FCC DOC TEST REPORT

According to

FCC CFR 47 Part 15 Subpart B: 2013

CISPR 22 : 1997

ICES 003 Issue 5:2012(Class B Limit)

Applicant	:	ASUSTEK COMPUTER INC.
Address	:	4F, No. 150, LI-TE Rd., PEITOU, TAIPEI 112, TAIWAN
Equipment	:	Motherboard
Model No.	:	Z170 PRO GAMING
Brand name	:	ASUS

I HEREBY CERTIFY THAT :

The sample was received on Jun. 18, 2015 and the testing was carried out on Jun. 20, 2015 at Cerpass Technology Corp. The test result refers exclusively to the test presented test model / sample. Without written approval of Cerpass Technology Corp., the test report shall not be reproduced except in full.

Approved by:

Hill Chen
EMC/RF B.U. Manager

FCC TEST REPORT

Issued by:

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The test record, data evaluation & Equipment. Under Test configurations represented herein are true and accurate accounts of the measurements of the samples EMC characteristics under the conditions specified in this report.

Laboratory Accreditation:

☒ Cerpass Technology Corporation Test Laboratory

NVLAP LAB Code:	**200954-0**
TAF LAB Code:	**1439**

Contents

History of this test report

■ ORIGINAL.

☐ Additional attachment as following record:

Report No	Version	Date	Description
SEFD1506085	Rev 01	Jul 16,2015	Initial Issue

1. Summary of Test Procedure and Test Result

1.1. Applicable Standards

The measurements shown in this test report were made in accordance with the procedures given in ANSI C63.4 – 2009 and the energy emitted by this equipment was passed Part 2, Part 15, CISPR PUB. 22.

The energy emitted by this equipment was passed both Radiated and Conducted Emissions Class B limits.

Test Item	Normative References	Test Result	Remarks
Conducted Emission	ANSI C63.4-2009 FCC Part 15 Subpart B CISPR 22 : 1997 ICES 003 Issue 5:2012	PASS	Meets Class B Limit Minimum passing margin(AV) is -15.19 dB at 24.0500 MHz
Radiated Emission	ANSI C63.4-2009 FCC Part 15 Subpart B CISPR 22 : 1997 ICES 003 Issue 5:2012	PASS	Meets Class B Limit Minimum passing margin(QP) is -6.10 dB at 951.5000 MHz

2. Test Configuration of Equipment under Test

2.1. Feature of Equipment under Test

Motherboard	Model No.:	Z170 PRO GAMING
Switching Power Supply	Model No.:	FSP350-60HHN(85)
	Input	AC 200V~240V~3A 50Hz
	Output:	DC(+3.3V/21A; +5V/20A; +12V1/15A; +12V2/15A; -12V/0.5A; +5Vsb/2.5A)

Key component List			
Item	Manufactory	Model	Specification
CPU	Intel	QJE9	3.40GHz
RAM	---	DDR4	16GB
HDD	Seagate	ST380815AS	80GB

CPU	Intel CPU Support Type		LGA 1151
Chipset	PCH Vendor		Intel
	PCH Type		Z170
Memory	Memory Type		DDR4
	Memory size		Min: 1024MB
			Max: 16GB
Network:	10M/bps,100M/bps,1000M/bps		
D-Sub Max. resolution	1920*1200@60Hz		
DVI Max. resolution	1920*1200@60Hz		
I/O Ports:	1	PS-2 port:	1
	2	USB1.1&2.0 port	2
	3	USB3.0 port	4
	4	DVI port	1
	5	D-sub port	1
	6	HDMI port	1
	7	RJ-45 port(10M/bps,100M/bps,1000M/bps)	1
	8	Audio port	5
	9	DP port	1
	10	USB3.1 port	1

2.2. Test Manner

a. During testing, the interface cables and equipment positions were varied according to ANSI C63.4.

b. The complete test system included the Notebook PC, PS/2 Keyboard, Mouse, LCD Monitor, iPod, HDD, Earphone and EUT for EMI test.

c. During the test, setup up the EUT and all system, turn on the power of all Equipments.

d. An executive program, “BurnInTest professional V6”, run the EMC test software “H”, “H” font size No. is 11, CPU+RAM+2D+3D 100%.

e. An executive program, “WINTHRAX.EXE” was executed to read and write data from IPOD, HDD.

f. During the disturbances at telecommunication port test, the condition of LAN utilization in excess of 10%.

The pre-test modes for CE

Mode 1: Full System with VGA (1920*1200@60Hz) and HDMI (1920*1200@60Hz) with Status 1

Mode 2: Full System with VGA (1920*1200@60Hz) and HDMI (1920*1200@60Hz) with Status 2

Mode 3: Full System with VGA (1920*1200@60Hz) and HDMI (1920*1200@60Hz) with Status 3

Mode 4: Full System with VGA (1920*1200@60Hz) and HDMI (1920*1200@60Hz) with Status 4

Mode 5: Full System with VGA (1920*1200@60Hz) and HDMI (1920*1200@60Hz) with Status 5

Mode 6: Full System with DVI (1920*1200@60Hz) and HDMI (1920*1200@60Hz) with Status 1

Mode 7: Full System with VGA (1920*1200@60Hz) and DVI (1920*1200@60Hz) with Status 1

Mode 8: Full System with VGA (1920*1200@60Hz) and Display (1920*1200@60Hz) Status 1

Mode 9: Full System with DVI (1920*1200@60Hz) and Display (1920*1200@60Hz) Status 1

Mode 10: Full System with HDMI (1920*1200@60Hz) and Display (1920*1200@60Hz) with Status 1

Mode 11: Full System with HDMI (1920*1200@60Hz) and Display (1920*1200@60Hz) with Status 1

Mode 12: Full System with VGA (1280*1024@75Hz) and HDMI (1280*1024@75Hz) with Status 1

Mode 13: Full System with VGA (640*480@60Hz) and HDMI (640*480@60Hz) with Status 1

The final test mode for CE

Mode 1: Full System with VGA (1920*1200@60Hz) and HDMI (1920*1200@60Hz) with Status 1

The pre-test modes for RE

Mode 1: Full System with VGA (1920*1200@60Hz) and HDMI (1920*1200@60Hz) with Status 1 for close case

Mode 2: Full System with VGA (1920*1200@60Hz) and HDMI (1920*1200@60Hz) with Status 2 for close case

Mode 3: Full System with VGA (1920*1200@60Hz) and HDMI (1920*1200@60Hz) with Status 3 for close case

Mode 4: Full System with VGA (1920*1200@60Hz) and HDMI (1920*1200@60Hz) with Status 4 for close case

Mode 5: Full System with VGA (1920*1200@60Hz) and HDMI (1920*1200@60Hz) with Status 5 for close case

Mode 6: Full System with DVI (1920*1200@60Hz) and HDMI (1920*1200@60Hz) with Status 1 for close case

Mode 7: Full System with VGA (1920*1200@60Hz) and DVI (1920*1200@60Hz) with Status 1 for close case

Mode 8: Full System with VGA (1920*1200@60Hz) and Display (1920*1200@60Hz) Status 1 for close case

Mode 9: Full System with DVI (1920*1200@60Hz) and Display (1920*1200@60Hz) Status 1 for close case

Mode 10: Full System with HDMI (1920*1200@60Hz) and Display (1920*1200@60Hz) with Status 1 for close case

Mode 11: Full System with HDMI (1920*1200@60Hz) and Display (1920*1200@60Hz) with Status 1 for close case

Mode 12: Full System with VGA (1280*1024@75Hz) and HDMI (1280*1024@75Hz) with Status 1 for close case

Mode 13: Full System with VGA (640*480@60Hz) and HDMI (640*480@60Hz) with Status 1 for close case

Mode 14: Full System with VGA (1920*1200@60Hz) and HDMI (1920*1200@60Hz) with Status 1 for open case

The final test mode for RE

Mode 1: Full System with VGA (1920*1200@60Hz) and HDMI (1920*1200@60Hz) with Status 1 for close case

Mode 14: Full System with VGA (1920*1200@60Hz) and HDMI (1920*1200@60Hz) with Status 1 for open case

Note1:

Status1: USB 2.0 Port Connect to mouse and Ipod, USB3.0 port connect to HDD

Status2: USB 2.0 Port Connect to mouse and keyboard, USB3.0 port connect to HDD

Status3: USB 2.0 Port Connect to mouse , USB3.0 port connect to keyboard

Status4: USB 2.0 Port Connect to keyboard , USB3.0 port connect to mouse

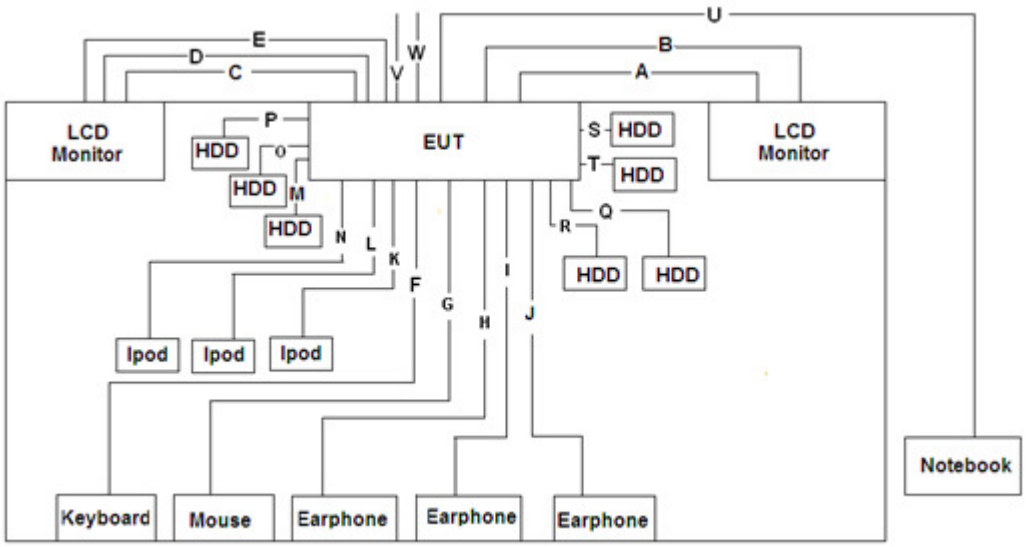
Status5: USB 3.0 Port Connect to mouse and keyboard, USB2.0 port connect to Ipod

The maximum operating frequency is above 108MHz, the test frequency range is from 30MHz to 18GHz.

2.3. Description of Test System

No.	Device	Manufacturer	Model No.	Description
1	Notebook PC	SONY	PCG-71811P	Non-Shielded, 1.5m R33021
2	PS/2 Keyboard	DELL	SK-8115	T3A002
3	Mouse	DELL	G0K02XYK	N/A
4	LCD Monitor	DELL	3008WFPt	Non-Shielded, 1.8m R3A002
5	LCD Monitor	Lenovo	L2364wA	Non-Shielded, 1.8m R33B65
6	iPod	APPLE	A1373	N/A
7	iPod	APPLE	A1373	N/A
8	iPod	APPLE	3409A	N/A
9	HDD	WD	WDBPCK5000ABK-01	N/A
10	HDD	WD	WDBPCK5000ABK-01	N/A
11	HDD	WD	WDBPCK5000ABK-01	N/A
12	HDD	WD	WDBPCK5000ABK-02	N/A
13	HDD	WD	WD4711.A	N/A
14	HDD	WD	WD4711.A	N/A
15	HDD	WD	WD4711.A	N/A
16	Earphone	SALAR	V18	N/A
17	Earphone	SALAR	V18	N/A
18	Earphone	SALAR	V18	N/A

2.4. Connection Diagram of Test System



Item	Cable	Quantity	Description
A	VGA Cable	1	Shielded, 1.8m,with two ferrites core bonded
B	DVI Cable	1	Shielded, 1.8m,with two ferrites core bonded
C	HDMI Cable	1	Non-Shielded, 1.5m
D	Display Cable	1	Non-Shielded, 1.5m
E	Audio Cable	1	Shielded, 1.8m
F	PS/2 Cable	1	Shielded, 1.8m,with a ferrite core bonded
G	USB Cable	1	Shielded, 1.2m
H	Audio Cable	1	Shielded, 1.8m
I	Audio Cable	1	Shielded, 1.8m
J	Audio Cable	1	Shielded, 1.8m
K	USB Cable	1	Shielded, 1.0m
L	USB Cable	1	Shielded, 1.0m
N	USB Cable	1	Shielded, 1.0m
M	USB Cable	1	Shielded,0.6m
O	USB Cable	1	Shielded,0.6m
P	USB Cable	1	Shielded,0.6m
Q	USB Cable	1	Shielded,0.6m
R	USB Cable	1	Shielded,0.6m
S	USB Cable	1	Shielded,0.6m
T	USB Cable	1	Shielded, 0.6m
U	LAN Cable	1	Non-Shielded, >3.0m
V	USB 3.1Cable	1	Shielded, 1.2m
W	Optical fiber Cable	1	Shielded, 1.5m

2.5. General Information of Test

Test Site :	**Cerpass Technology Corporation Test Laboratory** Address: No.10, Ln. 2, Lianfu St., Luzhu Dist., Taoyuan City 33848, Taiwan (R.O.C.) Tel:+886-3-3226-888 Fax:+886-3-3226-881 Address: No.68-1, Shihbachongsi, Shihding Township, New Taipei City 223, Taiwan, R.O.C. Tel: +886-2-2663-8582
FCC Registration Number :	TW1079, TW1061,390316, 228391, 641184
IC Registration Number :	4934B-1, 4934E-1, 4934E-2
VCCI	T-2205 for Telecommunication Test C-4463 for Conducted emission test R-3428, R-4128 for Radiated emission test G-812, G-813 for radiated disturbance above 1GHz
Frequency Range Investigated :	Conducted Emission Test: from 150 kHz to 30 MHz Radiated Emission Test: from 30 MHz to 18,000 MHz
Test Distance :	The test distance of radiated emission below 1GHz from antenna to EUT is 3 M. The test distance of radiated emission above 1GHz from antenna to EUT is 3 M.

2.6. Measurement Uncertainty

Measurement Item	Measurement Frequency	Polarization	Uncertainty
Conducted Emission	9 kHz ~ 30 MHz	LINE / NEUTRAL	3.25 dB
Radiated Emission	30 MHz ~ 1,000 MHz	Vertical / Horizontal	3.93 dB
	1,000 MHz ~ 18,000 MHz	Vertical / Horizontal	5.18 dB

The measurement uncertainty will be considered, when test result margin to the limit.

3. Test of Conducted Emission

3.1. Test Limit

Conducted Emissions were measured from 150 kHz to 30 MHz with a bandwidth of 9 KHz on the 120 VAC power and return leads of the EUT according to the methods defined in ANSI C63.4-2009 Section 3.1. The EUT was placed on a nonmetallic stand in a shielded room 0.8 meters above the ground plane as shown in section 2.2. The interface cables and equipment positioning were varied within limits of reasonable applications to determine the position produced maximum conducted emissions.

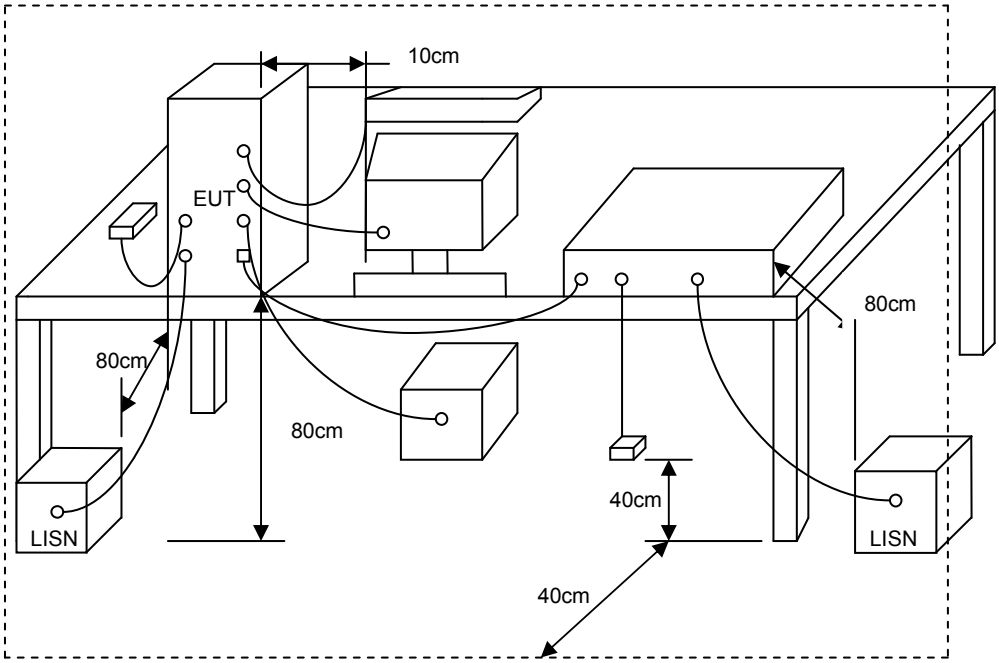
Conducted Emission Limits:

Frequency (MHz)	Quasi Peak (dB μ V)	Average (dB μ V)
0.15 – 0.5	66-56*	56-46*
0.5 – 5.0	56	46
5.0 – 30.0	60	50

3.2. Test Procedures

a. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
b. Connect EUT to the power mains through a line impedance stabilization network (LISN).
c. All the support units are connecting to the other LISN.
d. The LISN provides 50 ohm coupling impedance for the measuring instrument.
e. The FCC states that a 50 ohm, 50 micro-Henry LISN should be used.
f. Both sides of AC line were checked for maximum conducted interference.
g. The frequency range from 150 kHz to 30 MHz was searched.
h. Set the test-receiver system to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

3.3. Typical test Setup

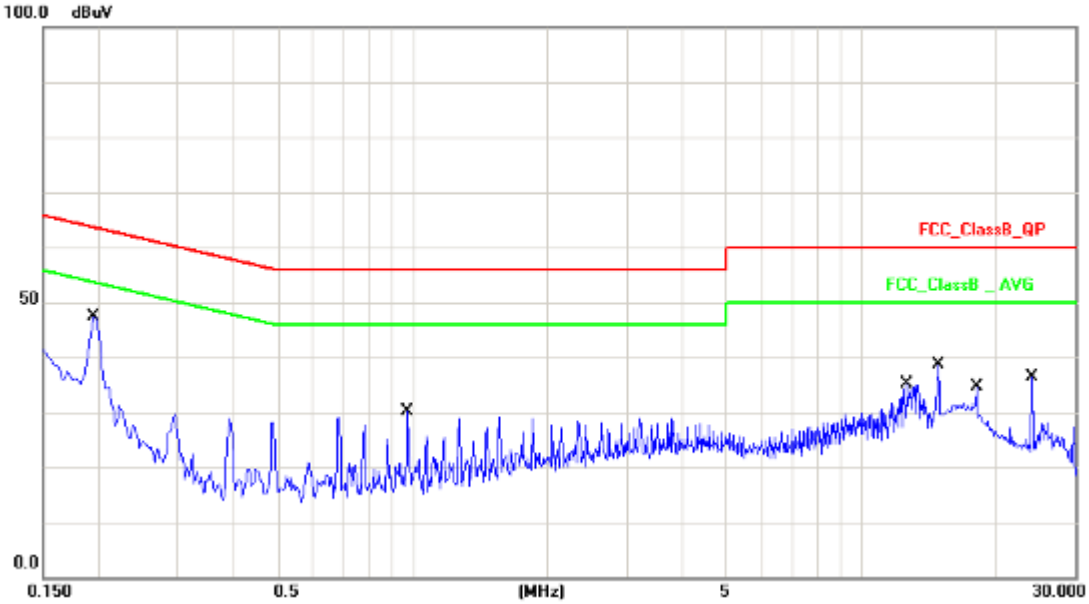


3.4. Measurement Equipment

Instrument/Ancillary	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date.
Test Receiver	R&S	ESCI	100565	2015.03.29	2016.03.28
AMN	R&S	ESH2-Z5	100182	2014.09.04	2015.09.03
Two-Line V-Network	R&S	ENV216	100325	/	/
ISN	FCC	FCC-TLISN-T2-02	20379	2015.03.29	2016.03.28
ISN	FCC	FCC-TLISN-T4-02	20380	2015.03.29	2016.03.28
ISN	FCC	FCC-TLISN-T8-02	20381	2015.03.29	2016.03.28
ISN	TESEQ	ISN ST08	30175	2015.03.29	2016.03.28
Current Probe	R&S	EZ-17	100303	2015.03.29	2016.03.28
Passive Voltage Probe	R&S	ESH2-Z3	100026	2015.03.29	2016.03.28
Pulse Limiter	R&S	ESH3-Z2	100529	2015.03.29	2016.03.28
Temperature/ Humidity Meter	Zhicheng	ZC1-11	CEP-TH-004	2015.04.02	2016.04.01
EZ-EMC	Fala	Ver CT3A1	N/A	N/A	N/A

3.5. Test Result and Data

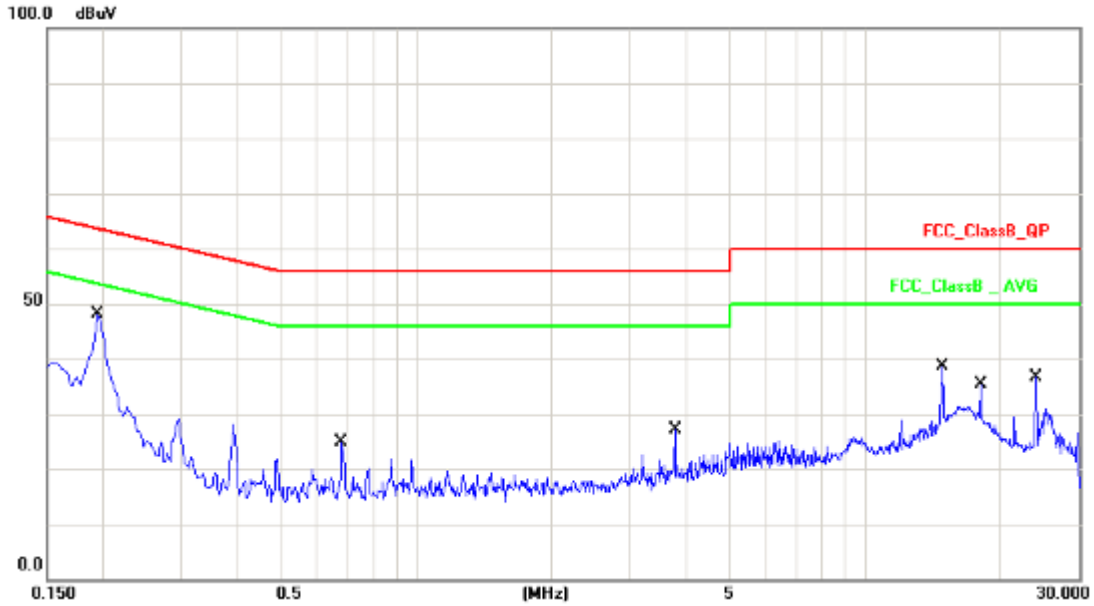
Test Mode :	Mode 1: Full System with VGA (1920*1200@60Hz) and HDMI (1920*1200@60Hz) with Status 1		
AC Power :	AC 120V/60Hz	Phase :	LINE
Temperature :	24℃	Humidity :	48%
Pressure(mbar) :	1002	Date :	2015/06/20



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1940	10.12	35.36	45.48	63.86	-18.38	QP
2	0.1940	10.12	27.50	37.62	53.86	-16.24	AVG
3	0.9780	10.16	18.12	28.28	56.00	-27.72	QP
4	0.9780	10.16	17.79	27.95	46.00	-18.05	AVG
5	12.6899	10.40	21.01	31.41	60.00	-28.59	QP
6	12.6899	10.40	16.66	27.06	50.00	-22.94	AVG
7	14.8500	10.52	26.01	36.53	60.00	-23.47	QP
8	14.8500	10.52	21.97	32.49	50.00	-17.51	AVG
9	18.0500	10.41	22.61	33.02	60.00	-26.98	QP
10	18.0500	10.41	21.77	32.18	50.00	-17.82	AVG
11	24.0500	10.41	24.68	35.09	60.00	-24.91	QP
12	24.0500	10.41	24.40	34.81	50.00	-15.19	AVG

Note: Measurement Level = Reading Level + Correct Factor

Test Mode :	Mode 1: Full System with VGA (1920*1200@60Hz) and HDMI (1920*1200@60Hz) with Status 1		
AC Power :	AC 120V/60Hz	Phase :	NEUTRAL
Temperature :	24℃	Humidity :	48%
Pressure(mbar) :	1002	Date :	2015/06/20



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1940	10.13	35.07	45.20	63.86	-18.66	QP
2	0.1940	10.13	27.93	38.06	53.86	-15.80	AVG
3	0.6820	10.16	11.63	21.79	56.00	-34.21	QP
4	0.6820	10.16	11.07	21.23	46.00	-24.77	AVG
5	3.7740	10.22	11.85	22.07	56.00	-33.93	QP
6	3.7740	10.22	6.46	16.68	46.00	-29.32	AVG
7	14.8500	10.52	26.00	36.52	60.00	-23.48	QP
8	14.8500	10.52	21.96	32.48	50.00	-17.52	AVG
9	18.0500	10.47	22.47	32.94	60.00	-27.06	QP
10	18.0500	10.47	21.61	32.08	50.00	-17.92	AVG
11	24.0500	10.36	24.76	35.12	60.00	-24.88	QP
12	24.0500	10.36	24.43	34.79	50.00	-15.21	AVG

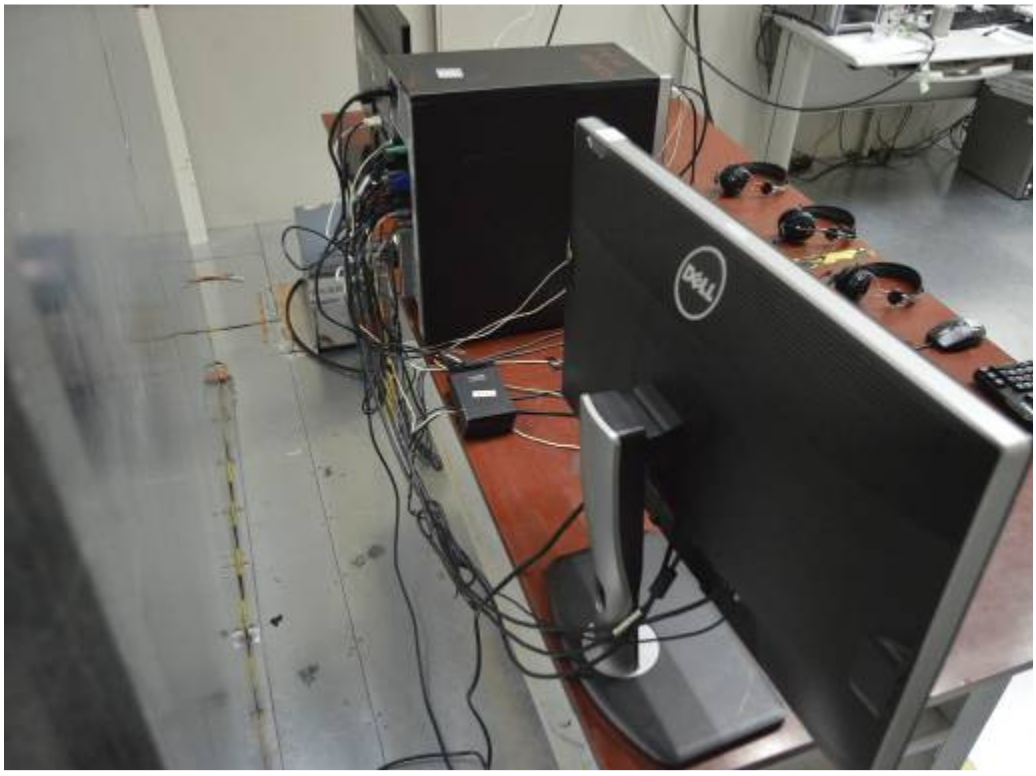
Note: Measurement Level = Reading Level + Correct Factor

Test engineer: Dian

3.6. Test Photographs

Front View

Rear View



4. Test of Radiated Emission

4.1. Test Limit

Radiated emissions were measured with a bandwidth according to the methods defines in ANSI C63.4-2009. The EUT was placed on a nonmetallic stand in the open-field site, 0.8 meter above the ground plane, as shown in section 3.2. The interface cables and equipment positions were varied within limits of reasonable applications to determine the positions producing maximum radiated emissions.

For unintentional device, according to § 15.109(a), except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

Frequency (MHz)	Distance Meters	Radiated (μ V / M)	Radiated (dB μ V/ M)
30-88	3	100	40.0
88-216	3	150	43.5
216-960	3	200	46.0
Above 960	3	500	54.0

For unintentional device, according to CISPR PUB.22, for Class B digital devices, the general requirement of field strength of radiated emissions from intentional radiators at a distance of 10 meters shall not exceed the below table.

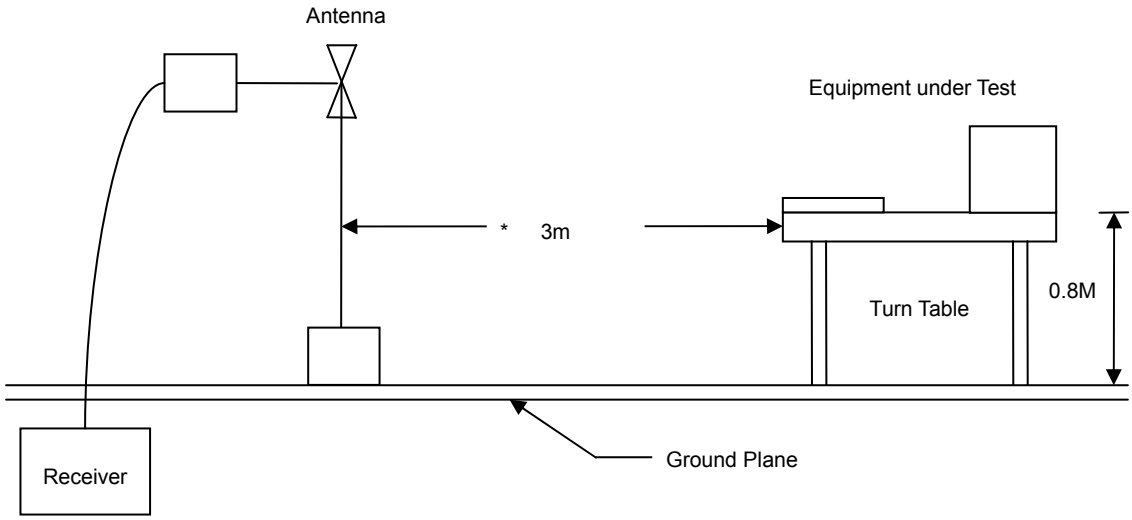
Frequency (MHz)	Distance Meters	Radiated (dB μ V/ M)
30-230	10	30
230-1000	10	37

4.2. Test Procedures

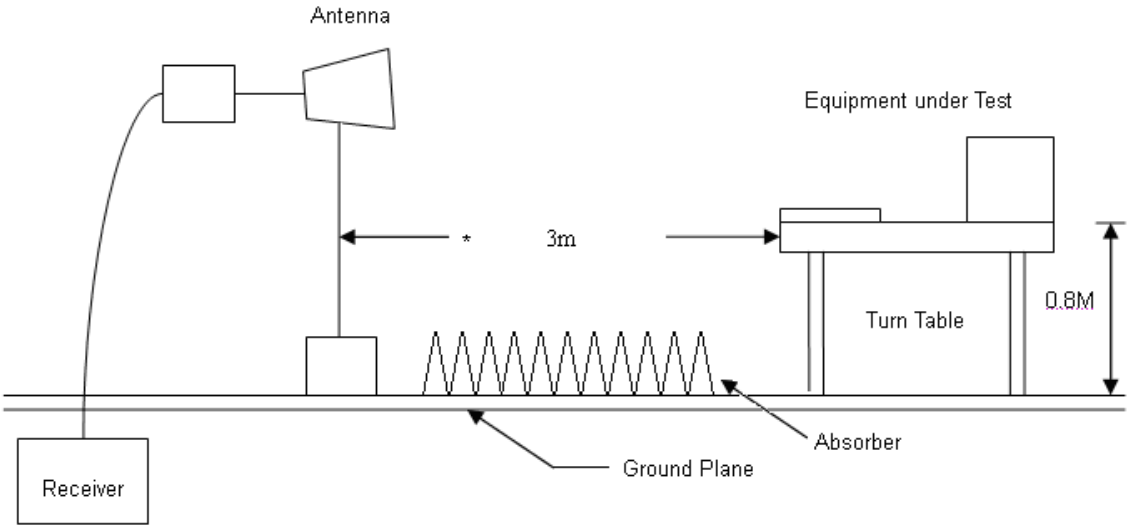
a. The EUT was placed on a Rota table top 0.8 meter above ground.
b. The EUT was set 3/10 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
c. The table was rotated 360 degrees to determine the position of the highest radiation.
d. The antenna is a half wave dipole and its height is varied between one meter and four meters above ground to find the maximum value of the field strength both horizontal polarization and vertical polarization of the antenna are set to make the measurement.
e. For each suspected emission the EUT was arranged to its worst case and then tune the antenna tower (from 1 M to 4 M) and turn table (from 0 degree to 360 degrees) to find the maximum reading.
f. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode.
g. If the emission level of the EUT in peak mode was 6 dB lower than the limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 6 dB margin will be repeated one by one using the quasi-peak method and reported.

4.3. Typical test Setup

Below 1GHz Test Setup



Above 1GHz Test Setup

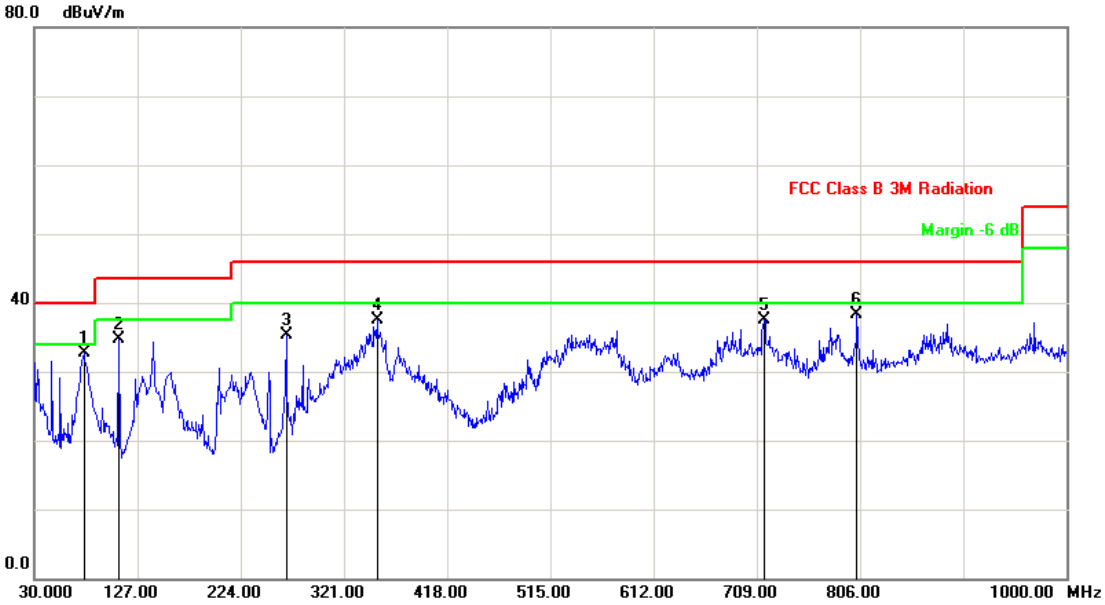


4.4. Measurement Equipment

Instrument	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date
EMI Test Receiver	R&S	ESCI	101183	2015.03.29	2016.03.28
Preamplifier	songyi	EM330	60618	2014.07.28	2015.07.27
Preamplifier	Agilent	8449B	3008A02342	2015.03.29	2016.03.28
Bilog Antenna	Sunol Science	JB1	A072414-2	2014.08.05	2015.08.04
Broad-Band Horn Antenna	Schwarzbeck	BBHA9120D	9120D-619	2015.04.20	2016.04.19
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	9170-347	2015.04.20	2016.04.19
Preamplifier	COM-POWER	PA-840	711885	2015.03.29	2016.03.28
Spectrum Analyzer	R&S	FSP40	100324	2015.03.29	2016.03.28
Temperature/ Humidity Meter	Zhicheng	ZC1-11	CEP-TH-002	2015.04.02	2016.04.01
EZ-EMC	Fala	Ver CT3A1	N/A	N/A	N/A

4.5. Test Result and Data (30MHz ~ 1000MHz)

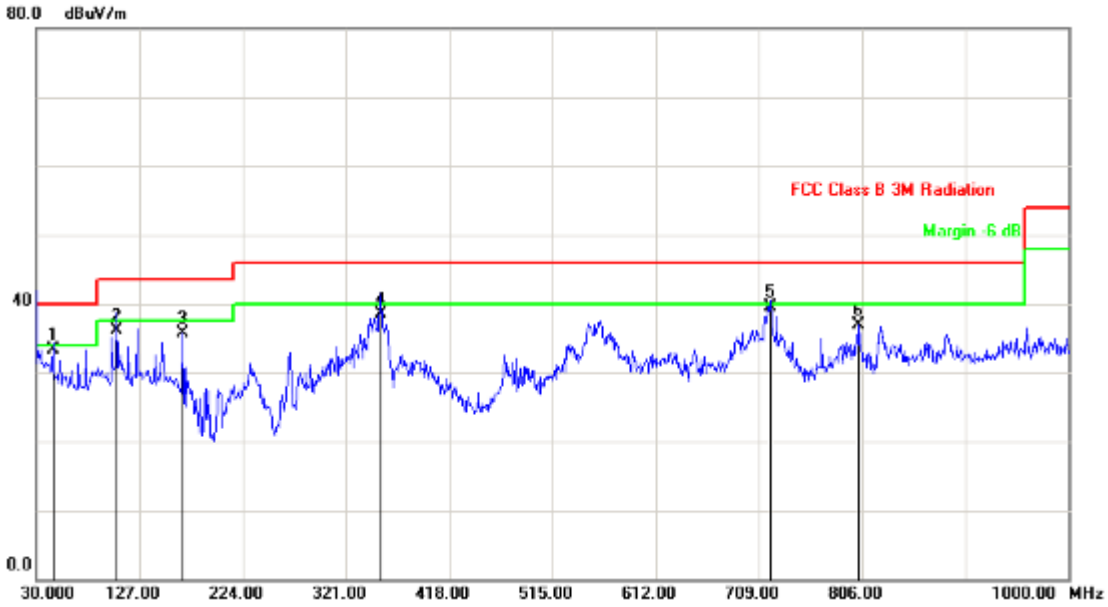
Test Mode :	Mode 1: Full System with VGA (1920*1200@60Hz) and HDMI (1920*1200@60Hz) with Status 1 for close case		
AC Power :	AC 120V/60Hz	Ant. Polarization:	Horizontal
Temp :	24℃	Humidity :	42%
Pressure(mbar) :	1002	Date :	2015/06/19



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	76.5600	-16.06	48.70	32.64	40.00	-7.36	QP	200	295
2	109.5400	-14.07	48.82	34.75	43.50	-8.75	QP	200	212
3	266.6800	-12.12	47.41	35.29	46.00	-10.71	QP	100	343
4	352.0400	-9.12	46.70	37.58	46.00	-8.42	QP	100	64
5	715.7899	-0.28	37.87	37.59	46.00	-8.41	QP	100	196
6	803.0900	1.13	37.10	38.23	46.00	-7.77	QP	200	76

Note: Measurement Level = Reading Level + Correct Factor

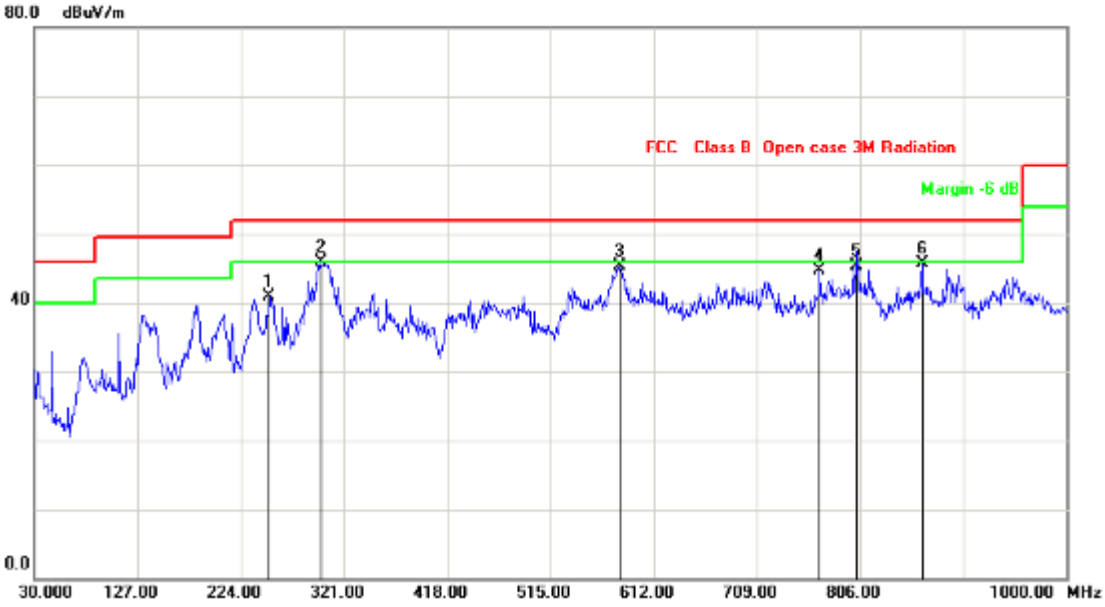
Test Mode :	Mode 1: Full System with VGA (1920*1200@60Hz) and HDMI (1920*1200@60Hz) with Status 1 for close case		
AC Power :	AC 120V/60Hz	Ant. Polarization:	Vertical
Temp :	24℃	Humidity :	42%
Pressure(mbar) :	1002	Date :	2015/06/19



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	45.5200	-9.58	42.83	33.25	40.00	-6.75	QP	100	173
2	105.6600	-14.20	50.39	36.19	43.50	-7.31	QP	100	243
3	167.7400	-15.14	50.77	35.63	43.50	-7.87	QP	100	256
4	353.9800	-9.06	47.48	38.42	46.00	-7.58	QP	200	30
5	719.6700	-0.22	39.63	39.41	46.00	-6.59	QP	100	43
6	803.0900	1.13	35.83	36.96	46.00	-9.04	QP	100	204

Note: Measurement Level = Reading Level + Correct Factor

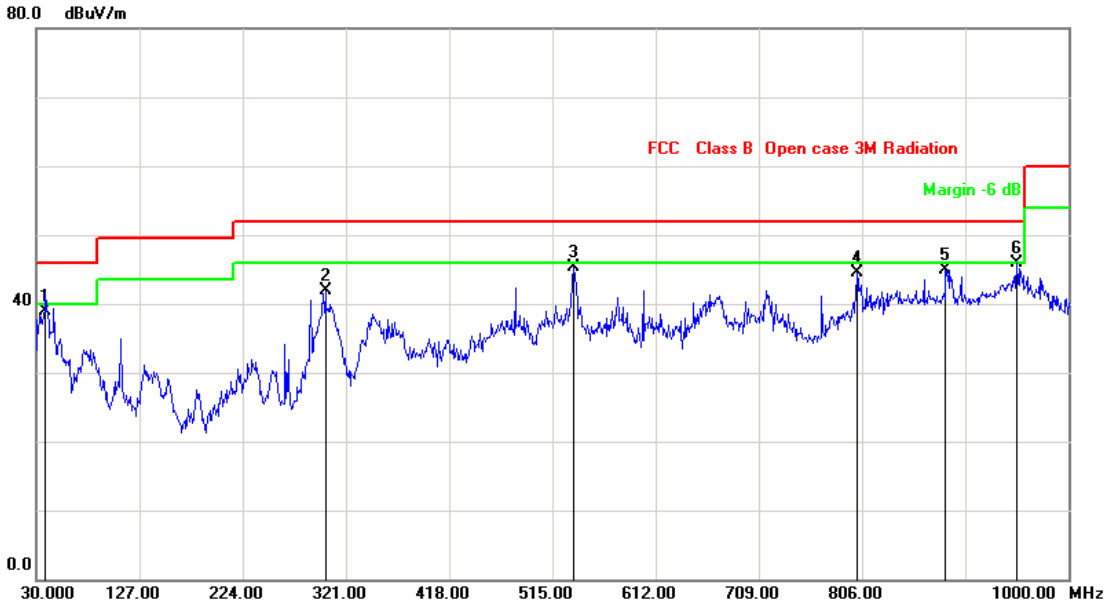
Test Mode :	Mode 14: Full System with VGA (1920*1200@60Hz) and HDMI (1920*1200@60Hz) with Status 1 for open case		
AC Power :	AC 120V/60Hz	Ant. Polarization:	Horizontal
Temp :	24℃	Humidity :	42%
Pressure(mbar) :	1002	Date :	2015/06/19



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	251.1599	-12.70	53.63	40.93	52.00	-11.07	QP	100	64
2	299.6600	-10.92	56.76	45.84	52.00	-6.16	QP	100	82
3	579.9900	-3.08	48.39	45.31	52.00	-6.69	QP	100	351
4	768.1699	0.56	44.21	44.77	52.00	-7.23	QP	200	68
5	803.0900	1.13	44.12	45.25	52.00	-6.75	QP	200	139
6	864.2000	2.33	43.42	45.75	52.00	-6.25	QP	200	73

Note: Measurement Level = Reading Level + Correct Factor

Test Mode :	Mode 14: Full System with VGA (1920*1200@60Hz) and HDMI (1920*1200@60Hz) with Status 1 for open case		
AC Power :	AC 120V/60Hz	Ant. Polarization:	Vertical
Temp :	24℃	Humidity :	42%
Pressure(mbar) :	1002	Date :	2015/06/19

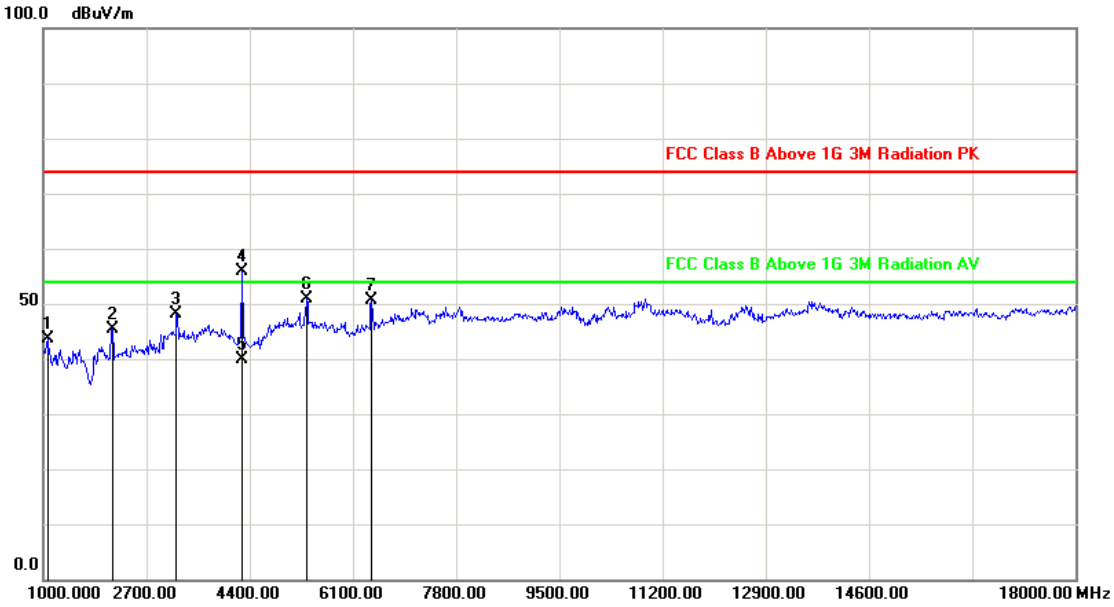


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	38.7300	-5.99	44.99	39.00	46.00	-7.00	QP	100	88
2	301.6000	-10.85	52.69	41.84	52.00	-10.16	QP	200	78
3	534.4000	-4.07	49.33	45.26	52.00	-6.74	QP	100	68
4	801.1500	1.09	43.47	44.56	52.00	-7.44	QP	100	79
5	884.5700	2.74	42.19	44.93	52.00	-7.07	QP	100	84
6	951.5000	3.71	42.19	45.90	52.00	-6.10	QP	100	84

Note: Measurement Level = Reading Level + Correct Factor

4.6. Test Result and Data (1000MHz ~ 18000MHz)

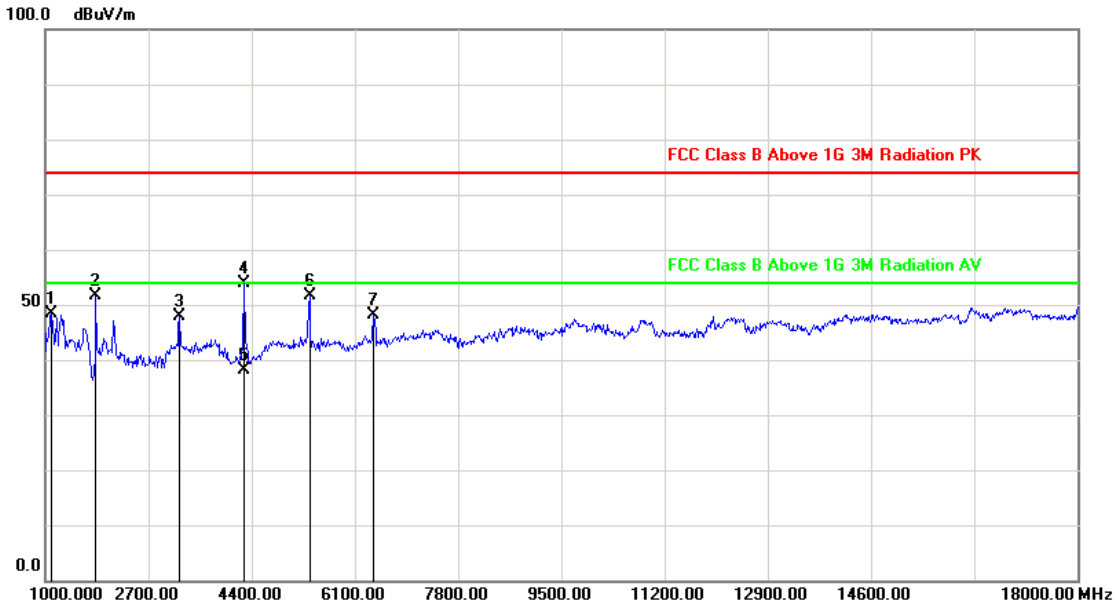
Test Mode :	Mode 1: Full System with VGA (1920*1200@60Hz) and HDMI (1920*1200@60Hz) with Status 1 for close case		
AC Power :	AC 120V/60Hz	Ant. Polarization:	Horizontal
Temp :	24℃	Humidity :	42%
Pressure(mbar) :	1002	Date :	2015/06/19



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	1068.000	-6.59	50.32	43.73	74.00	-30.27	peak	100	323
2	2139.000	-2.23	47.66	45.43	74.00	-28.57	peak	100	213
3	3193.000	1.37	46.80	48.17	74.00	-25.83	peak	100	240
4	4281.000	5.06	50.81	55.87	74.00	-18.13	peak	100	170
5	4281.000	5.06	34.79	39.85	54.00	-14.15	AVG	100	170
6	5335.000	7.41	43.58	50.99	74.00	-23.01	peak	100	53
7	6406.000	9.93	40.80	50.73	74.00	-23.27	peak	108	0

Note: Measurement Level = Reading Level + Correct Factor

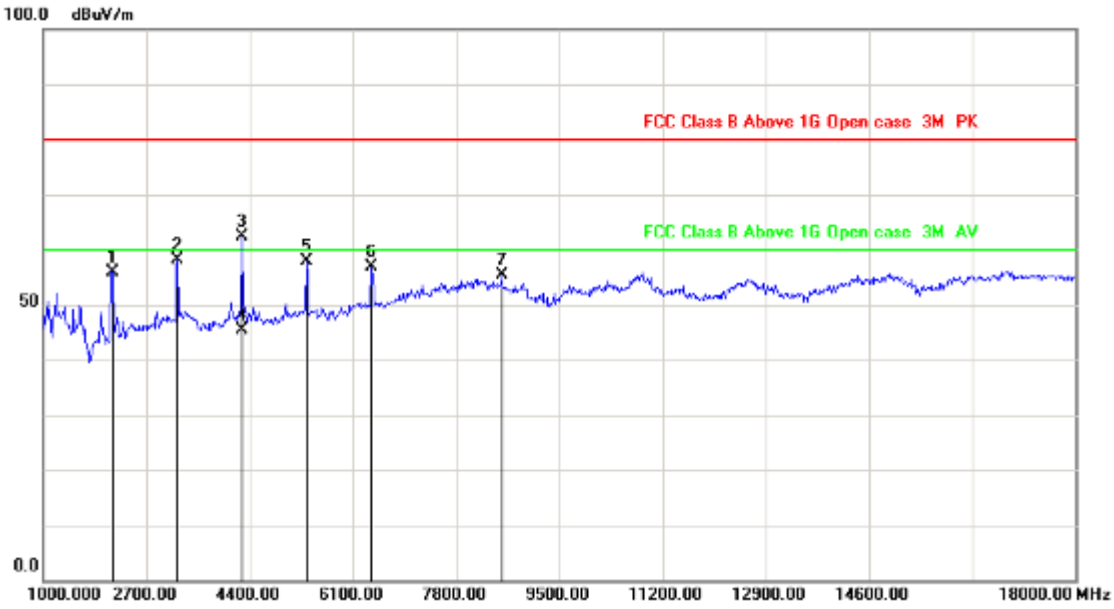
Test Mode :	Mode 1: Full System with VGA (1920*1200@60Hz) and HDMI (1920*1200@60Hz) with Status 1 for close case		
AC Power :	AC 120V/60Hz	Ant. Polarization:	Vertical
Temp :	24℃	Humidity :	42%
Pressure(mbar) :	1002	Date :	2015/06/19



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	1102.000	-6.44	54.87	48.43	74.00	-25.57	peak	100	0
2	1833.000	-3.40	55.13	51.73	74.00	-22.27	peak	124	0
3	3210.000	1.43	46.35	47.78	74.00	-26.22	peak	200	203
4	4264.000	5.02	48.96	53.98	74.00	-20.02	peak	100	244
5	4264.000	5.02	33.09	38.11	54.00	-15.89	AVG	100	244
6	5352.000	7.44	44.24	51.68	74.00	-22.32	peak	100	32
7	6406.000	9.93	38.25	48.18	74.00	-25.82	peak	100	32

Note: Measurement Level = Reading Level + Correct Factor

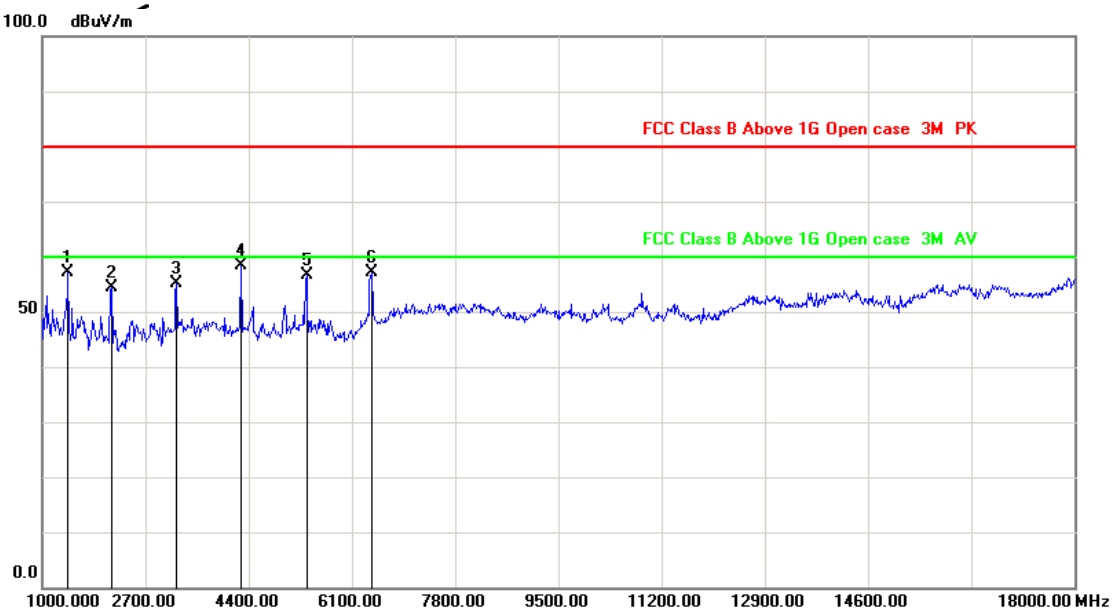
Test Mode :	Mode 14: Full System with VGA (1920*1200@60Hz) and HDMI (1920*1200@60Hz) with Status 1 for open case		
AC Power :	AC 120V/60Hz	Ant. Polarization:	Horizontal
Temp :	24℃	Humidity :	42%
Pressure(mbar) :	1002	Date :	2015/06/19



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	2139.000	-2.23	58.12	55.89	80.00	-24.11	peak	200	85
2	3210.000	1.43	56.66	58.09	80.00	-21.91	peak	100	97
3	4281.000	5.06	57.22	62.28	80.00	-17.72	peak	100	32
4	4281.000	5.06	40.39	45.45	60.00	-14.55	AVG	100	32
5	5335.000	7.41	50.44	57.85	80.00	-22.15	peak	100	61
6	6406.000	9.93	46.88	56.81	80.00	-23.19	peak	100	72
7	8548.000	14.61	40.70	55.31	80.00	-24.69	peak	100	89

Note: Measurement Level = Reading Level + Correct Factor

Test Mode :	Mode 14: Full System with VGA (1920*1200@60Hz) and HDMI (1920*1200@60Hz) with Status 1 for open case		
AC Power :	AC 120V/60Hz	Ant. Polarization:	Vertical
Temp :	24℃	Humidity :	42%
Pressure(mbar) :	1002	Date :	2015/06/19



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	1425.000	-5.10	62.21	57.11	80.00	-22.89	peak	100	71
2	2139.000	-2.23	56.68	54.45	80.00	-25.55	peak	200	119
3	3210.000	1.43	53.67	55.10	80.00	-24.90	peak	200	59
4	4264.000	5.02	53.43	58.45	80.00	-21.55	peak	100	137
5	5352.000	7.44	49.16	56.60	80.00	-23.40	peak	200	134
6	6423.000	9.99	47.19	57.18	80.00	-22.82	peak	200	47

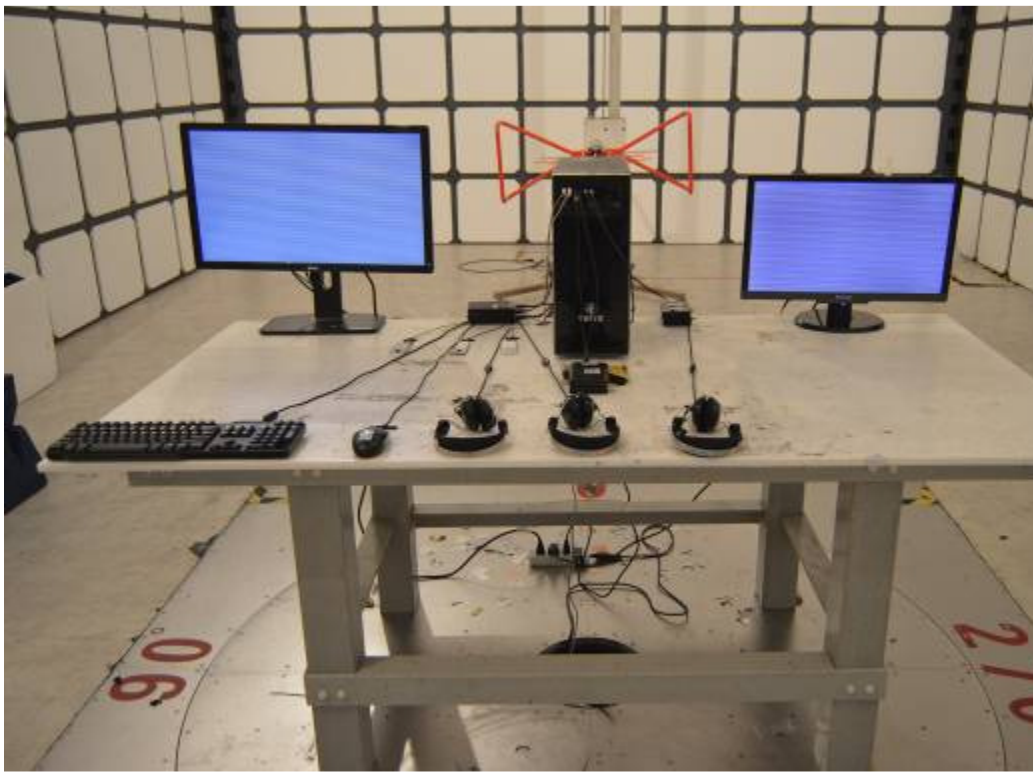
Note: Measurement Level = Reading Level + Correct Factor

Test engineer: _____

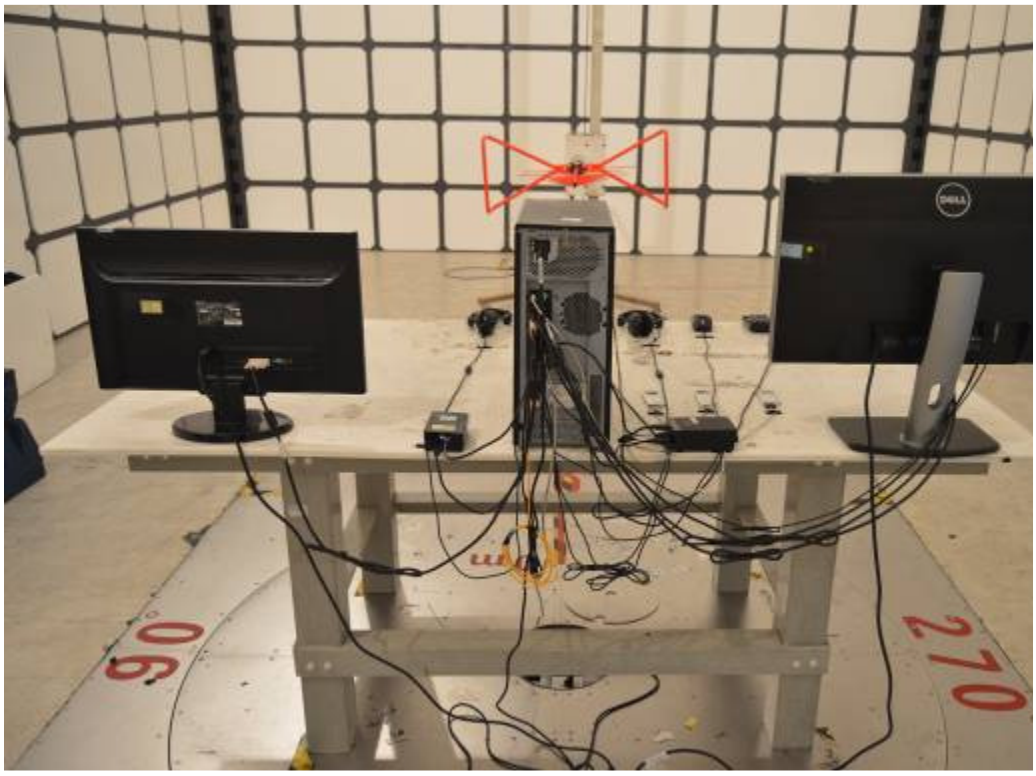
4.7. Test Photographs (30MHz ~ 1000MHz)

Close case

Front View

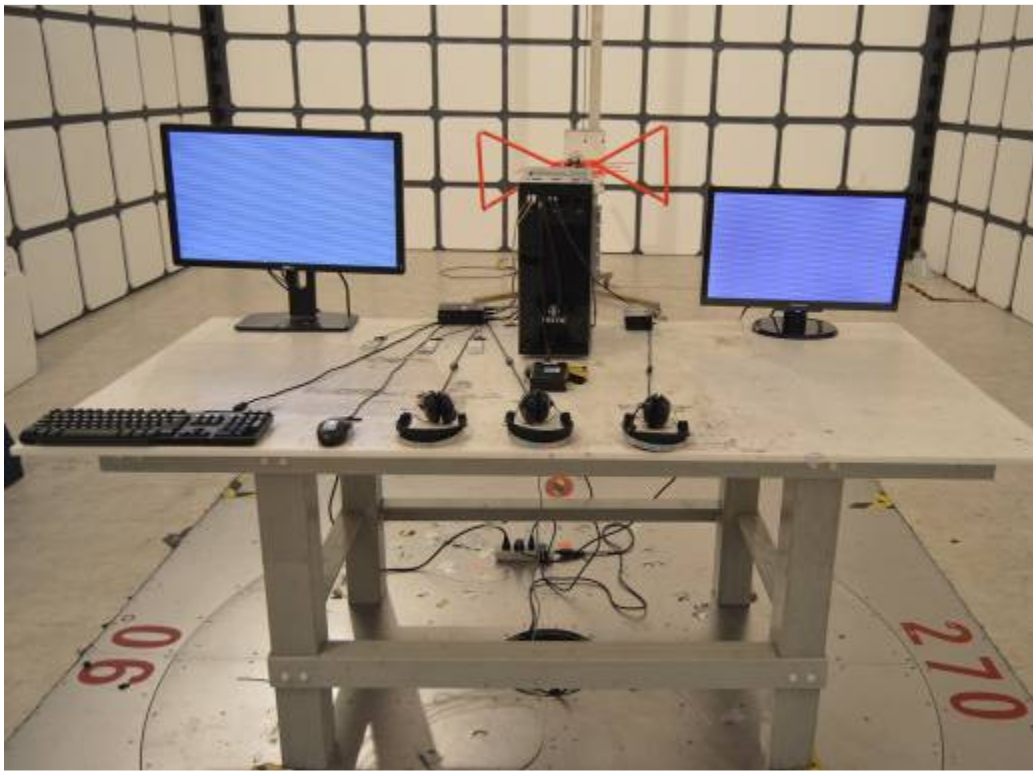


Rear View

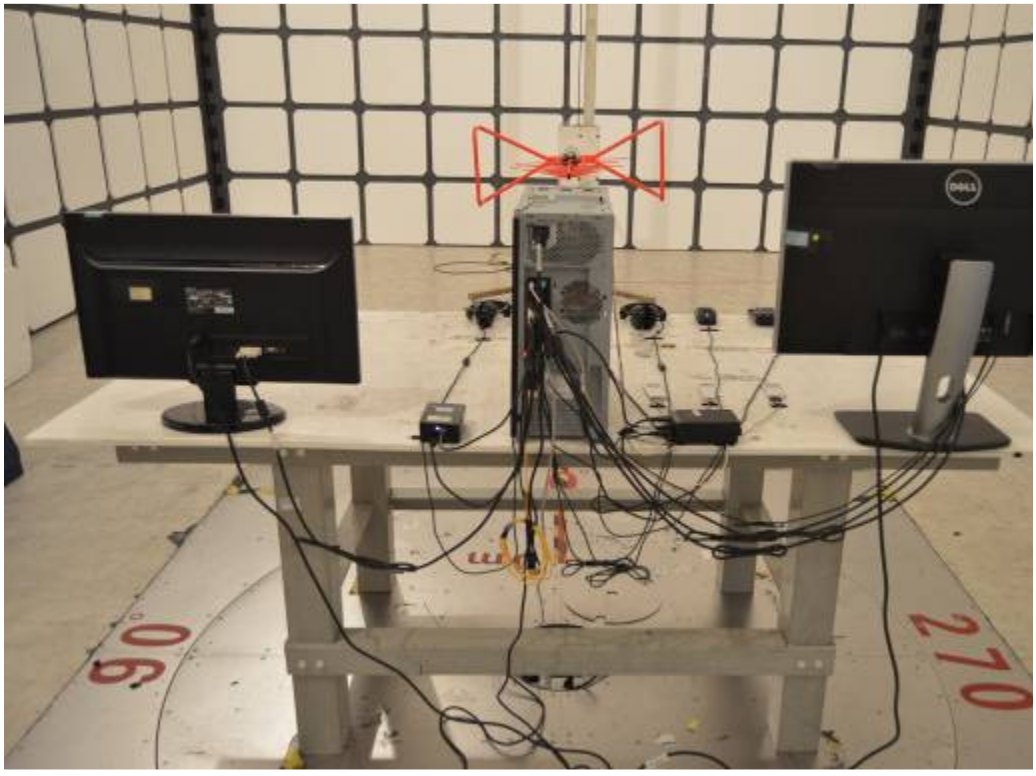


Open case

Front View



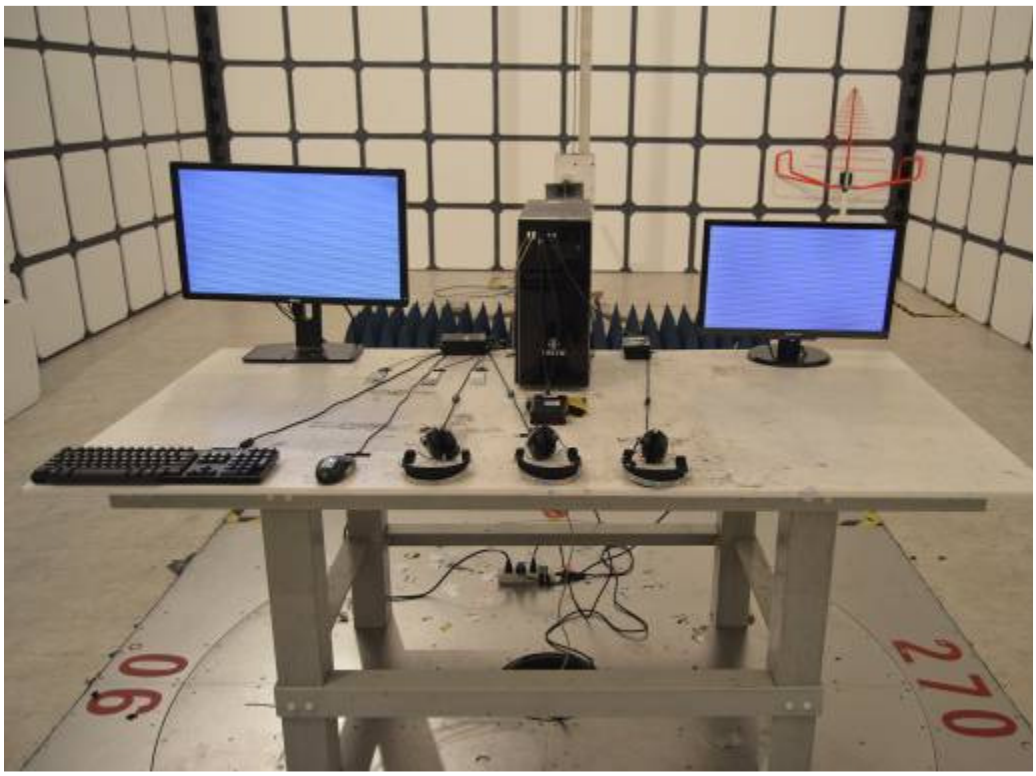
Rear View



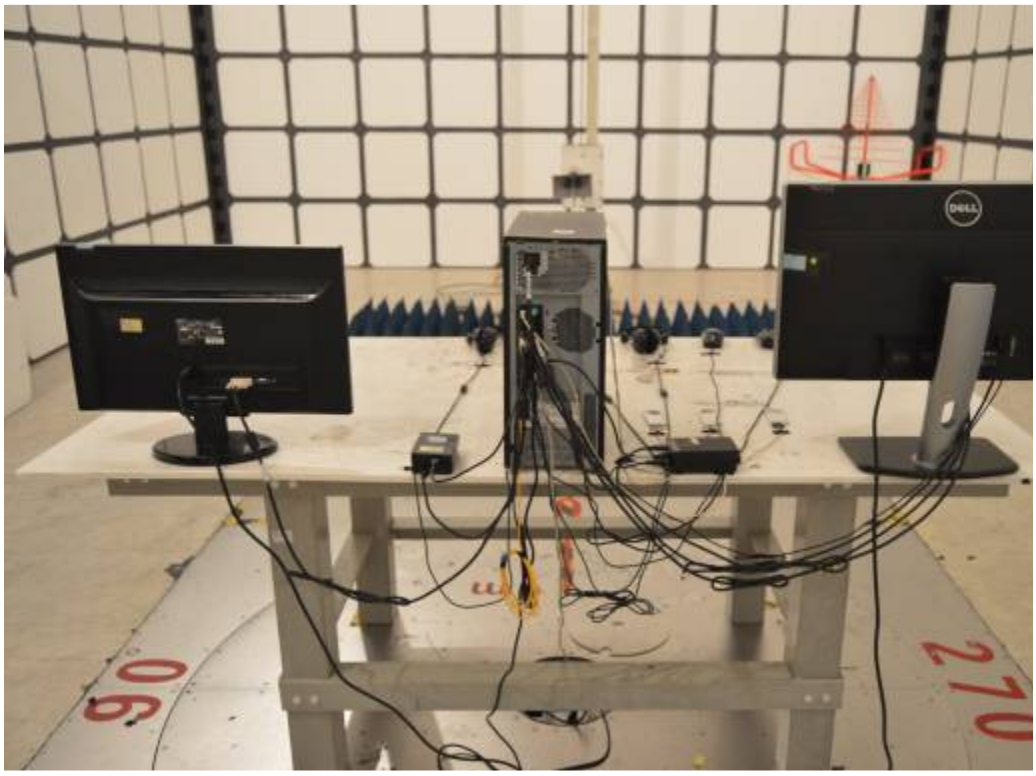
4.8. Test Photographs (1000MHz ~ 18000MHz)

Close case

Front View

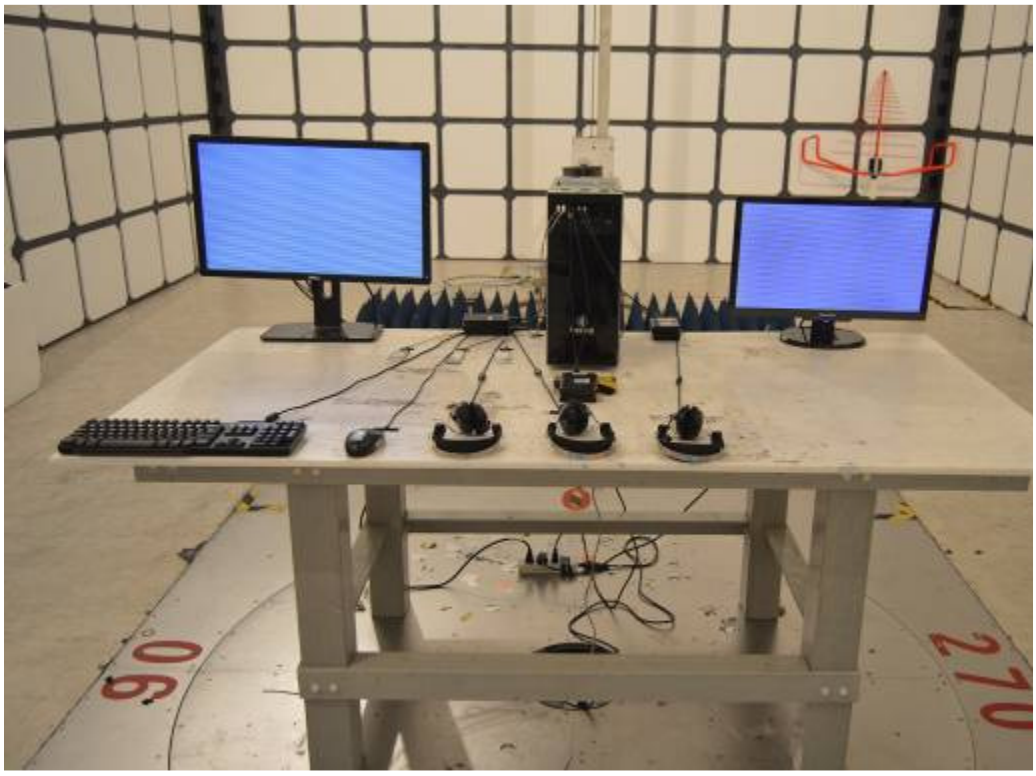


Rear View

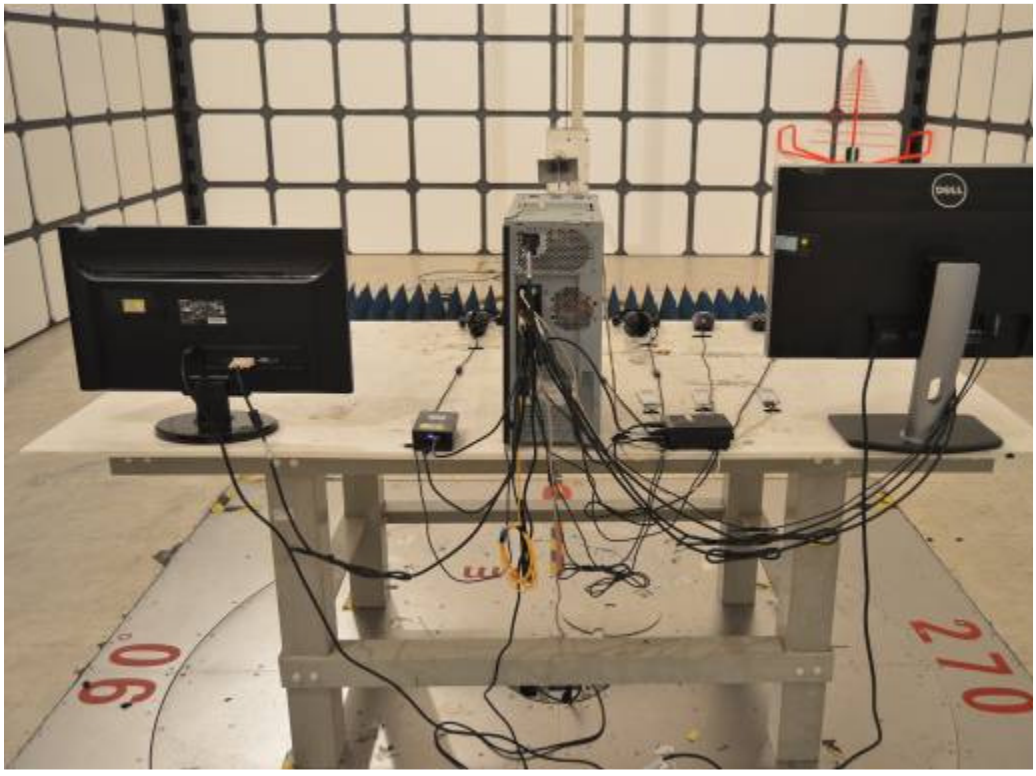


Open case

Front View



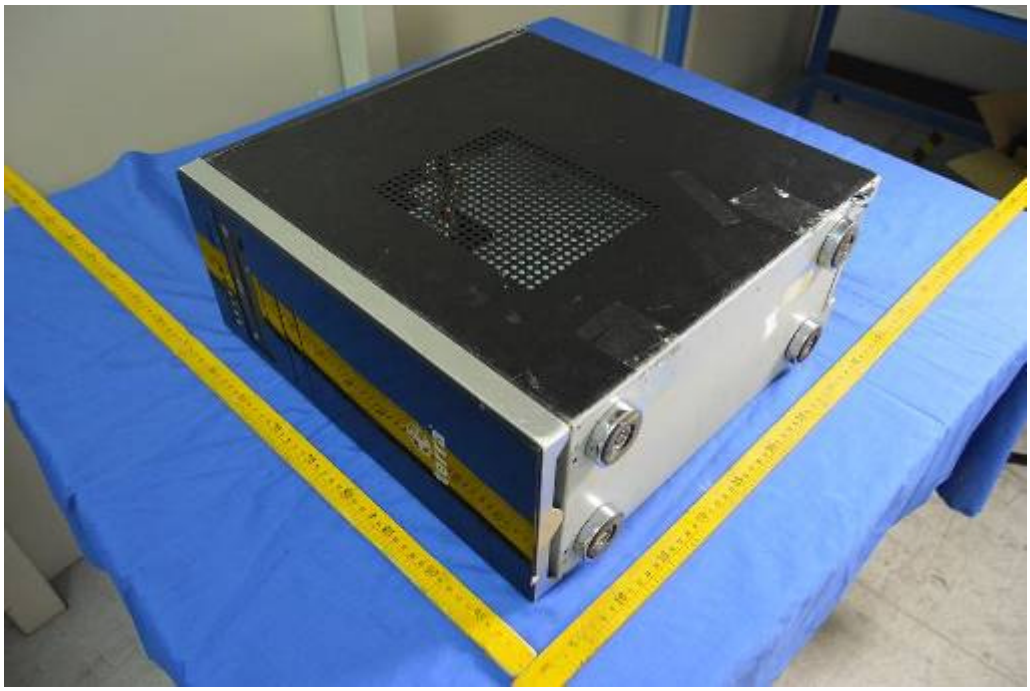
Rear View



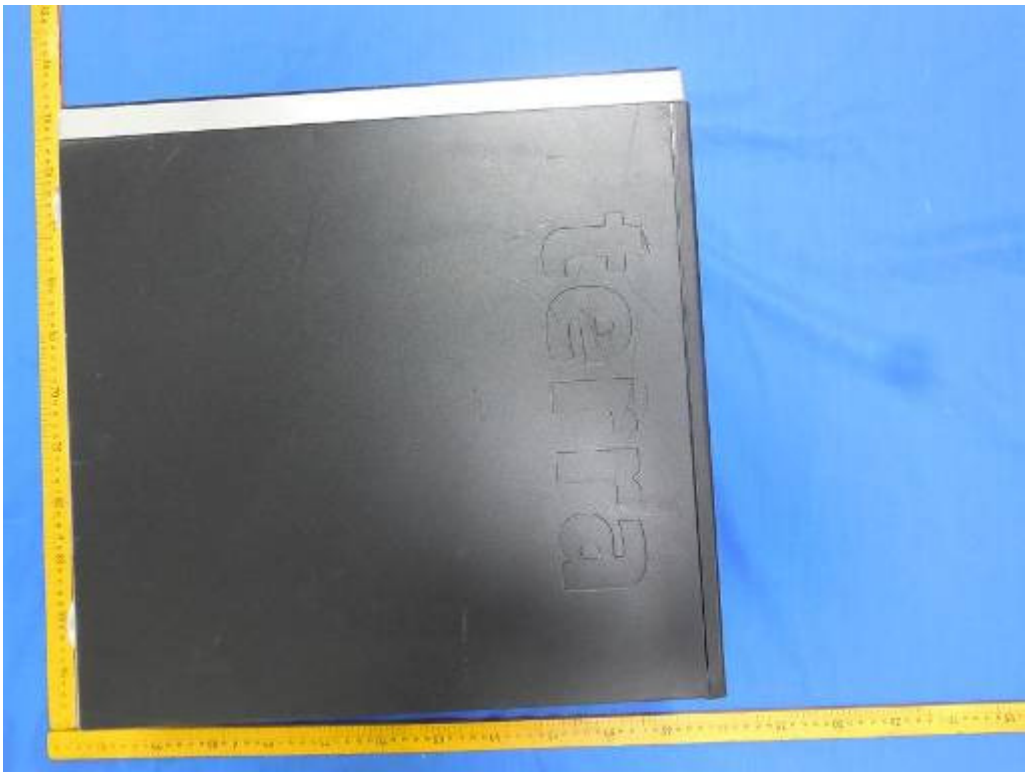
5. Photographs of EUT

1) EUT Photo

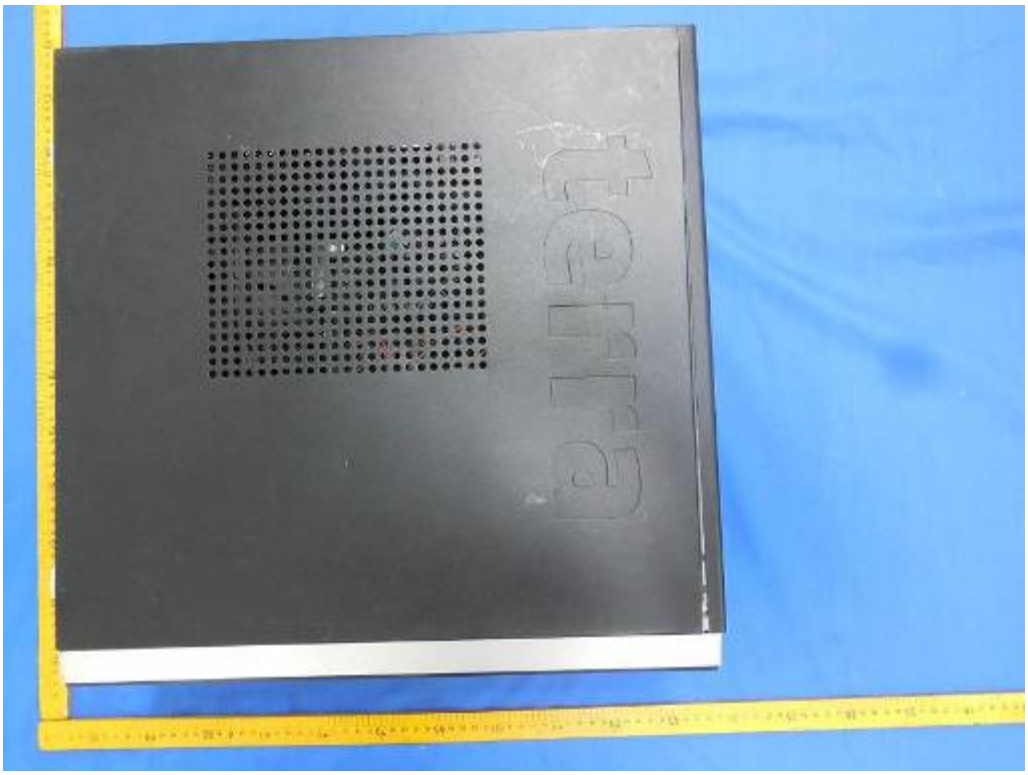
2) EUT Photo



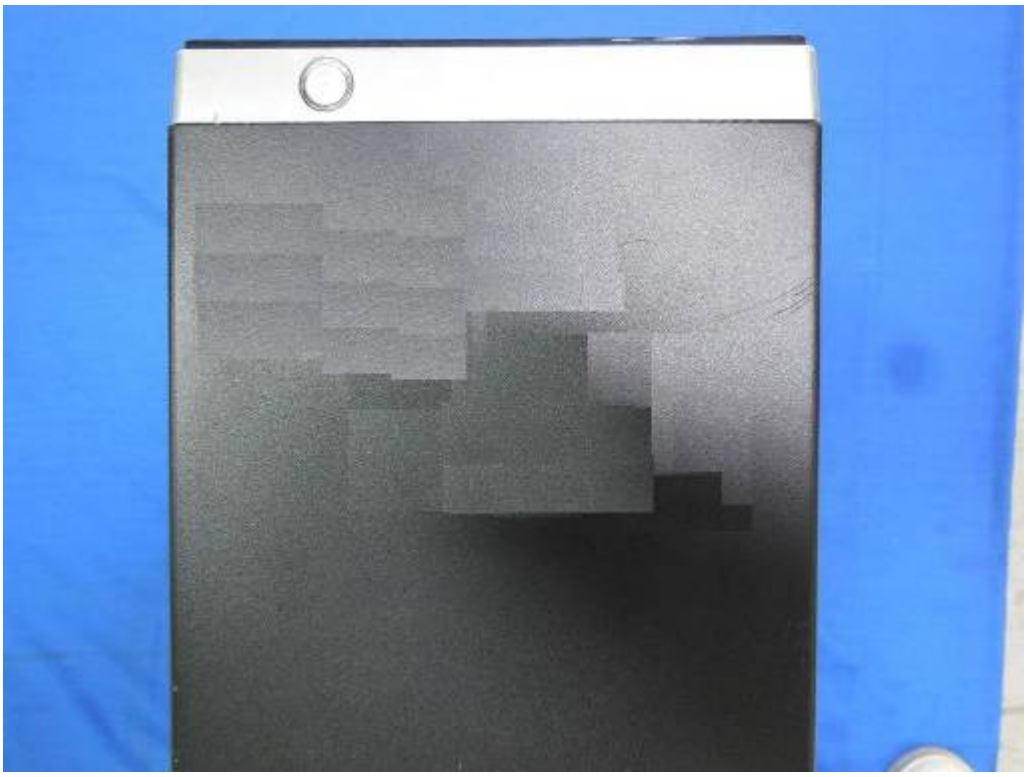
3) EUT Photo



4) EUT Photo



5) EUT Photo



6) EUT Photo

7) EUT Photo

8) EUT Photo

9) EUT Photo

10) EUT Photo

11) EUT Photo

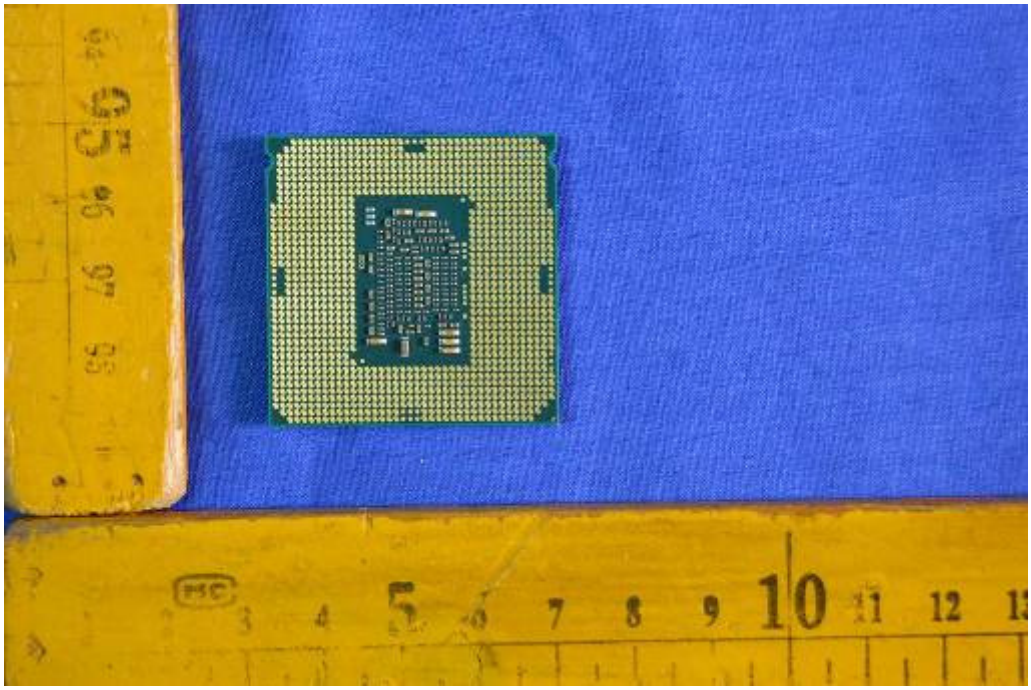
12) EUT Photo

13) EUT Photo

14) EUT Photo

15) EUT Photo

16) EUT Photo



17) EUT Photo

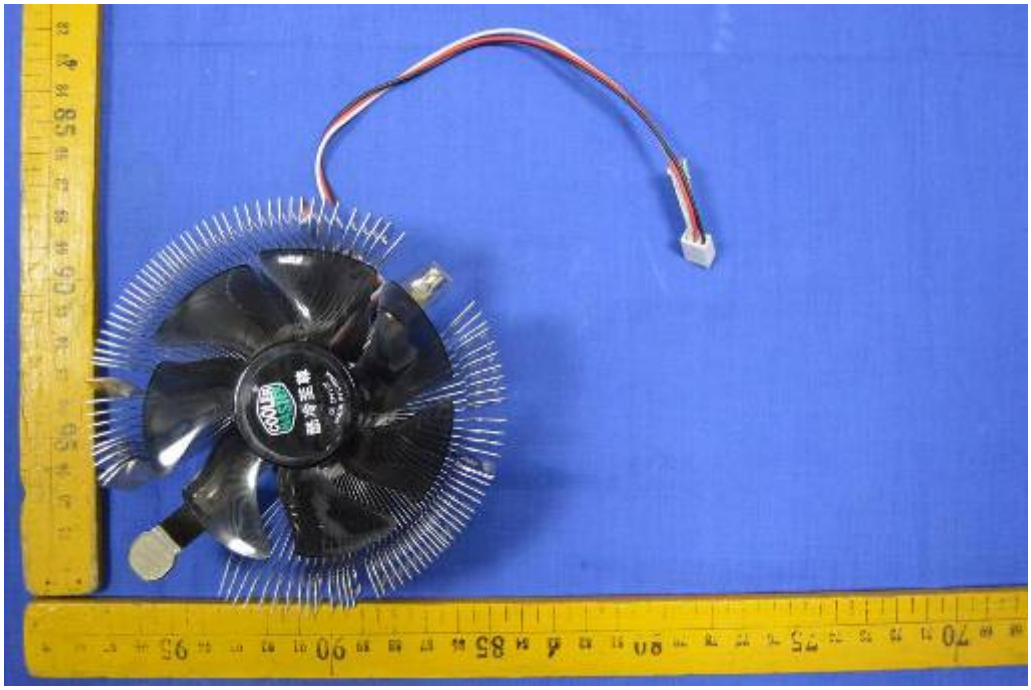
18) EUT Photo

19) EUT Photo

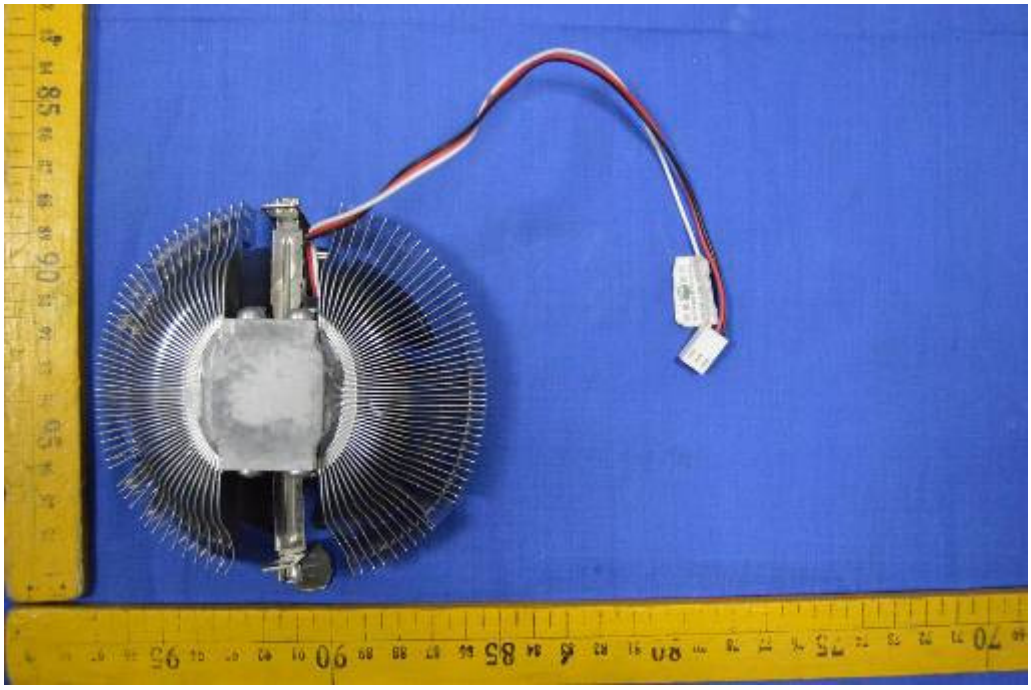
20) EUT Photo

21) EUT Photo

22) EUT Photo



23) EUT Photo



24) EUT Photo

25) EUT Photo

26) EUT Photo