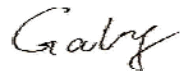
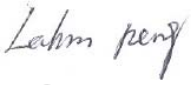



**FCC PART 15B**  
**MEASUREMENT AND TEST REPORT**  
**FOR**

**Matsunichi Communication Holdings R&D (Shenzhen)**  
**Co.,Ltd.**

**43B/F, INTERNAL CHAMBER OF COMMERCE TOWER, FUHUA RD3 CBD,**  
**FUTIAN DISTRICT, SHENZHEN, CHINA**

**FCC ID: XAJDVD-RW**

<b>Report Concerns:</b> Original Report	<b>Equipment Type:</b> DVD-RW
<b>Model:</b>	<u>RW108</u>
<b>Report No.:</b>	<u>STR10068063I</u>
<b>Test Date:</b>	<u>2010-06-07 to 2010-06-24</u>
<b>Issue Date:</b>	<u>2010-06-24</u>
<b>Test Engineer:</b>	<u>Galy</u> 
<b>Reviewed By:</b>	<u>Lahm Peng</u> 
<b>Approved &amp; Authorized By:</b>	<u>Jandy so/PSQ Manager</u> 
<b>Prepared By:</b>	<b>SEM.Test Compliance Service Co., Ltd</b> 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: <a href="http://www.semtest.com.cn">www.semtest.com.cn</a>

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: Matsunichi Communication Holdings R&D (Shenzhen) Co., Ltd.  
Address of applicant: 43B/F, INTERNAL CHAMBER OF COMMERCE TOWER,  
FUHUA RD3 CBD, FUTIAN DISTRICT, SHENZHEN, CHINA

Manufacturer: Guangzhou Singulargold Electronics Co., Ltd.  
Address of manufacturer: No.6, Lianhua yan Road, Science City, Guangzhou Hi-Tech  
Industrial Development Zone, Guangzhou, China

#### General Description of E.U.T

Items	Description
EUT Description:	DVD-RW
Trade Name:	Polaroid
Model No.:	RW108
Adding Model:	RW208
Rated Voltage:	DC 5V
Rated Power:	5W
Packaging Size:	14.2X14.2X1.8 cm
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. Test is carried out with RW108 since the others listed in the report have the different appearances, without electronic construction changed, declared by the manufacturer*

### 1.2 Test Standards

The following report is prepared on behalf of the Matsunichi Communication Holdings R&D (Shenzhen) 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 15.107, 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 Related Submittal(s)/Grant(s)

No Related Submittal(s).

### 1.4 Test Methodology

All measurements contained in this report were conducted with ANSI C63.4-2009, 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.

## 1.5 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.

## 1.6 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. under the Windows XP terminal.

## 1.7 Accessories Equipment List and Details

Description	Manufacturer	Model	Serial Number
Notebook	Lenovo	T22	LV14893
/	/	/	/

## 1.8 EUT Cable List and Details

Cable Description	Length (M)	Shielded/Unshielded	With Core/Without Core
USB Cable	2.0	Shielded	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  $\pm 2.88$  dB.

#### 3.2 Test Equipment List and Details

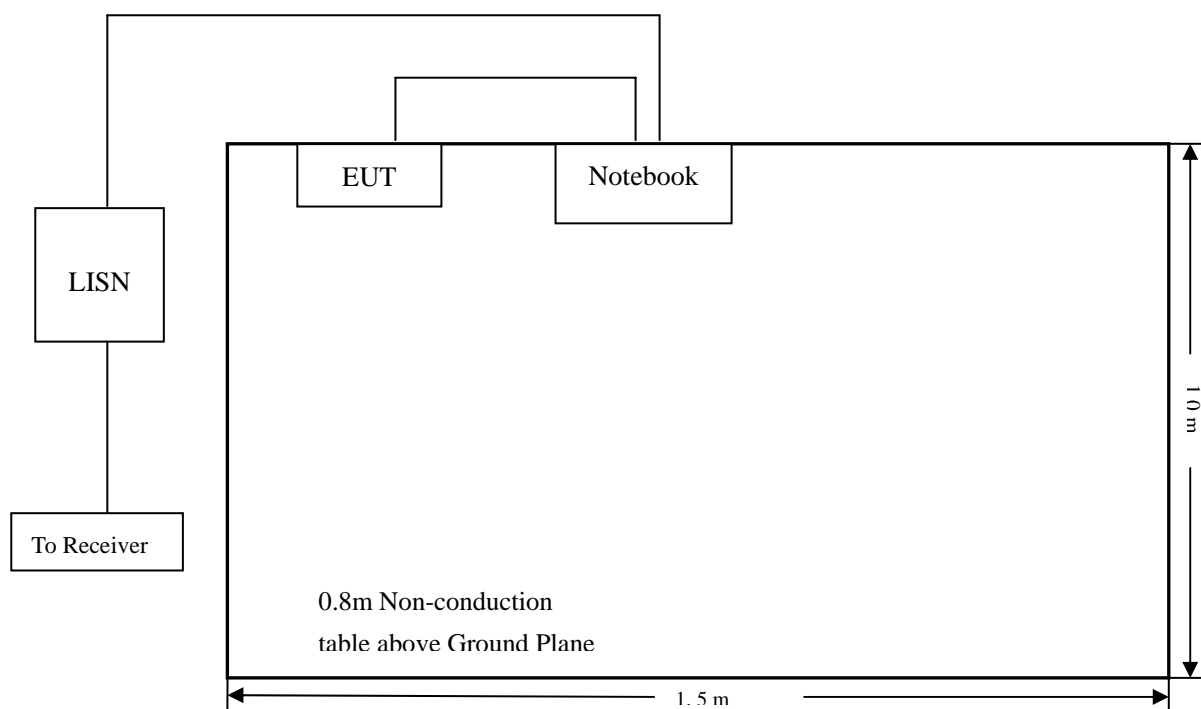
Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
EMI Test Receiver	Rohde & Schwarz	ESPI	101611	2009-08-12	2010-08-11
L.I.S.N	Schwarz beck	NSLK8126	8126-224	2009-08-12	2010-08-11
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100911	2009-08-12	2010-08-11

#### 3.3 Test Procedure

The setup of EUT is according with per ANSI C63.4-2009 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 15B Conducted margin for a Class B device, with the *worst* margin reading of:

**-8.51 dB $\mu$ V at 0.338 MHz in the Neutral mode, Ave detector, 0.15-30MHz**

### 3.8 Conducted Emissions Test Data

LINE CONDUCTED EMISSIONS				FCC 15 CLASS B	
Frequency	Amplitude	Detector	Phase	Limit	Margin
MHz	dB $\mu$ V	QP/Ave/Pk	Line/Neutral	dB $\mu$ V	dB
0.338	40.73	Ave	Neutral	49.24	-8.51
0.338	40.38	Ave	Line	49.24	-8.86
17.99	40.73	Ave	Neutral	50	-9.27
17.99	40.72	Ave	Line	50	-9.28
0.346	45.87	QP	Neutral	59.05	-13.18
0.166	51.02	QP	Line	65.15	-14.13
17.99	42.52	QP	Line	60	-17.48
17.99	42.26	QP	Neutral	60	-17.74

### Plot of Conducted Emissions Test Data

### Conducted Disturbance

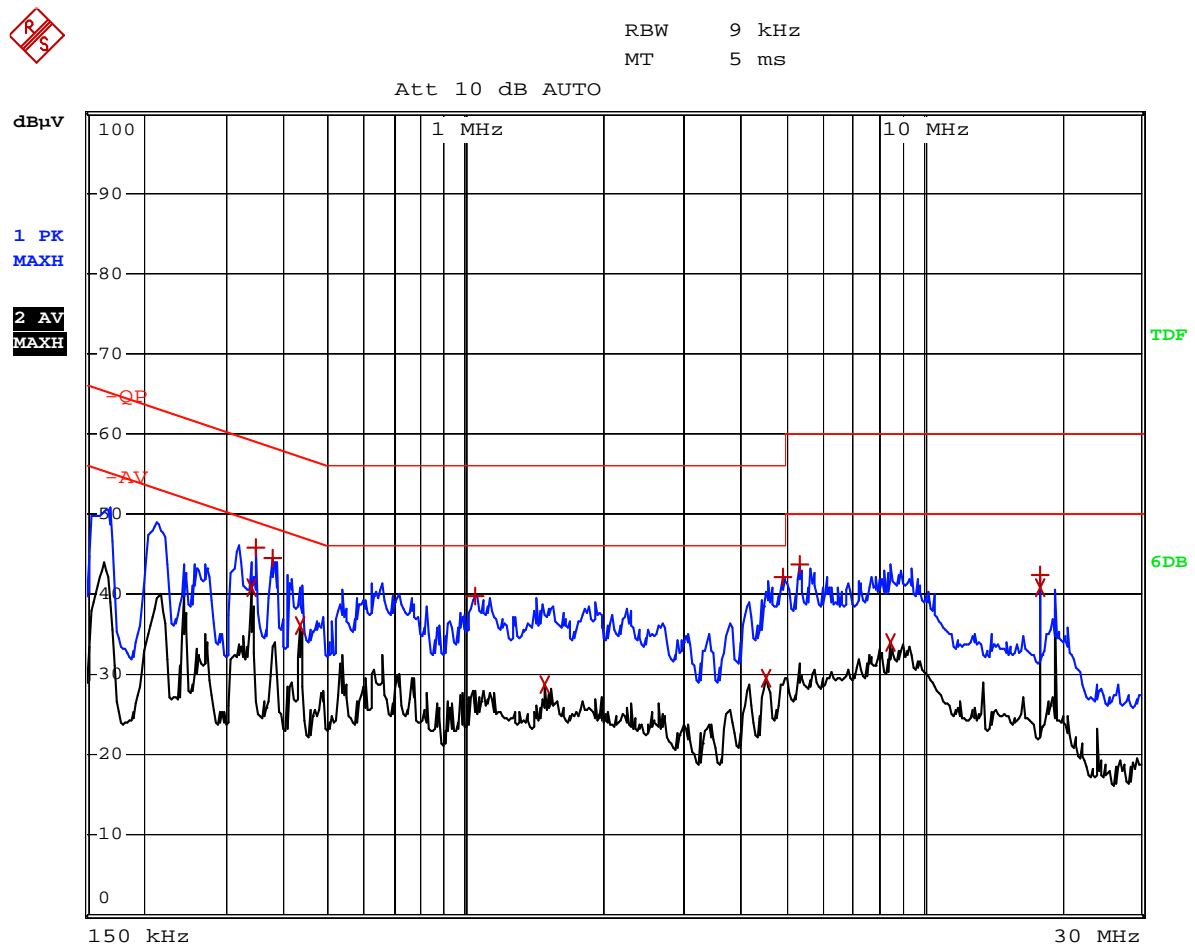
*EUT: DVD-RW*

*M/N: RW108*

*Operating Condition: Running*

*Test Specification:  $N$*

*Comment: AC 120V/60Hz connect to PC, USB 5V*





### Plot of Conducted Emissions Test Data

### Conducted Disturbance

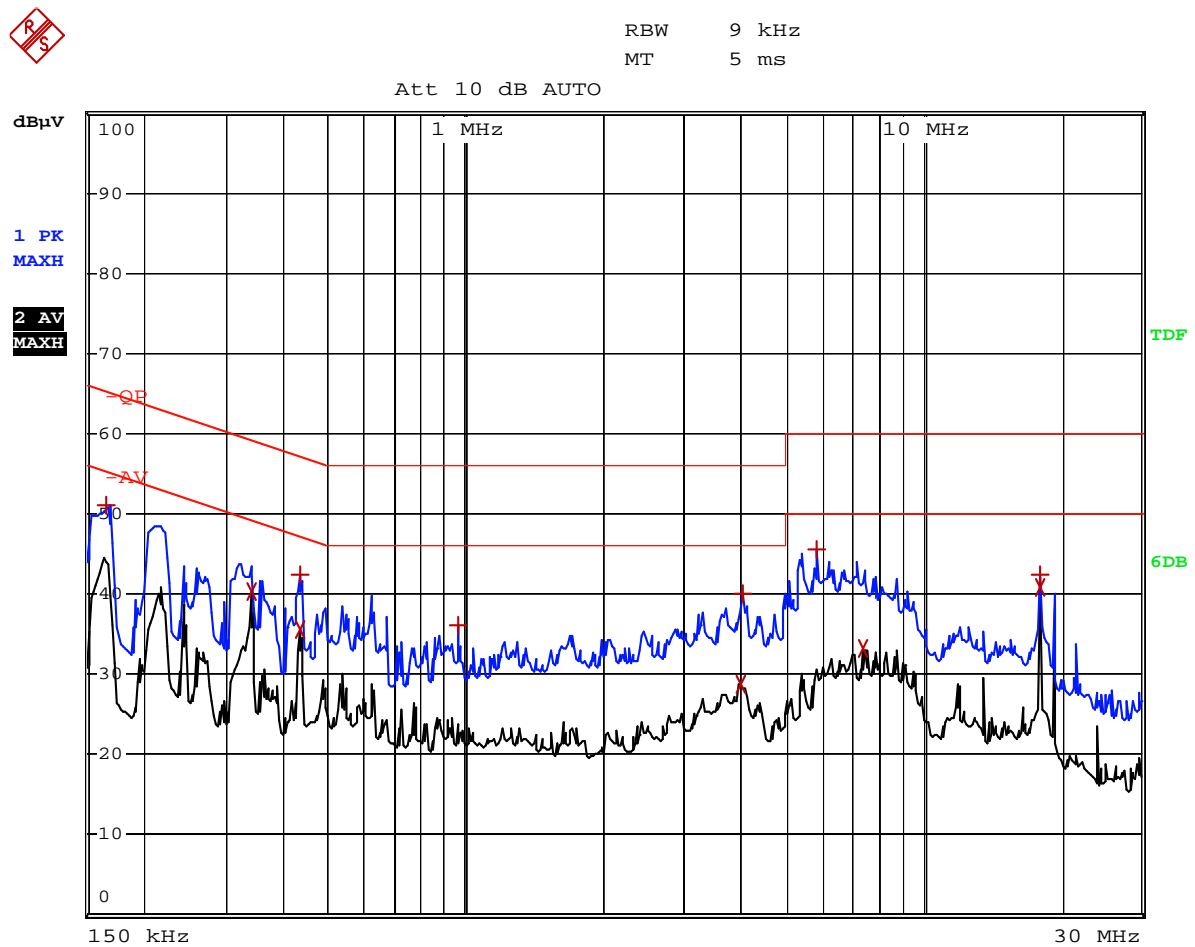
*EUT: DVD-RW*

*M/N: RW108*

*Operating Condition: Running*

*Test Specification: L*

*Comment: AC 120V/60Hz connect to PC, USB 5V*



## 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  $\pm 5.10$  dB.

### 4.2 Test Equipment List and Details

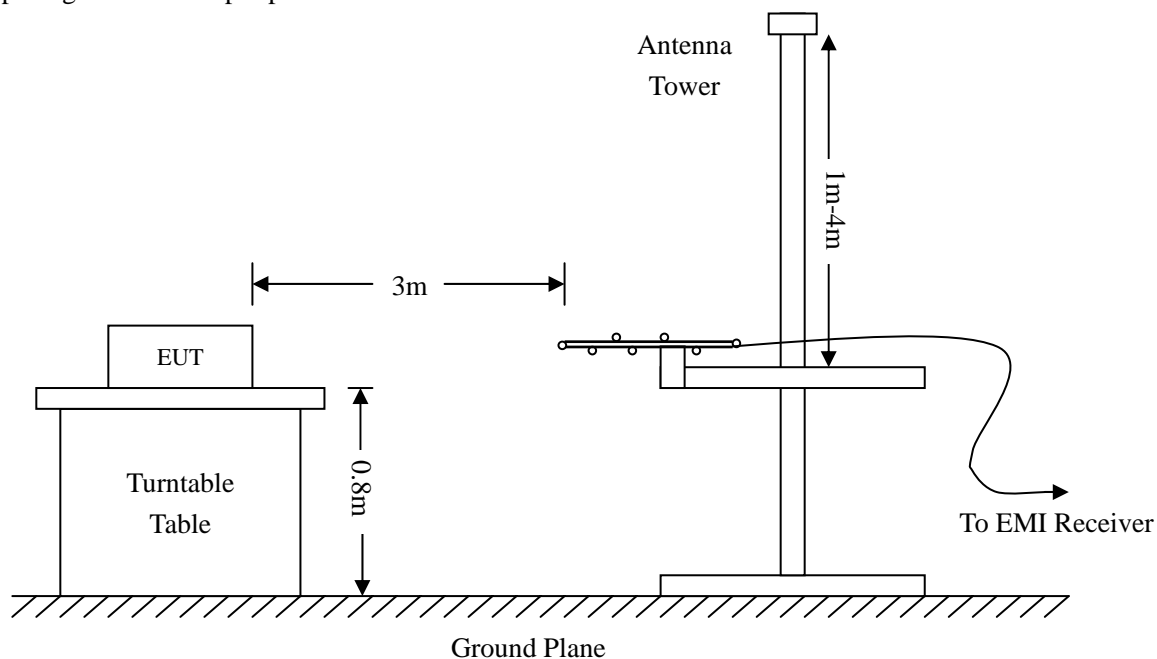
Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
Spectrum Analyzer	ROHDE&SCHWARZ	FSEA20	DE25181	2009-08-12	2010-08-11
Positioning Controller	C&C	CC-C-1F	N/A	2009-08-12	2010-08-11
Trilog Broadband Antenna	SCHWARZBECK	VULB9163	9163-333	2009-07-21	2010-07-20
Horn Antenna	SCHWARZBECK	BBHX 9120	9120-426	2009-07-21	2010-07-20
RF Switch	EM	EMSW18	SW060023	2009-08-12	2010-08-11
Amplifier	Agilent	8447F	3113A06717	2009-08-12	2010-08-11
Coaxial Cable	SCHWARZBECK	AK9513	9513-10	2009-08-12	2010-08-11
EMI Test Receiver	ROHDE&SCHWARZ	FSP	N/A	2010-04-16	2011-04-15

### 4.3 Test Procedure

The setup of EUT is according with per ANSI C63.4-2009 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 Test Receiver Setup

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

Start Frequency ..... 30 MHz  
 Stop Frequency..... 1000 MHz  
 Sweep Speed ..... Auto  
 IF Bandwidth..... 10 kHz  
 Quasi-Peak Adapter Bandwidth ..... 120 kHz  
 Quasi-Peak Adapter Mode ..... Normal

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

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

#### 4.6 Environmental Conditions

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

#### 4.7 Summary of Test Results/Plots

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

**-4.31 dBμV at 337.2155MHz in the Horizontal polarization, 30 MHz to 1 GHz, 3Meters**

Plot of Radiation Emissions Test Data

Radiated Disturbance

EUT: DVD-RW

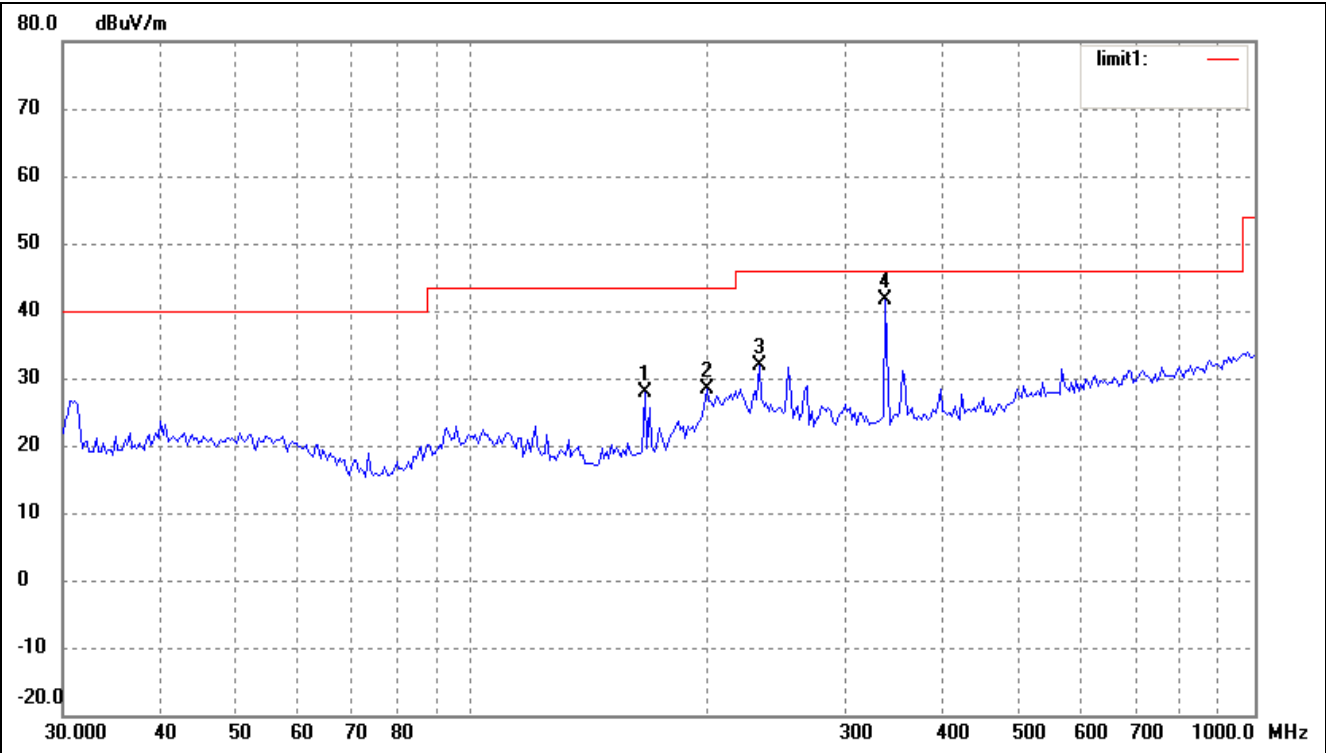
M/N: RW108

Operating Condition: Running

Test Specification: Horizontal & Vertical

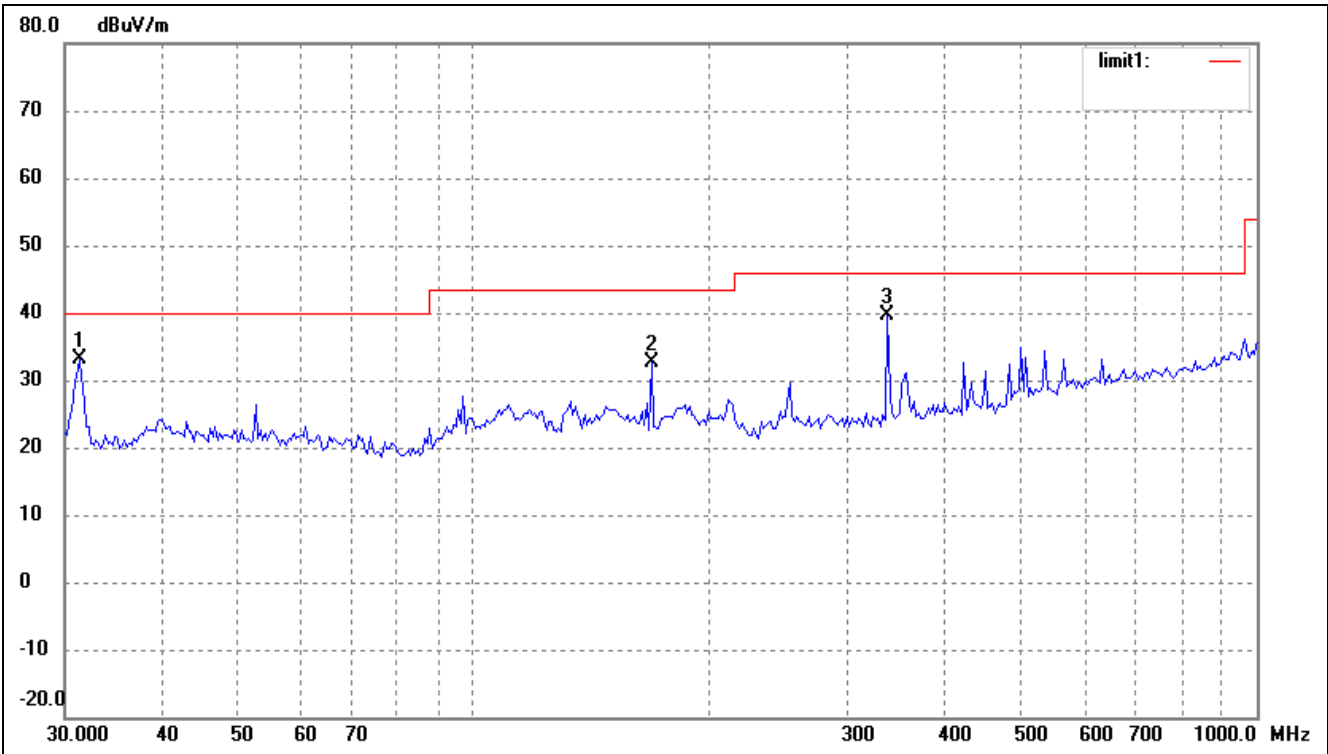
Comment: AC 120V/60Hz connect to PC, USB 5V

Horizontal



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( ° )	(cm)	
1	166.0680	24.03	3.93	27.96	43.50	-15.54	360	100	peak
2	199.2855	22.78	5.68	28.46	43.50	-15.04	360	100	peak
3	232.5318	24.85	7.03	31.88	46.00	-14.12	360	100	peak
4	337.2155	32.51	9.18	41.69	46.00	-4.31	360	100	peak

Vertical



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( ° )	(cm)	
1	31.2893	26.58	6.62	33.20	40.00	-6.80	360	100	peak
2	168.4138	28.63	4.01	32.64	43.50	-10.86	360	100	peak
3	337.2155	30.45	9.18	39.63	46.00	-6.37	360	100	peak

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