



# FCC Test Report

**APPLICANT** : Motorola Mobility LLC  
**EQUIPMENT** : Mobile Cellular Phone  
**BRAND NAME** : Motorola  
**FCC ID** : IHDT56XJ1  
**STANDARD** : FCC CFR Title 47 Part 15 Subpart B  
**CLASSIFICATION** : Certification

The product was received on May 15, 2018 and testing was completed on May 25, 2018. We, Sporton International (Kunshan) Inc., would like to declare that the tested sample has been evaluated in accordance with the test procedures given in ANSI C63.4-2014 and has been in compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International (Kunshan) Inc., the test report shall not be reproduced except in full.



Approved by: James Huang / Manager

**Sporton International (Kunshan) Inc.**  
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China



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### REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FC851503	Rev. 01	Initial issue of report	May 31, 2018



### 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 5.37 dB at 0.223 MHz
3.2	15.109	Radiated Emission	< 15.109 limits	PASS	Under limit 5.95 dB at 43.580 MHz



# 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
FCC ID	IHDT56XJ1
EUT supports Radios application	CDMA/EVDO/GSM/GPRS/EGPRS/WCDMA/HSPA/ DC-HSDPA/HSPA+(16QAM uplink is not supported)/LTE/NFC WLAN 2.4GHz 802.11b/g/n HT20/ WLAN 5GHz 802.11a/n HT20/HT40 WLAN 5GHz 802.11ac VHT20/VHT40/VHT80 Bluetooth v3.0 + EDR/Bluetooth v4.2 LE/Bluetooth v5.0 LE
IMEI Code	Conduction: 355550090016408 Radiation: 355550090016358
HW Version	DVT2
SW Version	fastboot_messi_verizon_oem_vzw_userdebug_8.1.0_ODX28. 56_50ee_intcfg-test-keys_vzw
EUT Stage	Identical Prototype

Remark: The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.



### 1.4. Product Specification of Equipment Under Test

Standards-related Product Specification	
<b>Tx Frequency</b>	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 LTE Band 13 : 779.5 MHz ~ 784.5 MHz LTE Band 66 : 1710.7 MHz ~ 1779.3 MHz CDMA2000 BC0: 824.70 MHz ~ 848.31 MHz CDMA2000 BC1: 1851.25 MHz ~ 1908.75 MHz 802.11b/g/n: 2412 MHz ~ 2462 MHz 802.11a/n/ac: 5180 MHz ~ 5240 MHz; 5260 MHz ~ 5320 MHz; 5500 MHz ~ 5720 MHz; 5745 MHz ~ 5825 MHz Bluetooth: 2402 MHz ~ 2480 MHz NFC : 13.56 MHz
<b>Rx Frequency</b>	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 : 2622.5 MHz ~ 2687.5 MHz LTE Band 13 : 748.5 MHz ~ 753.5 MHz LTE Band 46 : 5155 MHz ~ 5920 MHz LTE Band 66 : 2110.7 MHz~ 2199.3 MHz CDMA2000 BC0: 869.70 MHz ~ 893.31 MHz CDMA2000 BC1: 1931.25 MHz ~ 1988.75 MHz 802.11b/g/n: 2412 MHz ~ 2462 MHz 802.11a/n/ac: 5180 MHz ~ 5240 MHz; 5260 MHz ~ 5320 MHz; 5500 MHz ~ 5720 MHz; 5745 MHz ~ 5825 MHz Bluetooth: 2402 MHz ~ 2480 MHz GNSS : 1559 MHz ~ 1610 MHz NFC : 13.56 MHz FM: 87.5 MHz ~ 108 MHz
<b>Antenna Type</b>	WWAN : Fixed Internal Antenna WLAN : Fixed Internal Antenna Bluetooth : Fixed Internal Antenna GNSS: Fixed Internal Antenna NFC: Fixed Internal Antenna FM: External Handset Antenna

<b>Type of Modulation</b>	GSM: GMSK GPRS: GMSK EDGE(MCS 0-4): GMSK / (MCS 5-9): 8PSK WCDMA : BPSK (Uplink) HSDPA/DC-HSDPA : QPSK (Uplink) HSUPA : QPSK (Uplink) HSPA+ : 16QAM (uplink is not supported) DC-HSDPA : 64QAM CDMA2000 1xRTT: QPSK CDMA2000 1xEV-DO: QPSK/8PSK LTE: QPSK / 16QAM / 64QAM 802.11b : DSSS (DBPSK / DQPSK / CCK) 802.11a/g/n/ac : OFDM (BPSK / QPSK / 16QAM / 64QAM / 256QAM) Bluetooth LE : GFSK Bluetooth (1Mbps) : GFSK Bluetooth (2Mbps) : $\pi/4$ -DQPSK Bluetooth (3Mbps) : 8-DPSK GNSS : BPSK NFC: ASK FM
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Note: GNSS = GPS + Glonass

### 1.5. Specification of Accessory

Specification of Accessory			
AC Adapter 1	Brand Name	Motorola (Salom)	Model Name SC-22
	Power Rating	I/P: 100-240 Vac, 500mA, O/P: 5Vdc,3000mA or 9Vdc,1600mA or 12Vdc,1200mA	
AC Adapter 2	Brand Name	Motorola (Chenyang)	Model Name SC-22
	Power Rating	I/P: 100-240 Vac, 500mA, O/P: 5Vdc,3000mA or 9Vdc,1600mA or 12Vdc,1200mA	
AC Adapter 3	Brand Name	Motorola (Salom)	Model Name SC-51
	Power Rating	I/P: 100-240 Vac, 600mA, O/P: 5Vdc,3000mA or 9Vdc,2000mA or 12Vdc,1500mA	
AC Adapter 4	Brand Name	Motorola (Chenyang)	Model Name SC-51
	Power Rating	I/P: 100-240 Vac, 600mA, O/P: 5Vdc,3000mA or 9Vdc,2000mA or 12Vdc,1500mA	
Battery	Brand Name	Motorola (Sunwoda)	Model Name JS40
	Power Rating	3.8Vdc,3000mAh	Type Li-ion
USB Cable 1	Brand Name	Motorola (Cabletech)	Model Name SKN6473A
	Signal Line Type	1.0 meter, shielded cable, without ferrite core	
USB Cable 2	Brand Name	Motorola (Luxshare)	Model Name SKN6473A
	Signal Line Type	1.0 meter, shielded cable, without ferrite core	
Audio Cable	Brand Name	Motorola (Luxshare)	Model Name SC18C27844
	Signal Line Type	0.08 meter, shielded cable, without ferrite core	

### 1.6. Modification of EUT

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



### 1.7. Test Location

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

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

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

### 1.8. Applicable Standards

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

- FCC CFR Title 47 Part 15 Subpart B
- ANSI C63.4-2014

**Remark:** All test items were verified and recorded according to the standards and without any deviation during the test.



## 2. Test Configuration of Equipment Under Test

### 2.1. Test Mode

The EUT has been associated with peripherals pursuant to ANSI C63.4-2014 and configuration operated in a manner tended to maximize its emission characteristics in a typical application.

Frequency range investigated: conduction 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).

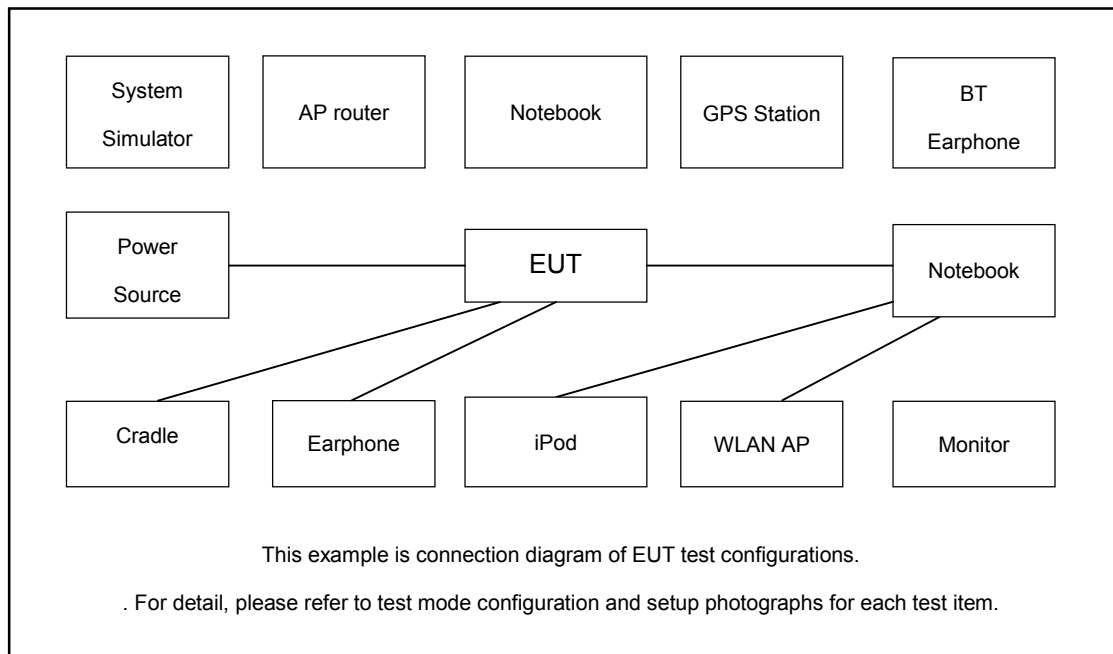
Test Items	Function Type
AC Conducted Emission	Mode 1: GSM850 Idle + Bluetooth Idle + WLAN (2.4G) Idle + USB Cable 1 (Charging from Adapter 1) + Camera (Rear) + SIM 1
	Mode 2: GSM1900 Idle + Bluetooth Idle + WLAN (5G) Idle + USB Cable 4 (Charging from Adapter 2) + Camera (Front) + SIM 2
	Mode 3: WCDMA Band V Idle + Bluetooth Idle + WLAN (2.4G) Idle + USB Cable 4 (Charging from Adapter 3) + MPEG4 + SIM 1
	Mode 4: LTE Band 4 Idle + Bluetooth Idle + WLAN (5G) Idle + USB Cable 4 (Charging from Adapter 4) + NFC On + SIM 2
	Mode 5: LTE Band 2 Idle + Bluetooth Idle + WLAN (2.4G) Idle + USB Cable 1 (Data Link with Notebook) + GNSS Rx + SIM 1
	Mode 6: LTE Band 7 Idle + Bluetooth Idle + WLAN (5G) Idle + USB Cable 4 (Data Link with Notebook) + GNSS Rx + SIM 2
Radiated Emissions	Mode 1: GSM850 Idle + Bluetooth Idle + WLAN (2.4G) Idle + USB Cable 1 (Charging from Adapter 1) + Camera (Rear) + SIM 1
	Mode 2: GSM1900 Idle + Bluetooth Idle + WLAN (5G) Idle + USB Cable 4 (Charging from Adapter 2) + Camera (Front) + SIM 2
	Mode 3: WCDMA Band V Idle + Bluetooth Idle + WLAN (2.4G) Idle + USB Cable 4 (Charging from Adapter 3) + MPEG4 + SIM 1
	Mode 4: LTE Band 4 Idle + Bluetooth Idle + WLAN (5G) Idle + USB Cable 4 (Charging from Adapter 4) + NFC On + SIM 2
	Mode 5: LTE Band 2 Idle + Bluetooth Idle + WLAN (2.4G) Idle + USB Cable 1 (Data Link with Notebook) + GNSS Rx + SIM 1
	Mode 6: LTE Band 7 Idle + Bluetooth Idle + WLAN (5G) Idle + USB Cable 2 (Data Link with Notebook) + GNSS Rx + SIM 2
	Mode 7: WCDMA Band V Idle + Bluetooth Idle + WLAN (2.4G) Idle + C2 Audio Cable 1 with Earphone + MPEG4 + SIM 1



**Remark:**

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

## 2.2. Connection Diagram of Test System



## 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, 1.8m
3.	WLAN AP	D-Link	DIR-855	KA2DIR855A2	N/A	Unshielded, 1.8 m
4.	WLAN AP	TP-Link	TL-WDR5600	N/A	N/A	Unshielded, 1.8 m
5.	Bluetooth Earphone	Lenovo	LBH308	N/A	N/A	N/A
6.	Notebook	Lenovo	G480	N/A	N/A	AC I/P: Unshielded, 1.8 m DC O/P: Shielded, 1.8 m
7.	Notebook	DELL	Latitude3440	N/A	N/A	AC I/P: Unshielded, 1.8 m DC O/P: Shielded, 1.8 m
8.	SD Card	Kingston	8GB	N/A	N/A	N/A
9.	SD Card	SanDisk	Uitra	N/A	N/A	N/A
10.	Hard Disk	Lenovo	F310	FCC DoC	Shielded, 1.2 m	N/A
11.	Earphone	Lenovo	SH100	N/A	N/A	N/A



## **2.4. EUT Operation Test Setup**

The EUT was in GSM or WCDMA or LTE idle mode during the testing. The EUT was synchronized to the BCCH, and is in continuous receiving mode by setting system simulator's paging reorganization.

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.
2. Turn on GNSS function to make the EUT receive continuous signals from GNSS station.
3. Execute "Video Player" to play MPEG4 files.
4. Turn on camera to capture images.
5. Turn on NFC function.



### 3. Test Result

#### 3.1. Test of AC Conducted Emission Measurement

##### 3.1.1 Limits of AC Conducted Emission

For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table.

<Class B Limit>

Frequency of emission (MHz)	Conducted limit (dBuV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

\*Decreases with the logarithm of the frequency.

##### 3.1.2 Measuring Instruments

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

##### 3.1.3 Test Procedure

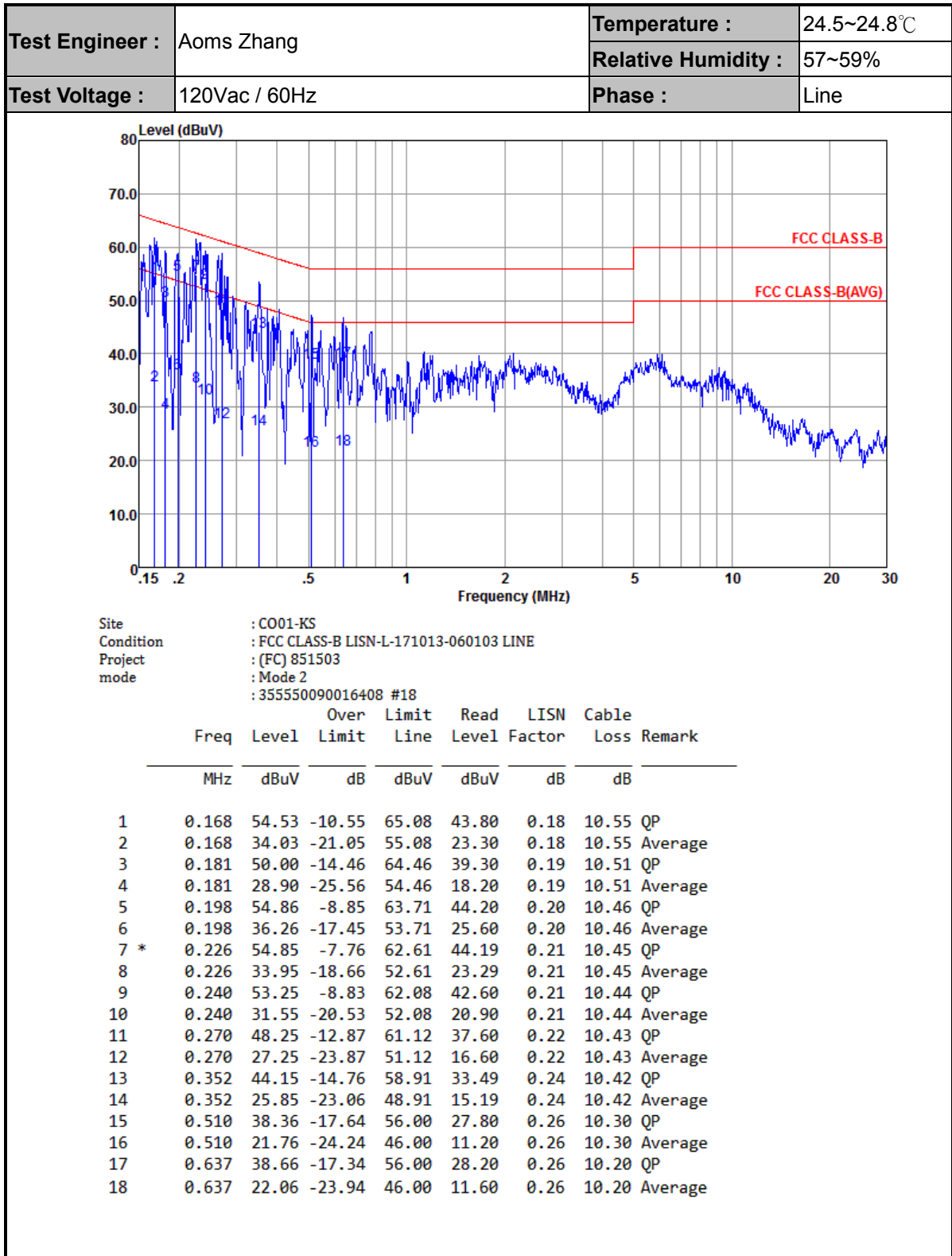
1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
5. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
6. Both sides of AC line were checked for maximum conducted interference.
7. The frequency range from 150 kHz to 30 MHz was searched.
8. Set the test-receiver system to Peak Detect Function and specified bandwidth (IF Bandwidth = 9kHz) with Maximum Hold Mode. Then measurement is also conducted by Average Detector and Quasi-Peak Detector Function respectively.

### 3.1.4 Test Setup



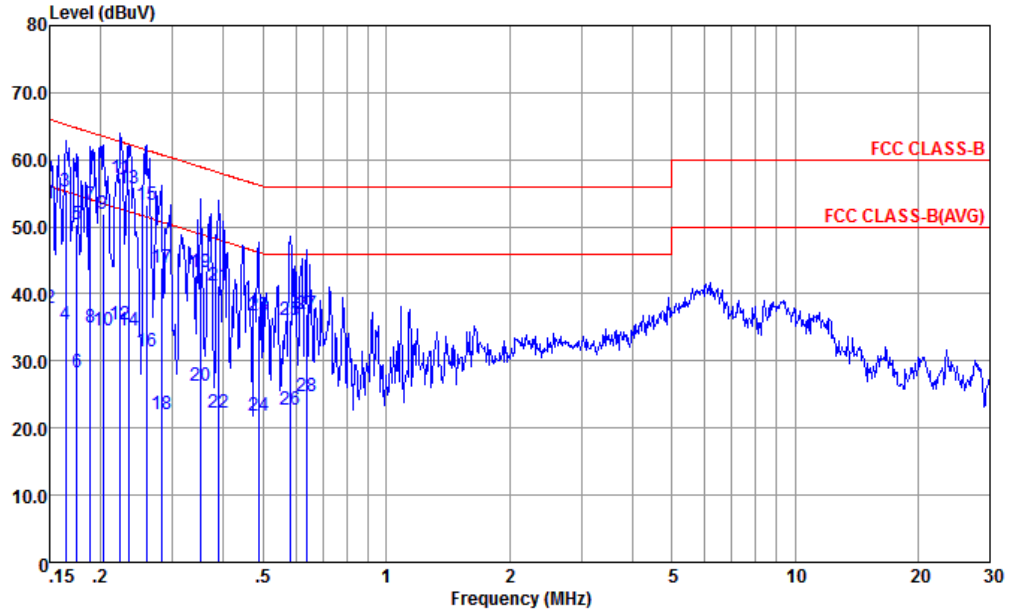


3.1.5 Test Result of AC Conducted Emission





Test Engineer :	Aoms Zhang	Temperature :	24.5~24.8°C
		Relative Humidity :	57~59%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral

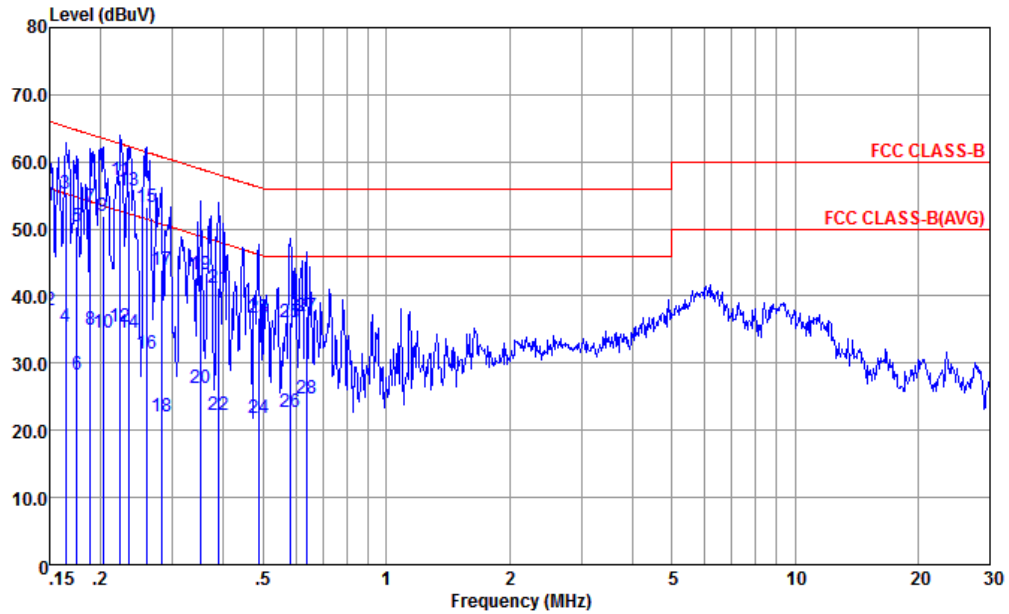


Site : CO01-KS  
 Condition : FCC CLASS-B LISN-N-171013-060103 NEUTRAL  
 Project : (FC) 851503  
 mode : Mode 2  
 : 355550090016408 #18

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.150	53.50	-12.50	66.00	42.60	0.28	10.62	QP
2	0.150	37.80	-18.20	56.00	26.90	0.28	10.62	Average
3	0.164	55.35	-9.90	65.25	44.50	0.28	10.57	QP
4	0.164	35.45	-19.80	55.25	24.60	0.28	10.57	Average
5	0.175	50.31	-14.41	64.72	39.50	0.28	10.53	QP
6	0.175	28.31	-26.41	54.72	17.50	0.28	10.53	Average
7	0.188	53.37	-10.74	64.11	42.60	0.28	10.49	QP
8	0.188	35.07	-19.04	54.11	24.30	0.28	10.49	Average
9	0.203	51.93	-11.56	63.49	41.20	0.28	10.45	QP
10	0.203	34.63	-18.86	53.49	23.90	0.28	10.45	Average
11 *	0.223	57.33	-5.37	62.70	46.60	0.28	10.45	QP
12	0.223	35.33	-17.37	52.70	24.60	0.28	10.45	Average
13	0.235	55.63	-6.63	62.26	44.91	0.28	10.44	QP
14	0.235	34.63	-17.63	52.26	23.91	0.28	10.44	Average
15	0.259	53.22	-8.25	61.47	42.50	0.28	10.44	QP
16	0.259	31.32	-20.15	51.47	20.60	0.28	10.44	Average
17	0.282	43.92	-16.84	60.76	33.21	0.28	10.43	QP



Test Engineer :	Aoms Zhang	Temperature :	24.5~24.8°C
		Relative Humidity :	57~59%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral



Site : CO01-KS  
 Condition : FCC CLASS-B LISN-N-171013-060103 NEUTRAL  
 Project : (FC) 851503  
 mode : Mode 2  
 : 355550090016408 #18

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
18	0.282	22.02	-28.74	50.76	11.31	0.28	10.43	Average
19	0.352	43.20	-15.71	58.91	32.49	0.29	10.42	QP
20	0.352	26.20	-22.71	48.91	15.49	0.29	10.42	Average
21	0.389	41.30	-16.78	58.08	30.60	0.29	10.41	QP
22	0.389	22.20	-25.88	48.08	11.50	0.29	10.41	Average
23	0.486	36.81	-19.42	56.23	26.20	0.29	10.32	QP
24	0.486	21.91	-24.32	46.23	11.30	0.29	10.32	Average
25	0.582	36.13	-19.87	56.00	25.60	0.29	10.24	QP
26	0.582	22.83	-23.17	46.00	12.30	0.29	10.24	Average
27	0.637	37.10	-18.90	56.00	26.60	0.30	10.20	QP
28	0.637	24.70	-21.30	46.00	14.20	0.30	10.20	Average



### 3.2. Test of Radiated Emission Measurement

#### 3.2.1. Limit of Radiated Emission

The emissions from an unintentional radiator shall not exceed the field strength levels specified in the following table:

<Class B Limit>

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
30 – 88	100	3
88 – 216	150	3
216 - 960	200	3
Above 960	500	3

#### 3.2.2. Measuring Instruments

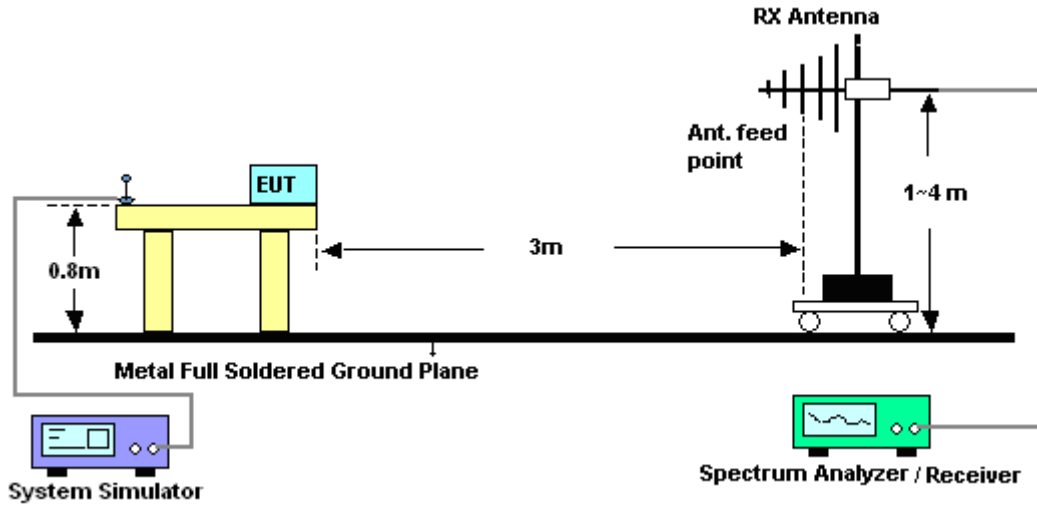
The measuring equipment is listed in the section 4 of this test report.

#### 3.2.3. Test Procedures

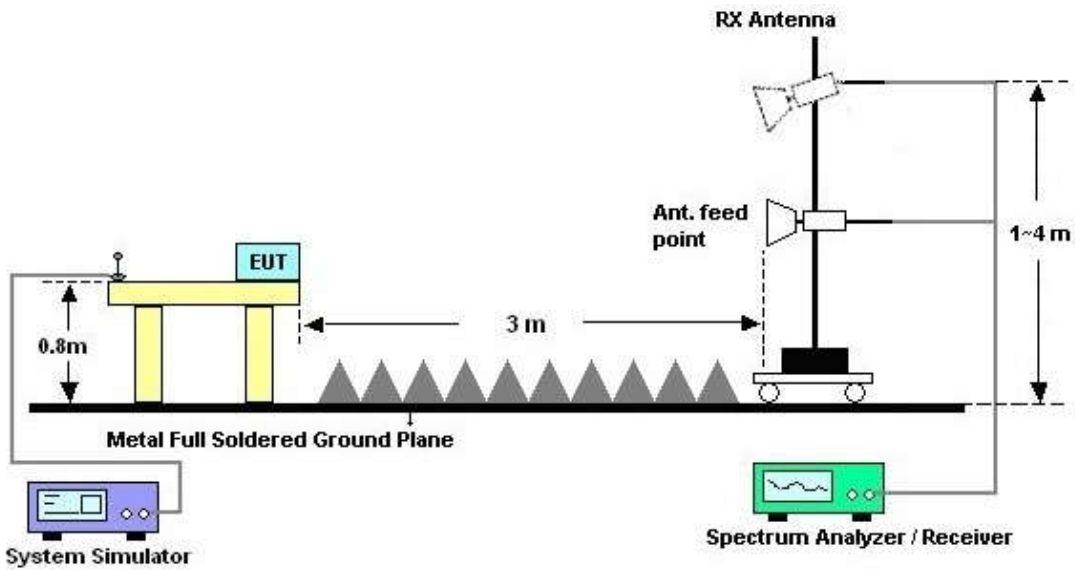
1. The EUT was placed on a turntable with 0.8 meter above ground.
2. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest radiation.
4. The antenna is a Bi-Log antenna and its height is adjusted between one to four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
5. For each suspected emission, the EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
6. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode (RBW=120kHz/VBW=300kHz for frequency below 1GHz; RBW=1MHz VBW=3MHz (Peak), RBW=1MHz/VBW=10Hz (Average) for frequency above 1GHz).
7. If the emission level of the EUT in peak mode was 3 dB lower than the limit specified, peak values of EUT will be reported. Otherwise, the emission will be repeated by using the quasi-peak method and reported.
8. Emission level (dBµV/m) = 20 log Emission level (µV/m)
9. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level

### 3.2.4. Test Setup of Radiated Emission

For radiated emissions from 30MHz to 1GHz



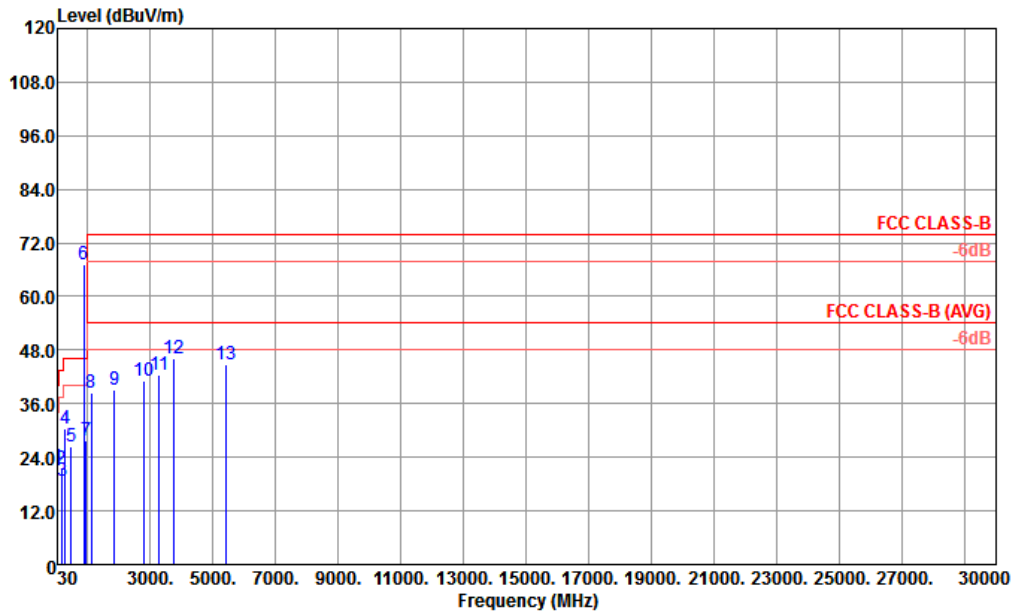
For radiated emissions above 1GHz





3.2.5. Test Result of Radiated Emission

Test Engineer :	Mark Qi	Temperature :	21~22°C
		Relative Humidity :	41~42%
Test Distance :	3m	Polarization :	Horizontal
Remark :	#6 is system simulator signal which can be ignored.		

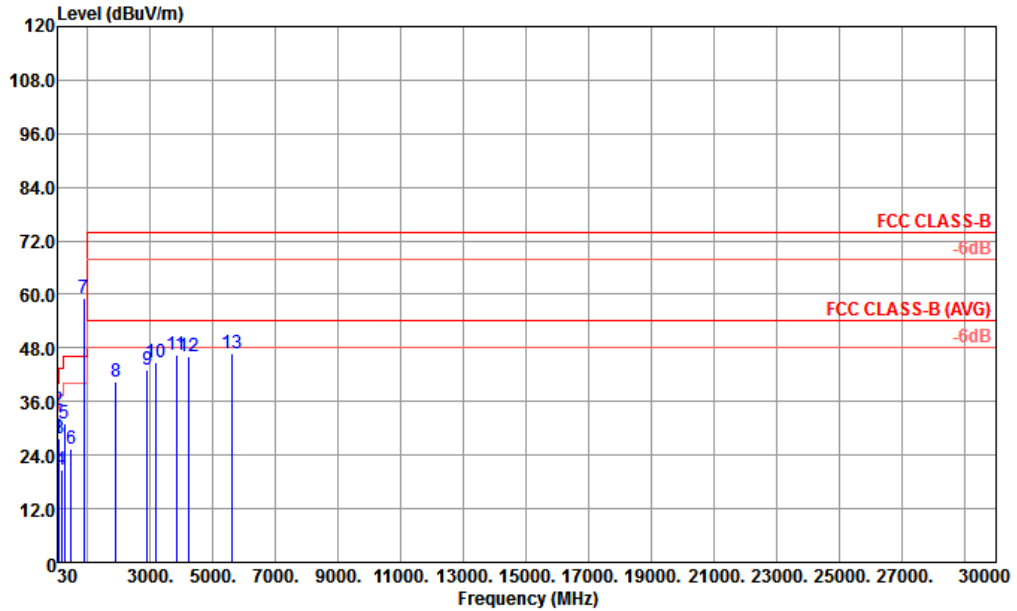


Site : 03CH02-KS  
 Condition : FCC CLASS-B 3m LF 47610 HORIZONTAL  
 Project : (FC)851503  
 Mode : 3  
 IMEI : 355550090016358 #16

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Cable Factor	Preamp Loss	A/Pos	T/Pos	Remark	
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	30.97	21.85	-18.15	40.00	28.85	24.44	0.59	32.03	---	---	Peak
2	153.19	21.55	-21.95	43.50	35.73	16.38	1.27	31.83	---	---	Peak
3	195.87	18.74	-24.76	43.50	33.75	15.24	1.43	31.68	---	---	Peak
4	268.62	30.43	-15.57	46.00	40.93	19.08	1.81	31.39	100	0	Peak
5	464.56	26.44	-19.56	46.00	31.67	23.00	2.24	30.47	---	---	Peak
6 *	881.66	67.15			65.24	26.49	3.08	27.66	---	---	Peak
7	948.59	27.61	-18.39	46.00	24.67	26.89	3.20	27.15	---	---	Peak
8	1104.00	38.32	-35.68	74.00	45.28	27.65	3.43	38.04	---	---	Peak
9	1864.00	39.04	-34.96	74.00	41.91	29.47	4.50	36.84	---	---	Peak
10	2808.00	41.28	-32.72	74.00	40.38	32.00	5.84	36.94	---	---	Peak
11	3288.00	42.39	-31.61	74.00	39.48	33.23	6.24	36.56	---	---	Peak
12	3728.00	46.10	-27.90	74.00	41.55	34.48	6.57	36.50	---	---	Peak
13	5392.00	44.93	-29.07	74.00	38.49	35.20	7.93	36.69	---	---	Peak



Test Engineer :	Mark Qi	Temperature :	21~22°C
		Relative Humidity :	41~42%
Test Distance :	3m	Polarization :	Vertical
Remark :	#7 is system simulator signal which can be ignored.		



Site : 03CH02-KS  
 Condition : FCC CLASS-B 3m LF 47610 VERTICAL  
 Project : (FC)851503  
 Mode : 3  
 IMEI : 355550090016358 #16

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	31.94	28.17	-11.83	40.00	35.72	23.88	0.60	32.03	---	---	Peak
2 !	43.58	34.05	-5.95	40.00	48.61	16.88	0.66	32.10	100	0	Peak
3	86.26	27.75	-12.25	40.00	44.65	14.18	0.96	32.04	---	---	Peak
4	155.13	20.70	-22.80	43.50	34.94	16.30	1.28	31.82	---	---	Peak
5	267.65	30.99	-15.01	46.00	41.42	19.16	1.81	31.40	---	---	Peak
6	462.62	25.26	-20.74	46.00	30.54	22.97	2.23	30.48	---	---	Peak
7 *	882.63	59.03			57.10	26.50	3.08	27.65	---	---	Peak
8	1912.00	40.31	-33.69	74.00	42.82	29.73	4.54	36.78	---	---	Peak
9	2912.00	43.09	-30.91	74.00	41.95	32.30	5.91	37.07	---	---	Peak
10	3184.00	44.86	-29.14	74.00	42.54	33.05	6.18	36.91	---	---	Peak
11	3832.00	46.50	-27.50	74.00	41.60	34.84	6.64	36.58	---	---	Peak
12	4232.00	46.22	-27.78	74.00	40.32	35.48	7.27	36.85	---	---	Peak
13	5616.00	46.65	-27.35	74.00	40.35	35.01	7.97	36.68	---	---	Peak



### 4. List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
EMI Receiver	R&S	ESC17	100768	9kHz~7GHz;	Apr. 19, 2018	May 25, 2018	Apr. 18, 2019	Conduction (CO01-KS)
AC LISN	MessTec	AN3016	060103	9kHz~30MHz	Oct. 13, 2017	May 25, 2018	Oct. 12, 2018	Conduction (CO01-KS)
AC LISN (for auxiliary equipment)	MessTec	AN3016	060105	9kHz~30MHz	Oct. 13, 2017	May 25, 2018	Oct. 12, 2018	Conduction (CO01-KS)
AC Power Source	Chroma	61602	ABP0000008 11	AC 0V~300V, 45Hz~1000Hz	Oct. 12, 2017	May 25, 2018	Oct. 11, 2018	Conduction (CO01-KS)
EMI Test Receiver	R&S	ESR7	101403	9kHz~7GHz;Ma x 30dBm	Aug. 08, 2017	May 22, 2018	Aug. 07, 2018	Radiation (03CH02-KS)
EXA Spectrum Analyzer	Keysight	N9010A	MY55150208	10Hz-44G,MAX 30dB	Apr. 17, 2018	May 22, 2018	Apr. 16, 2019	Radiation (03CH02-KS)
Bilog Antenna	TeseQ	CBL6112D	23182	30MHz-2GHz	Jan. 29, 2018	May 22, 2018	Jan. 28, 2019	Radiation (03CH02-KS)
Double Ridge Horn Antenna	ETS-Lindgren	3117	75957	1GHz~18GHz	Oct. 21, 2017	May 22, 2018	Oct. 20, 2018	Radiation (03CH02-KS)
SHF-EHF Horn	Schwarzbeck	BBHA 9170	BBHA170249	15GHz~40GHz	Feb. 07, 2018	May 22, 2018	Feb. 06, 2019	Radiation (03CH02-KS)
Amplifier	MITEQ	TTA1840-35-H G	1887435	18~40GHz	Oct. 12, 2017	May 22, 2018	Oct. 11, 2018	Radiation (03CH02-KS)
Amplifier	SONOMA	310N	187289	9KHz-1GHz	Aug. 07, 2017	May 22, 2018	Aug. 06, 2018	Radiation (03CH02-KS)
Amplifier	Agilent	8449B	3008A02384	1-26.5GHz Gain 30dB	Oct. 12, 2017	May 22, 2018	Oct. 11, 2018	Radiation (03CH02-KS)
AC Power Source	Chroma	61601	61601000247 3	N/A	NCR	May 22, 2018	NCR	Radiation (03CH02-KS)
Turn Table	MF	MF7802	N/A	0~360 degree	NCR	May 22, 2018	NCR	Radiation (03CH02-KS)
Antenna Mast	MF	MF7802	N/A	1 m~4 m	NCR	May 22, 2018	NCR	Radiation (03CH02-KS)

NCR: No Calibration Required



## 5. Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ )	2.3dB
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### Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ )	4.2dB
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### Uncertainty of Radiated Emission Measurement (1000 MHz ~ 18000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ )	4.2dB
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### Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)

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