



FCC Test Report

APPLICANT : Motorola Mobility, LLC
EQUIPMENT : Mobile Cellular Phone
BRAND NAME : Motorola
MODEL NAME : 4603
FCC ID : IHDT56UB2
STANDARD : FCC 47 CFR FCC Part 15 Subpart B
CLASSIFICATION : Certification

The product was received on May 01, 2015 and testing was completed on Jun. 13, 2015. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the test procedures given in ANSI C63.4-2009 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 INC., the test report shall not be reproduced except in full.

Reviewed by: Louis Wu / Manager

Approved by: Jones Tsai / Manager



SPORTON INTERNATIONAL INC.

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FC550147-02	Rev. 01	Initial issue of report	Jul. 08, 2015



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 8.40 dB at 0.190 MHz
3.2	15.109	Radiated Emission	< 15.109 limits	PASS	Under limit 9.44 dB at 664.000 MHz



1. General Description

1.1. Applicant

Motorola Mobility, LLC

222 W Merchandise Mart Plaza, Suite 1800, Chicago, IL 60654, United States

1.2. Manufacturer

Motorola Mobility, LLC

222 W Merchandise Mart Plaza, Suite 1800, Chicago, IL 60654, United States

1.3. Product Feature of Equipment Under Test

Product Feature	
Equipment	Mobile Cellular Phone
Brand Name	Motorola
Model Name	4603
FCC ID	IHDT56UB2
IMEI Code	SIM1: 358966060018892 SIM2: 358966060018900
EUT supports Radios application	GSM/EGPRS/WCDMA/HSPA/LTE/NFC/FM WLAN 11b/g/n HT20 WLAN 11a/n HT20/HT40 Bluetooth 2.1 EDR Bluetooth 4.1 - LE
HW Version	P2
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.

Accessory List	
Battery	Brand Name : Motorola
	Model Name : FL40
Earphone	Brand Name : Motorola
	Model Name : 89719N
USB Cable	Brand Name : Motorola
	Model Name : SKN6461A



1.4. Product Specification subjective to this standard

Product Specification subjective to this standard	
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 5 : 824.7 MHz ~ 848.3 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 LTE Band 12 : 699 MHz ~ 716 MHz LTE Band 17 : 706.5 MHz ~ 713.5 MHz 802.11b/g/n: 2412 MHz ~ 2462 MHz 802.11a/n: 5180 MHz ~ 5240 MHz; 5260 MHz ~ 5320 MHz; 5500 MHz ~ 5580 MHz and 5660 MHz ~ 5700 MHz ; 5745 MHz ~ 5825 MHz Bluetooth: 2402 MHz ~ 2480 MHz NFC : 13.56 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 5 : 869.7 MHz ~ 893.3 MHz LTE Band 2 : 1930.7 MHz ~ 1989.3 MHz LTE Band 4 : 2110.7 MHz ~ 2154.3 MHz LTE Band 7 : 2622.5MHz ~ 2687.5 MHz LTE Band 12 : 729 MHz ~ 746 MHz LTE Band 17 : 736.5 MHz ~ 743.5 MHz 802.11b/g/n: 2412 MHz ~ 2462 MHz 802.11a/n: 5180 MHz ~ 5240 MHz; 5260 MHz ~ 5320 MHz; 5500 MHz ~ 5580 MHz and 5660 MHz ~ 5700 MHz ; 5745 MHz ~ 5825 MHz Bluetooth: 2402 MHz ~ 2480 MHz GPS : 1.57542 GHz NFC : 13.56 MHz FM : 88 MHz ~ 108 MHz
Antenna Type	WWAN: Fixed Internal Antenna WLAN: Fixed, stamped metal Antenna Bluetooth: Fixed Internal Antenna GPS: Fixed Internal Antenna NFC : Printed circuited flex Antenna FM: Headset Antenna

Product Specification subjective to this standard	
Type of Modulation	GSM: GMSK GPRS: GMSK EDGE(MCS 0-4): GMSK / (MCS 5-9): 8PSK WCDMA: QPSK (Uplink) HSDPA: 64QAM (Downlink) HSUPA: QPSK (Uplink) LTE: QPSK / 16QAM 802.11b : DSSS (DBPSK / DQPSK / CCK) 802.11a/g/n : OFDM (BPSK / QPSK / 16QAM / 64QAM) Bluetooth LE : GFSK Bluetooth (1Mbps) : GFSK Bluetooth (2Mbps) : $\pi/4$ -DQPSK Bluetooth (3Mbps) : 8-DPSK GPS : BPSK NFC: ASK FM : FM

1.5. Modification of EUT

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

1.6. Test Location

Sporton Lab is accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code : 1190) and the FCC designation TW1022 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC Test.

Test Site	SPORTON INTERNATIONAL INC.	
Test Site Location	No. 52, Hwa Ya 1 st Rd., Hwa Ya Technology Park, Kwei-Shan District, Tao Yuan City, Taiwan, R.O.C. TEL: +886-3-327-3456 FAX: +886-3-328-4978	
Test Site No.	Sporton Site No.	
	CO05-HY	03CH06-HY



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 C63.4-2009

Remark:

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. For FCC 15 Subpart B - Unintentional Radiators, device supporting USB interface or similar peripherals (defined as the Section 15.3 (r) Peripheral device) acting as a peripheral for personal computers shall be authorized as “The Class B personal computers and peripherals” per the Section 15.101 (a) Equipment authorization of unintentional radiators.
3. For other Unintentional Radiators features of this EUT, test reports are be issued separately.
Per the Note of the Section 15.101, when device supports features (USB, FM Radio, digital devices...etc) more than one category of authorization, type of authorization shall be appropriately chosen for FCC 15B compliance rule, and the Section 15.101 (b), only those receivers that operate (tune) within the frequency range of 30-960 MHz, CB receivers and radar detectors are subject to the authorizations shown in paragraph (a) of the Section 15.101. However, receivers indicated as being subject to Declaration of Conformity that are contained within a transceiver, the transmitter portion of which is subject to certification, shall be authorized under the verification procedure.



2. Test Configuration of Equipment Under Test

2.1. Test Mode

The EUT has been associated with peripherals pursuant to ANSI C63.4-2009 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.

Item	EUT Configuration	Test Condition		
		EMI AC	EMI RE<1G	EMI RE≥1G
1.	Data application transferred mode (EUT with notebook)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Abbreviations:

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

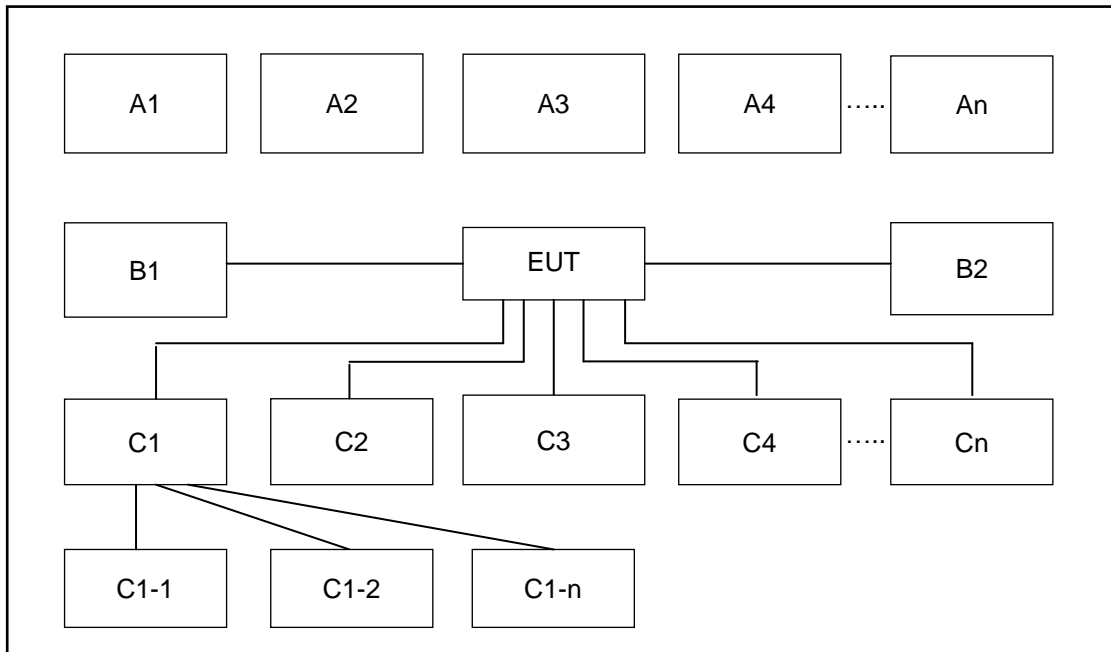


Test Items	EUT Configure Mode	Function Type
AC Conducted Emission	1	Mode 1 : LTE Band 17 Idle + Bluetooth Idle + WLAN Idle + GPS Rx + Earphone + Battery + USB Cable (Data Link with Notebook) + SIM 1 Mode 2 : WCDMA Band IV Idle + Bluetooth Idle + WLAN Idle + GPS Rx + Earphone + Battery + USB Cable (Data Link with Notebook) + SIM 1 Mode 3 : LTE Band 17 Idle + Bluetooth Idle + WLAN Idle + GPS Rx + Earphone + Battery + USB Cable (Data Link with Notebook) + SIM 2
Radiated Emissions < 1GHz	1	Mode 1 : LTE Band 17 Idle + Bluetooth Idle + WLAN Idle + GPS Rx + Earphone + Battery + USB Cable (Data Link with Notebook) + SIM 1 Mode 2 : WCDMA Band IV Idle + Bluetooth Idle + WLAN Idle + GPS Rx + Earphone + Battery + USB Cable (Data Link with Notebook) + SIM 1 Mode 3 : WCDMA Band IV Idle + Bluetooth Idle + WLAN Idle + GPS Rx + Earphone + Battery + USB Cable (Data Link with Notebook) + SIM 2
Radiated Emissions ≥ 1GHz	1	Mode 1 : LTE Band 17 Idle + Bluetooth Idle + WLAN Idle + GPS Rx + Earphone + Battery + USB Cable (Data Link with Notebook) + SIM 1

Remark:

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

2.2. Connection Diagram of Test System



Conduction and Radiation Test Setup									
No.	Wireless Station	Connection Type	Test Mode						
			1	2	3	-	-	-	-
A1	BT Earphone	Bluetooth	X	X	X	-	-	-	-
A2	System Simulator	WCDMA/LTE	X	X	X	-	-	-	-
A3	GPS Station	GPS	X	X	X	-	-	-	-
A4	AP router	WiFi	X	X	X	-	-	-	-
No.	Setup Peripherals	Connection Type	1	2	3	-	-	-	-
C1	Notebook	USB cable	X	X	X	-	-	-	-
C1-1	iPod	USB Cable to C1	X	X	X	-	-	-	-
C1-2	WLAN AP	RJ-45 Cable to C1	X	X	X	-	-	-	-
C2	Earphone	Earphone jack	X	X	X	-	-	-	-
C3	SD card	SD I/O interface without cable	X	X	X	-	-	-	-



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	R&S	CMU 200	N/A	N/A	Unshielded, 1.8 m
2.	System Simulator	R&S	CMW 500	N/A	N/A	Unshielded, 1.8 m
3.	System Simulator	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8 m
4.	GPS Station	Pendulum	GSG-54	N/A	N/A	Unshielded, 1.8 m
5.	WLAN AP	D-Link	DIR-865L	KA2DIR865LA1	N/A	Unshielded, 1.8 m
6.	WLAN AP	D-Link	DIR-628	KA2DIR628A2	N/A	Unshielded, 1.8 m
7.	Notebook	DELL	Latitude E3340	FCC DoC/ Contains FCC ID: PD97260NGU	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
8.	Notebook	DELL	Latitude E6320	FCC DoC/ Contains FCC ID: QDS-BRCM1054	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
9.	Bluetooth Earphone	Sony Ericsson	MW600	PY7DDA-2029	N/A	N/A
10.	iPod	Apple	A1199	FCC DoC	Shielded, 1.0 m	N/A
11.	iPod	Apple	A1285	FCC DoC	Shielded, 1.0 m	N/A
12.	SD Card	SanDisk	MicroSD HC	FCC DoC	N/A	N/A

2.4. EUT Operation Test Setup

The EUT was in 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.

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

1. Data application is transferred between Laptop and EUT via USB cable.
2. Execute "GPS Test" to make the EUT continuously receive signals from GPS station.



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

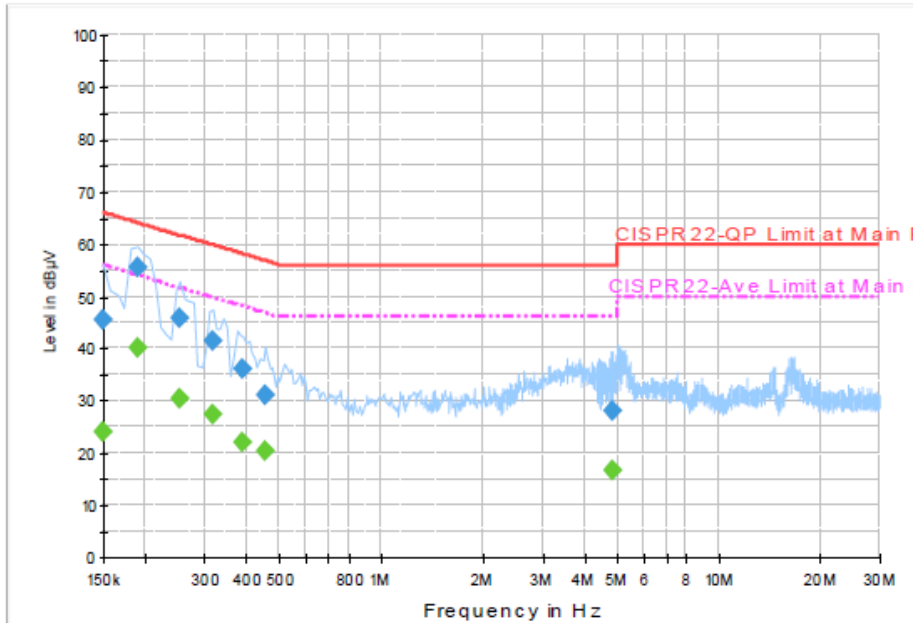
1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
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 1	Temperature :	23~25°C
Test Engineer :	Eric Jeng	Relative Humidity :	58~61%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	LTE Band 17 Idle + Bluetooth Idle + WLAN Idle + GPS Rx + Earphone + Battery + USB Cable (Data Link with Notebook) + SIM 1		



Final Result : Quasi-Peak

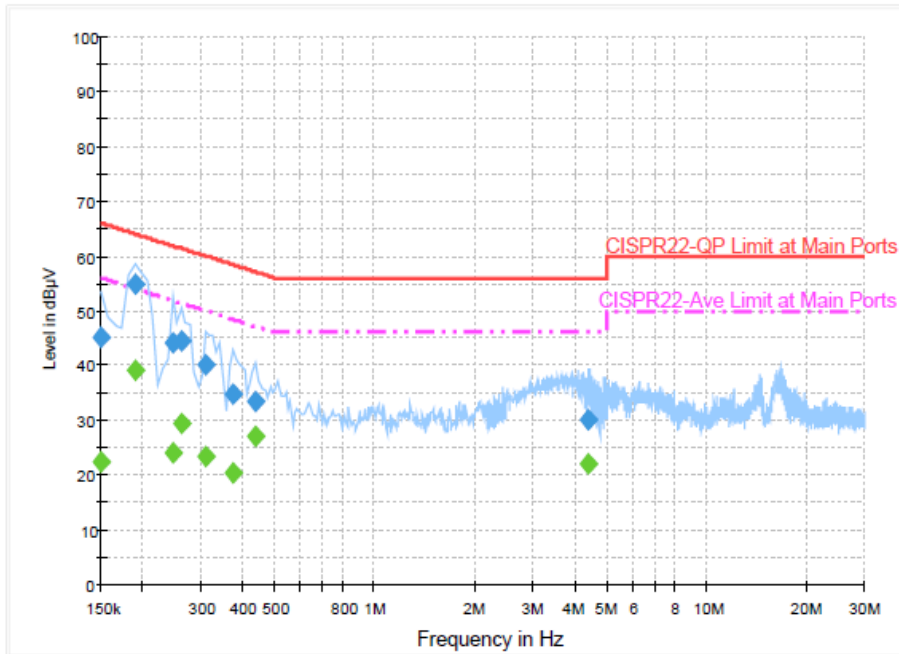
Frequency (MHz)	Quasi-Peak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	45.6	Off	L1	19.5	20.4	66.0
0.190000	55.6	Off	L1	19.5	8.4	64.0
0.254000	45.9	Off	L1	19.4	15.7	61.6
0.318000	41.5	Off	L1	19.5	18.3	59.8
0.390000	36.1	Off	L1	19.5	22.0	58.1
0.454000	31.2	Off	L1	19.4	25.6	56.8
4.854000	28.2	Off	L1	19.8	27.8	56.0

Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	24.0	Off	L1	19.5	32.0	56.0
0.190000	40.1	Off	L1	19.5	13.9	54.0
0.254000	30.5	Off	L1	19.4	21.1	51.6
0.318000	27.5	Off	L1	19.5	22.3	49.8
0.390000	22.1	Off	L1	19.5	26.0	48.1
0.454000	20.4	Off	L1	19.4	26.4	46.8
4.854000	16.7	Off	L1	19.8	29.3	46.0



Test Mode :	Mode 1	Temperature :	23~25°C
Test Engineer :	Eric Jeng	Relative Humidity :	58~61%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	LTE Band 17 Idle + Bluetooth Idle + WLAN Idle + GPS Rx + Earphone + Battery + USB Cable (Data Link with Notebook) + SIM 1		



Final Result : Quasi-Peak

Frequency (MHz)	Quasi-Peak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	45.1	Off	N	19.5	20.9	66.0
0.190000	54.7	Off	N	19.5	9.3	64.0
0.246000	44.1	Off	N	19.5	17.8	61.9
0.262000	44.5	Off	N	19.5	16.9	61.4
0.310000	40.3	Off	N	19.5	19.7	60.0
0.374000	34.9	Off	N	19.5	23.5	58.4
0.438000	33.4	Off	N	19.5	23.7	57.1
4.414000	29.9	Off	N	19.7	26.1	56.0

Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	22.2	Off	N	19.5	33.8	56.0
0.190000	39.0	Off	N	19.5	15.0	54.0
0.246000	24.0	Off	N	19.5	27.9	51.9
0.262000	29.6	Off	N	19.5	21.8	51.4
0.310000	23.3	Off	N	19.5	26.7	50.0
0.374000	20.5	Off	N	19.5	27.9	48.4
0.438000	27.2	Off	N	19.5	19.9	47.1
4.414000	22.1	Off	N	19.7	23.9	46.0



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

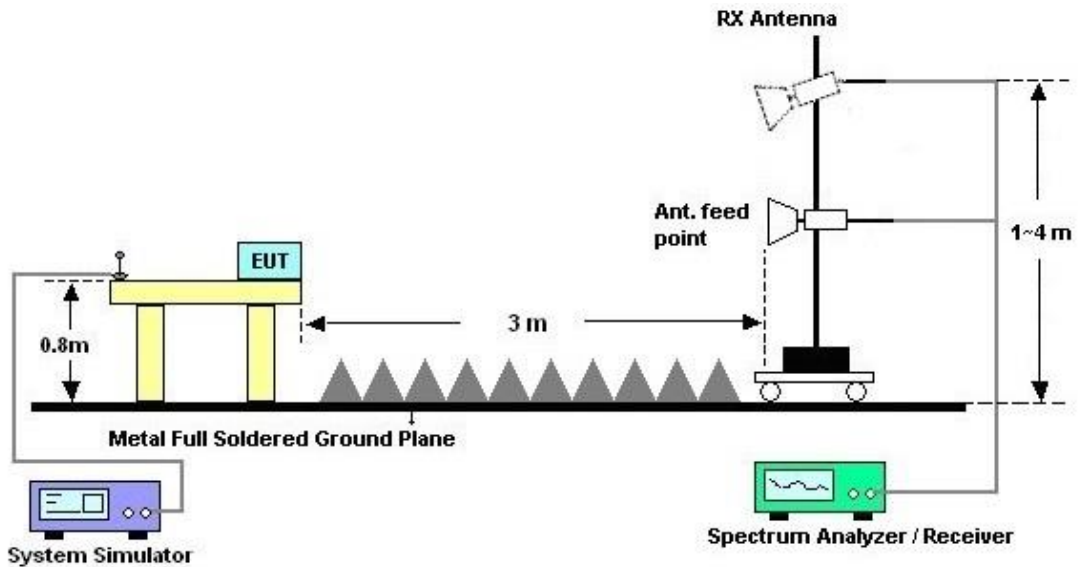
1. The EUT was placed on a turntable with 0.8 meter above ground.
2. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest radiation.
4. The antenna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



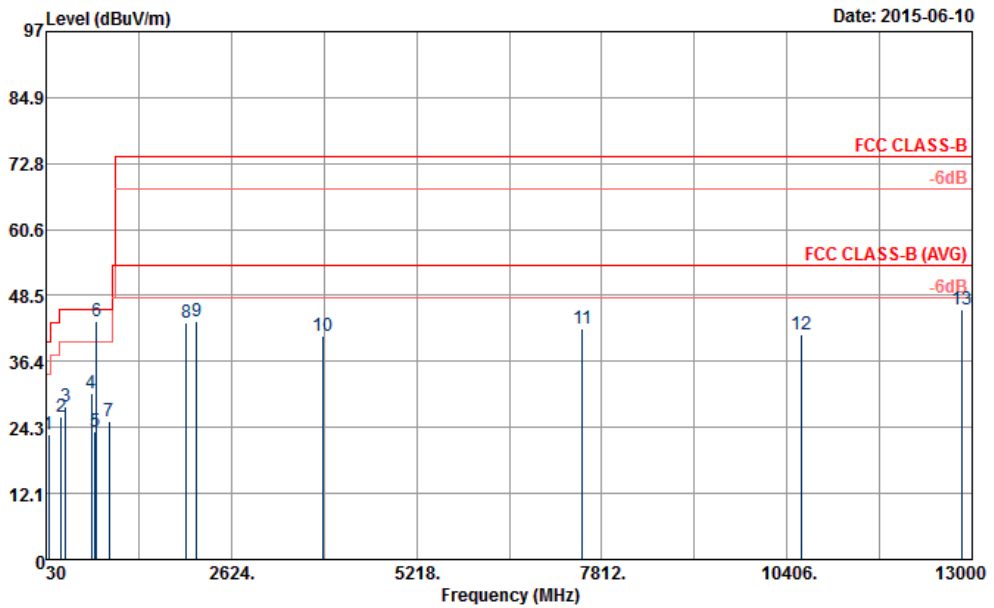
For radiated emissions above 1GHz





3.2.5. Test Result of Radiated Emission

Test Mode :	Mode 1	Temperature :	20~23°C
Test Engineer :	Daniel Lee and Hayden Wu	Relative Humidity :	50~53%
Test Distance :	3m	Polarization :	Horizontal
Function Type :	LTE Band 17 Idle + Bluetooth Idle + WLAN Idle + GPS Rx + Earphone + Battery + USB Cable (Data Link with Notebook) + SIM 1		
Remark :	#6 is system simulator signal which can be ignored.		



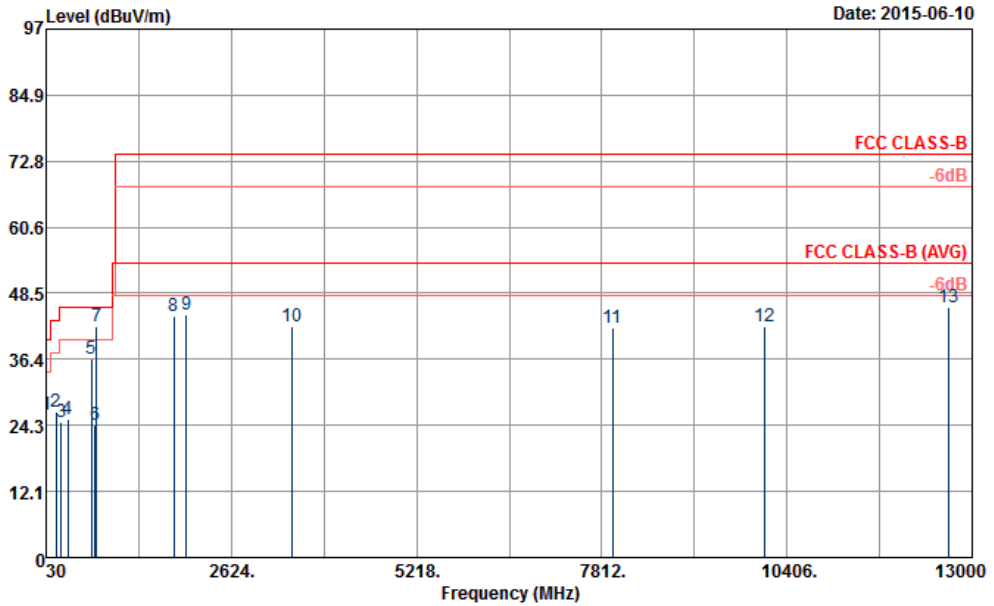
Site : 03CH06-HY
 Condition : FCC CLASS-B 3m HF-ANT_583_140731 HORIZONTAL

Power : From System
 Memo : Mode 1

	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	64.83	23.08	-16.92	40.00	47.93	6.00	0.91	31.76	---	---	Peak
2	240.33	26.10	-19.90	46.00	44.74	11.39	1.69	31.72	---	---	Peak
3	298.38	28.00	-18.00	46.00	44.71	13.09	1.90	31.70	---	---	Peak
4	666.10	30.46	-15.54	46.00	40.76	18.96	2.83	32.09	113	354	Peak
5	719.30	23.41	-22.59	46.00	33.43	19.10	2.95	32.07	---	---	Peak
6	741.00	43.71			53.20	19.53	3.02	32.04	---	---	Peak
7	916.00	25.31	-20.69	46.00	32.77	20.50	3.36	31.32	---	---	Peak
8	1992.00	43.48	-30.52	74.00	64.31	31.58	6.10	58.51	---	---	Peak
9	2136.00	43.80	-30.20	74.00	64.12	31.78	6.32	58.42	---	---	Peak
10	3898.00	41.19	-32.81	74.00	57.85	33.23	8.87	58.76	---	---	Peak
11	7544.00	42.44	-31.56	74.00	53.28	35.71	12.77	59.32	---	---	Peak
12	10614.00	41.32	-32.68	74.00	46.28	37.47	15.32	57.75	---	---	Peak
13	12854.00	45.82	-28.18	74.00	48.21	39.44	16.60	58.43	100	0	Peak



Test Mode :	Mode 1	Temperature :	20~23°C
Test Engineer :	Daniel Lee and Hayden Wu	Relative Humidity :	50~53%
Test Distance :	3m	Polarization :	Vertical
Function Type :	LTE Band 17 Idle + Bluetooth Idle + WLAN Idle + GPS Rx + Earphone + Battery + USB Cable (Data Link with Notebook) + SIM 1		
Remark :	#7 is system simulator signal which can be ignored.		



Site : 03CH06-HY
 Condition : FCC CLASS-B 3m HF-ANT_583_140731 VERTICAL

Power : From System
 Memo : Mode 1

	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	31.62	26.09	-13.91	40.00	39.57	17.64	0.66	31.78	---	---	Peak
2	169.86	26.86	-16.64	43.50	47.26	9.70	1.63	31.73	---	---	Peak
3	245.46	24.94	-21.06	46.00	43.10	11.85	1.71	31.72	---	---	Peak
4	339.20	25.44	-20.56	46.00	41.29	13.88	2.01	31.74	---	---	Peak
5	664.00	36.56	-9.44	46.00	46.87	18.95	2.83	32.09	100	239	Peak
6	720.00	24.19	-21.81	46.00	34.20	19.10	2.95	32.06	---	---	Peak
7	741.00	42.38			51.90	19.50	3.02	32.04	---	---	Peak
8	1814.00	44.31	-29.69	74.00	66.74	30.34	5.80	58.57	---	---	Peak
9	1994.00	44.49	-29.51	74.00	65.32	31.58	6.10	58.51	---	---	Peak
10	3464.00	42.44	-31.56	74.00	60.22	32.61	8.18	58.57	---	---	Peak
11	7962.00	42.09	-31.91	74.00	52.54	35.79	13.25	59.49	---	---	Peak
12	10086.00	42.41	-31.59	74.00	49.07	37.07	14.82	58.55	---	---	Peak
13	12662.00	45.82	-28.18	74.00	48.33	39.37	16.59	58.47	100	0	Peak



4. List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
EMI Test Receiver	Rohde & Schwarz	ESCS 30	100356	9kHz – 2.75GHz	Dec. 01, 2014	Jun. 13, 2015	Nov. 30, 2015	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100080	9kHz~30MHz	Dec. 02, 2014	Jun. 13, 2015	Dec. 01, 2015	Conduction (CO05-HY)
LISN (for auxiliary equipment)	Rohde & Schwarz	ENV216	100081	9kHz~30MHz	Dec. 08, 2014	Jun. 13, 2015	Dec. 07, 2015	Conduction (CO05-HY)
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	Jun. 13, 2015	N/A	Conduction (CO05-HY)
Bilog Antenna	Teseq GmbH	CBL6112D	35379	30MHz~2GHz	Sep. 27, 2014	Jun. 10, 2015	Sep. 26, 2015	Radiation (03CH06-HY)
Double Ridge Horn Antenna	EMCO	3117	00066583	1GHz~18GHz	Jul. 24, 2014	Jun. 10, 2015	Jul. 23, 2015	Radiation (03CH06-HY)
EMI Test Receiver	Rohde & Schwarz	ESU26	100472	20Hz~26.5GHz	Jan. 19, 2015	Jun. 10, 2015	Jan. 18, 2016	Radiation (03CH06-HY)
Preamplifier	SONOMA	310N	186713	9kHz~1GHz	Apr. 20, 2015	Jun. 10, 2015	Apr. 19, 2016	Radiation (03CH06-HY)
Antenna Mast	MF	MF-7802	MF780208212	1m~4m	N/A	Jun. 10, 2015	N/A	Radiation (03CH06-HY)
Turn Table	INN-CO	DS2000	420/650/00	0-360 degree	N/A	Jun. 10, 2015	N/A	Radiation (03CH06-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100315	9 kHz~30 MHz	Jul. 28, 2014	Jun. 10, 2015	Jul. 27, 2015	Radiation (03CH06-HY)
Preamplifier	MITEQ	AMF-7D-0010 1800-30-10P	1815698	1GHz~18GHz	Dec. 12, 2014	Jun. 10, 2015	Dec. 11, 2015	Radiation (03CH06-HY)



5. Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	2.26
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Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	4.50
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