



FCC Test Report

APPLICANT : HTC Corporation
EQUIPMENT : Smartphone
MODEL NAME : 0PFH100
FCC ID : NM80PFH100
STANDARD : FCC 47 CFR FCC Part 15 Subpart B
CLASSIFICATION : Certification

The product was received on Jul. 29, 2014 and testing was completed on Sep. 29, 2014. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the test procedures given in ANSI C63.4-2009 and has been in compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC., the test report shall not be reproduced except in full.

Reviewed by: Louis Wu / Manager

Approved by: Jones Tsai / Manager



SPORTON INTERNATIONAL INC.

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



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SUMMARY OF TEST RESULT

Report Section	FCC Rule	IC Rule	Description	Limit	Result	Remark
3.1	15.107	ICES003 Section 6.1	AC Conducted Emission	< 15.107 limits < ICES003 6.1 limits	PASS	Under limit 5.80 dB at 0.174 MHz
3.2	15.109	ICES003 Section 6.2	Radiated Emission	< 15.109 limits < ICES003 6.2 limits	PASS	Under limit 3.16 dB at 720.000 MHz for Quasi-Peak



1. General Description

1.1. Applicant

HTC Corporation

No. 23, Xinghua Rd., Taoyuan City, Taoyuan County 330, Taiwan.

1.2. Manufacturer

HTC Corporation

No. 23, Xinghua Rd., Taoyuan City, Taoyuan County 330, Taiwan.

1.3. Product Feature of Equipment Under Test

Product Feature	
Equipment	Smartphone
Model Name	OPFH100
FCC ID	NM80PFH100
Sample 1	EUT with Main Camera 1, Speaker(top) 1, Speaker(bottom) 1, Microphone 1, RAM 1, and RF PA 1
Sample 2	EUT with Main Camera 1, Speaker(top) 2, Speaker(bottom) 2, Microphone 2, RAM 2, and RF PA 1
Sample 3	EUT with Main Camera 2, Speaker(top) 2, Speaker(bottom) 2, Microphone 2, RAM 2, and RF PA 2
EUT supports Radios application	GSM/EGPRS/WCDMA/HSPA/LTE/NFC WLAN 11b/g/n HT20 WLAN 11a/n HT20/HT40 Bluetooth v4.0 EDR/LE
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 subjective to this standard

Product Specification subjective to this standard	
Tx Frequency	GSM850 : 824.2 MHz ~ 848.8 MHz GSM1900 : 1850.2 MHz ~ 1909.8MHz WCDMA Band V : 826.4 MHz ~ 846.6 MHz WCDMA Band IV : 1712.4 MHz ~ 1752.6 MHz WCDMA Band II : 1852.4 MHz ~ 1907.6 MHz LTE Band 5 : 824.7 MHz ~ 848.3 MHz LTE Band 2 : 1850.7 MHz ~ 1909.3 MHz LTE Band 4 : 1710.7 MHz ~ 1754.3 MHz LTE Band 17 : 706.5 MHz ~ 713.5 MHz 802.11b/g/n: 2412 MHz ~ 2462 MHz 802.11a/n: 5180 MHz ~ 5240 MHz; 5260 MHz ~ 5320 MHz; 5500 MHz ~ 5580 MHz and 5660 MHz ~ 5700 MHz ; 5745 MHz ~ 5825 MHz Bluetooth: 2402 MHz ~ 2480 MHz NFC : 13.56 MHz
Rx Frequency	GSM850 : 869.2 MHz ~ 893.8 MHz GSM1900 : 1930.2 MHz ~ 1989.8 MHz WCDMA Band V : 871.4 MHz ~ 891.6 MHz WCDMA Band IV : 2112.4 MHz ~ 2152.6 MHz WCDMA Band II : 1932.4 MHz ~ 1987.6 MHz LTE Band 5 : 869.7 MHz ~ 893.3 MHz LTE Band 2 : 1930.7 MHz ~ 1989.3 MHz LTE Band 4 : 2110.7 MHz ~ 2154.3 MHz LTE Band 17 : 736.5 MHz ~ 743.5 MHz 802.11b/g/n: 2412 MHz ~ 2462 MHz 802.11a/n: 5180 MHz ~ 5240 MHz; 5260 MHz ~ 5320 MHz; 5500 MHz ~ 5580 MHz and 5660 MHz ~ 5700 MHz ; 5745 MHz ~ 5825 MHz Bluetooth: 2402 MHz ~ 2480 MHz GPS : 1.57542 GHz NFC : 13.56 MHz
Antenna Type	GSM / WCDMA / LTE : Fixed Internal Antenna WLAN : PIPA Antenna Bluetooth : PIPA Antenna NFC : Loop Antenna GPS: Fixed Internal Antenna



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

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 TW1023 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC Test.

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

Test Site	SPORTON INTERNATIONAL INC.	
Test Site Location	No. 30-2, Dingfu Tsuen, Linkou Shiang, Taipei, Taiwan 244, R.O.C. TEL: +886-2-2603-5367 / +886-2-2601-1640 FAX: +886-2-2601-1695	
Test Site No.	Sporton Site No.	
	OS06-LK	

1.7. Applicable Standards

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

- ♦ FCC 47 CFR FCC Part 15 Subpart B
- ♦ ANSI C63.4-2009

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



2. Test Configuration of Equipment Under Test

2.1. Test Mode

The EUT has been associated with peripherals pursuant to ANSI C63.4-2009 and configuration operated in a manner tended to maximize its emission characteristics in a typical application.

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

The following tables are showing the test modes as the worst cases and recorded in this report.

Item	EUT Configuration	Test Condition		
		EMI AC	EMI RE<1G	EMI RE≥1G
1.	Charging Mode (EUT with adapter)	☒	☒	Note 1
2.	Data application transferred mode (EUT connected with notebook)	☒	☒	☒

Abbreviations:

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

Note 1: Testing for this mode is not required or not the worst case.

Remark: For signal above 1GHz, the worst case was test item 2.



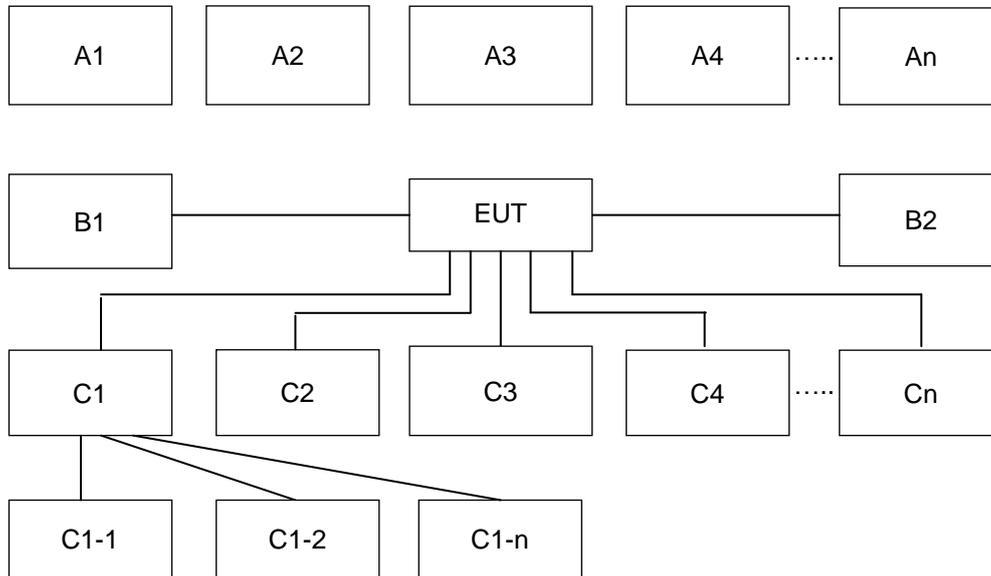
Test Items	EUT Configure Mode	Function Type
AC Conducted Emission	1/2	<p>Mode 1 : GSM850 Idle + Bluetooth Idle + WLAN (2.4GHz) Idle + NFC On + Earphone 1 + USB Cable 1 (Charging from Adapter 1) for Sample 1</p> <p>Mode 2 : WCDMA Band V Idle + Bluetooth Idle + WLAN (5GHz) Idle + Camera (Main) + Earphone 2 + USB Cable 2 (Charging from Adapter 2) for Sample 1</p> <p>Mode 3 : LTE Band 4 Idle + Bluetooth Idle + WLAN (2.4GHz) Idle + MPEG4 + Earphone 1 + USB Cable 1 (Charging from Adapter 1) for Sample 1</p> <p>Mode 4 : GSM1900 Idle + Bluetooth Idle + WLAN (5GHz) Idle + Camera (Front) + Earphone 2 + USB Cable 2 (Charging from Adapter 2) for Sample 1</p> <p>Mode 5 : WCDMA Band II Idle + Bluetooth Idle + WLAN (2.4GHz) Idle + GPS Rx + Earphone 1 + USB Cable 2 (Data Link with Notebook) for Sample 1</p> <p>Mode 6 : WCDMA Band II Idle + Bluetooth Idle + WLAN (2.4GHz) Idle + GPS Rx + Earphone 1 + USB Cable 2 (Data Link with Notebook) for Sample 2</p> <p>Mode 7 : WCDMA Band II Idle + Bluetooth Idle + WLAN (2.4GHz) Idle + GPS Rx + Earphone 1 + USB Cable 2 (Data Link with Notebook) for Sample 3</p>
Radiated Emissions < 1GHz	1/2	<p>Mode 1 : GSM850 Idle + Bluetooth Idle + WLAN (2.4GHz) Idle + NFC On + Earphone 1 + USB Cable 1 (Charging from Adapter 1) for Sample 1</p> <p>Mode 2 : WCDMA Band V Idle + Bluetooth Idle + WLAN (5GHz) Idle + Camera (Main) + Earphone 2 + USB Cable 2 (Charging from Adapter 2) for Sample 1</p> <p>Mode 3 : LTE Band 4 Idle + Bluetooth Idle + WLAN (2.4GHz) Idle + MPEG4 + Earphone 1 + USB Cable 1 (Charging from Adapter 1) for Sample 1</p> <p>Mode 4 : GSM1900 Idle + Bluetooth Idle + WLAN (5GHz) Idle + Camera (Front) + Earphone 2 + USB Cable 2 (Charging from Adapter 2) for Sample 1</p> <p>Mode 5 : WCDMA Band II Idle + Bluetooth Idle + WLAN (2.4GHz) Idle + GPS Rx + Earphone 1 + USB Cable 2 (Data Link with Notebook) for Sample 1</p> <p>Mode 6 : WCDMA Band II Idle + Bluetooth Idle + WLAN (2.4GHz) Idle + GPS Rx + Earphone 1 + USB Cable 2 (Data Link with Notebook) for Sample 2</p> <p>Mode 7 : WCDMA Band II Idle + Bluetooth Idle + WLAN (2.4GHz) Idle + GPS Rx + Earphone 1 + USB Cable 2 (Data Link with Notebook) for Sample 3</p>



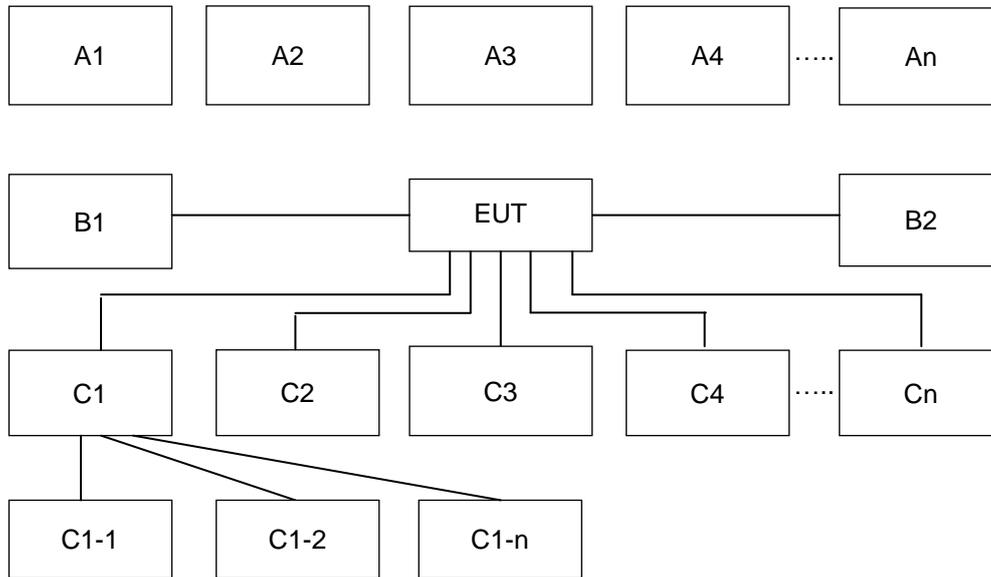
Test Items	EUT Configure Mode	Function Type
Radiated Emissions \geq 1GHz	2	Mode 1 : WCDMA Band II Idle + Bluetooth Idle + WLAN (2.4GHz) Idle + GPS Rx + Earphone 1 + USB Cable 2 (Data Link with Notebook) for Sample 1
Remark: <ol style="list-style-type: none">1. The worst case of AC is mode 5; only the test data of this mode was reported.2. The worst case of RE < 1G is mode 5; only the test data of this mode was reported.3. Link with Notebook means data application transferred mode between EUT and Notebook.		



2.2. Connection Diagram of Test System



Conducted Emission Test Setup									
No.	Wireless Station	Connection Type	Test Mode						
			1	2	3	4	5	-	-
A1	BT Earphone	Bluetooth	X	X	X	X	X		
A2	System Simulator	GSM/UMTS/CDMA/ WCDMA/LTE	X	X	X	X	X		
A3	GPS Station	GPS					X		
A4	AP router	WiFi	X	X	X	X	X		
No.	Power Source	Connection Type	1	2	3	4	5	-	-
B1	AC : 120V/60Hz	AC Power Cable	X	X	X	X	X		
No.	Setup Peripherals	Connection Type	1	2	3	4	5	-	-
C1	Notebook	Usb cable					X		
C1-1	iPod	USB CABLE jack to C11					X		
C1-2	Notebook	RJ-45 cable to C11					X		
C2	Earphone	Earphone jack	X	X	X	X	X		
C3	SD card	SD I/O interface without cable	X	X	X	X	X		



Radiated Emissions Test Setup									
No.	Wireless Station	Connection Type	Test Mode						
			1	2	3	4	5	-	-
A1	BT Earphone	Bluetooth	X	X	X	X	X		
A2	System Simulator	GSM/UMTS/CDMA/ WCDMA/LTE	X	X	X	X	X		
A3	GPS Station	GPS					X		
A4	AP router	WiFi	X	X	X	X	X		
No.	Power Source	Connection Type	1	2	3	4	5	-	-
B1	AC : 120V/60Hz	AC Power Cable	X	X	X	X			
No.	Setup Peripherals	Connection Type	1	2	3	4	5	-	-
C1	Notebook	USB cable					X		
C1-1	iPod	USB Cable to C1					X		
C1-2	HUB	RJ-45 Cable to C1					X		
C2	Earphone	Earphone jack	X	X	X	X	X		
C3	SD card	SD I/O interface without cable	X	X	X	X	X		



2.3. Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	System Simulator	R&S	CMU 200	N/A	N/A	Unshielded, 1.8 m
2.	System Simulator	R&S	CMW 500	N/A	N/A	Unshielded, 1.8 m
3.	WLAN AP	D-Link	DIR-628	KA2DIR628A2	N/A	Unshielded, 1.8 m
4.	GPS Station	Pendulum	GSG-54	N/A	N/A	Unshielded, 1.8 m
5.	Bluetooth Earphone	Sony Ericsson	MW600	PY7DDA-2029	N/A	N/A
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.	iPod	Apple	A1199	FCC DoC	Shielded, 1.0 m	N/A
9.	HUB	D-Link	DES-1005A	FCC DoC	N/A	Unshielded, 1.4m
10.	SD Card	SanDisk	MicroSD HC	FCC DoC	N/A	N/A

2.4. EUT Operation Test Setup

The EUT was in GSM or WCDMA or LTE idle mode during the testing. The EUT was synchronized to the BCCH, and was 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. Execute the programs, “Winthrax” under WIN7 installed in notebook for files transfer with EUT via USB cable / iPod.
2. Data application is transferred between Laptop and EUT via USB cable.
3. Execute “HTC SSD Test Tool” to make the EUT receive continuous signals from GPS station.
4. Execute “Video Player” to play MPEG4 files.
5. Turn on camera to capture images.



3. Test Result

3.1. Test of AC Conducted Emission Measurement

3.1.1 Limits of AC Conducted Emission

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

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

*Decreases with the logarithm of the frequency.

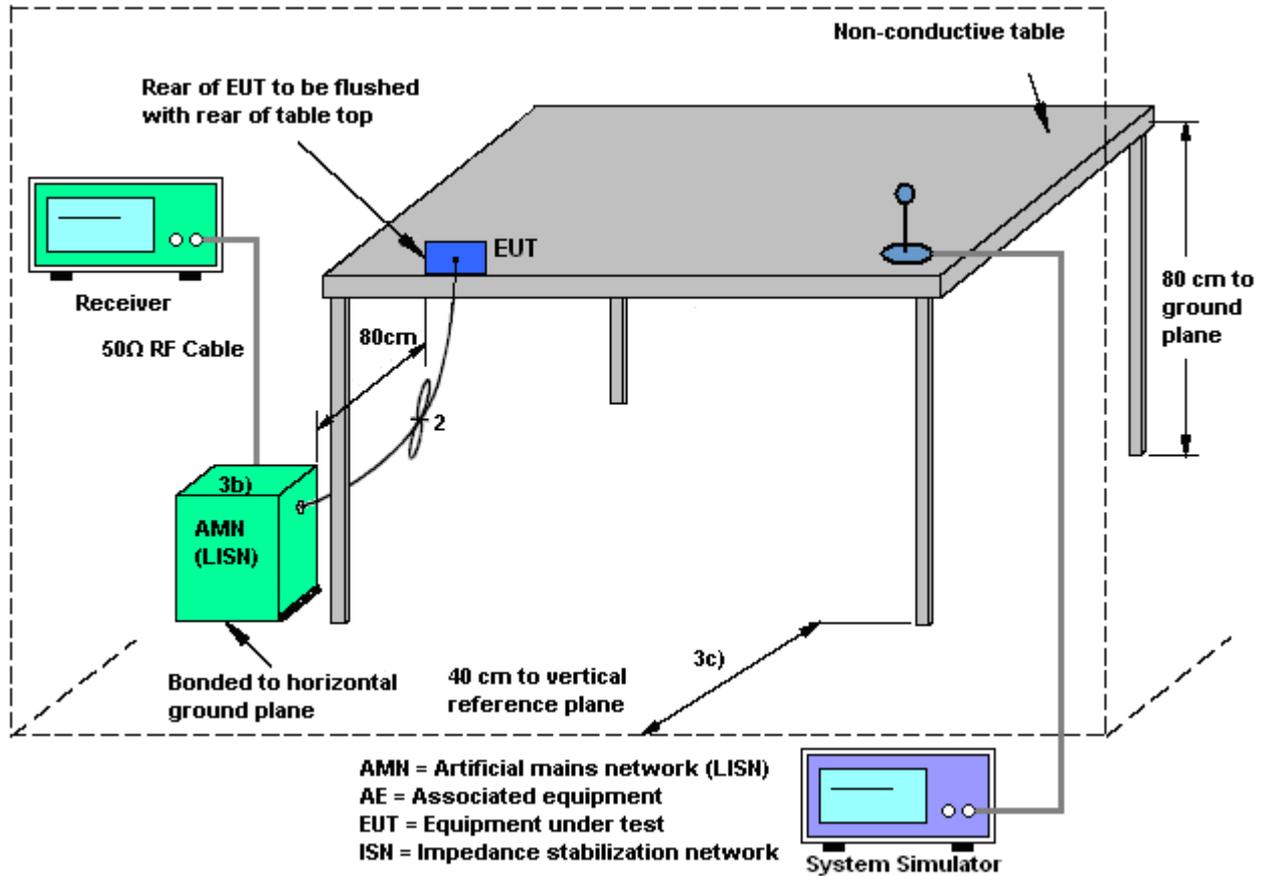
3.1.2 Measuring Instruments

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

3.1.3 Test Procedure

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

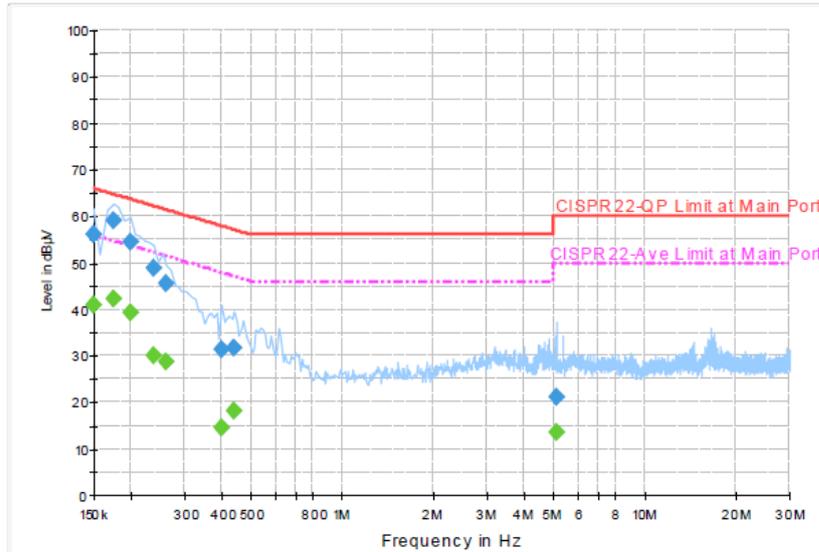
3.1.4 Test Setup





3.1.5 Test Result of AC Conducted Emission

Test Mode :	Mode 5	Temperature :	20~22°C
Test Engineer :	Cosmo Xu	Relative Humidity :	46~48%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	WCDMA Band II Idle + Bluetooth Idle + WLAN (2.4GHz) Idle + GPS Rx + Earphone 1 + USB Cable 2 (Data Link with Notebook) for Sample 1		



Final Result : Quasi-Peak

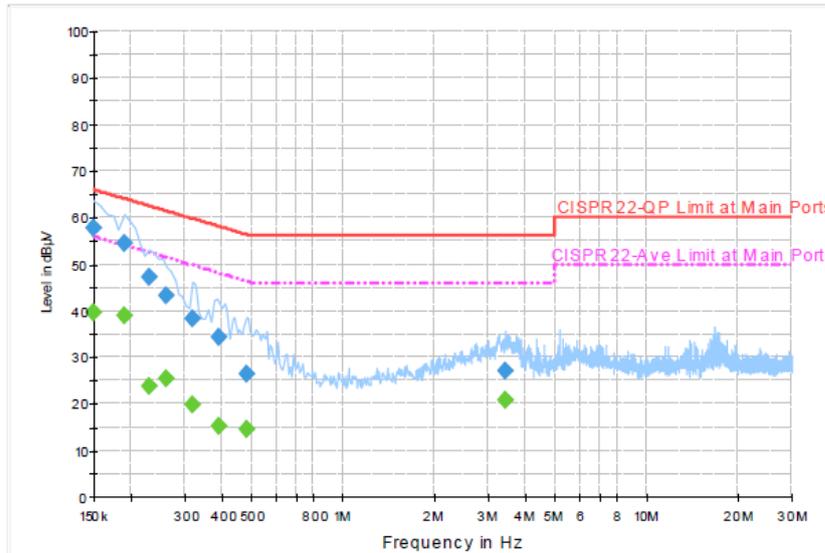
Frequency (MHz)	Quasi-Peak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	56.2	Off	L1	19.3	9.8	66.0
0.174000	59.0	Off	L1	19.3	5.8	64.8
0.198000	54.3	Off	L1	19.3	9.4	63.7
0.238000	49.0	Off	L1	19.4	13.2	62.2
0.262000	45.4	Off	L1	19.4	16.0	61.4
0.398000	31.4	Off	L1	19.4	26.5	57.9
0.438000	31.6	Off	L1	19.4	25.5	57.1
5.070000	21.1	Off	L1	19.6	38.9	60.0

Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	41.0	Off	L1	19.3	15.0	56.0
0.174000	42.3	Off	L1	19.3	12.5	54.8
0.198000	39.3	Off	L1	19.3	14.4	53.7
0.238000	30.1	Off	L1	19.4	22.1	52.2
0.262000	28.8	Off	L1	19.4	22.6	51.4
0.398000	14.5	Off	L1	19.4	33.4	47.9
0.438000	18.1	Off	L1	19.4	29.0	47.1
5.070000	13.5	Off	L1	19.6	36.5	50.0



Test Mode :	Mode 5	Temperature :	20~22°C
Test Engineer :	Cosmo Xu	Relative Humidity :	46~48%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	WCDMA Band II Idle + Bluetooth Idle + WLAN (2.4GHz) Idle + GPS Rx + Earphone 1 + USB Cable 2 (Data Link with Notebook) for Sample 1		



Final Result : Quasi-Peak

Frequency (MHz)	Quasi-Peak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	57.9	Off	N	19.4	8.1	66.0
0.190000	54.4	Off	N	19.3	9.6	64.0
0.230000	47.3	Off	N	19.4	15.1	62.4
0.262000	43.1	Off	N	19.4	18.3	61.4
0.318000	38.4	Off	N	19.4	21.4	59.8
0.390000	34.5	Off	N	19.4	23.6	58.1
0.478000	26.5	Off	N	19.5	29.9	56.4
3.406000	27.2	Off	N	19.6	28.8	56.0

Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	39.7	Off	N	19.4	16.3	56.0
0.190000	39.1	Off	N	19.3	14.9	54.0
0.230000	23.7	Off	N	19.4	28.7	52.4
0.262000	25.5	Off	N	19.4	25.9	51.4
0.318000	19.8	Off	N	19.4	30.0	49.8
0.390000	15.3	Off	N	19.4	32.8	48.1
0.478000	14.6	Off	N	19.5	31.8	46.4
3.406000	20.7	Off	N	19.6	25.3	46.0



3.2. Test of Radiated Emission Measurement

3.2.1. Limit of Radiated Emission

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

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



3.2.2. Measuring Instruments

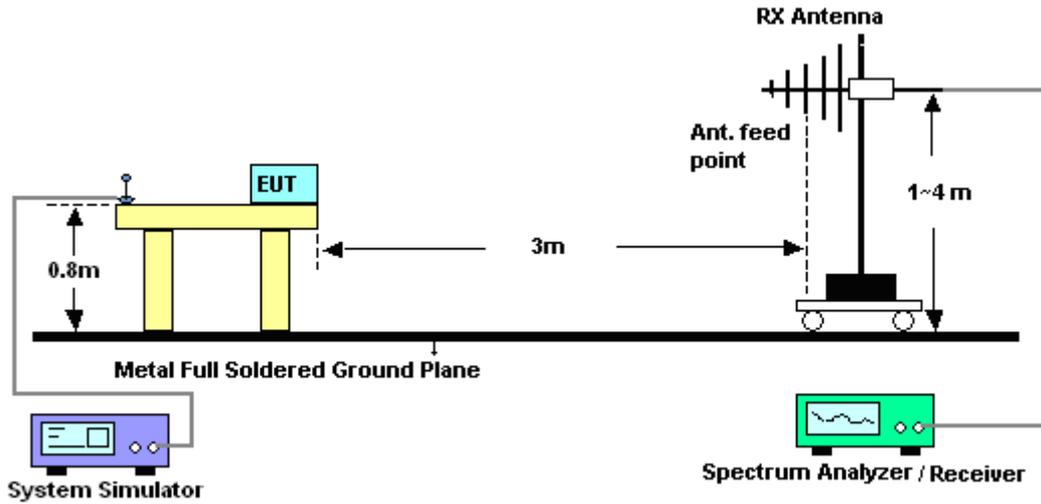
The measuring equipment is listed in the section 4 of this test report.

3.2.3. Test Procedures

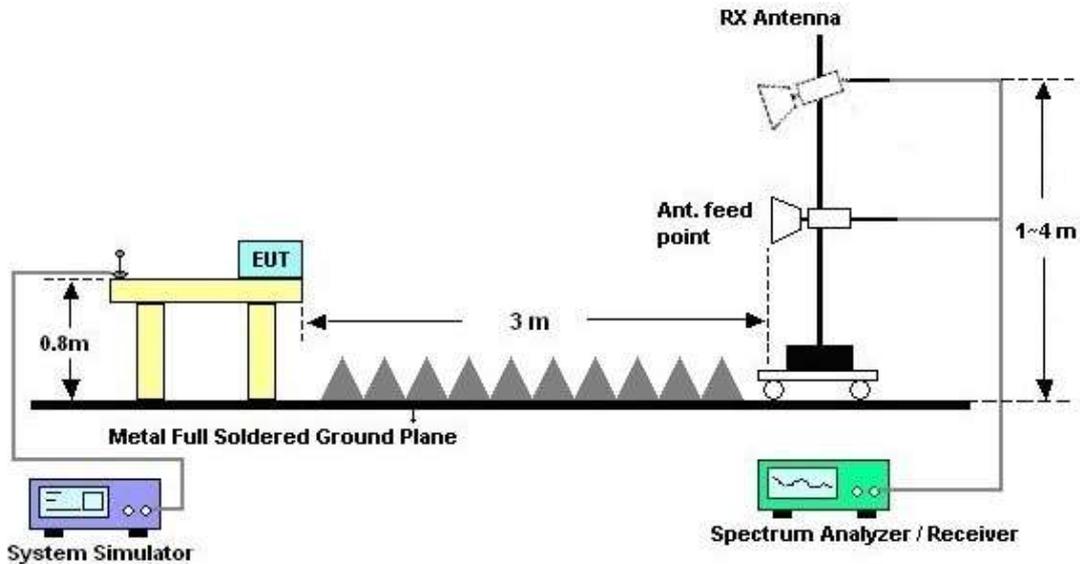
1. The EUT was placed on a turntable with 0.8 meter above ground.
2. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest radiation.
4. The antenna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

3.2.4. Test Setup of Radiated Emission

For radiated emissions from 30MHz to 1GHz



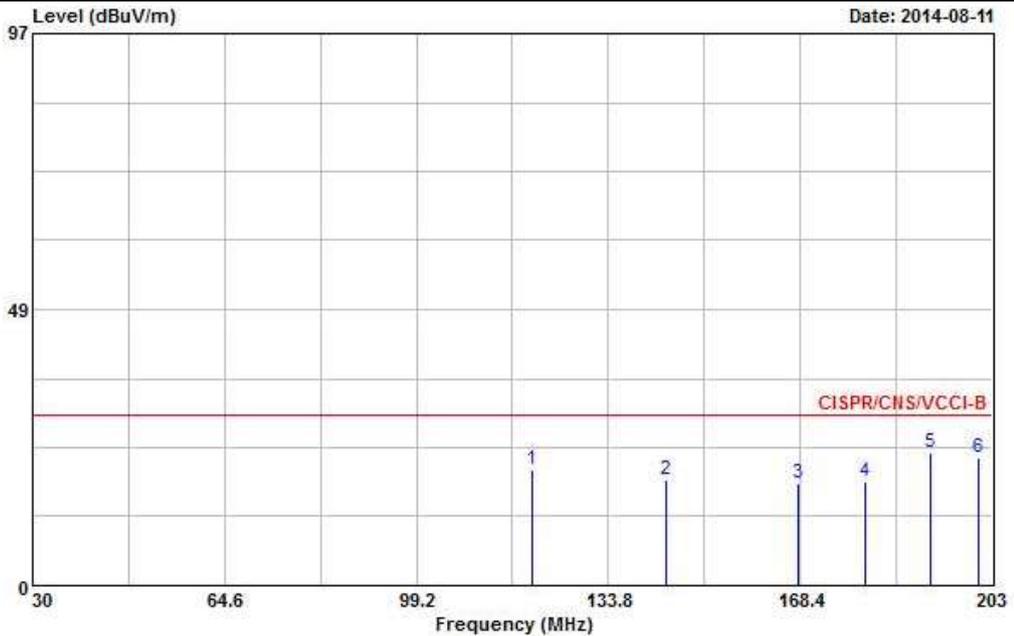
For radiated emissions above 1GHz





3.2.5. Test Result of Radiated Emission

Test Mode :	Mode 5	Temperature :	21~24°C
Test Engineer :	Daniel Lee	Relative Humidity :	51~54%
Test Distance :	3m	Polarization :	Horizontal
Function Type :	WCDMA Band II Idle + Bluetooth Idle + WLAN (2.4GHz) Idle + GPS Rx + Earphone 1 + USB Cable 2 (Data Link with Notebook) for Sample 1		

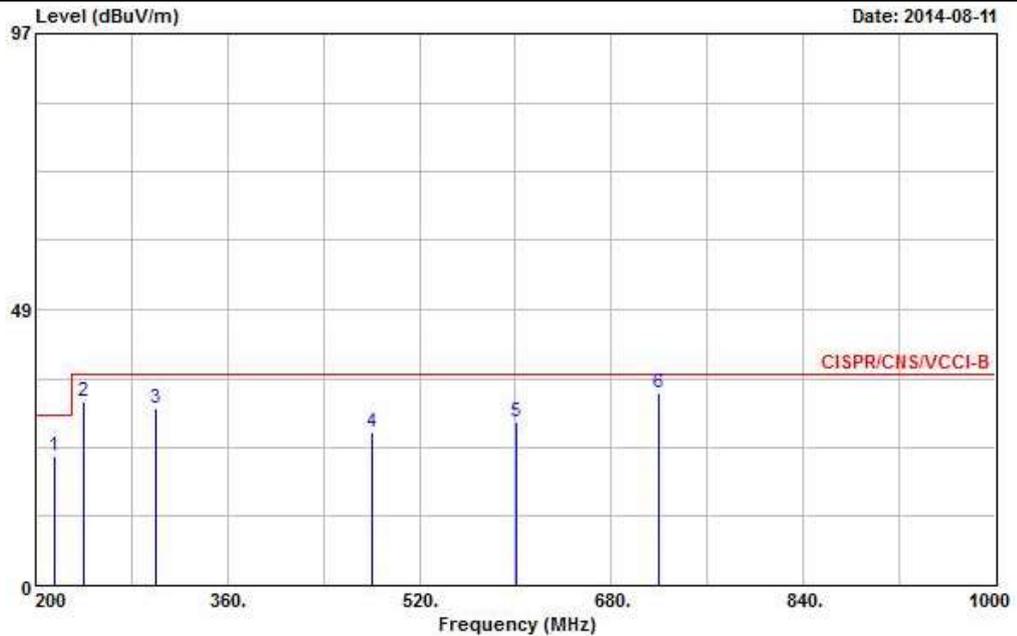


Site : OS06-LK
 Condition : CISPR/CNS/VCCI-B 10m HORIZONTAL
 Project : 472933
 Mode : Mode 5
 Power : From System

	Freq	Level	Over	Limit	Read	Cable	Preamp	Antenna	Ant	Table	
	MHz	dBuV/m	Limit	Line	Level	Loss	Factor	Factor	Pos	Pos	Remark
			dB	dBuV/m	dBuV	dB	dB	dB/m	cm	deg	
1	120.006	20.30	-9.70	30.00	33.94	1.40	27.31	12.27	---	---	Peak
2	144.208	18.69	-11.31	30.00	33.62	1.55	27.24	10.76	---	---	Peak
3	168.000	17.99	-12.01	30.00	33.79	1.60	27.17	9.77	---	---	Peak
4	180.004	18.16	-11.84	30.00	34.36	1.70	27.13	9.23	---	---	Peak
5	192.000	23.32	-6.68	30.00	39.52	1.80	27.09	9.09	---	---	Peak
6	200.580	22.48	-7.52	30.00	38.53	1.80	27.07	9.22	---	---	Peak



Test Mode :	Mode 5	Temperature :	21~24°C
Test Engineer :	Daniel Lee	Relative Humidity :	51~54%
Test Distance :	3m	Polarization :	Horizontal
Function Type :	WCDMA Band II Idle + Bluetooth Idle + WLAN (2.4GHz) Idle + GPS Rx + Earphone 1 + USB Cable 2 (Data Link with Notebook) for Sample 1		

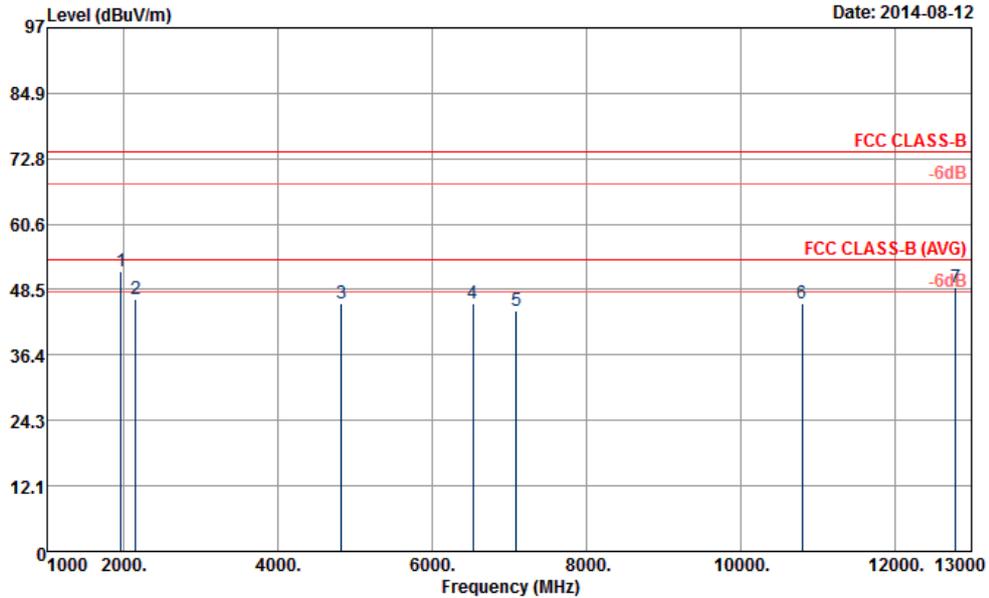


Site : OS06-LK
 Condition : CISPR/CNS/VCCI-B 10m HORIZONTAL
 Project : 472933
 Mode : Mode 5
 Power : From System

	Freq	Level	Over Limit	Limit Line	Read Level	Cable Loss	Preamp Factor	Antenna Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB/m	cm	deg	
1	216.448	22.81	-7.19	30.00	38.74	1.80	27.03	9.30	---	---	Peak
2	240.000	32.25	-4.75	37.00	46.10	1.80	26.98	11.33	---	---	Peak
3	300.000	31.10	-5.90	37.00	42.84	1.90	26.84	13.20	---	---	Peak
4	480.002	27.05	-9.95	37.00	35.17	2.72	28.12	17.28	---	---	Peak
5	600.010	28.78	-8.22	37.00	35.31	3.20	28.38	18.65	---	---	Peak
6	720.000	33.84	-3.16	37.00	39.30	3.48	28.30	19.36	143	242	QP



Test Mode :	Mode 5	Temperature :	21~24°C
Test Engineer :	Kai Wang	Relative Humidity :	51~54%
Test Distance :	3m	Polarization :	Horizontal
Function Type :	WCDMA Band II Idle + Bluetooth Idle + WLAN (2.4GHz) Idle + GPS Rx + Earphone 1 + USB Cable 2 (Data Link with Notebook) for Sample 1		
Remark :	#1 is system simulator signal which can be ignored.		

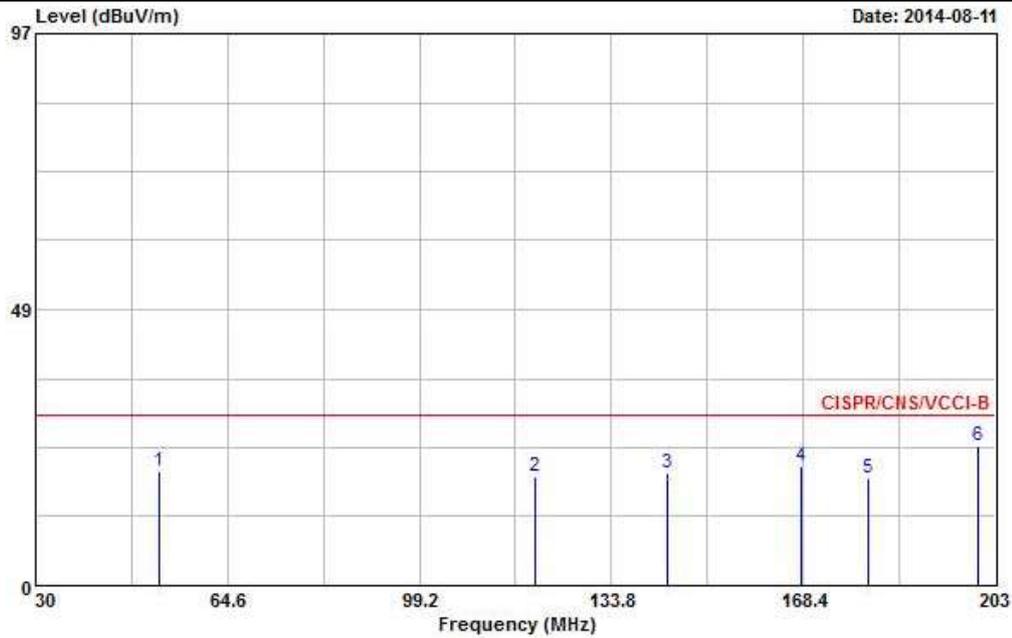


Site : 03CH06-HY
 Condition : FCC CLASS-B 3m HF-ANT_583_140731 HORIZONTAL
 Project : 472933
 Power : From System
 Mode : Mode 5

	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	1960.00	51.79		74.00	75.16	31.33	5.79	60.49	---	---	Peak
2	2146.00	46.80	-27.20	74.00	69.41	31.78	6.11	60.50	---	---	Peak
3	4824.00	45.80	-28.20	74.00	62.08	34.36	10.17	60.81	---	---	Peak
4	6530.00	45.98	-28.02	74.00	59.00	35.80	11.68	60.50	---	---	Peak
5	7088.00	44.68	-29.32	74.00	58.33	35.78	11.00	60.43	---	---	Peak
6	10798.00	45.87	-28.13	74.00	57.25	37.58	10.72	59.68	---	---	Peak
7	12792.00	48.87	-25.13	74.00	58.10	39.42	11.39	60.04	100	20	Peak



Test Mode :	Mode 5	Temperature :	21~24°C
Test Engineer :	Daniel Lee	Relative Humidity :	51~54%
Test Distance :	3m	Polarization :	Vertical
Function Type :	WCDMA Band II Idle + Bluetooth Idle + WLAN (2.4GHz) Idle + GPS Rx + Earphone 1 + USB Cable 2 (Data Link with Notebook) for Sample 1		

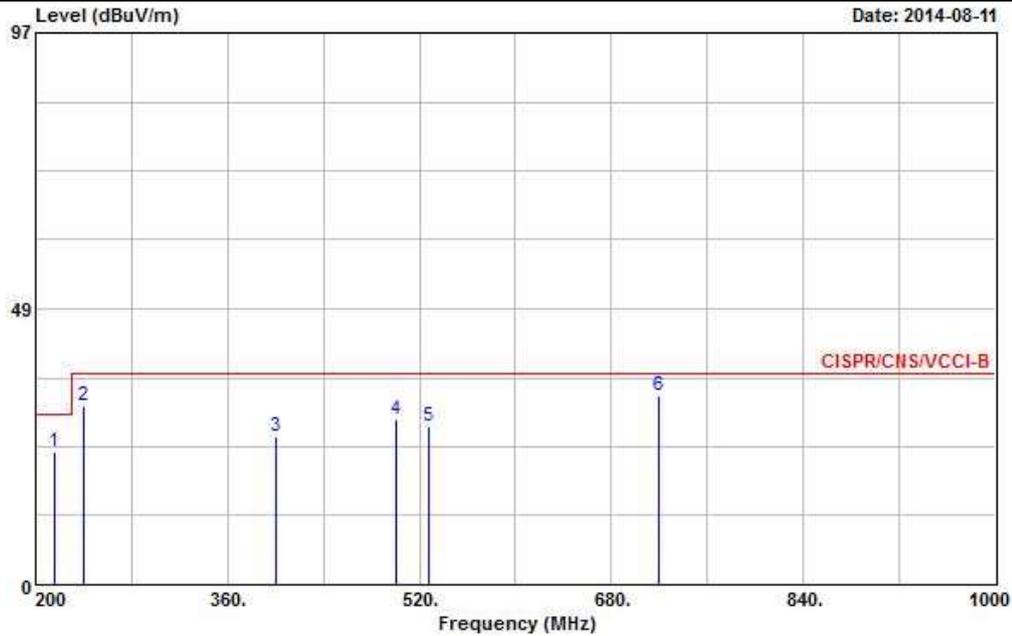


Site : OS06-LK
 Condition : CISPR/CNS/VCCI-B 10m VERTICAL
 Project : 472933
 Mode : Mode 5
 Power : From System

	Freq	Level	Over	Limit	Read	Cable	Preamp	Antenna	Ant	Table	
	MHz	dBuV/m	Limit	Line	Level	Loss	Factor	Factor	Pos	Pos	Remark
			dB	dBuV/m	dBuV	dB	dB	dB/m	cm	deg	
1	52.350	19.97	-10.03	30.00	38.67	1.04	27.49	7.75	---	---	Peak
2	120.004	19.30	-10.70	30.00	32.94	1.40	27.31	12.27	---	---	Peak
3	144.004	19.76	-10.24	30.00	34.69	1.55	27.24	10.76	---	---	Peak
4	168.000	21.04	-8.96	30.00	36.84	1.60	27.17	9.77	---	---	Peak
5	180.000	18.75	-11.25	30.00	34.95	1.70	27.13	9.23	---	---	Peak
6	200.000	24.62	-5.38	30.00	40.68	1.80	27.07	9.21	---	---	Peak



Test Mode :	Mode 5	Temperature :	21~24°C
Test Engineer :	Daniel Lee	Relative Humidity :	51~54%
Test Distance :	3m	Polarization :	Vertical
Function Type :	WCDMA Band II Idle + Bluetooth Idle + WLAN (2.4GHz) Idle + GPS Rx + Earphone 1 + USB Cable 2 (Data Link with Notebook) for Sample 1		

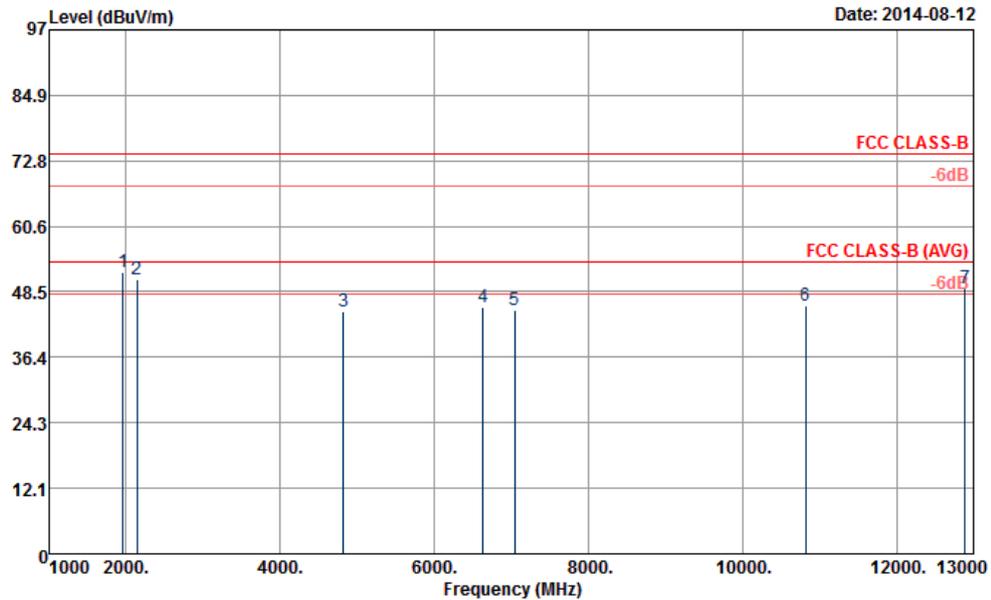


Site : OS06-LK
 Condition : CISPR/CNS/VCCI-B 10m VERTICAL
 Project : 472933
 Mode : Mode 5
 Power : From System

	Freq	Level	Over	Limit	Read	Cable	Preamp	Antenna	Ant	Table	
	MHz	dBuV/m	Limit	Line	Level	Loss	Factor	Factor	Pos	Pos	Remark
			dB	dBuV/m	dBuV	dB	dB	dB/m	cm	deg	
1	215.990	23.21	-6.79	30.00	39.14	1.80	27.03	9.30	---	---	Peak
2	240.000	31.55	-5.45	37.00	45.40	1.80	26.98	11.33	---	---	Peak
3	400.000	26.03	-10.97	37.00	35.54	2.50	27.65	15.64	---	---	Peak
4	500.000	28.94	-8.06	37.00	36.95	2.80	28.24	17.43	---	---	Peak
5	528.002	27.80	-9.20	37.00	35.31	2.91	28.28	17.86	---	---	Peak
6	720.000	33.11	-3.89	37.00	38.57	3.48	28.30	19.36	238	49	Peak



Test Mode :	Mode 5	Temperature :	21~24°C
Test Engineer :	Kai Wang	Relative Humidity :	51~54%
Test Distance :	3m	Polarization :	Vertical
Function Type :	WCDMA Band II Idle + Bluetooth Idle + WLAN (2.4GHz) Idle + GPS Rx + Earphone 1 + USB Cable 2 (Data Link with Notebook) for Sample 1		
Remark :	#1 is system simulator signal which can be ignored.		



Site : 03CH06-HY
 Condition : FCC CLASS-B 3m HF-ANT_583_140731 VERTICAL
 Project : 472933
 Power : From System
 Mode : Mode 5

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Loss	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	1960.00	52.14	---	74.00	75.51	31.33	5.79	60.49	---	---	Peak
2	2144.00	50.88	-23.12	74.00	73.49	31.78	6.11	60.50	130	100	Peak
3	4824.00	44.84	-29.16	74.00	61.12	34.36	10.17	60.81	---	---	Peak
4	6628.00	45.75	-28.25	74.00	58.88	35.80	11.55	60.48	---	---	Peak
5	7046.00	45.24	-28.76	74.00	58.85	35.79	11.02	60.42	---	---	Peak
6	10816.00	45.97	-28.03	74.00	57.29	37.59	10.72	59.63	---	---	Peak
7	12888.00	49.06	-24.94	74.00	58.33	39.45	11.39	60.11	---	---	Peak



4. List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
EMI Test Receiver	Rohde & Schwarz	ESCS 30	100356	9kHz ~ 2.75GHz	Nov. 15, 2013	Aug. 06, 2014~ Sep. 24, 2014	Nov. 14, 2014	Conduction (CO05-HY)
LISN (for auxiliary equipment)	Rohde & Schwarz	ENV216	100081	9kHz ~ 30MHz	Dec. 12, 2013	Aug. 06, 2014~ Sep. 24, 2014	Dec. 11, 2014	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100080	9kHz ~ 30MHz	Dec. 04, 2013	Aug. 06, 2014~ Sep. 24, 2014	Dec. 03, 2014	Conduction (CO05-HY)
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	Aug. 06, 2014~ Sep. 24, 2014	N/A	Conduction (CO05-HY)
Amplifier	HP	8447D	2944A08290	0.1 MHz ~ 1.3 GHz	Jun. 09, 2014	Aug. 11, 2014~ Sep. 29, 2014	Jun. 08, 2015	Radiation (OS06-LK)
Spectrum Analyzer	R&S	FSP 7	100642	9 kHz ~ 7 GHz	Mar. 06, 2014	Aug. 11, 2014~ Sep. 29, 2014	Mar. 05, 2015	Radiation (OS06-LK)
Test Receiver	R&S	ESCS 30	100359	9 kHz ~ 2.75 GHz	Mar. 19, 2014	Aug. 11, 2014~ Sep. 29, 2014	Mar. 18, 2015	Radiation (OS06-LK)
Bilog Antenna	SCHAFFNER	CBL6112C	2890	30 MHz ~ 2 GHz	May 10, 2014	Aug. 11, 2014~ Sep. 29, 2014	May 09, 2015	Radiation (OS06-LK)
Turn Table	EMCO	1670	N/A	0~360 degree	N/A	Aug. 11, 2014~ Sep. 29, 2014	N/A	Radiation (OS06-LK)
Antenna Mast	EMCO	2070-2	2263	1 m~4 m	N/A	Aug. 11, 2014~ Sep. 29, 2014	N/A	Radiation (OS06-LK)
Spectrum Analyzer	R&S	FSP30	101067	9kHz ~ 30GHz	Nov. 20, 2013	Aug. 12, 2014~ Sep. 29, 2014	Nov. 19, 2014	Radiation (03CH06-HY)
Spectrum Analyzer	Agilent	E4408B	MY44211030	9kHz ~ 26.5GHz	Dec. 02, 2013	Aug. 12, 2014~ Sep. 29, 2014	Dec. 01, 2014	Radiation (03CH06-HY)
EMI Test Receiver	R&S	ESVS10	834468/0003	20MHz ~ 1000MHz	May 06, 2014	Aug. 12, 2014~ Sep. 29, 2014	May 05, 2015	Radiation (03CH06-HY)
Bilog Antenna	Schaffner	CBL6112B	2885	30MHz ~ 2GHz	Oct. 10, 2013	Aug. 12, 2014~ Sep. 29, 2014	Oct. 09, 2014	Radiation (03CH06-HY)
Double Ridge Horn Antenna	EMCO	3117	00066583	1GHz ~ 18GHz	Jul. 24, 2014	Aug. 12, 2014~ Sep. 29, 2014	Jul. 23, 2015	Radiation (03CH06-HY)
Amplifier	SONOMA	310N	186713	9kHz ~ 1GHz	Apr. 16, 2014	Aug. 12, 2014~ Sep. 29, 2014	Apr. 15, 2015	Radiation (03CH06-HY)
Preamplifier	EMCI	EMC051845	SN980048	1GHz ~ 18GHz	Jul. 17, 2014	Aug. 12, 2014~ Sep. 29, 2014	Jul. 16, 2015	Radiation (03CH06-HY)
Turn Table	INN-CO	DS2000	420/650/00	0 ~ 360 degree	N/A	Aug. 12, 2014~ Sep. 29, 2014	N/A	Radiation (03CH06-HY)
Antenna Mast	MF	MF-7802	MF78020821 2	1 m ~ 4 m	N/A	Aug. 12, 2014~ Sep. 29, 2014	N/A	Radiation (03CH06-HY)



5. Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	2.26
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Measuring Uncertainty for a Level of Confidence of 95% ($U=2Uc(y)$)	3.50
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