FCC Part 15B
Measurement and Test Report

For

Guizhou Fortuneship Technology Co., Ltd.

No. 4 Plant, High-tech Industrial Park, Xinpu Economic Development Zone,

Zunyi City, P. R. China

FCC ID: 2ALQJB125C

Test Rule(s):	FCC Part 15 Subpart B
Product Description:	4G Smart Phone
Tested Model:	C145
Report No.:	STR17128103I-6
Sample Receipt Date:	2017-12-08
Tested Date:	2017-12-08 to 2017-12-14
Issued Date:	2017-12-14
Tested By:	Iven Guo / Engineer
Reviewed By:	Silin Chen / EMC Manager
Approved & Authorized By:	Jandy So / PSQ Manager

Prepared By:

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Note: This test report is limited to the above client company and the product model only. Part of the test data is cited the early report, Report Numbers is STR17068072I-6. 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:	Guizhou Fortuneship Technology Co., Ltd.
Address of applicant:	No. 4 Plant, High-tech Industrial Park, Xinpu Economic Development Zone, Zunyi City, P. R. China
Manufacturer:	Guizhou Fortuneship Technology Co., Ltd.
Address of manufacturer:	No. 4 Plant, High-tech Industrial Park, Xinpu Economic Development Zone, Zunyi City, P. R. China

General Description of EUT	
Product Name:	4G Smart Phone
Trade Name:	NC1
Model No.:	C145
Adding Model(s):	/
The EUT Main board support GSM850/900/DCS1800/PCS1900, WCDMA Band 1/2/4/5, LTE Band 2/4/7/12/17 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	
Note: The test data is gathered from a production sample, provided by the manufacturer.	

Technical Characteristics of EUT	
Rated Voltage:	DC 3.8V by Battery
Rated Current:	/
Rated Power:	/
Power Adapter Model:	/
Highest Internal Frequency:	1.5GHz
Classification of ITE:	Class B

1.2 Test Standards

The following report is prepared on behalf of the Guizhou Fortuneship Technology Co., Ltd. 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	/
TM2	Downloading	/
TM3	Charging + 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

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	±2.88dB
Transmitter Spurious Emissions	Radiated	±5.1dB

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

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

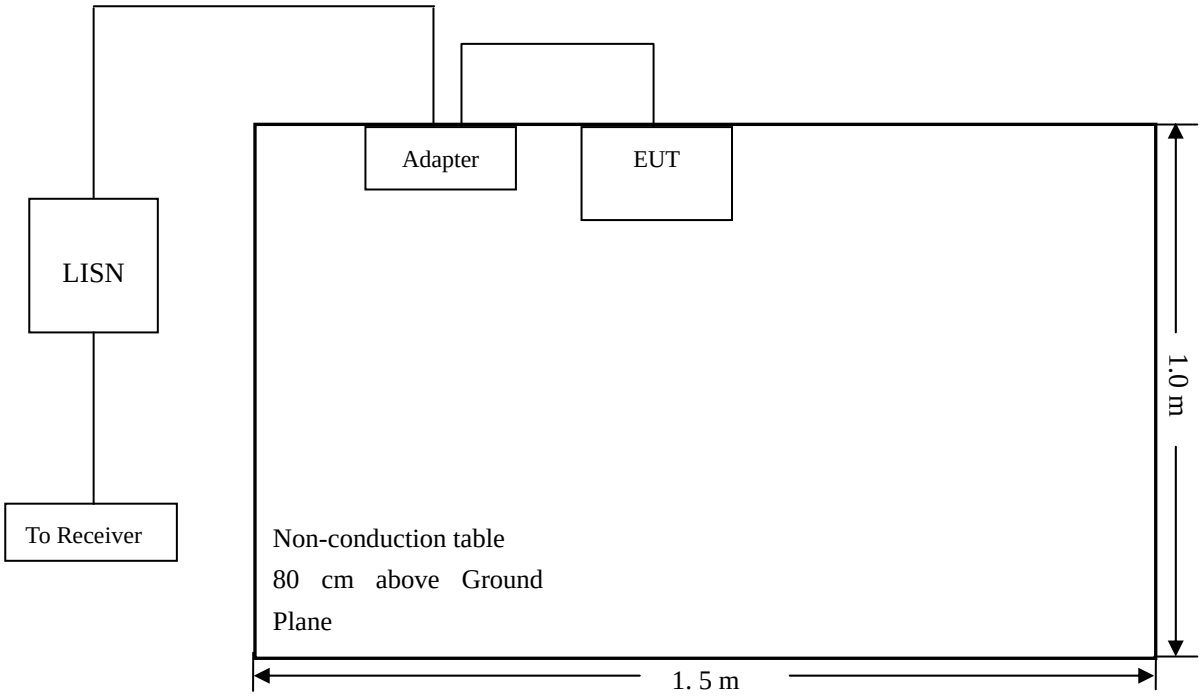
N/A: not applicable

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:

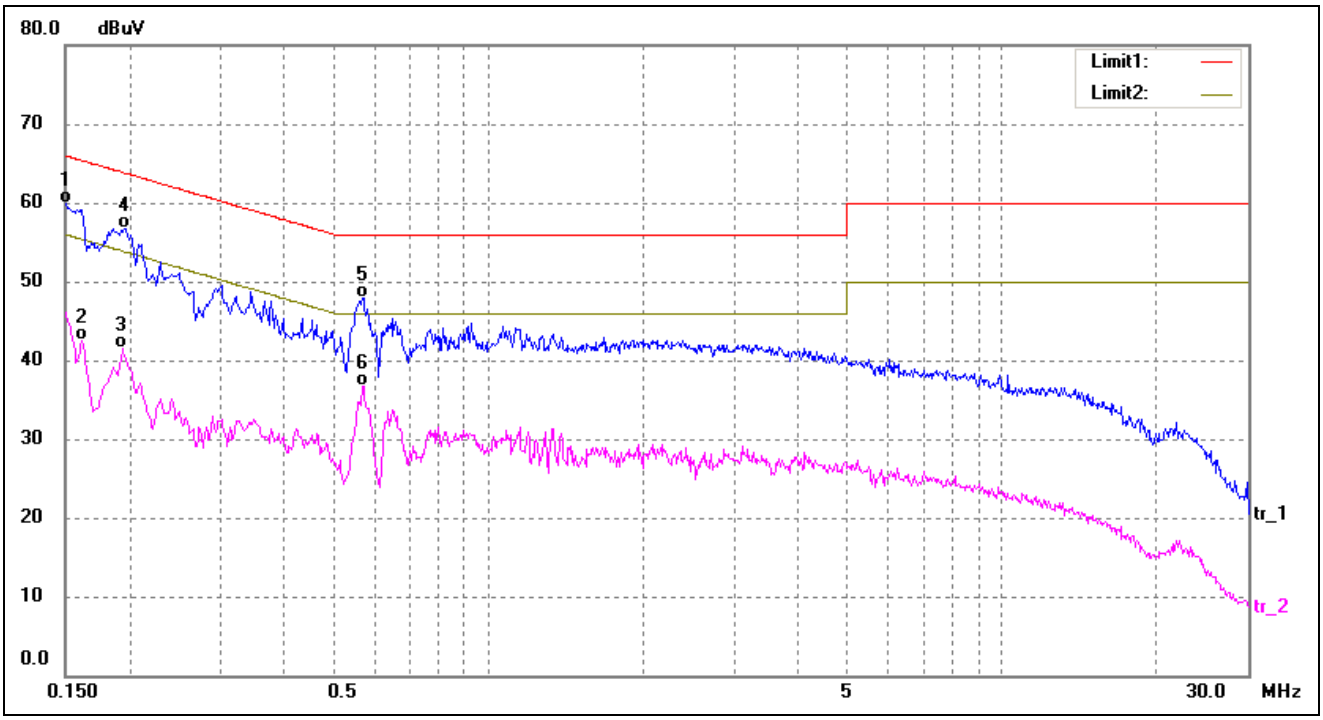
-6.05 dB at **0.1499 MHz** in the **Neutral**, **QP** detector, **TM1** Mode, 0.15-30MHz

3.5 Conducted Emissions Test Data

Plot of Conducted Emissions Test Data

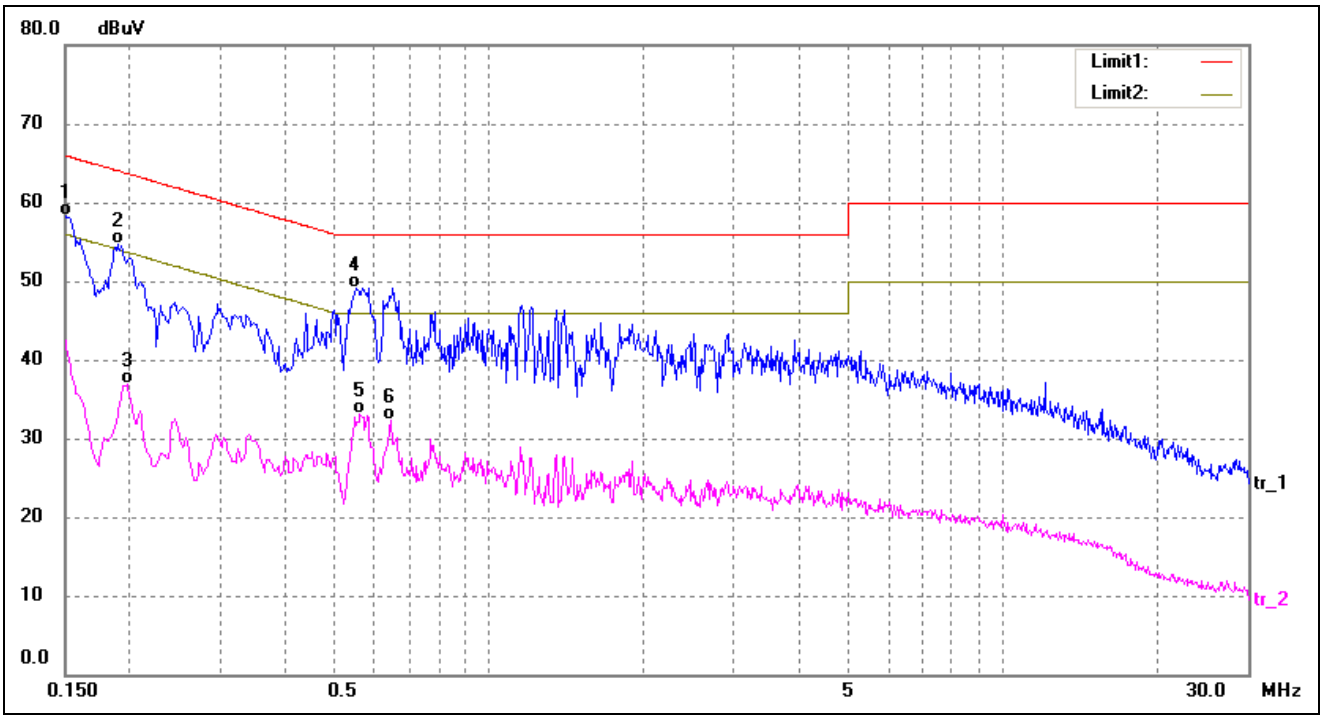
EUT: *4G Smart Phone*
Tested Model: *C145*
Operating Condition: *TM1*
Comment: *AC 120V/60Hz; Adapter DC 5V*

Test Specification: *Neutral*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Detector
	(MHz)	(dBuV)	(dB/m)	(dBuV)	(dBuV)	(dB)	
1*	0.1499	50.10	9.85	59.95	66.00	-6.05	QP
2	0.1620	32.67	9.84	42.51	55.36	-12.85	AVG
3	0.1940	31.63	9.81	41.44	53.86	-12.42	AVG
4	0.1965	46.96	9.80	56.76	63.75	-6.99	QP
5	0.5699	38.09	9.79	47.88	56.00	-8.12	QP
6	0.5699	26.88	9.79	36.67	46.00	-9.33	AVG

Test Specification: *Line*

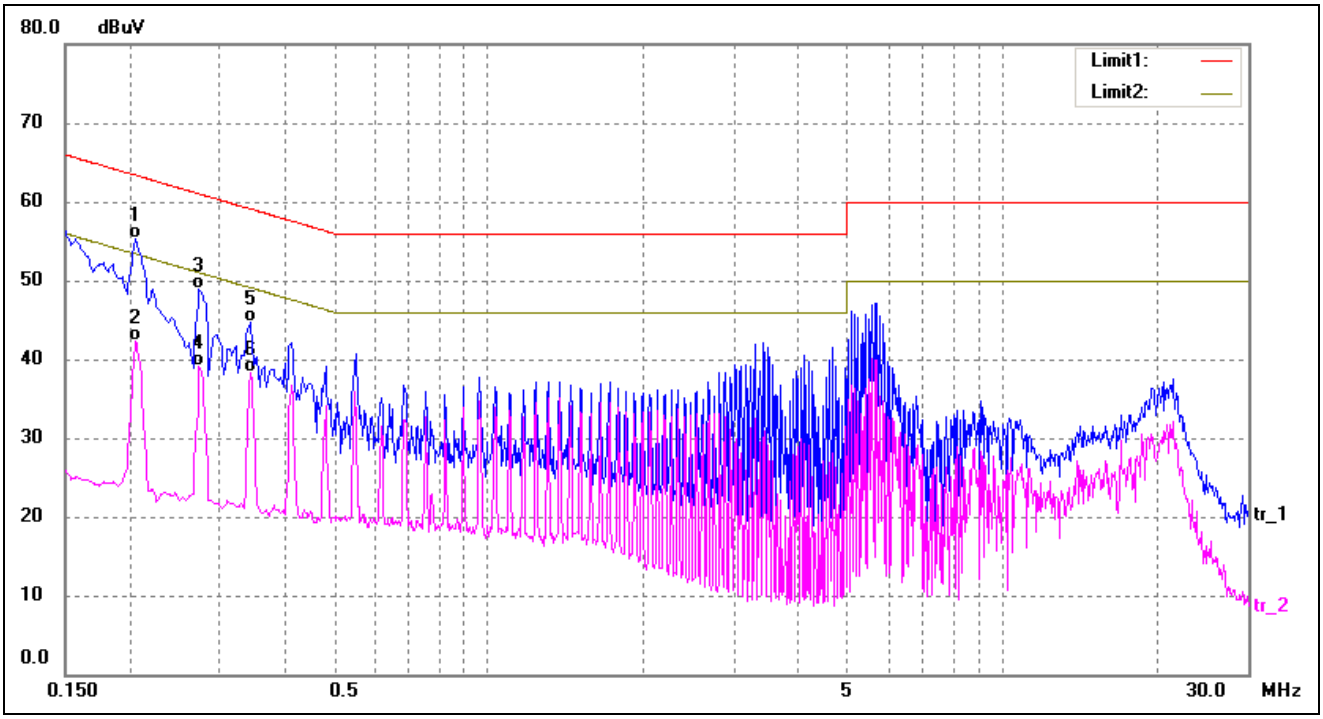


No.	Frequency	Reading	Correct	Result	Limit	Margin	Detector
	(MHz)	(dBuV)	(dB/m)	(dBuV)	(dBuV)	(dB)	
1	0.1499	48.40	9.85	58.25	66.00	-7.75	QP
2	0.1900	44.85	9.81	54.66	64.03	-9.37	QP
3	0.1980	27.03	9.80	36.83	53.69	-16.86	AVG
4*	0.5540	39.29	9.80	49.09	56.00	-6.91	QP
5	0.5620	23.40	9.80	33.20	46.00	-12.80	AVG
6	0.6460	22.46	9.79	32.25	46.00	-13.75	AVG

Plot of Conducted Emissions Test Data

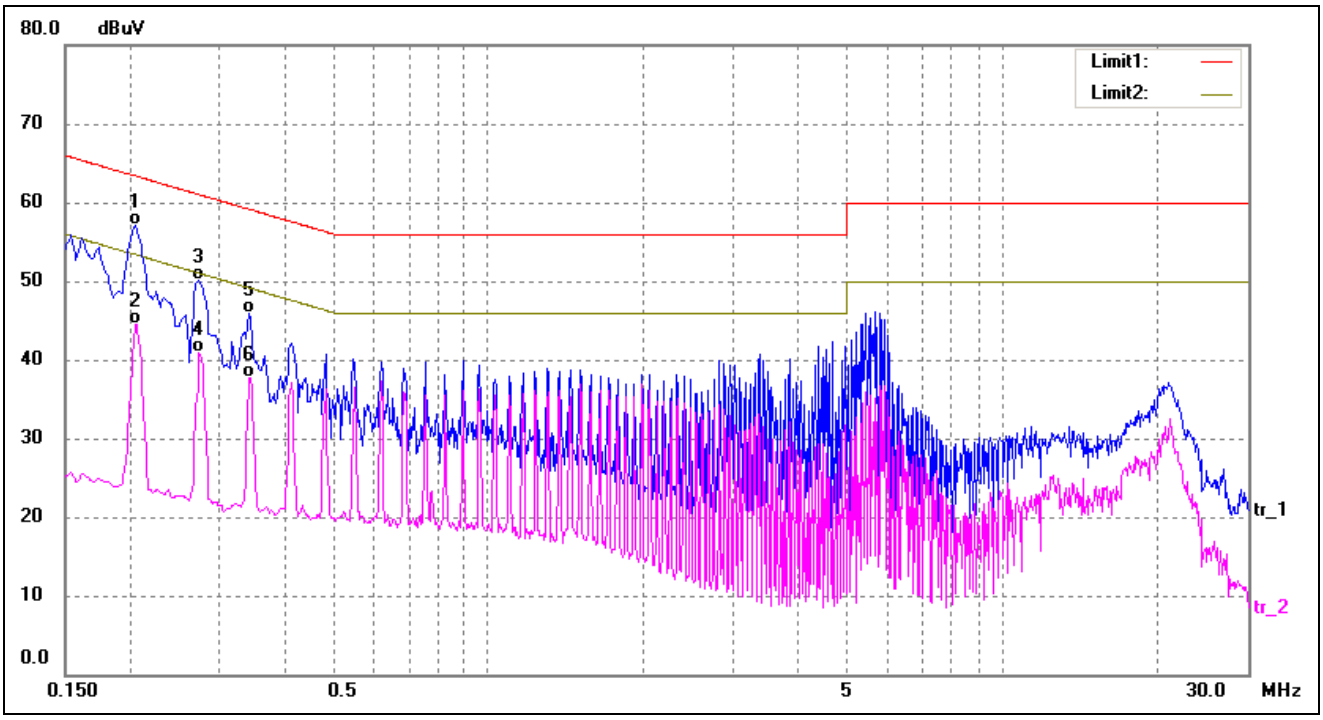
EUT: *4G Smart Phone*
Tested Model: *C145*
Operating Condition: *TM2*
Comment: *AC 120V/60Hz; USB 5V*

Test Specification: *Neutral*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Detector
	(MHz)	(dBuV)	(dB/m)	(dBuV)	(dBuV)	(dB)	
1*	0.2060	45.57	9.80	55.37	63.37	-8.00	QP
2	0.2060	32.43	9.80	42.23	53.37	-11.14	AVG
3	0.2740	39.15	9.80	48.95	61.00	-12.05	QP
4	0.2740	29.23	9.80	39.03	51.00	-11.97	AVG
5	0.3460	34.88	9.80	44.68	59.06	-14.38	QP
6	0.3460	28.50	9.80	38.30	49.06	-10.76	AVG

Test Specification: *Line*

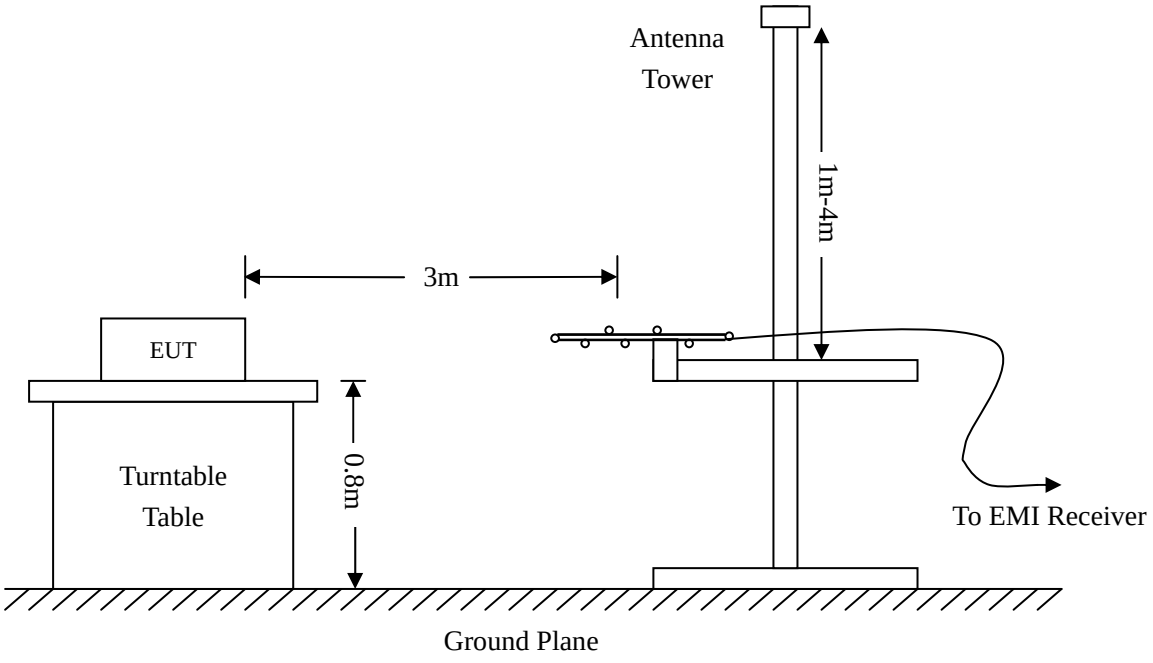


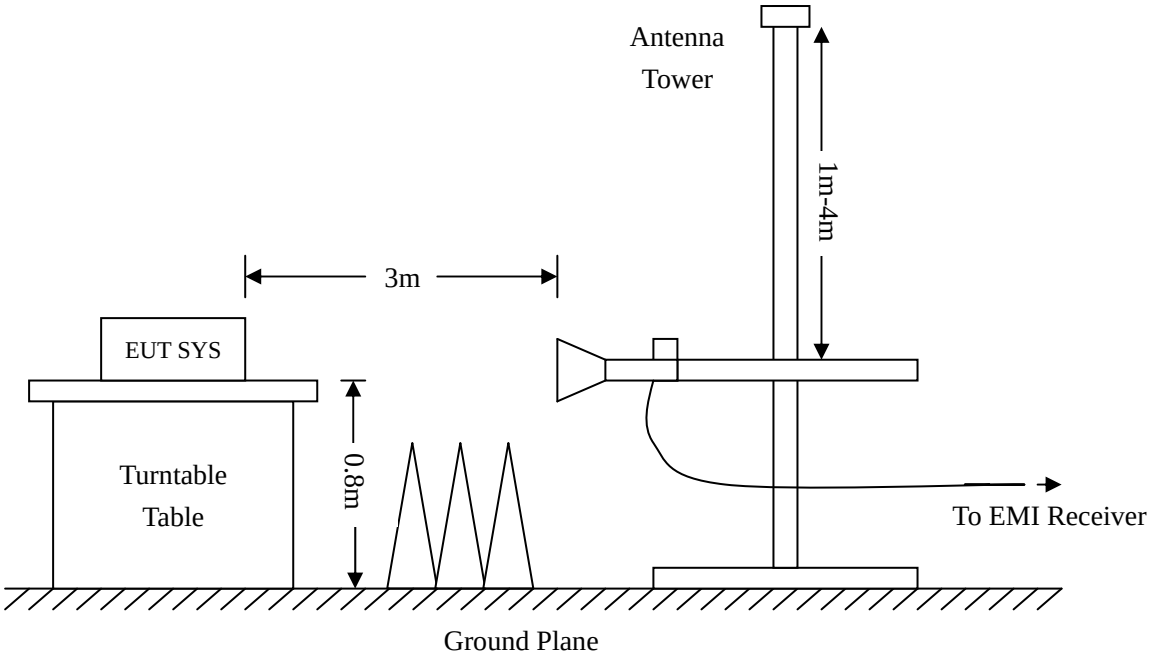
No.	Frequency	Reading	Correct	Result	Limit	Margin	Detector
	(MHz)	(dBuV)	(dB/m)	(dBuV)	(dBuV)	(dB)	
1*	0.2060	47.24	9.80	57.04	63.37	-6.33	QP
2	0.2060	34.77	9.80	44.57	53.37	-8.80	AVG
3	0.2740	40.37	9.80	50.17	61.00	-10.83	QP
4	0.2740	31.08	9.80	40.88	51.00	-10.12	AVG
5	0.3420	36.08	9.80	45.88	59.15	-13.27	QP
6	0.3420	27.98	9.80	37.78	49.15	-11.37	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	Frequency :30MHz-1GHz	Frequency :Above 1GHz
RBW=10KHz,	RBW=120KHz,	RBW=1MHz,
VBW =30KHz	VBW=300KHz	VBW=3MHz(Peak), 10Hz(AV)
Sweep time= Auto	Sweep time= Auto	Sweep time= Auto
Trace = max hold	Trace = max hold	Trace = max hold
Detector function = peak	Detector function = peak, QP	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:

Corr. Ampl. = Indicated Reading – Corr. Factor

The "**Margin**" column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of -6dBμV means the emission is 6dBμV below the maximum limit for a Class B device. The equation for margin calculation is as follows:

Margin = Corr. Ampl. – 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

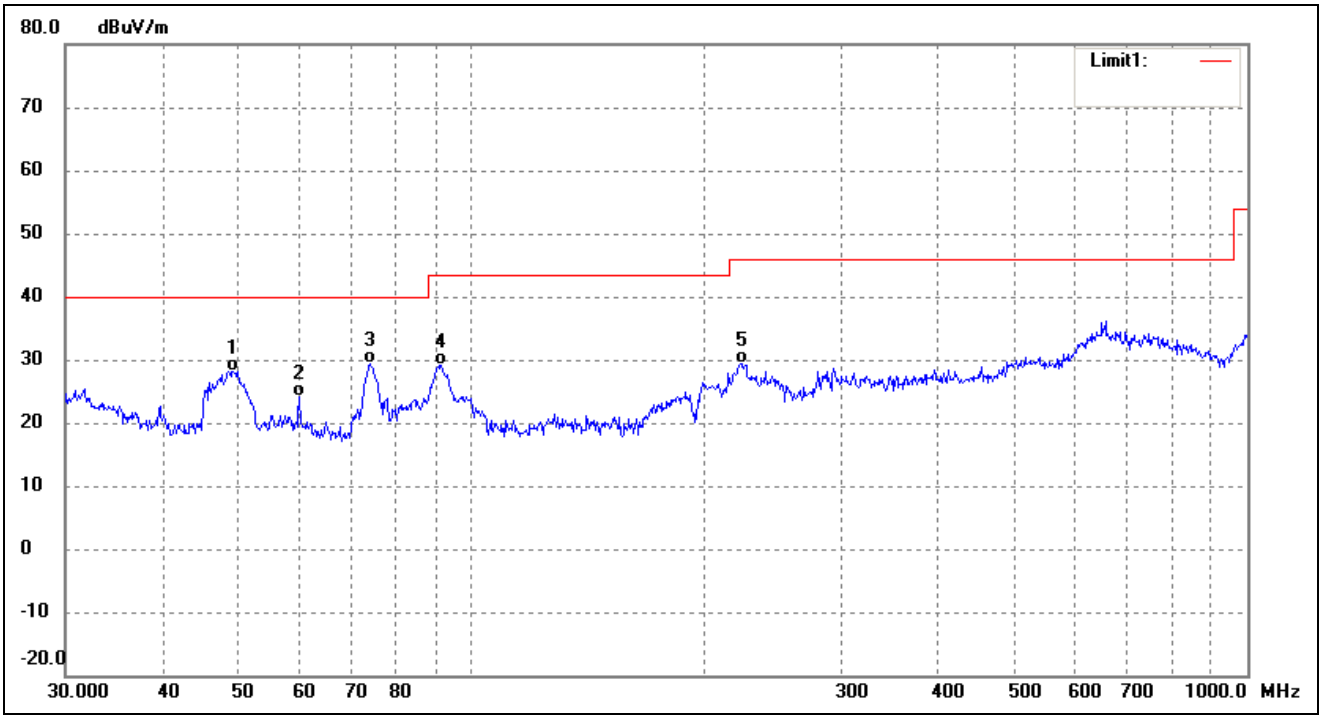
According to the data, the EUT complied with the FCC Part 15.109(a) rule, and had the worst margin of:

-6.82 dB at **54.8348 MHz** in the **Vertical** polarization, **TM2** Mode, **30MHz** to **12.75 GHz**, **3Meters**

Plot of Radiated Emissions Test Data

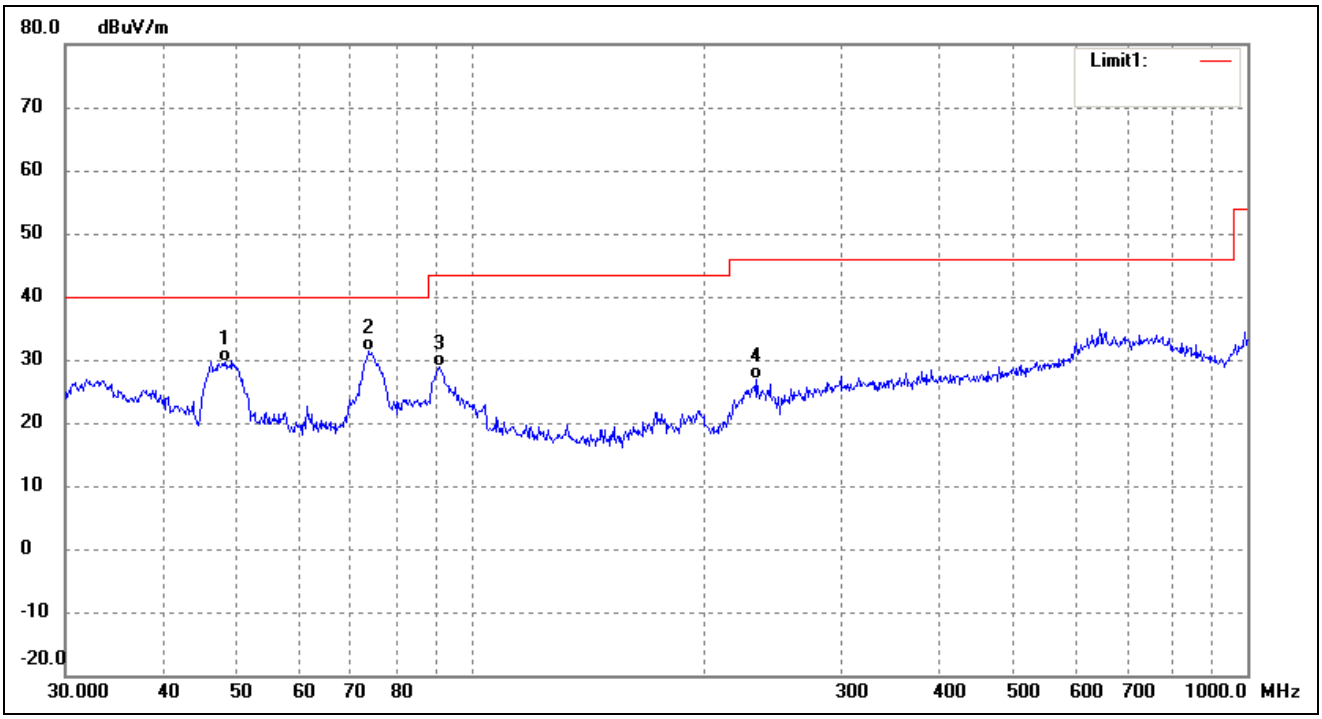
EUT: *4G Smart Phone*
Tested Model: *C145*
Operating Condition: *TM1*
Comment: *AC 120V/60Hz; Adapter DC 5V*

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	49.3594	23.24	4.98	28.22	40.00	-11.78	317	100	QP
2	60.0690	19.06	5.02	24.08	40.00	-15.92	95	100	QP
3	74.1350	27.09	2.39	29.48	40.00	-10.52	326	100	QP
4	91.4949	25.61	3.64	29.25	43.50	-14.25	96	100	QP
5	222.9501	21.50	7.85	29.35	46.00	-16.65	68	100	QP

Test Specification: *Vertical*

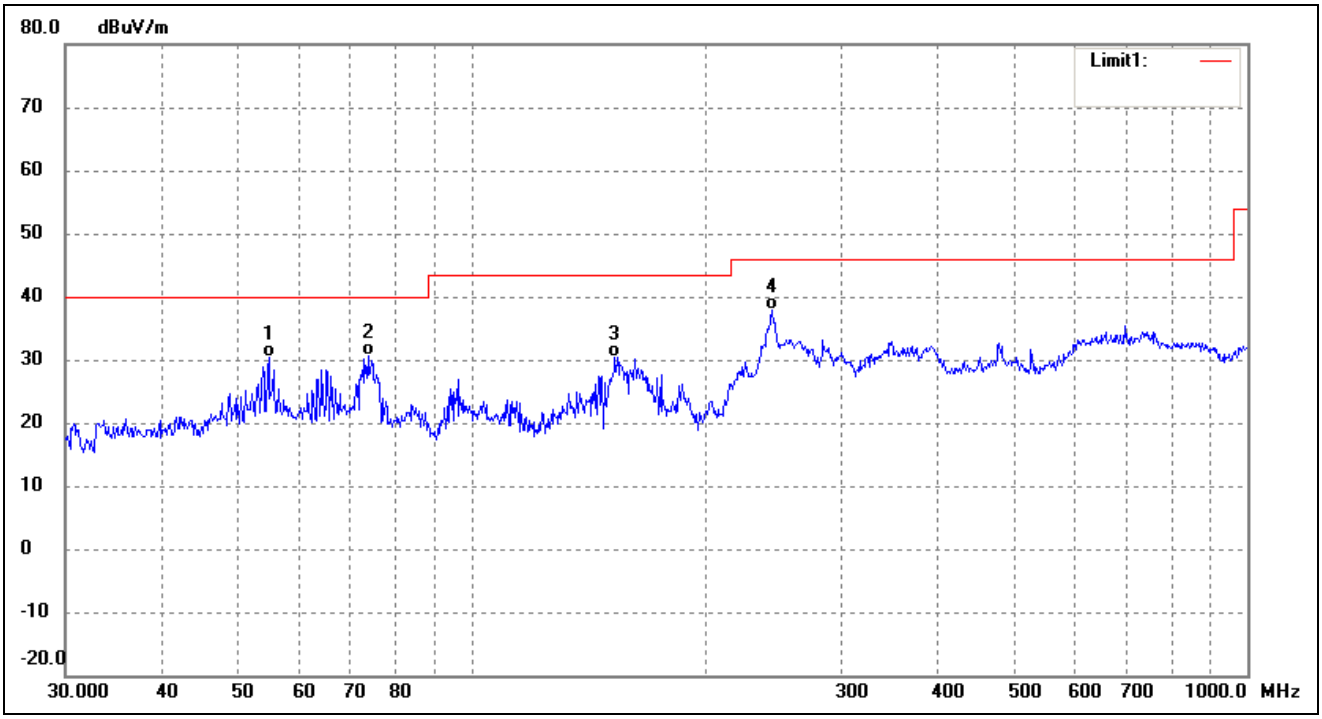


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	48.1625	24.60	4.96	29.56	40.00	-10.44	266	100	QP
2	73.8756	28.87	2.42	31.29	40.00	-8.71	96	100	QP
3	90.8554	25.23	3.54	28.77	43.50	-14.73	299	100	QP
4	233.3487	18.31	8.51	26.82	46.00	-19.18	110	100	QP

Plot of Radiated Emissions Test Data

EUT: *4G Smart Phone*
Tested Model: *C145*
Operating Condition: *TM2*
Comment: *AC 120V/60Hz; USB 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	54.8348	25.24	5.03	30.27	40.00	-9.73	326	100	QP
2	73.6170	28.23	2.45	30.68	40.00	-9.32	202	100	QP
3	153.2004	27.73	2.64	30.37	43.50	-13.13	94	100	QP
4	244.2321	28.74	9.09	37.83	46.00	-8.17	341	100	QP

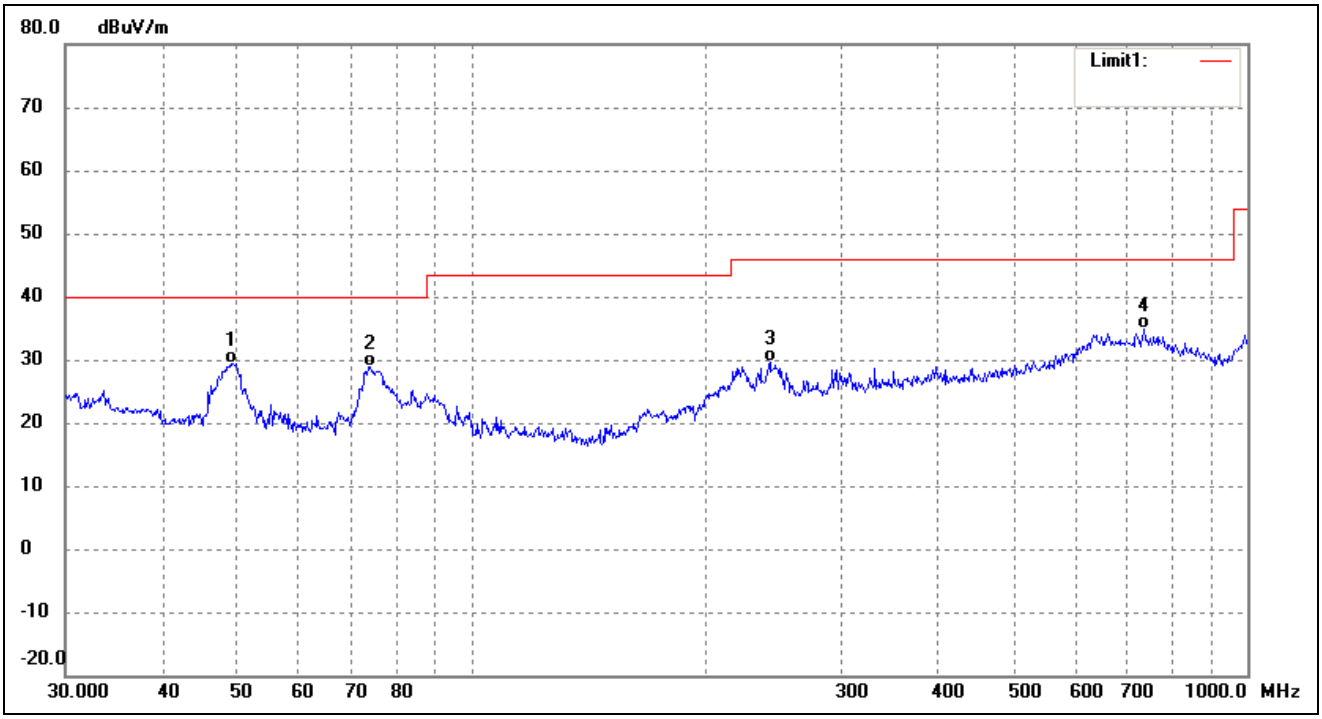
Test Specification: *Vertical*

No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	54.8348	28.15	5.03	33.18	40.00	-6.82	258	100	QP
2	236.6447	24.71	8.72	33.43	46.00	-12.57	322	100	QP
3	390.7225	20.82	12.27	33.09	46.00	-12.91	68	100	QP
4	526.3967	22.62	13.87	36.49	46.00	-9.51	340	100	QP

Plot of Radiated Emissions Test Data

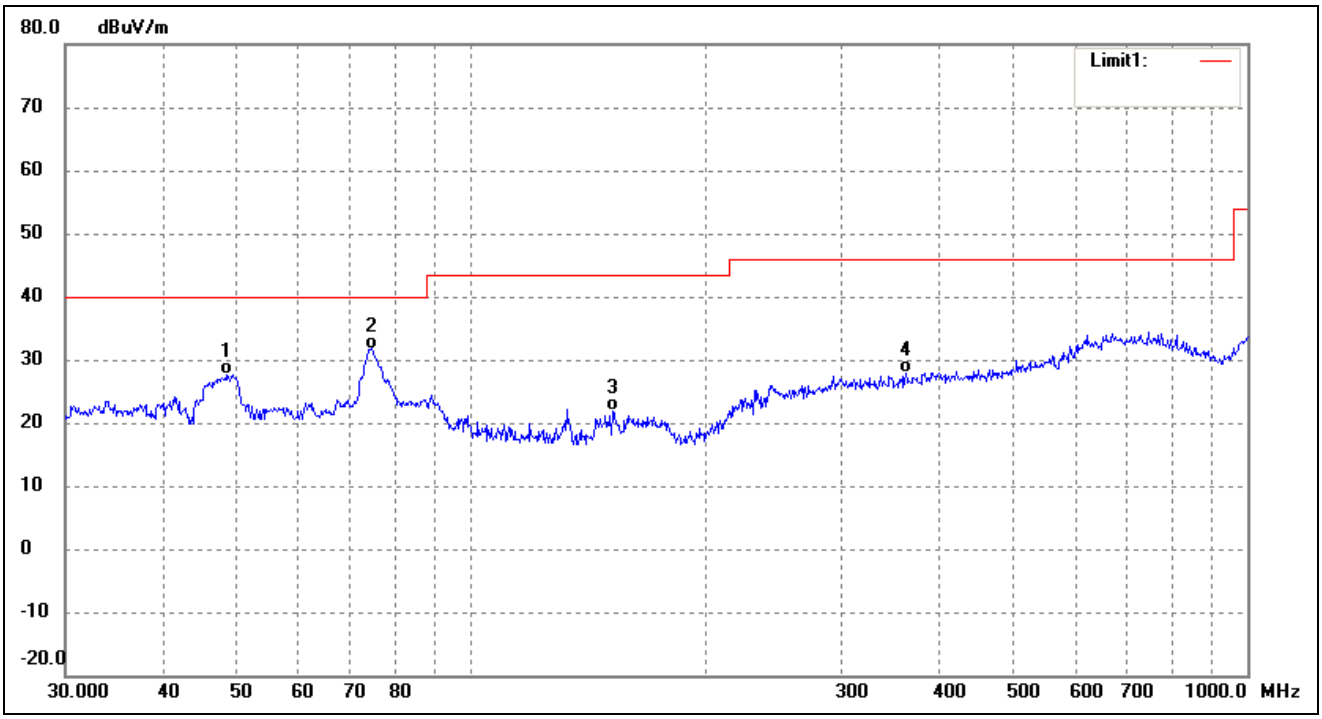
EUT: *4G Smart Phone*
Tested Model: *C145*
Operating Condition: *TM3*
Comment: *AC 120V/60Hz; Adapter DC 5V*

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	49.0144	24.39	4.97	29.36	40.00	-10.64	164	100	QP
2	74.1350	26.45	2.39	28.84	40.00	-11.16	174	100	QP
3	242.5252	20.53	9.03	29.56	46.00	-16.44	121	100	QP
4	737.0714	15.99	18.84	34.83	46.00	-11.17	124	100	QP

Test Specification: *Vertical*

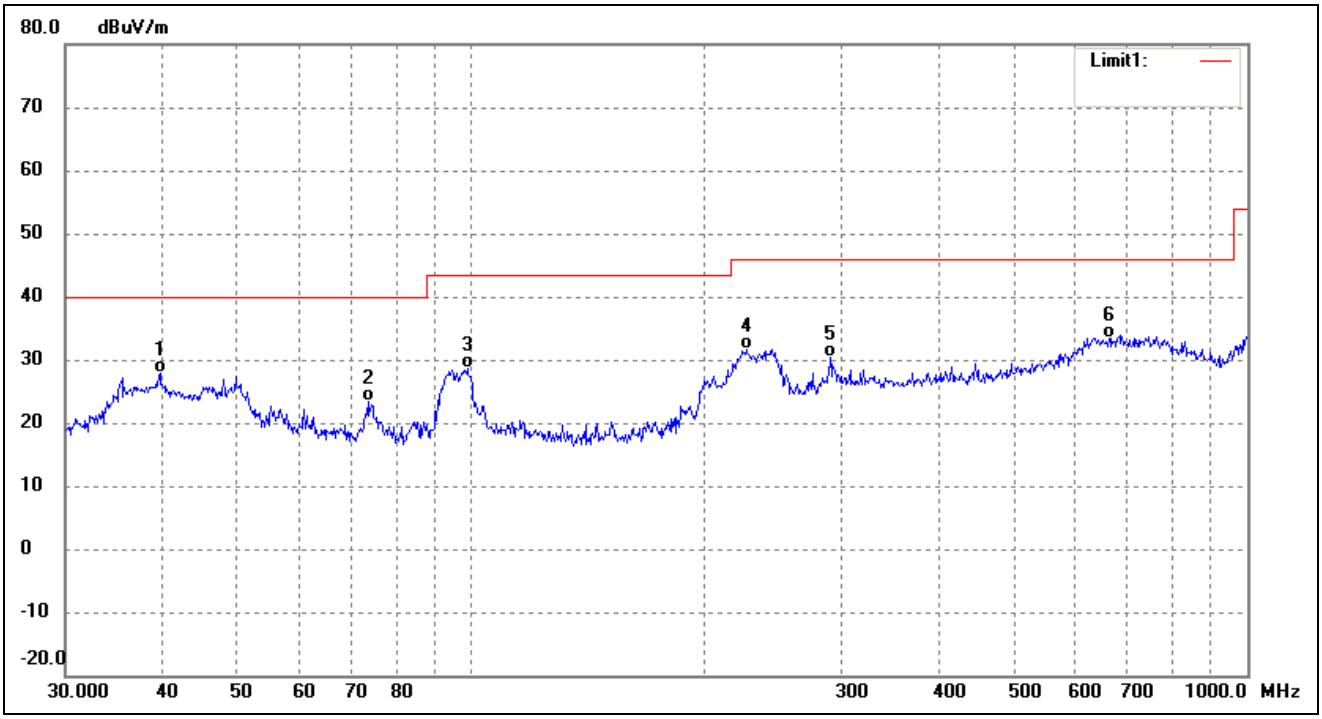


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	48.3318	22.58	4.96	27.54	40.00	-12.46	69	100	QP
2	74.3954	29.39	2.36	31.75	40.00	-8.25	113	100	QP
3	152.1297	19.09	2.67	21.76	43.50	-21.74	102	100	QP
4	362.9845	16.06	11.89	27.95	46.00	-18.05	129	100	QP

Plot of Radiated Emissions Test Data

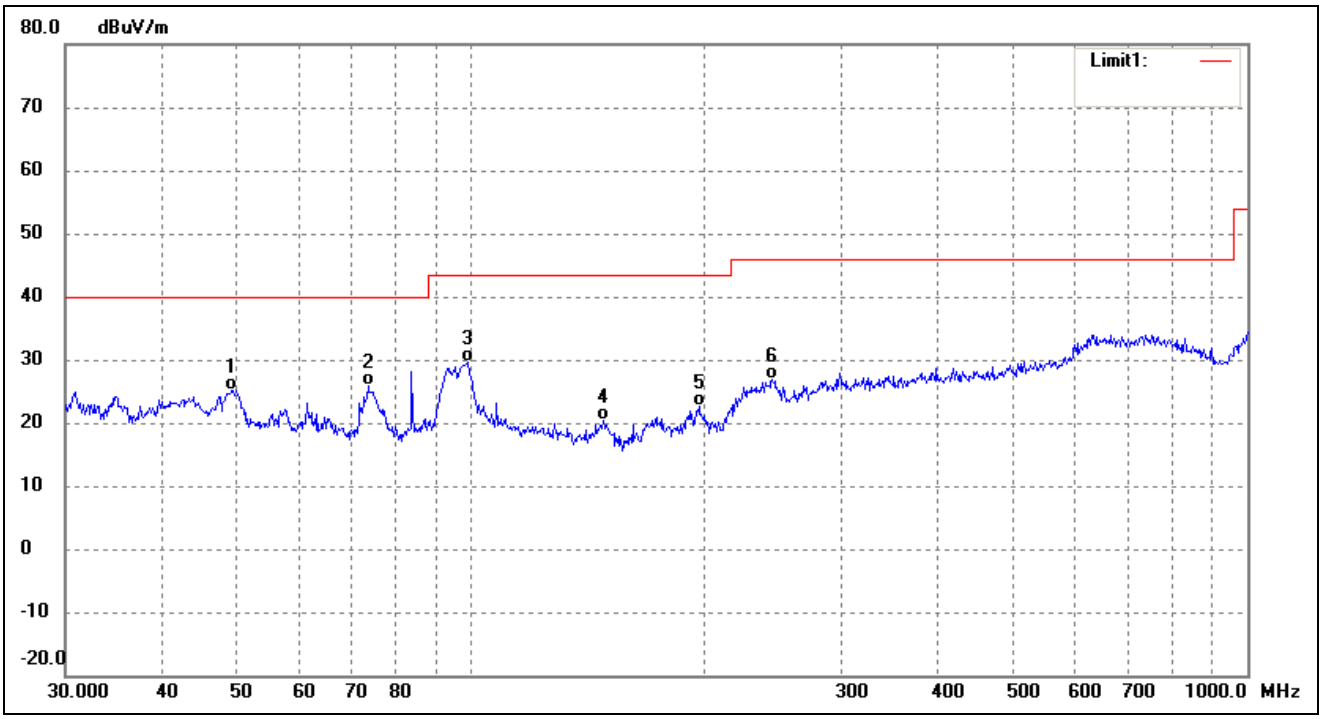
EUT: *4G Smart Phone*
Tested Model: *C145*
Operating Condition: *TM4*
Comment: *DC 3.8V*

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	39.7147	23.08	4.89	27.97	40.00	-12.03	84	100	QP
2	73.6170	20.83	2.45	23.28	40.00	-16.72	201	100	QP
3	98.8326	23.84	4.76	28.60	43.50	-14.90	52	100	QP
4	226.0994	23.58	8.05	31.63	46.00	-14.37	197	100	QP
5	290.0172	18.69	11.57	30.26	46.00	-15.74	102	100	QP
6	663.4729	15.69	17.76	33.45	46.00	-12.55	250	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	49.1866	20.24	4.97	25.21	40.00	-14.79	197	100	QP
2	73.6170	23.47	2.45	25.92	40.00	-14.08	102	100	QP
3	99.1797	24.71	4.81	29.52	43.50	-13.98	86	100	QP
4	147.9214	17.42	2.84	20.26	43.50	-23.24	297	100	QP
5	196.5098	19.34	3.20	22.54	43.50	-20.96	142	100	QP
6	244.2321	17.72	9.09	26.81	46.00	-19.19	190	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 *******