



# FCC RF Test Report

**APPLICANT** : Motorola Mobility LLC  
**EQUIPMENT** : Mobile Cellular Phone  
**BRAND NAME** : Motorola  
**MODEL NAME** : 10715, 10716  
**FCC ID** : IHDT56WC4  
**STANDARD** : FCC Part 15 Subpart C §15.247  
**CLASSIFICATION** : (DTS) Digital Transmission System

The product was received on Jan. 19, 2017 and testing was completed on Mar. 15, 2017. We, Sporton International (KunShan) INC., would like to declare that the tested sample has been evaluated in accordance with the test procedures 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.

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**No.3-2, Pingxiang Road, Kunshan Development Zone, Jiangsu, China**



# TABLE OF CONTENTS

**REVISION HISTORY..... 3**

**SUMMARY OF TEST RESULT ..... 4**

**1 GENERAL DESCRIPTION ..... 5**

    1.1 Applicant ..... 5

    1.2 Manufacturer ..... 5

    1.3 Product Feature of Equipment Under Test..... 5

    1.4 Product Specification of Equipment Under Test..... 6

    1.5 Specification of Accessory ..... 6

    1.6 Modification of EUT ..... 6

    1.7 Re-use of Measured Data ..... 7

    1.8 Testing Location ..... 8

    1.9 Applicable Standards ..... 8

**2 TEST CONFIGURATION OF EQUIPMENT UNDER TEST ..... 9**

    2.1 Carrier Frequency and Channel ..... 9

    2.2 Test Mode ..... 10

    2.3 Connection Diagram of Test System ..... 11

    2.4 Support Unit used in test configuration and system ..... 12

    2.5 EUT Operation Test Setup ..... 12

    2.6 Radiated Band Edges and Spurious Emission Measurement ..... 13

    2.7 AC Conducted Emission Measurement..... 17

    2.8 Antenna Requirements ..... 21

**3 LIST OF MEASURING EQUIPMENT ..... 22**

**4 UNCERTAINTY OF EVALUATION ..... 23**

**APPENDIX A. RADIATED SPURIOUS EMISSION**

**APPENDIX B. DUTY CYCLE PLOTS**

**APPENDIX C. SETUP PHOTOGRAPHS**

**APPENDIX D. PRODUCT EQUALITY DECLARATION**

**APPENDIX E. REFERENCE REPORT**





### SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
2.6	15.247(d)	Radiated Band Edges and Radiated Spurious Emission	15.209(a) & 15.247(d)	Pass	Under limit 3.65 dB at 2483.500 MHz
2.7	15.207	AC Conducted Emission	15.207(a)	Pass	Under limit 8.56 dB at 0.150 MHz
2.8	15.203 & 15.247(b)	Antenna Requirement	N/A	Pass	-



# 1 General Description

## 1.1 Applicant

Motorola Mobility LLC  
222 W, Merchandise Mart Plaza, Chicago IL 60654 USA

## 1.2 Manufacturer

Motorola Mobility LLC  
222 W, Merchandise Mart Plaza, Chicago IL 60654 USA

## 1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Mobile Cellular Phone
Brand Name	Motorola
Model Name	10715, 10716
FCC ID	IHDT56WC4
EUT supports Radios application	GSM/GPRS/EGPRS/WCDMA/HSPA/HSPA+/DC-HSDP A/LTE/ WLAN2.4GHz 802.11b/g/n HT20/ Bluetooth v3.0+EDR Bluetooth v4.0 LE/Bluetooth v4.1 LE/Bluetooth v4.2 LE
IMEI Code	Radiation: 355647080006330/355647080006348 Conduction: 355639080022672/355639080022680
HW Version	WKGMA1A4-3
SW Version	woods- userdebug 7.0 NMA25.27 314 intcfg,test-keys
EUT Stage	Identical Prototype

**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 types of EUT sample 1 and sample 2, the differences between two samples are only for SIM slot, sample 1(model name: 10715) is dual SIM slot, sample 2(model name: 10716) is single SIM slot. According to the difference, the sample 1 to perform full test.



### 1.4 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx/Rx Channel Frequency Range	2412 MHz ~ 2462 MHz
Antenna Type / Gain	PIFA Antenna with gain -0.6 dBi
Type of Modulation	802.11b : DSSS (DBPSK / DQPSK / CCK) 802.11g/n : OFDM (BPSK / QPSK / 16QAM / 64QAM)

### 1.5 Specification of Accessory

Specification of Accessory				
AC Adapter	Brand Name	Motorola (Salom)	Model Name	SSW-2865BR SPN5933A
	Power Rating	I/P: 100-240 Vac, 500mA, O/P: 5.0Vdc, 2000mA		
Battery 1	Brand Name	Motorola (ATL)	Model Name	GK40
	Power Rating	3.8Vdc,2685/2800mAh (Min/Typ)	Type	Li-ion
Battery 2	Brand Name	Motorola (Sunwoda)	Model Name	GK40
	Power Rating	3.8Vdc,2685/2800mAh (Min/Typ)	Type	Li-ion
Earphone	Brand Name	Motorola (Cosonic)	Model Name	SH38C16617
	Signal Line Type	1.1 meter, non-shielded cable, without ferrite core		
USB Cable	Brand Name	Motorola (Sai Bao)	Model Name	SYD-A017A
	Signal Line Type	1.0 meter, shielded cable, without ferrite core		

### 1.6 Modification of EUT

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



## 1.7 Re-use of Measured Data

### 1.7.1 Introduction Section

This application re-uses data collected on a similar device. The subject device of this application (Model: 10715, 10716, FCC ID: IHDT56WC4) is electrically identical to the reference device (Model: 10714, FCC ID: IHDT56WC6) for the portions of the circuitry corresponding to the data being re-used, as treated by KDB Publication 178919 D01.

### 1.7.2 Difference Section

For details concerning the similarity with respect to component placement, mechanical/electrical design etc., please refer to Product Equality Declaration as Appendix D..

The re-used RF data includes the following bands provided in Appendix E (Sporton RF Report No. FR711913C for the reference device Model: 10714, FCC ID: IHDT56WC6)

### 1.7.3 Spot Check Verification Data Section

In order to confirm hardware similarity of the subject device with the reference device, spot check measurements were performed on the subject device for radiated spurious emission and conducted Emission.

Assertions concerning the similarity of these devices are based on representations by the applicant. The applicant accepts full responsibility for the validity of the similarity claim, and for the determination that verification test data are sufficient to support it.

### 1.7.4 Reference detail Section:

Equipment Class	Reference FCC ID	Folder Test/RF Exposure	Report Title/Section
DSS	IHDT56WC6	Part15C(FR711913A)	Conducted sections applicable
DTS (BLE)	IHDT56WC6	Part15C(FR711913B)	Conducted sections applicable
DTS (WLAN)	IHDT56WC6	Part15C(FR711913C)	Conducted sections applicable



### 1.8 Testing Location

<b>Test Site</b>	Sporton International (KunShan) INC.	
<b>Test Site Location</b>	No.3-2, Pingxiang Road, Kunshan Development Zone, Jiangsu, China TEL: +86-0512-5790-0158 FAX: +86-0512-5790-0958	
<b>Test Site No.</b>	<b>Sporton Site No.</b>	<b>FCC Registration No.</b>
	03CH02-KS	418269

<b>Test Site</b>	SPORTON International (ShenZhen) INC.	
<b>Test Site Location</b>	1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan District, Shenzhen City, Guangdong Province, China TEL: +86-755-8637-9589 FAX: +86-755-8637-9595	
<b>Test Site No.</b>	<b>Sporton Site No.</b>	
	CO01-SZ	

**Note:** The test site complies with ANSI C63.4 2014 requirement.

### 1.9 Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- FCC Part 15 Subpart C §15.247
- FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v03r05
- ANSI C63.10-2013

**Remark:**

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.



## 2 Test Configuration of Equipment Under Test

The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conducted emission (150 kHz to 30 MHz) and radiated emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower). For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases were recorded in this report.

### 2.1 Carrier Frequency and Channel

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
2400-2483.5 MHz	1	2412	7	2442
	2	2417	8	2447
	3	2422	9	2452
	4	2427	10	2457
	5	2432	11	2462
	6	2437	-	-



## 2.2 Test Mode

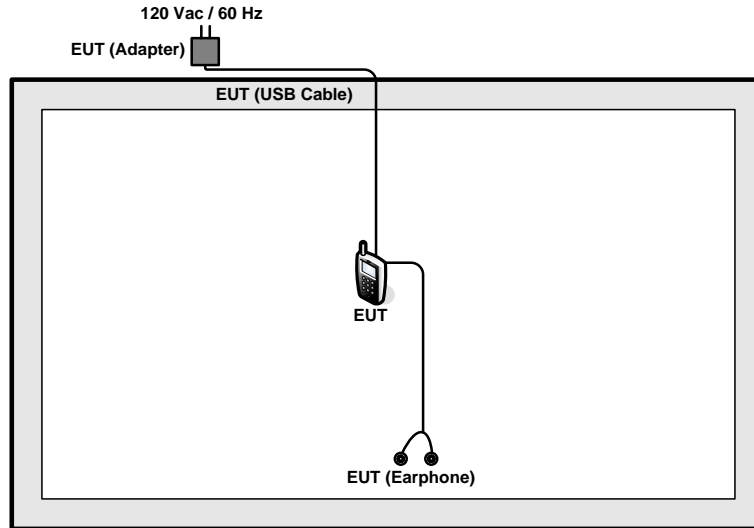
Final test mode of radiated spurious emissions are considering the modulation and worse data rates as below table.

Modulation	Data Rate
802.11b	1 Mbps
802.11g	6 Mbps
802.11n HT20	MCS0

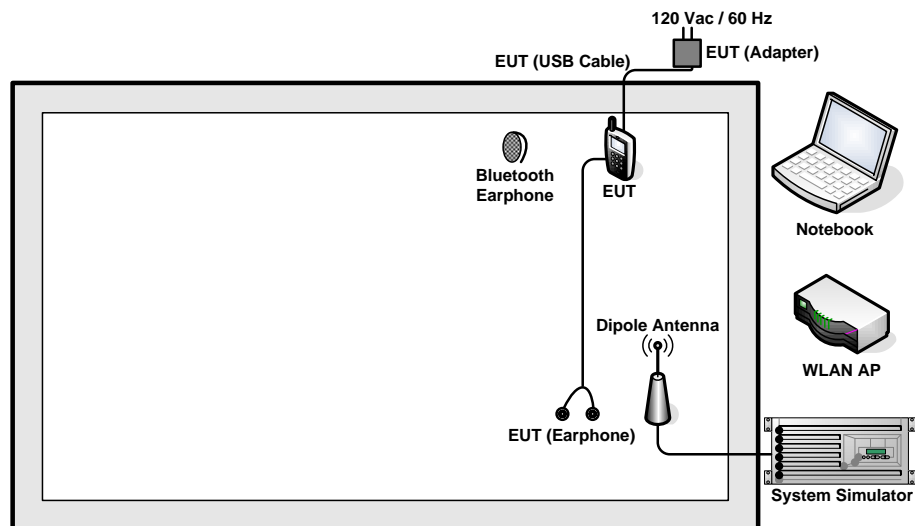
Test Cases	
<b>AC Conducted Emission</b>	Mode 1: GSM850 Idle + Bluetooth Link + WLAN Link + Earphone + Battery 1 + USB Cable (Charging from Adapter) + SIM 1 for Sample 1 Mode 2: <b>GSM850 Idle + Bluetooth Link + WLAN Link + Earphone + Battery 2 + USB Cable (Charging from Adapter) + SIM 1 for Sample 1</b>
<b>Remark:</b> 1. The worst case of conducted emission is mode 2; only the test data of it was reported. 2. For Radiated TCs, The tests were performed with Adapter, Earphone, Battery1, Battery 2 and USB Cable.	

## 2.3 Connection Diagram of Test System

### <WLAN Tx Mode>



### <AC Conducted Emission Mode>



## 2.4 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.	WLAN AP	Dlink	DIR-820L	KA2IR820LA1	N/A	Unshielded, 1.8 m
3.	Notebook	Lenovo	E540	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
4.	Bluetooth Earphone	Nokia	BH-108	PYAHS-107W	N/A	N/A

## 2.5 EUT Operation Test Setup

For WLAN function, the engineering test program was provided and enabled to make EUT continuous transmit/receive.

For AC power line conducted emissions, the EUT was set to connect with the Notebook under large package sizes transmission.



## 2.6 Radiated Band Edges and Spurious Emission Measurement

### 2.6.1 Limit of Radiated band edge and Spurious Emission Measurement

In any 100 kHz bandwidth outside the intentional radiator frequency band, all harmonics/spurious must be at least 20 dB below the highest emission level within the authorized band. If the output power of this device was measured by spectrum analyzer, the attenuation under this paragraph shall be 30 dB instead of 20 dB. In addition, radiated emissions which fall in the restricted bands must also comply with the FCC section 15.209 limits as below.

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 – 0.490	2400/F(kHz)	300
0.490 – 1.705	24000/F(kHz)	30
1.705 – 30.0	30	30
30 – 88	100	3
88 – 216	150	3
216 - 960	200	3
Above 960	500	3

### 2.6.2 Measuring Instruments

The measuring equipment is listed in the section 3 of this test report.

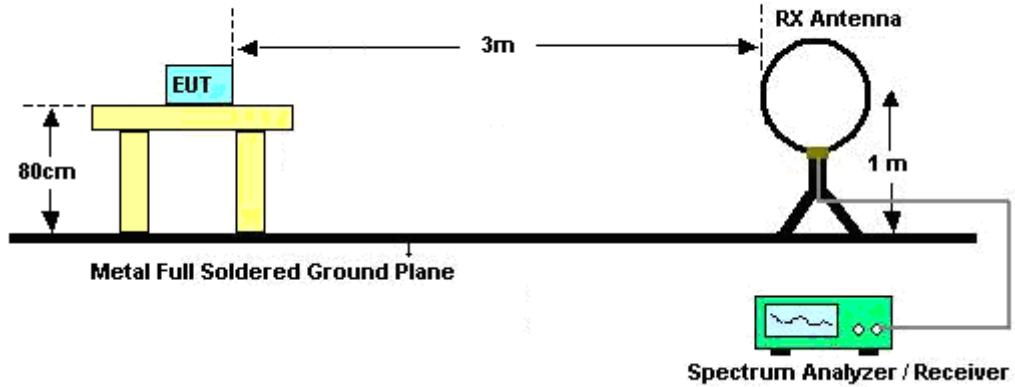


### 2.6.3 Test Procedures

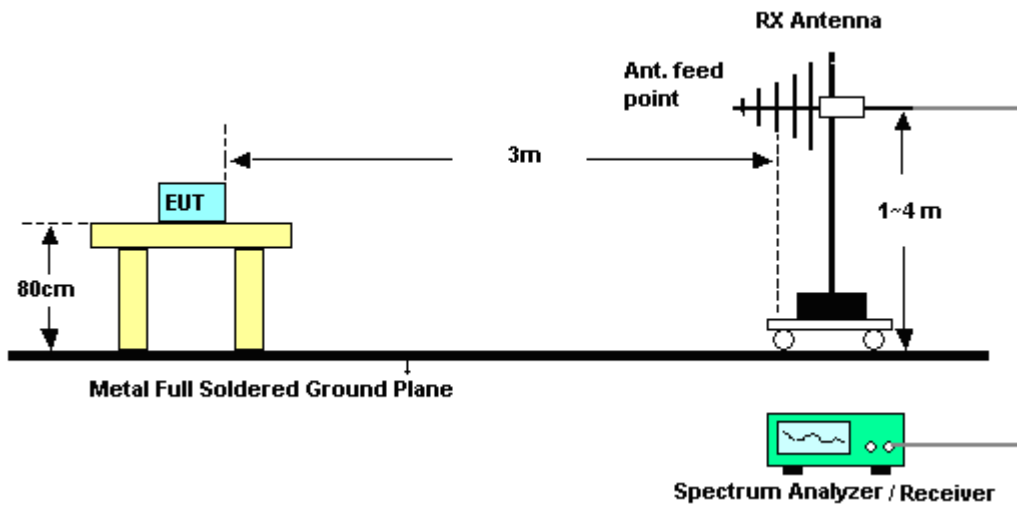
1. The testing follows FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v03r05.
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level.
3. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
5. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level
6. For measurement below 1GHz, If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.
7. Use the following spectrum analyzer settings:
  - (1) Span shall wide enough to fully capture the emission being measured;
  - (2) Set RBW=100 kHz for  $f < 1$  GHz; VBW  $\geq$  RBW; Sweep = auto; Detector function = peak; Trace = max hold;
  - (3) Set RBW = 1 MHz, VBW= 3MHz for  $f \geq 1$  GHz for peak measurement.  
For average measurement:
    - VBW = 10 Hz, when duty cycle is no less than 98 percent.
    - VBW  $\geq 1/T$ , when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

### 2.6.4 Test Setup

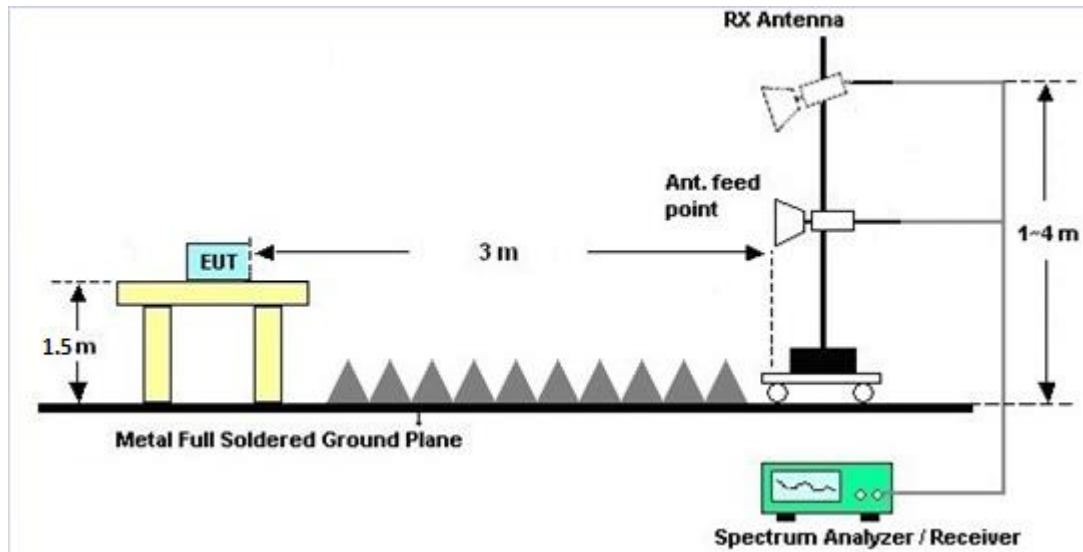
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



#### 2.6.5 Test Results of Radiated Spurious Emissions (9kHz ~ 30MHz)

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line per 15.31(o) was not reported.

#### 2.6.6 Test Result of Radiated Spurious at Band Edges

Please refer to Appendix A.

#### 2.6.7 Duty Cycle

Please refer to Appendix B.

#### 2.6.8 Test Result of Radiated Spurious Emission (30MHz ~ 10<sup>th</sup> Harmonic)

Please refer to Appendix A.



## 2.7 AC Conducted Emission Measurement

### 2.7.1 Limit 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 (dBµV)	
	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.

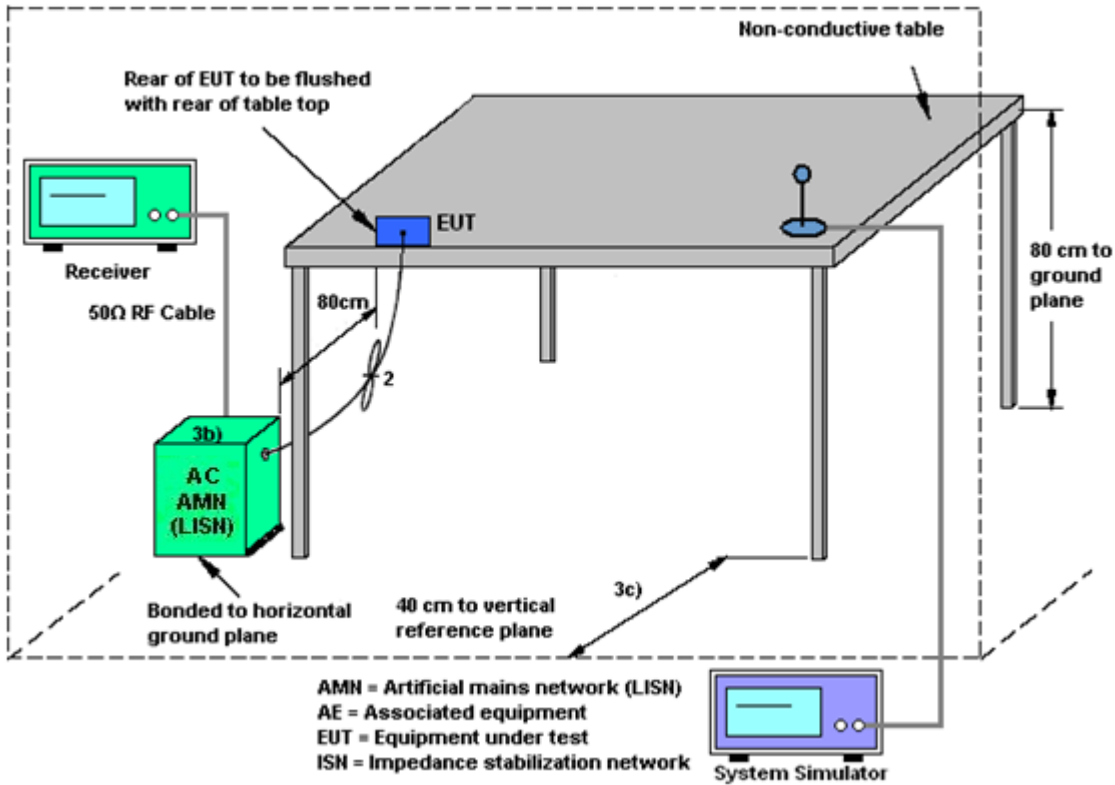
### 2.7.2 Measuring Instruments

The measuring equipment is listed in the section 3 of this test report.

### 2.7.3 Test Procedures

1. The EUT was placed 0.4 meter from the conducting wall of the shielding room, and it 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.

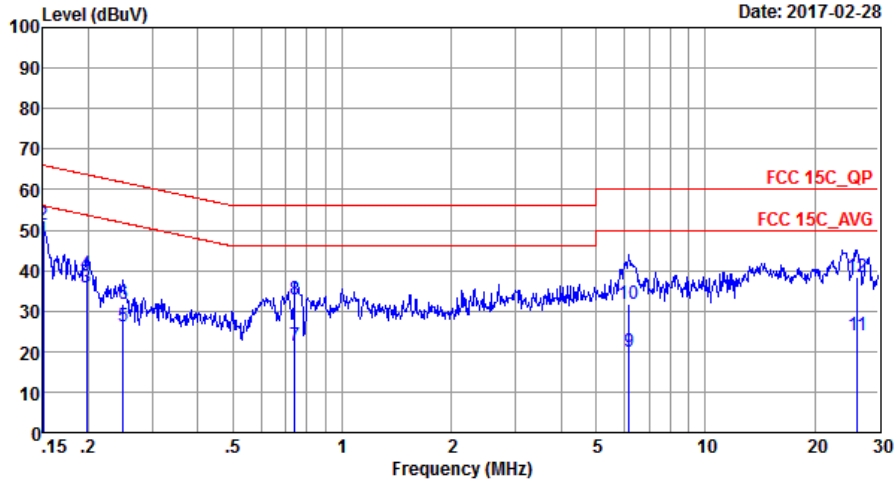
2.7.4 Test Setup





2.7.5 Test Result of AC Conducted Emission

Test Mode :	Mode 2	Temperature :	21~23°C
Test Engineer :	Tao Cheng	Relative Humidity :	41~42%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	GSM850 Idle + Bluetooth Link + WLAN Link + Earphone + Battery 2 + USB Cable (Charging from Adapter) + SIM 1 for Sample 1		



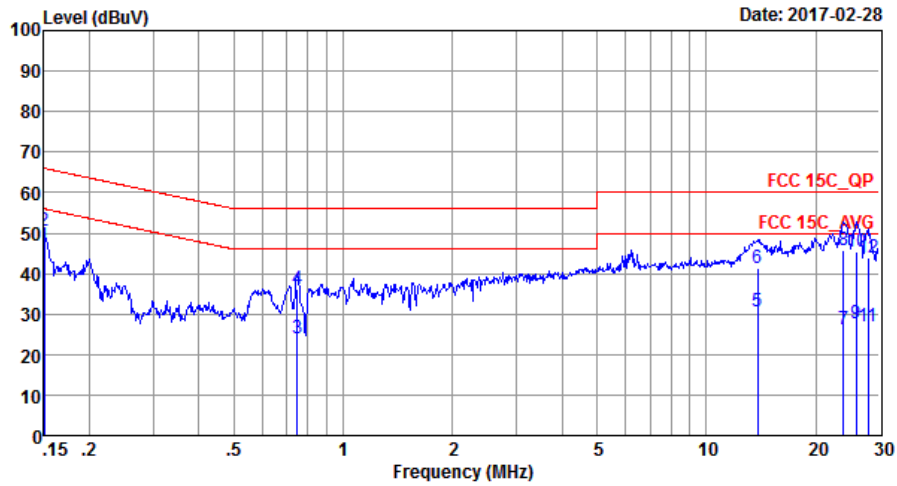
Site : C001-SZ  
Condition: FCC 15C\_QP LISN\_20170301\_L LINE

Mode : Mode 2  
IMEI : 355639080022672/355639080022680

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1 *	0.15	47.44	-8.56	56.00	37.00	0.03	10.41	Average
2	0.15	51.14	-14.86	66.00	40.70	0.03	10.41	QP
3	0.20	35.96	-17.75	53.71	25.70	0.03	10.23	Average
4	0.20	39.06	-24.65	63.71	28.80	0.03	10.23	QP
5	0.25	26.15	-25.63	51.78	15.90	0.03	10.22	Average
6	0.25	31.55	-30.23	61.78	21.30	0.03	10.22	QP
7	0.74	21.39	-24.61	46.00	11.20	0.03	10.16	Average
8	0.74	32.89	-23.11	56.00	22.70	0.03	10.16	QP
9	6.15	19.82	-30.18	50.00	9.30	0.21	10.31	Average
10	6.15	31.72	-28.28	60.00	21.20	0.21	10.31	QP
11	26.28	23.86	-26.14	50.00	12.00	1.38	10.48	Average
12	26.28	38.26	-21.74	60.00	26.40	1.38	10.48	QP



Test Mode :	Mode 2	Temperature :	21~23°C
Test Engineer :	Tao Cheng	Relative Humidity :	41~42%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	GSM850 Idle + Bluetooth Link + WLAN Link + Earphone + Battery 2 + USB Cable (Charging from Adapter) + SIM 1 for Sample 1		



Site : CO01-SZ  
Condition: FCC 15C\_QP LISN\_20170301\_N NEUTRAL

Mode : Mode 2  
IMEI : 355639080022672/355639080022680

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1 *	0.15	46.84	-9.16	56.00	36.40	0.03	10.41	Average
2	0.15	50.54	-15.46	66.00	40.10	0.03	10.41	QP
3	0.75	23.99	-22.01	46.00	13.80	0.03	10.16	Average
4	0.75	36.29	-19.71	56.00	26.10	0.03	10.16	QP
5	13.84	30.52	-19.48	50.00	19.90	0.30	10.32	Average
6	13.84	41.22	-18.78	60.00	30.60	0.30	10.32	QP
7	23.89	26.38	-23.62	50.00	14.90	0.91	10.57	Average
8	23.89	45.78	-14.22	60.00	34.30	0.91	10.57	QP
9	25.86	27.57	-22.43	50.00	16.00	1.06	10.51	Average
10	25.86	45.57	-14.43	60.00	34.00	1.06	10.51	QP
11	27.86	27.10	-22.90	50.00	15.50	1.20	10.40	Average
12	27.86	43.90	-16.10	60.00	32.30	1.20	10.40	QP



## **2.8 Antenna Requirements**

### **2.8.1 Standard Applicable**

If directional gain of transmitting antennas is greater than 6dBi, the power shall be reduced by the same level in dB comparing to gain minus 6dBi. For the fixed point-to-point operation, the power shall be reduced by one dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the FCC rule.

### **2.8.2 Antenna Anti-Replacement Construction**

An embedded-in antenna design is used.

### **2.8.3 Antenna Gain**

The antenna peak gain of EUT is less than 6 dBi. Therefore, it is not necessary to reduce maximum peak output power limit.



### 3 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
EMI Test Receiver	R&S	ESR7	101403	9kHz~7GHz; Max 30dBm	Aug. 09, 2016	Mar. 15, 2017	Aug. 08, 2017	Radiation (03CH02-KS)
EXA Spectrum Analyzer	Keysight	N9010A	MY551502 08	10Hz~44GHz, MAX 30dB	Apr. 22, 2016	Mar. 15, 2017	Apr. 21, 2017	Radiation (03CH02-KS)
Loop Antenna	R&S	HFH2-Z2	100321	9kHz~30MHz	Nov. 23, 2016	Mar. 15, 2017	Nov. 22, 2017	Radiation (03CH02-KS)
Bilog Antenna	TeseQ	CBL6112D	37879	30MHz~2GHz	Aug. 20, 2016	Mar. 15, 2017	Aug. 19, 2017	Radiation (03CH02-KS)
Double Ridge Horn Antenna	ETS-Lindgren	3117	75957	1GHz~18GHz	Oct. 22, 2016	Mar. 15, 2017	Oct. 21, 2017	Radiation (03CH02-KS)
SHF-EHF Horn	Schwarzbeck	BBHA 9170	BBHA1702 49	15GHz~40GHz	Feb. 14, 2017	Mar. 15, 2017	Feb. 13, 2018	Radiation (03CH02-KS)
Amplifier	com-power	PA-103A	161069	1kHz~1000MHz / 32 dB	Apr. 22, 2016	Mar. 15, 2017	Apr. 21, 2017	Radiation (03CH02-KS)
Amplifier	Agilent	8449B	3008A023 84	1GHz~26.5GHz	Oct. 13, 2016	Mar. 15, 2017	Oct. 12, 2017	Radiation (03CH02-KS)
Amplifier	MITEQ	TTA1840-35- HG	1887435	18GHz~40GHz	Oct. 13, 2016	Mar. 15, 2017	Oct. 12, 2017	Radiation (03CH02-KS)
AC Power Source	Chroma	61601	616010002 473	N/A	NCR	Mar. 15, 2017	NCR	Radiation (03CH02-KS)
Turn Table	MF	MF7802	N/A	0~360 degree	NCR	Mar. 15, 2017	NCR	Radiation (03CH02-KS)
Antenna Mast	MF	MF7802	N/A	1 m~4 m	NCR	Mar. 15, 2017	NCR	Radiation (03CH02-KS)
EMI Receiver	R&S	ESR7	101630	9kHz~7GHz;	Jan. 06, 2017	Feb. 28, 2017	Jan. 05, 2018	Conduction (CO01-SZ)
AC LISN	EMCO	3816/2SH	00103892	9kHz~30MHz	Jan. 05, 2017	Feb. 28, 2017	Jan. 04, 2018	Conduction (CO01-SZ)
AC LISN (for auxiliary equipment)	MessTec	3816/2SH	00103912	9kHz~30MHz	Jan. 05, 2017	Feb. 28, 2017	Jan. 04, 2018	Conduction (CO01-SZ)
AC Power Source	Chroma	61602	616020000 891	100Vac~250Vac	Jul. 16, 2016	Feb. 28, 2017	Jul. 15, 2017	Conduction (CO01-SZ)

NCR: No Calibration Required



## 4 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ )	2.5dB
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### Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ )	5.2dB
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### Uncertainty of Radiated Emission Measurement (1000 MHz ~ 18000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ )	4.7dB
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### Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ )	5.3dB
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## Appendix A. Radiated Spurious Emission

2.4GHz 2400~2483.5MHz

WIFI 802.11b (Band Edge @ 3m)

Battery 1:

WIFI Ant.	Note	Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level ( dBμV )	Antenna Factor ( dB/m )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Peak Avg. ( P/A )	Pol. ( H/V )
802.11b CH 01 2412MHz		2389.69	47.46	-26.54	74	48.82	25.4	4.76	31.52	260	205	P	H
		2389.95	36.96	-17.04	54	38.32	25.4	4.76	31.52	260	205	A	H
	*	2412	102.65	-	-	103.83	25.54	4.78	31.5	260	205	P	H
	*	2410	99.44	-	-	100.62	25.54	4.78	31.5	260	205	A	H
		2389.95	48.02	-25.98	74	49.38	25.4	4.76	31.52	100	147	P	V
		2389.95	37.48	-16.52	54	38.84	25.4	4.76	31.52	100	147	A	V
	*	2412	104.24	-	-	105.42	25.54	4.78	31.5	100	147	P	V
	*	2410	101.04	-	-	102.22	25.54	4.78	31.5	100	147	A	V
802.11b CH 06 2437MHz		2389.69	47.38	-26.62	74	48.74	25.4	4.76	31.52	333	46	P	H
		2389.82	36.69	-17.31	54	38.05	25.4	4.76	31.52	333	46	A	H
	*	2438	105.84	-	-	106.67	25.83	4.82	31.48	333	46	P	H
	*	2438	102.82	-	-	103.65	25.83	4.82	31.48	333	46	A	H
		2485.48	50	-24.00	74	50.49	26.11	4.86	31.46	333	46	P	H
		2485.18	39.89	-14.11	54	40.38	26.11	4.86	31.46	333	46	A	H
		2389.69	48.45	-25.55	74	49.81	25.4	4.76	31.52	161	147	P	V
		2389.3	38.23	-15.77	54	39.59	25.4	4.76	31.52	161	147	A	V
	*	2438	108.12	-	-	108.95	25.83	4.82	31.48	161	147	P	V
	*	2438	105.02	-	-	105.85	25.83	4.82	31.48	161	147	A	V
		2492.26	52.28	-21.72	74	52.59	26.26	4.88	31.45	161	147	P	V
	2485.3	42.27	-11.73	54	42.76	26.11	4.86	31.46	161	147	A	V	



<b>802.11b</b> <b>CH 11</b> <b>2462MHz</b>	*	2462	104.19	-	-	104.85	25.97	4.84	31.47	126	47	P	H
	*	2460	100.84	-	-	101.5	25.97	4.84	31.47	126	47	A	H
		2483.8	51.49	-22.51	74	51.98	26.11	4.86	31.46	126	47	P	H
		2487.28	43.44	-10.56	54	43.93	26.11	4.86	31.46	126	47	A	H
	*	2462	107.05	-	-	107.71	25.97	4.84	31.47	113	148	P	V
	*	2460	103.8	-	-	104.46	25.97	4.84	31.47	113	148	A	V
		2486.74	54.76	-19.24	74	55.25	26.11	4.86	31.46	113	148	P	V
		2487.46	47.57	-6.43	54	48.06	26.11	4.86	31.46	113	148	A	V
<b>Remark</b>	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz

WIFI 802.11b (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level ( dBμV )	Antenna Factor ( dB/m )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Peak Avg. (P/A)	Pol. (H/V)
802.11b CH 01 2412MHz		4824	36.79	-37.21	74	58.4	30.9	6.87	59.38	150	360	P	H
		4824	37.36	-36.64	74	58.97	30.9	6.87	59.38	150	360	P	V
802.11b CH 06 2437MHz		4872	38.33	-35.67	74	59.6	31.01	6.86	59.14	150	360	P	H
		7308	41.86	-32.14	74	56.6	35.34	8.47	58.55	150	360	P	H
		4872	36.58	-37.42	74	57.85	31.01	6.86	59.14	150	360	P	V
		7308	41.52	-32.48	74	56.26	35.34	8.47	58.55	150	360	P	V
802.11b CH 11 2462MHz		4926	36.76	-37.24	74	57.7	31.12	6.84	58.9	150	360	P	H
		7386	41.65	-32.35	74	56.59	35.55	8.49	58.98	150	360	P	H
		4926	36.9	-37.1	74	57.84	31.12	6.84	58.9	150	360	P	V
		7386	42.23	-31.77	74	57.17	35.55	8.49	58.98	150	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



**2.4GHz 2400~2483.5MHz  
WIFI 802.11g (Band Edge @ 3m)**

WIFI Ant. 1	Note	Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level ( dBμV )	Antenna Factor ( dB/m )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Peak Avg. ( P/A )	Pol. ( H/V )
802.11g CH 01 2412MHz		2389.82	53.3	-20.70	74	54.66	25.4	4.76	31.52	248	251	P	H
		2389.69	38.29	-15.71	54	39.65	25.4	4.76	31.52	248	251	A	H
	*	2410	102.04	-	-	103.22	25.54	4.78	31.5	248	251	P	H
	*	2412	94.4	-	-	95.58	25.54	4.78	31.5	248	251	A	H
		2389.69	49.33	-24.67	74	50.69	25.4	4.76	31.52	339	133	P	V
		2389.95	38	-16.00	54	39.36	25.4	4.76	31.52	339	133	A	V
	*	2412	100.42	-	-	101.6	25.54	4.78	31.5	339	133	P	V
	*	2410	92.68	-	-	93.86	25.54	4.78	31.5	339	133	A	V
802.11g CH 06 2437MHz		2388.91	48.08	-25.92	74	49.44	25.4	4.76	31.52	100	286	P	H
		2389.82	38.15	-15.85	54	39.51	25.4	4.76	31.52	100	286	A	H
	*	2438	97.66	-	-	98.49	25.83	4.82	31.48	100	286	A	H
	*	2438	105.2	-	-	106.03	25.83	4.82	31.48	100	286	P	H
		2494.36	53.84	-20.16	74	54.15	26.26	4.88	31.45	100	286	P	H
		2490.58	41.74	-12.26	54	42.05	26.26	4.88	31.45	100	286	A	H
		2388	47.51	-26.49	74	48.87	25.4	4.76	31.52	332	136	P	V
		2389.43	37.5	-16.50	54	38.86	25.4	4.76	31.52	332	136	A	V
	*	2438	104.16	-	-	104.99	25.83	4.82	31.48	332	136	P	V
	*	2436	96.68	-	-	97.68	25.69	4.8	31.49	332	136	A	V
		2489.74	51.18	-22.82	74	51.49	26.26	4.88	31.45	332	136	P	V
		2488.12	40.8	-13.20	54	41.11	26.26	4.88	31.45	332	136	A	V



802.11g CH 11 2462MHz	*	2462	103.88	-	-	104.54	25.97	4.84	31.47	100	300	P	H
	*	2460	96.23	-	-	96.89	25.97	4.84	31.47	100	300	A	H
		2483.5	62.49	-11.51	74	62.98	26.11	4.86	31.46	100	300	P	H
	!	2483.56	47.88	-6.12	54	48.37	26.11	4.86	31.46	100	300	A	H
	*	2460	100.85	-	-	101.51	25.97	4.84	31.47	400	125	P	V
	*	2462	93.29	-	-	93.95	25.97	4.84	31.47	400	125	A	V
		2483.92	61.32	-12.68	74	61.81	26.11	4.86	31.46	400	125	P	V
	!	2483.56	45.64	-8.36	54	46.13	26.11	4.86	31.46	400	125	A	V
Remark	<ol style="list-style-type: none"> <li>No other spurious found.</li> <li>All results are PASS against Peak and Average limit line.</li> </ol>												



2.4GHz 2400~2483.5MHz
WIFI 802.11g (Harmonic @ 3m)

Table with 14 columns: WIFI Ant. 1, Note, Frequency (MHz), Level (dBµV/m), Over Limit (dB), Limit Line (dBµV/m), Read Level (dBµV), Antenna Factor (dB/m), Cable Loss (dB), Preamp Factor (dB), Ant Pos (cm), Table Pos (deg), Peak Avg. (P/A), Pol. (H/V). Rows include data for CH 01 (2412MHz) and CH 06 (2437MHz).



**2.4GHz 2400~2483.5MHz  
WIFI 802.11n HT20 (Band Edge @ 3m)**

WIFI Ant. 1	Note	Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level ( dBμV )	Antenna Factor ( dB/m )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Peak Avg. ( P/A )	Pol. ( H/V )
802.11n HT20 CH 01 2412MHz	*	2410	99.37	-	-	100.55	25.54	4.78	31.5	105	208	P	H
	*	2410	91.95	-	-	93.13	25.54	4.78	31.5	105	208	A	H
		2388.78	49.53	-24.47	74	50.89	25.4	4.76	31.52	105	208	P	H
		2389.95	38.55	-15.45	54	39.91	25.4	4.76	31.52	105	208	A	H
	*	2410	101.55	-	-	102.73	25.54	4.78	31.5	139	295	P	V
	*	2412	93.95	-	-	95.13	25.54	4.78	31.5	139	295	A	V
		2389.56	51.71	-22.29	74	53.07	25.4	4.76	31.52	139	295	P	V
802.11n HT20 CH 06 2437MHz		2389.95	39.46	-14.54	54	40.82	25.4	4.76	31.52	139	295	A	V
		2386.96	47.35	-26.65	74	48.71	25.4	4.76	31.52	382	25	P	H
		2389.82	37.95	-16.05	54	39.31	25.4	4.76	31.52	382	25	A	H
	*	2436	103.84	-	-	104.84	25.69	4.8	31.49	382	25	P	H
	*	2438	96.13	-	-	96.96	25.83	4.82	31.48	382	25	A	H
		2487.76	50.95	-23.05	74	51.26	26.26	4.88	31.45	382	25	P	H
		2483.74	40.6	-13.40	54	41.09	26.11	4.86	31.46	382	25	A	H
		2389.82	48.73	-25.27	74	50.09	25.4	4.76	31.52	100	29	P	V
		2389.56	38.7	-15.30	54	40.06	25.4	4.76	31.52	100	29	A	V
	*	2440	106.47	-	-	107.3	25.83	4.82	31.48	100	29	P	V
	*	2438	98.88	-	-	99.71	25.83	4.82	31.48	100	29	A	V
	2491.78	54.24	-19.76	74	54.55	26.26	4.88	31.45	100	29	P	V	
	2490.22	43.04	-10.96	54	43.35	26.26	4.88	31.45	100	29	A	V	



<b>802.11n</b>  <b>HT20</b>  <b>CH 11</b>  <b>2462MHz</b>	*	2460	100.31	-	-	100.97	25.97	4.84	31.47	100	142	P	H
	*	2462	92.62	-	-	93.28	25.97	4.84	31.47	100	142	A	H
		2483.74	61.77	-12.23	74	62.26	26.11	4.86	31.46	100	142	P	H
	!	2483.5	45.89	-8.11	54	46.38	26.11	4.86	31.46	100	142	A	H
	*	2460	105.04	-	-	105.7	25.97	4.84	31.47	100	268	P	V
	*	2460	97.49	-	-	98.15	25.97	4.84	31.47	100	268	A	V
		2484.04	67.75	-6.25	74	68.24	26.11	4.86	31.46	100	268	P	V
	!	2483.5	49.84	-4.16	54	50.33	26.11	4.86	31.46	100	268	A	V
<b>Remark</b>	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



**2.4GHz 2400~2483.5MHz**  
**WIFI 802.11n HT20 (Harmonic @ 3m)**

WIFI Ant. 1	Note	Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level ( dBμV )	Antenna Factor ( dB/m )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Peak Avg. ( P/A )	Pol. ( H/V )
802.11n HT20 CH 01 2412MHz		4824	36.79	-37.21	74	58.4	30.9	6.87	59.38	150	360	P	H
		4824	37.16	-36.84	74	58.77	30.9	6.87	59.38	150	360	P	V
802.11n HT20 CH 06 2437MHz		4872	36.19	-37.81	74	57.46	31.01	6.86	59.14	150	360	P	H
		7308	42.34	-31.66	74	57.08	35.34	8.47	58.55	150	360	P	H
		4872	37.55	-36.45	74	58.82	31.01	6.86	59.14	150	360	P	V
		7308	41.38	-32.62	74	56.12	35.34	8.47	58.55	150	360	P	V
802.11n HT20 CH 11 2462MHz		4926	36.16	-37.84	74	57.1	31.12	6.84	58.9	150	360	P	H
		7386	41.7	-32.30	74	56.64	35.55	8.49	58.98	150	360	P	H
		4924	36.07	-37.93	74	57.01	31.12	6.84	58.9	150	360	P	V
		7386	41.23	-32.77	74	56.17	35.55	8.49	58.98	150	360	P	V
<b>Remark</b>	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz

WIFI 802.11n HT20 (Band Edge @ 3m)

Battery 2:

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1		( MHz )	( dBμV/m )	( dB )	( dBμV/m )	( dBμV )	( dB/m )	( dB )	( dB )	( cm )	( deg )	( P/A )	( H/V )
2.4GHz 802.11n HT20 2462MHz	*	2460	99.9	-	-	100.56	25.97	4.84	31.47	100	142	P	H
	*	2462	92.62	-	-	93.28	25.97	4.84	31.47	100	142	A	H
		2484.04	63.57	-10.43	74	64.06	26.11	4.86	31.46	100	142	P	H
		2483.62	45.69	-8.31	54	46.18	26.11	4.86	31.46	100	142	A	H
	*	2460	105.14	-	-	105.8	25.97	4.84	31.47	100	268	P	V
	*	2460	97.55	-	-	98.21	25.97	4.84	31.47	100	268	A	V
		2483.8	66.12	-7.88	74	66.61	26.11	4.86	31.46	100	268	P	V
	2483.5	50.35	-3.65	54	50.84	26.11	4.86	31.46	100	268	A	V	
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz

Emission below 1GHz

2.4GHz WIFI 802.11n HT20 (LF)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1		( MHz )	( dBμV/m )	( dB )	( dBμV/m )	( dBμV )	( dB/m )	( dB )	( dB )	( cm )	( deg )	( P/A )	( H/V )
2.4GHz 802.11n HT20 LF		32.91	20.73	-19.27	40	26.18	26.18	0.11	31.74	100	29	P	H
		106.63	15.08	-28.42	43.5	27.63	18.76	0.25	31.56	-	-	P	H
		452.92	22.02	-23.98	46	25.77	25.37	0.91	30.03	-	-	P	H
		637.22	22.87	-23.13	46	25.21	25.39	0.99	28.72	-	-	P	H
		705.12	23.93	-22.07	46	24.23	26.68	1.2	28.18	-	-	P	H
		965.08	28.34	-25.66	54	23.41	29.5	1.77	26.34	-	-	P	H
		30	27.41	-12.59	40	31.85	27.2	0.11	31.75	100	267	P	V
		43.58	27.27	-12.73	40	39.02	20	0.13	31.88	-	-	P	V
		56.19	26.5	-13.50	40	43.45	14.52	0.16	31.63	-	-	P	V
		149.31	17.54	-25.96	43.5	30.83	17.92	0.32	31.53	-	-	P	V
		553.8	22.52	-23.48	46	26.22	24.78	0.86	29.34	-	-	P	V
	953.44	28.31	-17.69	46	23.54	29.5	1.73	26.46	-	-	P	V	
Remark	1. No other spurious found. 2. All results are PASS against limit line.												



2.4GHz 2400~2483.5MHz

Note symbol

*	<b>Fundamental Frequency</b> which can be ignored. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency.
!	Test result is <b>over limit</b> line.
P/A	<b>Peak</b> or <b>Average</b>
H/V	<b>Horizontal</b> or <b>Vertical</b>



A calculation example for radiated spurious emission is shown as below:

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		( MHz )	( dBμV/m )	( dB )	( dBμV/m )	( dBμV )	( dB/m )	( dB )	( dB )	( cm )	( deg )	( P/A )	( H/V )
802.11b		2390	55.45	-18.55	74	54.51	32.22	4.58	35.86	103	308	P	H
CH 01													
2412MHz		2390	43.54	-10.46	54	42.6	32.22	4.58	35.86	103	308	A	H

- Level(dBμV/m) =  
Antenna Factor(dB/m) + Cable Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)
- Over Limit(dB) = Level(dBμV/m) – Limit Line(dBμV/m)

**For Peak Limit @ 2390MHz:**

- Level(dBμV/m)  
= Antenna Factor(dB/m) + Cable Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)  
= 32.22(dB/m) + 4.58(dB) + 54.51(dBμV) – 35.86 (dB)  
= 55.45 (dBμV/m)
- Over Limit(dB)  
= Level(dBμV/m) – Limit Line(dBμV/m)  
= 55.45(dBμV/m) – 74(dBμV/m)  
= -18.55(dB)

**For Average Limit @ 2390MHz:**

- Level(dBμV/m)  
= Antenna Factor(dB/m) + Cable Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)  
= 32.22(dB/m) + 4.58(dB) + 42.6(dBμV) – 35.86 (dB)  
= 43.54 (dBμV/m)
- Over Limit(dB)  
= Level(dBμV/m) – Limit Line(dBμV/m)  
= 43.54(dBμV/m) – 54(dBμV/m)  
= -10.46(dB)

Both peak and average measured complies with the limit line, so test result is “PASS”.



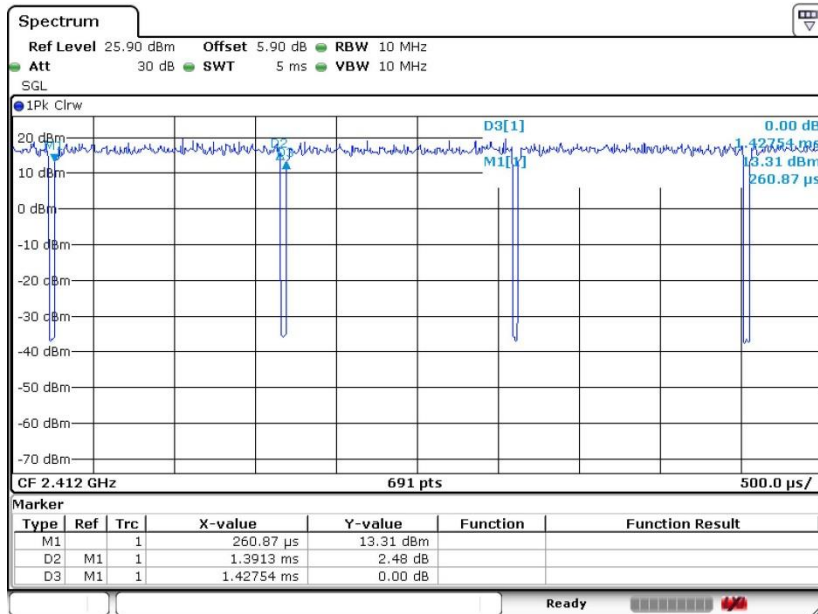
## Appendix B. Duty Cycle Plots

Band	Duty Cycle(%)	T(ms)	1/T(kHz)	VBW Setting
802.11b	100.00	-	-	10Hz
802.11g	94.46	1.39	0.72	1kHz
802.11n HT20	97.30	1.30	0.77	1kHz

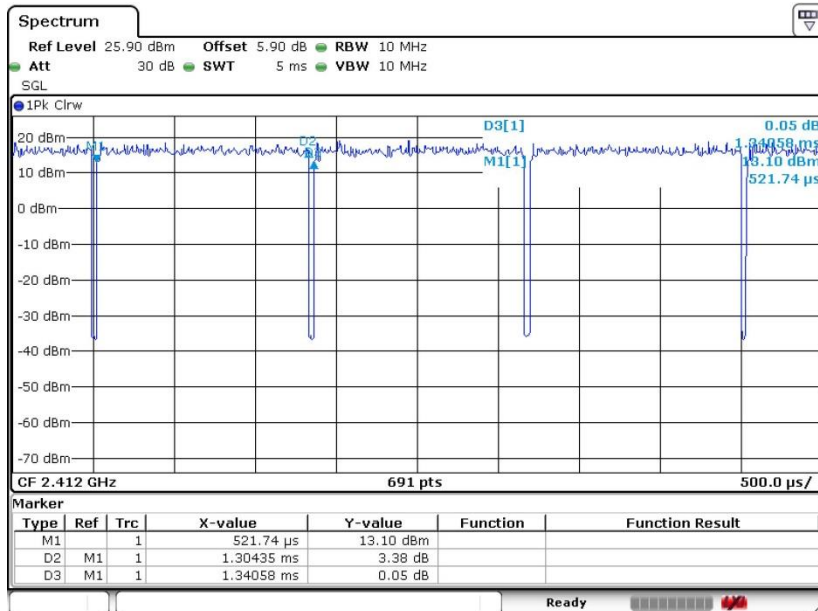




802.11g



802.11n20





## Appendix D. Product Equality Declaration

# Motorola Mobility LLC.

222 W, Merchandise Mart Plaza, Chicago IL 60654 USA

## Product Equality Declaration

We, Motorola Mobility LLC. declare on our sole responsibility for the product as below:

The differences between Latam DS (XT1763), Latam SS(XT1764), EMEA DS (XT1762), EMEA SS(XT1761), APAC DS (XT1760), AP-DS+B28(XT1769) as below:

■ RF section

1. Frequency band difference

<i>Bands/Modes</i>	<i>LatAm (XT1763)</i>	<i>LatAm (XT1764)</i>	<i>EMEA (XT1762)</i>	<i>EMEA (XT1761)</i>	<i>APAC (XT1760)</i>	<i>AP-DS+B28 (XT1769)</i>
<i>SIM Slots</i>	<i>DS</i>	<i>SS</i>	<i>DS</i>	<i>SS</i>	<i>DS</i>	<i>DS</i>
<i>Type name</i>	<i>M29DC</i>	<i>M29DC</i>	<i>M29DA</i>	<i>M29D9</i>	<i>M290D</i>	<i>M2C64</i>
<i>FCC Model</i>	<i>10715</i>	<i>10716</i>	<i>10714</i>	<i>10713</i>	<i>10509</i>	<i>11364</i>
<i>FCC ID</i>	<i>IHDT56WC4</i>	<i>IHDT56WC4</i>	<i>IHDT56WC6</i>	<i>IHDT56WC5</i>	<i>IHDT56WC7</i>	<i>IHDT56WC8</i>
<i>GSM 850</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>
<i>GSM 900</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>
<i>GSM 1800</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>
<i>GSM 1900</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>
<i>LTE 1</i>	<i>N</i>	<i>N</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>
<i>LTE 2</i>	<i>Y</i>	<i>Y</i>	<i>N</i>	<i>N</i>	<i>N</i>	<i>N</i>
<i>LTE 3</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>
<i>LTE 4</i>	<i>Y</i>	<i>Y</i>	<i>N</i>	<i>N</i>	<i>N</i>	<i>N</i>
<i>LTE 5</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>
<i>LTE 7</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>
<i>LTE 8</i>	<i>N</i>	<i>N</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>
<i>LTE 20</i>	<i>N</i>	<i>N</i>	<i>Y</i>	<i>Y</i>	<i>N</i>	<i>N</i>
<i>LTE 28</i>	<i>Y</i>	<i>Y</i>	<i>N</i>	<i>N</i>	<i>N</i>	<i>Y</i>
<i>LTE 38</i>	<i>N</i>	<i>N</i>	<i>Y</i>	<i>Y</i>	<i>N</i>	<i>N</i>
<i>LTE 40</i>	<i>N</i>	<i>N</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>
<i>WCDMA 1</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>
<i>WCDMA 2</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>
<i>WCDMA 4</i>	<i>Y</i>	<i>Y</i>	<i>N</i>	<i>N</i>	<i>N</i>	<i>N</i>
<i>WCDMA 5</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>
<i>WCDMA 8</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>
<i>WLAN 2.4GHz</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>
<i>Bluetooth</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>
<i>NFC</i>	<i>N</i>	<i>N</i>	<i>N</i>	<i>Y</i>	<i>N</i>	<i>N</i>

## 2. Board difference

		LatAm (XT1763)	LatAm (XT1764)	EMEA (XT1762)	EMEA (XT1761)	APAC (XT1760)	AP-DS+B28 (XT1769)
		DS	SS	DS	SS	DS	DS
		M29DC	M29DC	M29DA	M29D9	M290D	M2C64
		10715	10716	10714	10713	10509	11364
		IHDT56WC4	IHDT56WC4	IHDT56WC6	IHDT56WC5	IHDT56WC7	IHDT56WC8
WWAN	IC	MT6169	MT6169	MT6169	MT6169	MT6169	MT6169
	Component on PCB	some difference of population/depopulation to enable support of different cellular bands					
	Antenna	EMEA DS (XT1762), EMEA SS(XT1761) , APAC DS (XT1760) and AP-DS+B28(XT1769) are the same antenna pattern and matching; Latam DS (XT1763), Latam SS(XT1764) is different antenna pattern and matching compared above.					
BT	IC	MT6625L	MT6625L	MT6625L	MT6625L	MT6625L	MT6625L
	Component on PCB	Same across all SKUs					
	Antenna	EMEA DS (XT1762), EMEA SS(XT1761) , APAC DS (XT1760), Latam DS (XT1763), Latam SS(XT1764) and AP-DS+B28(XT1769) are the same antenna pattern and matching.					
WLAN 2.4GHz	IC	MT6625L	MT6625L	MT6625L	MT6625L	MT6625L	MT6625L
	Component on PCB	Same across all SKUs					
	Antenna	EMEA DS (XT1762), EMEA SS(XT1761) , APAC DS (XT1760), Latam DS (XT1763), Latam SS(XT1764) and AP-DS+B28(XT1769) are the same antenna pattern and matching.					
NFC	IC	Not support	Not support	Not support	PN548 Support	Not support	Not support
	Component on PCB	EMEA (XT1761for CE , 10713 for FCC)has NFC function					
	Antenna	Others has no NFC chipset and antenna except for EMEA (XT1761for CE , 10713 for FCC)					

### ■ SW section

For this particular Motorola project all SKUs will be sharing the same SW version. The main differences exist per SKUs are related to RF Bands supported (including here availability of CDMA RAT or not). Regarding the SW/FW, there is NOT much difference between SKUs. Note that specific features are enabled via MCFG depending on SIM Card inserted to device, as the lab tests are usually performed with a base FSG setup, we should not expect differences on the protocol level between all SKUs.

■ HW section

- WCDMA/LTE bands: Difference of population/depopulation on duplex, SPDT Switch and matching capacitance inductance to enable support of different cellular bands.
- RF trace: same across Latam DS (XT1763), Latam SS(XT1764), EMEA DS (XT1762), EMEA SS(XT1761),APAC DS (XT1760),AP-DS+B28(XT1769)SKUs.
- PCB layout: same across Latam DS (XT1763), Latam SS(XT1764), EMEA DS (XT1762), EMEA SS(XT1761),APAC DS (XT1760),AP-DS+B28(XT1769)SKUs.
- PCBA: for any DS/SS models under the same SKU the same PCBA will be used. For example, EMEA DS/SS(XT1762/XT1761) will share the same PCBA and the only difference is that SS model will have only one SIM slot. PCBA of each SKU is unique because the RF components will differ from SKU to SKU.
- WLAN/BT/GPS/Diversity antenna type, antenna pattern, antenna location, antenna matching value and chipset: Same across EMEA, APAC, LatAm sku and AP-DS+B28 sku.
- NFC antenna type, antenna pattern, antenna location and chipset: Only EMEA SS( XT1761) SKU support NFC.
- WWAN antenna, same pattern and matching for all EMEA, APAC and AP-DS+B28 skus; LatAm Sku is different compared with above WWAN antennas.

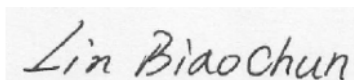
■ Mechanical section

There is no difference in mechanical design and materials used for all SKUs. There are differences in number of SIM's supported across different SKUs.

Region	Country / Sub-region	RF SKU	FCC Model	FCC ID	SIM	Memory
Latam	Latam	Latam-DS(XT1763)	10715	IHDT56WC4	DS	2+16G
	Latam	RoLA-SS(XT1764)	10716	IHDT56WC4	SS	2+16G
EMEA	EMEA	EMEA-DS(XT1762)	10714	IHDT56WC6	DS	2+16G
	EMEA	EMEA-SS NFC(XT1761)	10713	IHDT56WC5	SS	2+16G
APAC	APAC	AP-DS(XT1760)	10509	IHDT56WC7	DS	2+16G
	APAC	AP-DS+B28(XT1769)	11364	IHDT56WC8	DS	2+16G

Except listings above, the others are all the same.

Should you have any questions or comments regarding this matter, please have my best



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## **Appendix E. Reference Report**

Please refer to Sporton report number FR711913C which is issued separately.