

FCC Part 15B

Measurement and Test Report

For

DOLSONMUSE ELECTRONIC CO., LTD

YONGHE CROSSING GUANHUA ROAD GUANYAO NANHAI FOSHAN

GUANGDONG CHINA

FCC ID: 2AH4GDJ-MX5330

FCC Rule(s):	<u>FCC Part 15 Subpart B</u>
Product Description:	<u>DJ MIXER ROCKY PARTY SYSTEM(DJ SPEAKER WITH BT&PRO-MIXER)</u>
Tested Model:	<u>DJ-MX5330</u>
Report No.:	<u>STR16038195I-1</u>
Tested Date:	<u>2016-03-21 to 2016-04-18</u>
Issued Date:	<u>2016-04-18</u>
Tested By:	<u>Rode Liu / Engineer</u>
Reviewed By:	<u>Silin Chen / EMC Manager</u>
Approved & Authorized By:	<u>Jandy so / PSQ Manager</u>
Prepared By:	

Rode Liu

Silin Chen

Jandy so

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
1.6 MEASUREMENT UNCERTAINTY	5
1.7 TEST EQUIPMENT LIST AND DETAILS	6
2. SUMMARY OF TEST RESULTS	7
3. CONDUCTED EMISSIONS	8
3.1 TEST PROCEDURE	8
3.2 BASIC TEST SETUP BLOCK DIAGRAM	8
3.3 ENVIRONMENTAL CONDITIONS	8
3.4 SUMMARY OF TEST RESULTS/PLOTS	8
3.5 CONDUCTED EMISSIONS TEST DATA	9
4. RADIATED EMISSION	11
4.1 TEST PROCEDURE	11
4.2 TEST RECEIVER SETUP	11
4.3 CORRECTED AMPLITUDE & MARGIN CALCULATION	12
4.4 ENVIRONMENTAL CONDITIONS	12
4.5 SUMMARY OF TEST RESULTS/PLOTS	12

1. GENERAL INFORMATION

1.1 Product Description for Equipment Under Test (EUT)

Client Information

Applicant: DOLSONMUSE ELECTRONIC CO., LTD
Address of applicant: YONGHE CROSSING GUANHUA ROAD GUANYAO
NANHAI FOSHAN GUANGDONG CHINA
Manufacturer: DOLSONMUSE ELECTRONIC CO., LTD
Address of manufacturer: YONGHE CROSSING GUANHUA ROAD GUANYAO
NANHAI FOSHAN GUANGDONG CHINA

General Description of EUT	
Product Name:	DJ MIXER ROCKY PARTY SYSTEM(DJ SPEAKER WITH BT&PRO-MIXER)
Trade Name:	/
Model No.:	DJ-MX5330
Adding Model(s):	IQ-4215DJBT, IQ-4212DJBT, DJ-MX5550, DJ-MX55YZ(Y and Z=0-9), iMAX-10, iMAX-YZ(Y and Z=0-9), HiGO-20, HiGO-YZ(Y and Z=0-9), DJ-90215Rplus, DJ-90210R, MGA-2288plus, MGA-1188plus, MAX-20
<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 DJ-MX5330, but the circuit and the electronic construction do not change, the product has two same BT modules, the test data is test with BT A. declared by the manufacturer.</i>	

Technical Characteristics of EUT	
Rated Voltage:	AC120V/60Hz
Rated Current:	/
Rated Power:	190W
Power Adapter Model:	/
Lowest Internal Frequency:	24MHz
Classification of ITE:	CLASS B

1.2 Test Standards

The following report is prepared on behalf of the DOLSONMUSE ELECTRONIC 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, 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 C63.4-2014, 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	Playing for SD/U disk	/
TM2		
TM3		

EUT Cable List and Details

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

Auxiliary Equipment List and Details

Description	Manufacturer	Model	Serial Number
/	/	/	/

Special Cable List and Details

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

1.6 Measurement Uncertainty

Measurement uncertainty		
Parameter	Conditions	Uncertainty
Conducted Emissions	Conducted	$\pm 2.88\text{dB}$
Transmitter Spurious Emissions	Radiated	$\pm 5.1\text{dB}$

1.7 Test Equipment List and Details

Description	Manufacturer	Model	Serial Number	Cal Date	Due Date
Spectrum Analyzer	Agilent	E4407B	MY41440400	2015-06-17	2016-06-16
Spectrum Analyzer	Rohde & Schwarz	FSP	836079/035	2015-06-17	2016-06-16
EMI Test Receiver	Rohde & Schwarz	ESVB	825471/005	2015-06-17	2016-06-16
Amplifier	Agilent	8447F	3113A06717	2015-06-17	2016-06-16
Amplifier	C&D	PAP-1G18	2002	2015-06-17	2016-06-16
Broadband Antenna	Schwarz beck	VULB9163	9163-333	2015-06-17	2016-06-16
Horn Antenna	ETS	3117	00086197	2015-06-17	2016-06-16
Loop Antenna	Schwarz beck	FMZB 1516	9773	2015-06-17	2016-06-16
EMI Test Receiver	Rohde & Schwarz	ESPI	101611	2015-06-17	2016-06-16
L.I.S.N	Schwarz beck	NSLK8126	8126-224	2015-06-17	2016-06-16
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100911	2015-06-17	2016-06-16

2. SUMMARY OF TEST RESULTS

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

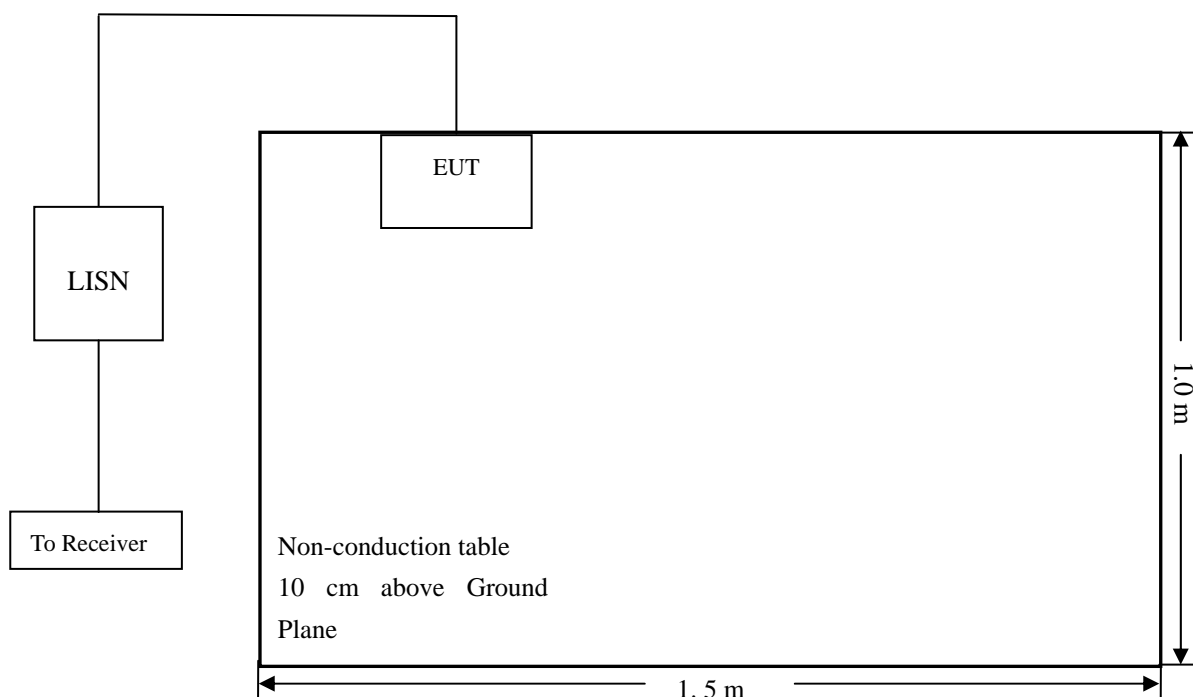
N/A: not applicable

3. Conducted Emissions

3.1 Test Procedure

Test is conducting under the description of ANSI C63.4-2014, 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.

3.2 Basic Test Setup Block Diagram



3.3 Environmental Conditions

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

3.4 Summary of Test Results/Plots

According to the data in section 3.6, the EUT complied with the FCC Part 15.107(a) Conducted margin for a Class B device, with the *worst* margin reading of:

-4.45 dB at 0.2980 MHz in the Neutral, Avg detector, 0.15-30MHz

3.5 Conducted Emissions Test Data

Plot of Conducted Emissions Test Data

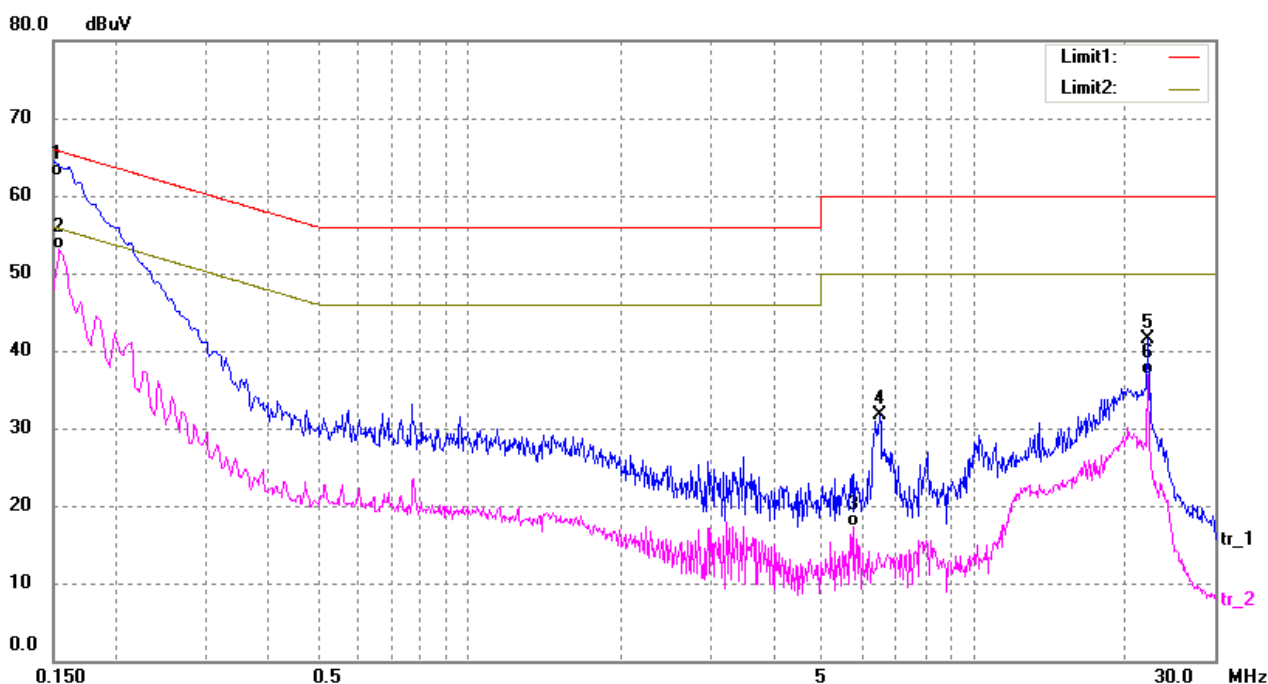
EUT: DJ MIXER ROCKY PARTY SYSTEM(DJ SPEAKER WITH BT&PRO-MIXER)

Tested Model: DJ-MX5330

Operating Condition: TM1

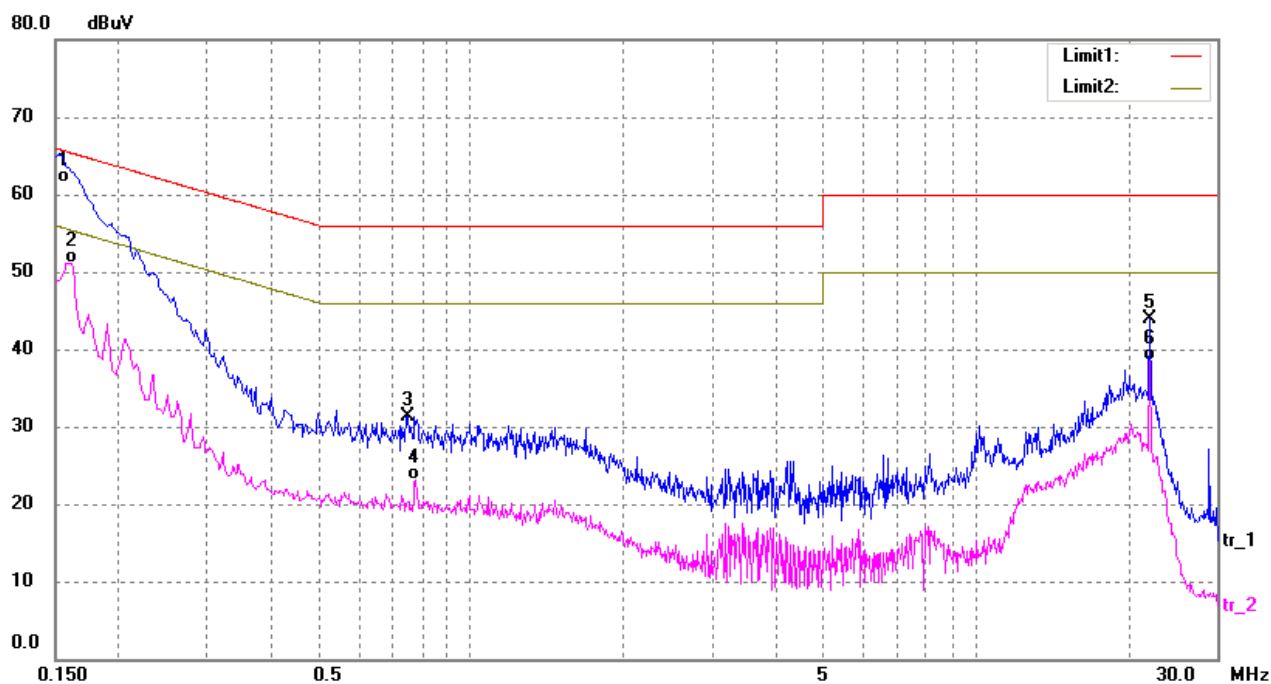
Comment: AC120V/60Hz

Test Specification: Neutral



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1500	52.92	9.50	62.42	66.00	-3.58	QP
2*	0.1540	43.68	9.50	53.18	55.78	-2.60	AVG
3	5.7940	6.97	10.26	17.23	50.00	-32.77	AVG
4	6.5140	21.43	10.28	31.71	60.00	-28.29	peak
5	22.0860	31.09	10.49	41.58	60.00	-18.42	peak
6	22.0860	26.35	10.49	36.84	50.00	-13.16	AVG

Test Specification: Line



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1540	51.98	9.50	61.48	65.78	-4.30	QP
2*	0.1620	41.64	9.50	51.14	55.36	-4.22	AVG
3	0.7500	21.71	9.62	31.33	56.00	-24.67	peak
4	0.7780	13.53	9.63	23.16	46.00	-22.84	AVG
5	22.0820	33.38	10.49	43.87	60.00	-16.13	peak
6	22.0820	28.09	10.49	38.58	50.00	-11.42	AVG

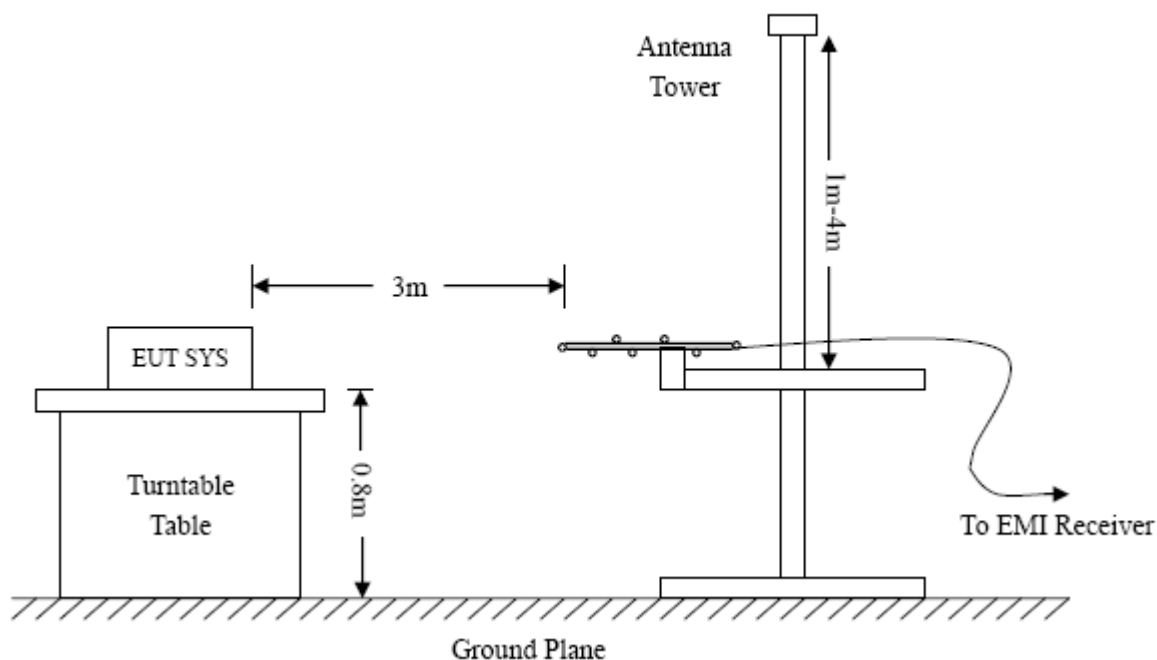
4. RADIATED EMISSION

4.1 Test Procedure

The setup of EUT is according with per ANSI C63.4-2014 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.



4.2 Test Receiver Setup

Frequency :9kHz-30MHz

RBW=10KHz,

VBW =30KHz

Sweep time= Auto

Trace = max hold

Detector function = peak

Frequency :30MHz-1GHz

RBW=120KHz,

VBW=300KHz

Sweep time= Auto

Trace = max hold

Detector function = peak, QP

Frequency :Above 1GHz

RBW=1MHz,

VBW=3MHz(Peak), 10Hz(AV)

Sweep time= Auto

Trace = max hold

Detector function = peak, AV

4.3 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:

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

4.4 Environmental Conditions

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

4.5 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:

-3.07 dB at 66.2662 **MHz** in the **Vertical** polarization, **TM1** mode, **30 MHz** to **1 GHz**, **3Meters**

Plot of Radiated Emissions Test Data

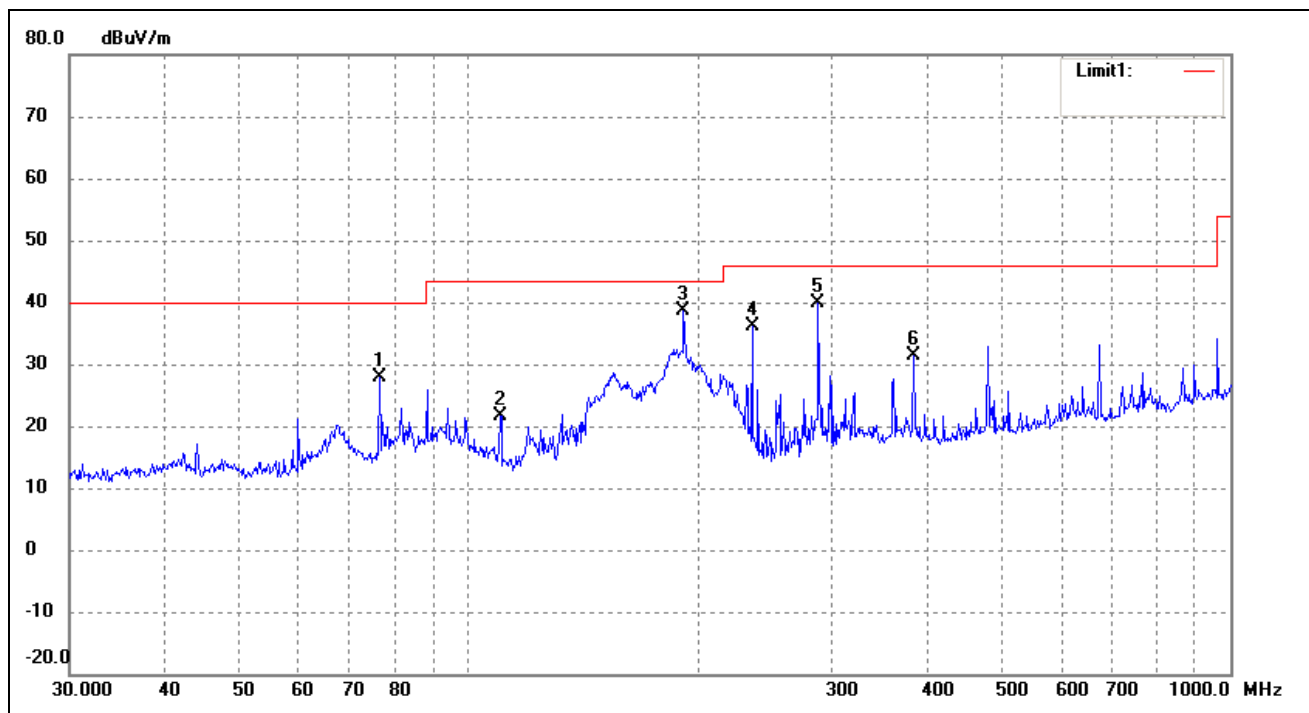
EUT: DJ MIXER ROCKY PARTY SYSTEM(DJ SPEAKER WITH BT&PRO-MIXER)

Tested Model: DJ-MX5330

Operating Condition: TM1

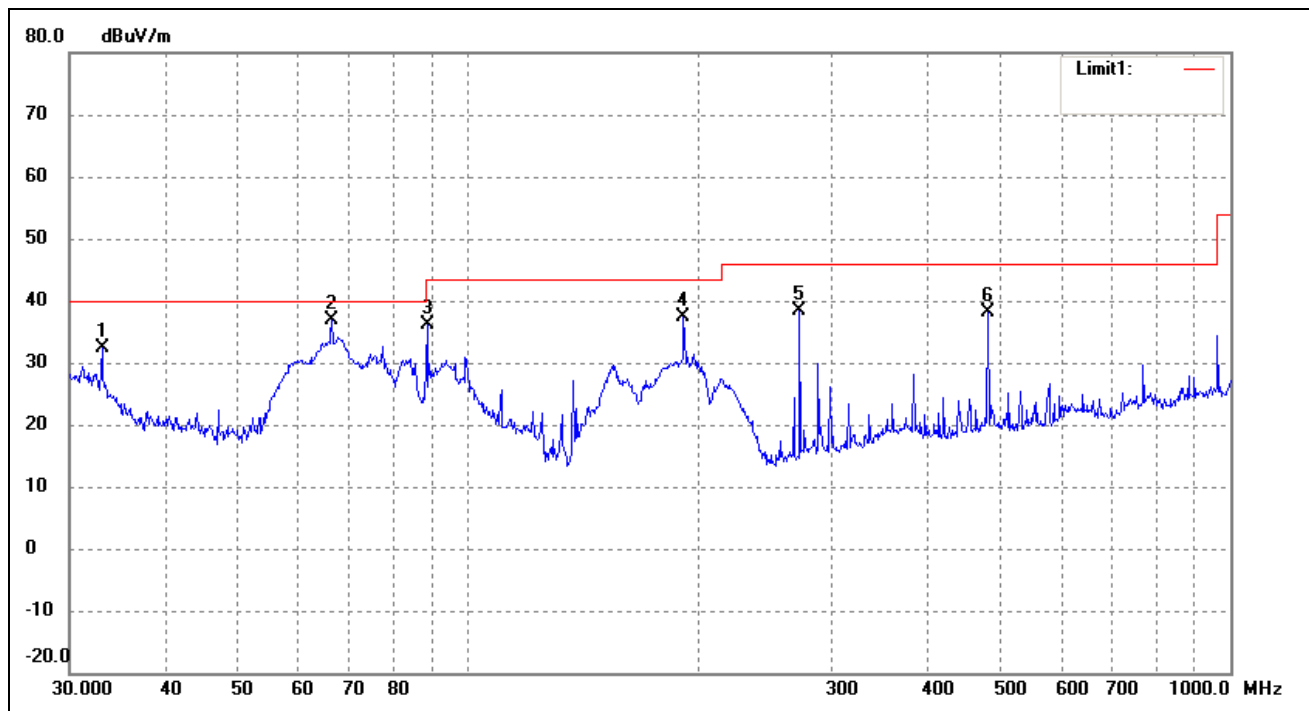
Comment: AC120V/60Hz

Test Specification: Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree (°)	Height (cm)	Remark
1	76.5121	40.08	-12.28	27.80	40.00	-12.20	100	100	peak
2	110.1816	32.81	-11.17	21.64	43.50	-21.86	100	100	peak
3	191.7450	48.47	-9.77	38.70	43.50	-4.80	100	100	peak
4	235.8164	44.59	-8.44	36.15	46.00	-9.85	100	100	peak
5	287.9904	45.77	-5.92	39.85	46.00	-6.15	100	100	peak
6	383.9318	33.80	-2.30	31.50	46.00	-14.50	100	100	peak

Test Specification: Vertical



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	33.0950	42.02	-9.53	32.49	40.00	-7.51	100	100	peak
2	66.2662	48.55	-11.62	36.93	40.00	-3.07	100	100	peak
3	88.3421	48.86	-12.79	36.07	43.50	-7.43	100	100	peak
4	191.7450	47.14	-9.77	37.37	43.50	-6.13	100	100	peak
5	272.2776	44.76	-6.43	38.33	46.00	-7.67	100	100	peak
6	480.5276	39.15	-1.08	38.07	46.00	-7.93	100	100	peak