

FCC Part 15B

Measurement and Test Report

For

Jiuzhou Group Holdings Limited-Digital Dept.

2F, B5d Building, Yingzhan Industrial Zone, Longtian Community, Kengzi

Street, Longgang, Shenzhen, China

FCC ID: SJQM901

Test Standards: FCC Part 15 Subpart B

Product Description: tablet PC

Tested Model: M901

Report No.: STR13038419I-2

Tested Date: 2013-03-23 to 2013-03-27

Issued Date: 2013-04-10

Tested By: Jack Li / Engineer

Reviewed By: Lahm Peng / EMC Manager

Approved & Authorized By: Jandy so / PSQ Manager

Prepared By:

SEM.Test Compliance Service Co., Ltd

3/F, Jinbao Commerce Building, Xin'an Fanshen 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 SEM.Test Compliance Service 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.....	13
4.1 MEASUREMENT UNCERTAINTY	13
4.2 TEST EQUIPMENT LIST AND DETAILS	13
4.3 TEST PROCEDURE.....	13
4.4 TEST RECEIVER SETUP	14
4.5 CORRECTED AMPLITUDE & MARGIN CALCULATION.....	14
4.6 ENVIRONMENTAL CONDITIONS	14
4.7 SUMMARY OF TEST RESULTS/PLOTS	14

1. GENERAL INFORMATION

1.1 Product Description for Equipment Under Test (EUT)

Client Information

Applicant: Jiuzhou Group Holdings Limited-Digital Dept.
Address of applicant: 2F, B5d Building, Yingzhan Industrial Zone, Longtian Community, Kengzi Street, Longgang, Shenzhen, China
Manufacturer: Jiuzhou Group Holdings Limited-Digital Dept.
Address of manufacturer: 2F, B5d Building, Yingzhan Industrial Zone, Longtian Community, Kengzi Street, Longgang, Shenzhen, China

General Description of EUT	
Product Name:	tablet PC
Trade Name:	/
Model No.:	M901
Adding Model(s):	S101, S971, S972, D802, D101, Q8, D2-912, EGP008, EGS102
<i>Note: The test data is gathered from a production sample, provided by the manufacturer. The appearance of others models listed in the report is different from main-test model M901, but the circuit and the electronic construction do not change, declared by the manufacturer.</i>	

Technical Characteristics of EUT	
Rated Voltage:	DC 5V
Rated Current:	2A
Rated Power:	10W
Power Adapter Model:	JK050200-S04USA(Input:100~240Vac,50/60Hz 0.5A Output:5V,2000mA)
Highest Internal Frequency:	1.5GHz
Classification of ITE:	Portable Device
Support Interface:	Micro SD Disk port, USB port, DC power port, Audio port

1.2 Test Standards

The following report is prepared on behalf of the Jiuzhou Group Holdings Limited-Digital Dept. 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.: 994117**

SEM.Test Compliance Services 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 994117.

- **Industry Canada (IC) Registration No.: 7673A**

The 3m Semi-anechoic chamber of SEM.Test Compliance Services Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 7673A.

- **CNAS Registration No.: L4062**

Shenzhen SEM.Test Electronics Service 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 3/F, Jinbao Commerce Building, Xin'an Fanshen 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	Playing	Color Bar with 1kHz Audio
TM2	Downloading	Test Software: CT3
TM3	/	/

EUT Cable List and Details

Cable Description	Length (M)	Shielded/Unshielded	With Core/Without Core
DC Line	1.2	Unshielded	Without Core
USB Cable	0.8	Shielded	Without Core

Auxiliary Equipment List and Details

Description	Manufacturer	Model	Serial Number
PC	Samsung	R20	/
Earphone	/	T423	/

Special Cable List and Details

Cable Description	Length (M)	Shielded/Unshielded	With Core/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.

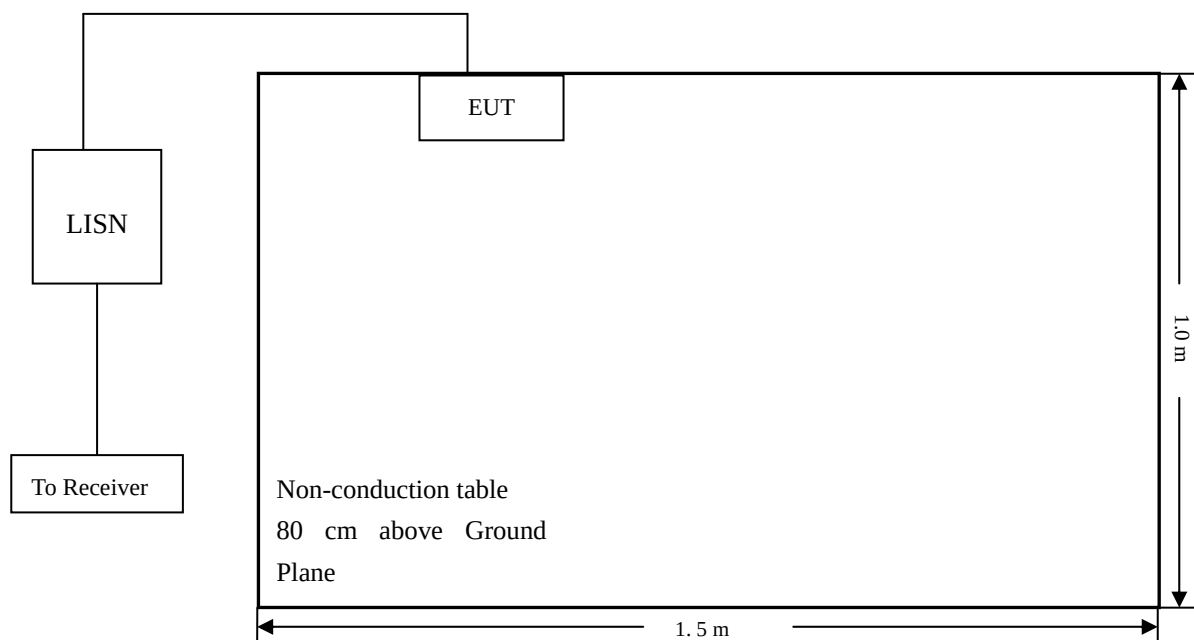
3.2 Test Equipment List and Details

Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
EMI Test Receiver	Rohde & Schwarz	ESPI	101611	2012-03-28	2013-03-27
L.I.S.N	Schwarz beck	NSLK8126	8126-224	2012-03-28	2013-03-27
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100911	2012-03-28	2013-03-27

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.

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:

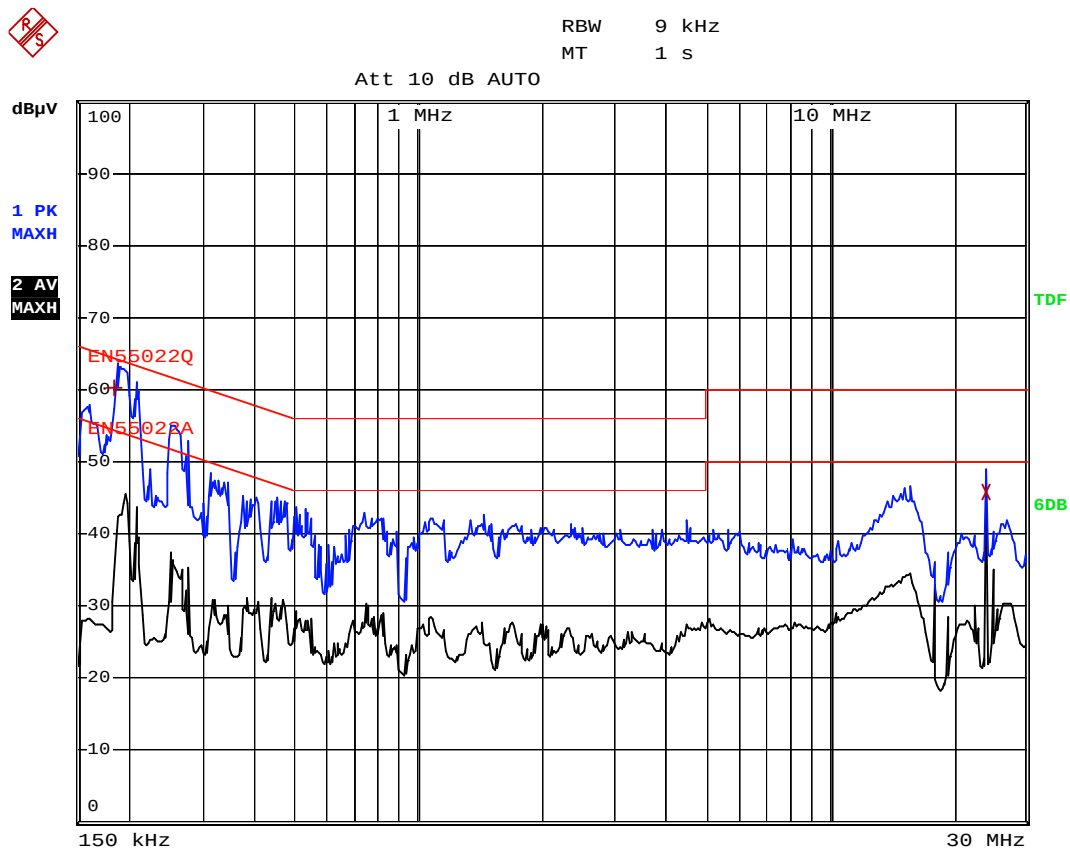
-3.24 dB at **0.186 MHz** in the **Neutral, Peak** detector, 0.15-30MHz

3.7 Conducted Emissions Test Data

Plot of Conducted Emissions Test Data

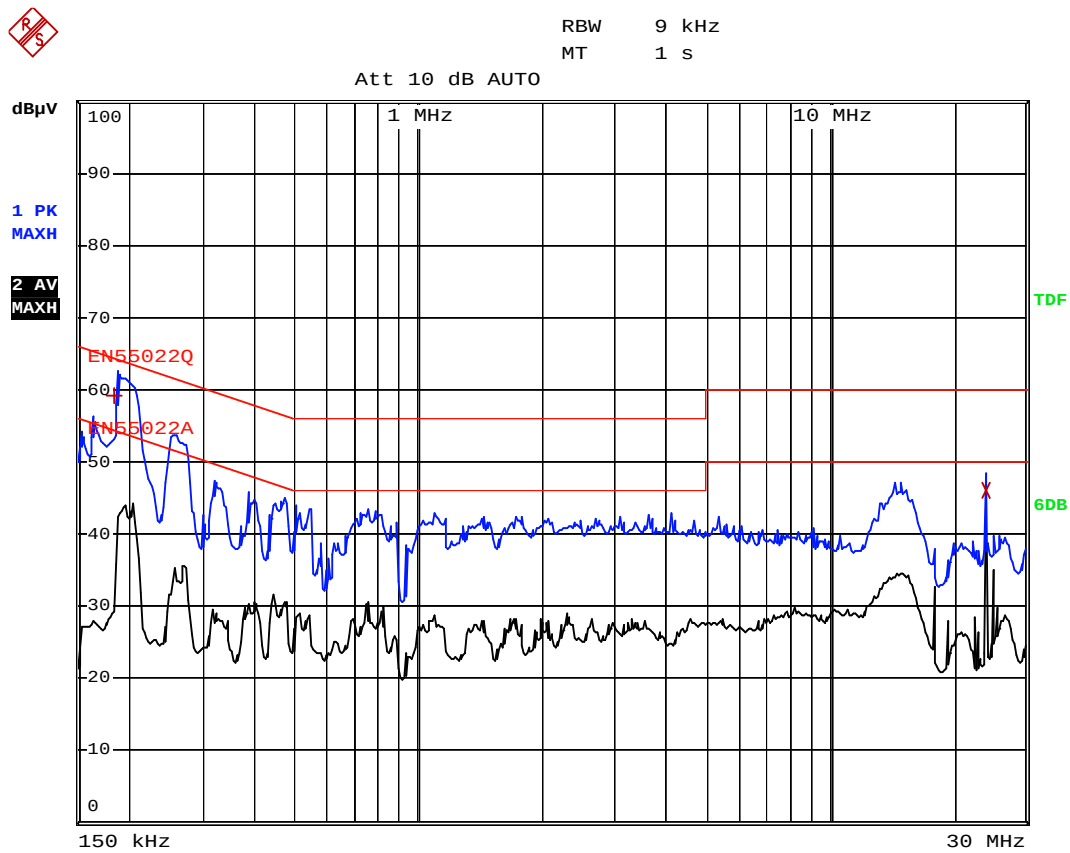
EUT: tablet PC
Tested Model: M901
Operating Condiation: Downloading
Comment: Connect to PC

Test Specification: Line



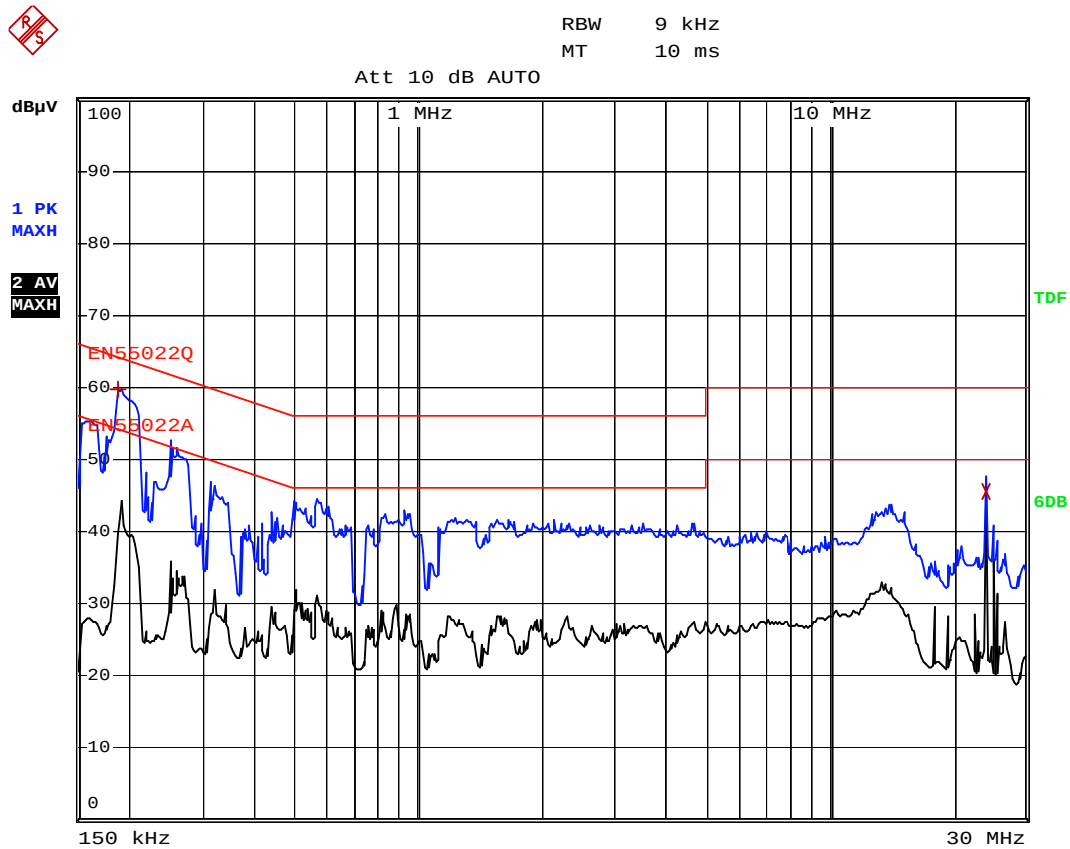
EDIT PEAK LIST (Final Measurement Results)			
Trace1:	EN55022Q		
Trace2:	EN55022A		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBµV	DELTA LIMIT dB
1 Quasi Peak	186 kHz	60.22	-3.99
2 Average	23.982 MHz	45.90	-4.09

Test Specification: Neutral



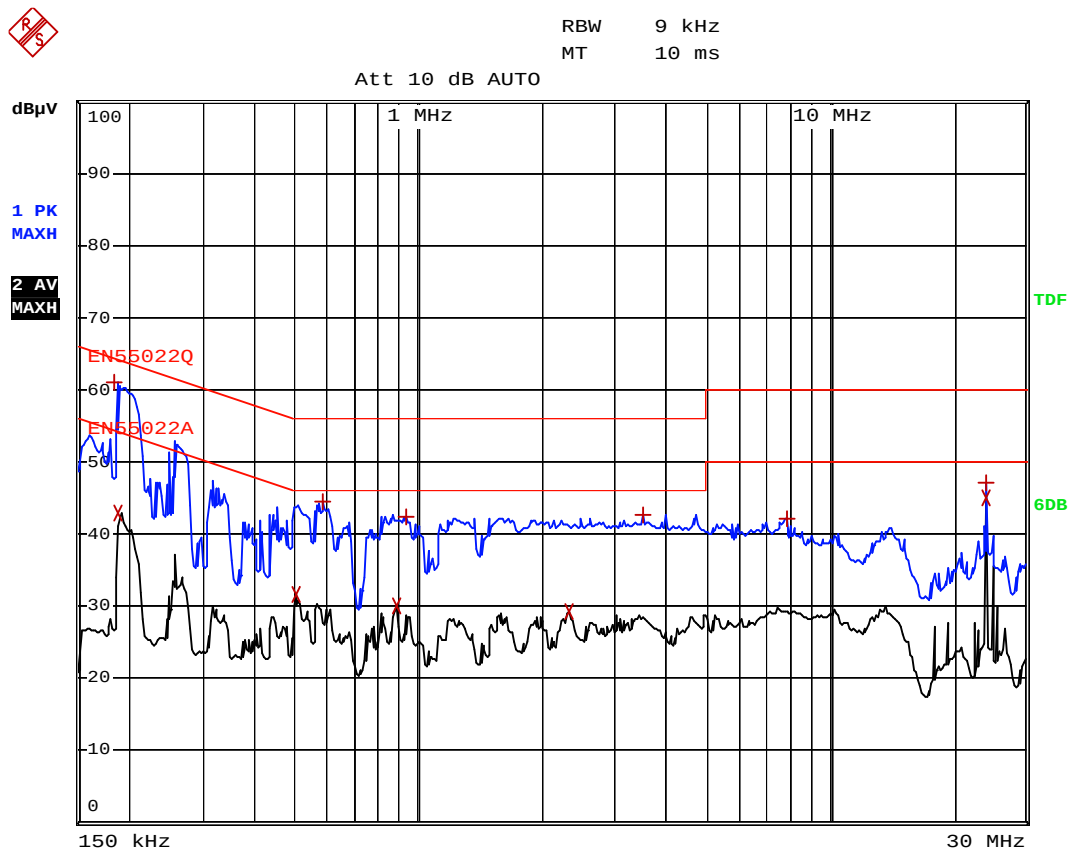
EDIT PEAK LIST (Final Measurement Results)			
Trace1:	EN55022Q		
Trace2:	EN55022A		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBμV	DELTA LIMIT dB
1 Quasi Peak	186 kHz	59.06	-5.14
2 Average	23.982 MHz	45.93	-4.06

Operating Condiation: Operating
Comment: Playing
 Charging with power adaptor
Test Specification: Line



EDIT PEAK LIST (Prescan Results)			
Trace1:	EN55022Q		
Trace2:	EN55022A		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBμV	DELTA LIMIT dB
1 Max Peak	190 kHz	59.58	-4.44
2 Average	23.982 MHz	45.58	-4.41

Test Specification: Neutral



EDIT PEAK LIST (Prescan Results)			
Trace1:	EN55022Q		
Trace2:	EN55022A		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBμV	DELTA LIMIT dB
1 Max Peak	186 kHz	60.96	-3.24
2 Average	190 kHz	43.02	-11.01
2 Average	506 kHz	31.50	-14.49
1 Max Peak	582 kHz	44.56	-11.43
2 Average	882 kHz	29.95	-16.04
1 Max Peak	938 kHz	42.44	-13.56
2 Average	2.334 MHz	29.21	-16.78
1 Max Peak	3.542 MHz	42.61	-13.38
1 Max Peak	7.862 MHz	42.22	-17.77
1 Max Peak	23.982 MHz	47.22	-12.77
2 Average	23.982 MHz	45.07	-4.92

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

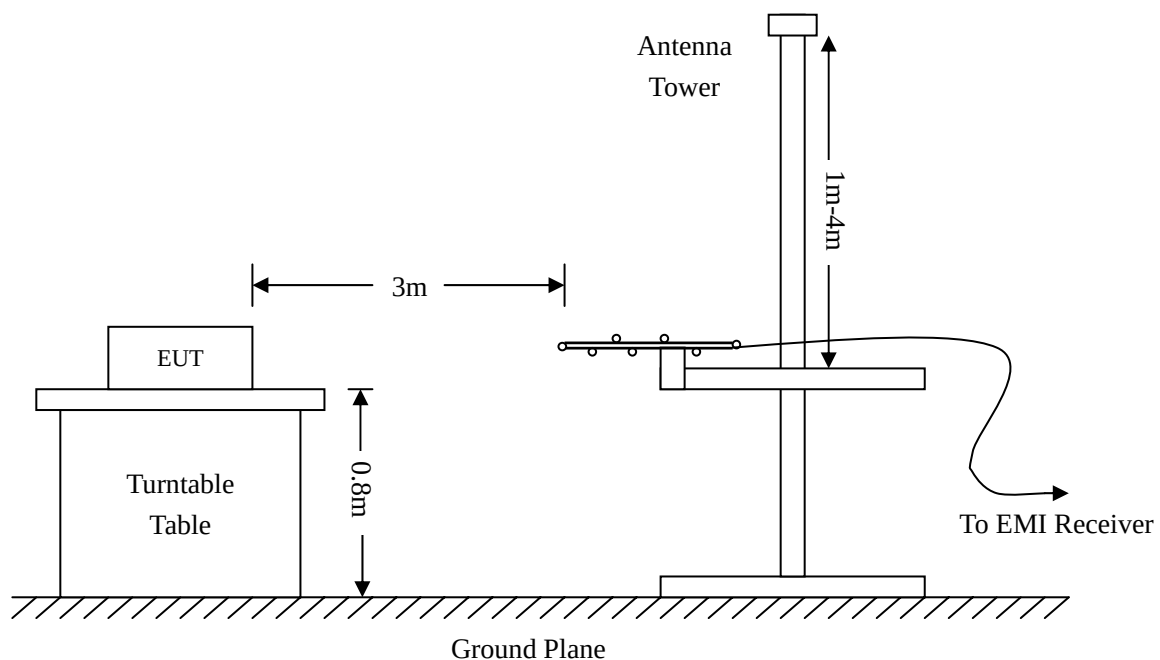
Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
Spectrum Analyzer	R&S	FSP	836079/035	2012-03-28	2013-03-27
EMI Test Receiver	R&S	ESVB	825471/005	2012-03-28	2013-03-27
Pre-amplifier	Agilent	8447F	3113A06717	2012-03-28	2013-03-27
Pre-amplifier	Compliance Direction	PAP-0118	24002	2012-03-28	2013-03-27
Trilog Broadband Antenna	SCHWARZBECK	VULB9163	9163-333	2013-02-25	2014-02-24
Horn Antenna	ETS	3117	00086197	2013-02-25	2014-02-24
Loop Antenna	SCHWARZECK	HFRA 5165	9365	2013-02-25	2014-02-24

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

During the radiated emission test for above 1GHz, the test receiver was set with the following configurations:

For peak detector:

RBW = 1000kHz, VBW = 3000kHz, Sweep Time = Auto

For average detector:

RBW = 1000kHz, VBW = 10Hz, Sweep Time = Auto

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:

$$\text{Corr. Ampl.} = \text{Indicated Reading} - \text{Corr. Factor}$$

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

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

4.6 Environmental Conditions

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

4.7 Summary of Test Results/Plots

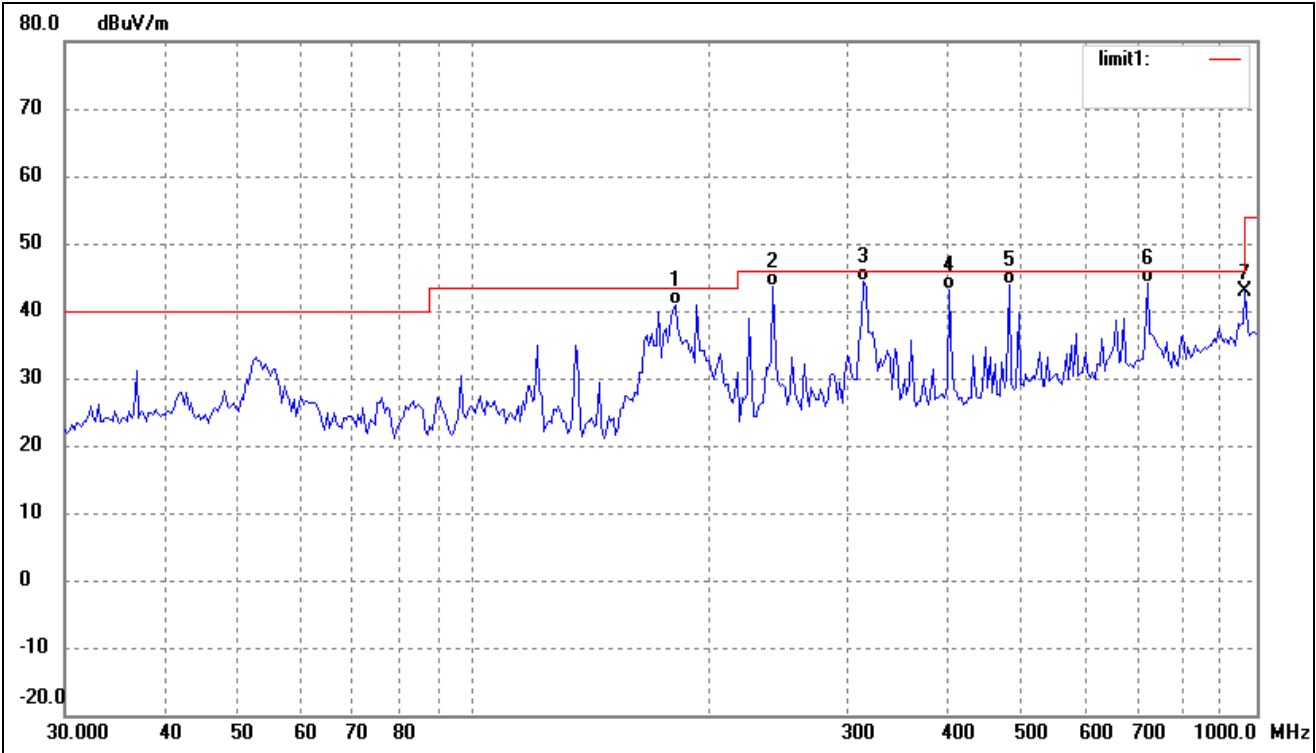
According to the data, the EUT complied with the FCC Part 15.109(a) rule, and had the worst margin of:

-1.47 dB at 263.8190 MHz in the Horizontal polarization, 30 MHz to 1 GHz, 3Meters

Plot of Radiated Emissions Test Data

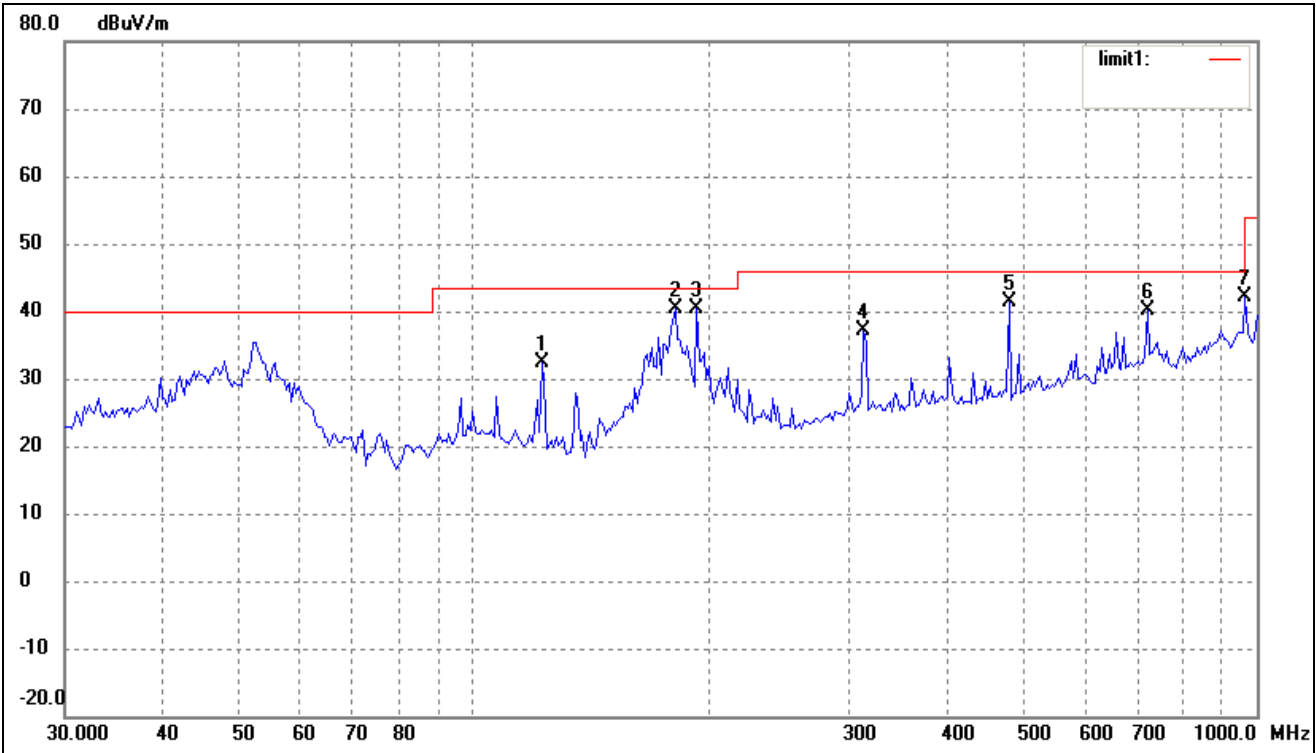
EUT: tablet PC
Tested Model: M901
Operating Condition: Downloading
Comment: Connect to PC

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	180.6486	37.02	3.78	40.80	43.50	-2.70	130	100	QP
2	240.8302	36.69	7.02	43.71	46.00	-2.29	175	100	QP
3	314.3765	34.05	10.40	44.45	46.00	-1.55	204	100	QP
4	404.6664	31.72	11.35	43.07	46.00	-2.93	47	100	QP
5	482.2155	32.32	11.49	43.81	46.00	-2.19	241	100	QP
6	724.2611	27.24	16.93	44.17	46.00	-1.83	336	100	QP
7	965.5421	24.62	18.37	42.99	54.00	-11.01	360	100	peak

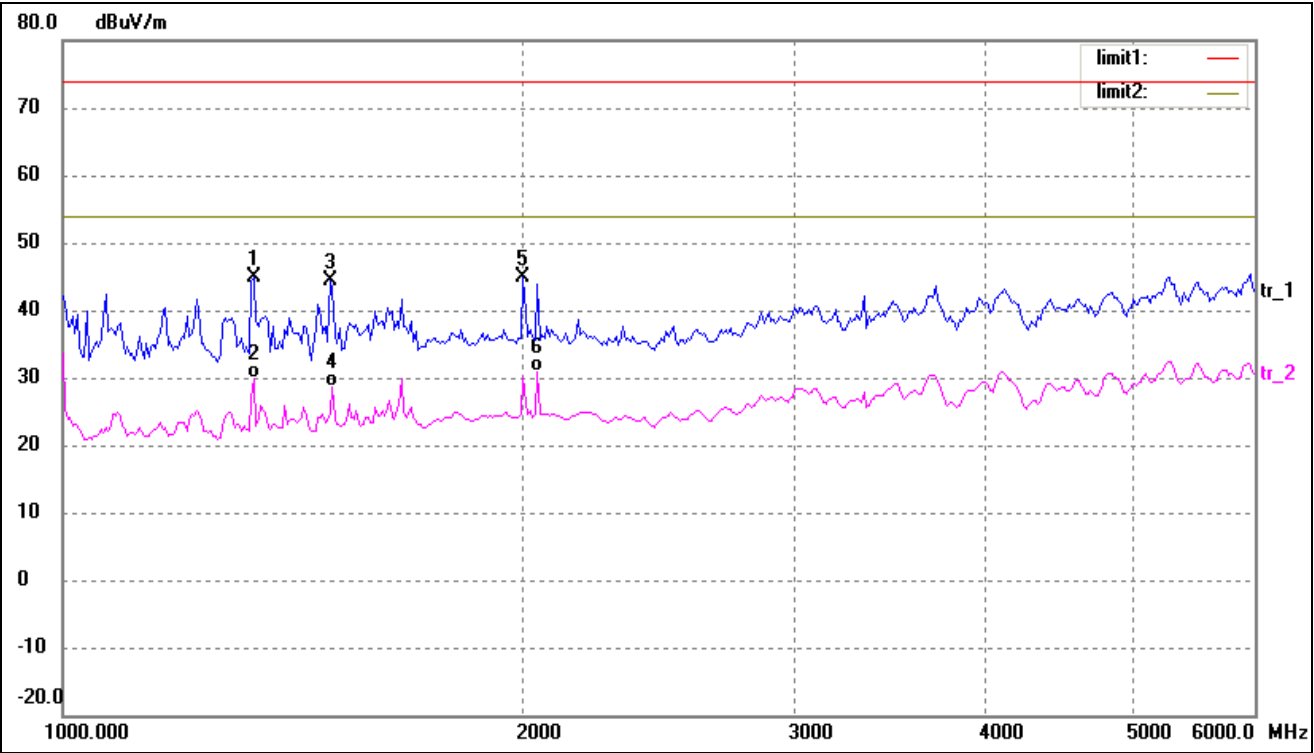
Test Specification: Vertical



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	121.9753	27.55	4.71	32.26	43.50	-11.24	360	100	peak
2	180.6486	36.58	3.78	40.36	43.50	-3.14	360	100	peak
3	192.4184	36.15	4.31	40.46	43.50	-3.04	360	100	peak
4	314.3765	26.70	10.40	37.10	46.00	-8.90	360	100	peak
5	482.2155	29.99	11.49	41.48	46.00	-4.52	360	100	peak
6	724.2611	23.23	16.93	40.16	46.00	-5.84	360	100	peak
7	965.5421	23.69	18.37	42.06	54.00	-11.94	360	100	peak

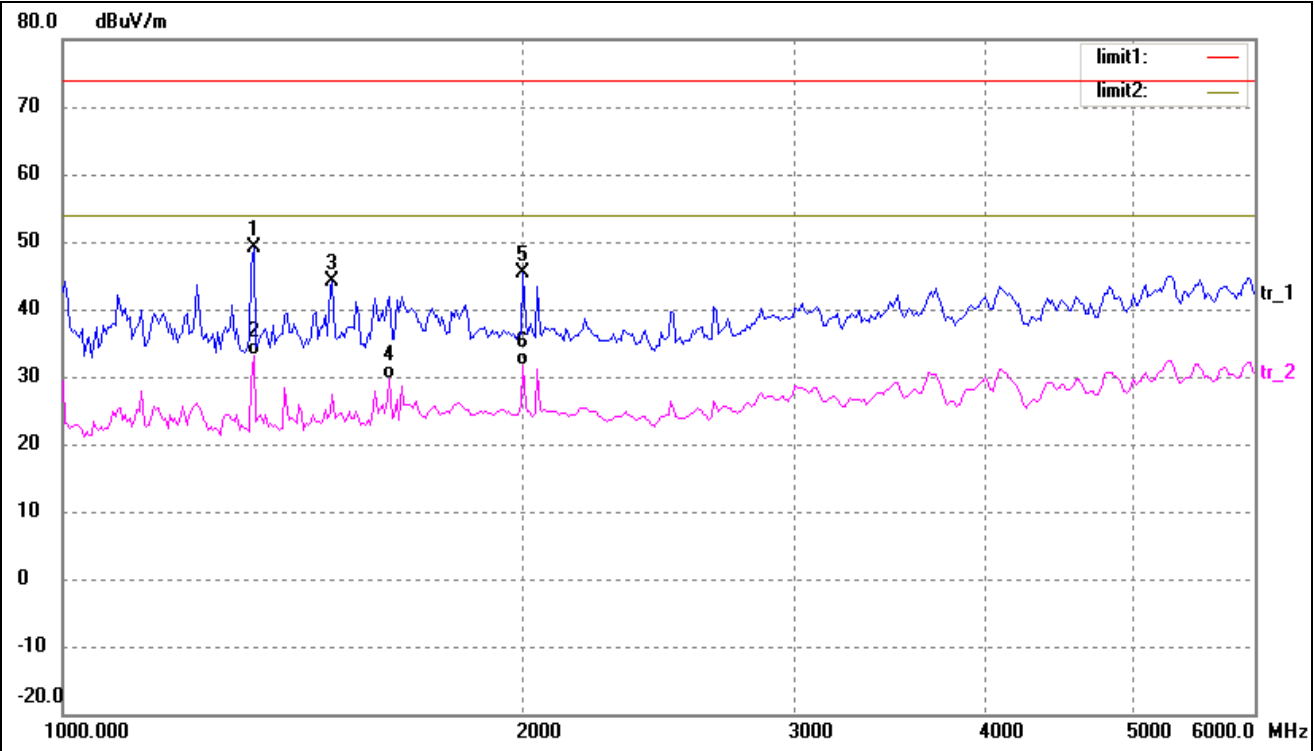
Above 1GHz

Test Specification: Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	1332.000	59.84	-14.97	44.87	74.00	-29.13	360	100	peak
2	1332.000	44.82	-14.97	29.85	54.00	-24.15	360	100	AVG
3	1493.846	58.80	-14.52	44.28	74.00	-29.72	360	100	peak
4	1499.209	43.17	-14.50	28.67	54.00	-25.33	360	100	AVG
5	1996.946	56.49	-11.65	44.84	74.00	-29.16	360	100	peak
6	2040.348	42.50	-11.64	30.86	54.00	-23.14	360	100	AVG

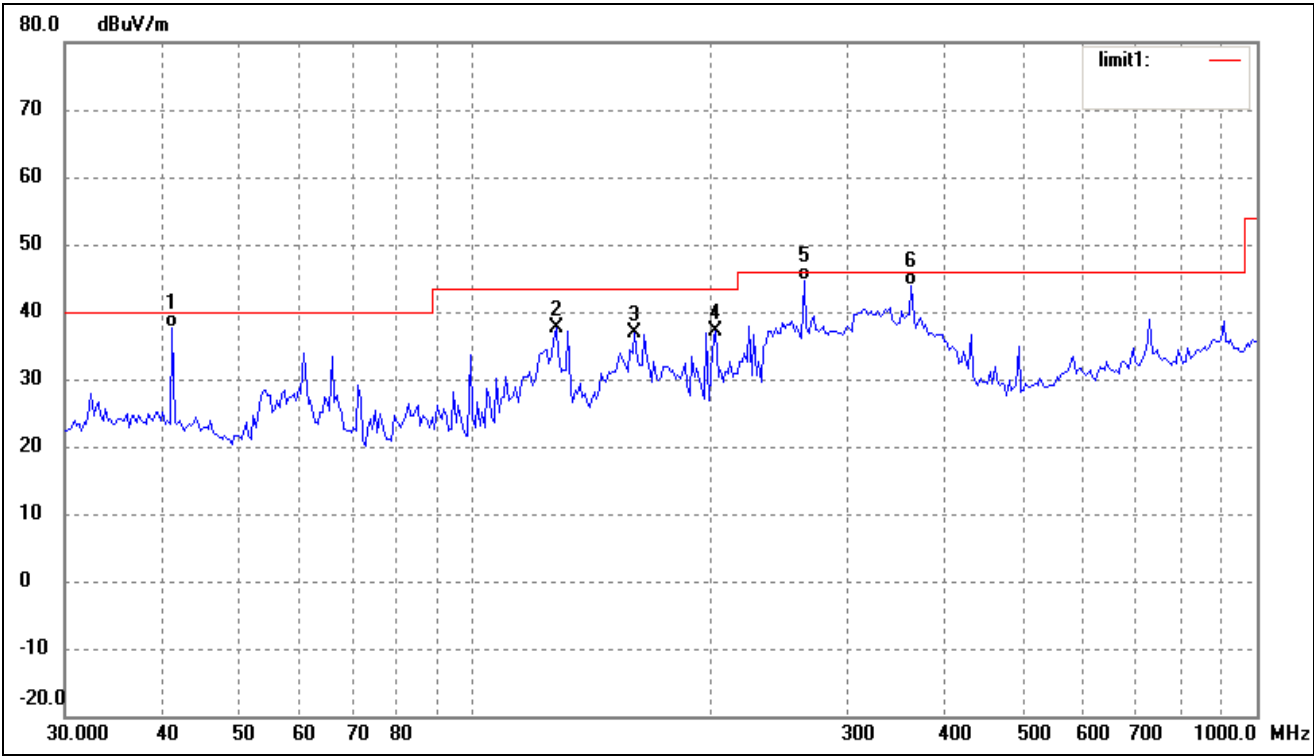
Test Specification: Vertical



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	1332.000	64.18	-14.97	49.21	74.00	-24.79	360	100	peak
2	1332.000	48.18	-14.97	33.21	54.00	-20.79	360	100	AVG
3	1499.209	58.68	-14.50	44.18	74.00	-29.82	360	100	peak
4	1633.855	43.25	-13.72	29.53	54.00	-24.47	360	100	AVG
5	1996.946	56.95	-11.65	45.30	74.00	-28.70	360	100	peak
6	1996.946	43.17	-11.65	31.52	54.00	-22.48	360	100	AVG

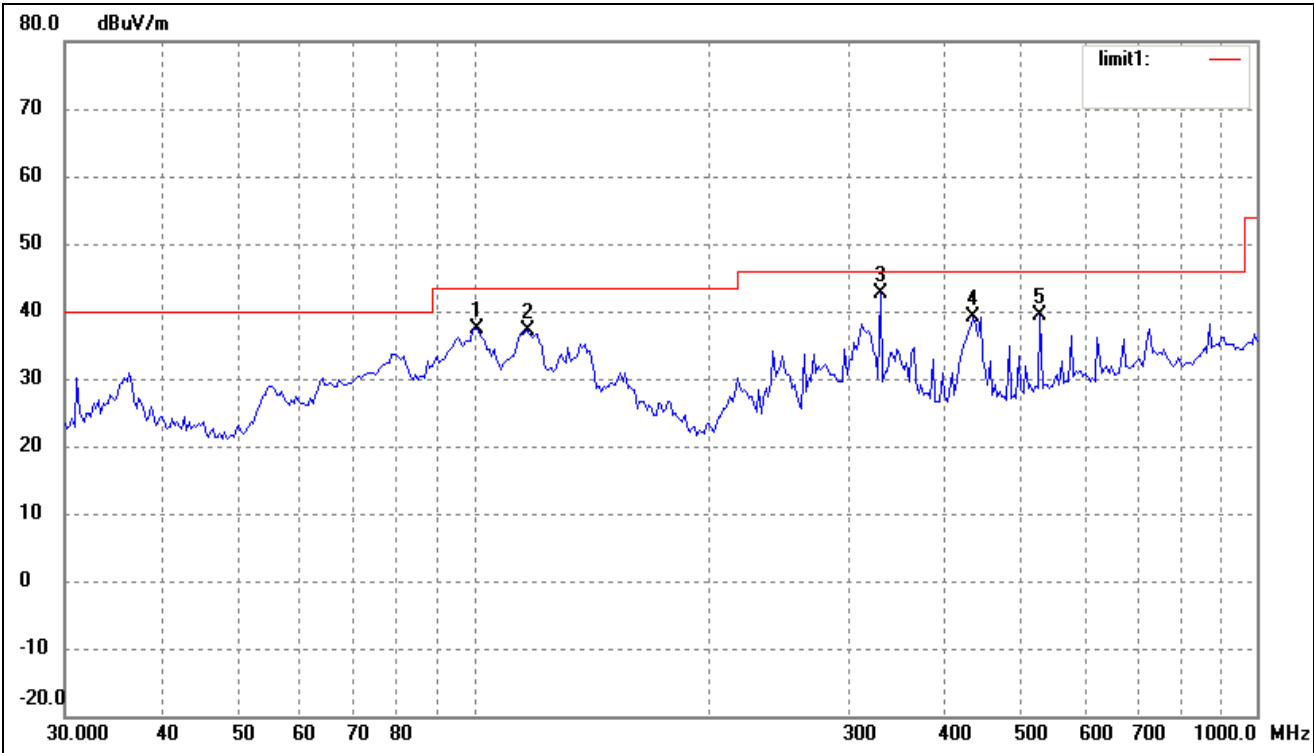
Operating Condition: Operating
Comment: Playing

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	41.1319	28.42	9.33	37.75	40.00	-2.25	142	100	QP
2	127.2176	33.39	4.34	37.73	43.50	-5.77	360	100	peak
3	160.3456	33.19	3.65	36.84	43.50	-6.66	360	100	peak
4	203.5227	32.33	4.87	37.20	43.50	-6.30	360	100	peak
5	263.8190	36.53	8.00	44.53	46.00	-1.47	24	100	QP
6	361.7139	33.08	10.69	43.77	46.00	-2.23	305	100	QP

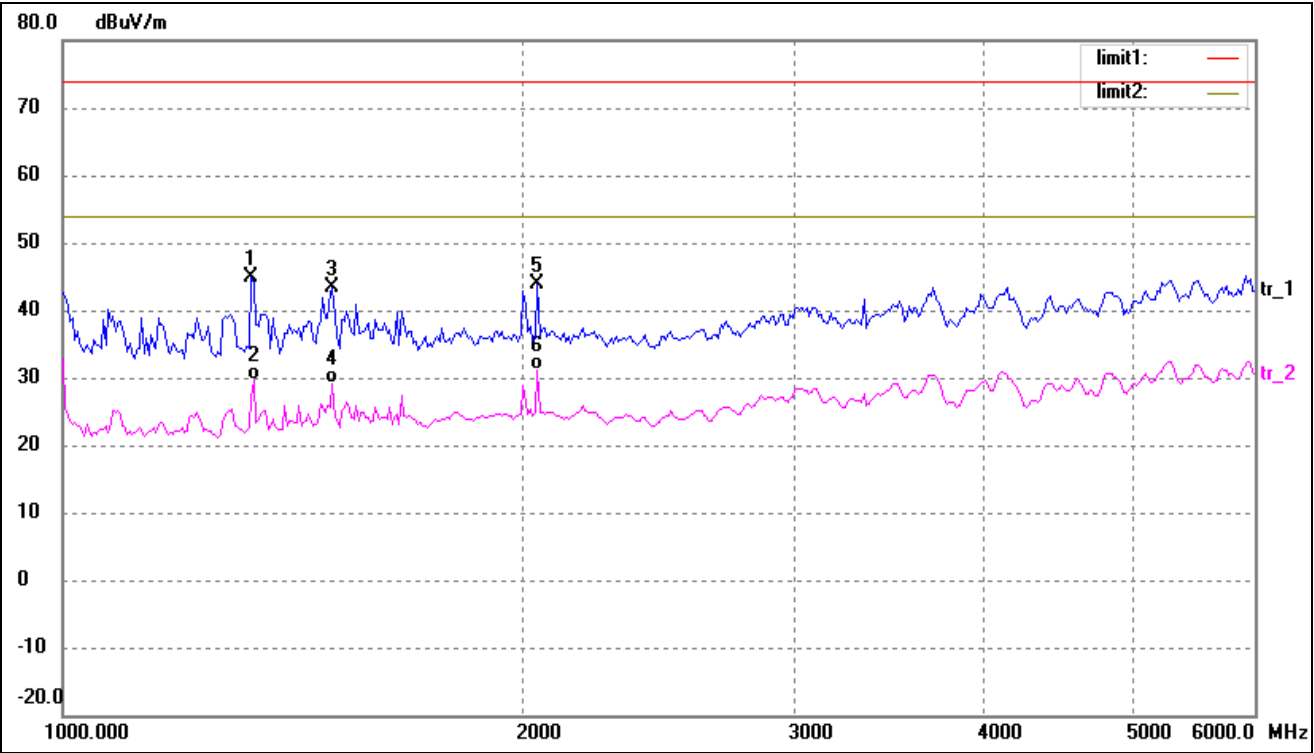
Test Specification: Vertical



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	100.9339	30.66	6.75	37.41	43.50	-6.09	360	100	peak
2	116.9495	31.98	5.17	37.15	43.50	-6.35	360	100	peak
3	330.1949	32.28	10.28	42.56	46.00	-3.44	360	100	peak
4	434.0650	28.11	11.10	39.21	46.00	-6.79	360	100	peak
5	528.2458	26.49	12.97	39.46	46.00	-6.54	360	100	peak

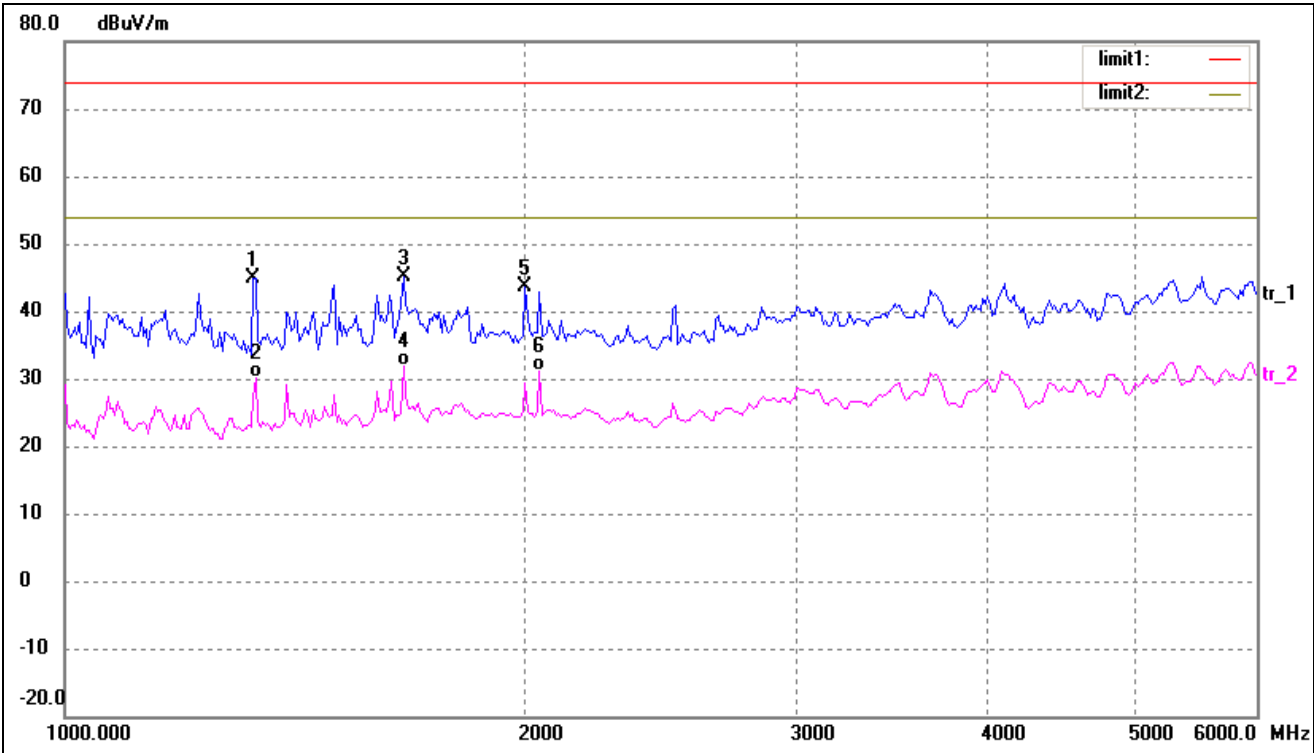
Above 1GHz

Test Specification: Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	1327.235	59.84	-14.98	44.86	74.00	-29.14	360	100	peak
2	1332.000	44.61	-14.97	29.64	54.00	-24.36	360	100	AVG
3	1499.209	57.83	-14.50	43.33	74.00	-30.67	360	100	peak
4	1499.209	43.55	-14.50	29.05	54.00	-24.95	360	100	AVG
5	2040.348	55.63	-11.64	43.99	74.00	-30.01	360	100	peak
6	2040.348	42.74	-11.64	31.10	54.00	-22.90	360	100	AVG

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	1327.235	59.86	-14.98	44.88	74.00	-29.12	360	100	peak
2	1332.000	45.08	-14.97	30.11	54.00	-23.89	360	100	AVG
3	1663.393	58.69	-13.56	45.13	74.00	-28.87	360	100	peak
4	1663.393	45.38	-13.56	31.82	54.00	-22.18	360	100	AVG
5	1996.946	55.37	-11.65	43.72	74.00	-30.28	360	100	peak
6	2040.348	42.69	-11.64	31.05	54.00	-22.95	360	100	AVG

Note: Testing is carried out with frequency rang 9kHz to 6GHz. The measurements greater than 20dB below the limit from 9kHz to 30MHz..

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