

FCC Test Report

APPLICANT : INFINIX MOBILITY LIMITED
EQUIPMENT : Mobile Phone
BRAND NAME : Infinix
MODEL NAME : X604
FCC ID : 2AIZN-X604
STANDARD : FCC 47 CFR FCC Part 15 Subpart B
CLASSIFICATION : Certification

The product was received on Mar. 09, 2018 and testing was completed on Mar. 23, 2018.

We, Sporton International (Shenzhen) Inc., would like to declare that the tested sample has been evaluated in accordance with the test procedures given in ANSI C63.4-2014 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.



Approved by: Eric Shih / Manager



Sporton International (Shenzhen) Inc.

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Guangdong Province 518055 China**



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REVISION HISTORY

| REPORT NO. | VERSION | DESCRIPTION | ISSUED DATE |
|------------|---------|-------------------------|--------------|
| FC830917 | Rev. 01 | Initial issue of report | May 04, 2018 |
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SUMMARY OF TEST RESULT

| Report Section | FCC Rule | Description | Limit | Result | Remark |
|----------------|----------|-----------------------|-----------------|--------|---|
| 3.1 | 15.107 | AC Conducted Emission | < 15.107 limits | PASS | Under limit 1.70 dB at 0.580 MHz |
| 3.2 | 15.109 | Radiated Emission | < 15.109 limits | PASS | Under limit 4.30 dB at 159.98 MHz |

1. General Description

1.1. Applicant

INFINIX MOBILITY LIMITED

RMS 05-15, 13A/F SOUTH TOWER WORLD FINANCE CTR HARBOUR CITY 17 CANTON RD TST
KLN HONG KONG

1.2. Manufacturer

SHENZHEN TECNO TECHNOLOGY CO., LTD.

1/-4/TH FLOOR, 7TH FLOOR, 3RD BUILDING, PACIFIC INDUSTRIAL PARK, NO.2088, SHENYAN
ROAD, YANTIAN DISTRICT, SHENZHEN, GUANGDONG, CHINA

1.3. Product Feature of Equipment Under Test

| Product Feature | |
|---------------------------------|--|
| Equipment | Mobile Phone |
| Brand Name | Infinix |
| Model Name | X604 |
| FCC ID | 2AIZN-X604 |
| EUT supports Radios application | GSM/GPRS/EGPRS/WCDMA/HSPA/DC-HSDPA/ HSPA+(16QAM uplink is not supported)/LTE WLAN 2.4GHz 802.11b/g/n HT20/HT40 Bluetooth v3.0+EDR/ Bluetooth v4.0 LE/ Bluetooth v4.1 LE/ Bluetooth v4.2 LE |
| IMEI Code | Conduction: 355784090025842/355784090025859 Radiation: 355784090025883/355784090025891 |
| HW Version | V1.4 |
| SW Version | X604-H633HIJ-O-PR2-20180124V1 |
| EUT Stage | Identical Prototype |

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

1.4. Product Specification of Equipment Under Test

| Standards-related Product Specification | |
|---|---|
| Tx Frequency | GSM850: 824.2 MHz ~ 848.8 MHz GSM1900: 1850.2 MHz ~ 1909.8MHz WCDMA Band V: 826.4 MHz ~ 846.6 MHz WCDMA Band IV : 1712.4 MHz ~ 1752.6 MHz WCDMA Band II: 1852.4 MHz ~ 1907.6 MHz LTE Band 2 : 1850.7 MHz ~ 1909.3 MHz LTE Band 4 : 1710.7 MHz ~ 1754.3 MHz LTE Band 7 : 2502.5 MHz ~ 2567.5 MHz 802.11b/g/n: 2412 MHz ~ 2462 MHz Bluetooth: 2402 MHz ~ 2480 MHz |
| Rx Frequency | GSM850: 869.2 MHz ~ 893.8 MHz GSM1900: 1930.2 MHz ~ 1989.8 MHz WCDMA Band V: 871.4 MHz ~ 891.6 MHz WCDMA Band IV : 2112.4 MHz ~ 2152.6 MHz WCDMA Band II: 1932.4 MHz ~ 1987.6 MHz LTE Band 2 : 1930.7 MHz ~ 1989.3 MHz LTE Band 4 : 2110.7 MHz ~ 2154.3 MHz LTE Band 7: 2622.5 MHz ~ 2687.5 MHz 802.11b/g/n: 2412 MHz ~ 2462 MHz GNSS: 1559 MHz ~ 1610 MHz FM : 88 MHz ~ 108 MHz |
| Antenna Type | WWAN : Fixed Internal Antenna Bluetooth/WLAN/GNSS : IFA Antenna FM: External headset Antenna |
| Type of Modulation | GSM: GMSK GPRS: GMSK EDGE(MCS 0-4): GMSK / (MCS 5-9): 8PSK WCDMA: BPSK (Uplink) HSDPA/ DC-HSDPA: QPSK (Uplink) HSUPA: QPSK (Uplink) HSPA+: 16QAM (Uplink is not supported) DC-HSDPA: 64QAM LTE: QPSK / 16QAM 802.11b : DSSS (DBPSK / DQPSK / CCK) 802.11g/n : OFDM (BPSK / QPSK / 16QAM / 64QAM) Bluetooth LE : GFSK Bluetooth (1Mbps) : GFSK Bluetooth (2Mbps) : $\pi/4$ -DQPSK Bluetooth (3Mbps) : 8-DPSK GNSS : BPSK FM |

Note: GNSS=GPS+GLONASS+SBAS

1.5. Modification of EUT

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

1.6. Test Location

Sporton International (Shenzhen) Inc. is accredited to ISO 17025 by National Voluntary Laboratory Accreditation Program (NVLAP code: 600156-0) and the FCC designation No are CN5018 and CN5019.

| | | |
|---------------------------|--|---------------------------------------|
| Test Site | Sporton International (Shenzhen) Inc. | |
| Test Site Location | 1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan Shenzhen City Guangdong Province 518055 China TEL: +86-755-8637-9589 FAX: +86-755-8637-9595 | |
| Test Site No. | Sporton Site No. | FCC Test Firm Registration No. |
| | CO01-SZ | 251365 |

| | | |
|---------------------------|---|---------------------------------------|
| 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. |
| | 03CH03-SZ | 577730 |

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 47 CFR FCC Part 15 Subpart B
- ♦ ANSI C63.4-2014

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

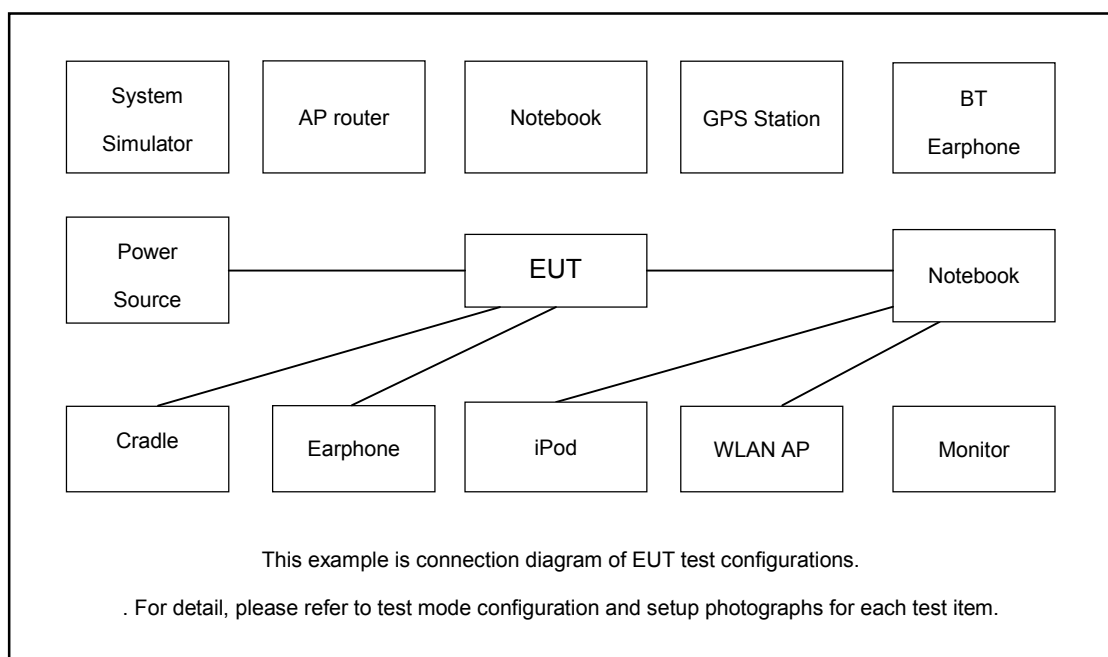
2.1. Test Mode

The EUT has been associated with peripherals pursuant to ANSI C63.4-2014 and configuration operated in a manner tended to maximize its emission characteristics in a typical application.

Frequency range investigated: conduction emission (150 kHz to 30 MHz), radiation emission (30MHz to the 5th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower).

| Test Items | Function Type |
|---|---|
| AC Conducted Emission | Mode 1: LTE Band 2 Idle + Bluetooth Idle + WLAN(2.4G) Idle + USB Cable (Charging from Adapter) + Earphone + MPEG4 |
| | Mode 2: LTE Band 4 Idle + Bluetooth Idle + WLAN(2.4G) Idle + USB Cable (Charging from Adapter) + Earphone + FM Rx |
| | Mode 3: USB Cable (Data Link with Notebook) + Earphone |
| Radiated Emissions | Mode 1: LTE Band 2 Idle + Bluetooth Idle + WLAN(2.4G) Idle + USB Cable (Charging from Adapter) + Earphone + MPEG4 |
| | Mode 2: LTE Band 4 Idle + Bluetooth Idle + WLAN(2.4G) Idle + USB Cable (Charging from Adapter) + Earphone + FM Rx |
| | Mode 3: USB Cable (Data Link with Notebook) + Earphone |
| Remark: <ol style="list-style-type: none"> 1. The worst case of AC is mode 2; only the test data of this mode is reported. 2. The worst case of RE is mode 3; only the test data of this mode is reported. 3. Data Link with Notebook means data application transferred mode between EUT and Notebook. | |

2.2.Connection Diagram of Test System



2.3. Support Unit used in test configuration and system

| Item | Equipment | Trade Name | Model Name | FCC ID | Data Cable | Power Cord |
|------|--------------------|------------|------------|-------------|-----------------|--|
| 1. | System Simulator | Anritsu | MT8820C | N/A | N/A | Unshielded, 1.8 m |
| 2. | System Simulator | R&S | SMB100A | N/A | N/A | Unshielded, 1.8 m |
| 3. | GNSS Station | RACELOGIC | RLLS03-2RP | N/A | N/A | Unshielded, 1.8 m |
| 4. | WLAN AP | ASUSTek | RT-AC66U | MSQ-RTAC66U | N/A | Unshielded, 2.7 m |
| 5. | WLAN AP | Dlink | DIR-820L | KA2IR820LA1 | N/A | Unshielded, 1.8 m |
| 6. | Bluetooth Earphone | Samsung | EO-MG900 | N/A | N/A | N/A |
| 7. | Notebook | Lenovo | E540 | FCC DoC | N/A | AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m |
| 8. | iPod nano 8GB | Apple | MC690 ZP/A | FCC DoC | Shielded, 1.2 m | N/A |
| 9. | iPod | Apple | MC525 ZP/A | FCC DoC | Shielded, 1.0 m | N/A |
| 10. | SD Card | Kingston | MicroSD HC | FCC DoC | N/A | N/A |

2.4. EUT Operation Test Setup

The EUT was in GSM or WCDMA or LTE idle mode during the testing. The EUT was synchronized to the BCCH, and is in continuous receiving mode by setting system simulator's paging reorganization.

At the same time, the EUT was attached to the Bluetooth earphone or WLAN AP, and the following programs installed in the EUT were programmed during the test.

1. Data application is transferred between Notebook and EUT via USB cable.
2. Turn on FM receiver function to make the EUT receive continuous signals from FM station.
3. Execute "Video player" to play MPEG4 files.

3. Test Result

3.1. Test of AC Conducted Emission Measurement

3.1.1 Limits 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.

<Class B Limit>

| Frequency of emission (MHz) | Conducted limit (dBuV) | |
|--------------------------------|------------------------|-----------|
| | 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.

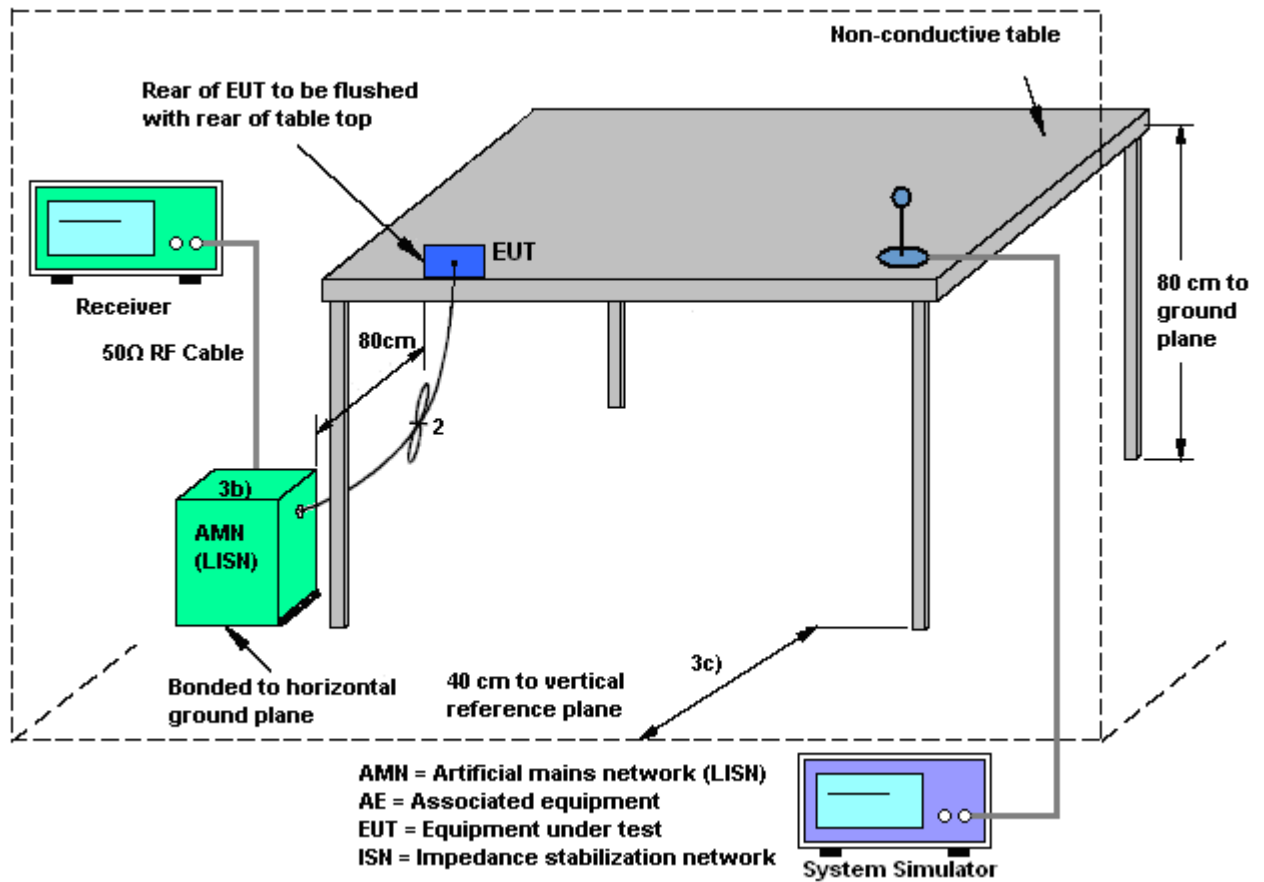
3.1.2 Measuring Instruments

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

3.1.3 Test Procedure

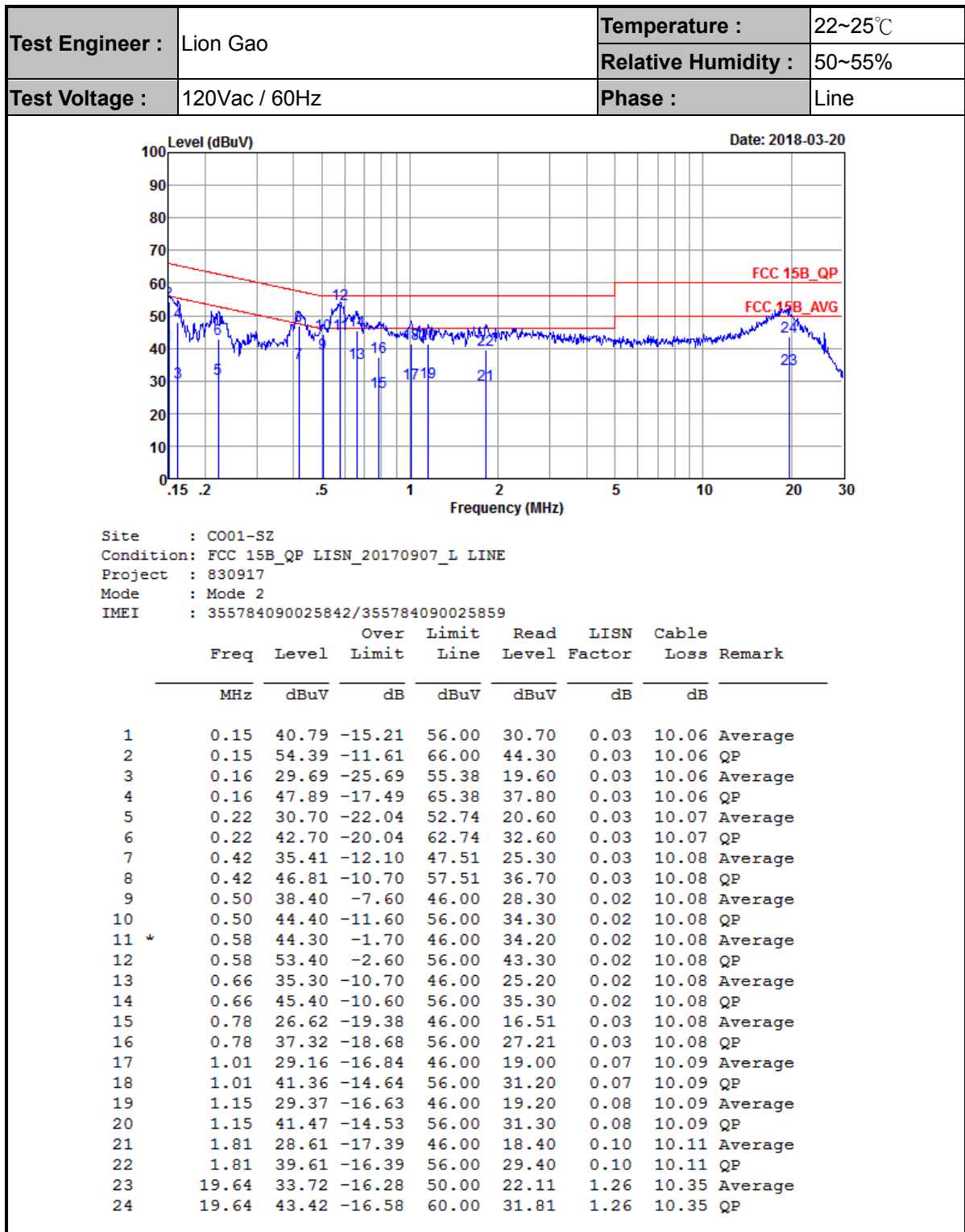
1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
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 (IF Bandwidth = 9kHz) with Maximum Hold Mode. Then measurement is also conducted by Average Detector and Quasi-Peak Detector Function respectively.

3.1.4 Test Setup



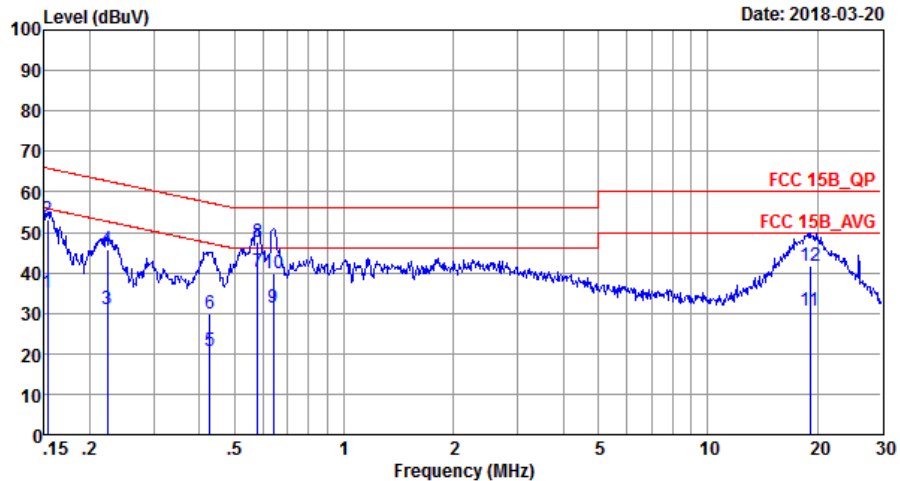


3.1.5 Test Result of AC Conducted Emission





| | | | |
|-----------------|---------------|---------------------|---------|
| Test Engineer : | Lion Gao | Temperature : | 22~25°C |
| | | Relative Humidity : | 50~55% |
| Test Voltage : | 120Vac / 60Hz | Phase : | Neutral |



Site : C001-SZ
Condition: FCC 15B_QP LISN_20170907_N NEUTRAL
Project : 830917
Mode : Mode 2
IMEI : 355784090025842/355784090025859

| | Freq | Level | Over Limit | Limit Line | Read Level | LISN Factor | Cable Loss | Remark |
|-----|-------|-------|------------|------------|------------|-------------|------------|---------|
| | MHz | dBuV | dB | dBuV | dBuV | dB | dB | |
| 1 | 0.15 | 34.99 | -20.83 | 55.82 | 24.90 | 0.03 | 10.06 | Average |
| 2 | 0.15 | 53.09 | -12.73 | 65.82 | 43.00 | 0.03 | 10.06 | QP |
| 3 | 0.22 | 31.00 | -21.70 | 52.70 | 20.90 | 0.03 | 10.07 | Average |
| 4 | 0.22 | 45.80 | -16.90 | 62.70 | 35.70 | 0.03 | 10.07 | QP |
| 5 | 0.43 | 20.50 | -26.79 | 47.29 | 10.40 | 0.02 | 10.08 | Average |
| 6 | 0.43 | 30.00 | -27.29 | 57.29 | 19.90 | 0.02 | 10.08 | QP |
| 7 * | 0.58 | 40.30 | -5.70 | 46.00 | 30.20 | 0.02 | 10.08 | Average |
| 8 | 0.58 | 47.70 | -8.30 | 56.00 | 37.60 | 0.02 | 10.08 | QP |
| 9 | 0.64 | 31.40 | -14.60 | 46.00 | 21.30 | 0.02 | 10.08 | Average |
| 10 | 0.64 | 39.70 | -16.30 | 56.00 | 29.60 | 0.02 | 10.08 | QP |
| 11 | 19.12 | 30.60 | -19.40 | 50.00 | 19.70 | 0.54 | 10.36 | Average |
| 12 | 19.12 | 41.60 | -18.40 | 60.00 | 30.70 | 0.54 | 10.36 | QP |

3.2. Test of Radiated Emission Measurement

3.2.1. Limit of Radiated Emission

The emissions from an unintentional radiator shall not exceed the field strength levels specified in the following table:

<Class B Limit>

| Frequency (MHz) | Field Strength (microvolts/meter) | Measurement Distance (meters) |
|--------------------|--------------------------------------|----------------------------------|
| 30 – 88 | 100 | 3 |
| 88 – 216 | 150 | 3 |
| 216 - 960 | 200 | 3 |
| Above 960 | 500 | 3 |

3.2.2. Measuring Instruments

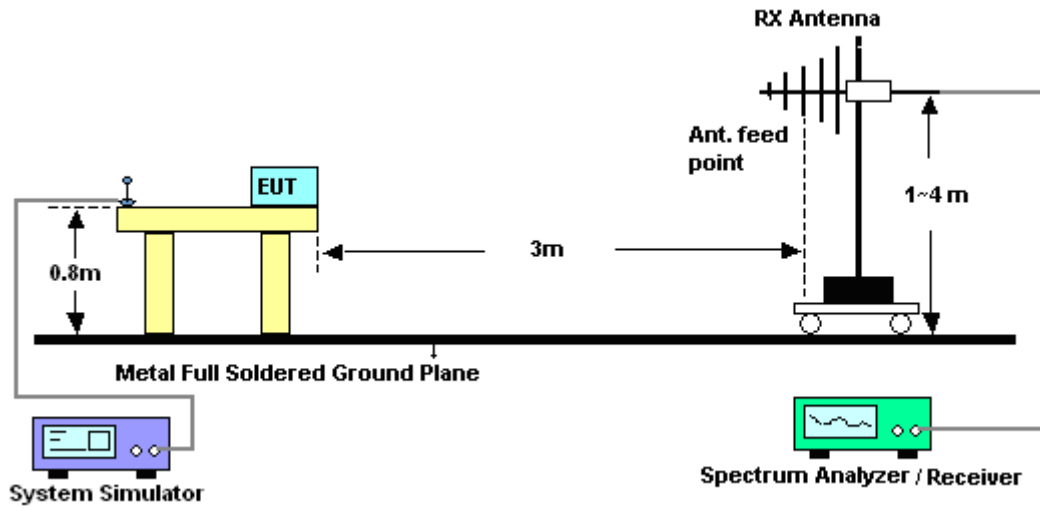
The measuring equipment is listed in the section 4 of this test report.

3.2.3. Test Procedures

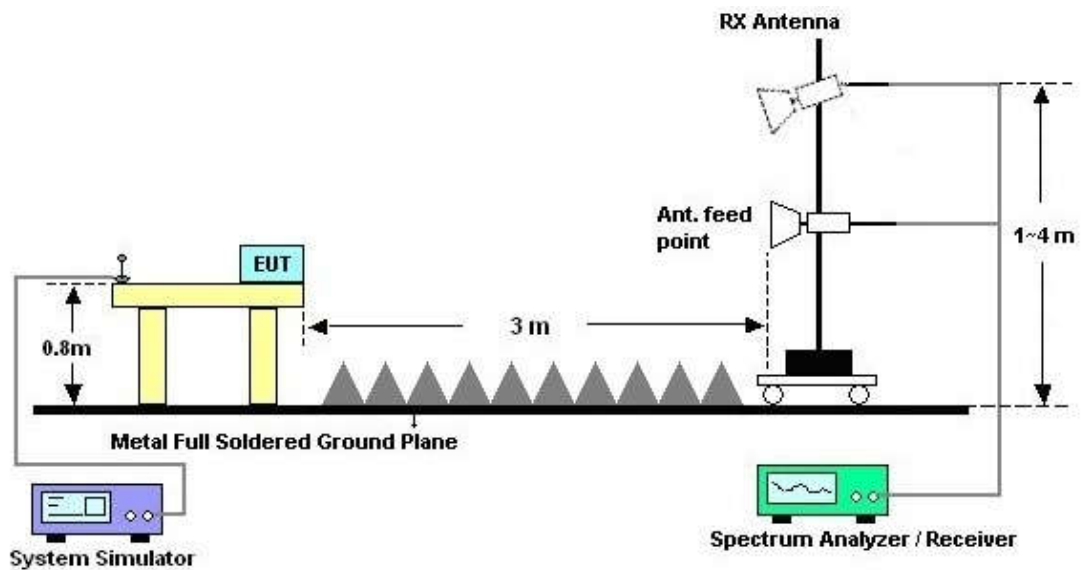
1. The EUT was placed on a turntable with 0.8 meter above ground.
2. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest radiation.
4. The antenna is a Bi-Log antenna and its height is adjusted between one to 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 tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
6. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode (RBW=120kHz/VBW=300kHz for frequency below 1GHz; RBW=1MHz VBW=3MHz (Peak), RBW=1MHz/VBW=10Hz (Average) for frequency above 1GHz).
7. If the emission level of the EUT in peak mode was 3 dB lower than the limit specified, peak values of EUT will be reported. Otherwise, the emission will be repeated by using the quasi-peak method and reported.
8. Emission level (dBμV/m) = 20 log Emission level (μV/m)
9. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level

3.2.4. Test Setup of Radiated Emission

For radiated emissions from 30MHz to 1GHz

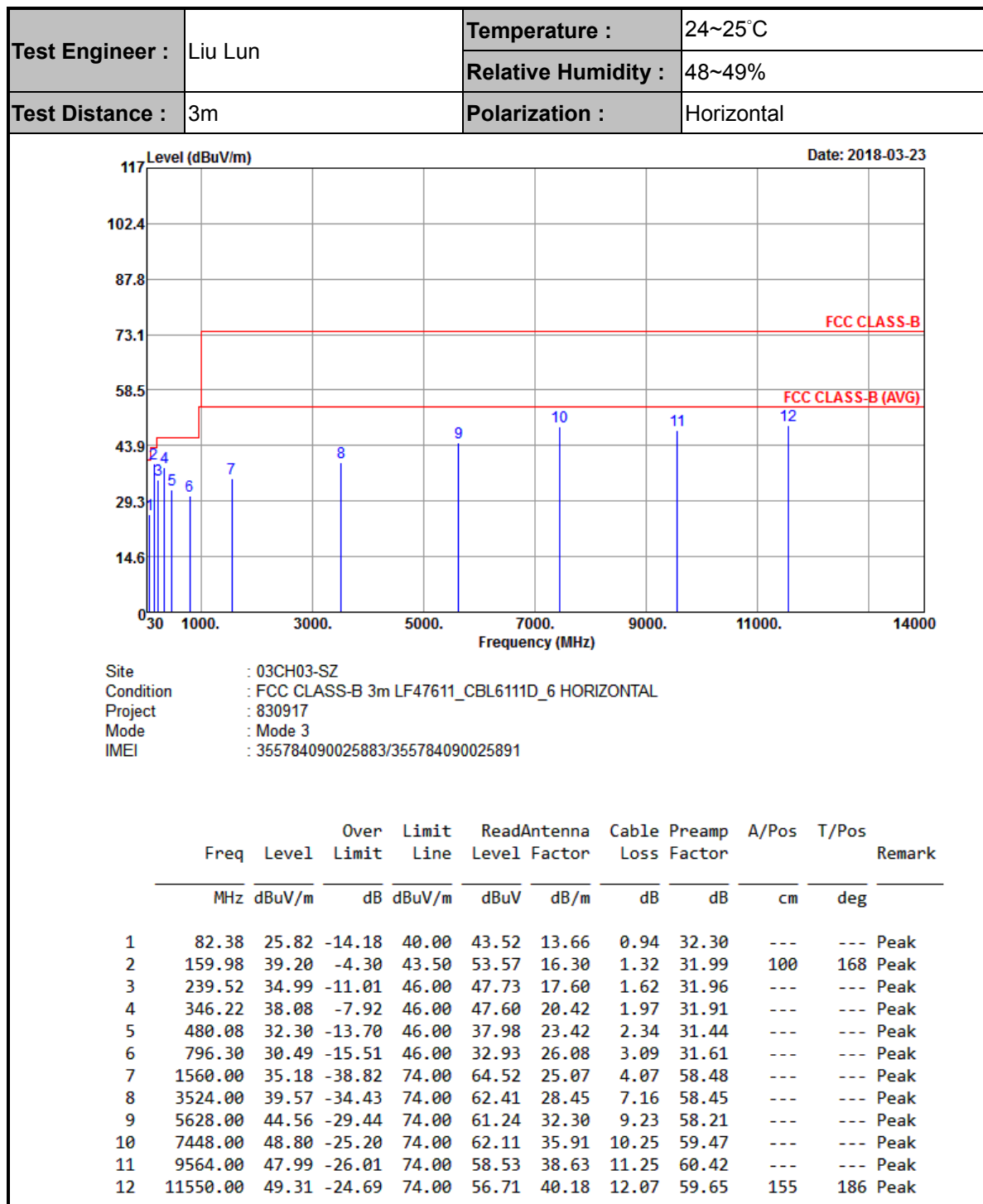


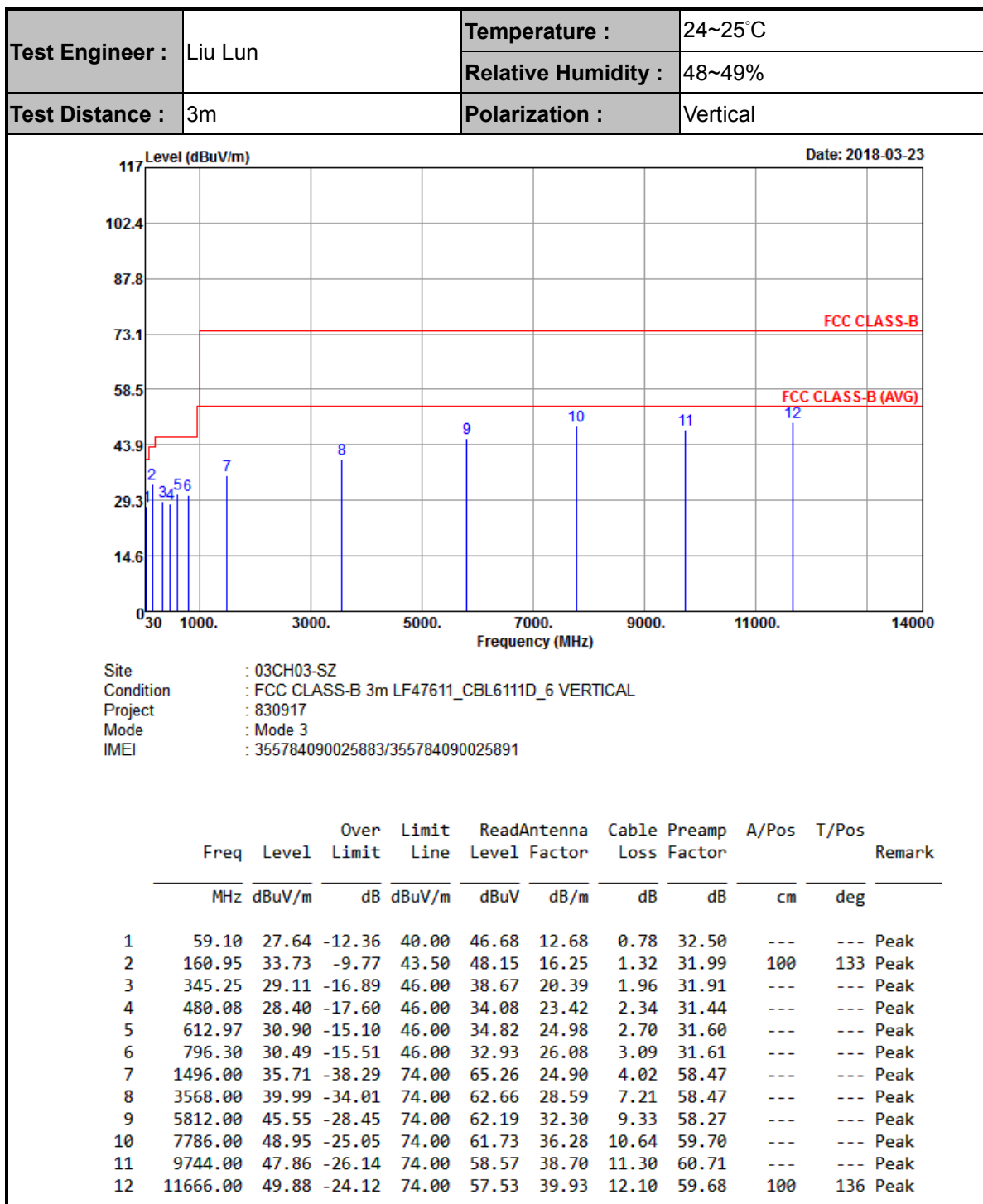
For radiated emissions above 1GHz





3.2.5. Test Result of Radiated Emission







4. List of Measuring Equipment

| Instrument | Manufacturer | Model No. | Serial No. | Characteristics | Calibration Date | Test Date | Due Date | Remark |
|-----------------------------------|--------------|------------------------------|--------------|-----------------|------------------|---------------|---------------|-----------------------|
| EMI Test Receiver&SA | KEYSIGHT | N9038A | MY54450083 | 20Hz~8.4GHz | Apr. 20, 2017 | Mar. 23, 2018 | Apr. 19, 2018 | Radiation (03CH03-SZ) |
| EXA Spectrum Analyzer | KEYSIGHT | N9010A | MY55150246 | 10Hz~44GHz; | Apr. 20, 2017 | Mar. 23, 2018 | Apr. 19, 2018 | Radiation (03CH03-SZ) |
| Bilog Antenna | TeseQ | CBL6112D | 35408 | 30MHz-2GHz | May 13, 2018 | Mar. 23, 2018 | May 12, 2019 | Radiation (03CH03-SZ) |
| Double Ridge Horn Antenna | SCHWARZBECK | BBHA9120D | 9120D-1355 | 1GHz~18GHz | Jul. 09, 2017 | Mar. 23, 2018 | Jul. 08, 2018 | Radiation (03CH03-SZ) |
| LF Amplifier | Burgeon | BPA-530 | 102210 | 0.01Hz~3000MHz | Oct. 19, 2017 | Mar. 23, 2018 | Oct. 18, 2018 | Radiation (03CH03-SZ) |
| HF Amplifier | MITEQ | AMF-7D-00101 800-30-10P-R | 1943528 | 1GHz~18GHz | Oct. 19, 2017 | Mar. 23, 2018 | Oct. 18, 2018 | Radiation (03CH03-SZ) |
| AC Power Source | Chroma | 61601 | 616010001985 | N/A | NCR | Mar. 23, 2018 | NCR | Radiation (03CH03-SZ) |
| Turn Table | EM | EM1000 | N/A | 0~360 degree | NCR | Mar. 23, 2018 | NCR | Radiation (03CH03-SZ) |
| Antenna Mast | EM | EM1000 | N/A | 1 m~4 m | NCR | Mar. 23, 2018 | NCR | Radiation (03CH03-SZ) |
| EMI Receiver | R&S | ESR7 | 101630 | 9kHz~7GHz; | Dec. 26, 2017 | Mar. 20, 2018 | Dec. 25, 2018 | Conduction (CO01-SZ) |
| AC LISN | EMCO | 3816/2SH | 00103912 | 9kHz~30MHz | Dec. 26, 2017 | Mar. 20, 2018 | Dec. 25, 2018 | Conduction (CO01-SZ) |
| AC LISN (for auxiliary equipment) | MessTec | 3816/2SH | 00103892 | 9kHz~30MHz | Nov. 01, 2017 | Mar. 20, 2018 | Oct. 31, 2018 | Conduction (CO01-SZ) |
| AC Power Source | Chroma | 61602 | 616020000891 | 100Vac~250Vac | Jul. 19, 2017 | Mar. 20, 2018 | Jul. 18, 2018 | Conduction (CO01-SZ) |

NCR: No Calibration Required

5. Uncertainty of Evaluation

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

| | |
|---|--------|
| Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$) | 2.6 dB |
|---|--------|

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

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

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

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

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

| | |
|---|--------|
| Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$) | 4.6 dB |
|---|--------|