

# FCC Part 15B Measurement and Test Report

For

Sky Phone LLC

1348 Washington Av. Suite 350, Miami Beach, Florida, United States

**FCC ID: 2ABOSSKYELITEA55**

Test Rule(s):	<u>FCC Part 15 Subpart B</u>
Product Description:	<u>4G Smart Phone</u>
Tested Model:	<u>Elite A55</u>
Report No.:	<u>STR18018114I-6</u>
Sample Receipt Date:	<u>2018-01-10</u>
Tested Date:	<u>2018-01-11 to 2018-01-26</u>
Issued Date:	<u>2018-01-26</u>
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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: Sky Phone LLC  
Address of applicant: 1348 Washington Av. Suite 350, Miami Beach, Florida,  
United States

Manufacturer: Sky Phone LLC  
Address of manufacturer: 1348 Washington Av. Suite 350, Miami Beach, Florida,  
United States

General Description of EUT	
Product Name:	4G Smart Phone
Trade Name:	/
Model No.:	Elite A55
Adding Model(s):	/
<i>Note: The test data is gathered from a production sample, provided by the manufacturer.</i>	

Technical Characteristics of EUT	
Rated Voltage:	Battery: DC 3.8V
Rated Current:	/
Rated Power:	/
Power Adapter Model:	Model: DCS10-0501000F I/P: AC100-240V~50/60Hz, 0.3A; O/P: DC 5V,1.0A
Lowest Internal Frequency:	26MHz
Highest Internal Frequency:	1.25GHz
Classification of ITE:	Class B

## 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.: 125990**

Shenzhen SEM Test Technology Co., Ltd. Laboratory has been recognized to perform compliance testing on equipment subject to the Commissions Declaration Of Conformity (DOC). The Designation Number is CN5010, and Test Firm Registration Number is 125990.

### **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.

## 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	Connect to adapter
TM2	Downloading	Connect to PC
TM3	Camera	/
TM4	FM	/

EUT Cable List and Details

Cable Description	Length (M)	Shielded/Unshielded	With Core/Without Core
USB Cable	1.0	Shielded	Without Ferrite
Earphone	1.2	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 Measurement Uncertainty

Measurement uncertainty		
Parameter	Conditions	Uncertainty
Conducted Emissions	Conducted	9-150kHz $\pm 3.74$ dB
		0.15-30MHz $\pm 3.34$ dB
Radiated Emissions	Radiated	30-200MHz $\pm 4.52$ dB
		0.2-1GHz $\pm 5.56$ dB
		1-6GHz $\pm 3.84$ dB
		6-18GHz $\pm 3.92$ 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	2017-06-12	2018-06-11
SEMT-1031	Spectrum Analyzer	Rohde & Schwarz	FSP30	836079/035	2017-06-12	2018-06-11
SEMT-1007	EMI Test Receiver	Rohde & Schwarz	ESVB	825471/005	2017-06-12	2018-06-11
SEMT-1008	Amplifier	Agilent	8447F	3113A06717	2017-06-12	2018-06-11
SEMT-1043	Amplifier	C&D	PAP-1G18	2002	2017-06-12	2018-06-11
SEMT-1011	Broadband Antenna	Schwarz beck	VULB9163	9163-333	2017-06-08	2018-06-07
SEMT-1042	Horn Antenna	ETS	3117	00086197	2017-06-08	2018-06-07
SEMT-1069	Loop Antenna	Schwarz beck	FMZB 1516	9773	2017-06-08	2018-06-07
SEMT-1001	EMI Test Receiver	Rohde & Schwarz	ESPI	101611	2017-06-12	2018-06-11
SEMT-1003	L.I.S.N	Schwarz beck	NSLK8126	8126-224	2017-06-12	2018-06-11
SEMT-1002	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100911	2017-06-12	2018-06-11

## 2. SUMMARY OF TEST RESULTS

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

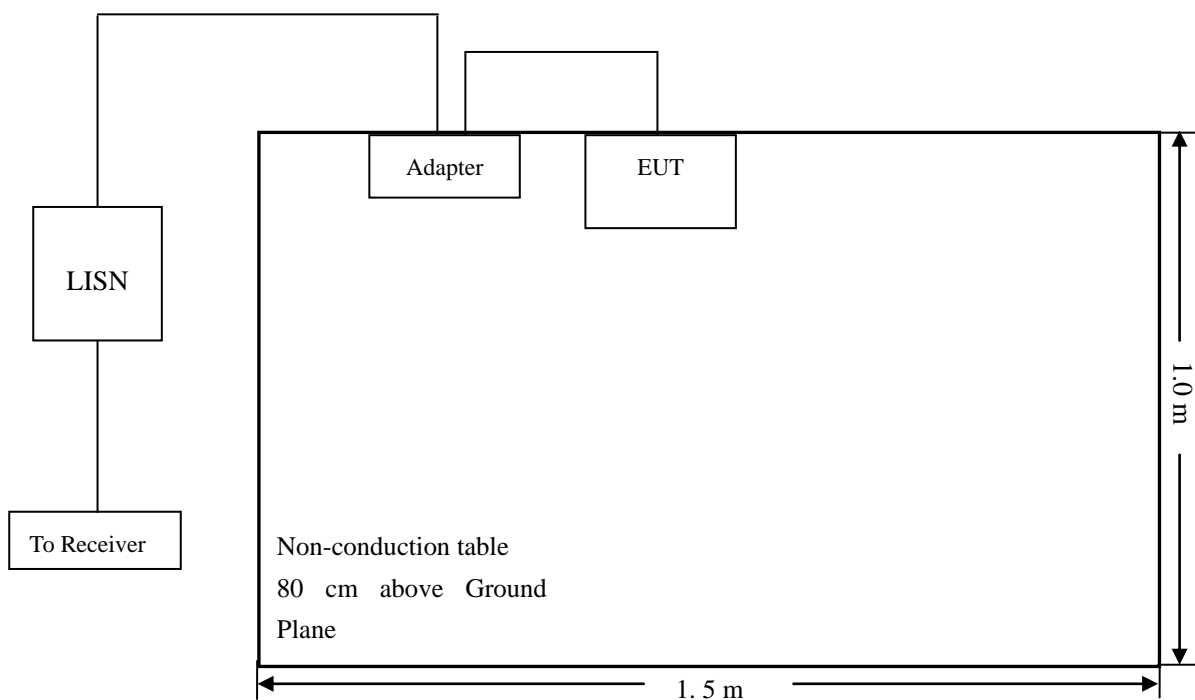
N/A: not applicable

### 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:

**-7.17 dB at 0.5140 MHz in the Neutral, QP detector, TM2 mode, 0.15-30MHz**

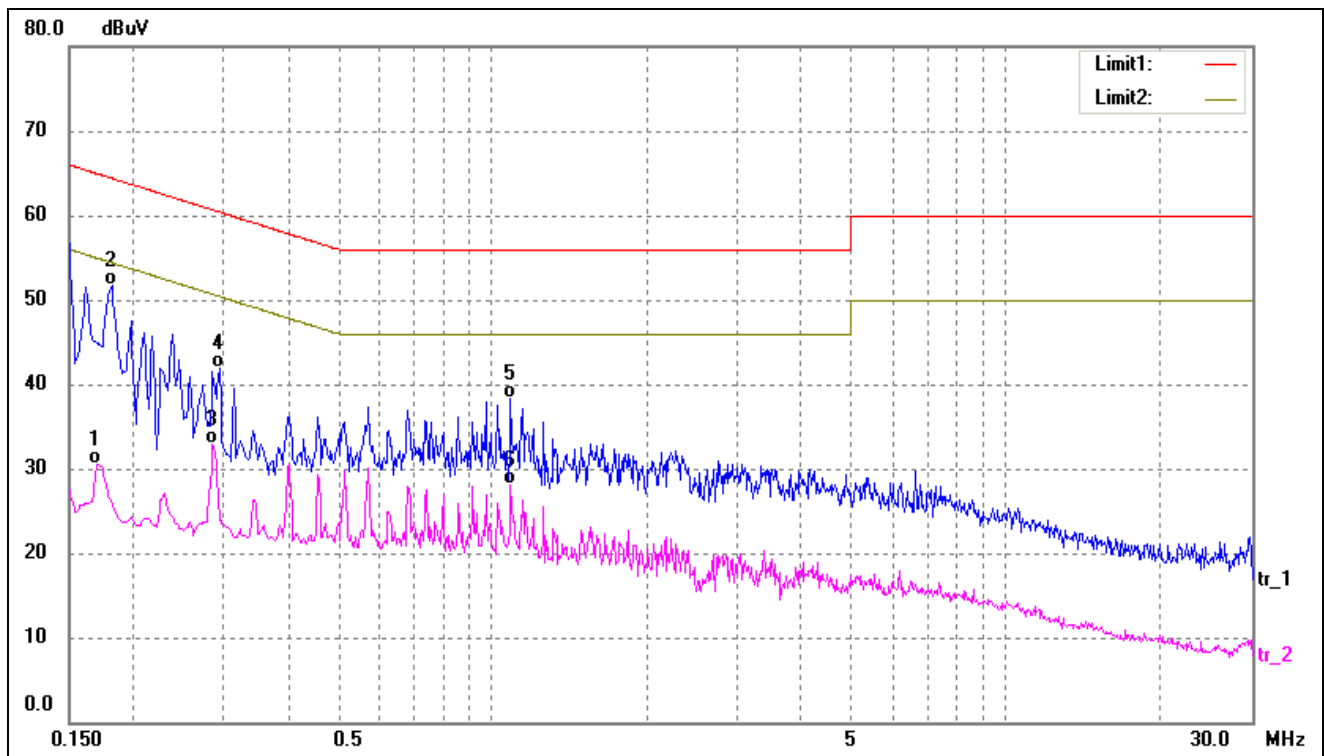


### 3.5 Conducted Emissions Test Data

#### Plot of Conducted Emissions Test Data

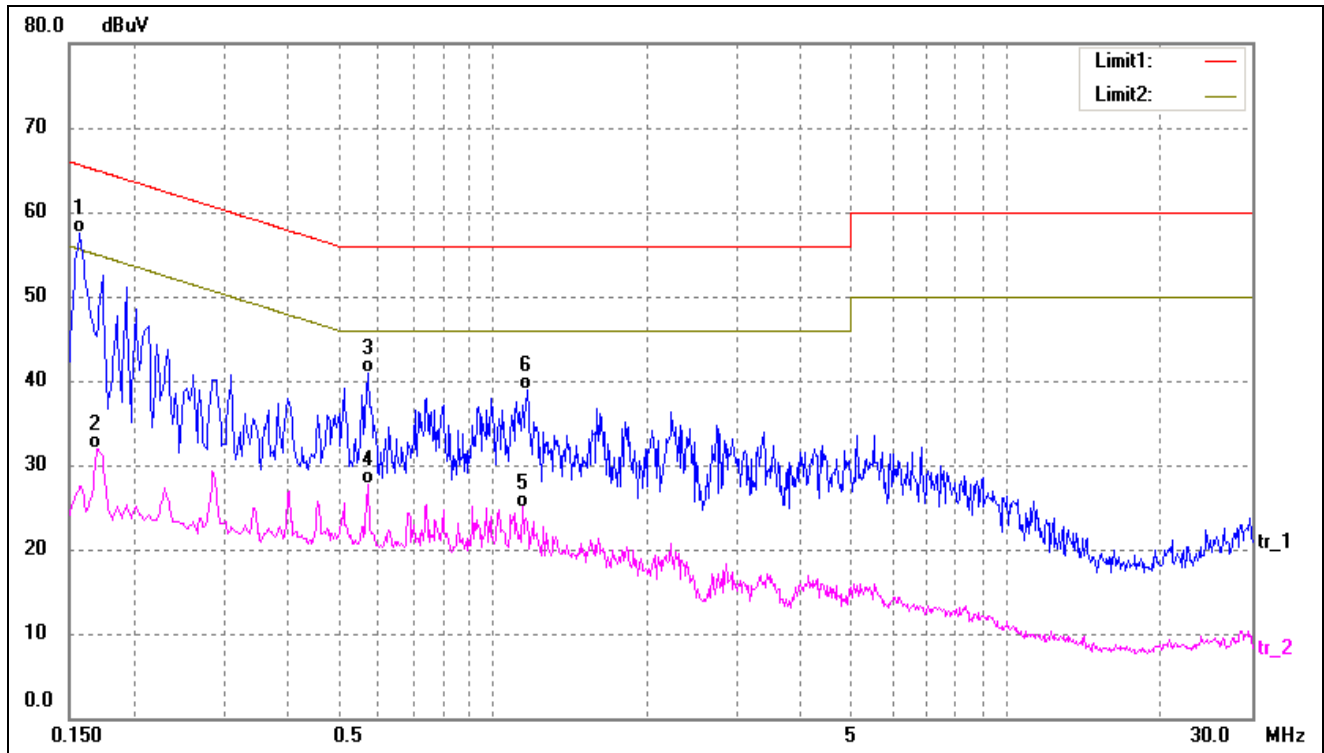
EUT: 4G Smart Phone  
 Tested Model: Elite A55  
 Operating Condition: TM1  
 Comment: AC 120V/60Hz; Adapter DC 5V

Test Specification: Neutral



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1700	20.72	9.83	30.55	54.96	-24.41	AVG
2*	0.1820	41.91	9.82	51.73	64.39	-12.66	QP
3	0.2860	23.05	9.80	32.85	50.64	-17.79	AVG
4	0.2940	32.08	9.80	41.88	60.41	-18.53	QP
5	1.0860	28.51	9.76	38.27	56.00	-17.73	QP
6	1.0860	18.43	9.76	28.19	46.00	-17.81	AVG

Test Specification: Line

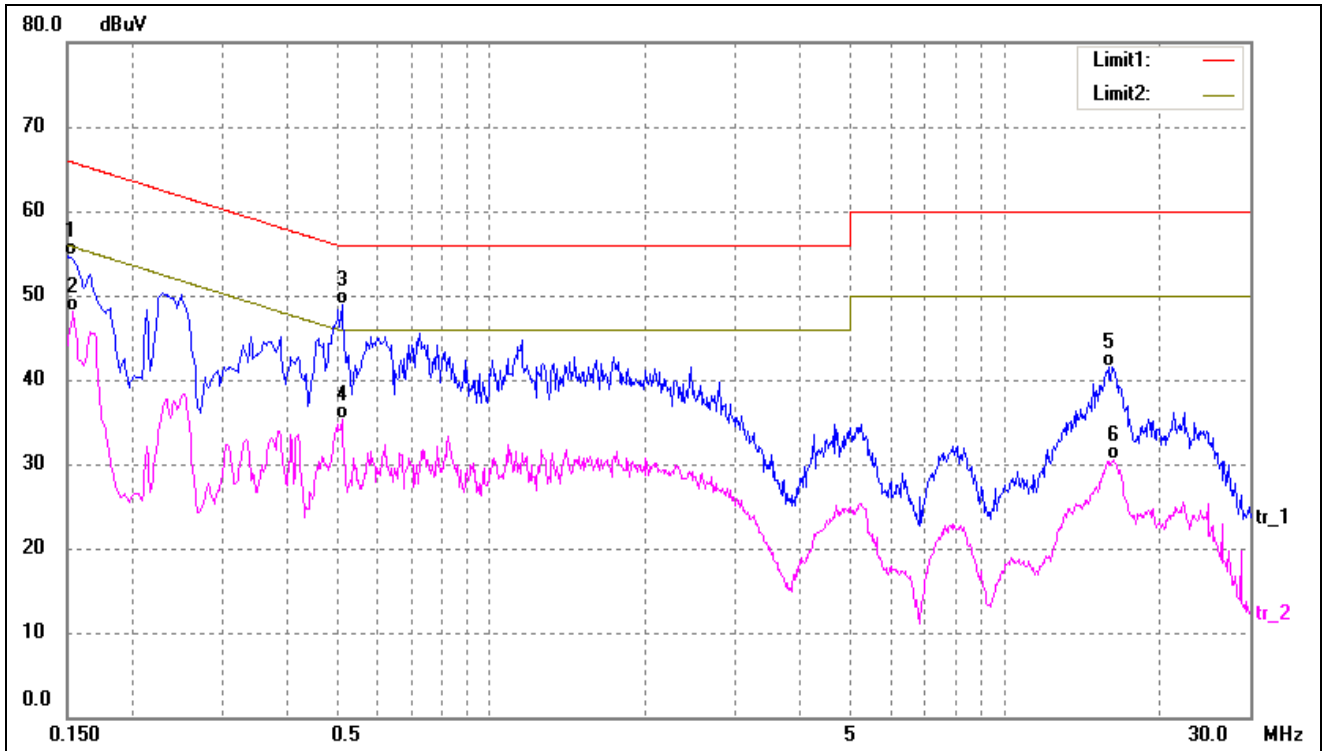


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1*	0.1580	47.60	9.84	57.44	65.57	-8.13	QP
2	0.1700	22.11	9.83	31.94	54.96	-23.02	AVG
3	0.5740	31.10	9.79	40.89	56.00	-15.11	QP
4	0.5740	17.83	9.79	27.62	46.00	-18.38	AVG
5	1.1460	15.24	9.76	25.00	46.00	-21.00	AVG
6	1.1660	29.12	9.76	38.88	56.00	-17.12	QP

**Plot of Conducted Emissions Test Data**

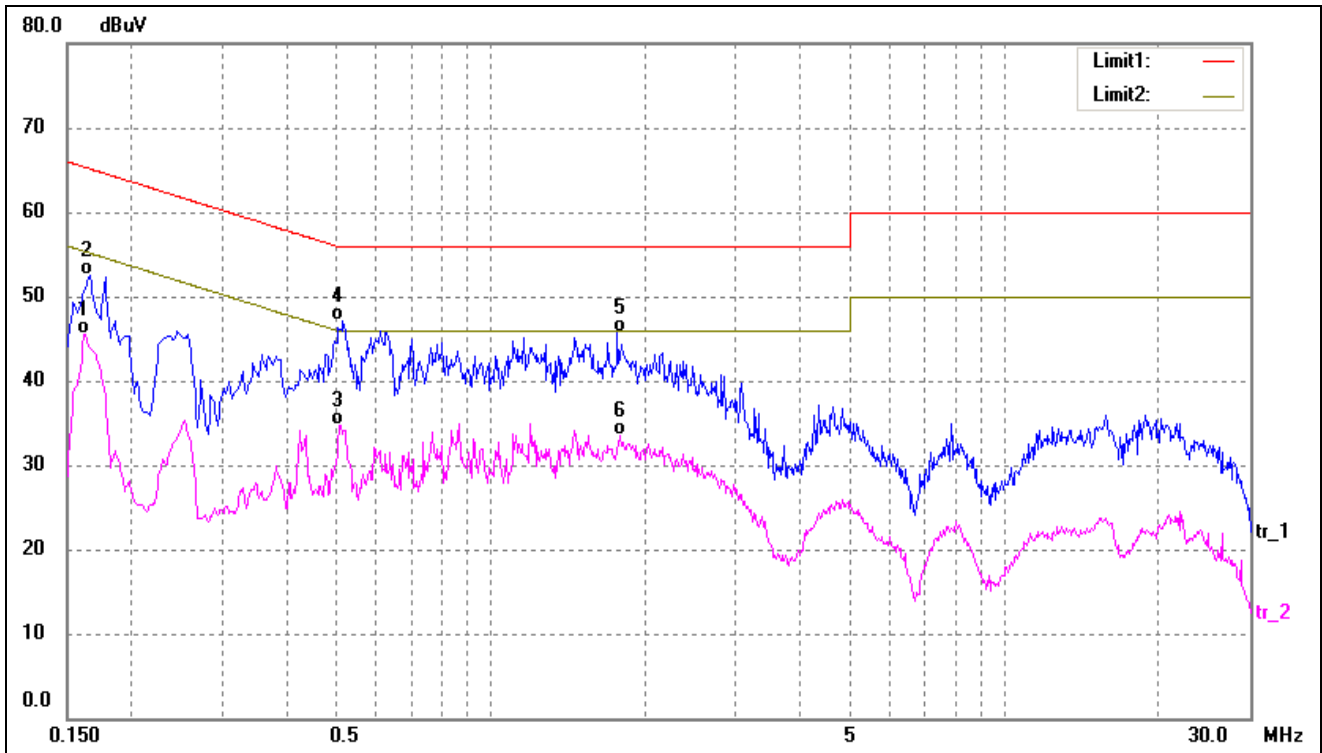
EUT: 4G Smart Phone  
 Tested Model: Elite A55  
 Operating Condition: TM2  
 Comment: AC 120V/60Hz; USB 5V

Test Specification: Neutral



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1500	44.81	9.85	54.66	66.00	-11.34	QP
2	0.1540	38.16	9.85	48.01	55.78	-7.77	AVG
3*	0.5140	39.03	9.80	48.83	56.00	-7.17	QP
4	0.5140	25.43	9.80	35.23	46.00	-10.77	AVG
5	15.9420	31.88	9.62	41.50	60.00	-18.50	QP
6	16.3300	20.92	9.63	30.55	50.00	-19.45	AVG

Test Specification: Line



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1620	35.75	9.84	45.59	55.36	-9.77	AVG
2	0.1660	42.65	9.83	52.48	65.16	-12.68	QP
3	0.5100	24.83	9.80	34.63	46.00	-11.37	AVG
4*	0.5180	37.32	9.80	47.12	56.00	-8.88	QP
5	1.7700	35.99	9.74	45.73	56.00	-10.27	QP
6	1.7860	23.77	9.74	33.51	46.00	-12.49	AVG

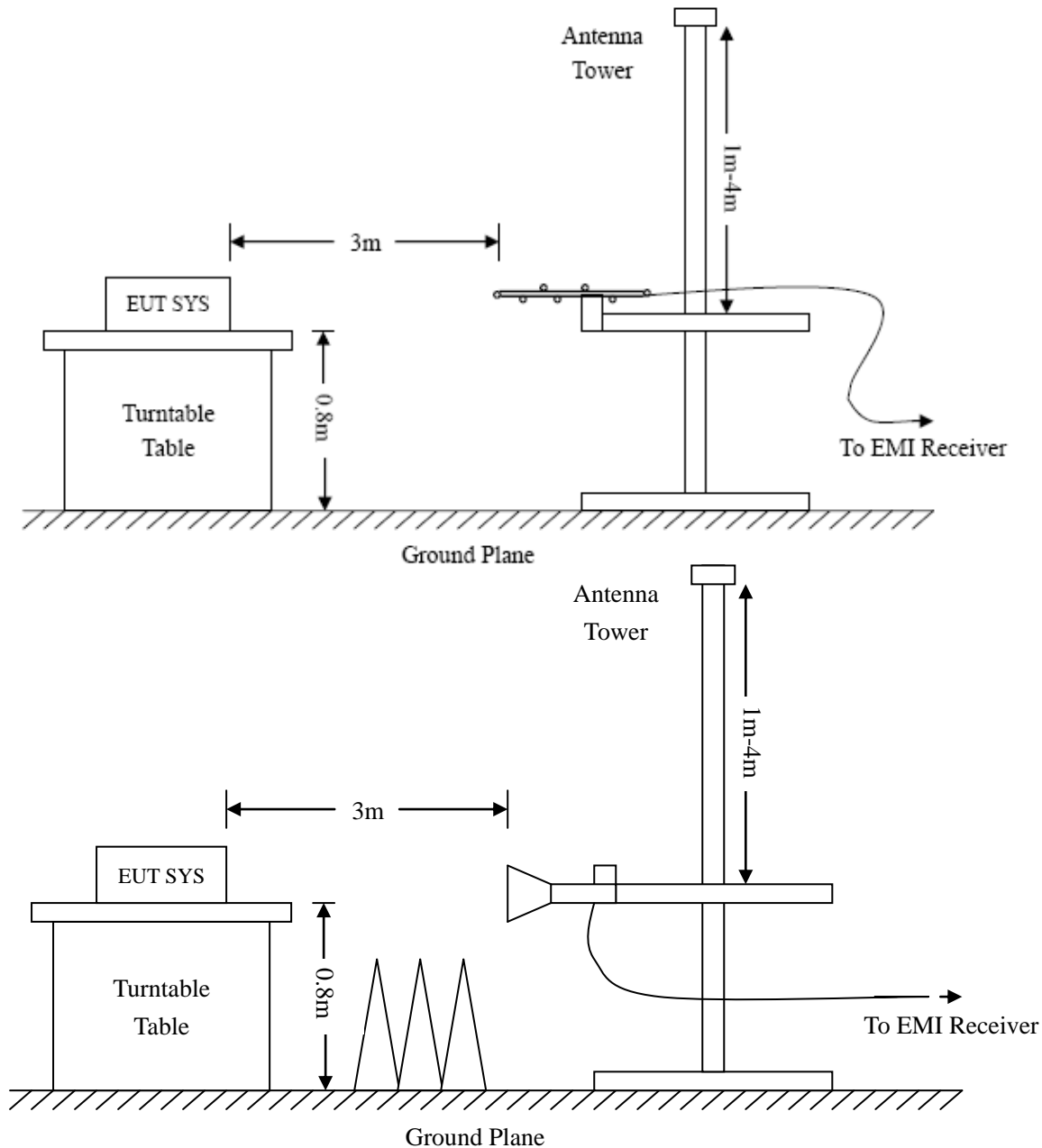
## 4. Radiated Emissions

### 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 $\mu$ V means the emission is 6dB $\mu$ 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

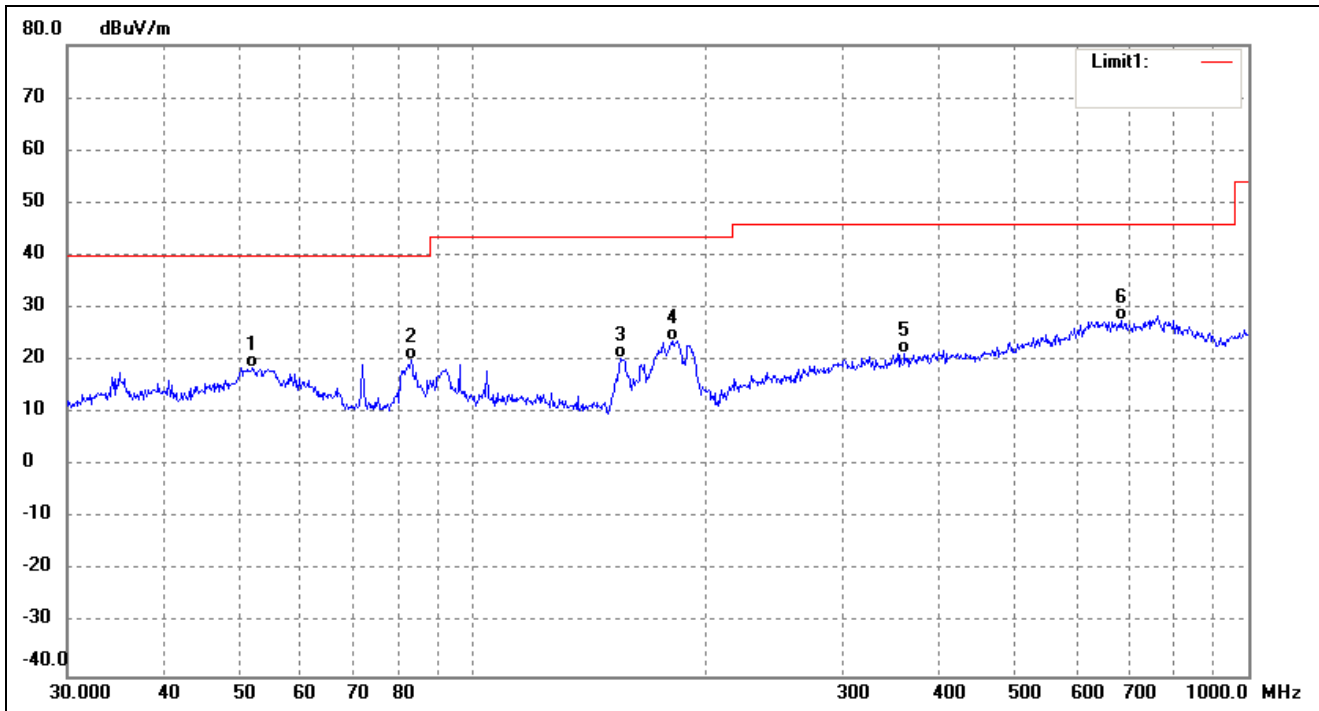
## 4.5 Summary of Test Results/Plots

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

**-2.67 dB at 166.0680 MHz in the Horizontal polarization, TM2 mode, 30MHz to 12.75 GHz, 3Meters**

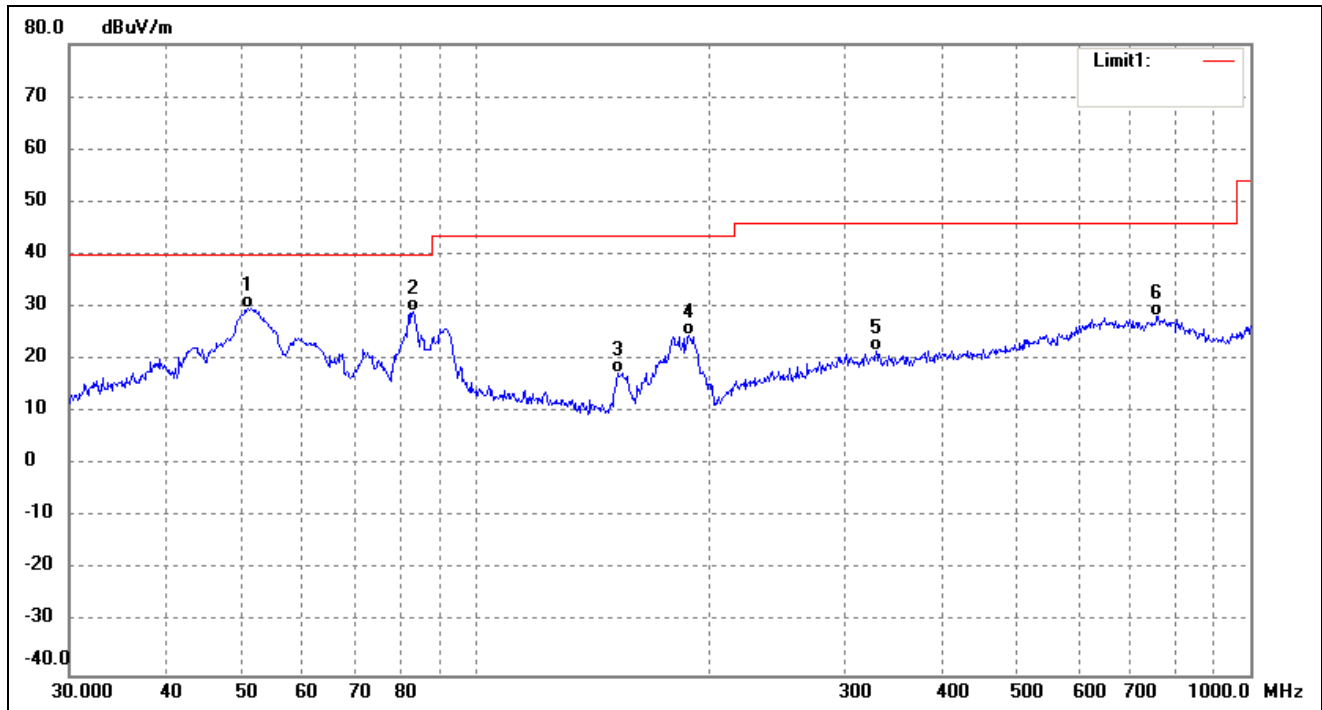
**Plot of Radiated Emissions Test Data**

EUT: 4G Smart Phone  
 Tested Model: Elite A55  
 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	52.0251	35.13	-16.50	18.63	40.00	-21.37	257	100	QP
2	83.2298	39.29	-19.25	20.04	40.00	-19.96	91	100	QP
3	154.8205	39.47	-18.92	20.55	43.50	-22.95	95	100	QP
4	180.6488	42.92	-19.05	23.87	43.50	-19.63	98	100	QP
5	360.4477	30.35	-8.92	21.43	46.00	-24.57	201	100	QP
6	684.7454	28.40	-0.71	27.69	46.00	-18.31	283	100	QP

Test Specification: Vertical



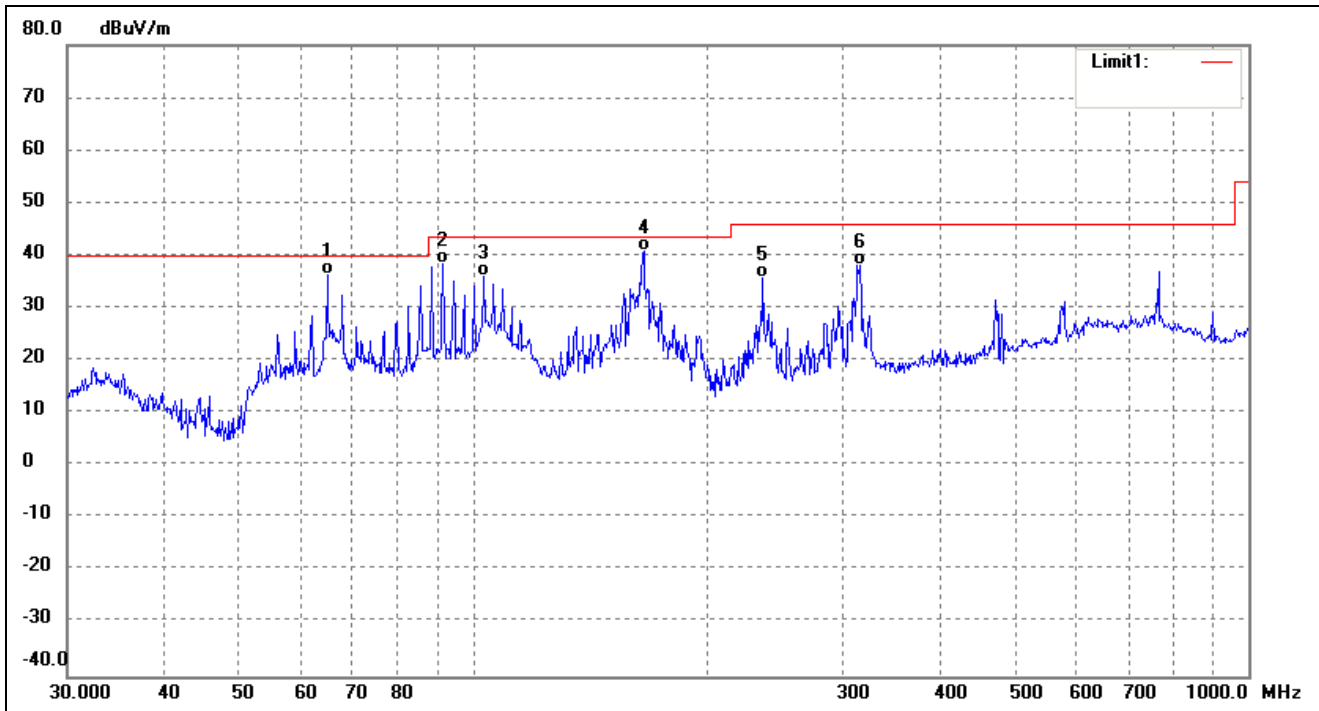
No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ( )	Height (cm)	Remark
1	50.9420	46.33	-16.52	29.81	40.00	-10.19	210	100	QP
2	83.2298	48.46	-19.25	29.21	40.00	-10.79	91	100	QP
3	152.6641	36.23	-18.84	17.39	43.50	-26.11	189	100	QP
4	188.4125	43.46	-18.72	24.74	43.50	-18.76	100	100	QP
5	329.0390	31.26	-9.50	21.76	46.00	-24.24	166	100	QP
6	758.0408	28.84	-0.53	28.31	46.00	-17.69	245	100	QP



**Plot of Radiated Emissions Test Data**

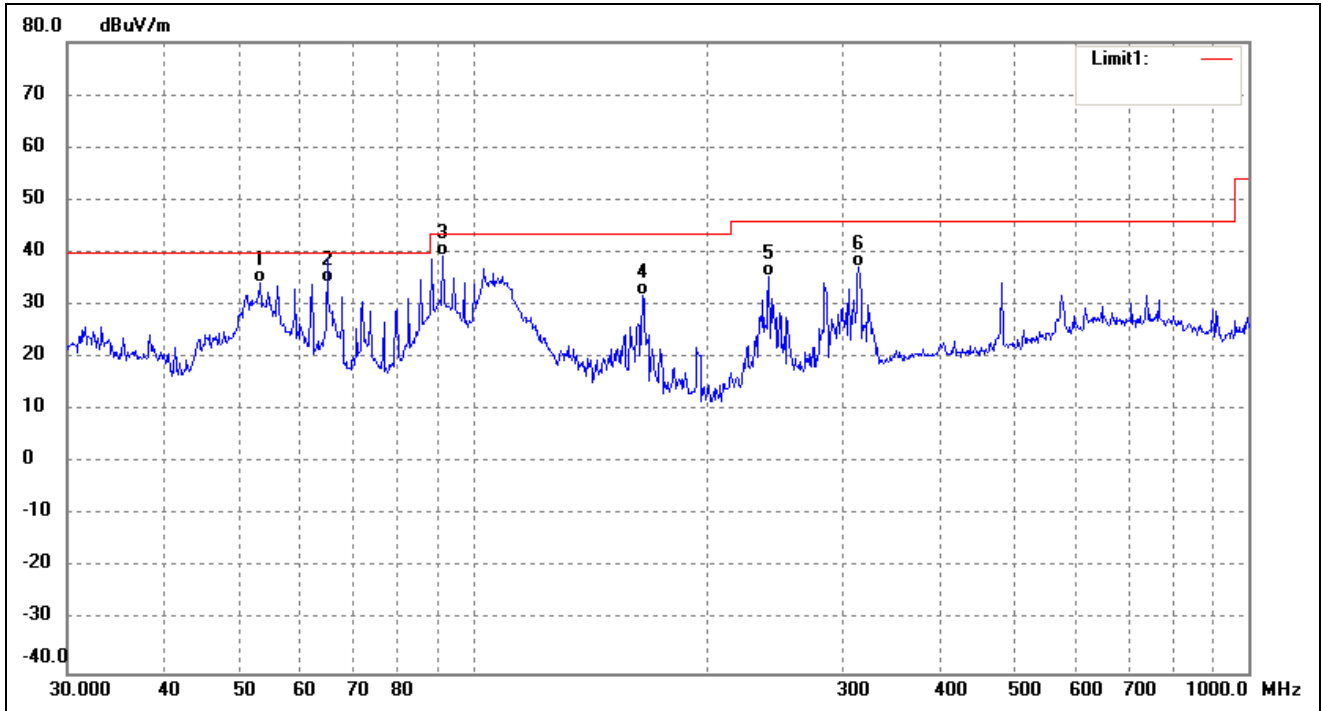
EUT: 4G Smart Phone  
 Tested Model: Elite A55  
 Operating Condition: TM2  
 Comment: AC 120V/60Hz, USB DC 5V

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	64.8864	53.79	-17.56	36.23	40.00	-3.77	204	100	QP
2	91.4949	56.41	-17.85	38.56	43.50	-4.94	304	100	QP
3	103.4420	52.65	-16.59	36.06	43.50	-7.44	88	100	QP
4	166.0680	59.89	-19.06	40.83	43.50	-2.67	227	100	QP
5	236.6447	48.55	-12.75	35.80	46.00	-10.20	82	100	QP
6	315.4807	47.58	-9.40	38.18	46.00	-7.82	330	100	QP

Test Specification: Vertical

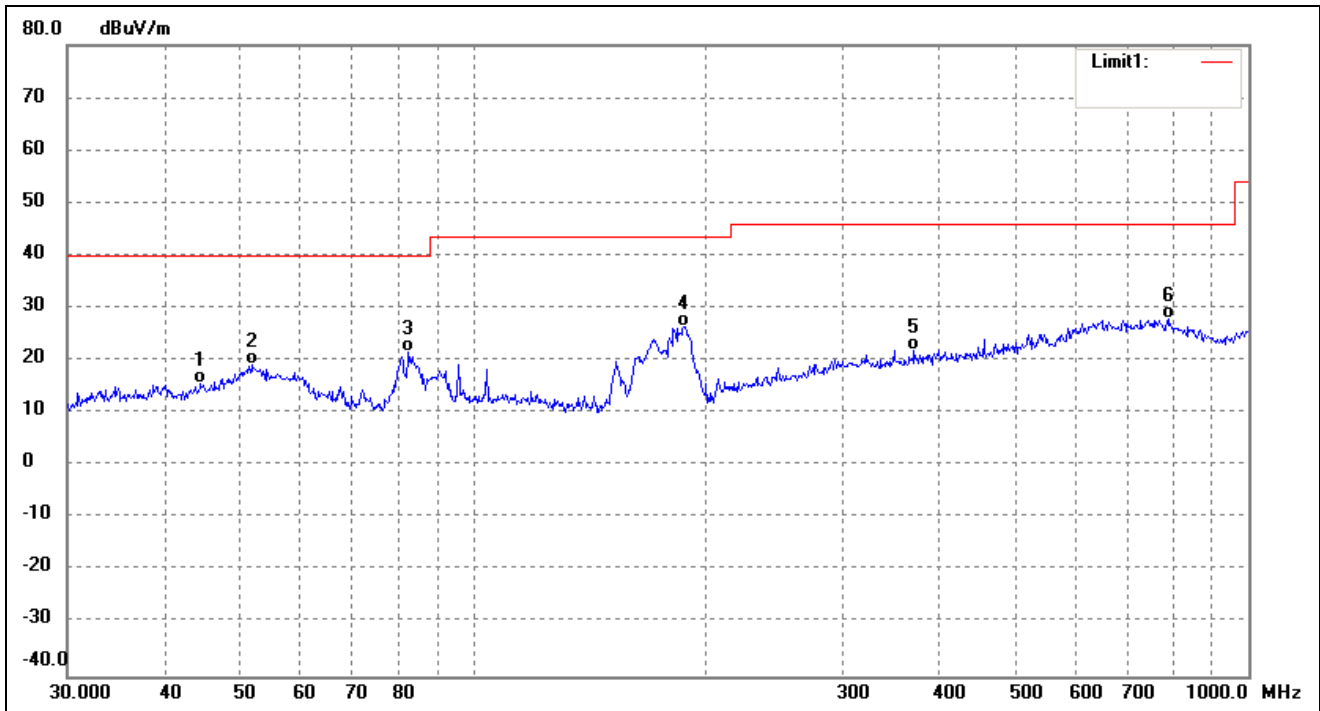


No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ( )	Height (cm)	Remark
1	53.1313	50.86	-16.48	34.38	40.00	-5.62	312	100	QP
2	64.8865	51.67	-17.56	34.11	40.00	-5.89	304	100	QP
3	91.4949	57.12	-17.85	39.27	43.50	-4.23	84	100	QP
4	165.4867	50.85	-19.06	31.79	43.50	-11.71	150	100	QP
5	240.8304	48.10	-12.51	35.59	46.00	-10.41	66	100	QP
6	314.3765	46.66	-9.40	37.26	46.00	-8.74	248	100	QP

**Plot of Radiated Emissions Test Data**

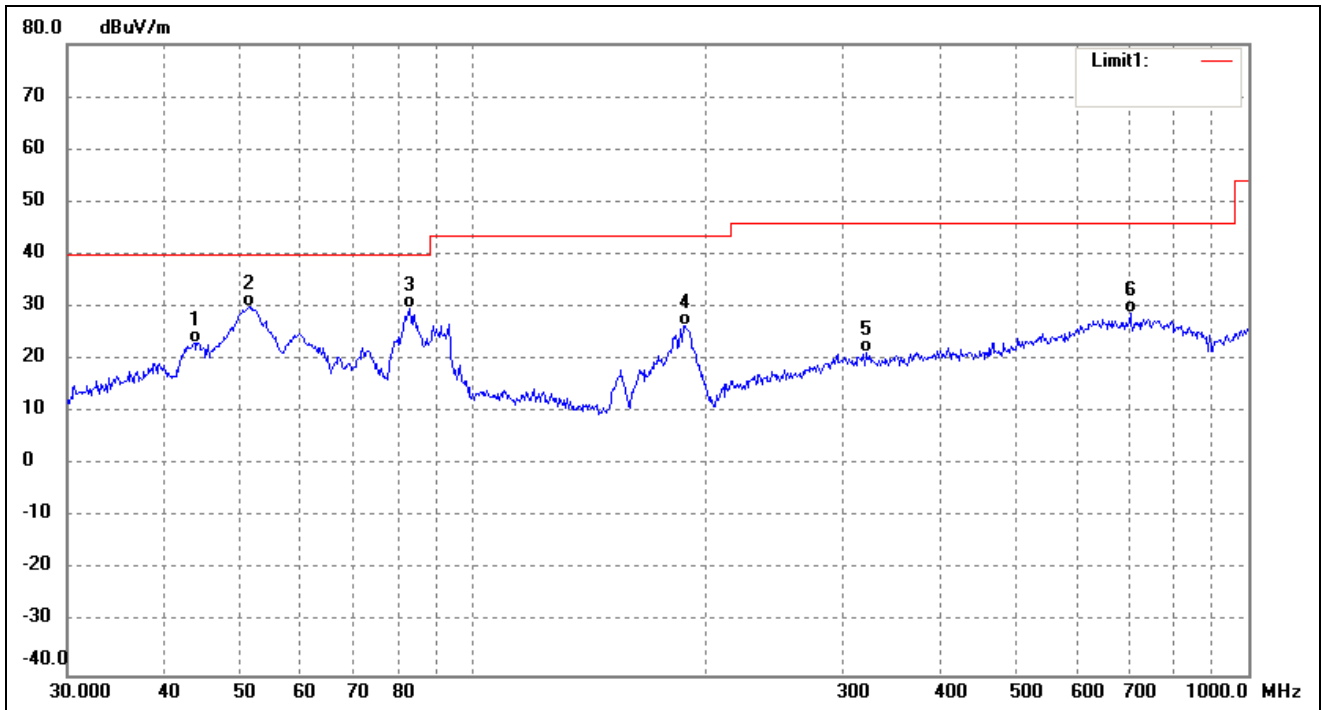
EUT: 4G Smart Phone  
 Tested Model: Elite A55  
 Operating Condition: TM3  
 Comment: AC 120V/60Hz; Adapter DC 5V

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	44.5868	32.02	-16.48	15.54	40.00	-24.46	118	100	QP
2	51.8430	35.62	-16.50	19.12	40.00	-20.88	158	100	QP
3	82.6482	40.93	-19.36	21.57	40.00	-18.43	136	100	QP
4	187.0958	45.21	-18.78	26.43	43.50	-17.07	105	100	QP
5	370.7023	30.98	-8.89	22.09	46.00	-23.91	50	100	QP
6	787.8513	29.88	-1.99	27.89	46.00	-18.11	138	100	QP

Test Specification: Vertical

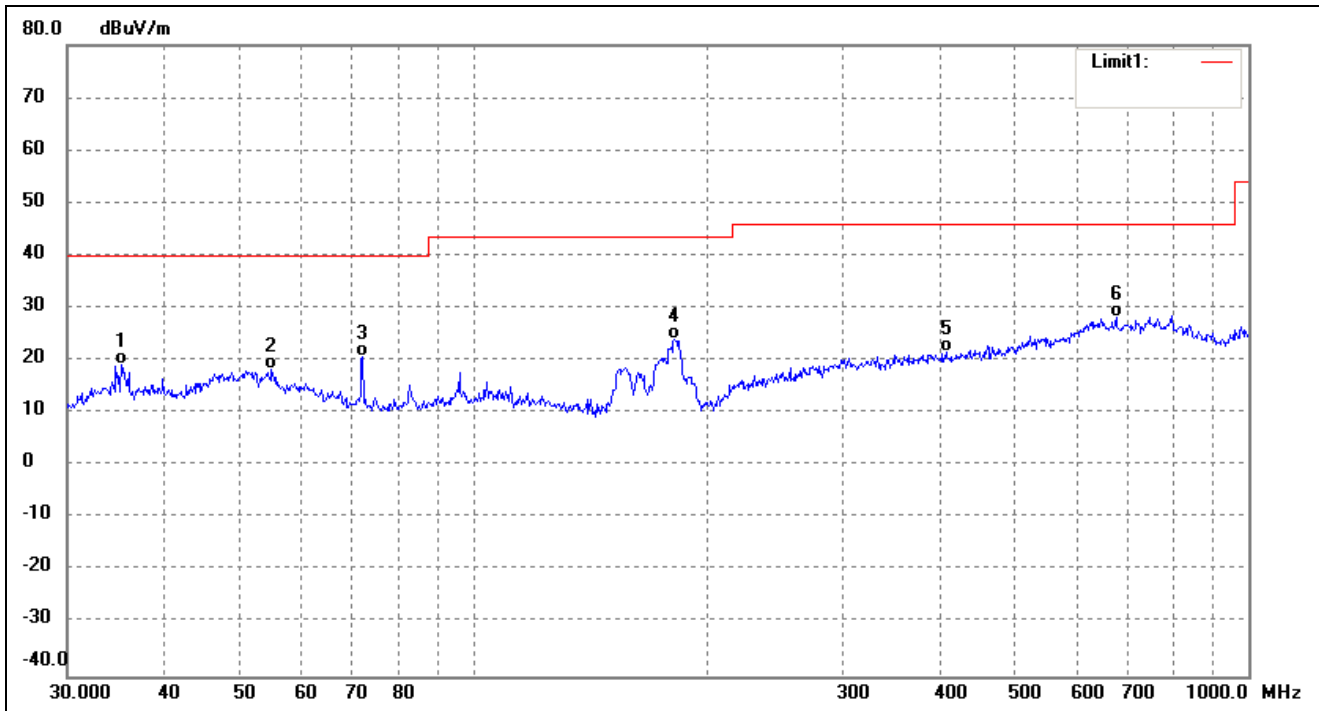


No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ( )	Height (cm)	Remark
1	43.8119	39.74	-16.49	23.25	40.00	-16.75	99	100	QP
2	51.4807	46.62	-16.52	30.10	40.00	-9.90	110	100	QP
3	82.9385	49.10	-19.31	29.79	40.00	-10.21	93	100	QP
4	187.7530	45.34	-18.75	26.59	43.50	-16.91	91	100	QP
5	322.1886	30.62	-9.38	21.24	46.00	-24.76	205	100	QP
6	704.2261	30.45	-1.68	28.77	46.00	-17.23	233	100	QP

**Plot of Radiated Emissions Test Data**

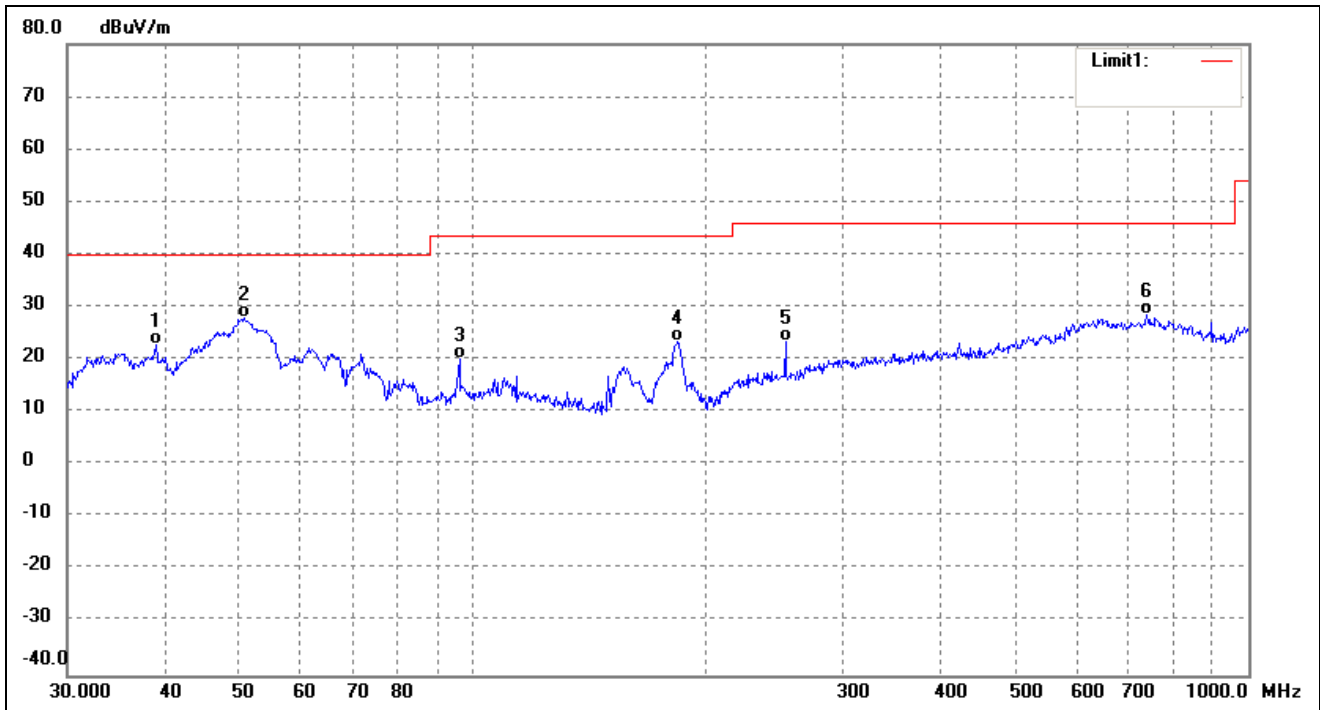
EUT: 4G Smart Phone  
 Tested Model: Elite A55  
 Operating Condition: TM4  
 Comment: AC 120V/60Hz; Adapter DC 5V

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	35.2512	36.46	-17.28	19.18	40.00	-20.82	285	100	QP
2	55.0274	34.77	-16.50	18.27	40.00	-21.73	95	100	QP
3	72.0843	39.86	-18.97	20.89	40.00	-19.11	78	100	QP
4	181.9202	43.01	-19.00	24.01	43.50	-19.49	114	100	QP
5	407.5145	29.64	-8.00	21.64	46.00	-24.36	115	100	QP
6	675.2080	29.02	-0.63	28.39	46.00	-17.61	322	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	39.0245	39.53	-16.69	22.84	40.00	-17.16	262	100	QP
2	50.7637	44.34	-16.53	27.81	40.00	-12.19	92	100	QP
3	96.0986	37.28	-17.14	20.14	43.50	-23.36	108	100	QP
4	183.8440	42.37	-18.93	23.44	43.50	-20.06	97	100	QP
5	252.9482	35.60	-12.03	23.57	46.00	-22.43	119	100	QP
6	739.6605	28.39	0.15	28.54	46.00	-17.46	262	100	QP

Note: Testing is carried out with frequency rang 30MHz to the 12.75GHz, which above 1GHz are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

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