FCC Test Report

APPLICANT : Motorola Mobility, LLC EQUIPMENT : Mobile Cellular Phone

BRAND NAME : Motorola

MODEL NAME : 4651

FCC ID : IHDT56UA2

STANDARD : FCC 47 CFR FCC Part 15 Subpart B

CLASSIFICATION : Certification

The product was received on May 21, 2015 and testing was completed on Jul. 08, 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

Louis Wu

Approved by: Jones Tsai / Manager

SPORTON INTERNATIONAL INC.

No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan District, Tao Yuan City, Taiwan, R.O.C.

SPORTON INTERNATIONAL INC.

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Report No.: FC552083-02

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FC552083-02	Rev. 01	Initial issue of report	Aug. 04, 2015

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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 7.50 dB at 0.190 MHz
3.2	15.109	Radiated Emission	< 15.109 limits	PASS	Under limit 14.50 dB at 30.540 MHz

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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	4651		
FCC ID	IHDT56UA2		
IMEI Code	358962060011565 (For Conducted Emission) 358962060011490 (For Radiated Emission)		
EUT supports Radios application	GSM/EGPRS/WCDMA/HSPA/LTE/NFC 2.4GHz WLAN 11b/g/n HT20 WLAN 11ac VHT20 WLAN 11a/n HT20/HT40 WLAN 11ac VHT20/VHT40/VHT80 Bluetooth v3.0 EDR Bluetooth v4.1 - LE		
HW Version	P2		
EUT Stage	Identical Prototype		

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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					
Battery	Model Name: FB55					
Earphone	Brand Name: Motorola					
Larphone	Model Name: SJYN1305A					
USB Cable	Brand Name: Motorola					
USB Cable	Model Name: SKN6461A					

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1.4. Product Specification subjective to this standard

Product Specification subjective to this standard						
	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					
	LTE Band 2 : 1850.7 MHz ~ 1909.3 MHz					
	LTE Band 4 : 1710.7 MHz ~ 1754.3 MHz					
	LTE Band 5 : 824.7 MHz ~ 848.3 MHz					
	LTE Band 7 : 2502.5 MHz ~ 2567.5 MHz					
Tx Frequency	LTE Band 12 : 698.7 MHz ~ 715.3 MHz					
	LTE Band 17 : 706.5 MHz ~ 713.5 MHz					
	LTE Band 25 : 1850.7 MHz ~ 1914.3 MHz					
	802.11b/g/n/ac: 2412 MHz ~ 2462 MHz					
	802.11a/n/ac: 5180 MHz ~ 5240 MHz; 5260 MHz ~ 5320 MHz;					
	5500 MHz ~ 5700 MHz ; 5745 MHz ~ 5825 MHz					
	Bluetooth: 2402 MHz ~ 2480 MHz					
	NFC: 13.56 MHz					
	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 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 5 : 869.7 MHz ~ 893.3 MHz					
	LTE Band 7 : 2622.5MHz ~ 2687.5 MHz					
Rx Frequency	LTE Band 12 : 729.7 MHz ~ 745.3 MHz					
	LTE Band 17 : 736.5 MHz ~ 743.5 MHz					
	LTE Band 25 : 1930.7MHz ~ 1994.3 MHz					
	802.11b/g/n/ac: 2412 MHz ~ 2462 MHz					
	802.11a/n/ac: 5180 MHz ~ 5240 MHz; 5260 MHz ~ 5320 MHz;					
	5500 MHz ~ 5700 MHz ; 5745 MHz ~ 5825 MHz					
	Bluetooth: 2402 MHz ~ 2480 MHz					
	GPS : 1.57542 GHz					
	NFC : 13.56 MHz					
	WWAN: Fixed Internal Antenna					
	WLAN: IFA Antenna					
Antenna Type	Bluetooth: IFA Antenna					
	GPS: Fixed Internal Antenna					
	NFC : Coil / Embedded Antenna					

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Due dont Considiration publication to this atom days							
Product Sp	pecification 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 / 64QAM (Downlink Only) 802.11b: DSSS (DBPSK / DQPSK / CCK) 802.11a/g/n: OFDM (BPSK / QPSK / 16QAM / 64QAM) 802.11ac: OFDM (BPSK / QPSK / 16QAM / 64QAM / 256QAM) Bluetooth LE: GFSK Bluetooth (1Mbps): GFSK Bluetooth (2Mbps): \pi /4-DQPSK Bluetooth (3Mbps): 8-DPSK GPS: BPSK NFC: ASK						

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

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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:

- 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.

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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.

		1	est Conditio	n
Item	EUT Configuration	EMI AC	EMI RE<1G	EMI RE≥1G
		Α0	ILLAIO	112-10
1.	Data application transferred mode (EUT with notebook)		\boxtimes	\boxtimes

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: GSM850 Idle + Bluetooth Idle + WLAN Idle + GPS Rx + Earphone + Battery + USB Cable (Data Link with Notebook) + SIM 1 Mode 2: WCDMA Band II Idle + Bluetooth Idle + WLAN Idle + GPS Rx + Earphone + Battery + USB Cable (Data Link with Notebook) + SIM 2
Radiated Emissions < 1GHz	1	Mode 1: GSM850 Idle + Bluetooth Idle + WLAN Idle + GPS Rx + Earphone + Battery + USB Cable (Data Link with Notebook) + SIM 1 Mode 2: WCDMA Band II Idle + Bluetooth Idle + WLAN Idle + GPS Rx + Earphone + Battery + USB Cable (Data Link with Notebook) + SIM 2
Radiated Emissions ≥ 1GHz	1	Mode 1: GSM850 Idle + Bluetooth Idle + WLAN Idle + GPS Rx + Earphone + Battery + USB Cable (Data Link with Notebook) + SIM 1

Remark:

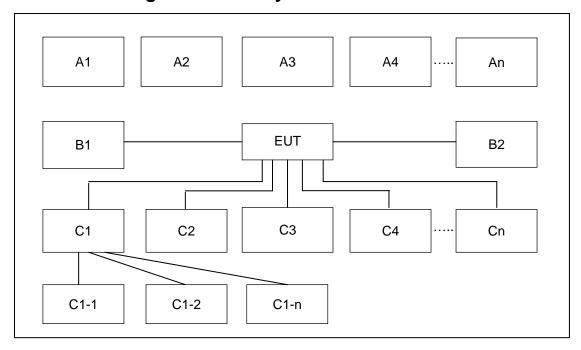
- 1. The worst case of AC is mode 1; only the test data of this mode was reported.
- 2. The worst case of RE < 1G is mode 1; only the test data of this mode was reported.
- 3. Data Link with Notebook means data application transferred mode between EUT and Notebook.

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2.2. Connection Diagram of Test System



	Conduction and Radiation Test Setup								
No	Wireless Station	Composition Time		Test Mode					
No.	wireless Station	Connection Type	1	2	-	-	-	-	-
A1	BT Earphone	Bluetooth	Х	Х					
A2	System Simulator	GSM/UMTS/CDMA/ WCDMA/LTE	Х	Х					
А3	GPS Station	GPS	Х	Х					
A4	AP router	WiFi	Х	Х					
No.	Setup Peripherals	Connection Type	1	2	-	-	-	-	-
C1	Notebook	USB cable	Х	Х					
C1-1	IPod	USB Cable to C1	Х	Х					
C1-2	AP router	RJ-45 Cable to C1	Х	Х					
C2	Earphone	Earphone jack	Х	Х					
C3	SD card	SD I/O interface without cable	Х	Х					

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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	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8 m
3.	GPS Station	Pendulum	GSG-54	N/A	N/A	Unshielded, 1.8 m
4.	WLAN AP	D-Link	DIR-865L	KA2DIR865LA1	N/A	Unshielded, 1.8 m
5.	WLAN AP	D-Link	DIR-628	KA2DIR628A2	N/A	Unshielded, 1.8 m
6.	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
7.	Bluetooth Earphone	Sony Ericsson	MW600	PY7DDA-2029	N/A	N/A
8.	iPod	Apple	A1199	FCC DoC	Shielded, 1.0 m	N/A
9.	iPod	Apple	A1285	FCC DoC	Shielded, 1.0 m	N/A
10.	SD Card	SanDisk	MicroSD HC	FCC DoC	N/A	N/A

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 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.

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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

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

3.1.3 Test Procedure

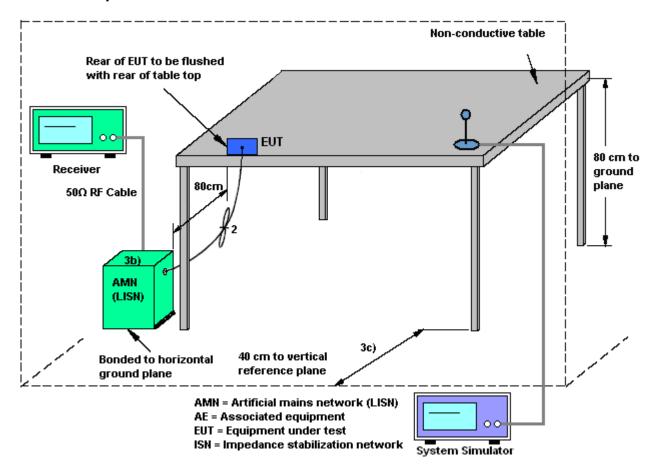
- 1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
- 2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
- 3. All the support units are connecting to the other 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.

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3.1.4 Test Setup

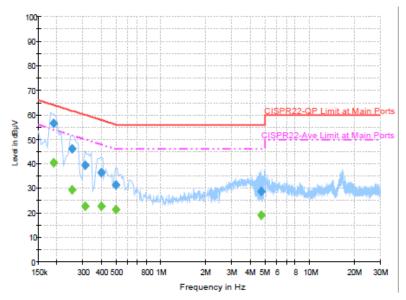


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3.1.5 Test Result of AC Conducted Emission

Test Mode :	Mode 1	Temperature :	25~26℃			
Test Engineer :	Kai-Chun Chu	Relative Humidity :	52~53%			
Test Voltage :	120Vac / 60Hz	Phase :	Line			
Function Type	GSM850 Idle + Bluetooth Idle + WLAN Idle + GPS Rx + Earphone + Battery + USB					
Function Type :	Cable (Data Link with Notebook) + SIM 1					



Final Result : Quasi-Peak

Frequency	Quasi-Peak	Filter	Line	Corr.	Margin	Limit
(MHz)	(dBµV)	i iitei	Lille	(dB)	(dB)	(dBµV)
0.190000	56.5	Off	L1	19.5	7.5	64.0
0.254000	46.3	Off	L1	19.4	15.3	61.6
0.310000	39.5	Off	L1	19.5	20.5	60.0
0.398000	36.5	Off	L1	19.6	21.4	57.9
0.502000	31.4	Off	L1	19.4	24.6	56.0
4.718000	28.8	Off	L1	19.7	27.2	56.0

Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.190000	40.5	Off	L1	19.5	13.5	54.0
0.254000	29.5	Off	L1	19.4	22.1	51.6
0.310000	22.7	Off	L1	19.5	27.3	50.0
0.398000	22.7	Off	L1	19.6	25.2	47.9
0.502000	21.4	Off	L1	19.4	24.6	46.0
4.718000	19.2	Off	L1	19.7	26.8	46.0

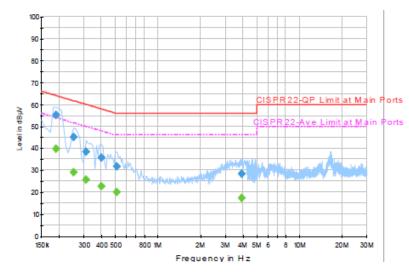
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Test Mode :	Mode 1	Temperature :	25~26℃			
Test Engineer :	Kai-Chun Chu	Relative Humidity :	52~53%			
Test Voltage :	120Vac / 60Hz	Phase :	Neutral			
Function Type	GSM850 Idle + Bluetooth Idle + WLAN Idle + GPS Rx + Earphone + Battery + USB					
Function Type :	Cable (Data Link with Notebook) + SIM 1					



Final Result : Quasi-Peak

Frequency	Quasi-Peak	uasi-Peak Filter		Corr.	Margin	Limit
(MHz)	(dBµV)	1 iiici	Line	(dB)	(dB)	(dBµV)
0.190000	55.3	Off	N	19.5	8.7	64.0
0.254000	45.3	Off	N	19.4	16.3	61.6
0.310000	38.4	Off	N	19.5	21.6	60.0
0.398000	35.8	Off	N	19.6	22.1	57.9
0.510000	31.7	Off	N	19.5	24.3	56.0
3.902000	28.3	Off	N	19.7	27.7	56.0

Final Result : Average

	_					
Frequency (MHz)	Average (dBµV)	Filter	Line	Corr.	Margin (dB)	Limit (dBµV)
0.190000	39.9	Off	N	19.5	14.1	54.0
0.254000	29.0	Off	N	19.4	22.6	51.6
0.310000	25.6	Off	N	19.5	24.4	50.0
0.398000	22.6	Off	N	19.6	25.3	47.9
0.510000	20.2	Off	N	19.5	25.8	46.0
3.902000	17.3	Off	N	19.7	28.7	46.0

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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

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

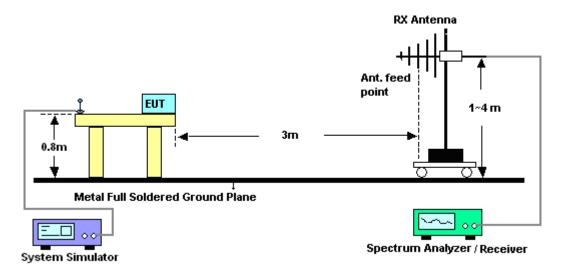
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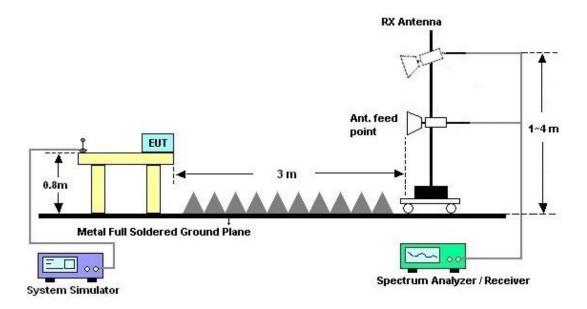
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3.2.4. Test Setup of Radiated Emission

For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



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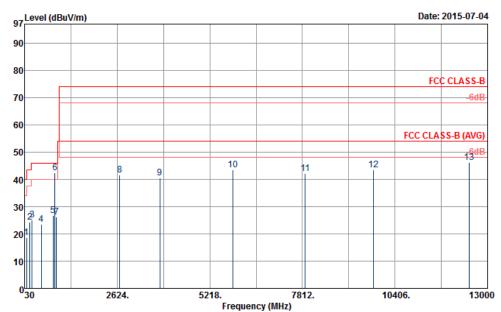
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3.2.5. Test Result of Radiated Emission

Test Mode :	Mode 1	Temperature :	20~23°C				
Test Engineer :	Daniel Lee	Relative Humidity :	50~53%				
Test Distance :	3m	Polarization :	Horizontal				
Function Type	GSM850 Idle + Bluetooth Idle + WLAN Idle + GPS Rx + Earphone + Battery + USB						
Function Type :	Cable (Data Link with Notebook) + SIM 1						
Remark :	#6 is system simulator signa	l which can be ignored	i.				



Site : 03CH06-HY

Condition : FCC CLASS-B 3m HF-ANT_583_140731 HORIZONTAL

Project : 552083-02 Power : From System Mode : Mode 1

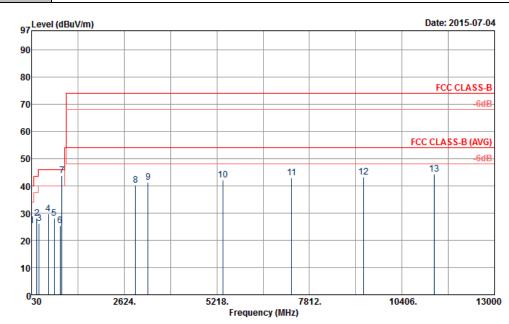
noae		wode 1									
			0ver	Limit	ReadA	ntenna	Cable	Preamp	A/Pos	T/Pos	
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor			Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	84.27	18.66	-21.34	40.00	41.64	7.76	1.01	31.75			Peak
2	183.90	24.26	-19.24	43.50	45.47	9.06	1.46	31.73			Peak
3	240.06	25.15	-20.85	46.00	43.79	11.39	1.69	31.72			Peak
4	499.50	23.46	-22.54	46.00	35.49	17.40	2.48	31.91			Peak
5	832.00	26.78	-19.22	46.00	35.37	20.04	3.17	31.80	100	188	Peak
6	881.70	42.29			50.07	20.45	3.32	31.55			Peak
7	925.80	26.24	-19.76	46.00	33.55	20.56	3.36	31.23			Peak
8	2694.00	41.58	-32.42	74.00	60.31	32.32	7.15	58.20			Peak
9	3824.00	40.44	-33.56	74.00	57.32	33.12	8.73	58.73			Peak
10	5866.00	43.44	-30.56	74.00	54.86	35.22	11.14	57.78			Peak
11	7890.00	42.26	-31.74	74.00	52.84	35.78	13.09	59.45			Peak
12	9806.00	43.38	-30.62	74.00	50.97	36.81	14.49	58.89			Peak
13	12494.00	46.22	-27.78	74.00	48.83	39.30	16.59	58.50	100	0	Peak

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20~23°C Test Mode: Mode 1 Temperature: Test Engineer: Daniel Lee Relative Humidity: 50~53% Test Distance: Polarization: Vertical GSM850 Idle + Bluetooth Idle + WLAN Idle + GPS Rx + Earphone + Battery + USB **Function Type:** 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

Project : 552083-02
Power : From System
Mode : Mode 1

			0ver	Limit		Intenna		Preamp	A/Pos	T/Pos	
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor			Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	30.54	25.50	-14.50	40.00	38.61	18.02	0.65	31.78	100	204	Peak
2	180.12	28.21	-15.29	43.50	49.19	9.30	1.45	31.73			Peak
3	242.76	26.19	-19.81	46.00	44.64	11.57	1.70	31.72			Peak
4	500.20	29.84	-16.16	46.00	41.86	17.40	2.49	31.91			Peak
5	664.70	28.09	-17.91	46.00	38.40	18.95	2.83	32.09			Peak
6	832.70	25.48	-20.52	46.00	34.04	20.06	3.17	31.79			Peak
7	881.70	43.78			51.56	20.45	3.32	31.55			Peak
8	2938.00	40.22	-33.78	74.00	58.13	32.69	7.60	58.20			Peak
9	3298.00	41.30	-32.70	74.00	59.05	32.68	8.00	58.43			Peak
10	5398.00	42.06	-31.94	74.00	54.47	34.90	10.57	57.88			Peak
11	7312.00	43.06	-30.94	74.00	54.07	35.74	12.36	59.11			Peak
12	9330.00	43.21	-30.79	74.00	51.71	36.33	14.30	59.13			Peak
13	11306.00	44.20	-29.80	74.00	48.30	37.94	15.92	57.96	100	0	Peak

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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	Jul. 08, 2015	Nov. 30, 2015	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100080	9kHz~30MHz	Dec. 02, 2014	Jul. 08, 2015	Dec. 01, 2015	Conduction (CO05-HY)
LISN (for auxiliary equipment)	Rohde & Schwarz	ENV216	100081	9kHz~30MHz	Dec. 08, 2014	Jul. 08, 2015	Dec. 07, 2015	Conduction (CO05-HY)
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	Jul. 08, 2015	N/A	Conduction (CO05-HY)
Bilog Antenna	Teseq GmbH	CBL6112D	35379	30MHz~2GHz	Sep. 27, 2014	Jul. 03, 2015 ~ Jul. 04, 2015	Sep. 26, 2015	Radiation (03CH06-HY)
Double Ridge Horn Antenna	EMCO	3117	00066583	1GHz~18GHz	Jul. 24, 2014	Jul. 03, 2015 ~ Jul. 04, 2015	Jul. 23, 2015	Radiation (03CH06-HY)
Preamplifier	SONOMA	310N	186713	9kHz~1GHz	Apr. 20, 2015	Jul. 03, 2015 ~ Jul. 04, 2015	Apr. 19, 2016	Radiation (03CH06-HY)
Antenna Mast	MF	MF-7802	MF780208212	1m~4m	N/A	Jul. 03, 2015 ~ Jul. 04, 2015	N/A	Radiation (03CH06-HY)
Turn Table	INN-CO	DS2000	420/650/00	0-360 degree	N/A	Jul. 03, 2015 ~ Jul. 04, 2015	N/A	Radiation (03CH06-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100315	9 kHz~30 MHz	Jul. 28, 2014	Jul. 03, 2015 ~ Jul. 04, 2015	Jul. 27, 2015	Radiation (03CH06-HY)
Preamplifier	MITEQ	AMF-7D-0010 1800-30-10P	1815698	1GHz~18GHz	Dec. 12, 2014	Jul. 03, 2015 ~ Jul. 04, 2015	Dec. 11, 2015	Radiation (03CH06-HY)
Bilog Antenna	TESEQ	CBL 6111D	37059	30MHz~1GHz	Sep. 27, 2014	Jul. 03, 2015 ~ Jul. 04, 2015	Sep. 26, 2015	Radiation (03CH06-HY)

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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))	2.20

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

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

SPORTON INTERNATIONAL INC.

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