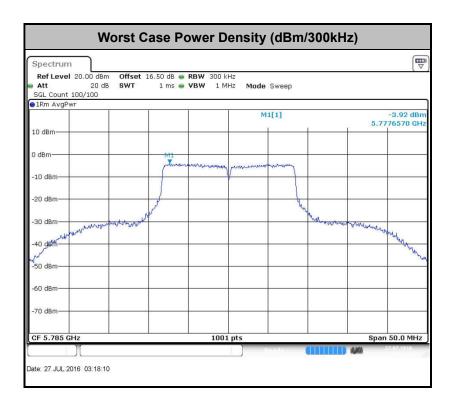
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3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.



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3.4 Unwanted Emissions Measurement

This section as specified in FCC Part 15.407(b) is to measure unwanted emissions through radiated measurement for band edge spurious emissions and out of band emissions measurement. The unwanted emissions shall comply with 15.407(b)(1) to (6), and restricted bands per FCC Part15.205.

3.4.1 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 per FCC Part15.205 shall comply with the general field strength limits set forth in § 15.209 as below table,

| Frequency | Field Strength | Measurement Distance |
|---------------|--------------------|----------------------|
| (MHz) | (microvolts/meter) | (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 |

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

$$E = \frac{1000000\sqrt{30P}}{3}$$
 µV/m, where P is the eirp (Watts)

| EIRP (dBm) | Field Strength at 3m (dBµV/m) |
|------------|-------------------------------|
| -17 | 78.3 |
| - 27 | 68.3 |

(3) KDB 789033 D02 General UNII Test Procedures New Rules v01r02 G)2)c) As specified in 15.407(b), emissions above 1000 MHz that are outside of the restricted bands are subject to a peak emission limit of -27 dBm/MHz (or -17 dBm/MHz as specified in 15.407(b)(4)). However, an out-of-band emission that complies with both the average and peak limits of 15.209 is not required to satisfy the -27 dBm/MHz or -17 dBm/MHz peak emission limit.

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3.4.2 Measuring Instruments

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

3.4.3 Test Procedures

- The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v01r02.
 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.

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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.

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- 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.

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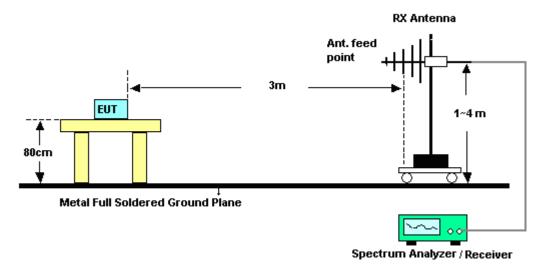
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3.4.4 Test Setup

For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



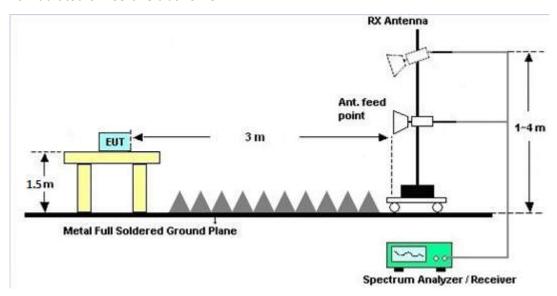
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For radiated emissions above 1GHz



3.4.5 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 per 15.31(o) was not reported.

3.4.6 Test Result of Radiated Band Edges

Please refer to Appendix B.

3.4.7 Duty Cycle

Please refer to Appendix C.

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

Please refer to Appendix B.

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3.5 AC Conducted Emission Measurement

3.5.1 Limit of AC Conducted Emission

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

| Eroquency of emission (MUz) | Conducted limit (dBμV) | | | | |
|-----------------------------|------------------------|-----------|--|--|--|
| Frequency of emission (MHz) | Quasi-peak | Average | | | |
| 0.15-0.5 | 66 to 56* | 56 to 46* | | | |
| 0.5-5 | 56 | 46 | | | |
| 5-30 | 60 | 50 | | | |

^{*}Decreases with the logarithm of the frequency.

3.5.2 Measuring Instruments

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

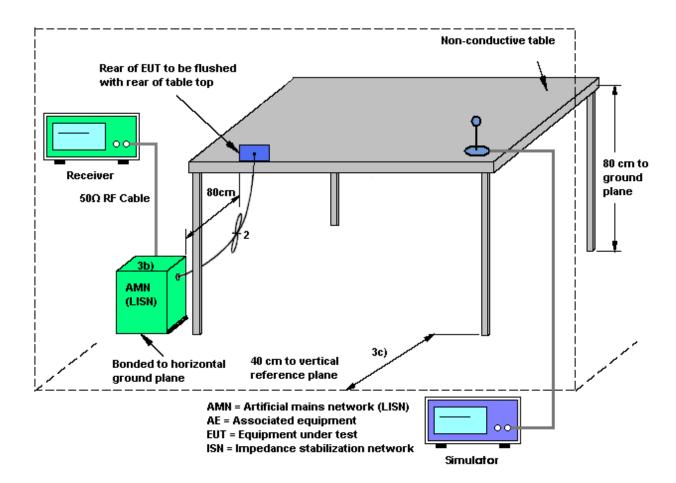
3.5.3 Test Procedures

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

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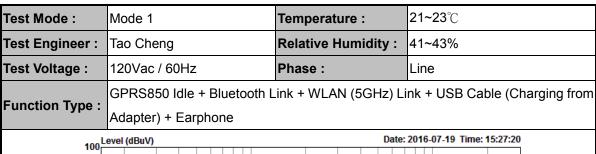
3.5.4 Test Setup

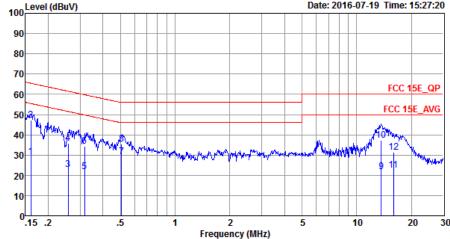


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3.5.5 Test Result of AC Conducted Emission





Site : CO01-SZ

Condition: FCC 15E_QP LISN_20160509 LINE

Mode : Mode 1

IMEI : 014732000100075

| | | | Over | Limit | Read | LISN | Cable | |
|-----|--------|-------|--------|-------|-------|--------|-------|---------|
| | Freq | Level | Limit | Line | Level | Factor | Loss | Remark |
| | MHz | dBuV | dB | dBu∀ | dBu∇ | dB | dB | |
| 1 | 0.16 | 29.21 | -26.22 | 55.43 | 18.50 | 0.13 | 10.58 | Average |
| 2 | 0.16 | 47.21 | -18.22 | 65.43 | 36.50 | 0.13 | 10.58 | QP |
| 3 | 0.26 | 22.96 | -28.55 | 51.51 | 12.40 | 0.11 | 10.45 | Average |
| 4 | 0.26 | 35.96 | -25.55 | 61.51 | 25.40 | 0.11 | 10.45 | QP |
| 5 | 0.32 | 21.80 | -28.00 | 49.80 | 11.30 | 0.11 | 10.39 | Average |
| 6 | 0.32 | 34.30 | -25.50 | 59.80 | 23.80 | 0.11 | 10.39 | QP |
| 7 4 | * 0.51 | 29.33 | -16.67 | 46.00 | 19.00 | 0.11 | 10.22 | Average |
| 8 | 0.51 | 35.43 | -20.57 | 56.00 | 25.10 | 0.11 | 10.22 | QP |
| 9 | 13.62 | 21.78 | -28.22 | 50.00 | 11.10 | 0.29 | 10.39 | Average |
| 10 | 13.62 | 37.18 | -22.82 | 60.00 | 26.50 | 0.29 | 10.39 | QP |
| 11 | 15.97 | 22.67 | -27.33 | 50.00 | 11.90 | 0.31 | 10.46 | Average |
| 12 | 15.97 | 31.37 | -28.63 | 60.00 | 20.60 | 0.31 | 10.46 | QP |

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| Test Mode : | Mode 1 | | | Ten | Temperature : | | | 21~23℃ | | |
|--|---|--|---|---|---|--|--|---|---------------|--|
| Test Engineer : | Tao Che | ng | | Rel | Relative Humidity: 41 | | | I~43% | | |
| Test Voltage : | 120Vac / | 60Hz | | Pha | Phase: Neu | | | ral | | |
| Function Type : | GPRS85 Adapter) | | | oth Link | ink + WLAN (5GHz) Link + USB Ca | | | JSB Cable (| (Charging fro | |
| 100 Level (dBuV) Date: 2016-07-19 Time: 15:31:25 | | | | | | | | | | |
| 90 | | | | | | | | | | |
| 80 | | | | | | | | | | |
| | | | | | | | | | | |
| 70 | | | | | | | | FCC 15E_0 | ND. | |
| 60 | | | | | | | | | | |
| 50 | 2. | - | | | | | | FCC 15E_A\ | <u>/G</u> | |
| 40 | The state was | 84 | | | | h | ti | Monga | | |
| 30 | 1 MIV® | My James A | May regarded | | nn wyfmyd | ~~\ <mark>~~\</mark> | LINE COLUMN | " 11 N | | |
| | W 1 | 4 7 | | A bearing | , , | | | 1 1 1 | (made) | |
| 20 | | | | | | | | | | |
| 10 | | | | | | | | | | |
| 0 | 15 .2 | .5 | Ш. | l | 2 | 5 | 10 | 20 | 30 | |
| • | 13 .2 | .5 | | - | ency (MHz) | _ | 10 | 20 | 30 | |
| Site | | | | | | | | | | |
| | : CO01-S | | | | | | | | | |
| Conditio | : CO01-S on: FCC 15 | | SN_20160 | 509 NEUT | RAL | | | | | |
| Conditio Mode | | E_QP LIS | SN_20160 | 509 NEUT | RAL | | | | | |
| | on: FCC 15 | E_QP LIS | 75 | | | | | | | |
| Mode | n: FCC 15 : Mode 1 : 014732 | E_QP LIS | 75 Over | Limit | Read | LISN | Cable | Remark | | |
| Mode | on: FCC 15 | E_QP LIS | 75 | Limit | Read | LISN Factor | | Remark | | |
| Mode | n: FCC 15 : Mode 1 : 014732 | E_QP LIS | 75 Over | Limit | Read | | | Remark | - | |
| Mode IMEI | m: FCC 15 : Mode 1 : 014732 Freq MHz | Level | 75 Over Limit ——————————————————————————————————— | Limit Line dBuV | Read Level dBuV | Factor dB | Loss | | - | |
| Mode | : Mode 1 : 014732 Freq | DE_QP LIST | 75 Over Limit | Limit Line | Read Level | ## Tactor dB 0.13 | Loss | Average | - | |
| Mode IMEI — | m: FCC 15 : Mode 1 : 014732 Freq MHz 0.16 | Level dBuV 27.31 44.61 | 75 Over Limit ——————————————————————————————————— | Limit Line dBuV | Read Level dBuV | Tactor dB 0.13 0.13 | dB 10.58 10.58 | Average | - | |
| Mode IMEI — 1 2 | m: FCC 15 : Mode 1 : 014732 Freq MHz 0.16 0.16 | Level dBuV 27.31 44.61 19.08 | 75 Over Limit ——————————————————————————————————— | Limit Line dBuV 55.43 65.43 | Read Level dBuV 16.60 33.90 | 0.13 0.13 0.11 | dB 10.58 10.58 | Average QP Average | - | |
| Mode IMEI 1 2 3 | m: FCC 15 : Mode 1 : 014732 Freq MHz 0.16 0.16 0.23 | Level dBuV 27.31 44.61 19.08 34.98 | 75 Over Limit ——————————————————————————————————— | Limit Line dBuV 55.43 65.43 52.44 | Read Level dBuV 16.60 33.90 8.50 24.40 7.10 | 0.13 0.13 0.13 0.11 0.11 | dB 10.58 10.58 10.47 10.47 | Average QP Average | - | |
| Mode IMEI 1 2 3 4 5 6 | m: FCC 15 : Mode 1 : 014732 Freq MHz 0.16 0.16 0.23 0.23 0.30 0.30 | Level dBuV 27.31 44.61 19.08 34.98 17.63 32.13 | 75 Over Limit —28.12 -20.82 -33.36 -27.46 -32.61 -28.11 | Limit Line dBuV 55.43 65.43 52.44 62.44 50.24 60.24 | Read Level dBuV 16.60 33.90 8.50 24.40 7.10 21.60 | 0.13 0.13 0.11 0.11 0.11 0.11 | dB 10.58 10.58 10.47 10.47 10.42 10.42 | Average QP Average QP Average QP | - | |
| Mode IMEI 1 2 3 4 5 6 7 | m: FCC 15 : Mode 1 : 014732 Freq MHz 0.16 0.16 0.23 0.23 0.30 0.30 0.50 | DE_QP LIST 000010000 Level dBuV 27.31 44.61 19.08 34.98 17.63 32.13 24.83 | 75 Over Limit —28.12 -20.82 -33.36 -27.46 -32.61 -28.11 -21.17 | Limit Line dBuV 55.43 65.43 52.44 62.44 50.24 60.24 46.00 | Read Level dBuV 16.60 33.90 8.50 24.40 7.10 21.60 14.50 | 0.13 0.13 0.11 0.11 0.11 0.11 0.11 | dB 10.58 10.58 10.47 10.47 10.42 10.42 | Average QP Average QP Average QP Average | - | |
| Mode IMEI 1 2 3 4 5 6 7 8 * | MHz 0.16 0.23 0.30 0.50 0.50 | DE_QP LIST | 75 Over Limit —28.12 -20.82 -33.36 -27.46 -32.61 -28.11 -21.17 -19.47 | Limit Line dBuV 55.43 65.43 52.44 62.44 50.24 46.00 56.00 | Read Level dBuV 16.60 33.90 8.50 24.40 7.10 21.60 14.50 26.20 | 0.13 0.13 0.11 0.11 0.11 0.11 0.11 0.11 | dB 10.58 10.58 10.47 10.47 10.42 10.42 10.22 | Average QP Average QP Average QP Average QP | - | |
| Mode IMEI 1 2 3 4 5 6 7 8 * | m: FCC 15 : Mode 1 : 014732 Freq MHz 0.16 0.16 0.23 0.23 0.30 0.50 0.50 13.48 | DE_QP LIST | 75 Over Limit —28.12 -20.82 -33.36 -27.46 -32.61 -28.11 -21.17 -19.47 -22.52 | Limit Line dBuV 55.43 65.43 52.44 62.44 50.24 60.24 46.00 56.00 50.00 | Read Level dBuV 16.60 33.90 8.50 24.40 7.10 21.60 14.50 26.20 16.80 | 0.13 0.13 0.11 0.11 0.11 0.11 0.11 0.11 | dB 10.58 10.58 10.47 10.47 10.42 10.42 10.22 10.22 | Average QP Average QP Average QP Average QP Average QP Average | - | |
| Mode IMEI 1 2 3 4 5 6 7 8 * 9 10 | MHz 0.16 0.23 0.30 0.50 0.50 13.48 13.48 | DE_QP LIST | 75 Over Limit -28.12 -20.82 -33.36 -27.46 -32.61 -28.11 -21.17 -19.47 -22.52 -20.22 | Limit Line dBuV 55.43 65.43 52.44 62.44 50.24 60.24 46.00 56.00 50.00 60.00 | Read Level dBuV 16.60 33.90 8.50 24.40 7.10 21.60 14.50 26.20 16.80 29.10 | Factor dB 0.13 0.13 0.11 0.11 0.11 0.11 0.11 0.1 | dB 10.58 10.58 10.47 10.47 10.42 10.42 10.22 10.22 10.39 10.39 | Average QP Average QP Average QP Average QP Average QP Average | _ | |
| Mode IMEI 1 2 3 4 5 6 7 8 * | m: FCC 15 : Mode 1 : 014732 Freq MHz 0.16 0.16 0.23 0.23 0.30 0.50 0.50 13.48 | DE_QP LIST | 75 Over Limit -28.12 -20.82 -33.36 -27.46 -32.61 -28.11 -21.17 -19.47 -22.52 -20.22 | Limit Line dBuV 55.43 65.43 52.44 62.44 50.24 60.24 46.00 56.00 50.00 | Read Level dBuV 16.60 33.90 8.50 24.40 7.10 21.60 14.50 26.20 16.80 29.10 | Factor dB 0.13 0.13 0.11 0.11 0.11 0.11 0.11 0.1 | dB 10.58 10.58 10.47 10.47 10.42 10.42 10.22 10.22 10.39 10.39 | Average QP Average QP Average QP Average QP Average QP | _ | |

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3.6 Frequency Stability Measurement

3.6.1 Limit of Frequency Stability

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

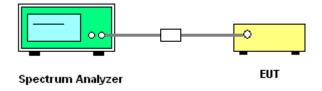
3.6.2 Measuring Instruments

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

3.6.3 Test Procedures

- To ensure emission at the band edge is maintained within the authorized band, those values shall
 be measured by radiation emissions at upper and lower frequency points, and finally
 compensated by frequency deviation as procedures below.
- 2. The EUT was operated at the maximum output power, and connected to the spectrum analyzer, which is set to maximum hold function and peak detector. The peak value of the power envelope was measured and noted. The upper and lower frequency points were respectively measured relatively 10dB lower than the measured peak value.
- 3. The frequency deviation was calculated by adding the upper frequency point and the lower frequency point divided by two. Those detailed values of frequency deviation are provided in table below.

3.6.4 Test Setup



3.6.5 Test Result of Frequency Stability

Please refer to Appendix A.

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3.7 Automatically Discontinue Transmission

3.7.1 Limit of Automatically Discontinue Transmission

The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure. These provisions are not intended to preclude the transmission of control or signaling information or the use of repetitive codes used by certain digital technologies to complete frame or burst intervals. Applicants shall include in their application for equipment authorization to describe how this requirement is met.

3.7.2 Measuring Instruments

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

3.7.3 Test Result of Automatically Discontinue Transmission

While the EUT is not transmitting any information, the EUT can automatically discontinue transmission and become standby mode for power saving. The EUT can detect the controlling signal of ACK message transmitting from remote device and verify whether it shall resend or discontinue transmission.

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3.8 Antenna Requirements

3.8.1 Standard Applicable

According to FCC 47 CFR Section 15.407(a)(1)(2) ,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.

3.8.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

3.8.3 Antenna Gain

The antenna gain is less than 6 dBi. Therefore, it is not necessary to reduce maximum output power limit

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4 List of Measuring Equipment

| Instrument | Manufacturer | Model No. | Serial No. | Characteristics | Calibration Date | Test Date | Due Date | Remark |
|-----------------------------------|---------------------------|----------------------------------|--------------|--------------------|---------------------|---------------------------------|---------------|--------------------------|
| Spectrum Analyzer | R&S | FSV40 | 101078 | 9kHz~40GHz | May 07, 2016 | Jul. 27, 2016 | May 06, 2017 | Conducted (TH01-SZ) |
| Pulse Power Senor | Anritsu | MA2411B | 1207253 | 30MHz~40GHz | Jan. 12, 2016 | Jul. 27, 2016 | Jan. 11, 2017 | Conducted (TH01-SZ) |
| Power Meter | Anritsu | ML2495A | 1218010 | 50MHz Bandwidth | Jan. 12, 2016 | Jul. 27, 2016 | Jan. 11, 2017 | Conducted (TH01-SZ) |
| Thermal Chamber | Ten Billion Hongzhangroup | LP-150U | H2014081803 | -40~+150°C | Jul. 16, 2016 | Jul. 27, 2016 | Jul. 15, 2017 | Conducted (TH01-SZ) |
| EMI Test Receiver&SA | KEYSIGHT | N9038A | MY54450083 | 20Hz~8.4GHz | May 07, 2016 | Jul. 14, 2016~ Aug. 02, 2016 | May 06, 2017 | Radiation (03CH03-SZ) |
| EXA Spectrum Anaiyzer | KEYSIGHT | N9010A | MY55150246 | 10Hz~44GHz; | May 07, 2016 | Jul. 14, 2016~ Aug. 02, 2016 | May 06, 2017 | Radiation (03CH03-SZ) |
| Loop Antenna | R&S | HFH2-Z2 | 100354 | 9kHz~30MHz | May 07, 2016 | Jul. 14, 2016~ Aug. 02, 2016 | May 06, 2017 | Radiation (03CH03-SZ) |
| Bilog Antenna | TeseQ | CBL6112D | 35408 | 30MHz~2GHz | May 21, 2016 | Jul. 14, 2016~ Aug. 02, 2016 | May 20, 2017 | Radiation (03CH03-SZ) |
| Double Ridge Horn Antenna | SCHWARZBECK | BBHA9120 D | 9120D-1355 | 1GHz~18GHz | May 07, 2016 | Jul. 14, 2016~ Aug. 02, 2016 | May 06, 2017 | Radiation (03CH03-SZ) |
| SHF-EHF Horn | com-power | AH-840 | 101071 | 18GHz~40GHz | Aug. 19, 2015 | Jul. 14, 2016~ Aug. 02, 2016 | Aug. 18, 2016 | Radiation (03CH03-SZ) |
| Amplifier | PREAMP LIFIER | BPA-530 | 102210 | 0.01Hz ~3000MHz | Oct. 20, 2015 | Jul. 14, 2016~ Aug. 02, 2016 | Oct. 19, 2016 | Radiation (03CH03-SZ) |
| Amplifier | Agilent Technologies | 83017A | MY39501302 | 500MHz~26.5G Hz | Jan. 12, 2016 | Jul. 14, 2016~ Aug. 02, 2016 | Jan. 11, 2017 | Radiation (03CH03-SZ) |
| HF Amplifier | MITEQ | AMF-7D-0 0101800-3 0-10P-R | 1943528 | 1GHz~18GHz | Oct. 20, 2015 | Jul. 14, 2016~ Aug. 02, 2016 | Oct. 19, 2016 | Radiation (03CH03-SZ) |
| AC Power Source | Chroma | 61601 | 616010001985 | N/A | NCR | Jul. 14, 2016~ Aug. 02, 2016 | NCR | Radiation (03CH03-SZ) |
| Turn Table | EM | EM1000 | N/A | 0~360 degree | NCR | Jul. 14, 2016~ Aug. 02, 2016 | NCR | Radiation (03CH03-SZ) |
| Antenna Mast | EM | EM1000 | N/A | 1 m~4 m | NCR | Jul. 14, 2016~ Aug. 02, 2016 | NCR | Radiation (03CH03-SZ) |
| EMI Receiver | R&S | ESCI7 | 100724 | 9kHz~3GHz; | Nov. 23, 2015 | Jul. 19, 2016 | Nov. 22, 2016 | Conduction (CO01-SZ) |
| AC LISN | EMCO | 3816/2SH | 00103892 | 9kHz~30MHz | Jan. 12, 2016 | Jul. 19, 2016 | Jan. 11, 2017 | Conduction (CO01-SZ) |
| AC LISN (for auxiliary equipment) | MessTec | 3816/2SH | 00103912 | 9kHz~30MHz | Jan. 12, 2016 | Jul. 19, 2016 | Jan. 11, 2017 | Conduction (CO01-SZ) |
| AC Power Source | Chroma | 61602 | 616020000891 | 100Vac~250Vac | Jul. 16, 2016 | Jul. 19, 2016 | Jul. 15, 2017 | Conduction (CO01-SZ) |

NCR: No Calibration Required

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5 Uncertainty of Evaluation

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

| Measuring Uncertainty for a Level of Confidence | 2.3 dB |
|---|--------|
| of 95% (U = 2Uc(y)) | 2.5 db |

<u>Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)</u>

| Measuring Uncertainty for a Level of Confidence | E 4 dD |
|---|--------|
| of 95% (U = 2Uc(y)) | 5.1dB |

<u>Uncertainty of Radiated Emission Measurement (1GHz ~ 18GHz)</u>

| Measuring Uncertainty for a Level of Confidence | 5.0dB |
|---|-------|
| of 95% (U = 2Uc(y)) | 3.0UB |

<u>Uncertainty of Radiated Emission Measurement (18GHz ~ 40GHz)</u>

| Measuring Uncertainty for a Level of Confidence | 5.0dB |
|---|-------|
| of 95% (U = 2Uc(y)) | 3.VUB |

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Appendix A. Conducted Test Results

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| Test Engineer: | Bruce Huang | Temperature: | 24~26 | °C |
|----------------|-------------|--------------------|-------|----|
| Test Date: | 2016/7/27 | Relative Humidity: | 50~53 | % |

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TEST RESULTS DATA 6dB and 26dB EBW and 99% OBW

| | | | | | | Band IV | | | |
|------|--------------|-----|-----|----------------|---------------------------|-----------------------------|----------------------------|---|-----------|
| Mod. | Data Rate | NTX | CH. | Freq. (MHz) | 99% Bandwidth (MHz) | 26 dB Bandwidth (MHz) | 6 dB Bandwidth (MHz) | 6dB Bandwidth min. Limit (MHz) | Pass/Fail |
| 11a | 6M bps | 1 | 149 | 5745 | 20.68 | 38.21 | 16.34 | 0.5 | Pass |
| 11a | 6Mbps | 1 | 157 | 5785 | 23.88 | 39.01 | 16.34 | 0.5 | Pass |
| 11a | 6Mbps | 1 | 161 | 5805 | 23.13 | 41.26 | 16.36 | 0.5 | Pass |
| HT20 | MCS 0 | 1 | 149 | 5745 | 23.08 | 39.61 | 17.58 | 0.5 | Pass |
| HT20 | MCS 0 | 1 | 157 | 5785 | 26.67 | 43.26 | 17.60 | 0.5 | Pass |
| HT20 | MCS 0 | 1 | 161 | 5805 | 26.72 | 44.16 | 17.58 | 0.5 | Pass |
| HT40 | MCS 0 | 1 | 151 | 5755 | 40.56 | 75.17 | 35.76 | 0.5 | Pass |
| HT40 | MCS 0 | 1 | 159 | 5795 | 58.64 | 88.47 | 35.76 | 0.5 | Pass |

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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 |
| 11a | 6M bps | 1 | 149 | 5745 | 0.58 | 12.59 | 30.00 | -3.00 | | Pass |
| 11a | 6Mbps | 1 | 157 | 5785 | 0.58 | 12.52 | 30.00 | -3.00 | | Pass |
| 11a | 6Mbps | 1 | 161 | 5805 | 0.58 | 13.19 | 30.00 | -3.00 | | Pass |
| HT20 | MCS 0 | 1 | 149 | 5745 | 0.62 | 12.64 | 30.00 | -3.00 | | Pass |
| HT20 | MCS 0 | 1 | 157 | 5785 | 0.62 | 12.59 | 30.00 | -3.00 | | Pass |
| HT20 | MCS 0 | 1 | 161 | 5805 | 0.62 | 13.26 | 30.00 | -3.00 | | Pass |
| HT40 | MCS 0 | 1 | 151 | 5755 | 1.18 | 10.81 | 30.00 | -3.00 | | Pass |
| HT40 | MCS 0 | 1 | 159 | 5795 | 1.18 | 12.20 | 30.00 | -3.00 | | Pass |

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TEST RESULTS DATA Power Spectral Density

| | | | | | | Band | IV | | | |
|------|--------------|-----|-----|----------------|------------------------|--|---|---|-------------|-----------|
| Mod. | Data Rate | NTX | CH. | Freq. (MHz) | Duty Factor (dB) | 10log (500kHz /RBW) Factor (dB) | Average Power Density (dBm/500kHz) | Average PSD Limit (dBm/500kHz) | DG (dBi) | Pass/Fail |
| 11a | 6M bps | 1 | 149 | 5745 | 0.58 | 2.22 | -1.28 | 30.00 | -3.00 | Pass |
| 11a | 6Mbps | 1 | 157 | 5785 | 0.58 | 2.22 | -1.12 | 30.00 | -3.00 | Pass |
| 11a | 6Mbps | 1 | 161 | 5805 | 0.58 | 2.22 | -1.13 | 30.00 | -3.00 | Pass |
| HT20 | MCS 0 | 1 | 149 | 5745 | 0.62 | 2.22 | -1.59 | 30.00 | -3.00 | Pass |
| HT20 | MCS 0 | 1 | 157 | 5785 | 0.62 | 2.22 | -1.87 | 30.00 | -3.00 | Pass |
| HT20 | MCS 0 | 1 | 161 | 5805 | 0.62 | 2.22 | -1.39 | 30.00 | -3.00 | Pass |
| HT40 | MCS 0 | 1 | 151 | 5755 | 1.18 | 2.22 | -5.06 | 30.00 | -3.00 | Pass |
| HT40 | MCS 0 | 1 | 159 | 5795 | 1.18 | 2.22 | -3.04 | 30.00 | -3.00 | Pass |

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TEST RESULTS DATA Frequency Stability

| | | | | | | Band | IV | | | |
|------|--------------|-----|-----|----------------|------------------------------|---------------------------------|----------------------------------|---------------------|----------------|------|
| | | | | | | | | | | |
| Mod. | Data Rate | NTX | CH. | Freq. (MHz) | Center Frequency (MHz) | Frequency Deviation (MHz) | Frequency Stablility (ppm) | Temperature (°C) | Voltage (V) | Note |
| 11a | 6M bps | 1 | 149 | 5745 | 5745.050 | 0.050 | 8.70 | 20 | 3.6 | |
| 11a | 6M bps | 1 | 149 | 5745 | 5745.000 | 0.000 | 0.00 | 20 | 4.2 | |
| 11a | 6M bps | 1 | 149 | 5745 | 5745.050 | 0.050 | 8.70 | 20 | 3.9 | |
| 11a | 6M bps | 1 | 149 | 5745 | 5745.025 | 0.025 | 4.35 | -30 | 3.9 | |
| 11a | 6M bps | 1 | 149 | 5745 | 5745.050 | 0.050 | 8.70 | 50 | 3.9 | |

Appendix B. Radiated Spurious Emission

Band 4 - 5725~5850MHz

WIFI 802.11a (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) | | (H/V) |
| | | 5614.2 | 46.09 | -22.21 | 68.3 | 38.81 | 33.12 | 7.65 | 33.49 | 174 | 220 | Р | Н |
| | | 5692.8 | 49.98 | -50.01 | 99.99 | 42.58 | 33.23 | 7.68 | 33.51 | 174 | 220 | Р | Н |
| | | 5719.4 | 60.37 | -50.36 | 110.73 | 52.94 | 33.27 | 7.68 | 33.52 | 174 | 220 | Р | Н |
| | | 5725 | 67.35 | -54.95 | 122.3 | 59.92 | 33.27 | 7.68 | 33.52 | 174 | 220 | Р | Н |
| 000 44- | * | 5745 | 101.36 | - | - | 93.86 | 33.29 | 7.74 | 33.53 | 174 | 220 | Р | Н |
| 802.11a CH 149 | * | 5745 | 94.79 | - | - | 87.29 | 33.29 | 7.74 | 33.53 | 174 | 220 | Α | Н |
| 5745MHz | | 5609.4 | 46.22 | -22.08 | 68.3 | 38.94 | 33.12 | 7.65 | 33.49 | 250 | 5 | Р | V |
| 37 43WH12 | | 5692.6 | 46.87 | -52.97 | 99.84 | 39.47 | 33.23 | 7.68 | 33.51 | 250 | 5 | Р | ٧ |
| | | 5720 | 52.24 | -58.66 | 110.9 | 44.81 | 33.27 | 7.68 | 33.52 | 250 | 5 | Р | ٧ |
| | | 5724.6 | 64.61 | -56.78 | 121.39 | 57.18 | 33.27 | 7.68 | 33.52 | 250 | 5 | Р | V |
| | * | 5745 | 97.62 | - | - | 90.12 | 33.29 | 7.74 | 33.53 | 250 | 5 | Р | ٧ |
| | * | 5745 | 90.56 | - | - | 83.06 | 33.29 | 7.74 | 33.53 | 250 | 5 | Α | V |
| | | 5600.2 | 45.5 | -22.8 | 68.3 | 38.22 | 33.12 | 7.64 | 33.48 | 152 | 227 | Р | Н |
| | | 5686 | 47.8 | -47.17 | 94.97 | 40.4 | 33.23 | 7.68 | 33.51 | 152 | 227 | Р | Н |
| | | 5719.8 | 46.7 | -64.14 | 110.84 | 39.27 | 33.27 | 7.68 | 33.52 | 152 | 227 | Р | Н |
| | | 5720 | 45.74 | -65.16 | 110.9 | 38.31 | 33.27 | 7.68 | 33.52 | 152 | 227 | Р | Н |
| | * | 5785 | 100.31 | - | - | 92.72 | 33.33 | 7.8 | 33.54 | 152 | 227 | Р | Н |
| | * | 5785 | 93.82 | - | - | 86.23 | 33.33 | 7.8 | 33.54 | 152 | 227 | Α | Н |
| 802.11a | | 5853 | 46.05 | -69.41 | 115.46 | 38.33 | 33.41 | 7.87 | 33.56 | 152 | 227 | Р | Н |
| CH 157 | | 5875 | 46.2 | -59.1 | 105.3 | 38.43 | 33.46 | 7.87 | 33.56 | 152 | 227 | Р | Н |
| 5785MHz | | 5915.4 | 47.2 | -28.18 | 75.38 | 39.37 | 33.5 | 7.91 | 33.58 | 152 | 227 | Р | Н |
| | | 5925.4 | 48.04 | -20.26 | 68.3 | 40.19 | 33.52 | 7.91 | 33.58 | 152 | 227 | Р | Н |
| | | 5639.6 | 47.21 | -21.09 | 68.3 | 39.88 | 33.17 | 7.65 | 33.49 | 250 | 6 | Р | V |
| | | 5697.8 | 45.62 | -58.06 | 103.68 | 38.22 | 33.23 | 7.68 | 33.51 | 250 | 6 | Р | V |
| | | 5709.6 | 45.27 | -62.72 | 107.99 | 37.86 | 33.25 | 7.68 | 33.52 | 250 | 6 | Р | V |
| | | 5724.8 | 47.14 | -74.7 | 121.84 | 39.71 | 33.27 | 7.68 | 33.52 | 250 | 6 | Р | V |
| | * | 5785 | 96.61 | - | - | 89.02 | 33.33 | 7.8 | 33.54 | 250 | 6 | Р | ٧ |

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| * | 5785 | 91.34 | - | - | 83.75 | 33.33 | 7.8 | 33.54 | 250 | 6 | Α | ٧ |
|---|--------|--|--|--|--|--|---|---|---|--|--|--|
| | 5851 | 46.06 | -73.96 | 120.02 | 38.34 | 33.41 | 7.87 | 33.56 | 250 | 6 | Р | ٧ |
| | 5858.8 | 46.04 | -63.79 | 109.83 | 38.3 | 33.43 | 7.87 | 33.56 | 250 | 6 | Р | ٧ |
| | 5909.6 | 46.13 | -33.53 | 79.66 | 38.3 | 33.5 | 7.91 | 33.58 | 250 | 6 | Р | ٧ |
| | 5938.4 | 46.78 | -21.52 | 68.3 | 38.89 | 33.52 | 7.95 | 33.58 | 250 | 6 | Р | ٧ |
| * | 5805 | 101.84 | - | - | 94.21 | 33.37 | 7.8 | 33.54 | 150 | 343 | Р | Н |
| * | 5805 | 95.01 | - | - | 87.38 | 33.37 | 7.8 | 33.54 | 150 | 343 | Α | Н |
| | 5851.8 | 48.24 | -69.96 | 118.2 | 40.52 | 33.41 | 7.87 | 33.56 | 150 | 343 | Р | Н |
| | 5857.4 | 51.15 | -59.08 | 110.23 | 43.41 | 33.43 | 7.87 | 33.56 | 150 | 343 | Р | Н |
| | 5903.2 | 46.95 | -37.44 | 84.39 | 39.13 | 33.48 | 7.91 | 33.57 | 150 | 343 | Р | Н |
| | 5934.8 | 45.7 | -22.6 | 68.3 | 37.81 | 33.52 | 7.95 | 33.58 | 150 | 343 | Р | Н |
| * | 5805 | 98.56 | - | - | 90.93 | 33.37 | 7.8 | 33.54 | 250 | 9 | Р | ٧ |
| * | 5805 | 91.41 | - | - | 83.78 | 33.37 | 7.8 | 33.54 | 250 | 9 | Α | ٧ |
| | 5850.4 | 47.04 | -74.35 | 121.39 | 39.32 | 33.41 | 7.87 | 33.56 | 250 | 9 | Р | ٧ |
| | 5856.8 | 49.01 | -61.39 | 110.4 | 41.27 | 33.43 | 7.87 | 33.56 | 250 | 9 | Р | ٧ |
| | 5924.2 | 47.47 | -21.42 | 68.89 | 39.62 | 33.52 | 7.91 | 33.58 | 250 | 9 | Р | ٧ |
| | 5940.8 | 45.94 | -22.36 | 68.3 | 38.03 | 33.54 | 7.95 | 33.58 | 250 | 9 | Р | V |
| | * * | 5851 5858.8 5909.6 5938.4 * 5805 * 5805 \$ 5851.8 5857.4 5903.2 5934.8 * 5805 * 5805 \$ 5805 5850.4 5856.8 5924.2 | 5851 46.06 5858.8 46.04 5909.6 46.13 5938.4 46.78 * 5805 101.84 * 5805 95.01 5851.8 48.24 5857.4 51.15 5903.2 46.95 5934.8 45.7 * 5805 98.56 * 5805 91.41 5850.4 47.04 5856.8 49.01 5924.2 47.47 | 5851 46.06 -73.96 5858.8 46.04 -63.79 5909.6 46.13 -33.53 5938.4 46.78 -21.52 * 5805 101.84 - * 5805 95.01 - 5851.8 48.24 -69.96 5857.4 51.15 -59.08 5903.2 46.95 -37.44 5934.8 45.7 -22.6 * 5805 98.56 - * 5805 91.41 - 5850.4 47.04 -74.35 5856.8 49.01 -61.39 5924.2 47.47 -21.42 | 5851 46.06 -73.96 120.02 5858.8 46.04 -63.79 109.83 5909.6 46.13 -33.53 79.66 5938.4 46.78 -21.52 68.3 * 5805 101.84 - - * 5805 95.01 - - 5851.8 48.24 -69.96 118.2 5857.4 51.15 -59.08 110.23 5903.2 46.95 -37.44 84.39 5934.8 45.7 -22.6 68.3 * 5805 98.56 - - * 5805 91.41 - - 5850.4 47.04 -74.35 121.39 5856.8 49.01 -61.39 110.4 5924.2 47.47 -21.42 68.89 | 5851 46.06 -73.96 120.02 38.34 5858.8 46.04 -63.79 109.83 38.3 5909.6 46.13 -33.53 79.66 38.3 5938.4 46.78 -21.52 68.3 38.89 * 5805 101.84 - - 94.21 * 5805 95.01 - - 87.38 5851.8 48.24 -69.96 118.2 40.52 5857.4 51.15 -59.08 110.23 43.41 5903.2 46.95 -37.44 84.39 39.13 5934.8 45.7 -22.6 68.3 37.81 * 5805 98.56 - - 90.93 * 5805 91.41 - - 83.78 5850.4 47.04 -74.35 121.39 39.32 5856.8 49.01 -61.39 110.4 41.27 5924.2 47.47 -21.42 68.89 39.62 | 5851 46.06 -73.96 120.02 38.34 33.41 5858.8 46.04 -63.79 109.83 38.3 33.43 5909.6 46.13 -33.53 79.66 38.3 33.5 5938.4 46.78 -21.52 68.3 38.89 33.52 * 5805 101.84 - - 94.21 33.37 * 5805 95.01 - - 87.38 33.37 5851.8 48.24 -69.96 118.2 40.52 33.41 5857.4 51.15 -59.08 110.23 43.41 33.43 5903.2 46.95 -37.44 84.39 39.13 33.48 5934.8 45.7 -22.6 68.3 37.81 33.52 * 5805 98.56 - - 90.93 33.37 * 5805 91.41 - - 83.78 33.37 \$850.4 47.04 -74.35 121.39 39.32 33.41 5856.8 49.01 -61.39 110.4 <t< td=""><td>5851 46.06 -73.96 120.02 38.34 33.41 7.87 5858.8 46.04 -63.79 109.83 38.3 33.43 7.87 5909.6 46.13 -33.53 79.66 38.3 33.5 7.91 5938.4 46.78 -21.52 68.3 38.89 33.52 7.95 * 5805 101.84 - - 94.21 33.37 7.8 * 5805 95.01 - - 87.38 33.37 7.8 5851.8 48.24 -69.96 118.2 40.52 33.41 7.87 5857.4 51.15 -59.08 110.23 43.41 33.43 7.87 5903.2 46.95 -37.44 84.39 39.13 33.48 7.91 \$934.8 45.7 -22.6 68.3 37.81 33.52 7.95 * 5805 98.56 - - 90.93 33.37 7.8 * 5805 91.41 - - 83.78 33.37 7.8</td><td>5851 46.06 -73.96 120.02 38.34 33.41 7.87 33.56 5858.8 46.04 -63.79 109.83 38.3 33.43 7.87 33.56 5909.6 46.13 -33.53 79.66 38.3 33.5 7.91 33.58 5938.4 46.78 -21.52 68.3 38.89 33.52 7.95 33.58 * 5805 101.84 - - 94.21 33.37 7.8 33.54 * 5805 95.01 - - 87.38 33.37 7.8 33.56 5851.8 48.24 -69.96 118.2 40.52 33.41 7.87 33.56 5857.4 51.15 -59.08 110.23 43.41 33.43 7.87 33.56 5903.2 46.95 -37.44 84.39 39.13 33.48 7.91 33.57 5934.8 45.7 -22.6 68.3 37.81 33.52 7.95 33.58 * 5805 98.56 - - 90.93 33.37 7.8 33.54</td><td>5851 46.06 -73.96 120.02 38.34 33.41 7.87 33.56 250 5858.8 46.04 -63.79 109.83 38.3 33.43 7.87 33.56 250 5909.6 46.13 -33.53 79.66 38.3 33.5 7.91 33.58 250 \$938.4 46.78 -21.52 68.3 38.89 33.52 7.95 33.58 250 * \$5805 101.84 - - 94.21 33.37 7.8 33.54 150 * \$5805 95.01 - - 87.38 33.37 7.8 33.56 150 \$851.8 48.24 -69.96 118.2 40.52 33.41 7.87 33.56 150 \$857.4 51.15 -59.08 110.23 43.41 33.43 7.87 33.56 150 \$903.2 46.95 -37.44 84.39 39.13 33.48 7.91 33.57 150 * \$805 98.56 - - 90.93 33.37 7.8 33.54 250</td><td>5851 46.06 -73.96 120.02 38.34 33.41 7.87 33.56 250 6 5858.8 46.04 -63.79 109.83 38.3 33.43 7.87 33.56 250 6 5909.6 46.13 -33.53 79.66 38.3 33.5 7.91 33.58 250 6 5938.4 46.78 -21.52 68.3 38.89 33.52 7.95 33.58 250 6 * 5805 101.84 - - 94.21 33.37 7.8 33.54 150 343 * 5805 95.01 - - 87.38 33.37 7.8 33.54 150 343 5851.8 48.24 -69.96 118.2 40.52 33.41 7.87 33.56 150 343 5857.4 51.15 -59.08 110.23 43.41 33.43 7.87 33.56 150 343 5903.2 46.95 -37.44 84.39 39.13 33.48 7.91 33.57 150 343 *</td><td>5851 46.06 -73.96 120.02 38.34 33.41 7.87 33.56 250 6 P 5858.8 46.04 -63.79 109.83 38.3 33.43 7.87 33.56 250 6 P 5909.6 46.13 -33.53 79.66 38.3 33.5 7.91 33.58 250 6 P \$5938.4 46.78 -21.52 68.3 38.89 33.52 7.95 33.58 250 6 P * 5805 101.84 - - 94.21 33.37 7.8 33.54 150 343 P * 5805 95.01 - - 87.38 33.37 7.8 33.54 150 343 P \$851.8 48.24 -69.96 118.2 40.52 33.41 7.87 33.56 150 343 P \$857.4 51.15 -59.08 110.23 43.41 33.43 7.87 33.56 150 343 P \$903.2 46.95 -37.44 84.39</td></t<> | 5851 46.06 -73.96 120.02 38.34 33.41 7.87 5858.8 46.04 -63.79 109.83 38.3 33.43 7.87 5909.6 46.13 -33.53 79.66 38.3 33.5 7.91 5938.4 46.78 -21.52 68.3 38.89 33.52 7.95 * 5805 101.84 - - 94.21 33.37 7.8 * 5805 95.01 - - 87.38 33.37 7.8 5851.8 48.24 -69.96 118.2 40.52 33.41 7.87 5857.4 51.15 -59.08 110.23 43.41 33.43 7.87 5903.2 46.95 -37.44 84.39 39.13 33.48 7.91 \$934.8 45.7 -22.6 68.3 37.81 33.52 7.95 * 5805 98.56 - - 90.93 33.37 7.8 * 5805 91.41 - - 83.78 33.37 7.8 | 5851 46.06 -73.96 120.02 38.34 33.41 7.87 33.56 5858.8 46.04 -63.79 109.83 38.3 33.43 7.87 33.56 5909.6 46.13 -33.53 79.66 38.3 33.5 7.91 33.58 5938.4 46.78 -21.52 68.3 38.89 33.52 7.95 33.58 * 5805 101.84 - - 94.21 33.37 7.8 33.54 * 5805 95.01 - - 87.38 33.37 7.8 33.56 5851.8 48.24 -69.96 118.2 40.52 33.41 7.87 33.56 5857.4 51.15 -59.08 110.23 43.41 33.43 7.87 33.56 5903.2 46.95 -37.44 84.39 39.13 33.48 7.91 33.57 5934.8 45.7 -22.6 68.3 37.81 33.52 7.95 33.58 * 5805 98.56 - - 90.93 33.37 7.8 33.54 | 5851 46.06 -73.96 120.02 38.34 33.41 7.87 33.56 250 5858.8 46.04 -63.79 109.83 38.3 33.43 7.87 33.56 250 5909.6 46.13 -33.53 79.66 38.3 33.5 7.91 33.58 250 \$938.4 46.78 -21.52 68.3 38.89 33.52 7.95 33.58 250 * \$5805 101.84 - - 94.21 33.37 7.8 33.54 150 * \$5805 95.01 - - 87.38 33.37 7.8 33.56 150 \$851.8 48.24 -69.96 118.2 40.52 33.41 7.87 33.56 150 \$857.4 51.15 -59.08 110.23 43.41 33.43 7.87 33.56 150 \$903.2 46.95 -37.44 84.39 39.13 33.48 7.91 33.57 150 * \$805 98.56 - - 90.93 33.37 7.8 33.54 250 | 5851 46.06 -73.96 120.02 38.34 33.41 7.87 33.56 250 6 5858.8 46.04 -63.79 109.83 38.3 33.43 7.87 33.56 250 6 5909.6 46.13 -33.53 79.66 38.3 33.5 7.91 33.58 250 6 5938.4 46.78 -21.52 68.3 38.89 33.52 7.95 33.58 250 6 * 5805 101.84 - - 94.21 33.37 7.8 33.54 150 343 * 5805 95.01 - - 87.38 33.37 7.8 33.54 150 343 5851.8 48.24 -69.96 118.2 40.52 33.41 7.87 33.56 150 343 5857.4 51.15 -59.08 110.23 43.41 33.43 7.87 33.56 150 343 5903.2 46.95 -37.44 84.39 39.13 33.48 7.91 33.57 150 343 * | 5851 46.06 -73.96 120.02 38.34 33.41 7.87 33.56 250 6 P 5858.8 46.04 -63.79 109.83 38.3 33.43 7.87 33.56 250 6 P 5909.6 46.13 -33.53 79.66 38.3 33.5 7.91 33.58 250 6 P \$5938.4 46.78 -21.52 68.3 38.89 33.52 7.95 33.58 250 6 P * 5805 101.84 - - 94.21 33.37 7.8 33.54 150 343 P * 5805 95.01 - - 87.38 33.37 7.8 33.54 150 343 P \$851.8 48.24 -69.96 118.2 40.52 33.41 7.87 33.56 150 343 P \$857.4 51.15 -59.08 110.23 43.41 33.43 7.87 33.56 150 343 P \$903.2 46.95 -37.44 84.39 |

Remark

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^{1.} No other spurious found.

^{2.} All results are PASS against Peak and Average limit line.

Band 4 5725~5850MHz

WIFI 802.11a (Harmonic @ 3m)

| Note | Frequency | Level | Over | Limit | Read | Antenna | Cable | Preamp | Ant | Table | Peak | Pol. |
|------|-----------|-------------------------------------|---|---|---|---|---|--|---|--|---|---|
| | | | Limit | Line | Level | Factor | Loss | Factor | Pos | Pos | Avg. | |
| | (MHz) | (dBµV/m) | (dB) | (dBµV/m) | (dBµV) | (dB/m) | (dB) | (dB) | (cm) | (deg) | (P/A) | (H/V) |
| | 11490 | 48.7 | -25.3 | 74 | 57.65 | 39.7 | 11.1 | 59.75 | 250 | 0 | Р | Н |
| | | | | | | | | | | _ | | |
| | 11490 | 48.67 | -25.33 | 74 | 57.62 | 39.7 | 11.1 | 59.75 | 250 | 0 | P | V |
| | 11570 | 48.96 | -25.04 | 74 | 57.96 | 39.66 | 11.17 | 59.83 | 250 | 0 | Р | Н |
| | 11570 | 48.34 | -25.66 | 74 | 57.34 | 39.66 | 11.17 | 59.83 | 250 | 0 | Р | V |
| | 11610 | 48.08 | -25.92 | 74 | 57.1 | 39.64 | 11.2 | 59.86 | 250 | 0 | Р | Н |
| | 11610 | 48.36 | -25.64 | 74 | 57.38 | 39.64 | 11.2 | 59.86 | 250 | 0 | Р | V |
| | Note | (MHz) 11490 11490 11570 11570 11610 | (MHz) (dBμV/m) 11490 48.7 11490 48.67 11570 48.96 11570 48.34 11610 48.08 | (MHz) (dBμV/m) (dB) 11490 48.7 -25.3 11490 48.67 -25.33 11570 48.96 -25.04 11570 48.34 -25.66 11610 48.08 -25.92 | (MHz) (dBμV/m) Limit (dB) Line (dBμV/m) 11490 48.7 -25.3 74 11490 48.67 -25.33 74 11570 48.96 -25.04 74 11570 48.34 -25.66 74 11610 48.08 -25.92 74 | (MHz) (dBμV/m) Limit (dB) Line (dBμV/m) Level (dBμV) 11490 48.7 -25.3 74 57.65 11490 48.67 -25.33 74 57.62 11570 48.96 -25.04 74 57.96 11570 48.34 -25.66 74 57.34 11610 48.08 -25.92 74 57.1 | (MHz) (dBμV/m) Limit (dB) Line (dBμV/m) Level (dBμV) Factor (dB/m) 11490 48.7 -25.3 74 57.65 39.7 11490 48.67 -25.33 74 57.62 39.7 11570 48.96 -25.04 74 57.96 39.66 11570 48.34 -25.66 74 57.34 39.66 11610 48.08 -25.92 74 57.1 39.64 | (MHz) (dBμV/m) Limit (dB) Line (dBμV/m) Level (dBμV) Factor (dB/m) Loss (dB) 11490 48.7 -25.3 74 57.65 39.7 11.1 11490 48.67 -25.33 74 57.62 39.7 11.1 11570 48.96 -25.04 74 57.96 39.66 11.17 11570 48.34 -25.66 74 57.34 39.66 11.17 11610 48.08 -25.92 74 57.1 39.64 11.2 | (MHz) Limit (dBμV/m) Line (dBμV/m) Level (dBμV) Factor (dB/m) Loss (dB) Factor (dB) 11490 48.7 -25.3 74 57.65 39.7 11.1 59.75 11490 48.67 -25.33 74 57.62 39.7 11.1 59.75 11570 48.96 -25.04 74 57.96 39.66 11.17 59.83 11570 48.34 -25.66 74 57.34 39.66 11.17 59.83 11610 48.08 -25.92 74 57.1 39.64 11.2 59.86 | (MHz) Limit (dBμV/m) Line (dBμV/m) Level (dBμV) Factor (dB/m) Loss (dB) Factor (dB) Pos (cm) 11490 48.7 -25.3 74 57.65 39.7 11.1 59.75 250 11490 48.67 -25.33 74 57.62 39.7 11.1 59.75 250 11570 48.96 -25.04 74 57.96 39.66 11.17 59.83 250 11570 48.34 -25.66 74 57.34 39.66 11.17 59.83 250 11610 48.08 -25.92 74 57.1 39.64 11.2 59.86 250 | (MHz) Limit (dB) (dB) (dB) (dB) (dB) (dB) (dB) (dB) | (MHz) (dBμV/m) Limit (dB) Line (dBμV/m) Level (dBμV) Factor (dB/m) Loss (dB) Factor (dB) Pos (deg) Avg. (deg) (P/A) 11490 48.7 -25.3 74 57.65 39.7 11.1 59.75 250 0 P 11490 48.67 -25.33 74 57.62 39.7 11.1 59.75 250 0 P 11570 48.96 -25.04 74 57.96 39.66 11.17 59.83 250 0 P 11570 48.34 -25.66 74 57.34 39.66 11.17 59.83 250 0 P 11610 48.08 -25.92 74 57.1 39.64 11.2 59.86 250 0 P |

Remark 2.

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Report No.: FR670507E

Report Version : Rev. 01
Report Template No.: BU5-FR15EWLB4 Version 1.4

^{1.} No other spurious found.

^{2.} All results are PASS against Peak and Average limit line.

Band 4 5725~5850MHz WIFI 802.11n HT20 (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) |
| | | 5608 | 46.15 | -22.15 | 68.3 | 38.87 | 33.12 | 7.65 | 33.49 | 150 | 230 | Р | Н |
| | | 5693.4 | 51.73 | -48.7 | 100.43 | 44.33 | 33.23 | 7.68 | 33.51 | 150 | 230 | Р | Н |
| | | 5719.8 | 60.12 | -50.72 | 110.84 | 52.69 | 33.27 | 7.68 | 33.52 | 150 | 230 | Р | Н |
| | | 5723.4 | 70.76 | -47.89 | 118.65 | 63.33 | 33.27 | 7.68 | 33.52 | 150 | 230 | Р | Н |
| 802.11n | * | 5745 | 102.36 | - | - | 94.86 | 33.29 | 7.74 | 33.53 | 150 | 230 | Р | Н |
| HT20 | * | 5745 | 94.61 | - | - | 87.11 | 33.29 | 7.74 | 33.53 | 150 | 230 | Α | Н |
| CH 149 | | 5648 | 46.16 | -22.14 | 68.3 | 38.81 | 33.17 | 7.67 | 33.49 | 250 | 11 | Р | V |
| 5745MHz | | 5692.2 | 47.36 | -52.19 | 99.55 | 39.96 | 33.23 | 7.68 | 33.51 | 250 | 11 | Р | V |
| | | 5719.6 | 56.58 | -54.21 | 110.79 | 49.15 | 33.27 | 7.68 | 33.52 | 250 | 11 | Р | V |
| | | 5724.6 | 67.39 | -54 | 121.39 | 59.96 | 33.27 | 7.68 | 33.52 | 250 | 11 | Р | ٧ |
| | * | 5745 | 98.1 | - | - | 90.6 | 33.29 | 7.74 | 33.53 | 250 | 11 | Р | ٧ |
| | * | 5745 | 90.67 | - | - | 83.17 | 33.29 | 7.74 | 33.53 | 250 | 11 | Α | V |
| | | 5623 | 46.16 | -22.14 | 68.3 | 38.86 | 33.14 | 7.65 | 33.49 | 150 | 229 | Р | Н |
| | | 5699.8 | 46.34 | -58.81 | 105.15 | 38.94 | 33.23 | 7.68 | 33.51 | 150 | 229 | Р | Н |
| | | 5712.2 | 45.16 | -63.56 | 108.72 | 37.75 | 33.25 | 7.68 | 33.52 | 150 | 229 | Р | Н |
| | | 5722.2 | 45.18 | -70.74 | 115.92 | 37.75 | 33.27 | 7.68 | 33.52 | 150 | 229 | Р | Н |
| | * | 5785 | 101 | - | - | 93.41 | 33.33 | 7.8 | 33.54 | 150 | 229 | Р | Н |
| | * | 5785 | 94.38 | - | - | 86.79 | 33.33 | 7.8 | 33.54 | 150 | 229 | Α | Н |
| | | 5853 | 44.92 | -70.54 | 115.46 | 37.2 | 33.41 | 7.87 | 33.56 | 150 | 229 | Р | Н |
| 802.11n | | 5856.2 | 45.75 | -64.81 | 110.56 | 38.01 | 33.43 | 7.87 | 33.56 | 150 | 229 | Р | Н |
| HT20 | | 5889.4 | 47.35 | -47.26 | 94.61 | 39.53 | 33.48 | 7.91 | 33.57 | 150 | 229 | Р | Н |
| CH 157 | | 5937.4 | 45.22 | -23.08 | 68.3 | 37.33 | 33.52 | 7.95 | 33.58 | 150 | 229 | Р | Н |
| 5785MHz | | 5624 | 46.07 | -22.23 | 68.3 | 38.77 | 33.14 | 7.65 | 33.49 | 250 | 24 | Р | V |
| | | 5690.4 | 46.97 | -51.25 | 98.22 | 39.57 | 33.23 | 7.68 | 33.51 | 250 | 24 | Р | V |
| | | 5700.8 | 45.53 | -59.99 | 105.52 | 38.11 | 33.25 | 7.68 | 33.51 | 250 | 24 | Р | V |
| | | 5721.4 | 45.45 | -68.64 | 114.09 | 38.02 | 33.27 | 7.68 | 33.52 | 250 | 24 | Р | V |
| | * | 5785 | 96.7 | - | - | 89.11 | 33.33 | 7.8 | 33.54 | 250 | 24 | Р | V |
| | * | 5785 | 89.24 | - | - | 81.65 | 33.33 | 7.8 | 33.54 | 250 | 24 | Α | V |
| | | 5850.2 | 45.56 | -76.28 | 121.84 | 37.84 | 33.41 | 7.87 | 33.56 | 250 | 24 | Р | V |
| | | 5857 | 45.9 | -64.44 | 110.34 | 38.16 | 33.43 | 7.87 | 33.56 | 250 | 24 | Р | V |

SPORTON INTERNATIONAL (SHENZHEN) INC.

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| | 5878.2 | 47.68 | -55.24 | 102.92 | 39.91 | 33.46 | 7.87 | 33.56 | 250 | 24 | Р | ٧ |
|---|--------|--|--|---|---|--|--|--|---|--|--|--|
| | 5930 | 47.74 | -20.56 | 68.3 | 39.85 | 33.52 | 7.95 | 33.58 | 250 | 24 | Р | ٧ |
| * | 5805 | 100.91 | -21.39 | 122.3 | 93.28 | 33.37 | 7.8 | 33.54 | 150 | 350 | Р | Н |
| * | 5805 | 94.02 | - | - | 86.39 | 33.37 | 7.8 | 33.54 | 150 | 350 | Α | Н |
| | 5852 | 47.44 | -70.3 | 117.74 | 39.72 | 33.41 | 7.87 | 33.56 | 150 | 350 | Р | Н |
| | 5856.2 | 50.66 | -59.9 | 110.56 | 42.92 | 33.43 | 7.87 | 33.56 | 150 | 350 | Р | Н |
| | 5897.4 | 47.16 | -41.53 | 88.69 | 39.34 | 33.48 | 7.91 | 33.57 | 150 | 350 | Р | Н |
| | 5926.6 | 46.08 | -22.22 | 68.3 | 38.19 | 33.52 | 7.95 | 33.58 | 150 | 350 | Р | Н |
| * | 5805 | 96.52 | -25.78 | 122.3 | 88.89 | 33.37 | 7.8 | 33.54 | 250 | 11 | Р | ٧ |
| * | 5805 | 82.06 | - | - | 74.43 | 33.37 | 7.8 | 33.54 | 250 | 11 | Α | ٧ |
| | 5854.4 | 45.63 | -66.64 | 112.27 | 37.89 | 33.43 | 7.87 | 33.56 | 250 | 11 | Р | ٧ |
| | 5856.6 | 48.9 | -61.55 | 110.45 | 41.16 | 33.43 | 7.87 | 33.56 | 250 | 11 | Р | ٧ |
| | 5921 | 47.05 | -24.2 | 71.25 | 39.22 | 33.5 | 7.91 | 33.58 | 250 | 11 | Р | V |
| | 5927.8 | 46.05 | -22.25 | 68.3 | 38.16 | 33.52 | 7.95 | 33.58 | 250 | 11 | Р | ٧ |
| | * | 5930 * 5805 * 5805 * 5805 5852 5856.2 5897.4 5926.6 * 5805 * 5805 5854.4 5856.6 5921 | 5930 47.74 * 5805 100.91 * 5805 94.02 5852 47.44 5856.2 50.66 5897.4 47.16 5926.6 46.08 * 5805 96.52 * 5854.4 45.63 5856.6 48.9 5921 47.05 | 5930 47.74 -20.56 * 5805 100.91 -21.39 * 5805 94.02 - 5852 47.44 -70.3 5856.2 50.66 -59.9 5897.4 47.16 -41.53 5926.6 46.08 -22.22 * 5805 96.52 -25.78 * 5854.4 45.63 -66.64 5856.6 48.9 -61.55 5921 47.05 -24.2 | 5930 47.74 -20.56 68.3 * 5805 100.91 -21.39 122.3 * 5805 94.02 - - 5852 47.44 -70.3 117.74 5856.2 50.66 -59.9 110.56 5897.4 47.16 -41.53 88.69 5926.6 46.08 -22.22 68.3 * 5805 96.52 -25.78 122.3 * 5854.4 45.63 -66.64 112.27 5856.6 48.9 -61.55 110.45 5921 47.05 -24.2 71.25 | 5930 47.74 -20.56 68.3 39.85 * 5805 100.91 -21.39 122.3 93.28 * 5805 94.02 - - 86.39 5852 47.44 -70.3 117.74 39.72 5856.2 50.66 -59.9 110.56 42.92 5897.4 47.16 -41.53 88.69 39.34 5926.6 46.08 -22.22 68.3 38.19 * 5805 96.52 -25.78 122.3 88.89 * 5805 82.06 - - 74.43 5854.4 45.63 -66.64 112.27 37.89 5856.6 48.9 -61.55 110.45 41.16 5921 47.05 -24.2 71.25 39.22 | 5930 47.74 -20.56 68.3 39.85 33.52 * 5805 100.91 -21.39 122.3 93.28 33.37 * 5805 94.02 - - 86.39 33.37 * 5852 47.44 -70.3 117.74 39.72 33.41 5856.2 50.66 -59.9 110.56 42.92 33.43 5897.4 47.16 -41.53 88.69 39.34 33.48 5926.6 46.08 -22.22 68.3 38.19 33.52 * 5805 96.52 -25.78 122.3 88.89 33.37 * 5805 82.06 - - 74.43 33.37 * 5805 82.06 - - 74.43 33.43 5854.4 45.63 -66.64 112.27 37.89 33.43 5856.6 48.9 -61.55 110.45 41.16 33.43 5921 47.05 -24.2 71.25 39.22 33.5 | 5930 47.74 -20.56 68.3 39.85 33.52 7.95 * 5805 100.91 -21.39 122.3 93.28 33.37 7.8 * 5805 94.02 - - 86.39 33.37 7.8 5852 47.44 -70.3 117.74 39.72 33.41 7.87 5856.2 50.66 -59.9 110.56 42.92 33.43 7.87 5897.4 47.16 -41.53 88.69 39.34 33.48 7.91 5926.6 46.08 -22.22 68.3 38.19 33.52 7.95 * 5805 96.52 -25.78 122.3 88.89 33.37 7.8 * 5805 82.06 - - 74.43 33.37 7.8 * 5854.4 45.63 -66.64 112.27 37.89 33.43 7.87 5856.6 48.9 -61.55 110.45 41.16 33.43 7.87 5921 47.05 -24.2 71.25 39.22 33.5 7.9 | 5930 47.74 -20.56 68.3 39.85 33.52 7.95 33.58 * 5805 100.91 -21.39 122.3 93.28 33.37 7.8 33.54 * 5805 94.02 - - 86.39 33.37 7.8 33.54 5852 47.44 -70.3 117.74 39.72 33.41 7.87 33.56 5856.2 50.66 -59.9 110.56 42.92 33.43 7.87 33.56 5897.4 47.16 -41.53 88.69 39.34 33.48 7.91 33.57 5926.6 46.08 -22.22 68.3 38.19 33.52 7.95 33.58 * 5805 96.52 -25.78 122.3 88.89 33.37 7.8 33.54 * 5805 82.06 - - 74.43 33.37 7.8 33.54 * 5805 82.06 - - 74.43 33.43 7.87 33.56 5854.4 45.63 -66.64 112.27 37.89 <th>5930 47.74 -20.56 68.3 39.85 33.52 7.95 33.58 250 * 5805 100.91 -21.39 122.3 93.28 33.37 7.8 33.54 150 * 5805 94.02 - - 86.39 33.37 7.8 33.54 150 5852 47.44 -70.3 117.74 39.72 33.41 7.87 33.56 150 5856.2 50.66 -59.9 110.56 42.92 33.43 7.87 33.56 150 5897.4 47.16 -41.53 88.69 39.34 33.48 7.91 33.57 150 \$926.6 46.08 -22.22 68.3 38.19 33.52 7.95 33.58 150 * \$805 96.52 -25.78 122.3 88.89 33.37 7.8 33.54 250 * \$805 82.06 - - 74.43 33.37 7.8 33.54 250 \$854.4 45.63 -66.64 112.27 37.89 33.43</th> <th>5930 47.74 -20.56 68.3 39.85 33.52 7.95 33.58 250 24 * 5805 100.91 -21.39 122.3 93.28 33.37 7.8 33.54 150 350 * 5805 94.02 - - 86.39 33.37 7.8 33.54 150 350 5852 47.44 -70.3 117.74 39.72 33.41 7.87 33.56 150 350 5856.2 50.66 -59.9 110.56 42.92 33.43 7.87 33.56 150 350 5897.4 47.16 -41.53 88.69 39.34 33.48 7.91 33.57 150 350 \$926.6 46.08 -22.22 68.3 38.19 33.52 7.95 33.58 150 350 * 5805 96.52 -25.78 122.3 88.89 33.37 7.8 33.54 250 11 * 5805 82.06 - - 74.43 33.37 7.8 33.54 250<th>5930 47.74 -20.56 68.3 39.85 33.52 7.95 33.58 250 24 P * 5805 100.91 -21.39 122.3 93.28 33.37 7.8 33.54 150 350 P * 5805 94.02 - - 86.39 33.37 7.8 33.54 150 350 A 5852 47.44 -70.3 117.74 39.72 33.41 7.87 33.56 150 350 P 5856.2 50.66 -59.9 110.56 42.92 33.43 7.87 33.56 150 350 P 5897.4 47.16 -41.53 88.69 39.34 33.48 7.91 33.57 150 350 P \$926.6 46.08 -22.22 68.3 38.19 33.52 7.95 33.58 150 350 P * 5805 96.52 -25.78 122.3 88.89 33.37 7.8 33.54 250 11 P * 5805 82.06</th></th> | 5930 47.74 -20.56 68.3 39.85 33.52 7.95 33.58 250 * 5805 100.91 -21.39 122.3 93.28 33.37 7.8 33.54 150 * 5805 94.02 - - 86.39 33.37 7.8 33.54 150 5852 47.44 -70.3 117.74 39.72 33.41 7.87 33.56 150 5856.2 50.66 -59.9 110.56 42.92 33.43 7.87 33.56 150 5897.4 47.16 -41.53 88.69 39.34 33.48 7.91 33.57 150 \$926.6 46.08 -22.22 68.3 38.19 33.52 7.95 33.58 150 * \$805 96.52 -25.78 122.3 88.89 33.37 7.8 33.54 250 * \$805 82.06 - - 74.43 33.37 7.8 33.54 250 \$854.4 45.63 -66.64 112.27 37.89 33.43 | 5930 47.74 -20.56 68.3 39.85 33.52 7.95 33.58 250 24 * 5805 100.91 -21.39 122.3 93.28 33.37 7.8 33.54 150 350 * 5805 94.02 - - 86.39 33.37 7.8 33.54 150 350 5852 47.44 -70.3 117.74 39.72 33.41 7.87 33.56 150 350 5856.2 50.66 -59.9 110.56 42.92 33.43 7.87 33.56 150 350 5897.4 47.16 -41.53 88.69 39.34 33.48 7.91 33.57 150 350 \$926.6 46.08 -22.22 68.3 38.19 33.52 7.95 33.58 150 350 * 5805 96.52 -25.78 122.3 88.89 33.37 7.8 33.54 250 11 * 5805 82.06 - - 74.43 33.37 7.8 33.54 250 <th>5930 47.74 -20.56 68.3 39.85 33.52 7.95 33.58 250 24 P * 5805 100.91 -21.39 122.3 93.28 33.37 7.8 33.54 150 350 P * 5805 94.02 - - 86.39 33.37 7.8 33.54 150 350 A 5852 47.44 -70.3 117.74 39.72 33.41 7.87 33.56 150 350 P 5856.2 50.66 -59.9 110.56 42.92 33.43 7.87 33.56 150 350 P 5897.4 47.16 -41.53 88.69 39.34 33.48 7.91 33.57 150 350 P \$926.6 46.08 -22.22 68.3 38.19 33.52 7.95 33.58 150 350 P * 5805 96.52 -25.78 122.3 88.89 33.37 7.8 33.54 250 11 P * 5805 82.06</th> | 5930 47.74 -20.56 68.3 39.85 33.52 7.95 33.58 250 24 P * 5805 100.91 -21.39 122.3 93.28 33.37 7.8 33.54 150 350 P * 5805 94.02 - - 86.39 33.37 7.8 33.54 150 350 A 5852 47.44 -70.3 117.74 39.72 33.41 7.87 33.56 150 350 P 5856.2 50.66 -59.9 110.56 42.92 33.43 7.87 33.56 150 350 P 5897.4 47.16 -41.53 88.69 39.34 33.48 7.91 33.57 150 350 P \$926.6 46.08 -22.22 68.3 38.19 33.52 7.95 33.58 150 350 P * 5805 96.52 -25.78 122.3 88.89 33.37 7.8 33.54 250 11 P * 5805 82.06 |

Remark

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^{1.} No other spurious found.

^{2.} All results are PASS against Peak and Average limit line.

Band 4 5725~5850MHz

WIFI 802.11n HT20 (Harmonic @ 3m)

| Ant. | (MHz) | (dBµV/m) | Limit | Line | | | | | | | | |
|---------|---------|--------------|--------|------------|---------------------|----------|--------|--------|------|---------|-------|-------|
| | (MHz) | / dBu\//m \ | | | Level | Factor | Loss | Factor | Pos | | Avg. | i |
| | | (ασμν/ιιι) | (dB) | (dBµV/m) | (dB _µ V) | (dB/m) | (dB) | (dB) | (cm) | (deg) | (P/A) | (H/V) |
| 802.11n | 11490 | 48.9 | -25.1 | 74 | 57.85 | 39.7 | 11.1 | 59.75 | 250 | 0 | Р | Н |
| HT20 | | | | | | | | | | | | |
| CH 149 | 11490 | 49.46 | -24.54 | 74 | 58.41 | 39.7 | 11.1 | 59.75 | 250 | 0 | Р | V |
| 5745MHz | | | | | | | | | | | | |
| 802.11n | 11570 | 48.52 | -25.48 | 74 | 57.52 | 39.66 | 11.17 | 59.83 | 250 | 0 | Р | Н |
| HT20 | | | | | | | | | | | | |
| CH 157 | 11570 | 49.41 | -24.59 | 74 | 58.41 | 39.66 | 11.17 | 59.83 | 250 | 0 | Р | ٧ |
| 5785MHz | | | | | | | | | | | | |
| 802.11n | 11610 | 50.46 | -23.54 | 74 | 59.48 | 39.64 | 11.2 | 59.86 | 250 | 0 | Р | Н |
| HT20 | | | | | | | | | | | | |
| CH 161 | 11610 | 48.78 | -25.22 | 74 | 57.8 | 39.64 | 11.2 | 59.86 | 250 | 0 | Р | V |
| 5805MHz | | | | | | | | | | | | |

Remark

SPORTON INTERNATIONAL (SHENZHEN) INC.

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^{1.} No other spurious found.

^{2.} All results are PASS against Peak and Average limit line.

Band 4 5725~5850MHz WIFI 802.11n HT40 (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) | (dB _µ V) | (dB/m) | (dB) | (dB) | (cm) | (deg) | (P/A) | (H/V) |
| | | 5648.4 | 46.15 | -22.15 | 68.3 | 38.8 | 33.17 | 7.67 | 33.49 | 150 | 343 | Р | Н |
| | | 5696.8 | 54.48 | -48.46 | 102.94 | 47.08 | 33.23 | 7.68 | 33.51 | 150 | 343 | Р | Н |
| | | 5709.8 | 69.88 | -38.17 | 108.05 | 62.47 | 33.25 | 7.68 | 33.52 | 150 | 343 | Р | Н |
| | | 5720.4 | 73.11 | -38.7 | 111.81 | 65.68 | 33.27 | 7.68 | 33.52 | 150 | 343 | Р | Н |
| | * | 5755 | 98.82 | - | - | 91.3 | 33.31 | 7.74 | 33.53 | 150 | 343 | Р | Н |
| | * | 5755 | 91.61 | - | - | 84.09 | 33.31 | 7.74 | 33.53 | 150 | 343 | Α | Н |
| | | 5854.6 | 46.53 | -65.28 | 111.81 | 38.79 | 33.43 | 7.87 | 33.56 | 150 | 343 | Р | Н |
| | | 5864.6 | 46.63 | -61.58 | 108.21 | 38.89 | 33.43 | 7.87 | 33.56 | 150 | 343 | Р | Н |
| 802.11n | | 5881.8 | 46.42 | -53.83 | 100.25 | 38.65 | 33.46 | 7.87 | 33.56 | 150 | 343 | Р | Н |
| HT40 | | 5946.8 | 46.32 | -21.98 | 68.3 | 38.41 | 33.54 | 7.95 | 33.58 | 150 | 343 | Р | Н |
| CH 151 | | 5621 | 46.43 | -21.87 | 68.3 | 39.13 | 33.14 | 7.65 | 33.49 | 250 | 11 | Р | ٧ |
| 5755MHz | | 5699.6 | 51.47 | -53.54 | 105.01 | 44.07 | 33.23 | 7.68 | 33.51 | 250 | 11 | Р | ٧ |
| | | 5720 | 67.18 | -43.72 | 110.9 | 59.75 | 33.27 | 7.68 | 33.52 | 250 | 11 | Р | ٧ |
| | | 5721.4 | 68.62 | -45.47 | 114.09 | 61.19 | 33.27 | 7.68 | 33.52 | 250 | 11 | Р | ٧ |
| | * | 5755 | 94.95 | - | - | 87.43 | 33.31 | 7.74 | 33.53 | 250 | 11 | Р | ٧ |
| | * | 5755 | 87.67 | - | - | 80.15 | 33.31 | 7.74 | 33.53 | 250 | 11 | Α | ٧ |
| | | 5851.2 | 46.31 | -73.25 | 119.56 | 38.59 | 33.41 | 7.87 | 33.56 | 250 | 11 | Р | ٧ |
| | | 5862.6 | 45.85 | -62.92 | 108.77 | 38.11 | 33.43 | 7.87 | 33.56 | 250 | 11 | Р | ٧ |
| | | 5891.8 | 47.03 | -45.8 | 92.83 | 39.21 | 33.48 | 7.91 | 33.57 | 250 | 11 | Р | V |
| | | 5926 | 46.98 | -21.32 | 68.3 | 39.09 | 33.52 | 7.95 | 33.58 | 250 | 11 | Р | V |

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| 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) |
| | | 5607.6 | 46.77 | -21.53 | 68.3 | 39.49 | 33.12 | 7.65 | 33.49 | 247 | 353 | Р | Н |
| | | 5691 | 48.41 | -50.25 | 98.66 | 41.01 | 33.23 | 7.68 | 33.51 | 247 | 353 | Р | Н |
| | | 5711.6 | 48.76 | -59.79 | 108.55 | 41.35 | 33.25 | 7.68 | 33.52 | 247 | 353 | Р | Н |
| | | 5723.8 | 50.2 | -69.36 | 119.56 | 42.77 | 33.27 | 7.68 | 33.52 | 247 | 353 | Р | Н |
| | * | 5795 | 98.3 | - | - | 90.69 | 33.35 | 7.8 | 33.54 | 247 | 353 | Р | Н |
| | * | 5795 | 91.22 | - | - | 83.61 | 33.35 | 7.8 | 33.54 | 247 | 353 | Α | Н |
| | | 5850 | 52.12 | -70.18 | 122.3 | 44.4 | 33.41 | 7.87 | 33.56 | 247 | 353 | Р | Н |
| | | 5862 | 50.07 | -58.87 | 108.94 | 42.33 | 33.43 | 7.87 | 33.56 | 247 | 353 | Р | Н |
| 802.11n | | 5882.2 | 46.89 | -53.06 | 99.95 | 39.12 | 33.46 | 7.87 | 33.56 | 247 | 353 | Р | Н |
| HT40 | | 5933.4 | 46.37 | -21.93 | 68.3 | 38.48 | 33.52 | 7.95 | 33.58 | 247 | 353 | Р | Н |
| CH 159 | | 5649.8 | 46.01 | -22.29 | 68.3 | 38.64 | 33.19 | 7.67 | 33.49 | 250 | 14 | Р | V |
| 5795MHz | | 5685.2 | 46.72 | -47.66 | 94.38 | 39.33 | 33.23 | 7.67 | 33.51 | 250 | 14 | Р | V |
| | | 5704.2 | 46.69 | -59.79 | 106.48 | 39.27 | 33.25 | 7.68 | 33.51 | 250 | 14 | Р | V |
| | | 5721 | 45.5 | -67.68 | 113.18 | 38.07 | 33.27 | 7.68 | 33.52 | 250 | 14 | Р | V |
| | * | 5795 | 94.08 | - | - | 86.47 | 33.35 | 7.8 | 33.54 | 250 | 14 | Р | V |
| | * | 5795 | 87.64 | - | - | 80.03 | 33.35 | 7.8 | 33.54 | 250 | 14 | Α | V |
| | | 5852.4 | 49.73 | -67.1 | 116.83 | 42.01 | 33.41 | 7.87 | 33.56 | 250 | 14 | Р | V |
| | | 5858.8 | 48.89 | -60.94 | 109.83 | 41.15 | 33.43 | 7.87 | 33.56 | 250 | 14 | Р | V |
| | | 5917.6 | 46.74 | -27.02 | 73.76 | 38.91 | 33.5 | 7.91 | 33.58 | 250 | 14 | Р | V |
| | | 5950 | 47.28 | -21.02 | 68.3 | 39.37 | 33.54 | 7.95 | 33.58 | 250 | 14 | Р | V |

Remark

2. All results are PASS against Peak and Average limit line.

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^{1.} No other spurious found.

Band 4 5725~5850MHz

WIFI 802.11n HT40 (Harmonic @ 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) |
| 802.11n | | 11510 | 48.79 | -25.21 | 74 | 57.75 | 39.7 | 11.1 | 59.76 | 250 | 0 | Р | Н |
| HT40 | | | | | | | | | | | | | |
| CH 151 | | 11510 | 49.26 | -24.74 | 74 | 58.22 | 39.7 | 11.1 | 59.76 | 250 | 0 | Р | V |
| 5755MHz | | | | | | | | | | | | | |
| 802.11n | | 11590 | 48.32 | -25.68 | 74 | 57.35 | 39.65 | 11.17 | 59.85 | 250 | 0 | Р | Н |
| HT40 | | | | | | | | | | | | | |
| CH 159 | | 11590 | 49.59 | -24.41 | 74 | 58.62 | 39.65 | 11.17 | 59.85 | 250 | 0 | Р | V |
| 5795MHz | | | | | | | | | | | | | |
| | | | 1 | 1 | 1 | 1 | | | 1 | 1 | 1 | 1 | 1 |

Remark 2.

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^{1.} No other spurious found.

^{2.} All results are PASS against Peak and Average limit line.

Emission below 1GHz

5GHz WIFI 802.11a (LF @ 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) |
| | | 42.61 | 32.24 | -7.76 | 40 | 42.55 | 20.82 | 0.62 | 31.75 | 100 | 319 | Р | Н |
| | | 112.45 | 30.78 | -12.72 | 43.5 | 42.78 | 18.55 | 0.99 | 31.54 | - | - | Р | Н |
| | | 181.32 | 26.98 | -16.52 | 43.5 | 40.59 | 16.42 | 1.28 | 31.31 | - | _ | Р | Н |
| | | 242.43 | 33.56 | -12.44 | 46 | 45.81 | 17.63 | 1.4 | 31.28 | - | - | Р | Н |
| -011 | | 400.54 | 27.29 | -18.71 | 46 | 30.73 | 25.98 | 1.82 | 31.24 | - | - | Р | Н |
| 5GHz | | 954.41 | 32.52 | -13.48 | 46 | 31.41 | 29.5 | 2.88 | 31.27 | - | - | Р | Н |
| 802.11a LF | | 42.61 | 34.3 | -5.7 | 40 | 44.61 | 20.82 | 0.62 | 31.75 | 100 | 177 | Р | ٧ |
| LF | | 109.54 | 29.74 | -13.76 | 43.5 | 41.69 | 18.61 | 0.99 | 31.55 | - | - | Р | ٧ |
| | | 181.32 | 25.33 | -18.17 | 43.5 | 38.94 | 16.42 | 1.28 | 31.31 | - | - | Р | V |
| | | 236.61 | 28.1 | -17.9 | 46 | 40.63 | 17.35 | 1.4 | 31.28 | - | - | Р | ٧ |
| | | 399.57 | 27.04 | -18.96 | 46 | 30.46 | 26 | 1.82 | 31.24 | - | - | Р | ٧ |
| | | 883.6 | 31.26 | -14.74 | 46 | 31.45 | 28.37 | 2.71 | 31.27 | - | - | Р | ٧ |

Remark

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^{1.} No other spurious found.

^{2.} All results are PASS against limit line.

Note symbol

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| * | 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 | | | | | |

SPORTON INTERNATIONAL (SHENZHEN) INC.

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

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| 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 | Р | Н |
| CH 01 | | | | | | | | | | | | | |
| 2412MHz | | 2390 | 43.54 | -10.46 | 54 | 42.6 | 32.22 | 4.58 | 35.86 | 103 | 308 | Α | Н |

1. Level($dB\mu V/m$) =

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

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

For Peak Limit @ 2390MHz:

- Level(dBµV/m)
- = Antenna Factor(dB/m) + Cable Loss(dB) + Read Level(dBµV) Preamp Factor(dB)
- $= 32.22(dB/m) + 4.58(dB) + 54.51(dB\mu V) 35.86 (dB)$
- $= 55.45 (dB\mu V/m)$
- 2. Over Limit(dB)
- = Level(dBµV/m) Limit Line(dBµV/m)
- $= 55.45(dB\mu V/m) 74(dB\mu V/m)$
- = -18.55(dB)

For Average Limit @ 2390MHz:

- Level(dBµV/m)
- = Antenna Factor(dB/m) + Cable Loss(dB) + Read Level(dBµV) Preamp Factor(dB)
- $= 32.22(dB/m) + 4.58(dB) + 42.6(dB\mu V) 35.86 (dB)$
- $= 43.54 (dB\mu V/m)$
- 2. Over Limit(dB)
- = Level($dB\mu V/m$) Limit Line($dB\mu V/m$)
- $= 43.54(dB\mu V/m) 54(dB\mu V/m)$
- = -10.46(dB)

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

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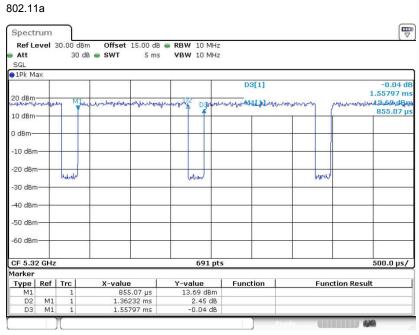
 FAX: 86-755-8637-9595
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Appendix C. Duty Cycle Plots

| Band | Duty Cycle(%) | T(ms) | 1/T(kHz) | VBW Setting |
|--------------|---------------|-------|----------|-------------|
| 802.11a | 87.44 | 1.36 | 0.73 | 1kHz |
| 802.11n HT20 | 86.70 | 1.28 | 0.78 | 1kHz |
| 802.11n HT40 | 76.12 | 0.64 | 1.57 | 3kHz |



Date: 14.JUL.2016 17:52:30

SPORTON INTERNATIONAL (SHENZHEN) INC.

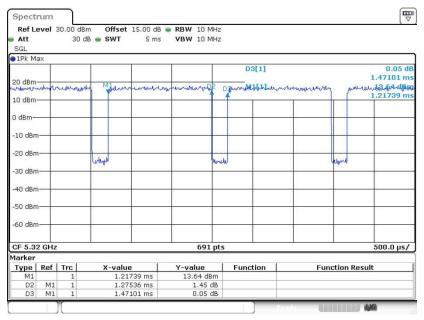
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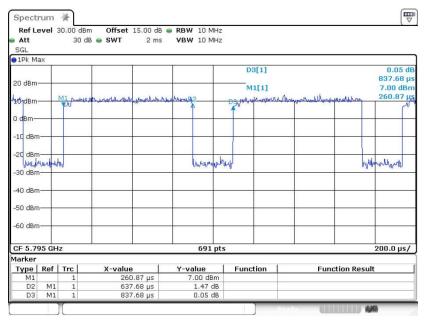
Report No.: FR670507E

802.11n HT20



Date: 14.JUL.2016 17:51:48

802.11n HT40



Date: 14.JUL.2016 19:02:58

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