

Report No.: FC361702

FCC Test Report

APPLICANT : CT Asia

EQUIPMENT: Quad-band /GPRS/ GSM Mobile Phone

BRAND NAME : BLU
MODEL NAME : Zoey

FCC ID : YHLBLUZOEY

STANDARD : FCC 47 CFR FCC Part 15 Subpart B

CLASSIFICATION: Certification

The product was received on Jun. 17, 2013 and completely tested on Jun. 22, 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
FC361702	Rev. 01	Initial issue of report	Jul. 18, 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	8.61 dB at
					2.120 MHz
					Under limit
3.2	15.109	Radiated Emission	< 15.109 limits	PASS	6.04 dB at
					379.800 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

1.2. Manufacturer

Zechin Communications Co., Ltd.

Unit 804, 8th Floor Desay Tech Building Gaoxin Road South, Nanshan District Shenzhen, China

1.3. Feature of Equipment Under Test

	Product Feature
Equipment	Quad-band /GPRS/ GSM Mobile Phone
Brand Name	BLU
Model Name	Zoey
FCC ID	YHLBLUZOEY
EUT supports Radios application	GSM/GPRS/Bluetooth 3.0
HW Version	BLU-T176-V05-GENERIC
SW Version	X119-MB-V0.1
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			
	Bluetooth: 2402 MHz ~ 2480 MHz			
	GSM850: 869.2 MHz ~ 893.8 MHz			
Rx Frequency Range	GSM1900: 1930.2 MHz ~ 1989.8 MHz			
	Bluetooth: 2402 MHz ~ 2480 MHz			
Antonna Typo	WWAN : PIFA Antenna			
Antenna Type	Bluetooth : Monopole Antenna			
	GSM: GMSK			
Гуре of Modulation	GPRS: GMSK			
	Bluetooth 3.0 EDR : GFSK, π /4-DQPSK, 8-DPSK			

1.5. Modification of EUT

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

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1.6. Test Site

Test Site	SPORTON INTERNATIONAL (SHENZHEN) INC.				
	No. 3 Building, the third floor of south, Shahe River west, Fengzeyuan				
Test Site Location	warehouse, Nanshan District, Shenzhen, Guangdong, P.R.C.				
	TEL: +86-755- 3320-2398				
Test Site 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	112 10 11210
Item	EUT Configuration	EMI AC	EMI RE<1G	
1.	Charging Mode (EUT with adapter)			Note 1
2.	Data application transferred mode (EUT with notebook)	\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 + USB Cable (Charging from Adapter) + Camera + SIM 1 <fig.1></fig.1>
AC Conducted		Mode 2: GSM1900 Idle + Bluetooth Idle + USB Cable (Charging from Adapter) + MP3 + SIM 1 <fig.1></fig.1>
Emission	1/2	Mode 3: GSM850 Idle + Bluetooth Idle + USB Cable (Charging from Adapter) + FM Rx + SIM 1 <fig.2></fig.2>
		Mode 4: GSM1900 Idle + Bluetooth Idle + USB Cable (Data Link with Notebook) + SIM 1 <fig.3></fig.3>
		Mode 1: GSM850 Idle + Bluetooth Idle + USB Cable (Charging from Adapter) + Camera + SIM 1 <fig.1></fig.1>
Radiated		Mode 2: GSM1900 Idle + Bluetooth Idle + USB Cable (Charging from Adapter) + MP3 + SIM 1 <fig.1></fig.1>
Emissions < 1GHz	1/2	Mode 3: GSM850 Idle + Bluetooth Idle + USB Cable (Charging from Adapter) + FM Rx + SIM 1 <fig.2></fig.2>
		Mode 4: GSM1900 Idle + Bluetooth Idle + USB Cable (Data Link with Notebook) + SIM 1 <fig.3></fig.3>
Radiated Emissions ≥ 1GHz	2	Mode 1: GSM1900 Idle + Bluetooth Idle + USB Cable (Data Link with Notebook) + SIM 1 <fig.3></fig.3>

Remark:

- 1. The worst case of AC is mode 1, and the USB Link mode of AC is mode 4; the test data of these modes were reported
- 2. The worst case of RE < 1G is mode 4; only the test data of this mode was reported.
- 3. Link with Notebook means data application transferred mode between EUT and Notebook.

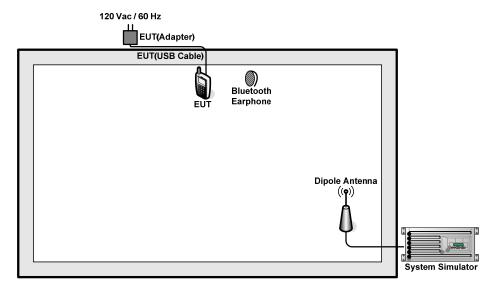
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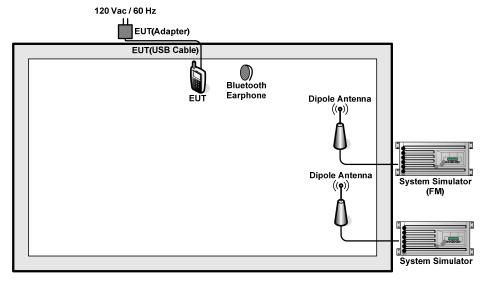


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2.2. Connection Diagram of Test System



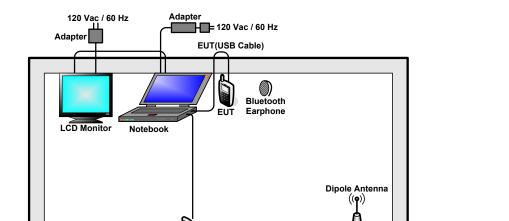
<Fig.1>



<Fig.2>

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<Fig.2>

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System Simulator

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.	Notebook	DELL	P08S	FCC DoC	N/A	AC I/P: Unshielded, 1.8 m DC O/P: Shielded, 1.8 m
4.	Monitor	DELL	IN1940MWB	FCC DoC	Shielded, 1.2m	Unshielded, 1.8 m
5.	iPod	Apple	MC525 ZP/A	FCC DoC	Shielded, 1.0m	N/A
6.	Bluetooth Earphone	Nokia	BH-108	N/A	N/A	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 Bluetooth earphone, and the following programs installed in the EUT were programmed during the test.

- 1. Execute the program, "Winthrax" under WIN7 installed in notebook for files transfer with EUT via USB cable / iPod.
- 2. Execute "Music Player" to play MP3 file.
- 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

^{*}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.

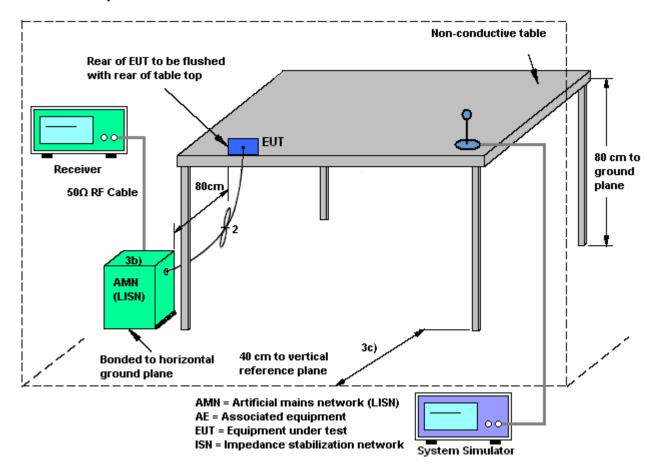
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3.1.4 Test Setup



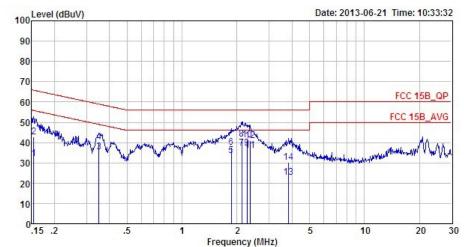
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3.1.5 Test Result of AC Conducted Emission

Test Mode :	Mode 1	Temperature :	24~25 ℃
Test Engineer :	Leo Liao	Relative Humidity :	48~49%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	GSM850 Idle + Bluetooth Idl	e + USB Cable (Char	ging from Adapter) + Camera +
Function Type :	SIM 1		



Site : CO01-SZ

Condition: FCC 15B_QP LISN_L_2000601 LINE

Project : (FC) 361702 Mode : Mode 1

Over Limit Read LISN Cable Freq Level Limit Line Level Factor Loss Remark dB dBuV dB dBuV dBuV MHz 0.15 32.18 -23.60 55.78 22.10 0.03 10.05 Average 0.15 42.68 -23.10 65.78 32.60 0.03 10.05 QP 0.35 35.59 -13.37 48.96 25.50 0.02 10.07 Average 0.03 10.05 Average 3 0.35 40.09 -18.87 58.96 30.00 1.86 33.48 -12.52 46.00 23.31 0.02 10.07 QP 0.03 10.14 Average 4 1.86 37.68 -18.32 56.00 27.51 2.12 37.39 -8.61 46.00 27.19 2.12 41.69 -14.31 56.00 31.49 2.27 37.20 -8.80 46.00 27.00 0.03 10.14 QP 0.04 10.16 Average 0.04 10.16 QP 7 * 8 0.04 10.16 Average 2.27 41.30 -14.70 56.00 31.10 0.04 10.16 QP 2.36 36.31 -9.69 46.00 26.10 0.04 10.17 Average 2.36 40.81 -15.19 56.00 30.60 0.04 10.17 QP 3.84 22.95 -23.05 46.00 12.70 0.06 10.19 Average 3.84 30.35 -25.65 56.00 20.10 0.06 10.19 QP 10 12 13

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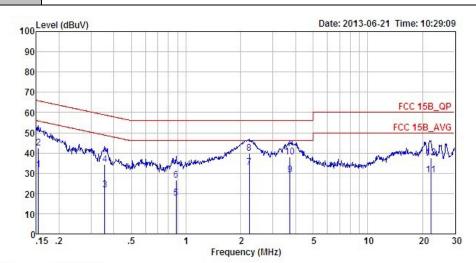


 Test Mode :
 Mode 1
 Temperature :
 24~25°C

 Test Engineer :
 Leo Liao
 Relative Humidity :
 48~49%

 Test Voltage :
 120Vac / 60Hz
 Phase :
 Neutral

 Function Type :
 GSM850 Idle + Bluetooth Idle + USB Cable (Charging from Adapter) + Camera + SIM 1



Site : CO01-SZ

Condition: FCC 15B_QP LISN_N_2000601 NEUTRAL

Project : (FC) 361702 Mode : Mode 1

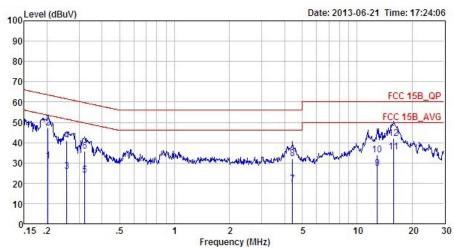
		Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	-	MHz	dBuV	dB	dBuV	dBu∇	dB	dB	-
1		0.15	31.57	-24.21	55.78	21.50	0.02	10.05	Average
2		0.15	42.47	-23.31	65.78	32.40	0.02	10.05	QP
3		0.36	21.79	-26.99	48.78	11.70	0.02	10.07	Average
4		0.36	34.39	-24.39	58.78	24.30	0.02	10.07	QP
5		0.88	17.73	-28.27	46.00	7.60	0.02	10.11	Average
6		0.88	26.63	-29.37	56.00	16.50	0.02	10.11	QP
7	4	2.22	32.80	-13.20	46.00	22.60	0.04	10.16	Average
8		2.22	40.00	-16.00	56.00	29.80	0.04	10.16	QP
9		3.74	29.25	-16.75	46.00	19.00	0.06	10.19	Average
10		3.74	37.85	-18.15	56.00	27.60	0.06	10.19	QP
11		22.18	29.19	-20.81	50.00	18.10	0.62	10.47	Average
12		22.18	37.69	-22.31	60.00	26.60	0.62	10.47	QP

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Test Mode :	Mode 4	Temperature :	24~25℃				
Test Engineer :	Leo Liao	Relative Humidity :	48~49%				
Test Voltage :	120Vac / 60Hz	Phase :	Line				
Function Type: GSM1900 Idle + Bluetooth Idle + USB Cable (Data Link with Notebook) + SIM 1							
7 0 0 0 0 0 0	L. 10009200000	Data	2042 06 24 Times 47:24:06				



: C001-SZ

Condition: FCC 15B_QP LISN_L_2000601 LINE Project : (FC) 361702 Mode : Mode 4

		Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	-	MHz	dBu∇	dB	dBu∀	dBu∇	dB	dB	8
1		0.20	30.98	-22.51	53.49	20.89	0.03	10.06	Average
2		0.20	47.08	-16.41	63.49	36.99	0.03	10.06	QP
3		0.26	25.79	-25.77	51.56	15.71	0.02	10.06	Average
4		0.26	40.99	-20.57	61.56	30.91	0.02	10.06	QP
5		0.32	24.09	-25.57	49.66	14.00	0.02	10.07	Average
6		0.32	35.89	-23.77	59.66	25.80	0.02	10.07	QP
7		4.43	19.46	-26.54	46.00	9.21	0.06	10.19	Average
8		4.43	31.96	-24.04	56.00	21.71	0.06	10.19	QP
9		12.92	27.32	-22.68	50.00	16.70	0.25	10.37	Average
10		12.92	33.82	-26.18	60.00	23.20	0.25	10.37	QP
11	*	15.89	35.52	-14.48	50.00	24.80	0.26	10.46	Average
12		15.89	41.92	-18.08	60.00	31.20	0.26	10.46	QP

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FCC Test Report

Test Mode :	Mode: Mode 1 Temperature: 24~25℃								
Test Engineer :	Leo Liao Relative Humidity :				48~49	%			
Гest Voltage :	120Vac / 6	Phas	Phase :			Neutral			
Function Type :		ldle + E	Bluetooth	n Idle + l	JSB Ca	ble (Data	a Link w	vith Noteb	ook) + SIN
100	Level (dBuV)		te: 2013-0	6-21 Time: 17	7:19:28				
90		40.00							
80		4-4-			-				
70									Carrier and
60					3 0	0 200	- 2 10020	FCC 15	B_QP
60	-	_						FCC 15B	AVG
50	MA	-							_AVG
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20						9			
					9 0	010	1 10 (01900)		
		1 1 1	1 1 1 1 1						
10									
10		.5	1		2	5	10	20	30
10 Site	.15 .2 : CO01-S			Frequ	2 ency (MHz)	N	10	20	30
10 Site Condit.	.15 .2	Z B_QP LIS 61702		Frequ	ency (MHz)	N	10	20	30
Site Condit. Projec	: CO01-S ion: FCC 15 t : (FC) 3	Z B_QP LIS 61702	SN_N_2000	Frequ	ency (MHz))	10	20	30
Site Condit. Projec	: CO01-S ion: FCC 15 t : (FC) 3 : Mode 4	Z B_QP LIS 61702	SN_N_2000	Frequ 0601 NEU: Limit	ency (MHz) FRAL Read)	Cable	20 Remark	30
Site Condit. Projec	: CO01-S ion: FCC 15 t : (FC) 3 : Mode 4	Z B_QP LIS 61702	SN_N_2000	Frequ 0601 NEU: Limit	ency (MHz) FRAL Read	LISN	Cable		30
Site Condit. Projec	: CO01-S ion: FCC 15 t : (FC) 3 : Mode 4	E QP LIS	Over	Frequ Description Limit Line dBuV	Read Level	LISN Factor	Cable Loss		30
Site Condit. Projec Mode	.15 .2 : COO1-Sion: FCC 15 t: (FC) 3 : Mode 4 Freq MHz 0.19 0.19	EZ B_QP LIS 661702 Level dBuV 30.97	Over Limit	Frequince Frequing Fr	Read Level dBuV	LISN Factor dB 0.02 0.02	Cable Loss dB 10.05 10.05	Remark Average	30
Site Condit. Projec Mode	.15 .2 : COO1-S ion: FCC 15 t : (FC) 3 : Mode 4 Freq MHz 0.19 0.19 0.21	E QP LIS 661702 Level dBuV 30.97 47.77 28.77	Over Limit dB -23.05 -16.25 -24.59	Limit Line dBuV 54.02 64.02 53.36	Read Level dBuV 20.90 37.70 18.69	LISN Factor dB 0.02 0.02 0.02 0.02	Cable Loss dB 10.05 10.05 10.06	Remark Average QP Average	30
Site Condit. Projec Mode	.15 .2 : COO1-S ion: FCC 15 t: (FC) 3 : Mode 4 Freq MHz 0.19 0.19 0.21 0.21	B_QP LIS 61702 Level dBuV 30.97 47.77 28.77 46.17	Over Limit dB -23.05 -16.25 -24.59 -17.19	Limit Line dBuV 54.02 64.02 53.36 63.36	Read Level dBuV 20.90 37.70 18.69 36.09	LISN Factor dB 0.02 0.02 0.02 0.02 0.02	Cable Loss dB 10.05 10.05 10.06 10.06	Remark Average QP Average QP	30
Site Condit. Projec Mode	.15 .2 : COO1-S ion: FCC 15 t: (FC) 3 : Mode 4 Freq MHz 0.19 0.19 0.21 0.21 0.25	B_QP LIS 61702 Level dBuV 30.97 47.77 28.77 46.17 21.68	Over Limit dB -23.05 -16.25 -24.59 -17.19 -30.05	Limit Line dBuV 54.02 64.02 53.36 63.36 51.73	Read Level dBuV 20.90 37.70 18.69 36.09 11.60	LISN Factor dB 0.02 0.02 0.02 0.02 0.02 0.02	Cable Loss dB 10.05 10.05 10.06 10.06	Remark Average QP Average QP Average	30
Site Condit. Projec: Mode	.15 .2 : COO1-S ion: FCC 15 t: (FC) 3 : Mode 4 Freq MHz 0.19 0.19 0.21 0.21 0.25 0.25	B_QP LIS 61702 Level dBuV 30.97 47.77 28.77 46.17 21.68 40.38	Over Limit dB -23.05 -16.25 -24.59 -17.19 -30.05 -21.35	Limit Line dBuV 54.02 64.02 53.36 63.36 51.73 61.73	Read Level dBuV 20.90 37.70 18.69 36.09 11.60 30.30	LISN Factor dB 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.0	Cable Loss dB 10.05 10.05 10.06 10.06 10.06	Remark Average QP Average QP Average QP	30
Site Condit. Projec Mode	.15 .2 : COO1-S ion: FCC 15 t: (FC) 3 : Mode 4 Freq MHz 0.19 0.19 0.21 0.21 0.25 0.25 0.32	B_QP LIS 61702 Level dBuV 30.97 47.77 28.77 46.17 21.68 40.38 23.28	Over Limit dB -23.05 -16.25 -24.59 -17.19 -30.05 -21.35 -26.34	Limit Line dBuV 54.02 64.02 53.36 63.36 51.73 61.73 49.62	Read Level dBuV 20.90 37.70 18.69 36.09 11.60 30.30 13.19	LISN Factor dB 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.0	Cable Loss dB 10.05 10.05 10.06 10.06 10.06 10.06	Remark Average QP Average QP Average QP Average QP Average	30
Site Condit. Projec Mode	.15 .2 : COO1-S ion: FCC 15 t : (FC) 3 : Mode 4 Freq MHz 0.19 0.19 0.21 0.21 0.25 0.25 0.32 0.32	Devel dBuV 30.97 47.77 28.77 46.17 21.68 40.38 23.28 35.58	Over Limit dB -23.05 -16.25 -24.59 -17.19 -30.05 -21.35 -26.34 -24.04	Limit Line dBuV 54.02 64.02 53.36 63.36 51.73 61.73 49.62 59.62	Read Level dBuV 20.90 37.70 18.69 36.09 11.60 30.30 13.19 25.49	LISN Factor dB 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.	Cable Loss dB 10.05 10.05 10.06 10.06 10.06 10.07 10.07	Remark Average QP Average QP Average QP Average QP	30
Site Condit: Project Mode	.15 .2 : COO1-S ion: FCC 15 t : (FC) 3 : Mode 4 Freq MHz 0.19 0.19 0.21 0.21 0.25 0.25 0.32 0.32 4.29	Devel dBuV 30.97 47.77 28.77 46.17 21.68 40.38 23.28 35.58 20.86	Over Limit dB -23.05 -16.25 -24.59 -17.19 -30.05 -21.35 -26.34 -24.04 -25.14	D601 NEUX Limit Line dBuV 54.02 64.02 53.36 63.36 51.73 61.73 49.62 59.62 46.00	Read Level dBuV 20.90 37.70 18.69 36.09 11.60 30.30 13.19 25.49 10.60	LISN Factor dB 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.	Cable Loss dB 10.05 10.06 10.06 10.06 10.07 10.07 10.19	Remark Average QP Average QP Average QP Average QP Average QP Average	30
Site Condita Project Mode	.15 .2 : COO1-S ion: FCC 15 t: (FC) 3 : Mode 4 Freq MHz 0.19 0.19 0.21 0.25 0.25 0.32 0.32 4.29 4.29	Devel dBuV 30.97 47.77 28.77 46.17 21.68 40.38 23.28 35.58 20.86 31.26	Over Limit dB -23.05 -16.25 -24.59 -17.19 -30.05 -21.35 -26.34 -24.04 -25.14 -24.74	D601 NEUX Limit Line dBuV 54.02 64.02 53.36 63.36 51.73 61.73 49.62 59.62 46.00 56.00	Read Level dBuV 20.90 37.70 18.69 31.60 30.30 13.19 25.49 10.60 21.00	LISN Factor dB 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.	Cable Loss dB 10.05 10.06 10.06 10.06 10.07 10.07 10.19 10.19	Remark Average QP Average QP Average QP Average QP Average QP	30
Site Condit: Project Mode	.15 .2 : COO1-S ion: FCC 15 t: (FC) 3 : Mode 4 Freq MHz 0.19 0.19 0.21 0.25 0.25 0.32 0.32 4.29 4.29 16.23	Devel dBuV 30.97 47.77 28.77 46.17 21.68 40.38 23.28 35.58 20.86 31.26 33.85	Over Limit dB -23.05 -16.25 -24.59 -17.19 -30.05 -21.35 -26.34 -24.04 -25.14	D601 NEUX Limit Line dBuV 54.02 64.02 53.36 63.36 51.73 49.62 59.62 46.00 56.00 50.00	Read Level dBuV 20.90 37.70 18.69 36.09 11.60 30.30 13.19 25.49 10.60 21.00 23.00	LISN Factor dB 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.	Cable Loss dB 10.05 10.06 10.06 10.06 10.07 10.07 10.19 10.19	Remark Average QP Average QP Average QP Average QP Average QP Average	30

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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 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.
- 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

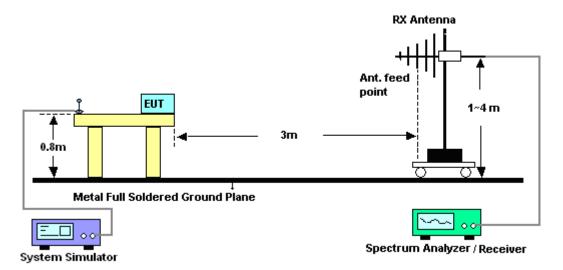
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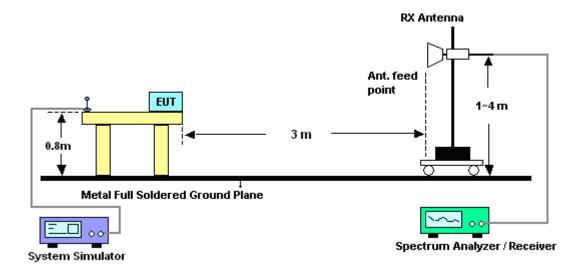
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3.2.4. Test Setup of Radiated Emission

For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz

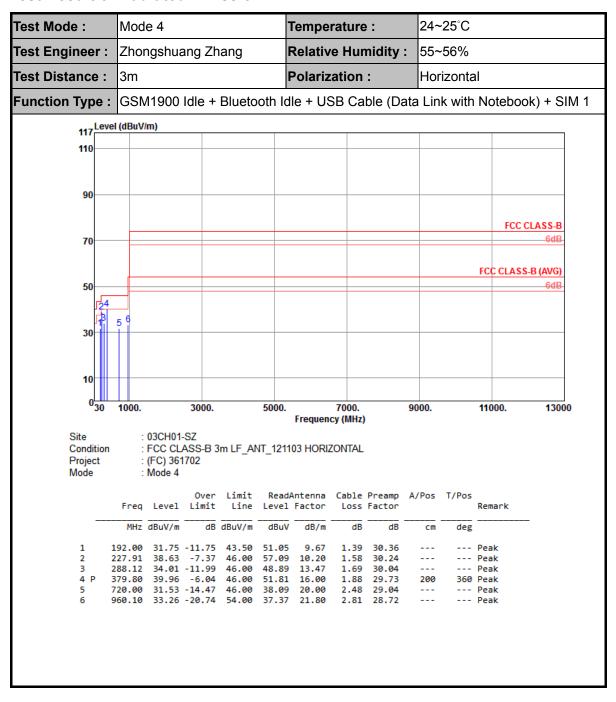


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3.2.5. Test Result of Radiated Emission



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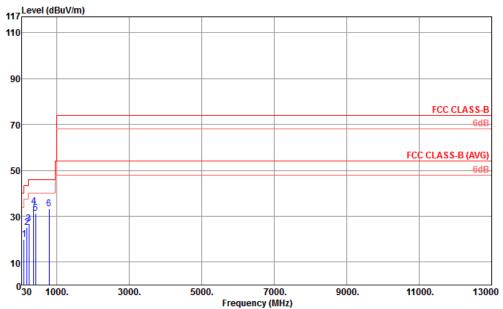


Test Mode: Mode 4 Temperature: 24~25°C

Test Engineer: Zhongshuang Zhang Relative Humidity: 55~56%

Test Distance: 3m Polarization: Vertical

Function Type: GSM1900 Idle + Bluetooth Idle + USB Cable (Data Link with Notebook) + SIM 1



Site : 03CH01-SZ

Condition : FCC CLASS-B 3m LF_ANT_121103 VERTICAL

Project : (FC) 361702 Mode : Mode 4

	Freq	Level		Limit Line						T/Pos	Remark
-	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	100.20	19.75	-23.75	43.50	38.06	11.20	1.16	30.67			Peak
2	180.12	25.07	-18.43	43.50	45.39	8.80	1.28	30.40			Peak
3	228.18	26.71	-19.29	46.00	44.77	10.60	1.58	30.24			Peak
4 P	363.70	34.11	-11.89	46.00	46.81	15.24	1.85	29.79	200	360	Peak
5	412.00	31.28	-14.72	46.00	42.12	16.86	1.93	29.63			Peak
6	792.10	33.30	-12.70	46.00	39.21	20.42	2.61	28.94			Peak

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4. List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristic s	Calibration Date	Test Date	Due Date	Remark
ESCIO TEST Receiver	R&S	1142.8007.03	100724	9kHz~3GHz	Mar. 28, 2013	Jun. 21, 2013	Mar. 27, 2014	Conduction (CO01-SZ)
AC LISN	EMCO	3816/2SH	00103912	9kHz~30MHz	Mar. 28, 2013	Jun. 21, 2013	Mar. 27, 2014	Conduction (CO01-SZ)
AC LISN (for auxiliary equipment)	EMCO	3816/2SH	00103892	9kHz~30MHz	Mar. 28, 2013	Jun. 21, 2013	Mar. 27, 2014	Conduction (CO01-SZ)
AC Power Source	Chroma	61602	6160200008 91	N/A	Nov. 20, 2012	Jun. 21, 2013	Nov. 19, 2013	Conduction (CO01-SZ)
AC Filter	ETS-LINDGR EN	LRE-2030/PEN 256260	00093783	N/A	N/A	Jun. 21, 2013	N/A	Conduction (CO01-SZ)
AC Filter	ETS-LINDGR EN	LRE-2030/PEN 256260	00097973	N/A	N/A	Jun. 21, 2013	N/A	Conduction (CO01-SZ)
ESCI TEST Receiver	R&S	ESCI	100724	9K-3GHz	Mar. 28, 2013	Jun. 22, 2013	Mar. 27, 2014	Radiation (03CH01-SZ)
Spectrum Analyzer	R&S	FSP30	101362	9kHz~30GHz	Oct. 11, 2012	Jun. 22, 2013	Oct. 10, 2013	Radiation (03CH01-SZ)
Double Ridge Horn Antenna	ETS Lindgren	3117	00119436	1GHz~18GHz	Oct. 12, 2012	Jun. 22, 2013	Oct. 11, 2013	Radiation (03CH01-SZ)
Bilog Antenna	SCHAFFNER	CBL6112B	2614	30Mhz~2Ghz	Nov. 03, 2012	Jun. 22, 2013	Nov. 02, 2013	Radiation (03CH01-SZ)
Amplifier	ADVANTEST	BB525C	E9007003	9K-3000MHz GAIN 30db	Mar. 28, 2013	Jun. 22, 2013	Mar. 27, 2014	Radiation (03CH01-SZ)
Amplifier	Yiai	AV3860B	04030	2GHz~26.5GH z	Mar. 28, 2013	Jun. 22, 2013	Mar. 27, 2014	Radiation (03CH01-SZ)
SHF-EHF-Hor	Schwarzbeck	BBHA9170	BBHA91702 49	14Ghz~40Ghz	Nov. 23, 2012	Jun. 22, 2013	Nov. 22, 2013	Radiation (03CH01-SZ)
Loop Antenna	R&S	HFH2-Z2	100321	9KHZ-30MHZ	Oct. 22, 2012	Jun. 22, 2013	Oct. 21, 2013	Radiation (03CH01-SZ)
Turn Table	EM Electronice	EM 1000	N/A	0 ~ 360 degree	N/A	Jun. 22, 2013	N/A	Radiation (03CH01-SZ)
Antenna Mast	EM Electronice	EM 1000	N/A	1 m - 4 m	N/A	Jun. 22, 2013	N/A	Radiation (03CH01-SZ)

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5. Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of	2.26
Confidence of 95% (U = 2Uc(y))	2.20

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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 95% ($U = 2UC(y)$)	

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	4.72
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Appendix A. Photographs of EUT

Please refer to Sporton report number EP361702 as below.

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