FCC Part 15B
Measurement and Test Report

For

Yinlips Technology (ShenZhen) Co., Ltd.

Building #3, Zone 1,BaiWangXin High Technology Industrial Park,

NanShan District, ShenZhen 518108, P.R.China

FCC ID: 2AA2LYDP-G28S

FCC Rule(s):	FCC Part 15 Subpart B
Product Description:	Portable Mutimedia Player
Tested Model:	YDP-G28S
Report No.:	STR13088460I-2
Tested Date:	2013-08-28 to 2013-09-24
Issued Date:	2013-09-24
Tested By:	Daniel Liu / Engineer
Reviewed By:	Lahm Peng / EMC Manager
Approved & Authorized By:	Jandy so / PSQ Manager

Prepared By:

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1. GENERAL INFORMATION

1.1 Product Description for Equipment Under Test (EUT)

Client Information

Applicant:	Yinlips Technology (ShenZhen) Co., Ltd.
Address of applicant:	Building #3, Zone 1,BaiWangXin High Technology Industrial Park, NanShan District, ShenZhen 518108, P.R.China
Manufacturer:	Yinlips Technology (ShenZhen) Co., Ltd
Address of manufacturer:	Building #3, Zone 1,BaiWangXin High Technology Industrial Park, NanShan District, ShenZhen 518108, P.R.China

General Description of EUT	
Product Name:	Portable Mutimedia Player
Trade Name:	/
Model No.:	YDP-G28S
Adding Model(s):	YDP-G28,YDP-G26,YDP-G18D,YDP-G18Q, YDP-G20,YDP-G65,YDP-G65D,YDP-G65Q, GP700,GP700D,GP700Q,GP706,GP706D, G706Q,GP708,GP708D,GP708Q,GP800, GP800D,GP800Q
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 YDP-G28S, but the circuit and the electronic construction do not change, declared by the manufacturer.	

Technical Characteristics of EUT	
Rated Voltage:	Charger: DC 5V Battery: DC 3.7V
Rated Current:	500mAh
Rated Power:	3W
Power Adapter Model:	YMK-10W052000A Input: AC 100-240V, 0.5A Output: DC 5.0V, 2000mA
Lowest Internal Frequency:	32.768kHz
Highest Internal Frequency:	1.6GHz
Classification of ITE:	Class B

1.2 Test Standards

The following report is prepared on behalf of the Yinlips Technology (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, 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	Charging & Playing	/
TM2	Downloading	Connect to Notebook
TM3	HDMI	HDMI Connect to Display

EUT Cable List and Details

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

Auxiliary Equipment List and Details

Description	Manufacturer	Model	Serial Number
Notebook	Lenove	E23	EB12648265
Display	DELL	U2410f	/

Special Cable List and Details

Cable Description	Length (M)	Shielded/Unshielded	With Core/Without Core
HDMI Cable	1.5	Shielded	Without Core
Earphone Cable	1.25	Unshielded	Without Core

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 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.

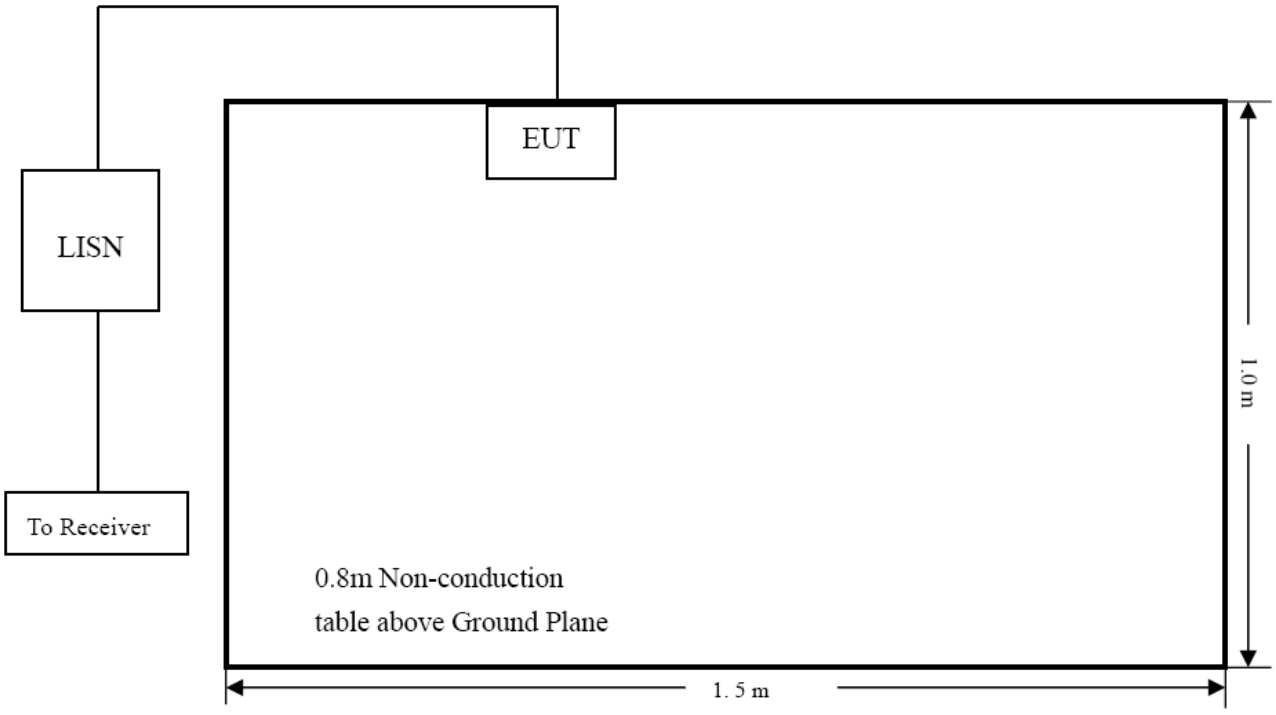
3.2 Test Equipment List and Details

Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
EMI Test Receiver	Rohde & Schwarz	ESPI	101611	2013-05-07	2014-05-06
L.I.S.N	Schwarz beck	NSLK8126	8126-224	2013-05-07	2014-05-06
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100911	2013-05-07	2014-05-06

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:

-6.05 dB at **0.15 MHz** in the **Line**, **Peak** detector, **TM1** Mode, 0.15-30MHz

3.7 Conducted Emissions Test Data

Plot of Conducted Emissions Test Data

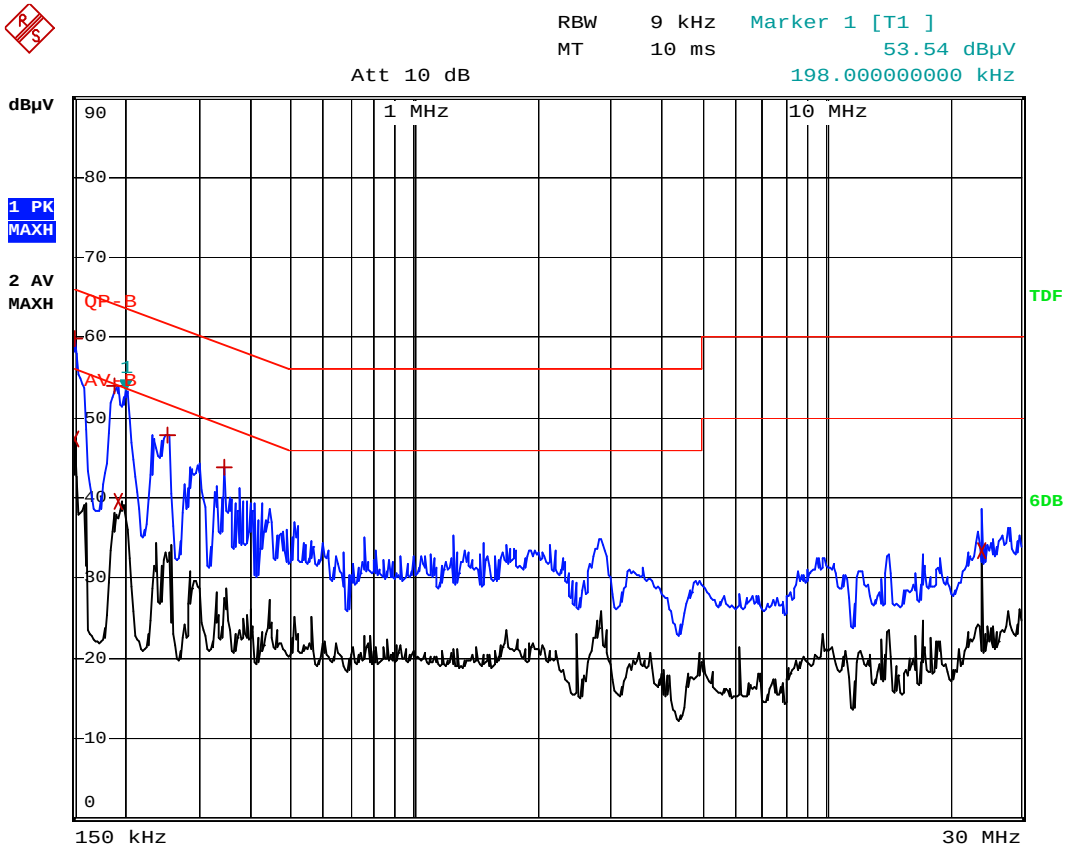
EUT: *Portable Mutimedia Player*

Tested Model: *YDP-G28S*

Operating Condition: *TM1*

Comment: *AC 120V/60Hz; Adapter DC 5V*

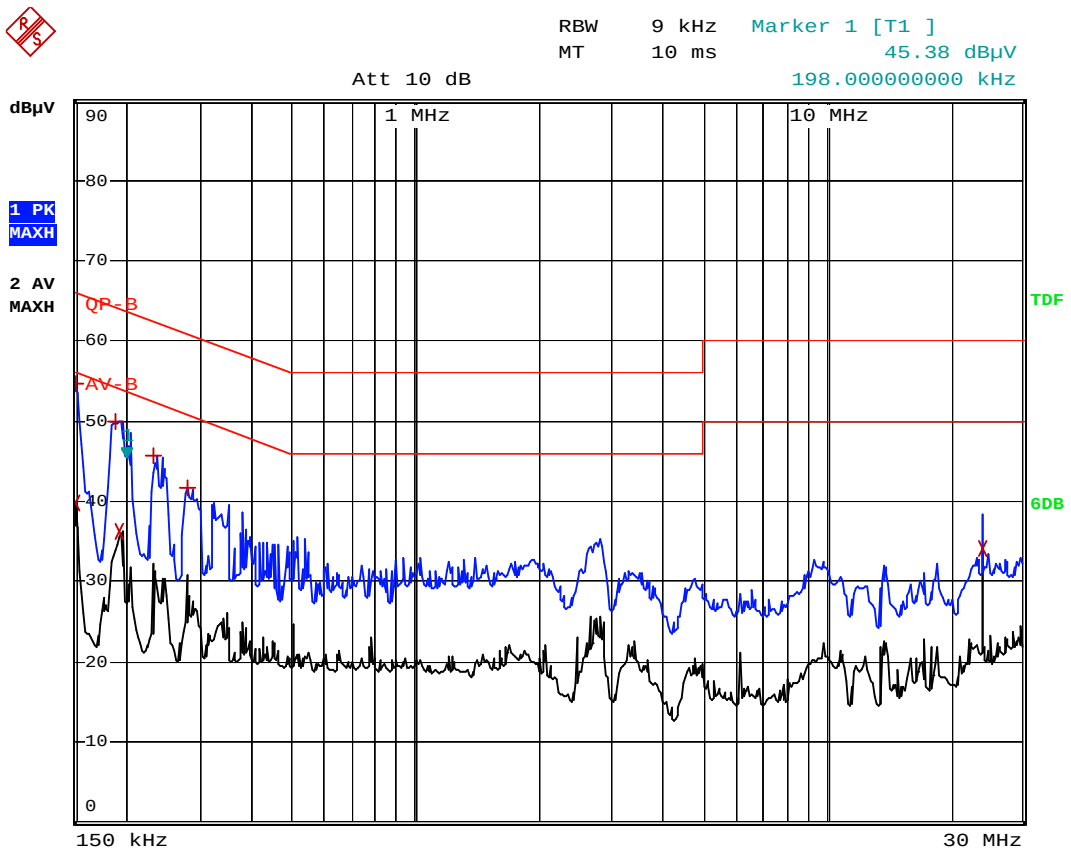
Test Specification: *Line*



EDIT PEAK LIST (Prescan Results)

Trace1:	QP-B			
Trace2:	AV-B			
Trace3:	---			
	TRACE	FREQUENCY	LEVEL dBµV	DELTA LIMIT dB
1	Max Peak	150 kHz	59.94	-6.05
2	Average	150 kHz	47.47	-8.52
1	Max Peak	190 kHz	54.01	-10.01
2	Average	194 kHz	39.50	-14.36
1	Max Peak	250 kHz	47.90	-13.85
1	Max Peak	342 kHz	43.82	-15.32
2	Average	23.974 MHz	33.36	-16.63

Test Specification: *Neutral*



EDIT PEAK LIST (Prescan Results)			
Trace1:	QP-B		
Trace2:	AV-B		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBµV	DELTA LIMIT dB
1 Max Peak	150 kHz	54.60	-11.39
2 Average	150 kHz	39.82	-16.17
1 Max Peak	190 kHz	49.90	-14.13
2 Average	194 kHz	36.33	-17.53
1 Max Peak	234 kHz	45.81	-16.49
1 Max Peak	278 kHz	41.77	-19.09
2 Average	23.974 MHz	34.02	-15.97

4. RADIATED EMISSION

4.1 Measurement Uncertainty

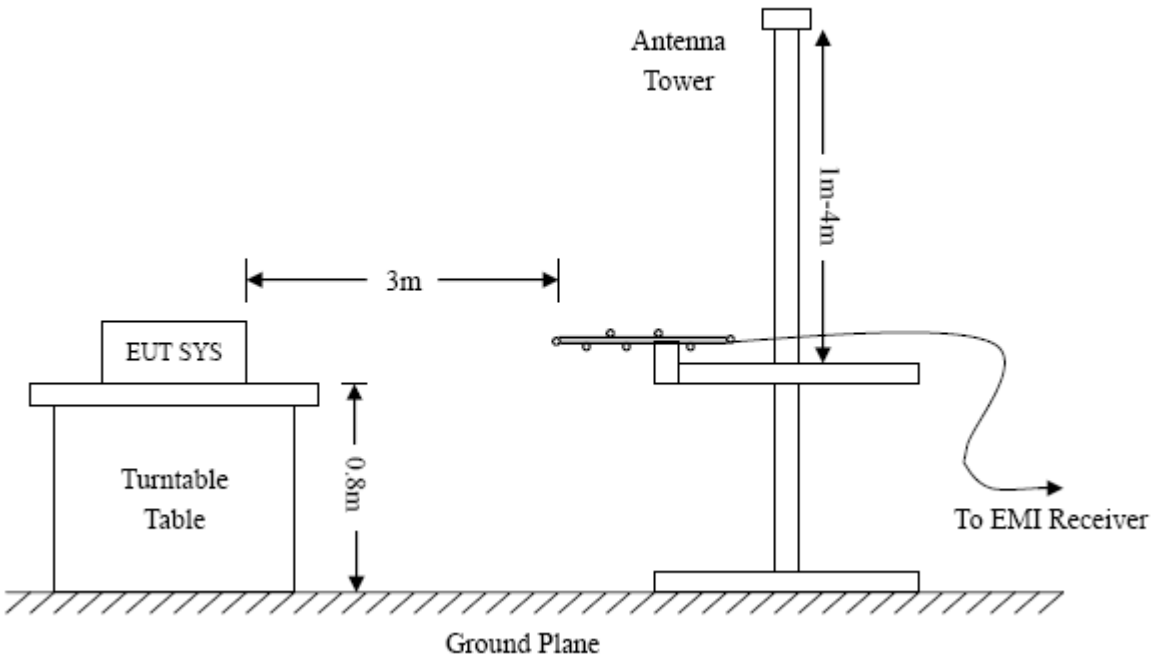
Base on NIS 81, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of any radiation emissions measurement is ± 5.10 dB.

4.2 Test Equipment List and Details

Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
Spectrum Analyzer	R&S	FSP	836079/035	2013-05-07	2014-05-06
EMI Test Receiver	R&S	ESVB	825471/005	2013-05-07	2014-05-06
Pre-amplifier	Agilent	8447F	3113A06717	2013-05-07	2014-05-06
Pre-amplifier	Compliance Direction	PAP-0118	24002	2013-05-07	2014-05-06
Trilog Broadband Antenna	SCHWARZBECK	VULB9163	9163-333	2013-04-20	2014-04-19
Horn Antenna	ETS	3117	00086197	2013-04-20	2014-04-19
Loop Antenna	SCHWARZECK	HFRA 5165	9365	2013-04-20	2014-04-19

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

Frequency :9kHz-30MHz	Frequency :30MHz-1GHz	Frequency :Above 1GHz
RBW=10KHz,	RBW=120KHz,	RBW=1MHz,
VBW =30KHz	VBW=300KHz	VBW=3MHz(Peak), 10Hz(AV)
Sweep time= Auto	Sweep time= Auto	Sweep time= Auto
Trace = max hold	Trace = max hold	Trace = max hold
Detector function = peak	Detector function = peak, QP	Detector function = peak, AV

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:

Corr. Ampl. = Indicated Reading – 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 a Class B device. The equation for margin calculation is as follows:

Margin = Corr. Ampl. – 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

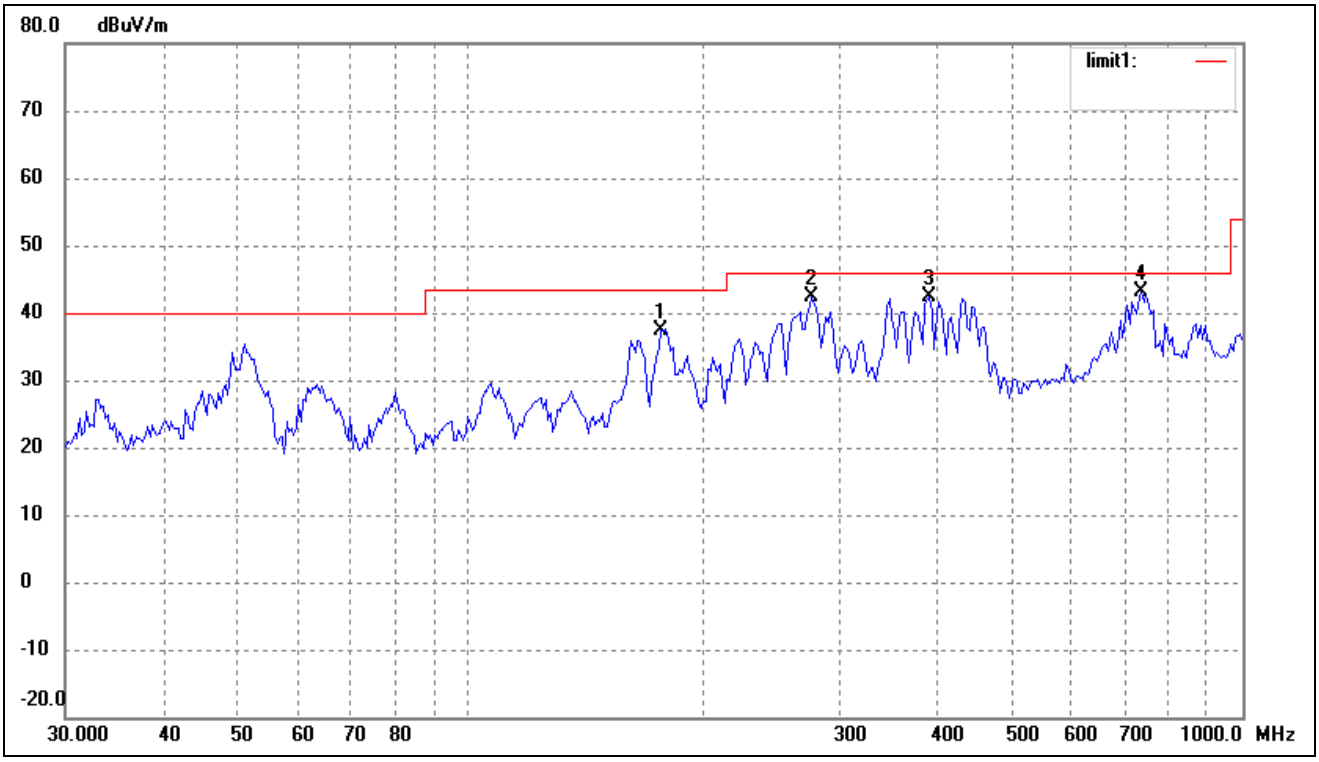
According to the data, the EUT complied with the FCC Part 15.109(a) rule, and had the worst margin of:

-2.55 dB at **160.3456 MHz** in the **Vertical** polarization, **TM3** Mode, **9 KHz** to **8 GHz**, **3Meters**

Plot of Radiated Emissions Test Data

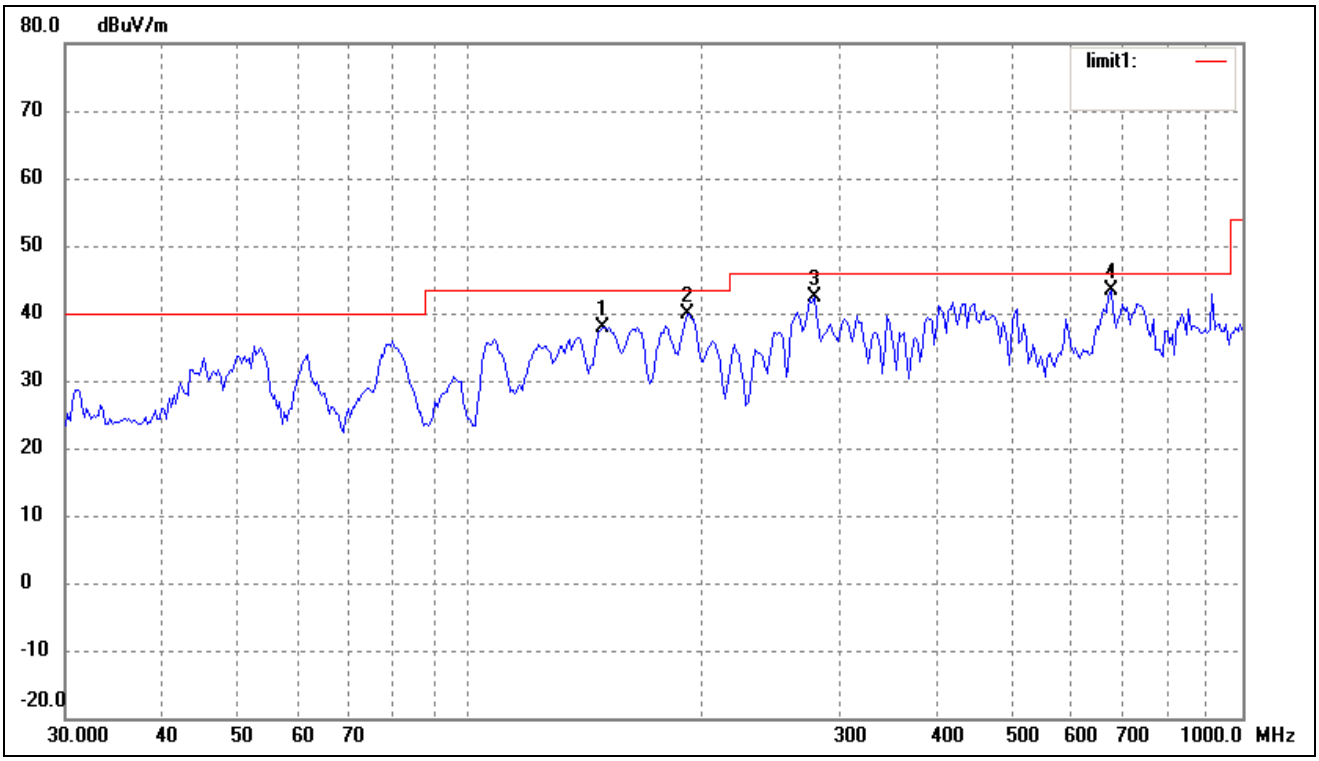
EUT: *Portable Mutimedia Player*
Tested Model: *YDP-G28S*
Operating Condition: *TM1*
Comment: *AC 120V/60Hz; Adapter DC 5V*

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	176.8878	33.54	3.73	37.27	43.50	-6.23	360	100	peak
2	277.0935	33.43	9.01	42.44	46.00	-3.56	360	100	peak
3	393.4724	31.22	11.24	42.46	46.00	-3.54	360	100	peak
4	739.6605	24.97	18.07	43.04	46.00	-2.96	360	100	peak

Test Specification: *Vertical*

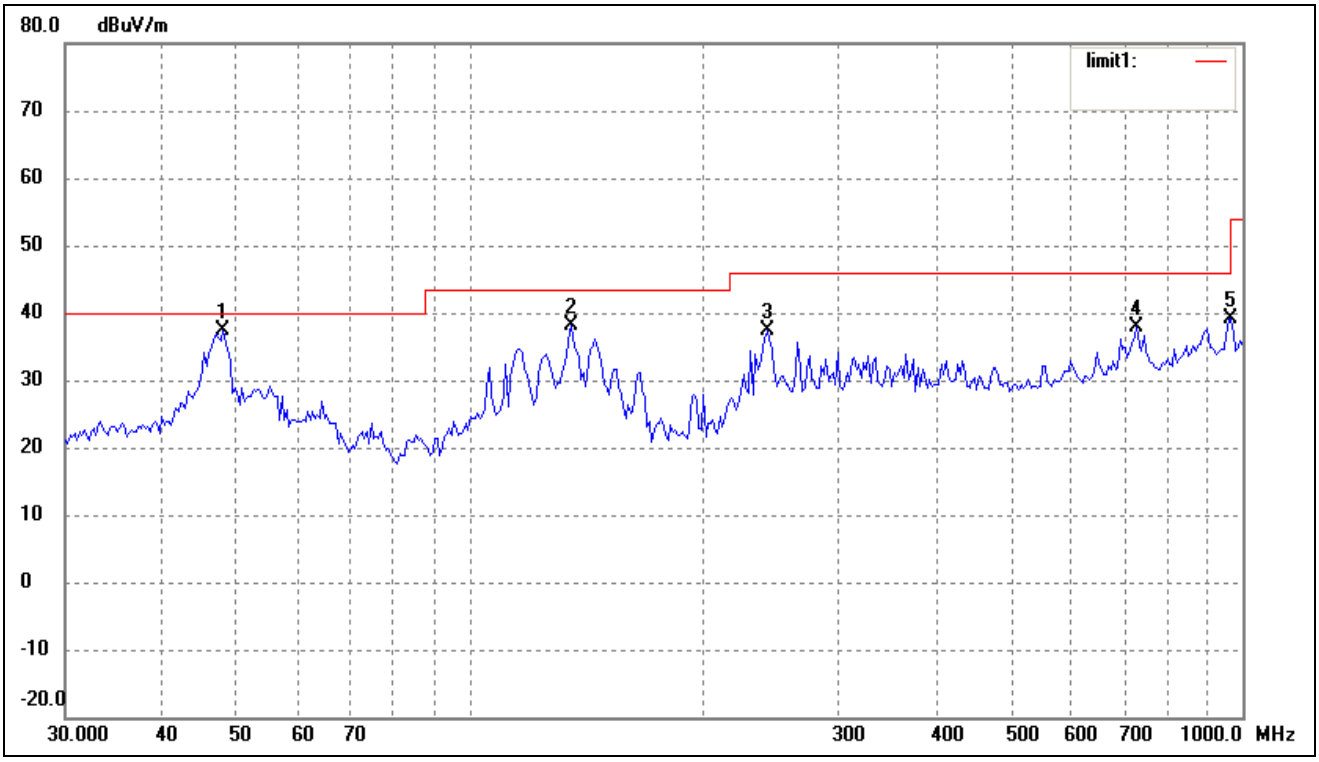


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	148.4410	34.35	3.53	37.88	43.50	-5.62	360	100	peak
2	191.0738	35.69	4.24	39.93	43.50	-3.57	360	100	peak
3	279.0436	33.24	9.17	42.41	46.00	-3.59	360	100	peak
4	675.2080	27.90	15.36	43.26	46.00	-2.74	360	100	peak

Plot of Radiated Emissions Test Data

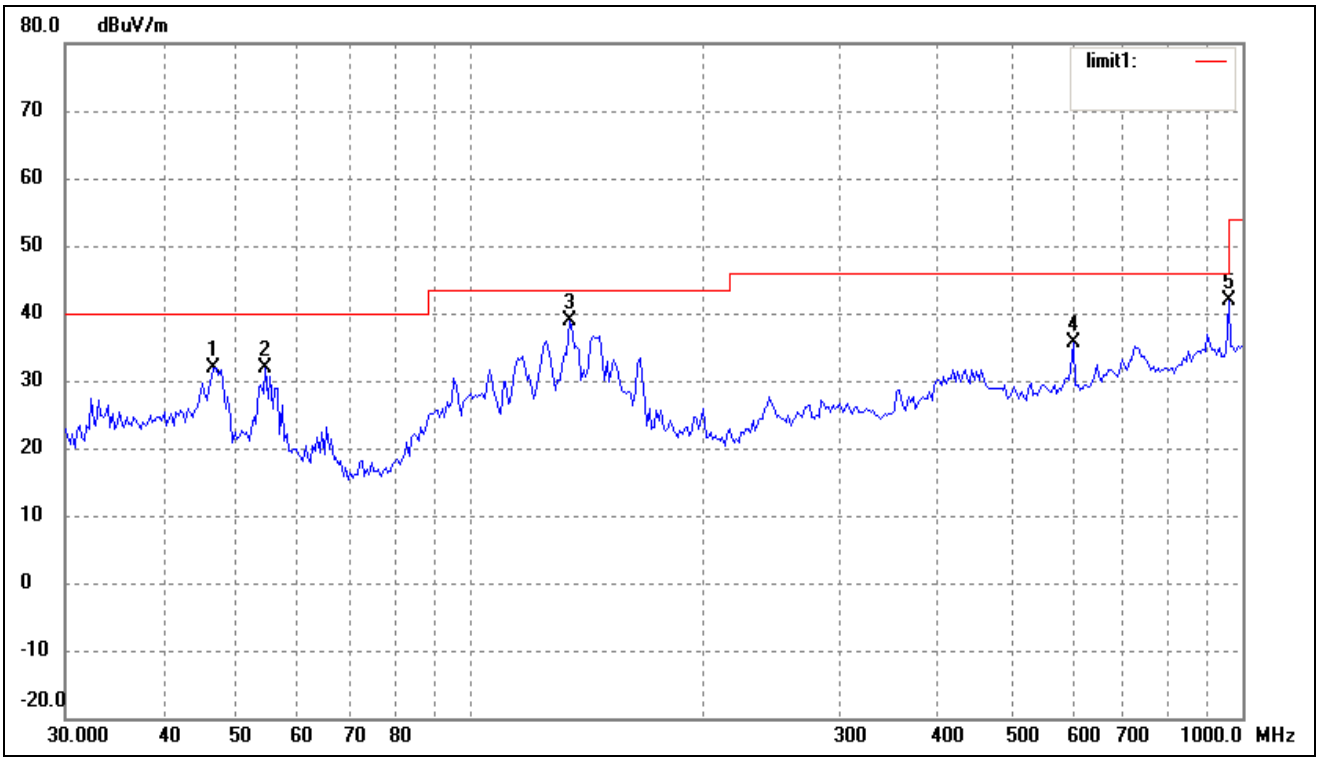
EUT: *Portable Mutimedia Player*
Tested Model: *YDP-G28S*
Operating Condition: *TM2*
Comment: *AC 120V/60Hz; PC DC 5V*

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	47.9940	30.11	7.23	37.34	40.00	-2.66	360	100	peak
2	135.5062	34.34	3.72	38.06	43.50	-5.44	360	100	peak
3	242.5253	30.37	7.08	37.45	46.00	-8.55	360	100	peak
4	729.3583	20.66	17.31	37.97	46.00	-8.03	360	100	peak
5	965.5421	20.74	18.37	39.11	54.00	-14.89	360	100	peak

Test Specification: *Vertical*

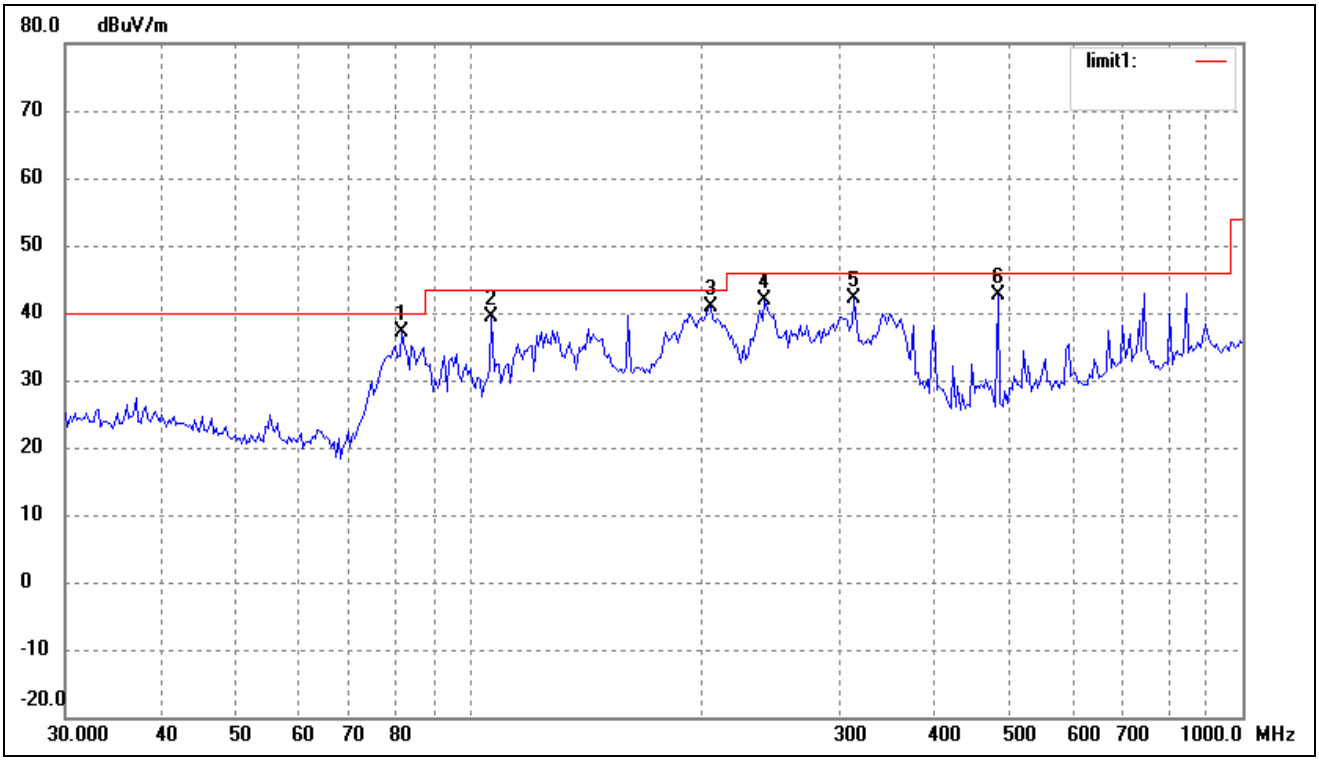


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	46.6664	24.19	7.64	31.83	40.00	-8.17	360	100	peak
2	54.4516	25.74	6.21	31.95	40.00	-8.05	360	100	peak
3	134.5592	35.05	3.78	38.83	43.50	-4.67	360	100	peak
4	603.5392	20.92	14.62	35.54	46.00	-10.46	360	100	peak
5	958.7943	23.60	18.16	41.76	46.00	-4.24	360	100	peak

Plot of Radiated Emissions Test Data

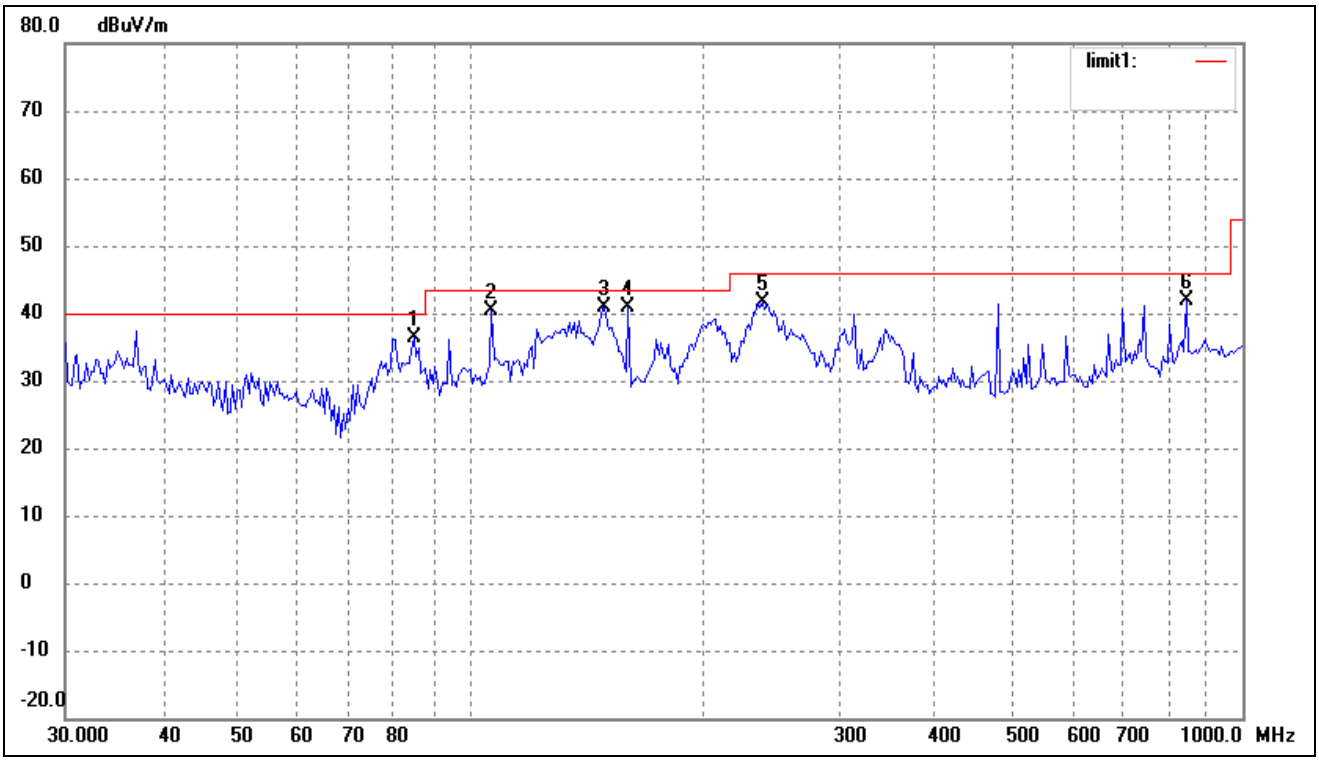
EUT: *Portable Mutimedia Player*
Tested Model: *YDP-G28S*
Operating Condition: *TM3*
Comment: *AC 120V/60Hz; USB DC 5V*

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	81.7833	34.85	2.18	37.03	40.00	-2.97	360	100	peak
2	106.7587	33.10	6.18	39.28	43.50	-4.22	360	100	peak
3	204.9551	35.95	4.96	40.91	43.50	-2.59	360	100	peak
4	240.8304	34.96	7.02	41.98	46.00	-4.02	360	100	peak
5	314.3765	31.71	10.40	42.11	46.00	-3.89	360	100	peak
6	482.2156	31.23	11.49	42.72	46.00	-3.28	360	100	peak

Test Specification: *Vertical*

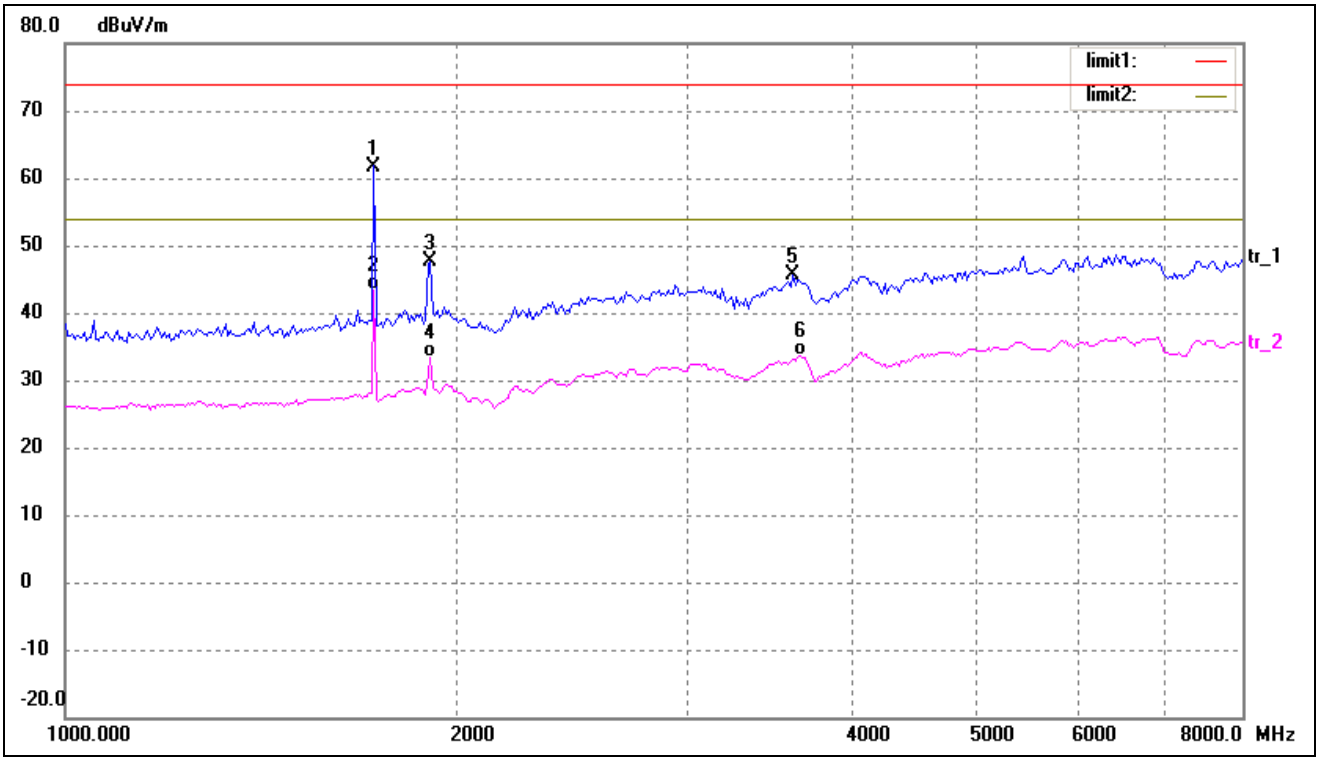


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	84.7019	33.47	3.00	36.47	40.00	-3.53	360	100	peak
2	106.7587	34.19	6.18	40.37	43.50	-3.13	360	100	peak
3	149.4857	37.25	3.55	40.80	43.50	-2.70	360	100	peak
4	160.3456	37.30	3.65	40.95	43.50	-2.55	360	100	peak
5	239.1473	34.59	6.95	41.54	46.00	-4.46	360	100	peak
6	845.0878	24.47	17.45	41.92	46.00	-4.08	360	100	peak

Plot of Radiated Emissions Test Data

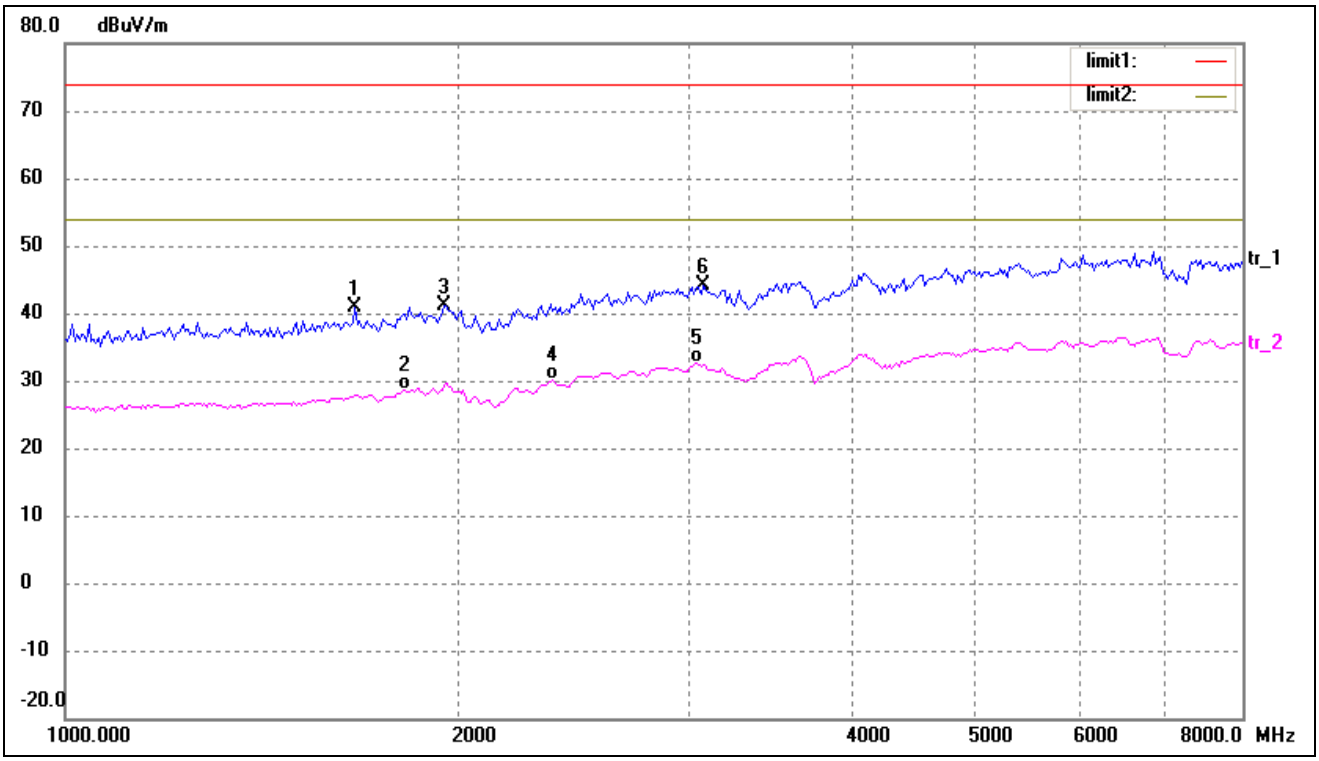
EUT: *Portable Mutimedia Player*
Tested Model: *YDP-G28S*
Operating Condition: *TM1*
Comment: *AC 120V/60Hz; Adapter DC 5V*

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	1724.287	68.08	-6.33	61.75	74.00	-12.25	360	100	peak
2	1724.287	49.81	-6.33	43.48	54.00	-10.52	360	100	AVG
3	1905.276	52.80	-5.08	47.72	74.00	-26.28	360	100	peak
4	1905.276	38.53	-5.08	33.45	54.00	-20.55	360	100	AVG
5	3615.011	46.99	-1.40	45.59	74.00	-28.41	360	100	peak
6	3660.397	34.97	-1.33	33.64	54.00	-20.36	360	100	AVG

Test Specification: *Vertical*

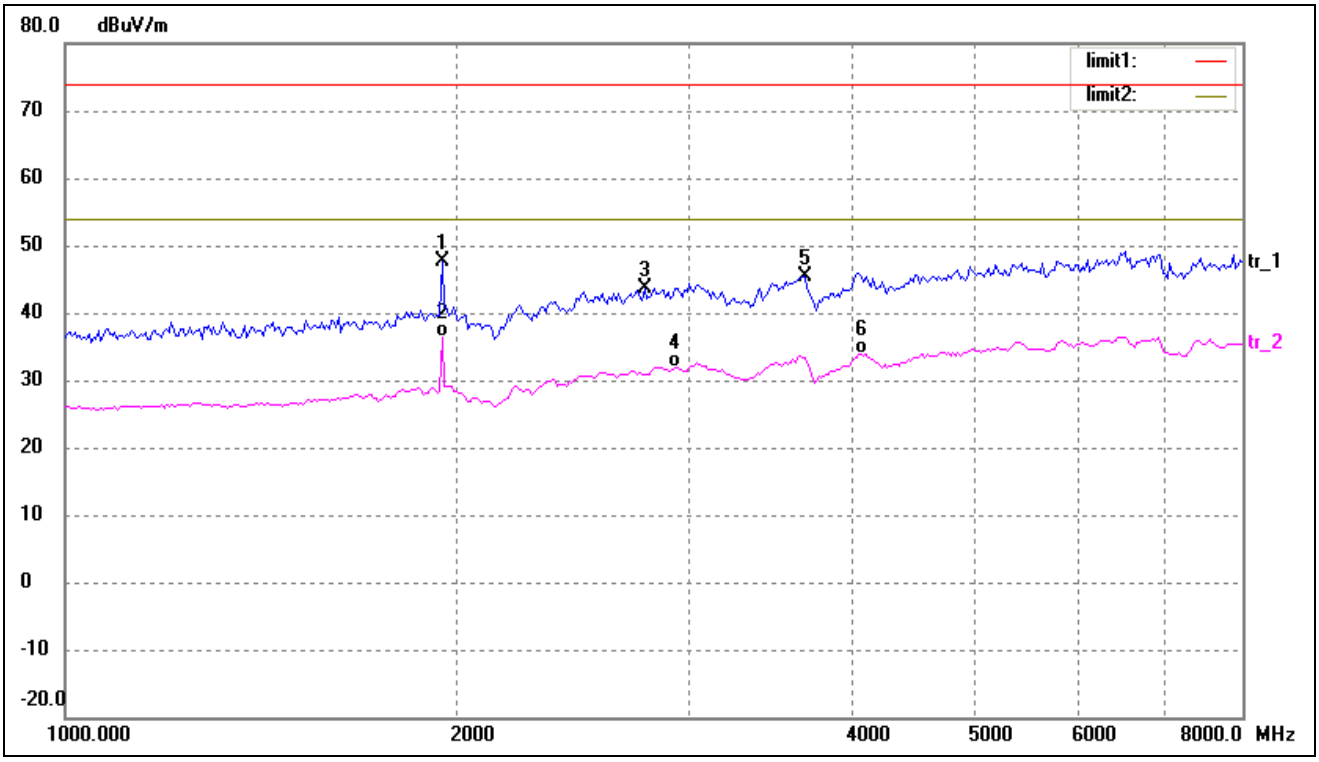


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	1667.862	47.64	-6.72	40.92	74.00	-33.08	360	100	peak
2	1820.078	34.25	-5.66	28.59	54.00	-25.41	360	100	AVG
3	1953.417	45.87	-4.74	41.13	74.00	-32.87	360	100	peak
4	2365.262	33.66	-3.59	30.07	54.00	-23.93	360	100	AVG
5	3048.290	34.98	-2.45	32.53	54.00	-21.47	360	100	AVG
6	3086.560	46.53	-2.38	44.15	74.00	-29.85	360	100	peak

Plot of Radiated Emissions Test Data

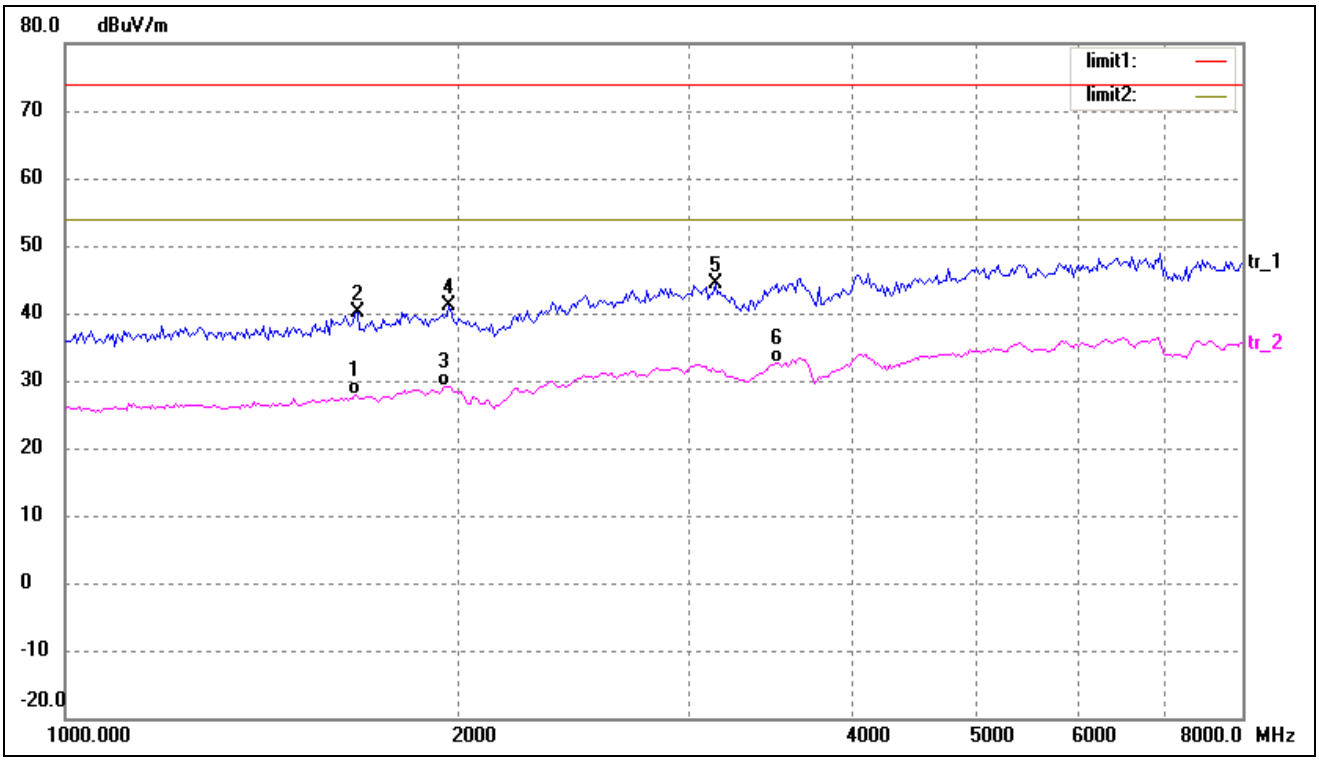
EUT: *Portable Mutimedia Player*
Tested Model: *YDP-G28S*
Operating Condition: *TM2*
Comment: *AC 120V/60Hz; PC DC 5V*

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	1945.310	52.32	-4.80	47.52	74.00	-26.48	360	100	peak
2	1945.310	41.12	-4.80	36.32	54.00	-17.68	360	100	AVG
3	2781.764	46.43	-2.86	43.57	74.00	-30.43	360	100	peak
4	2936.301	34.60	-2.63	31.97	54.00	-22.03	360	100	AVG
5	3690.970	46.64	-1.28	45.36	74.00	-28.64	360	100	peak
6	4078.391	34.60	-0.62	33.98	54.00	-20.02	360	100	AVG

Test Specification: *Vertical*

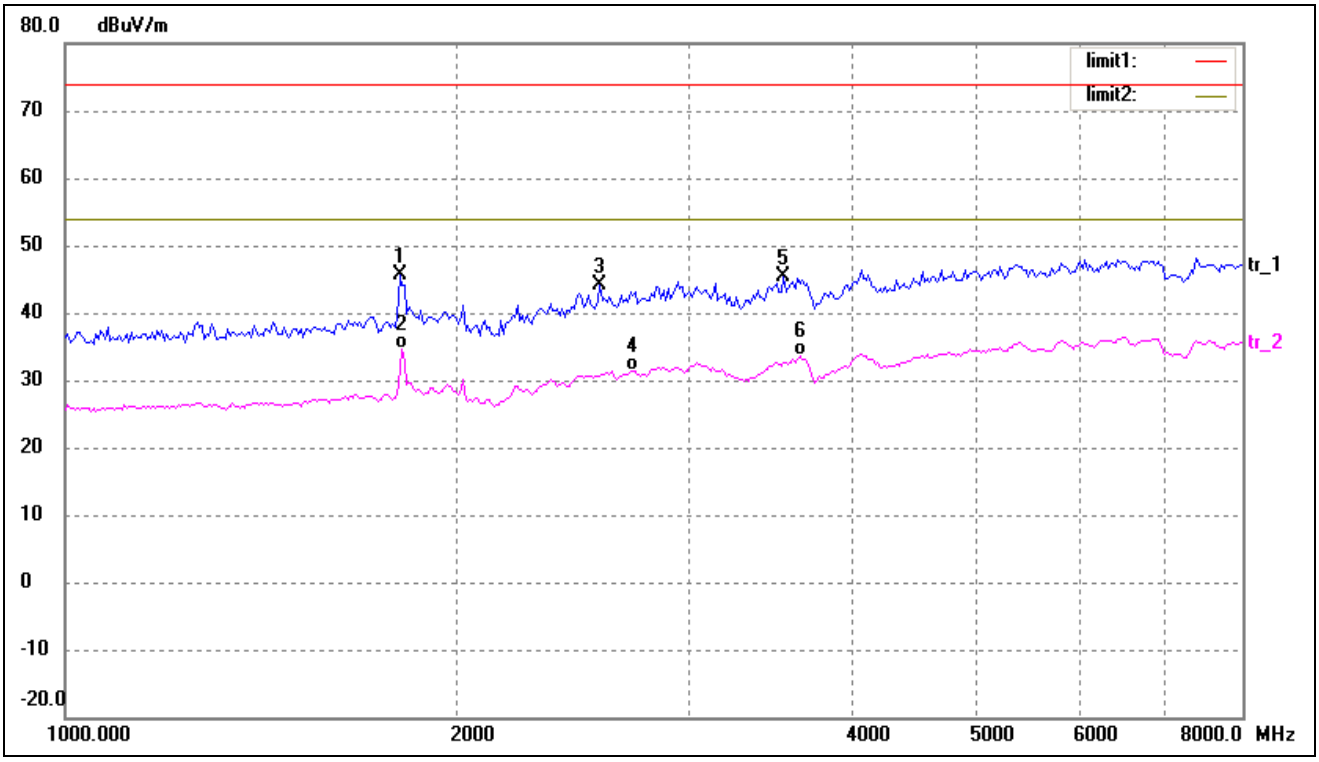


No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	(°)	(cm)	
1	1667.862	34.49	-6.72	27.77	54.00	-26.23	360	100	AVG
2	1674.813	46.74	-6.68	40.06	74.00	-33.94	360	100	peak
3	1953.417	33.91	-4.74	29.17	54.00	-24.83	360	100	AVG
4	1969.733	45.81	-4.63	41.18	74.00	-32.82	360	100	peak
5	3151.416	46.52	-2.26	44.26	74.00	-29.74	360	100	peak
6	3511.287	34.20	-1.58	32.62	54.00	-21.38	360	100	AVG

Plot of Radiated Emissions Test Data

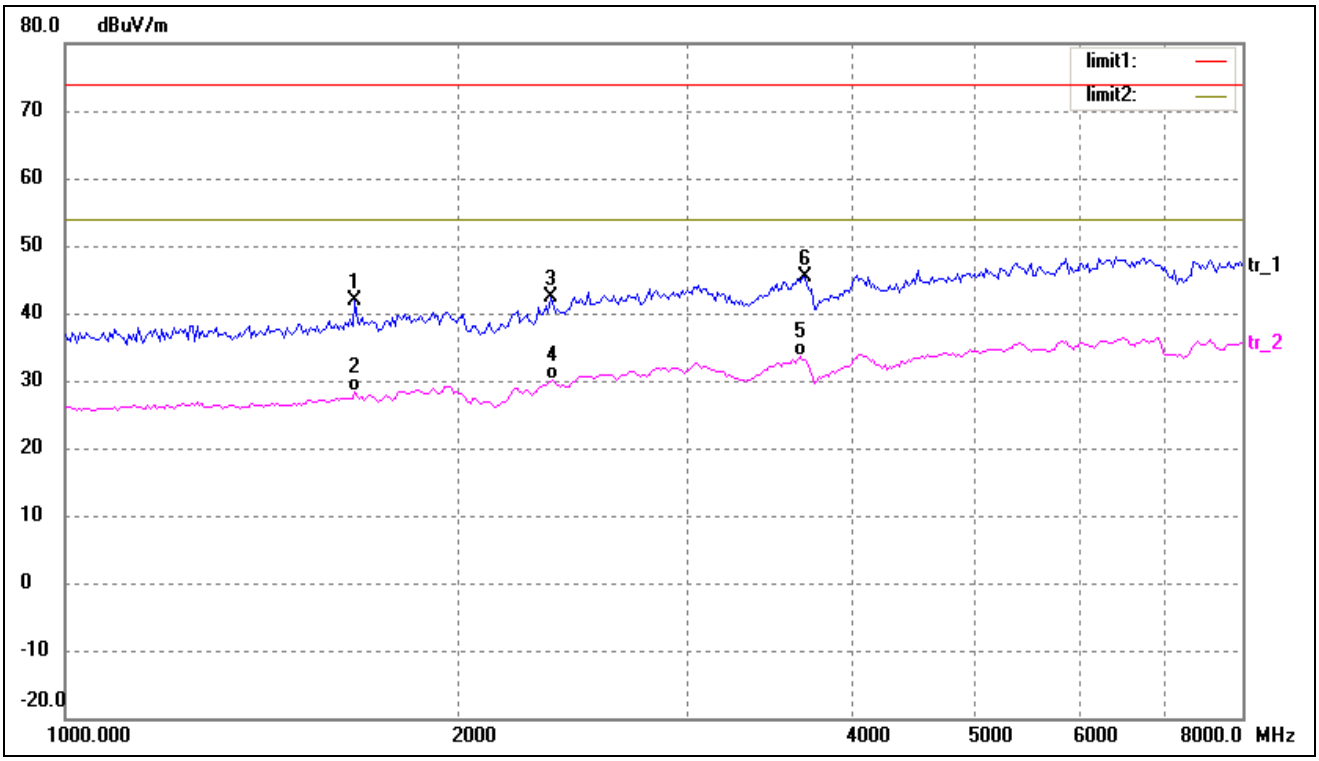
EUT: *Portable Mutimedia Player*
Tested Model: *YDP-G28S*
Operating Condition: *TM3*
Comment: *AC 120V/60Hz; USB DC 5V*

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	1805.002	51.32	-5.77	45.55	74.00	-28.45	360	100	peak
2	1812.524	40.43	-5.71	34.72	54.00	-19.28	360	100	AVG
3	2570.413	47.27	-3.18	44.09	74.00	-29.91	360	100	peak
4	2724.516	34.37	-2.95	31.42	54.00	-22.58	360	100	AVG
5	3555.371	46.93	-1.50	45.43	74.00	-28.57	360	100	peak
6	3660.397	35.03	-1.33	33.70	54.00	-20.30	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	1667.862	48.69	-6.72	41.97	74.00	-32.03	360	100	peak
2	1667.862	35.21	-6.72	28.49	54.00	-25.51	360	100	AVG
3	2355.446	45.97	-3.61	42.36	74.00	-31.64	360	100	peak
4	2365.262	33.61	-3.59	30.02	54.00	-23.98	360	100	AVG
5	3660.397	34.90	-1.33	33.57	54.00	-20.43	360	100	AVG
6	3690.970	46.71	-1.28	45.43	74.00	-28.57	360	100	peak

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

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