



FCC Test Report

APPLICANT : FIH International Co., Ltd.
EQUIPMENT : GSM/WCDMA/LTE Mobile Phone
BRAND NAME : Nokia
MODEL NAME : TA-1047
FCC ID : 2AJOTTA-1047
STANDARD : FCC 47 CFR FCC Part 15 Subpart B
CLASSIFICATION : Certification

The product was received on Oct. 26, 2017 and testing was completed on Nov. 06, 2017. We, Sporton International (Kunshan) 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 (Kunshan) Inc., the test report shall not be reproduced except in full.



Approved by: James Huang / Manager

Sporton International (Kunshan) Inc.

**No.3-2 Ping-Xiang Rd, Kunshan Development Zone Kunshan City Jiangsu Province 215335
China**



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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 14.18 dB at 0.471 MHz |
| 3.2 | 15.109 | Radiated Emission | < 15.109 limits | PASS | Under limit 7.35 dB at 599.60 MHz |



1. General Description

1.1. Applicant

FIH International Co., Ltd.

No.18, Tongji zhonglu, Beijing Economic&Technological Development Area

1.2. Manufacturer

HMD Global Oy

Karaportti 2 02610 Espoo FINLAND

1.3. Product Feature of Equipment Under Test

| Product Feature | |
|---------------------------------|--|
| Equipment | GSM/WCDMA/LTE Mobile Phone |
| Brand Name | Nokia |
| Model Name | TA-1047 |
| FCC ID | 2AJOTTA-1047 |
| EUT supports Radios application | GSM/GPRS/EGPRS/WCDMA/HSPA/DC-HSDPA/HSPA+/ LTE WLAN 2.4GHz 802.11b/g/n HT20 Bluetooth v2.1 + EDR/Bluetooth v4.2 LE |
| IMEI Code | Conduction: 004402970653220/004402970653238 Radiation: 004402970653444/004402970653451 |
| HW Version | HW0201 |
| SW Version | 000C_0_14A |
| 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 LTE Band 5 : 824.7 MHz ~ 848.3 MHz LTE Band 7 : 2502.5 MHz ~ 2567.5 MHz LTE Band 38 : 2572.5 MHz ~ 2617.5 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 LTE Band 5 : 869.7 MHz ~ 893.3 MHz LTE Band 7 : 2622.5 MHz ~ 2687.5 MHz LTE Band 38 : 2572.5 MHz ~ 2617.5 MHz 802.11b/g/n: 2412 MHz ~ 2462 MHz Bluetooth: 2402 MHz ~ 2480 MHz GPS : 1.57542 GHz FM : 88 MHz ~ 108 MHz |
| Antenna Type | WWAN: PIFA Antenna WLAN: PIFA Antenna Bluetooth: PIFA Antenna GPS: PIFA 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 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 GPS : BPSK FM |



1.5. Modification of EUT

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

1.6. Test Location

Sporton International (Kunshan) Inc. is accredited to ISO 17025 by National Voluntary Laboratory Accreditation Program (NVLAP code: 600155-0) and the FCC designation No. is CN5013.

| | | | |
|---------------------------|---|-----------|---------------------------------------|
| Test Site | Sporton International (Kunshan) Inc. | | |
| Test Site Location | No.3-2 Ping-Xiang Rd, Kunshan Development Zone Kunshan City Jiangsu Province 215335 China TEL : +86-512-57900158 FAX : +86-512-57900958 | | |
| Test Site No. | Sporton Site No. | | FCC Test Firm Registration No. |
| | CO01-KS | 03CH02-KS | 630927 |

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

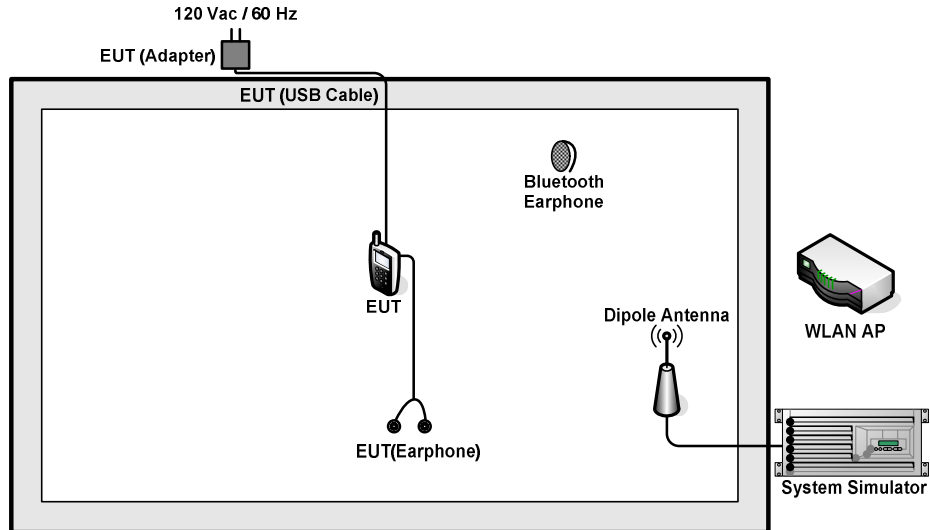
2.1. Test Mode

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.

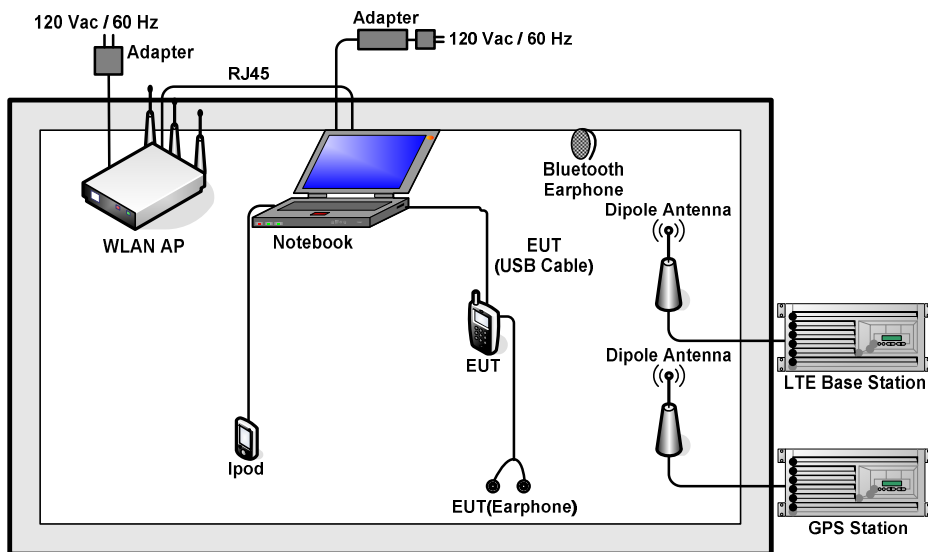
Frequency range investigated: conduction (150 kHz to 30 MHz), radiation (30MHz to the 5th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower).

| Test Items | Function Type |
|---|--|
| AC Conducted Emission | Mode 1: GSM850 Idle + Bluetooth Idle + WLAN Idle(2.4G) + Earphone + USB Cable(Charging from Adapter) + Camera(Rear) + SIM 1 <Fig. 1> |
| | Mode 2: GSM1900 Idle + Bluetooth Idle + WLAN Idle(2.4G) + Earphone + USB Cable(Charging from Adapter) + Camera(Front) + SIM 2 <Fig. 1> |
| | Mode 3: WCDMA Band V Idle + Bluetooth Idle + WLAN Idle(2.4G) + Earphone + USB Cable(Charging from Adapter) + MPEG4 + SIM 1 <Fig. 1> |
| | Mode 4: LTE Band 7 Idle + Bluetooth Idle + WLAN Idle(2.4G) + Earphone + USB Cable(Data Link with Notebook) + GPS RX + SIM2 <Fig. 2> |
| | Mode 5: Earphone + USB Cable(Charging from Adapter) + FM(88MHz) RX<Fig. 3> |
| | Mode 6: Earphone + USB Cable(Charging from Adapter) + FM(98MHz) RX<Fig. 3> |
| | Mode 7: Earphone + USB Cable(Charging from Adapter) + FM(108MHz) RX<Fig. 3> |
| Radiated Emissions | Mode 1: GSM850 Idle + Bluetooth Idle + WLAN Idle(2.4G) + Earphone + USB Cable(Charging from Adapter) + Camera(Rear) + SIM 1 <Fig. 1> |
| | Mode 2: GSM1900 Idle + Bluetooth Idle + WLAN Idle(2.4G) + Earphone + USB Cable(Charging from Adapter) + Camera(Front) + SIM 2 <Fig. 1> |
| | Mode 3: WCDMA Band V Idle + Bluetooth Idle + WLAN Idle(2.4G) + Earphone + USB Cable(Charging from Adapter) + MPEG4 + SIM 1 <Fig. 1> |
| | Mode 4: LTE Band 7 Idle + Bluetooth Idle + WLAN Idle(2.4G) + Earphone + USB Cable(Data Link with Notebook) + GPS RX + SIM2 <Fig. 2> |
| | Mode 5: Earphone + USB Cable(Charging from Adapter) + FM(88MHz) RX<Fig. 3> |
| | Mode 6: Earphone + USB Cable(Charging from Adapter) + FM(98MHz) RX<Fig. 3> |
| | Mode 7: Earphone + USB Cable(Charging from Adapter) + FM(108MHz) RX<Fig. 3> |
| Remark: | |
| <ol style="list-style-type: none"> The worst case of AC is mode 4; only the test data of this mode was reported. The worst case of RE is mode 4, only the test data of this mode was reported. Data Link with Notebook means data application transferred mode between EUT and Notebook. | |

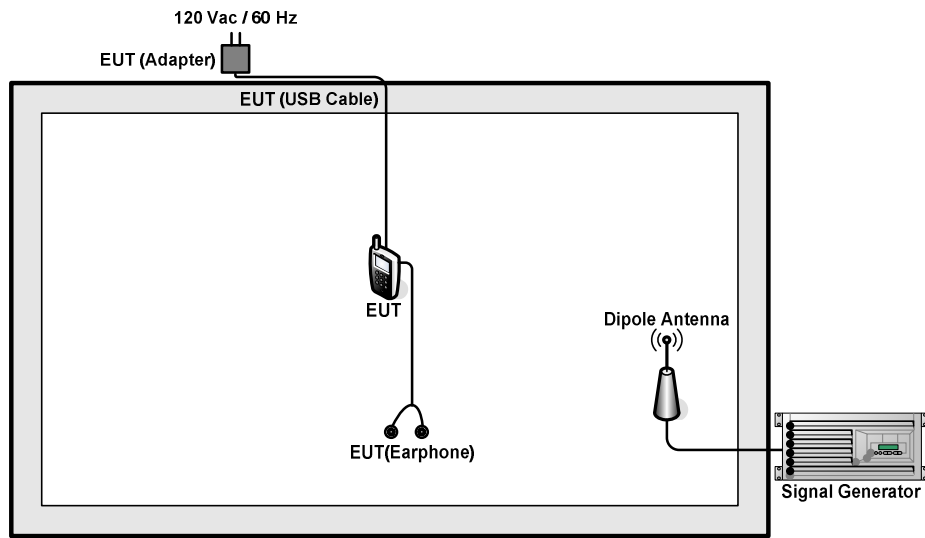
2.2. Connection Diagram of Test System



<Fig. 1>



<Fig. 2>



<Fig. 3>

2.3. Support Unit used in test configuration and system

| Item | Equipment | Trade Name | Model Name | FCC ID | Data Cable | Power Cord |
|------|--------------------|------------|--------------|----------------|----------------|--|
| 1. | LTE Base Station | Anritsu | MT8820C | N/A | N/A | Unshielded, 1.8 m |
| 2. | System Simulator | R&S | CMU200 | N/A | N/A | Unshielded, 1.8 m |
| 3. | GPS Station | ADIVIC | MP9000 | N/A | N/A | Unshielded, 1.8 m |
| 4. | Signal Generator | R&S | SMBV100A | N/A | N/A | Unshielded, 1.8 m |
| 5. | WLAN AP | LINKSYS | WRT600N | Q87-WRT600NV11 | N/A | Unshielded, 1.8m |
| 6. | WLAN AP | TP-Link | TL-WDR5600 | N/A | N/A | Unshielded, 1.8m |
| 7. | Bluetooth Earphone | Lenovo | LBH308 | N/A | N/A | N/A |
| 8. | Notebook | DELL | Latitude3440 | N/A | N/A | AC I/P : Unshielded, 1.8m DC O/P : Shielded, 1.8m |
| 9. | Notebook | Lenovo | G480 | N/A | N/A | AC I/P : Unshielded, 1.8m DC O/P : Shielded, 1.8m |
| 10. | SD Card | Kingston | 8GB | N/A | N/A | N/A |
| 11. | SD Card | SanDisk | Uitra | N/A | N/A | N/A |
| 12. | iPod | Apple | A1199 | FCC DoC | Shielded, 1.2m | N/A |



2.4. EUT Operation Test Setup

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. Execute "GPS Test" to make the EUT receive continuous signals from GPS station
3. Execute "Video player" to play MPEG4 files
4. Turn on camera to capture images.
5. Turn on FM Rx function.



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 (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.

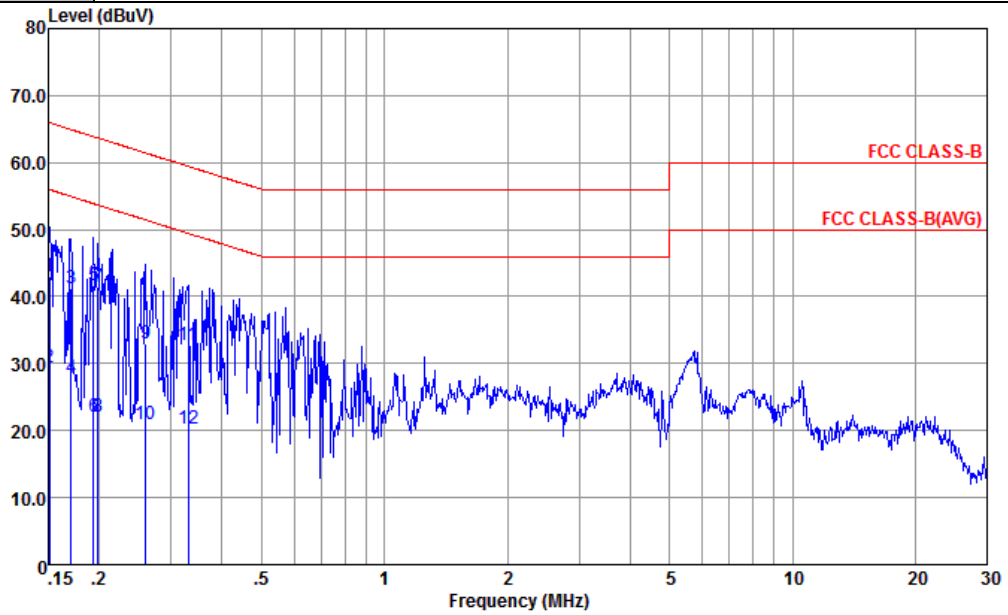
3.1.4 Test Setup





3.1.5 Test Result of AC Conducted Emission

| | | | |
|-----------------|--|---------------------|---------|
| Test Mode : | Mode 4 | Temperature : | 22~24°C |
| Test Engineer : | Amos Zhang | Relative Humidity : | 42~46% |
| Test Voltage : | 120Vac / 60Hz | Phase : | Line |
| Function Type : | LTE Band 7 Idle + Bluetooth Idle + WLAN Idle(2.4G) + Earphone + USB Cable(Data Link with Notebook) + GPS RX + SIM2 | | |

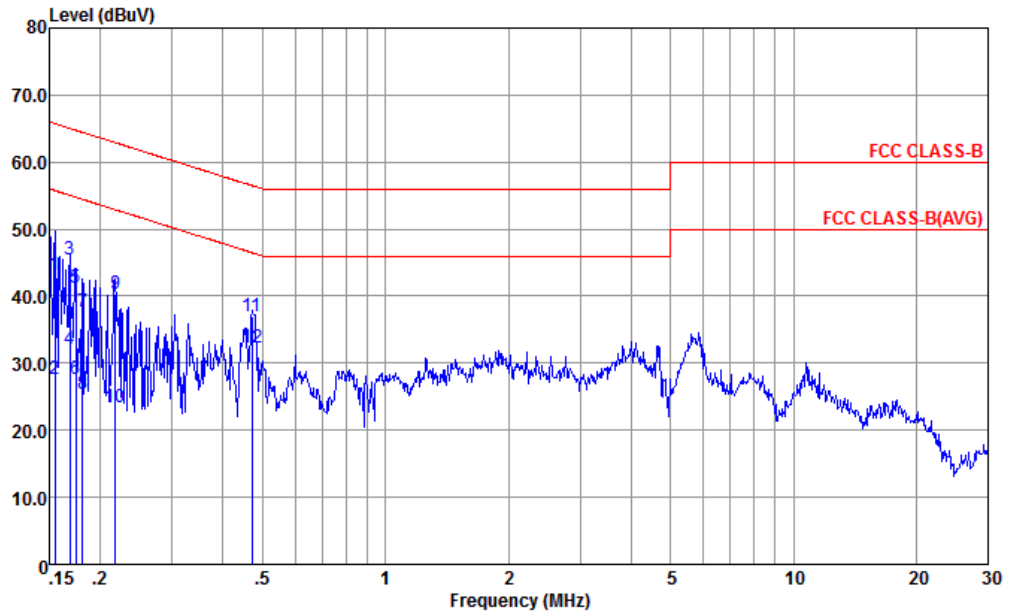


Site : CO01-KS
 Condition : FCC CLASS-B LISN-L-161017-060103 LINE
 Project : (FC) 702602
 mode : Mode 4
 : 004402970653220/004402970653238 #26

| | Freq | Level | Over Limit | Limit Line | Read Level | LISN Factor | Cable Loss | Remark |
|-----|-------|-------|------------|------------|------------|-------------|------------|---------|
| | MHz | dBuV | dB | dBuV | dBuV | dB | dB | |
| 1 | 0.151 | 43.07 | -22.89 | 65.96 | 31.90 | 0.55 | 10.62 | QP |
| 2 | 0.151 | 29.37 | -26.59 | 55.96 | 18.20 | 0.55 | 10.62 | Average |
| 3 | 0.170 | 41.27 | -23.67 | 64.94 | 30.30 | 0.42 | 10.55 | QP |
| 4 | 0.170 | 27.77 | -27.17 | 54.94 | 16.80 | 0.42 | 10.55 | Average |
| 5 * | 0.193 | 41.58 | -22.31 | 63.89 | 30.81 | 0.30 | 10.47 | QP |
| 6 | 0.193 | 21.98 | -31.91 | 53.89 | 11.21 | 0.30 | 10.47 | Average |
| 7 | 0.199 | 41.34 | -22.33 | 63.67 | 30.60 | 0.28 | 10.46 | QP |
| 8 | 0.199 | 22.04 | -31.63 | 53.67 | 11.30 | 0.28 | 10.46 | Average |
| 9 | 0.260 | 33.01 | -28.41 | 61.42 | 22.30 | 0.27 | 10.44 | QP |
| 10 | 0.260 | 21.01 | -30.41 | 51.42 | 10.30 | 0.27 | 10.44 | Average |
| 11 | 0.330 | 32.79 | -26.65 | 59.44 | 22.10 | 0.27 | 10.42 | QP |
| 12 | 0.330 | 20.29 | -29.15 | 49.44 | 9.60 | 0.27 | 10.42 | Average |



| | | | |
|-----------------|--|---------------------|---------|
| Test Mode : | Mode 4 | Temperature : | 22~24°C |
| Test Engineer : | Amos Zhang | Relative Humidity : | 42~46% |
| Test Voltage : | 120Vac / 60Hz | Phase : | Neutral |
| Function Type : | LTE Band 7 Idle + Bluetooth Idle + WLAN Idle(2.4G) + Earphone + USB Cable(Data Link with Notebook) + GPS RX + SIM2 | | |



Site : CO01-KS
 Condition : FCC CLASS-B LISN-N-161017-060103 NEUTRAL
 Project : (FC) 702602
 mode : Mode 4
 : 004402970653220/004402970653238

| | Freq | Level | Over Limit | Limit Line | Read Level | LISN Factor | Cable Loss | Remark |
|------|-------|-------|------------|------------|------------|-------------|------------|---------|
| | MHz | dBuV | dB | dBuV | dBuV | dB | dB | |
| 1 | 0.155 | 43.14 | -22.60 | 65.74 | 32.20 | 0.34 | 10.60 | QP |
| 2 | 0.155 | 27.74 | -28.00 | 55.74 | 16.80 | 0.34 | 10.60 | Average |
| 3 | 0.169 | 45.49 | -19.54 | 65.03 | 34.60 | 0.34 | 10.55 | QP |
| 4 | 0.169 | 32.19 | -22.84 | 55.03 | 21.30 | 0.34 | 10.55 | Average |
| 5 | 0.174 | 41.17 | -23.60 | 64.77 | 30.30 | 0.33 | 10.54 | QP |
| 6 | 0.174 | 27.67 | -27.10 | 54.77 | 16.80 | 0.33 | 10.54 | Average |
| 7 | 0.181 | 37.65 | -26.81 | 64.46 | 26.81 | 0.33 | 10.51 | QP |
| 8 | 0.181 | 25.35 | -29.11 | 54.46 | 14.51 | 0.33 | 10.51 | Average |
| 9 | 0.217 | 40.38 | -22.54 | 62.92 | 29.60 | 0.33 | 10.45 | QP |
| 10 | 0.217 | 23.38 | -29.54 | 52.92 | 12.60 | 0.33 | 10.45 | Average |
| 11 | 0.471 | 36.91 | -19.58 | 56.49 | 26.20 | 0.38 | 10.33 | QP |
| 12 * | 0.471 | 32.31 | -14.18 | 46.49 | 21.60 | 0.38 | 10.33 | Average |



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 (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

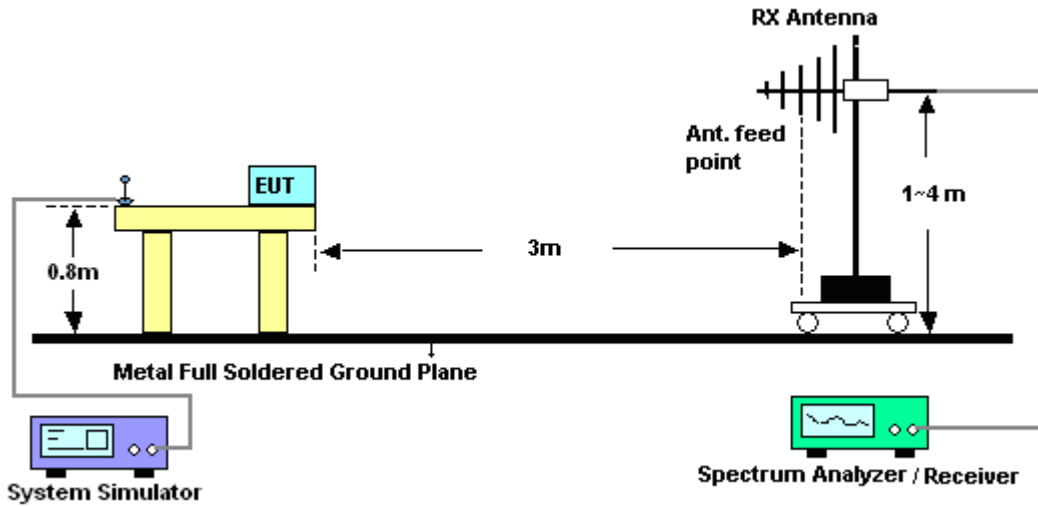
The measuring equipment is listed in the section 4 of this test report.

3.2.3. Test Procedures

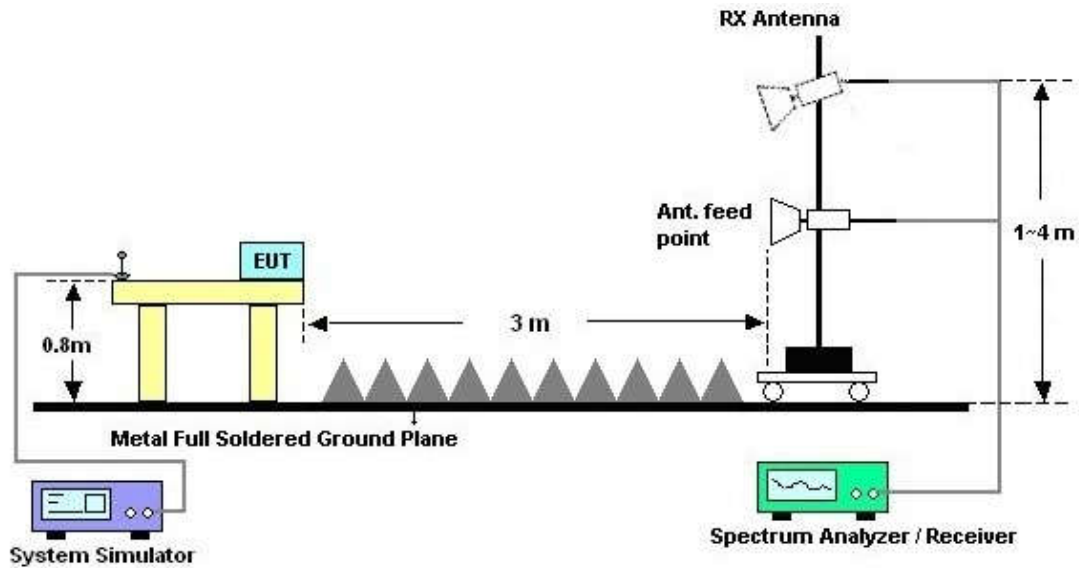
1. The EUT was placed on a turntable with 0.8 meter above ground.
2. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest radiation.
4. The antenna 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



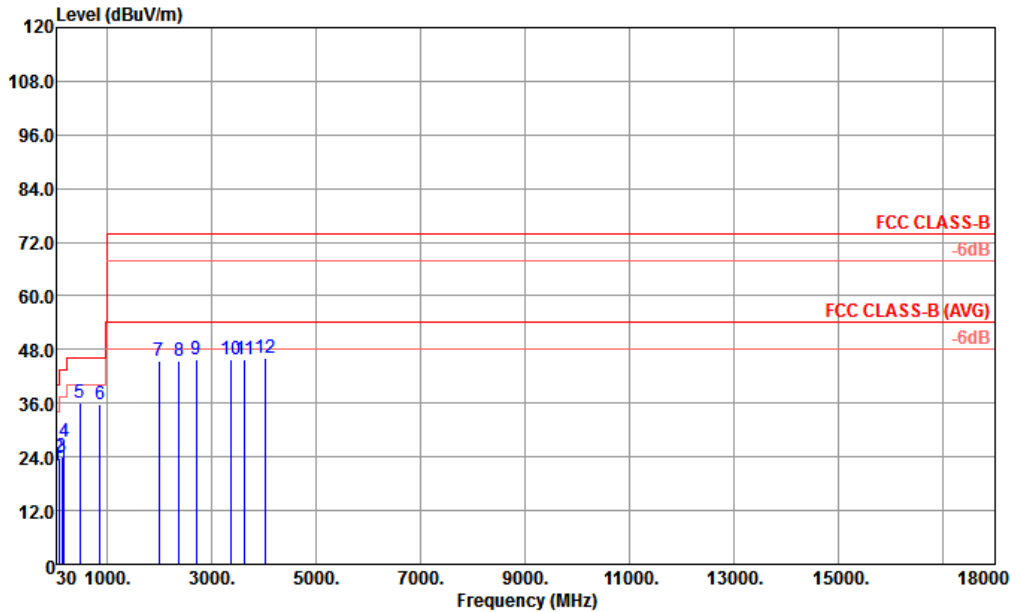
For radiated emissions above 1GHz





3.2.5. Test Result of Radiated Emission

| | | | |
|-----------------|--|---------------------|------------|
| Test Mode : | Mode 4 | Temperature : | 21~22°C |
| Test Engineer : | Leo Li | Relative Humidity : | 41~42% |
| Test Distance : | 3m | Polarization : | Horizontal |
| Function Type : | LTE Band 7 Idle + Bluetooth Idle + WLAN Idle(2.4G) + Earphone + USB Cable(Data Link with Notebook) + GPS RX + SIM2 | | |

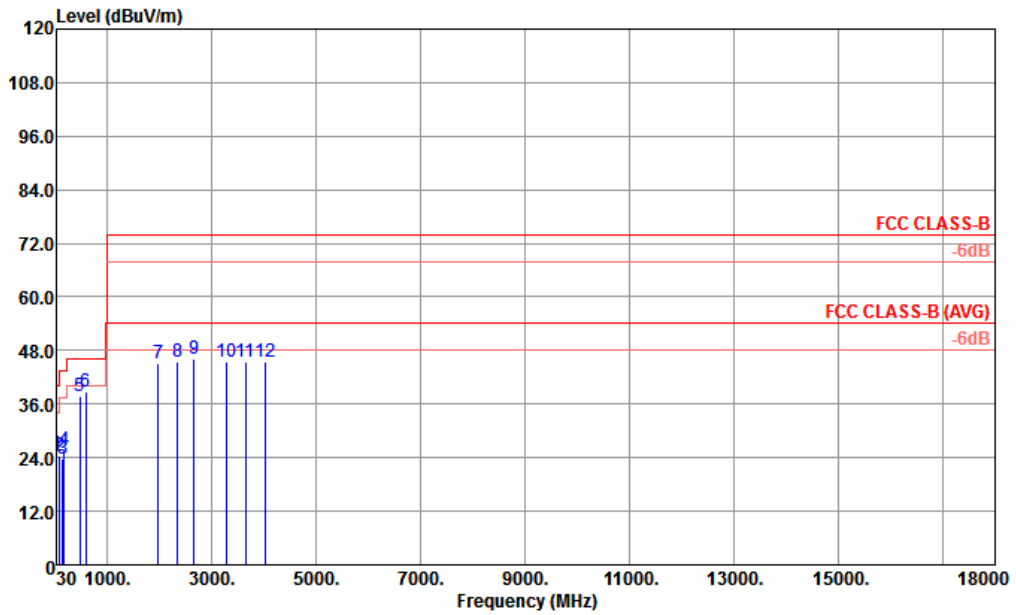


Site : 03CH02-KS
 Condition : FCC CLASS-B 3m 02 LF ANT HORIZONTAL
 Project : (FC)702602
 Mode : 4
 IMEI : 004402970653444 004402970653451 #6

| | Freq | Level | Over Limit | Limit Line | ReadAntenna Level | Antenna Factor | Cable Loss | Preamp Factor | A/Pos | T/Pos | Remark |
|----|---------|--------|------------|------------|-------------------|----------------|------------|---------------|-------|-------|--------|
| | MHz | dBuV/m | dB | dBuV/m | dBuV | dB/m | dB | dB | cm | deg | |
| 1 | 30.54 | 22.17 | -17.83 | 40.00 | 28.01 | 25.60 | 0.59 | 32.03 | --- | --- | Peak |
| 2 | 84.00 | 23.87 | -16.13 | 40.00 | 39.54 | 15.43 | 0.95 | 32.05 | --- | --- | Peak |
| 3 | 143.40 | 23.96 | -19.54 | 43.50 | 37.03 | 17.55 | 1.23 | 31.85 | --- | --- | Peak |
| 4 | 186.33 | 27.46 | -16.04 | 43.50 | 41.51 | 16.28 | 1.39 | 31.72 | --- | --- | Peak |
| 5 | 479.90 | 36.02 | -9.98 | 46.00 | 40.50 | 23.62 | 2.30 | 30.40 | 100 | 0 | Peak |
| 6 | 862.10 | 35.91 | -10.09 | 46.00 | 33.48 | 27.19 | 3.06 | 27.82 | --- | --- | Peak |
| 7 | 1990.00 | 45.61 | -28.39 | 74.00 | 43.43 | 30.19 | 4.61 | 32.62 | --- | --- | Peak |
| 8 | 2380.00 | 45.56 | -28.44 | 74.00 | 40.33 | 31.27 | 5.14 | 31.18 | --- | --- | Peak |
| 9 | 2704.00 | 45.68 | -28.32 | 74.00 | 38.67 | 31.82 | 5.60 | 30.41 | --- | --- | Peak |
| 10 | 3369.00 | 45.82 | -28.18 | 74.00 | 36.56 | 33.33 | 6.27 | 30.34 | --- | --- | Peak |
| 11 | 3642.00 | 45.76 | -28.24 | 74.00 | 35.45 | 33.92 | 6.49 | 30.10 | --- | --- | Peak |
| 12 | 4041.00 | 46.04 | -27.96 | 74.00 | 34.68 | 35.18 | 6.86 | 30.68 | --- | --- | Peak |



| | | | |
|-----------------|--|---------------------|----------|
| Test Mode : | Mode 4 | Temperature : | 21~22°C |
| Test Engineer : | Leo Li | Relative Humidity : | 41~42% |
| Test Distance : | 3m | Polarization : | Vertical |
| Function Type : | LTE Band 7 Idle + Bluetooth Idle + WLAN Idle(2.4G) + Earphone + USB Cable(Data Link with Notebook) + GPS RX + SIM2 | | |



Site : 03CH02-KS
 Condition : FCC CLASS-B 3m 02 LF ANT VERTICAL
 Project : (FC)702602
 Mode : 4
 IMEI : 004402970653444 004402970653451 #6

| | Freq | Level | Over Limit | Limit Line | ReadAntenna Level | Antenna Factor | Cable Loss | Preamp Factor | A/Pos | T/Pos | Remark |
|----|---------|--------|------------|------------|-------------------|----------------|------------|---------------|-------|-------|--------|
| | MHz | dBuV/m | dB | dBuV/m | dBuV | dB/m | dB | dB | cm | deg | |
| 1 | 30.27 | 24.80 | -15.20 | 40.00 | 30.66 | 25.60 | 0.57 | 32.03 | --- | --- | Peak |
| 2 | 88.86 | 24.35 | -19.15 | 43.50 | 38.61 | 16.80 | 0.97 | 32.03 | --- | --- | Peak |
| 3 | 153.12 | 23.88 | -19.62 | 43.50 | 37.01 | 17.43 | 1.27 | 31.83 | --- | --- | Peak |
| 4 | 182.28 | 25.61 | -17.89 | 43.50 | 39.55 | 16.41 | 1.38 | 31.73 | --- | --- | Peak |
| 5 | 479.90 | 37.64 | -8.36 | 46.00 | 42.12 | 23.62 | 2.30 | 30.40 | --- | --- | Peak |
| 6 | 599.60 | 38.65 | -7.35 | 46.00 | 41.10 | 24.60 | 2.62 | 29.67 | 100 | 0 | Peak |
| 7 | 1978.00 | 45.16 | -28.84 | 74.00 | 43.20 | 30.19 | 4.61 | 32.84 | --- | --- | Peak |
| 8 | 2354.00 | 45.46 | -28.54 | 74.00 | 40.66 | 31.25 | 5.09 | 31.54 | --- | --- | Peak |
| 9 | 2672.00 | 45.98 | -28.02 | 74.00 | 39.11 | 31.76 | 5.54 | 30.43 | --- | --- | Peak |
| 10 | 3276.00 | 45.47 | -28.53 | 74.00 | 36.58 | 33.21 | 6.24 | 30.56 | --- | --- | Peak |
| 11 | 3645.00 | 45.36 | -28.64 | 74.00 | 34.94 | 34.03 | 6.49 | 30.10 | --- | --- | Peak |
| 12 | 4026.00 | 45.34 | -28.66 | 74.00 | 34.08 | 35.15 | 6.79 | 30.68 | --- | --- | Peak |



4. List of Measuring Equipment

| Instrument | Manufacturer | Model No. | Serial No. | Characteristics | Calibration Date | Test Date | Due Date | Remark |
|-----------------------------------|--------------|-----------|------------------|----------------------------|------------------|---------------|---------------|-----------------------|
| EMI Receiver | R&S | ESCI7 | 100768 | 9kHz~7GHz; | Apr. 20, 2017 | Nov. 06, 2017 | Apr. 19, 2018 | Conduction (CO01-KS) |
| AC LISN | MessTec | AN3016 | 060103 | 9kHz~30MHz | Oct. 13, 2017 | Nov. 06, 2017 | Oct. 12, 2018 | Conduction (CO01-KS) |
| AC LISN (for auxiliary equipment) | MessTec | AN3016 | 060105 | 9kHz~30MHz | Oct. 13, 2017 | Nov. 06, 2017 | Oct. 12, 2018 | Conduction (CO01-KS) |
| AC Power Source | Chroma | 61602 | ABP0000008 11 | AC 0V~300V, 45Hz~1000Hz | Oct. 12, 2017 | Nov. 06, 2017 | Oct. 11, 2018 | Conduction (CO01-KS) |
| EMI Test Receiver | R&S | ESR7 | 101403 | 9kHz~7GHz; Max 30dBm | Aug. 08, 2017 | Nov. 09, 2017 | Aug. 07, 2018 | Radiation (03CH02-KS) |
| EXA Spectrum Analyzer | Keysight | N9010A | MY55150208 | 10Hz~44GHz, MAX 30dB | Apr. 18, 2017 | Nov. 09, 2017 | Apr. 17, 2018 | Radiation (03CH02-KS) |
| Bilog Antenna | TeseQ | CBL6112D | 23182 | 30MHz~2GHz | Jan. 22, 2017 | Nov. 09, 2017 | Jan. 21, 2018 | Radiation (03CH02-KS) |
| Double Ridge Horn Antenna | ETS-Lindgren | 3117 | 75957 | 1GHz~18GHz | Oct. 21, 2017 | Nov. 09, 2017 | Oct. 20, 2018 | Radiation (03CH02-KS) |
| SHF-EHF Horn | Schwarzbeck | BBHA 9170 | BBHA170249 | 15GHz~40GHz | Feb. 15, 2017 | Nov. 09, 2017 | Feb. 14, 2018 | Radiation (03CH02-KS) |
| Amplifier | SONOMA | 310N | 187289 | 9kHz~1GHz | Aug. 07, 2017 | Nov. 09, 2017 | Aug. 06, 2018 | Radiation (03CH02-KS) |
| Amplifier | Agilent | 8449B | 3008A02384 | 1GHz~26.5GHz | Oct. 12, 2017 | Nov. 09, 2017 | Oct. 11, 2018 | Radiation (03CH02-KS) |
| AC Power Source | Chroma | 61601 | 61601000247 3 | N/A | NCR | Nov. 09, 2017 | NCR | Radiation (03CH02-KS) |
| Turn Table | MF | MF7802 | N/A | 0~360 degree | NCR | Nov. 09, 2017 | NCR | Radiation (03CH02-KS) |
| Antenna Mast | MF | MF7802 | N/A | 1 m~4 m | NCR | Nov. 09, 2017 | NCR | Radiation (03CH02-KS) |

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% ($U = 2Uc(y)$) | 2.3dB |
|---|-------|

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

| | |
|---|-------|
| Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$) | 5.2dB |
|---|-------|

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

| | |
|---|-------|
| Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$) | 4.7dB |
|---|-------|

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

| | |
|---|-------|
| Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$) | 5.3dB |
|---|-------|