

FCC Part 15B

Measurement and Test Report

For

DynaPoint (Dong Guan) INC.

No.51, Xinju Road, Precinct Shangjiao, ChangAn, DongGuan,
GuangDong, China

FCC ID: RYLKA558UH

Report Concerns: Original Report	Equipment Type: Keyboard
Model:	<u>KA558UH</u>
Report No.:	<u>STR10088045I</u>
Test Date:	<u>2010-08-09 to 2010-08-21</u>
Issue Date:	<u>2010-08-26</u>
Test Engineer:	<u>Silin Chen</u> <i>Silin chen</i>
Reviewed By:	<u>Lahm Peng</u> <i>Lahm peng</i>
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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: DynaPoint (Dong Guan) INC.
Address of applicant: No.51, Xinju Road, Precinct Shangjiao, ChangAn,
DongGuan, GuangDong, China

Manufacturer: DynaPoint (Dong Guan) INC.
Address of manufacturer: No.51, Xinju Road, Precinct Shangjiao, ChangAn,
DongGuan, GuangDong, China

General Description of E.U.T

Items	Description
EUT Description:	Keyboard
Trade Name:	/
Model No.:	KA558UH
Adding Model:	/
Rated Voltage:	DC 5V
Rated Current:	/

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 DynaPoint (Dong Guan) 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, 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 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 the testing was designed to exercise the system components.

1.7 Accessories Equipment List and Details

Description	Manufacturer	Model	Serial Number
AC Adapter	/	92P101	/
IBM	Notebook	1843	/

1.8 EUT Cable List and Details

Cable Description	Length (M)	Shielded/Unshielded	With Core/Without Core
Keyboard Cable	1.5	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 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

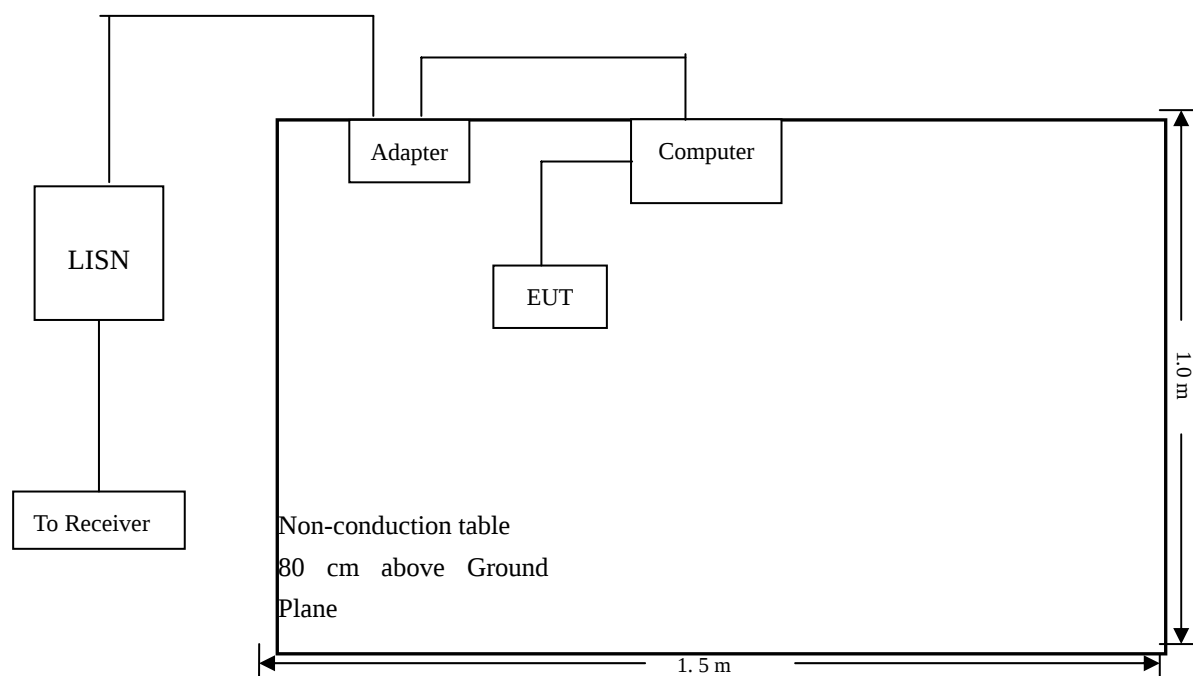
Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
EMI Test Receiver	Rohde & Schwarz	ESPI	101611	2010-08-12	2011-08-11
L.I.S.N	Schwarz beck	NSLK8126	8126-224	2010-08-12	2011-08-11
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100911	2010-08-12	2011-08-11

Statement of Traceability: All calibrations have been performed per the NVLAP requirements traceable to the NIST.

3.3 Test Procedure

Test is conducting under the description of 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.

3.4 Basic Test Setup Block Diagram



3.5 Environmental Conditions

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

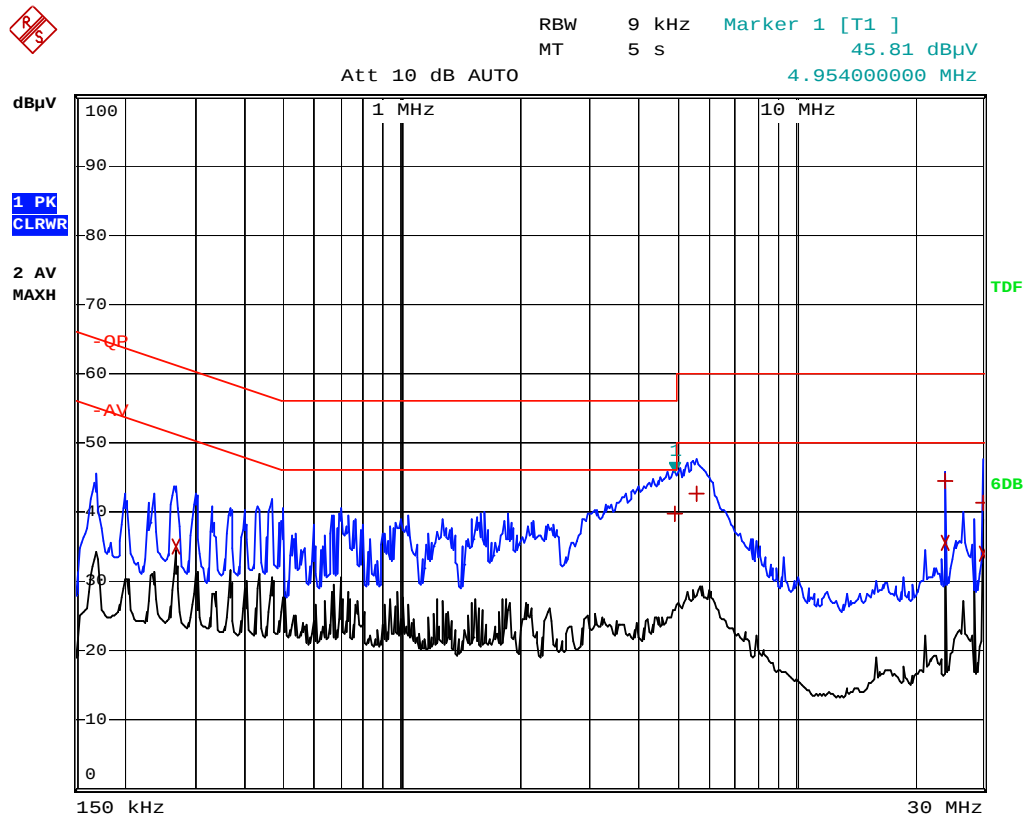
3.6 Summary of Test Results/Plots

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

-10.93 dB μ V at **24.026 MHz** in the **Line, Ave** detector, 0.15-30MHz

Plot of Conducted Emissions Test Data

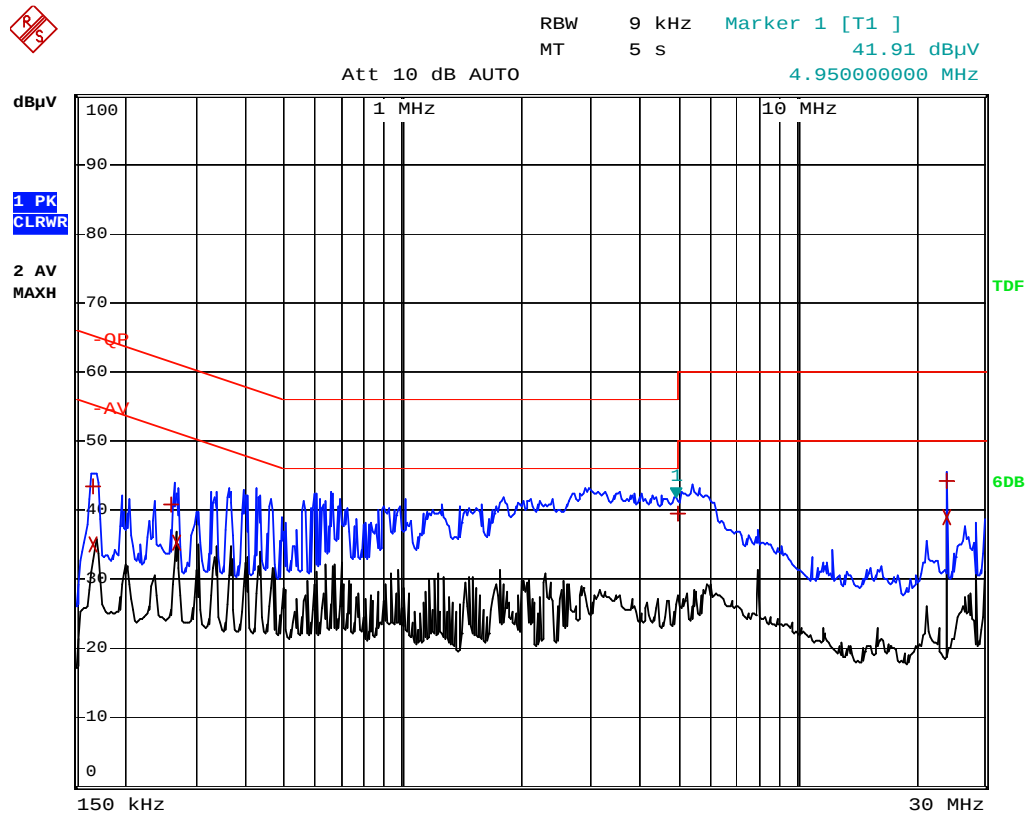
Conducted Disturbance
EUT: Keyboard
M/N: KA558UH
Operating Condition: Operating
Test Specification: N
Comment: DC 5V



EDIT PEAK LIST (Final Measurement Results)			
Trace1:	-QP		
Trace2:	-AV		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBµV	DELTA LIMIT dB
2 Average	266 kHz	34.94	-16.29
1 Quasi Peak	4.954 MHz	39.86	-16.13
1 Quasi Peak	5.638 MHz	42.56	-17.43
1 Quasi Peak	24.026 MHz	44.37	-15.62
2 Average	24.026 MHz	35.61	-14.38
1 Quasi Peak	29.978 MHz	41.32	-18.67
2 Average	29.978 MHz	34.03	-15.96

Plot of Conducted Emissions Test Data

EUT: Keyboard
M/N: KA558UH
Operating Condition: Operating
Test Specification: L
Comment: DC 5V



EDIT PEAK LIST (Final Measurement Results)				
Trace1:	-QP			
Trace2:	-AV			
Trace3:	---			
TRACE	FREQUENCY	LEVEL dBμV	DELTA LIMIT dB	
1 Quasi Peak	166 kHz	43.53	-21.62	
2 Average	166 kHz	34.95	-20.19	
1 Quasi Peak	262 kHz	40.77	-20.59	
2 Average	266 kHz	35.31	-15.92	
1 Quasi Peak	4.994 MHz	39.54	-16.45	
1 Quasi Peak	24.026 MHz	44.16	-15.83	
2 Average	24.026 MHz	39.06	-10.93	

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

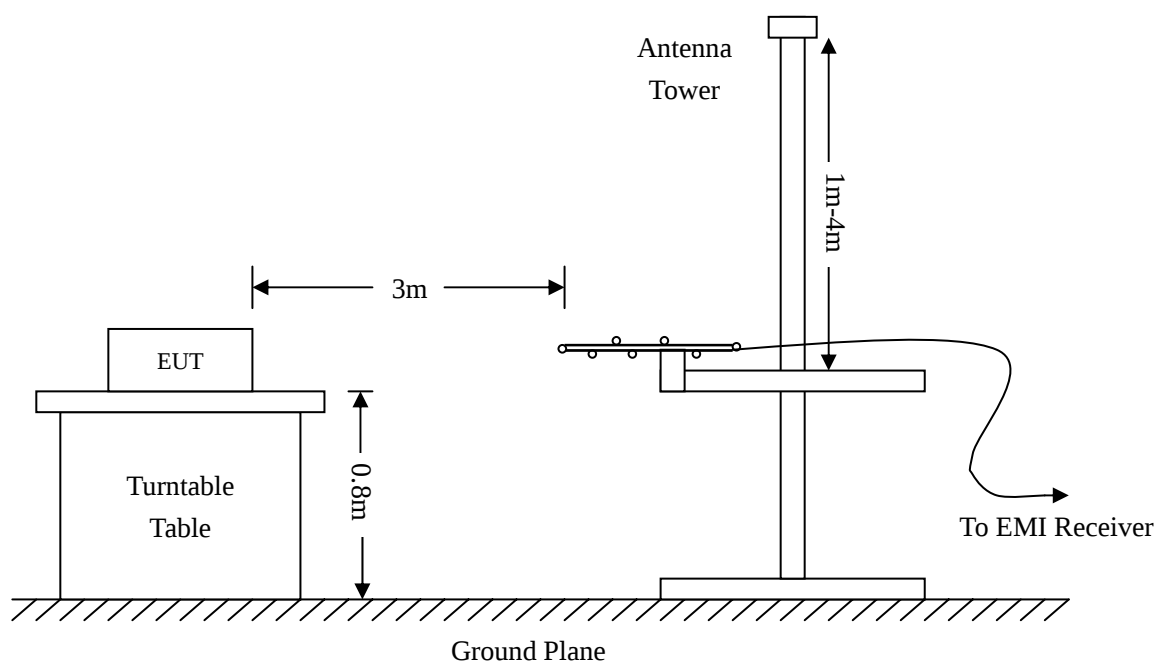
Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
Spectrum Analyzer	R&S	FSP	836079/035	2010-04-16	2011-04-15
EMI Test Receiver	R&S	ESVB	825471/005	2010-08-12	2011-08-11
Positioning Controller	C&C	CC-C-1F	N/A	2010-08-12	2011-08-11
RF Switch	EM	EMSW18	SW060023	2010-08-12	2011-08-11
Pre-amplifier	Agilent	8447F	3113A06717	2010-08-12	2011-08-11
Pre-amplifier	Compliance Direction	PAP-0118	24002	2010-08-12	2011-08-11
Trilog Broadband Antenna	SCHWARZBECK	VULB9163	9163-333	2010-07-21	2011-07-20
Horn Antenna	ETS	3117	00086197	2010-07-21	2011-07-20

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 15.109 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 -6dB μ V means the emission is 6dB μ V 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:	23 °C
Relative Humidity:	55 %
ATM Pressure:	1011 mbar

4.7 Summary of Test Results/Plots

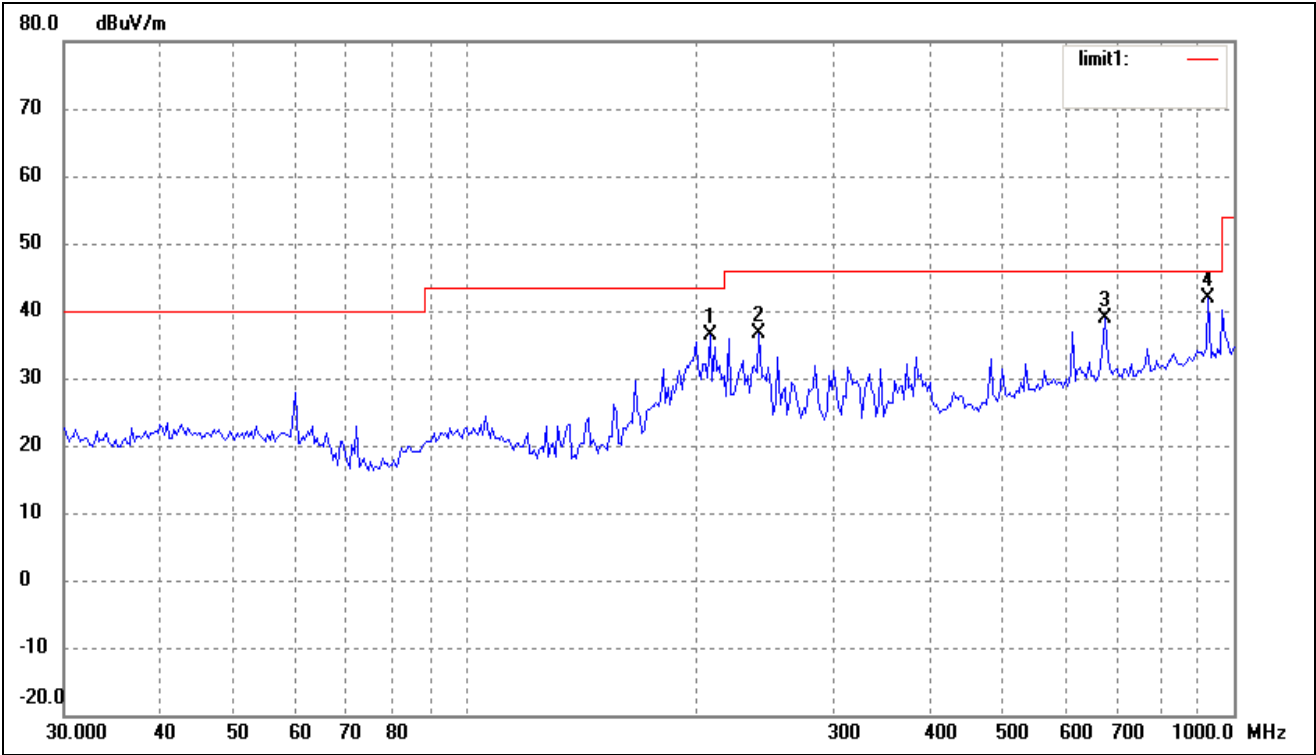
According to the data, the EUT complied with the FCC Part 15B Class B standards, and had the worst margin of:

-3.08 dB μ V at 925.7563 MHz in the Vertical polarization, 30 MHz to 1 GHz, 3Meters

Plot of Radiation Emissions Test

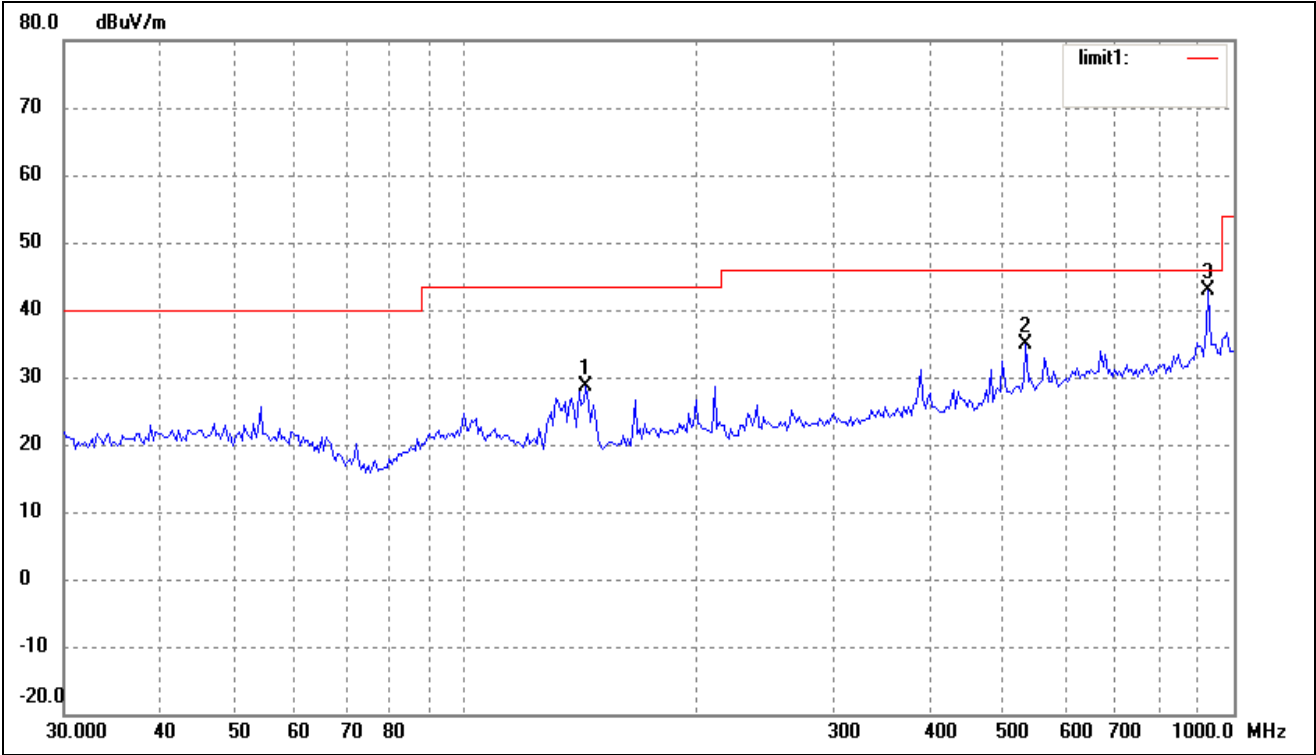
Radiated Disturbance
EUT: Keyboard
M/N: KA558UH
Operating Condition: Operating
Test Specification: Horizontal & Vertical
Comment: DC 5V

Horizontal



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	207.8501	30.55	5.94	36.49	43.50	-7.01	360	100	peak
2	240.8304	29.20	7.46	36.66	46.00	-9.34	360	100	peak
3	679.9600	24.39	14.43	38.82	46.00	-7.18	360	100	peak
4	925.7563	24.72	17.24	41.96	46.00	-4.04	360	100	peak

Vertical



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	143.3261	25.40	3.25	28.65	43.50	-14.85	360	100	peak
2	535.7073	21.54	13.37	34.91	46.00	-11.09	360	100	peak
3	925.7563	25.68	17.24	42.92	46.00	-3.08	360	100	peak

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