ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT
UNINTENTIONAL RADIATOR CERTIFICATION TO
FCC PART 15 SUBPART B REQUIREMENT

for

Digital Home Multimedia Center

M/N: HMC-3911,R700

FCC ID: WF7HMC-3911

Trade Name: N/A

Report No.: SZEE080411264302

Issue Date: June 26, 2008

Prepared for

Shenzhen Mele Digital Technology Ltd
6/F,Union Friend Industrial Center,Langshan Road 1,Beiqu,Shenzhen Hi-tech Industry Park,Shenzhen,(518051)China
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Prepared by

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1. General Information

Applicant:	Shenzhen Mele Digital Technology Ltd 6/F,Union Friend Industrial Center,Langshan Road 1,Beiqu,ShenzhenHi-tech Industry,Shenzhen,(518051)China
Manufacturer:	Shenzhen Mele Digital Technology Ltd 6/F,Union Friend Industrial Center,Langshan Road 1,Beiqu,ShenzhenHi-tech Industry,Shenzhen,(518051)China
Trade Name:	N/A
Product Name :	Digital Home Multimedia Center
M/N:	HMC-3911,R700
Report No.:	SZEE080411264302
Date of Test:	June 18, 2008 to June 24, 2008

We hereby certify that:

The above equipment was tested by Centre Testing International (CTI), The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.4 (2003) and the energy emitted by the sample EUT tested as described in this report is in compliance with conducted and radiated emission limits of FCC Rules Part 15B.

The test results of this report relate only to the tested sample identified in this report.

Prepared by : Forrest Lei

Forrest Lei

Inspected by : Daisy Wu

Daisy wu

Approved by: Jacky Guo

Jacky Guo
General Manager

Date : June 26, 2008

2. Product Information

Product name: Digital Home Multimedia Center
Model name:HMC3911,R700
Trade name: N/A
Technical data: normal work voltage---DC12V/3A
Model difference: The two models product have no any difference except for model name

Function: Video Recording,
Movie Playback,
Music Playback,
Photo Playback,
Data Storage,
Network Function,
HDMI

3. Test Methodology

Both conducted and radiated testing were performed according to the procedures in ANSI C63.4 (2003). Radiated testing was performed at an antenna to EUT distance 3 meters.

4. Test Facility

The 3m Semi-Anechoic chamber test site and conducted measurement facility used to collect the radiated data is located on the address:
1F., Building C, Hongwei Industrial Zone 70 District., Baoan, Shenzhen, Guangdong, China.
The Test Sites and the Line Conducted labs are constructed and calibrated to meet the FCC requirements in documents ANSI C63.4: 2003 requirements. The test site Registration Number: 614926

5. Special Accessories

Not available for this EUT intended for grant.

6. Equipment Modifications

Not available for this EUT intended for grant.

7. Test Condition

7.1 Test Configuration

The device was configured for testing in a typical fashion (as a customer would normally use it). During the tests, the EUT and the supported equipments were installed to meet FCC requirement and operated in a manner which tends to maximize its emission level in a typical application.

7.2 Test Procedure

Conducted Emissions:
The EUT is a placed on as turn table which is 0.8 m above ground plane. According to the requirements in Section 13.1.4.1 of ANSI C63.4-2003.Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using CISPR Quasi-Peak and average detector mode.

Radiated Emissions:
The EUT is a placed on as turn table which is 0.8 m above ground plane. The turn table shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the max emission, the relative positions of this hand-held transmitter (EUT) was rotated through three orthogonal axes according to the requirements in Section 13.1.4.1 of ANSI C63.4-2003.

7.3 EUT operation

EUT was tested according to the following operation modes provided by the specifications given by the manufacturer, and reported the worst emissions.

7.4 Peripherals / Support Equipment Used

Following peripheral devices and interface cables were connected during the measurement:

Type of Peripheral Equipment Used:

Description	Model Name	Serial No.	Manufacturer	FCC ID
Monitor	LT1563	TS1536K02034100040	IBM	DoC
Keyboard	KB-9963	B28AC0NGANB1WH	Lenovo	DoC
Mouse	Wheel Mouse 3.0 PS/2	B28A0532589PU	Lenovo	DoC
PC	8143	28143ISCL3NGA07	IBM	DoC
TV	32PF7320/93	BZ1A0627401425	Philips	VOC

Type of Cables Used:

Device from	Device to	Type of Cable	Length(m)	Type of shield
EUT	PC	USB	1.5	Unshielded
EUT	PC	Network	1.3	Unshielded
EUT	TV	Audio	1.5	Unshielded
EUT	TV	Video	1.5	Unshielded
EUT	TV	HDMI	1.8	Unshielded
PC	Mouse	PS/2	2.1	Unshielded
PC	Keyboard	PS/2	2.1	Unshielded
PC	Monitor	VGA	1.8	Shielded

7.5 Limit

Conducted Emission:

According to section 15.107(a) Conducted Emission Limits is as following:

Frequency range (MHz)	Limits (dBuV)	
	Quasi-peak	Average
0.15 to 0.5	66 to 56 *	56 to 46 *
0.5 to 5	56	46
5 to 30	60	50

Note:

* Decreases with the logarithm of the frequency.

Radiated Emission:

According to section 15.109(g) Radiated Emission Limits is as following:

Frequency	Field strength	Distance	Field strength at 3m
(MHz)	(μV/m)	(m)	(dBμV/m)
30-88	100	3	40
88-216	150	3	43.5
216-960	200	3	46
Above 960	500	3	54

Remark:

1. Emission level in dBuV/m=20 log (uV/m)
2. Measurement was performed at an antenna to the closed point of EUT distance of meters.

8. Summary of Test Results

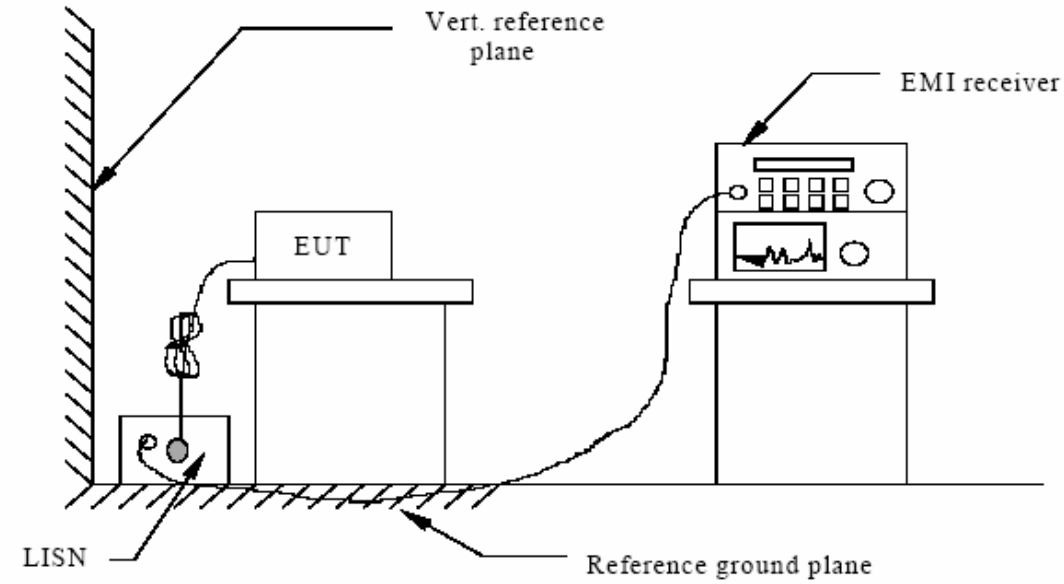
FCC Rules	Description Of Test	Result
§15.107(a)	Conducted Emission	Compliant
§15.109(g)	Radiated Emission	Compliant

9. Conducted Emissions Test

9.1 Measurement Procedure

1. The EUT was placed on a table which is 0.8m above ground plane.
2. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
3. Repeat above procedures until all frequency measured were complete.

9.2 Test Set-up (Block Diagram of Configuration)



9.3 Measurement Equipment Used

Equipment Type	Manufacturer	Model Number	Serial Number	Last Calibration	Calibration Due
Receiver	R&S	ESCI	100435	01/29/2008	01/28/2009
LISN	ETS	3816	00060336	06/07/2008	06/06/2009

9.4 Measurement Results

Limit	:	FCC Class B Conduction	**Power**	:	AC 120V/60HZ
EUT	:	Digital Home Multimedia Center	**Temperature**	:	24℃
M/N	:	HMC-3911	**Humidity**	:	53%
Mode	:	USB----COPY DATA	**Tested by**	:	Forrest Lei

(The chart below shows the highest readings taken from the final data)

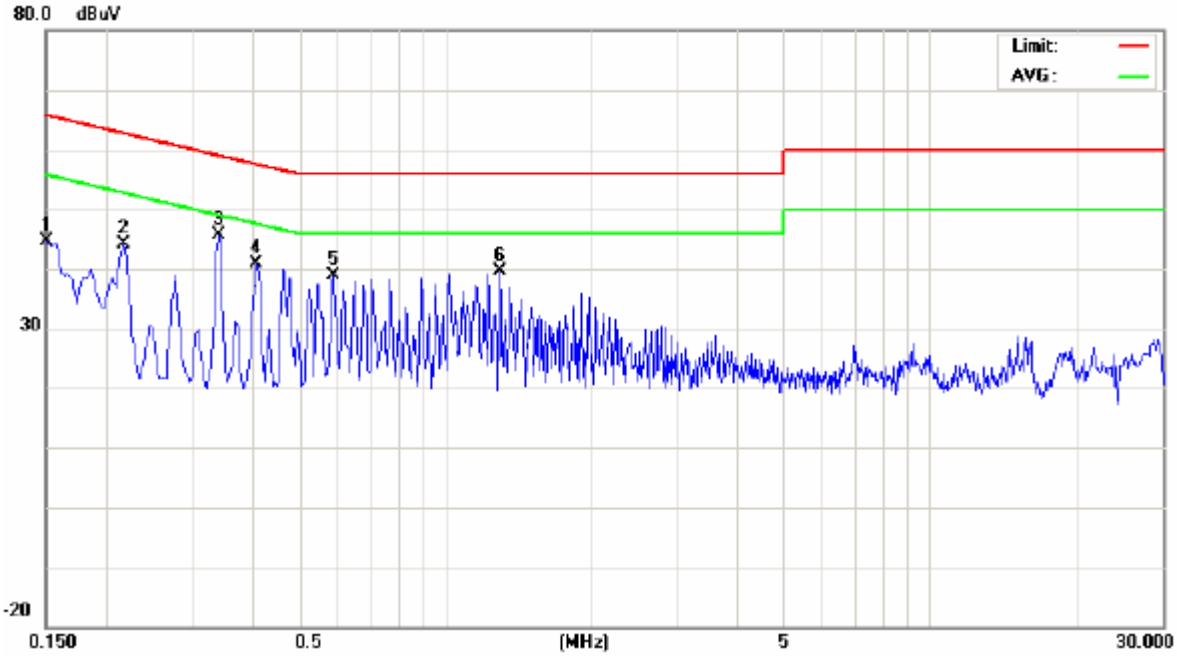
Conducted Emission Test Result													
Frequency	Reading Level (dBuV)			Correct Factor	Measurement (dBuV)			Limits		Margin		Result	Remarks
(MHz)	Peak	Q.P.	Avg.	dB	Peak	Q.P.	Avg.	Q.P.	Avg.	Q.P.	Avg.	(P/F)	(L1/L2)
0.1499	23.04	20.23	11.63	21.51	44.55	41.74	33.14	66.00	56.00	-14.26	-22.86	P	L
0.2180	22.09	19.61	18.74	22.13	44.22	41.74	40.87	62.89	52.89	-11.15	-12.02	P	L
0.3420	23.98	20.03	19.08	21.71	45.69	41.74	40.79	59.15	49.15	-7.41	-8.36	P	L
0.4100	19.11	18.20	17.93	21.66	40.77	39.86	39.59	57.65	47.65	-7.79	-8.06	P	L
0.5900	17.23	14.66	13.75	21.53	38.76	36.19	35.28	56.00	46.00	-9.81	-10.72	P	L
1.3020	18.21	15.90	14.38	21.36	39.57	37.26	35.74	56.00	46.00	-8.74	-10.26	P	L
0.1820	28.58	26.66	24.25	21.96	50.54	48.62	46.21	64.39	54.39	-15.77	-8.18	P	N
0.3620	24.81	20.16	16.91	21.70	46.51	41.86	38.61	58.68	48.68	-16.82	-10.07	P	N
0.4820	23.56	20.83	16.62	21.60	45.16	42.43	38.22	56.30	46.30	-13.87	-8.08	P	N
0.5300	25.60	24.05	20.19	21.56	47.16	45.61	41.75	56.00	46.00	-10.39	-4.25	P	N
0.6220	25.49	21.11	15.68	21.53	47.02	42.64	37.21	56.00	46.00	-13.36	-8.79	P	N
1.1460	26.12	18.84	11.68	21.45	47.57	40.29	33.13	56.00	46.00	-15.71	-12.87	P	N

Freq.	= Emission frequency in MHz
Reading level	= Uncorrected Analyzer/Receiver reading
Factor	= Cable loss + insertion loss
Emission level	= Reading level + Factor
Limit	= Limit stated in standard
Margin	= Reading in reference to limit

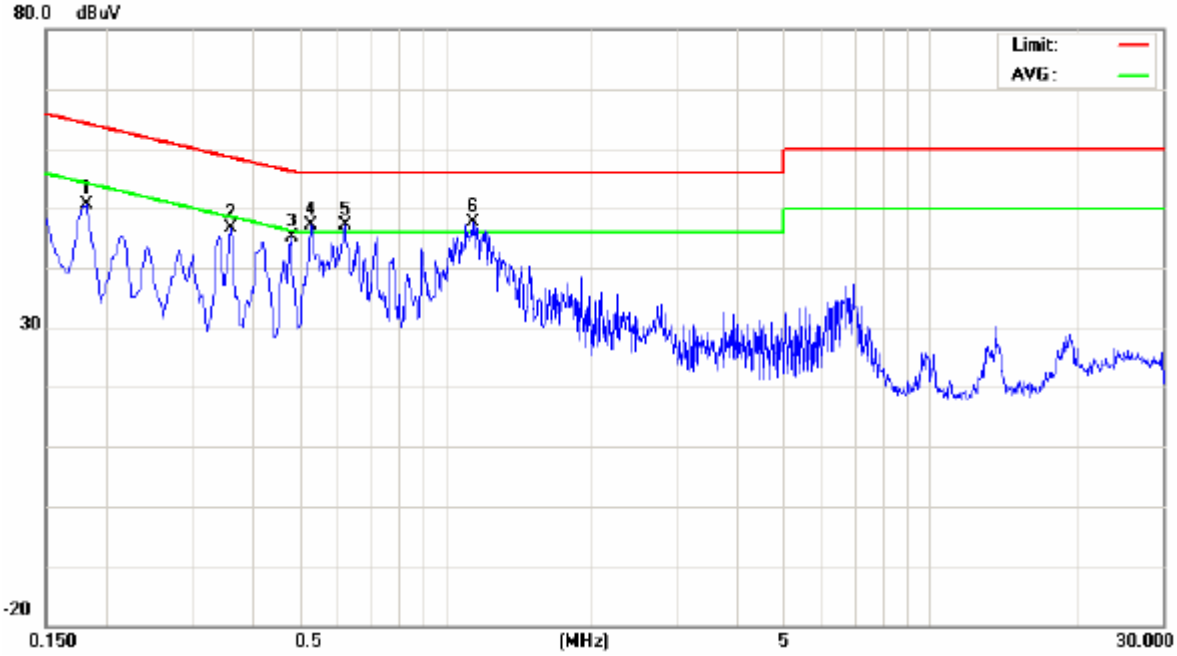
Notes: This is the worst mode of all modes. the other modes comply with conduction limits.

Graph of Conducted Emissions:

L:(USB Mode)



N:(USB Mode)



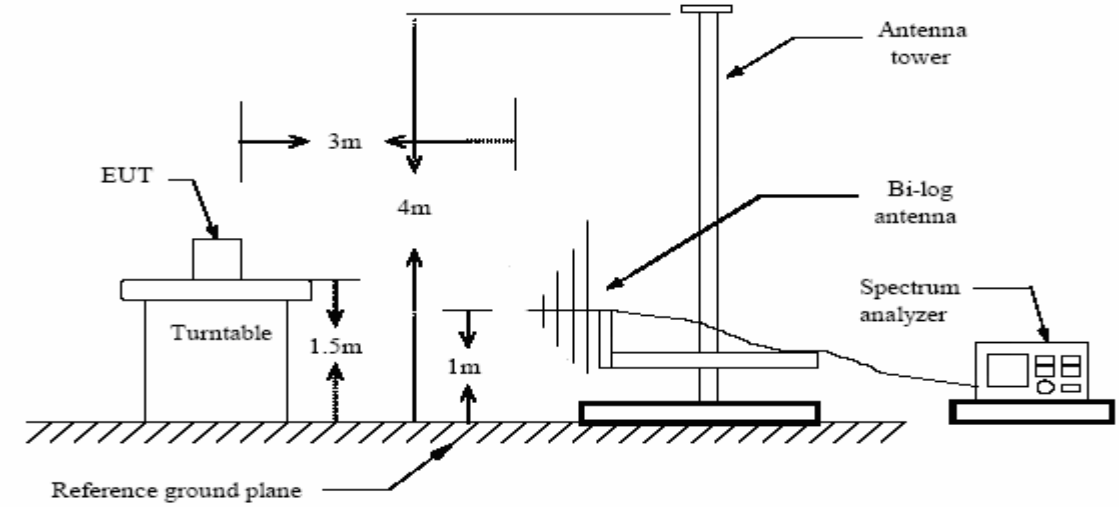
10. Radiated Emission Test

10.1 Measurement Procedure

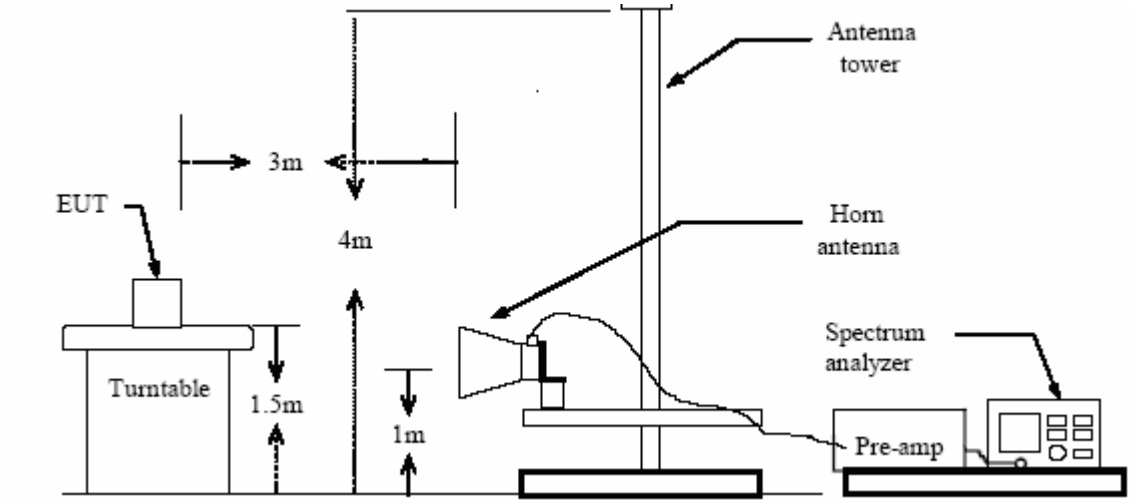
1. The EUT was placed on a turn table which is 0.8m above ground plane.
2. Maximum procedure was performed on the twelve highest emissions to ensure EUT compliance.
3. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
4. Repeat above procedures until all frequency measured were complete.

10.2 Test Set-up (Block Diagram of Configuration)

A. Radiated Emission Test Set-Up, Frequency below 1000MHz



B. Radiated Emission Test Set-Up, Frequency above 1000MHz



10.3 Measurement Equipment Used

Equipment Type	Manufacturer	Model Number	Serial Number	Last Calibration	Calibration Due
Spectrum Analyzer	Agilent	E4443A	MY46185649	06/29/2008	06/28/2009
Biconilog Antenna	ETS	3142C	920250	05/30/2008	05/29/2009
ETS Horn Antenna	ETS	3117	57410	05/30/2008	05/29/2009
Multi device Controller	ETS	2090	00057230	06/07/2008	06/06/2009

10.4 Measurement Results

Limit : FCC Class B Radiation
EUT : Digital Home Multimedia Center
M/N : HMC-3911
Mode : USB---(Copy data)
Power : AC 120V
Temperature : 26℃
Humidity : 60%
Tested by : Forrest lei

(The chart below shows the highest readings taken from the final data)

Radiated Emission Test Result													
Frequency	Reading Level (dBuV)			Correct Factor	Measurement (dBuV/m)			Limit (dBuV/m)		Margin (dB)		Result	Remarks
(MHz)	Peak	Q.P.	Avg.	dB	Peak	Q.P.	Avg.	Q.P.	Avg.	Q.P.	Avg.	(P/F)	(L/N)
240.1600	27.33	25.38		13.78	41.11	39.16		46.00		-6.84		P	H
432.5500	17.29			18.69	35.98			46.00		<-10		P	H
479.4330	21.17	19.54		20.07	41.24	39.61		46.00		-6.39		P	H
500.4499	21.56	18.61		19.96	41.52	38.57		46.00		-7.43		P	H
561.8832	17.34	12.34		21.45	38.79	33.79		46.00		-12.21		P	H
862.5800	17.04	14.63		25.85	42.89	40.48		46.00		-5.52		P	H
30.0000	13.39	10.59		17.63	31.02	28.22		40.00		-11.78		P	V
101.1300	18.74			10.35	29.09			43.50		-14.41		P	V
175.5000	19.90			11.52	31.42			43.50		<-10		P	V
479.4300	19.78	17.61		20.07	39.85	37.68		46.00		-8.32		P	V
500.4500	24.00	19.43		19.96	43.96	39.39		46.00		-6.61		P	V
599.0600	17.20	15.28		22.16	39.36	37.44		46.00		<-10		P	V

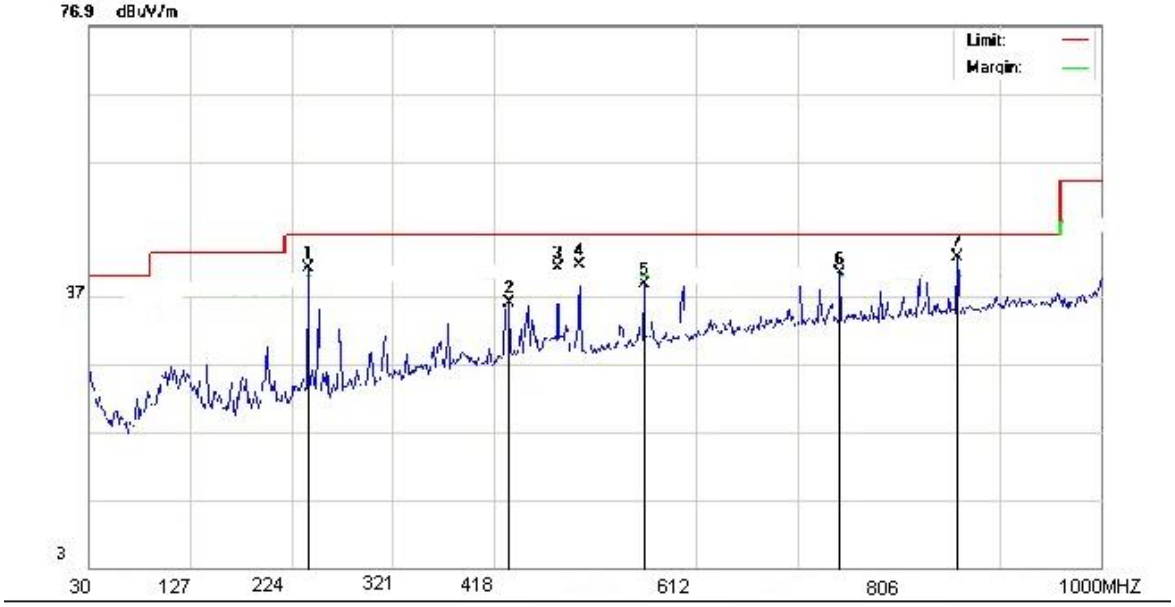
Freq. = Emission frequency in MHz
Raw Data (dBuV/m) = Uncorrected Analyzer / Receiver reading
Corr. Factor (dB) = Correction factors of antenna factor and cable loss
Emiss. Leve = Raw reading converted to dBuV/m and CF added
Limit dBuV/m = Limit stated in standard
Margin dB = Reading in reference to limit
PK = Peak Reading
QP = Quasi-peak

Notes: This is the worst mode of all modes. The other modes comply with radiation limits.

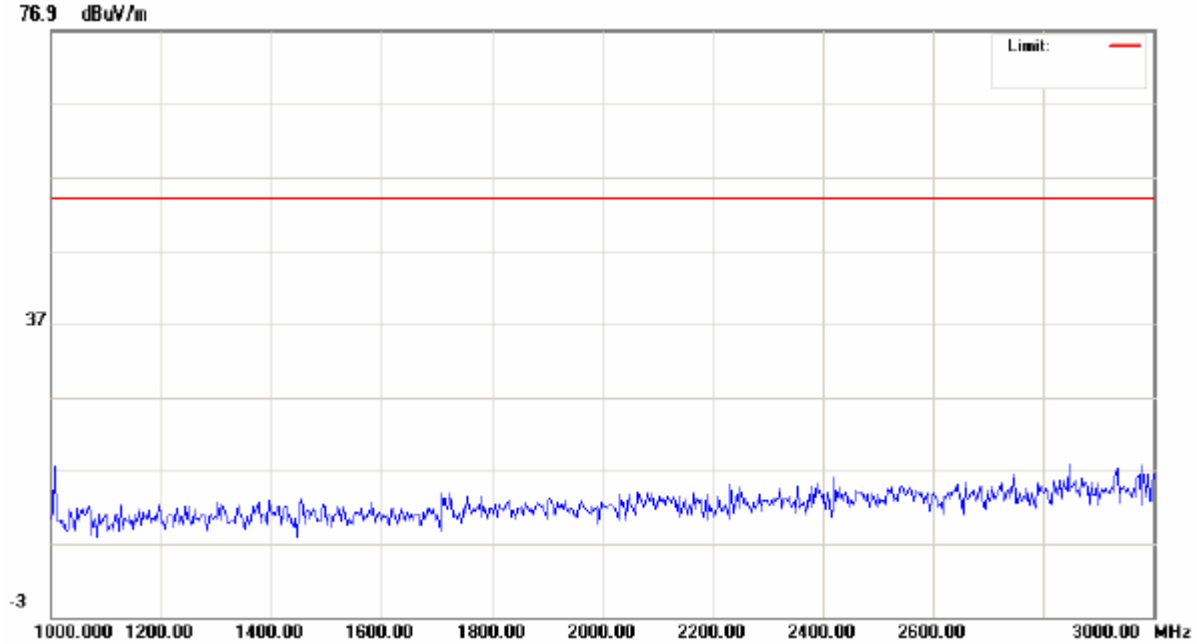
Graph of Radiated Emissions:

H:(Antenna)

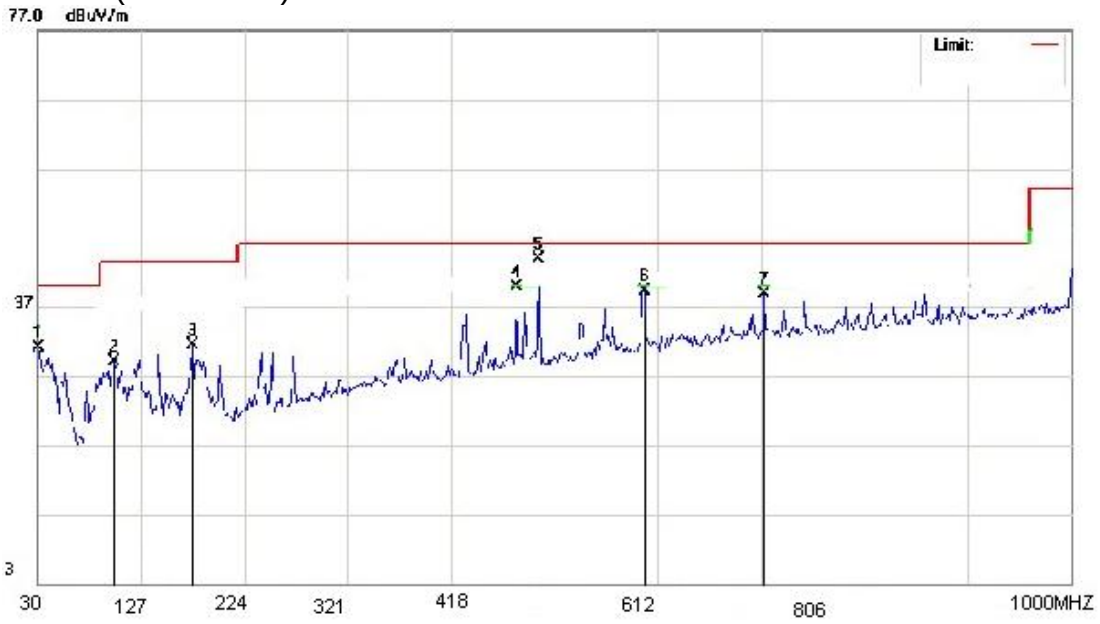
Below 1GHz(USB mode)



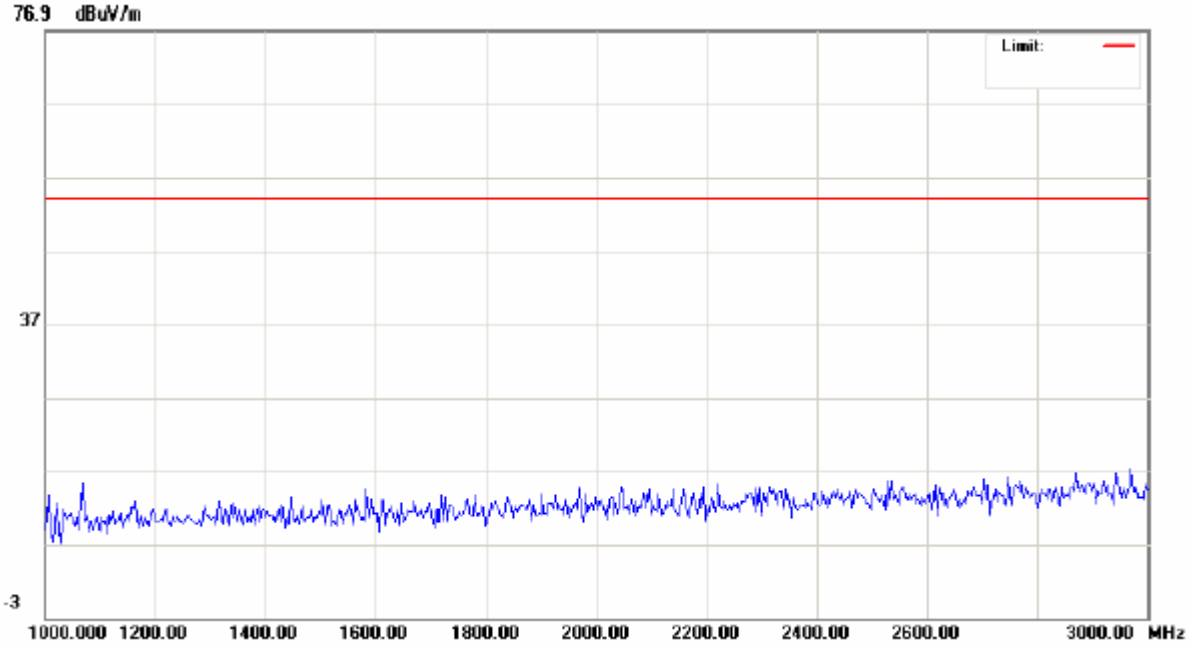
Above 1GHz(HDMI Mode)



V:(Antenna)
Below 1GHz(USB Mode)



Above 1GHz(HDMI Mode)



11. Measurement Uncertainty

Conduction Uncertainty : ± 2.72dB
Radiation Uncertainty : ± 3.84dB

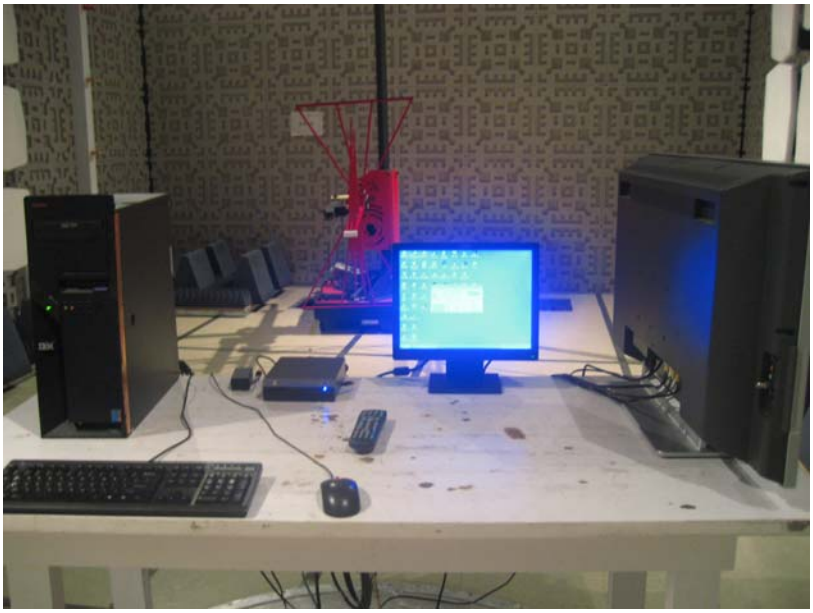
APPENDIX 1 PHOTOGRAPHS OF TEST SETUP

CONDUCTED EMISSION TEST

View 1 of conduction

View 2 of conduction

RADIATED EMISSION TEST



APPENDIX 2 EXTERNAL PHOTOGRAPHS OF EUT

Whole View of EUT-1

View of EUT-2

View of EUT-3

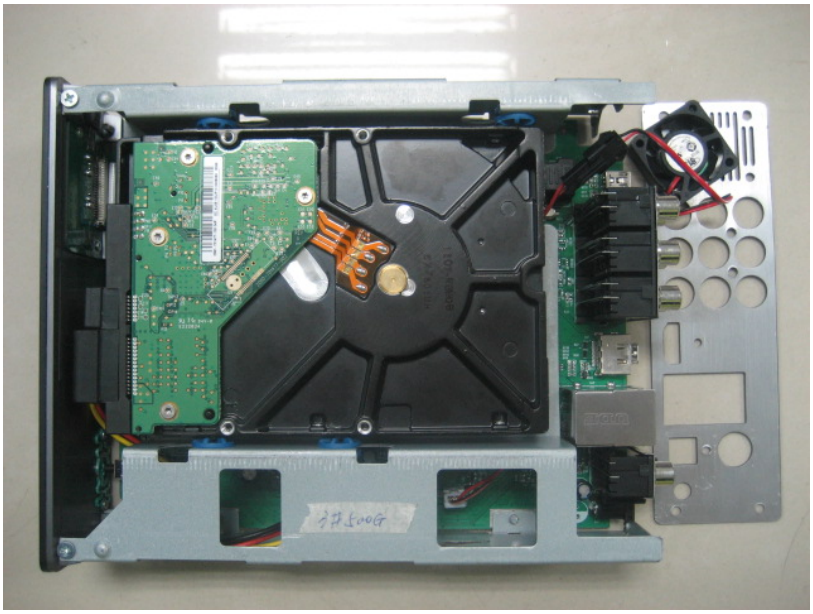
View of EUT-4

View of EUT-5

View of EUT-6

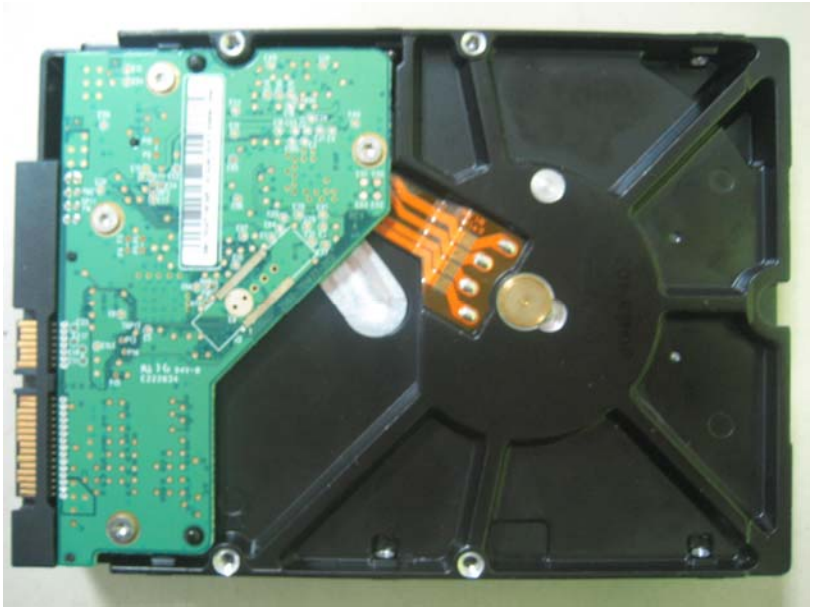
View of EUT-7

APPENDIX 3 INTERNAL PHOTOGRAPHS OF EUT

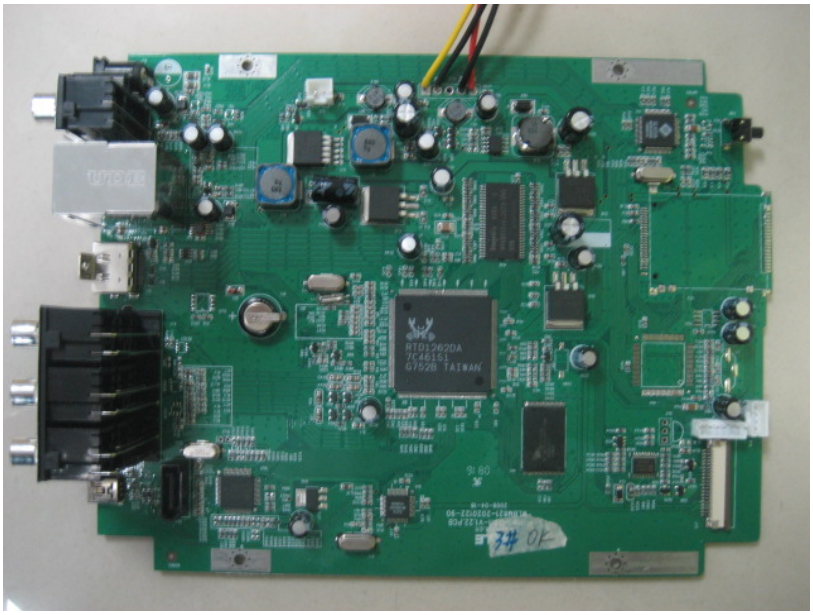


Whole internal View of EUT

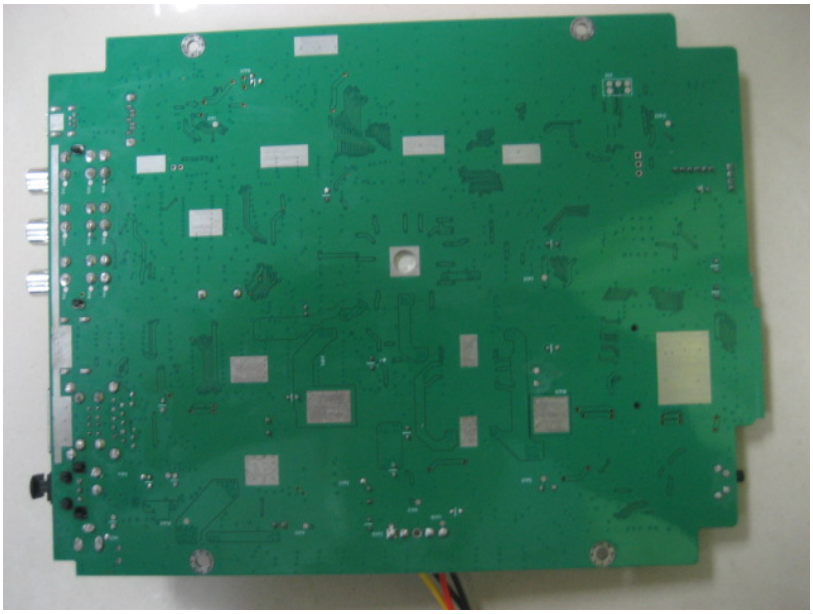
Hard disk top view of EUT



Hard disk bottom view of EUT



Main board top view of EUT



Main board bottom view of EUT

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