

# FCC Part 15B

## Measurement and Test Report

For

**DDC TRADING INC**

**2480 NW 20th Street #D Miami, Florida 33142**

**FCC ID: 2AGF3L5**

<b>Test Rule(s):</b>	<u>FCC Part 15 Subpart B</u>
<b>Product Description:</b>	<u>Mobile Phone</u>
<b>Tested Model:</b>	<u>L5</u>
<b>Report No.:</b>	<u>STR15118099I-5</u>
<b>Tested Date:</b>	<u>2015-11-06 to 2015-11-20</u>
<b>Issued Date:</b>	<u>2015-11-20</u>
<b>Tested By:</b>	<u>Seven Song / Engineer</u>
<b>Reviewed By:</b>	<u>Silin Chen / EMC Manager</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: DDC TRADING INC  
Address of applicant: 2480 NW 20th Street #D Miami, Florida 33142

Manufacturer: Shenzhen CHK Technology Limited.  
Address of manufacturer: Rm1703,Block A, Electronic & Technology Building,  
No.2070,Shennan Central Road, Futian, Shenzhen,  
China.

General Description of EUT	
Product Name:	Mobile phone
Brand Name:	DDC
Model No.:	L5
Hardware version:	X5_1.2
Software version:	M5 EA_X5 20150819.16575
Rated Voltage:	DC 3.7V Li-ion Battery
Battery:	2500mAh
Device Category:	Portable Device
Note: The test data is gathered from a production sample provided by the manufacturer.	

Technical Characteristics of EUT	
Rated Voltage:	DC 3.7V
Battery Capacity:	2500mAh
Rated Power:	/
Lowest Internal Frequency:	32.768kHz
Highest Internal Frequency:	1.3GHz
Classification of ITE:	Class B

## 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 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	Front Camera
TM4	Camera on	Rear Camera

EUT Cable List and Details

Cable Description	Length (M)	Shielded/Unshielded	With Core/Without Core
USB Cable	0.75	Shielded	Without Ferrite
Earphone	1.05	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

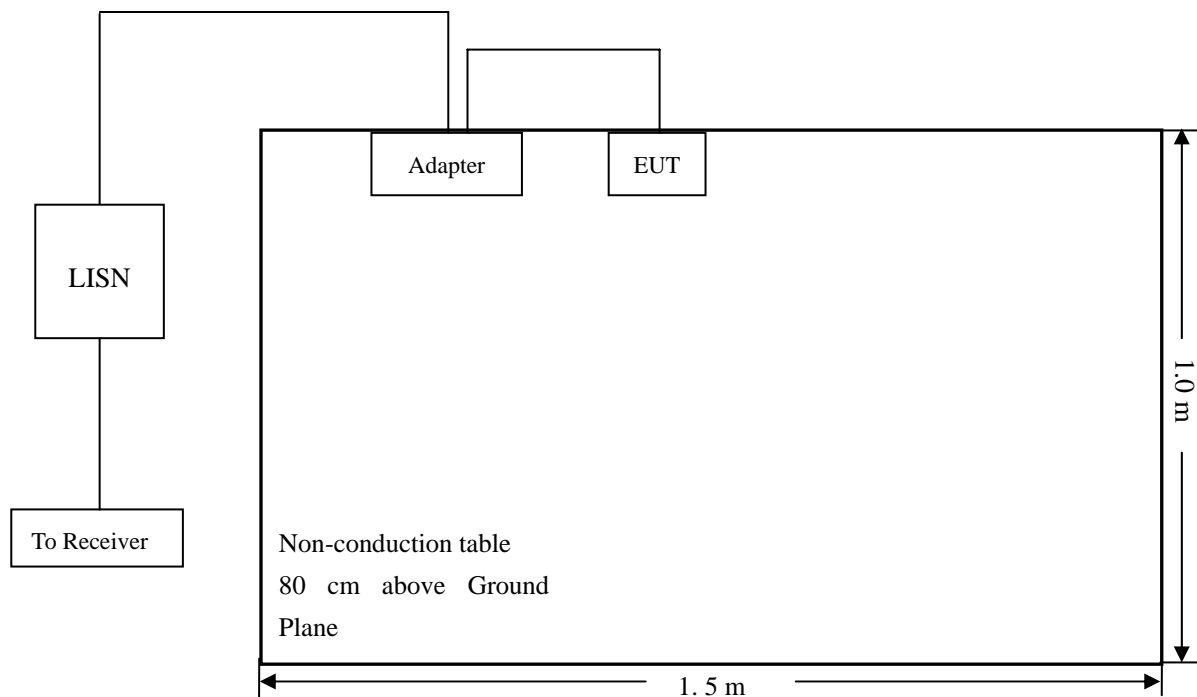
#### 3.1 Measurement Uncertainty

Base on NIS 81, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of any conducted emissions measurement is  $\pm 2.88$  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:

**-8.34 dB at 0.2020 MHz** in the **Neutral, TM1, Peak** detector, TM1, 0.15-30MHz

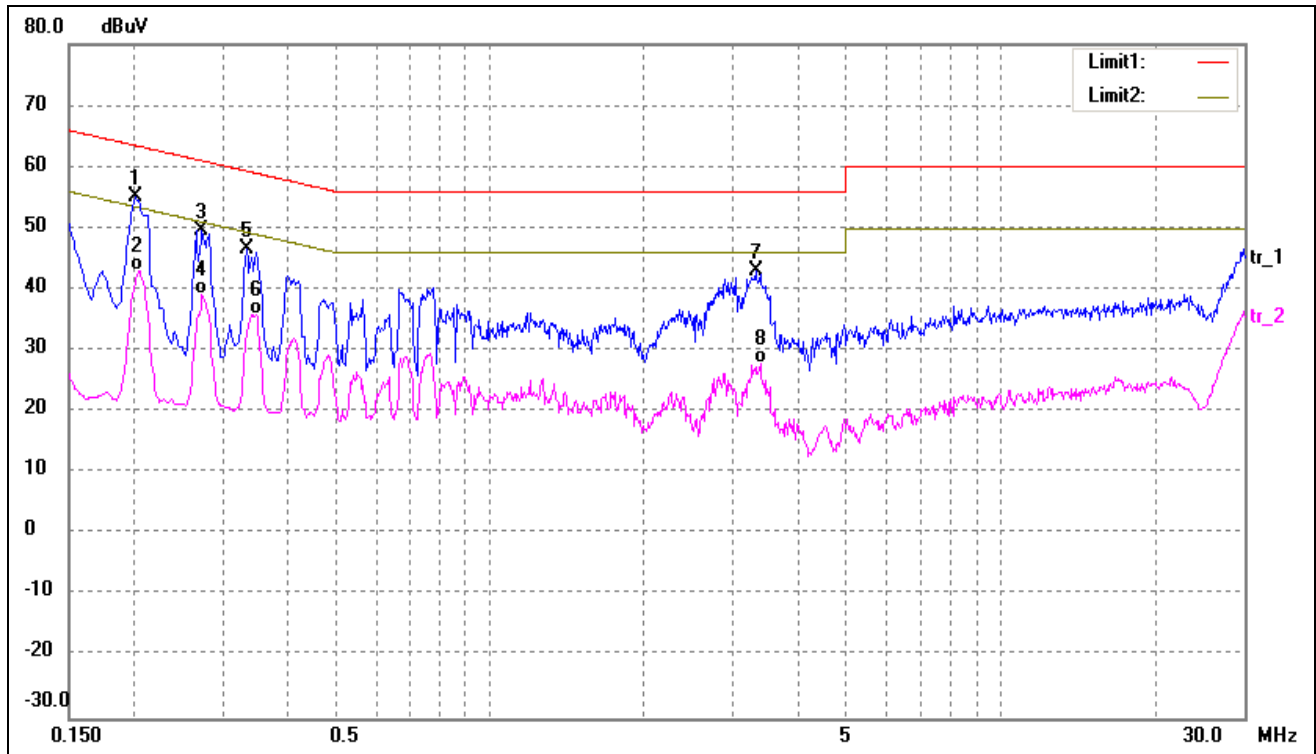
### 3.6 Conducted Emissions Test Data



### Plot of Conducted Emissions Test Data

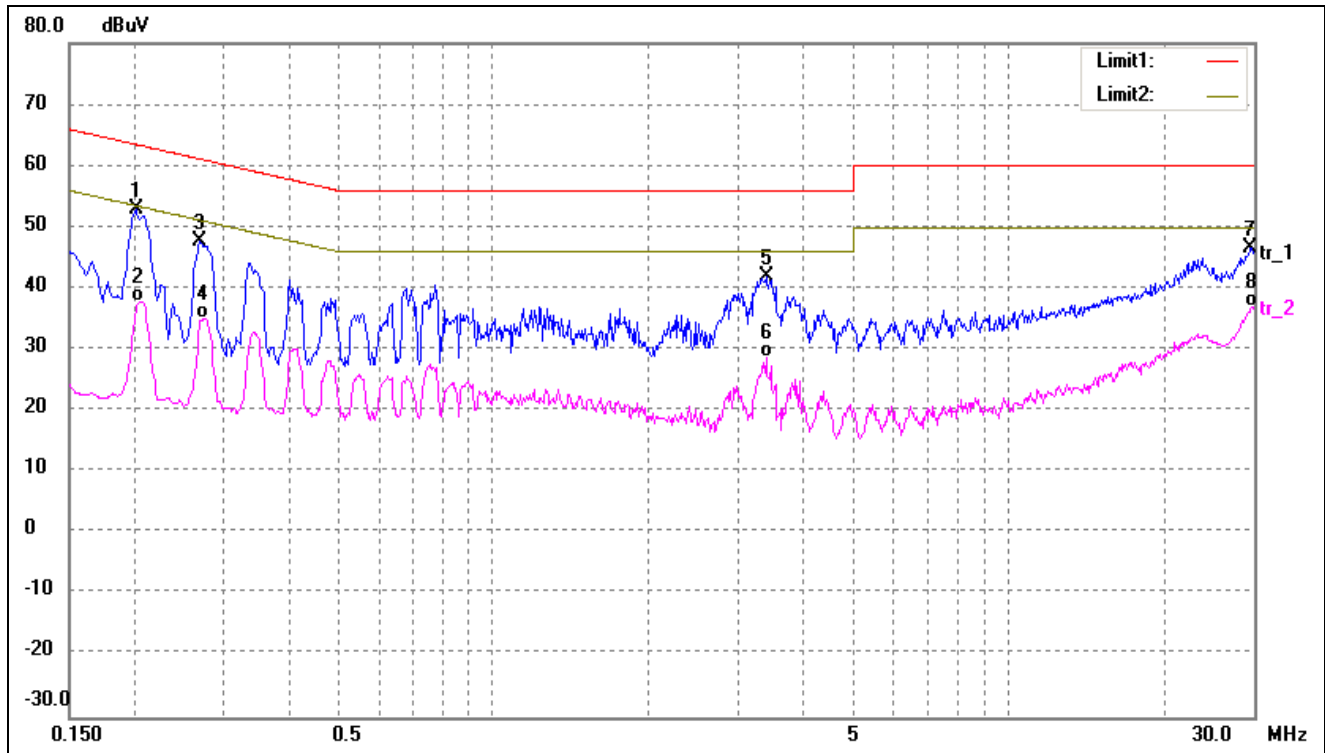
EUT: *Mobile phone*  
 Tested Model: *L5*  
 Operating Condition: *TM1*  
 Comment: *AC 120V/60Hz; Adapter DC 5V*

Test Specification: *Neutral*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Detector
	(MHz)	(dBuV)	(dB/m)	(dBuV)	(dBuV)	(dB)	
1*	0.2020	45.69	9.50	55.19	63.53	-8.34	peak
2	0.2060	33.62	9.50	43.12	53.37	-10.25	AVG
3	0.2740	40.18	9.50	49.68	61.00	-11.32	peak
4	0.2740	29.56	9.50	39.06	51.00	-11.94	AVG
5	0.3340	37.16	9.50	46.66	59.35	-12.69	peak
6	0.3500	26.34	9.50	35.84	48.96	-13.12	AVG
7	3.3260	32.90	10.00	42.90	56.00	-13.10	peak
8	3.3940	17.86	10.00	27.86	46.00	-18.14	AVG

Test Specification: Line



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1*	0.2020	43.49	9.50	52.99	63.53	-10.54	peak
2	0.2060	28.40	9.50	37.90	53.37	-15.47	AVG
3	0.2700	38.16	9.50	47.66	61.12	-13.46	peak
4	0.2740	25.54	9.50	35.04	51.00	-15.96	AVG
5	3.3980	32.05	10.00	42.05	56.00	-13.95	peak
6	3.3980	18.77	10.00	28.77	46.00	-17.23	AVG
7	29.6260	33.71	13.00	46.71	60.00	-13.29	peak
8	29.8740	23.90	13.00	36.90	50.00	-13.10	AVG

### Plot of Conducted Emissions Test Data

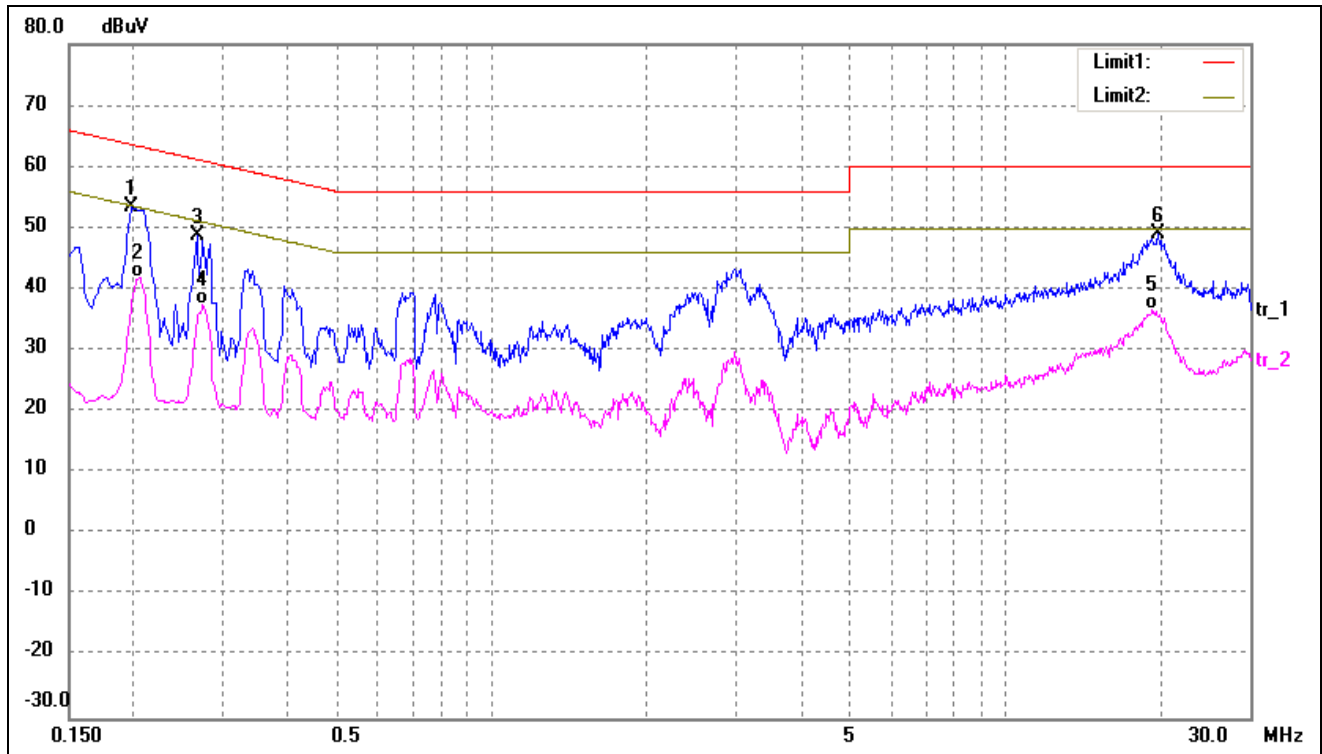
EUT: Mobile Phone

Tested Model: L5

Operating Condition: TM2

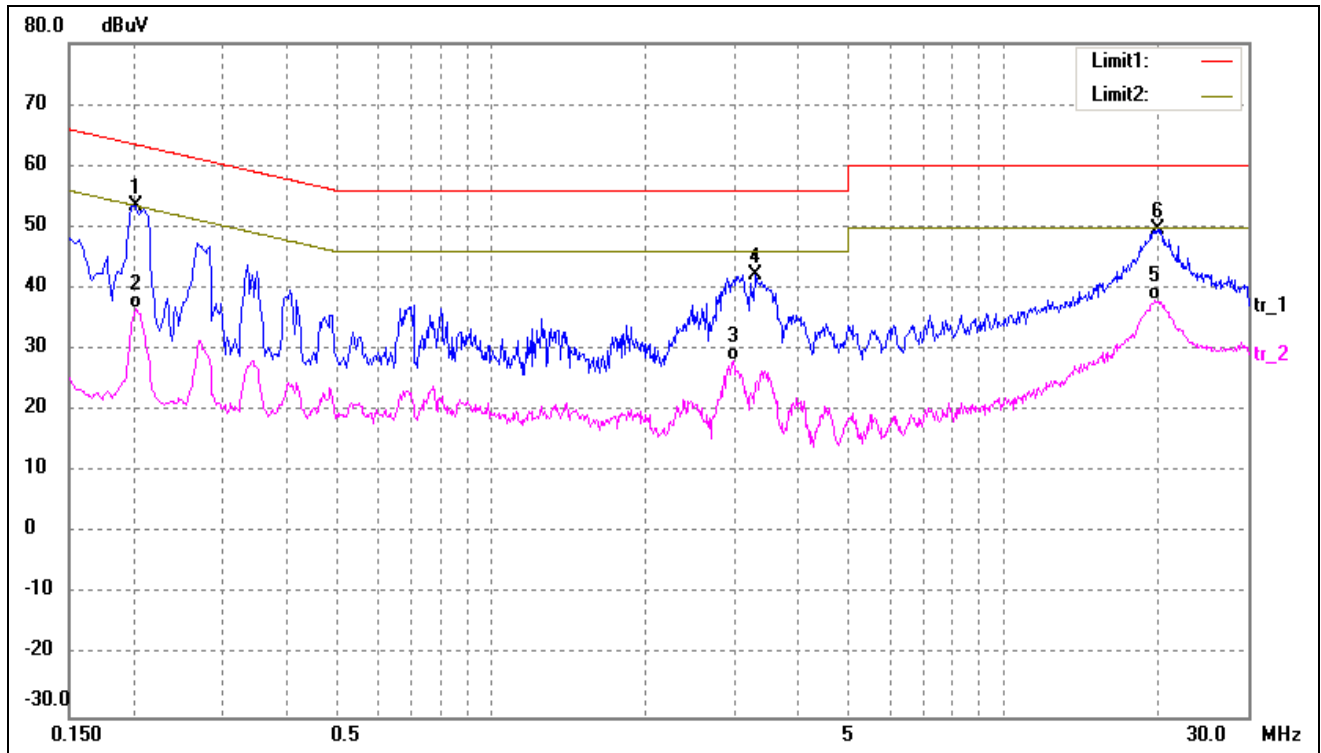
Comment: AC 120V/60Hz; USB 5V

Test Specification: Neutral



No.	Frequency	Reading	Correct	Result	Limit	Margin	Detector
	(MHz)	(dBuV)	(dB/m)	(dBuV)	(dBuV)	(dB)	
1*	0.1980	43.90	9.50	53.40	63.69	-10.29	peak
2	0.2060	32.48	9.50	41.98	53.37	-11.39	AVG
3	0.2660	39.17	9.50	48.67	61.24	-12.57	peak
4	0.2740	28.02	9.50	37.52	51.00	-13.48	AVG
5	19.4180	24.71	11.88	36.59	50.00	-13.41	AVG
6	19.8780	37.00	11.98	48.98	60.00	-11.02	peak

Test Specification: Line



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1*	0.2020	44.06	9.50	53.56	63.53	-9.97	peak
2	0.2020	27.31	9.50	36.81	53.53	-16.72	AVG
3	2.9620	18.27	10.00	28.27	46.00	-17.73	AVG
4	3.2900	32.20	10.00	42.20	56.00	-13.80	peak
5	19.8300	26.08	11.97	38.05	50.00	-11.95	AVG
6	20.0140	37.63	12.00	49.63	60.00	-10.37	peak

## 4. Radiated Emissions

### 4.1 Measurement Uncertainty

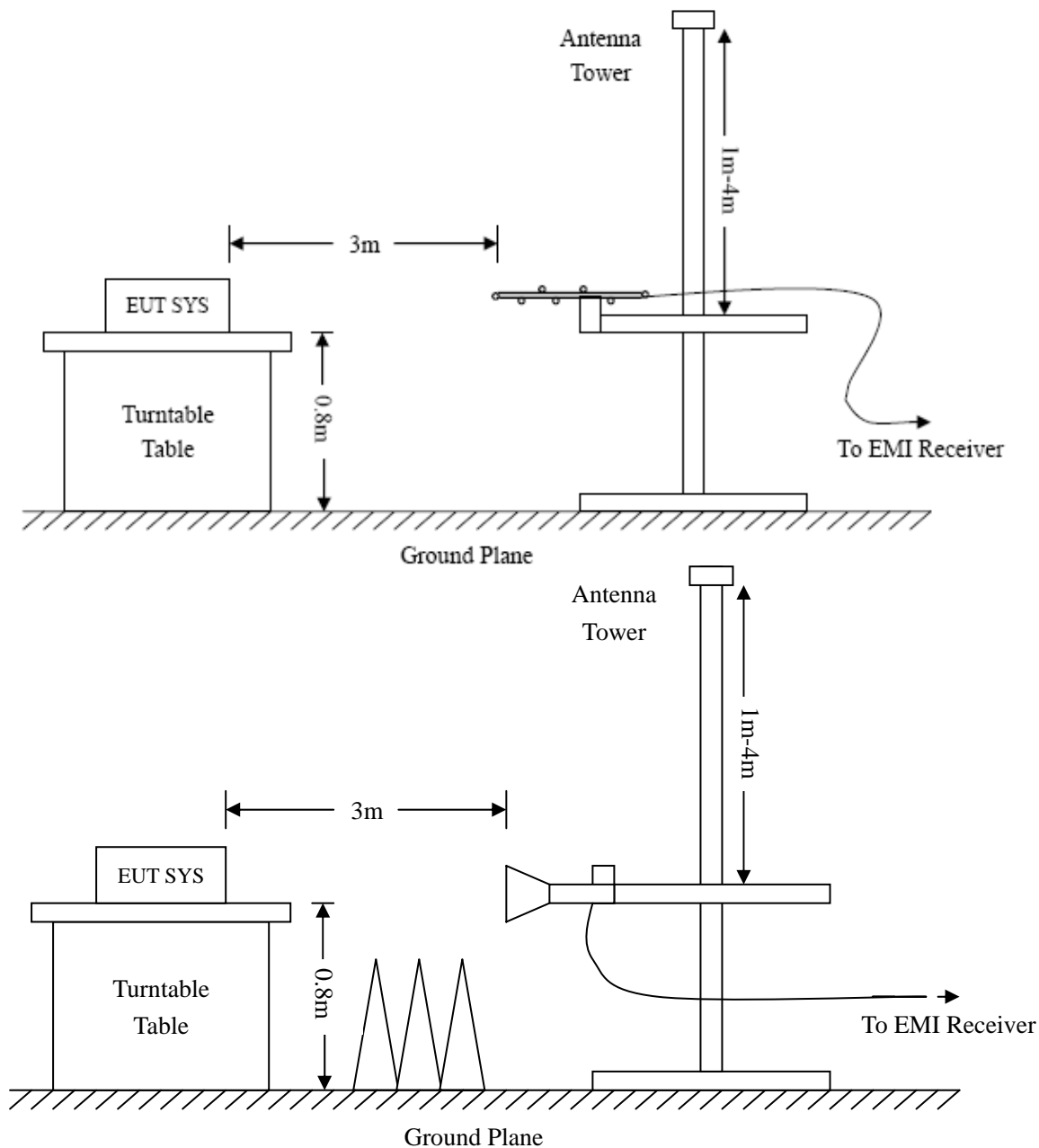
Base on NIS 81, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of any radiation emissions measurement is  $\pm 5.10$  dB.

### 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 $\mu$ 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:

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

### 4.5 Environmental Conditions

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

### 4.6 Summary of Test Results/Plots

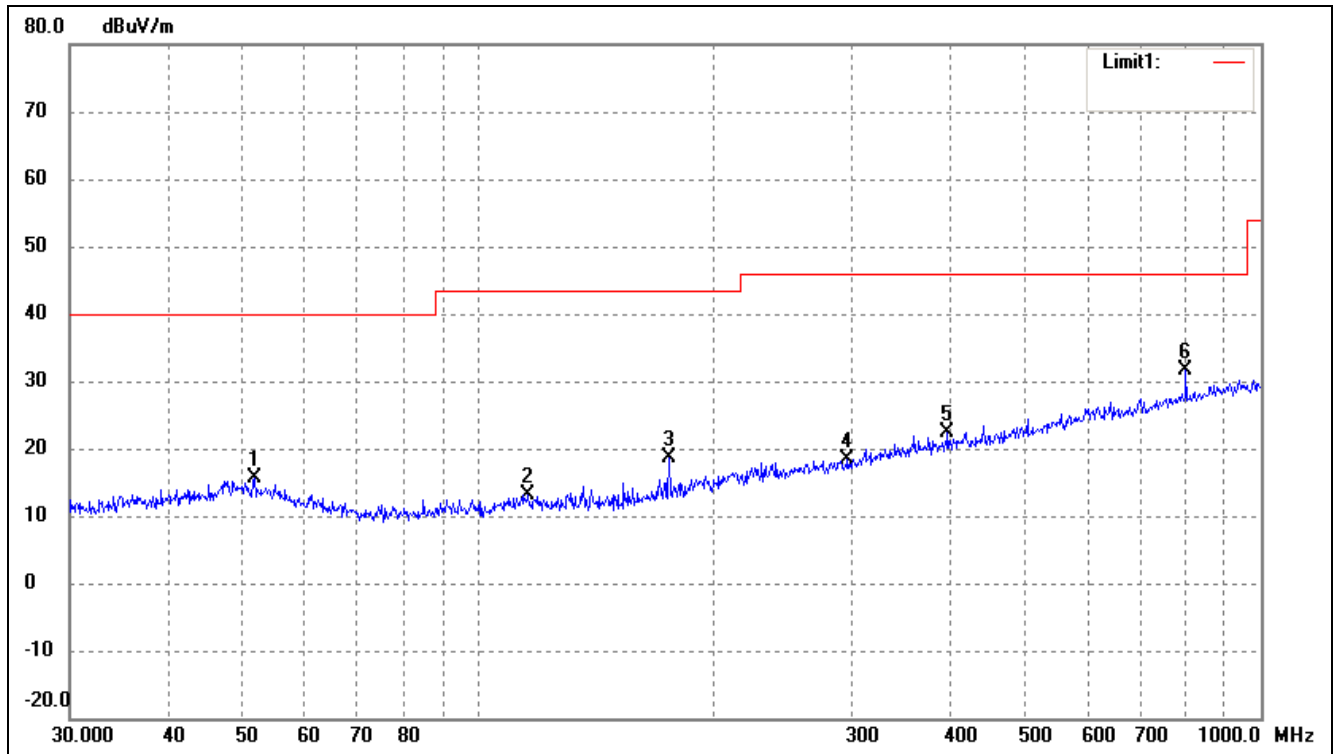
According to the data, the EUT complied with the FCC Part 15.109(a) rule, and had the worst margin of:

**-1.69 dB at 165.8000 MHz in the Vertical polarization, TM2 Mode 9 kHz to 6.5 GHz, 3Meters**

### Plot of Radiated Emissions Test Data

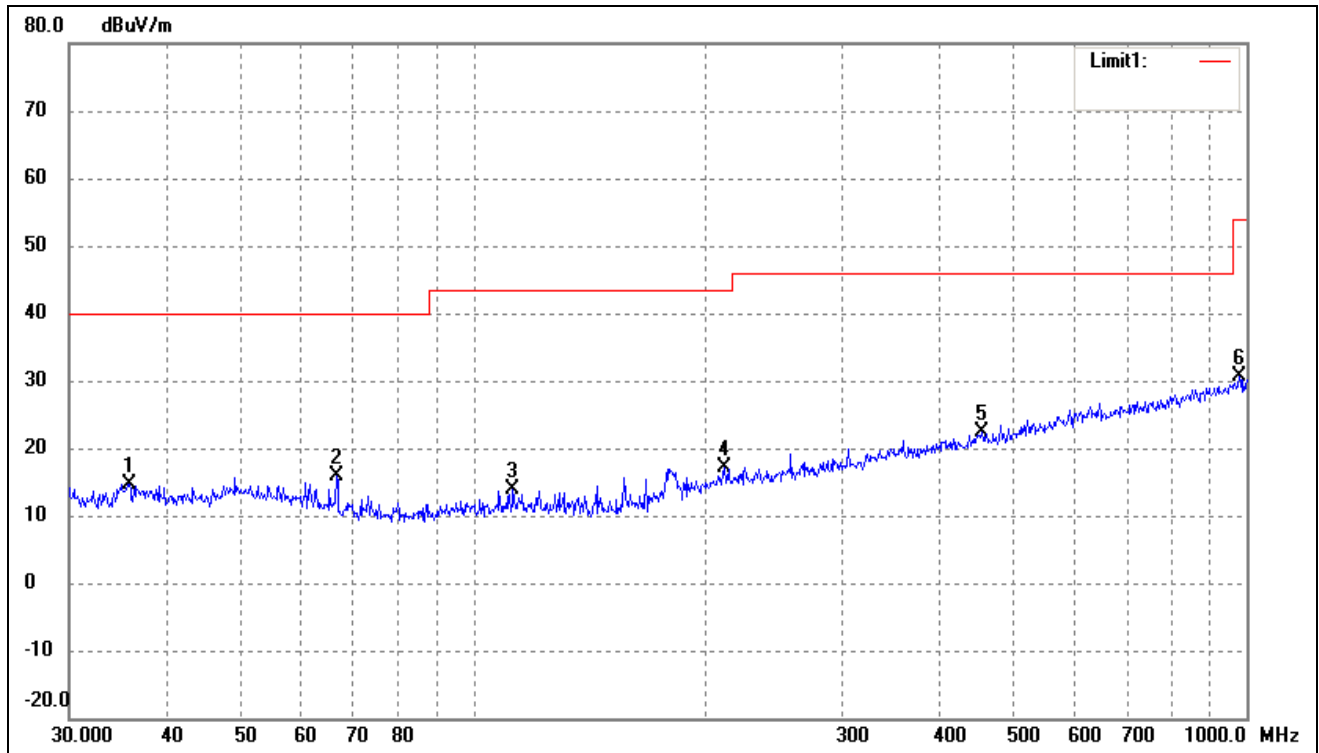
EUT: Mobile Phone  
Tested Model: L5  
Operating Condition: TM1  
Comment: AC 120V/60Hz; Adapter DC 5V

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	51.6616	25.03	-9.32	15.71	40.00	-24.29	142	100	QP
2	115.7256	24.37	-11.17	13.20	43.50	-30.30	225	100	QP
3	175.0368	28.74	-10.11	18.63	43.50	-24.87	270	100	QP
4	296.1836	23.94	-5.45	18.49	46.00	-27.51	26	100	QP
5	397.6334	25.21	-2.93	22.28	46.00	-23.72	342	100	QP
6	801.7863	28.04	3.65	31.69	46.00	-14.31	132	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	35.8747	25.71	-10.99	14.72	40.00	-25.28	59	100	QP
2	66.4989	28.38	-12.44	15.94	40.00	-24.06	147	100	QP
3	112.5244	25.04	-11.14	13.90	43.50	-29.60	236	100	QP
4	210.7860	25.39	-8.19	17.20	43.50	-26.30	158	100	QP
5	454.3100	24.47	-2.01	22.46	46.00	-23.54	229	100	QP
6	979.1804	24.90	5.67	30.57	54.00	-23.43	270	100	QP



### Plot of Radiated Emissions Test Data

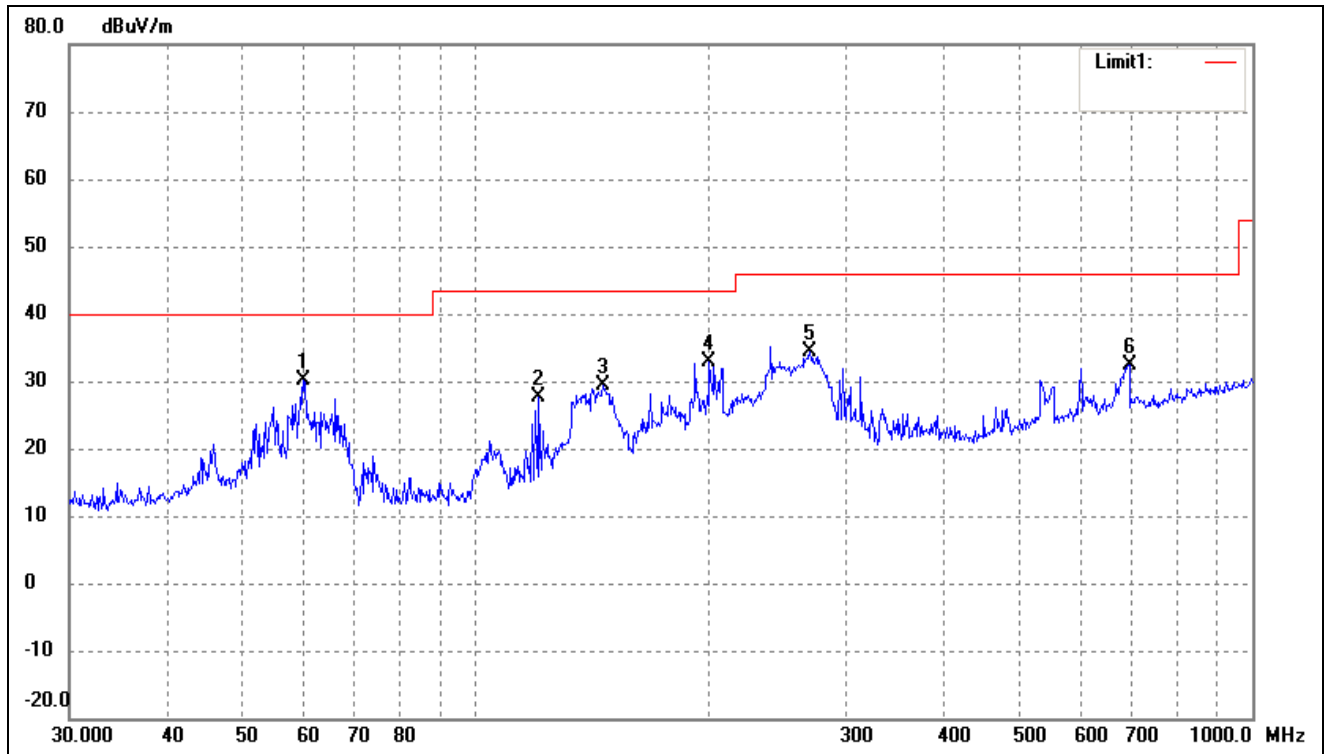
EUT: Mobile Phone

Tested Model: L5

Operating Condition: TM2

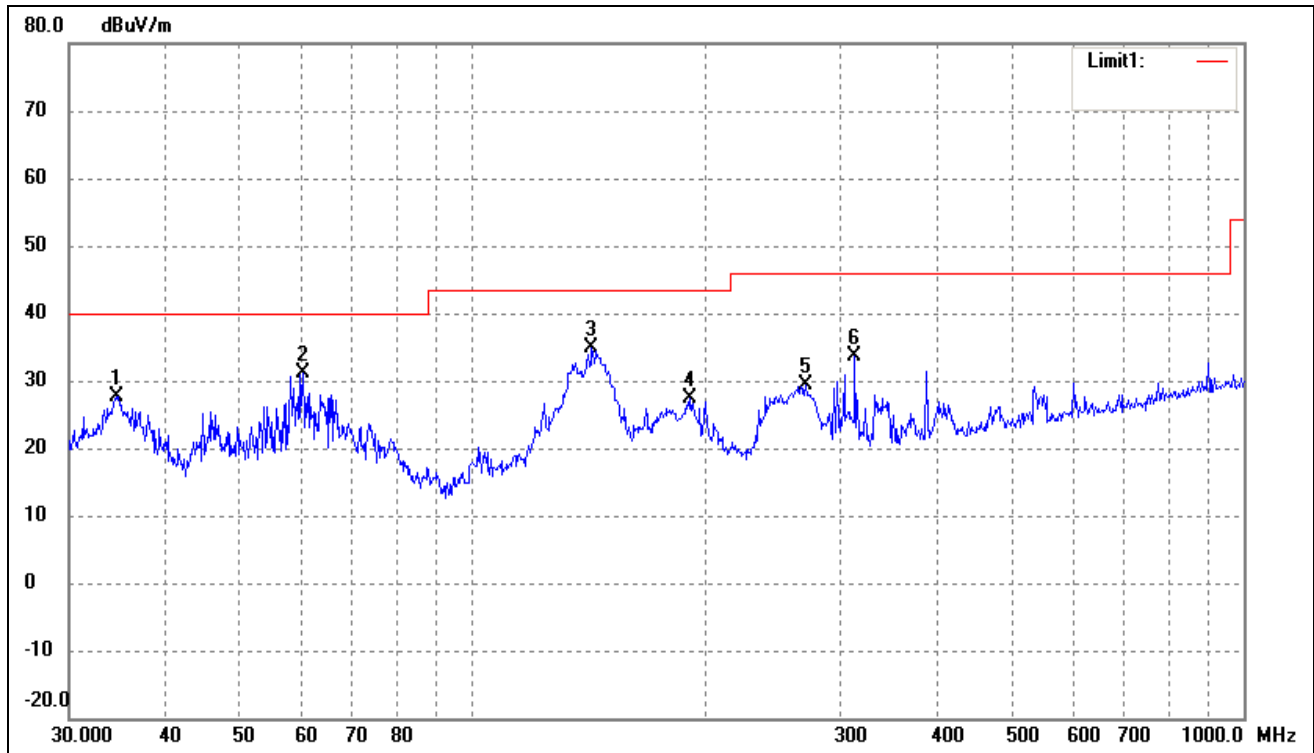
Comment: USB: DC5V

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	60.0691	41.23	-11.09	30.14	40.00	-9.86	51	100	QP
2	120.6991	38.76	-11.22	27.54	43.50	-15.96	124	100	QP
3	145.8611	40.84	-11.52	29.32	43.50	-14.18	203	100	QP
4	199.9856	41.50	-8.56	32.94	43.50	-10.56	86	100	QP
5	269.4284	40.78	-6.44	34.34	46.00	-11.66	227	100	peak
6	694.4174	30.25	2.20	32.45	46.00	-13.55	180	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	34.5173	38.77	-11.19	27.58	40.00	-12.42	22	100	QP
2	60.2801	42.37	-11.15	31.22	40.00	-8.78	146	100	QP
3	142.8244	46.26	-11.48	34.78	43.50	-8.72	197	100	QP
4	191.7450	36.25	-8.81	27.44	43.50	-16.06	375	100	QP
5	270.3748	35.83	-6.42	29.41	46.00	-16.59	180	100	QP
6	313.2760	38.58	-5.05	33.53	46.00	-12.47	210	100	QP

### Plot of Radiated Emissions Test Data

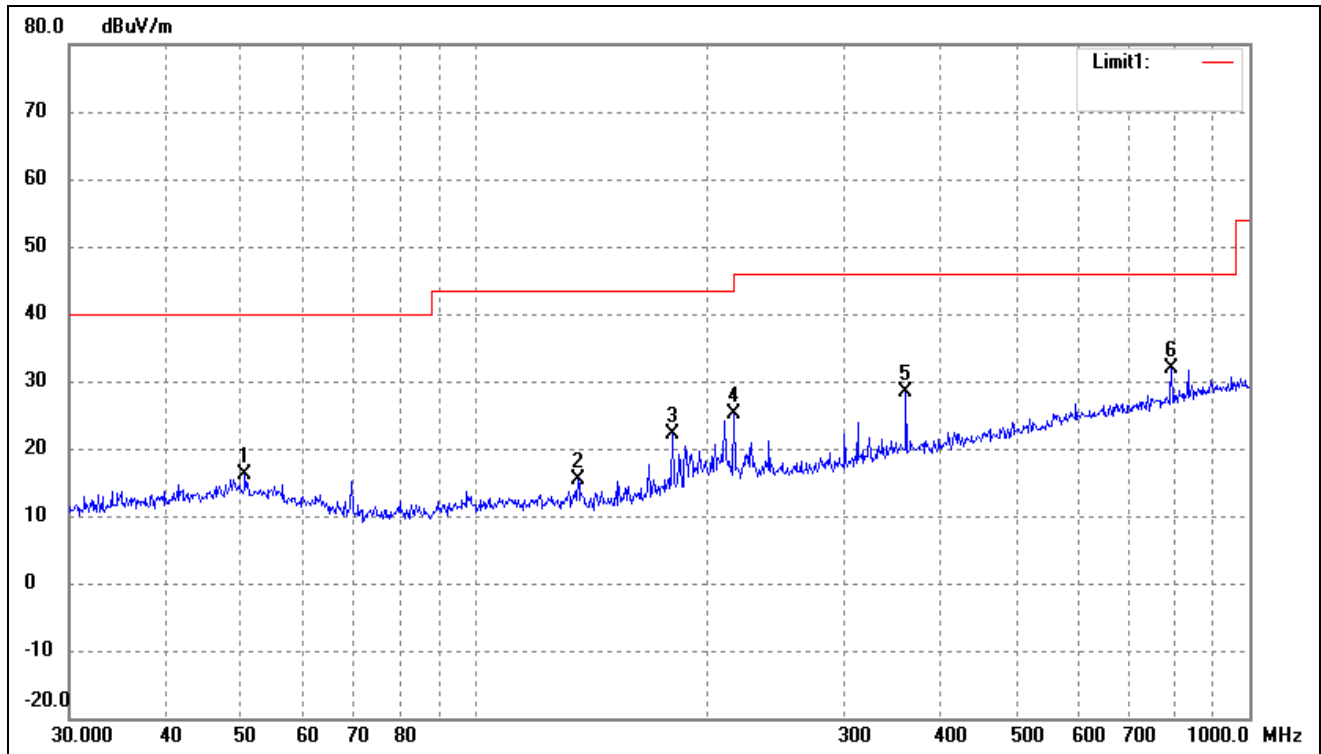
EUT: Mobile Phone

Tested Model: L5

Operating Condition: TM3

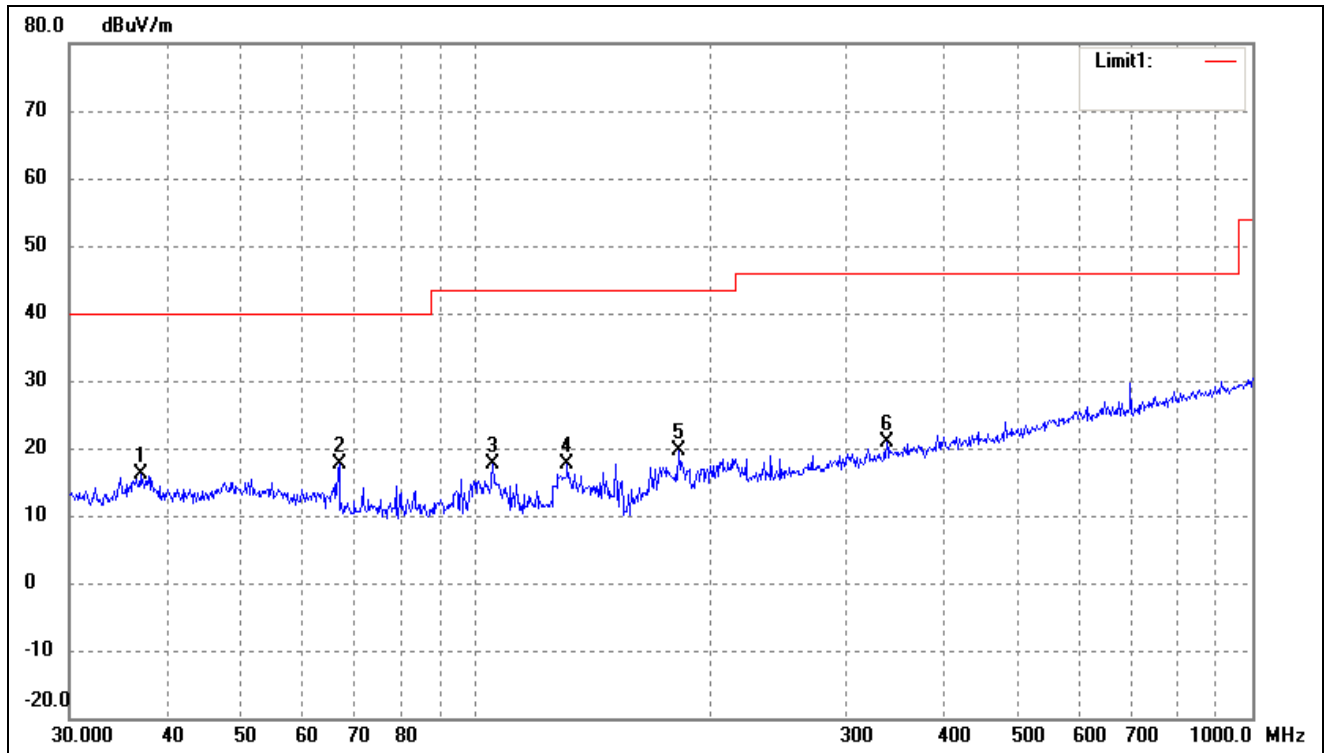
Comment: DC 3.8V

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	50.5860	25.15	-9.09	16.06	40.00	-23.94	158	100	QP
2	135.9822	26.82	-11.39	15.43	43.50	-28.07	0	100	QP
3	180.0165	31.89	-9.69	22.20	43.50	-21.30	147	100	QP
4	216.0240	32.95	-7.91	25.04	46.00	-20.96	352	100	QP
5	360.4477	31.93	-3.65	28.28	46.00	-17.72	100	100	QP
6	793.3960	28.18	3.59	31.77	46.00	-14.23	278	100	QP

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	37.0249	26.87	-10.82	16.05	40.00	-23.95	76	100	QP
2	66.7325	30.04	-12.49	17.55	40.00	-22.45	76	100	QP
3	105.2718	29.18	-11.48	17.70	43.50	-25.80	288	100	QP
4	131.2965	29.07	-11.34	17.73	43.50	-25.77	10	100	QP
5	182.5592	28.98	-9.47	19.51	43.50	-23.99	287	100	QP
6	338.4001	24.91	-4.11	20.80	46.00	-25.20	360	100	QP

### Plot of Radiated Emissions Test Data

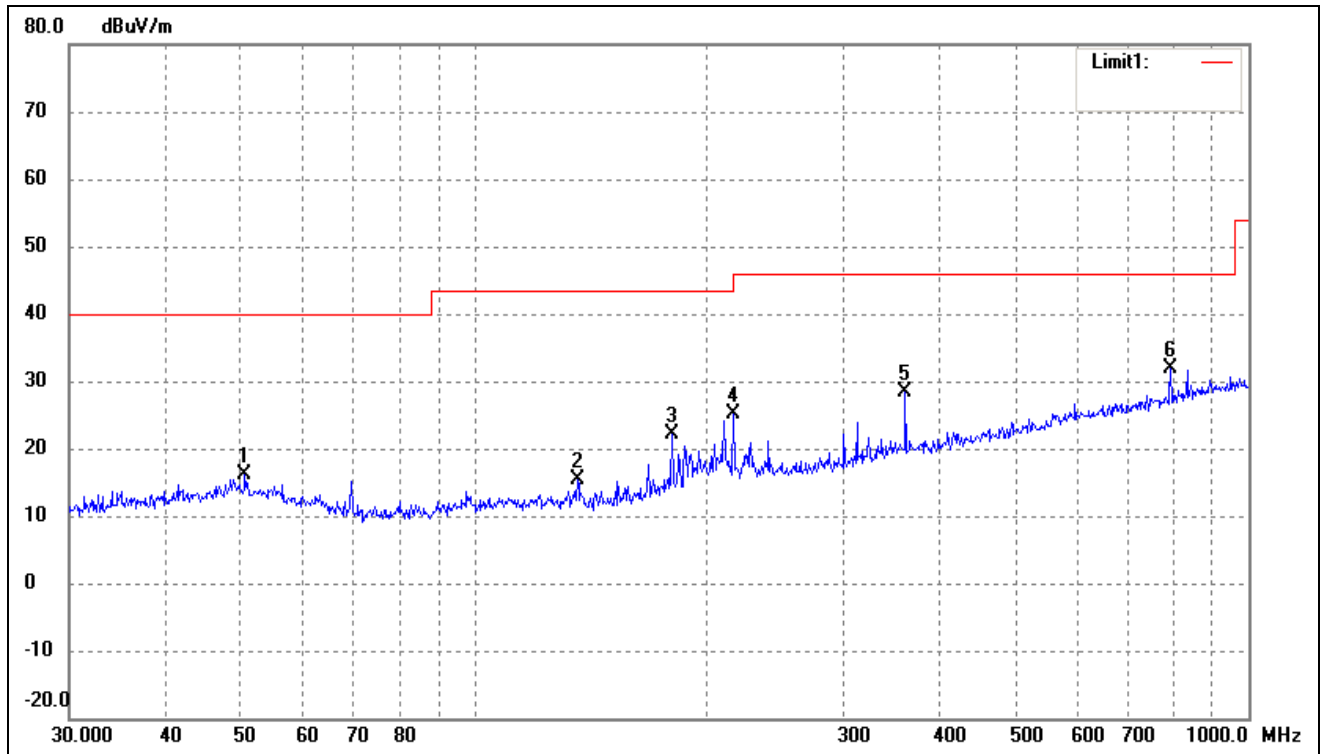
EUT: Mobile Phone

Tested Model: L5

Operating Condition: TM4

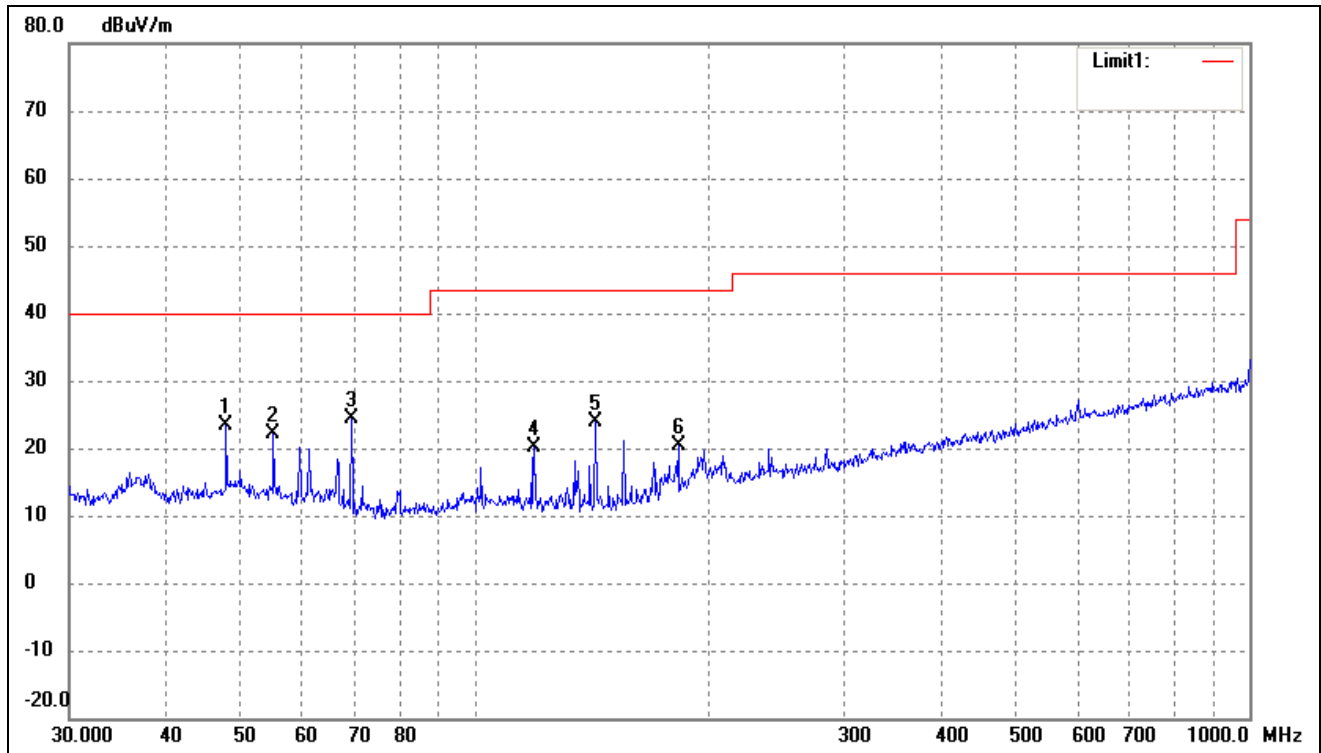
Comment: DC 3.8V

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	49.8814	23.93	-8.99	14.94	40.00	-25.06	158	100	QP
2	135.9822	27.01	-11.39	15.62	43.50	-27.88	0	100	QP
3	187.0958	30.98	-9.10	21.88	43.50	-21.62	147	100	QP
4	241.6763	32.33	-6.80	25.53	46.00	-20.47	223	100	QP
5	343.1800	27.37	-3.90	23.47	46.00	-22.53	330	100	QP
6	599.3213	25.05	1.24	26.29	46.00	-19.71	360	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	47.8260	32.77	-9.29	23.48	40.00	-16.52	118	100	QP
2	55.0274	32.22	-10.03	22.19	40.00	-17.81	278	100	QP
3	69.3568	37.35	-13.05	24.30	40.00	-15.70	230	100	QP
4	119.4361	31.42	-11.21	20.21	43.50	-23.29	332	100	QP
5	143.3261	35.38	-11.49	23.89	43.50	-19.61	360	100	QP
6	183.2005	29.85	-9.42	20.43	43.50	-23.07	360	100	QP

Note: Testing is carried out with frequency rang 9kHz to the 6.5GHz, 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 \*\*\*\*\*