

Report No. : FC342511

# **FCC Test Report**

APPLICANT : CT Asia

**EQUIPMENT**: Mobile phone

BRAND NAME : BLU

MODEL NAME : Dash 4.5
MARKETING NAME : Dash 4.5

FCC ID : YHLBLUDASH45

STANDARD : FCC 47 CFR FCC Part 15 Subpart B

**CLASSIFICATION**: Certification

The product was received on Apr. 25, 2013 and completely tested on Jun. 25, 2013. We, SPORTON INTERNATIONAL (SHENZHEN) INC., would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.4-2003 and shown the 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 (SHENZHEN) INC., the test report shall not be reproduced except in full.

Reviewed by: Louis Wu / Manager

Louis Win

Approved by: Jones Tsai / Manager

## SPORTON INTERNATIONAL (SHENZHEN) INC.

No. 3 Building, the third floor of south, Shahe River west, Fengzeyuan warehouse, Nanshan District, Shenzhen, Guangdong, P.R.C.

SPORTON INTERNATIONAL (SHENZHEN) INC.

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Testing Laboratory 2353



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## **REVISION HISTORY**

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FC342511	Rev. 01	Initial issue of report	Jul. 1, 2013



**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	7.65 dB at
					0.380 MHz
					Under limit
3.2	15.109	Radiated Emission	< 15.109 limits	PASS	2.56 dB at
					240.060 MHz

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## 1. General Description

### 1.1. Applicant

#### **CT Asia**

Unit 01, 15/F, Seaview Centre, 139-141 Hoi bun road, Kwun Tong, Kowloon, Hongkong

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### 1.2. Manufacturer

#### **Ragentek Technology Group**

Building D10-D11, No. 58-60, Lane 3188, Xiupu Road, PuDong District, Shanghai, PRC

## 1.3. Feature of Equipment Under Test

	Product Feature
Equipment	Mobile phone
Brand Name	BLU
Model Name	Dash 4.5
Marketing Name	Dash 4.5
FCC ID	YHLBLUDASH45
EUT supports Radios application	GSM/GPRS/WCDMA/HSPA/HSPA+/ WLAN 11bgn/Bluetooth/Bluetooth v4.0 - LE
HW Version	V1.2
SW Version	BLU-D310-V05-GENERIC
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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1.4. Product Specification of Equipment Under Test

Product Specification subjective to this standard					
Tx Frequency Range	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 802.11b/g/n: 2412 MHz ~ 2462 MHz Bluetooth: 2402 MHz ~ 2480 MHz GSM850: 869.2 MHz ~ 893.8 MHz GSM1900: 1930.2 MHz ~ 1989.8 MHz WCDMA Band V: 871.4 MHz ~ 891.6 MHz				
Rx Frequency Range	WCDMA Band II: 1932.4 MHz ~ 1987.6 MHz 802.11b/g/n: 2412 MHz ~ 2462 MHz Bluetooth: 2402 MHz ~ 2480 MHz GPS: 1.57542 GHz FM: 88 MHz ~ 108 MHz WWAN: PIFA Antenna				
Antenna Type	WLAN: Monopole Antenna Bluetooth: Monopole Antenna				
Type of Modulation	GSM: GMSK GPRS: GMSK WCDMA: QPSK (Uplink) HSDPA: QPSK (Uplink) HSUPA: QPSK (Uplink) HSPA+: $16QAM(Uplink)$ $802.11b: DSSS (DBPSK / DQPSK / CCK)$ $802.11g/n: OFDM (BPSK / QPSK / 16QAM / 64QAM)$ Bluetooth BR $(1Mbps): GFSK$ Bluetooth EDR $(2Mbps): \pi / 4$ -DQPSK Bluetooth EDR $(3Mbps): 8$ -DPSK Bluetooth $3.0 EDR: GFSK, \pi / 4$ -DQPSK, $8$ -DPSK Bluetooth $4.0 - E$ -CFSK GPS: BPSK				

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1.5. Modification of EUT

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

#### 1.6. Test Site

Test Site	SPORTON INTERNATIONAL (SHENZHEN) INC.				
Test Site Location	No. 3 Building, the third floor of south, Shahe River west, Fengzeyuan warehouse, Nanshan District, Shenzhen, Guangdong, P.R.C.				
	TEL: +86-755- 3320-2398				
Took Cita No	Sporton Site No. FCC/IC Registration No.				
Test Site No.	CO01-SZ 03CH01-SZ 831040/4086F-1				

## 1.7. Applied 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 C63.4-2003

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

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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 C63.4-2003 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.

		Те	st Condition	on
Item	EUT Configuration	EMI	EMI	EMI
		AC	RE<1G	RE≥1G
1.	Charging Mode (EUT with adapter)	$\boxtimes$	$\boxtimes$	Note 1
2.	Data application transferred mode (EUT with PC)	$\boxtimes$	$\boxtimes$	$\boxtimes$

#### 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.

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Test Items	EUT Configure Mode	Function Type
		Mode 1: GSM850 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter) + Earphone + Camera <fig. 1=""></fig.>
AC Conducted	AC Conducted 1/2	Mode 2: GSM1900 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter) + Earphone + MPEG4 <fig. 1=""></fig.>
Emission		Mode 3: WCDMA Band V Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter) + Earphone + FM Rx <fig. 2=""></fig.>
		Mode 4: WCDMA Band II Idle + Bluetooth Idle + WLAN Idle + USB Cable (Data Link with PC) + Earphone + GPS Rx <fig. 3=""></fig.>
	1/2	Mode 1: GSM850 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter) + Earphone + Camera <fig. 1=""></fig.>
Radiated		Mode 2: GSM1900 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter) + Earphone + MPEG4 <fig. 1=""></fig.>
Emissions < 1GHz		Mode 3: WCDMA Band V Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter) + Earphone + FM Rx <fig. 2=""></fig.>
		Mode 4: WCDMA Band II Idle + Bluetooth Idle + WLAN Idle + USB Cable (Data Link with PC) + Earphone + GPS Rx <fig. 3=""></fig.>
Radiated Emissions ≥ 1GHz	2	Mode 1: WCDMA Band II Idle + Bluetooth Idle + WLAN Idle + USB Cable (Data Link with PC) + Earphone + GPS Rx <fig. 3=""></fig.>

#### Remark:

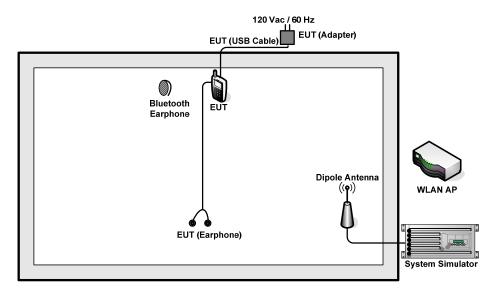
- The worst case of AC Conducted Emission is mode 3, and the USB link mode of AC Conducted Emission is mode4; the test data of these modes were reported.
- 2. The worst case of Radiated Emissions is mode 4, and the USB link mode of Radiated Emissions is also mode4; the test data of this mode was reported.
- 3. Link with PC means data application transferred mode between EUT and PC.

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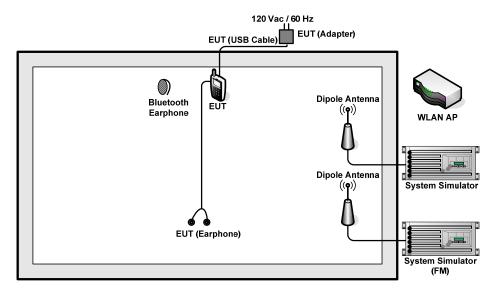


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## 2.2. Connection Diagram of Test System

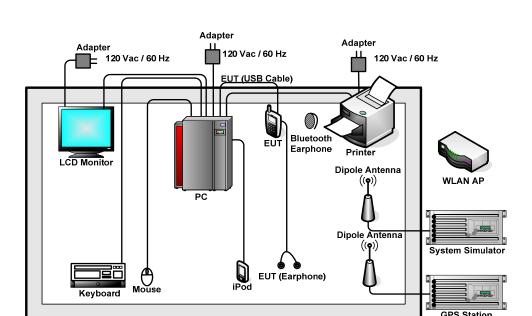


<Fig. 1>



<Fig. 2>

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<Fig. 3>

## 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	Agilent	E5515C	N/A	N/A	Unshielded, 1.8 m
2.	System Simulator (FM)	R&S	CMU 200	N/A	N/A	Unshielded, 1.8 m
3.	GPS Station	T&E	GS-50	N/A	N/A	Unshielded, 1.8 m
4.	WLAN AP	Netcore	NW616	N/A	N/A	Unshielded, 1.8 m
5.	WLAN AP	D-Link	DIR-615	N/A	N/A	Unshielded, 1.8 m
6.	Bluetooth Earphone	Nokia	BH-108	N/A	N/A	N/A
7.	PC	DELL	OPTIPLEX 390	FCC DoC	N/A	Unshielded, 1.8 m
8.	Monitor	DELL	IN1940MWB	FCC DoC	Shielded, 1.2 m	Unshielded, 1.8 m
9.	Mouse	DELL	MS111-L	FCC DoC	Shielded, 1.5 m	N/A
10.	Keyboard	DELL	KB212-B	FCC DoC	Shielded, 1.5 m	N/A
11.	Printer	Samsung	ML-1610	FCC DoC	Unshielded, 1.8 m	Unshielded, 1.8 m
12.	iPod	Apple	MC525 ZP/A	FCC DoC	Shielded, 1.0 m	N/A

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### 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. Execute the program, "Winthrax" under WIN7 installed in PC for files transfer with EUT via USB cable.
- 2. Turn on GPS function to make the EUT receive continuous signals from GPS station.
- 3. Turn on FM function to make the EUT receive continuous signals from system simulator (FM).
- 4. Execute "Video player" to play MPEG4 files.
- 5. Turn on camera to capture images.

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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			

<sup>\*</sup>Decreases with the logarithm of the frequency.

### 3.1.2 Measuring Instruments

See list of measuring instruments 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 with Maximum Hold Mode.

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### 3.1.4 Test Setup



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### 3.1.5 Test Result of AC Conducted Emission

Test Mode :	Mode 3			Tem	peratur	е:	24~2	5°C	
Test Engineer :	Leo Liao		Rela	Relative Humidity :		50~5°	50~51%		
Test Voltage :	120Vac / 60Hz			Phas	se :		Line		
Function Type	WCDMA	WCDMA Band V Idle + Bluetooth Idle + WLAN Idle +							Charging from
Function Type :	Adapter)	+ Earph	one + F	M Rx					
Remark :	All emissi	ons not	reported	d here a	re more	than 10	dB belo	ow the preso	ribed limit.
100	Level (dBuV)					Date	e: 2013-0	5-09 Time: 14:53:	43
90									
80									
70									
3000	-							FCC 15B_Q	P
60								FCC 15B_AV	'G
50	Y MAN IN	No.		1746233					, )
40	HAVAN	3 5 MAN BY	March Land	Who the house was now the	John Market	March	A. Maria	May Museum han	A1:
30		1 7	9	-			. white.		1
20									
10					0	0 0 0	(01400)		-
0	.15 .2	.5	1		2	5	10	20	30
				Frequ	ency (MHz)				
Site	: CO01-S on: FCC 15		SN T 2000	0601 T.TNI	F.				
Project	: (FC) 3	42511	J.,		_				
Mode	: Mode 3		Over	Limit	Read	LISN	Cable		
	Freq	Level	Limit		Level			Remark	
-	MHz	dBuV	dB	dBu∇	dBuV	dB	dB	-	
1	0.18	32.78	-21.50	54.28	22.70	0.03	10.05	Average	
2			-21.60			0.03	10.05	QP	
3 *			-11.65					Average	
4 5	0.33		-13.75 -11.67	48.56		0.02		Average	
6						0.02			
7								Average	
8						0.02			
9								Average	
10						0.02			
11 12						0.64		Average	
12	27.00	50.03	23.17	00.00	20.71	0.04	10.40	×F	

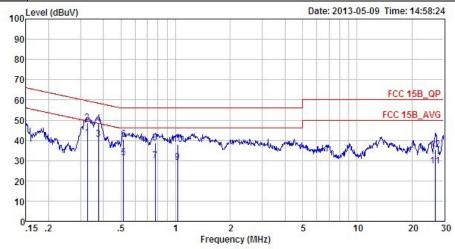
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### FCC Test Report

Test Mode:	Mode 3	Temperature :	<b>24~25</b> ℃				
Test Engineer :	Leo Liao	Relative Humidity :	50~51%				
Test Voltage :	120Vac / 60Hz	Phase :	Neutral				
Function Type :	WCDMA Band V Idle + Bluetooth Idle + WLAN Idle + USB Cable						
Function Type :	Adapter) + Earphone + FM Rx						
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.						



Site : COO1-SZ

Condition: FCC 15B\_QP LISN\_N\_2000601 NEUTRAL

Project : (FC) 342511 Mode : Mode 3

		Freq	Level	Over	Limit Line	Read Level	LISN	Cable	Remark
	***	MHz	dBuV	dB	dBuV	dBuV	dB	dB	*
1		0.33	41.38	-8.15	49.53	31.29	0.02	10.07	Average
2		0.33	48.58	-10.95	59.53	38.49	0.02	10.07	QP
3	*	0.38	40.69	-7.65	48.34	30.60	0.02	10.07	Average
4		0.38	48.19	-10.15	58.34	38.10	0.02	10.07	QP
5		0.52	31.50	-14.50	46.00	21.39	0.02	10.09	Average
6		0.52	40.60	-15.40	56.00	30.49	0.02	10.09	QP
6 7 8		0.77	29.92	-16.08	46.00	19.80	0.02	10.10	Average
8		0.77	38.92	-17.08	56.00	28.80	0.02	10.10	QP
9		1.03	29.34	-16.66	46.00	19.21	0.02	10.11	Average
10		1.03	37.84	-18.16	56.00	27.71	0.02	10.11	QP
11		26.98	27.42	-22.58	50.00	16.10	0.89	10.43	Average
12		26.98	35.52	-24.48	60.00	24.20	0.89	10.43	QP

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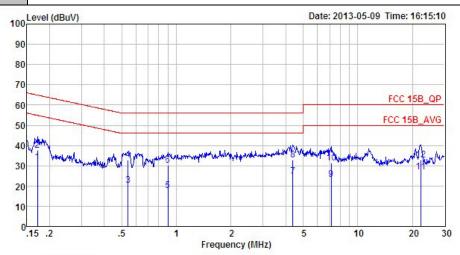
FCC Test Report No.: FC342511

Test Mode :	t Mode: Mode 4			Tem	Temperature :			24~25℃		
Test Engineer :	Leo Liao			Rela	Relative Humidity :			50~51%		
Test Voltage :	120Vac /	60Hz		Phas	Phase: Line					
Function Type :	WCDMA Band II Idle + Bluetooth Idle + WLAN Idle + USB Cable (Data Link with									
i unction type.	PC) + Ea	rphone	+ GPS F	₹x						
Remark :	All emissi	ons not	reported	d here a	re more	than 10	dB belo	ow the prescr	ibed limit.	
100L	evel (dBuV)					Dat	e: 2013-0	5-09 Time: 16:11:1	6	
90										
80		45 45			1	4 4	10.		3	
70								TO SECURE OF STREET	-	
60	-					5 7 2 0	- 2000	FCC 15B_QP		
	-							FCC 15B_AVG		
50	12									
404	Aug Aug	65	and where	A man almost a seed	L. Die volleren	www. And Browning	Ale .	م الله الم		
30	1	harries and the	Man Market Market	Astronos das	Market August .	4	Mark Salak	house principles 1/2 p/V		
20		5	1			T.				
10										
0	15 .2	.5	1		2	5	10	20	_ 30	
	: CO01-S on: FCC 15 : (FD) 3 : Mode 4	B_QP LI: 42511	Over	Limit	Read		Cable			
	Freq	Level	Limit	Line	Level	Factor	Loss	Remark		
-	MHz	dBu∇	dB	dBuV	dBu₹	dB	dB			
1 *	0.18	37.68	-16.91	54.59	27.60	0.03	10.05	Average		
2			-21.71		32.80			The state of the s		
3			-23.71		17.81			Average		
4	0.25	34.99	-26.61	61.60	24.91	0.02	10.06	QP		
5	0.54	20.51	-25.49	46.00	10.40			Average		
6	0.54	33.01	-22.99	56.00	22.90	0.02	10.09	QP		
7	0.91	17.53	-28.47	46.00	7.39	0.03	10.11	Average		
8						0.03				
9	4.45	24.86	-21.14	46.00	14.61			Average		
10	4.45	32.46	-23.54	56.00	22.21					
11								Average		
12	21.95	31.09	-28.91	60.00	20.20	0.41	10.48	QP		
12	21.95	31.09	-28.91	60.00	20.20	U.41	10.48	Őħ		

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24~25°C Test Mode: Mode 4 Temperature: Relative Humidity: 50~51% Test Engineer: Leo Liao 120Vac / 60Hz Phase: Test Voltage: Neutral WCDMA Band II Idle + Bluetooth Idle + WLAN Idle + USB Cable (Data Link with Function Type: PC) + Earphone + GPS Rx Remark: All emissions not reported here are more than 10 dB below the prescribed limit.



Site : CO01-SZ

Condition: FCC 15B\_QP LISN\_N\_2000601 NEUTRAL

Project : (FD) 342511 Mode : Mode 4

Over Limit Read LISN Cable Freq Level Limit Line Level Factor Loss Remark MHz dBuV dB dBuV dBuV dB dB 0.17 31.68 -23.22 54.90 21.61 0.17 37.78 -27.12 64.90 27.71 0.02 10.05 Average 1 0.02 10.05 QP 0.54 20.40 -25.60 46.00 10.29 3 0.02 10.09 Average 0.54 32.70 -23.30 56.00 22.59 4 0.02 10.09 QP 0.90 17.53 -28.47 46.00 7.40 0.02 10.11 Average 0.90 30.33 -25.67 56.00 20.20 0.02 10.11 QP 6 4.38 24.66 -21.34 46.00 14.40 4.38 32.76 -23.24 56.00 22.50 7.14 23.33 -26.67 50.00 13.00 0.07 10.19 Average 0.07 10.19 QP 0.13 10.20 Average 9 10 7.14 31.23 -28.77 60.00 20.90 0.13 10.20 QP 22.18 26.89 -23.11 50.00 15.80 22.18 32.99 -27.01 60.00 21.90 0.62 10.47 Average 0.62 10.47 QP 11 12

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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 (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

See list of measuring instruments 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 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.
- 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 (dBuV/m) = 20 log Emission level (uV/m)
- 9. Corrected Reading: Antenna Factor + Cable Loss + Read Level Preamp Factor= Level

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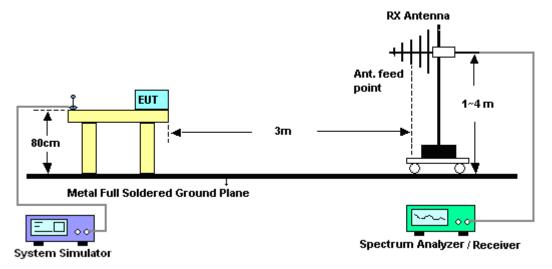
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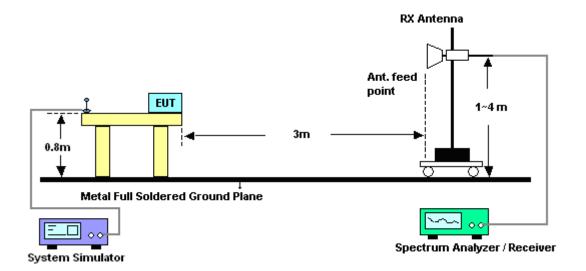
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### 3.2.4. Test Setup of Radiated Emission

For radiated emissions from 30MHz to 1GHz



#### For radiated emissions above 1GHz



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3.2.5. Test Result of Radiated Emission

Test Mode :	Mode 4		Tempe	rature :	24~25°C				
Test Engineer :	Robin Luo		Relativ	e Humidity :	49~50%	49~50%			
Test Distance :	3m		Polariz	ation :	Horizontal				
Function Type .	WCDMA Ba	nd II Idle + Bl	uetooth Id	lle + WLAN Id	lle + USB (	Cable (Data Link with			
Function Type :	PC) + Earph	one + GPS R	x						
117 <sup>Leve</sup>	(dBuV/m)								
110									
90									
						FCC CLASS-B			
70						-6dB-			
						FCC CLASS-B (AVG)			
50	5 6					6dB			
,	+								
30									
10									
030	1000.	5000.	00. Frequenc		000.	11000. 13000			
Site Condition Project Mode	: 03CH01-Si : FCC CLAS : (FC)34251 : Mode 4	S-B 3m LF_ANT_1							
	Freq Level L		eadAntenna vel Factor	Cable Preamp A		Remark			
	MHz dBuV/m		BuV dB/m	dB dB	cm deg				
2 1	65.81 28.81 -1		.09 9.90	1.17 30.66 1.27 30.45	F	Peak			
4 P 6	40.06 43.44 - 15.00 35.19 -1	0.81 46.00 42	.10 11.90 .99 19.08	1.64 30.20 2.30 29.18	200 23 (	Peak			
		3.56 46.00 49 1.10 54.00 47		2.48 29.04 2.81 28.72	100 320 (	_			

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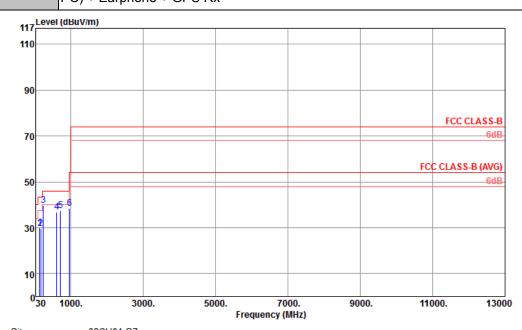
Test Mode: Mode 4 Temperature: 24~25°C

Test Engineer: Robin Luo Relative Humidity: 49~50%

Test Distance: 3m Polarization: Vertical

WCDMA Band II Idle + Bluetooth Idle + WLAN Idle + LISB Cable (Data Link with

Function Type: WCDMA Band II Idle + Bluetooth Idle + WLAN Idle + USB Cable (Data Link with PC) + Earphone + GPS Rx



Site : 03CH01-SZ

Condition : FCC CLASS-B 3m LF\_ANT\_121103 VERTICAL

Project : (FC)342511 Mode : Mode 4

	Freq	Level		Limit Line						T/Pos	Remark
-	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	134.22	29.99	-13.51	43.50	47.20	12.10	1.24	30.55			Peak
2	165.81	29.51	-13.99	43.50	48.79	9.90	1.27	30.45			Peak
3 P	242.76	39.66	-6.34	46.00	56.20	12.00	1.65	30.19	100	360	Peak
4	615.00	36.67	-9.33	46.00	44.47	19.08	2.30	29.18			Peak
5	720.00	37.63	-8.37	46.00	44.19	20.00	2.48	29.04			Peak
6	960.10	38.60	-15.40	54.00	42.71	21.80	2.81	28.72			Peak

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4. List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
ESCIO TEST Receiver	R&S	1142.8007.03	100724	9kHz~3GHz	Mar. 28, 2013	May 09, 2013	Mar. 27, 2014	Conduction (CO01-SZ)
AC LISN	EMCO	3816/2SH	00103912	9kHz~30MHz	Mar. 28, 2013	May 09, 2013	Mar. 27, 2014	Conduction (CO01-SZ)
AC LISN (for auxiliary equipment)	EMCO	3816/2SH	00103892	9kHz~30MHz	Mar. 28, 2013	May 09, 2013	Mar. 27, 2014	Conduction (CO01-SZ)
AC Power Source	Chroma	61602	616020000891	N/A	Nov. 20, 2012	May 09, 2013	Nov. 19, 2013	Conduction (CO01-SZ)
AC Filter	ETS-LINDGRE N	LRE-2030/PE N 256260	00093783	N/A	N/A	May 09, 2013	N/A	Conduction (CO01-SZ)
AC Filter	ETS-LINDGRE N	LRE-2030/PE N 256260	00097973	N/A	N/A	May 09, 2013	N/A	Conduction (CO01-SZ)
ESCI TEST Receiver	R&S	ESCI	100724	9kHz~3GHz	Mar. 28, 2013	Jun. 25, 2013	Mar. 27, 2014	Radiation (03CH01-SZ)
Spectrum Analyzer	R&S	FSP30	101362	9kHz~30GHz	Oct. 11, 2012	Jun. 25, 2013	Oct. 10, 2013	Radiation (03CH01-SZ)
Double Ridge Horn Antenna	ETS Lindgren	3117	00119436	1GHz~18GHz	Oct. 12, 2012	Jun. 25, 2013	Oct. 11, 2013	Radiation (03CH01-SZ)
Bilog Antenna	SCHAFFNER	CBL6112B	2614	30MHz~2GHz	Nov. 03, 2012	Jun. 25, 2013	Nov. 02, 2013	Radiation (03CH01-SZ)
Amplifier	ADVANTEST	BB525C	E9007003	9kHz~3GHz Gain 30dB	Mar. 28, 2013	Jun. 25, 2013	Mar. 27, 2014	Radiation (03CH01-SZ)
Amplifier	Yiai	AV3860B	04030	2GHz~26.5GHz	Mar. 28, 2013	Jun. 25, 2013	Mar. 27, 2014	Radiation (03CH01-SZ)
SHF-EHF-Hor n	Schwarzbeck	BBHA9170	BBHA9170249	14GHz~40GHz	Nov. 23, 2012	Jun. 25, 2013	Nov. 22, 2013	Radiation (03CH01-SZ)
Loop Antenna	R&S	HFH2-Z2	100321	9KHz~30MHZ	Oct. 22, 2012	Jun. 25, 2013	Oct. 21, 2013	Radiation (03CH01-SZ)
Turn Table	EM Electronice	EM 1000	N/A	0 ~ 360 degree	N/A	Jun. 14, 2013	N/A	Radiation (03CH01-SZ)
Antenna Mast	EM Electronice	EM 1000	N/A	1 m - 4 m	N/A	Jun. 14, 2013	N/A	Radiation (03CH01-SZ)

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## FCC Test Report

## 5. Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of	0.00
Confidence of 95% (U = 2Uc(y))	2.26
201111401100 01 0070 (C 200(y))	

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	2.54
Confidence of 35% (0 = 200(y))	

#### **Uncertainty of Radiated Emission Measurement (1 GHz ~ 40 GHz)**

Measuring Uncertainty for a Level of	
Confidence of 95%	4.72
(U = 2Uc(y))	

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## Appendix A. Photographs of EUT

Please refer to Sporton report number EP342511 as below.

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