

# FCC Part 15B

## Measurement and Test Report

### For

**DDC TRADING INC**

**2480 NW 20th Street #D Miami, Floriad 33142, USA.**

**FCC ID: 2AGF3-E5S**

**Test Rule(s):** FCC Part 15 Subpart B

**Product Description:** Mobile phone

**Tested Model:** E5s

**Report No.:** STR16068114I-5

**Tested Date:** 2016-06-10 to 2016-07-06

**Issued Date:** 2016-07-09

**Tested By:** Vigoss Liang / Engineer

**Reviewed By:** Lahm Peng / EMC Manager

**Approved & Authorized By:** Jandy So / PSQ Manager

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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: DDC TRADING INC  
Address of applicant: 2480 NW 20th Street #D Miami, Floriad 33142, USA.

Manufacturer: DDC TRADING INC  
Address of manufacturer: 2480 NW 20th Street #D Miami, Floriad 33142, USA.

General Description of EUT:	
Product Name:	Mobile phone
Brand Name:	DDC
Model No.:	E5s
Hardware version:	103B
Software version:	1490D.K810.L1.MP6.MV88.HD.B1B2B5.EN.160509.TST
<i>The EUT Main board support GSM850/PCS1900, WCDMA Band 2/5, function. It is intended for speech, Multimedia Message Service (MMS) transmission. It is equipped with GPRS class 12 for GSM850/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:	2600mAh
Device Category:	Portable Device
Power Adaptor:	Model:E5S
	Input: AC 100-240V Output: DC 5V/0.15A    Output:5V0.8A
Lowest Internal Frequency	26MHz
Highest Internal Frequency	1GHz

## 1.2 Test Standards

The following report is prepared on behalf of the DDC TRADING INC 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 2<sup>nd</sup> 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 Adpter
TM2	Downloading	Connect to Computer
TM3	Camera	Front and Back Camera

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	/

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

## 2. SUMMARY OF TEST RESULTS

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

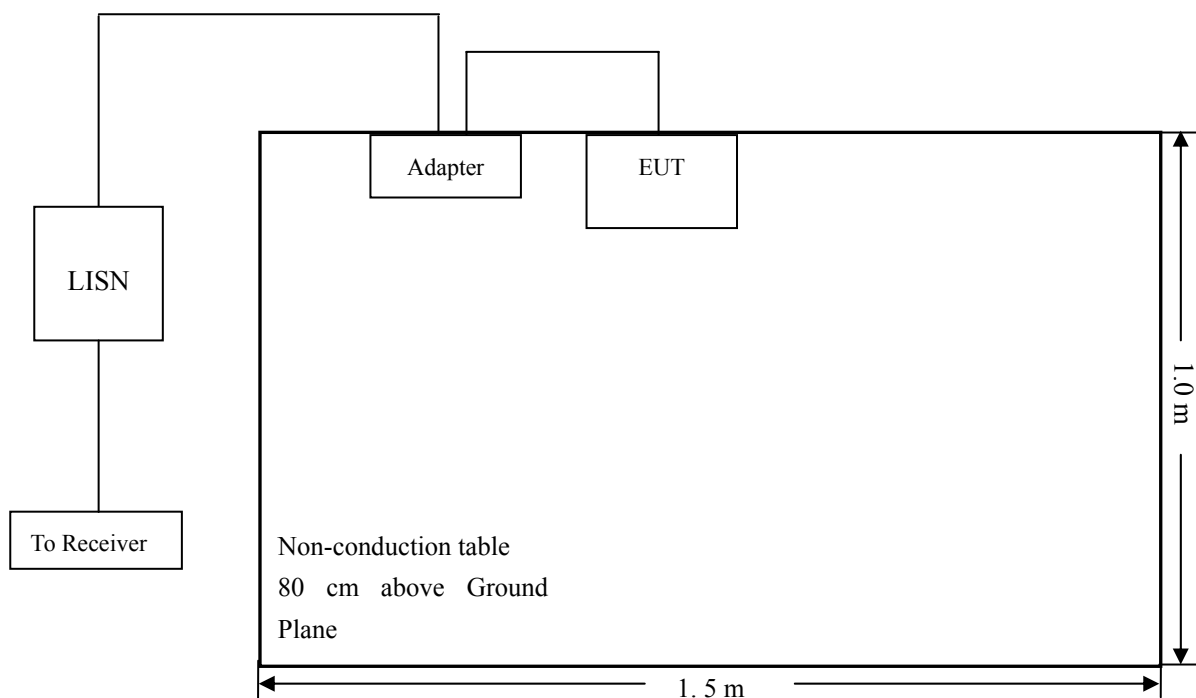
N/A: not applicable

### 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 3.6, the EUT complied with the FCC Part 15.107(a) Conducted margin for a Class B device, with the *worst* margin reading of:

**-8.35 dB at 20.4380 MHz in the Line, Peak detector, TM1, 0.15-30MHz**



### 3.5 Conducted Emissions Test Data

#### Plot of Conducted Emissions Test Data

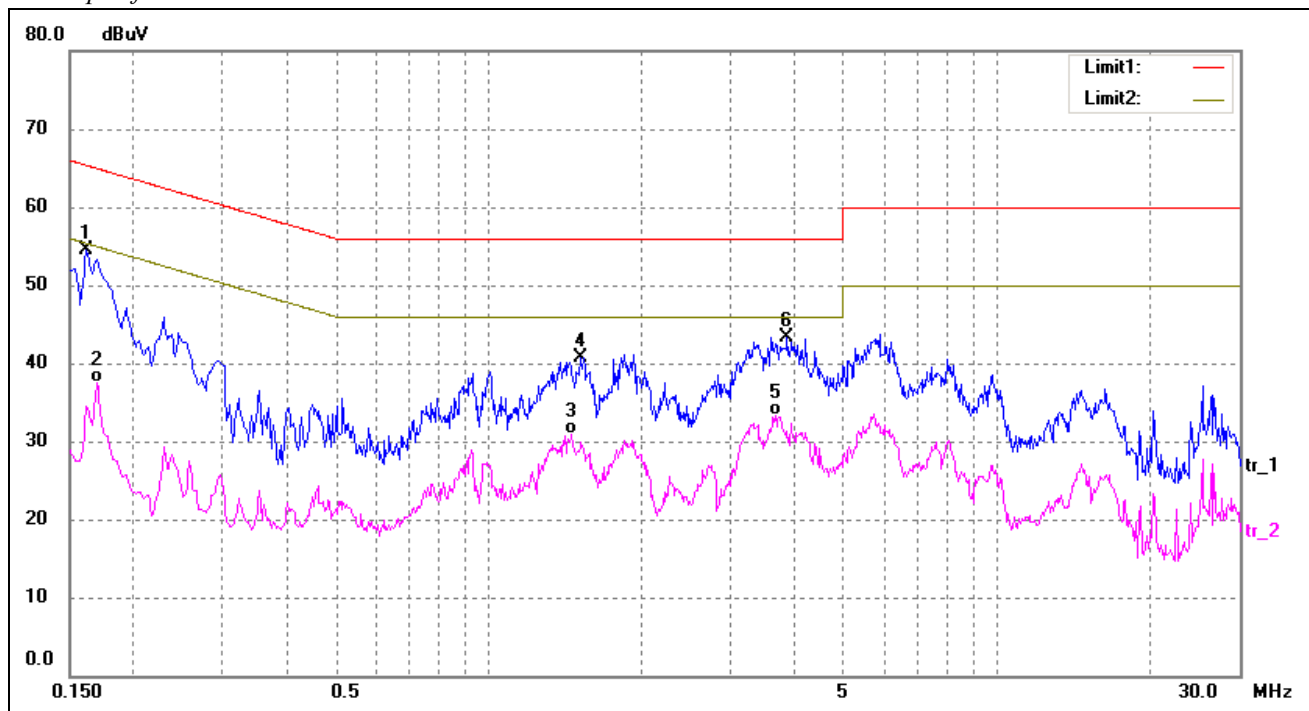
EUT: Mobile phone

Tested Model: E5s

Operating Condition: TM1

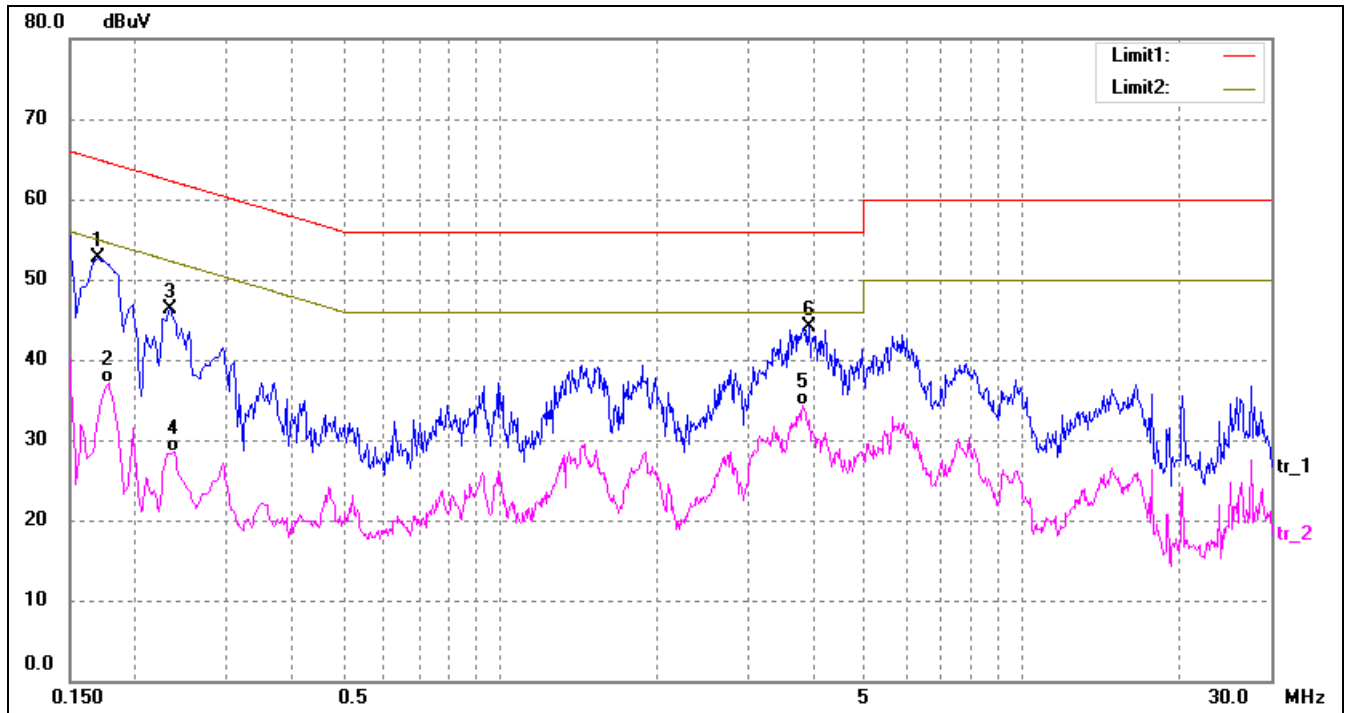
Comment: AC 120V/60Hz

Test Specification: Neutral



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1*	0.1620	44.63	9.78	54.41	65.36	-10.95	peak
2	0.1700	28.23	9.30	37.53	54.96	-17.43	AVG
3	1.4580	19.82	11.00	30.82	46.00	-15.18	AVG
4	1.5140	29.66	11.00	40.66	56.00	-15.34	peak
5	3.6660	21.21	12.11	33.32	46.00	-12.68	AVG
6	3.8620	31.14	12.24	43.38	56.00	-12.62	peak

Test Specification: Line

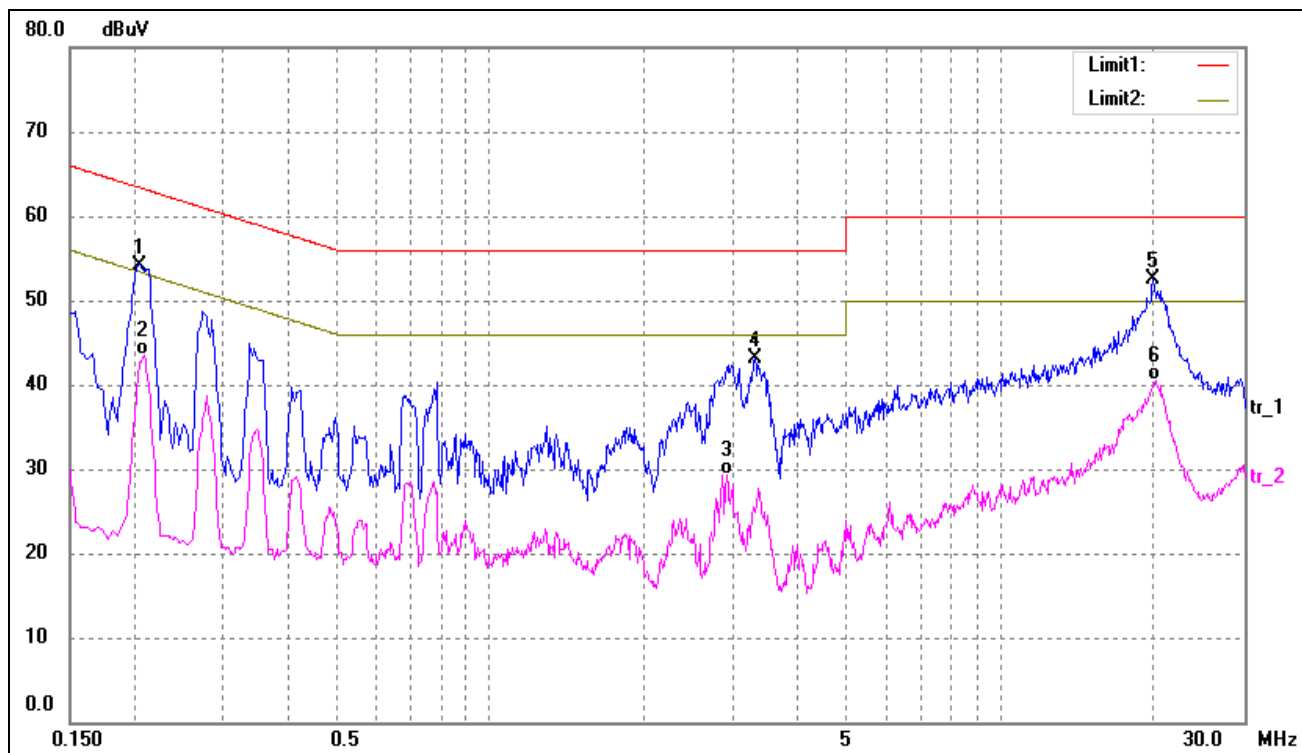


No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1700	43.39	9.30	52.69	64.96	-12.27	peak
2	0.1780	28.26	8.82	37.08	54.58	-17.50	AVG
3	0.2340	38.85	7.50	46.35	62.31	-15.96	peak
4	0.2380	21.04	7.50	28.54	52.17	-23.63	AVG
5*	3.8180	22.12	12.21	34.33	46.00	-11.67	AVG
6	3.9020	31.81	12.27	44.08	56.00	-11.92	peak

### Plot of Conducted Emissions Test Data

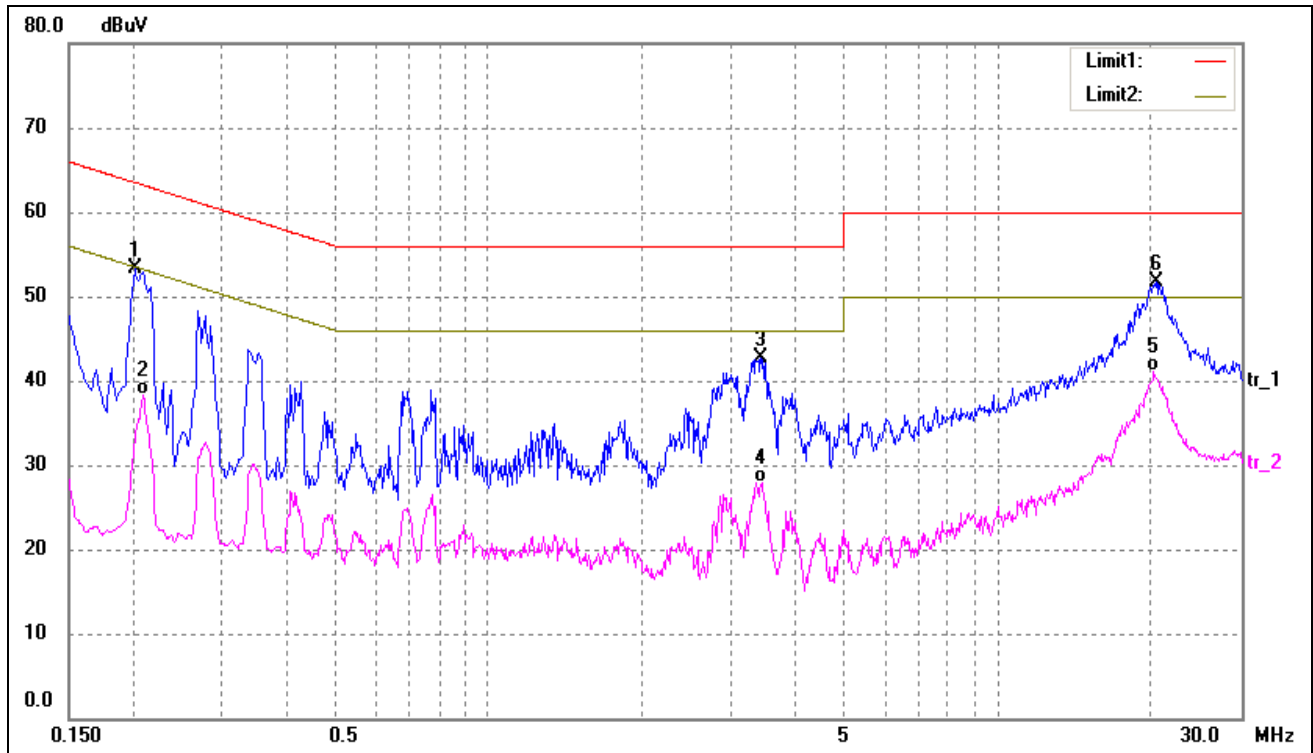
EUT: Mobile phone  
Tested Model: E5s  
Operating Condition: TM2  
Comment: AC 120V/60Hz; USB 5V

Test Specification: Neutral



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.2060	44.70	9.50	54.20	63.37	-9.17	peak
2	0.2100	34.09	9.50	43.59	53.21	-9.62	AVG
3	2.9140	19.24	10.00	29.24	46.00	-16.76	AVG
4	3.3020	33.02	10.00	43.02	56.00	-12.98	peak
5*	19.8740	40.46	11.97	52.43	60.00	-7.57	peak
6	20.1500	28.58	12.00	40.58	50.00	-9.42	AVG

Test Specification: Line



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.2020	43.77	9.50	53.27	63.53	-10.26	peak
2	0.2100	28.71	9.50	38.21	53.21	-15.00	AVG
3	3.4340	32.67	10.00	42.67	56.00	-13.33	peak
4	3.4500	17.95	10.00	27.95	46.00	-18.05	AVG
5	20.2260	29.06	12.00	41.06	50.00	-8.94	AVG
6*	20.4380	39.65	12.00	51.65	60.00	-8.35	peak

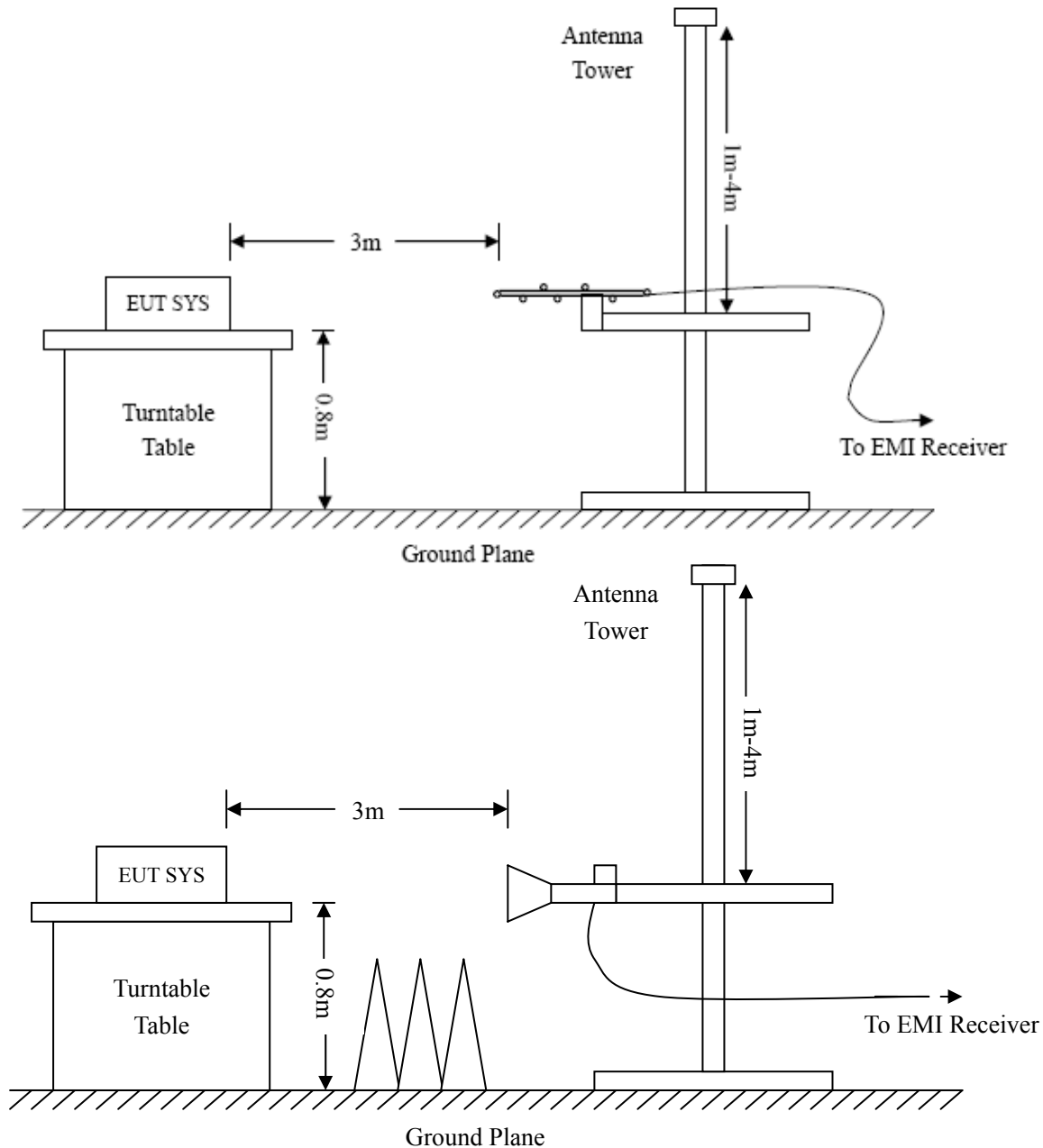
## 4. Radiated Emissions

### 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

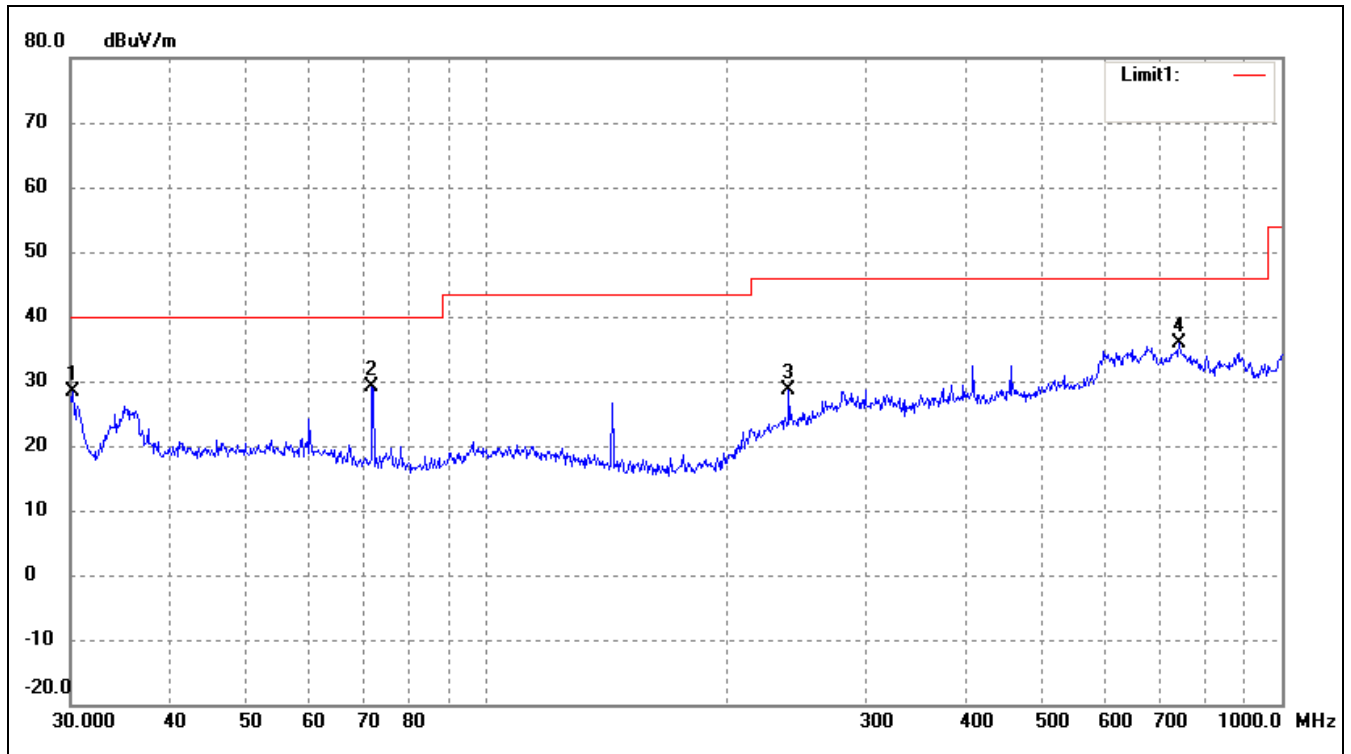
According to the data, the EUT complied with the FCC Part 15.109(a) rule, and had the worst margin of:

**-5.41 dB at 70.5836 MHz in the Vertical polarization TM2 model, 30MHz to 5 GHz, 3Meters**

### Plot of Radiated Emissions Test Data

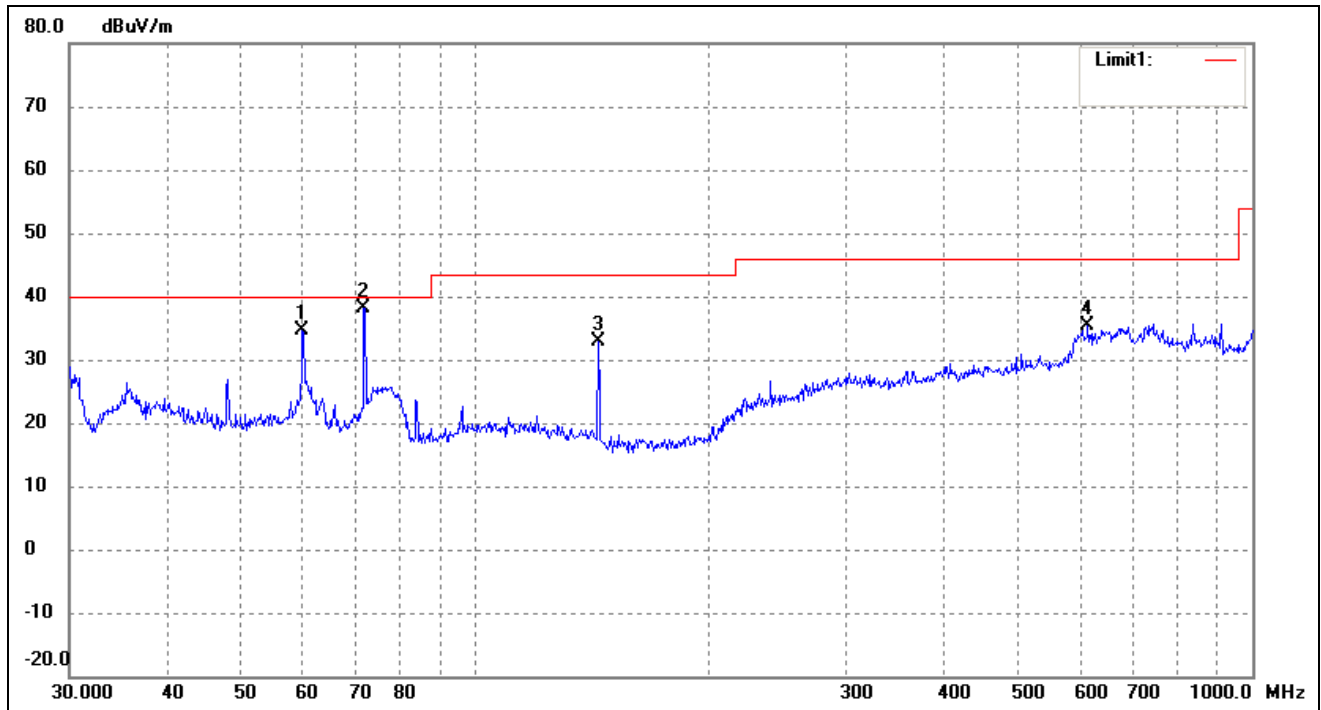
EUT: *Mobile phone*  
 Tested Model: *E5*  
 Operating Condition: *TM1*  
 Comment: *AC 120V/60Hz*

Test Specification: *Horizontal*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( ° )	(cm)	
1	30.2111	24.79	3.67	28.46	40.00	-11.54	42	100	peak
2	71.8320	26.25	2.97	29.22	40.00	-10.78	132	100	peak
3	239.9874	19.19	9.33	28.52	46.00	-17.48	168	100	peak
4	742.2587	16.35	19.45	35.80	46.00	-10.20	0	100	peak

Test Specification: Vertical



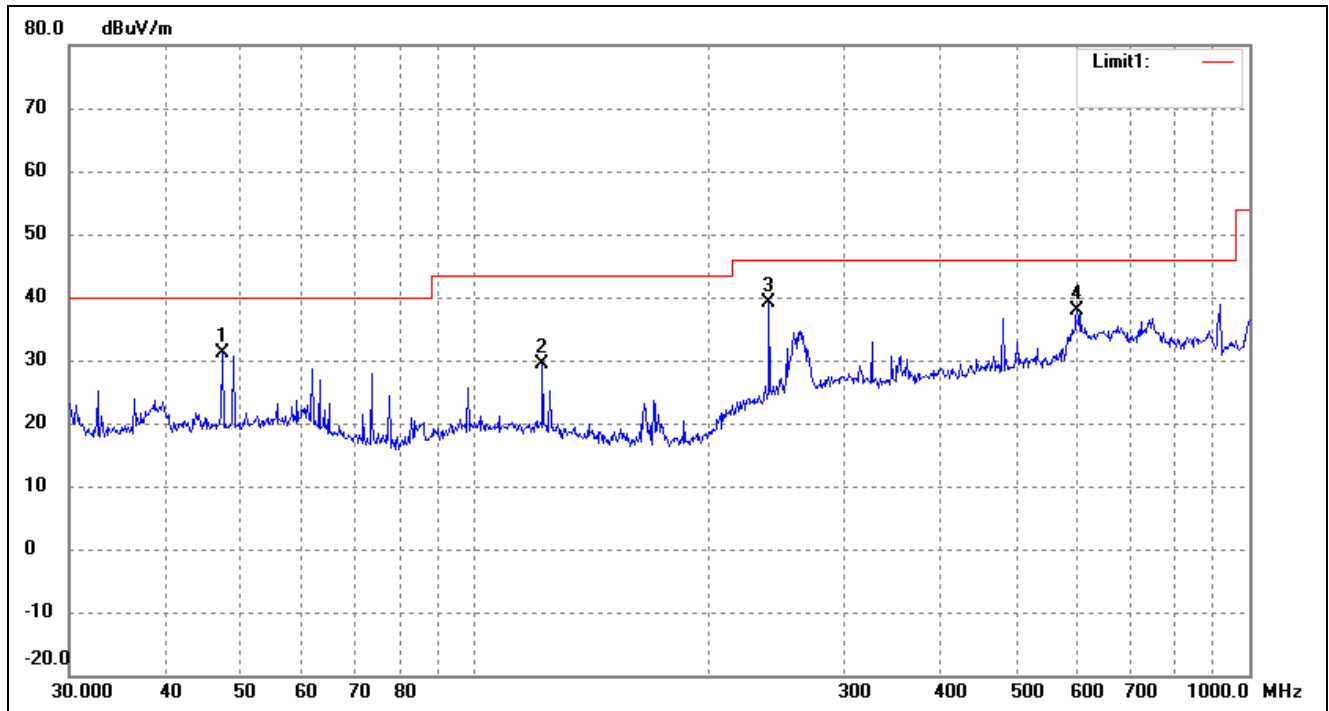
No.	Frequency (MHz)	Reading (dBuV)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ( ° )	Height (cm)	Remark
1	59.8588	29.27	5.38	34.65	40.00	-5.35	59	100	peak
2	71.8320	35.12	2.97	38.09	40.00	-1.91	147	100	peak
3	143.8295	29.50	3.26	32.76	43.50	-10.74	236	100	peak
4	614.2142	17.12	18.32	35.44	46.00	-10.56	158	100	peak



### Plot of Radiated Emissions Test Data

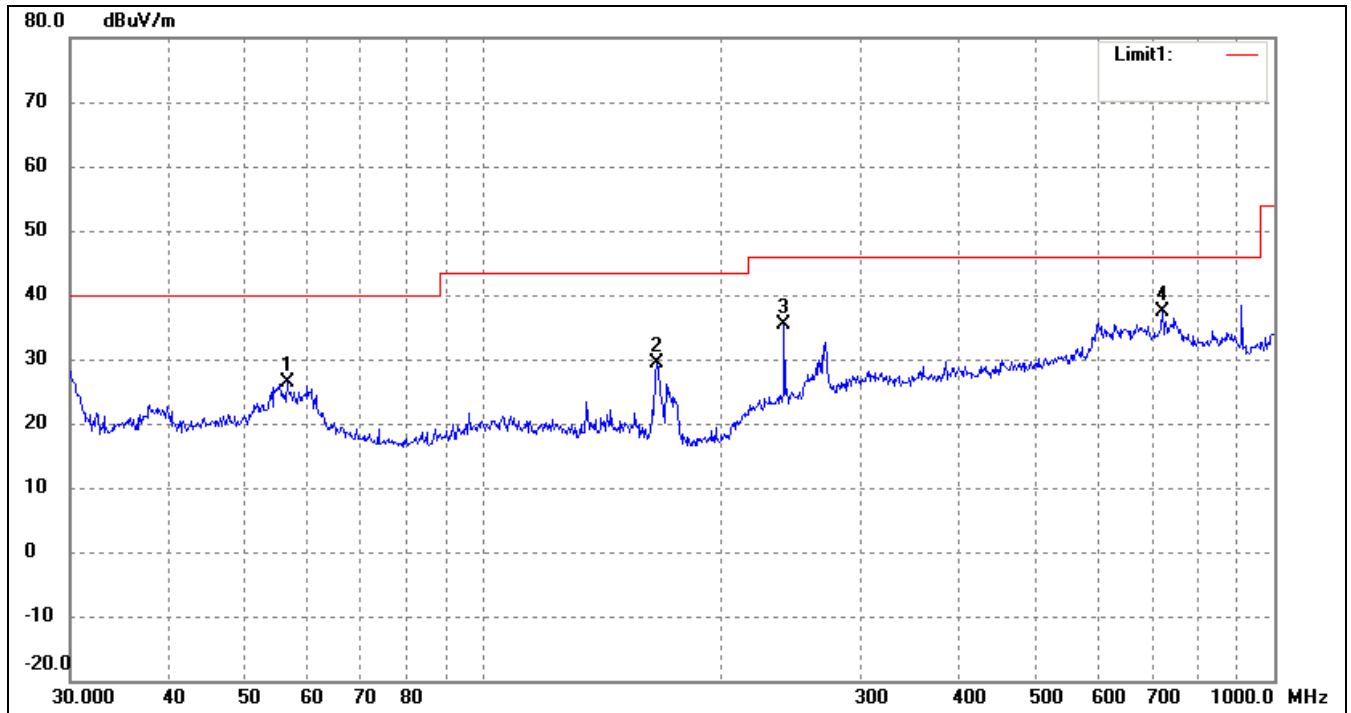
EUT: Mobile phone  
Tested Model: E5  
Operating Condition: TM2  
Comment: AC 120V/60Hz, USB 5V

Test Specification: Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ( ° )	Height (cm)	Remark
1	47.3255	25.92	5.26	31.18	40.00	-8.82	51	100	peak
2	122.4040	24.60	4.82	29.42	43.50	-14.08	124	100	peak
3	239.9874	29.71	9.33	39.04	46.00	-6.96	203	100	peak
4	599.3213	18.61	19.19	37.80	46.00	-8.20	86	100	peak

Test Specification: Vertical

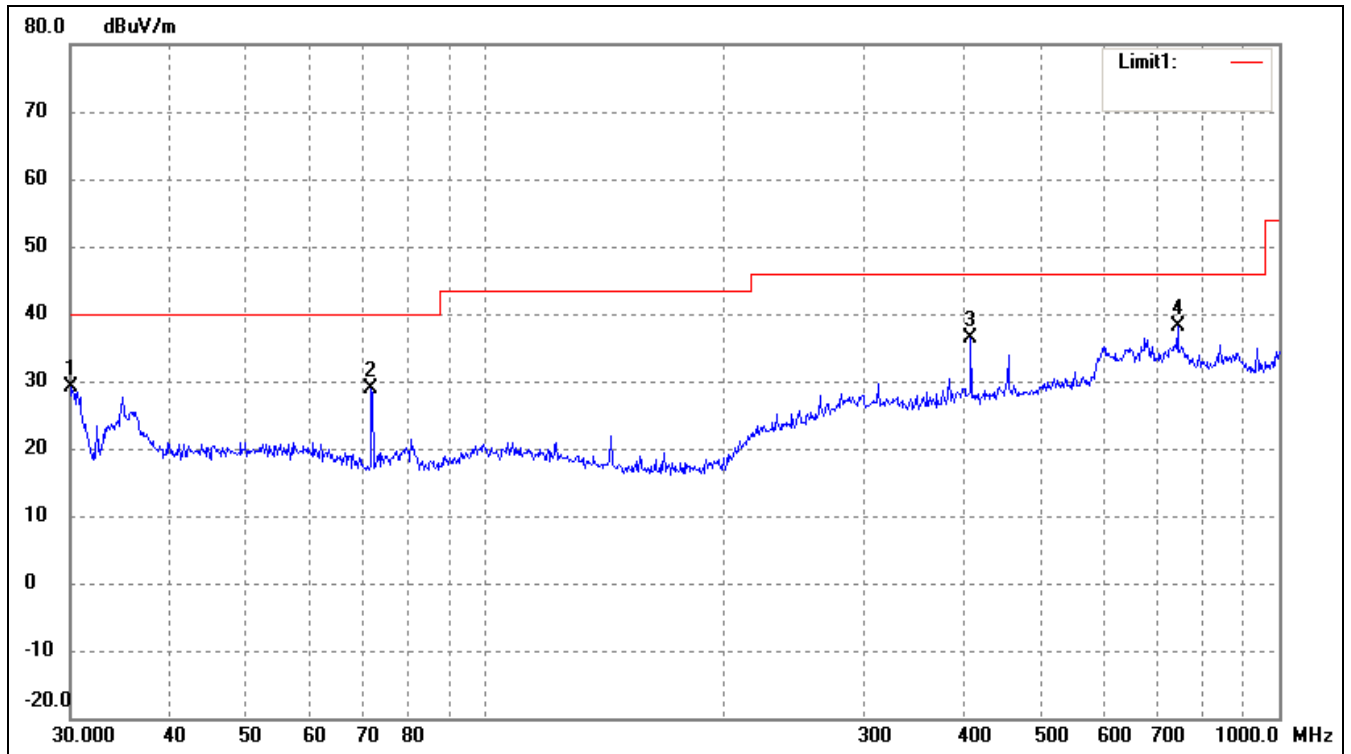


No.	Frequency (MHz)	Reading (dBuV)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ( ° )	Height (cm)	Remark
1	56.3948	21.12	5.33	26.45	40.00	-13.55	22	100	peak
2	165.4866	26.82	2.65	29.47	43.50	-14.03	146	100	peak
3	239.9874	25.95	9.33	35.28	46.00	-10.72	197	100	peak
4	721.7259	18.80	18.47	37.27	46.00	-8.73	375	100	peak

### Plot of Radiated Emissions Test Data

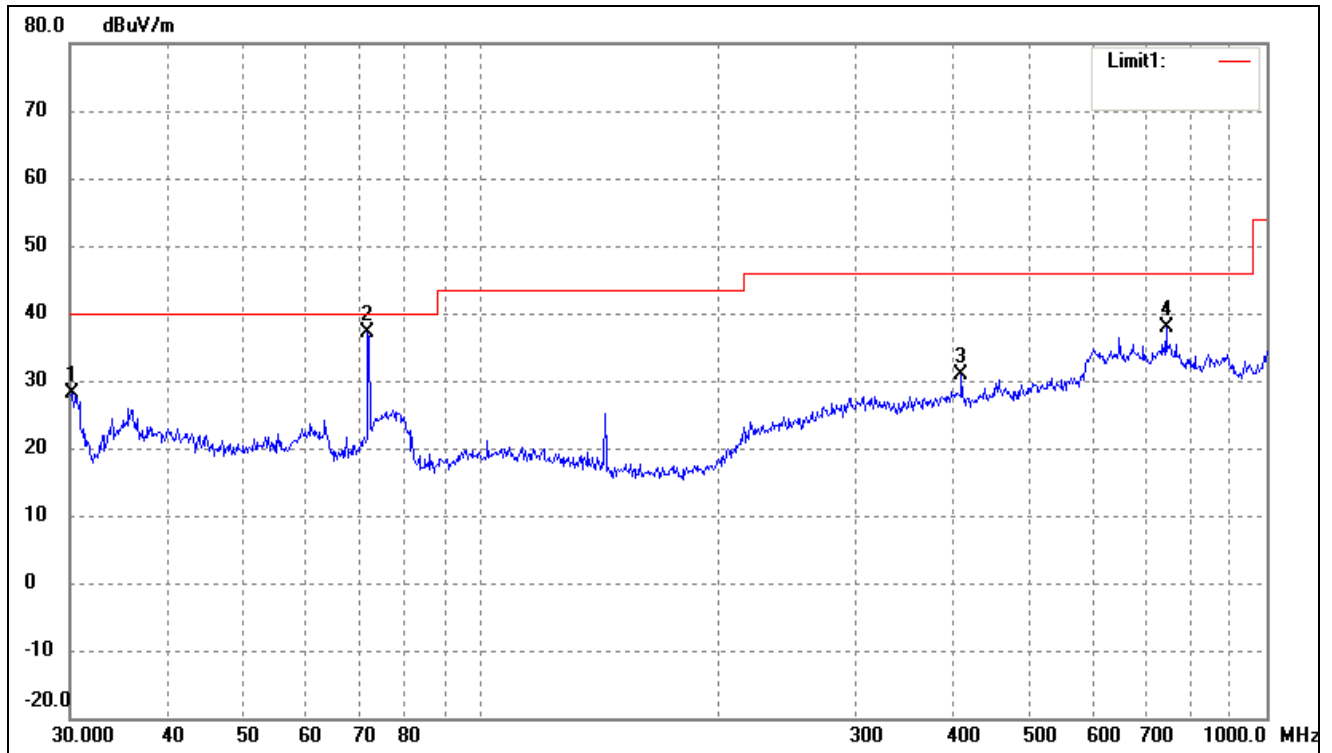
EUT: Mobile phone  
Tested Model: E5  
Operating Condition: TM3  
Comment: AC 120V/60Hz

Test Specification: Horizontal



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( ° )	(cm)	
1	30.0000	25.45	3.64	29.09	40.00	-10.91	158	100	peak
2	71.8320	25.87	2.97	28.84	40.00	-11.16	0	100	peak
3	408.9460	23.67	12.80	36.47	46.00	-9.53	147	100	peak
4	744.8661	18.69	19.33	38.02	46.00	-7.98	352	100	peak

Test Specification: Vertical



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( ° )	(cm)	
1	30.2111	24.48	3.67	28.15	40.00	-11.85	76	100	peak
2	71.8320	34.22	2.97	37.19	40.00	-2.81	288	100	peak
3	408.9460	18.07	12.80	30.87	46.00	-15.13	10	100	peak
4	744.8661	18.52	19.33	37.85	46.00	-8.15	11	100	peak

Note: Testing is carried out with frequency rang 30MHz to the 5GHz, which 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 \*\*\*\*\*