FCC Part 15B
Measurement and Test Report

For

PCSmart S.A.

Carrera 116 no. 15 - 25 Bogota - Colombia

FCC ID: 2ABFV-CPLAY

Test Rule(s):	FCC Part 15 Subpart B
Product Description:	Entertainment Tablet
Tested Model:	Touch Simply Connect Play
Report No.:	STR14068119I-4
Tested Date:	2014-05-07 to 2014-06-19
Issued Date:	2014-06-19
Tested By:	Lebron Wang / Engineer
Reviewed By:	Lahm Peng / EMC Manager
Approved & Authorized By:	Jandy so / PSQ Manager

Prepared By:

Shenzhen SEM.Test Technology Co., Ltd.
1/F, Building A, Hongwei Industrial Park, Liuxian 2nd Road,
Bao'an District, Shenzhen, P.R.C.（518101）
Tel.: +86-755-33663308 Fax.: +86-755-33663309 Website: www.semtest.com.cn

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.

TABLE OF CONTENTS

1. GENERAL INFORMATION 3
1.1 PRODUCT DESCRIPTION FOR EQUIPMENT UNDER TEST (EUT) 3
1.2 TEST STANDARDS 4
1.3 TEST METHODOLOGY 4
1.4 TEST FACILITY 4
1.5 EUT SETUP AND OPERATION MODE 5
2. SUMMARY OF TEST RESULTS 6
3. CONDUCTED EMISSIONS 7
3.1 MEASUREMENT UNCERTAINTY 7
3.2 TEST EQUIPMENT LIST AND DETAILS 7
3.3 TEST PROCEDURE 7
3.4 BASIC TEST SETUP BLOCK DIAGRAM 7
3.5 ENVIRONMENTAL CONDITIONS 8
3.6 SUMMARY OF TEST RESULTS/PLOTS 8
3.7 CONDUCTED EMISSIONS TEST DATA 8
4. RADIATED EMISSIONS 15
4.1 MEASUREMENT UNCERTAINTY 15
4.2 TEST EQUIPMENT LIST AND DETAILS 15
4.3 TEST PROCEDURE 15
4.4 TEST RECEIVER SETUP 16
4.5 CORRECTED AMPLITUDE & MARGIN CALCULATION 16
4.6 ENVIRONMENTAL CONDITIONS 16
4.7 SUMMARY OF TEST RESULTS/PLOTS 16

1. GENERAL INFORMATION

1.1 Product Description for Equipment Under Test (EUT)

Client Information

Applicant:	PCSmart S.A.
Address of applicant:	Carrera 116 no. 25 - 25 Bogota - Colombia
Manufacturer:	Shenzhen Wisky Technology Co., LTD
Address of manufacturer:	5th Floor, W2-A Building, Hi-Tech Park South 1st Road, Nanshan District, Shenzhen

General Description of EUT	
Product Name:	Entertainment Tablet
Trade Name:	PCSMART
Model No.:	Touch Simply Connect Play
Adding Model(s):	/
Note: The test data is gathered from a production sample, provided by the manufacturer.	

Technical Characteristics of EUT	
Rated Voltage:	DC 5V
Rated Current:	2A
Rated Power:	/
Power Adapter Model:	FY0502000/SAPA05010US
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 PCSmart S.A. 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 C63.4-2003, 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	Connect to Adapter Model: FY050200
TM2	Charging & Playing	Connect to Adapter Model: SAPA05010US
TM3	Downloading	Connect to PC

EUT Cable List and Details

Cable Description	Length (M)	Shielded/Unshielded	With Core/Without Core
/	/	/	/

Auxiliary Equipment List and Details

Description	Manufacturer	Model	Serial Number
Notebook Computer	Lenovo	20007	EB12648265

Special Cable List and Details

Cable Description	Length (M)	Shielded/Unshielded	With Core/Without Core
USB Cable	0.8	Unshielded	Without Core

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 Equipment List and Details

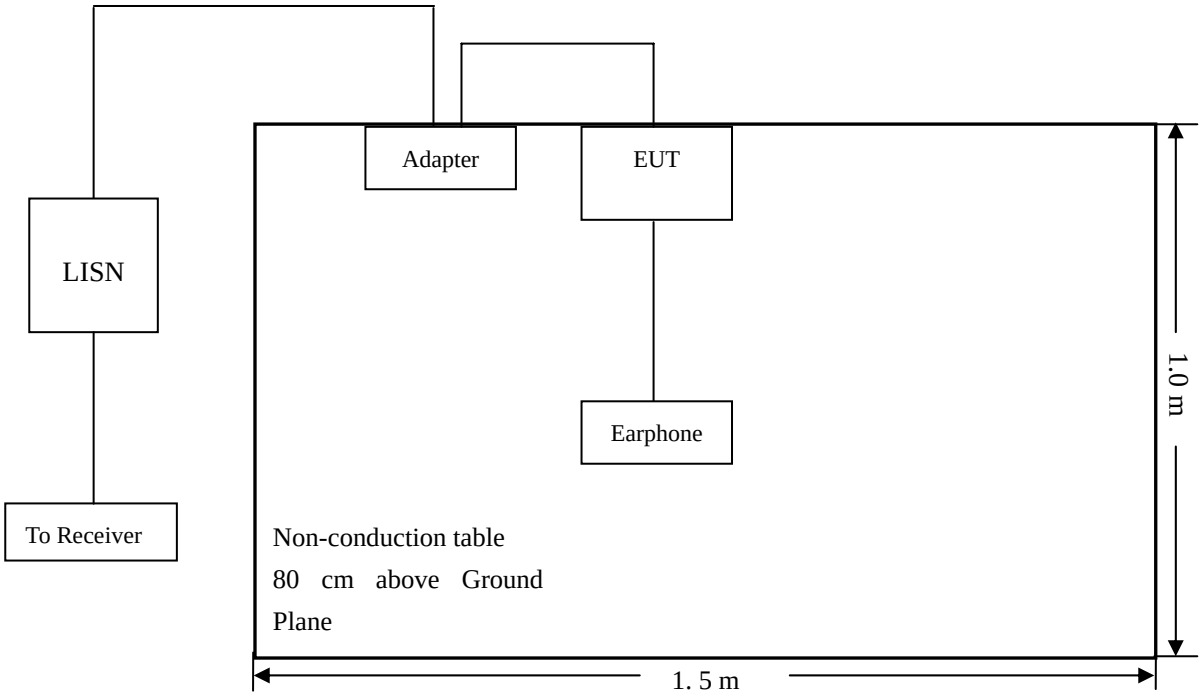
Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
EMI Test Receiver	Rohde & Schwarz	ESPI	101611	2014-05-28	2015-05-27
L.I.S.N	Schwarz beck	NSLK8126	8126-224	2014-05-28	2015-05-27
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100911	2014-05-28	2015-05-27

3.3 Test Procedure

Test is conducting under the description of ANSI C63.4-2003, 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.

Note: Base on the calibrated result, for the impedance characteristic and insertion loss, the effect shall be ignored from the placed multiple outlet power strip between the device and LISN.

3.4 Basic Test Setup Block Diagram



3.5 Environmental Conditions

Temperature:	23 °C
Relative Humidity:	52%
ATM Pressure:	1011 mbar

3.6 Summary of Test Results/Plots

According to the data in section 3.7, the EUT complied with the FCC Part 15.107(a) Conducted margin for a Class B device, with the *worst* margin reading of:

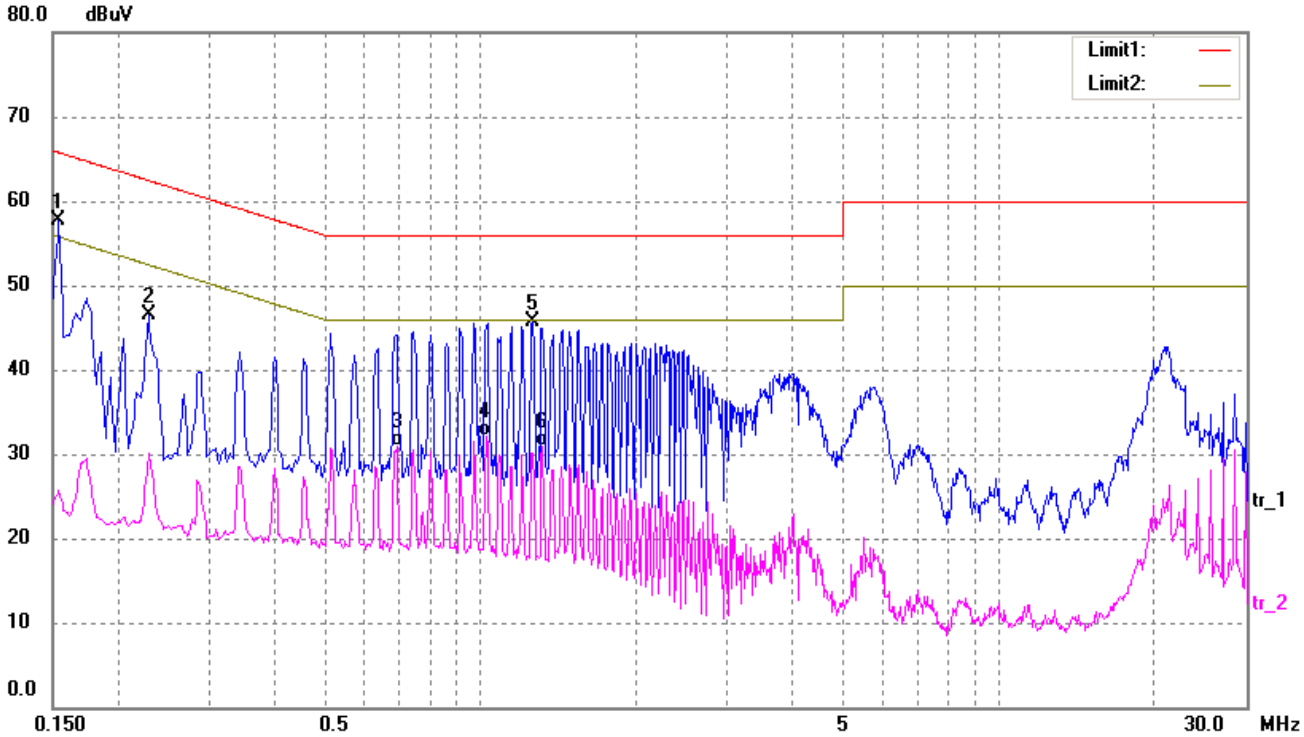
-2.34 dB at **0.1740 MHz** in the **Line**, **TM2** Mode**, Peak** detector, 0.15-30MHz

3.7 Conducted Emissions Test Data

Plot of Conducted Emissions Test Data

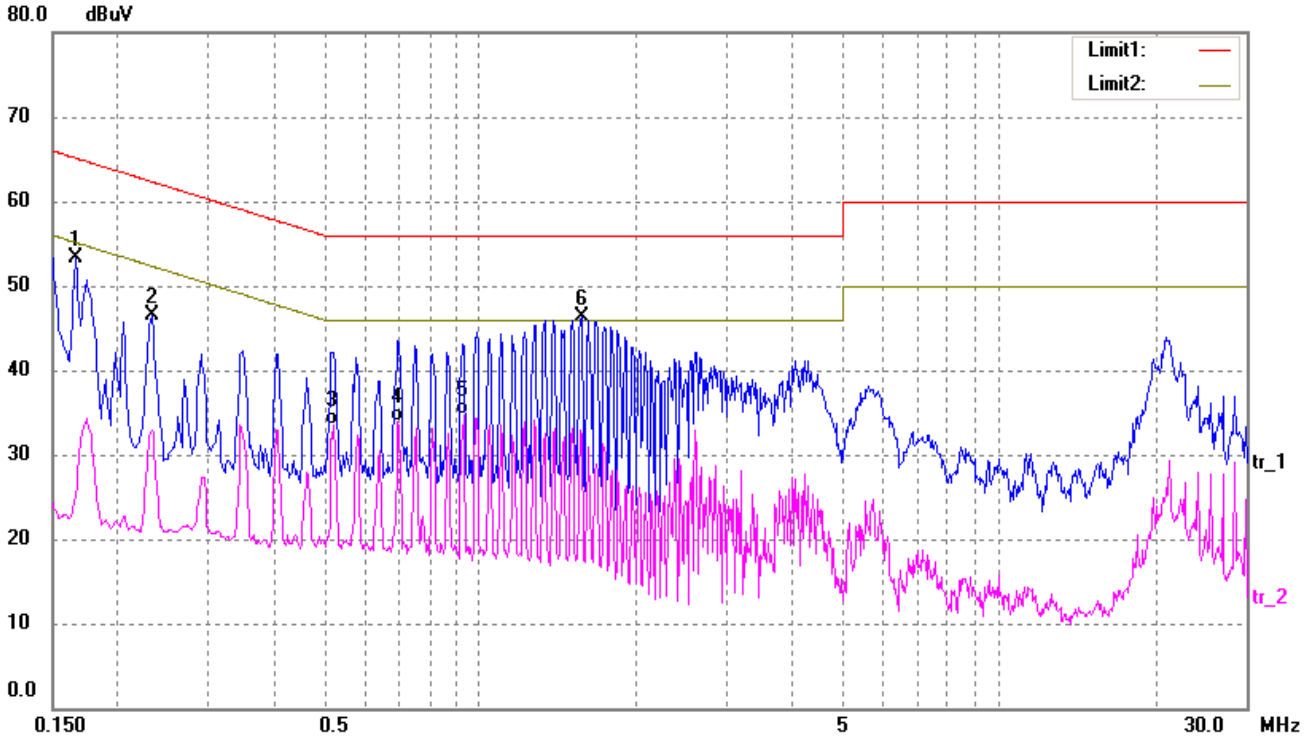
EUT: *Entertainment Tablet*
Tested Model: *Touch Simply Connect Play*
Operating Condiation: *AC 120V/60Hz; Adapter DC 5V/2A*
Comment: *TM1（Adapter Model: FY050200）*

Test Specification: *Neutral*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Detector
	(MHz)	(dBuV)	(dB/m)	(dBuV)	(dBuV)	(dB)	
1	0.1540	48.29	9.50	57.79	65.78	-7.99	peak
2	0.2300	36.98	9.50	46.48	62.45	-15.97	peak
3	0.6900	21.13	9.69	30.82	46.00	-15.18	AVG
4	1.0300	22.08	10.00	32.08	46.00	-13.92	AVG
5	1.2660	35.68	10.00	45.68	56.00	-10.32	peak
6	1.3180	20.96	10.00	30.96	46.00	-15.04	AVG

Test Specification: *Line*

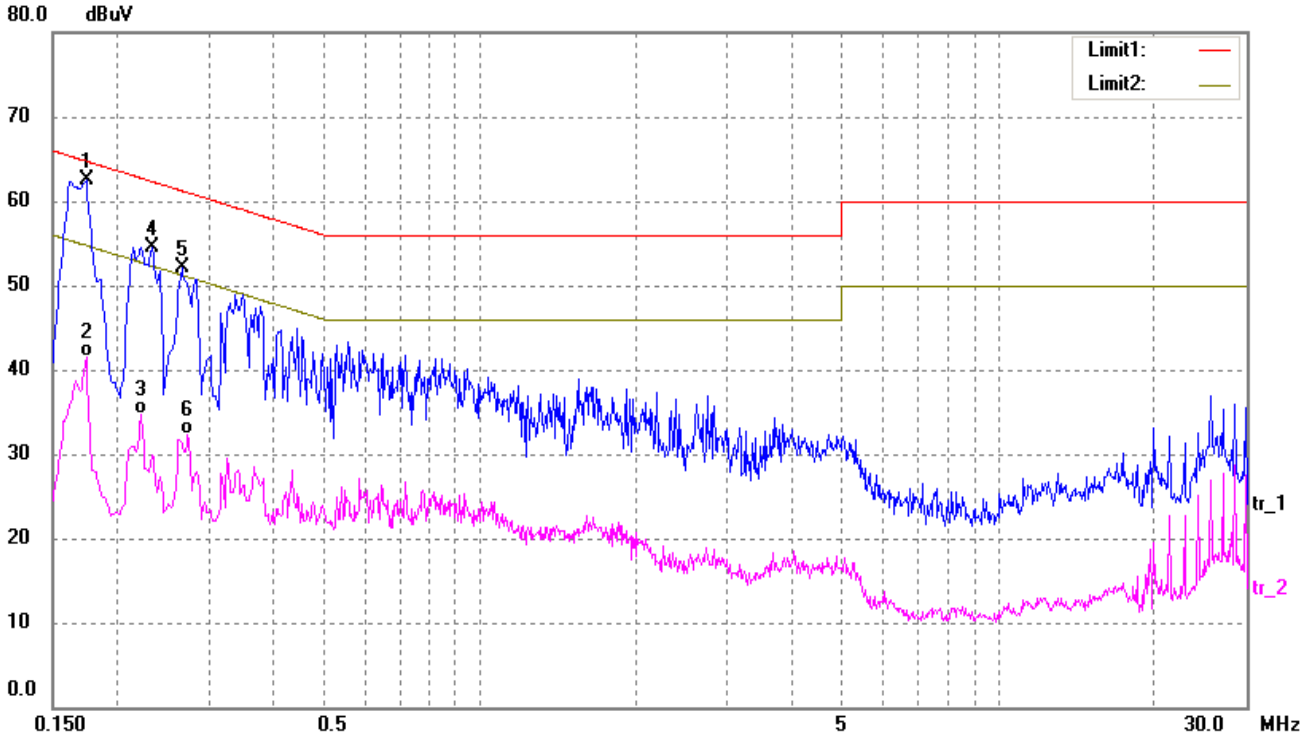


No.	Frequency	Reading	Correct	Result	Limit	Margin	Detector
	(MHz)	(dBuV)	(dB/m)	(dBuV)	(dBuV)	(dB)	
1	0.1660	43.71	9.50	53.21	65.16	-11.95	peak
2	0.2340	36.98	9.50	46.48	62.31	-15.83	peak
3	0.5220	24.03	9.52	33.55	46.00	-12.45	AVG
4	0.6940	24.17	9.69	33.86	46.00	-12.14	AVG
5	0.9300	24.87	9.93	34.80	46.00	-11.20	AVG
6	1.5700	36.36	10.00	46.36	56.00	-9.64	peak

Plot of Conducted Emissions Test Data

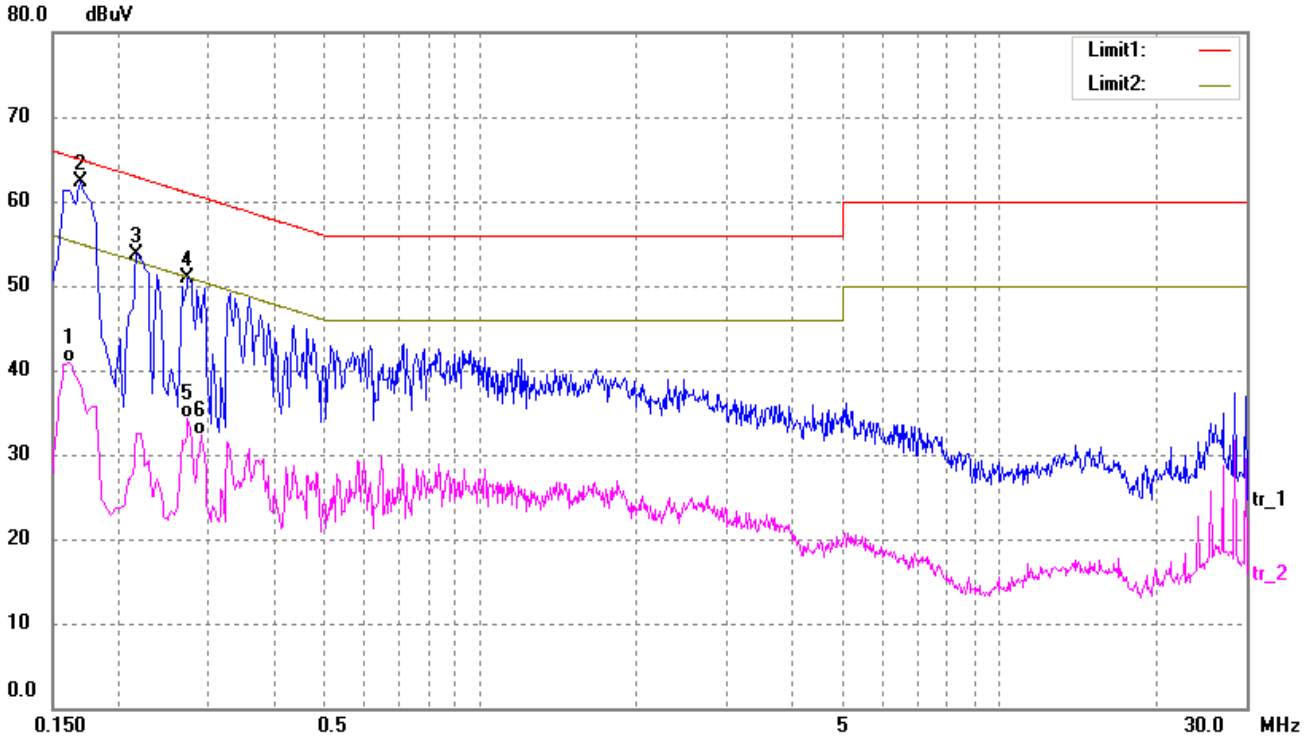
EUT: *Entertainment Tablet*
Tested Model: *Touch Simply Connect Play*
Operating Condiation: *AC 120V/60Hz; Adapter DC 5V/2A*
Comment: *TM2（Adapter Model: SAPA05010US）*

Test Specification: *Neutral*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Detector
	(MHz)	(dBuV)	(dB/m)	(dBuV)	(dBuV)	(dB)	
1	0.1740	52.93	9.50	62.43	64.77	-2.34	peak
2	0.1740	32.09	9.50	41.59	54.77	-13.18	AVG
3	0.2220	25.11	9.50	34.61	52.74	-18.13	AVG
4	0.2340	45.04	9.50	54.54	62.31	-7.77	peak
5	0.2660	42.64	9.50	52.14	61.24	-9.10	peak
6	0.2740	22.78	9.50	32.28	51.00	-18.72	AVG

Test Specification: *Line*

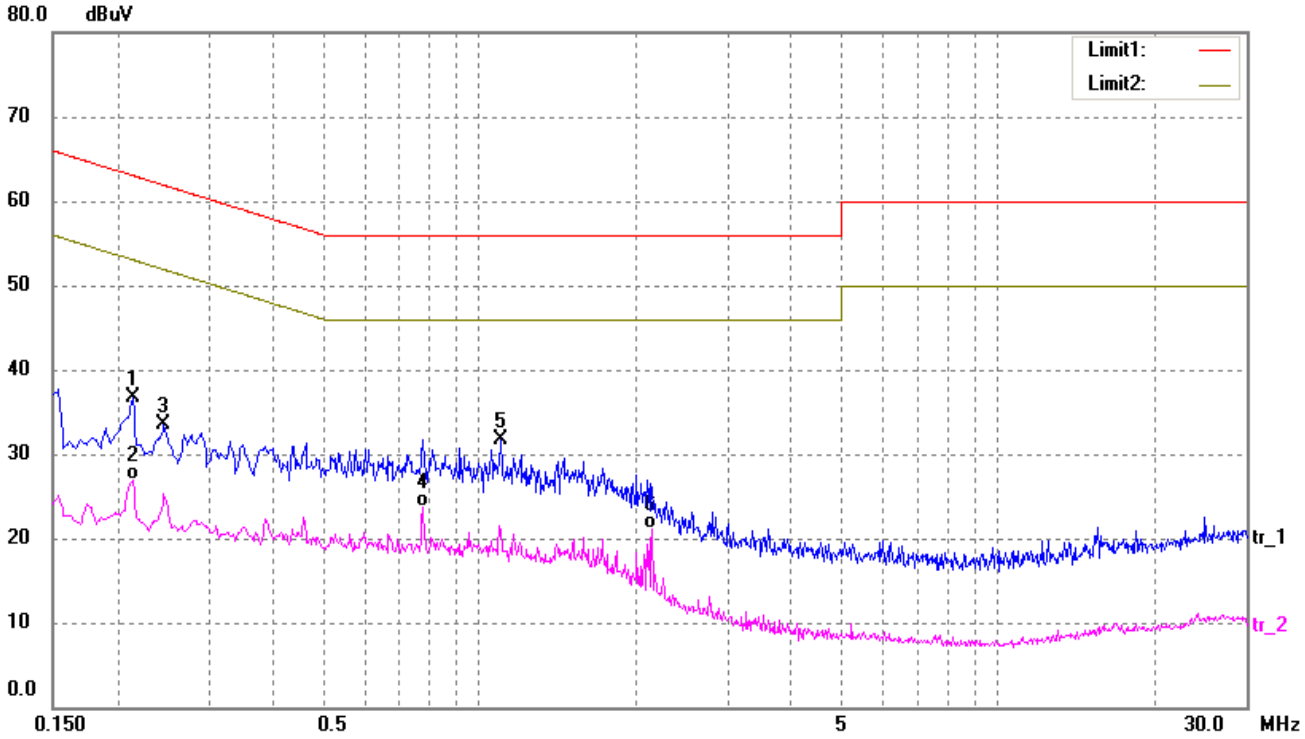


No.	Frequency	Reading	Correct	Result	Limit	Margin	Detector
	(MHz)	(dBuV)	(dB/m)	(dBuV)	(dBuV)	(dB)	
1	0.1620	31.46	9.50	40.96	55.36	-14.40	AVG
2	0.1700	52.73	9.50	62.23	64.96	-2.73	peak
3	0.2180	44.20	9.50	53.70	62.89	-9.19	peak
4	0.2740	41.48	9.50	50.98	61.00	-10.02	peak
5	0.2740	24.74	9.50	34.24	51.00	-16.76	AVG
6	0.2900	22.88	9.50	32.38	50.52	-18.14	AVG

Plot of Conducted Emissions Test Data

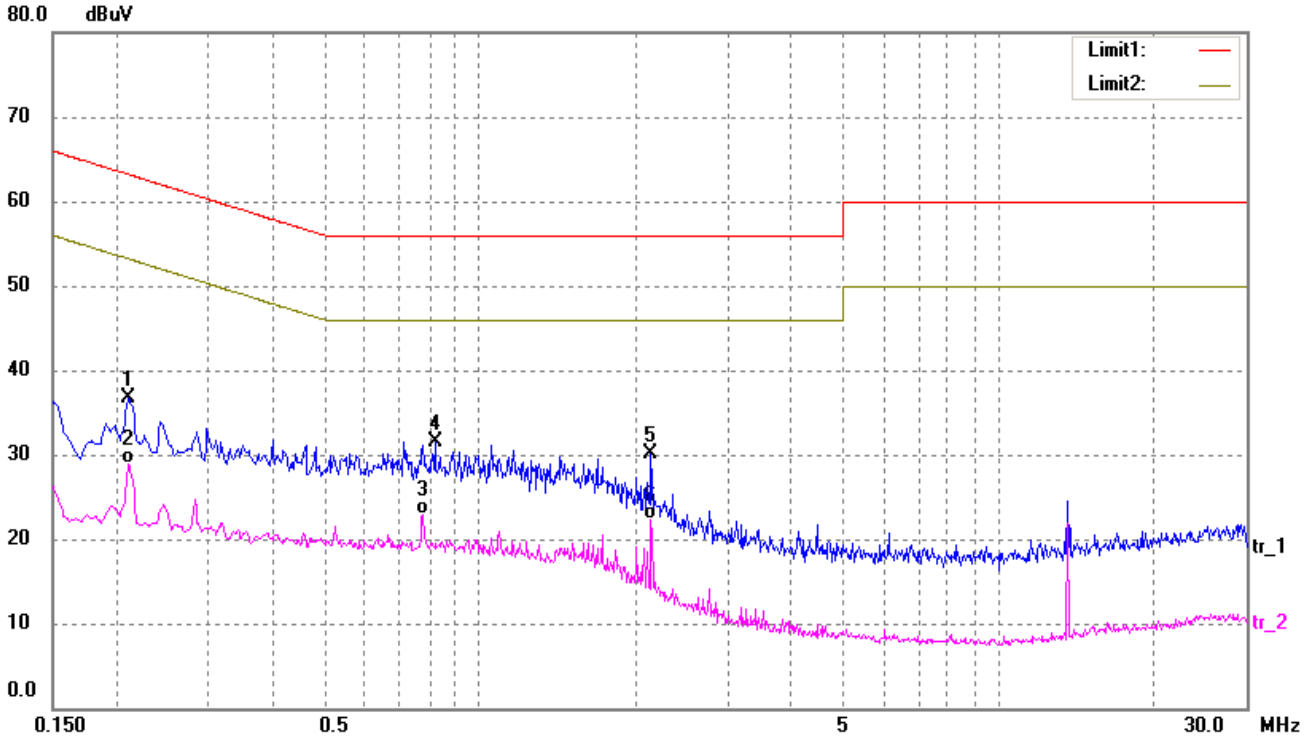
EUT: *Entertainment Tablet*
Tested Model: *Touch Simply Connect Play*
Operating Condiation: *AC 120V/60Hz; Adapter DC 5V/2A*
Comment: *TM3*

Test Specification: *Neutral*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Detector
	(MHz)	(dBuV)	(dB/m)	(dBuV)	(dBuV)	(dB)	
1	0.2140	27.28	9.50	36.78	63.05	-26.27	peak
2	0.2140	17.34	9.50	26.84	53.05	-26.21	AVG
3	0.2460	23.93	9.50	33.43	61.89	-28.46	peak
4	0.7780	13.96	9.78	23.74	46.00	-22.26	AVG
5	1.0940	21.70	10.00	31.70	56.00	-24.30	peak
6	2.1460	11.13	10.00	21.13	46.00	-24.87	AVG

Test Specification: *Line*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Detector
	(MHz)	(dBuV)	(dB/m)	(dBuV)	(dBuV)	(dB)	
1	0.2100	27.21	9.50	36.71	63.21	-26.50	peak
2	0.2100	19.48	9.50	28.98	53.21	-24.23	AVG
3	0.7780	13.08	9.78	22.86	46.00	-23.14	AVG
4	0.8180	21.73	9.82	31.55	56.00	-24.45	peak
5	2.1420	20.07	10.00	30.07	56.00	-25.93	peak
6	2.1420	12.40	10.00	22.40	46.00	-23.60	AVG

4. Radiated Emissions

4.1 Measurement Uncertainty

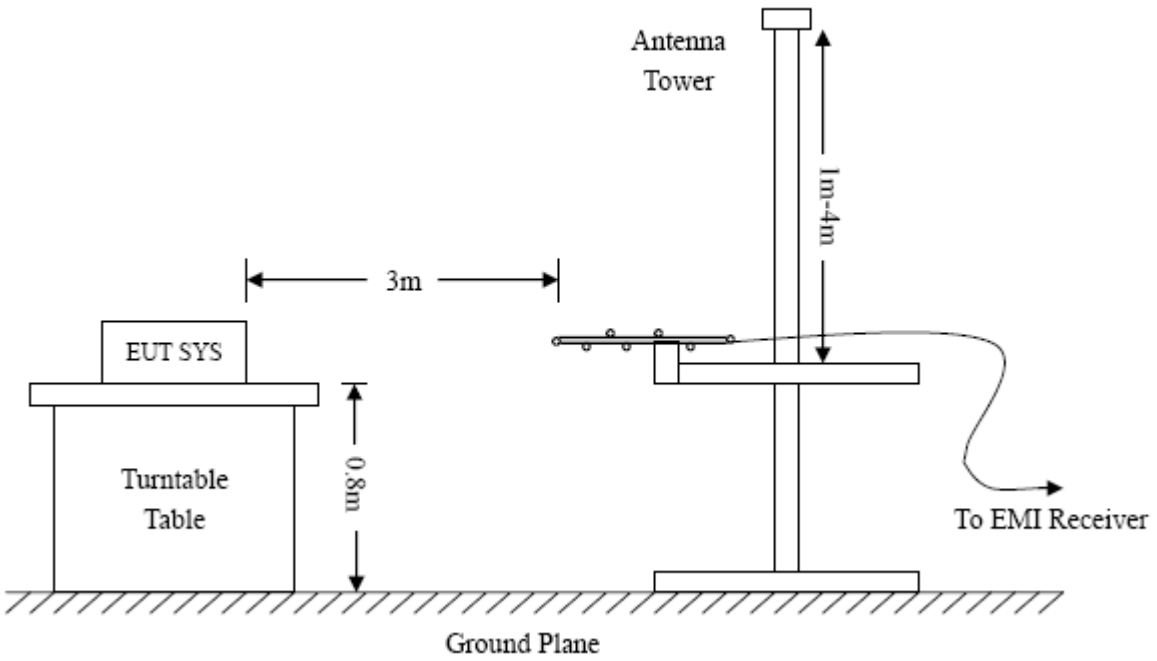
Base on NIS 81, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of any radiation emissions measurement is ± 5.10 dB.

4.2 Test Equipment List and Details

Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
Spectrum Analyzer	R&S	FSP	836079/035	2014-05-28	2015-05-27
EMI Test Receiver	R&S	ESVB	825471/005	2014-05-28	2015-05-27
Pre-amplifier	Agilent	8447F	3113A06717	2014-05-28	2015-05-27
Pre-amplifier	Compliance Direction	PAP-0118	24002	2014-05-28	2015-05-27
Trilog Broadband Antenna	SCHWARZBECK	VULB9163	9163-333	2014-05-24	2015-05-23
Horn Antenna	ETS	3117	00086197	2014-05-24	2015-05-23
Loop Antenna	SCHWARZECK	HFRA 5165	9365	2014-05-28	2015-05-27

4.3 Test Procedure

The setup of EUT is according with per ANSI C63.4-2003 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.



4.4 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

4.5 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

4.6 Environmental Conditions

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

4.7 Summary of Test Results/Plots

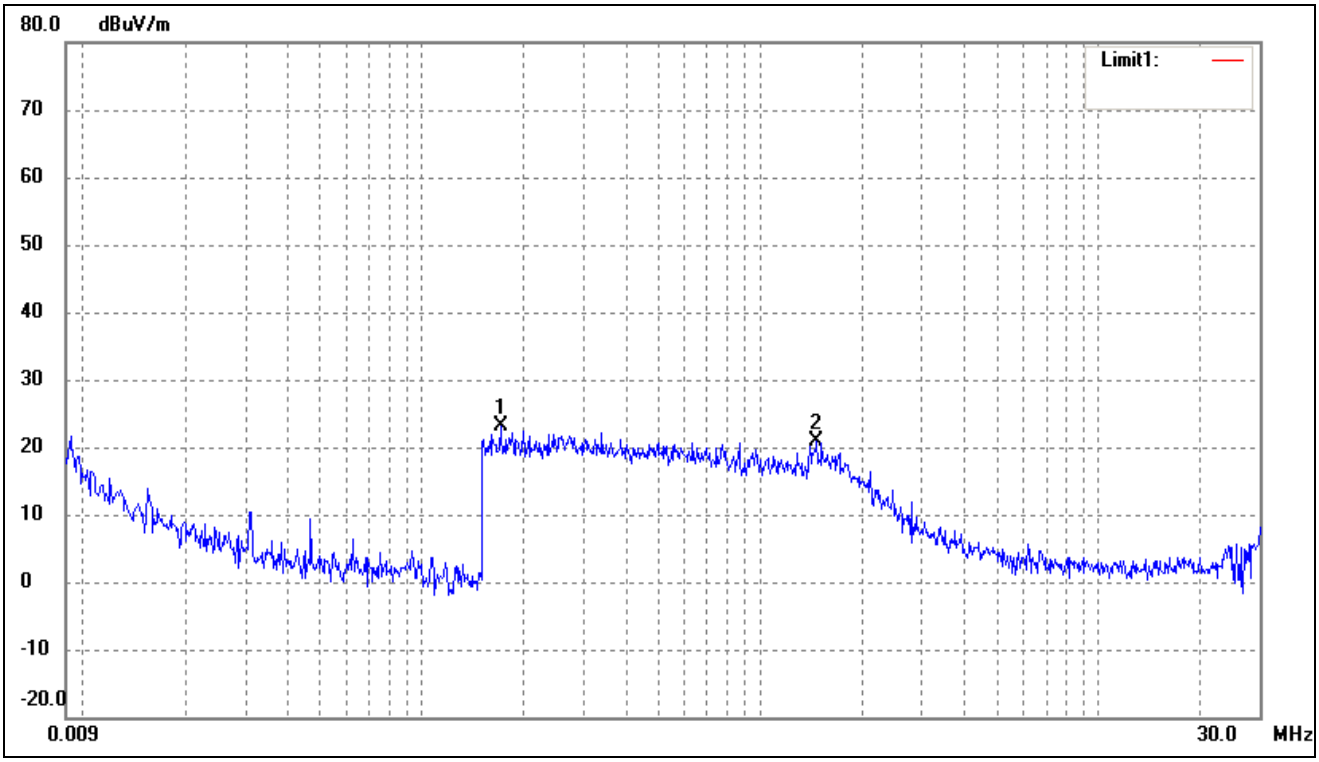
According to the data, the EUT complied with the FCC Part 15.109(a) rule, and had the worst margin of:

-1.99 dB at **47.9940 MHz** in the **Horizontal** polarization, **TM3** mode, **9 kHz** to **6 GHz**, **3Meters**

Plot of Radiated Emissions Test Data (9kHz~30MHz)

EUT: *Entertainment Tablet*
Tested Model: *Touch Simply Connect Play*
Operating Condition: *AC 120V/60Hz; Adapter DC 5V/2A*
Comment: *TM1（Adapter Model: FY050200）*

Test Specification:

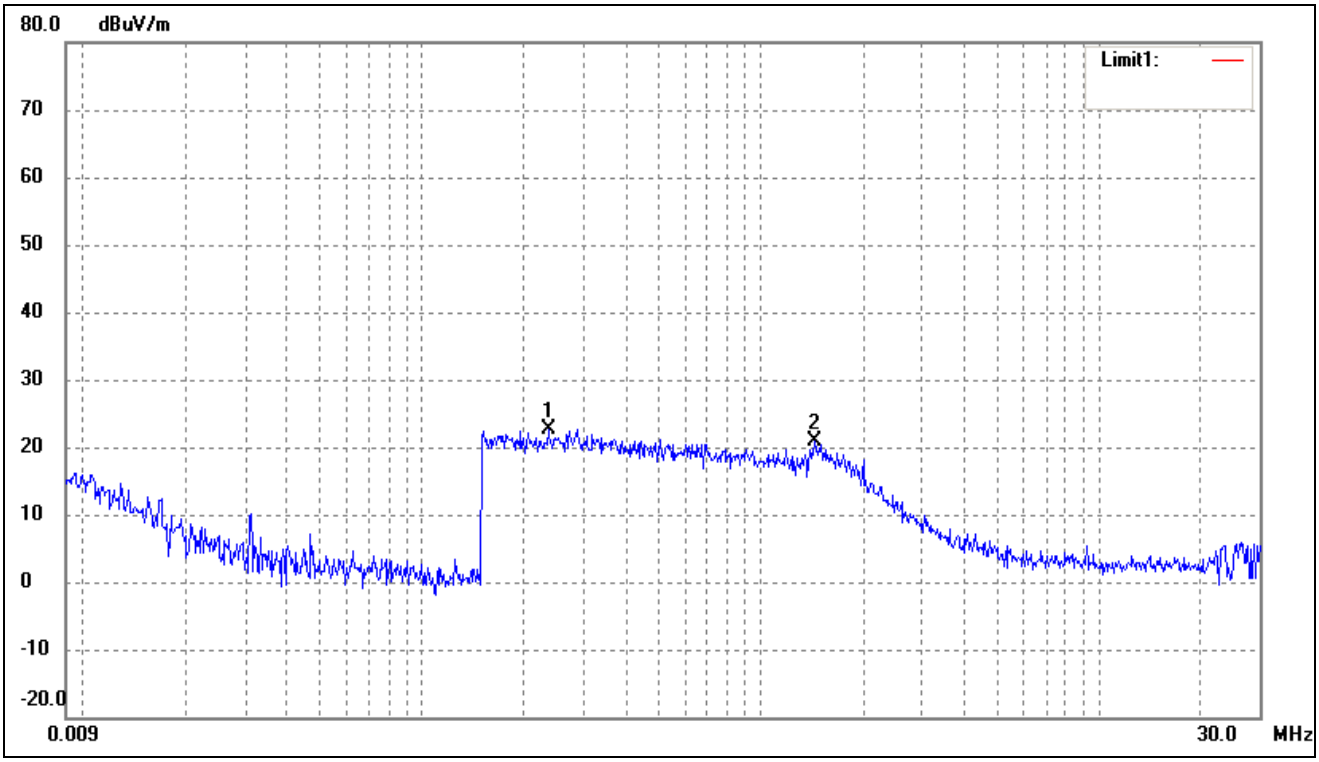


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	0.1711	3.52	19.63	23.15			0	100	peak
2	1.4638	7.61	13.19	20.80			0	100	peak

Plot of Radiated Emissions Test Data (9kHz~30MHz)

EUT: *Entertainment Tablet*
Tested Model: *Touch Simply Connect Play*
Operating Condition: *AC 120V/60Hz; Adapter DC 5V/2A*
Comment: *TM2（Adapter Model: SAPA05010US）*

Test Specification:

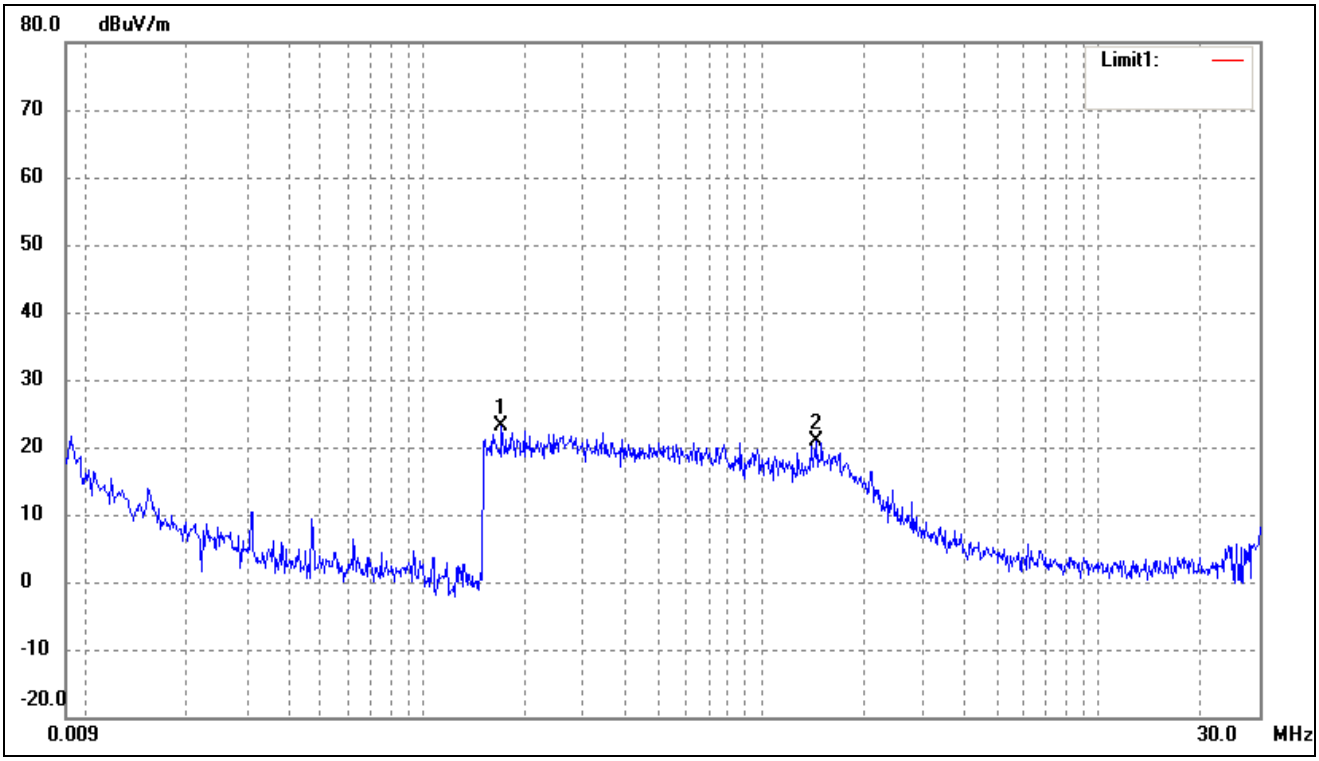


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	0.2353	3.15	19.56	22.71			254	100	peak
2	1.4483	7.58	13.19	20.77			116	100	peak

Plot of Radiated Emissions Test Data (9kHz~30MHz)

EUT: *Entertainment Tablet*
Tested Model: *3G052i*
Operating Condition: *AC 120V/60Hz; USB DC 5V*
Comment: *TM3*

Test Specification:

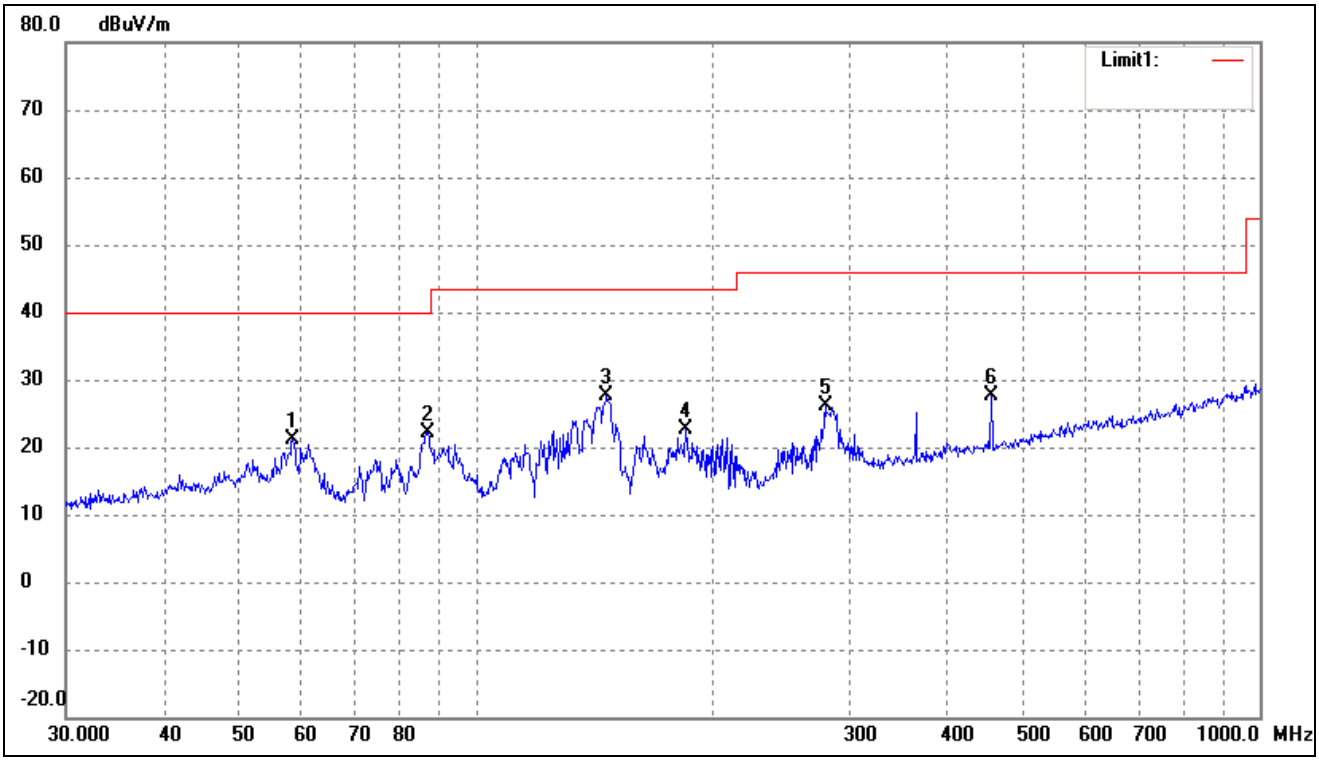


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	0.1711	3.52	19.63	23.15			254	100	peak
2	1.4639	7.61	13.19	20.80			116	100	peak

Plot of Radiated Emissions Test Data

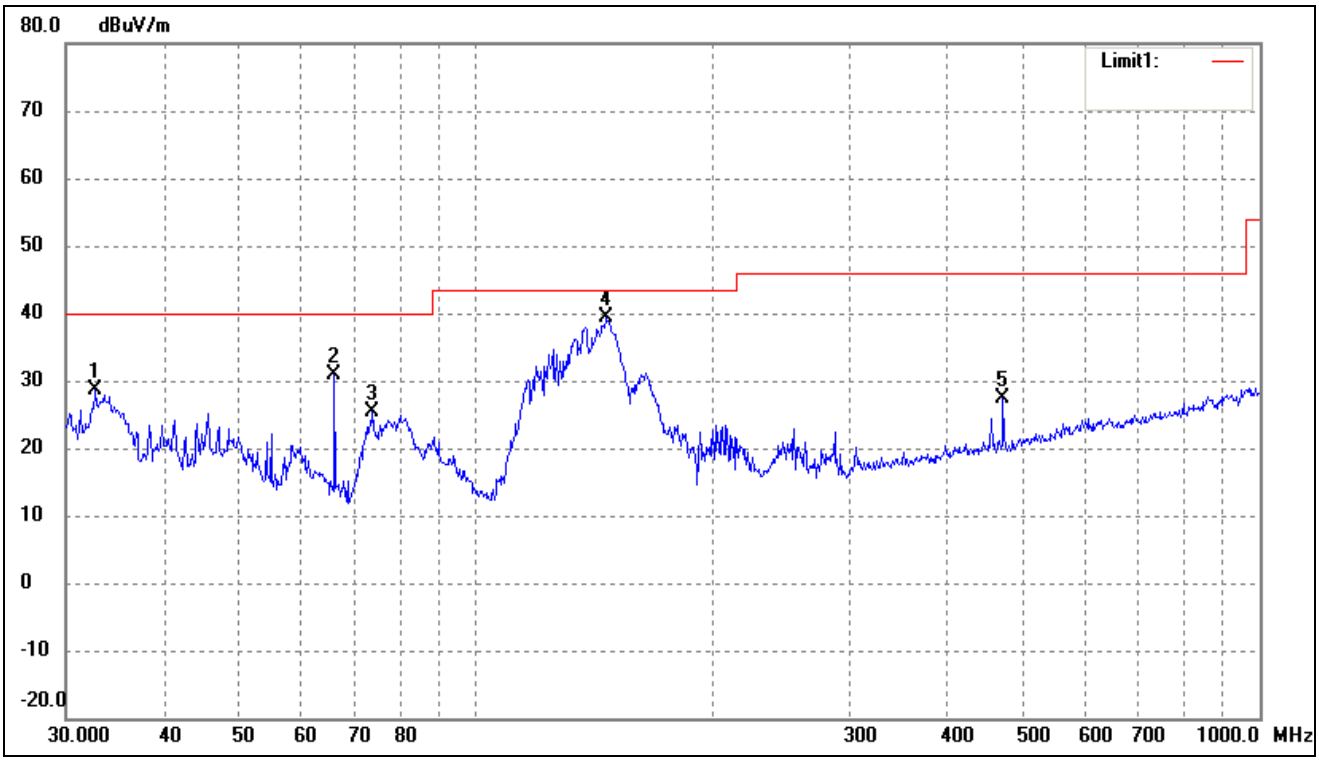
EUT: *Entertainment Tablet*
Tested Model: *Touch Simply Connect Play*
Operating Condition: *AC 120V/60Hz; Adapter DC 5V/2A*
Comment: *TM1（Adapter Model: FY050200）*

Test Specification: *Horizontal*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	58.4074	29.76	-8.65	21.11	40.00	-18.89	58	150	peak
2	86.8068	34.22	-12.08	22.14	40.00	-17.86	326	100	peak
3	146.8877	40.61	-13.02	27.59	43.50	-15.91	29	150	peak
4	185.1379	33.15	-10.58	22.57	43.50	-20.93	209	100	peak
5	279.0436	32.91	-6.72	26.19	46.00	-19.81	178	100	peak
6	454.3100	29.62	-2.11	27.51	46.00	-18.49	359	200	peak

Test Specification: *Vertical*

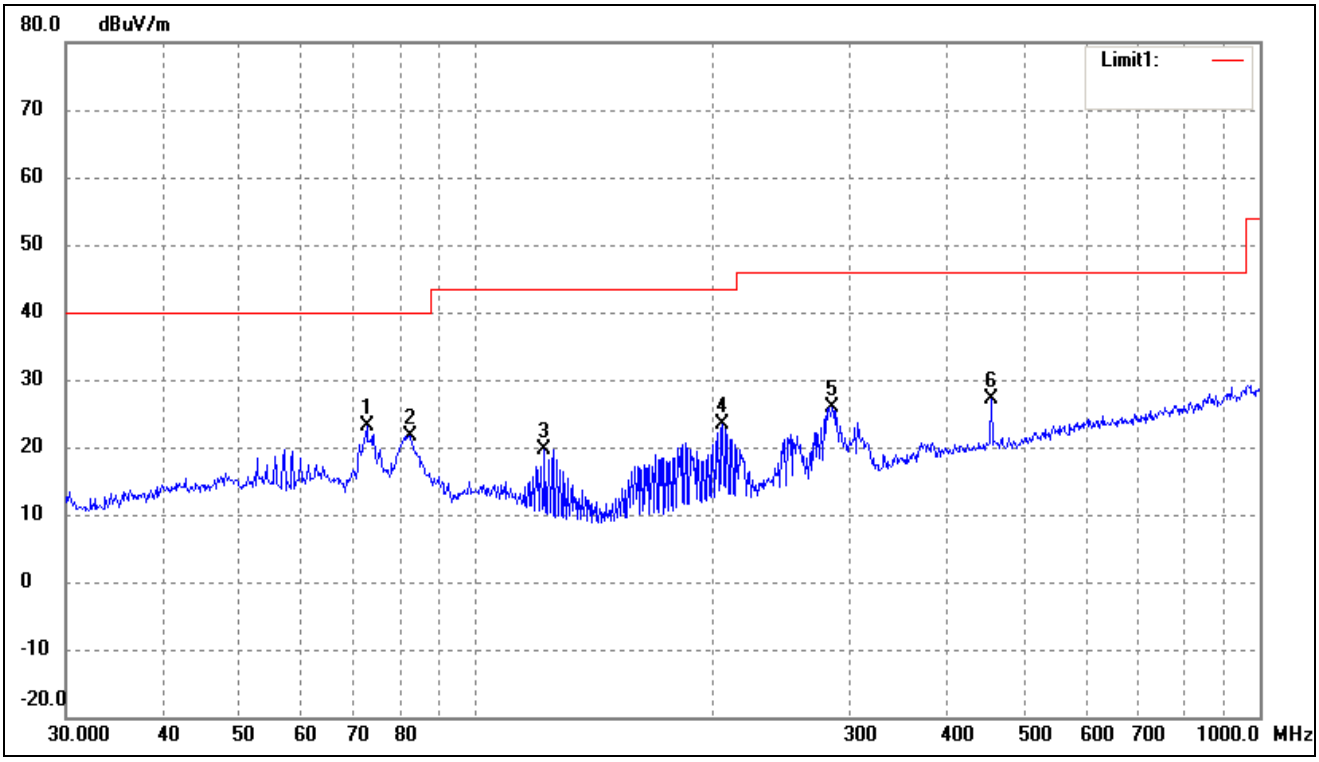


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	32.7486	39.08	-10.48	28.60	40.00	-11.40	51	100	peak
2	66.0342	40.97	-10.00	30.97	40.00	-9.03	308	100	peak
3	73.8756	38.34	-12.90	25.44	40.00	-14.56	120	100	peak
4	146.8877	52.30	-13.02	39.28	43.50	-4.22	359	100	peak
5	470.5232	29.06	-1.80	27.26	46.00	-18.74	195	100	peak

Plot of Radiated Emissions Test Data

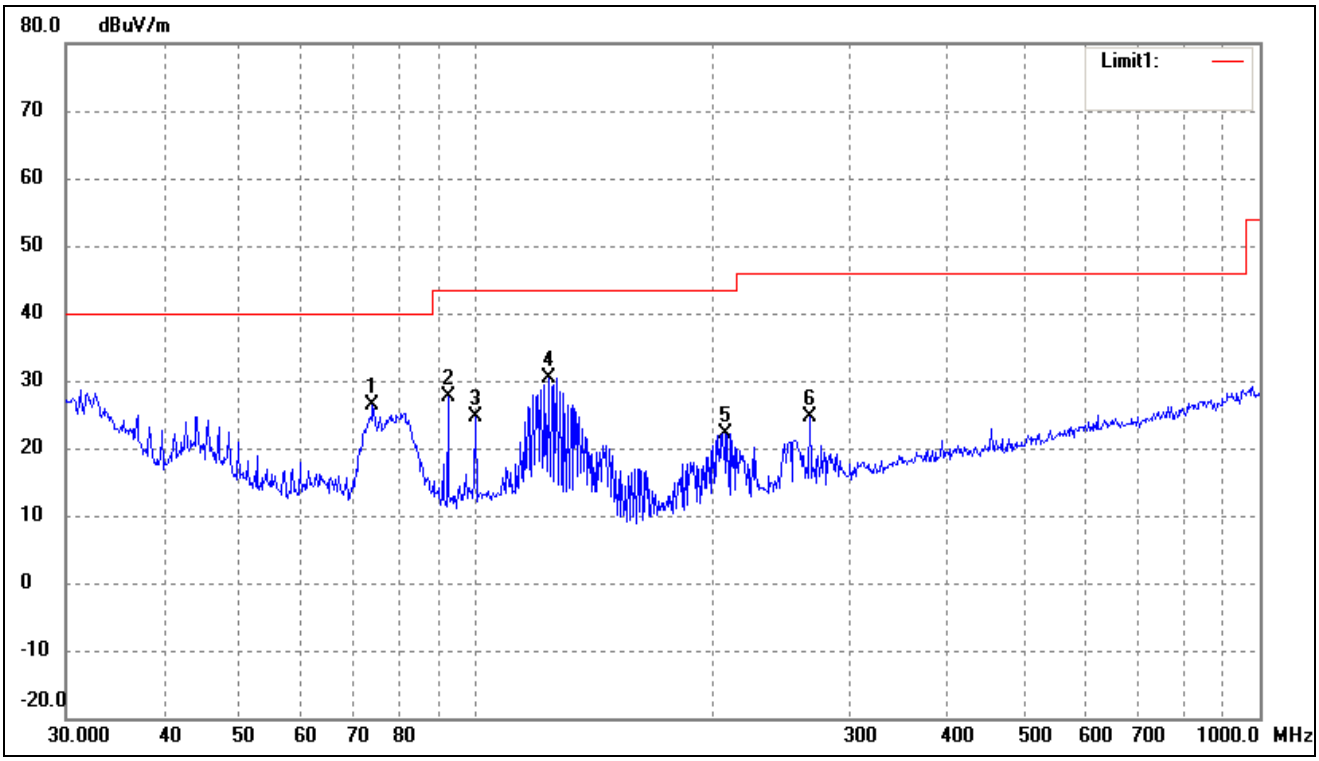
EUT: *Entertainment Tablet*
Tested Model: *Touch Simply Connect Play*
Operating Condition: *AC 120V/60Hz; Adapter DC 5V/2A*
Comment: *TM2（Adapter Model: SAPA05010US）*

Test Specification: *Horizontal*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	72.5917	35.63	-12.49	23.14	40.00	-16.86	158	150	peak
2	82.3589	34.62	-13.03	21.59	40.00	-18.41	226	100	peak
3	122.4040	31.34	-11.63	19.71	43.50	-23.79	129	150	peak
4	206.3976	32.37	-9.01	23.36	43.50	-20.14	109	100	peak
5	284.9767	32.39	-6.56	25.83	46.00	-20.17	178	100	peak
6	454.3100	29.34	-2.11	27.23	46.00	-18.77	259	200	peak

Test Specification: *Vertical*

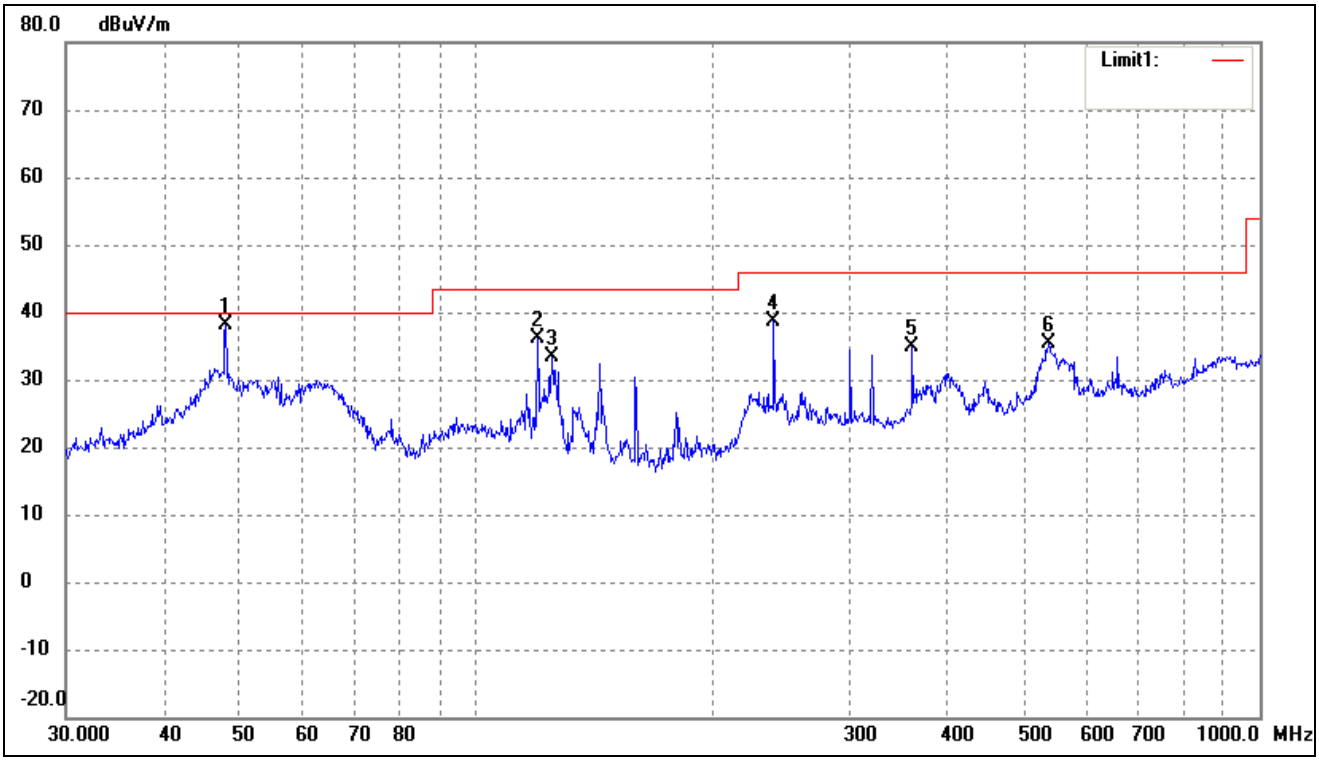


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	73.8756	39.21	-12.90	26.31	40.00	-13.69	51	100	peak
2	92.1388	38.34	-10.76	27.58	43.50	-15.92	308	100	peak
3	99.8777	34.19	-9.58	24.61	43.50	-18.89	120	100	peak
4	123.6985	42.19	-11.82	30.37	43.50	-13.13	359	100	peak
5	207.8501	31.25	-9.00	22.25	43.50	-21.25	195	100	peak
6	266.6089	31.57	-7.03	24.54	46.00	-21.46	359	100	peak

Plot of Radiated Emissions Test Data

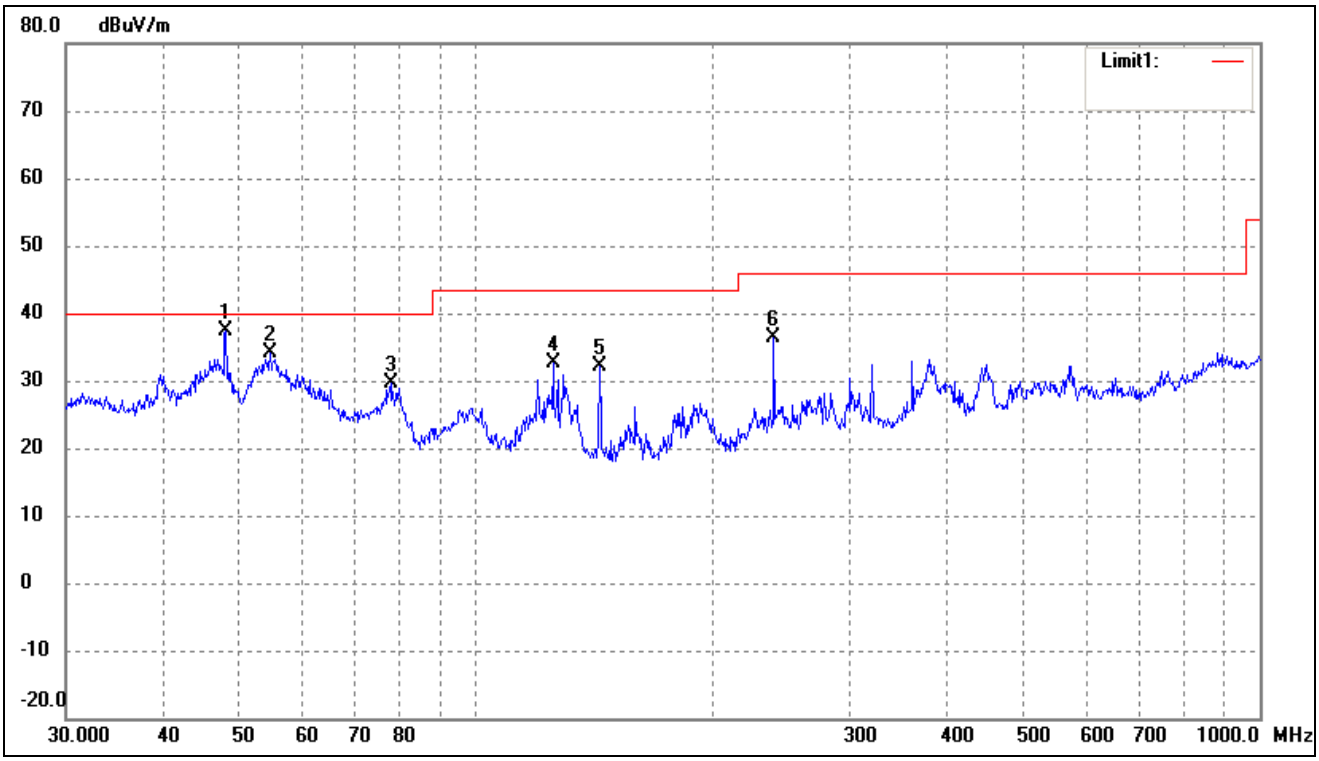
EUT: *Entertainment Tablet*
Tested Model: *Touch Simply Connect Play*
Operating Condition: *AC 120V/60Hz;DC 5V*
Comment: *TM3*

Test Specification: *Horizontal*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	47.9940	31.55	6.46	38.01	40.00	-1.99	58	150	peak
2	119.8556	32.14	4.04	36.18	43.50	-7.32	326	100	peak
3	125.0066	29.88	3.61	33.49	43.50	-10.01	29	120	peak
4	239.9874	32.38	6.33	38.71	46.00	-7.29	209	100	peak
5	360.4476	25.75	9.24	34.99	46.00	-11.01	125	100	peak
6	537.5891	24.09	11.31	35.40	46.00	-10.60	359	200	peak

Test Specification: *Vertical*



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	(•)	(cm)	
1	47.9939	30.63	6.86	37.49	40.00	-2.51	51	100	peak
2	54.6429	28.40	5.85	34.25	40.00	-5.75	308	100	peak
3	77.8654	28.37	1.26	29.63	40.00	-10.37	120	100	peak
4	125.4457	29.03	3.58	32.61	43.50	-10.89	359	100	peak
5	143.8295	29.73	2.45	32.18	43.50	-11.32	178	100	peak
6	239.9874	29.94	6.33	36.27	46.00	-9.73	359	100	peak

Remark:

Testing is carried out with frequency rang 9kHz to the 6GHz, The amplitude of spurious emissions from intentional radiators and emissions from unintentional radiators which are attenuated more than 20 dB below the permissible value need not be reported unless specifically required elsewhere in this part.

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