

Report No.: FC360409

FCC Test Report

APPLICANT : CT Asia

Quad-band/GPRS/GSM Mobile Phone EQUIPMENT

: BLU BRAND NAME

MODEL NAME : Samba TV, Samba W **FCC ID** : YHLBLUSAMBATV

STANDARD : FCC 47 CFR FCC Part 15 Subpart B

CLASSIFICATION : Certification

The product was received on Jun. 04, 2013 and completely tested on Jun. 19, 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
FC360409	Rev. 01	Initial issue of report	Jul. 03, 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	5.20 dB at
					2.160 MHz
					Under limit
3.2	15.109	Radiated Emission	< 15.109 limits	PASS	3.17 dB at
					551.860 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.

Unit804, 8th Floor Desay Tech Building Gaoxin Road South, Nanshan District Shenzhen, China

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1.3. Feature of Equipment Under Test

	Product Feature
Equipment	Quad-band/GPRS/GSM Mobile Phone
Brand Name	BLU
Model Name	Samba TV, Samba W
FCC ID	YHLBLUSAMBATV
EUT supports Radios application	GSM/GPRS/WLAN 11bgn / Bluetooth 3.0
HW Version	V0.1
SW Version	BLU_Q170T_60A_V02_GENERIC
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 Specific	ication subjective to this standard
Tx Frequency	GSM850: 824.2 MHz ~ 848.8 MHz GSM1900: 1850.2 MHz ~ 1909.8MHz 802.11b/g/n: 2412 MHz ~ 2462 MHz Bluetooth: 2402 MHz ~ 2480 MHz GSM850: 869.2 MHz ~ 893.8 MHz
Rx Frequency Range	GSM1900: 1930.2 MHz ~ 1989.8 MHz 802.11b/g/n: 2412 MHz ~ 2462 MHz Bluetooth: 2402 MHz ~ 2480 MHz FM: 88 MHz ~ 108 MHz
Antenna Type	WWAN : PIFA Antenna WLAN : Monopole Antenna Bluetooth : Monopole Antenna
Type of Modulation	GSM: GMSK GPRS: GMSK 802.11b : DSSS (DBPSK / DQPSK / CCK) 802.11g/n : OFDM (BPSK / QPSK / 16QAM / 64QAM) Bluetooth 3.0 EDR : GFSK, π /4-DQPSK, 8-DPSK FM

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 INTERI	NATIONAL (SHENZI	HEN) 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- 332)-2398			
Took Cita No	Sporton Site No.		FCC/IC Registration No.		
Test Site No.	CO01-SZ 03CH01-SZ 831040/4086F-1		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)			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 + WLAN Idle + USB Cable (Charging from Adapter) + Camera <fig.1></fig.1>
AC Conducted	1/0	Mode 2: GSM1900 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter) + MP3 <fig.1></fig.1>
Emission	1/2	Mode 3: GSM850 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter) + FM Rx <fig.2></fig.2>
		Mode 4: GSM1900 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Data Link with Notebook) <fig.3></fig.3>
		Mode 1: GSM850 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter) + Camera <fig.1></fig.1>
Radiated	1/2	Mode 2: GSM1900 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter) + MP3 <fig.1></fig.1>
Emissions < 1GHz	1/2	Mode 3: GSM850 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter) + FM Rx <fig.2></fig.2>
		Mode 4: GSM1900 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Data Link with Notebook) <fig.3></fig.3>
Radiated Emissions ≥ 1GHz	2	Mode 1: GSM1900 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Data Link with Notebook) <fig.3></fig.3>

Remark:

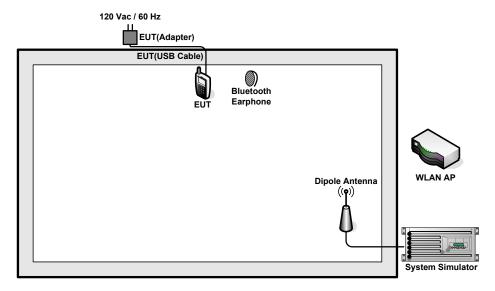
- The worst case of AC Conducted Emission is mode 3, and the USB Link Mode of AC Conducted Emission is mode 4; the test data of these modes are reported.
- 2. The worst case of RE < 1G is mode 4; only the test data of this mode is reported.
- 3. Link with Notebook means data application transferred mode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

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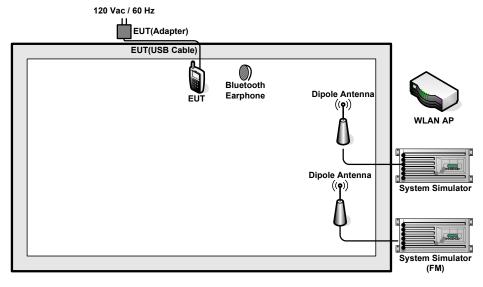


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2.2. Connection Diagram of Test System

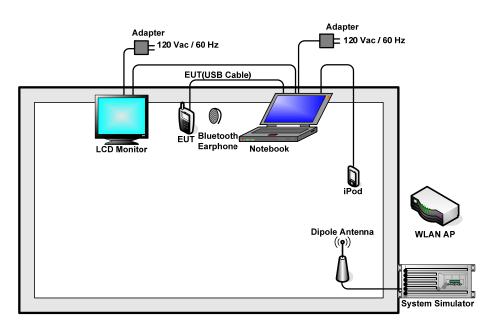


<Fig.1>



<Fig.2>

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<Fig.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(FM)	R&S	CMU 200	N/A	N/A	Unshielded, 1.8 m
2.	System Simulator	Agilent	E5515C	N/A	N/A	Unshielded, 1.8 m
3.	WLAN AP	D-Link	DIR-612	N/A	N/A	Unshielded, 1.8 m
4.	WLAN AP	D-Link	DIR-615	N/A	N/A	Unshielded, 1.8 m
5.	Bluetooth Earphone	Nokia	BH-108	N/A	N/A	N/A
6.	Notebook	DELL	P08S	FCC DoC	N/A	AC I/P: Unshielded, 1.8 m DC O/P: Shielded, 1.8 m
7.	Monitor	DELL	IN1940MWB	FCC DoC	Shielded, 1.2m	Unshielded, 1.8 m
8.	iPod	Apple	MC525 ZP/A	FCC DoC	Shielded, 1.0m	N/A

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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 or WLAN AP, and the following programs installed in the EUT were programmed during the test.

- 1. Execute the program, "Winthrax" under WIN 7 installed in notebook for files transfer with EUT via USB cable.
- 2. Execute "Music Player" to play MP3 file.
- 3. Turn on camera to capture images.
- 4. Turn on FM function to make the EUT receive continuous signals from system simulator (FM).

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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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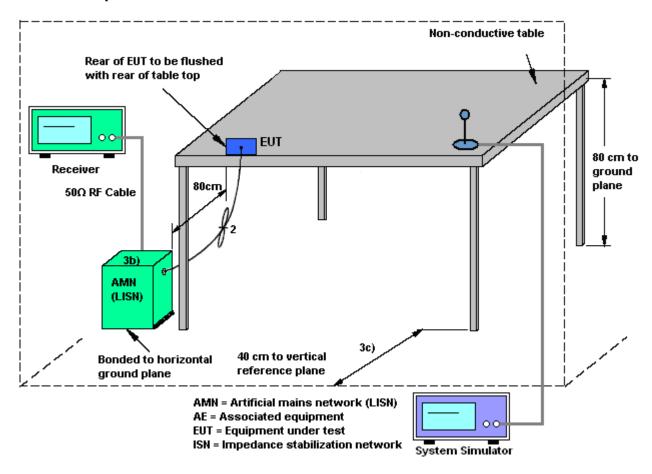
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3.1.4 Test Setup



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3.1.5 Test Result of AC Conducted Emission

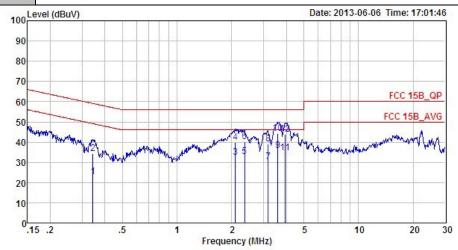
Test Mode :	Mode 3		Tem	peratui	re:	24~2	24~25℃			
Test Engineer :	Leo Liao 120Vac / 60Hz			Rela	tive Hu	ımidity :	48~4	48~49%		
Test Voltage :	120Vac /	120Vac / 60Hz GSM850 Idle + Bluetooth Id				Phase:				
Function Type :	GSM850 + FM Rx	ldle + E	Bluetooth	ı ldle + \	WLAN I	dle + US	B Cable	e (Charging	from /	
	Level (dBuV)					Da	te: 2013-0	6-06 Time: 17:04	1:59	
100										
90					9					
80										
70		-	7711		+			170,740	Tarih T	
60					9 0	0. 9	1000	FCC 15B_0	QP	
00	-							FCC 15B_AV	VG.	
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40	a halfra Stranger	4	man	Market Jack	5 5 5 W	Ma				
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201										
20										
10										
10										
10	15 .2	.5	1		2 ancy (MHz)	5	10	20	30	
10 0			1		2 ency (MHz)	7.5.	10	20	30	
10 0 Site Conditi	15 .2 : COO1-S on: FCC 15 : (FC) 3 : Mode 3	Z B_QP LI 60409		Frequ	ency (MHz)	7.5.	10	20	30	
5ite Conditi Project	: CO01-S on: FCC 15 : (FC) 3	Z B_QP LI 60409	SN_L_2000	Frequ	ency (MHz))		20	30	
5ite Conditi Project	: CO01-S on: FCC 15 : (FC) 3 : Mode 3	Z B_QP LI 60409	SN_L_2000	Frequ 0601 LIN Dimit	ency (MHz) E Read)	Cable	20 Remark	30	
5ite Conditi Project	: CO01-S on: FCC 15 : (FC) 3 : Mode 3	Z B_QP LI 60409	SN_L_2000	Frequ 0601 LIN Dimit	ency (MHz) E Read	LISN	Cable		30	
5ite Conditi Project	: CO01-S on: FCC 15 : (FC) 3 : Mode 3	Z B_QP LI 60409 Level	SN_L_2000 Over Limit	Frequ Description Limit Line dBuV	Read Level	LISN Factor	Cable Loss dB		30	
Site Conditi Project Mode	: CO01-S on: FCC 15 : (FC) 3 : Mode 3 Freq MHz	Z B_QP LI 60409 Level dBuV 37.09	Over Limit	Frequi Description of the Limit Line dBuV d9.22	Read Level	LISN Factor dB	Cable Loss dB	Remark Average	30	
Site Conditi Project Mode	: CO01-S on: FCC 15 : (FC) 3 : Mode 3 Freq MHz	Z B_QP LI 60409 Level dBuV 37.09 41.79	Over Limit dB	Frequence of the Limit Line dBuV 49.22 59.22	Read Level dBuV	LISN Factor dB 0.02 0.02	Cable Loss dB 10.07 10.07	Remark Average	30	
Site Conditi Project Mode	: CO01-S on: FCC 15 : (FC) 3 : Mode 3 Freq MHz 0.34 0.34	Z B_QP LI 60409 Level dBuV 37.09 41.79 35.57	Over Limit dB -12.13 -17.43	Frequence of the Limit Line dBuV 49.22 59.22	Read Level dBuV 27.00 31.70 25.40	LISN Factor dB 0.02 0.02	Cable Loss dB 10.07 10.07	Remark Average QP Average	30	
Site Conditi Project Mode	: CO01-S on: FCC 15 : (FC) 3 : Mode 3 Freq MHz 0.34 0.34 1.79	Z B_QP LI 60409 Level dBuV 37.09 41.79 35.57	Over Limit dB -12.13 -17.43 -10.43	Frequence	Read Level dBuV 27.00 31.70 25.40 30.10	LISN Factor dB 0.02 0.02 0.03 0.03	Cable Loss dB 10.07 10.07 10.14 10.14	Remark Average QP Average	30	
Site Conditi Project Mode	: CO01-S on: FCC 15 : (FC) 3 : Mode 3 Freq MHz 0.34 0.34 1.79 1.79 2.16 2.16	Z B_QP LI 60409 Level dBuV 37.09 41.79 35.57 40.27 40.80 45.40	Over Limit dB -12.13 -17.43 -10.43 -15.73	Limit Line dBuV 49.22 59.22 46.00 56.00 46.00	Read Level dBuV 27.00 31.70 25.40 30.10	LISN Factor dB 0.02 0.03 0.03 0.04	Cable Loss dB 10.07 10.07 10.14 10.14	Remark Average QP Average QP Average	30	
Site Conditi Project Mode	: CO01-S on: FCC 15 : (FC) 3 : Mode 3 Freq MHz 0.34 0.34 1.79 1.79 2.16 2.16	Z B_QP LI 60409 Level dBuV 37.09 41.79 35.57 40.27 40.80	Over Limit dB -12.13 -17.43 -10.43 -15.73 -5.20	Limit Line dBuV 49.22 59.22 46.00 56.00 46.00	Read Level dBuV 27.00 31.70 25.40 30.10 30.60 35.20	LISN Factor dB 0.02 0.02 0.03 0.03 0.04 0.04 0.04	Cable Loss dB 10.07 10.14 10.14 10.16 10.16	Remark Average QP Average QP Average QP Average	30	
Site Conditi Project Mode	: CO01-S on: FCC 15 : (FC) 3 : Mode 3 Freq MHz 0.34 0.34 1.79 1.79 2.16 2.16 2.32 2.32	Z B_QP LI 60409 Level dBuV 37.09 41.79 35.57 40.27 40.80 45.40 37.31 42.01	Over Limit dB -12.13 -17.43 -10.43 -5.20 -10.60 -8.69 -13.99	D601 LINI Limit Line dBuV 49.22 59.22 46.00 56.00 46.00 56.00 56.00	Read Level dBuV 27.00 31.70 25.40 30.10 30.60 35.20 27.10 31.80	LISN Factor dB 0.02 0.02 0.03 0.03 0.04 0.04 0.04 0.04 0.04	Cable Loss dB 10.07 10.14 10.14 10.16 10.16 10.17	Remark Average QP Average QP Average QP Average QP Average QP	30	
Site Conditi Project Mode 1 2 3 4 5 * 6 7 8 9	: CO01-S on: FCC 15 : (FC) 3 : Mode 3 Freq MHz 0.34 0.34 1.79 1.79 2.16 2.16 2.32 2.32 3.66	Z B_QP LI 60409 Level dBuV 37.09 41.79 35.57 40.80 45.40 37.31 42.01 28.24	Over Limit dB -12.13 -17.43 -10.43 -5.20 -10.60 -8.69 -13.99 -17.76	dBuV 49.22 59.22 46.00 56.00 46.00 56.00 46.00	Read Level dBuV 27.00 31.70 25.40 30.10 30.60 35.20 27.10 31.80 18.00	LISN Factor dB 0.02 0.02 0.03 0.03 0.04 0.04 0.04 0.04 0.05	Cable Loss dB 10.07 10.07 10.14 10.16 10.16 10.17 10.17	Remark Average QP Average QP Average QP Average QP Average QP Average	30	
Site Conditi Project Mode 1 2 3 4 5 7 8 9 10	: CO01-S on: FCC 15 : (FC) 3 : Mode 3 Freq MHz 0.34 0.34 1.79 1.79 2.16 2.16 2.32 2.32 3.66 3.66	Z B_QP LI 60409 Level dBuV 37.09 41.79 35.57 40.80 45.40 37.31 42.01 28.24 37.74	Over Limit dB -12.13 -17.43 -10.43 -15.73 -5.20 -10.60 -8.69 -13.99 -17.76 -18.26	Description of the control of the co	Read Level dBuV 27.00 31.70 25.40 30.60 35.20 27.10 31.80 18.00 27.50	LISN Factor dB 0.02 0.02 0.03 0.04 0.04 0.04 0.04 0.05 0.05	Cable Loss dB 10.07 10.07 10.14 10.16 10.16 10.17 10.17 10.19 10.19	Remark Average QP Average QP Average QP Average QP Average QP	30	
Site Conditi Project Mode 1 2 3 4 5 * 6 7 8 9	: CO01-S on: FCC 15 : (FC) 3 : Mode 3 Freq MHz 0.34 0.34 1.79 1.79 2.16 2.16 2.32 2.32 3.66 3.66 4.11	Z B_QP LI 60409 Level dBuV 37.09 41.79 35.57 40.27 40.80 45.40 37.31 42.01 28.24 37.74 29.45	Over Limit dB -12.13 -17.43 -10.43 -5.20 -10.60 -8.69 -13.99 -17.76	Description of the control of the co	Read Level dBuV 27.00 31.70 25.40 30.60 35.20 27.10 31.80 18.00 27.50 19.20	LISN Factor dB 0.02 0.02 0.03 0.03 0.04 0.04 0.04 0.04 0.05 0.05 0.06	Cable Loss dB 10.07 10.07 10.14 10.16 10.16 10.17 10.17 10.19 10.19	Remark Average QP Average QP Average QP Average QP Average QP Average	30	

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24~25℃ Test Mode: Mode 3 Temperature : Relative Humidity: 48~49% Test Engineer: Leo Liao Phase: Test Voltage : 120Vac / 60Hz Neutral GSM850 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Charging from Adapter)

Function Type: + FM Rx



: CO01-SZ

Condition: FCC 15B_QP LISN_N_2000601 NEUTRAL

Project : (FC) 360409 Mode : Mode 3 Mode

		Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	-	MHz	dBuV	— dB	dBuV	dBuV	dB	dB	-
1		0.34	22.99	-26.10	49.09	12.90	0.02	10.07	Average
2		0.34	34.39	-24.70	59.09	24.30	0.02	10.07	QP
3		2.10	32.39	-13.61	46.00	22.20	0.03	10.16	Average
4		2.10	39.99	-16.01	56.00	29.80	0.03	10.16	QP
5		2.36	32.91	-13.09	46.00	22.70	0.04	10.17	Average
6		2.36	40.31	-15.69	56.00	30.10	0.04	10.17	QP
7		3.17	30.24	-15.76	46.00	20.00	0.05	10.19	Average
8		3.17	39.04	-16.96	56.00	28.80	0.05	10.19	QP
9	*	3.60	35.65	-10.35	46.00	25.40	0.06	10.19	Average
10		3.60	44.45	-11.55	56.00	34.20	0.06	10.19	QP
11		3.94	34.55	-11.45	46.00	24.30	0.06	10.19	Average
12		3.94	44.05	-11.95	56.00	33.80	0.06	10.19	QP

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Test Mode :	Mode 4			Ter	nperatu	ire :	24~25 ℃				
Test Engineer :	Leo Liao			Rel	Relative Humidity :			48~49%			
Test Voltage :	120Vac / 60Hz			Pha	Phase:			Line			
Function Type :	GSM190 Noteboo		+ Bluet	ooth Id	le + W	LAN Idle	+ US	SB Cable	(Data	Link	with
100L	evel (dBuV)				7	Dat	te: 2013-0	6-06 Time: 17:	34:41		
90	p 4				4 0						
80											
70											
	-							FCC 15E	3_QP		
60	Thurston							FCC 15B_	AVG		
50	3 5 7917	Married Marrie						100 130_	Avo		
40		M.				JAN.	4,540	A THOUSE	100		
30		. Manhy	Many de proprie	Hydrolly Branch Blands	had a house had a	Markey Sharrath	water of	Manage Market V	V 40		
20											
10					3 0		- 0.100				
0.1	5 .2	.5	1		2	5	10	20	30		
				Frequ	ency (MHz						
	: CO01-S n: FCC 15 : (FC) 3	B_QP LI	SN_L_2000	0601 LIN	E						
Mode	: Mode 4										
			Over	Limit	Read	LISN	Cable				
	Freq	Level	Limit	Line	Level	Factor	Loss	Remark			
-	MHz	dBu∇	dB	dBu∀	dBuV	dB	dB	-			
1	0.17	47.48	-7.73	55.21	37.40	0.03	10.05	Average			
2	0.17	55.88	-9.33	65.21	45.80	0.03	10.05				
3	0.18	42.08	-12.29	54.37	32.00			Average			
4	0.18	52.58	-11.79	64.37	42.50	0.03	10.05				
5	0.21	43.48	-9.92	53.40	33.40	0.02	10.06	Average			
6	0.21	51.48		63.40			10.06	7.7			
7		42.09	-9.33		32.01			Average			
8			-11.53				10.06	A STATE OF THE PARTY OF THE PAR			
9		42.88	-8.10					Average			
10	0.27	49.08	-11.90	60.98	39.00		10.06	A CONTRACTOR OF THE PARTY OF TH			
11 *		42.99						Average			
12			-13.63								

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Test Mode :	Mode 4			Ten	Temperature : 24~25			25℃			
Test Engineer :	Leo Liao			Rel	Relative Humidity :			48~49%			
Test Voltage :	120Vac / 60Hz			Pha	Phase :			Neutral			
Function Type :	Noteboo		+ Bluet	ooth Id	e + W	LAN Idle	+ US	SB Cable (I	Data L	₋ink	with
100L	evel (dBuV)					Dat	e: 2013-0	6-06 Time: 17:27	7:45		
90		40. 40					P 100000				
275											
80											
70								manual figure			
60	Ma					0 1		FCC 15B_0	QP.		
50		2						FCC 15B_AV	VG		
	1 W 1 W	1 de la									
40		ALL WAY	Made have	My Lyberray warm	al-ample and	Market San	an work	Margaret Mar	W		
30			, , althou				1		-		
20		-									
10		4 4			3 0	0 0	- E. (175) EO)				
0.1	5 .2	.5	1		2 ency (MHz	5	10	20	30		
	: CO01-S on: FCC 15 : (FC) 3 : Mode 4	B_QP LI	SN_N_2000								
			Over	Limit	Read	LISN	Cable				
	Freq	Level	Limit	Line	Level	Factor	Loss	Remark			
_	MHz	dBuV	dB	dBuV	dBuV	dB	dB		<u></u>		
1	0.19	38.87	-15.24	54.11	28.80	0.02	10.05	Average			
2			-11.84				10.05				
3 *			-7.19					Average			
4 5		45.77	-10.09 -7.68	63.76 53.45			10.06	Average			
6		53.67	-9.78				10.06				
7								Average			
8						0.02					
9		42.68	-8.30					Average			
10						0.02					
11 12			-10.17 -12.27	49.75			10.07	Average			
12	0.32	17.10	12.21	55.15	57.35	0.02	10.07	×			

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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	Field Strength	Measurement Distance
(MHz)	(microvolts/meter)	(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.
- 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 (dBuV/m) = 20 log Emission level (uV/m)
- 9. Corrected Reading: Antenna Factor + Cable Loss + Read Level Preamp Factor = Level

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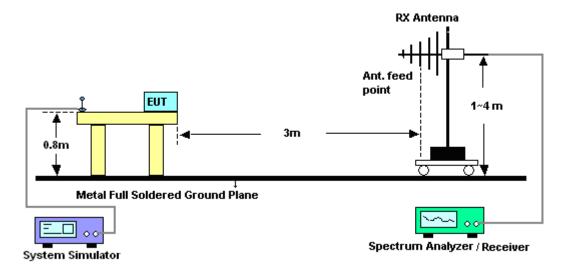
Report No.: FC360409



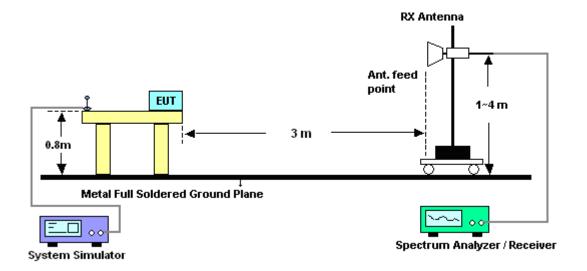
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3.2.4. Test Setup of Radiated Emission

For radiated emissions from 30MHz to 1GHz



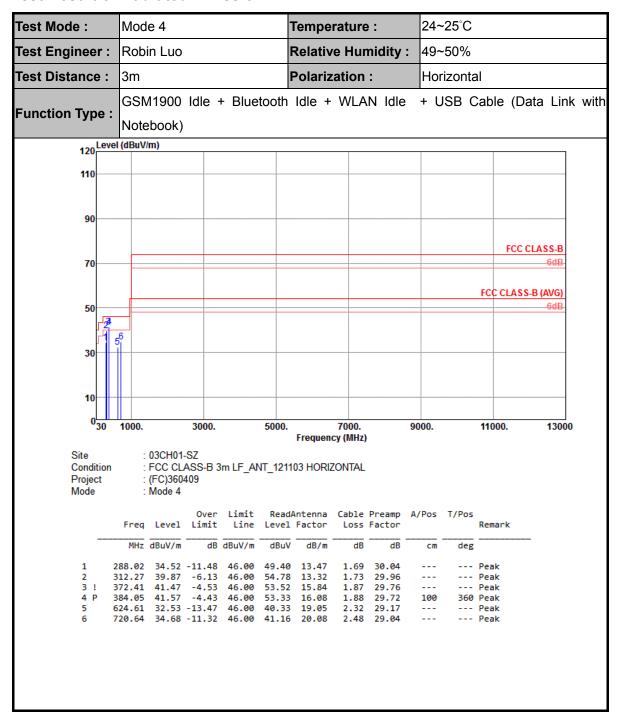
For radiated emissions above 1GHz



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3.2.5. Test Result of Radiated Emission



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24~25°C Test Mode: Mode 4 Temperature : **Relative Humidity:** 49~50% Test Engineer: Robin Luo Polarization: Test Distance: 3m Vertical GSM1900 Idle + Bluetooth Idle + WLAN Idle + USB Cable (Data Link with Function Type: Notebook) 120 Level (dBuV/m) 110 90 FCC CLASS-B 70 FCC CLASS-B (AVG) -6dB 50 30 10 0<mark>30</mark> 3000. 7000. 9000. 11000. 13000 1000. 5000. Frequency (MHz) : 03CH01-SZ Site : FCC CLASS-B 3m LF_ANT_121103 VERTICAL Condition Project : (FC)360409 Mode : Mode 4 Over Limit ReadAntenna Cable Preamp A/Pos T/Pos Freq Level Limit Line Level Factor Loss Factor Remark dB dBuV/m dBuV dB/m MHz dBuV/m dB dB deg cm 169.68 28.91 -14.59 43.50 48.27 --- Peak --- Peak --- Peak 2 288.02 33.57 -12.43 46.00 48.45 13.47 1.69 30.04 ---371.44 37.05 -8.95 46.00 49.15 15.80 551.86 42.83 -3.17 46.00 51.03 18.84 564.47 38.24 -7.76 46.00 46.60 18.66 1.86 29.76 2.22 29.26 3 4 P 320 Peak 100 2.23 29.25 --- Peak

624.61 32.36 -13.64 46.00 40.16 19.05

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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	Jun. 06, 2013	Mar. 27, 2014	Conduction (CO01-SZ)
AC LISN	EMCO	3816/2SH	00103912	9kHz~30MHz	Mar. 28, 2013	Jun. 06, 2013	Mar. 27, 2014	Conduction (CO01-SZ)
AC LISN	EMCO	3816/2SH	00103892	9kHz~30MHz	Mar. 28, 2013	Jun. 06, 2013	Mar. 27, 2014	Conduction (CO01-SZ)
AC Power Source	Chroma	61602	61602000 0891	N/A	Nov. 20, 2012	Jun. 06, 2013	Nov. 19, 2013	Conduction (CO01-SZ)
AC Filter	ETS-LINDGR EN	LRE-2030/PEN 256260	00093783	N/A	N/A	Jun. 06, 2013	N/A	Conduction (CO01-SZ)
AC Filter	ETS-LINDGR EN	LRE-2030/PEN 256260	00097973	N/A	N/A	Jun. 06, 2013	N/A	Conduction (CO01-SZ)
ESCI TEST Receiver	R&S	ESCI	100724	9kHz~3GHz	Mar. 28, 2013	Jun. 19, 2013	Mar. 27, 2014	Radiation (03CH01-SZ)
Spectrum Analyzer	R&S	FSP30	101362	9kHz~30GHz	Oct. 11, 2012	Jun. 19, 2013	Oct. 10, 2013	Radiation (03CH01-SZ)
Double Ridge Horn Antenna	ETS Lindgren	3117	00119436	1GHz~18GHz	Oct. 12, 2012	Jun. 19, 2013	Oct. 11, 2013	Radiation (03CH01-SZ)
Bilog Antenna	SCHAFFNER	CBL6112B	2614	30MHz~2GHz	Nov. 03, 2012	Jun. 19, 2013	Nov. 02, 2013	Radiation (03CH01-SZ)
Amplifier	ADVANTEST	BB525C	E9007003	9kHz~3000MHz GAIN 30db	Mar. 28, 2013	Jun. 19, 2013	Mar. 27, 2014	Radiation (03CH01-SZ)
Amplifier	Yiai	AV3860B	04030	2GHz~26.5GHz	Mar. 28, 2013	Jun. 19, 2013	Mar. 27, 2014	Radiation (03CH01-SZ)
SHF-EHF -Horn	Schwarzbeck	BBHA9170	BBHA9170 249	14GHz~40GHz	Nov. 23, 2012	Jun. 19, 2013	Nov. 22, 2013	Radiation (03CH01-SZ)
Turn Table	EM Electronic	EM 1000	N/A	0~360degree	N/A	Jun. 19, 2013	N/A	Radiation (03CH01-SZ)
Antenna Mast	EM Electronic	EM 1000	N/A	1m~4m	N/A	Jun. 19, 2013	N/A	Radiation (03CH01-SZ)

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5. Uncertainty of Evaluation

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

Managerina Unacetainty for a Lavel of	
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
20111acrice 01 00 /0 (3 200(y))	

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Appendix A. Photographs of EUT

Please refer to Sporton report number EP360409 as below.

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