
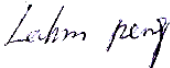



FCC PART 15B
MEASUREMENT AND TEST REPORT
FOR

Verykool USA Inc
4350 Executive Dr. #100, San Diego

FCC ID: WA6R800

Report Concerns: Original Report	Equipment Type: Panel computer
Model:	<u>R800C</u>
Report No.:	<u>STR11118292I-4</u>
Test Date:	<u>2011-11-28 to 2011-12-15</u>
Issue Date:	<u>2011-12-20</u>
Tested By:	<u>Jason Chen / Engineer</u> 
Reviewed By:	<u>Lahm Peng / EMC Manager</u> 
Approved & Authorized By:	<u>Jandy so / PSQ Manager</u> 
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.

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1. GENERAL INFORMATION

1.1 Product Description for Equipment Under Test (EUT)

Client Information

Applicant: Verykool USA Inc
Address of applicant: 4350 Executive Dr. #100, San Diego

Manufacturer: Verykool Wireless Technology Ltd.
Address of manufacturer: Room 1701, Reward Building C, No.203, 2nd Section of Wangjing, Li Ze Zhong Yuan, ChaoYang District, Beijing, P.R. of China 100102

General Description of E.U.T

Items	Description
EUT Description:	Panel computer
Trade Name:	verykool
Model No.:	R800C
Rated Voltage:	Battery DC 3.7V with Power adaptor
Rated Current:	1A
Battery:	M/N: JHY487390; DC 3.7V/3500mAh
Power Adapter:	M/N: ASUC12A-05150; Input: 100-240V ~ 50/60Hz, 0.3A
For more information refer to the circuit diagram form and the user's manual.	

The test data is gathered from a production sample, provided by the manufacturer.

1.2 Test Standards

The following report is prepared on behalf of the Verykool USA 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 15.107, and 15.109 rules.

Maintenance of compliance is the responsibility of the manufacturer. Any modification of the product, which results in lowering the emission/immunity, 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.

The equipment under test (EUT) was configured to measure its highest possible susceptibility against the tested phenomena. The test modes were adapted accordingly in reference to the Operating Instructions.

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 Exercise Software

The EUT exercise program used during radiated and conducted testing was designed to exercise the system components. The test software, provided by the customer, is started while the EUT is on to simulate the normal work.

1.6 Accessories Equipment List and Details

Description	Manufacturer	Model	Serial Number
Notebook PC	Samsung	NP-R20	124V93FP300082V
/	/	/	/

1.7 EUT Cable List and Details

Cable Description	Length (M)	Shielded/Unshielded	With Core/Without Core
USB Cable	1.2	Shielded	Without Core
Earphone Cable	1.5	Unshielded	Without Core

2. SUMMARY OF TEST RESULTS

Description of Test	Result
§15.107 (a) Conducted Emission	Compliant
§15.109(a) Radiated Emission	Compliant

3. §15.107 (a)- CONDUCTED EMISSION

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	2010-12-20	2011-12-19
L.I.S.N	Schwarz beck	NSLK8126	8126-224	2010-12-20	2011-12-19
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100911	2010-12-20	2011-12-19

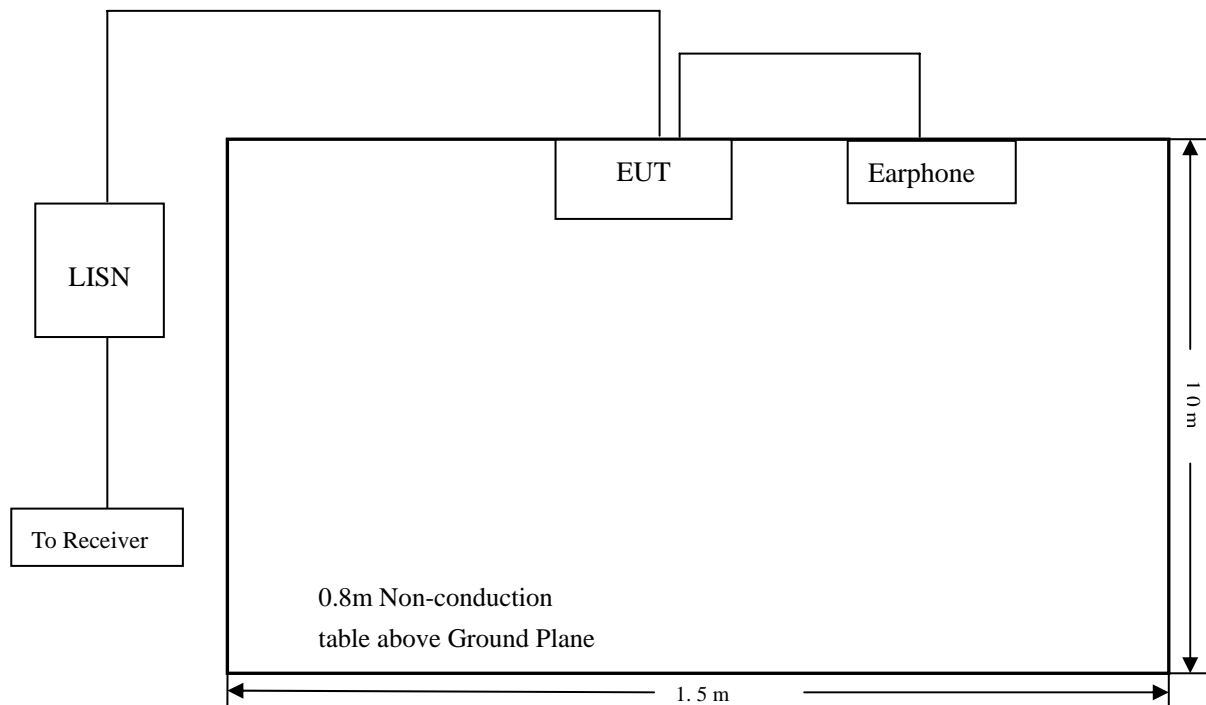
3.3 Test Procedure

The setup of EUT is according with per ANSI C63.4-2003 measurement procedure. The specification used was with the FCC Part 15.107 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.

3.4 Basic Test Setup Block Diagram



3.5 Environmental Conditions

Temperature:	25 °C
Relative Humidity:	52%
ATM Pressure:	1012 mbar

3.6 Test Receiver Setup

During the conducted emission test, the test receiver was set with the following configurations:

Start Frequency 150 kHz
Stop Frequency..... 30 MHz
Sweep Speed Auto
IF Bandwidth..... 10 kHz
Quasi-Peak Adapter Bandwidth 9 kHz
Quasi-Peak Adapter Mode Normal

3.7 Summary of Test Results/Plots

According to the data in section 3.8, the EUT complied with the FCC Part 15B Conducted margin for a Class B device, with the *worst* margin reading of:

-3.63 dB μ V at 0.198 MHz in the Line, Peak detector, 0.15-30MHz

3.8 Conducted Emissions Test Data

Plot of Conducted Emissions Test Data

Conducted Disturbance

EUT: Panel computer

M/N: R800C

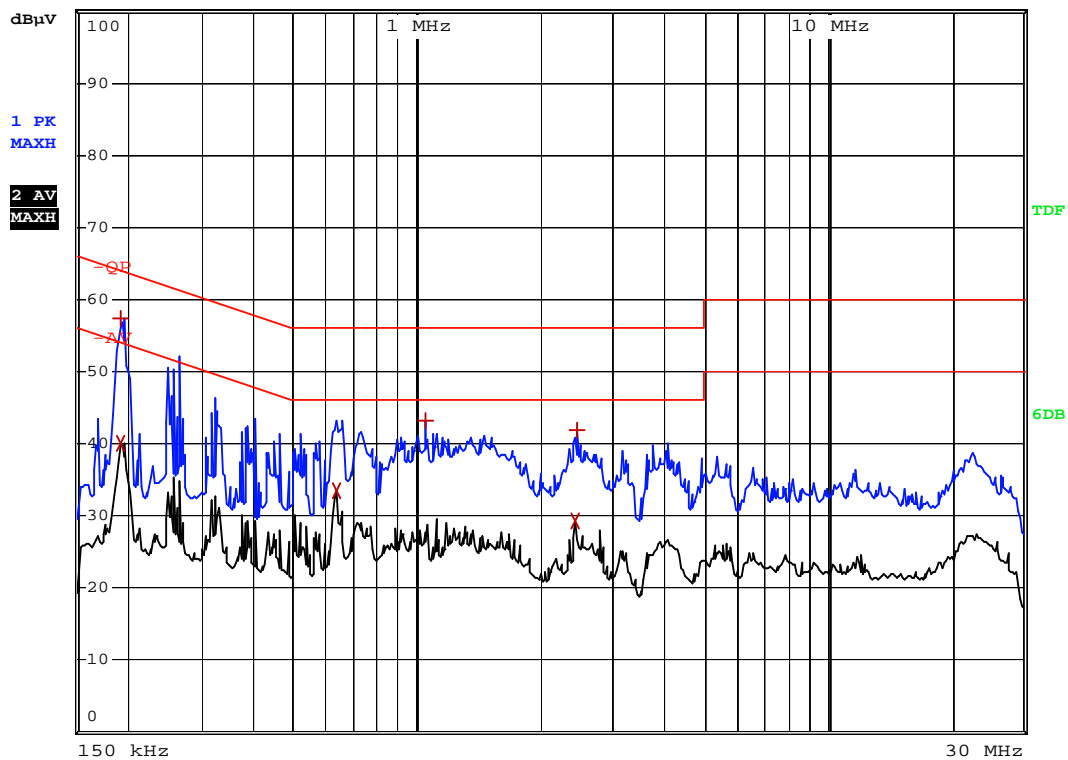
Operating Condition: Playing and charging

Test Specification: N

Comment: 120V/60Hz

RBW 9 kHz
MT 5 ms

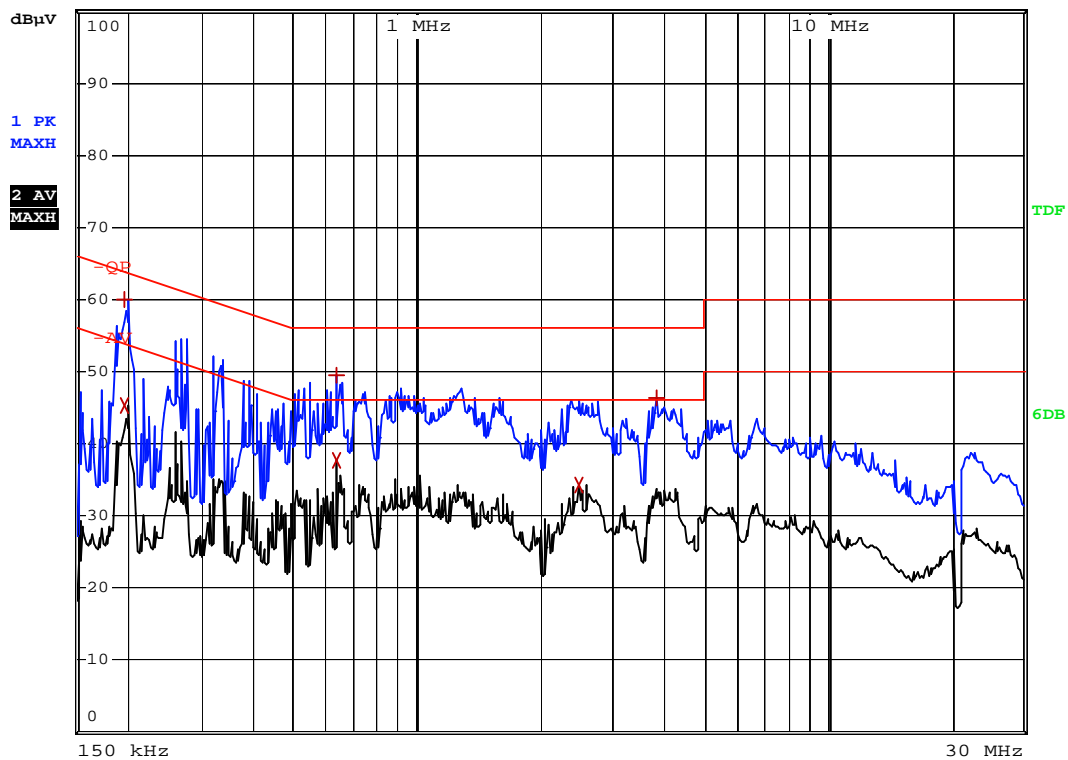
Att 10 dB AUTO



EDIT PEAK LIST (Prescan Results)			
Trace1:	-QP		
Trace2:	-AV		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBμV	DELTA LIMIT dB
1 Max Peak	194 kHz	57.41	-6.45
2 Average	194 kHz	39.94	-13.91
2 Average	638 kHz	33.34	-12.65
1 Max Peak	1.046 MHz	43.21	-12.78
2 Average	2.442 MHz	29.18	-16.82
1 Max Peak	2.466 MHz	41.80	-14.19

Plot of Conducted Emissions Test Data*Conducted Disturbance**EUT: Panel computer**M/N: R800C**Operating Condition: Playing and charging**Test Specification: L**Comment: 120V/60Hz*RBW 9 kHz
MT 5 ms

Att 10 dB AUTO



EDIT PEAK LIST (Prescan Results)			
Trace1:	-QP		
Trace2:	-AV		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBμV	DELTA LIMIT dB
1 Max Peak	198 kHz	60.06	-3.63
2 Average	198 kHz	45.18	-8.50
1 Max Peak	634 kHz	49.50	-6.49
2 Average	634 kHz	37.54	-8.45
2 Average	2.482 MHz	34.26	-11.73
1 Max Peak	3.842 MHz	46.35	-9.64

4. §15.109(a)- RADIATED EMISSION

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

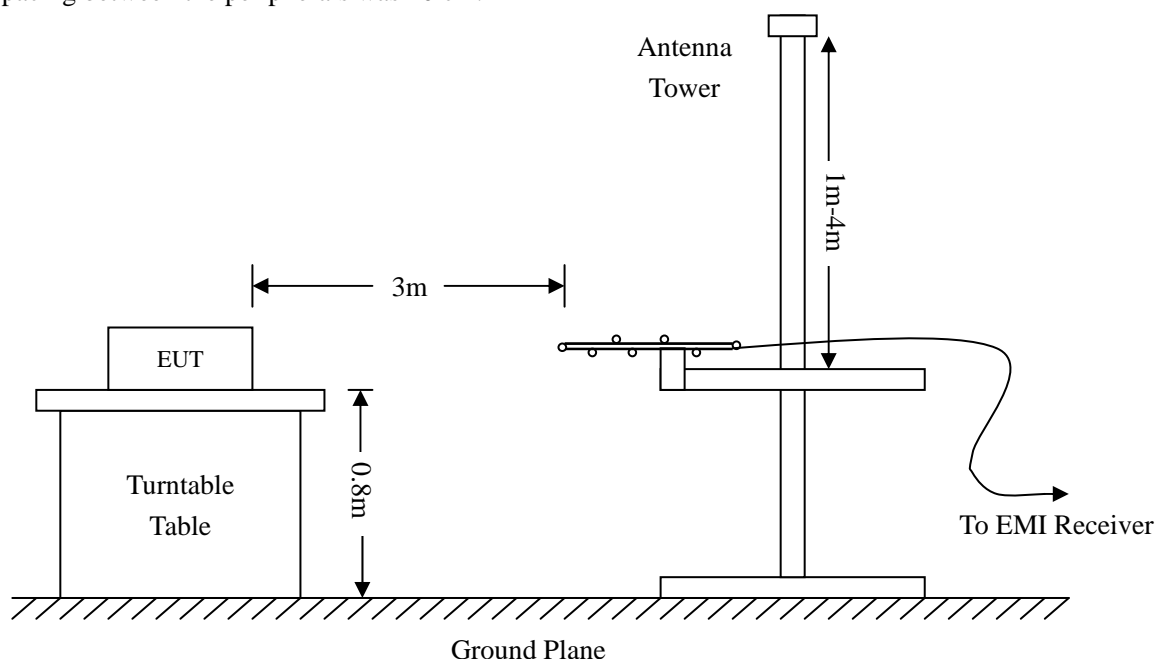
Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
Spectrum Analyzer	R&S	FSP	836079/035	2010-12-20	2011-12-19
EMI Test Receiver	R&S	ESVB	825471/005	2010-12-20	2011-12-19
Positioning Controller	C&C	CC-C-1F	N/A	2010-12-20	2011-12-19
RF Switch	EM	EMSW18	SW060023	2010-12-20	2011-12-19
Pre-amplifier	Agilent	8447F	3113A06717	2010-12-20	2011-12-19
Pre-amplifier	Compliance Direction	PAP-0118	24002	2010-12-20	2011-12-19
Trilog Broadband Antenna	SCHWARZBECK	VULB9163	9163-333	2011-01-09	2012-01-08
Horn Antenna	ETS	3117	00086197	2011-01-09	2012-01-08
Loop Antenna	SCHWARZECK	HFRA 5165	9365	2011-01-09	2012-01-08

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 15.205 and 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 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 -6dBμV means the emission is 6dBμV below the maximum limit for Class B. The equation for margin calculation is as follows:

$$\text{Margin} = \text{Corr. Ampl.} - \text{FCC Part 15B Limit}$$

4.5 Environmental Conditions

Temperature:	25 °C
Relative Humidity:	54%
ATM Pressure:	1011 mbar

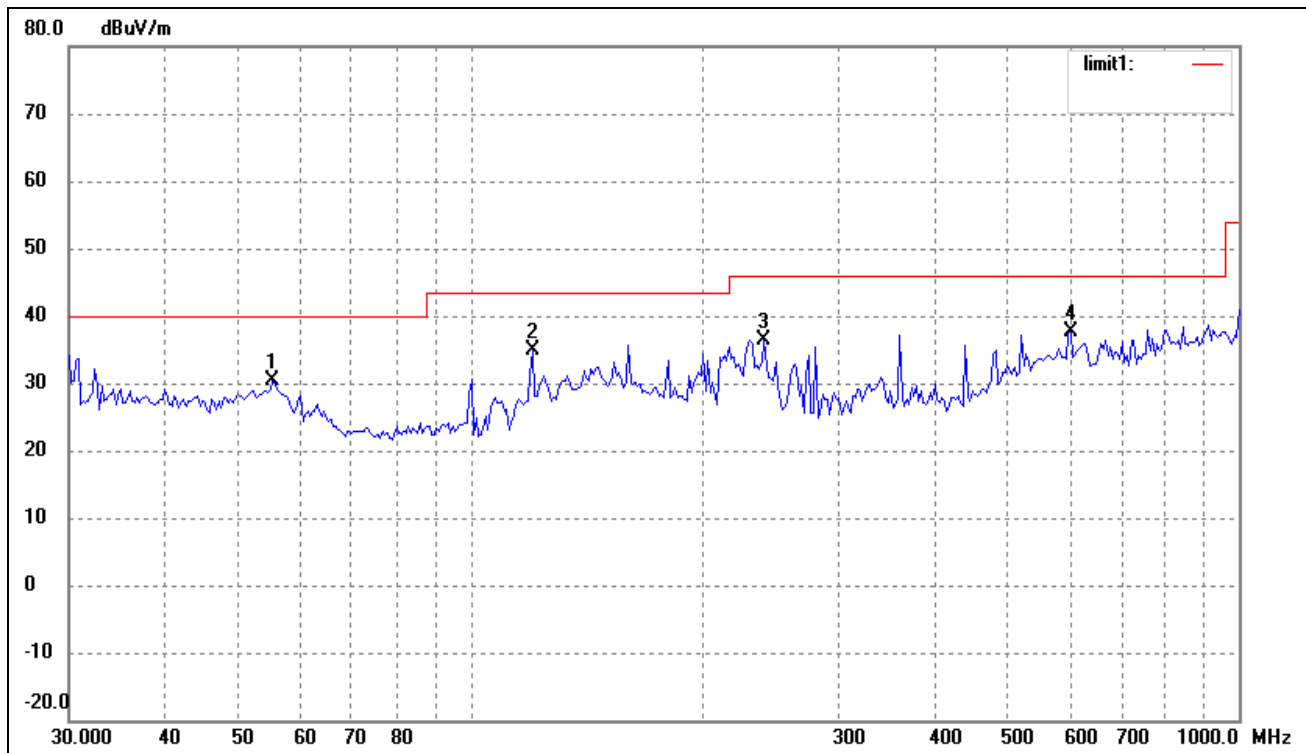
4.6 Summary of Test Results/Plots

According to the data, the EUT complied with the FCC Part 15B Class B standards, and had the worst margin of:

-6.95 dBμV at 760.7036 MHz in the Vertical polarization, Playing and Charging mode, 9kHz to 5GHz, 3Meters

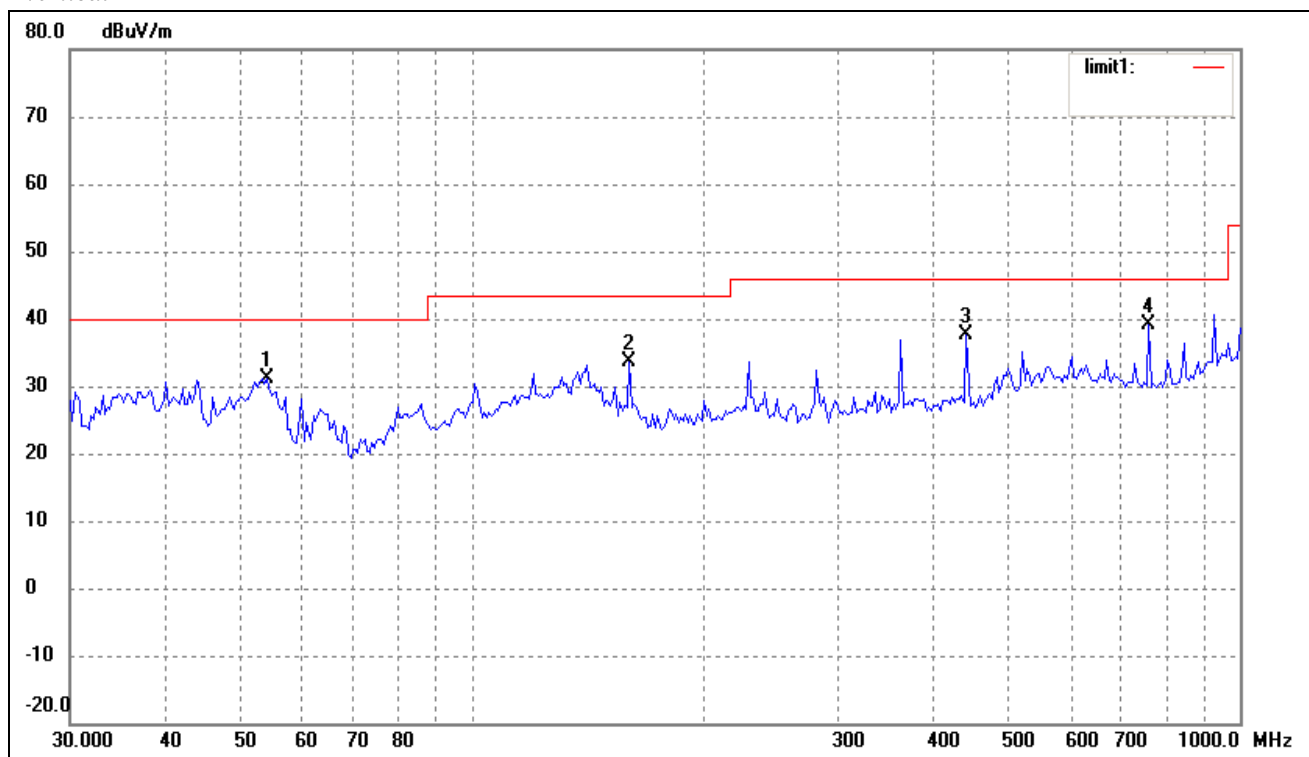
-6.42 dBμV at 361.7139 MHz in the Vertical polarization, Downloading mode, 9kHz to 5GHz, 3Meters

Spurious Radiated Emissions measurements starting below or at the lowest crystal frequency.

Plot of Radiation Emissions Test Data*Radiated Disturbance**EUT: Panel computer**M/N: R800C**Operating Condition: Playing and Charging**Test Specification: Horizontal & Vertical**Comment: AC 120V/60Hz***Horizontal**

No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	55.2207	22.56	7.76	30.32	40.00	-9.68	360	200	peak
2	120.2766	28.85	5.91	34.76	43.50	-8.74	0	100	peak
3	240.8302	28.02	8.45	36.47	46.00	-9.53	360	200	peak
4	603.5392	20.95	16.70	37.65	46.00	-8.35	0	200	peak

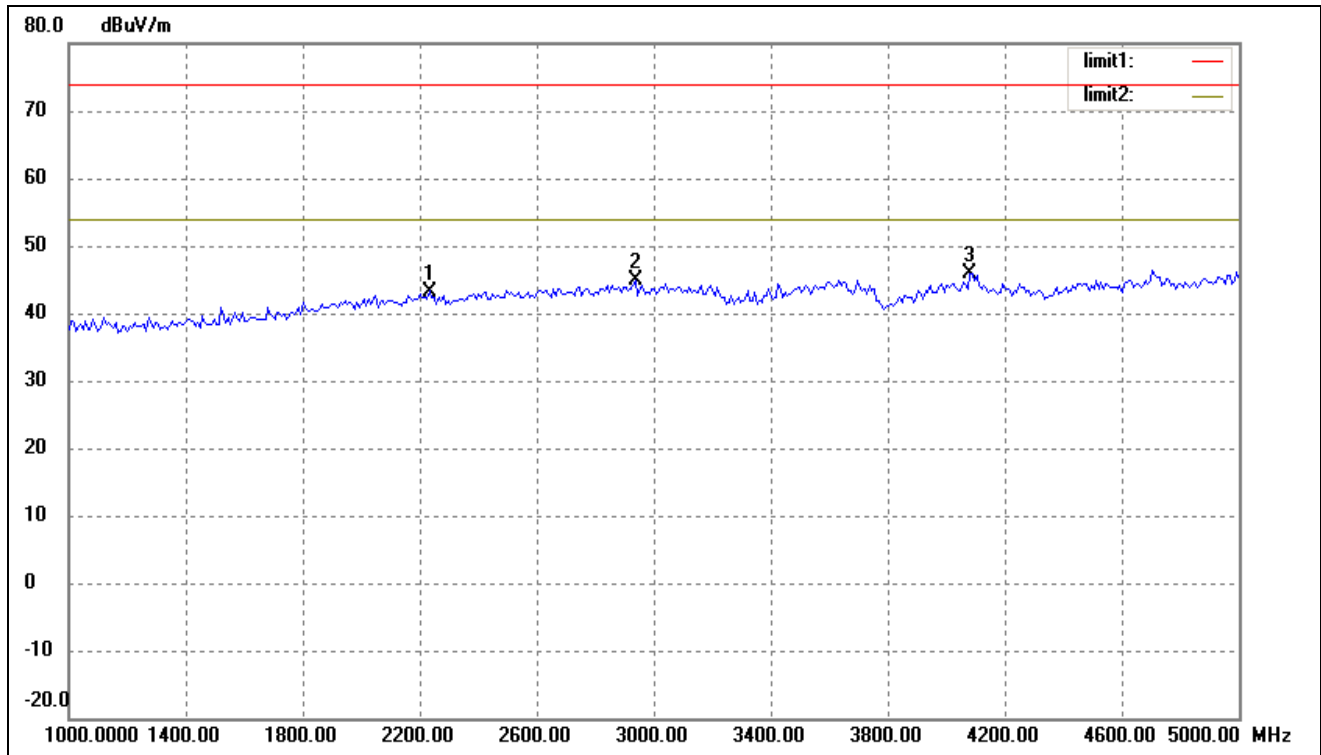
Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	54.0711	23.31	7.80	31.11	40.00	-8.89	360	200	peak
2	160.3456	28.96	4.55	33.51	43.50	-9.99	360	200	peak
3	440.1963	25.37	12.18	37.55	46.00	-8.45	0	100	peak
4	760.7036	20.63	18.42	39.05	46.00	-6.95	360	200	peak

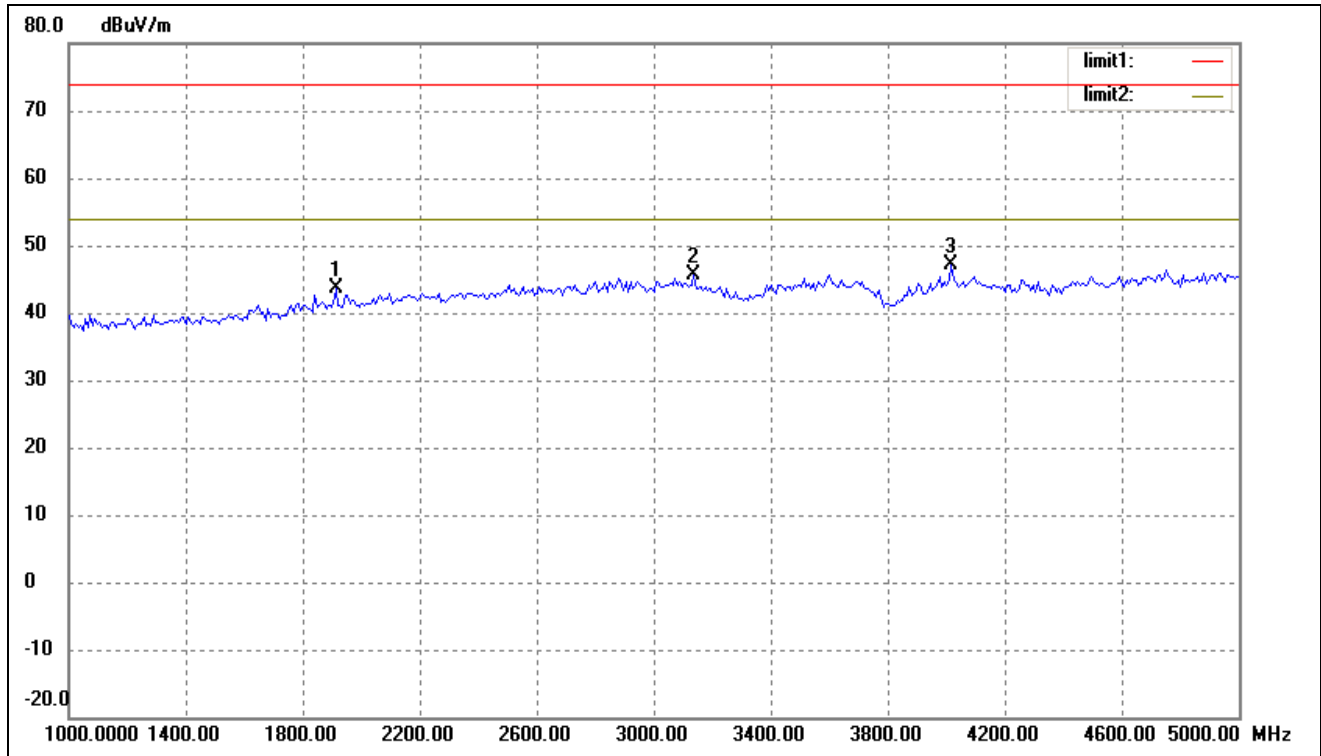
Form Above 1-5GHz

Horizontal

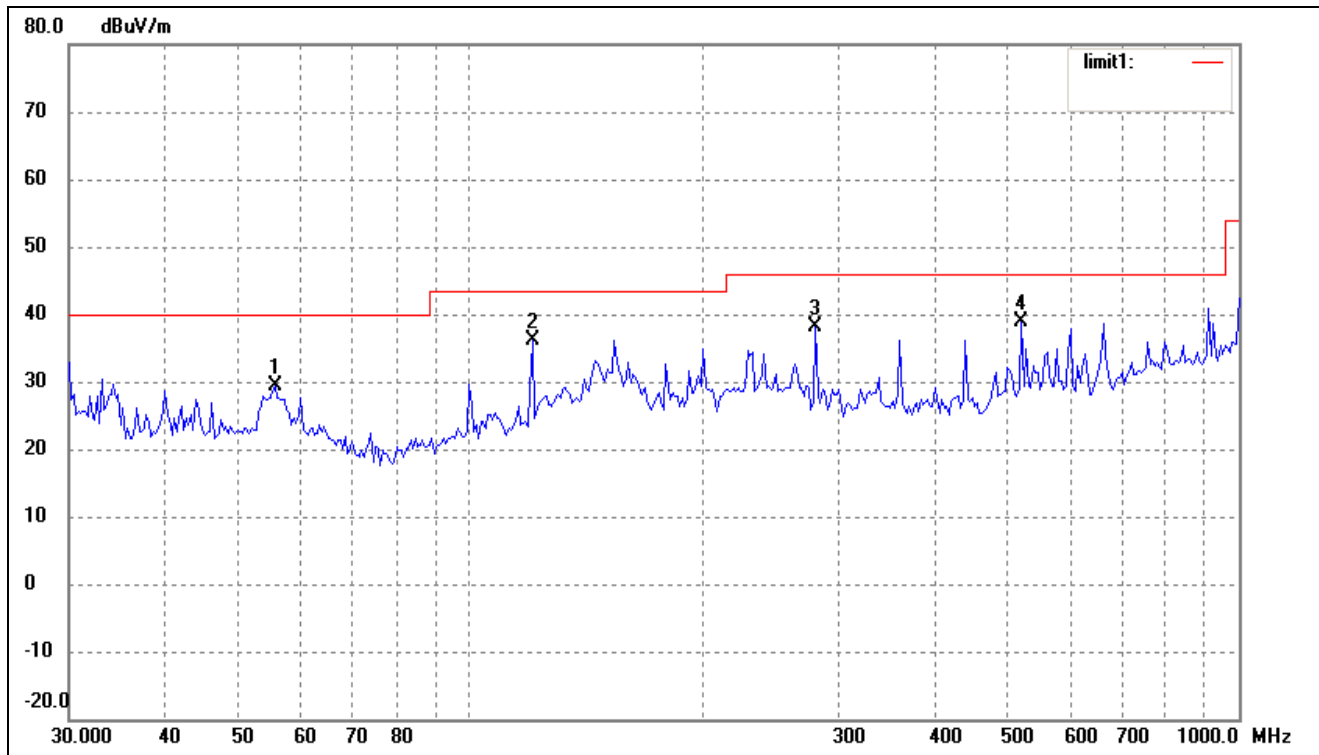


No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	2232.000	50.95	-7.70	43.25	74.00	-30.75	360	200	peak
2	2936.000	51.21	-6.35	44.86	74.00	-29.14	0	100	peak
3	4080.000	51.29	-5.29	46.00	74.00	-28.00	360	200	peak

Vertical

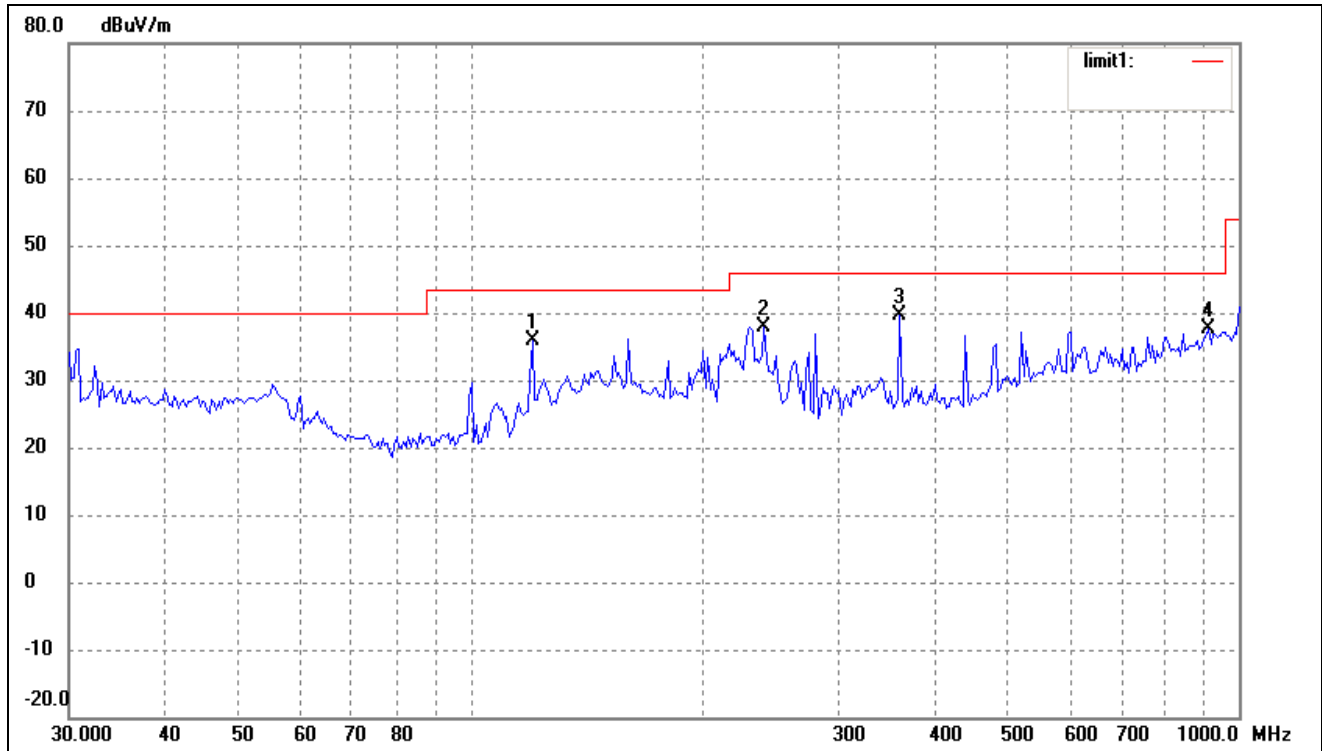


No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	1912.000	52.37	-8.75	43.62	74.00	-30.38	360	100	peak
2	3136.000	51.78	-6.15	45.63	74.00	-28.37	360	200	peak
3	4016.000	52.59	-5.35	47.24	74.00	-26.76	0	200	peak

*Radiated Disturbance**EUT: Panel computer**M/N: R800C**Operating Condition: Downloading**Test Specification: Horizontal & Vertical**Comment: AC 120V/60Hz, Connect to PC**Horizontal*

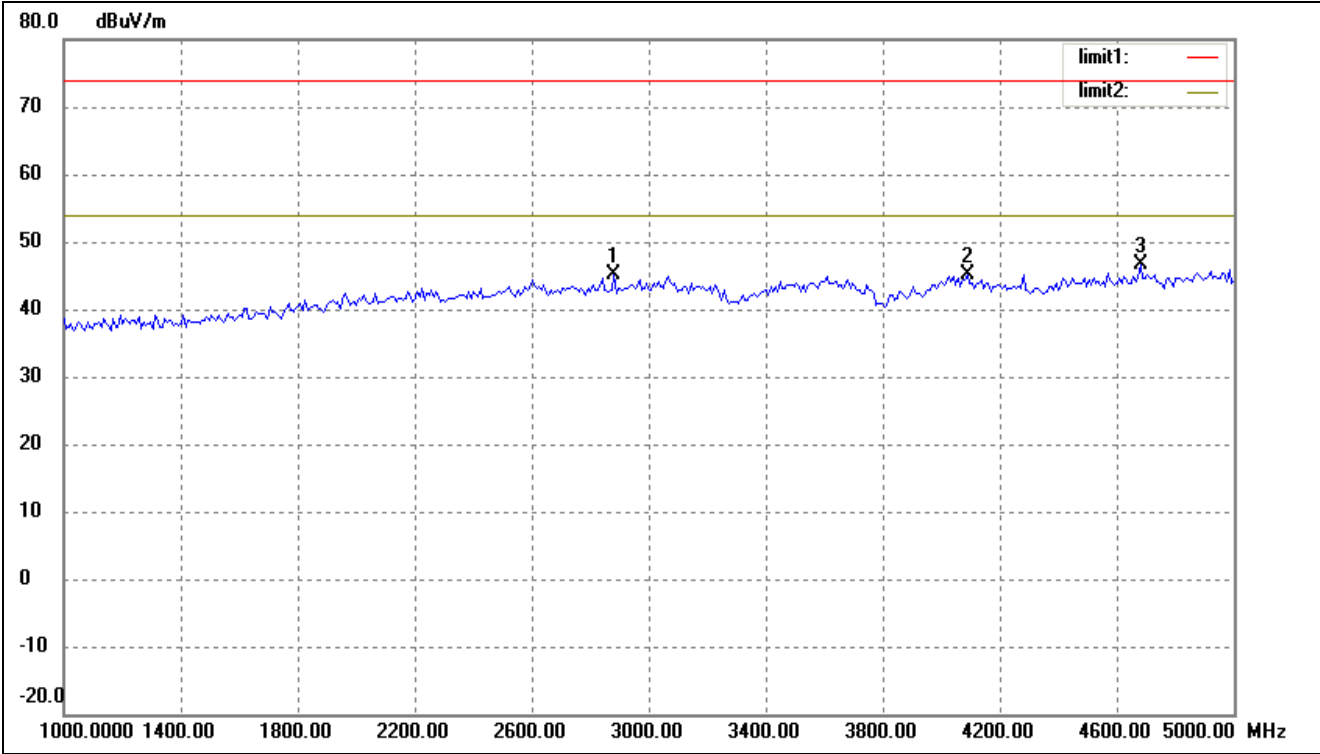
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	55.6094	21.63	7.74	29.37	40.00	-10.63	360	200	peak
2	120.2766	30.27	5.91	36.18	43.50	-7.32	0	100	peak
3	281.0074	28.48	9.53	38.01	46.00	-7.99	0	200	peak
4	520.8881	23.93	14.89	38.82	46.00	-7.18	360	200	peak

Vertical



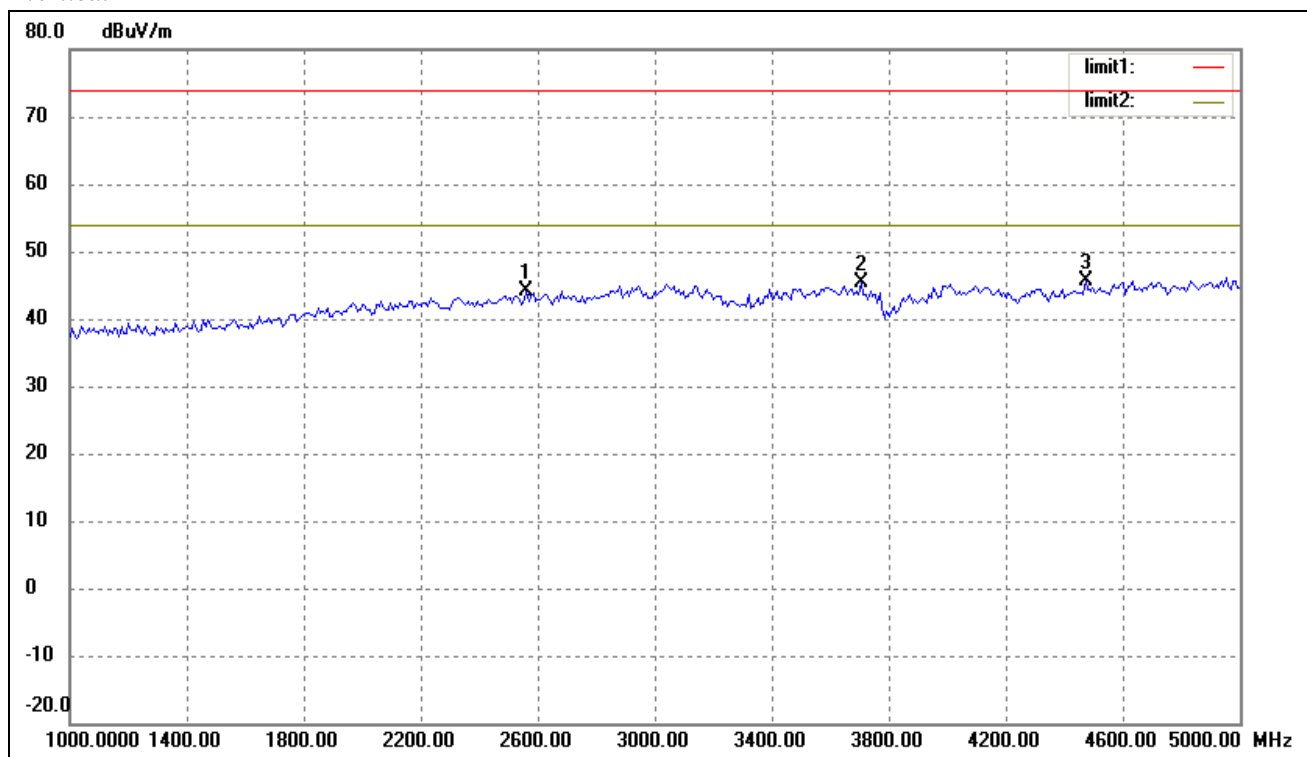
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	120.2766	29.85	5.91	35.76	43.50	-7.74	360	100	peak
2	240.8303	29.52	8.45	37.97	46.00	-8.03	360	200	peak
3	361.7139	28.67	10.91	39.58	46.00	-6.42	0	100	peak
4	912.8619	16.56	21.14	37.70	46.00	-8.30	360	200	peak

Above 1-5GHz
Horizontal



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	2880.000	51.66	-6.45	45.21	74.00	-28.79	360	200	peak
2	4088.000	50.45	-5.28	45.17	74.00	-28.83	0	100	peak
3	4680.000	51.35	-4.76	46.59	74.00	-27.41	0	200	peak

Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	2560.000	51.16	-6.98	44.18	74.00	-29.82	360	100	peak
2	3704.000	51.01	-5.68	45.33	74.00	-28.67	360	200	peak
3	4472.000	50.57	-4.93	45.64	74.00	-28.36	0	200	peak

Note: Testing is carried out with frequency rang 9kHz to the tenth harmonics, which above 5th Harmonics 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..

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