

Report No.: FC411003

# **FCC Test Report**

APPLICANT : CT Asia

**EQUIPMENT**: GSM Mobile Phone

BRAND NAME : BLU

MODEL NAME : Star JR

FCC ID : YHLBLUSTARJR

STANDARD : FCC 47 CFR FCC Part 15 Subpart B

CLASSIFICATION : Certification

The product was testing completed on Apr. 23, 2014. We, SPORTON INTERNATIONAL (SHENZHEN) INC., would like to declare that the tested sample has been evaluated in accordance with the test procedures given in ANSI C63.4-2003 and the testing has shown the tested sample to be 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 (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
FC411003	Rev. 01	Initial issue of report	May 04, 2014

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**SUMMARY OF TEST RESULT** 

Report Section	FCC Rule	Description	tion Limit		Remark
					Under limit
3.1	15.107	AC Conducted Emission	< 15.107 limits	PASS	15.48 dB at
					0.340 MHz
					Under limit
3.2	15.109	109 Radiated Emission	< 15.109 limits	PASS	3.38 dB at
3.2	15.109	Naulateu Elliissioli	< 15.109 IIIIIIIS	FASS	336.400 MHz
					for Quasi-Peak

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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

### 1.2. Manufacturer

#### BEIJING BENYWAVE TECHNOLOGY CO., LTD.

NO.55 Jiachang 2 road, OPTO-Mechatronics Industrial Park, Tongzhou district, Beijing 101111

### 1.3. Feature of Equipment Under Test

	Product Feature
Equipment	GSM Mobile Phone
Brand Name	BLU
Model Name	Star JR
FCC ID	YHLBLUSTARJR
EUT supports Radios application	GSM/GPRS/EGPRS/WLAN2.4GHz 802.11b/g/n HT20
HW Version	TBT9611_P2_001
SW Version	961112_9342_VXXX
EUT Stage	Production Unit

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					
	GSM850 : 824.2 MHz ~ 848.8 MHz				
Tx Frequency	GSM1900 : 1850.2 MHz ~ 1909.8MHz				
	802.11b/g/n: 2412 MHz ~ 2462 MHz				
	GSM850 : 869.2 MHz ~ 893.8 MHz				
Rx Frequency	GSM1900 : 1930.2 MHz ~ 1989.8 MHz				
	802.11b/g/n: 2412 MHz ~ 2462 MHz				
Antonna Typa	WWAN : Fixed Internal Antenna				
Antenna Type	WLAN: PIFA Antenna				
	GSM: GMSK				
	GPRS: GMSK				
Type of Modulation	EDGE(MCS 0-4): GMSK / (MCS 5-9): 8PSK				
	802.11b: DSSS (DBPSK / DQPSK / CCK)				
	802.11g/n: OFDM (BPSK / QPSK / 16QAM / 64QAM)				

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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	FCC Registration No.				
Test Site No.	CO01-SZ	03CH01-SZ	831040			

### 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 C63.4-2003

**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 AC	EMI RE<1G	EMI RE≥1G
1.	Charging Mode (EUT with adapter)			$\boxtimes$
2.	Data application transferred mode	$\boxtimes$	$\boxtimes$	$\boxtimes$
	(EUT connected with notebook)			

#### Abbreviations:

EMI AC: AC conducted emissions

• EMI RE ≥ 1G: EUT radiated emissions ≥ 1GHz

• EMI RE < 1G: EUT radiated emissions < 1GHz

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Test Items	EUT Configure Mode	Function Type
		Mode 1: GSM850 Idle + WLAN Idle + USB Cable (Charging from Adapter) + Earphone + Camera + SIM 1 <fig.1></fig.1>
AC Conducted Emission	1/2	Mode 2: GSM1900 Idle + WLAN Idle + USB Cable (Charging from Adapter) + Earphone + MPEG4 + SIM 1 <fig.1></fig.1>
		Mode 3: GSM850 Idle + WLAN Idle + USB Cable (Data Link with Notebook) + Earphone + SIM 1 <fig.2></fig.2>
	1/2	Mode 1: GSM850 Idle + WLAN Idle + USB Cable (Charging from Adapter) + Earphone + Camera + SIM 1 <fig.1></fig.1>
Radiated Emissions < 1GHz		Mode 2: GSM1900 Idle + WLAN Idle + USB Cable (Charging from Adapter) + Earphone + MPEG4 + SIM 1 <fig.1></fig.1>
		Mode 3: GSM850 Idle + WLAN Idle + USB Cable (Data Link with Notebook) + Earphone + SIM 1 <fig.2></fig.2>
Radiated	1/0	Mode 1: GSM1900 Idle + WLAN Idle + USB Cable (Charging from Adapter) + Earphone + MPEG4 + SIM 1 <fig.1></fig.1>
Emissions ≥ 1GHz	2 1/2	Mode 2: GSM850 Idle + WLAN Idle + USB Cable (Data Link with Notebook) + Earphone + SIM 1 <fig.2></fig.2>

### Remark:

- 1. The worst case of AC is mode 2; and the USB Link mode of AC is mode 3, the test data of these modes are reported.
- The worst case of RE < 1G is mode 2; and the USB Link mode of RE< 1G is mode 3, the test data of these modes are reported.
- 3. Link with Notebook means data application transferred mode between EUT and Notebook.

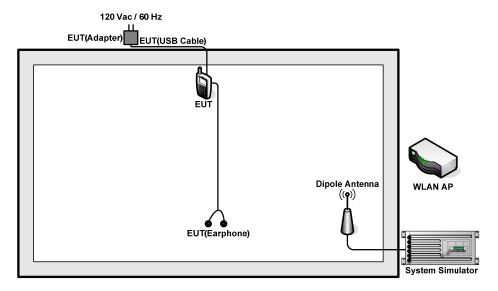
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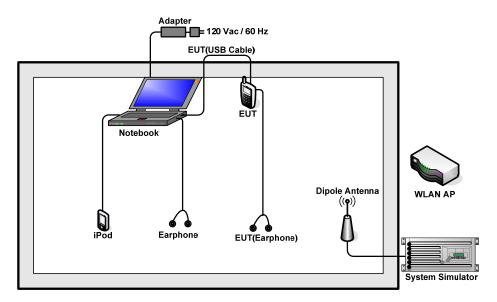


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# 2.2. Connection Diagram of Test System



<Fig.1>



<Fig.2>

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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	R&S	CMW 500	N/A	N/A	Unshielded, 1.8 m
2.	WLAN AP	D-Link	DIR-815	KA2DIR815A1	N/A	Unshielded, 1.8 m
3.	WLAN AP	D-Link	DIR-628	KA2DIR628A2	N/A	Unshielded, 1.8 m
4.	Notebook	Lenovo	G480	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
5.	SD Card	SanDisk	4G class 4	FCC DoC	N/A	N/A
6.	iPod	Apple	MC690 ZP/A	FCC DoC	Shielded, 1.2m	N/A
7.	Earphone	Lenovo	SH100	N/A	Unshielded, 1.2 m	N/A

### 2.4. EUT Operation Test Setup

The EUT was in GSM 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 WLAN AP, and the following programs installed in the EUT were programmed during the test.

- 1. Execute the program, "Winthrax" under WINXP installed in notebook for files transfer with EUT via USB cable.
- 2. Execute "Video player" to play MPEG4 files.
- 3. 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

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 with Maximum Hold Mode.

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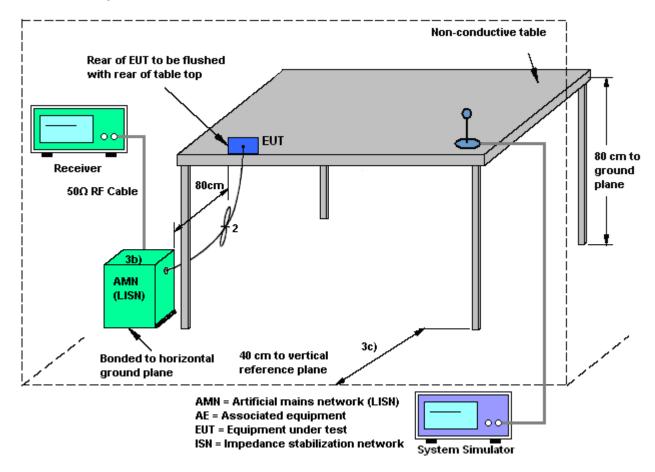
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### 3.1.4 Test Setup

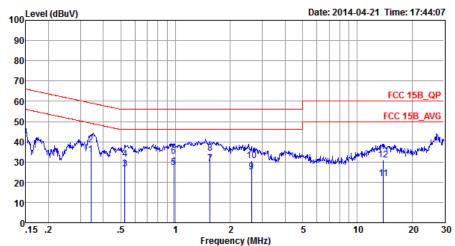


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3.1.5 Test Result of AC Conducted Emission

Test Mode :	Mode 2	Temperature :	<b>21~22</b> ℃			
Test Engineer :	Jack Tian	Relative Humidity :	41~42%			
Test Voltage :	120Vac / 60Hz	Phase :	Line			
Function Type :	GSM1900 Idle + WLAN Idle + USB Cable (Charging from Adapter) + Earphone +					
Function Type :	MPEG4 + SIM 1					



Site : CO01-SZ

Condition: FCC 15B\_QP LISN\_L\_20140304 LINE

Project : (FC)411003 Mode : Mode 2

			Over	Limit	Read	LISN	Cable	
	Freq	Level	Limit	Line	Level	Factor	Loss	Remark
_	MHz	dBu₹	dB	dBuV	dBu₹	dB	dB	
1 *	0.34	33.65	-15.48	49.13	23.19	0.27	10.19	Average
2	0.34	38.35	-20.78	59.13	27.89	0.27	10.19	QP
3	0.53	26.53	-19.47	46.00	16.10	0.28	10.15	Average
4	0.53	31.33	-24.67	56.00	20.90	0.28	10.15	QP
5	0.98	27.20	-18.80	46.00	16.80	0.25	10.15	Average
6	0.98	32.70	-23.30	56.00	22.30	0.25	10.15	QP
7	1.55	29.01	-16.99	46.00	18.61	0.23	10.17	Average
8	1.55	34.41	-21.59	56.00	24.01	0.23	10.17	QP
9	2.62	24.98	-21.02	46.00	14.50	0.28	10.20	Average
10	2.62	30.68	-25.32	56.00	20.20	0.28	10.20	QP
11	13.91	21.88	-28.12	50.00	10.10	1.29	10.49	Average
12	13.91	30.88	-29.12	60.00	19.10	1.29	10.49	QP

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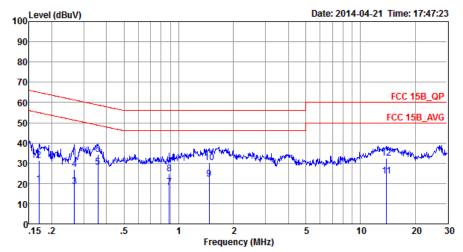


 Test Mode :
 Mode 2
 Temperature :
 21~22°C

 Test Engineer :
 Jack Tian
 Relative Humidity :
 41~42%

 Test Voltage :
 120Vac / 60Hz
 Phase :
 Neutral

 Function Type :
 GSM1900 Idle + WLAN Idle + USB Cable (Charging from Adapter) + Earphone + MPEG4 + SIM 1



Site : CO01-SZ

Condition: FCC 15B\_QP LISN\_N\_20140304 NEUTRAL

Project : (FC)411003 Mode : Mode 2

	Fr	eq Leve	Over l Limit	Limit Line	Read Level	LISN Factor		Remark
	M	Hz dBu	V dB	dBu∇	dBu∀	dB	dB	
1	0.	17 19.6	6 -35.28	54.94	9.00	0.33	10.33	Average
2	0.	17 31.2	6 -33.68	64.94	20.60	0.33	10.33	QP
3	0.	27 18.5	8 -32.67	51.25	8.00	0.35	10.23	Average
4	0.	27 26.9	8 -34.27	61.25	16.40	0.35	10.23	QP
5 *	0.	36 27.8	6 -20.88	48.74	17.30	0.38	10.18	Average
6	0.	36 34.2	6 -24.48	58.74	23.70	0.38	10.18	QP
7	0.	88 18.1	5 -27.85	46.00	7.70	0.30	10.15	Average
8	0.	88 24.7	5 -31.25	56.00	14.30	0.30	10.15	QP
9	1.	47 22.1	2 -23.88	46.00	11.60	0.35	10.17	Average
10	1.	47 30.3	2 -25.68	56.00	19.80	0.35	10.17	QP
11	13.	91 23.7	3 -26.27	50.00	11.80	1.44	10.49	Average
12	13.	91 32.3	3 -27.67	60.00	20.40	1.44	10.49	QP

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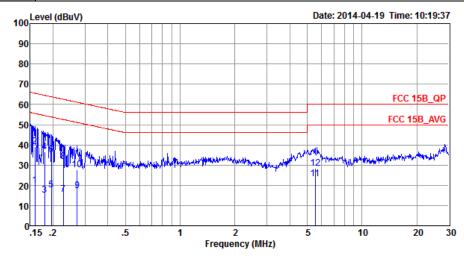


 Test Mode :
 Mode 3
 Temperature :
 21~22°C

 Test Engineer :
 Jack Tian
 Relative Humidity :
 41~42%

 Test Voltage :
 120Vac / 60Hz
 Phase :
 Line

 Function Type :
 GSM850 Idle + WLAN Idle + USB Cable (Data Link with Notebook) + Earphone + SIM 1



Site : CO01-SZ

Condition: FCC 15B\_QP LISN\_L\_20140304 LINE

Project : (FC)411003 Mode : Mode 3

				Over	Limit	Read	LISN	Cable	
		Freq	Level	Limit	Line	Level	Factor	Loss	Remark
	-	MHz	dBu∀	dB	dBu∀	dBu∀	dB	dB	
1		0.16	20.07	-35.45	55.52	9.50	0.22	10.35	Average
2	*	0.16	39.27	-26.25	65.52	28.70	0.22	10.35	QP
3		0.18	15.24	-39.26	54.50	4.70	0.22	10.32	Average
4		0.18	36.64	-27.86	64.50	26.10	0.22	10.32	QP
5		0.20	17.72	-36.08	53.80	7.20	0.22	10.30	Average
6		0.20	35.02	-28.78	63.80	24.50	0.22	10.30	QP
7		0.23	15.39	-37.13	52.52	4.90	0.23	10.26	Average
8		0.23	31.69	-30.83	62.52	21.20	0.23	10.26	QP
9		0.27	17.27	-33.80	51.07	6.80	0.25	10.22	Average
10		0.27	27.77	-33.30	61.07	17.30	0.25	10.22	QP
11		5.53	23.36	-26.64	50.00	12.70	0.41	10.25	Average
12		5.53	28.26	-31.74	60.00	17.60	0.41	10.25	QP

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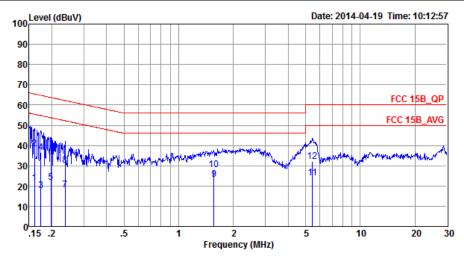


 Test Mode :
 Mode 3
 Temperature :
 21~22°C

 Test Engineer :
 Jack Tian
 Relative Humidity :
 41~42%

 Test Voltage :
 120Vac / 60Hz
 Phase :
 Neutral

 Function Type :
 GSM850 Idle + WLAN Idle + USB Cable (Data Link with Notebook) + Earphone + SIM 1



Site : CO01-SZ

Condition: FCC 15B\_QP LISN\_N\_20140304 NEUTRAL

Project : (FC)411003 Mode : Mode 3

			Over	Limit	Read	LISN	Cable	
	Freq	Level	Limit	Line	Level	Factor	Loss	Remark
	MHz	dBu∇	dB	dBu∇	dBu∀	dB	dB	
1	0.16	21.27	-34.16	55.43	10.60	0.33	10.34	Average
2	0.16	38.47	-26.96	65.43	27.80	0.33	10.34	QP
3	0.17	17.75	-37.02	54.77	7.10	0.32	10.33	Average
4	0.17	36.65	-28.12	64.77	26.00	0.32	10.33	QP
5	0.20	21.82	-31.89	53.71	11.20	0.32	10.30	Average
6	0.20	34.22	-29.49	63.71	23.60	0.32	10.30	QP
7	0.24	18.09	-34.13	52.22	7.50	0.34	10.25	Average
8	0.24	30.39	-31.83	62.22	19.80	0.34	10.25	QP
9 *	1.56	23.23	-22.77	46.00	12.70	0.36	10.17	Average
10	1.56	27.93	-28.07	56.00	17.40	0.36	10.17	QP
11	5.45	24.13	-25.87	50.00	13.40	0.48	10.25	Average
12	5.45	32.13	-27.87	60.00	21.40	0.48	10.25	QP

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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

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 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 (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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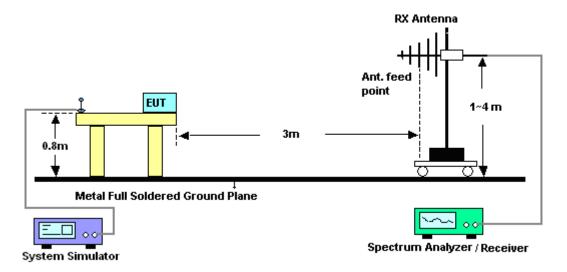
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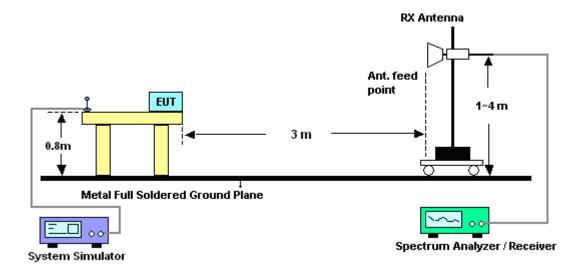
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### 3.2.4. Test Setup of Radiated Emission

### 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:	Mc	de 2				Temp	Temperature :			~25°C		
Test Engine	er: Ka	er Hua	ng			Relative Humidity :			: 42	42~52%		
Test Distanc	<b>:e:</b> 3m	1				Polarization :			Но	rizont	al	
	GS	M1900	) Idle -	+ WLA	N Idle	+ USE	3 Cab	le (Cha	arging	from A	Adapte	er) + Earpl
Function Typ	pe:  MF	PEG4 +	SIM 1	1								
Remark :	#8	is syste	em sin	nulator	signa	l which	n can b	oe igno	red.			
117	Level (dBu\	//m)									Dat	e: 2014-04-23
105.3												
93.6												
81.9											F	CC CLASS-B
70.2												-6dB
58.5											FCC CL	ASS-B (AVG)
46.8		- 8										-6dB
	_8 <del>1                                    </del>				9	10			11	12 	2	11
35.1	2											
23.4												
11.7												
0	30 <b>1</b> 000.		3000.		5000.		7000.		9000.		11000.	13000
						Frequen	cy (MHz)	)				
Site Condi		: 03CH01 : FCC CL		3m LF_Al	NT_1310	26 HORI	ZONTAL					
Projec Mode		: (FC)411 : Mode 2										
			Over					Preamp	A/Pos	T/Pos		
		Level				Factor		Factor			Remark	
1.0		dBuV/m 36.54		dBuV/m	dBuV		dB	dB		deg	Dask	
1 P 2	189.30	29.53	-13.97	43.50	49.21	8.61	1.65	29.94			Peak	
		42.50						29.93 29.93	100 100	210 245		
3 ! 4 Q		42.61	-3.39	46.00	48.94	20.40	3.20	29.93	100	360	_	
3 ! 4 Q 5 !		1 11 00	-4.10					29.94 57.88	118 120	230 132	QP Peak	
3 ! 4 Q 5 !	911.80	41.90 41.85		74.00								
3 ! 4 Q 5 ! 6 ! 7 8	911.80 1008.00 1960.00	41.85 46.39	-32.15		68.26	29.72		56.69			Peak	
3 ! 4 Q 5 ! 6 ! 7 8	911.80 1008.00 1960.00 4674.00	41.85 46.39 35.08	-32.15 -38.92	74.00	68.26 50.93	33.48	8.20	57.53			Peak	
3 ! 4 Q 5 ! 6 ! 7 8	911.80 1008.00 1960.00 4674.00 6276.00	41.85 46.39	-32.15 -38.92 -36.77	74.00 74.00	68.26 50.93 49.95	33.48 34.00	8.20 9.57	57.53 56.29				
3 ! 4 Q 5 ! 6 ! 7 8 9	911.80 1008.00 1960.00 4674.00 6276.00	41.85 46.39 35.08 37.23 37.68 39.54	-32.15 -38.92 -36.77 -36.32 -34.46	74.00 74.00 74.00 74.00	68.26 50.93 49.95 45.45 46.79	33.48 34.00 36.32 36.71	8.20 9.57 11.11 12.92	57.53 56.29 55.20 56.88			Peak Peak	

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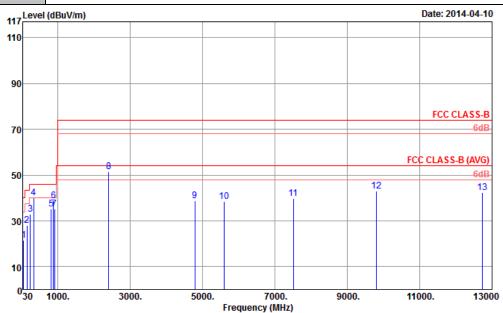


23~25°C Test Mode: Mode 2 Temperature: **Relative Humidity:** 42~52% Test Engineer: Kaer Huang Polarization: Test Distance: 3m Vertical GSM1900 Idle + WLAN Idle + USB Cable (Charging from Adapter) + Earphone + Function Type: MPEG4 + SIM 1 Remark: #8 is system simulator signal which can be ignored. 117 Level (dBuV/m) Date: 2014-04-23 105.3 93.6 81.9 FCC CLASS-B 70.2 58.5 46.8 13 10 35.1 11.7 1000. 3000. 5000. 7000. 9000. 11000. 13000 Frequency (MHz) Site : 03CH01-SZ Condition : FCC CLASS-B 3m LF\_ANT\_131026 VERTICAL Project (FC)411003 Mode : Mode 2 Over Limit ReadAntenna Cable Preamp A/Pos T/Pos Freq Level Limit Remark Line Level Factor Loss Factor MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 36.21 36.67 -3.33 40.00 50.29 15.50 29.93 Peak 1 P 0.81 33.18 -10.32 43.50 11.20 Peak 50.66 1.26 3 240.06 42.25 -3.75 46.00 59.01 11.35 29.93 Peak 4 ! 335.70 41.05 -4.95 46.00 54.66 14.20 2.12 29.93 Peak 5 Q 815.90 42.58 -3.42 46.00 48.91 20.40 100 151 OP 3.20 29.93 -4.17 6 ! 911.80 41.83 46.00 47.29 21.12 3.36 29.94 132 201 QP --- Peak --- Peak 40.94 -33.06 67.66 1960.00 46.15 68.02 29.72 5.10 56.69 47.22 -26.78 74.00 9 4914.00 61.88 34.01 8.44 57.11 152 230 Peak 36.42 -37.58 34.00 10 6342.00 74.00 49.20 9.63 56.41 --- Peak ---11 7932.00 37.19 -36.81 74.00 48.16 34.78 10.62 56.37 Peak 44.92 -29.08 74.00 52.38 36.86 12.49 --- Peak 12634.00 40.53 -33.47 74.00 44.28 38.14 14.25

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23~25°C Test Mode: Mode 3 Temperature: Test Engineer: Kaer Huang Relative Humidity: 42~52% Test Distance: 3m Polarization: Horizontal GSM850 Idle + WLAN Idle + USB Cable (Data Link with Notebook) + Earphone + **Function Type:** SIM 1 Remark: #6 is system simulator signal which can be ignored.



Site : 03CH01-SZ

Condition : FCC CLASS-B 3m LF\_ANT\_131026 HORIZONTAL

Project : (FC)411003 Mode : Mode 3

			Over	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	
1	56.19	21.59	-18.41	40.00	45.87	4.67	0.98	29.93			Peak
2	143.94	28.04	-15.46	43.50	46.00	10.53	1.45	29.94			Peak
3	240.06	32.93	-13.07	46.00	49.69	11.35	1.82	29.93			Peak
4 P	335.70	39.98	-6.02	46.00	53.59	14.20	2.12	29.93	120	50	Peak
5	815.90	35.07	-10.93	46.00	41.40	20.40	3.20	29.93			Peak
6	881.70	38.83			44.92	20.56	3.29	29.94			Peak
7	911.80	35.13	-10.87	46.00	40.59	21.12	3.36	29.94			Peak
8	2402.00	51.46	-22.54	74.00	70.61	31.98	5.62	56.75	154	123	Peak
9	4784.00	38.73	-35.27	74.00	54.00	33.74	8.31	57.32			Peak
10	5598.00	38.54	-35.46	74.00	51.76	34.00	9.07	56.29			Peak
11	7514.00	39.92	-34.08	74.00	52.73	34.03	10.06	56.90			Peak
12	9804.00	42.95	-31.05	74.00	50.54	36.73	12.32	56.64			Peak
13	12728.00	42.21	-31.79	74.00	45.76	38.32	14.28	56.15			Peak

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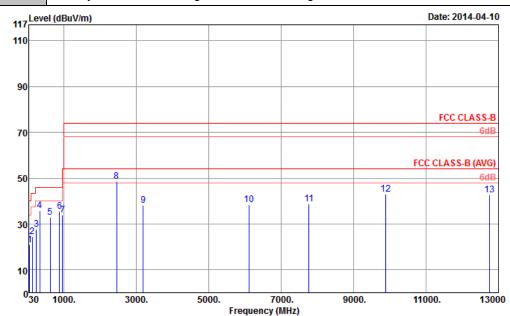
Test Mode: Mode 3 Temperature: 23~25°C

Test Engineer: Kaer Huang Relative Humidity: 42~52%

Test Distance: 3m Polarization: Vertical

Function Type: SIM 1

**Remark**: #6 is system simulator signal which can be ignored.



Site : 03CH01-SZ

Condition : FCC CLASS-B 3m LF\_ANT\_131026 VERTICAL

Project : (FC)411003 Mode : Mode 3

	Freq	Level		Limit Line		Antenna Factor				T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	55.65	20.96	-19.04	40.00	45.29	4.63	0.97	29.93			Peak
2	130.71	24.34	-19.16	43.50	40.90	11.99	1.39	29.94			Peak
3	240.06	27.60	-18.40	46.00	44.36	11.35	1.82	29.93			Peak
4 P	335.70	35.82	-10.18	46.00	49.43	14.20	2.12	29.93	100	20	Peak
5	624.10	33.07	-12.93	46.00	41.57	18.60	2.82	29.92			Peak
6	881.70	35.41			41.50	20.56	3.29	29.94			Peak
7	960.10	33.90	-20.10	54.00	39.11	21.30	3.43	29.94			Peak
8	2460.00	48.50	-25.50	74.00	67.27	32.33	5.68	56.78	130	53	Peak
9	3188.00	38.26	-35.74	74.00	55.94	33.04	6.57	57.29			Peak
10	6116.00	38.41	-35.59	74.00	51.04	34.00	9.40	56.03			Peak
11	7770.00	38.78	-35.22	74.00	50.50	34.48	10.39	56.59			Peak
12	9878.00	42.98	-31.02	74.00	50.47	36.83	12.45	56.77			Peak
13	12752.00	42.56	-31.44	74.00	46.08	38.35	14.28	56.15			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	ESCI	100724	9kHz~3GHz	Feb. 21, 2014	Apr. 19, 2014~ Apr. 21, 2014	Feb. 20, 2015	Conduction (CO01-SZ)
AC LISN	EMCO	3816/2SH	00103912	9kHz~30MHz	Mar. 04, 2014	Apr. 19, 2014~ Apr. 21, 2014	Mar. 03, 2015	Conduction (CO01-SZ)
AC LISN (for auxiliary equipment)	EMCO	3816/2SH	00103892	9kHz~30MHz	Mar. 04, 2014	Apr. 19, 2014~ Apr. 21, 2014	Mar. 03, 2015	Conduction (CO01-SZ)
AC Power Source	Chroma	61602	61602000089 1	100Vac~250Vac	Dec. 17, 2013	Apr. 19, 2014~ Apr. 21, 2014	Dec. 16, 2014	Conduction (CO01-SZ)
Signal Analyzer	R&S	FSV40	101078	10Hz~40GHz	Jun. 17, 2013	Apr. 10, 2014~ Apr. 23, 2014	Jun. 16, 2014	Radiation (03CH01-SZ)
Bilog Antenna	TESEQ	CBL 6112D	23188	30MHz~2GHz	Oct. 26, 2013	Apr. 10, 2014~ Apr. 23, 2014	Oct. 25, 2014	Radiation (03CH01-SZ)
Double Ridge Horn Antenna	ETS Lindgren	3117	00119436	1GHz~18GHz	Oct. 26, 2013	Apr. 10, 2014~ Apr. 23, 2014	Oct. 25, 2014	Radiation (03CH01-SZ)
Amplifier	ADVANTEST	BB525C	E9007003	9kHz~3000MHz	Feb. 21, 2014	Apr. 10, 2014~ Apr. 23, 2014	Feb. 20, 2015	Radiation (03CH01-SZ)
Amplifier	Agilent	83017A	MY39501302	3Hz~26.5GHz	Mar. 03, 2014	Apr. 10, 2014~ Apr. 23, 2014	Mar. 02, 2015	Radiation (03CH01-SZ)
Turn Table	EM Electronics	EM 1000	N/A	0~360 degree	NCR	Apr. 10, 2014~ Apr. 23, 2014	NCR	Radiation (03CH01-SZ)
Antenna Mast	EM Electronics	EM 1000	N/A	1 m~4 m	NCR	Apr. 10, 2014~ Apr. 23, 2014	NCR	Radiation (03CH01-SZ)

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### FCC Test Report

# 5. Uncertainty of Evaluation

### <u>Uncertainty of Conducted Emission Measurement (150 kHz ~ 30 MHz)</u>

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	2.31
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Report No.: FC411003

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

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

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