FCC Test Report

APPLICANT : Motorola Mobility LLC EQUIPMENT : Mobile Cellular Phone

BRAND NAME : Motorola

MODEL NAME : XT1929-5

FCC ID : IHDT56XE5

STANDARD : FCC 47 CFR FCC Part 15 Subpart B

CLASSIFICATION: Declaration of Conformity

The product was received on Jan. 18, 2018 and testing was completed on Feb. 26, 2018. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the test procedures given in ANSI C63.4-2014 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 INC., the test report shall not be reproduced except in full.

Reviewed by: Louis Wu / Manager

Lunis Wu

Approved by: Jones Tsai / Manager



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

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Report Version : Rev. 01

Testing Laboratory 1190

Report No.: FC811821-04

Report Template No.: BU5-FD15B Version 2.0

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FC811821-04	Rev. 01	Initial issue of report	Mar. 14, 2018

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SUMMARY OF TEST RESULT

Report Section	FCC Rule Description		Limit	Result	Remark
					Under limit
3.1	15.107	AC Conducted Emission	< 15.107 limits	PASS	12.36 dB at
					0.174 MHz
					Under limit
3.2	15.109	Radiated Emission	< 15.109 limits	PASS	6.24 dB at
					268.680 MHz

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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	XT1929-5			
FCC ID	IHDT56XE5			
IMEI Code	IMEI 1: 354106090007979 IMEI 2: 354106090007987			
EUT supports Radios application	GSM/EGPRS/WCDMA/HSPA/LTE/GNSS/NFC WLAN 11b/g/n HT20 WLAN 11a/n HT20/HT40 WLAN 11ac VHT20/VHT40/VHT80 Bluetooth BR/EDR/LE			
HW Version	DVT2			
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.

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Accessory List Brand Name: Motorola Model Name: SC-28 SPN5997A AC Adapter 1 Manufacturer: Salom Brand Name: Motorola Model Name: SC-28 SPN5976A AC Adapter 2 Manufacturer: Salom Brand Name: Motorola Model Name: SC-28 SPN5998A AC Adapter 3 Manufacturer: Cliptech Brand Name: Motorola **Battery** Model Name: JS40 Manufacturer: SUNWODA Brand Name: Motorola **Earphone** Model Name: SH38C16618 Brand Name: Motorola C2Audio Cable 1 Model Name: SC18C27844 Manufacturer: Luxshare Brand Name: Motorola C2Audio Cable 2 Model Name: SC18C27845 Manufacturer: Cabletech Brand Name: Cabletech **USB Cable 1** Model Name: SKN6473A Brand Name: FOXLINK USB Cable 2 Model Name: SKN6473A 17195-C 0403532 Brand Name: SAIBAO **USB Cable 3** Model Name: SKN6473A 17214-C 1127044 Brand Name: Luxshare **USB Cable 4** Model Name: SKN6473A 17227-C 1126538

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1.4. Product Specification of Equipment Under Test

Standards-related Product Specification				
	GSM850: 824.2 MHz ~ 848.8 MHz			
	GSM1900: 1850.2 MHz ~ 1909.8 MHz			
	WCDMA Band V: 826.4 MHz ~ 846.6 MHz			
	WCDMA Band II: 1852.4 MHz ~ 1907.6 MHz			
	LTE Band 5: 824.7 MHz ~ 848.3 MHz			
	LTE Band 7: 2502.5 MHz ~ 2567.5 MHz			
Ty Francisco	802.11b/g/n: 2412 MHz ~ 2462 MHz			
Tx Frequency	802.11a/n/ac:			
	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			
	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 5: 869.7 MHz ~ 893.3 MHz			
	LTE Band 7: 2622.5 MHz ~ 2687.5 MHz			
	802.11b/g/n: 2412 MHz ~ 2462 MHz			
	802.11a/n/ac:			
Rx Frequency	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			
	Glonass: 1602 MHz + n× 0.5625MHz (n=-7,-6,-5,0,,6)			
	NFC : 13.56 MHz			
	WWAN : Fixed Internal Antenna			
	LTE : Fixed Internal Antenna			
Antonno Timo	WLAN : Loop Antenna			
Antenna Type	Bluetooth : İnternal Antenna			
	GPS/Glonass : Internal Loop Antenna			
	NFC : Loop Antenna			

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Standards-related Product Specification				
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 802.11b: DSSS (DBPSK / DQPSK / CCK) 802.11a/g/n: OFDM (BPSK / QPSK / 16QAM / 64QAM) 802.11ac: OFDM (BPSK / QPSK / 16QAM / 64QAM) Bluetooth LE: GFSK Bluetooth BR (1Mbps): GFSK Bluetooth EDR (2Mbps): π /4-DQPSK Bluetooth EDR (3Mbps): 8-DPSK GPS/Glonass: 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 No. TW1093 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,				
Toot Site Leastion	Kwei-Shan District, Tao Yuan City, Taiwan, R.O.C.				
Test Site Location	TEL: +886-3-327-3456				
	FAX: +886-3-328-4978				
Toot Cito 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 C63.4-2014

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 C63.4-2014 and configuration operated in a manner tended to maximize its emission characteristics in a typical application.

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

Test Items	Function Type
	Mode 1: GSM850 Idle + Bluetooth Idle + WLAN Idle + Battery + USB Cable 1 Type C (Data Link with Notebook) + SIM 2
	Mode 2: WCDMA Band V Idle + Bluetooth Idle + WLAN Idle + Battery + USB Cable 2 Type C (Data Link with Notebook) + SIM 1
AC Conducted Emission	Mode 3: GSM1900 Idle + Bluetooth Idle + WLAN Idle + Battery + USB Cable 3 Type C (Data Link with Notebook) + SIM 1
	Mode 4: WCDMA Band II Idle + Bluetooth Idle + WLAN Idle + Battery + USB Cable 4 Type C (Data Link with Notebook) + SIM 1
	Mode 5: GSM850 Idle + Bluetooth Idle + WLAN Idle + Battery + USB 3.0 Cable Type C (Data Link with Notebook) + SIM 1
	Mode 1: GSM850 Idle + Bluetooth Idle + WLAN Idle + Battery + USB Cable 1 Type C (Data Link with Notebook) + SIM 1
	Mode 2: WCDMA Band V Idle + Bluetooth Idle + WLAN Idle + Battery + USB Cable 2 Type C (Data Link with Notebook) + SIM 2
Radiated Emissions	Mode 3: GSM1900 Idle + Bluetooth Idle + WLAN Idle + Battery + USB Cable 3 Type C (Data Link with Notebook) + SIM 1
	Mode 4: WCDMA Band II Idle + Bluetooth Idle + WLAN Idle + Battery + USB Cable 4 Type C (Data Link with Notebook) + SIM 1
	Mode 5: GSM850 Idle + Bluetooth Idle + WLAN Idle + Battery + USB 3.0 Cable Type C (Data Link with Notebook) + SIM 1

Remark:

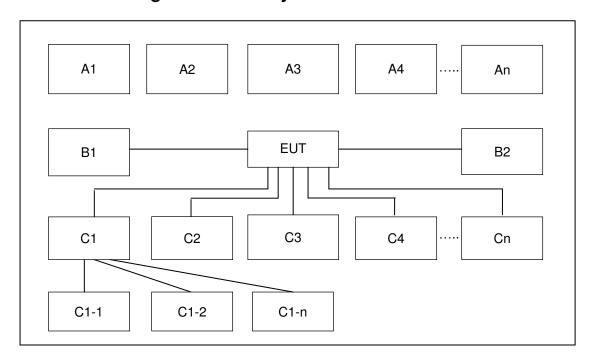
- 1. The worst case of AC is mode 5; only the test data of this mode was reported.
- 2. The worst case of RE is mode 2; only the test data of this mode was reported.
- 3. Data Link with Notebook means data application transferred mode between EUT and Notebook.

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2.2. Connection Diagram of Test System



	Conduction Test Setup									
No.	Wireless Station	Connection Type	Test Mode							
140.		Connection Type	1	2	3	4	5	-	-	
A1	Bluetooth Earphone	Bluetooth	Х	Χ	Χ	Χ	Χ			
A2	System Simulator	GSM/UMTS/CDMA/ WCDMA/LTE	Х	X	Х	Х	X			
A3	AP Router	WiFi	Χ	Χ	Χ	Χ	Χ			
No.	Setup Peripherals	Connection Type	1	2	3	4	5	•	-	
C1	Notebook	USB Cable	Х	Χ	Χ	Χ	Χ			
C1-1	C1-1 HD USB Cable to C1		Х	Χ	Χ	Χ	Χ			
C1-2	AP Router	RJ-45 Cable to C1	Χ	Χ	Χ	Χ	Χ			
C2	SD Card	SD I/O interface without Cable	Х	X	Х	Х	Х			

	Radiation Test Setup									
No.	Wireless Station	Connection Type	Test Mode							
NO.	Wireless Station	Connection Type	1	2	3	4	5	-	-	
A1	Bluetooth Earphone	Bluetooth	Х	Χ	Χ	Χ	Χ			
A2	System Simulator	GSM/UMTS/CDMA/ WCDMA/LTE	Х	Х	Х	Х	Х			
A3	AP Router	WiFi	Х	Χ	Χ	Χ	Χ			
No.	Setup Peripherals	Connection Type	1	2	3	4	5	-	-	
C1	Notebook	USB Cable	Х	Χ	Χ	Χ	Χ			
C1-1	iPod	USB Cable to C1	Х	Χ	Χ	Χ	Χ			
C1-2	AP Router	RJ-45 Cable to C1	Х	Χ	Χ	Χ	Χ			
C2	SD Card	SD I/O interface without Cable	Х	X	Х	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	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8 m
2.	System Simulator	R&S	CMU 200	N/A	N/A	Unshielded, 1.8 m
3.	WLAN AP	ASUS	RT-AC66U	MSQ-RTAC66U	N/A	Unshielded, 1.8 m
4.	Bluetooth Earphone	Lenovo	LBH301	PY7DDA-2029	N/A	N/A
5.	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
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.	iPod	Apple	A1285	FCC DoC	Shielded, 1.0 m	N/A
8.	SD Card	SanDisk	MicroSD HC	FCC DoC	N/A	N/A
9.	USB HD	Lenovo	H568V	FCC DoC	Shielded, 0.5m	N/A
10.	USB3.0 Cable Type C	Moshi	99MO084101	N/A	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.

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 Laptop and EUT via USB cable Type C.

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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

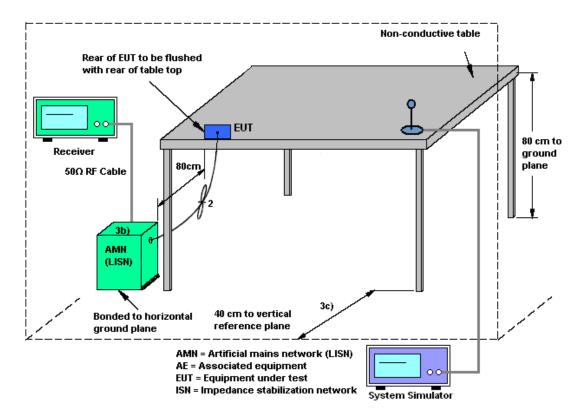
- 1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
- 2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
- 3. All the support units are connecting to the other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

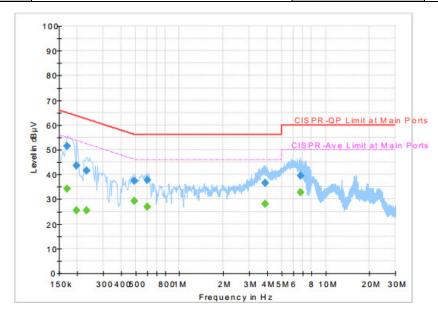


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3.1.6 Test Result of AC Conducted Emission

Toot Engineer	Sharoof Vi	Temperature :	22~23 ℃	
Test Engineer :	Shareer fu	Relative Humidity :	58~62%	
Test Voltage :	120Vac / 60Hz	Phase :	Line	



Final Result:

Frequency (MHz)	Quasi-Peak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Filter	Corr.
0.17	` ' '	34.26	54.96	20.7	L1	OFF	19.5
		34.20					
0.17	51.54		64.96	13.42	L1	OFF	19.5
0.198		25.29	53.69	28.4	L1	OFF	19.5
0.198	43.46		63.69	20.23	L1	OFF	19.5
0.23		25.5	52.45	26.95	L1	OFF	19.5
0.23	41.65		62.45	20.8	L1	OFF	19.5
0.49		29.11	46.17	17.06	L1	OFF	19.5
0.49	37.51		56.17	18.66	L1	OFF	19.5
0.602		26.99	46	19.01	L1	OFF	19.5
0.602	37.76		56	18.24	L1	OFF	19.5
3.838		28.19	46	17.81	L1	OFF	19.6
3.838	36.45		56	19.55	L1	OFF	19.6
6.738		32.74	50	17.26	L1	OFF	19.6
6.738	39.44		60	20.56	L1	OFF	19.6

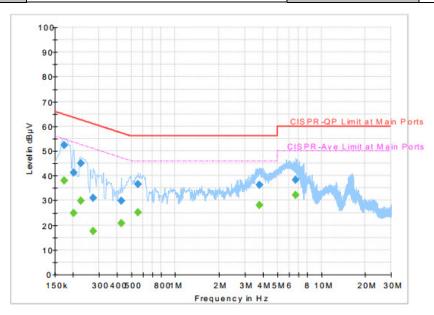
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Toot Engineer	Sharoof Vi	Temperature :	22~23℃
Test Engineer :	Shareer fu	Relative Humidity :	58~62%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral



Final Result:

Frequency (MHz)	Quasi-Peak (dBμV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Filter	Corr. (dB)
0.174		38.15	54.77	16.62	N	OFF	19.5
0.174	52.41		64.77	12.36	N	OFF	19.5
0.202		24.86	53.53	28.67	N	OFF	19.5
0.202	41.33		63.53	22.2	N	OFF	19.5
0.226		29.9	52.6	22.7	N	OFF	19.5
0.226	45		62.6	17.6	N	OFF	19.5
0.274		17.56	51	33.44	N	OFF	19.5
0.274	31.05		61	29.95	N	OFF	19.5
0.426		20.82	47.33	26.51	N	OFF	19.5
0.426	29.92		57.33	27.41	N	OFF	19.5
0.554		25.11	46	20.89	N	OFF	19.5
0.554	36.65		56	19.35	N	OFF	19.5
3.754		27.93	46	18.07	N	OFF	19.6
3.754	36.39		56	19.61	N	OFF	19.6
6.678		32.29	50	17.71	N	OFF	19.6
6.678	38.32		60	21.68	N	OFF	19.6

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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.

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

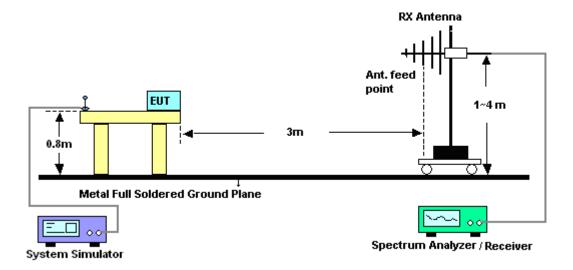
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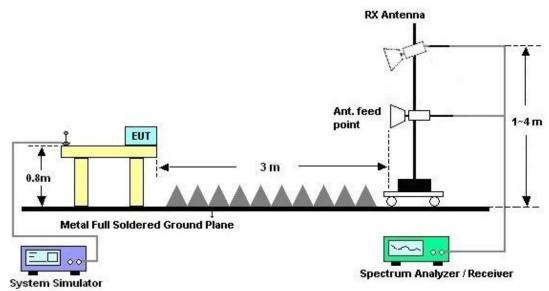
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3.2.4. Test Setup of Radiated Emission

For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz

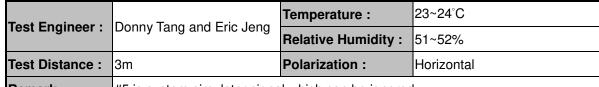


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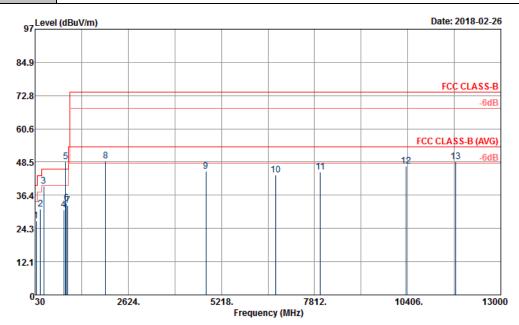
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3.2.5. Test Result of Radiated Emission



Remark: #5 is system simulator signal which can be ignored.



Site : 03CH06-HY

Condition : FCC CLASS-B 3m 9120D_1156_170915 HORIZONTAL

Project : 811821-04
Power : From System
Memo : Mode 2

memo	•	mode Z									
			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	62.94	27.02	-12.98	40.00	45.97	11.67	1.21	31.83			Peak
2	176.07	31.24	-12.26	43.50	46.23	14.92	1.87	31.78			Peak
3	268.68	39.76	-6.24	46.00	49.95	19.30	2.26	31.75	100	124	Peak
4	830.60	31.06	-14.94	46.00	30.88	28.16	3.87	31.85			Peak
5 *	881.70	48.67			47.27	29.10	3.93	31.63			Peak
6	901.30	33.40	-12.60	46.00	32.05	28.99	3.90	31.54			Peak
7	943.30	32.60	-13.40	46.00	29.40	30.25	4.12	31.17			Peak
8	1994.00	48.90	-25.10	74.00	77.77	25.72	6.41	61.00	100	11	Peak
9	4786.00	45.02	-28.98	74.00	62.99	31.06	10.59	59.62			Peak
10	6736.00	43.76	-30.24	74.00	55.57	34.77	12.73	59.31			Peak
11	7970.00	44.86	-29.14	74.00	52.75	36.56	13.89	58.34			Peak
12	10366.00	47.02	-26.98	74.00	50.28	39.24	15.89	58.39			Peak
13	11746.00	48.62	-25.38	74.00	48.86	38.81	17.95	57.00			Peak

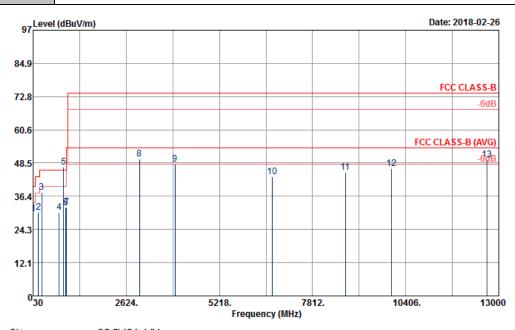
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Report No.: FC811821-04

Test Engineer :	Denny Tong and Eric Jong	Temperature :	23~24°C		
	Donny rang and Eric Jeng	Relative Humidity :	51~52%		
Test Distance :	3m	Polarization :	Vertical		
Domork I	#5 is system simulator signal which can be ignored				

#5 is system simulator signal which can be ignored. Remark:



Site : 03CH06-HY

 $: FCC\ CLASS-B\ 3m\ 9120D_1156_170915\ VERTICAL$ Condition

: 811821-04 Project : From System Power : Mode 2 Memo

-										
		0ver	Limit	Read/	Antenna	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	
30.00	30.12	-9.88	40.00	36.95	24.17	0.84	31.84			Peak
177.42	30.40	-13.10	43.50	45.43	14.88	1.87	31.78			Peak
268.95	37.78	-8.22	46.00	47.97	19.30	2.26	31.75	100	122	Peak
760.60	30.40	-15.60	46.00	30.86	27.91	3.66	32.03			Peak
881.70	46.98			45.58	29.10	3.93	31.63			Peak
943.30	32.15	-13.85	46.00	28.95	30.25	4.12	31.17			Peak
959.40	32.31	-13.69	46.00	28.14	31.07	4.13	31.03			Peak
2998.00	49.85	-24.15	74.00	74.28	28.74	8.13	61.30	100	131	Peak
3982.00	48.15	-25.85	74.00	70.21	29.94	9.50	61.50			Peak
6680.00	43.44	-30.56	74.00	55.52	34.64	12.61	59.33			Peak
8722.00	45.22	-28.78	74.00	51.74	36.74	14.81	58.07			Peak
10002.00	46.38	-27.62	74.00	51.44	38.51	15.33	58.90			Peak
12670.00	49.61	-24.39	74.00	51.45	37.94	18.86	58.64			Peak
	MHz 30.00 177.42 268.95 760.60 881.70 943.30 959.40 2998.00 3982.00 6680.00 8722.00 10002.00	MHz dBuV/m 30.00 30.12 177.42 30.40 268.95 37.78 760.60 30.40 881.70 46.98 943.30 32.15 959.40 32.31 2998.00 49.85 3982.00 48.15 6680.00 43.44 8722.00 45.22 10002.00 46.38	Freq Level Limit MHz dBuV/m dB 30.00 30.12 -9.88 177.42 30.40 -13.10 268.95 37.78 -8.22 760.60 30.40 -15.60 881.70 46.98 943.30 32.15 -13.85 959.40 32.31 -13.69 2998.00 49.85 -24.15 3982.00 48.15 -25.85 6680.00 43.44 -30.56 8722.00 45.22 -28.78 10002.00 46.38 -27.62	Freq Level Limit Line MHz dBuV/m dB dBuV/m 30.00 30.12 -9.88 40.00 177.42 30.40 -13.10 43.50 268.95 37.78 -8.22 46.00 760.60 30.40 -15.60 46.00 881.70 46.98 943.30 32.15 -13.85 46.00 959.40 32.31 -13.69 46.00 2998.00 49.85 -24.15 74.00 3982.00 48.15 -25.85 74.00 6680.00 43.44 -30.56 74.00 8722.00 45.22 -28.78 74.00 10002.00 46.38 -27.62 74.00	Freq Level Limit Line Level MHz dBuV/m dB dBuV/m dBuV/m 30.00 30.12 -9.88 40.00 36.95 177.42 30.40 -13.10 43.50 45.43 268.95 37.78 -8.22 46.00 47.97 760.60 30.40 -15.60 46.00 30.86 881.70 46.98 45.58 943.30 32.15 -13.85 46.00 28.95 959.40 32.31 -13.69 46.00 28.14 2998.00 49.85 -24.15 74.00 74.28 3982.00 48.15 -25.85 74.00 70.21 6680.00 43.44 -30.56 74.00 55.52 8722.00 45.22 -28.78 74.00 51.74 10002.00 46.38 -27.62 74.00 51.44	Freq Level Limit Line Level Factor MHz dBuV/m dB dBuV/m dBuV/m dBuV dB/m 30.00 30.12 -9.88 40.00 36.95 24.17 177.42 30.40 -13.10 43.50 45.43 14.88 268.95 37.78 -8.22 46.00 47.97 19.30 760.60 30.40 -15.60 46.00 30.86 27.91 881.70 46.98 45.58 29.10 943.30 32.15 -13.85 46.00 28.95 30.25 959.40 32.31 -13.69 46.00 28.14 31.07 2998.00 49.85 -24.15 74.00 74.28 28.74 3982.00 48.15 -25.85 74.00 70.21 29.94 6680.00 43.44 -30.56 74.00 55.52 34.64 8722.00 45.22 -28.78 74.00 51.74 36.74	Freq Level Limit Line Level Factor Loss MHz dBuV/m dB dBuV/m dBuV dB/m dB 30.00 30.12 -9.88 40.00 36.95 24.17 0.84 177.42 30.40 -13.10 43.50 45.43 14.88 1.87 268.95 37.78 -8.22 46.00 47.97 19.30 2.26 760.60 30.40 -15.60 46.00 30.86 27.91 3.66 881.70 46.98 45.58 29.10 3.93 943.30 32.15 -13.85 46.00 28.95 30.25 4.12 959.40 32.31 -13.69 46.00 28.14 31.07 4.13 2998.00 49.85 -24.15 74.00 74.28 28.74 8.13 3982.00 48.15 -25.85 74.00 70.21 29.94 9.50 6680.00 43.44 -30.56 74.00 <	Freq Level Limit Line Level Factor Loss Factor MHz dBuV/m dB dBuV/m dBuV dB/m dB dB 30.00 30.12 -9.88 40.00 36.95 24.17 0.84 31.84 177.42 30.40 -13.10 43.50 45.43 14.88 1.87 31.78 268.95 37.78 -8.22 46.00 47.97 19.30 2.26 31.75 760.60 30.40 -15.60 46.00 30.86 27.91 3.66 32.03 881.70 46.98 45.58 29.10 3.93 31.63 943.30 32.15 -13.85 46.00 28.95 30.25 4.12 31.17 959.40 32.31 -13.69 46.00 28.14 31.07 4.13 31.03 2998.00 49.85 -24.15 74.00 74.28 28.74 8.13 61.30 3982.00 48.15 <t< td=""><td>Freq Level Limit Line Level Factor Loss Factor MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm 30.00 30.12 -9.88 40.00 36.95 24.17 0.84 31.84 177.42 30.40 -13.10 43.50 45.43 14.88 1.87 31.78 268.95 37.78 -8.22 46.00 47.97 19.30 2.26 31.75 100 760.60 30.40 -15.60 46.00 30.86 27.91 3.66 32.03 881.70 46.98 45.58 29.10 3.93 31.63 943.30 32.15 -13.85 46.00 28.95 30.25 4.12 31.17 959.40 32.31 -13.69 46.00 28.14 31.07 4.13 31.03 2998.00 49.85 -24.15 74.00</td><td>Freq Level Limit Line Level Factor Loss Factor MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 30.00 30.12 -9.88 40.00 36.95 24.17 0.84 31.84 177.42 30.40 -13.10 43.50 45.43 14.88 1.87 31.78 268.95 37.78 -8.22 46.00 47.97 19.30 2.26 31.75 100 122 760.60 30.40 -15.60 46.00 30.86 27.91 3.66 32.03 881.70 46.98 45.58 29.10 3.93 31.63 943.30 32.15 -13.85 46.00 28.95 30.25 4.12 31.17 998.00 49.85 -24.15 74.00 74.28 28.74 8.13</td></t<>	Freq Level Limit Line Level Factor Loss Factor MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm 30.00 30.12 -9.88 40.00 36.95 24.17 0.84 31.84 177.42 30.40 -13.10 43.50 45.43 14.88 1.87 31.78 268.95 37.78 -8.22 46.00 47.97 19.30 2.26 31.75 100 760.60 30.40 -15.60 46.00 30.86 27.91 3.66 32.03 881.70 46.98 45.58 29.10 3.93 31.63 943.30 32.15 -13.85 46.00 28.95 30.25 4.12 31.17 959.40 32.31 -13.69 46.00 28.14 31.07 4.13 31.03 2998.00 49.85 -24.15 74.00	Freq Level Limit Line Level Factor Loss Factor MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 30.00 30.12 -9.88 40.00 36.95 24.17 0.84 31.84 177.42 30.40 -13.10 43.50 45.43 14.88 1.87 31.78 268.95 37.78 -8.22 46.00 47.97 19.30 2.26 31.75 100 122 760.60 30.40 -15.60 46.00 30.86 27.91 3.66 32.03 881.70 46.98 45.58 29.10 3.93 31.63 943.30 32.15 -13.85 46.00 28.95 30.25 4.12 31.17 998.00 49.85 -24.15 74.00 74.28 28.74 8.13

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4. List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	Feb. 21, 2018~ Feb. 22, 2018	N/A	Conduction (CO05-HY)
EMI Test Receiver	Rohde & Schwarz	ESR3	102388	3.6GHz	Dec. 08, 2017	Feb. 21, 2018~ Feb. 22, 2018	Dec. 07, 2018	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100080	9kHz~30MHz	Nov. 30, 2017	Feb. 21, 2018~ Feb. 22, 2018	Nov. 29, 2018	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100081	9kHz~30MHz	Dec. 08, 2017	Feb. 21, 2018~ Feb. 22, 2018	Dec. 07, 2018	Conduction (CO05-HY)
Bilog Antenna	Schaffner	CBL6111C&N- 6-06	2725&AT-N06 01	30MHz~1GHz	Oct. 14, 2017	Feb. 22, 2018~ Feb. 26, 2018	Oct. 13, 2018	Radiation (03CH06-HY)
EMI Test Receiver	Rohde & Schwarz	ESU26	100472	20Hz~26.5GHz	Jan. 04, 2018	Feb. 22, 2018~ Feb. 26, 2018	Jan. 03, 2019	Radiation (03CH06-HY)
Horn Antenna	SCHWARZBE CK	BBHA 9120 D	9120D-1156	1GHz~18GHz	Aug. 08, 2017	Feb. 22, 2018~ Feb. 26, 2018	Aug. 07, 2018	Radiation (03CH06-HY)
Preamplifier	SONOMA	310N	186713	9kHz~1GHz	Apr. 25, 2017	Feb. 22, 2018~ Feb. 26, 2018	Apr. 24, 2018	Radiation (03CH06-HY)
Preamplifier	MITEQ	AMF-7D-0010 1800-30-10P	1850117	1GHz ~ 18GHz	May 22, 2017	Feb. 22, 2018~ Feb. 26, 2018	May 21, 2018	Radiation (03CH06-HY)
Antenna Mast	MF	MF-7802	MF78020821 2	1m~4m	N/A	Feb. 22, 2018~ Feb. 26, 2018	N/A	Radiation (03CH06-HY)
Turn Table	INN-CO	DS2000	420/650/00	0-360 degree	N/A	Feb. 22, 2018~ Feb. 26, 2018	N/A	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 Confidence	2.70
of 95% (U = 2Uc(y))	2.70

<u>Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)</u>

Measuring Uncertainty for a Level of Confidence	3.90
of 95% (U = 2Uc(y))	3.90

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

Measuring Uncertainty for a Level of Confidence	4.70
of 95% (U = 2Uc(y))	4.70

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