

FCC TEST REPORT

For

TOMY International, Inc.

2 PU Crisp and Clear Monitor

Model No.: Y7569P

Prepared for : TOMY International, Inc.
Address : 1111 W. 22nd Street Suite 320 Oak Brook, IL 60523 United States

Manufacturer Honor Tone Limited

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Date of Report : October 23, 2012

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APPLICATION FOR VERIFICATION

Applicant : TOMY International, Inc.
Model Name : 2 PU Crisp and Clear Monitor
Model No. : Y7569P
Input Rating : DC 3*1.5V Battery or DC 6V, 200mA come from adapter

Measurement Procedure Used:

FCC Rules and Regulations Part 15 Subpart B Class B October 2010 & FCC / ANSI C63.4-2009

The device described above is tested by Dongguan EMTEK Co., Ltd. to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart Class B limits both radiated and conducted emissions. The measurement results are contained in this test report and Dongguan EMTEK Co., Ltd. is assumed full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the Equipment Under Test (EUT) is to be technically compliant with the FCC requirements.

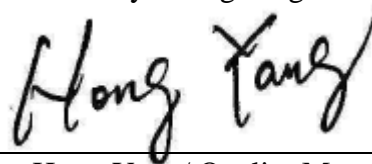
This report applies to above tested sample only. This report shall not be reproduced in part without written approval of Dongguan EMTEK Co., Ltd.

Date of Test : October 13, 2012 to October 23, 2012



Prepared by :

Sally Zhang/ Engineer



Reviewer :

Hong Yang/ Quality Manager

Approved & Authorized Signer :



Sam Lv/ Manager



1. GENERAL INFORMATION

1.1 Description of Device (EUT)

Model Name : 2 PU Crisp and Clear Monitor

Model No. : Y7569P

Brand name : Not Provided

Power Supply for Test : DC 3*1.5V Battery and AC 120V/60Hz for adapter

Adapter : Model No.: KU1B-060-0200D
Input Rating: AC 120V/60Hz, 6VA
Output Rating: DC 6V, 200mA

Applicant : TOMY International, Inc.

Address : 1111 W. 22nd Street Suite 320 Oak Brook, IL 60523
United States

Date of sample receiver : October 13, 2012

Date of Test : October 13, 2012 to October 23, 2012

1.2 Description of Test Facility

Site Description

EMC Lab. : Accredited by CNAS, 2012.07.04
The certificate is valid until 2015.07.03
The Laboratory has been assessed and proved to be in compliance with CNAS/CL01:2006
The Certificate Registration Number is L3150

Accredited by TUV Product Service Group 2011.07.05
Accredited by TUV Rheinland Shenzhen 2011.05.12
The certificate is valid until 2012.11.12
The Laboratory has been assessed according to the requirements ISO/IEC 17025: 2005

Accredited by FCC, Aug. 18, 2011
The Certificate Number is 247565

Accredited by Industry Canada, January 13, 2011
The Certificate Number is 9444A

Name of Firm : Dongguan EMTEK Co., Ltd.
Site Location : No.281, Guantai Road, Nancheng District, Dongguan, Guangdong, China.

1.3 Measurement Uncertainty

Radiation Emission Uncertainty : $U_r = 3.3 \text{ dB (k=2.0)}$

Conduction Emission Uncertainty : $U_c = 2.8 \text{ dB (k=2.0)}$

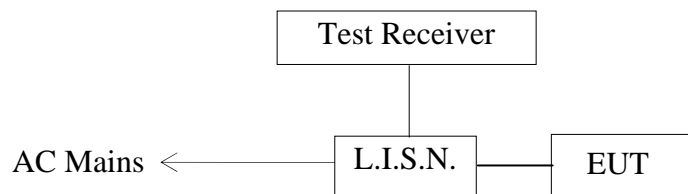
2. POWER LINE CONDUCTED MEASUREMENT

2.1 Test Equipment

The following test equipments are used during the power line conducted measurement:

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Test Receiver	Rohde & Schwarz	ESCS30	100018	May 29, 2012	1 Year
2.	L.I.S.N	Rohde & Schwarz	ENV216	100017	May 29, 2012	1 Year
3.	RF Switching Unit	CDS	RSU-M2	38401	May 29, 2012	1 Year

2.2 Block Diagram of Test Setup



(EUT: 2 PU Crisp and Clear Monitor)

2.3 Power Line Conducted Emission Measurement Limits (Class B)

Frequency MHz	Limits dB(μV)	
	Quasi-peak Level	Average Level
0.15 ~ 0.50	66 ~ 56*	56 ~ 46*
0.50 ~ 5.00	56	46
5.00 ~ 30.00	60	50

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

2.4 Configuration of EUT on Measurement

The following equipments are installed on Power Line Conducted Emission Measurement to meet the commission requirement and operating regulations in a manner which tends to maximize its emission characteristics in a normal application.

EUT : 2 PU Crisp and Clear Monitor
Model Number : Y7569P

2.5 Operating Condition of EUT

- 2.5.1 Setup the EUT and simulator as shown as Section 2.2.
- 2.5.2 Turn on the power of all equipment.
- 2.5.3 Let the EUT work in test model (RX) and measure it.

2.6 Test Procedure

The EUT system is connected to the power mains through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm coupling impedance for the EUT system. Please refer the block diagram of the test setup and photographs. Both sides of AC line are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to FCC ANSI C63.4-2009 on Conducted Emission Measurement.

The bandwidth of test receiver (R & S ESCS30) is set at 9KHz.
The frequency range from 150KHz to 30MHz is checked.

The scanning waveform is put in Appendix I.

2.7 Power Line Conducted Emission Measurement Results

PASS

The frequency range from 150KHz to 30 MHz is investigated.

3. RADIATED EMISSION MEASUREMENT

3.1 Test Equipment

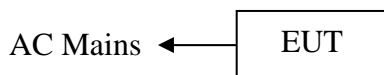
The following test equipments are used during the radiated emission measurement:

2.7.1 For Anechoic Chamber

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Test Receiver	Rohde & Schwarz	ESCI	100137	May 29, 2012	1 Year
2.	Bilog Antenna	Schwarzbeck	VULB9163	000141	May 29, 2012	1 Year
3.	Power Amplifier	CDS	RSU-M352	818	May 29, 2012	1 Year
4.	Power Amplifier	HP	8447F	OPT H64	May 29, 2012	1 Year
5.	Color Monitor	SUNSPO	SP-140A	N/A	May 29, 2012	1 Year
6.	Single Line Filter	JIANLI	XL-3	N/A	May 29, 2012	1 Year
7.	Single Phase Power Line Filter	JIANLI	DL-2X100B	N/A	May 29, 2012	1 Year
8.	3 Phase Power Line Filter	JIANLI	DL-4X100B	N/A	May 29, 2012	1 Year
9.	DC Power Filter	JIANLI	DL-2X50B	N/A	May 29, 2012	1 Year
10.	Cable	Schwarzbeck	PLF-100	519489	May 29, 2012	1 Year
11.	Cable	Rosenberger	CIL02	A0783566	May 29, 2012	1 Year
12.	Cable	Rosenberger	RG 233/U	525178	May 29, 2012	1 Year

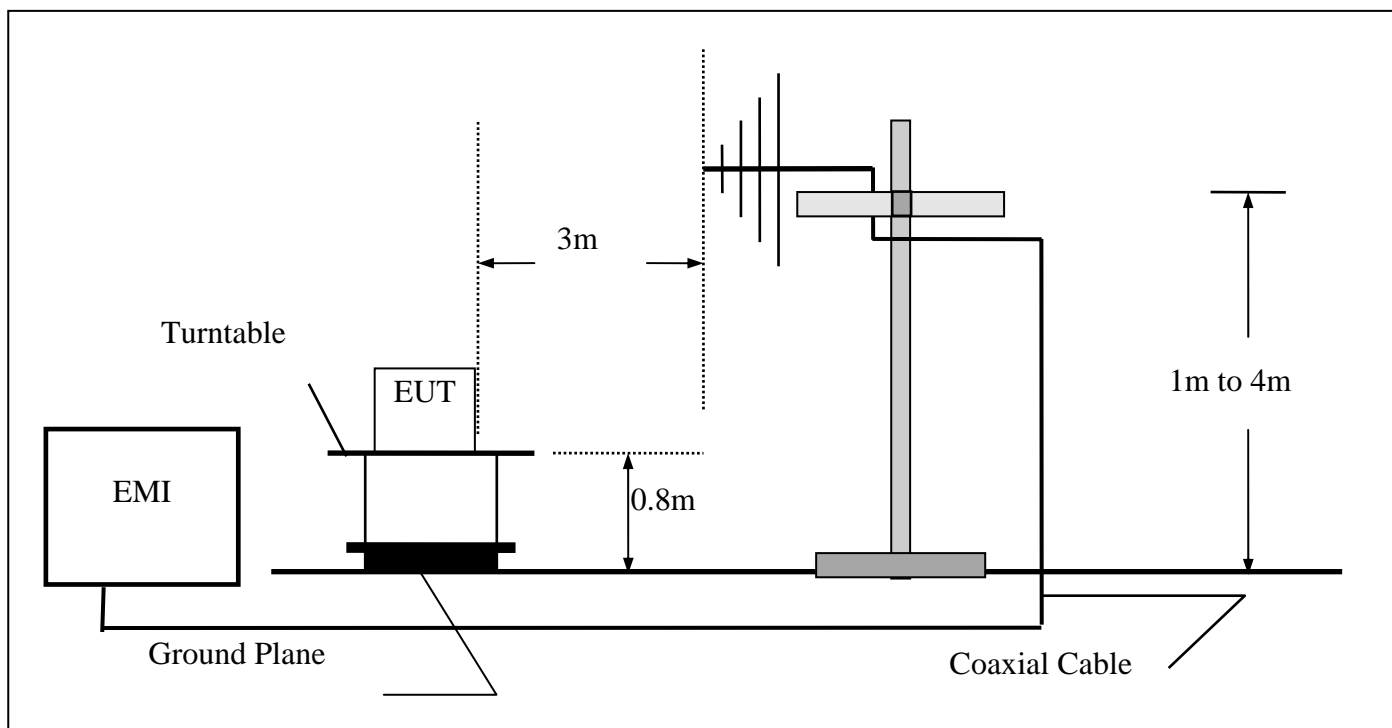
3.2 Block Diagram of Test Setup

3.2.1 Block diagram of connection between the EUT and simulators



(EUT: 2 PU Crisp and Clear Monitor)

3.2.2 Anechoic Chamber Test Setup Diagram



(EUT: 2 PU Crisp and Clear Monitor)

3.3 Radiated Emission Limit (Class B)

FREQUENCY MHz	DISTANCE Meters	FIELD STRENGTHS LIMIT	
		$\mu\text{V/m}$	$\text{dB}(\mu\text{V})/\text{m}$
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
960 ~ 1000	3	500	54.0

- Remark :
- (1) Emission level $(\text{dB})\mu\text{V} = 20 \log \text{Emission level } \mu\text{V/m}$
 - (2) The smaller limit shall apply at the cross point between two frequency bands.
 - (3) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.

3.4 EUT Configuration on Measurement

The following equipment are installed on Radiated Emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

2 PU Crisp and Clear Monitor (EUT)

Model Number	:	Y7569P
Serial Number	:	N/A

3.5 Operating Condition of EUT

- 3.5.1 Setup the EUT as shown in Section 3.2.
- 3.5.2 Turn on the power of all equipment.
- 3.5.3 Let the EUT work in test mode (RX) and measure it.

3.6 Test Procedure

EUT and its simulators are placed on a turntable, which is 0.8 meter high above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. EUT is set 3.0 meters away from the receiving antenna, which is mounted on a antenna tower. The antenna can be moved up and down between 1.0 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated bilog antenna) is used as receiving antenna. Both horizontal and vertical polarization of the antenna is set on measurement. In order to find the maximum emission levels, all of the interface cables must be manipulated according to ANSI C63.4-2009 on radiated emission measurement.

The bandwidth of the EMI test receiver (R&S ESCI) is set at 120KHz.
The frequency range from 30MHz to 1000MHz is checked.

The scanning waveform is put in Appendix II.

3.7 Radiated Emission Measurement Results

PASS.

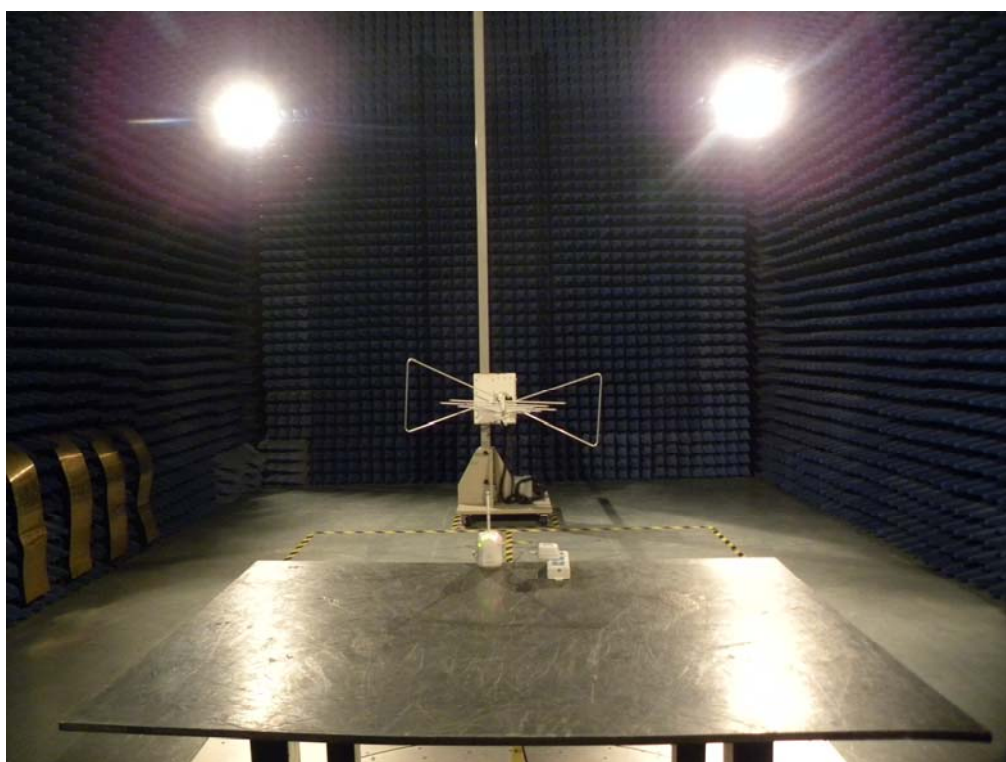
The frequency range from 30MHz to 1000MHz is investigated.

4. PHOTOGRAPH

4.1 Photo of Conducted Emission Measurement



4.2 Photo of Radiated Measurement



APPENDIX I

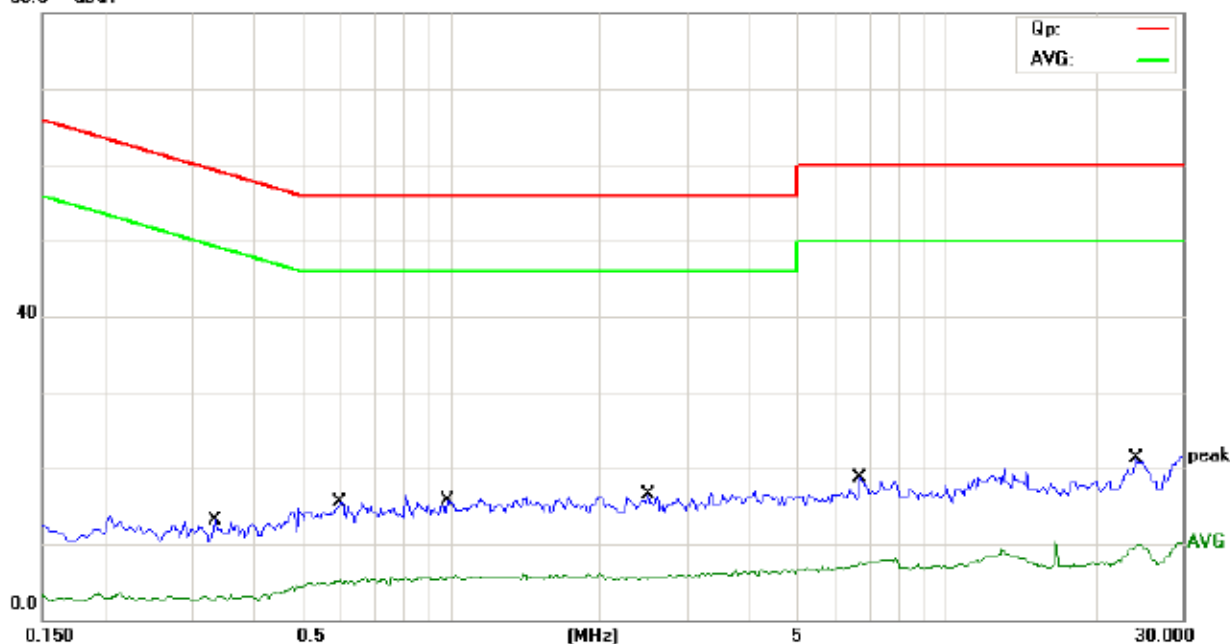
Conducted Emission Measurement

File :Y7569P
80.0 dBuV

Data :#3

Date: 2012-10-22

Time: 9:40:53



Site site #1

Phase: L1

Temperature: 26

Limit: (CE)FCC PART 15 class B_QP

Power: AC 120V/60Hz

Humidity: 60 %

EUT: 2 PU Crisp and Clear Monitor

M/N: Y7569P

Mode: RX

Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.3350	13.20	0.00	13.20	59.33	-46.13	QP	
2		0.3350	3.40	0.00	3.40	49.33	-45.93	AVG	
3		0.6000	15.52	0.00	15.52	56.00	-40.48	QP	
4		0.6000	5.21	0.00	5.21	46.00	-40.79	AVG	
5		0.9850	15.70	0.00	15.70	56.00	-40.30	QP	
6		0.9850	5.81	0.00	5.81	46.00	-40.19	AVG	
7		2.5100	16.57	0.00	16.57	56.00	-39.43	QP	
8		2.5100	5.73	0.00	5.73	46.00	-40.27	AVG	
9		6.7250	18.71	0.00	18.71	60.00	-41.29	QP	
10		6.7250	7.96	0.00	7.96	50.00	-42.04	AVG	
11	*	24.1500	21.30	0.00	21.30	60.00	-38.70	QP	
12		24.1500	9.97	0.00	9.97	50.00	-40.03	AVG	

*:Maximum data x:Over limit !:over margin Comment: Factor build in receiver.

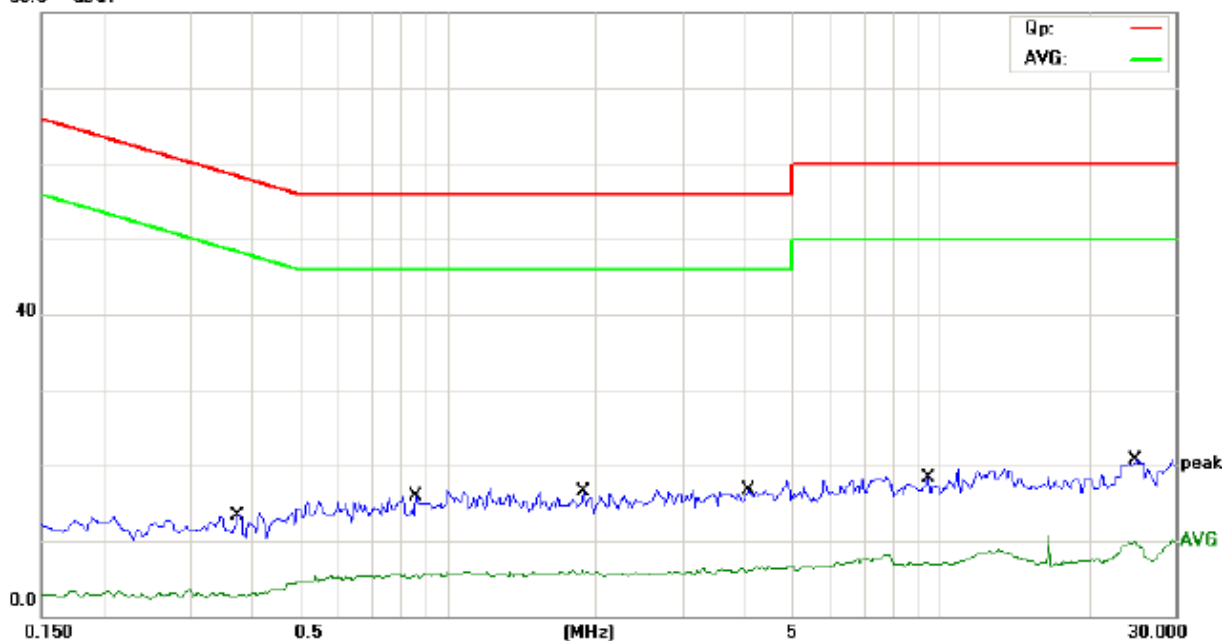
Conducted Emission Measurement

File :Y7569P
80.0 dBuV

Data :#4

Date: 2012-10-22

Time: 9:43:17



Site site #1

Phase: N

Temperature: 26

Limit: (CE)FCC PART 15 class B_QP

Power: AC 120V/60Hz

Humidity: 60 %

EUT: 2 PU Crisp and Clear Monitor

M/N: Y7569P

Mode: RX

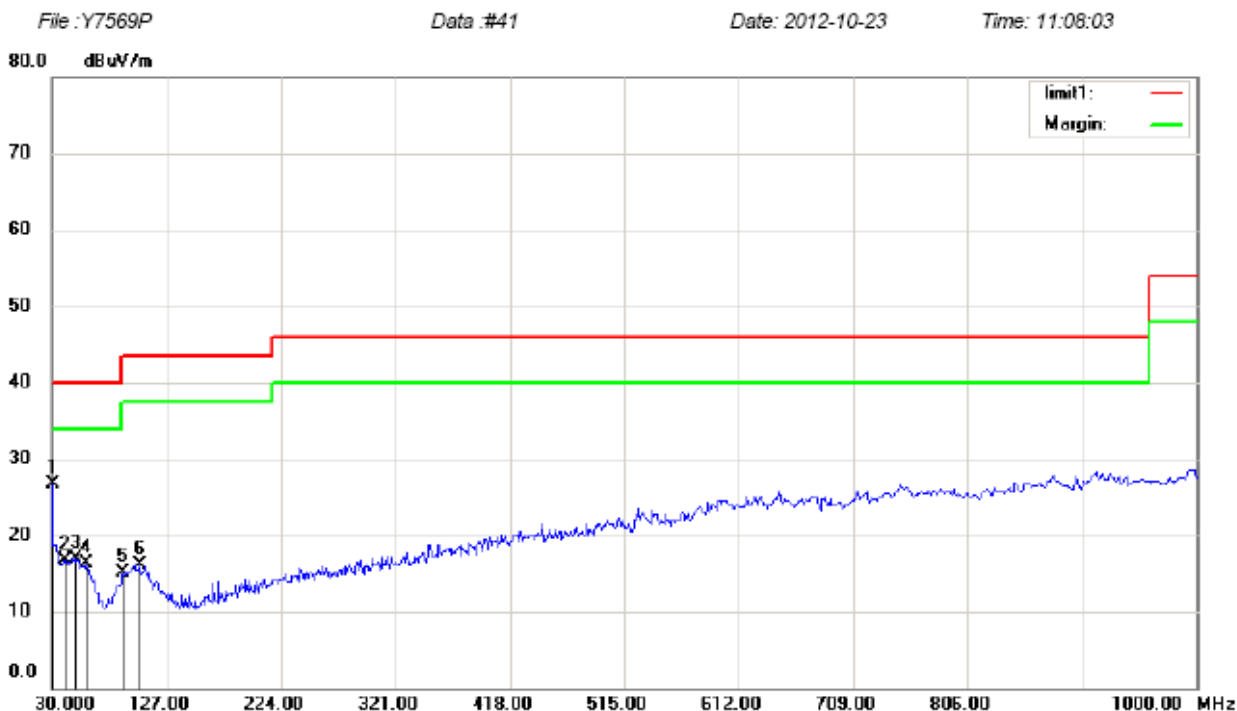
Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.3750	13.30	0.00	13.30	58.39	-45.09	QP	
2		0.3750	3.11	0.00	3.11	48.39	-45.28	AVG	
3		0.8650	15.88	0.00	15.88	56.00	-40.12	QP	
4		0.8650	5.72	0.00	5.72	46.00	-40.28	AVG	
5		1.8950	16.59	0.00	16.59	56.00	-39.41	QP	
6		1.8950	6.12	0.00	6.12	46.00	-39.88	AVG	
7		4.0800	16.72	0.00	16.72	56.00	-39.28	QP	
8		4.0800	6.53	0.00	6.53	46.00	-39.47	AVG	
9		9.4750	18.37	0.00	18.37	60.00	-41.63	QP	
10		9.4750	7.06	0.00	7.06	50.00	-42.94	AVG	
11	*	24.9750	20.75	0.00	20.75	60.00	-39.25	QP	
12		24.9750	9.99	0.00	9.99	50.00	-40.01	AVG	

*:Maximum data x:Over limit !:over margin Comment: Factor build in receiver.

APPENDIX II

Radiated Emission Measurement



Site Chamber #1

Polarization: **Horizontal**

Temperature: 26

Limit: (RE)FCC PART 15 class B 3m

Power: AC 120V/60Hz

Humidity: 55 %

EUT: 2 PU Crisp and Clear Monitor

M/N: Y7569P

Mode:RX

Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Antenna Height cm	Table Degree degree	Comment
1	*	30.0000	42.20	-15.42	26.78	40.00	-13.22	QP			
2		40.6700	30.92	-14.13	16.79	40.00	-23.21	QP			
3		49.4000	31.21	-14.37	16.84	40.00	-23.16	QP			
4		59.1000	31.23	-14.87	16.36	40.00	-23.64	QP			
5		90.1400	30.72	-15.58	15.14	43.50	-28.36	QP			
6		103.7200	30.74	-14.63	16.11	43.50	-27.39	QP			

*:Maximum data x:Over limit !:over margin

Operator: Zoey

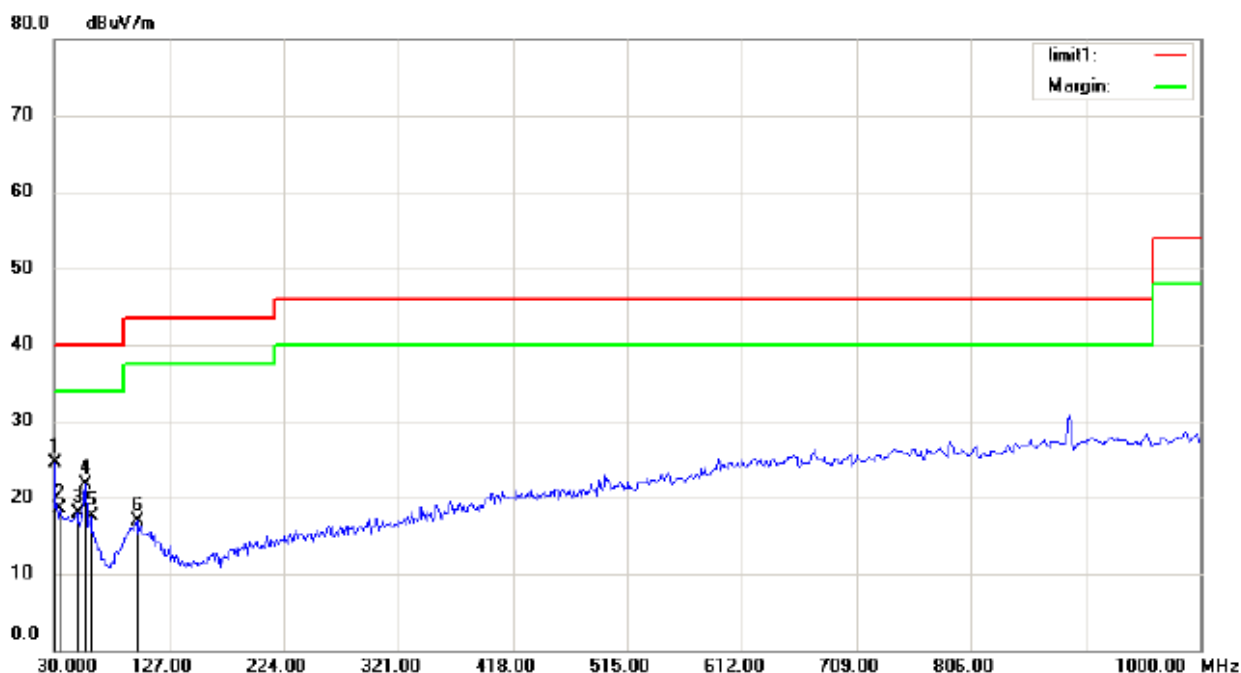
Radiated Emission Measurement

File :Y7569P

Data :#40

Date: 2012-10-23

Time: 11:06:54



Site Chamber #1

Polarization: **Vertical**

Temperature: 26

Limit: (RE)FCC PART 15 class B 3m

Power: AC 120V/60Hz

Humidity: 55 %

EUT: 2 PU Crisp and Clear Monitor

M/N: Y7569P

Mode:RX

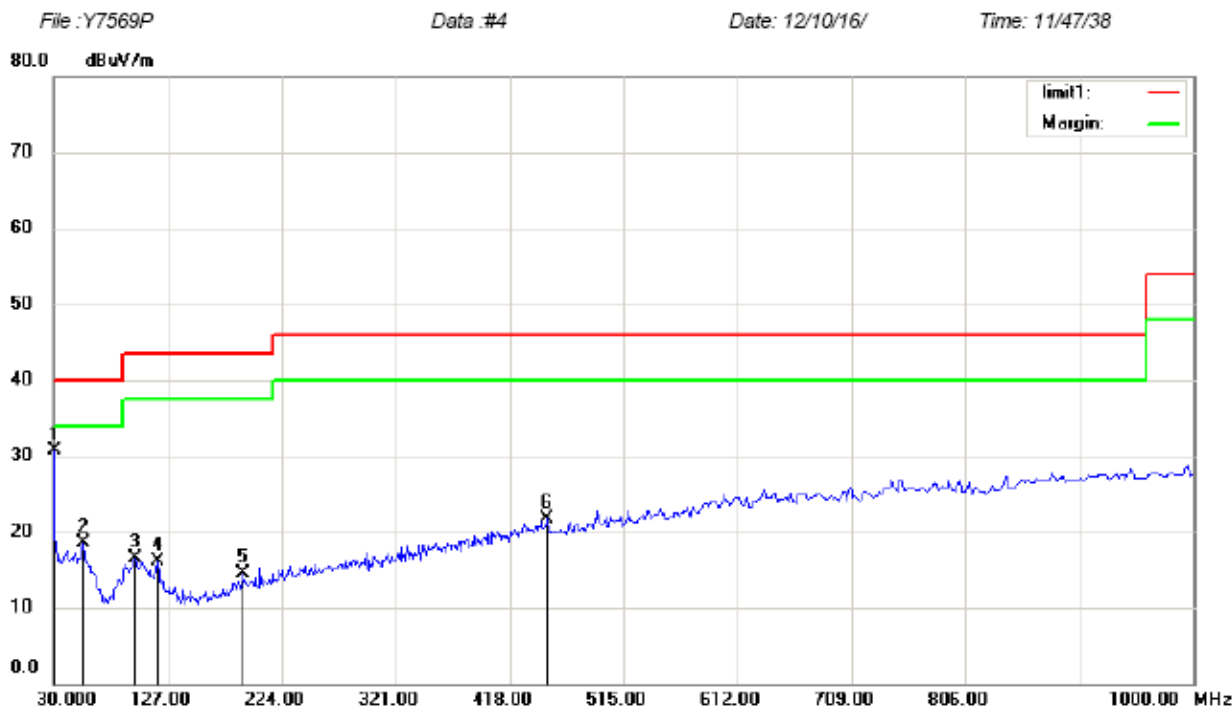
Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree	Comment
1	*	30.0000	39.74	-15.15	24.59	40.00	-15.41	QP		
2		34.8500	33.07	-14.65	18.42	40.00	-21.58	QP		
3		49.4000	32.23	-14.37	17.86	40.00	-22.14	QP		
4		56.1900	36.34	-14.70	21.64	40.00	-18.36	QP		
5		61.0400	32.78	-15.33	17.45	40.00	-22.55	QP		
6		99.8400	31.23	-14.30	16.93	43.50	-26.57	QP		

*:Maximum data x:Over limit !:over margin

Operator: Zoey

Radiated Emission Measurement



Site Chamber #1

Polarization: **Horizontal**

Temperature: 26

Limit: (RE)FCC PART 15 class B 3m

Power: Battery3*1.5V

Humidity: 55 %

EUT: 2 PU Crisp and Clear Monitor

M/N: Y7569P

Mode:RX

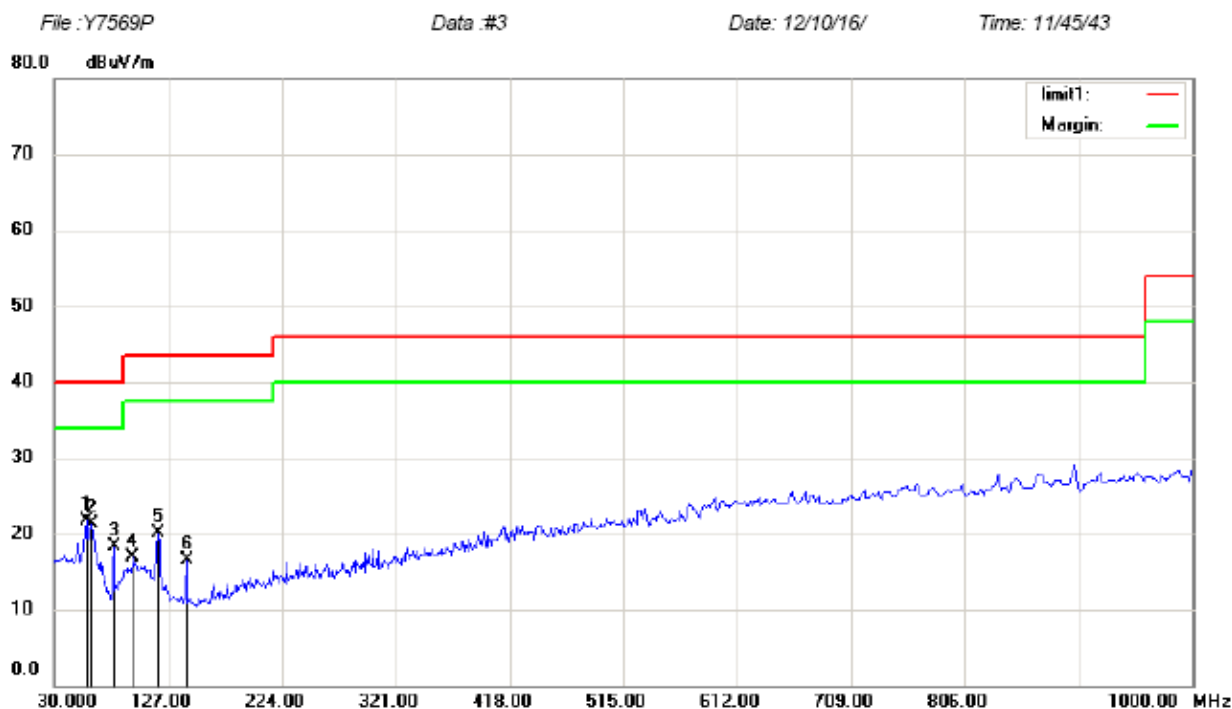
Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1	*	30.0000	46.20	-15.42	30.78	40.00	-9.22	QP		
2		55.2200	33.12	-14.63	18.49	40.00	-21.51	QP		
3		98.8700	30.88	-14.37	16.51	43.50	-26.99	QP		
4		118.2700	32.71	-16.66	16.05	43.50	-27.45	QP		
5		191.0200	30.47	-15.98	14.49	43.50	-29.01	QP		
6		450.0100	30.94	-9.15	21.79	46.00	-24.21	QP		

*:Maximum data x:Over limit !:over margin

Operator: Zoey

Radiated Emission Measurement



Site Chamber #1

Polarization: **Vertical**

Temperature: 26

Limit: (RE)FCC PART 15 class B 3m

Power: Battery3*1.5V

Humidity: 55 %

EUT: 2 PU Crisp and Clear Monitor

M/N: Y7569P

Mode:RX

Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree	Detector	Comment
1	*	57.1600	36.45	-14.76	21.69	40.00	-18.31			QP	
2		62.0100	37.00	-15.72	21.28	40.00	-18.72			QP	
3		80.4400	37.15	-18.86	18.29	40.00	-21.71			QP	
4		96.9300	31.34	-14.51	16.83	43.50	-26.67			QP	
5		118.2700	36.84	-16.66	20.18	43.50	-23.32			QP	
6		142.5200	35.45	-18.87	16.58	43.50	-26.92			QP	

*:Maximum data x:Over limit !:over margin

Operator: Zoey

APPENDIX III (Photos of EUT)

Figure 1
General Appearance of the EUT



Figure 2
General Appearance of the EUT



Figure 3
General Appearance of the EUT



Figure 4
General Appearance of the Adapter

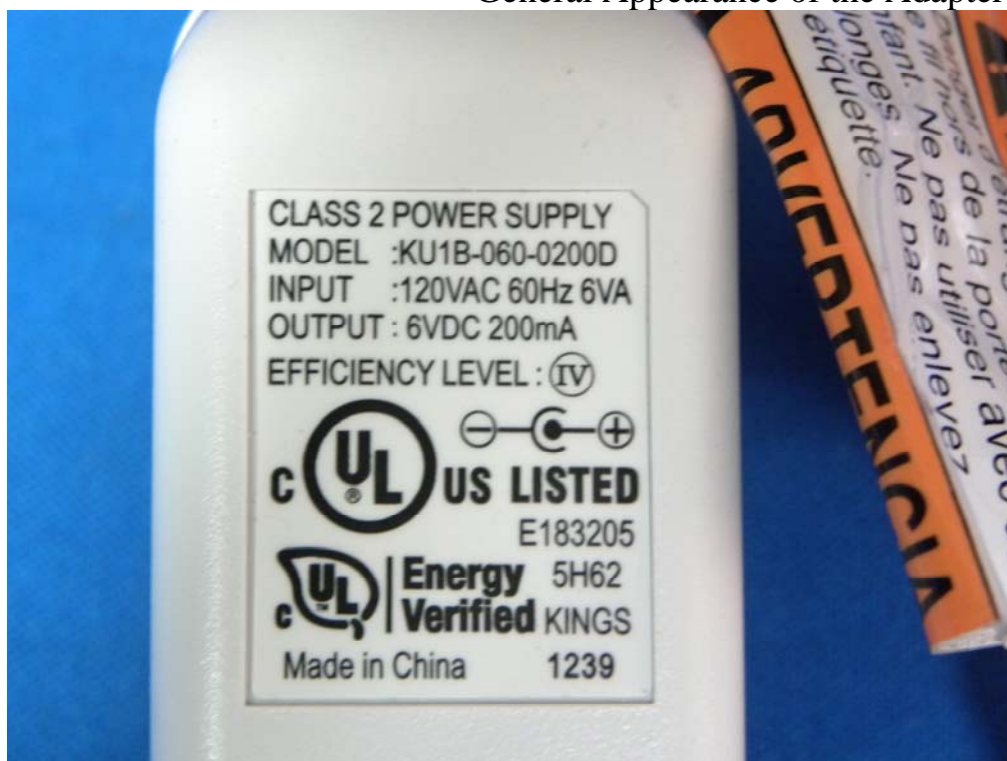


Figure 5
General Internal of the EUT



Figure 6
General Appearance of the PCB

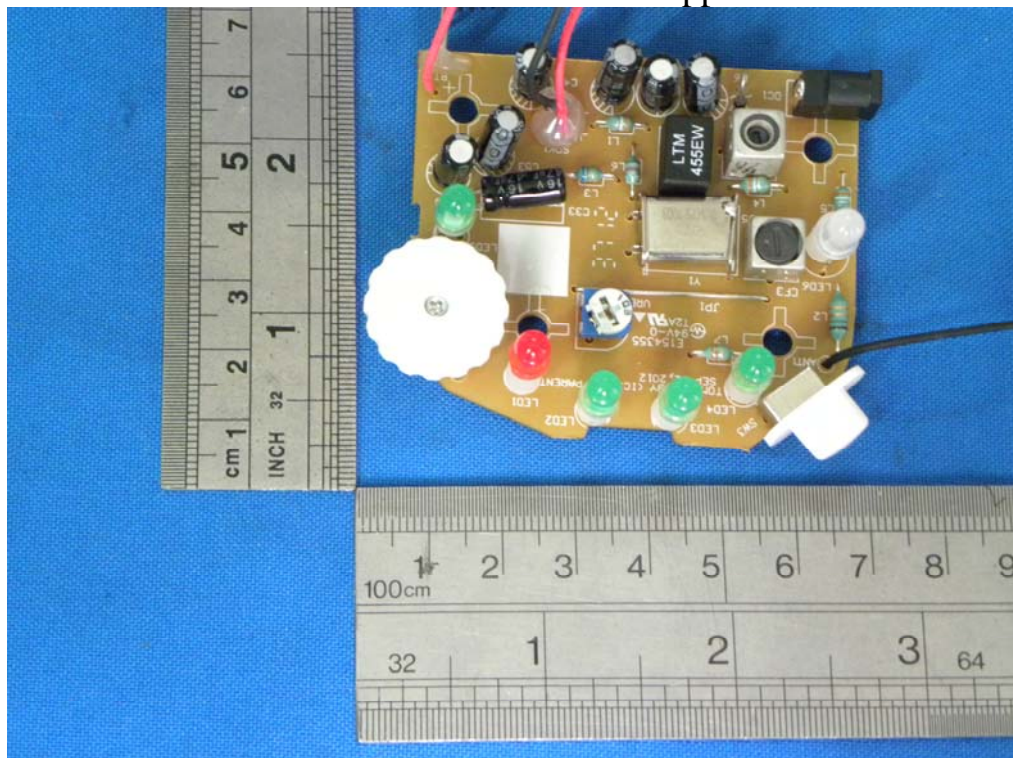


Figure 7
General Appearance of the PCB

