

FCC PART15B Test Report

For
LTT Card Services, INC

GSM mobile phone
Model No.: X3
FCC ID :XUMPREX3
Test Report Number : EST0910-202-F



EST COMPLIANCE LABORATORY LIMITED

6/F, 207 Building, Nanyou No. 2 Industrial Park, Dengliang Road
Nanshan District, Shenzhen 518053, China
Tel:+86-755-26648640 Fax:+86-755-26648637

1. GENERAL INFORMATION

1.1 Product Description for Equipment Under Test (EUT)

Client Information

Applicant: LTT Card Services, INC
Address of applicant: PO Box 194625 San Juan, Puerto Rico 00919-4625, United States.
Manufacturer: General Electric Communication Limited
Address of Manufacturer: Unit 1017, Tian An Cyber Times Tower A, Futian District, Shenzhen, China

General Description of E.U.T

EUT Description: GSM mobile phone
Trade Name: Premier
Model No.: X3
Rating: 3.7-4.2V /1.5-300mAh DC re-chargeable battery
Test Power Supply: DC 5.0V,550mA by AC/ DC power adapter, Adapter input 100-240V AC 50/60Hz

1.2 Test Standards

The following Declaration of Conformity report of EUT is prepared in accordance with FCC PART 15, SUBPART B, CLASS B (2008)

The objective of the manufacturer is to demonstrate compliance with the described standards above.

Date of Test :

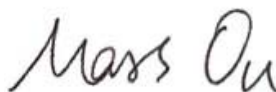
Oct. 23~27, 2009

Prepared by :



(Engineer)

Reviewer :



(Project Manager)

Approved & Authorized Signer :



(Manager)

Test Summary

Test	Test Requirement	Test Method	Class / Severity	Result
Radiated Emission (30MHz to 1GHz)\$	FCC PART 15, SUBPART B: 2008	ANSI C63.4:2003	Class B	PASS*
Conducted Emission (150KHz to 30MHz)	FCC PART 15, SUBPART B: 2008	ANSI C63.4:2003	Class B	PASS

Contents

	Page
1. GENERAL INFORMATION	2
2 GENERAL INFORMATION	5
2.1 GENERAL DESCRIPTION OF E.U.T.....	5
2.2 DETAILS OF E.U.T.	5
2.3 DESCRIPTION OF SUPPORT UNITS	5
2.4 STANDARDS APPLICABLE FOR TESTING.....	5
2.5 TEST LOCATION.....	5
2.6 TEST FACILITY.....	6
2.7 DEVIATION FROM STANDARDS	6
2.8 ABNORMALITIES FROM STANDARD CONDITIONS	6
3 EQUIPMENTS USED DURING TEST	7
4 TEST RESULTS	8
4.1 CONDUCTED EMISSIONS MAINS TERMINALS, 150kHz TO 30MHz	8
4.1.1 <i>E.U.T. Operation</i>	8
4.1.2 <i>Measurement Data</i>	8
4.2 RADIATED EMISSIONS, 30MHz TO 1GHz	13
4.2.1 <i>E.U.T. Operation</i>	13
4.2.2 <i>Measurement Data</i>	13
5 PHOTOGRAPHS.....	16
5.1 CONDUCTED EMISSION TEST SETUP	16
5.2 RADIATED EMISSION TEST SETUP.....	16
5.3 EUT CONSTRUCTIONAL DETAILS	17

2 General Information

2.1 General Description of E.U.T.

EUT Name: GSM mobile phone
Item No.: X3

2.2 Details of E.U.T.

Power Supply: DC 5.0V,550mA by AC/ DC power adapter, Adapter input 100-240V AC 50/60Hz
Power Cord: Length of USB cable:100cm*1 shield
Length of DC cable:100cm*1 unshield
Length of earphone cable:120cm*2 unshield

2.3 Description of Support Units

The EUT has been tested with associated equipment below.

Description	Manufacturer	Model No.
PC (RE)	DELL	OPTIPLEX 755
LCD-displaying	DELL	E1909WF
KEYBOARD	DELL	SK-8115
MOUSE	DELL	MOC5110
PC (CE)	DELL	OPTIDLEX 330
LCD-displaying	DELL	SP2208WFPT
KEYBOARD	DELL	SK-8115
MOUSE	DELL	MOC5110

2.4 Standards Applicable for Testing

The customer requested FCC tests for GSM mobile phone
The standard used was FCC PART 15, SUBPART B, CLASS B.

2.5 Test Location

All tests were sub-contracted. at:
SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory,
No. 1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China. 518057.
Tel: +86 755 2601 2053 Fax: +86 755 2671 0594

2.6 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **NVLAP – Lab Code: 200611-0**
SGS-CSTC Standards Technical Services Co., Ltd., Guangzhou EMC Laboratory is recognized under the National Voluntary Laboratory Accreditation Program (NVLAP/NIST). NVLAP Code: 200611-0.
- **ACA**
SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory can also perform testing for the Australian C-Tick mark as a result of our NVLAP accreditation.
- **VCCI**
The 3m Semi-anechoic chamber and Shielded Room (7.5m x 4.0m x 3.0m) of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-2197 and C-2383 respectively.
Date of Registration: September 29, 2008. Valid until September 28, 2011
- **SGS UK(Certificate No.: 32), SGS-TUV SAARLAND and SGS-FIMKO**
Have approved SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory as a supplier of EMC TESTING SERVICES and SAFETY TESTING SERVICES
- **CNAS (No. CNAS L2929)**
CNAS has accredited SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch EMC Lab to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration Laboratories (CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing.
- **FCC – Registration No.: 556682**
SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration 556682, Aug. 04, 2005
- **Industry Canada (IC)**
The 3m Semi-anechoic chamber of SGS-CSTC Standards Technical Services Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 4620C-1.

2.7 Deviation from Standards

None.

2.8 Abnormalities from Standard Conditions

None.

3 Equipments Used during Test

Conducted Emission						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (dd-mm-yy)	Cal.Due date (dd-mm-yy)
1	Shielding Room	ZhongYu Electron	GB-88	SEL0042	N/A	N/A
2	LISN	ETS-LINDGREN	3816/2	SEL0021	18-06-2009	17-06-2010
3	ISN	Rohde & Schwarz	ENY 22 1109	EMC0114	18-06-2009	17-06-2010
4	ISN	Rohde & Schwarz	ENY 41 1110	EMC0115	18-06-2009	17-06-2010
5	EMI Test Receiver	Rohde & Schwarz	ESCI	SEL0022	18-06-2009	17-06-2010
6	Coaxial Cable	SGS	N/A	SEL0024	18-06-2009	17-06-2010

RE in Chamber						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (dd-mm-yy)	Cal.Due date (dd-mm-yy)
1	3m Semi-Anechoic Chamber	ETS-LINDGREN	N/A	SEL0017	16-06-2009	15-06-2010
2	EMI Test Receiver	Rohde & Schwarz	ESIB26	SEL0023	12-12-2009	11-12-2010
3	EMI Test software	AUDIX	E3	SEL0050	N/A	N/A
4	Coaxial cable	SGS	N/A	SEL0028	18-06-2009	17-06-2010
5	BiConiLog Antenna (26-3000MHz)	ETS-LINDGREN	3142C	SEL0014	12-08-2009	11-08-2010
6	Pre-amplifier (0.1-1300MHz)	Agilent Technologies	8447D	SEL0053	18-06-2009	17-06-2010
7	Double-ridged horn (1-18GHz)	ETS-LINDGREN	3117	SEL0005	12-08-2009	11-08-2010
8	Horn Antenna (18-26GHz)	ETS-LINDGREN	3160	SEL0076	12-08-2009	11-08-2010
9	Pre-amplifier (1-18GHz)	Rohde & Schwarz	AFS42-00101 800-25-S-42	SEL0081	18-06-2009	17-06-2010
10	Pre-amplifier (18-26GHz)	Rohde & Schwarz	AFS33- 18002650-30- 8P-44	SEL0080	18-06-2009	17-06-2010
11	Band filter	Amindeon	82346	SEL0094	18-06-2009	17-06-2010
12	Active Loop Antenna	Beijing Daze	ZN30900A	SEL0097	15-06-2009	14-06-2010

4 Test Results

4.1 Conducted Emissions Mains Terminals, 150kHz to 30MHz

Test Requirement:	FCC Part15 B
Test Method:	ANSI C63.4
Frequency Range:	150KHz to 30MHz
Class / Severity:	Class B
Detector:	Peak for pre-scan (9kHz Resolution Bandwidth) Quasi-Peak if maximised peak within 6dB of Quasi-Peak limit

4.1.1 E.U.T. Operation

Operating Environment:					
Temperature:	25.0 °C	Humidity:	55% RH	Atmospheric Pressure:	1015 Mbar
EUT Operation:	Test the EUT operation GSM mode (per test FM mode .communication with pc mode ,MP3/MP4 playing mode taking photo Mode idle mode no find the worse case.) conducted to preform to GSM mode. keep the EUT working with 850MHZ/1900MHZ,				

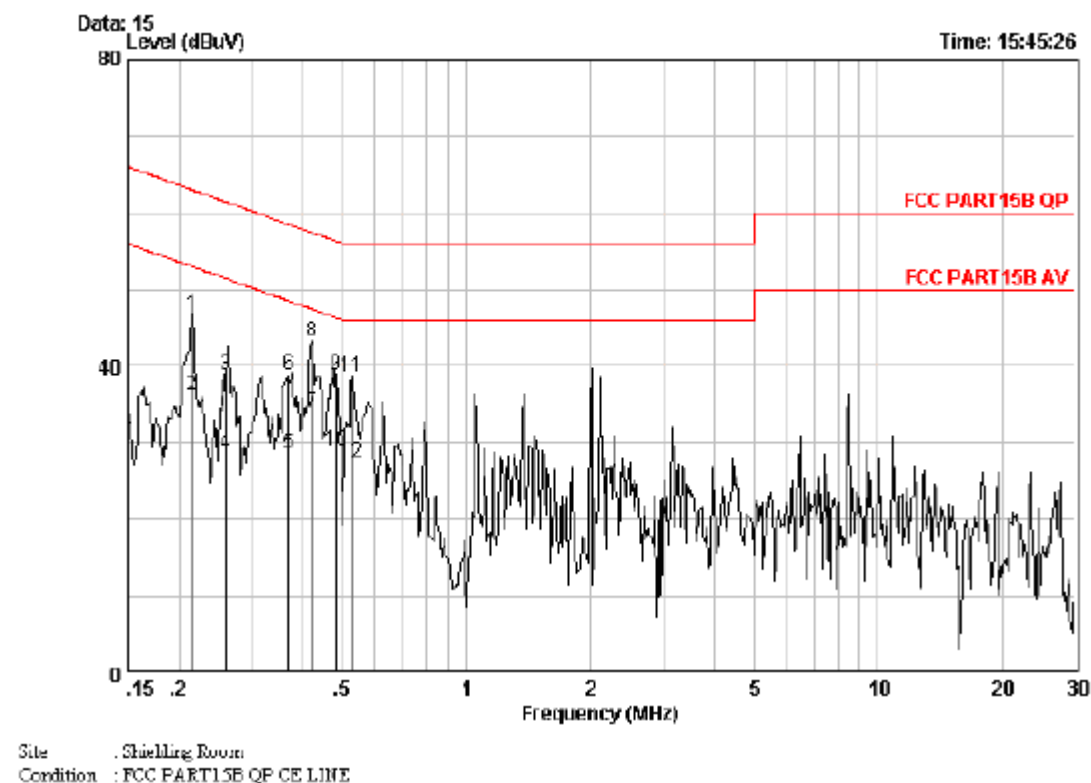
4.1.2 Measurement Data

An initial pre-scan was performed on the live and neutral lines with peak detector.

Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission were detected.

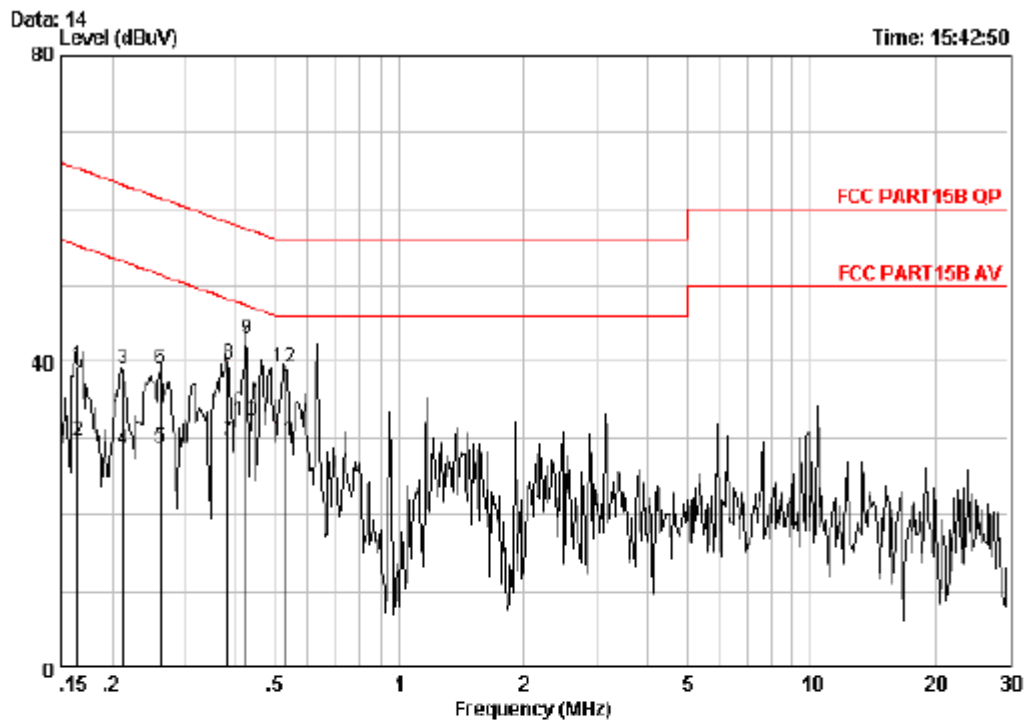
The following Quasi-Peak and Average measurements were performed on the EUT
850MHz charging with adapter

Live Line:



	Freq	Cable	LISN	Read	Limit	Over	
	MHz	Loss	Factor	Level	Line	Limit	Remark
		dB		dBuV	dBuV	dB	
1	0.21506	-0.08	-0.04	46.67	46.55	63.01	QE
2	0.21506	-0.08	-0.04	36.25	36.12	63.01	Average
3	0.26025	-0.04	-0.04	38.82	38.75	61.42	QE
4	0.26025	-0.04	-0.04	28.62	28.54	61.42	Average
5	0.36920	0.00	-0.04	28.69	28.65	58.52	Average
6	0.36920	0.00	-0.04	38.82	38.78	58.52	QE
7	0.42149	0.00	-0.04	34.12	34.08	57.42	Average
8	0.42149	0.00	-0.04	43.21	43.17	57.42	QE
9	0.48119	0.00	-0.04	38.74	38.69	56.32	QE
10	0.48119	0.00	-0.04	28.95	28.91	56.32	Average
11	0.52654	0.00	-0.04	38.60	38.56	56.00	QE
12	0.52654	0.00	-0.04	27.46	27.42	56.00	Average

Neutral Line: charging with adapter

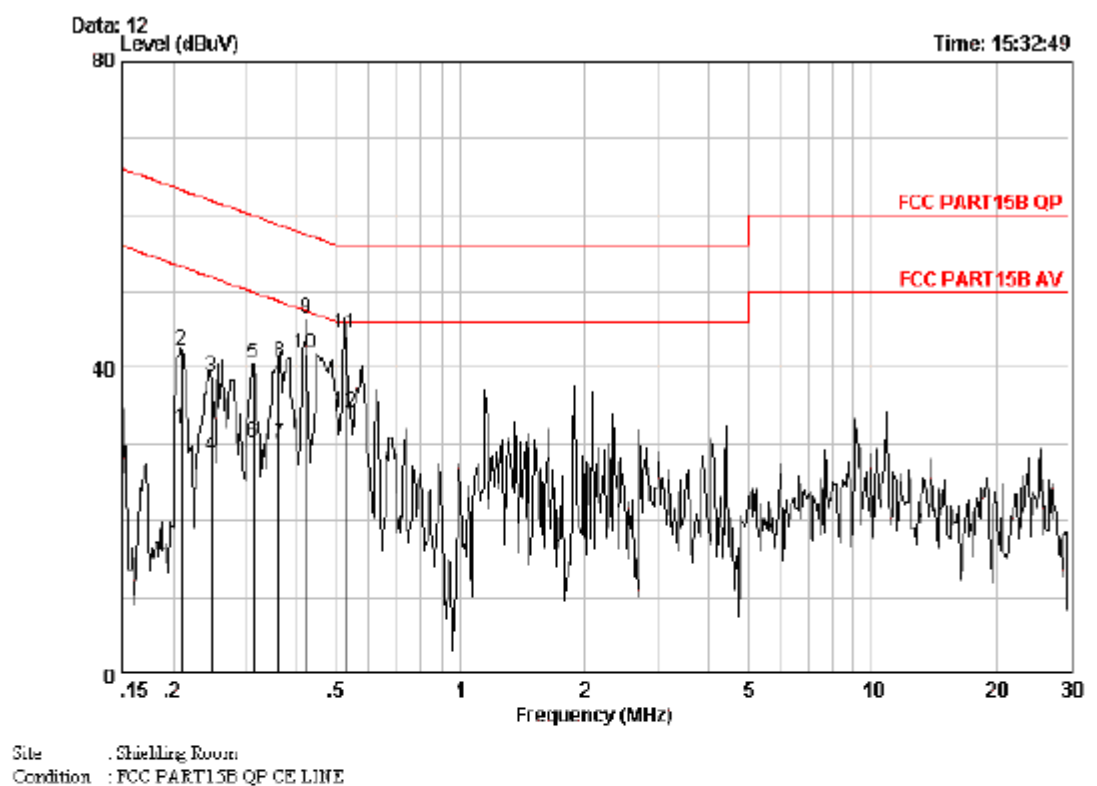


Site : Shielding Room
Condition : FCC PART 15B QP CE NEUTRAL

	Freq	Cable Loss	LISN Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB	dBuV	dBuV	dBuV	dB	
1	0.16501	-0.03	-0.04	39.46	39.38	65.21	-25.82	QP
2	0.16501	-0.03	-0.04	29.62	29.54	65.21	-35.66	Average
3	0.21279	-0.08	-0.04	39.15	39.02	63.10	-24.07	QP
4	0.21279	-0.08	-0.04	28.75	28.62	63.10	-34.47	Average
5	0.26164	-0.03	-0.04	28.89	28.82	61.38	-32.56	Average
6	0.26164	-0.03	-0.04	38.99	38.92	61.38	-22.46	QP
7	0.38315	0.00	-0.04	29.74	29.70	58.21	-28.51	Average
8	0.38315	0.00	-0.04	39.73	39.69	58.21	-18.52	QP
9	0.42373	0.00	-0.04	42.91	42.87	57.37	-14.50	QP
10	0.42373	0.00	-0.04	32.24	32.20	57.37	-25.17	Average
11	0.52654	0.00	-0.04	29.65	29.61	56.00	-26.39	Average
12	0.52654	0.00	-0.04	39.31	39.27	56.00	-16.73	QP

1900MHz charging with adapter

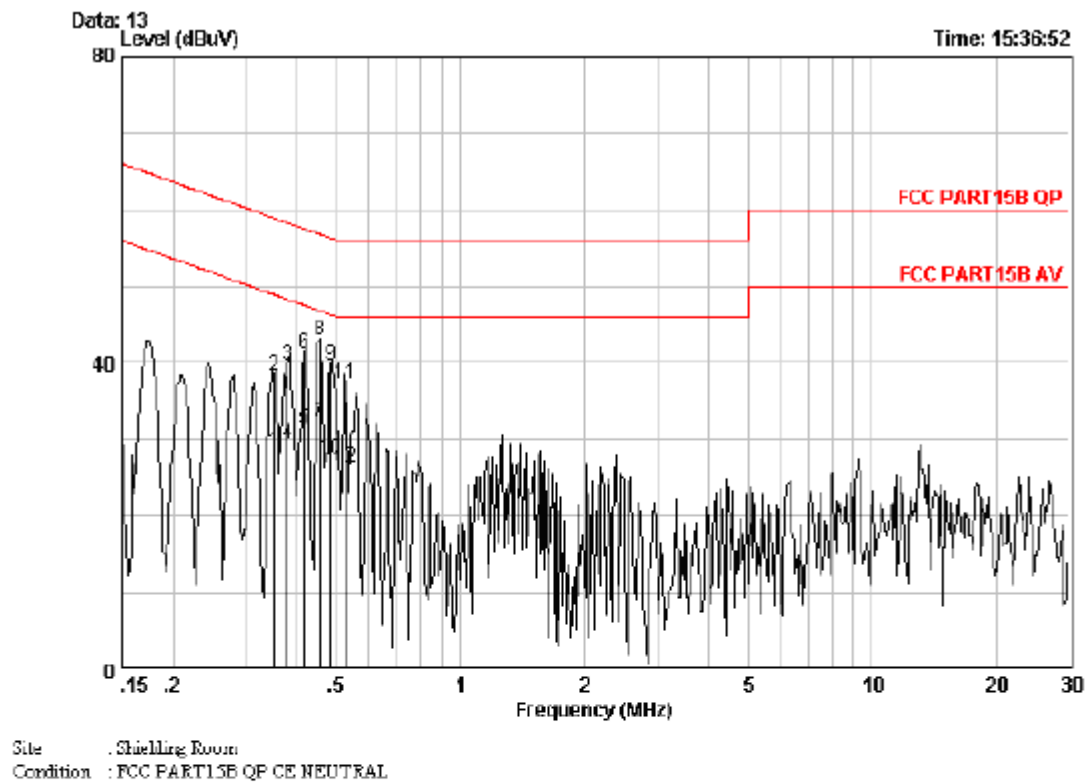
Live Line:



	Freq	Cable Loss	LISN Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB	dBuV	dBuV	dBuV	dB	
1	0.20944	-0.09	-0.04	32.26	32.13	63.23	-31.10	Averag
2	0.20944	-0.09	-0.04	42.34	42.20	63.23	-21.02	QP
3	0.24814	-0.05	-0.04	39.00	38.91	61.82	-22.91	QP
4	0.24814	-0.05	-0.04	28.64	28.55	61.82	-33.27	Averag
5	0.31328	0.00	-0.04	40.50	40.46	59.88	-19.43	QP
6	0.31328	0.00	-0.04	30.26	30.22	59.88	-29.66	Averag
7	0.36146	0.00	-0.04	30.13	30.09	58.69	-28.60	Averag
8	0.36146	0.00	-0.04	40.83	40.79	58.69	-17.91	QP
9 @	0.42100	0.00	-0.04	46.40	46.36	57.43	-11.07	QP
10	0.42100	0.00	-0.04	41.80	41.76	57.43	-15.67	Averag
11 @	0.52654	0.00	-0.04	44.42	44.38	56.00	-11.62	QP
12	0.52654	0.00	-0.04	34.21	34.17	56.00	-21.83	Averag

1900MHz charging with adapter

Neutral Line:



	Freq	Cable Loss	ISN Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB	dBuV	dBuV	dBuV	dB	
1	0.35201	0.00	-0.04	28.42	28.38	58.91	-30.53	Average
2	0.35201	0.00	-0.04	38.30	38.26	58.91	-20.65	QP
3	0.37912	0.00	-0.04	39.68	39.64	58.30	-18.66	QP
4	0.37912	0.00	-0.04	29.42	29.38	58.30	-28.92	Average
5	0.41705	0.00	-0.04	31.45	31.41	57.51	-26.10	Average
6	0.41705	0.00	-0.04	41.22	41.18	57.51	-16.32	QP
7	0.45395	0.00	-0.04	32.41	32.37	56.80	-24.43	Average
8 @	0.45395	0.00	-0.04	42.89	42.85	56.80	-13.95	QP
9	0.48375	0.00	-0.04	39.76	39.72	56.27	-16.55	QP
10	0.48375	0.00	-0.04	27.46	27.42	56.27	-28.85	Average
11	0.52376	0.00	-0.04	37.24	37.20	56.00	-18.80	QP
12	0.52376	0.00	-0.04	26.40	26.36	56.00	-29.64	Average

4.2 Radiated Emissions, 30MHz to 1GHz

Test Requirement:	FCC Part15 B
Test Method:	ANSI C63.4
Frequency Range:	30MHz to 1GHz
Measurement Distance:	3m
Class:	Class B
Limit:	40.0 dB μ V/m between 30MHz & 88MHz 43.5 dB μ V/m between 88MHz & 216MHz 46.0 dB μ V/m between 216MHz & 960MHz 54.0 dB μ V/m above 960MHz
Detector:	Peak for pre-scan (120kHz resolution bandwidth) Quasi-Peak if maximised peak within 6dB of limit

4.2.1 E.U.T. Operation

Operating Environment:			
Temperature:	22.0 °C	Humidity:	54% RH
		Atmospheric Pressure:	1015 mbar
EUT Operation:	Test the EUT operation GSM mode (pertest FM mode .communication with pc mode ,MP3/MP4 playing mode taking photo Mode idle mode no find the worse case.) conducted to preform to GSM mode. keep the EUT working with 850MHz/1900MHz,		

4.2.2 Measurement Data

An initial pre-scan was performed in the chamber using the spectrum analyser in peak detection mode. Quasi-peak measurements were conducted based on the peak sweep graph. The EUT was measured by Bilog antenna with 2 orthogonal polarities.

The following quasi-peak measurements were performed on the EUT

900MHz mode charging with adapter

Horizontal:

Frequency (MHz)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Factor (dB/m)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)
164.83	1.35	27.36	9.55	49.69	33.23	43.50	-10.27
292.87	1.87	26.75	13.58	54.30	43.00	46.00	-3.00
321.97	1.97	26.89	14.71	52.27	42.06	46.00	-3.94
440.31	2.37	27.54	16.71	51.21	42.75	46.00	-3.25
773.02	3.12	27.03	21.97	44.67	42.73	46.00	-3.27
886.51	3.56	26.50	23.09	42.68	42.83	46.00	-3.17

Vertical:

Frequency (MHz)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Factor (dB/m)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)
94.99	1.15	27.91	8.91	52.69	34.84	43.50	-8.66
322.94	1.98	26.90	14.76	49.49	39.33	46.00	-6.67
440.31	2.37	27.54	16.71	51.41	42.95	46.00	-3.05
497.54	2.59	27.70	17.80	50.19	42.88	46.00	-3.12
514.03	2.61	27.70	18.23	45.86	39.00	46.00	-7.00
773.02	3.12	27.03	21.97	44.65	42.71	46.00	-3.29

1800MHz mode charging with adapter

Horizontal:

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Quasi-peak Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)
97.900	1.18	9.02	27.89	29.51	11.82	43.50	-31.68
141.550	1.30	8.24	27.51	29.76	11.79	43.50	-31.71
188.110	1.38	10.06	27.22	31.00	15.22	43.50	-28.28
354.950	2.08	15.53	27.12	29.80	20.29	46.00	-25.71
673.110	2.85	21.40	27.37	34.07	30.95	46.00	-15.05
785.630	3.16	22.04	26.99	35.40	33.61	46.00	-12.39

Vertical

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Quasi-peak Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)
66.860	0.80	6.99	28.01	33.10	12.88	40.00	-27.12
109.540	1.23	8.62	27.78	33.56	15.63	43.50	-27.87
125.060	1.27	7.80	27.64	34.44	15.87	43.50	-27.63
246.310	1.66	12.19	26.93	28.94	15.86	46.00	-30.14
382.110	2.15	16.08	27.30	30.17	21.10	46.00	-24.90
591.630	2.69	19.57	27.63	29.88	24.51	46.00	-21.49

N/A: refer to remark 1).

Remark:

- 1). For this unintentional radiator operates above 1 GHz, the spectrum shall be investigated to the this unintentional radiator, the disturbance is very low. So the test result only displays to 1GHz

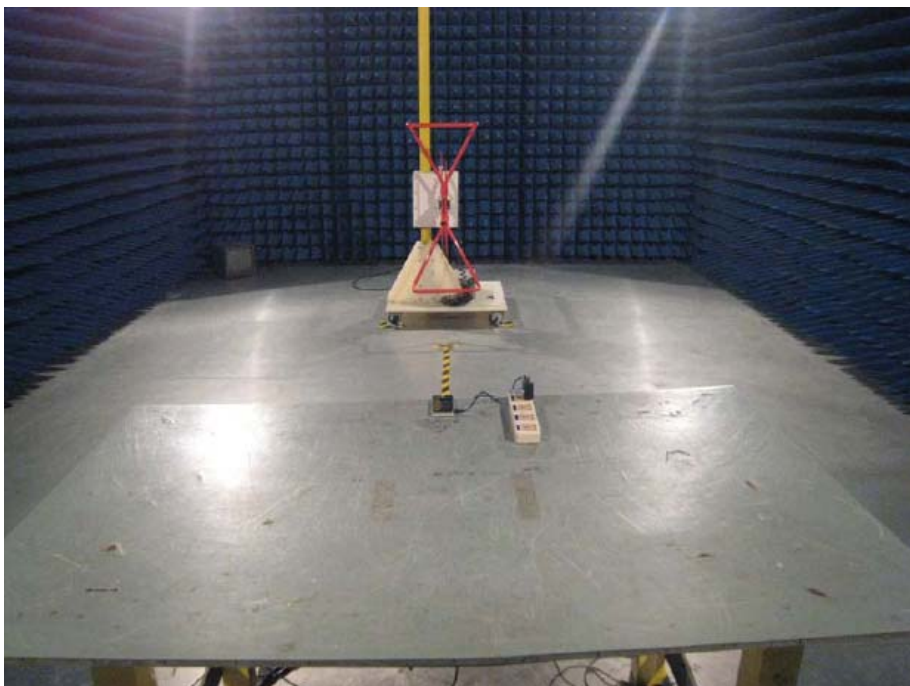
TEST RESULTS: The unit does meet the FCC requirements.

5 Photographs

5.1 Conducted Emission Test Setup



5.2 Radiated Emission Test Setup



5.3 EUT Constructional Details







