

FCC Part 15B

Measurement and Test Report

For

Tech Corp America

5511 NW 112 AVE #106 BORAL FL 33178 USA

FCC ID: 2AG7M-G26A

Test Rule(s): FCC Part 15 Subpart B

Product Description: Mobile Phone

Tested Model: G26A

Report No.: STR15128268I-5

Tested Date: 2015-12-30 to 2016-01-21

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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: Tech Corp America
Address of applicant: 5511 NW 112 AVE #106 BORAL FL 33178 USA

Manufacturer: GPLUS.TELECOM CO., LIMITED
Address of manufacturer: Office: Room 505-507, East Science And Technology Building,
Keyuan Road Science And Technology Park, Nanshan,
henzhen.

General Description of EUT	
Product Name:	Mobile Phone
Trade Name:	BITCOM
Model No.:	G26A
Adapter Model:	G26A
	INPUT:100-240V,50/60Hz,0.2A; OUTPUT:5V,500mA
Hardware version:	WZ-7A E170968 TKH46682A
Software version:	ALPS.KK1.MP7.V1.22
IMEI:	355753051582059 / 355753051582067
<i>The EUT Main board support GSM850/900/DCS1800/PCS1900, WCDMA Band 2/5 function. It is intended for speech, Multimedia Message Service (MMS) transmission. It is equipped with GPRS/EDGE class 12 for GSM850/900/DCS1800/PCS1900, GPS, FM, Bluetooth and Wi-Fi functions. For more information see the following datasheet</i>	
<i>Note: The test data is gathered from a production sample provided by the manufacturer.</i>	

Technical Characteristics of EUT	
Rated Voltage:	DC 3.7V Li-ion Battery
Battery Capacity:	1400mAh
Rated Power:	/
Lowest Internal Frequency:	32.768kHz
Highest Internal Frequency:	1.0GHz
Classification of ITE:	Class B

1.2 Test Standards

The following report is prepared on behalf of the Tech Corp America 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	Powered by battery
TM4	FM	Worst case 98MHz

EUT Cable List and Details

Cable Description	Length (M)	Shielded/Unshielded	With Core/Without Core
USB Cable	1.0	Shielded	Without Ferrite
Earphone	1.15	Unshielded	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 Test Equipment List and Details

Description	Manufacturer	Model	Serial Number	Cal Date	Due Date
Spectrum Analyzer	Agilent	E4407B	MY41440400	2015-06-17	2016-06-16
Spectrum Analyzer	Rohde & Schwarz	FSP	836079/035	2015-06-17	2016-06-16
EMI Test Receiver	Rohde & Schwarz	ESVB	825471/005	2015-06-17	2016-06-16
Amplifier	Agilent	8447F	3113A06717	2015-06-17	2016-06-16
Amplifier	C&D	PAP-1G18	2002	2015-06-17	2016-06-16
Broadband Antenna	Schwarz beck	VULB9163	9163-333	2015-06-17	2016-06-16
Horn Antenna	ETS	3117	00086197	2015-06-17	2016-06-16
Loop Antenna	Schwarz beck	FMZB 1516	9773	2015-06-17	2016-06-16
EMI Test Receiver	Rohde & Schwarz	ESPI	101611	2015-06-17	2016-06-16
L.I.S.N	Schwarz beck	NSLK8126	8126-224	2015-06-17	2016-06-16
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100911	2015-06-17	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

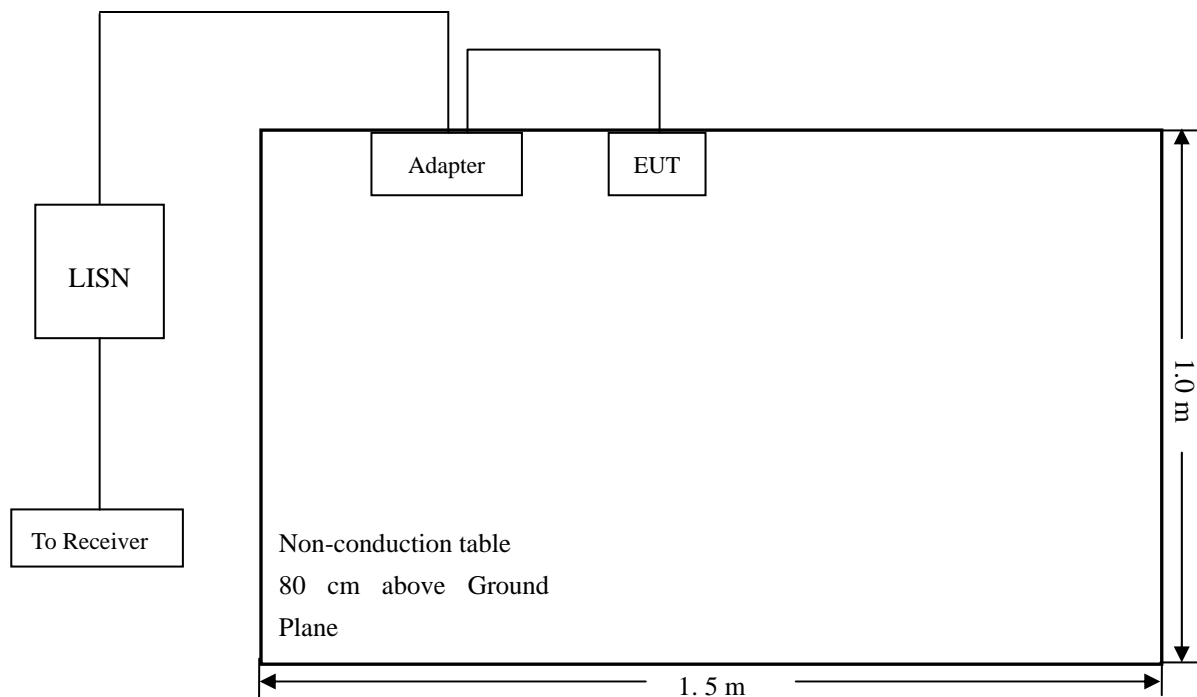
3.1 Measurement Uncertainty

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 C63.4-2014, 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.

3.3 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:

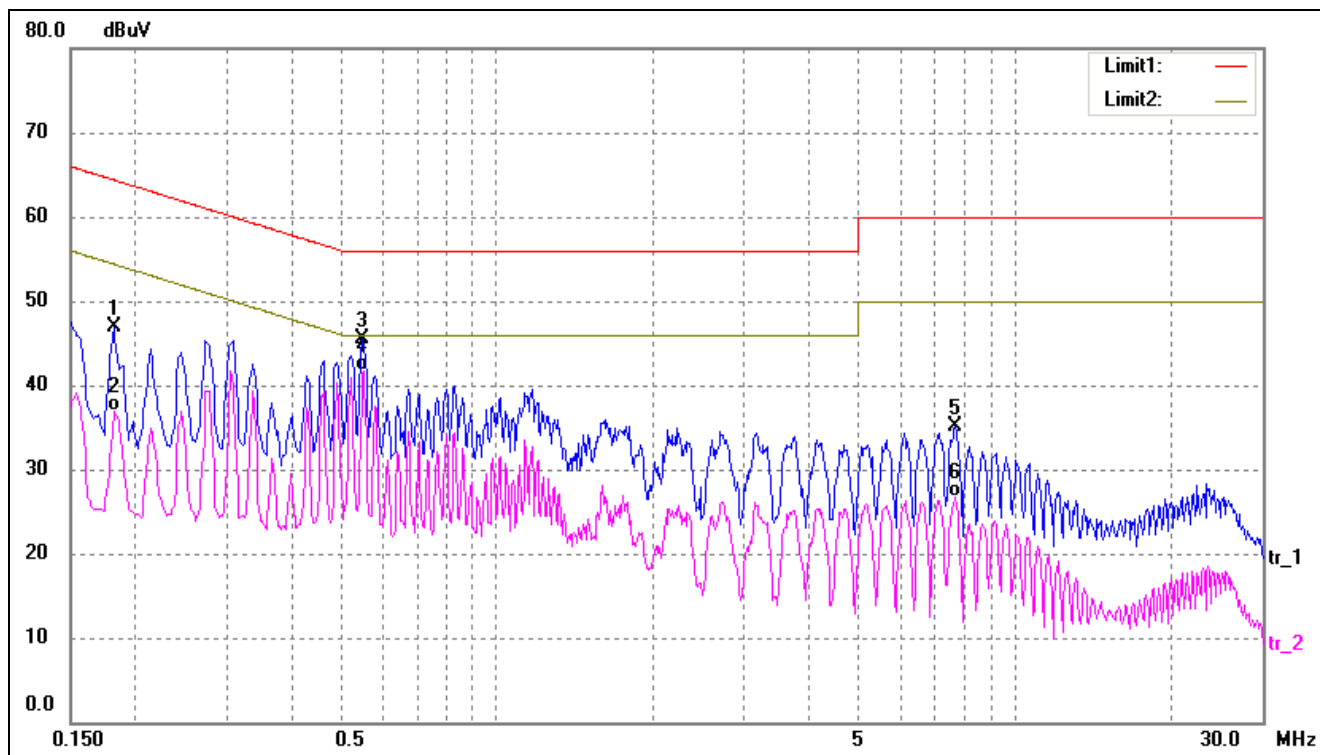
-4.19 dB at 0.5500 MHz in the **Line, AVG** detector, TM1, 0.15-30MHz

3.6 Conducted Emissions Test Data

Plot of Conducted Emissions Test Data

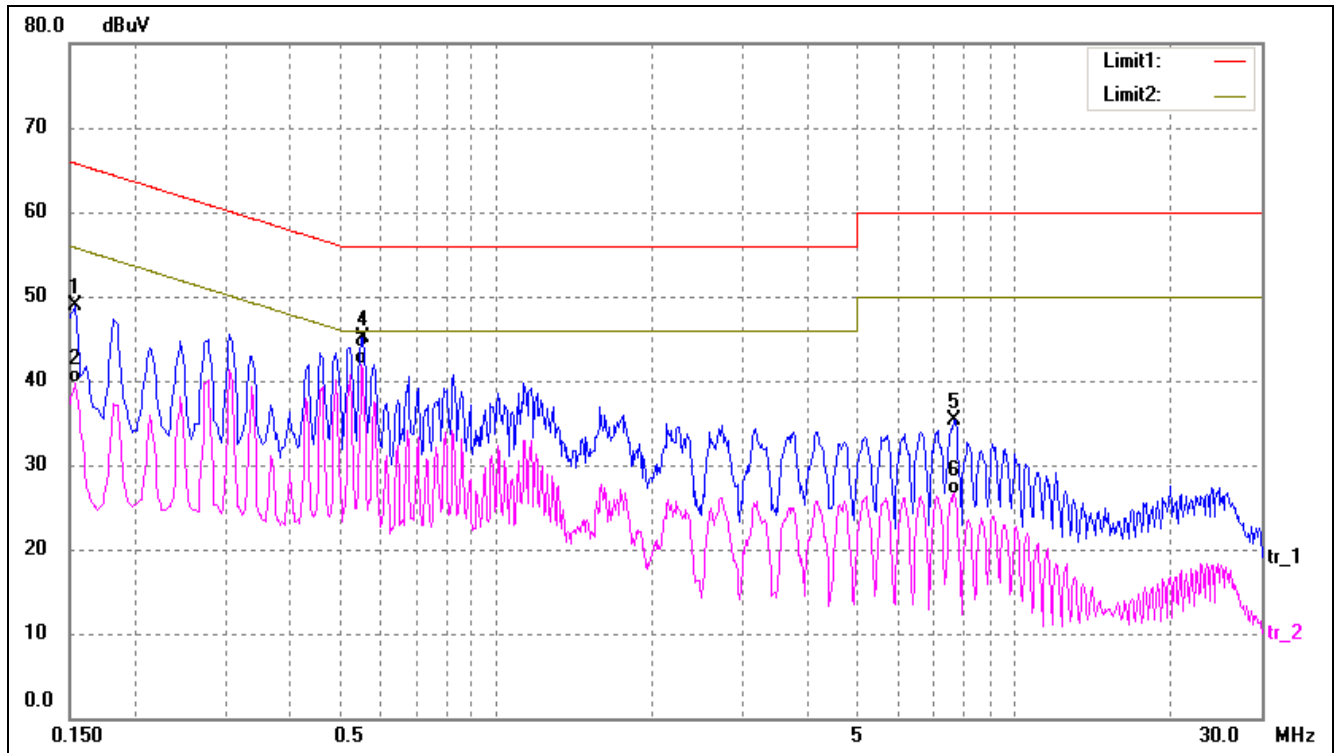
EUT: *Mobile Phone*
 Tested Model: *G26A*
 Operating Condition: *TM1*
 Comment: *AC 120V/60Hz; Adapter DC 5V*

Test Specification: *Neutral*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Detector
	(MHz)	(dBuV)	(dB/m)	(dBuV)	(dBuV)	(dB)	
1	0.1820	34.37	12.50	46.87	64.39	-17.52	peak
2	0.1820	24.41	12.50	36.91	54.39	-17.48	AVG
3	0.5500	32.98	12.55	45.53	56.00	-10.47	peak
4	0.5540	29.13	12.55	41.68	46.00	-4.32	AVG
5	7.6540	23.15	11.94	35.09	60.00	-24.91	peak
6	7.6540	14.75	11.94	26.69	50.00	-23.31	AVG

Test Specification: Line

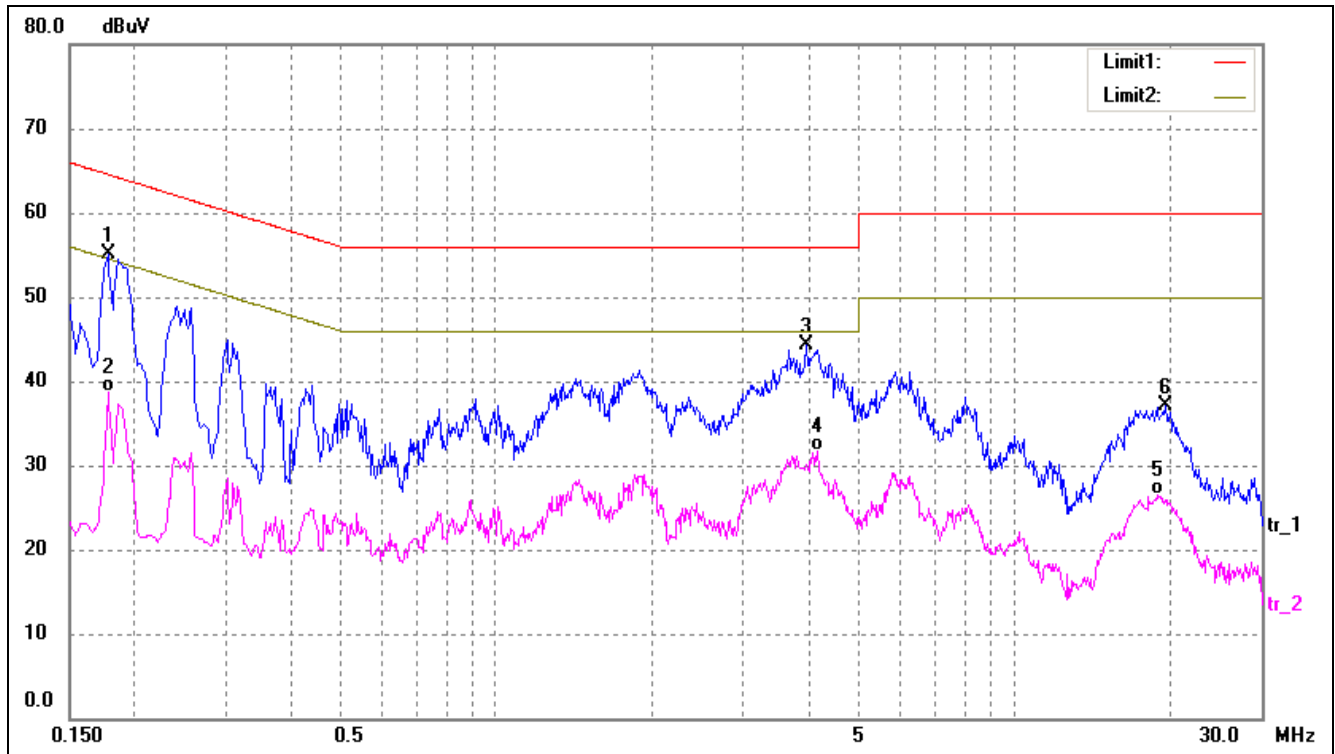


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1540	36.43	12.50	48.93	65.78	-16.85	peak
2	0.1540	27.25	12.50	39.75	55.78	-16.03	AVG
3	0.5500	29.26	12.55	41.81	46.00	-4.19	AVG
4	0.5540	32.62	12.55	45.17	56.00	-10.83	peak
5	7.6660	23.47	11.93	35.40	60.00	-24.60	peak
6	7.6660	14.67	11.93	26.60	50.00	-23.40	AVG

Plot of Conducted Emissions Test Data

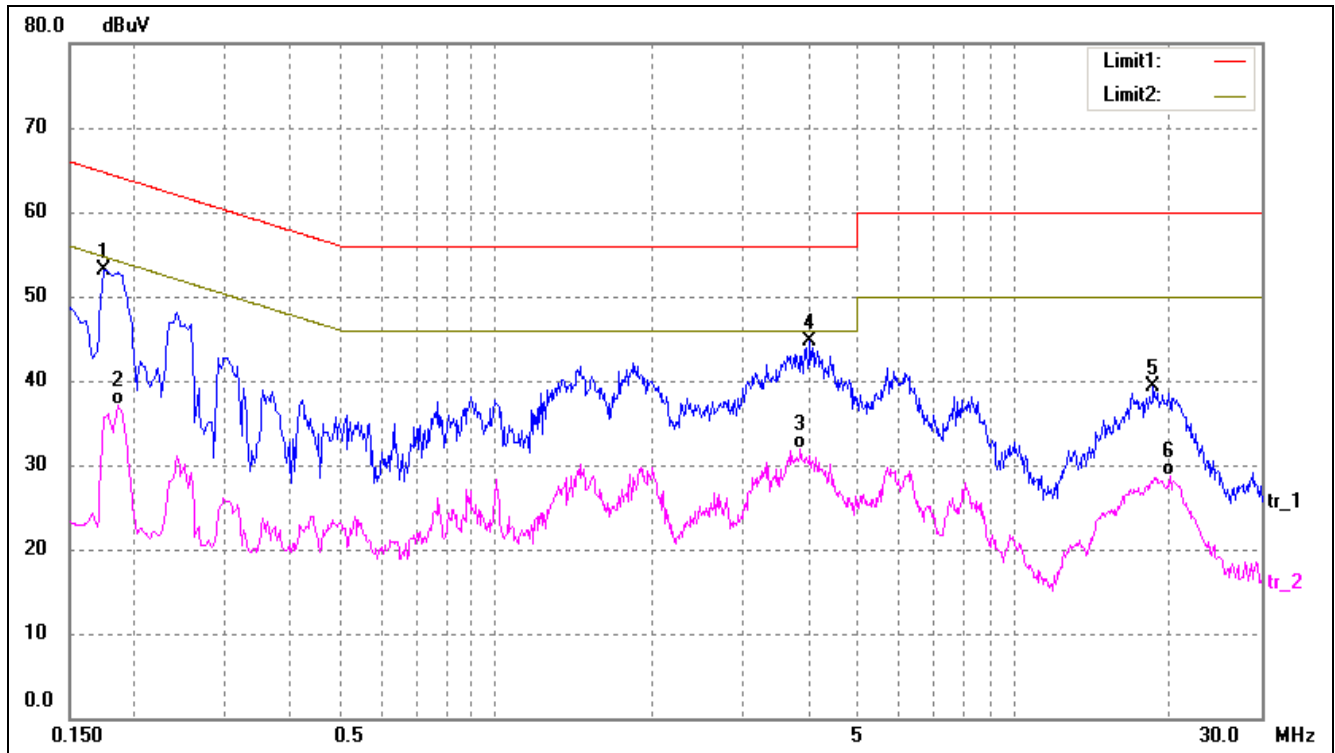
EUT: Mobile Phone
 Tested Model: G26A
 Operating Condition: TM2
 Comment: AC 120V/60Hz; USB 5V

Test Specification: Neutral



No.	Frequency	Reading	Correct	Result	Limit	Margin	Detector
	(MHz)	(dBuV)	(dB/m)	(dBuV)	(dBuV)	(dB)	
1	0.1780	45.57	9.50	55.07	64.58	-9.51	peak
2	0.1780	29.28	9.50	38.78	54.58	-15.80	AVG
3	3.9820	34.32	10.00	44.32	56.00	-11.68	peak
4	4.1740	21.74	10.00	31.74	46.00	-14.26	AVG
5	18.8700	14.65	11.77	26.42	50.00	-23.58	AVG
6	19.5700	25.15	11.91	37.06	60.00	-22.94	peak

Test Specification: Line



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1740	43.67	9.50	53.17	64.77	-11.60	peak
2	0.1860	27.63	9.50	37.13	54.21	-17.08	AVG
3	3.8780	21.95	10.00	31.95	46.00	-14.05	AVG
4	4.0460	34.76	10.00	44.76	56.00	-11.24	peak
5	18.5780	27.53	11.72	39.25	60.00	-20.75	peak
6	20.0060	16.64	12.00	28.64	50.00	-21.36	AVG

4. Radiated Emissions

4.1 Measurement Uncertainty

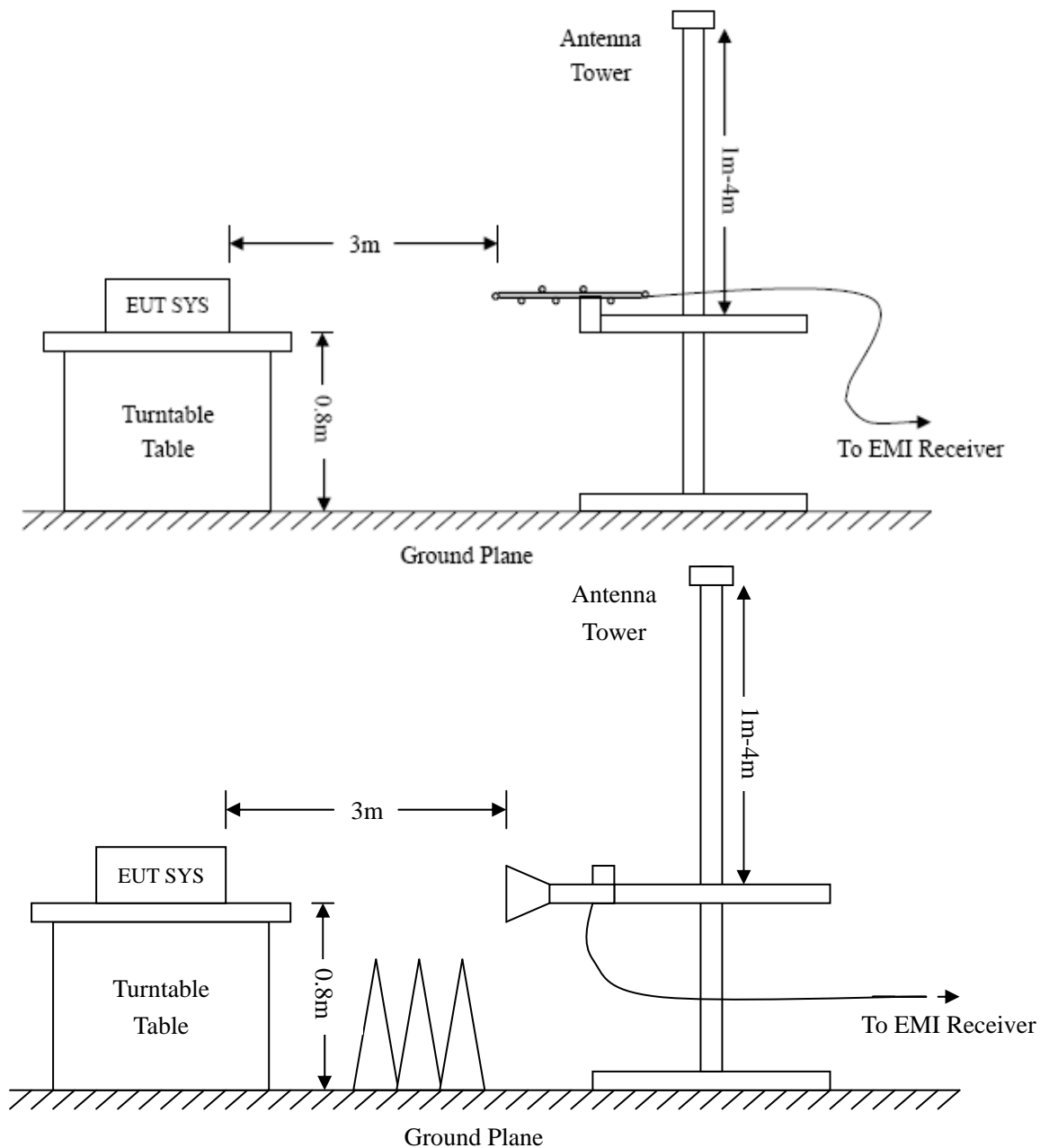
Base on NIS 81, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of any radiation emissions measurement is ± 5.10 dB.

4.2 Test Procedure

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



4.3 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

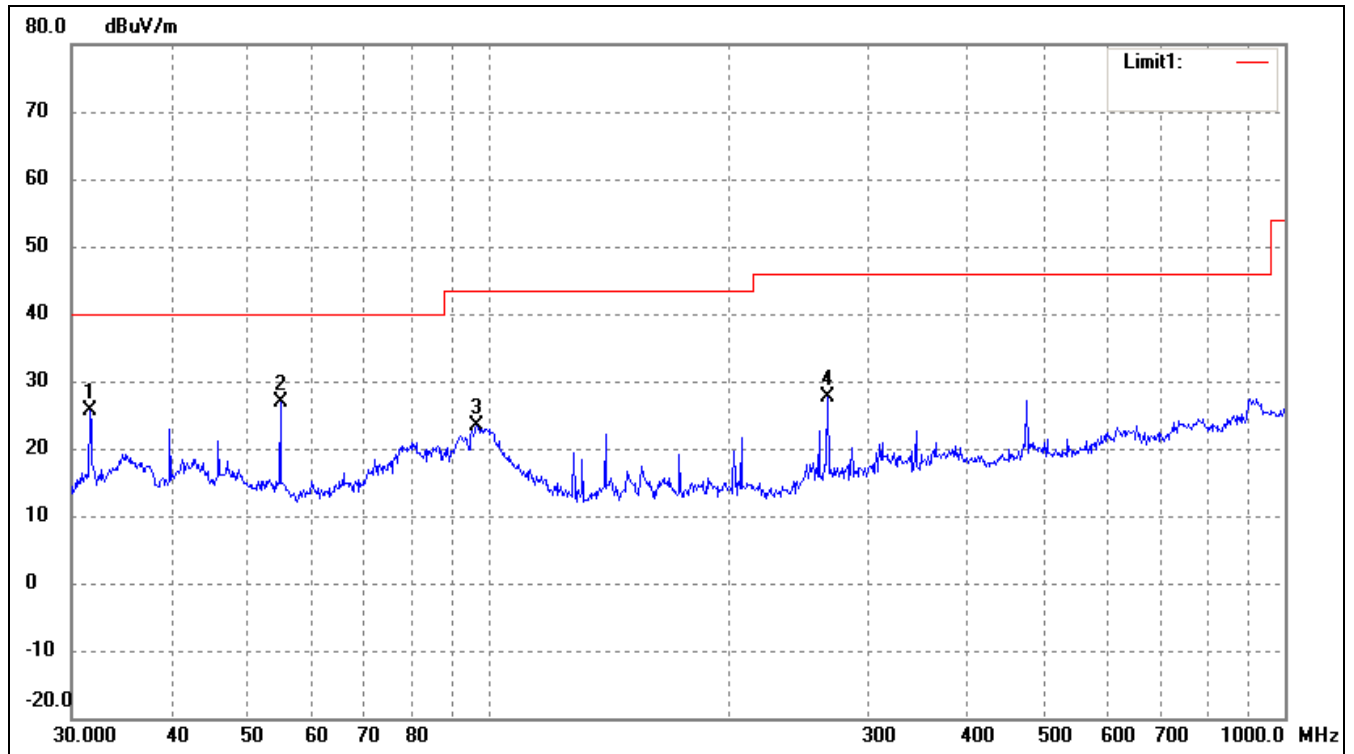
According to the data, the EUT complied with the FCC Part 15.109(a) rule, and had the worst margin of:

-2.67 dB at 239.9874 MHz in the Vertical polarization, TM2 Mode 9 kHz to 6.0 GHz, 3Meters

Plot of Radiated Emissions Test Data

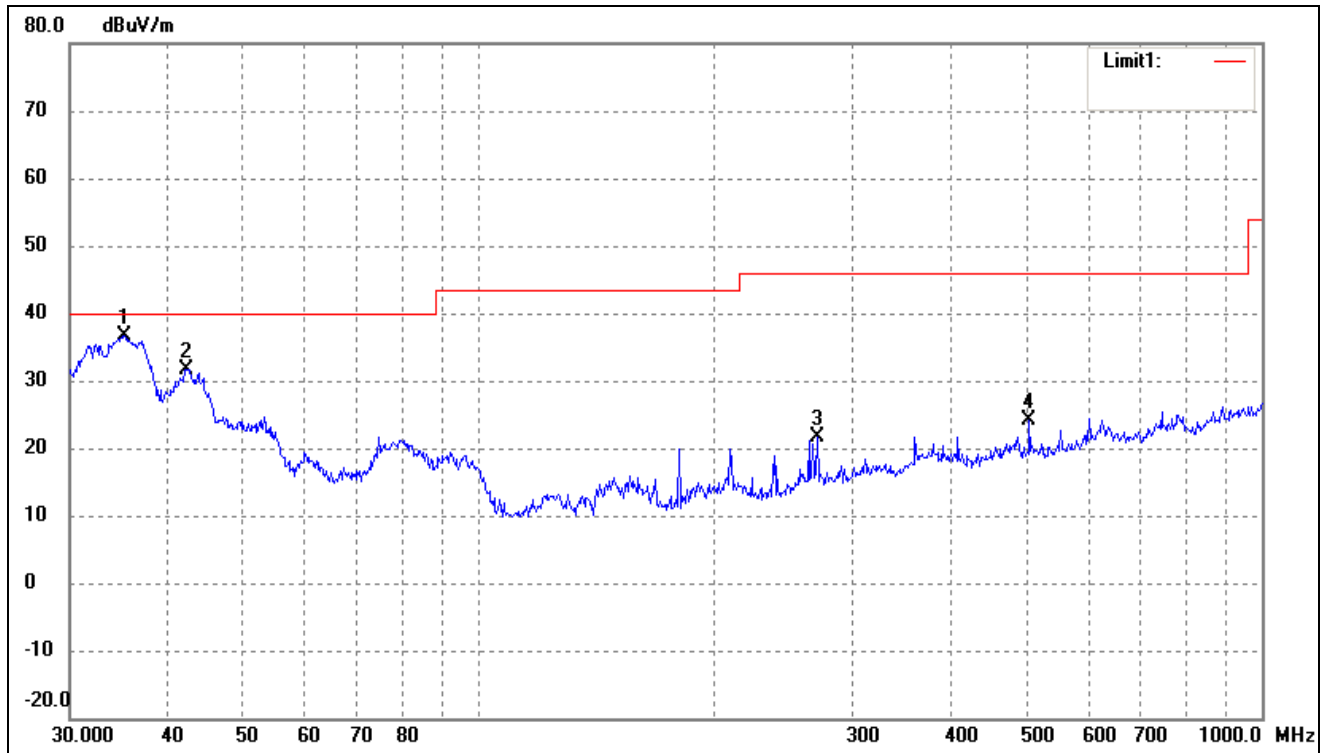
EUT: Mobile Phone
 Tested Model: G26A
 Operating Condition: TM1
 Comment: AC 120V/60Hz; Adapter DC 5V

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	31.6202	35.61	-9.90	25.71	40.00	-14.29	154	100	peak
2	54.8348	35.70	-8.93	26.77	40.00	-13.23	24	100	peak
3	96.7749	34.89	-11.56	23.33	43.50	-20.17	265	100	peak
4	266.6089	34.27	-6.67	27.60	46.00	-18.40	115	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	35.2512	45.63	-8.96	36.67	40.00	-3.33	178	100	peak
2	42.3022	39.54	-7.82	31.72	40.00	-8.28	54	100	peak
3	270.3748	28.16	-6.51	21.65	46.00	-24.35	198	100	peak
4	504.7062	26.36	-2.12	24.24	46.00	-21.76	214	100	peak

Plot of Radiated Emissions Test Data

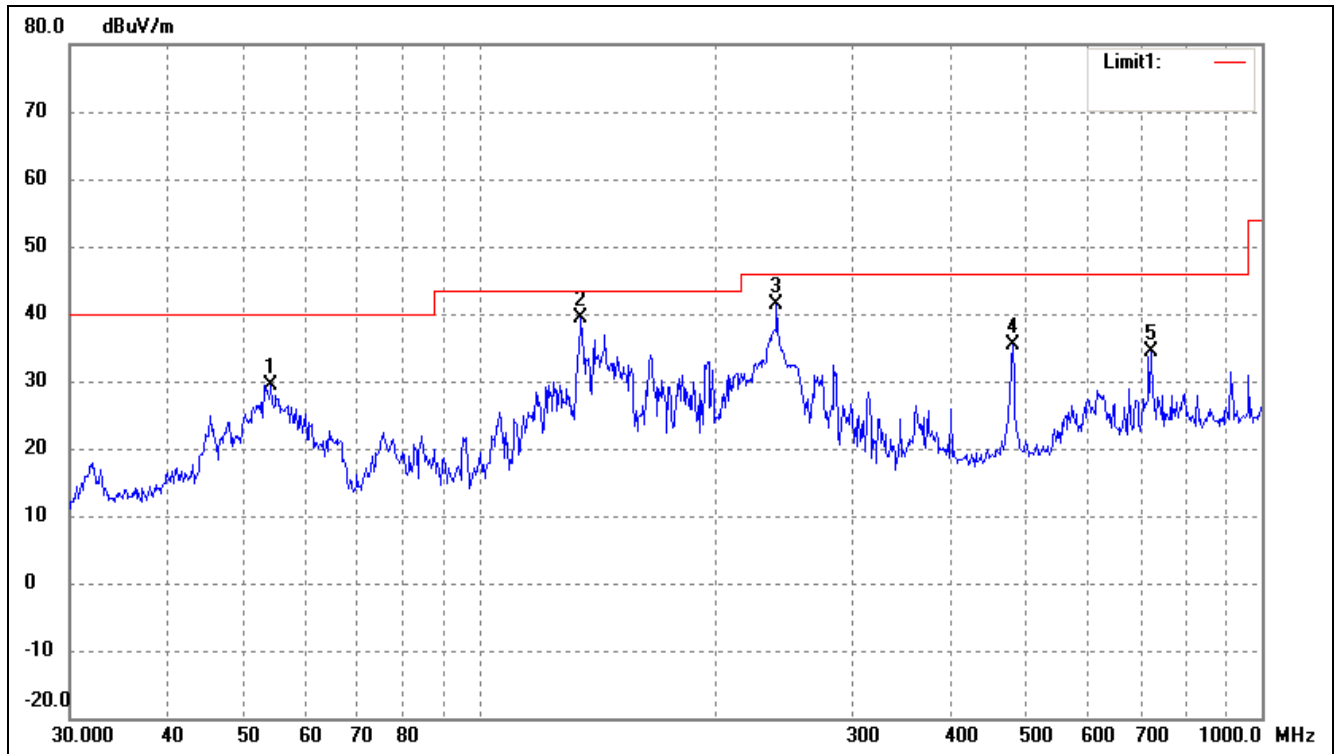
EUT: *Mobile Phone*

Tested Model: *G26A*

Operating Condition: *TM2*

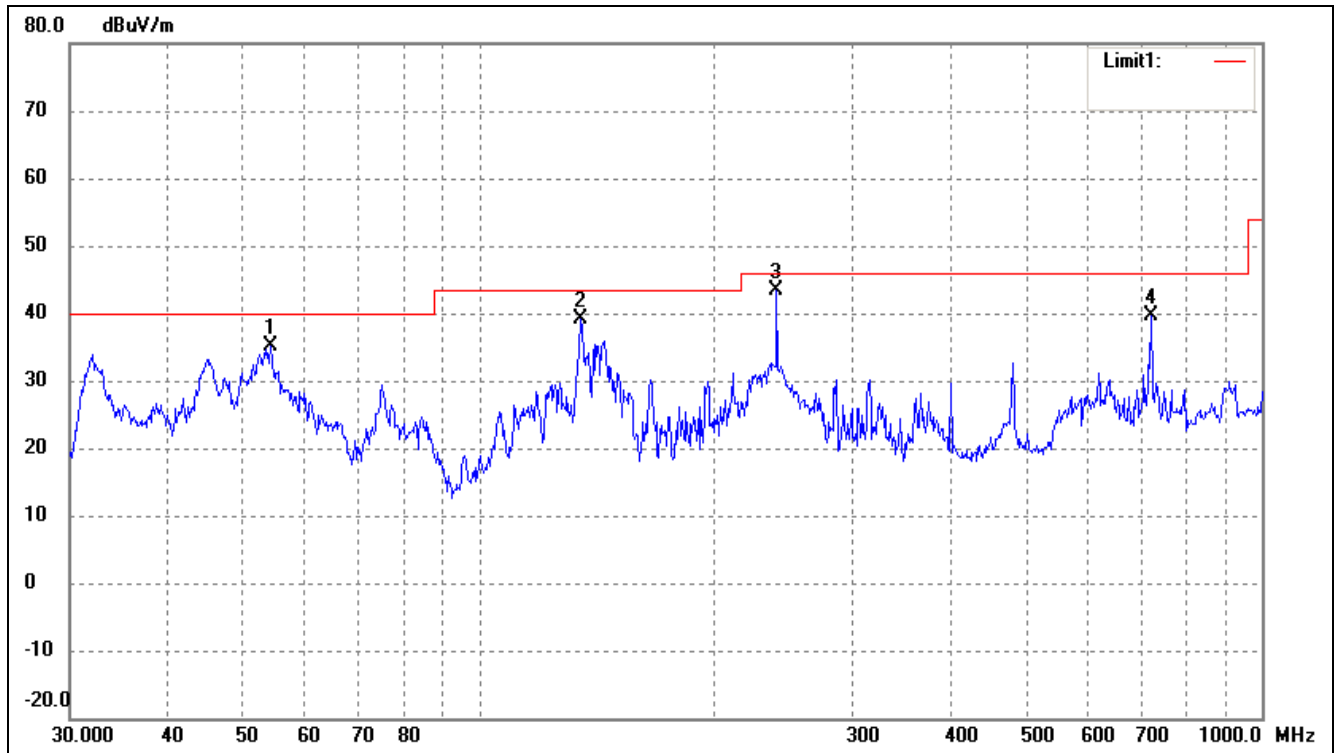
Comment: *USB: DC5V*

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	54.2610	38.34	-8.86	29.48	40.00	-10.52	78	100	peak
2	135.0319	51.64	-12.28	39.36	43.50	-4.14	98	100	peak
3	239.9874	49.62	-8.33	41.29	46.00	-4.71	214	100	peak
4	480.5276	36.55	-1.08	35.47	46.00	-10.53	51	100	peak
5	721.7259	33.26	1.06	34.32	46.00	-11.68	126	100	peak

Test Specification: Vertical



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	54.0711	43.93	-8.83	35.10	40.00	-4.90	18	100	peak
2	135.0319	51.36	-12.28	39.08	43.50	-4.42	144	100	peak
3	239.9874	51.66	-8.33	43.33	46.00	-2.67	98	100	peak
4	721.7259	38.46	1.06	39.52	46.00	-6.48	265	100	peak

Plot of Radiated Emissions Test Data

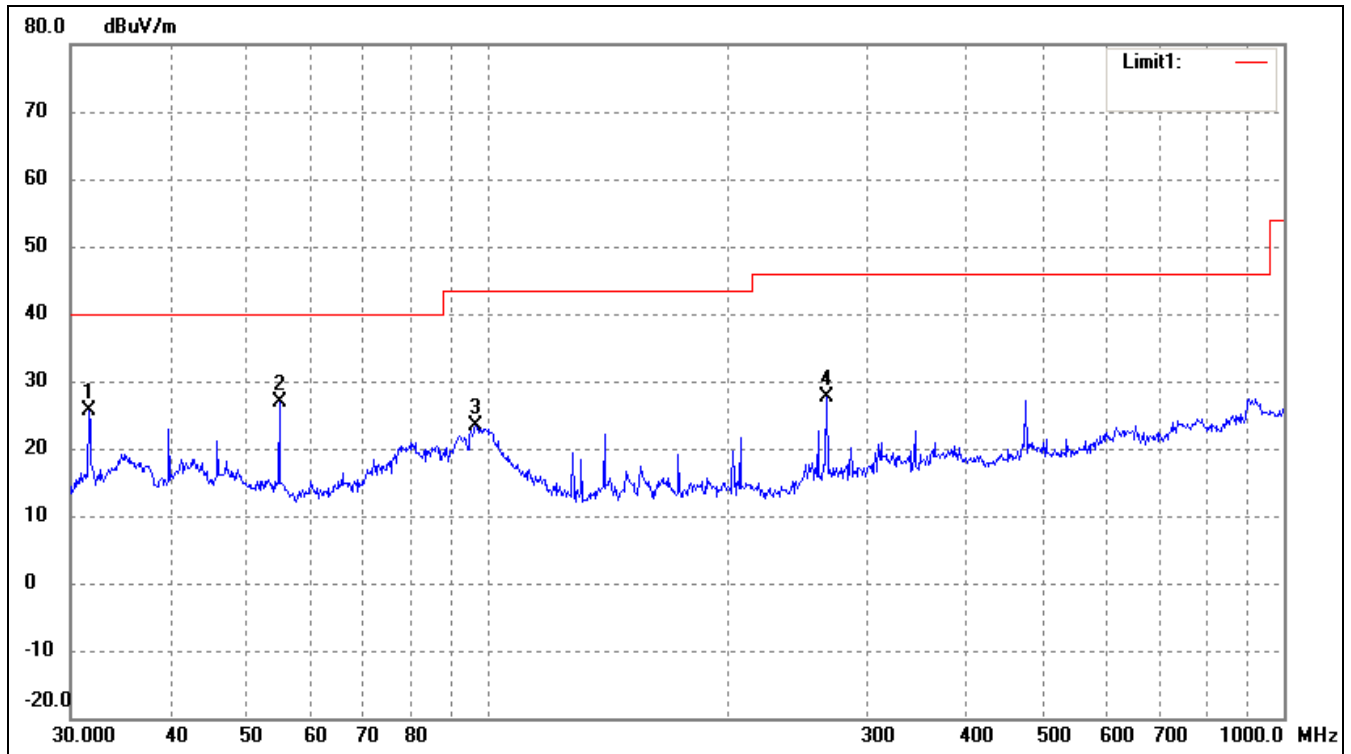
EUT: Mobile Phone

Tested Model: G26A

Operating Condition: TM3

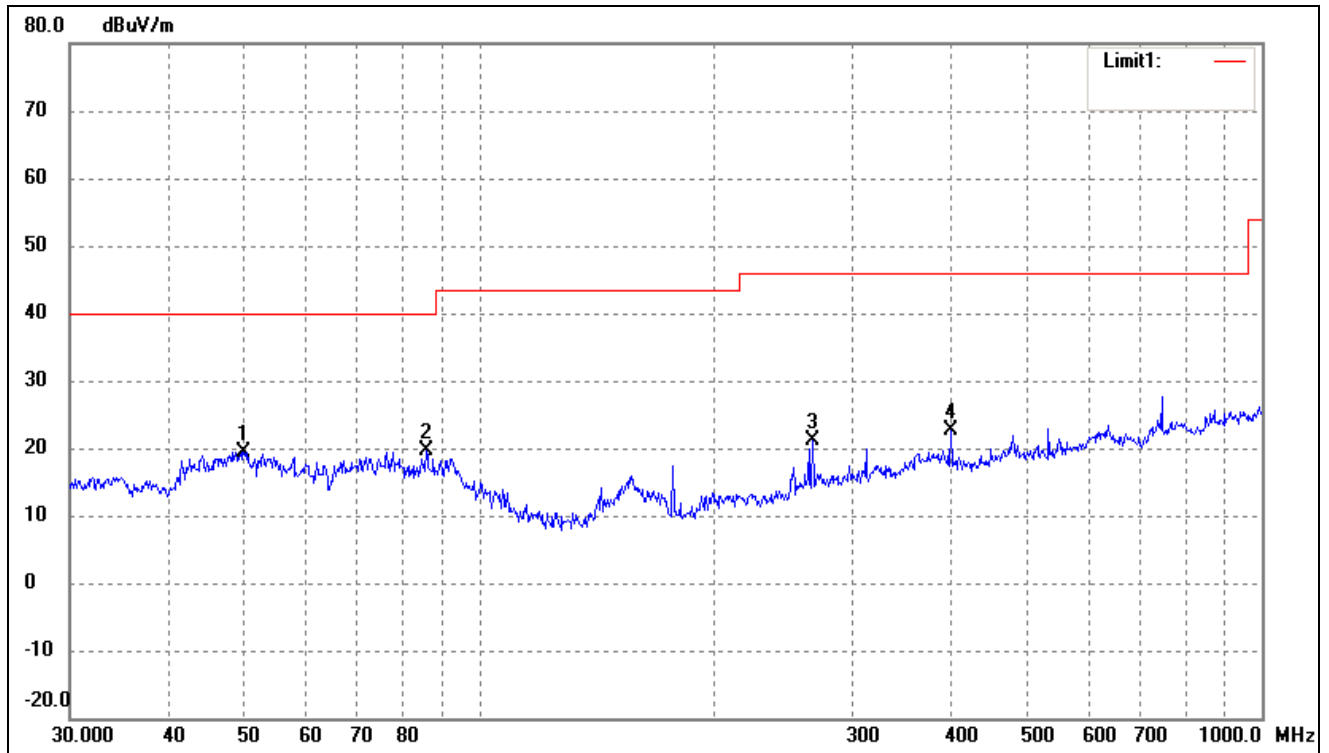
Comment: DC 3.7V

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	31.6202	35.61	-9.90	25.71	40.00	-14.29	79	100	peak
2	54.8348	35.70	-8.93	26.77	40.00	-13.23	58	100	peak
3	96.7749	34.89	-11.56	23.33	43.50	-20.17	328	100	peak
4	266.6089	34.27	-6.67	27.60	46.00	-18.40	27	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	50.0566	27.81	-8.33	19.48	40.00	-20.52	89	100	peak
2	85.5977	32.09	-12.52	19.57	40.00	-20.43	65	100	peak
3	266.6089	27.68	-6.67	21.01	46.00	-24.99	125	100	peak
4	400.4318	25.81	-3.15	22.66	46.00	-23.34	129	100	peak

Plot of Radiated Emissions Test Data

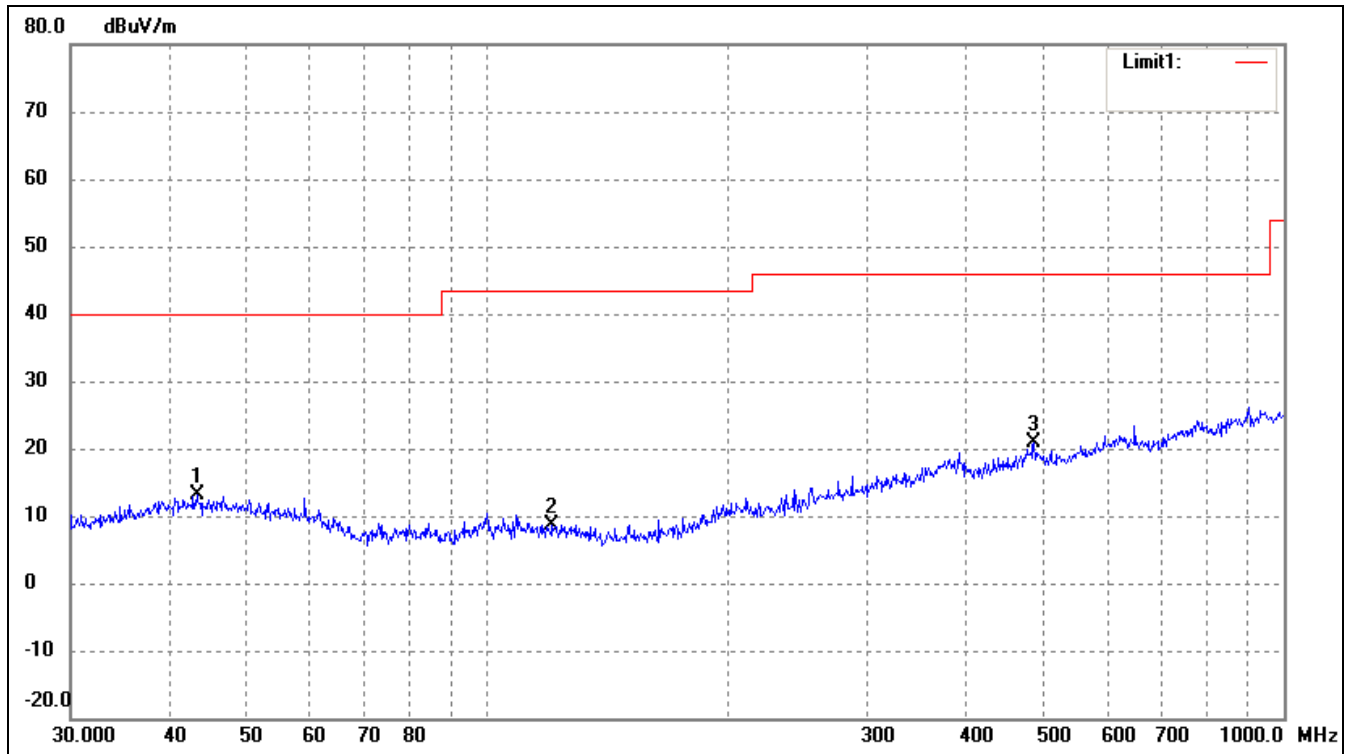
EUT: Mobile Phone

Tested Model: G26A

Operating Condition: TM3

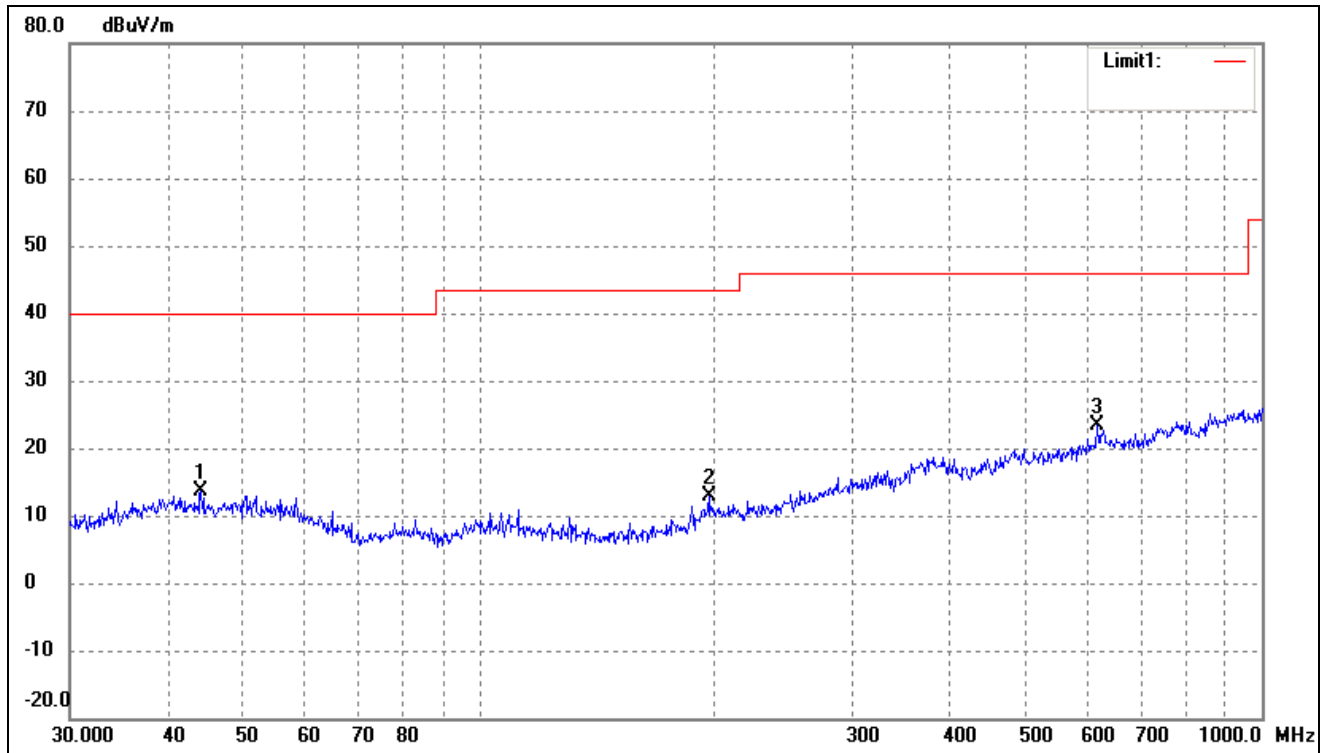
Comment: DC 3.7V

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	43.2017	20.95	-7.87	13.08	40.00	-26.92	185	100	peak
2	120.6991	20.14	-11.47	8.67	43.50	-34.83	21	100	peak
3	485.6093	22.18	-1.36	20.82	46.00	-25.18	46	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	44.1202	21.55	-7.94	13.61	40.00	-26.39	79	100	peak
2	196.5098	21.98	-9.12	12.86	43.50	-30.64	98	100	peak
3	616.3718	22.35	0.99	23.34	46.00	-22.66	44	100	peak

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 *****