

FCC Part 15B Measurement and Test Report

For

XPX TECHNOLOGY CO., LTD

RM689B, HUAFA 411 Bldg. Huafa N. Road, Futian, Shenzhen, China

FCC ID: 2ADIZ-LIFE

Test Rule(s): FCC Part 15 Subpart B

Product Description: 3G Mobile phone

Tested Model: LIFE

Report No.: STR15068240I-4

Tested Date: 2015-06-29 to 2015-07-14

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Tested By: Vigoss Liang / Engineer

Reviewed By: Lahm Peng / EMC Manager

Approved & Authorized By: Jandy So / PSQ Manager

Prepared By:

Shenzhen SEM.Test Technology Co., Ltd.

1/F, Building A, Hongwei Industrial Park, Liuxian 2nd Road,
Bao'an District, Shenzhen, P.R.C. (518101)

Tel.: +86-755-33663308 Fax.: +86-755-33663309 Website: www.semtest.com.cn

Note: This test report is limited to the above client company and the product model only. It may not be duplicated without prior permitted by Shenzhen SEM.Test Technology Co., Ltd.

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1. GENERAL INFORMATION

1.1 Product Description for Equipment Under Test (EUT)

Client Information

Applicant: XPX TECHNOLOGY CO., LTD
Address of applicant: RM689B, HUAFA 411 Bldg. Huafa N. Road, Futian, Shenzhen, China
Manufacturer: XPX TECHNOLOGY CO., LTD
Address of manufacturer: Flat2, 2/F, Wah Wai industrial Building, 53-61 Pak Tin Par Street, Tsuen Wan, NT, HK

General Description of EUT	
Product Name:	3G Mobile phone
Trade Name:	LIFE,XPX,ZILO
Model No.:	LIFE
Adding Model(s):	L4, L5, X35LIFE, X40LIFE, L45, L55, L35
<i>Note: The test data is gathered from a production sample, provided by the manufacturer. The appearance of others models listed in the report is different from main-test model LIFE, but the circuit and the electronic construction do not change, declared by the manufacturer.</i>	

Technical Characteristics of EUT	
Rated Voltage:	AC120V/60Hz; Battery: DC 3.7V
Rated Current:	2A
Rated Power:	10W
Power Adapter Model:	XC20
	INPUT: AC100-240V 50/6Hz; OUTPUT: DC5V/2A
Lowest Internal Frequency:	32.768KHz
Highest Internal Frequency:	1.2GHz
Classification of ITE:	Class B

1.2 Test Standards

The following report is prepared on behalf of the XPX TECHNOLOGY CO., LTD in accordance with Part 2, Subpart J, and Part 15, Subparts A and B of the Federal Communication Commissions rules.

The objective is to determine compliance with FCC Part 15, Subpart B, and section 15.205, 15.107, and 15.109 rules.

Maintenance of compliance is the responsibility of the manufacturer. Any modification of the product, which result in lowering the emission, should be checked to ensure compliance has been maintained.

1.3 Test Methodology

All measurements contained in this report were conducted with ANSI C63.4-2009, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz.

1.4 Test Facility

FCC – Registration No.: 934118

Shenzhen SEM.Test Technology Co., Ltd. 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 and the Registration is 934118.

Industry Canada (IC) Registration No.: 11464A

The 3m Semi-anechoic chamber of Shenzhen SEM.Test Technology Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 11464A.

CNAS Registration No.: L4062

Shenzhen SEM.Test Technology Co., Ltd. is a testing organization accredited by China National Accreditation Service for Conformity Assessment (CNAS) according to ISO/IEC 17025. The accreditation certificate number is L4062. All measurement facilities used to collect the measurement data are located at 1/F, Building A, Hongwei Industrial Park, Liuxian 2nd Road, Bao'an District, Shenzhen, P.R.C (518101).

1.5 EUT Setup and Operation Mode

The equipment under test (EUT) was configured to measure its highest possible emission level. The test modes were adapted according to the operation manual for use, more detailed description as follows:

Test Mode List:

Test Mode	Description	Remark
TM1	Charging + Playing	/
TM2	Downloading	/
TM3	Charging + Camera	/

EUT Cable List and Details

Cable Description	Length (M)	Shielded/Unshielded	With Core/Without Core
Earphone Cable	1.0	Unshielded	Without Core
USB Cable	0.4	Shielded	Without Core

Auxiliary Equipment List and Details

Description	Manufacturer	Model	Serial Number
Notebook	Lenovo	E10	LR-63C8R
TF Card	/	1G	/

Special Cable List and Details

Cable Description	Length (M)	Shielded/Unshielded	With Core/Without Core
/	/	/	/

1.6 Test Equipment List and Details

Description	Manufacturer	Model	Serial Number	Due. Date
Spectrum Analyzer	Agilent	E4407B	MY41440400	2016-06-16
Spectrum Analyzer	Rohde & Schwarz	FSP	836079/035	2016-06-16
EMI Test Receiver	Rohde & Schwarz	ESVB	825471/005	2016-06-16
Amplifier	Agilent	8447F	3113A06717	2016-06-16
Amplifier	C&D	PAP-1G18	2002	2016-06-16
Broadband Antenna	Schwarz beck	VULB9163	9163-333	2016-06-16
Horn Antenna	ETS	3117	00086197	2016-06-16
Loop Antenna	Schwarz beck	FMZB 1516	9773	2016-06-16
Attenuator	ATTEN	ATS100-4-20	/	2016-06-16
EMI Test Receiver	Rohde & Schwarz	ESPI	101611	2016-06-16
L.I.S.N	Schwarz beck	NSLK8126	8126-224	2016-06-16
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100911	2016-06-16

2. SUMMARY OF TEST RESULTS

FCC Rules	Description of Test Item	Result
§ 15.107 (a)	Conducted Emissions	Compliant
§ 15.109 (a)	Radiated Emissions	Compliant

N/A: not applicable

3. Conducted Emissions

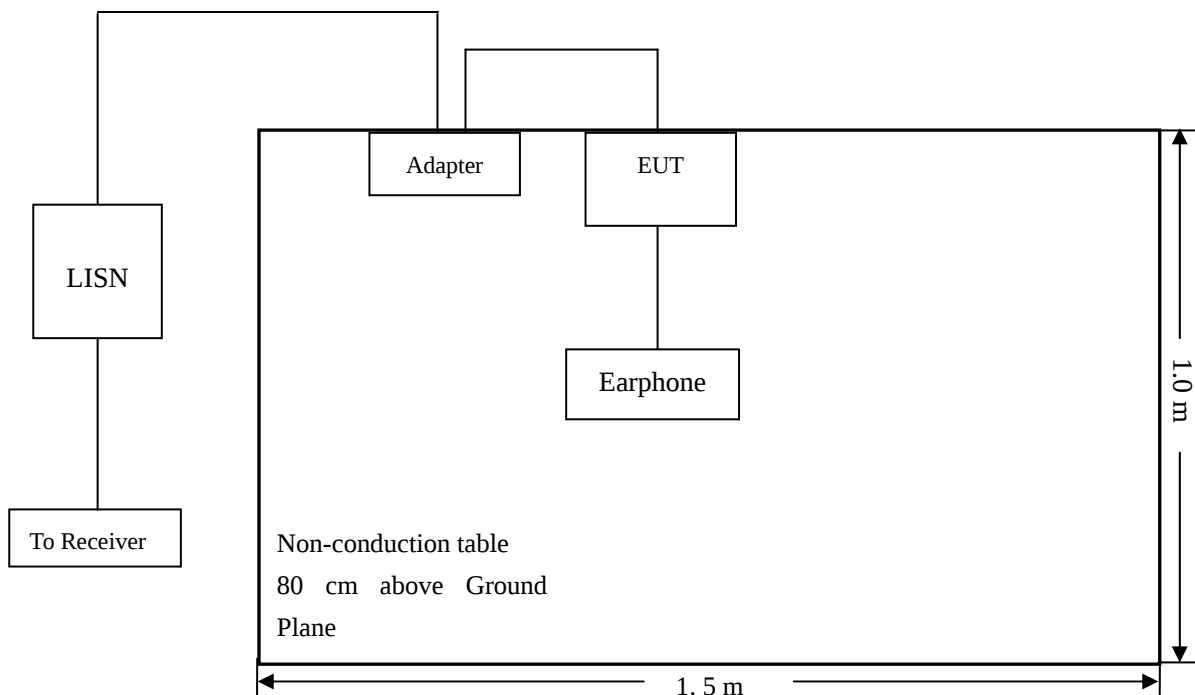
3.1 Measurement Uncertainty

Base on NIS 81, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of any conducted emissions measurement is ± 2.88 dB.

3.2 Test Procedure

Test is conducting under the description of ANSI C63.4-2009, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz.

3.3 Basic Test Setup Block Diagram



3.4 Environmental Conditions

Temperature:	23 °C
Relative Humidity:	52%
ATM Pressure:	1011 mbar

3.5 Summary of Test Results/Plots

According to the data in section 3.6, the EUT complied with the FCC Part 15.107(a) Conducted margin for a Class B device, with the *worst* margin reading of:

-1.11 dB at 2.4660 MHz in the Line mode, AVG detector, 0.15-30MHz

3.6 Conducted Emissions Test Data

Plot of Conducted Emissions Test Data

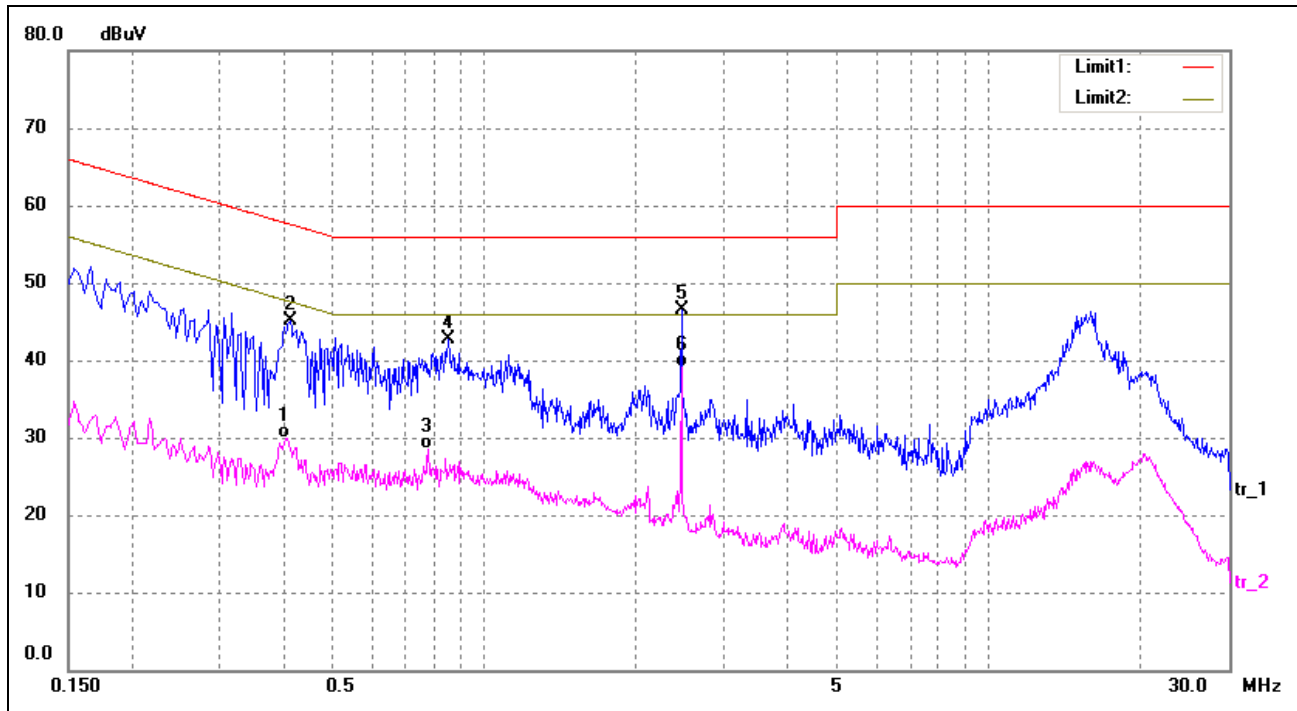
EUT: 3G Mobile Phone

Tested Model: LIFE

Operating Condition: TM1

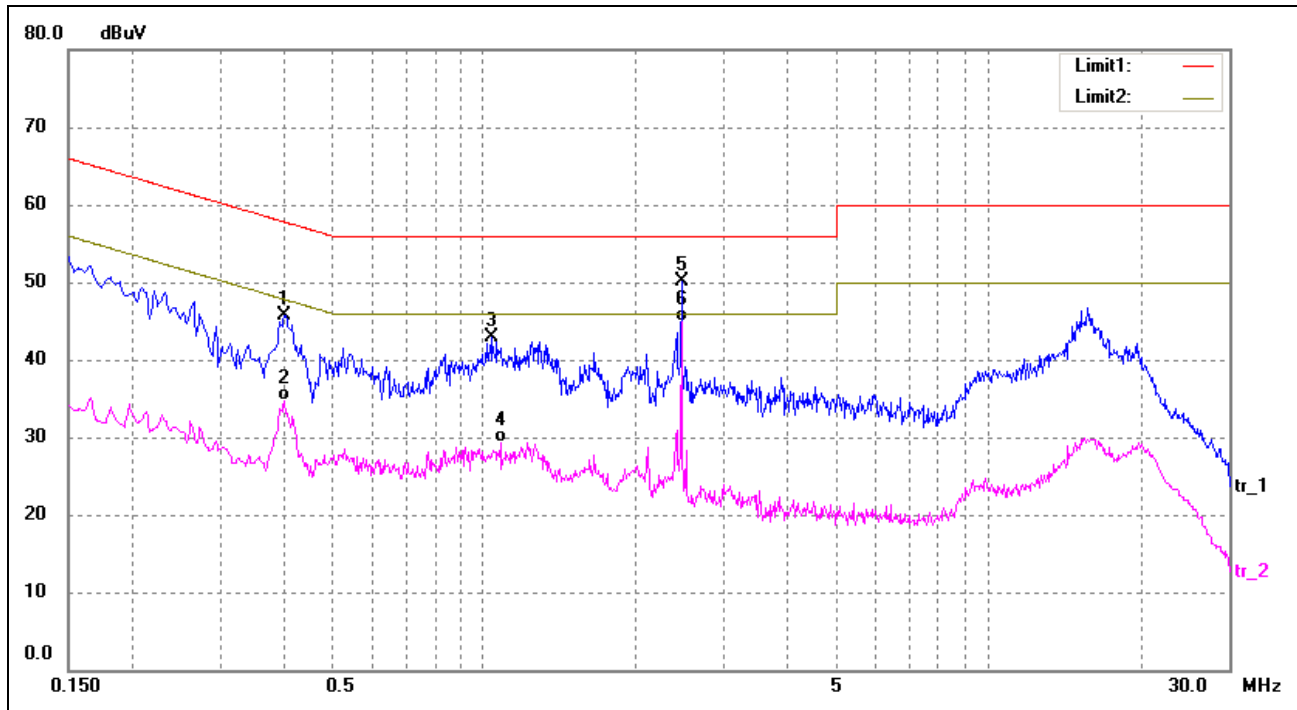
Comment: AC 120V/60Hz

Test Specification: Neutral



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.4060	17.50	12.50	30.00	47.73	-17.73	AVG
2	0.4140	32.52	12.50	45.02	57.57	-12.55	QP
3	0.7780	15.63	12.78	28.41	46.00	-17.59	AVG
4	0.8500	29.87	12.85	42.72	56.00	-13.28	QP
5	2.4660	33.46	13.00	46.46	56.00	-9.54	QP
6	2.4660	26.07	13.00	39.07	46.00	-6.93	AVG

Test Specification: Line



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.4020	33.16	12.50	45.66	57.81	-12.15	QP
2	0.4020	22.20	12.50	34.70	47.81	-13.11	AVG
3	1.0420	29.93	13.00	42.93	56.00	-13.07	QP
4	1.0780	16.30	13.00	29.30	46.00	-16.70	AVG
5	2.4660	37.16	13.00	50.16	56.00	-5.84	QP
6	2.4660	31.89	13.00	44.89	46.00	-1.11	AVG

4. Radiated Emissions

4.1 Measurement Uncertainty

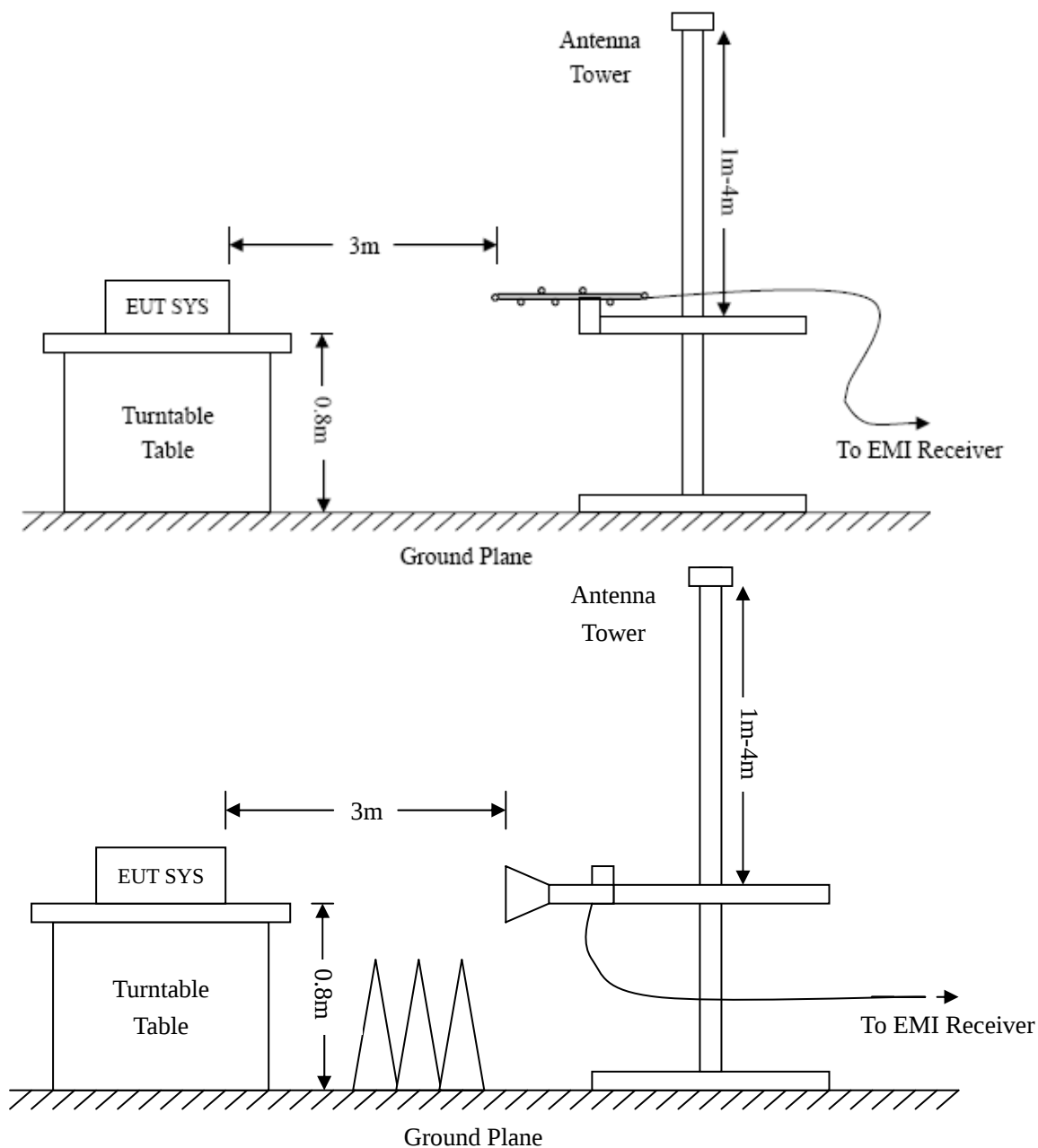
Base on NIS 81, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of any radiation emissions measurement is ± 5.10 dB.

4.2 Test Procedure

The setup of EUT is according with per ANSI C63.4-2009 measurement procedure. The specification used was with the FCC Part 15.109 Limit.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

The spacing between the peripherals was 10 cm.



4.3 Test Receiver Setup

Frequency :9kHz-30MHz

RBW=10KHz,

VBW =30KHz

Sweep time= Auto

Trace = max hold

Detector function = peak

Frequency :30MHz-1GHz

RBW=120KHz,

VBW=300KHz

Sweep time= Auto

Trace = max hold

Detector function = peak, QP

Frequency :Above 1GHz

RBW=1MHz,

VBW=3MHz(Peak), 10Hz(AV)

Sweep time= Auto

Trace = max hold

Detector function = peak, AV

4.4 Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Factor and the Cable Factor, and subtracting the Amplifier Gain from the Amplitude reading. The basic equation is as follows:

$$\text{Corr. Ampl.} = \text{Indicated Reading} - \text{Corr. Factor}$$

The “**Margin**” column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of -6dB μ V means the emission is 6dB μ V below the maximum limit for a Class B device. The equation for margin calculation is as follows:

$$\text{Margin} = \text{Corr. Ampl.} - \text{FCC Part 15.109(a) Limit}$$

4.5 Environmental Conditions

Temperature:	23 °C
Relative Humidity:	55 %
ATM Pressure:	1011 mbar

4.6 Summary of Test Results/Plots

According to the data, the EUT complied with the FCC Part 15.109(a) rule, and had the worst margin of:

-1.70 dB at 39.0245 MHz in the Vertical polarization, TM1 Mode 9 kHz to 1 GHz, 3Meters

Plot of Radiated Emissions Test Data

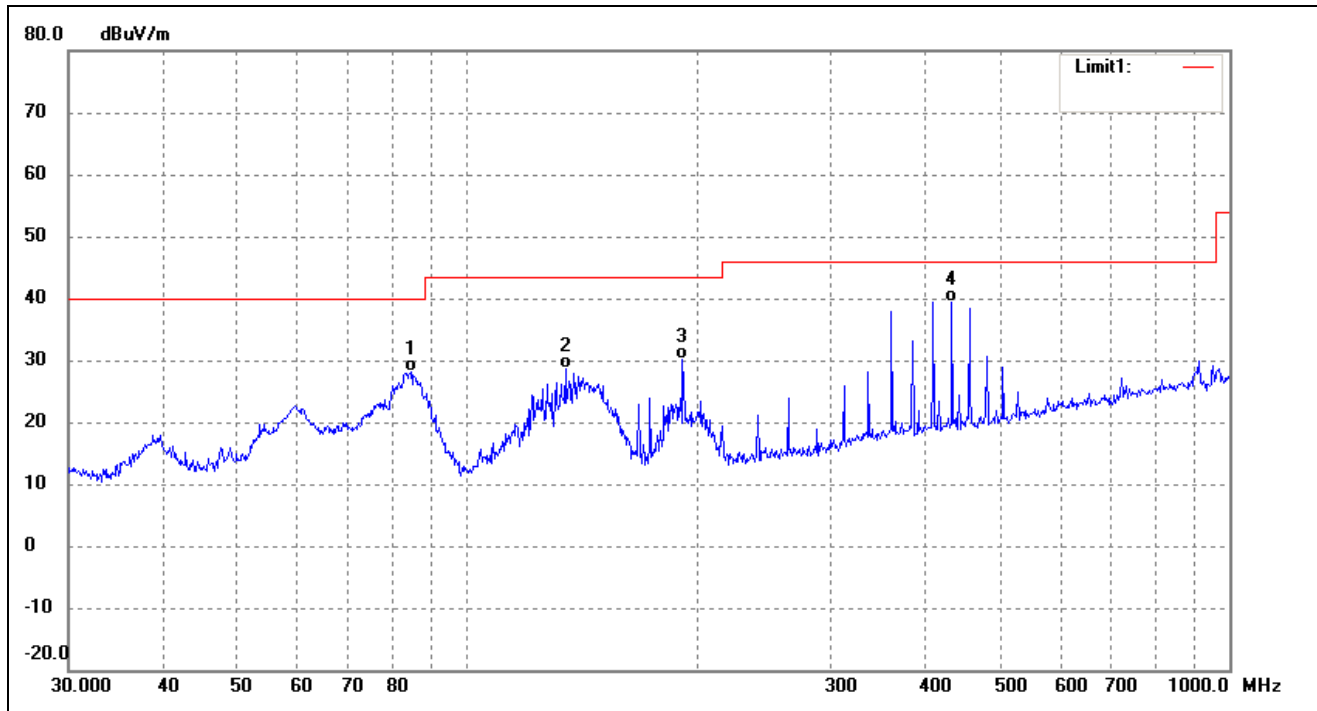
EUT: 3G Mobile Phone

Tested Model: LIFE

Operating Condition: TM1

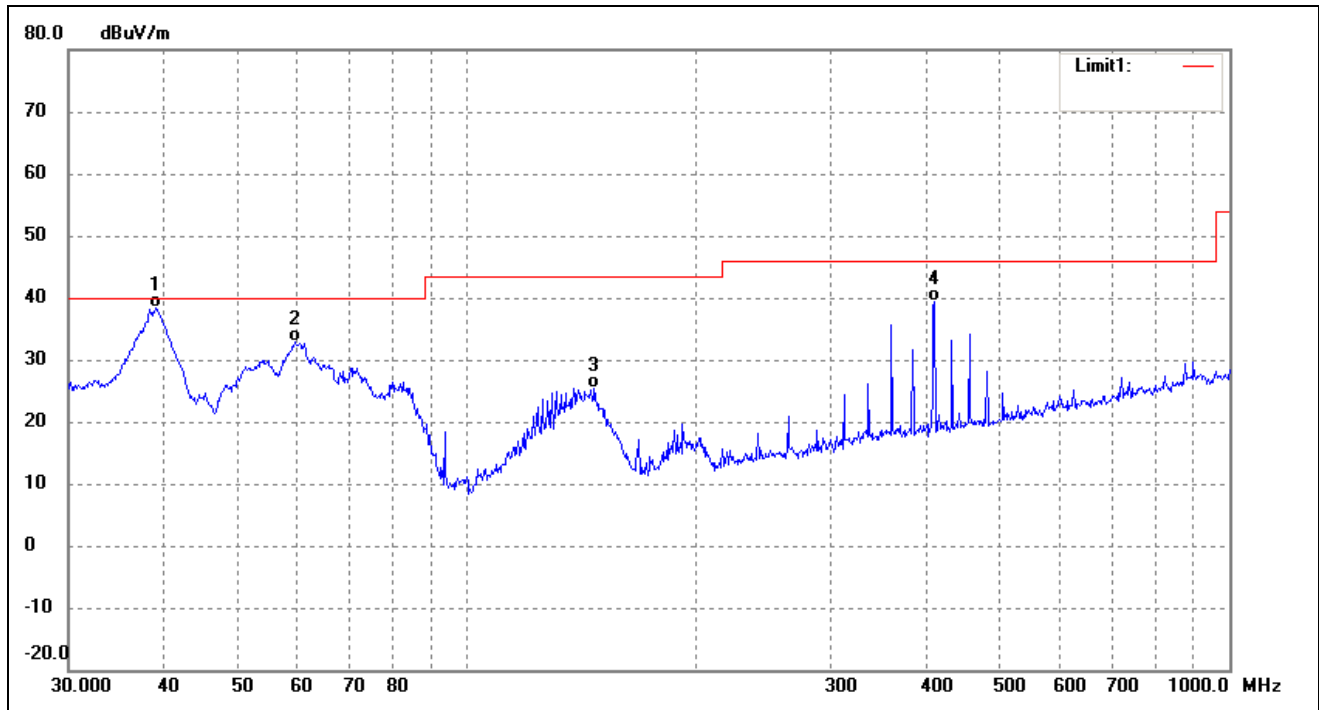
Comment: AC 120V/60Hz

Test Specification: Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	84.4054	40.33	-12.15	28.18	40.00	-11.82	58	200	QP
2	134.5592	39.41	-10.80	28.61	43.50	-14.89	326	200	QP
3	191.7450	38.49	-8.39	30.10	43.50	-13.40	29	100	QP
4	432.5457	40.95	-1.67	39.28	46.00	-6.72	209	100	QP

Test Specification: Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	39.0245	48.28	-9.98	38.30	40.00	-1.70	51	100	QP
2	59.4405	43.20	-10.32	32.88	40.00	-7.12	308	100	QP
3	146.8877	36.44	-10.99	25.45	43.50	-18.05	120	100	QP
4	410.3825	41.37	-2.01	39.36	46.00	-6.64	359	100	QP

Plot of Radiated Emissions Test Data

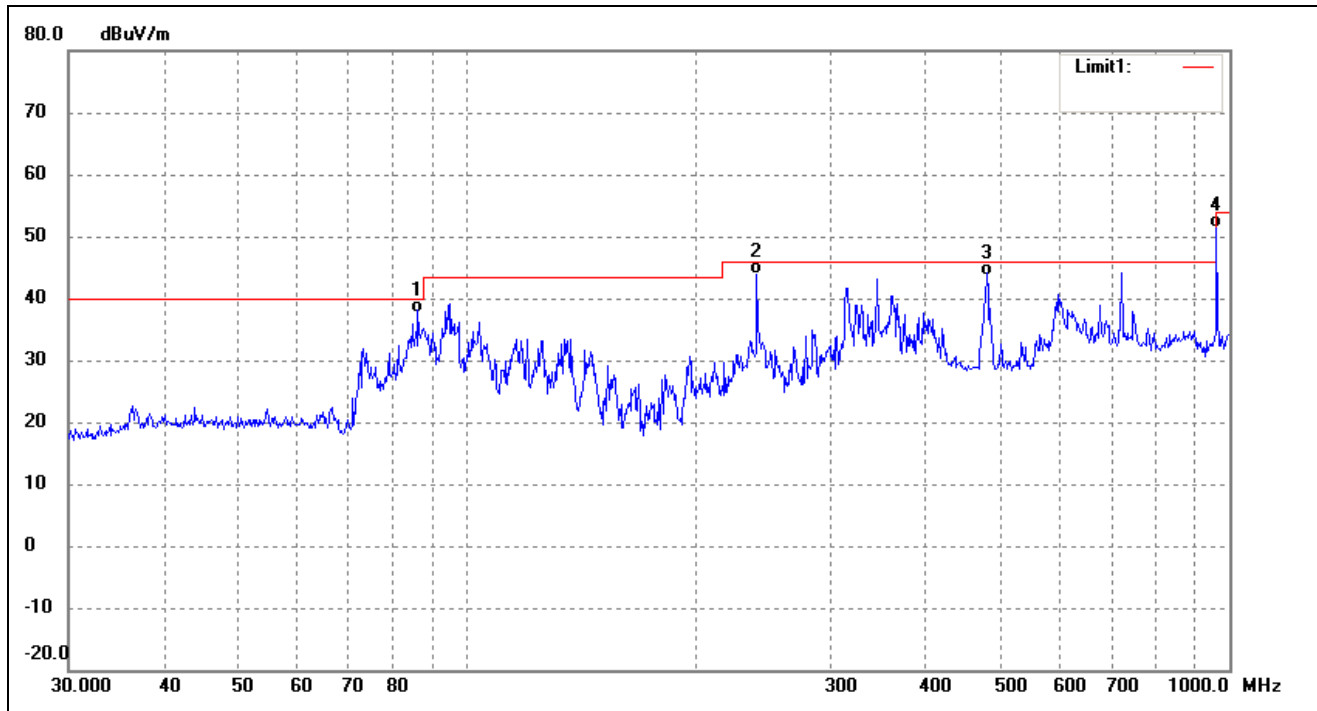
EUT: 3G Mobile Phone

Tested Model: LIFE

Operating Condition: TM2

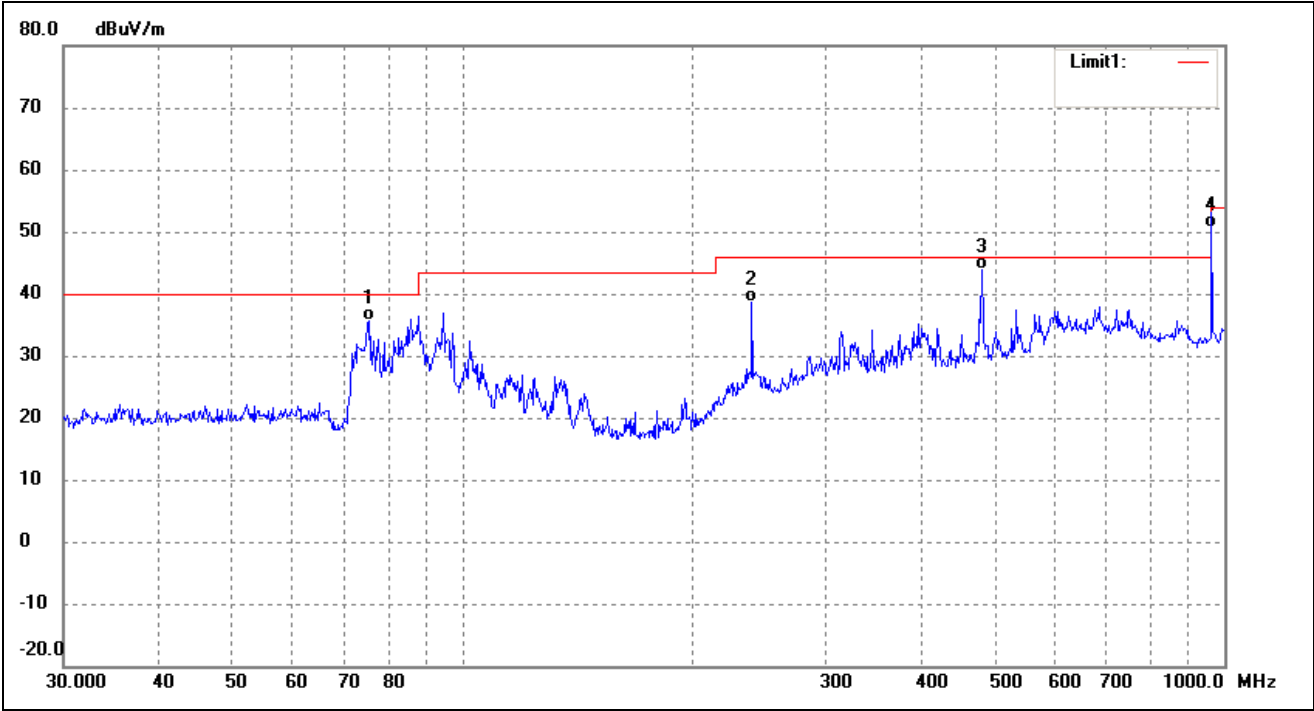
Comment: AC 120V/60Hz USB: DC5V

Test Specification: Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	86.2001	34.60	3.00	37.60	40.00	-2.40	240	200	QP
2	239.9874	34.59	9.33	43.92	46.00	-2.08	42	200	QP
3	480.5276	30.40	13.12	43.52	46.00	-2.48	54	100	QP
4	962.1622	35.07	16.38	51.45	54.00	-2.55	.314	100	QP

Test Specification: Vertical



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	75.4462	33.10	2.55	35.65	40.00	-4.35	53	100	QP
2	239.9874	29.36	9.33	38.69	46.00	-7.31	340	100	QP
3	480.5276	30.87	13.12	43.99	46.00	-2.01	43	100	QP
4	962.1621	34.20	16.38	50.58	54.00	-3.42	342	100	QP

Plot of Radiated Emissions Test Data

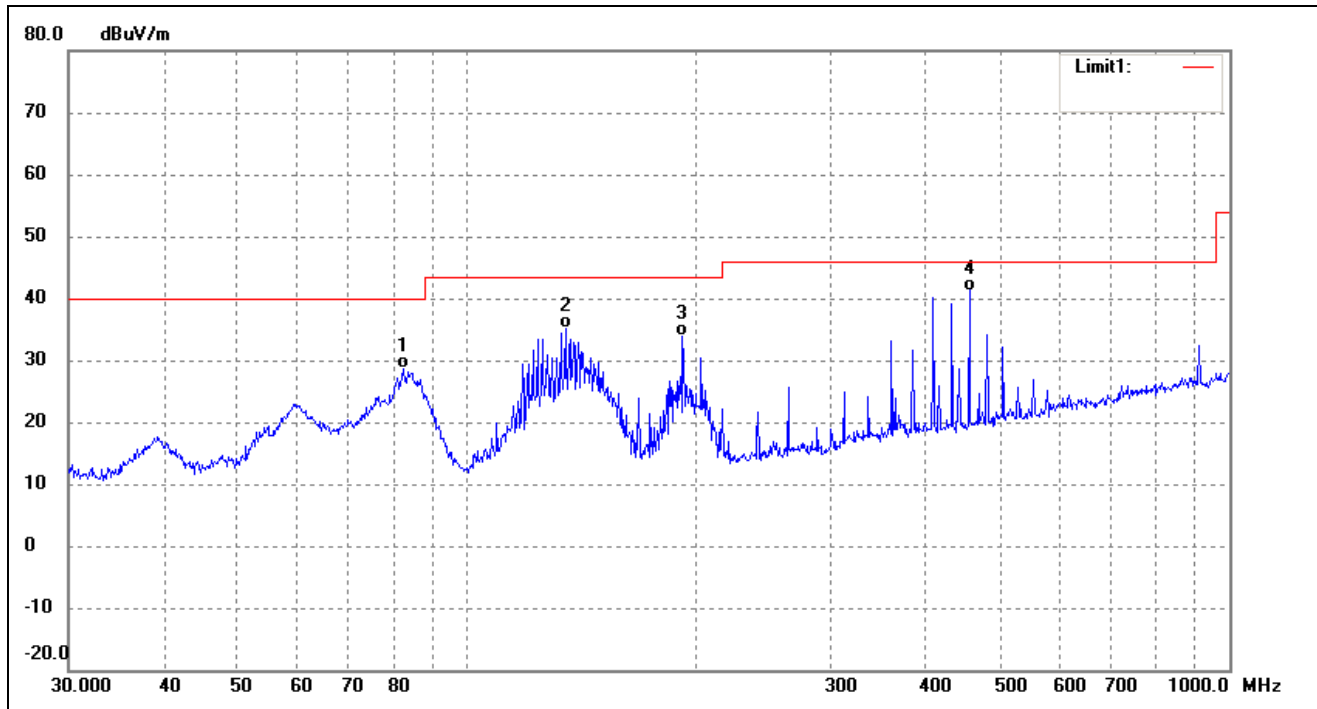
EUT: 3G Mobile Phone

Tested Model: LIFE

Operating Condition: TM3

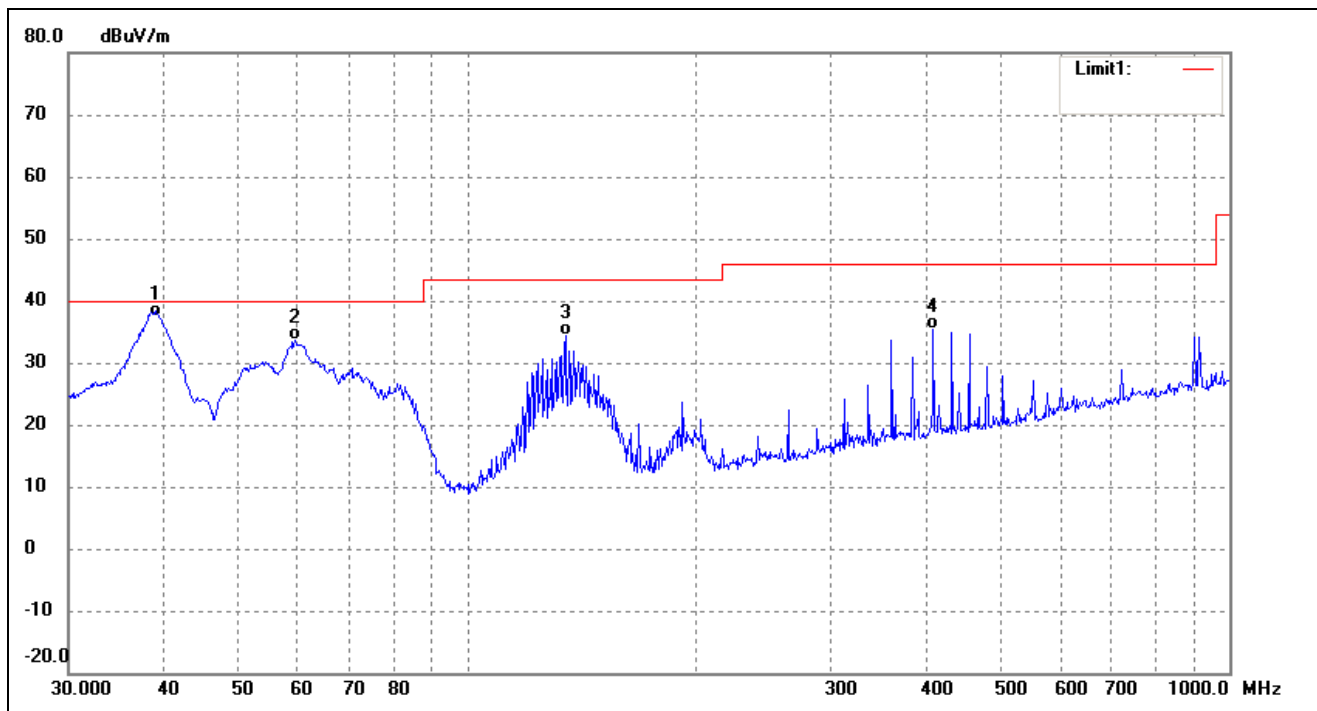
Comment: AC 120V/60Hz

Test Specification: Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	82.3589	40.85	-12.21	28.64	40.00	-11.36	64	200	QP
2	134.5592	45.87	-10.80	35.07	43.50	-8.43	347	200	QP
3	191.7450	42.34	-8.39	33.95	43.50	-9.55	314	100	QP
4	455.9058	42.60	-1.48	41.12	46.00	-4.88	85	100	QP

Test Specification: Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	39.0245	47.30	-9.98	37.32	40.00	-2.68	43	100	QP
2	59.4405	43.93	-10.32	33.61	40.00	-6.39	120	100	QP
3	134.5592	45.22	-10.80	34.42	43.50	-9.08	37	100	QP
4	408.9460	37.49	-2.05	35.44	46.00	-10.56	51	100	QP

Note: Testing is carried out with frequency rang 9kHz to the 6GHz, which above 1GHz is close to the noise base even antenna close up to 1meter distance according the measurement of ANSI C63.4.

The measurements greater than 20dB below the limit from 9kHz to 30MHz and test data are not provided.

***** END OF REPORT *****