

## FCC CLASS B CONFORMITY REPORT

**Product Name** : Multimedia Projector  
**Model Number** : PLC-WXU700  
LC-WB42N  
**FCC ID** : WS309KY7AC00  
**Report Number** : SZEE09030262698720-3  
**Date** : May 05, 2009

Standards	Results
<input checked="" type="checkbox"/> FCC Part 15: 2008	PASS

Prepared for:

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## 1. CERTIFICATION INFORMATION

**Applicant & Address:** Dongguan Huaqiang SANYO Electronics Co., Ltd  
HongYe Industry Area,Tang Xia Town,Dongguan ,Gangdong

**Manufacturer & Address:** Dongguan Huaqiang SANYO Electronics Co., Ltd  
HongYe Industry Area,Tang Xia Town,Dongguan ,Gangdong

**Type of Test:** FCC Part 15 Class B

**FCC ID:** WS309KY7AC00

**Equipment Under Test:** Multimedia Projector

**Test Model:** PLC-WXU700      **Trade Name:** Sanyo

**Additional Model:** LC-WB42N      **Trade Name:** EIKI

**Model Deviation:** The two models above are identical except the printings and trade marks for different buyers.  
The test model is PLC-WXU700, and all the test results are applicable to LC-WB42N.

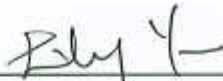
**Serial Number:** N/A

**Date of test:** Mar. 26,2009 to May 05, 2009

**Condition of Test Sample:** Normal

The above equipment was tested by Centre Testing International for compliance with the requirements set forth in the FCC Rules and Regulations Part 15, Subpart B and the measurement procedure according to ANSI C63.4.  
The test results of this report relate only to the tested sample identified in this report.

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Date

:

\_\_\_\_\_  
May. 05, 2009

## 2. TEST SUMMARY

The EUT has been tested according to the following specifications:

EMISSION			
Standard	Test Type	Result	Remark
FCC Part 15	Conducted emission at AC power port	<b>PASS</b>	See clause 7 in this report
	Radiated emission	<b>PASS</b>	See clause 8 in this report

## 3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

Measurement items	Value
Conducted emission	3.2 dB
Radiated emission	4.6 dB

## 4. PRODUCT INFORMATION

### I/O Port of EUT

I/O Port Type	Quantity
R/C JACK	1
USB	2
<b>CONTROL PORT</b>	1
COMPUTER IN1 / COMPONENT IN	1
COMPUTER IN2 / MONITOR OUT	1
HDMI	1
VIDEO IN	1
AUDIO IN	4 (L(MONO), R, COMPUTER1 / COMPONENT, COMPUTER2)
AUDIO OUT (VARIABLE)	1
S-VIDEO	1
LAN	1

## 5. FACILITIES AND ACCREDITATIONS

### 5.1 TEST FACILITY

All measurement facilities used to collect the measurement data are located at Building C, Hongwei Industrial Zone, Baoan 70 District, Shenzhen, Guangdong, China. The sites are constructed in conformance with the requirements of ANSI C63.4, and CISPR 16.

### 5.2 TEST EQUIPMENT LIST

**Instrumentation:** The following list contains equipments used at CTI for testing.

The calibrations of the measuring instruments, including any accessories that may effect such calibration, are checked frequently to assure their accuracy. Adjustments are made and correction factors applied in accordance with instructions contained in the manual for the measuring instrument.

Equipment	Manufacturer	Model Number	Serial Number	Calibration Date
<b>Shielding Room No. 1 —AC Power Line Conducted Emissions Measurement</b>				
Receiver	R&S	ESCI	100435	01/29/2009
LISN	R&S	ENV216	100098	06/13/2008
<b>3M Semi-anechoic Chamber — Radio Test Site</b>				
Spectrum Analyzer	Agilent	E4443A	MY45300910	09/07/2008
Biconilog Antenna	A.H.System	SAS-521-2	487	06/05/2008
Horn Antenna	ETS-LINDGREN	3117	00057407	06/27/2008
Loop Antenna	ETS-LINDGREN	6502	00071730	09/22/2008
3M Chamber & Accessories	ETS-LINDGREN	FACT-3	N/A	05/11/2008

### 5.3 LABORATORY ACCREDITATIONS AND LISTINGS

The test facilities used to perform radiated and conducted emissions tests are accredited by China National Accreditation Board for Laboratories (CNAS). Electromagnetic Interference tests according to ANSI C63.4 and CISPR 16 requirements.

## 6. SETUP OF EQUIPMENT UNDER TEST

### 6.1 SETUP CONFIGURATION OF EUT

1. See test photographs attached in Appendix 1 for the actual connections between EUT and support equipment.
2. Make sure EUT work normally during the whole test.

### 6.2 SUPPORT EQUIPMENT

No.	Device Type	Brand	Model	Series No.	Data Cable	Power Cord
1.	PC	IBM	8143	BD-241	--	Un-shielded 1.2M
2.	Monitor	IBM	9205-AB6	VK-KZ133	Un-shielded 1M	Un-shielded 1 M
3.	Mouse	IBM	M028UOL	23-468157	Un-shielded 1.2M	--
4.	headphone	SONY	--	--	Un-Shielded 1M	--
5.	DVD player	PHILIPS	DVP5965K/93	KX1A065042 2576	Un-shielded 1M	Un-shielded 1M

#### Notes:

1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

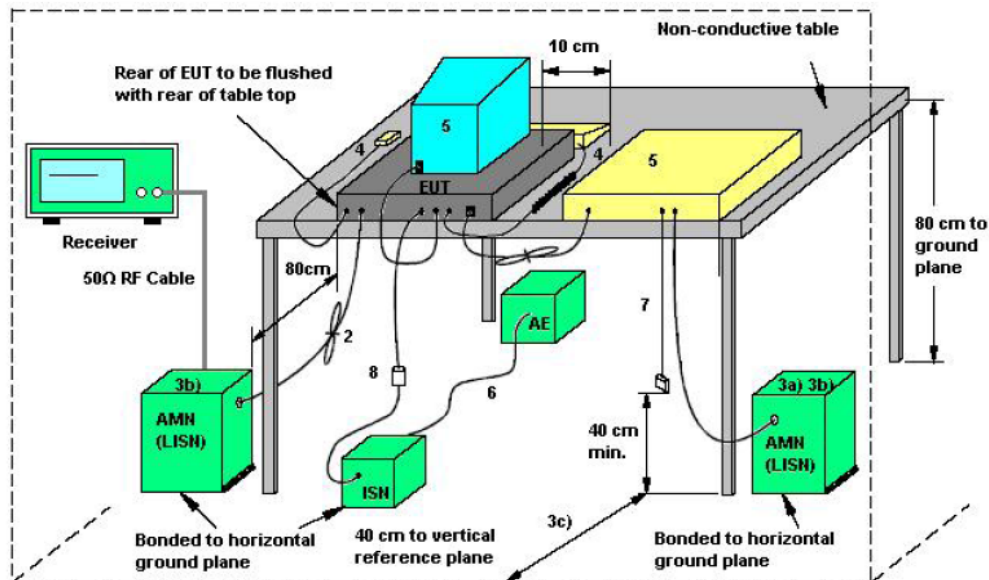
## 6. AC POWER LINE CONDUCTED EMISSIONS MEASUREMENT

### 6.1 LIMITS

Frequency (MHz)	Conducted Limit ( dBuV) – Class B Digital Device	
	Q.P.	Average( dBuV)
0.150 – 0.5	66-56	56-46
0.5 – 5	56	46
5 - 30	60	50

**Note:** the tighter limit applies at the band edges.

### 6.2 BLOCK DIAGRAM OF TEST SETUP



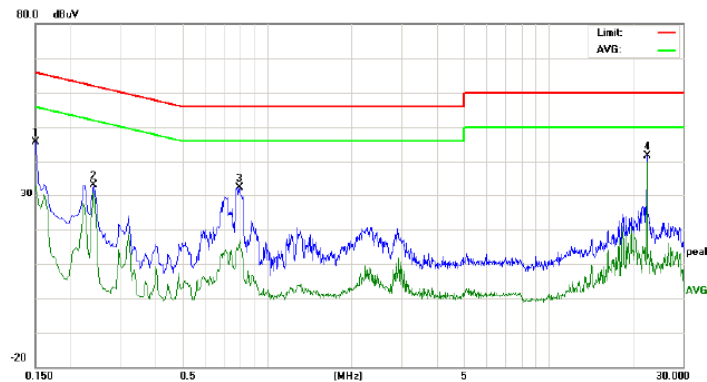
### 6.3 TEST PROCEDURE

- The EUT was placed 0.4 meters from the conducting wall of the shielded room and connected to the main through Line Impedance Stability Network (LISN). This provided a 50ohm coupling impedance for the tested equipments.
- The bandwidth of the field strength meter (Receiver) was set at 9kHz in 150kHz ~ 30MHz.
- The disturbance levels and the frequencies of at least two highest disturbances were recorded from each power line which comprises the EUT.

## 6.4 TEST RESULT

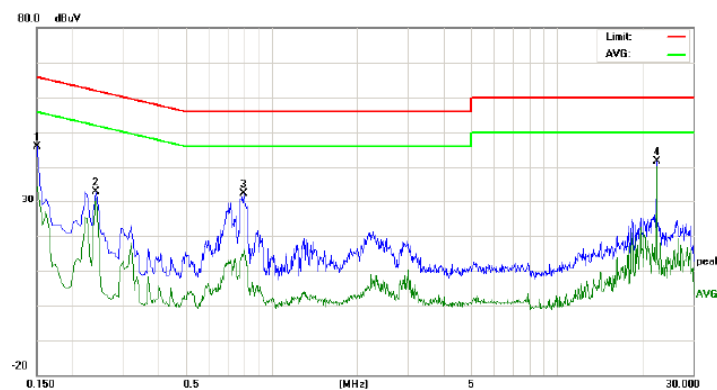
**Test Results-L (Test Mode: VGA with Monitor Out)**

No.	Freq. MHz	Reading Level (dBuV)			Correct Factor dB	Measurement (dBuV)			Limit (dBuV)		Margin (dB)		P/F
		Peak	QP	AVG		peak	QP	AVG	QP	AVG	QP	AVG	
1	0.1500	35.74	27.82	23.39	10.01	45.75	37.83	33.40	66.00	56.00	-28.17	-22.60	P
2	0.2420	23.09	21.86	21.70	9.96	33.05	31.82	31.66	62.03	52.03	-30.21	-20.37	P
3	0.7980	22.52	17.50	5.84	9.91	32.43	27.41	15.75	56.00	46.00	-28.59	-30.25	P
4	22.3820	31.89	30.91	28.88	9.85	41.74	40.76	38.73	60.00	50.00	-19.24	-11.27	P



**Test Results-N (Test Mode: VGA with Monitor Out)**

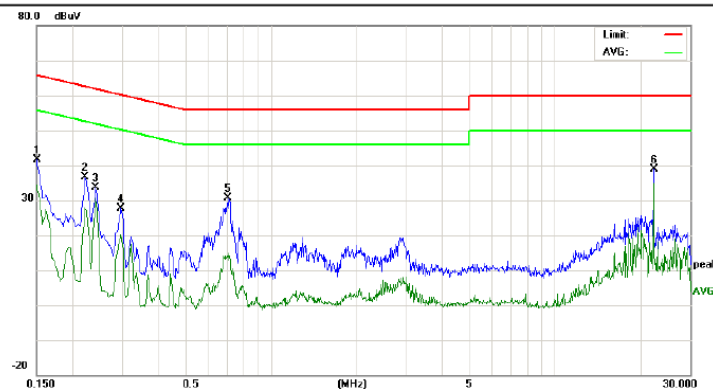
No.	Freq. MHz	Reading Level (dBuV)			Correct Factor dB	Measurement (dBuV)			Limit (dBuV)		Margin (dB)		P/F
		Peak	QP	AVG		peak	QP	AVG	QP	AVG	QP	AVG	
1	0.1500	35.97	28.94	23.62	10.01	45.98	38.95	33.63	66.00	56.00	-27.05	-22.37	P
2	0.2420	23.01	21.20	21.07	9.96	32.97	31.16	31.03	62.03	52.03	-30.87	-21.00	P
3	0.7980	22.47	17.33	5.73	9.91	32.38	27.24	15.64	56.00	46.00	-28.76	-30.36	P
4	22.3900	31.86	31.30	29.36	9.85	41.71	41.15	39.21	60.00	50.00	-18.85	-10.79	P





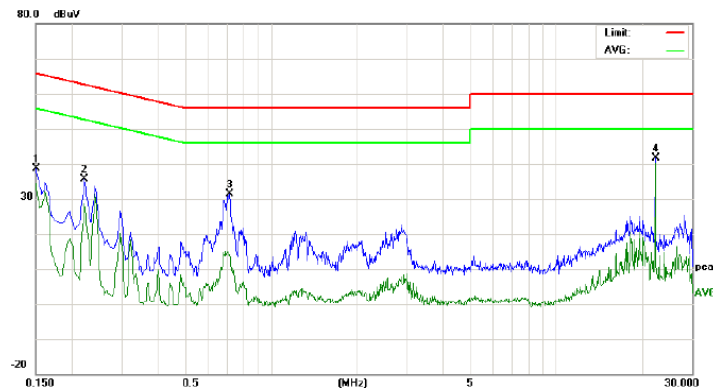
### Test Results-L (Test Mode: HDMI)

No.	Freq.	Reading_Level (dBuV)			Correct Factor	Measurement (dBuV)			Limit (dBuV)		Margin (dB)		P/F
		MHz	Peak	QP		peak	QP	AVG	QP	AVG	QP	AVG	
1	0.1516	31.58	26.23	24.35	10.03	41.61	36.26	34.38	65.91	55.91	-29.65	-21.53	P
2	0.2220	26.78	24.69	17.89	9.95	36.73	34.64	27.84	62.74	52.74	-28.10	-24.90	P
3	0.2420	23.55	21.69	20.61	9.96	33.51	31.65	30.57	62.03	52.03	-30.38	-21.46	P
4	0.2980	17.53	14.36	10.21	9.97	27.50	24.33	20.18	60.30	50.30	-35.97	-30.12	P
5	0.7100	20.67	15.96	4.85	9.94	30.61	25.90	14.79	56.00	46.00	-30.10	-31.21	P
6	22.3940	29.07	28.01	25.10	9.85	38.92	37.86	34.95	60.00	50.00	-22.14	-15.05	P



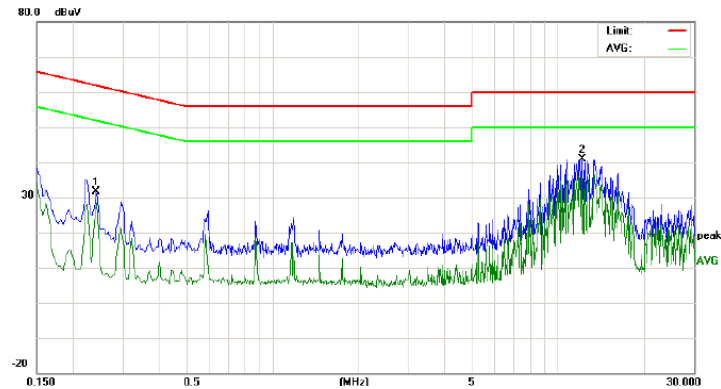
### Test Results-N (Test Mode: HDMI)

No.	Freq.	Reading_Level (dBuV)			Correct Factor	Measurement (dBuV)			Limit (dBuV)		Margin (dB)		P/F
		MHz	Peak	QP		peak	QP	AVG	QP	AVG	QP	AVG	
1	0.1500	28.51	26.44	24.06	10.01	38.52	36.45	34.07	66.00	56.00	-29.55	-21.93	P
2	0.2220	25.73	23.92	17.64	9.95	35.68	33.87	27.59	62.74	52.74	-28.87	-25.15	P
3	0.7180	21.52	16.38	3.56	9.94	31.46	26.32	13.50	56.00	46.00	-29.68	-32.50	P
4	22.3819	31.80	31.18	29.77	9.85	41.65	41.03	39.62	60.00	50.00	-18.97	-10.38	P



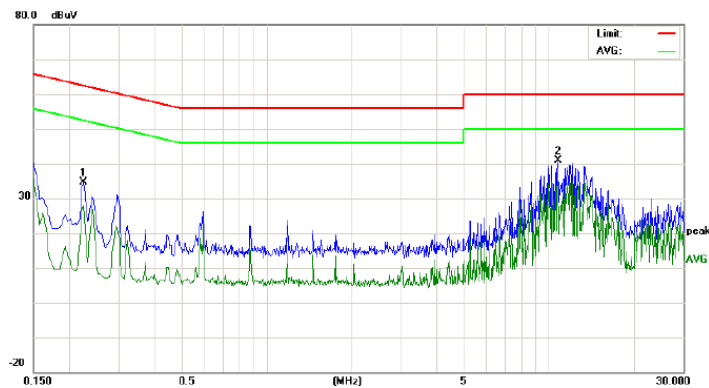
### Test Results-L (Test Mode: LAN)

No.	Freq.	Reading_Level (dBuV)			Correct Factor	Measurement (dBuV)			Limit (dBuV)		Margin (dB)			
		MHz	Peak	QP		AVG	dB	peak	QP	AVG	QP	AVG	QP	AVG
1	0.2420	21.56			19.37	9.96	31.52		29.33	62.02	52.02	-30.50	-22.69	P
2	12.1980	31.10			26.64	9.79	40.89		36.43	60.00	50.00	-19.11	-13.57	P



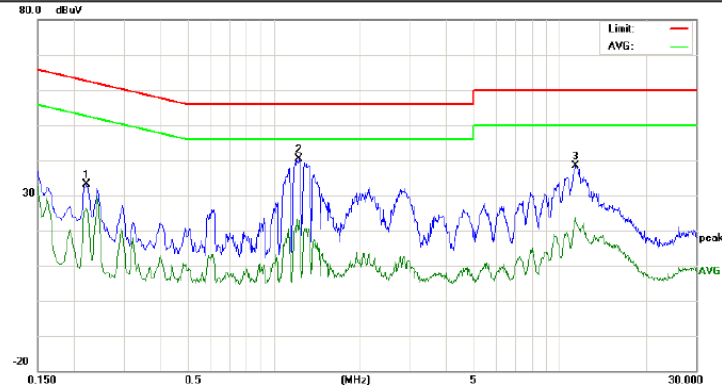
### Test Results-N (Test Mode: LAN)

No.	Freq.	Reading_Level (dBuV)			Correct Factor	Measurement (dBuV)			Limit (dBuV)		Margin (dB)			
		MHz	Peak	QP		AVG	dB	peak	QP	AVG	QP	AVG	QP	AVG
1	0.2260	24.56			17.91	9.96	34.52		27.87	62.59	52.59	-28.07	-24.72	P
2	10.7940	31.09			26.03	9.79	40.88		35.82	60.00	50.00	-19.12	-14.18	P



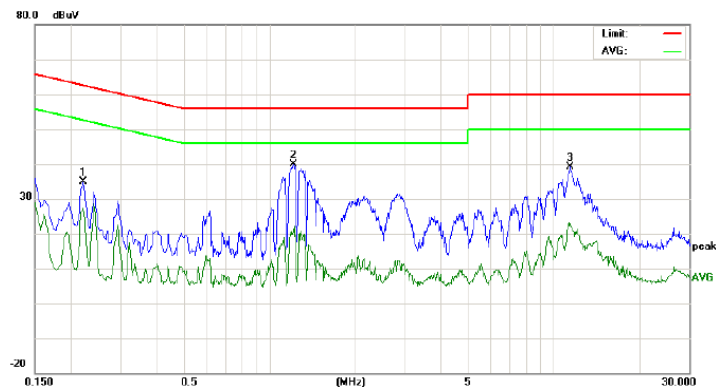
### Test Results-L (Test Mode: AV IN)

No.	Freq.	Reading_Level (dBuV)			Correct Factor	Measurement (dBuV)			Limit (dBuV)		Margin (dB)			
		MHz	Peak	QP		AVG	dB	peak	QP	AVG	QP	AVG	QP	AVG
1	0.2220	23.22			16.37	9.95	33.17		26.32	62.74	52.74	-29.57	-26.42	P
2	1.2300	30.49			10.50	9.85	40.34		20.35	56.00	46.00	-15.66	-25.65	P
3	11.3660	28.53			13.75	9.79	38.32		23.54	60.00	50.00	-21.68	-26.46	P



### Test Results-N (Test Mode: AV IN)

No.	Freq.	Reading_Level (dBuV)			Correct Factor	Measurement (dBuV)			Limit (dBuV)		Margin (dB)			
		MHz	Peak	QP		AVG	dB	peak	QP	AVG	QP	AVG	QP	AVG
1	0.2220	24.87			17.41	9.95	34.82		27.36	62.74	52.74	-27.92	-25.38	P
2	1.2220	30.06			10.70	9.85	39.91		20.55	56.00	46.00	-16.09	-25.45	P
3	11.4620	29.35			12.97	9.79	39.14		22.76	60.00	50.00	-20.86	-27.24	P



## 7. RADIATED EMISSION TEST

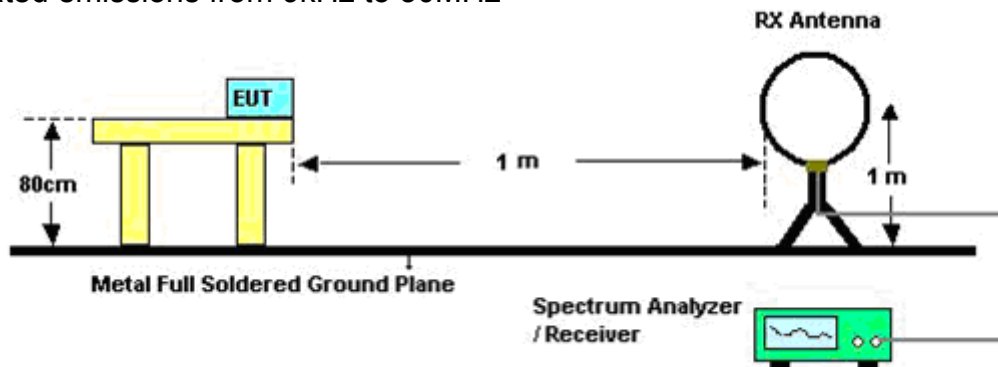
### 7.1 LIMITS

Frequency (MHz)	Field strength ( $\mu\text{V/m}$ )	Distance (m)
0.009-0.490	$2400/F(\text{kHz})$	300
0.490-1.705	$24000/F(\text{kHz})$	30
1.705-30	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

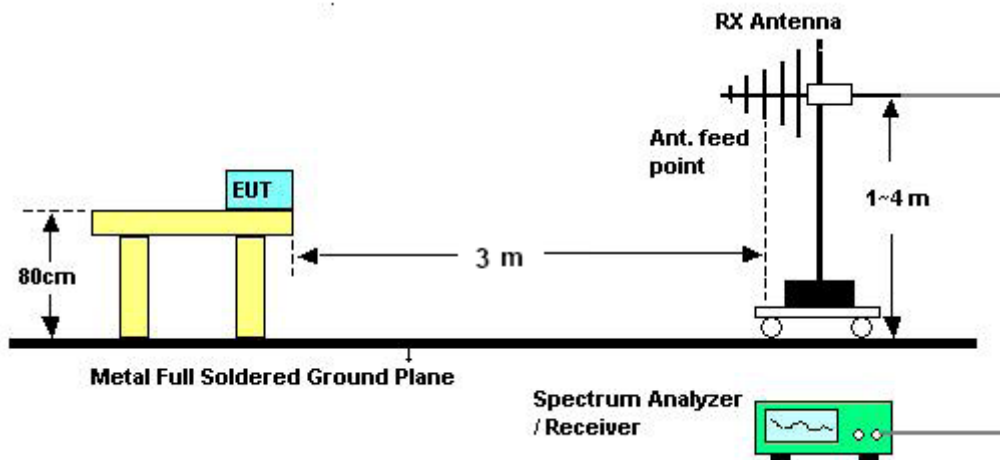
**Note:** the tighter limit applies at the band edges.

### 7.2 BLOCK DIAGRAM OF TEST SETUP

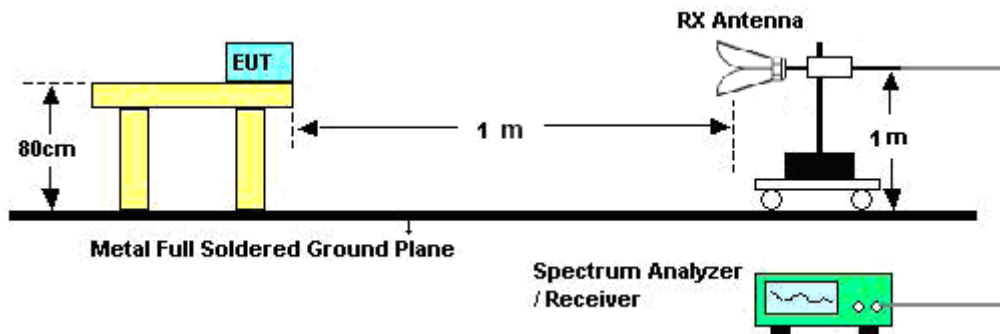
For radiated emissions from 9kHz to 30MHz



For radiated emissions from 30 - 1000MHz



For radiated emissions from 1GHz to 24GHz



## 7.3 PROCEDURE

1. Configure the EUT according to ANSI C63.4. The EUT was placed on the top of the turntable 0.8meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.
2. Power on the EUT and all the supporting units. The turntable was rotated by 360 degrees to determine the position of the highest radiation.
3. The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emissions field strength of both horizontal and vertical polarization.
4. For each suspected emissions, the antenna tower was scan (from 1 M to 4 M) and then the turntable was rotated (from 0 degree to 360 degrees) to find the maximum reading.
5. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function with specified bandwidth under Maximum Hold Mode.
6. For emissions above 1GHz, use 1MHz VBW and RBW for peak reading. Then 1MHz RBW and 10Hz VBW for average reading in spectrum analyzer.
7. When the radiated emissions limits are expressed in terms of the average value of the emissions, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum value.
8. If the emissions level of the EUT in peak mode was 3 dB lower than the average limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method for below 1GHz.

9. For testing above 1GHz, the emissions level of the EUT in peak mode was lower than average limit (that means the emissions level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

10. In case the emission is lower than 30MHz, loop antenna has to be used for measurement and the recorded data should be QP measured by receiver. High – Low scan is not required in this case.

#### **7.4 TEST RESULT OF RADIATED EMISSION TEST**

Note: Limit dB $\mu$ V/m @1m = Limit dB $\mu$ V/m @300m+ 90

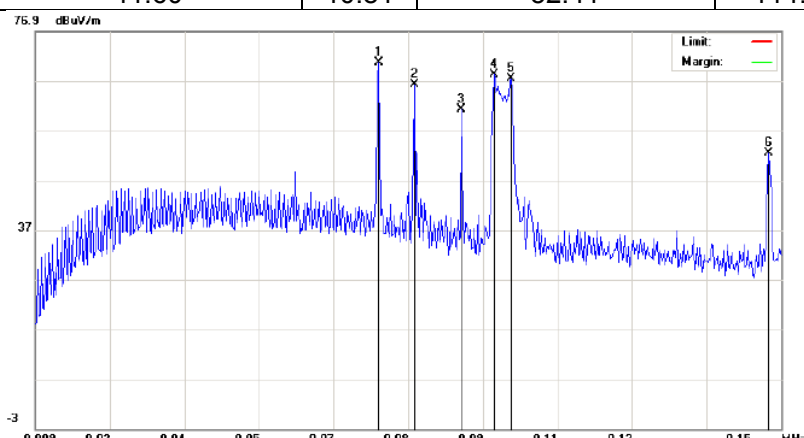
Limit dB $\mu$ V/m @1m = Limit dB $\mu$ V/m @30m + 50

Limit dB $\mu$ V/m @1m = Limit dB $\mu$ V/m @3m +10

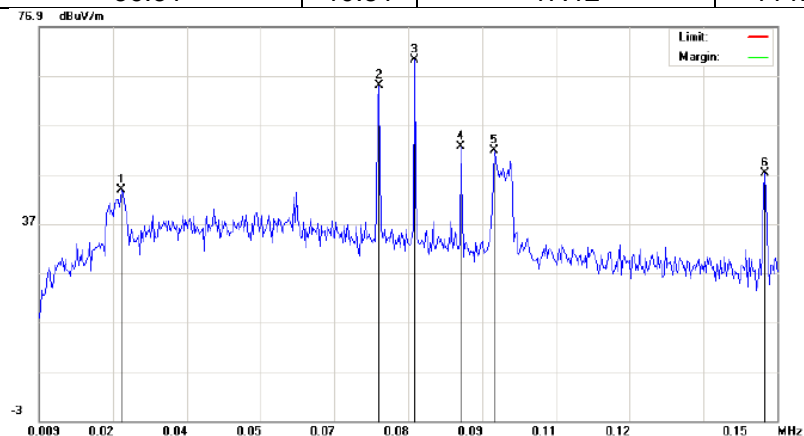
## 7.4.1 Results of Radiated Emissions (Mode: VGA with Monitor Out)

### 1. For 9kHz~150kHz

Test Results-H (Measurement Distance: 1m)					
Frequency (kHz)	Reading Level - peak (dB $\mu$ V/m)	Factor (dB)	Measurement - peak (dB $\mu$ V/m)	Limit - QP (dB $\mu$ V/m)	Result (P/F)
73.9	59.51	11.05	70.56	120.23	P
80.7	55.16	11.03	66.19	119.47	P
89.6	50.16	11.02	61.18	118.56	P
95.7	57.11	11.01	67.39	117.99	P
147.6	41.60	10.81	52.41	114.22	P

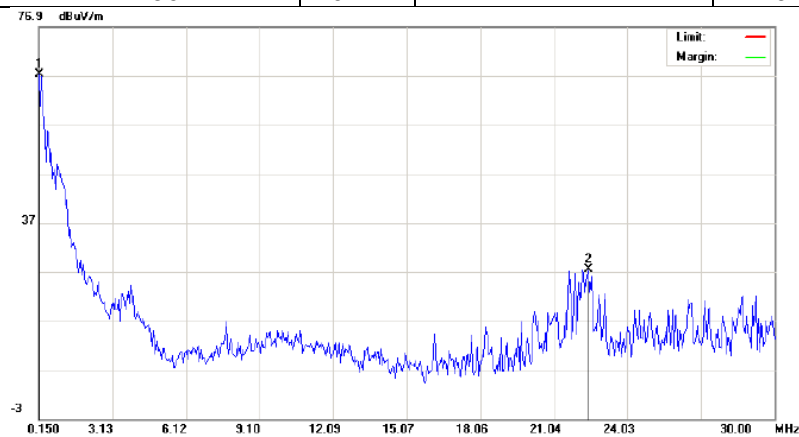


Test Results-V (Measurement Distance: 1m)					
Frequency (kHz)	Reading Level - peak (dB $\mu$ V/m)	Factor (dB)	Measurement - peak (dB $\mu$ V/m)	Limit - QP (dB $\mu$ V/m)	Result (P/F)
24.7	29.93	13.78	43.71	129.75	P
73.9	54.04	11.05	65.09	120.23	P
80.7	59.26	11.03	70.29	119.47	P
89.6	41.62	11.02	52.64	118.56	P
95.9	40.78	11.01	51.79	117.97	P
147.6	36.31	10.81	47.12	114.22	P

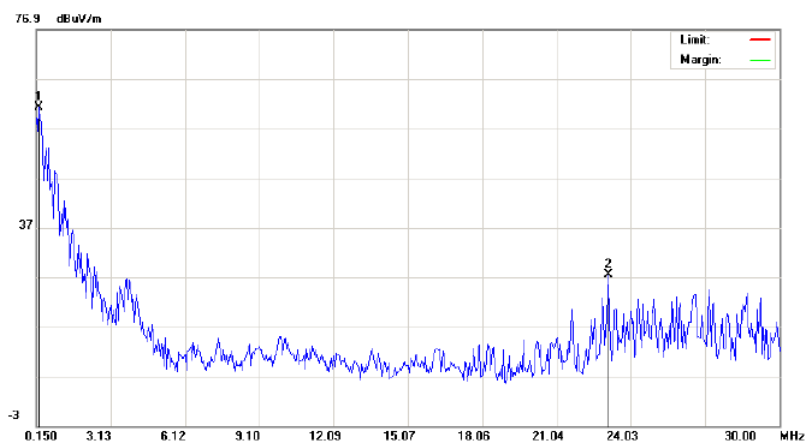


## 2. For 150kHz~30MHz

Test Results-H (Measurement Distance: 1m)					
Frequency (kHz)	Reading Level - peak (dB $\mu$ V/m)	Factor (dB)	Measurement - peak (dB $\mu$ V/m)	Limit - QP (dB $\mu$ V/m)	Result (P/F)
150.0	56.49	10.80	67.29	114.08	P
21 438.0	27.30	0.11	27.41	79.54	P



Test Results-V (Measurement Distance: 1m)					
Frequency (kHz)	Reading Level - peak (dB $\mu$ V/m)	Factor (dB)	Measurement - peak (dB $\mu$ V/m)	Limit - QP (dB $\mu$ V/m)	Result (P/F)
249.5	50.71	10.44	61.15	109.66	P
23 134.5	26.71	0.77	27.48	79.54	P

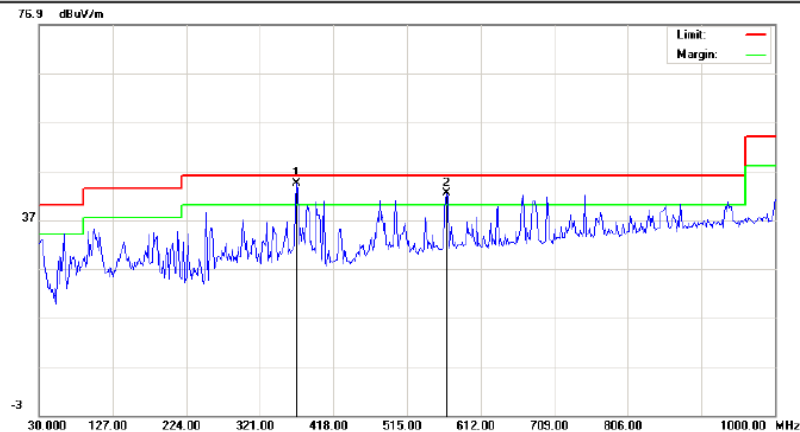




### 3. For 30MHz~1GHz

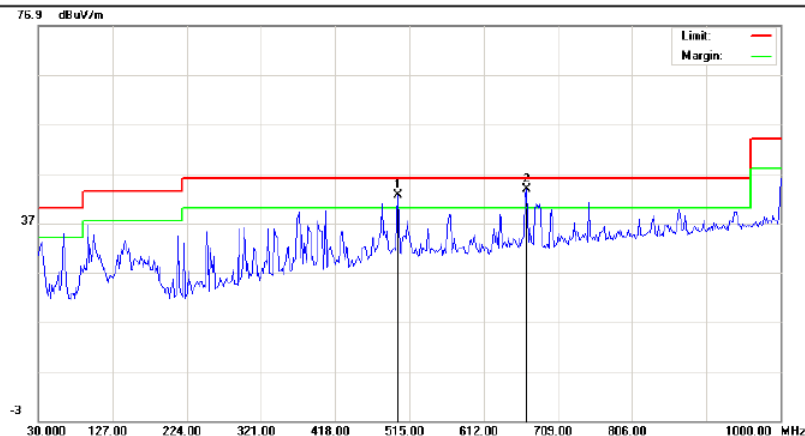
#### Test Results - H (Measurement Distance: 3m)

No.	Freq.	Reading_Level (dBuV)			Correct Factor	Measurement (dBuV/m)			Limit (dBuV/m)		Margin (dB)			
		MHz	Peak	QP		AVG	dB	peak	QP	AVG	QP	AVG	QP	AVG
1	369.5000	26.85	25.68		17.58	44.43	43.26		46.00		-2.74			P
2	566.7332	19.81	18.32		22.53	42.34	40.85		46.00		-5.15			P



#### Test Results - V (Measurement Distance: 3m)

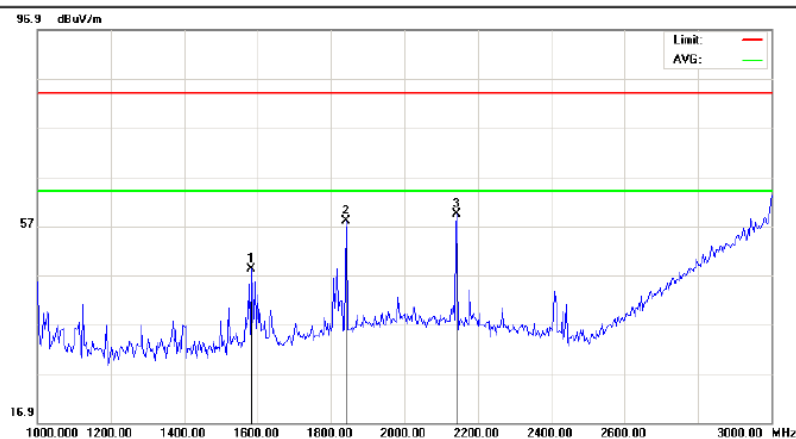
No.	Freq.	Reading_Level (dBuV)			Correct Factor	Measurement (dBuV/m)			Limit (dBuV/m)		Margin (dB)			
		MHz	Peak	QP		AVG	dB	peak	QP	AVG	QP	AVG	QP	AVG
1	500.4500	22.00	21.77		20.61	42.61	42.38		46.00		-3.62			P
2	668.5833	20.18	18.64		23.65	43.83	42.29		46.00		-3.71			P



#### 4. For above 1GHz

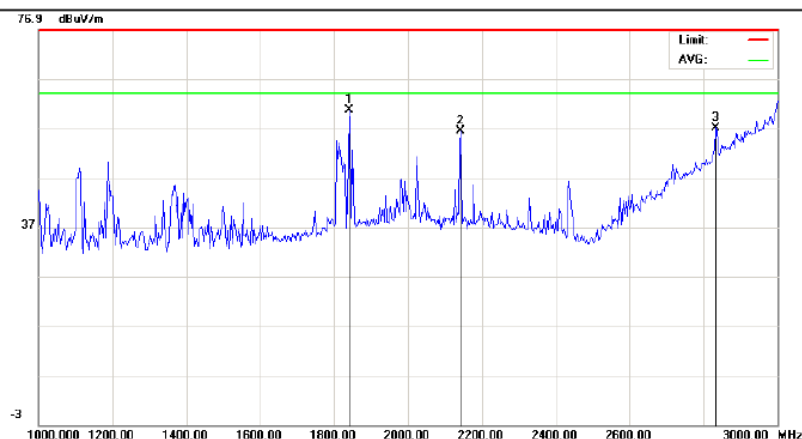
##### Test Results - H (Measurement Distance: 1m)

No.	Freq. MHz	Reading_Level (dBuV)			Correct Factor dB	Measurement (dBuV/m)			Limit (dBuV/m)		Margin (dB)		P/F
		Peak	QP	AVG		peak	QP	AVG	QP	AVG	QP	AVG	
1	1583.333	47.84			0.28	48.12			84.00	64.00	-35.88	-15.88	P
2	1840.000	53.73			4.25	57.98			84.00	64.00	-26.02	-6.02	P
3	2143.333	52.33			7.03	59.36			84.00	64.00	-24.64	-4.64	P



##### Test Results - V (Measurement Distance: 1m)

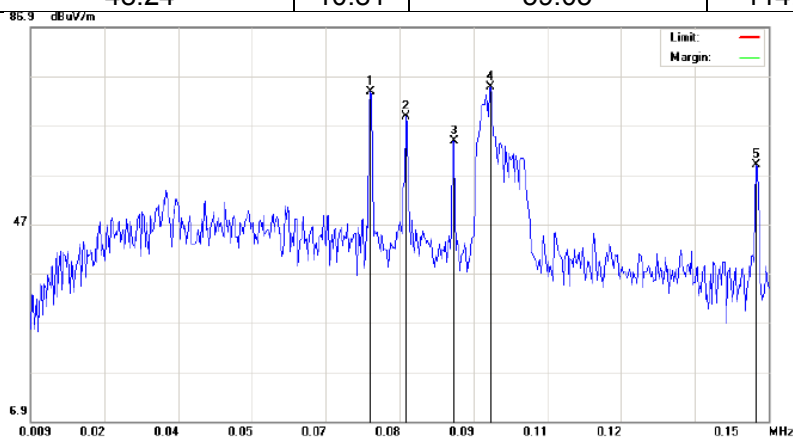
No.	Freq. MHz	Reading_Level (dBuV)			Correct Factor dB	Measurement (dBuV/m)			Limit (dBuV/m)		Margin (dB)		P/F
		Peak	QP	AVG		peak	QP	AVG	QP	AVG	QP	AVG	
1	1840.000	56.36			4.25	60.61			84.00	64.00	-23.39	-3.39	P
2	2143.333	49.38			7.03	56.41			84.00	64.00	-27.59	-7.59	P
3	2833.333	35.19			21.91	57.10			84.00	64.00	-26.90	-6.90	P



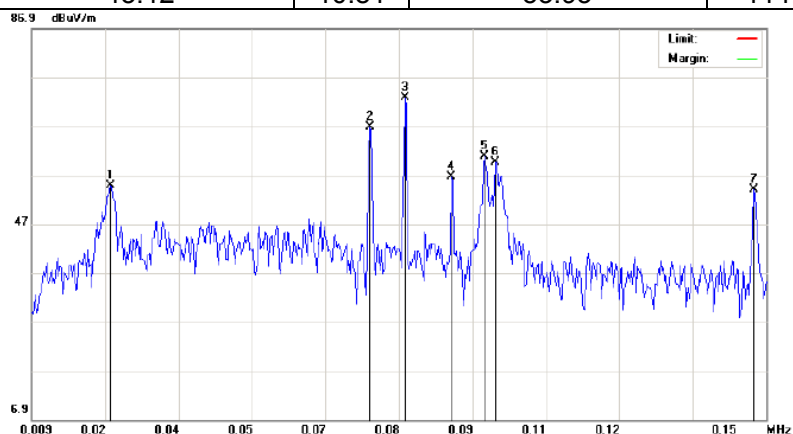
## 7.4.2 Results of Radiated Emissions (Mode: AV IN)

### 1. For 9kHz~150kHz

Test Results-H (Measurement Distance: 1m)					
Frequency (kHz)	Reading Level - peak (dB $\mu$ V/m)	Factor (dB)	Measurement - peak (dB $\mu$ V/m)	Limit - QP (dB $\mu$ V/m)	Result (P/F)
73.9	62.84	11.06	73.90	120.23	P
80.7	57.87	11.03	68.90	119.47	P
89.8	52.72	11.02	63.74	118.54	P
96.9	63.82	11.01	74.83	117.88	P
147.6	48.24	10.81	59.05	114.22	P

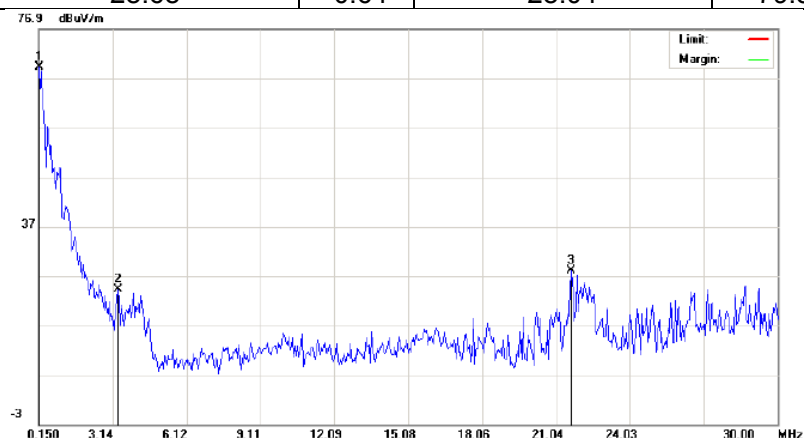


Test Results-V (Measurement Distance: 1m)					
Frequency (kHz)	Reading Level - peak (dB $\mu$ V/m)	Factor (dB)	Measurement - peak (dB $\mu$ V/m)	Limit - QP (dB $\mu$ V/m)	Result (P/F)
24.0	40.87	13.84	54.71	129.75	P
73.9	55.75	11.06	66.81	120.23	P
80.7	61.74	11.03	72.77	119.47	P
89.6	45.53	11.02	56.55	118.56	P
95.9	49.81	11.01	60.82	117.97	P
98.1	48.69	11.01	59.70	117.77	P
147.6	43.12	10.81	53.93	114.22	P

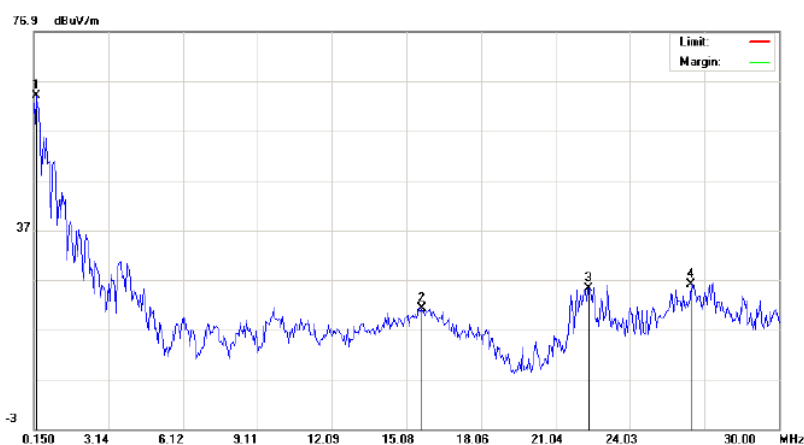


## 2. For 150kHz~30MHz

Test Results-H (Measurement Distance: 1m)					
Frequency (kHz)	Reading Level - peak (dB $\mu$ V/m)	Factor (dB)	Measurement - peak (dB $\mu$ V/m)	Limit - QP (dB $\mu$ V/m)	Result (P/F)
150.0	58.46	10.80	69.26	114.08	P
3 334.0	26.48	-2.21	24.27	79.54	P
21 642.0	28.68	-0.64	28.04	79.54	P



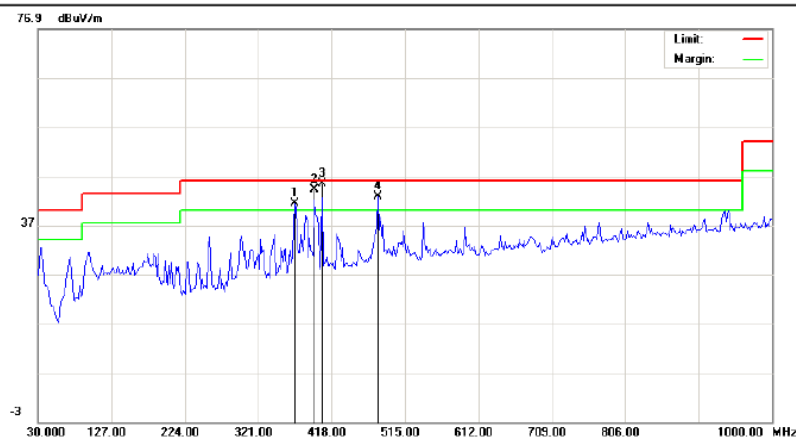
Test Results-V (Measurement Distance: 1m)					
Frequency (kHz)	Reading Level - peak (dB $\mu$ V/m)	Factor (dB)	Measurement - peak (dB $\mu$ V/m)	Limit - QP (dB $\mu$ V/m)	Result (P/F)
249.5	53.60	10.44	64.04	109.66	P
15 672.0	28.26	-7.10	21.16	79.54	P
22 388.3	25.20	0.07	25.27	79.54	P
26 467.8	25.35	0.60	25.95	79.54	P



### 3. For 30MHz~1GHz

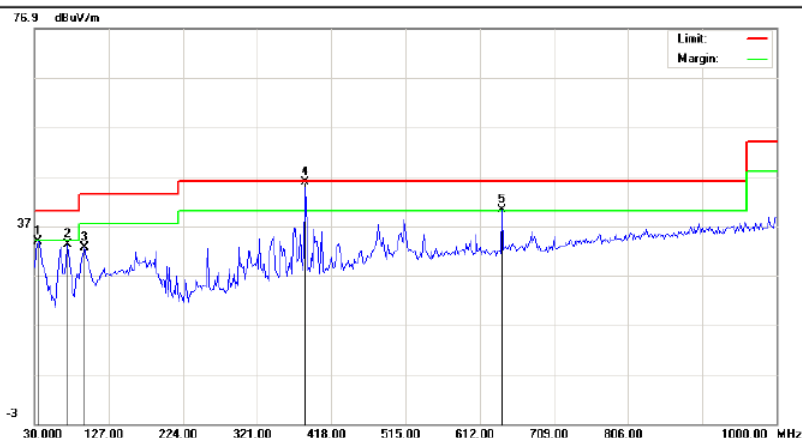
#### Test Results - H (Measurement Distance: 3m)

No.	Freq. MHz	Reading_Level (dBuV)			Correct Factor dB	Measurement (dBuV/m)			Limit (dBuV/m)		Margin (dB)		P/F
		Peak	QP	AVG		peak	QP	AVG	QP	AVG	QP	AVG	
1	369.5000	23.89	20.17		17.58	41.47	37.75		46.00		-8.25		P
2	395.3667	25.88	24.45		18.37	44.25	42.82		46.00		-3.18		P
3	405.0667	26.70	25.82		18.70	45.40	44.52		46.00		-1.48		P
4	479.4333	22.87	21.19		20.02	42.89	41.21		46.00		-4.79		P



#### Test Results - V (Measurement Distance: 3m)

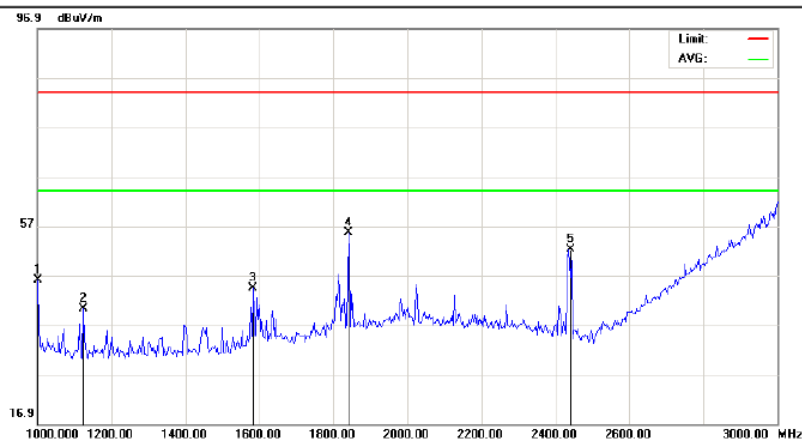
No.	Freq. MHz	Reading_Level (dBuV)			Correct Factor dB	Measurement (dBuV/m)			Limit (dBuV/m)		Margin (dB)		P/F
		Peak	QP	AVG		peak	QP	AVG	QP	AVG	QP	AVG	
1	34.8500	14.88			18.89	33.77			40.00		-6.23		P
2	73.6500	25.11			8.12	33.23			40.00		-6.77		P
3	94.6667	19.56			13.08	32.64			43.50		-10.86		P
4	384.0500	27.80	26.71		18.05	45.85	44.76		46.00		-1.24		P
5	641.1000	17.21			22.92	40.13			46.00		-5.87		P



#### 4. For above 1GHz

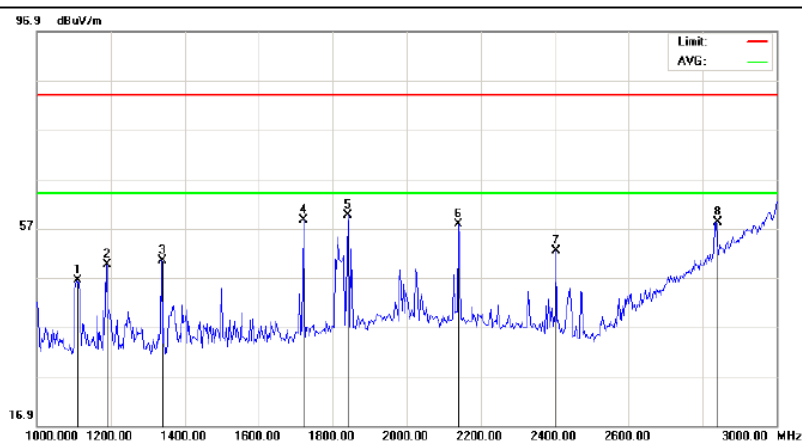
##### Test Results - H (Measurement Distance: 1m)

No.	Freq. MHz	Reading_Level (dBuV)			Correct Factor dB	Measurement (dBuV/m)			Limit (dBuV/m)		Margin (dB)		P/F
		Peak	QP	AVG		peak	QP	AVG	QP	AVG	QP	AVG	
1	1000.000	50.13			-4.22	45.91			84.00	64.00	-38.09	-18.09	P
2	1123.333	43.70			-3.43	40.27			84.00	64.00	-43.73	-23.73	P
3	1583.333	44.11			0.28	44.39			84.00	64.00	-39.61	-19.61	P
4	1840.000	51.36			4.25	55.61			84.00	64.00	-28.39	-8.39	P
5	2436.667	44.49			7.66	52.15			84.00	64.00	-31.85	-11.85	P



##### Test Results - V (Measurement Distance: 1m)

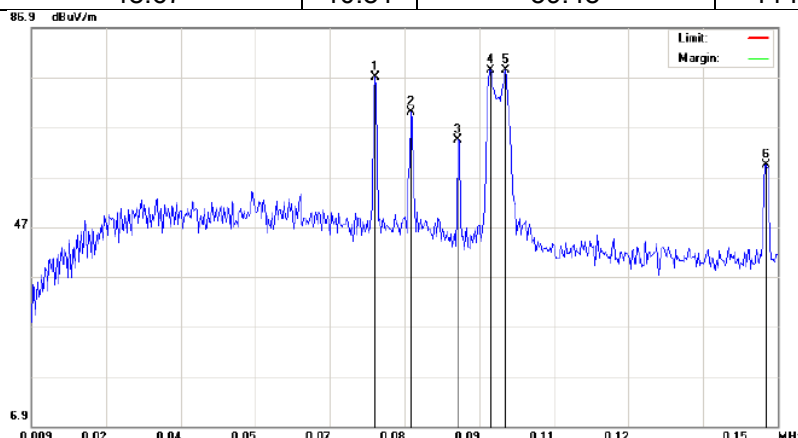
No.	Freq. MHz	Reading_Level (dBuV)			Correct Factor dB	Measurement (dBuV/m)			Limit (dBuV/m)		Margin (dB)		P/F
		Peak	QP	AVG		peak	QP	AVG	QP	AVG	QP	AVG	
1	1106.667	50.01			-3.54	46.47			84.00	64.00	-37.53	-17.53	P
2	1186.667	52.71			-3.02	49.69			84.00	64.00	-34.31	-14.31	P
3	1336.667	52.53			-2.06	50.47			84.00	64.00	-33.53	-13.53	P
4	1720.000	56.24			2.40	58.64			84.00	64.00	-25.36	-5.36	P
5	1840.000	55.30			4.25	59.55			84.00	64.00	-24.45	-4.45	P
6	2140.000	50.77			7.03	57.80			84.00	64.00	-26.20	-6.20	P
7	2403.333	44.72			7.59	52.31			84.00	64.00	-31.69	-11.69	P
8	2836.667	36.24			22.05	58.29			84.00	64.00	-25.71	-5.71	P



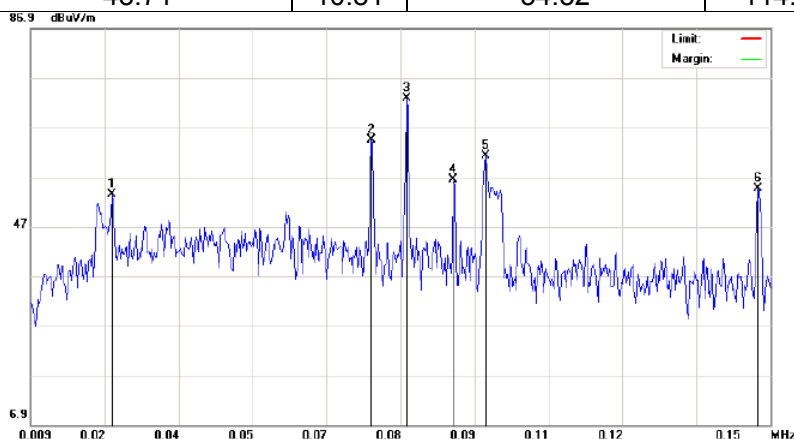
### 7.4.3 Results of Radiated Emissions (Mode: LAN)

#### 1. For 9kHz~150kHz

Test Results-H (Measurement Distance: 1m)					
Frequency (kHz)	Reading Level - peak (dB $\mu$ V/m)	Factor (dB)	Measurement - peak (dB $\mu$ V/m)	Limit - QP (dB $\mu$ V/m)	Result (P/F)
73.9	65.85	11.06	76.91	120.23	P
80.7	58.89	11.03	69.92	119.47	P
89.6	53.46	11.02	64.48	118.56	P
95.7	67.45	11.02	78.47	117.99	P
98.5	67.32	11.01	78.33	117.74	P
147.9	48.67	10.81	59.48	114.20	P

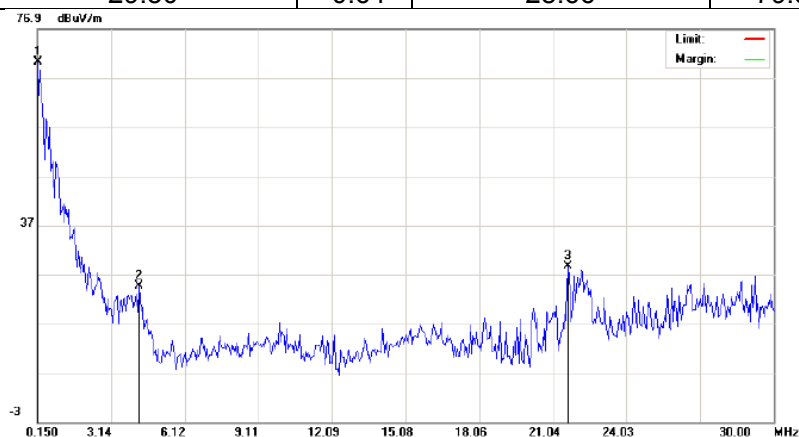


Test Results-V (Measurement Distance: 1m)					
Frequency (kHz)	Reading Level - peak (dB $\mu$ V/m)	Factor (dB)	Measurement - peak (dB $\mu$ V/m)	Limit - QP (dB $\mu$ V/m)	Result (P/F)
24.5	39.58	13.80	53.38	129.82	P
73.9	53.29	11.06	64.35	120.23	P
80.7	61.69	11.03	72.72	119.47	P
89.6	45.32	11.02	56.34	118.56	P
95.7	50.18	11.02	61.20	117.99	P
147.6	43.71	10.81	54.52	114.22	P

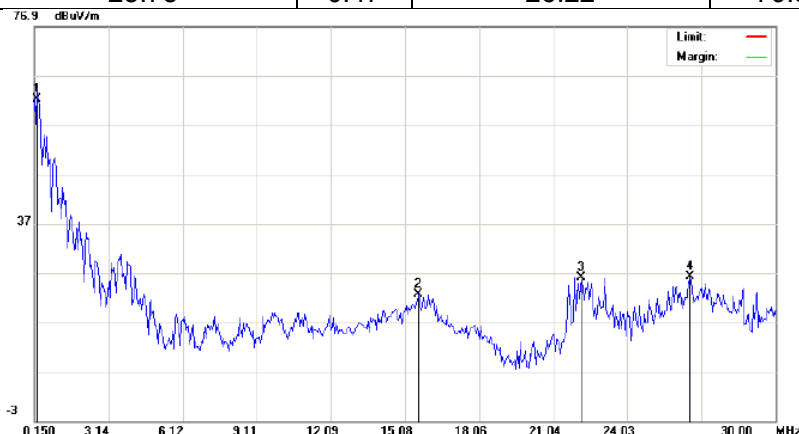


## 2. For 150kHz~30MHz

Test Results-H (Measurement Distance: 1m)					
Frequency (kHz)	Reading Level - peak (dB $\mu$ V/m)	Factor (dB)	Measurement - peak (dB $\mu$ V/m)	Limit - QP (dB $\mu$ V/m)	Result (P/F)
150.0	59.36	10.80	70.16	114.08	P
4 279.3	25.42	-0.90	24.52	79.54	P
21 6542.0	29.30	-0.64	28.66	79.54	P



Test Results-V (Measurement Distance: 1m)					
Frequency (kHz)	Reading Level - peak (dB $\mu$ V/m)	Factor (dB)	Measurement - peak (dB $\mu$ V/m)	Limit - QP (dB $\mu$ V/m)	Result (P/F)
249.5	51.72	10.44	62.16	109.66	P
15 622.3	29.72	-7.15	22.57	79.54	P
22 189.3	26.21	-0.12	26.09	79.54	P
26 567.3	25.75	0.47	26.22	79.54	P

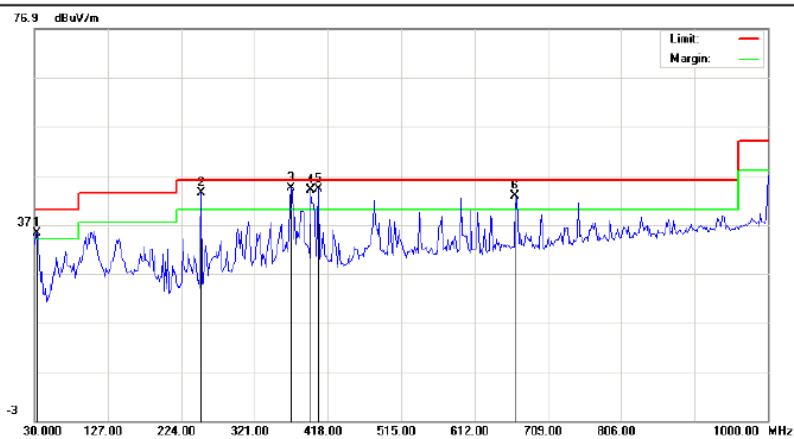




### 3. For 30MHz~1GHz

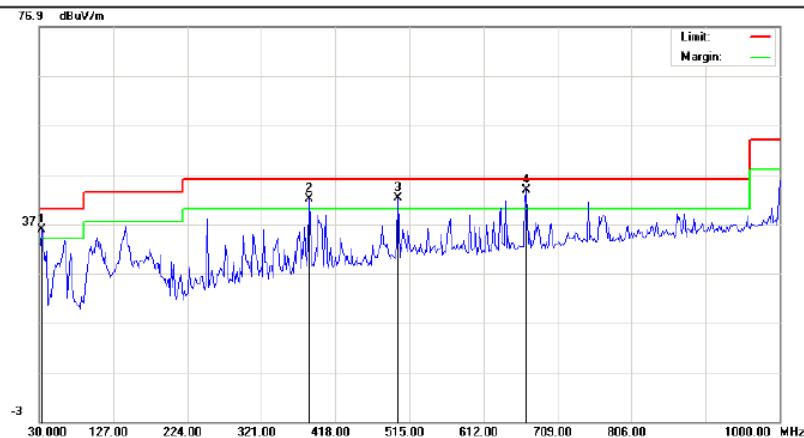
#### Test Results - H (Measurement Distance: 3m)

No.	Freq.	Reading_Level (dBuV)			Correct Factor	Measurement (dBuV/m)			Limit (dBuV/m)		Margin (dB)		P/F
		Peak	QP	AVG		peak	QP	AVG	QP	AVG	QP	AVG	
1	33.2332	16.35	13.08		18.83	35.18	31.91		40.00		-8.09		P
2	249.8667	27.91	26.70		15.59	43.50	42.29		46.00		-3.71		P
3	369.5000	26.84	26.03		17.58	44.42	43.61		46.00		-2.39		P
4	395.3666	25.61	24.19		18.37	43.98	42.56		46.00		-3.44		P
5	405.0667	25.49	23.92		18.70	44.19	42.62		46.00		-3.38		P
6	665.3500	19.33	19.03		23.57	42.90	42.60		46.00		-3.40		P



#### Test Results - V (Measurement Distance: 3m)

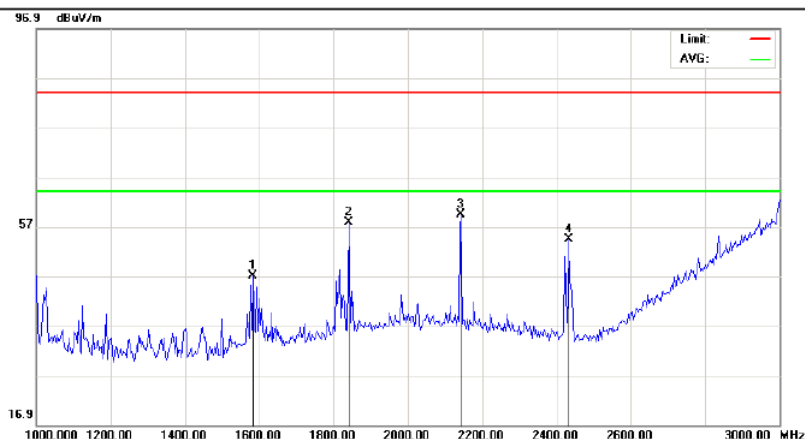
No.	Freq.	Reading_Level (dBuV)			Correct Factor	Measurement (dBuV/m)			Limit (dBuV/m)		Margin (dB)		P/F
		Peak	QP	AVG		peak	QP	AVG	QP	AVG	QP	AVG	
1	33.2332	16.99	13.23		18.83	35.82	32.06		40.00		-7.94		P
2	384.0500	23.98	22.84		18.05	42.03	40.89		46.00		-5.11		P
3	500.4499	21.65	20.39		20.61	42.26	41.00		46.00		-5.00		P
4	668.5833	20.10	19.48		23.65	43.75	43.13		46.00		-2.87		P



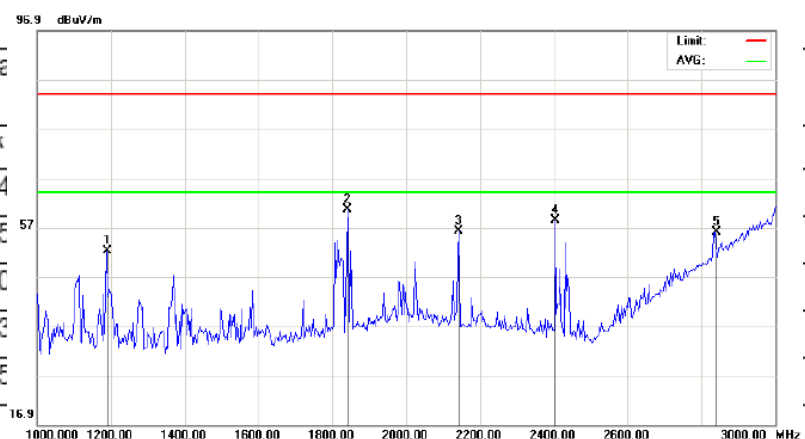
#### 4. For above 1GHz

##### Test Results - H (Measurement Distance: 1m)

No.	Freq. MHz	Reading_Level (dBuV)			Correct Factor dB	Measurement (dBuV/m)			Limit (dBuV/m)		Margin (dB)		P/F
		Peak	QP	AVG		peak	QP	AVG	QP	AVG	QP	AVG	
1	1583.333	46.68			0.28	46.96			84.00	64.00	-37.04	-17.04	P
2	1840.000	53.54			4.25	57.79			84.00	64.00	-26.21	-6.21	P
3	2143.333	52.35			7.03	59.38			84.00	64.00	-24.62	-4.62	P
4	2433.333	46.76			7.65	54.41			84.00	64.00	-29.59	-9.59	P



No.	Freq. MHz	Reading_Level Peak dBuV
1	1186.667	55.24
2	1840.000	56.45
3	2143.333	49.10
4	2403.333	50.83
5	2836.667	33.95

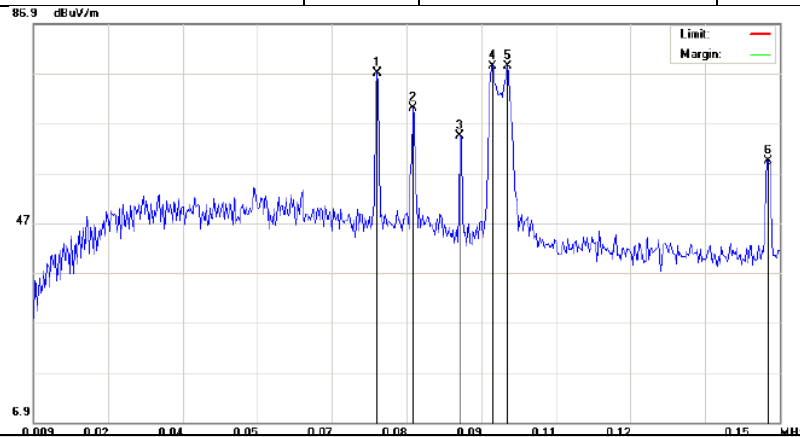


Margin (dB)		
QP	AVG	P/F
-31.78	-11.78	P
-23.30	-3.30	P
-27.87	-7.87	P
-25.58	-5.58	P
-28.00	-8.00	P

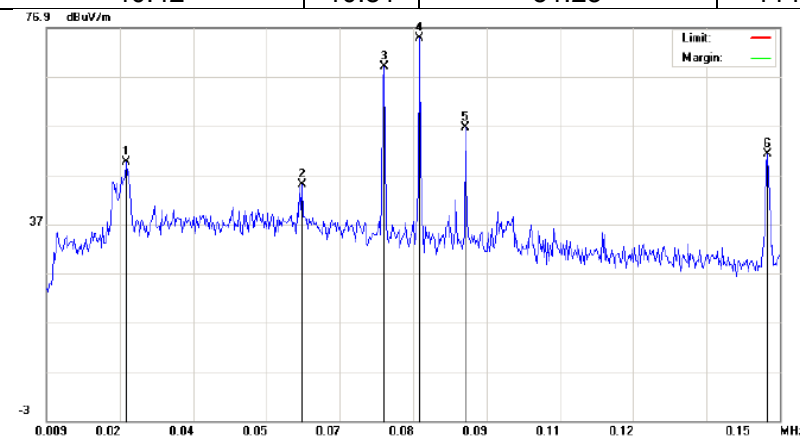
## 7.4.4 Results of Radiated Emissions (Mode: HDMI)

### 1. For 9kHz~150kHz

Test Results-H (Measurement Distance: 1m)					
Frequency (kHz)	Reading Level - peak (dB $\mu$ V/m)	Factor (dB)	Measurement - peak (dB $\mu$ V/m)	Limit - QP (dB $\mu$ V/m)	Result (P/F)
73.9	65.85	11.06	76.91	120.23	P
80.7	58.89	11.03	69.92	119.47	P
89.6	53.46	11.02	64.48	118.56	P
95.7	67.45	11.02	78.47	117.99	P
98.5	67.32	11.01	78.33	117.74	P
147.9	48.67	10.81	59.48	114.20	P



Test Results-V (Measurement Distance: 1m)					
Frequency (kHz)	Reading Level - peak (dB $\mu$ V/m)	Factor (dB)	Measurement - peak (dB $\mu$ V/m)	Limit - QP (dB $\mu$ V/m)	Result (P/F)
24.3	35.85	13.81	49.66	129.82	P
58.1	33.65	11.28	44.93	122.32	P
73.9	57.93	11.05	68.98	120.23	P
80.7	63.74	11.03	74.77	119.47	P
89.6	45.65	11.02	56.67	118.56	P
147.6	40.42	10.81	51.23	114.22	P

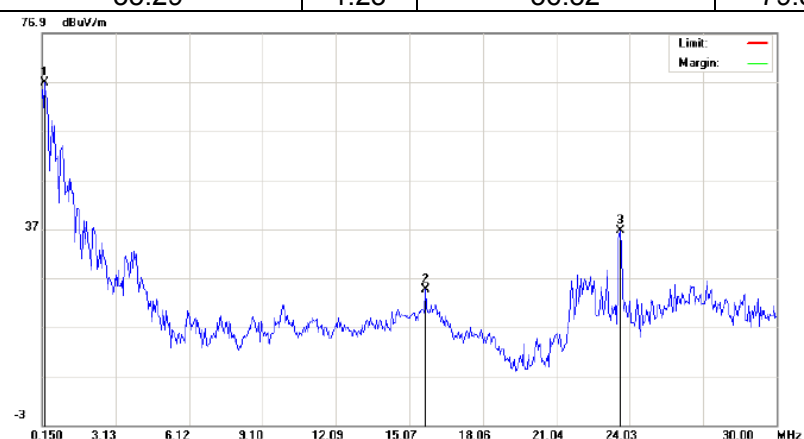


## 2. For 150kHz~30MHz

Test Results-H (Measurement Distance: 1m)					
Frequency (kHz)	Reading Level - peak (dB $\mu$ V/m)	Factor (dB)	Measurement - peak (dB $\mu$ V/m)	Limit - QP (dB $\mu$ V/m)	Result (P/F)
150.0	59.14	10.80	69.94	114.08	P
21 890.8	28.79	-0.40	28.39	79.54	P
23 631.9	30.47	1.23	31.70	79.54	P



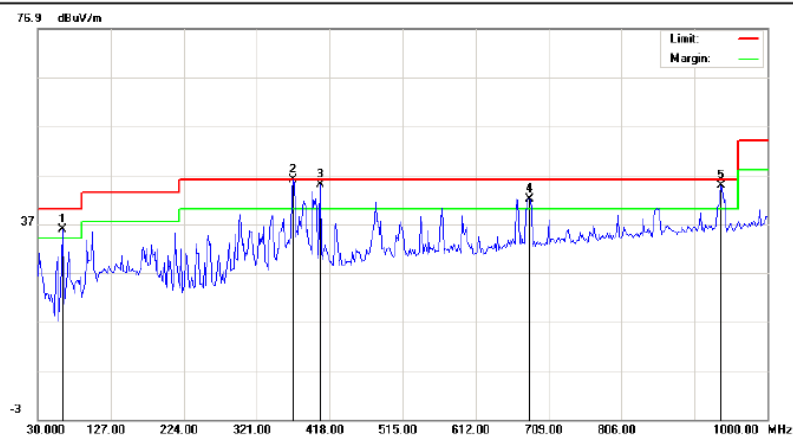
Test Results-V (Measurement Distance: 1m)					
Frequency (kHz)	Reading Level - peak (dB $\mu$ V/m)	Factor (dB)	Measurement - peak (dB $\mu$ V/m)	Limit - QP (dB $\mu$ V/m)	Result (P/F)
249.5	56.31	10.44	66.75	109.66	P
15 721.8	31.62	-7.04	24.58	79.54	P
23 631.9	35.29	1.23	36.52	79.54	P



### 3. For 30MHz~1GHz

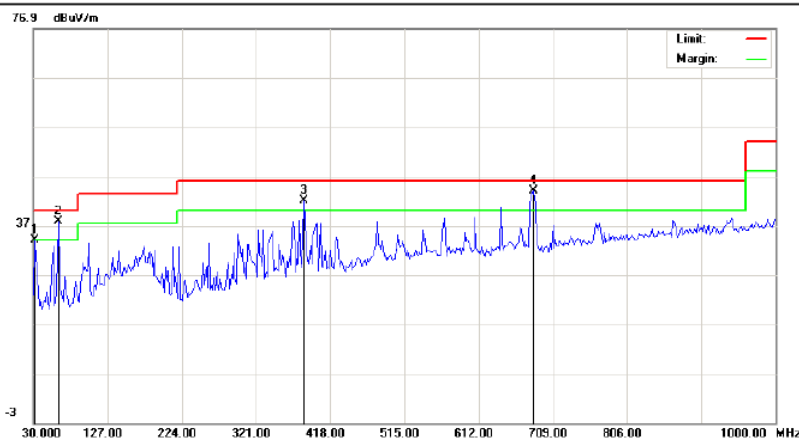
#### Test Results - H (Measurement Distance: 3m)

No.	Freq.	Reading_Level (dBuV)			Correct Factor	Measurement (dBuV/m)			Limit (dBuV/m)		Margin (dB)			
		MHz	Peak	QP		AVG	dB	peak	QP	AVG	QP	AVG	QP	AVG
1	62.3333	28.54	27.10		7.27	35.81	34.37		40.00		-5.63			P
2	369.5000	28.37	27.54		17.58	45.95	45.12		46.00		-0.88			P
3	405.0667	26.34	25.87		18.70	45.04	44.57		46.00		-1.43			P
4	683.1332	18.43	17.73		23.60	42.03	41.33		46.00		-4.67			P
5	938.5666	17.91	17.06		26.81	44.72	43.87		46.00		-2.13			P



#### Test Results - V (Measurement Distance: 3m)

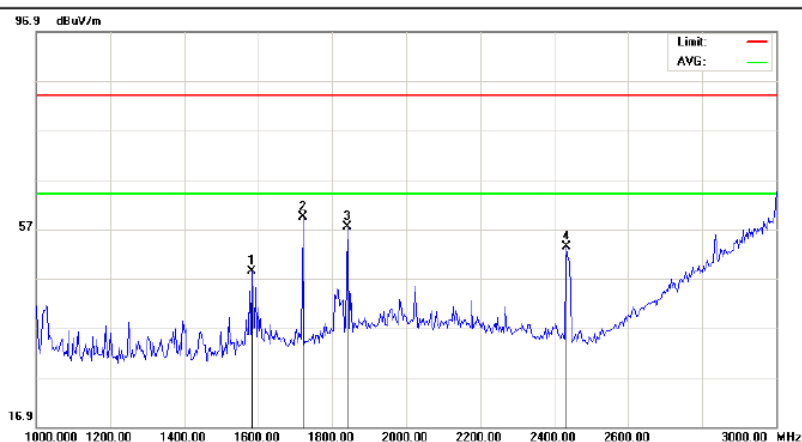
No.	Freq.	Reading_Level (dBuV)			Correct Factor	Measurement (dBuV/m)			Limit (dBuV/m)		Margin (dB)			
		MHz	Peak	QP		AVG	dB	peak	QP	AVG	QP	AVG	QP	AVG
1	31.6167	15.25	13.15		18.76	34.01	31.91		40.00		-8.09			P
2	62.3333	30.62	29.76		7.27	37.89	37.03		40.00		-2.97			P
3	384.0500	23.89	22.06		18.05	41.94	40.11		46.00		-5.89			P
4	683.1332	20.41	19.38		23.60	44.01	42.98		46.00		-3.02			P



#### 4. For above 1GHz

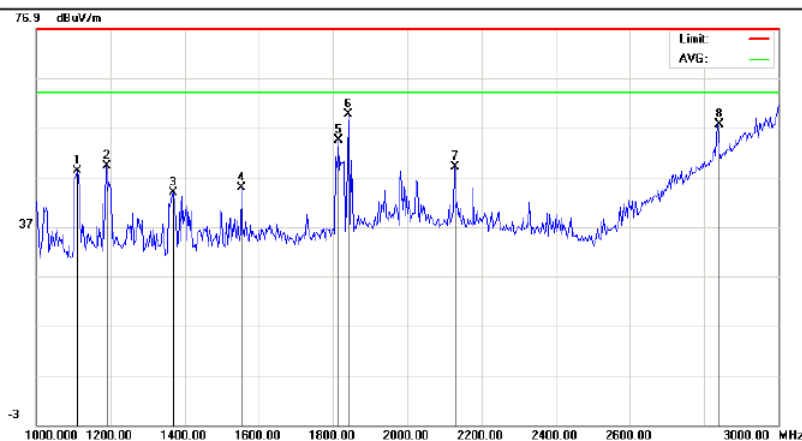
##### Test Results - H (Measurement Distance: 1m)

No.	Freq. MHz	Reading_Level (dBuV)			Correct Factor dB	Measurement (dBuV/m)			Limit (dBuV/m)		Margin (dB)		P/F
		Peak	QP	AVG		peak	QP	AVG	QP	AVG	QP	AVG	
1	1583.333	48.07			0.28	48.35			84.00	64.00	-35.65	-15.65	P
2	1720.000	57.07			2.40	59.47			84.00	64.00	-24.53	-4.53	P
3	1840.000	53.09			4.25	57.34			84.00	64.00	-26.66	-6.66	P
4	2433.333	45.80			7.65	53.45			84.00	64.00	-30.55	-10.55	P

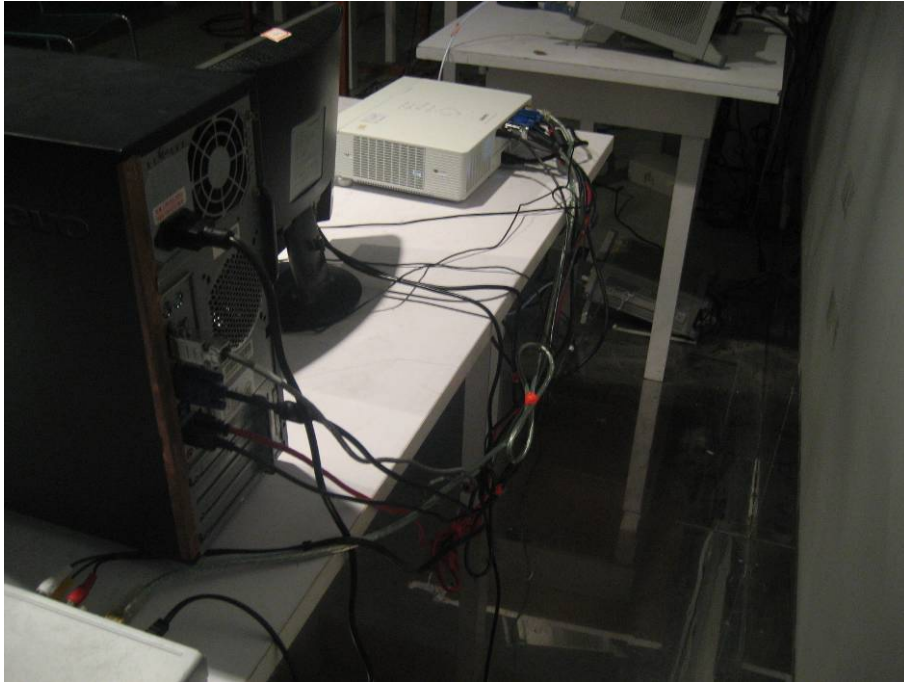


##### Test Results - V (Measurement Distance: 1m)

No.	Freq. MHz	Reading_Level (dBuV)			Correct Factor dB	Measurement (dBuV/m)			Limit (dBuV/m)		Margin (dB)		P/F
		Peak	QP	AVG		peak	QP	AVG	QP	AVG	QP	AVG	
1	1110.000	51.67			-3.51	48.16			84.00	64.00	-35.84	-15.84	P
2	1186.667	52.13			-3.02	49.11			84.00	64.00	-34.89	-14.89	P
3	1370.000	45.65			-1.84	43.81			84.00	64.00	-40.19	-20.19	P
4	1553.333	44.95			-0.18	44.77			84.00	64.00	-39.23	-19.23	P
5	1813.333	50.59			3.84	54.43			84.00	64.00	-29.57	-9.57	P
6	1840.000	55.36			4.25	59.61			84.00	64.00	-24.39	-4.39	P
7	2126.667	42.08			7.00	49.08			84.00	64.00	-34.92	-14.92	P
8	2836.667	35.56			22.05	57.61			84.00	64.00	-26.39	-6.39	P



## APPENDIX 1 PHOTOGRAPHS OF TEST SETUP



**TEST SETUP OF CONDUCTED EMISSION-1**



**TEST SETUP OF CONDUCTED EMISSION-2**



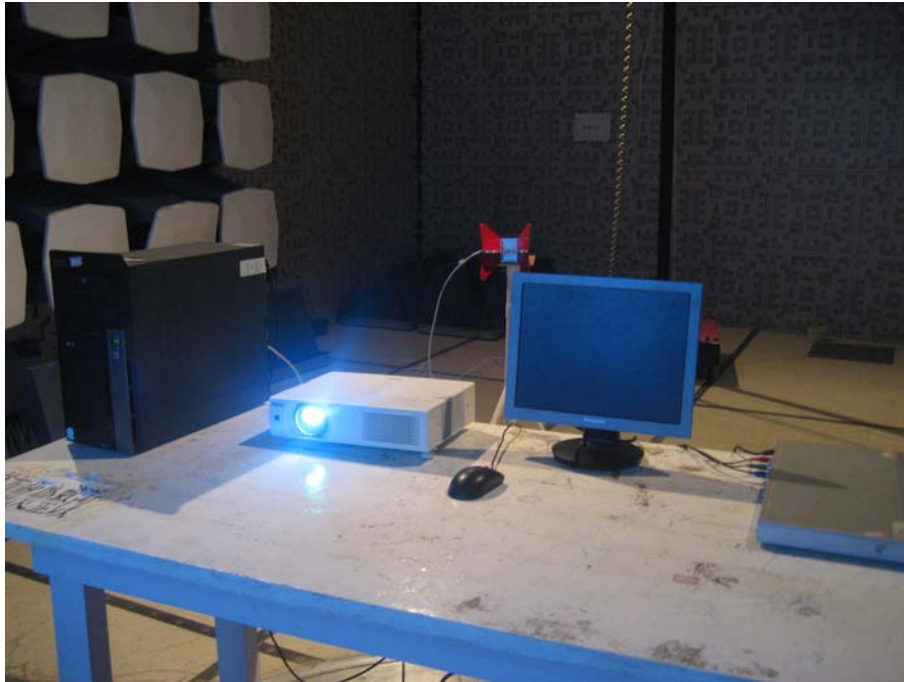


**TEST SETUP OF RADIATED EMISSION (9kHz-30MHz)**



**TEST SETUP OF RADIATED EMISSION (30MHz-1GHz)**





**TEST SETUP OF RADIATED EMISSION (above 1GHz)**



**TEST SETUP OF RADIATED EMISSION - BACK VIEW**

## APPENDIX 2 EXTERNAL PHOTOGRAPHS OF EUT



View of EUT-1



View of EUT-2





View of EUT-3



View of EUT-4



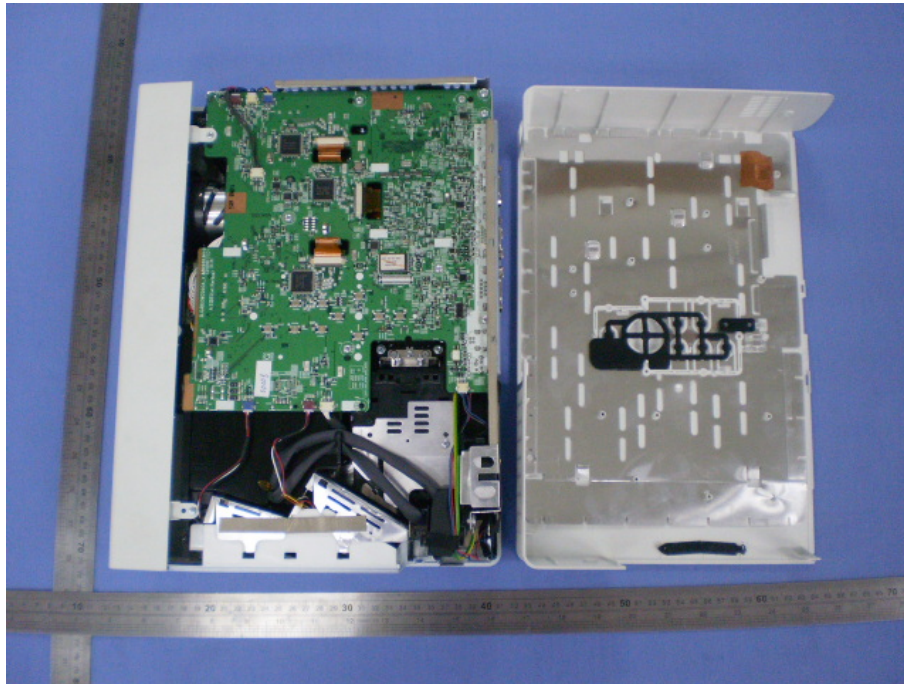
View of EUT-5



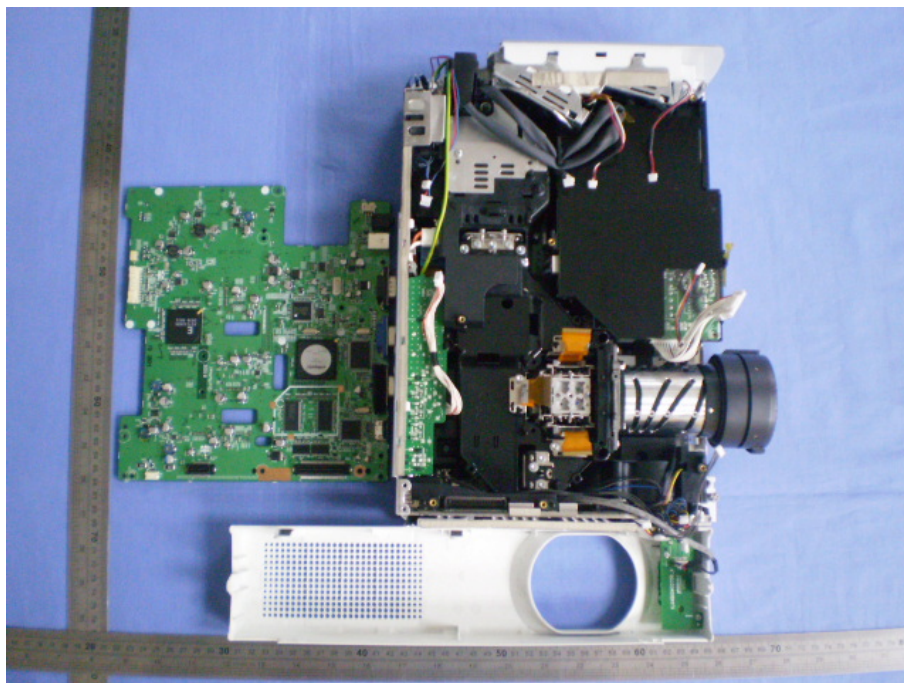
View of EUT-6



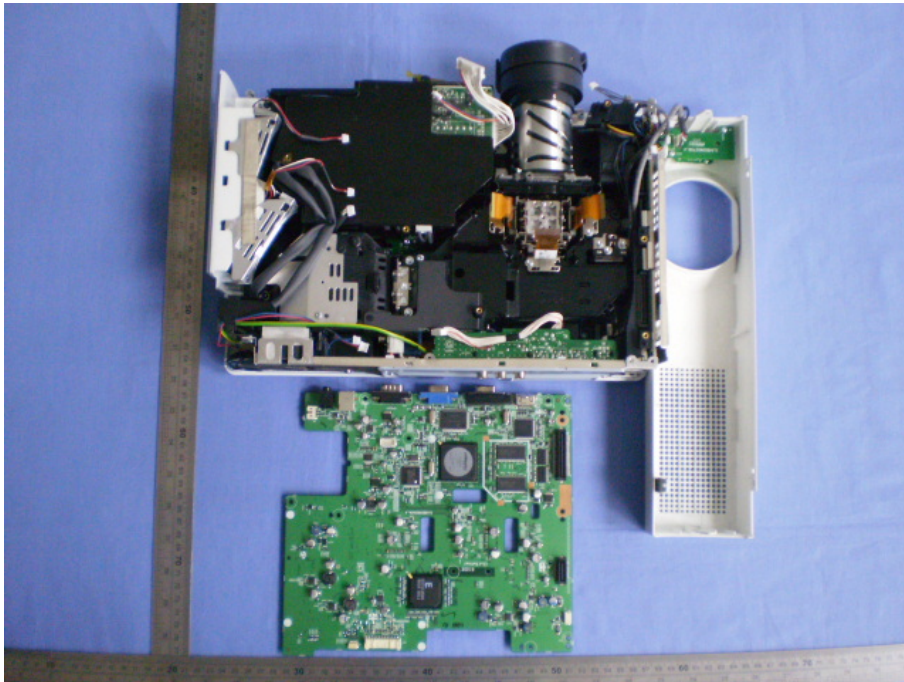
## APPENDIX 3 INTERNAL PHOTOGRAPHS OF EUT



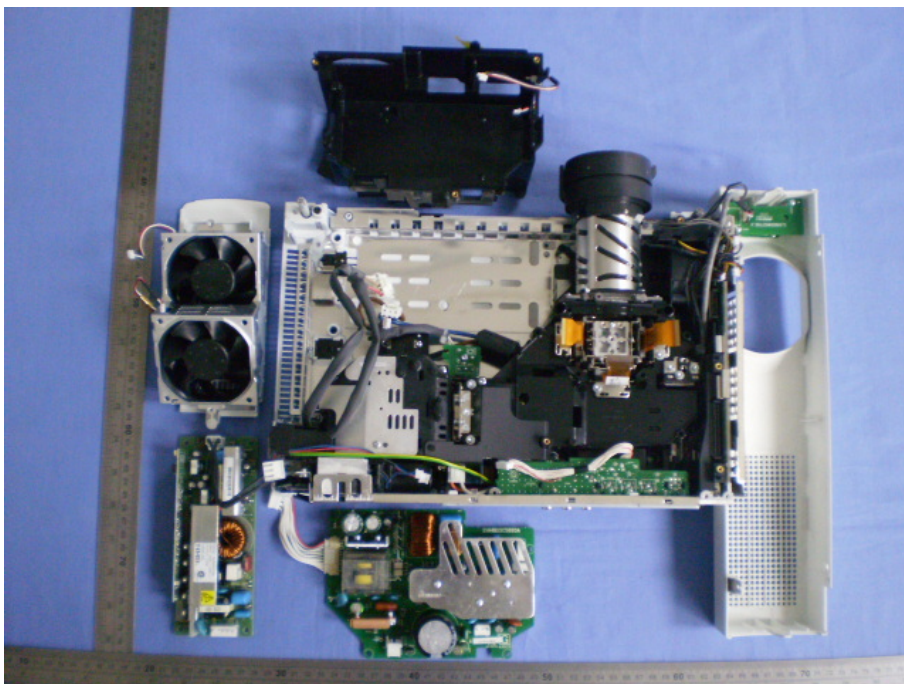
Internal View-1



Internal View-2

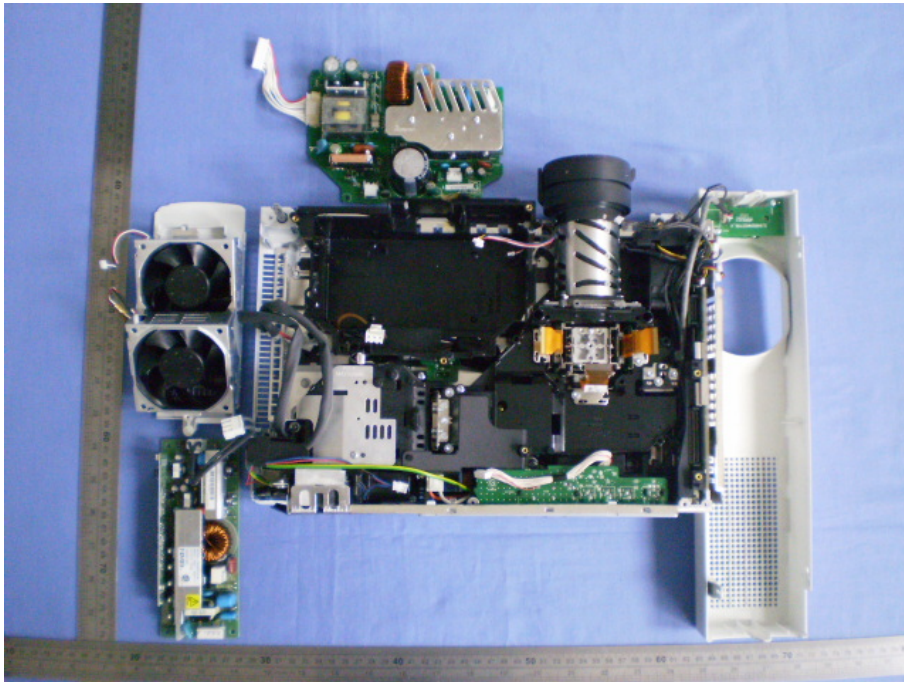


Internal View-3

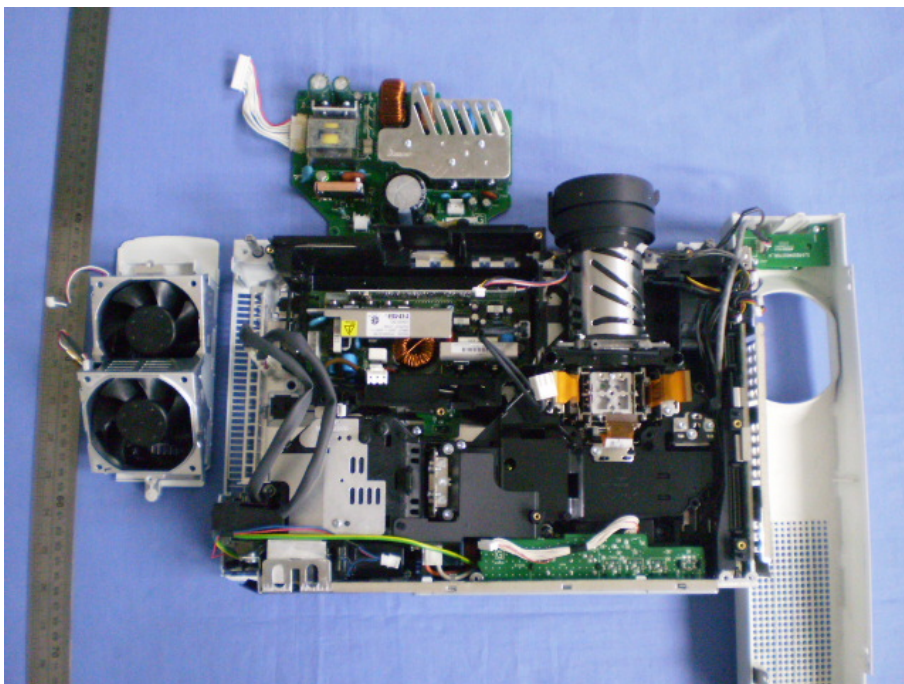


Internal View-4

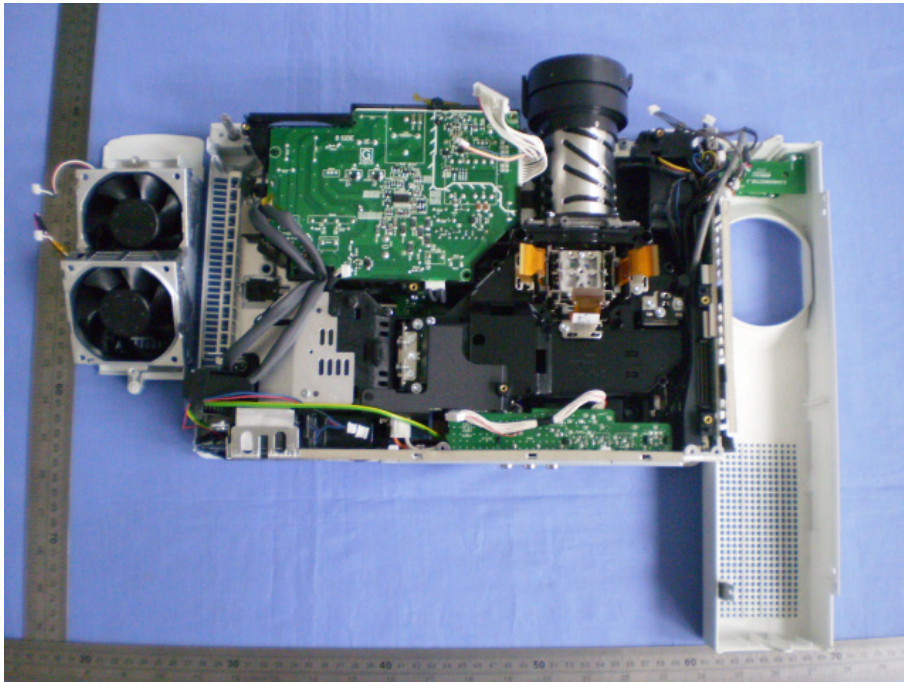




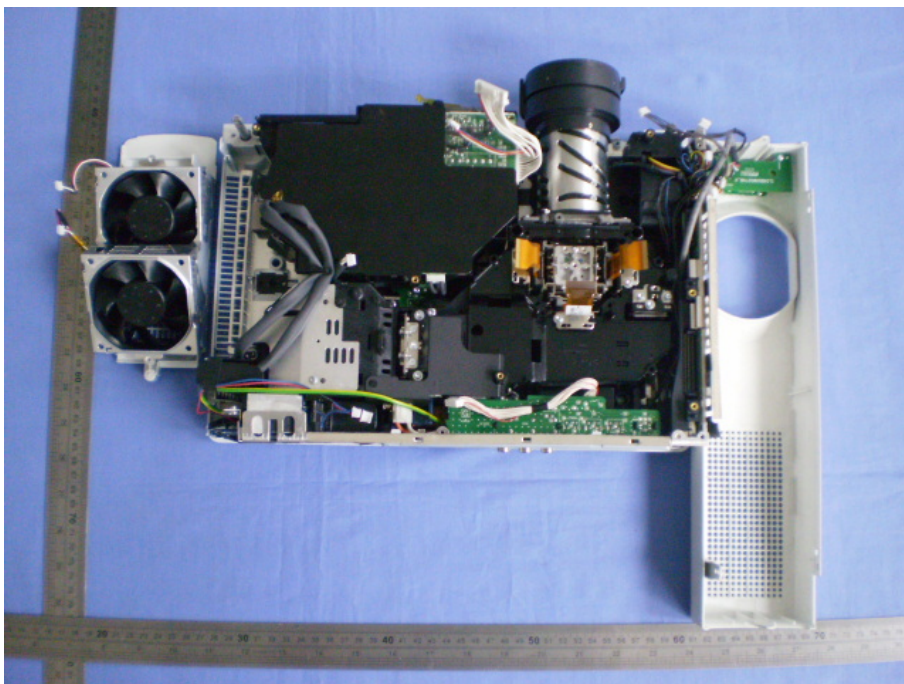
Internal View-5



Internal View-6

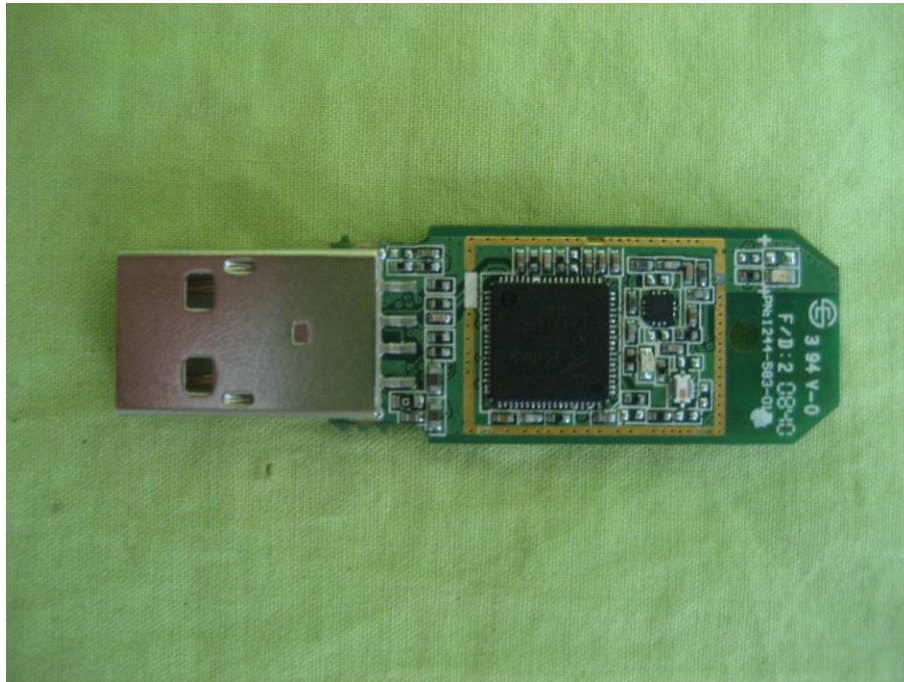


Internal View-7

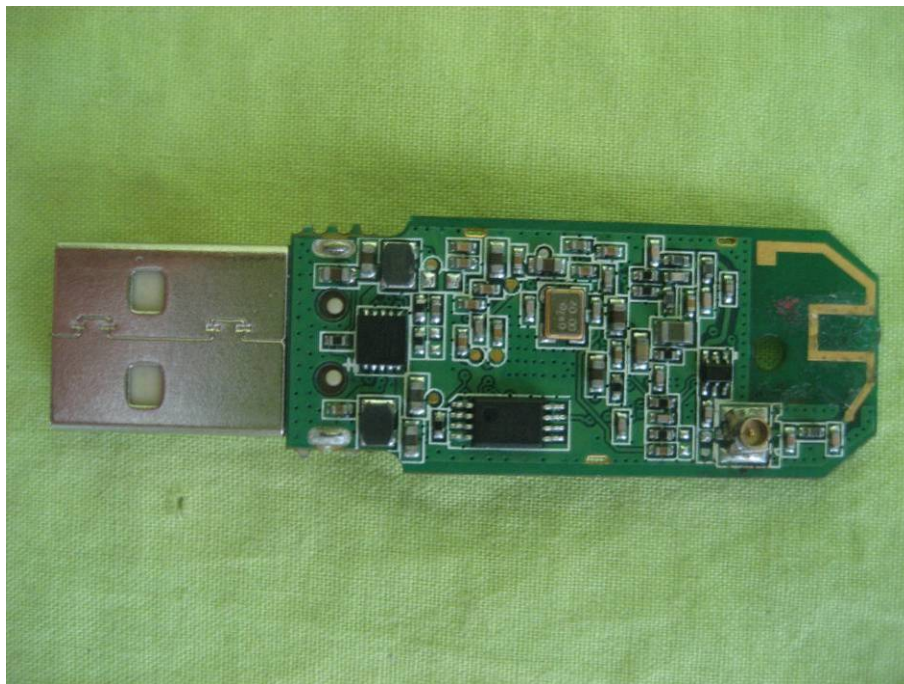


Internal View-8

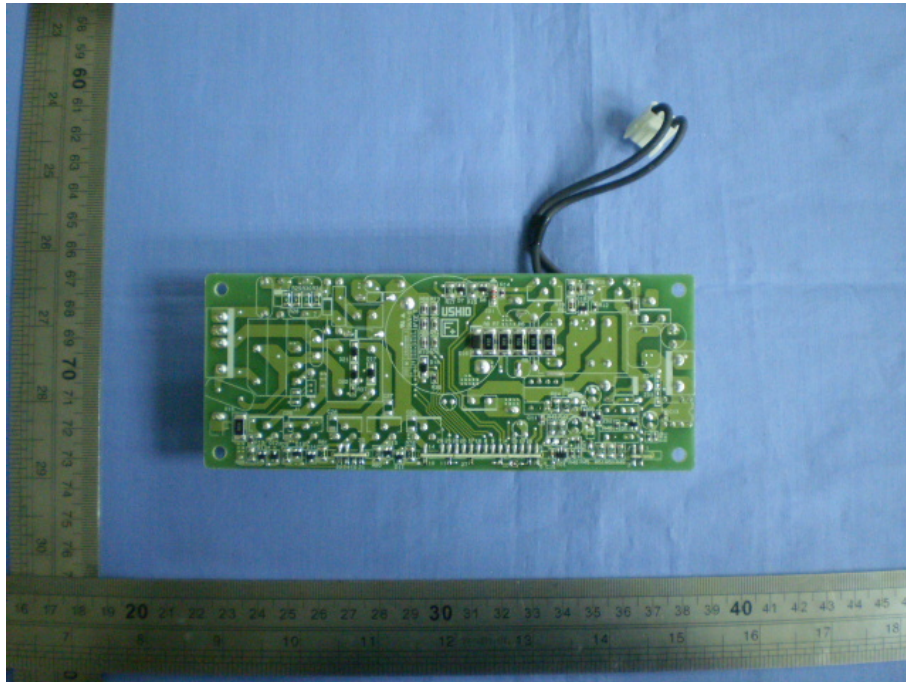




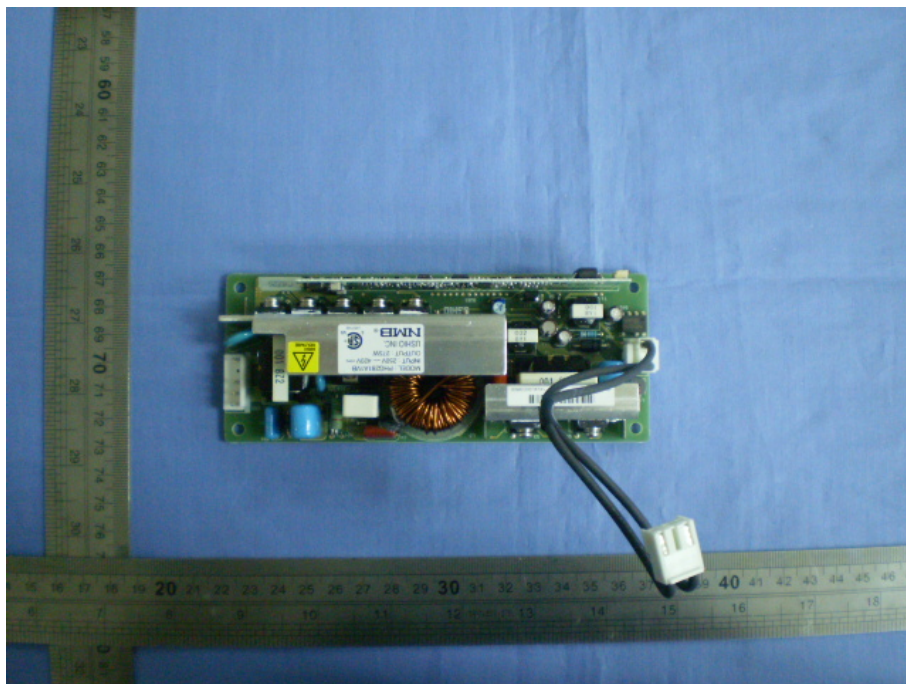
View of PCB 1-1



View of PCB 1-2

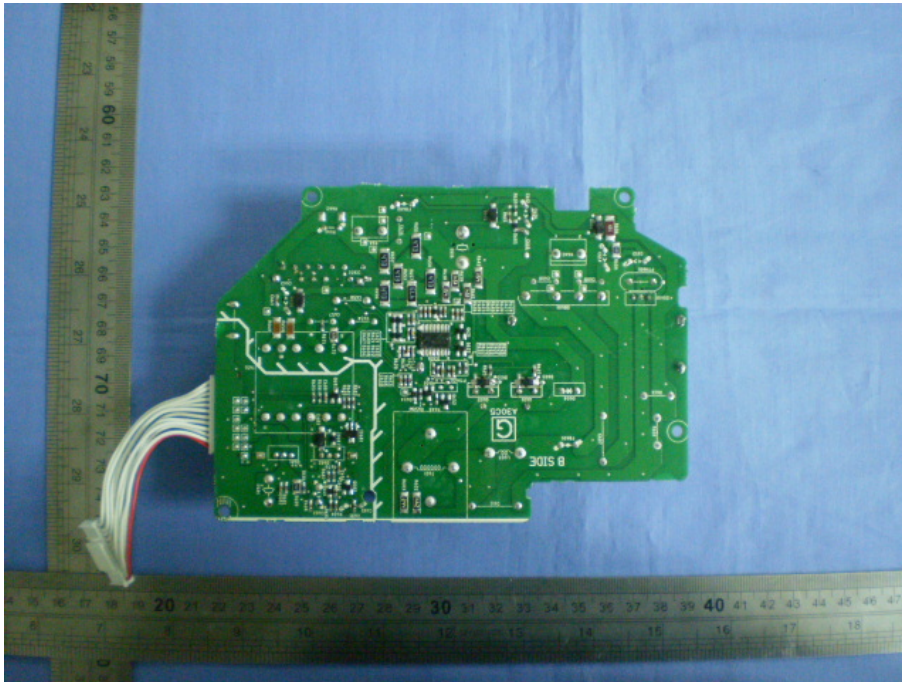


View of PCB 2-1

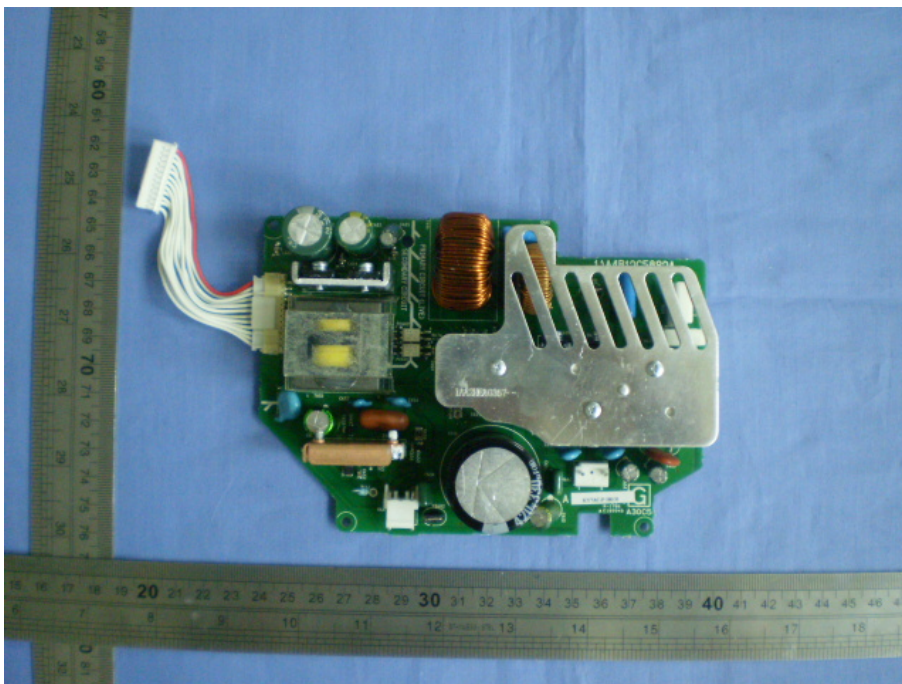


View of PCB 2-2





View of PCB 3-1



View of PCB 3-2

----- End of report -----