



FCC Test Report

FCC ID: N56ARG-PVS15LED

Computing Device Peripheral

Report No. : TB-FCC123753
Applicant : Audio Resource Group, Inc.
Equipment Under Test (EUT)
EUT Name : Personal View Screen
Model No. : ARG-PVS15LED
Serial No. : Please see page 3.
Brand Name : Not supplied by client
Receipt Date : 2012-04-16
Test Date : 2012-04-17 to 2012-04-26
Issue Date : 2012-04-27
Standards : FCC Part 15: 2009, Subpart B, Class B
Test Method : ANSI C63.4-2003
Conclusions : **PASS**

In the configuration tested, the EUT complied with the standards specified above,
The EUT technically complies with the FCC requirements

Test/Witness Engineer : Ray Lai

Approved& Authorized : Justin Zheng

This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in the report.

Contents

CONTENTS.....	2
1. GENERAL INFORMATION ABOUT EUT	3
1.1 Client Information.....	3
1.2 General Description of EUT (Equipment Under Test)	3
1.3 Block Diagram Showing the Configuration of System Tested.....	3
1.4 Description of Support Units	4
1.5 Description of Test Mode.....	4
1.6 Test Facility.....	5
2. TEST SUMMARY	6
3. CONDUCTED EMISSION TEST	7
3.1 Test Standard and Limit.....	7
3.2 Test Setup.....	7
3.3 Test Procedure.....	7
3.4 Test Equipment Used.....	8
3.5 EUT Operating Mode	8
3.6 Deviation	8
3.7 Test Data.....	8
4. RADIATED EMISSION TEST	15
4.1 Test Standard and Limit.....	15
4.2 Test Setup.....	15
4.3 Test Procedure.....	16
4.4 Test Equipment	16
4.5 EUT Operating Condition	16
4.6 Deviation	17
4.7 Test Data.....	17

1. General Information About EUT

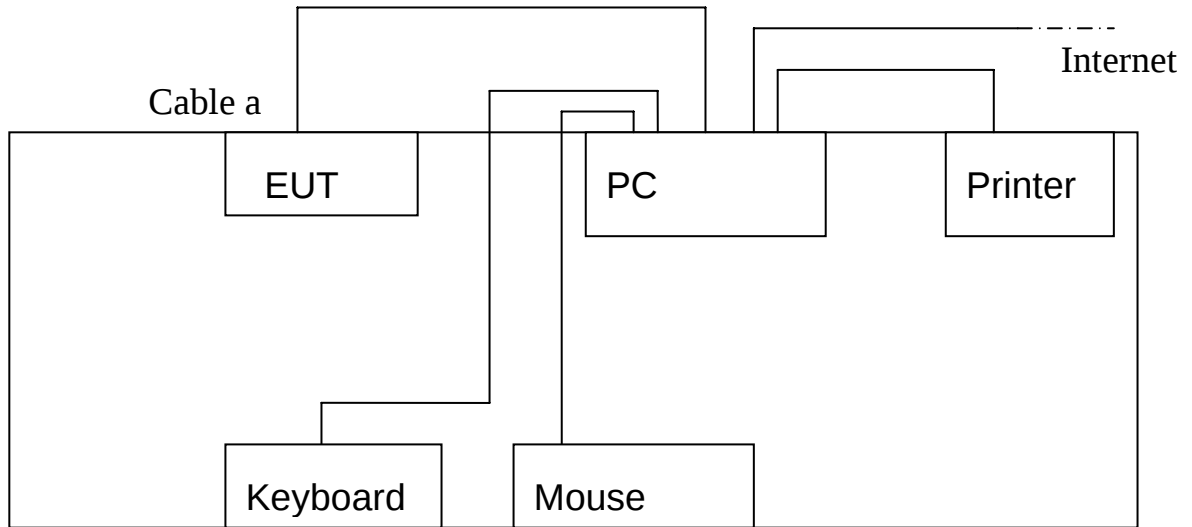
1.1 Client Information

Applicant	:	Audio Resource Group, Inc.
Address	:	440 Ramsland Ave, Hannafor, ND58448, USA
Manufacturer	:	Audio Resource Group - Shenzhen Branch
Address	:	305, Bldg B, Hongchen Biz Ctr, Buxin Dongxiao RD, Luohu District, Shenzhen, GD518023, China

1.2 General Description of EUT (Equipment Under Test)

EUT Name	:	Personal View Screen
Model No.	:	ARG-PVS15LED
Serial No.	:	ARG-PVS15LCD, ARG-PVS17LED, ARG-PVS17LCD, ARG-PVS19LED, ARG-PVS19LCD, 107157-001, 107158-001, 107159-001, 107160-001, 107161-001, 107162-001, 107163-001, 107164-001, 107165-001, 107166-001, 107167-001
Model difference	:	The different models are identical in schematic, structure and critical component, the only different is the appearance of the product.
Power Supply	:	AC Adapter: Input: 100~240V 50/60Hz 1.6A Output: DC 12V 5A
Connecting I/O Port(s)	:	Please refer to the User's Manual
Note: For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.		

1.3 Block Diagram Showing the Configuration of System Tested



Cable a: VGA Cable

1.4 Description of Support Units

Name	Model	S/N	Manufacturer	Used “√”
Printer	HP1505n	VNF3G06957	HP	√
LCD Monitor	E170Sc	----	DELL	√
PC	OPTIPLEX380	----	DELL	√
Keyboard	L100	U01C	DELL	√
Mouse	M-UARDEL7	----	DELL	√

1.5 Description of Test Mode

Mode	Description
VGA Mode	800*600@ 60Hz
	1280*1024@60Hz
	1920*1080@60Hz

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of the EUT operation mode, and the maximum emission levels of the conducted and radiated emissions are compared to the FCC Part 15 Subpart B (Class B) limits.

Note: The test results for EUT’s TV functions are contained in another Verification Report.

1.6 Test Facility

The tests were performed at:

Bontek Compliance Testing Laboratory Ltd

1/F., Block East H-3, OCT Eastern Ind. Zone, Qiaocheng East Road, Nanshan, Shenzhen, 518055 China

Tel: 86-755-86337020 Fax: 86-755-86337028

At the time of testing, the Laboratory is accredited. It is listed in the United States of American Federal Communications Commission (FCC), and the registration number is 338263.

The test report was fulfilled by Shenzhen Meihua Electronic Co., Ltd. Shenzhen Meihua Electronic Technology Co., Ltd. is assumed full responsibility for the accuracy and completeness of these measurements results.

2. Test Summary

FCC Part15, Subpart B				
Section	Test Method	Test Item	Limit	Judgment
15.109	ANSI C63.4:2003	Radiated Emission (9KHz to 30MHz)	Class B	PASS
15.107	ANSI C63.4:2003	Conducted Emission (9KHz to 30MHz)	Class B	PASS
Note: N/A is an abbreviation for Not Applicable.				

3. Conducted Emission Test

3.1 Test Standard and Limit

3.1.1 Test Standard

FCC Part 15.107

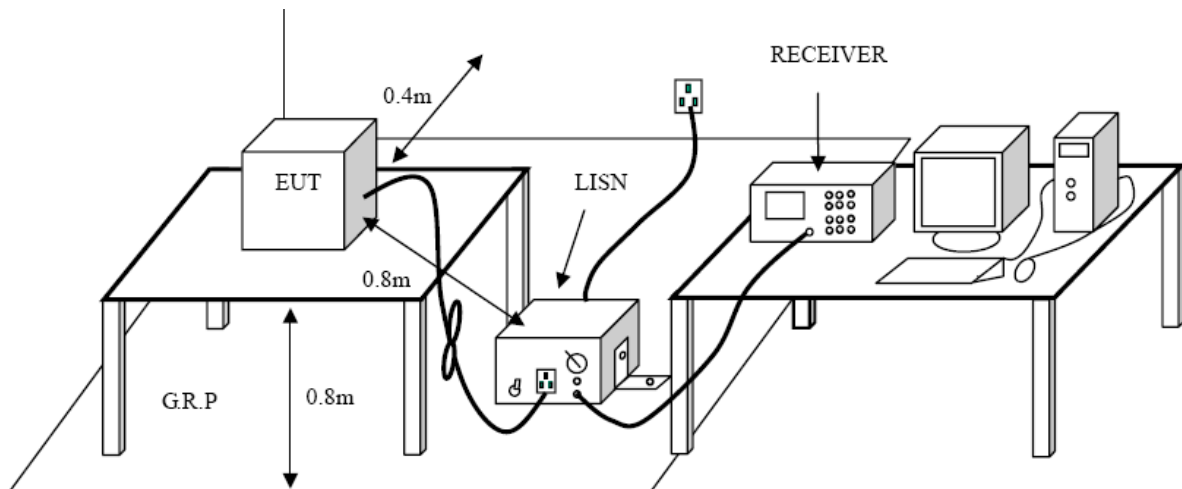
3.1.2 Test Limit

Conducted Emission Test Limit

Frequency (MHz)	Conducted Limit (dBuV)	
	Quasi-peak Level	Average Level
0.15~0.5	66 ~ 56 *	56 ~ 46 *
0.5~5.0	56.00	46.00
5.0~30.0	60.00	50.00

Notes: (1) *Decreasing linearly with logarithm of the frequency.
 (2) The lower limit shall apply at the transition frequencies.

3.2 Test Setup



3.3 Test Procedure

The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.

Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.

I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance.

The overall length shall not exceed 1 m.

LISN at least 80 cm from nearest part of EUT chassis.

The bandwidth of EMI test receiver is set at 9kHz, and the test frequency band is from 0.15MHz to 30MHz.

For the actual test configuration, please refer to the EUT test Photos.

3.4 Test Equipment Used

Description	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Date
EMI Test Receiver	ROHDE& SCHWARZ	ESCI	100627	2011-08-11	2012-08-11
L.I.S.N	ROHDE& SCHWARZ	ENV216	100055	2011-08-11	2012-08-11
L.I.S.N	SCHWARZBEC K	NSLK8127	100056	2011-08-11	2012-08-11

3.5 EUT Operating Mode

- (1) Setup the EUT and peripherals refer to the description of test mode.
- (2) Turn on the power of all equipments and the EUT.
- (3) PC system ran the self-test program "EMC Test" by windows XP and sent "H" Characters to EUT through graphic card, the EUT's screen displayed and filled with "H" pattern by its resolution (Via D-sub & HDMI Input).
- (4) Repeat above procedure for difference test mode.
- (5) All the peripherals devices were driven and operated during the testing procedure.

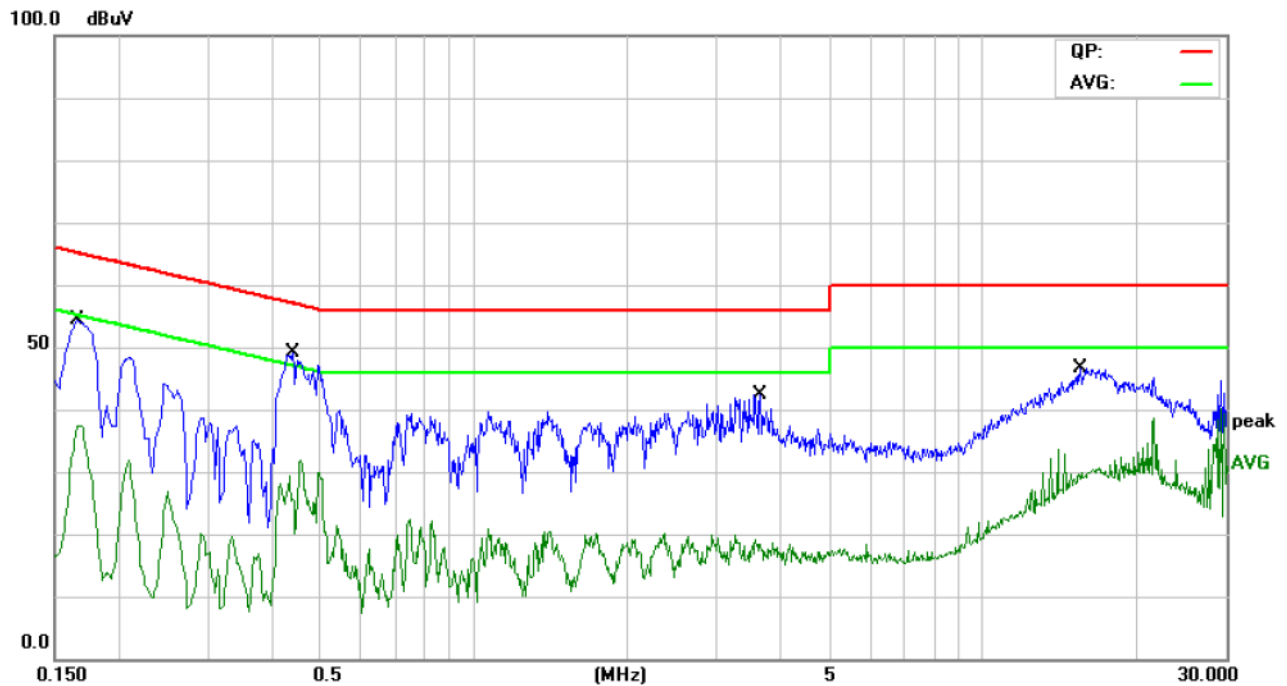
3.6 Deviation

The test is no deviation from the standard.

3.7 Test Data

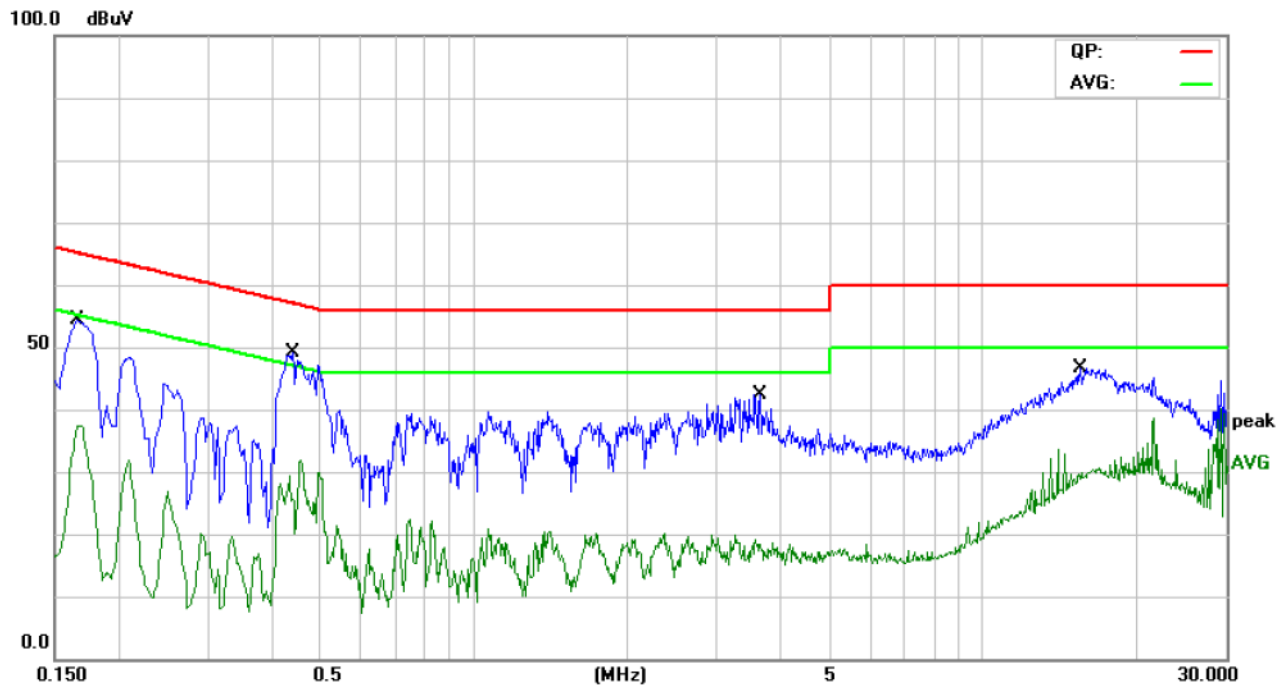
Please see the next page.

E.U.T :	Personal View Screen	Model Name :	ARG-PVS15LED
Temperature :	26°C	Relative Humidity :	51 %
Terminal	Line		
Test Voltage :	AC 120 V / 60Hz		
Test Mode :	Mode 1: VGA 800*600@60Hz		



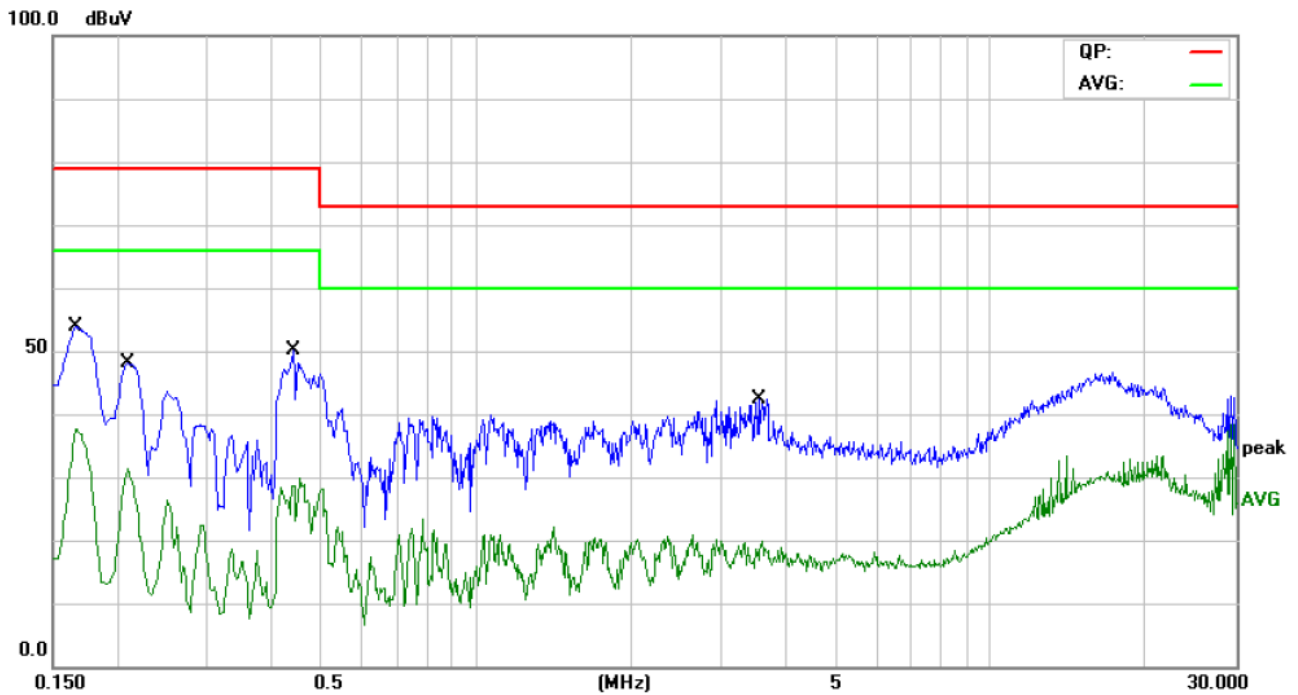
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1660	41.86	10.74	52.60	65.15	-12.55	QP	
2		0.1660	24.91	10.74	35.65	55.15	-19.50	AVG	
3	*	0.4420	36.94	9.58	46.52	57.02	-10.50	QP	
4		0.4420	15.18	9.58	24.76	47.02	-22.26	AVG	
5		3.6500	22.75	9.44	32.19	56.00	-23.81	QP	
6		3.6500	7.50	9.44	16.94	46.00	-29.06	AVG	
7		15.5220	28.36	10.06	38.42	60.00	-21.58	QP	
8		15.5220	18.18	10.06	28.24	50.00	-21.76	AVG	

E.U.T :	Personal View Screen	Model Name :	ARG-PVS15LED
Temperature :	26°C	Relative Humidity :	51 %
Terminal	Neutral		
Test Voltage :	AC 120 V / 60Hz		
Test Mode :	Mode 1: VGA 800*600@60Hz		



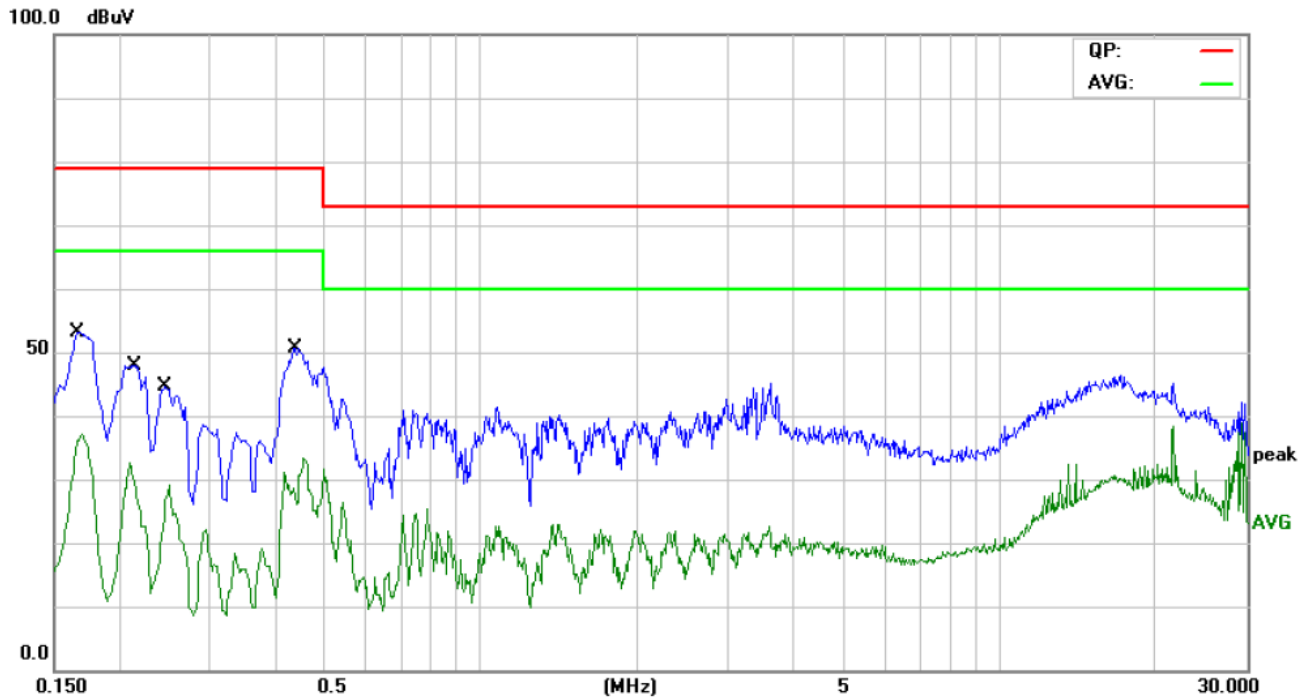
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1660	41.86	10.74	52.60	65.15	-12.55	QP	
2		0.1660	24.91	10.74	35.65	55.15	-19.50	AVG	
3	*	0.4420	36.94	9.58	46.52	57.02	-10.50	QP	
4		0.4420	15.18	9.58	24.76	47.02	-22.26	AVG	
5		3.6500	22.75	9.44	32.19	56.00	-23.81	QP	
6		3.6500	7.50	9.44	16.94	46.00	-29.06	AVG	
7		15.5220	28.36	10.06	38.42	60.00	-21.58	QP	
8		15.5220	18.18	10.06	28.24	50.00	-21.76	AVG	

E.U.T :	Personal View Screen	Model Name :	ARG-PVS15LED
Temperature :	26°C	Relative Humidity :	51 %
Terminal	Line		
Test Voltage :	AC 120 V / 60Hz		
Test Mode :	Mode 2: VGA 1280*1024@60Hz		



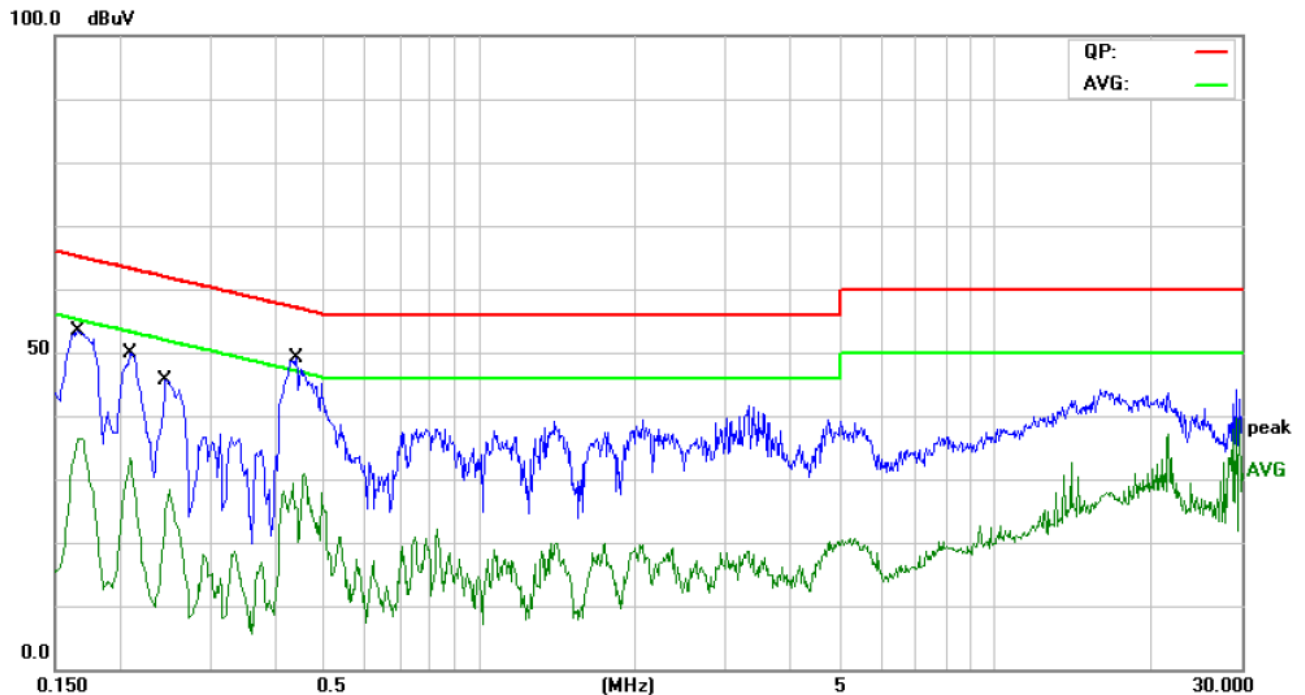
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.1660	43.22	10.74	53.96	79.00	-25.04	QP	
2		0.1660	26.97	10.74	37.71	66.00	-28.29	AVG	
3		0.2100	37.79	10.28	48.07	79.00	-30.93	QP	
4		0.2100	20.99	10.28	31.27	66.00	-34.73	AVG	
5		0.4420	40.43	9.58	50.01	79.00	-28.99	QP	
6		0.4420	19.05	9.58	28.63	66.00	-37.37	AVG	
7		3.5300	32.87	9.43	42.30	73.00	-30.70	QP	
8		3.5620	8.76	9.43	18.19	60.00	-41.81	AVG	

E.U.T :	Personal View Screen	Model Name :	ARG-PVS15LED
Temperature :	26°C	Relative Humidity :	51 %
Terminal	Neutral		
Test Voltage :	AC 120 V / 60Hz		
Test Mode :	Mode 2: VGA 1280*1024@60Hz		



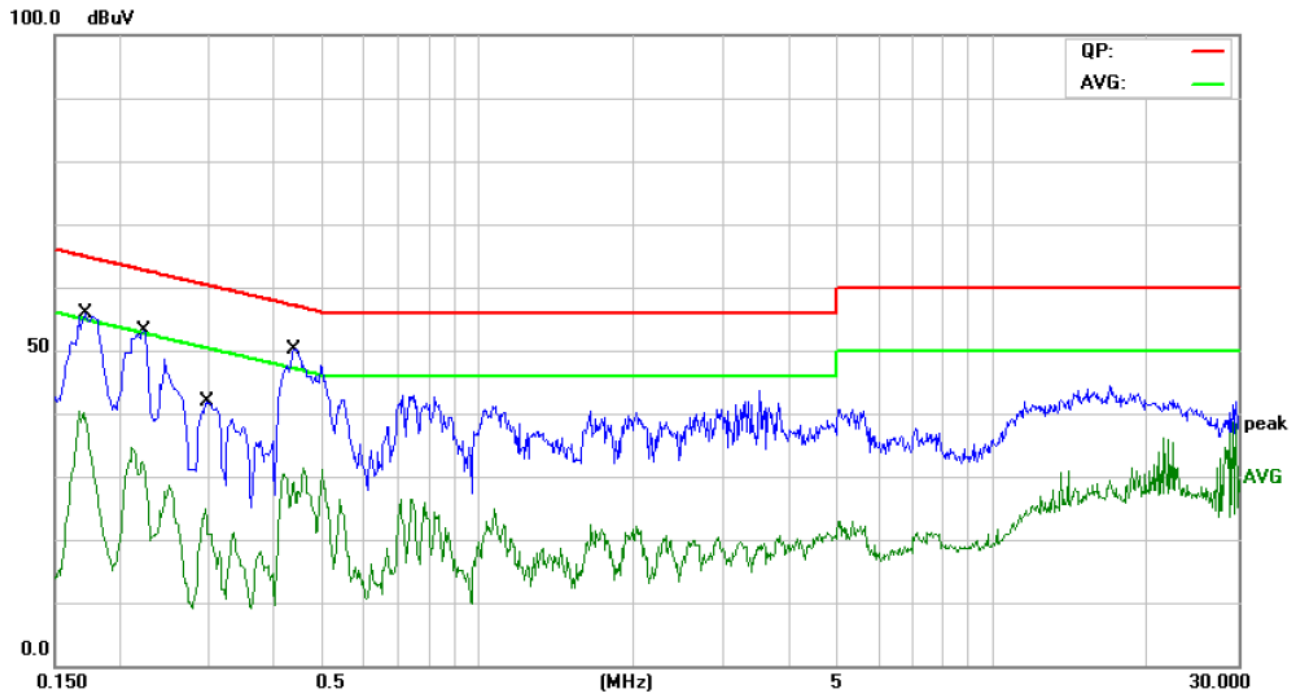
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.1660	42.46	10.74	53.20	79.00	-25.80	QP	
2		0.1660	25.28	10.74	36.02	66.00	-29.98	AVG	
3		0.2140	37.63	10.25	47.88	79.00	-31.12	QP	
4		0.2140	19.27	10.25	29.52	66.00	-36.48	AVG	
5		0.2460	34.52	10.01	44.53	79.00	-34.47	QP	
6		0.2460	16.55	10.01	26.56	66.00	-39.44	AVG	
7		0.4380	41.09	9.59	50.68	79.00	-28.32	QP	
8		0.4380	18.09	9.59	27.68	66.00	-38.32	AVG	

E.U.T :	Personal View Screen	Model Name :	ARG-PVS15LED
Temperature :	26°C	Relative Humidity :	51 %
Terminal	Line		
Test Voltage :	AC 120 V / 60Hz		
Test Mode :	Mode 3: VGA 1920*1080@60Hz		



No. Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Detector	Comment
	MHz	dBuV	dB	dBuV	dBuV	dB		
1	0.1660	42.56	10.74	53.30	65.15	-11.85	QP	
2	0.1675	25.70	10.73	36.43	55.08	-18.65	AVG	
3	0.2100	39.63	10.28	49.91	63.20	-13.29	QP	
4	0.2100	23.05	10.28	33.33	53.20	-19.87	AVG	
5	0.2460	35.61	10.01	45.62	61.89	-16.27	QP	
6	0.2460	15.18	10.01	25.19	51.89	-26.70	AVG	
7 *	0.4420	39.44	9.58	49.02	57.02	-8.00	QP	
8	0.4420	15.93	9.58	25.51	47.02	-21.51	AVG	

E.U.T :	Personal View Screen	Model Name :	ARG-PVS15LED
Temperature :	26°C	Relative Humidity :	51 %
Terminal	Neutral		
Test Voltage :	AC 120 V / 60Hz		
Test Mode :	Mode 3: VGA 1920*1080@60Hz		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1720	45.28	10.67	55.95	64.86	-8.91	QP	
2		0.1720	28.74	10.67	39.41	54.86	-15.45	AVG	
3		0.2231	42.91	10.18	53.09	62.70	-9.61	QP	
4		0.2231	21.57	10.18	31.75	52.70	-20.95	AVG	
5		0.2977	32.06	9.80	41.86	60.30	-18.44	QP	
6		0.2977	11.11	9.80	20.91	50.30	-29.39	AVG	
7	*	0.4380	40.52	9.59	50.11	57.10	-6.99	QP	
8		0.4380	19.52	9.59	29.11	47.10	-17.99	AVG	

4. Radiated Emission Test

4.1 Test Standard and Limit

4.1.1 Test Standard

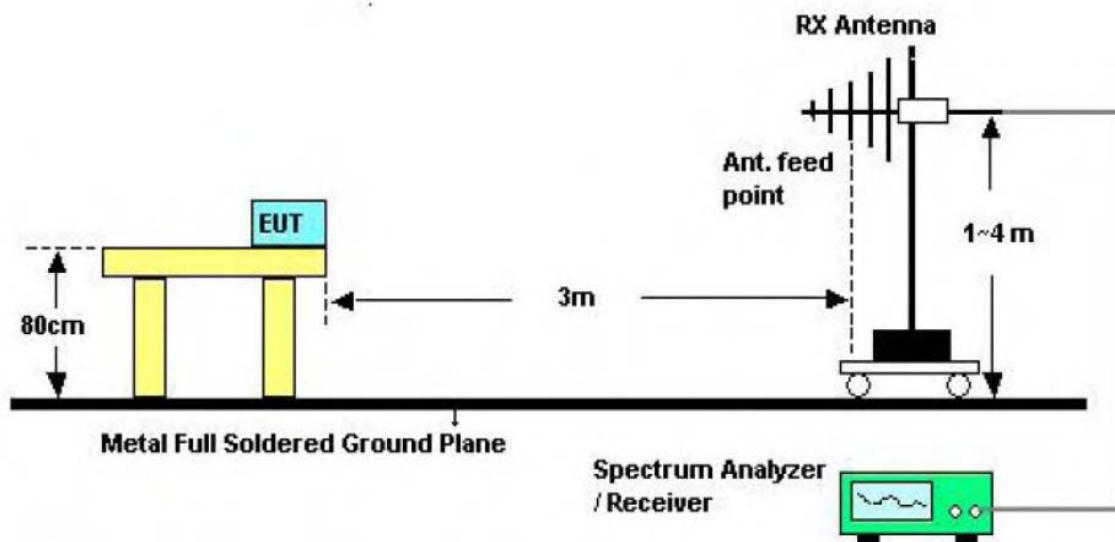
FCC Part 15.109

4.1.2 Test Limit

Radiated Emission Limit

Frequency (MHz)	Field Strength (dBuV/m)	Measurement Distance (meters)
30~88	40	3
88~216	43.5	3
216~960	46	3
Above 960	54	3
Note: Emission Level(dBuV/m)=20log Emission Level(uV/m)		

4.2 Test Setup



30MHz to 1000MHz Test Setup

4.3 Test Procedure

- (1) The measuring distance of 3m shall be used for measurements at frequency from 30MHz up to 1GHz.
- (2) The EUT was placed on the top of a rotating table 0.8 meters above the ground. The table was rotated 360 degrees to determine the position of the highest radiation.
- (3) The height of the equipment or of the substitution antenna shall be 0.8m, the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- (4) The initial step in collecting radiated emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- (5) If the Peak Mode measured value complies with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
- (6) For more details, please refer to the EUT Test Photos.

4.4 Test Equipment

Description	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Date
Spectrum Analyzer	Agilent	E7405A	MY45114970	2011-08-12	2012-08-11
Pre-Amplifier	CD	PAM0203	804203	2011-08-12	2012-08-11
RF Switch	CD	RSU-M3	RSU-M3	2011-07-21	2012-07-20
Trilog Broadband Antenna	SCHWARZBEC K	VULB9163	345	2011-07-21	2012-07-20
Coaxial Cable	SCHWARZBEC K	RG214-N-8	11065	2011-08-12	2012-08-11
Broadband Preamplifier 0.5-18GHz	SCHWARZBECK	BBV9718	9718-148	2011-08-12	2012-08-11
Horn Antenna	SCHWARZBEC K	BBHA9120D	667	2011-08-12	2012-08-11
Coaxial Cable	SCHWARZBEC K	AK9513	9513-10	2011-08-12	2012-08-11
Coaxial Cable	SCHWARZBEC K	AK9515H	9515-10	2011-08-12	2012-08-11

4.5 EUT Operating Condition

- (1) Setup the EUT and peripherals refer to the description of test mode.

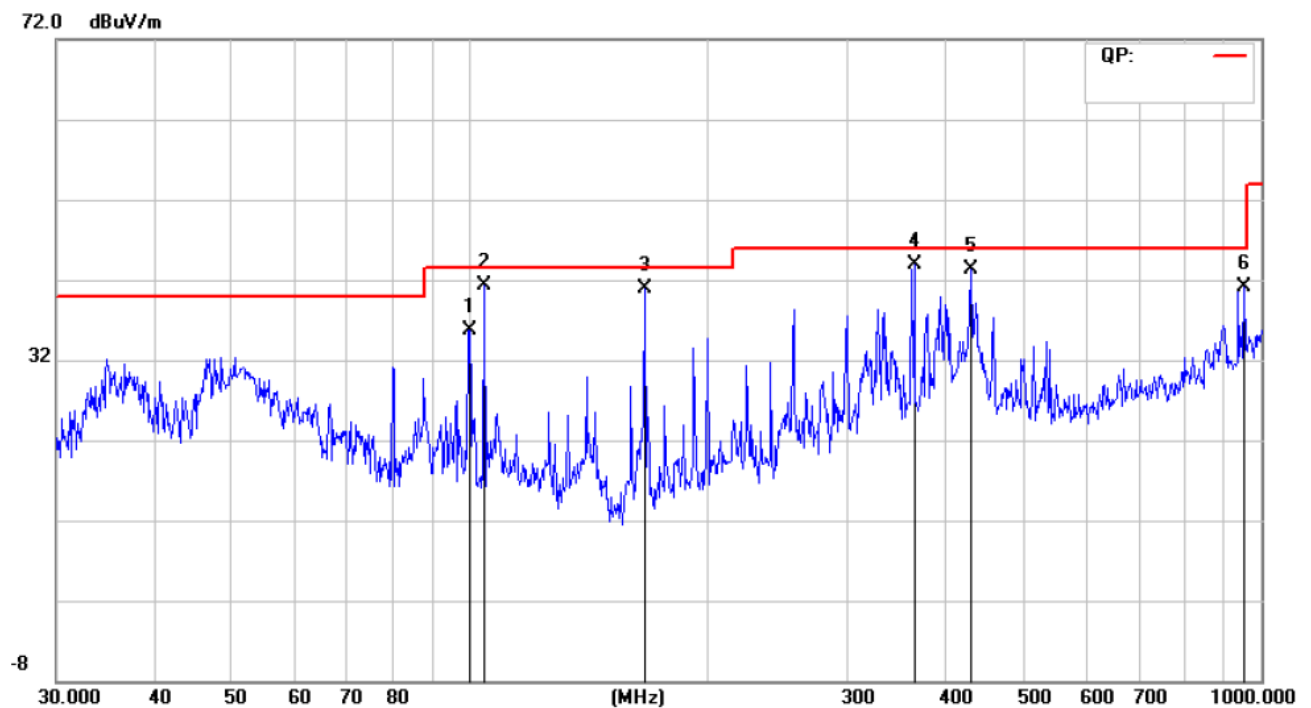
- (2) Turn on the power of all equipments and the EUT.
- (3) PC system ran the self-test program "EMC Test" by windows XP and sent "H" Characters to EUT through graphic card, the EUT's screen displayed and filled with "H" pattern by its resolution (Via D-sub & HDMI Input).
- (4) Repeat above procedure for difference test mode.
- (5) All the peripherals devices were driven and operated during the testing procedure.

4.6 Deviation

The test is no deviation from the standard.

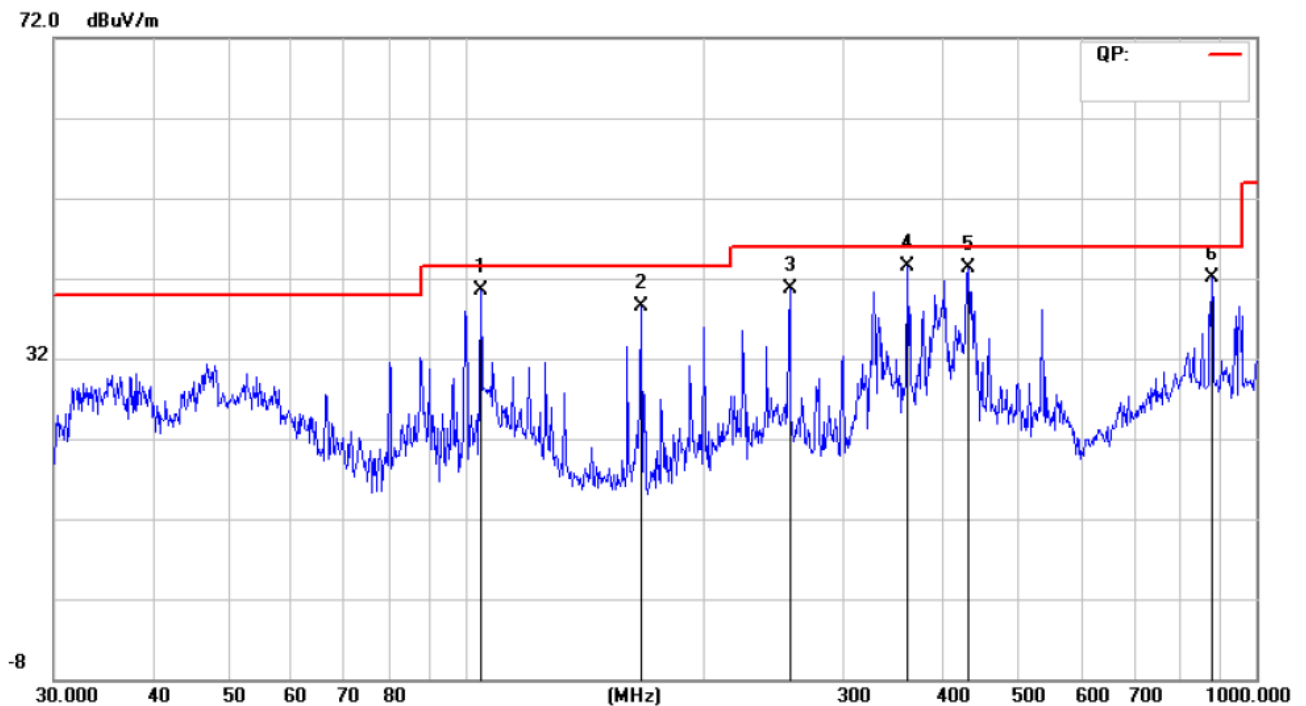
4.7 Test Data

E.U.T :	Personal View Screen	Model Name :	ARG-PVS15LED
Temperature :	26°C	Relative Humidity :	51 %
Test Voltage :	AC 120 V / 60Hz		
Antenna. Pol:	Horizontal		
Test Mode :	Mode 1: VGA 800*600@60Hz		



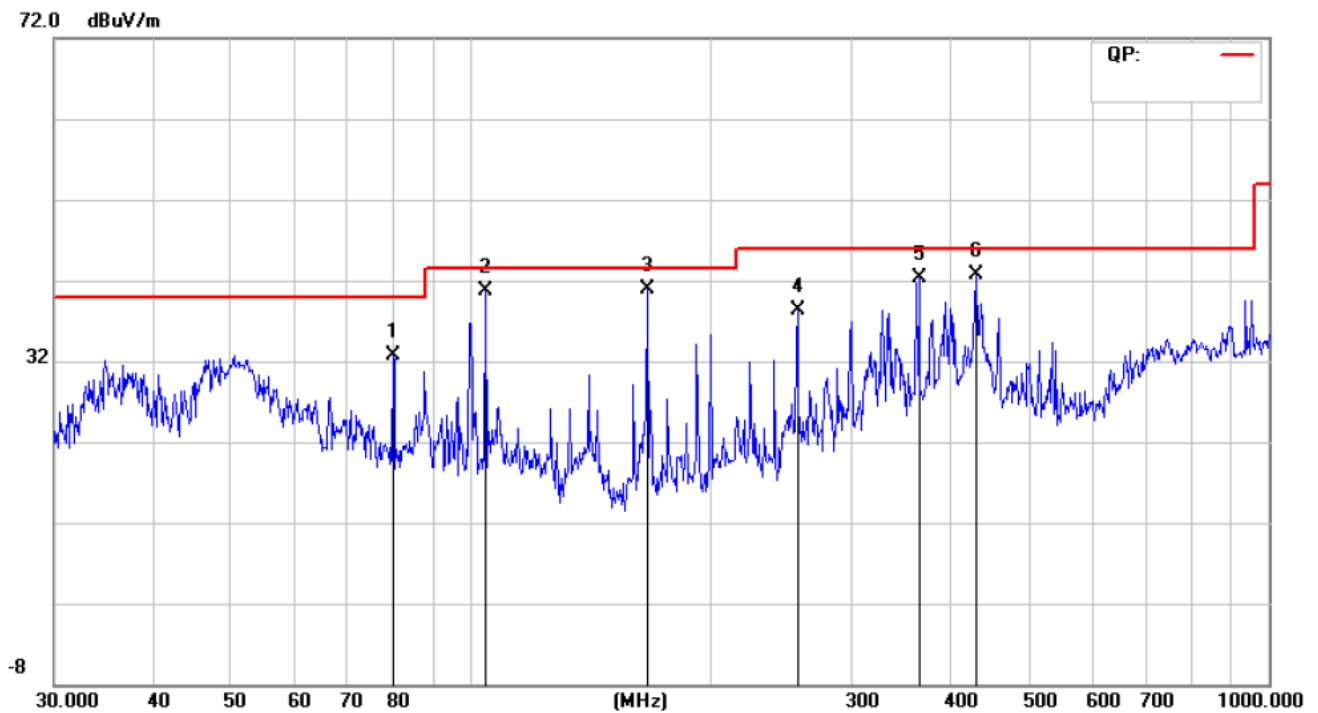
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		99.8777	17.55	18.15	35.70	43.50	-7.80	peak	
2		104.1701	23.51	17.78	41.29	43.50	-2.21	peak	
3		166.0680	27.09	13.85	40.94	43.50	-2.56	peak	
4	*	364.2595	22.20	21.69	43.89	46.00	-2.11	peak	
5		429.5228	20.67	22.57	43.24	46.00	-2.76	peak	
6		952.0937	12.61	28.43	41.04	46.00	-4.96	peak	

E.U.T :	Personal View Screen	Model Name :	ARG-PVS15LED
Temperature :	26°C	Relative Humidity :	51 %
Test Voltage :	AC 120 V / 60Hz		
Antenna. Pol:	Vertical		
Test Mode :	Mode 1: VGA 800*600@60Hz		



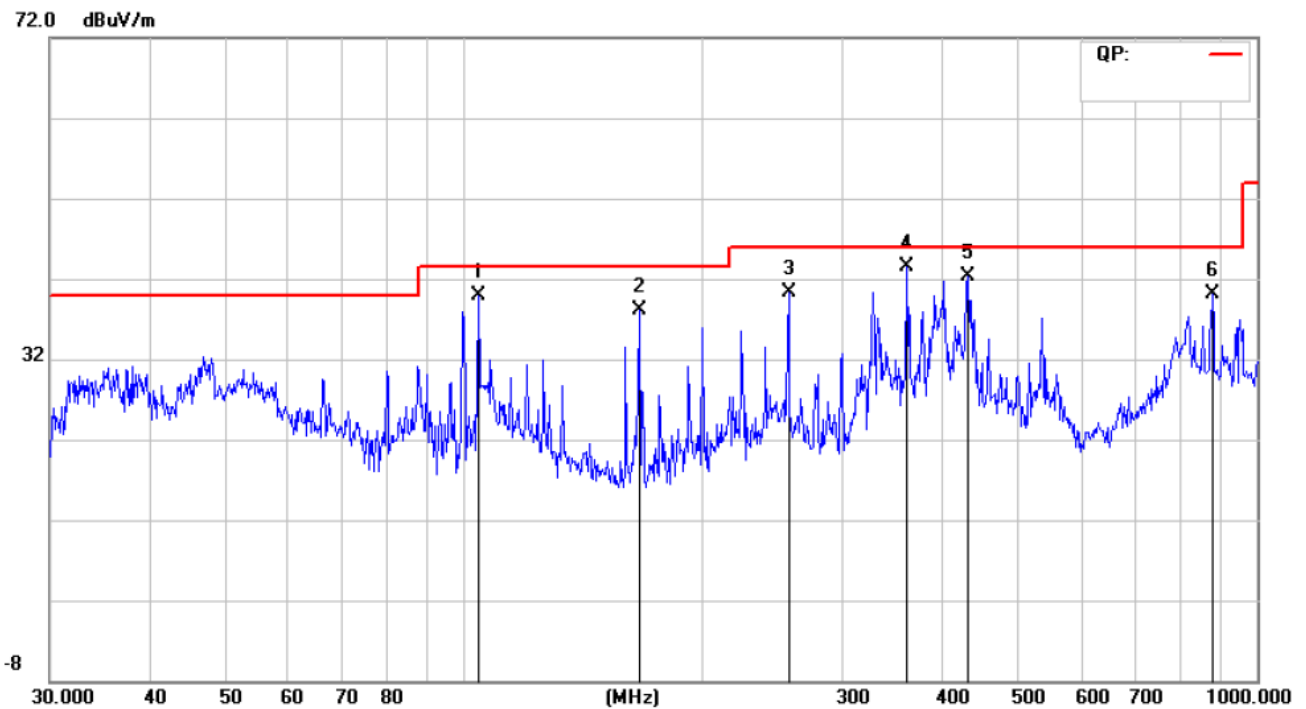
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1		104.1701	32.21	8.28	40.49	43.50	-3.01	peak	
2		166.0680	34.13	4.45	38.58	43.50	-4.92	peak	
3		256.5211	32.02	8.73	40.75	46.00	-5.25	peak	
4	*	361.7139	30.60	12.81	43.41	46.00	-2.59	peak	
5		432.5457	29.57	13.71	43.28	46.00	-2.72	peak	
6		878.3214	23.34	18.84	42.18	46.00	-3.82	peak	

E.U.T :	Personal View Screen	Model Name :	ARG-PVS15LED
Temperature :	26°C	Relative Humidity :	51 %
Test Voltage :	DC 4.5V		
Antenna. Pol:	Horizontal		
Test Mode :	Mode 2: VGA 1280*1024@60Hz		



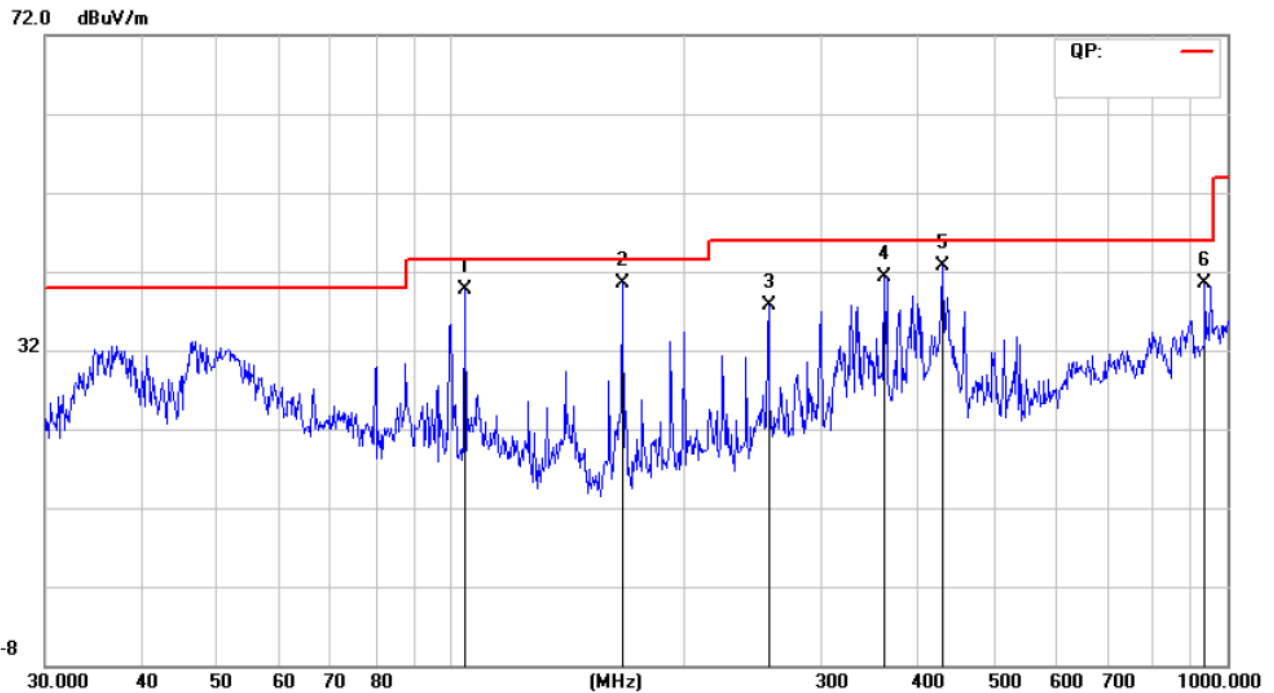
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		79.8003	16.03	16.59	32.62	40.00	-7.38	peak	
2		104.1701	23.01	17.78	40.79	43.50	-2.71	peak	
3	*	166.0680	27.09	13.85	40.94	43.50	-2.56	peak	
4		256.5211	21.02	17.23	38.25	46.00	-7.75	peak	
5		364.2595	20.70	21.69	42.39	46.00	-3.61	peak	
6		429.5228	20.17	22.57	42.74	46.00	-3.26	peak	

E.U.T :	Personal View Screen	Model Name :	ARG-PVS15LED
Temperature :	26°C	Relative Humidity :	51 %
Test Voltage :	DC 4.5V		
Antenna. Pol:	Vertical		
Test Mode :	Mode 2: VGA 1280*1024@60Hz		



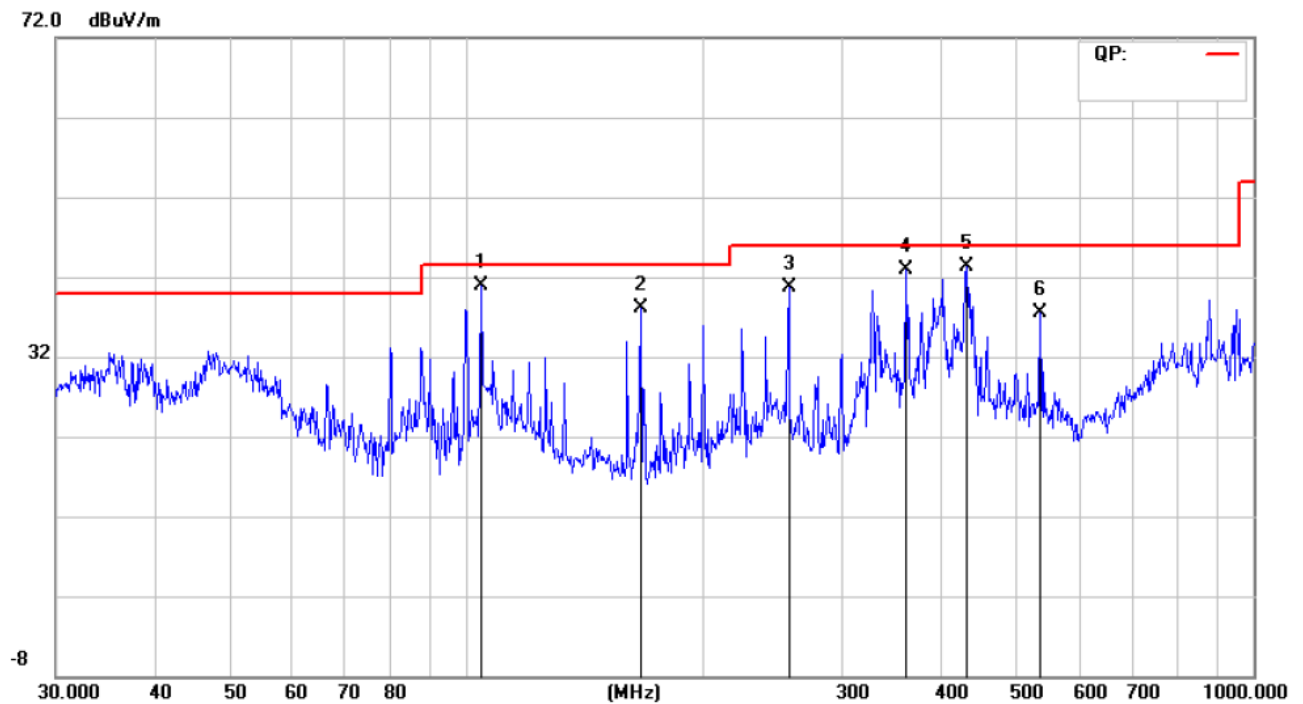
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		104.1701	31.71	8.28	39.99	43.50	-3.51	peak	
2		166.0680	33.63	4.45	38.08	43.50	-5.42	peak	
3		256.5211	31.52	8.73	40.25	46.00	-5.75	peak	
4	*	361.7139	30.60	12.81	43.41	46.00	-2.59	peak	
5		432.5457	28.57	13.71	42.28	46.00	-3.72	peak	
6		878.3214	21.34	18.84	40.18	46.00	-5.82	peak	

E.U.T :	Personal View Screen	Model Name :	ARG-PVS15LED
Temperature :	26°C	Relative Humidity :	51 %
Test Voltage :	DC 4.5V		
Antenna. Pol:	Horizontal		
Test Mode :	Mode 3: VGA 1920*1080@60Hz		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		104.1701	22.01	17.78	39.79	43.50	-3.71	peak	
2	*	166.0680	26.59	13.85	40.44	43.50	-3.06	peak	
3		256.5211	20.52	17.23	37.75	46.00	-8.25	peak	
4		361.7139	19.67	21.63	41.30	46.00	-4.70	peak	
5		429.5228	20.17	22.57	42.74	46.00	-3.26	peak	
6		935.5463	12.15	28.32	40.47	46.00	-5.53	peak	

E.U.T :	Personal View Screen	Model Name :	ARG-PVS15LED
Temperature :	26°C	Relative Humidity :	51 %
Test Voltage :	DC 4.5V		
Antenna. Pol:	Vertical		
Test Mode :	Mode 3: VGA 1920*1080@60Hz		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1	*	104.1701	32.71	8.28	40.99	43.50	-2.51	peak	
2		166.0680	33.63	4.45	38.08	43.50	-5.42	peak	
3		256.5211	32.02	8.73	40.75	46.00	-5.25	peak	
4		361.7139	30.10	12.81	42.91	46.00	-3.09	peak	
5		432.5457	29.57	13.71	43.28	46.00	-2.72	peak	
6		535.7073	23.26	14.31	37.57	46.00	-8.43	peak	