

FCC Test Report

| APPLICANT | : | Brightstar Corporation |
|----------------|---|----------------------------------|
| EQUIPMENT | : | Mobile Phone |
| BRAND NAME | : | Αννίο |
| MODEL NAME | : | Avvio 785S/Avvio 785 |
| FCC ID | : | WVBA785X |
| STANDARD | : | FCC 47 CFR FCC Part 15 Subpart B |
| CLASSIFICATION | : | Certification |

The product was received on Aug. 16, 2013 and testing was completed on Sep. 03, 2013. We, SPORTON INTERNATIONAL (SHENZHEN) INC., would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.4-2003 and shown to be compliant 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.

Lunis Win

Reviewed by: Louis Wu / Manager

Approved by: Jones Tsai / Manager



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SPORTON INTERNATIONAL (SHENZHEN) INC. TEL : 86-755- 3320-2398 FCC ID : WVBA785X Page Number: 1 of 24Report Issued Date: Sep. 13, 2013Report Version: Rev. 01



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APPENDIX A. SETUP PHOTOGRAPHS



REVISION HISTORY

| REPORT NO. | VERSION | DESCRIPTION | ISSUED DATE |
|------------|---------|-------------------------|---------------|
| FC381604 | Rev. 01 | Initial issue of report | Sep. 13, 2013 |
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SUMMARY OF TEST RESULT

| Report Section | FCC Rule | Description | Limit | Result | Remark |
|-------------------|----------|-----------------------|-----------------|--------|-------------|
| | | | | | Under limit |
| 3.1 | 15.107 | AC Conducted Emission | < 15.107 limits | PASS | 8.90 dB at |
| | | | | | 3.800 MHz |
| | | | | | Under limit |
| 3.2 | 15.109 | Radiated Emission | < 15.109 limits | PASS | 12.62 dB at |
| | | | | | 165.800 MHz |



1. General Description

1.1. Applicant

Brightstar Corporation

9725 NW 117th Ave., Miami, Florida, FL 33178, United States

1.2. Manufacturer

Tinno Mobile Technology Corp.

4/F., H-3 Building, OCT Eastern Industrial Park. No. 1 XiangShan East Road., Nan Shan District, Shenzhen, P.R.China

1.3. Feature of Equipment Under Test

| | Product Feature |
|---------------------------------|---|
| Equipment | Mobile Phone |
| Brand Name | Avvio |
| Model Name | Avvio 785S/Avvio 785 |
| FCC ID | WVBA785X |
| EUT supports Radios application | GSM/GPRS/EGPRS/WCDMA/HSPA/HSPA+(Downlink Only)/WLAN 2.4GHz 802.11bgn/Bluetooth v3.0 + EDR/ Bluetooth v4.0 |
| HW Version | V1.0 |
| SW Version | MEU_AN450_Brazil_V1.03 |
| EUT Stage | Production Unit |

Remark:

- 1. The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.
- 2 There are two different types of EUT. They are single SIM card mobile (Model Name: Avvio 785) and dual SIM card mobile (Model Name: Avvio 785S). The others are the same including circuit design, PCB board, structure and all components. It is special to declare. After pre-scan two types of EUT, we found test result of the sample that dual SIM (Model Name: Avvio 785S) was the worst, so we choose dual SIM card mobile to perform all test.
- 3 · For dual SIM card mobile, SIM1 supports GSM and WCDMA functions, and SIM2 only supports GSM function.



1.4. Product Specification of Equipment Under Test

| Product Specif | ication subjective to this standard |
|------------------------------|---|
| Tx Frequency Rx 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 II : 1852.4 MHz ~ 1907.6 MHz 802.11b/g/n: 2412 MHz ~ 2462 MHz Bluetooth: 2402 MHz ~ 2480 MHz GSM850 : 869.2 MHz ~ 2480 MHz GSM1900 : 1930.2 MHz ~ 1989.8 MHz WCDMA Band V : 871.4 MHz ~ 891.6 MHz WCDMA Band II : 1932.4 MHz ~ 1987.6 MHz 802.11b/g/n: 2412 MHz ~ 2462 MHz Bluetooth: 2402 MHz ~ 2480 MHz GPS : 1.57542 GHz |
| Antenna Type | WWAN : PIFA Antenna WLAN : PIFA Antenna Bluetooth : PIFA Antenna |
| Type of Modulation | GSM: GMSK GPRS: GMSK EDGE(MCS 0-4): GMSK / (MCS 5-9): 8PSK WCDMA: QPSK (Uplink) HSDPA: QPSK (Uplink) HSUPA: QPSK (Uplink) HSPA+ :16QAM (Downlink Only) 802.11b : DSSS (DBPSK / DQPSK / CCK) 802.11g/n : OFDM (BPSK / QPSK / 16QAM / 64QAM) Bluetooth BR (1Mbps) : GFSK Bluetooth EDR (2Mbps) : π /4-DQPSK Bluetooth EDR (3Mbps) : 8-DPSK Bluetooth v4.0 - LE : GFSK GPS : BPSK |

1.5. Modification of EUT

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



1.6. Test Site

| Test Site | SPORTON INTERN | NATIONAL (SHENZI | HEN) INC. |
|--------------------|-------------------|------------------|---|
| Test Site Location | - | | uth, Shahe River west, Fengzeyuan n, Guangdong, P.R.C. |
| | TEL: +86-755- 332 | 0-2398 | |
| Test Site No | Sporton | Site No. | FCC Registration No. |
| Test Site No. | CO01-SZ | 03CH01-SZ | 831040 |

1.7. Applied 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 C63.4-2003

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 C63.4-2003 and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conduction (150 kHz to 30 MHz), radiation (30MHz to the 5th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower).

The following tables are showing the test modes as the worst cases and recorded in this report.

| | | Te | st Conditio | on |
|------|---|-------------|-------------|-----------|
| ltem | EUT Configuration | EMI | EMI | EMI |
| | | AC | RE<1G | RE≥1G |
| 1. | Charging Mode (EUT with adapter) | \boxtimes | \boxtimes | Note 1 |
| 2. | Data application transferred mode (EUT with notebook) | \boxtimes | \boxtimes | \square |

Abbreviations:

- EMI AC: AC conducted emissions
- EMI RE ≥ 1G: EUT radiated emissions ≥ 1GHz
- EMI RE < 1G: EUT radiated emissions < 1GHz

Note 1: Testing for this mode is not required or not the worst case.

Remark: For signal above 1GHz, the worst case was test item 2.



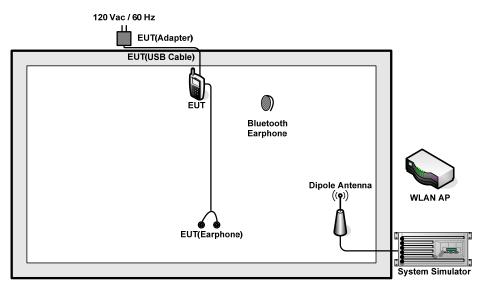
| Test Items | EUT Configure Mode | Function Type |
|-------------------------------|--------------------------|---|
| AC Conducted | 1/0 | Mode 1: GSM850 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter) + Camera + Earphone + SIM 1 <fig.1></fig.1> |
| Emission | 1/2 | Mode 2: WCDMA Band II Idle + Bluetooth Idle + WLAN Idle + USB Cable (Data Link with Notebook) + GPS Rx + Earphone + SIM 1 <fig.2></fig.2> |
| Radiated | 4/0 | Mode 1: GSM850 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter) + Camera + Earphone + SIM 1 <fig.1></fig.1> |
| Emissions < 1GHz | 1/2 | Mode 2: WCDMA Band II Idle + Bluetooth Idle + WLAN Idle + USB Cable (Data Link with Notebook) + GPS Rx + Earphone + SIM 1 <fig.2></fig.2> |
| Radiated Emissions \ge 1GHz | 2 | Mode 1: WCDMA Band II Idle + Bluetooth Idle + WLAN Idle + USB Cable (Data Link with Notebook) + GPS Rx + Earphone + SIM 1 <fig.2></fig.2> |
| Remark: | case of AC is | mode 1 and the LISB Link Mode of AC is mode 2: the test data of |

 The worst case of AC is mode 1, and the USB Link Mode of AC is mode 2; the test data of these modes are reported.

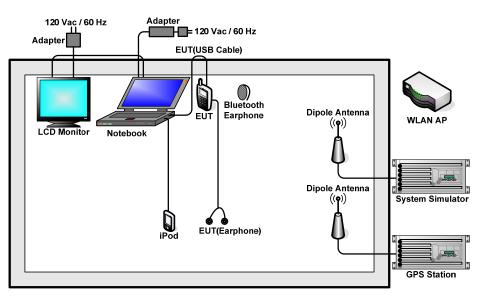
- 2. The worst case of RE < 1G is mode 2; only the test data of this mode is reported.
- 3. Link with Notebook means data application transferred mode between EUT and Notebook.



2.2. Connection Diagram of Test System







<Fig.2>



| ltem | Equipment | Trade Name | Model Name | FCC ID | Data Cable | Power Cord |
|------|-----------------------|------------|------------|---------|----------------|--|
| 1. | System Simulator | Agilent | E5515C | N/A | N/A | Unshielded, 1.8 m |
| 2. | GPS Station | T&E | GS-50 | N/A | N/A | Unshielded, 1.8 m |
| 3. | WLAN AP | D-Link | DIR-612 | N/A | N/A | Unshielded, 1.8 m |
| 4. | WLAN AP | D-Link | DIR-615 | N/A | N/A | Unshielded, 1.8 m |
| 5. | Bluetooth Earphone | Nokia | BH-108 | N/A | N/A | N/A |
| 6. | Notebook | DELL | P08S | FCC DoC | N/A | AC I/P: Unshielded, 1.8 m DC O/P: Shielded, 1.8 m |
| 7. | Monitor | DELL | IN1940MWB | FCC DoC | Shielded, 1.2m | Unshielded, 1.8 m |
| 8. | iPod | Apple | MC525 ZP/A | FCC DoC | Shielded, 1.0m | N/A |

2.3. Support Unit used in test configuration and system

2.4. EUT Operation Test Setup

The EUT was in GSM or WCDMA idle mode during the testing. The EUT was synchronized to the BCCH, and was 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. Execute the program, "Winthrax.exe" under WIN7 installed in notebook for files transfer with EUT via USB cable.
- 2. Turn on GPS function to make the EUT receive continuous signals from GPS station.
- 3. Turn on camera to capture images.
- 4. Execute "H Pattern" to show H Pattern via VGA Cable on the Monitor.



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.

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

3.1.2 Measuring Instruments

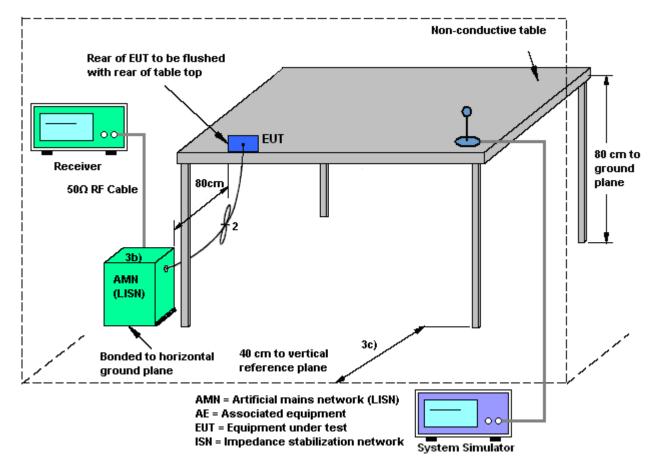
See list of measuring instruments of this test report.

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 with Maximum Hold Mode.



3.1.4 Test Setup

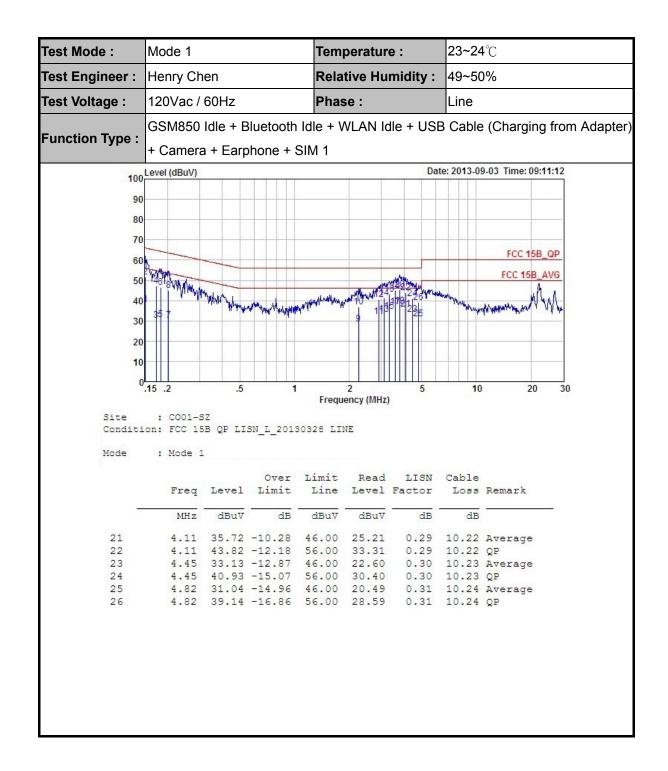




3.1.5 Test Result of AC Conducted Emission

| Test Voltage : 120V Function Type : GSM + Car 100 11 12 13 10 11 12 13 | MMM/M/M/W/W/W/W/W/W/W/W/W/W/W/W/W/W/W/W | phone + S | Phas Idle + V SIM 1 | VLAN Id | | e: 2013-09 | | 11:12 | apter |
|--|---|--------------------------------|---------------------------|-------------------------|--------|-------------|-------------------------------------|----------------------|-------|
| Function Type : GSM + Car 100 20 30 40 30 40 30 40 30 40 30 40 30 40 30 40 30 40 30 40 30 40 30 40 30 40 40 30 40 40 30 40 40 40 35 7 40 40 40 40 40 40 40 40 40 40 40 40 40 | 1850 Idle + I mera + Ear IBUV) | phone + S | Idle + V SIM 1 | VLAN Id | Dat | 3 Cable | -03 Time: 09: FCC 15E FCC 15B | 11:12 B_QP AVG | apter |
| Function Type : + Car + Condition: FC + Car + Ca | mera + Ear | phone + S | SIM 1 | 2 ency (MHz) | Dat | e: 2013-09 | -03 Time: 09: FCC 15E FCC 15B | 11:12 B_QP AVG | apter |
| + Can + Can 100 100 100 100 100 100 100 10 | IBUV) | | ۲requ 30328 LII | 2 ency (MHz) | 5 5 | | FCC 15E | | |
| 90 80 70 60 50 40 35 70 60 50 40 35 70 60 50 40 35 70 60 50 40 35 70 60 50 40 35 70 60 50 40 50 60 40 50 60 50 60 40 50 60 40 50 60 50 60 40 50 60 50 60 50 60 50 60 50 60 50 60 50 60 50 60 50 60 50 60 50 60 50 60 50 60 50 60 50 60 60 50 60 60 50 60 60 50 60 60 50 60 60 60 60 60 10 90 15.2 50 60 60 10 90 15.2 50 60 60 10 90 15.2 50 60 60 10 90 15.2 50 10 10 02 00 3 00 4 00 5 00 60 60 70 00 3 00 4 00 5 00 60 70 00 3 00 4 00 5 00 60 70 00 5 00 6 00 7 00 8 00 9 2 10 10 2 10 10 10 10 10 10 10 10 10 10 | .5 CO1-SZ CC 15B_QP L | 5 1 ISN_L_2013 Over | Frequ | 2 ency (MHz) | 5 5 | | FCC 15E | | |
| 90 80 70 60 50 40 35 70 60 50 40 35 70 60 50 40 35 70 60 50 40 35 70 60 50 40 35 70 60 50 40 50 60 40 50 60 50 60 40 50 60 40 50 60 50 60 40 50 60 50 60 50 60 50 60 50 60 50 60 50 60 50 60 50 60 50 60 50 60 50 60 50 60 50 60 50 60 60 50 60 60 50 60 60 50 60 60 50 60 60 60 60 60 10 90 15.2 50 60 60 10 90 15.2 50 60 60 10 90 15.2 50 60 60 10 90 15.2 50 10 10 02 00 3 00 4 00 5 00 60 60 70 00 3 00 4 00 5 00 60 70 00 3 00 4 00 5 00 60 70 00 5 00 6 00 7 00 8 00 9 2 10 10 2 10 10 10 10 10 10 10 10 10 10 | .5 CO1-SZ CC 15B_QP L | 5 1 ISN_L_2013 Over | Frequ | 2 ency (MHz) | - | | FCC 15B_ | AVG W | |
| 80 70 60 50 40 35 70 60 50 40 35 70 60 50 40 35 70 10 0 15 20 10 0 15 20 10 0 15 20 10 10 15 20 10 10 10 10 10 10 10 10 10 1 | .5 001-SZ CC 15B_QP L: | 5 1 ISN_L_2013 Over | Frequ | 2 ency (MHz) | - | | FCC 15B_ | AVG W | |
| 70 60 50 40 30 20 10 10 20 10 10 20 10 10 20 10 10 20 10 10 20 10 10 20 10 10 20 10 10 20 10 10 20 10 10 20 10 10 20 10 10 20 20 10 20 20 10 20 20 20 20 20 20 20 20 20 2 | .5 001-SZ CC 15B_QP L: | 5 1 ISN_L_2013 Over | Frequ | 2 ency (MHz) | - | | FCC 15B_ | AVG W | |
| 60 50 40 30 20 10 0 15.2 Site : CC Condition: FC Mode : Mc F: 1 0 2 0 3 0 4 0 5 0 6 0 7 0 8 0 9 2 10 2 10 2 10 10 2 15.2 Site : CC Condition: FC Mode : Mc 5 0 1 1 0 2 0 3 0 1 1 0 2 0 3 0 1 1 0 2 0 1 1 0 2 0 3 0 1 1 0 2 0 3 0 1 1 0 2 0 3 0 1 1 0 2 0 3 0 1 1 0 2 0 3 0 4 0 0 3 0 4 0 0 3 0 4 0 0 3 0 4 0 0 3 0 1 2 0 3 0 4 0 0 3 0 1 2 0 3 0 4 0 0 3 0 1 2 0 3 0 1 2 0 3 0 1 2 0 3 0 1 2 0 3 0 1 2 0 1 2 0 3 0 1 2 0 3 0 1 2 0 3 0 1 2 0 3 0 1 2 0 1 2 0 3 0 1 2 1 0 2 11 2 2 13 3 3 3 3 3 1 1 1 1 1 1 1 1 1 1 1 1 1 | .5 001-SZ CC 15B_QP L: | 5 1 ISN_L_2013 Over | Frequ | 2 ency (MHz) | - | | FCC 15B_ | AVG W | |
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| 20 10 0.15.2 Site : CC Condition: FC Mode : Mode F. 1 0 2 0 3 0 4 0 5 0 6 0 7 0 8 0 9 2 10 2 11 2 12 2 13 3 | .5 001-SZ CC 15B_QP L: | 5 1 ISN_L_2013 Over | Frequ | 2 ency (MHz) | - | | www.m.m.W | W. | |
| 20 10 0.15.2 Site : CC Condition: FC Mode : Mode F. 1 0 2 00 3 00 4 00 5 00 6 00 7 00 8 00 9 2 10 2 11 2 12 2 13 3 | .5 001-SZ CC 15B_QP L: | 5 1 ISN_L_2013 Over | Frequ | 2 ency (MHz) | - | | | 30 | |
| 20 10 0.15.2 Site : CC Condition: FC Mode : Mode F. 1 0 2 00 3 00 4 00 5 00 6 00 7 00 8 00 9 2 10 2 11 2 12 2 13 3 | .5 001-SZ CC 15B_QP L: | 5 1 ISN_L_2013 Over | Frequ | 2 ency (MHz) | - | | | 30 | |
| 10 0,15.2 Site : CC Condition: FC Mode : Mc F. 10 10 20 30 40 50 60 70 80 92 10 22 10 22 10 22 10 22 10 23 10 23 10 20 30 40 50 50 50 50 50 50 50 50 50 5 | 001-SZ CC 15B_QP L: | ISN_L_2013 Over | Frequ | ency (MHz) NE | - | 10 | 20 | 30 | |
| 0.15 .2 Site : CC Condition: FC Mode : Mo F: 1 0 2 0 3 0 4 0 5 0 6 0 7 0 8 0 9 2 10 2 11 2 12 2 13 3 | 001-SZ CC 15B_QP L: | ISN_L_2013 Over | Frequ | ency (MHz) NE | - | 10 | 20 | 30 | |
| 15 .2 Site : CC Condition: FC Mode : Mc F. 1 1 1 0 2 0 3 0 4 0 5 0 6 0 7 0 8 0 9 2 10 2 10 2 10 2 10 2 10 3 0 4 0 3 0 4 0 3 0 4 0 3 0 4 0 3 0 4 0 3 0 4 0 3 0 4 0 3 0 4 0 3 0 4 0 3 0 4 0 3 0 4 0 3 0 4 0 3 0 4 0 3 0 4 0 5 0 6 0 7 0 8 0 1 1 0 2 0 3 0 4 0 5 0 6 0 7 0 8 0 9 2 10 2 10 2 0 3 0 4 0 5 0 6 0 7 0 8 0 9 2 10 2 11 2 2 11 2 2 13 3 3 3 3 3 3 3 3 3 3 3 3 3 | 001-SZ CC 15B_QP L: | ISN_L_2013 Over | Frequ | ency (MHz) NE | - | 10 | 20 | 30 | |
| Site : CC Condition: FC Mode : Mc F: 1 0 2 0 3 0 4 0 5 0 6 0 7 0 8 0 9 2 10 2 11 2 12 2 13 3 | 001-SZ CC 15B_QP L: | ISN_L_2013 Over | Frequ | ency (MHz) NE | - | 10 | 20 | 30 | |
| Condition: FC Mode : Mo F. 1 0 2 0 3 0 4 0 5 0 6 0 7 0 8 0 9 2 10 2 11 2 11 2 12 2 13 3 | CC 15B_QP L | Over | | | | | | | |
| Mode : Mo | | Over | | | | | | | |
| F 1 0 2 0 3 0 4 0 5 0 6 0 7 0 8 0 9 2 10 2 11 2 12 2 13 3 | ode 1 | | Limit | | | | | | |
| 1 0 2 0 3 0 4 0 5 0 6 0 7 0 8 0 9 2 10 2 11 2 11 2 12 2 13 3 | | | Limit | | | | | | |
| 1 0 2 0 3 0 4 0 5 0 6 0 7 0 8 0 9 2 10 2 11 2 11 2 12 2 13 3 | | Timit | | Read | LISN | Cable | | | |
| 1 0 2 0 3 0 4 0 5 0 6 0 7 0 8 0 9 2 10 2 11 2 11 2 12 2 13 3 | 'req Level | | Line | Level | Factor | Loss | Remark | | |
| 2 0 3 0 4 0 5 0 6 0 7 0 8 0 9 2 10 2 11 2 12 2 13 3 | MHz dBuV | dB | dBuV | dBuV | dB | dB | | | |
| 2 0 3 0 4 0 5 0 6 0 7 0 8 0 9 2 10 2 11 2 12 2 13 3 | .15 37.92 | -18.04 | 55.96 | 27.50 | 0.06 | 10.36 | Average | | |
| 4 0 5 0 6 0 7 0 8 0 9 2 10 2 11 2 12 2 13 3 | .15 51.52 | 2 -14.44 | 65.96 | 41.10 | 0.06 | 10.36 | - | | |
| 5 0 6 0 7 0 8 0 9 2 10 2 11 2 12 2 13 3 | .17 30.38 | | | | | | Average | | |
| 6 0 7 0 8 0 9 2 10 2 11 2 12 2 13 3 | | -17.63 | | | | 10.32 | QP Average | | |
| 8 0 9 2 10 2 11 2 12 2 13 3 | | -17.97 | | | | 10.30 | | | |
| 9 2 10 2 11 2 12 2 13 3 | .20 30.44 | -23.05 | 53.49 | 20.10 | 0.07 | 10.27 | Average | | |
| 10 2 11 2 12 2 13 3 | .20 44.84 | | | | | | | | |
| 11 2 12 2 13 3 | .25 28.23 | | | | | | | | |
| 12 2 13 3 | .25 36.93 | | | | | | | | |
| 13 3 | .90 31.97 | | | | | | Average | | |
| | .90 40.47 | | | | | 10.20 | | | |
| 14 3 | .11 33.08 .11 41.48 | | | | | | Average | | |
| | | | | | | 10.21 | | | |
| | | -11.22 | | | | | Average | | |
| | .31 34.78 | -10 00 | 1.00 | 32.10 | | 10.21 | | | |
| | .31 34.78 .31 43.18 | | | | | | | | |
| | .31 34.78 .31 43.18 .60 36.80 | -9.20 | 46.00 | 26.31 | | | Average | | |
| | .31 34.78 .31 43.18 .60 36.80 .60 45.10 |) -9.20) -10.90 | 46.00 56.00 | 26.31 34.61 | 0.28 | 10.21 | QP | | |
| 20 3 | .31 34.78 .31 43.18 .60 36.80 .60 45.10 .80 37.10 |) -9.20) -10.90) -8.90 | 46.00 56.00 46.00 | 26.31 34.61 26.59 | 0.28 | 10.21 10.22 | QP Average | | |
| | .31 34.78 .31 43.18 .60 36.80 .60 45.10 |) -9.20) -10.90) -8.90 | 46.00 56.00 46.00 | 26.31 34.61 26.59 | 0.28 | 10.21 10.22 | QP Average | | |





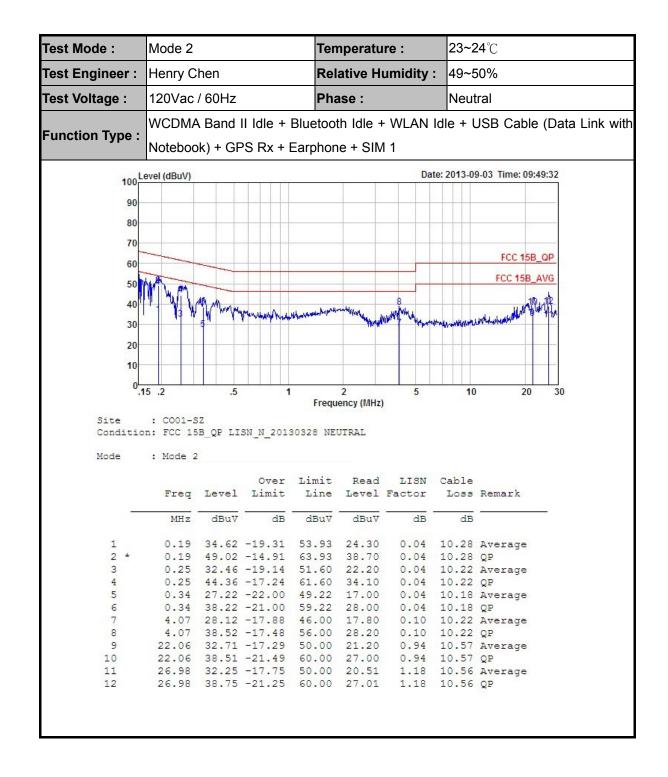


| Test Mode : | Mode 1 | | | Tem | peratur | e : | 23~24 | 4℃ | | |
|--|---|--|---|--|---|---|--|--|------------|--|
| Test Engineer : | Henry Ch | Henry Chen | | | | midity : | 49~50 | 49~50% | | |
| Test Voltage : | 120Vac / 60Hz | | | Phas | se : | | Neutr | al | | |
| | GSM850 | Idle + E | Bluetooth | Idle + V | VLAN Io | dle + USI | B Cable | e (Charging | from Adapt | |
| Function Type : | + Camera | a + Earp | hone + : | SIM 1 | | | | | | |
| 100 | Level (dBuV) | | | | | Dat | te: 2013-0 | 9-03 Time: 09:22 | 2:45 | |
| | | | | | | | | | | |
| 90 | | | | | | | | | | |
| 80 | | | | | 3 | | | | | |
| 70 | | | | | - | | | | C.10 | |
| 60 | | | | | 3 3 | | | FCC 15B_(| QP | |
| 100 | | | | | - | | | FCC 15B_A | VG | |
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| 20 | | | | | | | | | | |
| 20 10 | | | | | | | | | | |
| 10 | | 5 | | | 2 | 5 | 10 | 20 | 30 | |
| 10 | | .5 | 1 | | 2 ency (MHz) | 5 | 10 |) 20 | 30 | |
| 10 | | | 1 | | - | - | 10 |) 20 | 30 | |
| 10 0 Site | .15 .2 | 5Z | | Frequ | ency (MHz) | - | 10 |) 20 | 30 | |
| 10 0 Site | .15 .2 : CO01-S | SZ SB_QP LI: | | Frequ | ency (MHz) | - | 10 |) 20 | 30 | |
| 10 O Site Conditi | .15 .2 : CO01-S .on: FCC 15 | SZ SB_QP LI: | SN_N_2013 | Frequ | ency (MHz) JTRAL | | |) 20 | 30 | |
| 10 O Site Conditi | .15 .2 : CO01-S on: FCC 15 : Mode 1 | SZ SB_QP LI: | | Frequ 30328 NET Limit | ency (MHz) JTRAL Read | - | Cable |) 20 Remark | 30 | |
| 10 O Site Conditi | .15 .2 : CO01-S on: FCC 15 : Mode 1 | SZ SB_QP LI: | SN_N_2013 Over | Frequ 30328 NET Limit | ency (MHz) JTRAL Read |) LISN | Cable | | | |
| 10 O Site Conditi Mode | .15 .2 : CO01-S .on: FCC 15 : Mode 1 Freq MHz | SZ SB_QP LI: Level dBuV | SN_N_2013 Over Limit dB | Frequ 30328 NET Limit Line dBuV | ITRAL Read Level dBuV |) LISN Factor dB | Cable Loss dB | Remark | 30 | |
| 10 O Site Conditi | .15 .2 : CO01-S : On: FCC 1S : Mode 1 Freq MHz 3.29 | E E Level dBuV 32.60 | SN_N_2013 Over Limit | Frequ 30328 NET Limit Line dBuV 46.00 | Read Level dBuV 22.30 |) LISN Factor dB 0.09 | Cable Loss dB | Remark Average | 30 | |
| 10 O Site Conditi Mode | .15 .2 : CO01-S : On: FCC 1S : Mode 1 Freq MHz 3.29 | 52 55_QP LI: Level dBuV 32.60 41.00 | 5N_N_2013 Over Limit dB -13.40 | Frequ 30328 NET Limit Line dBuV 46.00 56.00 | Read Level 22.30 30.70 | LISN Factor dB 0.09 0.09 | Cable Loss dB 10.21 10.21 | Remark Average | 30 | |
| 10 Site Conditi Mode - 1 2 3 4 | .15 .2 : COO1-S : On: FCC 1S : Mode 1 Freq MHz 3.29 3.29 3.47 3.47 | 32 BB_QP LI Level dBuV 32.60 41.00 33.50 42.10 | Over Limit -13.40 -12.50 -13.90 | Frequ 30328 NET Limit Line dBuV 46.00 56.00 46.00 56.00 | Read Level 22.30 30.70 23.20 31.80 | LISN Factor dB 0.09 0.09 0.09 0.09 0.09 | Cable Loss dB 10.21 10.21 10.21 | Remark Average QP Average QP | 30 | |
| 10 0 Site Conditi Mode | .15 .2 : COO1-S con: FCC 1S : Mode 1 Freq MHz 3.29 3.29 3.47 3.47 3.74 | 32 BB_QP LI Level dBuV 32.60 41.00 33.50 42.10 34.31 | Over Limit -13.40 -12.50 -13.90 -11.69 | Frequ 30328 NET Limit Line dBuV 46.00 56.00 46.00 56.00 46.00 | Read Level 22.30 30.70 23.20 31.80 24.00 | LISN Factor dB 0.09 0.09 0.09 0.09 0.09 0.09 | Cable Loss dB 10.21 10.21 10.21 10.21 10.22 | Remark Average QP Average QP Average | 30 | |
| 10 0 Site Conditi Mode | .15 .2 : CO01-S : CO01-S : CO01-S : Mode 1 Freq MHz 3.29 3.29 3.29 3.47 3.47 3.47 3.74 3.74 | 2 32 35 QP LI 45 45 45 42.10 34.31 42.71 | Over Limit dB -13.40 -15.00 -12.50 -13.90 -11.69 -13.29 | Frequ 30328 NET Limit Line dBuV 46.00 56.00 46.00 56.00 46.00 56.00 | Read Level dBuV 22.30 30.70 23.20 31.80 24.00 32.40 | LISN Factor dB 0.09 0.09 0.09 0.09 0.09 0.09 0.09 | Cable Loss dB 10.21 10.21 10.21 10.22 10.22 | Remark Average QP Average QP Average QP | 30 | |
| 10 0 Site Conditi Mode | .15 .2 : CO01-S : CO01-S : CO01-S : Mode 1 Freq MHz 3.29 3.29 3.29 3.47 3.47 3.74 3.74 3.74 3.94 | 2 DE_QP LI: Level dBuV 32.60 41.00 33.50 42.10 34.31 42.71 33.82 | Over Limit | Frequ 30328 NET Limit Line dBuV 46.00 56.00 46.00 56.00 46.00 56.00 46.00 56.00 46.00 | Read Level dBuV 22.30 30.70 23.20 31.80 24.00 32.40 23.50 | LISN Factor dB 0.09 0.09 0.09 0.09 0.09 0.09 0.09 0.0 | Cable Loss dB 10.21 10.21 10.21 10.22 10.22 10.22 | Remark Average QP Average QP Average QP Average | 30 | |
| 10 0 Site Conditi Mode | .15 .2 : CO01-S : CO01-S : Mode 1 Freq MHz 3.29 3.29 3.29 3.47 3.47 3.74 3.74 3.74 3.74 3.94 3.94 | 2 BB_QP LI Level dBuV 32.60 41.00 33.50 42.10 34.31 42.71 33.82 42.32 | Over Limit dB -13.40 -15.00 -12.50 -13.90 -11.69 -13.29 -12.18 -13.68 | Frequ 30328 NET Limit Line dBuV 46.00 56.00 46.00 56.00 46.00 56.00 46.00 56.00 | Read Level dBuV 22.30 30.70 23.20 31.80 24.00 32.40 23.50 32.00 | LISN Factor dB 0.09 0.09 0.09 0.09 0.09 0.09 0.09 0.0 | Cable Loss dB 10.21 10.21 10.21 10.22 10.22 10.22 10.22 | Remark Average QP Average QP Average QP Average | | |
| 10 0 Site Conditi Mode | .15 .2 : CO01-S : CO01-S : Mode 1 Freq MHz 3.29 3.29 3.29 3.47 3.74 3.74 3.74 3.74 3.74 3.94 3.94 4.18 4.18 | Level dBuV 32.60 41.00 33.50 42.10 34.31 42.71 33.82 42.32 32.32 40.82 | Over Limit dB -13.40 -15.00 -12.50 -11.69 -13.29 -12.18 -13.68 -13.68 -13.68 -15.18 | Frequ 30328 NET Limit Line dBuV 46.00 56.00 46.00 56.00 46.00 56.00 46.00 56.00 46.00 56.00 46.00 56.00 56.00 | Read Level dBuV 22.30 30.70 23.20 31.80 24.00 32.40 23.50 32.00 22.00 30.50 | LISN Factor dB 0.09 0.09 0.09 0.09 0.09 0.09 0.09 0.0 | Cable Loss dB 10.21 10.21 10.22 10.22 10.22 10.22 10.22 10.22 10.22 | Remark Average QP Average QP Average QP Average QP Average QP | | |
| 10 0 Site Conditi Mode 1 2 3 4 5 5 6 7 8 9 | .15 .2 : CO01-S : CO01-S : Mode 1 Freq MHz 3.29 3.29 3.29 3.47 3.74 3.74 3.74 3.74 3.74 3.94 3.94 4.18 4.18 4.70 | Level dBuV 32.60 41.00 33.50 42.10 34.31 42.71 33.82 42.32 32.32 40.82 28.64 | Over Limit dB -13.40 -15.00 -12.50 -11.69 -13.29 -12.18 -13.68 -13.68 -15.18 -17.36 | Frequ 30328 NET Limit Line dBuV 46.00 56.00 46.00 | Read Level dBuV 22.30 30.70 23.20 24.00 32.40 23.50 32.00 22.00 30.50 18.30 | LISN Factor dB 0.09 0.09 0.09 0.09 0.09 0.09 0.09 0.0 | Cable Loss dB 10.21 10.21 10.22 10.22 10.22 10.22 10.22 10.22 10.22 10.22 10.22 | Remark Average QP Average QP Average QP Average QP Average QP Average | | |



| Test Mode : | Mode 2 | | | Tem | peratui | re: | 23~24 | 23~24 ℃ | | |
|--|---|--|---|---|---|--|--|---|--------------|--|
| Test Engineer : | Henry Ch | en | | Rela | Relative Humidity : | | | 49~50% | | |
| Test Voltage : | 120Vac / | Pha | se : | | Line | | | | | |
| Function Type : | | | | | | | dle + U | SB Cable (| Data Link wi | |
| | Notebook | () + GP | S Rx + E | arphone | e + SIM | 1 | | | | |
| 100 | evel (dBuV) | 200 000 | | | | Dat | te: 2013-09 | 9-03 Time: 09:54 | 4:25 | |
| | | | | | | | | | | |
| 90- | | | | | | | | | | |
| 80 | | | | | | | | | | |
| 70 | | | | | | | | | | |
| | | | | | | | | FCC 15B_0 | P | |
| 60 | - | | | | | | | and the second | | |
| 50 | MAN PAN S | | | | | | | FCC 15B_AV | VG | |
| 40 | WILL | M MA | | | | | | unter | 12 | |
| | 3 5 1 | · N Number | Virminia Andrea | what have a server | New Workship with | help they have a se | | manutherstor | 11 | |
| | | | | | | And | Strating and a state of the | No. a bela. | | |
| 30 | | | | | | | | | | |
| | | | | | | 8 8 8 | | | | |
| 20 | | | | | | | | | | |
| | | | | | | | | | | |
| 20 10 | 15 2 | 5 | | | 2 | 5 | 10 | 20 | 30 | |
| 20 10 | 15 .2 | .5 | 1 | | 2 ency (MHz) | 5 | 10 | 20 | 30 | |
| 20 10 0 ¹ | | | 1 | | | | 10 | 20 | 30 | |
| 20 10 0 Site | : C001-S | Z | | Frequ | ency (MHz) | | 10 | 20 | 30 | |
| 20 10 Site Conditio | : CO01-S on: FCC 15 | Z | | Frequ | ency (MHz) | | 10 | 20 | 30 | |
| 20 10 0 Site | : C001-S | Z | | Frequ | ency (MHz) | | 10 | 20 | 30 | |
| 20 10 Site Conditio | : CO01-S on: FCC 15 | Z | SN_L_2013 | Frequ | ency (MHz) |) | 10 Cable | 20 | 30 | |
| 20 10 Site Conditio | : CO01-S on: FCC 15 : Mode 2 | Z B_QP LI | SN_L_2013 | Frequ 30328 LII Limit | ency (MHz) NE Read |) | Cable | 20 Remark | 30 | |
| 20 10 Site Conditio | : CO01-S on: FCC 15 : Mode 2 | Z B_QP LI | SN_L_2013 Over | Frequ 30328 LII Limit | ency (MHz) NE Read |) LISN | Cable | | 30 | |
| 20 10 Site Conditio | : CO01-S on: FCC 15 : Mode 2 | Z B_QP LI | SN_L_2013 Over | Frequ 30328 LII Limit | ency (MHz) NE Read |) LISN | Cable | | 30 | |
| 20 10 Site Conditio | : CO01-S on: FCC 15 : Mode 2 Freq | Z B_QP LI Level dBuV | SN_L_2013 Over Limit | Frequ 30328 LII Limit Line dBuV | NE Read Level dBuV | LISN Factor dB | Cable Loss dB | | 30 | |
| 20 10 0 Site Conditio Mode | : CO01-S on: FCC 15 : Mode 2 Freq MHz | Z B_QP LI Level dBuV 27.22 | SN_L_2013 Over Limit dB | Frequ 30328 LII Limit Line dBuV 55.96 | Read Level dBuV 16.80 | LISN Factor dB 0.06 | Cable Loss dB | Remark | 30 | |
| 20 10 Site Conditio Mode | : CO01-S on: FCC 15 : Mode 2 Freq MHz 0.15 | Z B_QF LI Level dBuV 27.22 43.02 | SN_L_2013 Over Limit dB -28.74 | Frequ 30328 LII Limit Line dBuV 55.96 65.96 | Read Level dBuV 16.80 32.60 | LISN Factor dB 0.06 0.06 | Cable Loss dB 10.36 10.36 | Remark | 30 | |
| 20 10 Site Conditio Mode 1 2 | : CO01-S on: FCC 15 : Mode 2 Freq MHz 0.15 0.15 | Z B_QP LI Level dBuV 27.22 43.02 32.86 | SN_L_2013 Over Limit dB -28.74 -22.94 | Frequ 30328 LII Limit Line dBuV 55.96 65.96 54.24 | Read Level dBuV 16.80 32.60 22.50 | LISN Factor dB 0.06 0.06 0.07 | Cable Loss dB 10.36 10.36 | Remark Average QP Average | 30 | |
| 20 10 Site Conditio Mode 1 2 3 | : CO01-S on: FCC 15 : Mode 2 Freq MHz 0.15 0.15 0.19 | Z B_QF LI Level dBuV 27.22 43.02 32.86 48.06 | Over Limit -28.74 -21.38 | Frequ 30328 LII Limit Line dBuV 55.96 65.96 54.24 64.24 | Read Level dBuV 16.80 32.60 22.50 37.70 | LISN Factor dB 0.06 0.06 0.07 0.07 | Cable Loss dB 10.36 10.36 10.29 10.29 | Remark Average QP Average | 30 | |
| 20 10 Site Conditio Mode 1 2 3 4 | : C001-S on: FCC 15 : Mode 2 Freq MHz 0.15 0.15 0.19 0.19 | Z B_QF LI Level dBuV 27.22 43.02 32.86 48.06 32.61 | Over Limit -28.74 -22.94 -21.38 -16.18 | Frequ 30328 LII Limit Line dBuV 55.96 65.96 54.24 64.24 51.64 | Read Level dBuV 16.80 32.60 22.50 37.70 22.30 | LISN Factor dB 0.06 0.06 0.07 0.07 0.07 0.09 | Cable Loss dB 10.36 10.36 10.29 10.29 | Remark Average QP Average QP Average | 30 | |
| 20 10 Site Conditio Mode 1 2 3 4 5 | : CO01-S on: FCC 15 : Mode 2 Freq MHz 0.15 0.15 0.19 0.19 0.25 0.25 | Z B_QF LI dBuV 27.22 43.02 32.86 48.06 32.61 43.91 | Over Limit dB 28.74 22.94 21.38 16.18 19.03 | Frequ 30328 LII Limit Line dBuV 55.96 65.96 54.24 64.24 51.64 61.64 | Read Level dBuV 16.80 32.60 22.50 37.70 22.30 33.60 | LISN Factor dB 0.06 0.07 0.07 0.07 0.09 0.09 | Cable Loss dB 10.36 10.36 10.29 10.29 10.22 | Remark Average QP Average QP Average | 30 | |
| 20 10 Condition Mode 1 2 3 4 5 6 | : CO01-S on: FCC 15 : Mode 2 Freq MHz 0.15 0.15 0.19 0.19 0.25 0.25 0.32 | Z B_QF LI Level dBuV 27.22 43.02 32.86 48.06 32.61 43.91 32.70 | Over Limit | Frequ 30328 LII Limit Line dBuV 55.96 65.96 54.24 64.24 51.64 61.64 49.66 | Read Level dBuV 16.80 32.60 22.50 37.70 22.30 33.60 22.40 | LISN Factor dB 0.06 0.07 0.07 0.07 0.09 0.09 | Cable Loss dB 10.36 10.29 10.29 10.22 10.22 10.19 | Remark Average QP Average QP Average QP Average | 30 | |
| 20 10 0 Site Conditio Mode 1 2 3 4 5 6 7 | : CO01-S on: FCC 15 : Mode 2 Freq MHz 0.15 0.15 0.19 0.19 0.19 0.25 0.25 0.25 0.32 0.32 | Z B_QF LI Level dBuV 27.22 43.02 32.86 48.06 32.61 43.91 32.70 44.30 | Over Limit | Frequ 30328 LII Limit Line dBuV 55.96 65.96 54.24 64.24 51.64 64.24 51.64 64.24 51.64 63.66 | Read Level dBuV 16.80 32.60 22.50 37.70 22.30 33.60 22.40 34.00 | LISN Factor dB 0.06 0.07 0.07 0.07 0.09 0.09 0.09 0.11 0.11 | Cable Loss dB 10.36 10.29 10.29 10.22 10.22 10.22 10.19 10.19 | Remark Average QP Average QP Average QP Average | 30 | |
| 20 10 0 Site Conditio Mode 1 2 3 4 5 6 7 8 * | : CO01-S on: FCC 15 : Mode 2 Freq MHz 0.15 0.15 0.19 0.19 0.25 0.25 0.25 0.32 0.32 22.18 | Z B_QF LI dBuV 27.22 43.02 32.86 48.06 32.61 43.91 32.70 44.30 33.23 | Over Limit dB -28.74 -22.94 -21.38 -16.18 -19.03 -17.73 -16.96 -15.36 -16.77 | Frequ 30328 LII Limit Line dBuV 55.96 65.96 54.24 64.24 51.64 61.64 49.66 59.66 50.00 | Read Level dBuV 16.80 32.60 22.50 37.70 22.30 33.60 22.40 34.00 21.00 | LISN Factor dB 0.06 0.07 0.07 0.07 0.09 0.09 0.09 0.11 0.11 | Cable Loss dB 10.36 10.29 10.29 10.22 10.22 10.22 10.19 10.19 10.57 | Remark Average QP Average QP Average QP Average QP Average | 30 | |
| 20 10 0 Site Conditio Mode 1 2 3 4 5 6 7 8 9 | : CO01-S on: FCC 15 : Mode 2 Freq MHz 0.15 0.15 0.19 0.25 0.25 0.25 0.32 0.32 22.18 22.18 | Z B_QF LI dBuV 27.22 43.02 32.86 48.06 32.61 43.91 32.70 44.30 33.23 39.23 | Over Limit | Frequ 30328 LII Limit Line dBuV 55.96 65.96 54.24 64.24 51.64 61.64 49.66 59.66 50.00 60.00 | Read Level dBuV 16.80 32.60 22.50 37.70 22.30 33.60 22.40 34.00 21.00 27.00 | LISN Factor dB 0.06 0.07 0.07 0.07 0.09 0.09 0.09 0.11 0.11 1.66 1.66 | Cable Loss dB 10.36 10.29 10.29 10.22 10.22 10.19 10.57 | Remark Average QP Average QP Average QP Average QP Average | 30 | |







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:

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

3.2.2. Measuring Instruments

See list of measuring instruments of this test report.

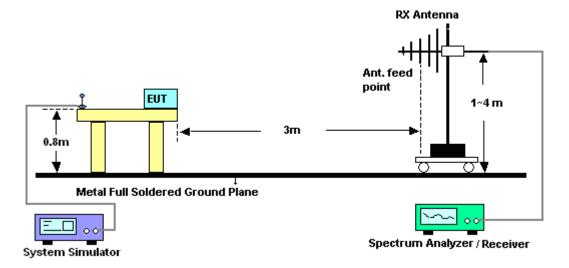
3.2.3. Test Procedures

- 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 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.
- 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 (dB μ V/m) = 20 log Emission level (μ V/m)
- 9. Corrected Reading: Antenna Factor + Cable Loss + Read Level Preamp Factor = Level

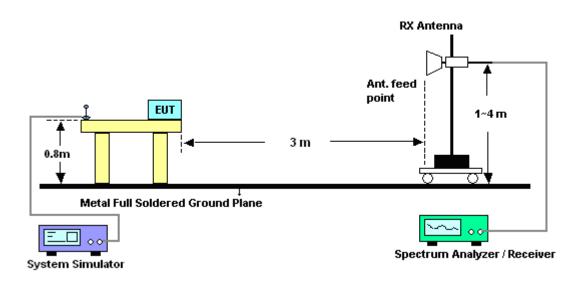


3.2.4. Test Setup of Radiated Emission

For radiated emissions from 30MHz to 1GHz



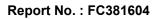
For radiated emissions above 1GHz





3.2.5. Test Result of Radiated Emission

| Test Mode : | Mode 2 | | | | Tempe | eratur | e : | 23 | 23~25°C | | | |
|----------------------|---|----------------------------|-------------------------|-------------------------|-------------------------|-------------------|-------------------------|--------------|--------------------------|------------------------------|----------------|--|
| Test Engineer : | Gavin Zh | ang | | | Relati | ve Hu | midity | ': 49 | ~52% | % | | |
| Test Distance : | 3m | | | | Polari | zatior | i : | Ho | Horizontal | | | |
| Function Type : | WCDMA Notebook | | | | | | | Idle + | le + USB Cable (Data Lir | | | |
| 117 | (dBuV/m) | | | | | | | | | Date: 2 | 013-08-31 | |
| 110 | | | | | | | | | | | | |
| 90 | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| 70 | | | | | | | | | | FLL | CLASS-B 6dB | |
| | | | | | | | | | | FCC CLAS | | |
| 50 | _ | | | | | | | | | | <u>6dB</u> - | |
| 10 | 6 (5) | | | | | | | | | | | |
| 030 | 1000. | 3000. | | 5000. | Frequen | 7000. cv (MHz) | | 9000. | | 11000. | 13000 | |
| Site Condition | : 03CH0 : FCC CI | | 3m LF_AI | NT_1211 | | | | | | | | |
| Mode | : Mode 2 | | | | | | | | | | | |
| | Freq Level | Limit | | | Antenna Factor | | Preamp Factor | A/Pos | T/Pos | Remark | _ | |
| | MHz dBuV/m | | dBuV/m | dBuV | dB/m | dB | dB | cm | deg | | | |
| 2 30 3 38 4 68 | 39.52 31.47 35.48 30.21 32.11 30.71 34.75 29.34 | -15.79 -15.29 -16.66 | 46.00 46.00 46.00 | 45.09 42.16 36.38 | 13.06 16.04 19.12 | 2.24 2.93 | 29.98 29.73 29.09 | 145 | | Peak Peak Peak Peak | | |
| | 37.04 29.48 50.23 33.03 | | | | | | | | | Peak Peak | | |
| | | | | | | | | | | | | |





| | Mode 2 | | | | | Temperature : | | | 23~25°C | | | |
|---------------|--|--|---|---|---|--|---|--|---|---|--|--|
| : Gavin Zhang | | | | | Relative Humidity : | | | : 49~ | 49~52% | | | |
| : 3m | 3m | | | Ì | Polarization : | | | Ver | Vertical | | | |
| . WO | CDMA E | Band I | and II Idle + Bluetooth Idle + WLAN Ic | | | | | | ⊥ lle + USB Cable (Data Link | | | |
| No | tebook) | + GP | S Rx + | Earpl | hone + | SIM ² | 1 | | | | | |
| vel (dBu | ıV/m) | | | | | | | | | Date: | 2013-08-31 | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | FC | C CLASS-B | |
| | | | | | | | | | | | <u>-6dB</u> - | |
| | | | | | | | | | | FCC CLA | SS-B (AVG) | |
| | | | | | | | | | | | -6dB | |
| | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | |
| Ĩ | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| 1000 |). | 3000. | | 5000. | - | 7000. | | 9000. | | 11000. | 1300 | |
| | · 03CH01 | \$7 | | | Frequen | CY (MHZ) |) | | | | | |
| n | | | m LF_A | NT_1211 | 03 VERT | ICAL | | | | | | |
| | : Mode 2 | | | | | | | | | | | |
| | | 0ver | Limit | Read/ | Antenna | Cable | Preamp | A/Pos | T/Pos | | | |
| Fre | q Level | Limit | Line | Level | Factor | Loss | Factor | | | Remark | | |
| МН | z dBuV/m | dB | dBuV/m | dBuV | dB/m | dB | dB | cm | deg | | | |
| | | | | | | | | 145 | | | | |
| 381.1 | 4 25.42 | -20.58 | 46.00 | 36.91 | 16.00 | 2.24 | 29.73 | | | Peak | | |
| 721.6 | 1 27.21 3 31.15 | -18.79 | 46.00 | 33.17 | 20.08 | 3.00 | 29.04 | | | Peak Peak | | |
| | : WC No vel (dBu 6 34 5 1000 n Fre MH 165.8 8381.1 | WCDMA E Notebook) vel (dBuV/m) e 6 34 5 1000. 1000. 1000. 1000. 1000. Freq Level MHz dBuV/m 165.80 30.88 228.85 28.32 381.14 25.42 | WCDMA Band II Notebook) + GP3 vel (dBuV/m) vel (dBuV/m) 6 34 5 6 34 5 1000. 3000. a a b a a b a b a a a b a b a b a b a b a b a b a b a a b a a< | WCDMA Band II Idle + Notebook) + GPS Rx + vel (dBuV/m) 6 34 5 1000. 3000. i 03CH01-SZ n : FCC CLASS-B 3m LF_AI : Mode 2 Over Limit Freq Level Limit Line MHz dBuV/m dB dBuV/m 165.80 30.88 -12.62 43.50 228.85 28.32 -17.68 46.00 | WCDMA Band II Idle + Blue Notebook) + GPS Rx + Earpl vel (dBuV/m) 6 34 5 6 34 5 1000. 3000. 5000. : 03CH01-SZ n : FCC CLASS-B 3m LF_ANT_1211 : Mode 2 MHz dBuV/m dB dBuV/m dBuV 165.80 30.88 -12.62 43.50 49.87 228.85 28.32 -17.68 46.09 46.17 381.14 25.42 -20.58 46.09 36.91 | WCDMA Band II Idle + Bluetooth Id Notebook) + GPS Rx + Earphone + vel (dBuV/m) 6 34 5 6 34 5 1000. 3000. 5000. Frequen 1000. 3000. 5000. Frequen 1000. Source Frequent 1000. Source Frequent 10 | WCDMA Band II Idle + Bluetooth Idle + V Notebook) + GPS Rx + Earphone + SIM · vel (dBuV/m) vel (dBuV/m) 6 3 6 3 5 1000. 3000. 5000. 7000. Frequency (MHz) 1000. 3000. 5000. 7000. Frequency (MHz) : 03CH01-SZ n : FCC CLASS-B 3m LF_ANT_121103 VERTICAL : Mode 2 Ver Limit ReadAntenna Cable Freq Level Limit Line Level Factor Loss MHz dBuV/m dB dBuV/m dBuV dB/m dB 165.80 30.88 -12.62 43.50 49.87 9.90 1.56 228.85 28.32 -17.68 46.00 46.17 10.60 1.79 381.14 25.42 -20.58 46.00 36.91 16.00 2.24 | WCDMA Band II Idle + Bluetooth Idle + WLAN Notebook) + GPS Rx + Earphone + SIM 1 vel (dBuV/m) vel (dBuV/m) 0 < | WCDMA Band II Idle + Bluetooth Idle + WLAN Idle + Notebook) + GPS Rx + Earphone + SIM 1 vel (dBuV/m) vel (dBuV/m) 6 3 6 3 6 3 6 7 1000. 3000. 5000. 7000. 9000. Frequency (MHz) : 03CH01-SZ n : FCC CLASS-B 3m LF_ANT_121103 VERTICAL : Mode 2 MHz GBuV/m MHz GBuV/m MHz GBuV/m 105.80 30.88 -12.62 28.85 28.32 -17.68 46.00 36.17 28.85 28.45 28.85 24.32-42-28.58 | WCDMA Band II Idle + Bluetooth Idle + WLAN Idle + USB Notebook) + GPS Rx + Earphone + SIM 1 vel (dBuV/m) vel (dBuV/m) 6 3 6 3 6 3 6 1000. 3000. 5000. 7000. 9000. Frequency (MHz) : 03CH01-SZ n : FCC CLASS-B 3m LF_ANT_121103 VERTICAL : Mode 2 Over Limit Line Level Factor MHz dBuV/m dB dBuV/m dB dBuV/m dB dBuV/m dB dBuV/m 128.18 28.32 -17.68 28.52 45.40 28.52 46.60 39.54 | WCDMA Band II Idle + Bluetooth Idle + WLAN Idle + USB Cable (Notebook) + GPS Rx + Earphone + SIM 1 vel (dBuV/m) Date: vel (dBuV/m) Date: Date:: Date:: Date:: Date:: Date:: Date:: Date:: Date:: Date:: Da | |



4. List of Measuring Equipment

| Instrument | Manufacturer | Model No. | Serial No. | Characteristic s | Calibration Date | Test Date | Due Date | Remark |
|---|-------------------------|--------------|--------------|-------------------------------|---------------------|---------------|---------------|--------------------------|
| ESCIO TEST Receiver | R&S | 1142.8007.03 | 100724 | 9kHz~3GHz | Mar. 28, 2013 | Sep. 03, 2013 | Mar. 27, 2014 | Conduction (CO01-SZ) |
| AC LISN | EMCO | 3816/2SH | 00103912 | 9kHz~30MHz | Mar. 28, 2013 | Sep. 03, 2013 | Mar. 27, 2014 | Conduction (CO01-SZ) |
| AC LISN (for auxiliary equipment) | EMCO | 3816/2SH | 00103892 | 9kHz~30MHz | Mar. 28, 2013 | Sep. 03, 2013 | Mar. 27, 2014 | Conduction (CO01-SZ) |
| AC Power Source | Chroma | 61602 | 616020000891 | N/A | Nov. 20, 2012 | Sep. 03, 2013 | Nov. 19, 2013 | Conduction (CO01-SZ) |
| Spectrum Analyzer | Agilent Technologies | N9038A | MY52260185 | 20Hz~26.5GH z | Apr. 04, 2013 | Aug. 31, 2013 | Apr. 03, 2014 | Radiation (03CH01-SZ) |
| Double Ridge Horn Antenna | ETS Lindgren | 3117 | 00119436 | 1GHz~18GHz | Oct. 12, 2012 | Aug. 31, 2013 | Oct. 11, 2013 | Radiation (03CH01-SZ) |
| Bilog Antenna | SCHAFFNER | CBL6112B | 2614 | 30MHz~2GHz | Nov. 03, 2012 | Aug. 31, 2013 | Nov. 02, 2013 | Radiation (03CH01-SZ) |
| Amplifier | ADVANTEST | BB525C | E9007003 | 9kHz ~3000MHz GAIN 30db | Mar. 28, 2013 | Aug. 31, 2013 | Mar. 27, 2014 | Radiation (03CH01-SZ) |
| Amplifier | Yiai | AV3860B | 04030 | 2GHz~26.5GH z | Mar. 28, 2013 | Aug. 31, 2013 | Mar. 27, 2014 | Radiation (03CH01-SZ) |
| SHF-EHF-Hor n | Schwarzbeck | BBHA9170 | BBHA9170249 | 14GHz~40GH z | Nov. 23, 2012 | Aug. 31, 2013 | Nov. 22, 2013 | Radiation (03CH01-SZ) |
| Turn Table | EM Electronic | EM 1000 | N/A | 0 ~ 360 degree | N/A | Aug. 31, 2013 | N/A | Radiation (03CH01-SZ) |
| Antenna Mast | EM electronic | EM 1000 | N/A | 1 m~4 m | N/A | Aug. 31, 2013 | N/A | Radiation (03CH01-SZ) |



5. Uncertainty of Evaluation

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

| Measuring Uncertainty for a Level of | 2.26 |
|--------------------------------------|------|
| Confidence of 95% (U = 2Uc(y)) | 2.26 |

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

| Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y)) | 2.54 |
|--|------|
| | |

Uncertainty of Radiated Emission Measurement (1 GHz ~ 40 GHz)

| Measuring Uncertainty for a Level of | 4 72 |
|--------------------------------------|------|
| Confidence of 95% (U = 2Uc(y)) | 4.72 |