

FCC Part 15B

Measurement and Test Report

For

Sky Phone LLC

1348 Washington Av. Suite 350 Miami Beach, FL 33139

FCC ID: 2ABOSSKYF3G

Test Rule(s):	<u>FCC Part 15 Subpart B</u>
Product Description:	<u>Feature Phone</u>
Tested Model:	<u>SKY F3G</u>
Report No.:	<u>STR16088097I-3</u>
Tested Date:	<u>2016-08-09 to 2016-08-25</u>
Issued Date:	<u>2016-08-25</u>
Tested By:	<u>Lucy Wei / Engineer</u>
Reviewed By:	<u>Silin Chen / EMC Manager</u>
Approved & Authorized By:	<u>Jandy So / PSQ Manager</u>
Prepared By:	

lucy wei

silin chen

Jandyso

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: Sky Phone LLC
Address of applicant: 1348 Washington Av.Suite 350 Miami Beach, FL 33139

Manufacturer: SHENZHEN SINTAVE COMMUNICATION CO, LTD
Address of manufacturer: 6th/F, Building 3, SangTai Technology Park,
LiuXianDong, XiLi, NanShan District, ShenZhen City,
GuangDong Province, China

General Description of EUT	
Product Name:	Feature Phone
Trade Name:	Phone SKY
Model No.:	SKY F3G
Adding Model(s):	/
Note: The test data is gathered from a production sample, provided by the manufacturer.	

Technical Characteristics of EUT	
Rated Voltage:	DC 3.7V
Rated Current:	/
Rated Power:	/
Power Adapter Model:	MB1706 Input:100-240V 50/60Hz 0.2A; Output: 5.0V/500mA
Lowest Internal Frequency:	32.768KHz
Highest Internal Frequency:	460.8MHz

1.2 Test Standards

The following report is prepared on behalf of the Sky Phone LLC 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 C63.4-2014, 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	With Earphone
TM2	Downloading	Connected to PC
TM3	Camera on	/

EUT Cable List and Details

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

Auxiliary Equipment List and Details

Description	Manufacturer	Model	Serial Number
Notebook	Lenovo	E10	LR-63C8R

Special Cable List and Details

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

1.6 Measurement Uncertainty

Measurement uncertainty		
Parameter	Conditions	Uncertainty
Conducted Emissions	Conducted	$\pm 2.88\text{dB}$
Transmitter Spurious Emissions	Radiated	$\pm 5.1\text{dB}$

1.7 Test Equipment List and Details

No.	Description	Manufacturer	Model	Serial No.	Cal Date	Due Date
SEMT-1072	Spectrum Analyzer	Agilent	E4407B	MY41440400	2016-06-04	2017-06-03
SEMT-1031	Spectrum Analyzer	Rohde & Schwarz	FSP30	836079/035	2016-06-04	2017-06-03
SEMT-1007	EMI Test Receiver	Rohde & Schwarz	ESVB	825471/005	2016-06-04	2017-06-03
SEMT-1008	Amplifier	Agilent	8447F	3113A06717	2016-06-04	2017-06-03
SEMT-1043	Amplifier	C&D	PAP-1G18	2002	2016-06-04	2017-06-03
SEMT-1011	Broadband Antenna	Schwarz beck	VULB9163	9163-333	2016-06-04	2017-06-03
SEMT-1042	Horn Antenna	ETS	3117	00086197	2016-06-04	2017-06-03
SEMT-1121	Horn Antenna	ETS	3116B	00088203	2016-06-04	2017-06-03
SEMT-1069	Loop Antenna	Schwarz beck	FMZB 1516	9773	2016-06-04	2017-06-03
SEMT-1001	EMI Test Receiver	Rohde & Schwarz	ESPI	101611	2016-06-04	2017-06-03
SEMT-1003	L.I.S.N	Schwarz beck	NSLK8126	8126-224	2016-06-04	2017-06-03
SEMT-1002	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100911	2016-06-04	2017-06-03
SEMT-1087	Semi-Anechoic Chamber	SAEMC	FSAC318	/	2014-10-08	2016-10-08
SEMT-1089	Shielding Room	SAEMC	MSR743	/	2014-10-08	2016-10-08

2. SUMMARY OF TEST RESULTS

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

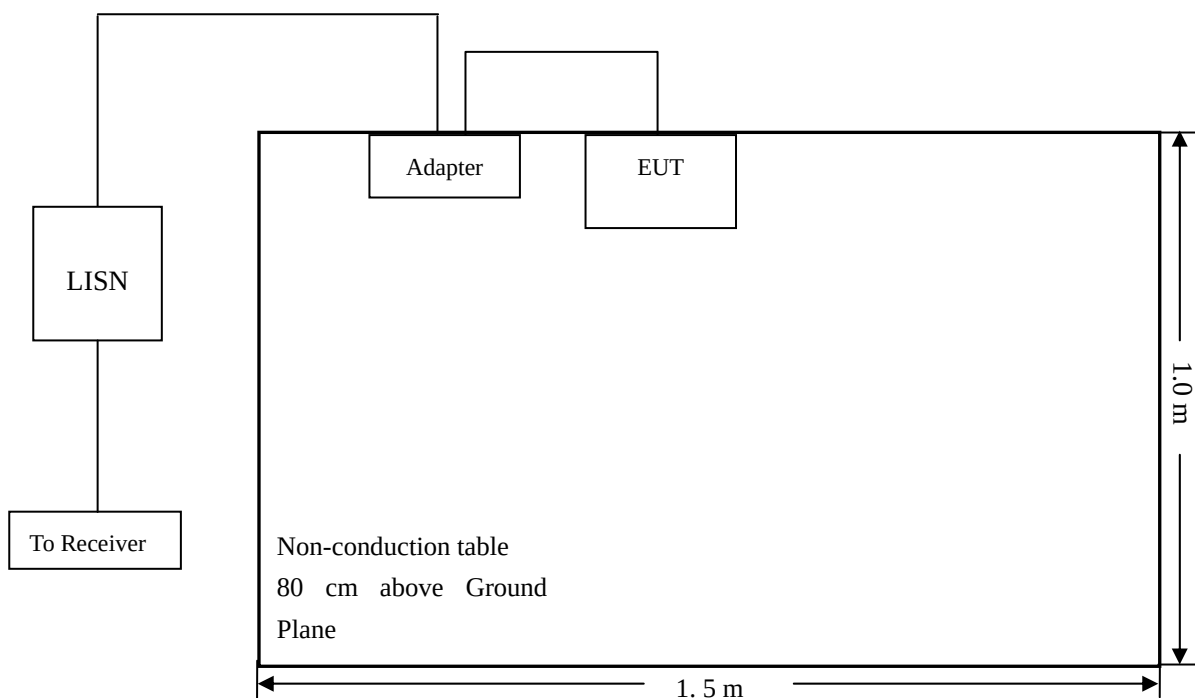
N/A: not applicable

3. Conducted Emissions

3.1 Test Procedure

Test is conducting under the description of ANSI C63.4-2014, 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.

3.2 Basic Test Setup Block Diagram



3.3 Environmental Conditions

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

3.4 Summary of Test Results/Plots

According to the data in section 3.5, the EUT complied with the FCC Part 15.107(a) Conducted margin for a Class B device, with the *worst* margin reading of:

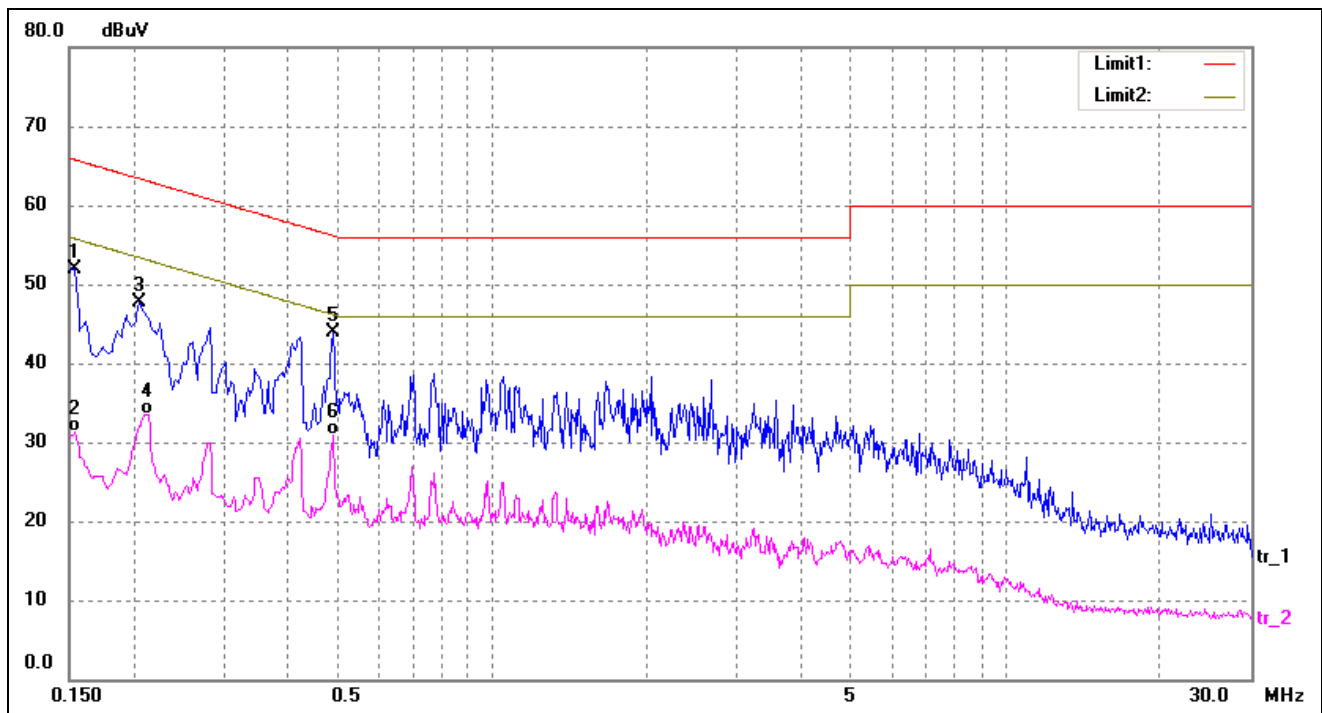
-4.07 dB at 0.8940 MHz in the Line, TM2 Mode, Peak detector, 0.15-30MHz

3.5 Conducted Emissions Test Data

Plot of Conducted Emissions Test Data

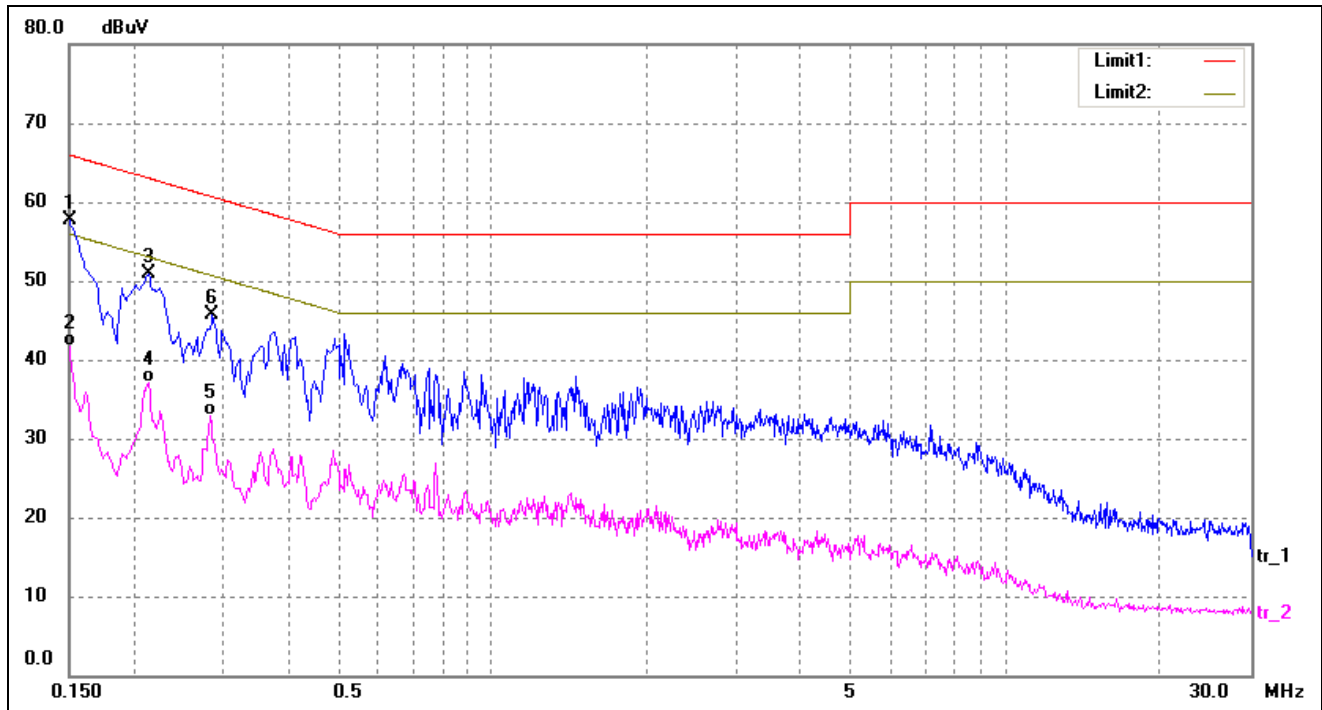
EUT: Feature Phone
Tested Model: SKY F3G
Operating Condition: TM1
Comment: AC 120V/60Hz; Adapter DC 5V

Test Specification: Neutral



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1540	42.45	9.50	51.95	65.78	-13.83	peak
2	0.1540	21.81	9.50	31.31	55.78	-24.47	AVG
3	0.2060	38.29	9.50	47.79	63.37	-15.58	peak
4	0.2140	23.92	9.50	33.42	53.05	-19.63	AVG
5*	0.4900	34.29	9.55	43.84	56.17	-12.33	peak
6	0.4900	21.41	9.55	30.96	46.17	-15.21	AVG

Test Specification: Line

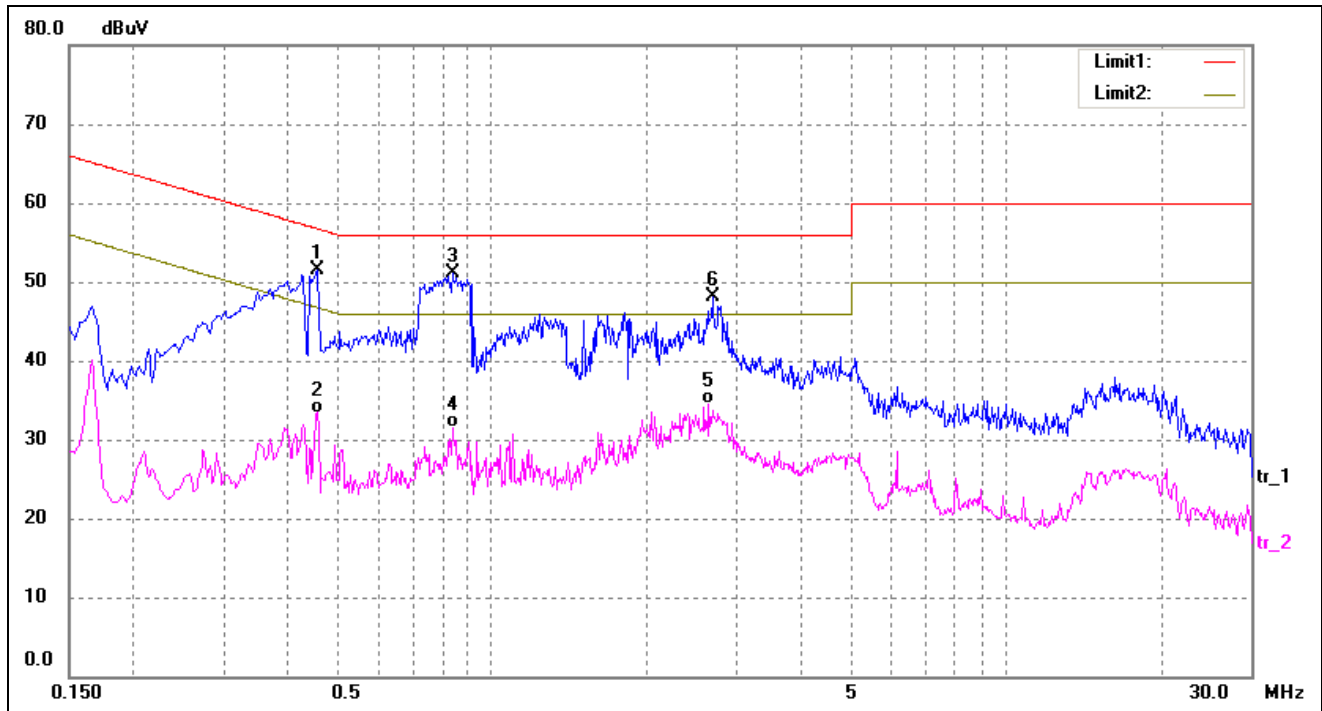


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1*	0.1500	48.15	9.50	57.65	66.00	-8.35	peak
2	0.1500	32.19	9.50	41.69	56.00	-14.31	AVG
3	0.2140	41.37	9.50	50.87	63.05	-12.18	peak
4	0.2140	27.53	9.50	37.03	53.05	-16.02	AVG
5	0.2820	23.44	9.50	32.94	50.76	-17.82	AVG
6	0.2860	36.24	9.50	45.74	60.64	-14.90	peak

Plot of Conducted Emissions Test Data

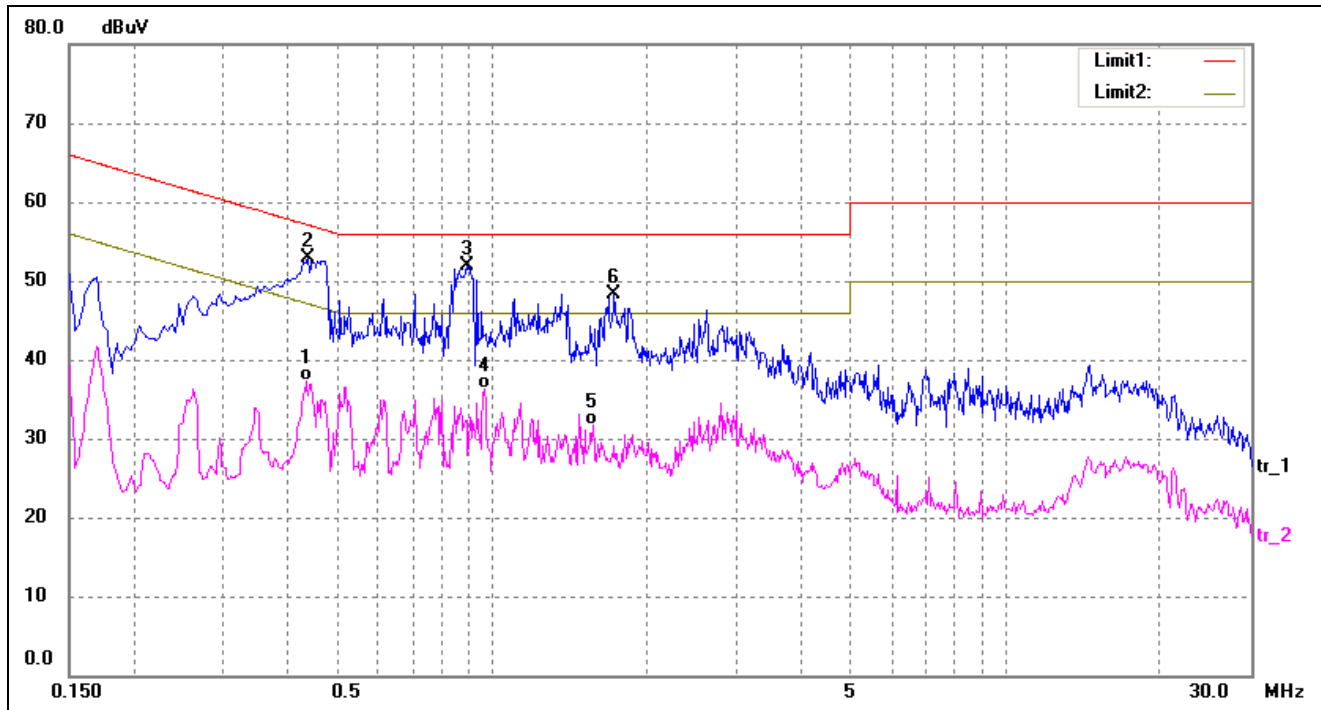
EUT: Feature Phone
Tested Model: SKY F3G
Operating Condition: TM2
Comment: AC 120V/60Hz; USB 5V

Test Specification: Neutral



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.4580	42.02	9.53	51.55	56.73	-5.18	peak
2	0.4580	23.87	9.53	33.40	46.73	-13.33	AVG
3*	0.8380	41.37	9.64	51.01	56.00	-4.99	peak
4	0.8380	21.91	9.64	31.55	46.00	-14.45	AVG
5	2.6460	24.61	9.91	34.52	46.00	-11.48	AVG
6	2.6860	38.12	9.92	48.04	56.00	-7.96	peak

Test Specification: Line

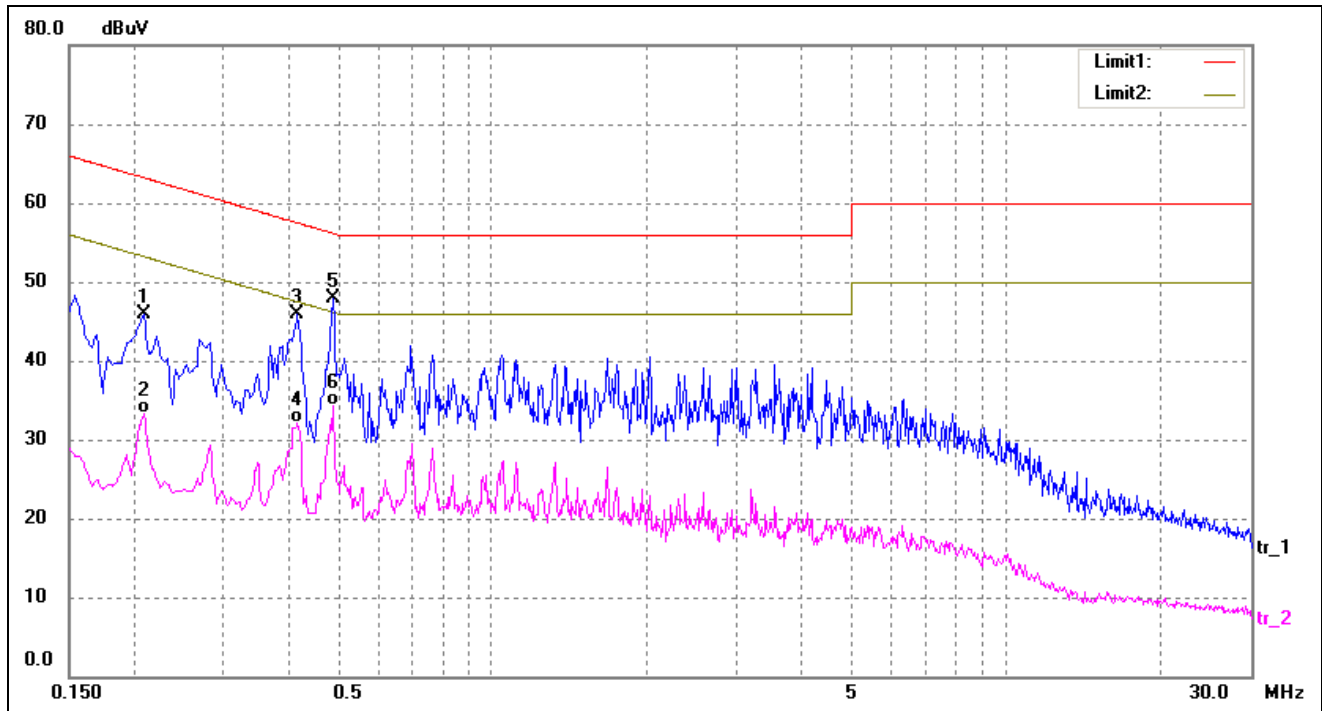


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.4340	27.73	9.52	37.25	47.18	-9.93	AVG
2	0.4380	43.30	9.52	52.82	57.10	-4.28	peak
3*	0.8940	42.28	9.65	51.93	56.00	-4.07	peak
4	0.9660	26.70	9.67	36.37	46.00	-9.63	AVG
5	1.5700	21.94	9.76	31.70	46.00	-14.30	AVG
6	1.7300	38.43	9.78	48.21	56.00	-7.79	peak

Plot of Conducted Emissions Test Data

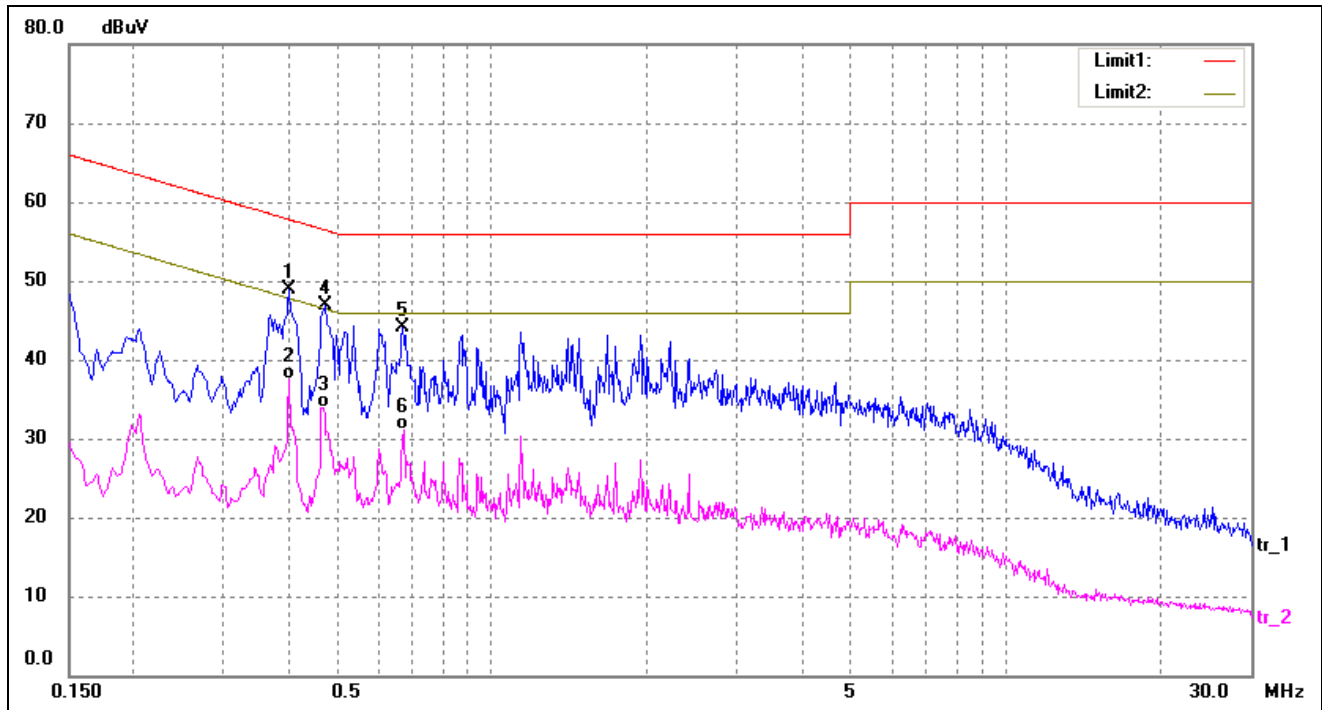
EUT: Feature Phone
Tested Model: SKY F3G
Operating Condition: TM3
Comment: AC 120V/60Hz; Adapter DC 5V

Test Specification: Neutral



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.2100	36.37	9.50	45.87	63.21	-17.34	peak
2	0.2100	23.81	9.50	33.31	53.21	-19.90	AVG
3	0.4180	36.49	9.51	46.00	57.49	-11.49	peak
4	0.4180	22.66	9.51	32.17	47.49	-15.32	AVG
5*	0.4900	38.37	9.55	47.92	56.17	-8.25	peak
6	0.4900	24.68	9.55	34.23	46.17	-11.94	AVG

Test Specification: Line



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1*	0.4020	39.31	9.50	48.81	57.81	-9.00	peak
2	0.4020	28.02	9.50	37.52	47.81	-10.29	AVG
3	0.4700	24.43	9.54	33.97	46.51	-12.54	AVG
4	0.4740	37.29	9.54	46.83	56.44	-9.61	peak
5	0.6700	34.55	9.60	44.15	56.00	-11.85	peak
6	0.6740	21.46	9.60	31.06	46.00	-14.94	AVG

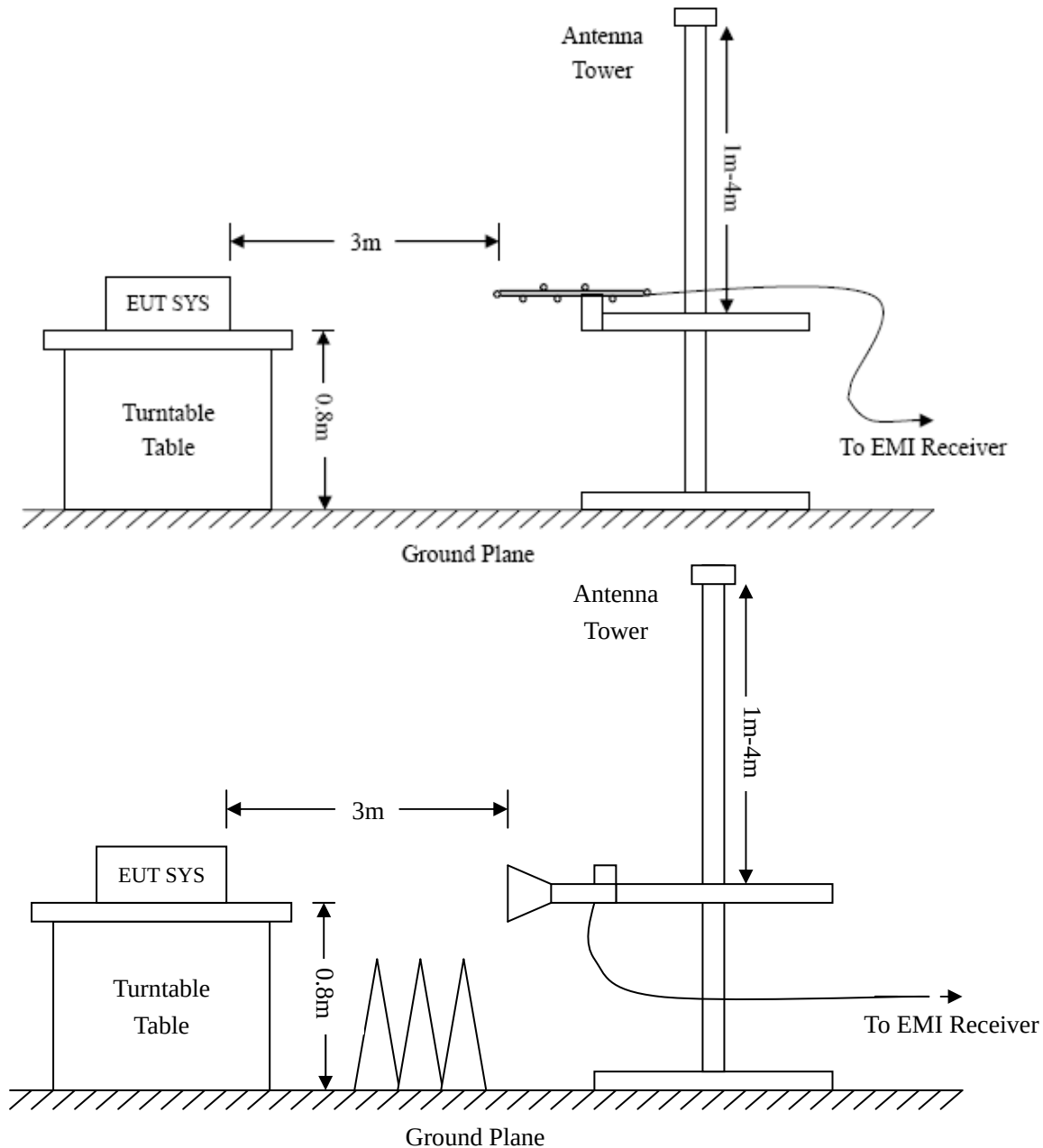
4. Radiated Emissions

4.1 Test Procedure

The setup of EUT is according with per ANSI C63.4-2014 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.



4.2 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

4.3 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:

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

4.4 Environmental Conditions

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

4.5 Summary of Test Results/Plots

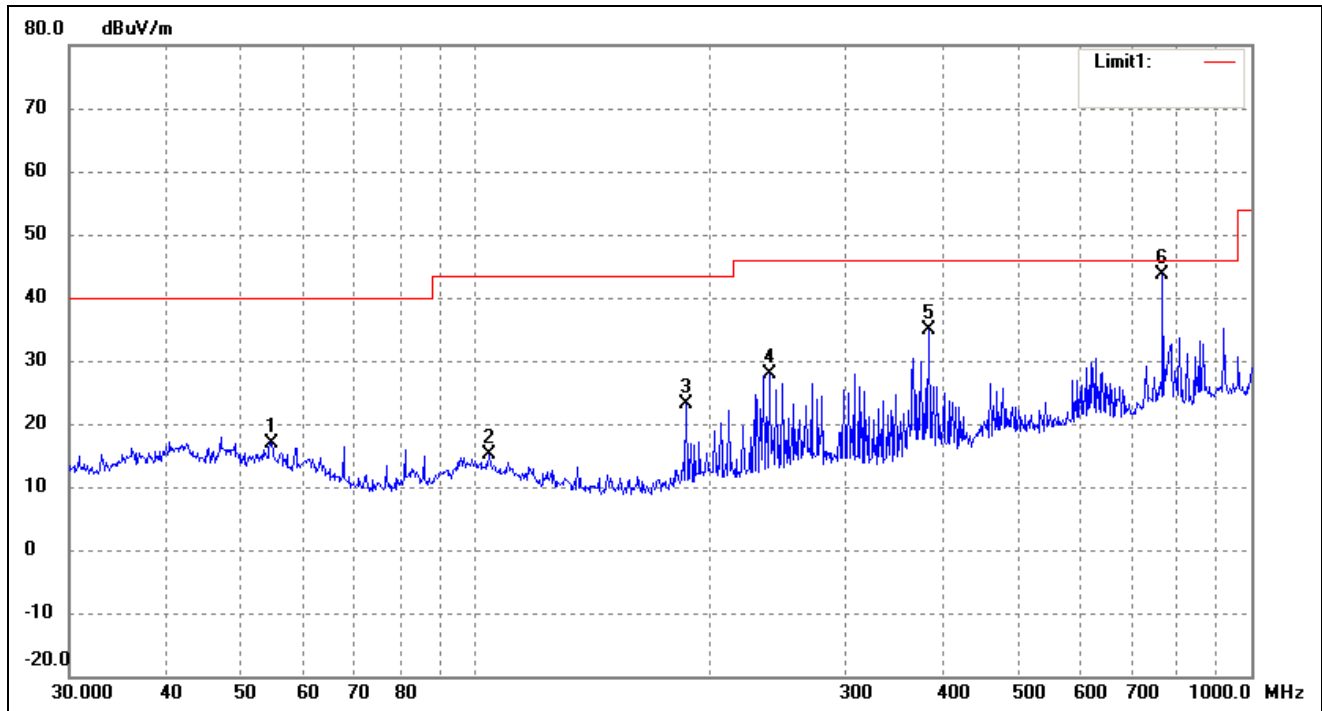
According to the data, the EUT complied with the FCC Part 15.109(a) rule, and had the worst margin of:

-1.10 dB at 165.4866 MHz in the Horizontal polarization, TM2 Mode, 9kHz to 1 GHz, 3Meters

Plot of Radiated Emissions Test Data

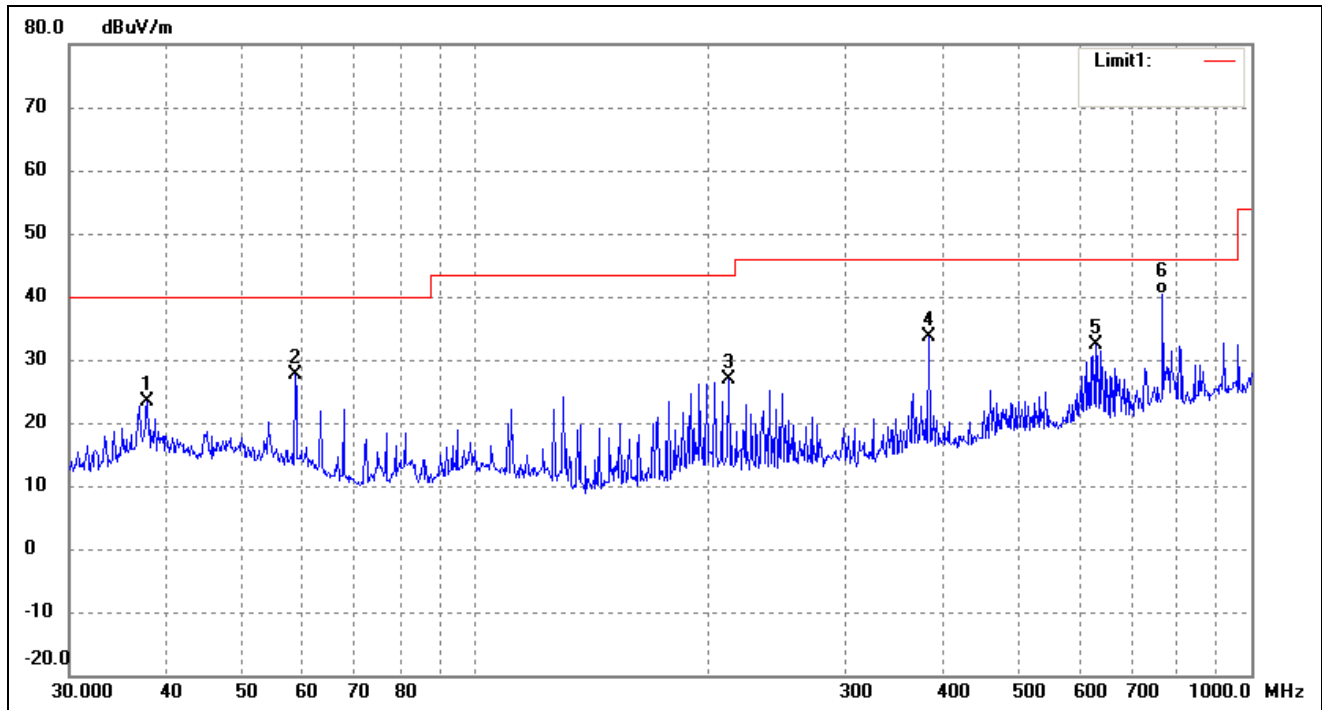
EUT: Feature Phone
Tested Model: SKY F3G
Operating Condition: TM1
Comment: AC 120V/60Hz; Adapter DC 5V

Test Specification: Horizontal



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	()	(cm)	
1	54.6429	23.54	-6.54	17.00	40.00	-23.00	0	100	peak
2	104.1701	22.57	-7.48	15.09	43.50	-28.41	0	100	peak
3	187.0958	32.92	-9.77	23.15	43.50	-20.35	0	100	peak
4	239.1473	35.81	-7.89	27.92	46.00	-18.08	0	100	peak
5	383.9318	38.06	-3.25	34.81	46.00	-11.19	0	100	peak
6	768.7481	40.32	3.34	43.66	46.00	-2.34	0	100	peak

Test Specification: Vertical

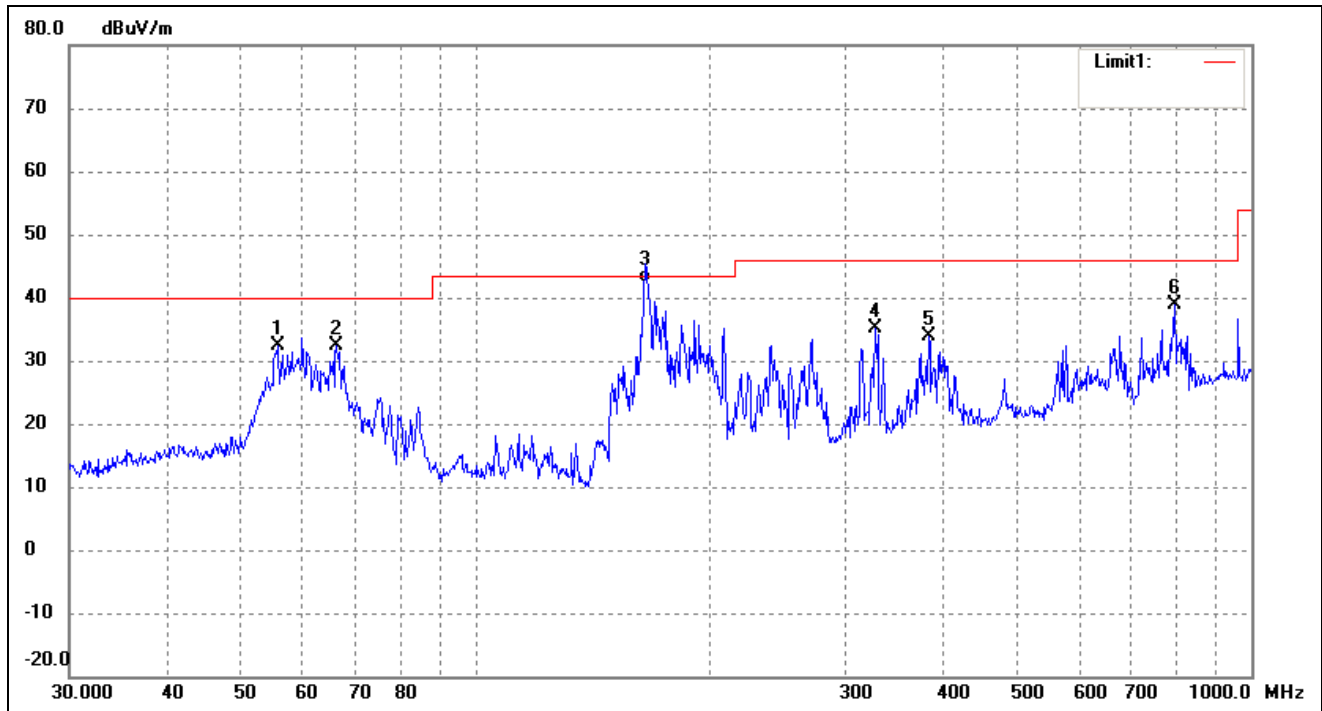


No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	37.8121	33.68	-10.31	23.37	40.00	-16.63	0	100	peak
2	58.6126	37.54	-9.90	27.64	40.00	-12.36	0	100	peak
3	212.2695	36.19	-9.32	26.87	43.50	-16.63	0	100	peak
4	383.9318	36.32	-2.65	33.67	46.00	-12.33	0	100	peak
5	629.4772	27.76	4.70	32.46	46.00	-13.54	0	100	peak
6	768.7481	35.47	4.84	40.31	46.00	-5.69	0	100	QP

Plot of Radiated Emissions Test Data

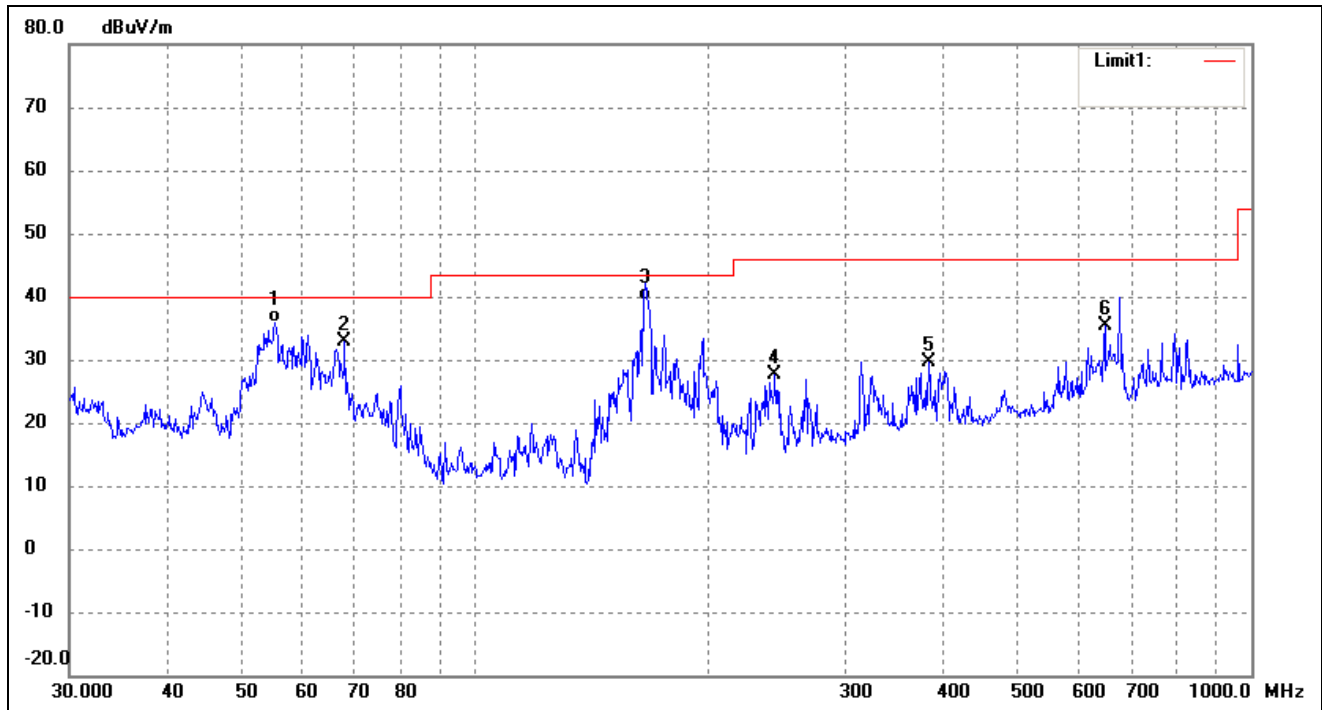
EUT: Feature Phone
Tested Model: SKY F3G
Operating Condition: TM2
Comment: AC 120V/60Hz; USB 5V

Test Specification: Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	55.6094	39.09	-6.65	32.44	40.00	-7.56	0	100	peak
2	66.2662	41.64	-9.22	32.42	40.00	-7.58	0	100	peak
3	165.4866	53.33	-10.93	42.40	43.50	-1.10	0	100	QP
4	327.8873	41.44	-6.29	35.15	46.00	-10.85	0	100	peak
5	383.9318	37.23	-3.25	33.98	46.00	-12.02	0	100	peak
6	796.1830	35.67	3.23	38.90	46.00	-7.10	0	100	peak

Test Specification: Vertical

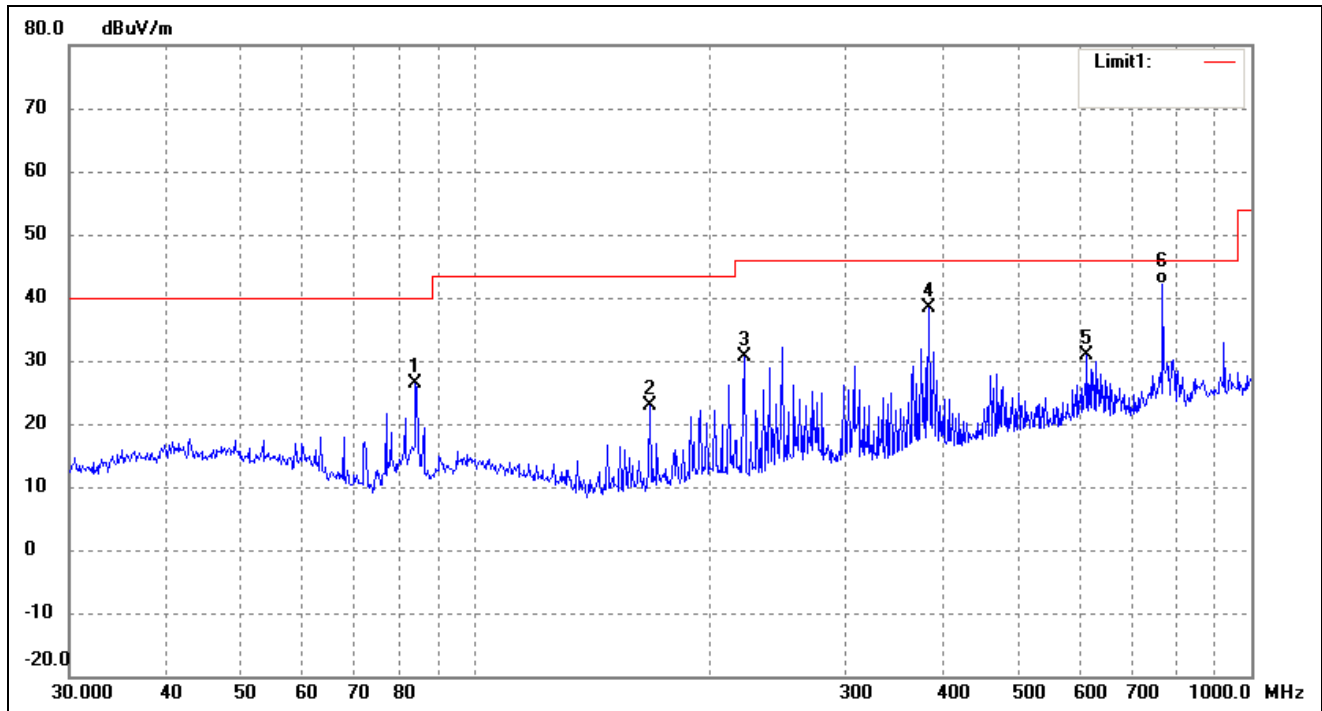


No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	55.2207	45.85	-9.93	35.92	40.00	-4.08	0	100	QP
2	67.9129	44.57	-11.65	32.92	40.00	-7.08	0	100	peak
3	165.4867	52.34	-12.94	39.40	43.50	-4.10	0	100	QP
4	243.3772	33.86	-6.34	27.52	46.00	-18.48	0	100	peak
5	383.9318	32.28	-2.65	29.63	46.00	-16.37	0	100	peak
6	647.3856	30.46	4.93	35.39	46.00	-10.61	0	100	peak

Plot of Radiated Emissions Test Data

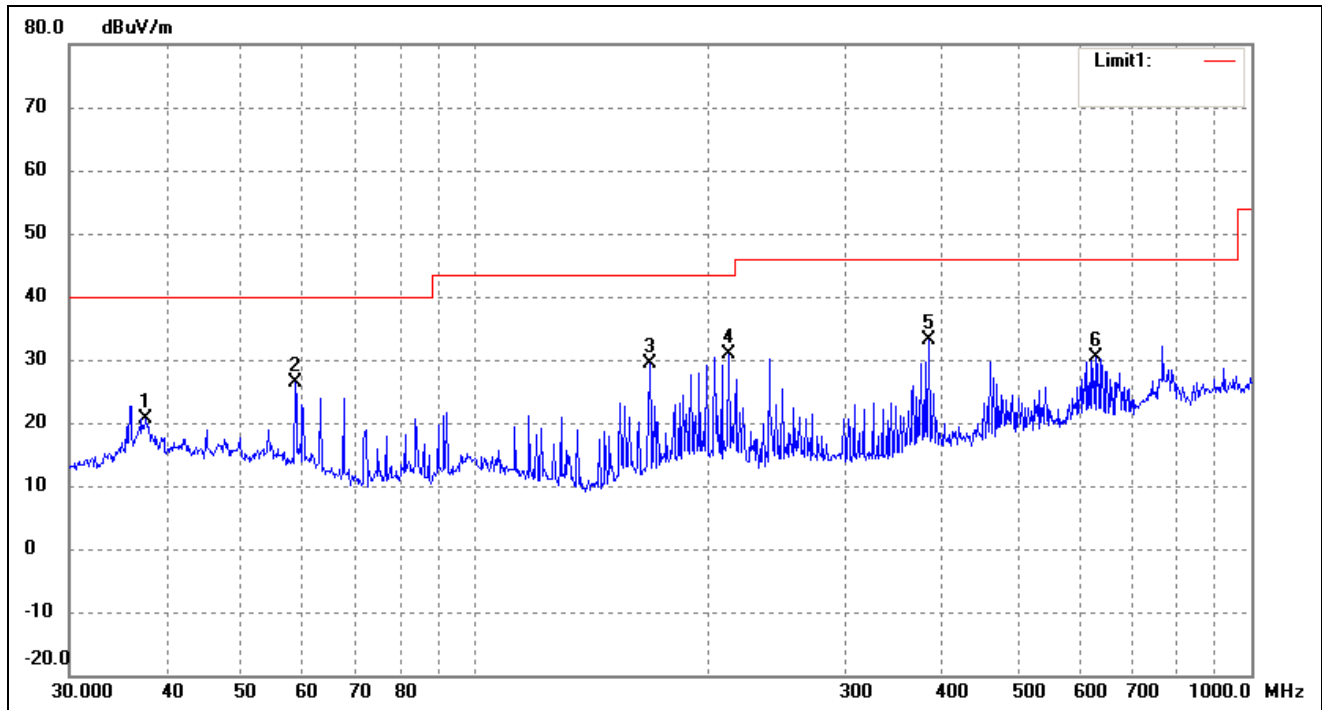
EUT: Feature Phone
Tested Model: SKY F3G
Operating Condition: TM3
Comment: AC 120V/60Hz; Adapter DC 5V

Test Specification: Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	83.8156	37.22	-10.86	26.36	40.00	-13.64	0	100	peak
2	167.8243	33.73	-10.87	22.86	43.50	-20.64	0	100	peak
3	222.1698	39.56	-8.81	30.75	46.00	-15.25	0	100	peak
4	383.9318	41.55	-3.25	38.30	46.00	-7.70	0	100	peak
5	614.2142	29.35	1.42	30.77	46.00	-15.23	0	100	peak
6	768.7482	38.87	3.34	42.21	46.00	-3.79	0	100	QP

Test Specification: Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	37.6798	31.08	-10.34	20.74	40.00	-19.26	0	100	peak
2	58.6126	36.23	-9.90	26.33	40.00	-13.67	0	100	peak
3	167.8243	42.22	-12.93	29.29	43.50	-14.21	0	100	peak
4	212.2695	40.24	-9.32	30.92	43.50	-12.58	0	100	peak
5	383.9318	35.83	-2.65	33.18	46.00	-12.82	0	100	peak
6	629.4772	25.75	4.70	30.45	46.00	-15.55	0	100	peak

Note: Testing is carried out with frequency rang 9kHz to the 5GHz, which below 30MHz and above 1GHz is close to the noise base even antenna close up to 1meter distance according the measurement of ANSI C63.4.

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