AUDIX Technology (Shenzhen) Co., Ltd.
52 Block, Shenzhen Science & Industry Park,
Nantou, Shenzhen, Guangdong, China

Tel : 0755-26639495~6-7
Fax : 86 0755-26632877

Technical Compliance Statement

No. ACS-E14476

The following products have been tested by us with the listed standards and found in compliance with the council EMC directive 2004/108/EC. It is demonstrative for the compliance with this EMC Directive.

Submitter : **TPV Electronics (FuJian) Co., Ltd.**
Rongqiao Economic and Technological Development Zone, Fuqing City, Fujian Province, P.R. China

Product : **LCD Monitor**

Brand Name	Model No.
NEC	E705

Test Standards :		
EN 55022: 2010+AC: 2011 (Class A) AS/NZS CISPR 22: 2009+A1: 2010	Limits and methods of measurement of radio disturbance characteristics of information technology equipment	
EN 61000-3-2: 2006+A1: 2009+A2: 2009	Electromagnetic compatibility(EMC) Part 3 :Limits Section 2 : Limits for harmonic current emissions (equipment input current≦16A per phase)	
EN 61000-3-3: 2013	Electromagnetic compatibility(EMC) Part 3 :Limits Section 3 : Limits of voltage fluctuations and flicker in low-voltage supply systems for equipment with rated current≦16A	
EN 55024: 2010	Information technology equipment-Immunity characteristics limits and methods of measurement	
	IEC 61000-4-2: 2008	Electrostatic Discharge
	IEC 61000-4-3: 2010	RF Field Strength Susceptibility
	IEC 61000-4-4: 2012	Electrical Fast Transients
	IEC 61000-4-5: 2005	Surge
	IEC 61000-4-6: 2013	Conducted Susceptibility
	IEC 61000-4-8: 2009	Magnetic Field Immunity
	IEC 61000-4-11: 2004	Dips, Voltage Interruption Variation

AUDIX 富華科技（深圳）有限公司
Audix Technology (Shenzhen) Co., Ltd.
EMC 部門報告專用章
Stamp only for EMC Dept. Report
Signature: David Jin

CE

David Jin
Manager
Date : Oct.22, 2014

The statement is based on a single evaluation of one sample of above mentioned products. It does not imply an assessment of the whole production and does not permit the use of the test lab. logo.

EMC TEST REPORT

for

TPV Electronics (FuJian) Co., Ltd.

LCD Monitor

Brand Name	Model No.
NEC	E705

Prepared for : TPV Electronics (FuJian) Co., Ltd.
Rongqiao Economic and Technological Development Zone,
Fuqing City, Fujian Province, P.R. China

Prepared By : Audix Technology (Shenzhen) Co., Ltd.
No. 6, Ke Feng Rd., 52 Block,
Shenzhen Science & Industrial Park,
Nantou, Shenzhen, Guangdong, China

Tel: (0755) 26639496
Fax: (0755) 26632877

Report Number : ACS-E14476
Date of Test : Oct.06~20, 2014
Date of Report : Oct.22, 2014

TABLE OF CONTENTS

TEST REPORT VERIFICATION

Applicant : TPV Electronics (FuJian) Co., Ltd.

EUT Description : LCD Monitor

(A) Model No. & Brand Name :

Brand Name	Model No.
NEC	E705

(B) Power Supply : AC 100V-240V, 50/60Hz

(C) Test Voltage : AC 230V/50Hz

Measurement Standard Used:

AS/NZS CISPR 22: 2009+A1: 2010, EN 55022: 2010+AC: 2011 (Class A)
EN 61000-3-2: 2006+A1: 2009+A2: 2009, EN 61000-3-3: 2013
EN 55024: 2010
(IEC 61000-4-2: 2008, IEC 61000-4-3: 2010, IEC 61000-4-4: 2012,
IEC 61000-4-5: 2005, IEC 61000-4-6: 2013, IEC 61000-4-8: 2009, IEC 61000-4-11: 2004)

The device described above is tested by Audix Technology (Shenzhen) Co., Ltd. to determine the maximum emission levels emanating from the device and the severe levels of the device can endure and its performance criterion. The test results are contained in this test report and Audix Technology (Shenzhen) Co., Ltd. is assumed full responsibility for the accuracy and completeness of test. Also, this report shows that the EUT is technically compliant with the EN 55022 and EN 55024 requirements.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of Audix Technology (Shenzhen) Co., Ltd.

Date of Test : Oct.06~20, 2014 Report of date: Oct.22, 2014

Prepared by : Eva Yin /Assistant

Reviewed by : Jack Zhong / Assistant Manager

AUDIX® 信華科技（深圳）有限公司
Audix Technology (Shenzhen) Co., Ltd.
EMC 部門報告專用章
Stamp only for EMC Dept. Report
Signature: David Jin 10.22

Approved & Authorized Signer :

David Jin / Manager

1. SUMMARY OF STANDARDS AND RESULTS

1.1. Description of Standards and Results

The EUT have been tested according to the applicable standards as referenced below.

EMISSION			
Description of Test Item	**Standard**	**Results**	**Remark**
Conducted disturbance at mains terminals	EN 55022: 2010+AC: 2011	PASS	Meets Class A Minimum passing margin is 25.58dB at 14.288MHz
Conducted disturbance at telecommunication port	EN 55022: 2010+AC: 2011	PASS	Meets Class A Minimum passing margin is 26.63dB at 23.140MHz
Radiated disturbance (30-1000MHz)	EN 55022: 2010+AC: 2011	PASS	Meets Class A Minimum passing margin is 12.31dB at 939.860MHz
Radiated disturbance (1-6GHz)	EN 55022: 2010+AC: 2011	PASS	Meets Class A Minimum passing margin is 12.08dB at 2224.218MHz
Harmonic current emissions	EN 61000-3-2: 2006+A1: 2009+A2: 2009	PASS	Meets the Class D requirement
Voltage fluctuations & flicker	EN 61000-3-3: 2013	PASS	Meets the requirement

IMMUNITY (EN 55024: 2010)				
Description of Test Item	**Basic Standard**	**Results**	**Performance Criteria**	**Observation Criteria**
Electrostatic discharge (ESD)	IEC 61000-4-2: 2008	PASS	B	A & B
Radio-frequency, Continuous radiated disturbance	IEC 61000-4-3: 2010	PASS	A	A
Electrical fast transient (EFT)	IEC 61000-4-4: 2012	PASS	B	A & B
Surge (Input a.c. power port)	IEC 61000-4-5: 2005	PASS	B	A
Surge(Telecommunication port)		PASS	C	A & B
Radio-frequency, Continuous conducted disturbance	IEC 61000-4-6: 2013	PASS	A	A
Power frequency magnetic field	IEC 61000-4-8: 2009	PASS	A	A
Voltage dips, >95% reduction	IEC 61000-4-11: 2004	PASS	B	A
Voltage dips, 30% reduction		PASS	C	B
Voltage interruptions		PASS	C	B

2. GENERAL INFORMATION

2.1. Description of Device (EUT)

Description : LCD Monitor

Model Number & Brand Name :

Brand Name	Model No.
NEC	E705

Applicant : TPV Electronics (FuJian) Co., Ltd.
Rongqiao Economic and Technological Development Zone, Fuqing City, Fujian Province, P.R. China

Max Resolution : 1920*1080@60Hz

Max Work Frequency : 148.5MHz

Panel : Manufacturer :SHARP M/N: LK695D3LA48

Remote Control : Manufacturer: NEC, M/N: N/A

Power Cord : Unshielded, Detachable, 3.0m(3 pins)

VGA Cord : Shielded, Detachable, 4.0m(Bond two ferrite cores)

DVI Cord : Shielded, Detachable, 1.8m / 1.5m(Bond two ferrite cores)

Audio Cord : Shielded, Detachable, 1.8m / 1.5m

HDMI Cord : Shielded, Detachable, 1.8m / 1.5m

Display Cable : Shielded, Detachable, 3.0m/2.0m

LAN Cable : Unshielded, Detachable, 3.0m/2.0m

Date of Test : Oct.06~20, 2014

Date of Receipt : Oct.04, 2014

Sample Type : Prototype production

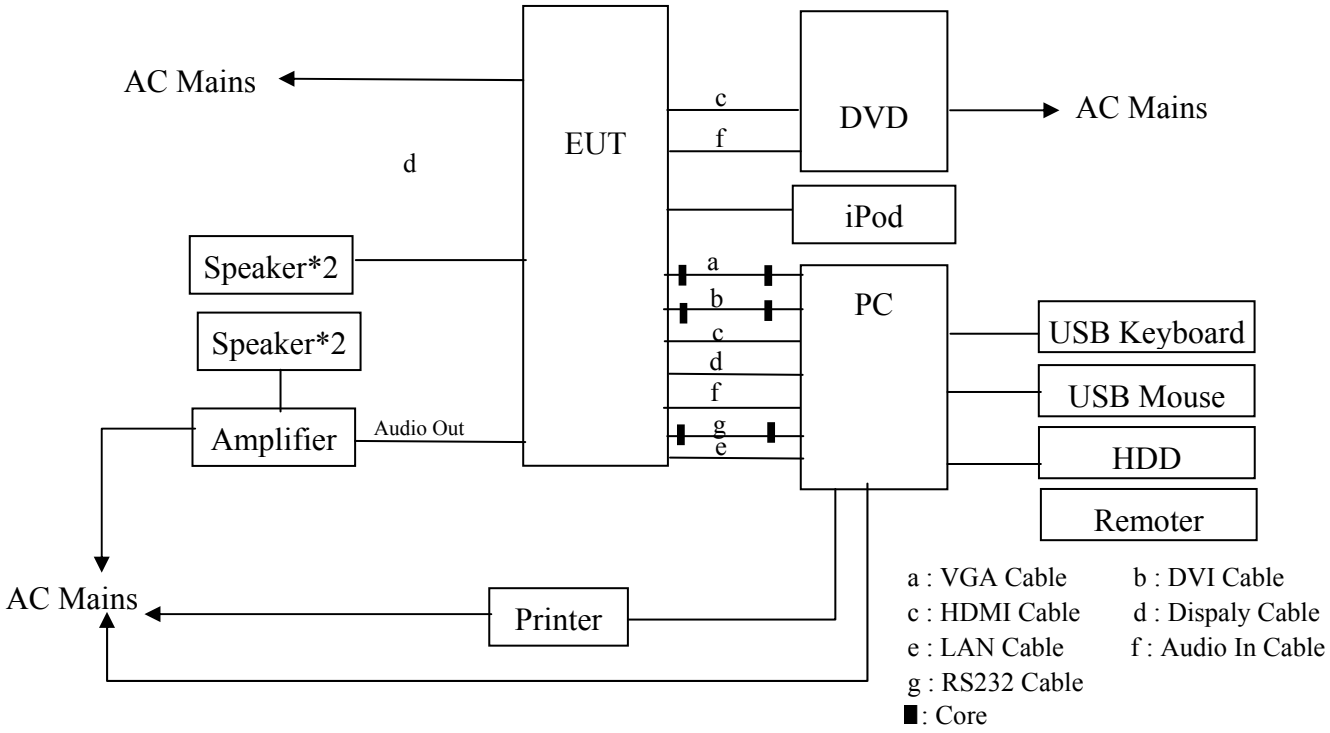
N/A is an abbreviation for Not Applicable.

2.2. Tested Supporting System Details

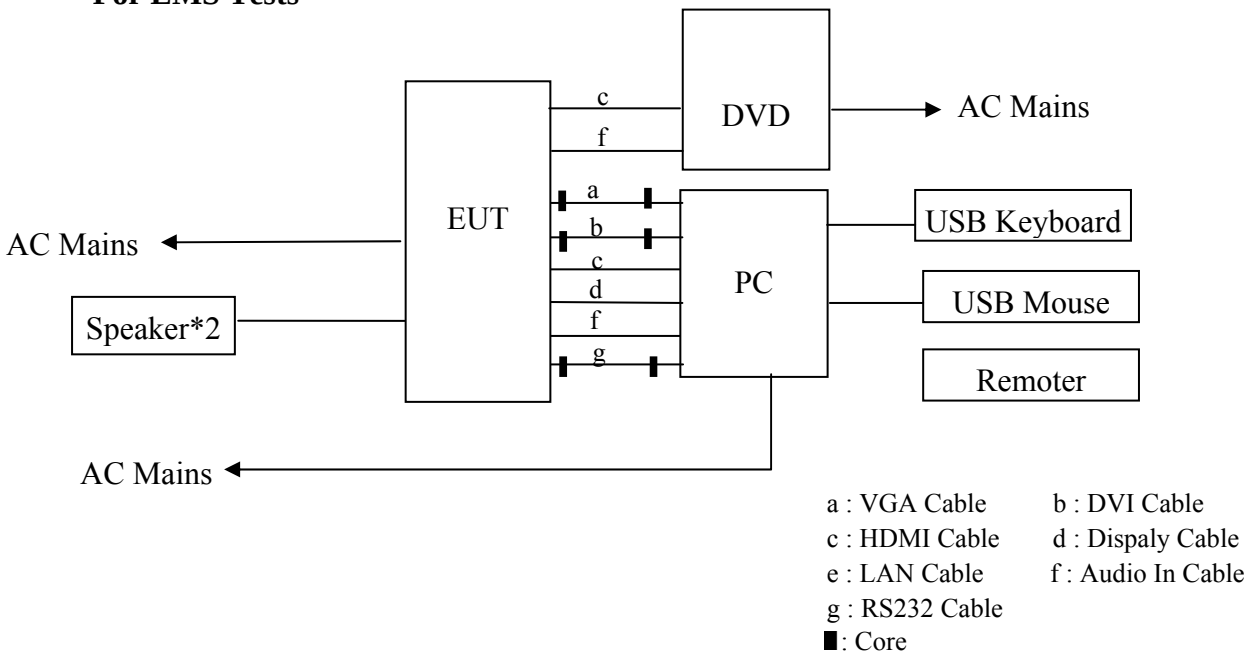
No.	Description	ACS No.	Manufacturer	Model	Serial Number	Approved type
1.	Personal Computer	Test PC GQ2	DELL	Dptiplex 9020MT	8MW91 A00DC2;Z248770	☑FCC DoC ☑BSMI ID: R33002
		Power Cord: Unshielded, Detachable, 1.8m / 1.5m				
2.	USB Keyboard	ACS-EMC-K01R	DELL	SK-8120	CN-ODJ365-71616-2BE-0BZ3-A00	☑ FCC DoC ☑BSMI ID: T3A002
		Power Cord: shielded, Undetachable, 2.0m				
3.	USB Mouse	ACS-EMC-M01R	DELL	M0C5UO	512022645	☑ FCC DoC ☑BSMI ID: R41108
		Power Cord: shielded, Undetachable, 1.8m				
4.	Printer	ACS-EMC-PT04	HP	C9079A	N/A	☑FCC DoC ☑BSMI ID: R33001
		USB Cable: Shielded, Detachabled, 1.8m Power Cord: Unshielded, Detachabled, 1.8m Power Adapter: HP, M/N: 0957-2119, BSMI ID: R33030 DC Cable: Unshielded, Detachabled, 1.5m				
5.	HDD	ACS-EMC-HDD01	Terasys	F12-UF	A0100215-5390031	☑FCC DoC ☑BSMI ID: 4912A022
		USB Cable: Shielded, Detachable, 1.8m				
6.	DVD Player	ACS-EMC-DVD01	DENON	DVD-3910	4098400342E	☐FCC ID ☐BSMI ID
		Power Cord: Unshielded, Detachabled , 1.8m				
7.	Power Amplifier	ACS-EMC-AMP01	SANGU	AV-805	N/A	☐FCC ID ☐BSMI ID
		Data Cable: Unshielded, Undetachable 1.2m				
8.	Speaker	Manufacturer: Shark M/N: HTW-615 External Speaker: 8Ω,15W				
9.	iPod	ACS-EMC-IPS1	APPLE	A1271	4H012AUKA78	☑FCC DoC ☑BSMI ID: R33057
		Data Cable: Shielded, Detachabled, 1.0m				
10.	Speaker	N/A	NEC	SP-TF1	3X0LTP223W	☐FCC ID ☐BSMI ID

2.3. Block Diagram of connection between EUT and simulators

For EMI Tests



For EMS Tests



Note : PC mode and DVD mode can not link the HDMI port at the same time.

(EUT: LCD Monitor)

2.4. Test Facility

Site Description

Name of Firm	:	Audix Technology (Shenzhen) Co., Ltd. No. 6, Ke Feng Rd., 52 Block, Shenzhen Science & Industrial Park,Nantou, Shenzhen, Guangdong, China
3m Anechoic Chamber	:	Certificated by FCC, USA Registration Number: 90454 Valid Date: Feb.22, 2015
3m & 10m Anechoic Chamber	:	Certificated by FCC, USA Registration Number: 794232 Valid Date: Oct.31, 2015
EMC Lab.	:	Certificated by DAkkS, Germany Registration No: D-PL-12151-01-00 Valid Date: Dec.15, 2016 Accredited by NVLAP, USA NVLAP Code: 200372-0 Valid Date: Mar.31, 2015

2.5. Measurement Uncertainty

(95% confidence levels, k=2)

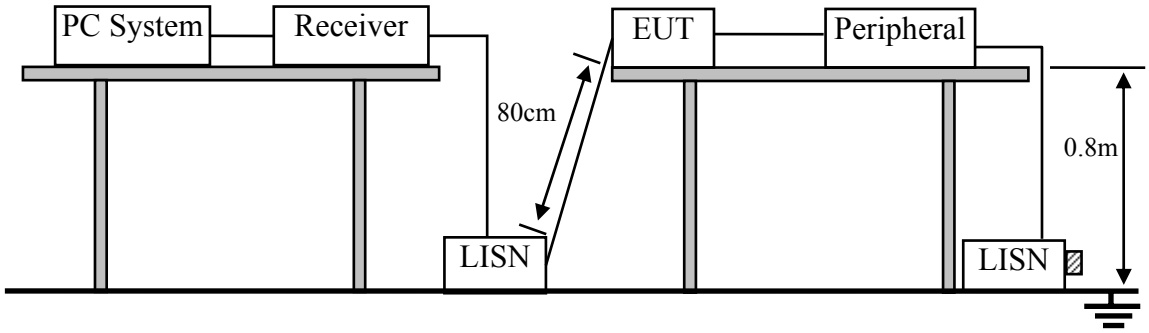
Test Item	Uncertainty
Uncertainty for Conduction emission test in No. 2 Conduction	3.08dB(150kHz~30MHz)
Uncertainty for ISN test in No. 2 Conduction	3.50dB(150kHz~30MHz)
Uncertainty for Radiation Emission test in 10m chamber (Distance: 10m)	3.45dB (30~200MHz, Polarize: H)
	3.47dB (30~200MHz, Polarize: V)
	3.62dB (200M~1GHz, Polarize: H)
	3.52dB (200M~1GHz, Polarize: V)
Uncertainty for Radiation Emission test in 10m chamber (1GHz-18GHz)	5.10dB (Distance: 3m Polarize: V)
	5.26dB (Distance: 3m Polarize: H)
Uncertainty for S_{VSWR} in 10m Chamber	3.62dB (Distance: 3m Polarize: V)
	3.84dB (Distance: 3m Polarize: H)
Uncertainty for Flicker test	5.18%
Uncertainty for Harmonic test	9.4%
Uncertainty for C/S Test	1.36dB (Using CDN test)
	3.20dB (Using EM clamp test)
Uncertainty for R/S Test	1.73dB (80MHz~200MHz)
	1.76dB(200MHz~1000MHz)
Uncertainty for test site temperature and humidity and pressure	0.6℃
	3%
	1kPa

3. CONDUCTED DISTURBANCE AT MAINS TERMINALS TEST

3.1. Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Test Receiver	Rohde & Schwarz	ESCI	100843	Nov. 08,13	1 Year
2.	L.I.S.N.#1	Rohde & Schwarz	ENV4200	100041	Apr. 28,14	1 Year
3.	L.I.S.N.#2	Kyoritsu	KNW-407	8-1628-5	Apr. 28,14	1 Year
4.	Terminator	Hubersuhner	50Ω	No. 1	Apr. 28,14	1 Year
5.	Terminator	Hubersuhner	50Ω	No. 2	Apr. 28,14	1 Year
6.	RF Cable	Fujikura	3D-2W	No.2	Apr. 28,14	1 Year
7.	Coaxial Switch	Anritsu	MP59B	6201397223	May. 16,14	1 Year
8.	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100340	Apr. 28,14	1 Year

3.2. Block Diagram of Test Setup



▨ :50Ω Terminator

3.3. Test Standard

EN 55022: 2010+AC: 2011, Class A

3.4. Power Line Conducted Disturbance at Mains Terminals Limit

Frequency	Maximum RF Line Voltage	
	Quasi-Peak Level dB(μV)	Average Level dB(μV)
150kHz ~ 500kHz	79	66
500kHz ~ 30MHz	73	60

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

3.5. EUT Configuration on Test

The following equipments are installed on Conducted Emission Test to meet EN 55022 requirement and operating in a manner which tends to maximize its emission characteristics in a normal application.

3.5.1. LCD Monitor (EUT)

Model Number ：E705
Serial Number ：N/A

3.5.2. Support Equipment ：As Tested Supporting System Detail, in Section 2.2.

3.6. Operating Condition of EUT

3.6.1. Setup the EUT and simulator as shown as Section 3.2.

3.6.2. Turned on the power of all equipment.

3.6.3. PC system ran the Self-test program “EMC TEST. exe” by windows XP and sent “H” Character to LCD Monitor (EUT) through DVI / VGA / HDMI / Display card, the Screen of EUT displayed and filled with “H” pattern

3.6.4. The PC system was running the program “1kHz signal playing” and sending sound to EUT.

3.6.5. DVD Mode: The DVD player played DVD Disk and sent “DVD 1kHz Signal Playing” image to the LCD Monitor (EUT).

3.6.6. The other peripheral devices were driven and operated in turn during all testing.

3.7. Test Procedure

The EUT was placed on a non-metallic table, 80cm above the ground plane. The EUT Power connected to the power mains through a line impedance stabilization network (L.I.S.N. #1). This provided a 50-ohm coupling impedance for the EUT (Please refer to the block diagram of the test setup and photographs). The other peripheral devices power cord connected to the power mains through a line impedance stabilization network (L.I.S.N.#2). Both sides of power line were checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipments and all of the interface cables were changed according to EN 55022 Class A on conducted Disturbance test.

The bandwidth of test receiver (R & S ESCI) is set at 9kHz.

The frequency range from 150kHz to 30MHz is checked. The test results are reported and test results for Conducted Disturbance Test on Section 3.8.

3.8. Conducted Disturbance at Mains Terminals Test Results

PASS. (All emissions not reported below are too low against the prescribed limits.)

The EUT with the following test modes were tested and selected to read Q.P values, all the test results are listed in next pages.

EUT: LCD Monitor Model No. : E705 Pressure: 101.6kPa

Test Date: Oct.07, 2014 Temperature: 23.8℃ Humidity: 44.7%

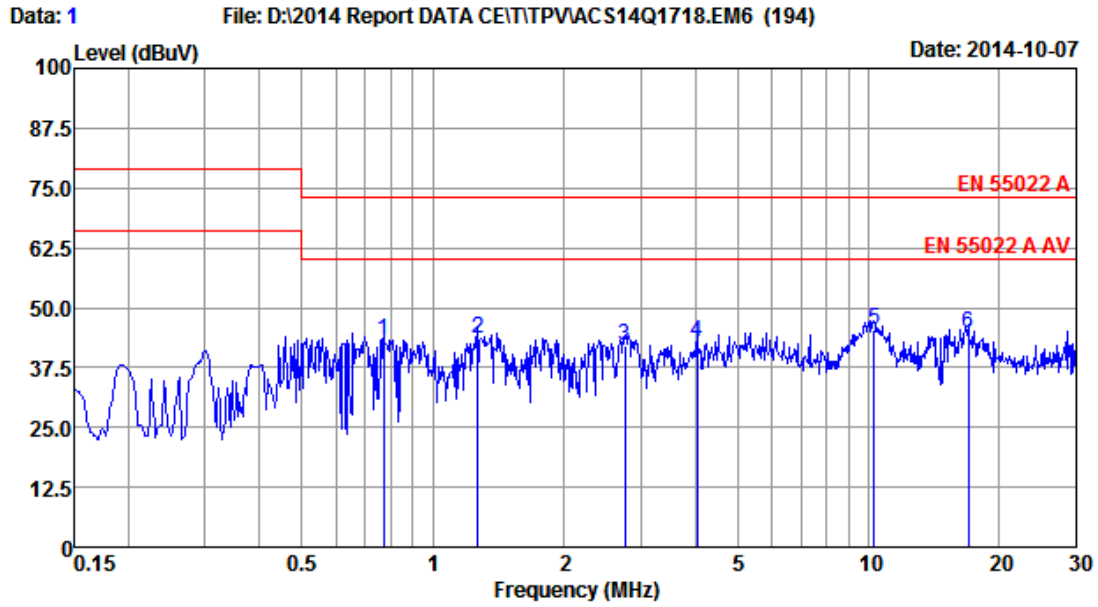
The EUT was pre-tested under following test modes, and selected test mode 12&19 was the worst cases to issue report.

No.	Test Mode	Input Port	Cable Length	Resolution & Frequency
1	PC Mode	Display	3.0m	640*480/60Hz
2				1280*1024/75Hz
3				1920*1080/60Hz
4			2.0m	640*480/60Hz
5				1280*1024/75Hz
6				1920*1080/60Hz
7		VGA	4.0m	640*480/60Hz
8				1280*1024/75Hz
9				1920*1080/60Hz
10		DVI	1.8m	640*480/60Hz
11				1280*1024/75Hz
12※				1920*1080/60Hz
13				(Panel is Vertical) 1080*1920/60Hz
14			1.5m	640*480/60Hz
15				1280*1024/75Hz
16				1920*1080/60Hz
17		HDMI	1.8m	1920*1080/60Hz
18			1.5m	1920*1080/60Hz
19	DVD Mode	HDMI	1.8m	HDMI 1080P

(※ Worst test mode)

Test result is presented in the report as below

No.	Cable Length	Test Mode	Input Port	Resolution & Frequency
1.	1.8m	PC Mode	DVI	1920*1080/60Hz
2.		DVD Mode	HDMI	1080P

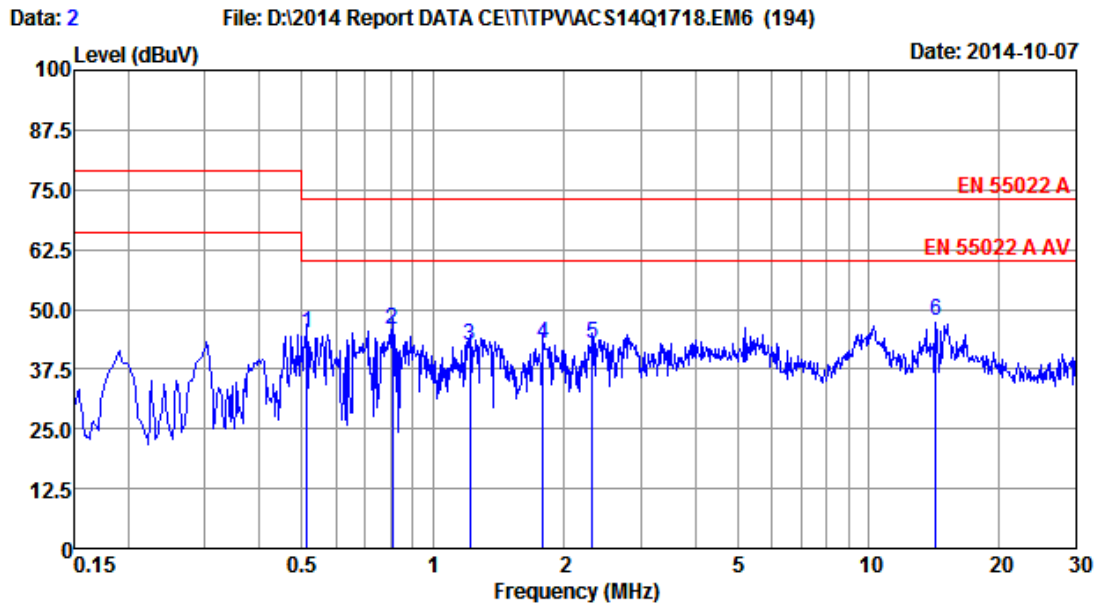


Site no :2# Conduction
Dis./Lisn :14 ENV4200 L1
Limit :EN 55022 A
Env./Ins. :23.8*C/44.7%
EUT :E705
Power Rating :AC 230V/50Hz
Test Mode :Running "H" Pattern And 1KHz Playing
DVI:1920*1080@60Hz
Line:1.8m

Data No :1
LISN phase:LINE
Pre :101.6kPa
Engineer :Nick_Huang

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.771	9.78	9.89	23.50	43.17	73.00	29.83	QP
2	1.269	9.75	9.90	24.04	43.69	73.00	29.31	QP
3	2.765	9.77	9.92	22.49	42.18	73.00	30.82	QP
4	4.049	9.75	9.92	22.98	42.65	73.00	30.35	QP
5	10.288	9.75	9.97	25.57	45.29	73.00	27.71	QP
6	16.928	9.76	10.02	24.77	44.55	73.00	28.45	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss(Include 10dB pulse limit)+Reading.
2.If the average limit is met when useing a quasi-peak detector.
the EUT shall be deemed to meet both limits and measurement
with average detector is unnecessary.

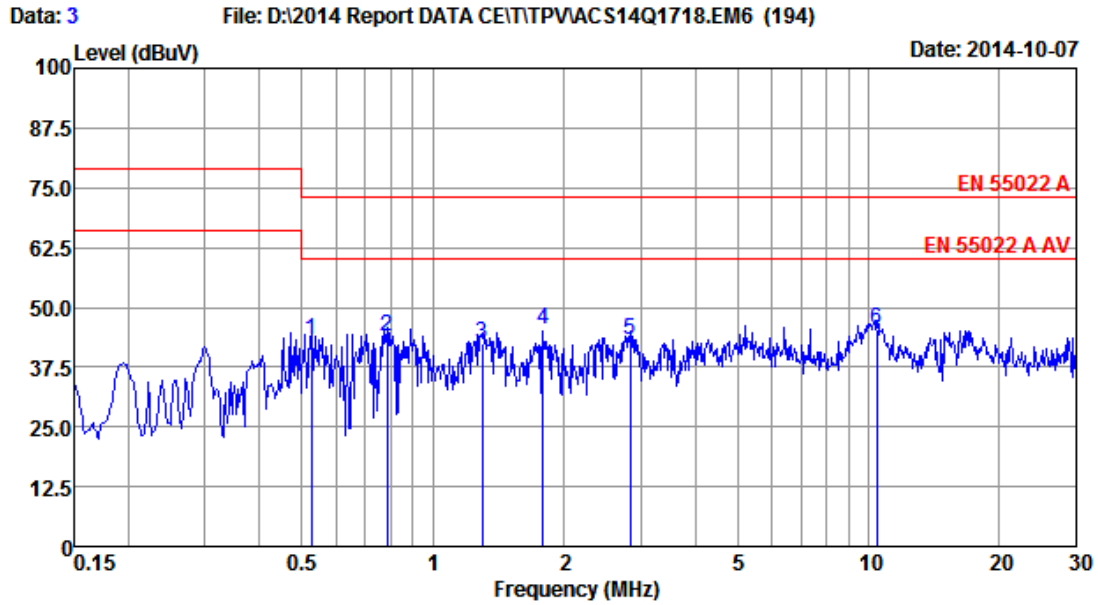


Site no :2# Conduction
Dis./Lisn :14 ENV4200 N
Limit :EN 55022 A
Env./Ins. :23.8*C/44.7%
EUT :E705
Power Rating :AC 230V/50Hz
Test Mode :Running "H" Pattern And 1KHz Playing
DVI:1920*1080@60Hz
Line:1.8m

Data No :2
LISN phase:NEUTRAL
Pre :101.6kPa
Engineer :Nick_Huang

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.513	9.88	9.89	25.13	44.90	73.00	28.10	QP
2	0.809	9.81	9.89	26.11	45.81	73.00	27.19	QP
3	1.216	9.73	9.89	22.95	42.57	73.00	30.43	QP
4	1.790	9.74	9.90	23.04	42.68	73.00	30.32	QP
5	2.321	9.74	9.91	23.20	42.85	73.00	30.15	QP
6	14.288	9.78	10.00	27.64	47.42	73.00	25.58	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss(Include 10dB pulse limit)+Reading.
2.If the average limit is met when useing a quasi-peak detector.
the EUT shall be deemed to meet both limits and measurement
with average detector is unnecessary.

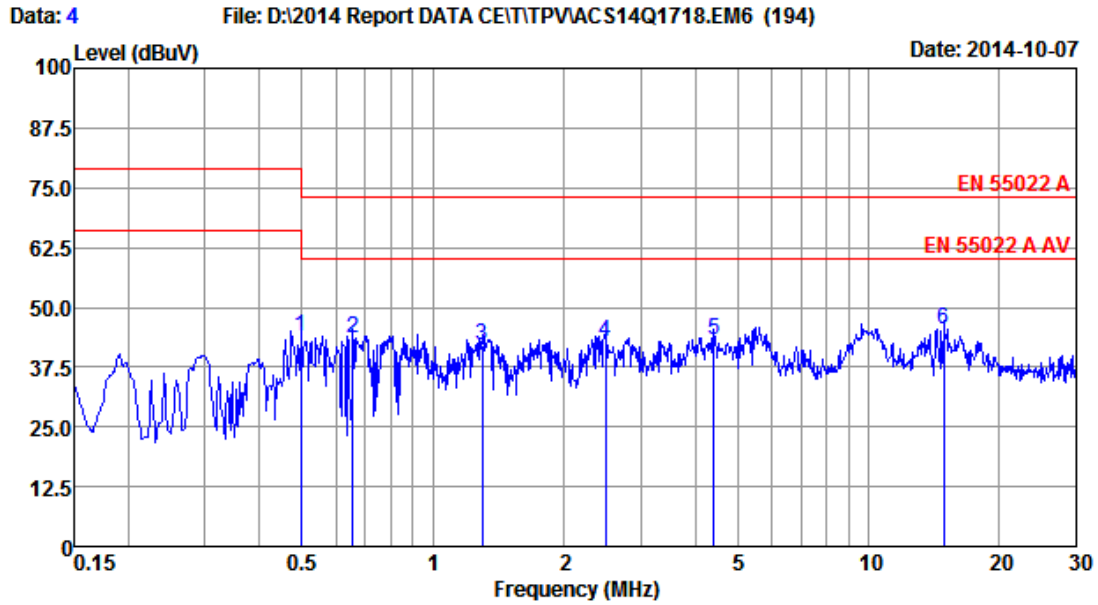


Site no :2# Conduction
Dis./Lisn :14 ENV4200 L1
Limit :EN 55022 A
Env./Ins. :23.8*C/44.7%
EUT :E705
Power Rating :AC 230V/50Hz
Test Mode :DVD Playing
HDMI 1:1080P
Line:1.8m

Data No :3
LISN phase:LINE
Pre :101.6kPa
Engineer :Nick_Huang

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.527	9.77	9.89	23.44	43.10	73.00	29.90	QP
2	0.783	9.78	9.89	24.18	43.85	73.00	29.15	QP
3	1.296	9.75	9.90	22.95	42.60	73.00	30.40	QP
4	1.790	9.77	9.90	25.68	45.35	73.00	27.65	QP
5	2.839	9.76	9.92	23.41	43.09	73.00	29.91	QP
6	10.452	9.75	9.97	25.50	45.22	73.00	27.78	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss(Include 10dB pulse limit)+Reading.
2.If the average limit is met when useing a quasi-peak detector.
the EUT shall be deemed to meet both limits and measurement
with average detector is unnecessary.



Site no :2# Conduction
Dis./Lisn :14 ENV4200 N
Limit :EN 55022 A
Env./Ins. :23.8*C/44.7%
EUT :E705
Power Rating :AC 230V/50Hz
Test Mode :DVD Playing
HDMI 1:1080P
Line:1.8m

Data No :4
LISN phase:NEUTRAL
Pre :101.6kPa
Engineer :Nick_Huang

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.497	9.88	9.89	24.05	43.82	79.00	35.18	QP
2	0.654	9.86	9.89	23.66	43.41	73.00	29.59	QP
3	1.296	9.73	9.90	22.56	42.19	73.00	30.81	QP
4	2.487	9.74	9.91	23.16	42.81	73.00	30.19	QP
5	4.407	9.76	9.93	23.60	43.29	73.00	29.71	QP
6	14.907	9.78	10.00	25.43	45.21	73.00	27.79	QP

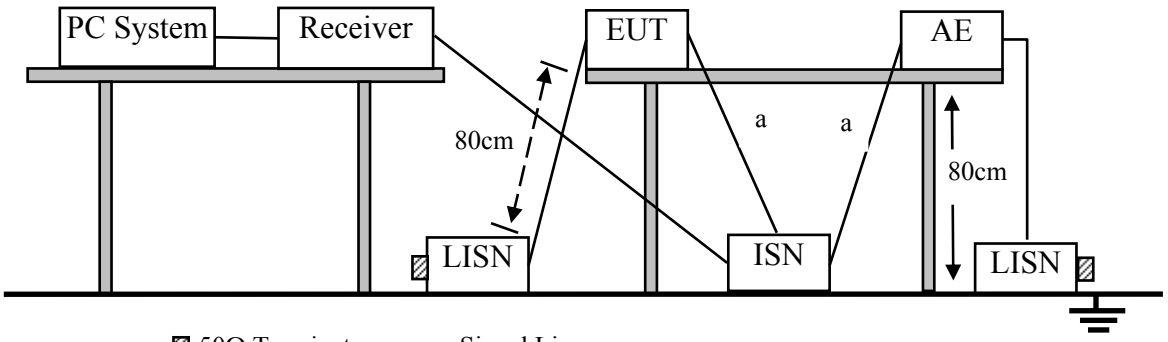
Remarks: 1.Emission Level=LISN Factor+Cable Loss(Include 10dB pulse limit)+Reading.
2.If the average limit is met when useing a quasi-peak detector.
the EUT shall be deemed to meet both limits and measurement
with average detector is unnecessary.

4. CONDUCTED DISTURBANCE AT TELECOMMUNICATION PORTS TEST

4.1. Test Equipments

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	2# Shielding Room	AUDIX	N/A	N/A	Apr.17,14	1 Year
2.	Test Receiver	Rohde & Schwarz	ESCI	100843	Nov. 08,13	1 Year
3.	L.I.S.N. #1	Rohde & Schwarz	ENV4200	100041	Apr. 28,14	1 Year
4.	L.I.S.N. #2	Kyoritsu	KNW-407	8-1628-5	Apr. 28,14	1 Year
5.	Terminator	Hubersuhner	50Ω	No. 1	Apr. 28,14	1 Year
6.	Terminator	Hubersuhner	50Ω	No. 2	Apr. 28,14	1 Year
7.	RF Cable	Fujikura	3D-2W	No. 2	Apr. 28,14	1Year
8.	Current Probe	Rohde & Schwarz	EZ-17	833335/009	Nov.28,13	1 Year
9.	Coaxial Switch	Anritsu	MP59B	6201397223	May. 16,14	1 Year
10.	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100341	Apr. 28,14	1Year
11.	I.S.N.	TESEQ	ISN T800	30858	Oct.31,13	1 Year

4.2. Block Diagram of Test Setup



▨:50Ω Terminator; a: Signal Line

4.3. Test Standard

EN 55022: 2010+AC: 2011

4.4. Conducted Disturbance at Telecommunication Ports Limit

Frequency	Maximum RF Line Voltage	
	Quasi-Peak Level dB(μV)	Average Level dB(μV)
150kHz ~ 500kHz	97~87	84~74
500kHz ~ 30MHz	87	74

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

4.5. EUT Configuration on Test

The following equipments are installed on Conducted Emission Test to meet EN 55022 Class A requirement and operating in a manner that tends to maximize its emission characteristics in a normal application. The configuration of EUT and its simulators were the same as those used in conducted test. Please refer to Section 3.5.

4.6. Operating Condition of EUT

Same as Conducted Emission test that is listed in Section 3.6. except the test set up replaced by Section 4.2.

4.7. Test Procedure

The EUT was placed on a non-metallic table, 80cm above the ground plane. The EUT Power connected to the power mains through a line impedance stabilization network (L.I.S.N. #1). The other peripheral devices power cord connected to the power mains through a line impedance stabilization network (L.I.S.N.#2). This provided a 50-ohm coupling impedance for the EUT (Please refer to the block diagram of the test setup and photographs). Both sides of power line were checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipments and all of the interface cables were changed according to EN 55022: 2010+AC: 2011 on Conducted Disturbance test. And connected to the telecommunication ports through ISN. the telecommunication line are investigated to find out the maximum conducted emission according to EN 55022 regulations during conducted disturbance test.

The bandwidth of the test receiver (R& S Test Receiver ESCI) is set at 9kHz.

The frequency range from 150kHz to 30MHz is checked. The test result are reported on Section 4.8.

4.8. Conducted Disturbance at Telecommunication Ports Test Results

PASS.

The EUT with the following test modes were tested and to read Q.P and average values, all the test results are listed in next pages.

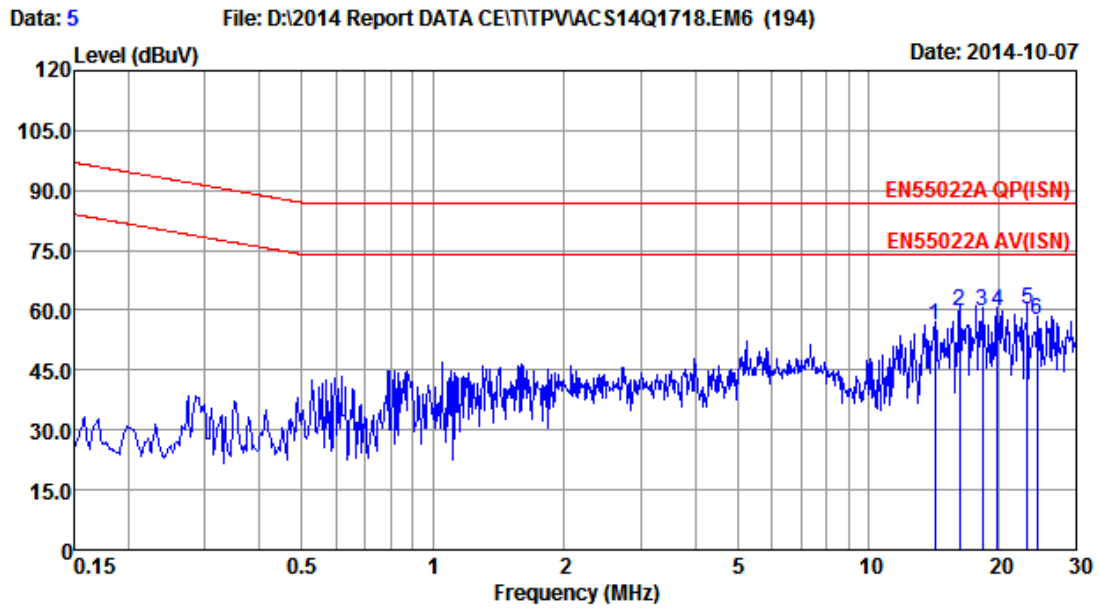
EUT: LCD Monitor Model No. : E705 Pressure: 101.6kPa

Test Date: Oct.07, 2014 Temperature: 23.8℃ Humidity: 44.7%

The details of test modes are as follows：

No.	Test Mode
1. ※	ISN 1 10Mbps
2.	ISN 2 100Mbps

(※ Worst test mode)

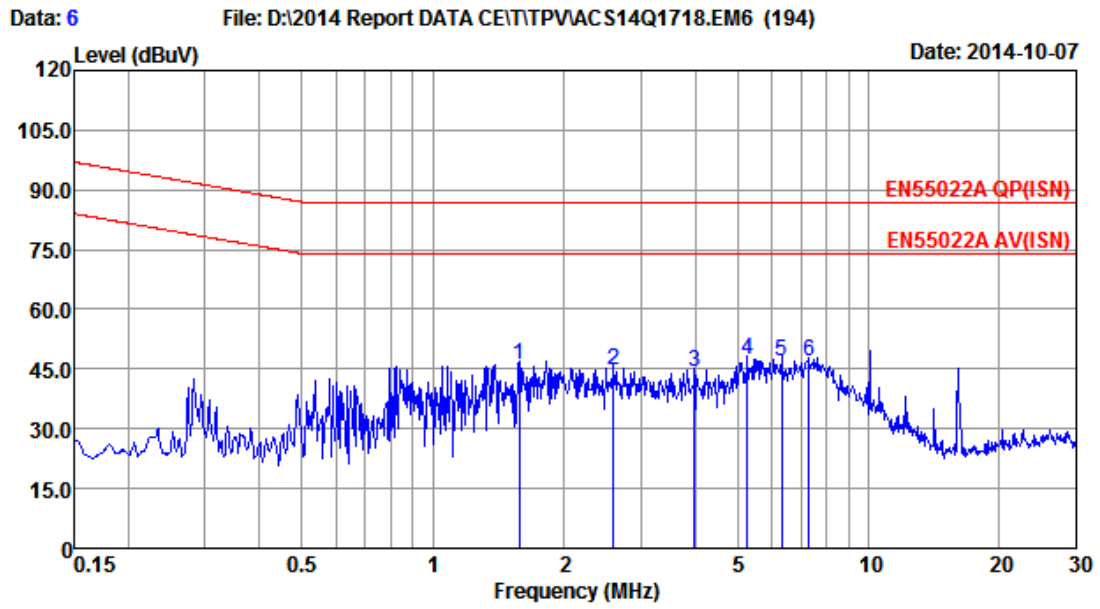


Site no :2# Conduction
Dis./Lisn :2013 ISN T800 CAT5
Limit :EN55022A QP(ISN)
Env./Ins. :23.8*C/44.7%
EUT :E705
Power Rating :AC 230V/50Hz
Test Mode :LAN MODE
ISN:10Mbps

Data No :5
LISN phase:
Pre :101.6kPa
Engineer :Nick_Huang

No	Freq (MHz)	ISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	14.213	9.65	10.00	36.44	56.09	87.00	30.91	QP
2	16.226	9.67	10.01	40.22	59.90	87.00	27.10	QP
3	18.232	9.70	10.03	40.01	59.74	87.00	27.26	QP
4	19.740	9.73	10.04	39.92	59.69	87.00	27.31	QP
5	23.140	9.81	10.05	40.51	60.37	87.00	26.63	QP
6	24.400	9.84	10.06	37.62	57.52	87.00	29.48	QP

Remarks: 1.Emission Level= ISN Factor+Cable Loss(Include 10dB pulse limit)+Reading.
2.If the average limit is met when useing a quasi-peak detector.
the EUT shall be deemed to meet both limits and measurement
with average detector is unnecessary.



Site no :2# Conduction
Dis./Lisn :2013 ISN T800 CAT5
Limit :EN55022A QP(ISN)
Env./Ins. :23.8*C/44.7%
EUT :E705
Power Rating :AC 230V/50Hz
Test Mode :LAN MODE
ISN:100Mbps

Data No :6
LISN phase:
Pre :101.6kPa
Engineer :Nick_Huang

No	Freq (MHz)	ISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	1.577	9.78	9.90	26.38	46.06	87.00	40.94	QP
2	2.594	9.73	9.91	25.29	44.93	87.00	42.07	QP
3	3.985	9.69	9.92	24.56	44.17	87.00	42.83	QP
4	5.277	9.67	9.93	27.57	47.17	87.00	39.83	QP
5	6.319	9.66	9.94	27.51	47.11	87.00	39.89	QP
6	7.290	9.66	9.95	27.14	46.75	87.00	40.25	QP

Remarks: 1.Emission Level= ISN Factor+Cable Loss(Include 10dB pulse limit)+Reading.
2.If the average limit is met when useing a quasi-peak detector.
the EUT shall be deemed to meet both limits and measurement
with average detector is unnecessary.

5. RADIATED DISTURBANCE TEST

5.1. Test Equipments

5.1.1. For frequency range 30MHz~1000MHz (In 10m Anechoic Chamber)

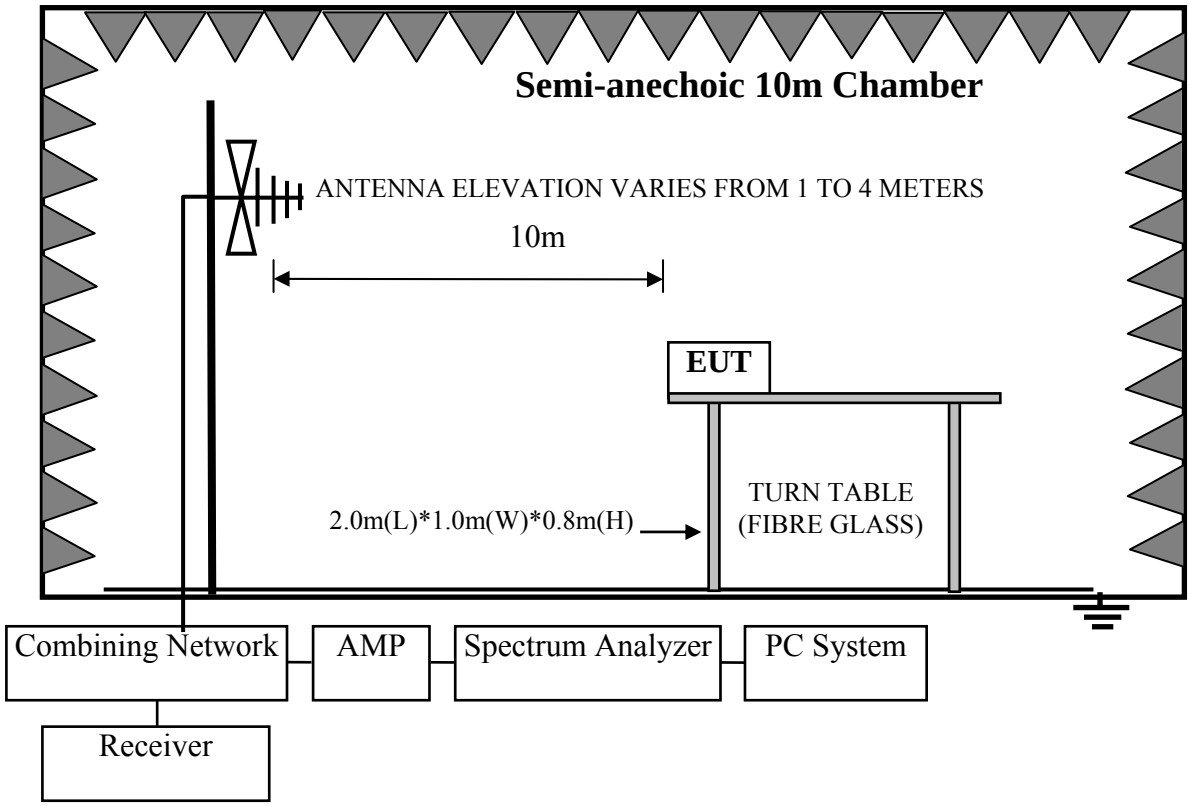
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	10m Chamber	AUDIX	N/A	N/A	Nov.25,13	1 Year
2.	EMC Analyzer	Agilent	E7405A	MY42000131	Oct.31, 13	1 Year
3.	EMC Analyzer	Agilent	E7405A	MY45116588	Oct.31, 13	1 Year
4.	Test Receiver	Rohde & Schwarz	ESCI	100842	Apr. 28,14	1 Year
5.	Amplifier	Agilent	8447D	2944A10684	Apr. 28,14	1Year
6.	Amplifier	Agilent	8447D	2944A11140	Apr. 28,14	1 Year
7.	Trilog-Broadband Antenna	SCHWARZBECK	VULB 9168	9168-493	Apr. 08,14	1 Year
8.	Trilog-Broadband Antenna	SCHWARZBECK	VULB 9168	9168-429	Dec.03, 13	1 Year
9.	RF Cable	MIYAZAKI	CFD400-NL	10m Chamber No.1	Apr. 28,14	1 Year
10.	RF Cable	MIYAZAKI	CFD400-NL	10m Chamber No.2	Apr. 28,14	1 Year
11.	Coaxial Switch	Anritsu	MP59B	6201397220	May. 16,14	1 Year
12.	Coaxial Switch	Anritsu	MP59B	6201397221	May. 16,14	1 Year
13.	Coaxial Switch	Anritsu	MP59B	6201397222	May. 16,14	1 Year

5.1.2. For frequency range 1GHz~6GHz (In 10m Anechoic Chamber)

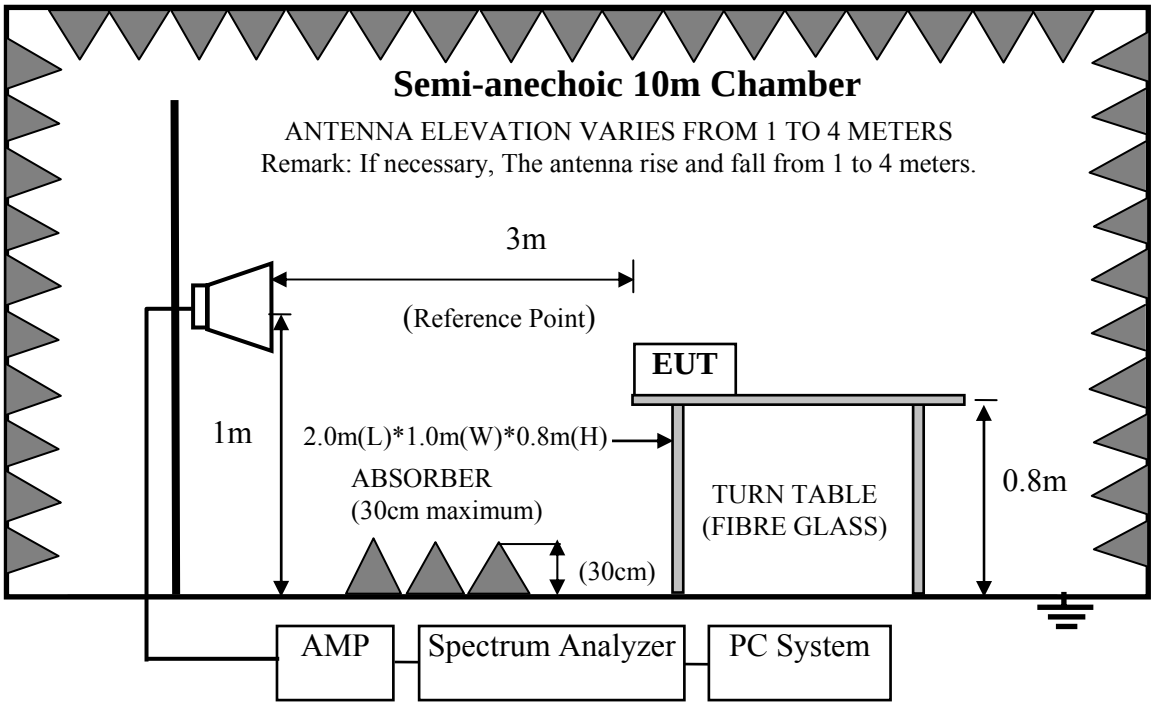
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	EMC Analyzer	Agilent	N9030A	MY45116588	Oct.31, 13	1 Year
2.	Horn Antenna	ETS	3115	9510-4580	Jun. 06, 14	1 Year
3.	Amplifier	Agilent	8449B	3008A00863	Apr. 28,14	1 Year
4.	RF Cable	Hubersuhner	SUCOFLEX106	77977/6	Apr. 28,14	1 Year
5.	RF Cable	Hubersuhner	SUCOFLEX106	28616/2	Apr. 28,14	1 Year
6.	10m Chamber	AUDIX	N/A	N/A	Mar.31, 14	1 Year

5.2. Block Diagram of Test Setup

5.2.1. In 10m Anechoic Chamber Test Setup Diagram for 30MHz~1000MHz



5.2.2. In 10m Anechoic Chamber Test Setup Diagram for 1-6GHz



5.3. Test Standard

EN 55022: 2010+AC: 2011, Class A

5.4. Radiated Disturbance Limit

All emanations from a Class A computing devices or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified below:

FREQUENCY (MHz)	DISTANCE (Meters)	FIELD STRENGTHS LIMITS (dBμV/m)
30 ~ 230	10	40
230 ~ 1000	10	47
1000~3000	3	76(Peak) 56(Average)
3000~6000	3	80(Peak) 60(Average)

Note: (1) Emission level = Antenna Factor + Cable Loss + Reading
Emission level = Antenna Factor -Amp Factor +Cable Loss + Reading (above 1000MHz)
(2) The lower limit shall apply at the transition frequencies.
(3) Distance refers to the distance in meters between the test instrument antenna and the closed point of any part of the E.U.T..

5.5. EUT Configuration on Test

The configurations of EUT are listed in Section 3.5.

5.6. Operating Condition of EUT

Same as Conducted Emission test that is listed in Section 3.6. except the test set up replaced by Section 5.2.

5.7. Test Procedure

The EUT was placed on a non-metallic table, 80 cm above the ground plane inside a semi-anechoic chamber. An antenna was located 3m & 10m from the EUT on an adjustable mast. A pre-scan was first performed in order to find prominent radiated emissions. For final emissions measurements at each frequency of interest, the EUT were rotated and the antenna height was varied between 1m and 4m in order to maximize the emission. Measurements in both horizontal and vertical polarities were made and the data was recorded. In order to find the maximum emission, the relative positions of equipments and all the interface cables were changed according to EN 55022 Class A on Radiated Disturbance test.

The bandwidth setting on the test receiver (R&S TEST RECEIVER ESCI) is 120 kHz.

The resolution bandwidth of the EMC Analyzer N9030A was set at 1MHz. (For above 1GHz)

The frequency range from 30MHz to 1000MHz was pre-scanned with a peak detector and all final readings of measurement from Test Receiver are Quasi-Peak values.

The frequency range from 1GHz to 6GHz was checked and all final readings of measurement were with Peak and Average detector, measurement distance was 3m at semi-anechoic chamber. The portion of the test volume that was obstructed by absorber placed on the floor (30cm maximum).

Finally, selected operating situations at Anechoic Chamber measurement, all the test results are listed in section 5.8.

5.8. Radiated Disturbance Test Results

PASS. (All emissions not reported below are too low against the prescribed limits.)

EUT: LCD Monitor Model No. : E705

For frequency range 30MHz~1GHz

The EUT with the following test modes were tested and selected to read Q.P values, all the test results are listed in next pages.

Test Date: Oct.06, 2014 Temperature: 22.6℃ Humidity: 47% Pressure: 101.7kPa

The EUT was pre-tested under following test modes, and selected test mode 9&19 was the worst cases to issue report.

No.	Test Mode	Input Port	Cable Length	Resolution & Frequency
1	PC Mode	Display	3.0m	640*480/60Hz
2				1280*1024/75Hz
3				1920*1080/60Hz
4			2.0m	640*480/60Hz
5				1280*1024/75Hz
6				1920*1080/60Hz
7		VGA	4.0m	640*480/60Hz
8				1280*1024/75Hz
9				1920*1080/60Hz
10		DVI	1.8m	640*480/60Hz
11				1280*1024/75Hz
12※				1920*1080/60Hz
13				1080*1920/60Hz (Panel is Vertical)
14			1.5m	640*480/60Hz
15				1280*1024/75Hz
16				1920*1080/60Hz
17		HDMI	1.8m	1920*1080/60Hz
18			1.5m	1920*1080/60Hz
19	DVD Mode	HDMI	1.8m	HDMI 1080P

(※ Worst test mode)

Test result is presented in the report as below

No	Cable Length	Test Mode	Input Port	Resolution & Frequency
1.	1.8m	PC Mode	DVI	1920*1080/60Hz
2.		DVD Mode	HDMI	1080P

For frequency range 1GHz~6GHz

The EUT with below test mode were measured within Anechoic Chamber and the test results listed in next pages

Test Date: Oct.09, 2014 Temperature: 22.5℃ Humidity: 42.8% Pressure: 101.6kPa

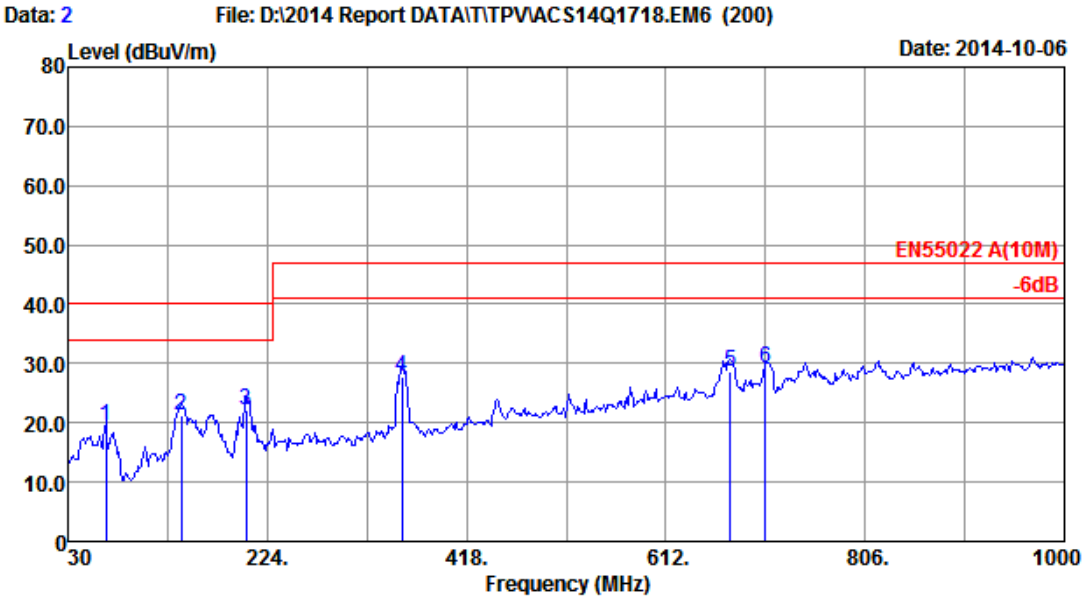
The EUT was pre-tested under following test modes, and selected test mode 8 was the worst cases to issue report.

No.	Test Mode	Input Port	Cable Length	Resolution & Frequency
1.	PC Mode	Display	3.0m	1280*1024/75Hz
2.				1920*1080/60Hz
3.			2.0m	1280*1024/75Hz
4.				1920*1080/60Hz
5.		VGA	4.0m	1280*1024/75Hz
6.				1920*1080/60Hz
7.		DVI	1.8m	1280*1024/75Hz
8. ※				1920*1080/60Hz
9.			1.5m	1280*1024/75Hz
10.				1920*1080/60Hz
11.		HDMI	1.8m	1920*1080/60Hz
12.			1.5m	1920*1080/60Hz

(※ Worst test mode)

Test result is presented in the report as below

No.	Cable Length	Test Mode	Input Port	Resolution & Frequency
1.	1.8m	PC Mode	DVI	1920*1080/60Hz



Site no. : 10m Chamber
Dis. / Ant. : 10m 2013 9168-429
Limit : EN55022 A(10M)
Env. / Ins. : 22.6*C/47%
EUT : E705
Power Rating : AC 230V/50Hz
Test Mode : Running "H" Pattern And 1kHz Playing
DVI:1920*1080@60Hz
Line:1.8m

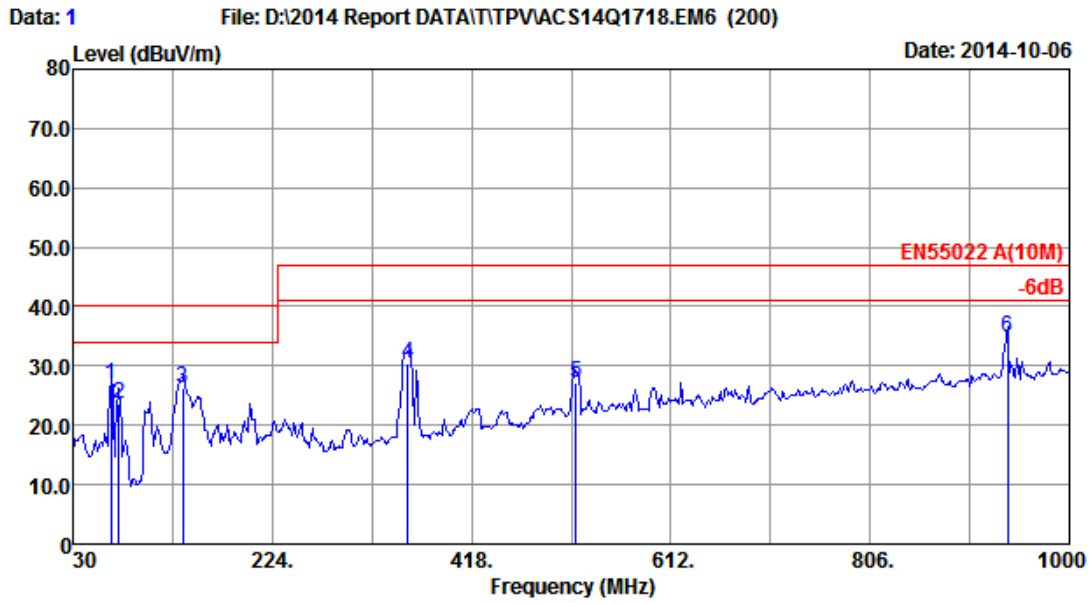
Data No. : 2
Ant. pol. : HORIZONTAL
Pre : 101.7kPa
Engineer : Alex

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level dBuV/m)	Limits (dBuV/m)	Magin (dB)	Remark
1	66.860	12.28	0.94	6.21	19.43	40.00	20.57	QP
2	140.580	13.06	1.29	6.92	21.27	40.00	18.73	QP
3	203.630	9.78	1.53	10.86	22.17	40.00	17.83	QP
4	354.950	15.10	1.99	10.73	27.82	47.00	19.18	QP
5	675.050	20.50	3.18	5.10	28.78	47.00	18.22	QP
6	709.000	20.90	3.31	5.11	29.32	47.00	17.68	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

3. The worst emission was detected at 709.000 MHz with corrected signal level of 29.32 dBμV/m (Limit is 47.00dBμV/m) when the antenna was at horizontal polarization and at 2.3m high and the turn table was at 152°.

4. 0° was the table front facing the antenna. Degree is calculated from 0° clockwise facing the antenna.



Site no. : 10m Chamber
Dis. / Ant. : 10m 2014 9168-493
Limit : EN55022 A(10M)
Env. / Ins. : 22.6*C/47%
EUT : E705
Power Rating : AC 230V/50Hz
Test Mode : Running "H" Pattern And 1kHz Playing
DVI:1920*1080@60Hz
Line:1.8m

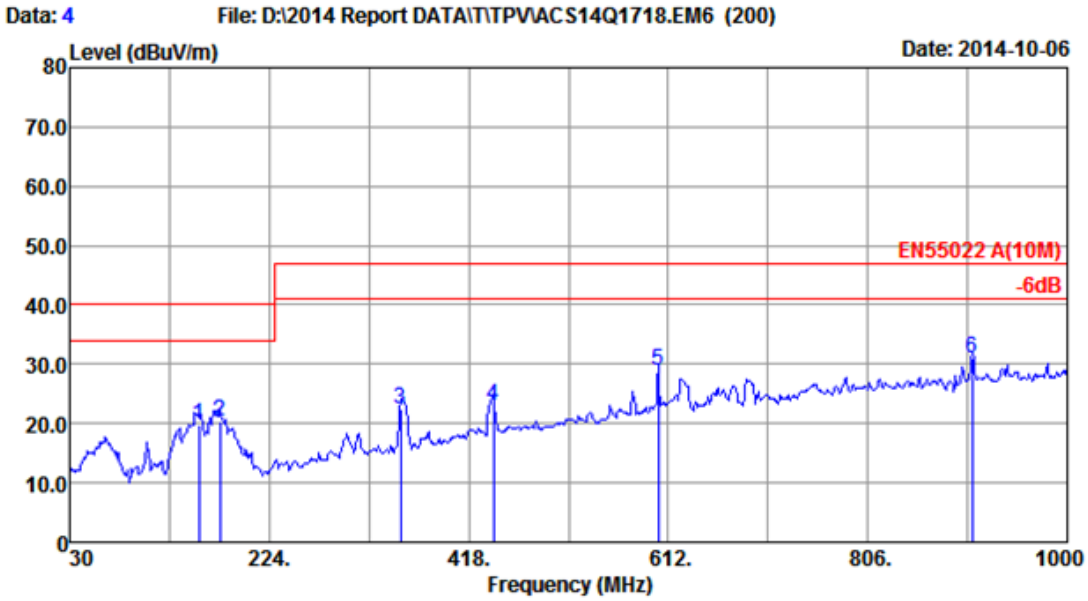
Data No. : 1
Ant. pol. : VERTICAL
Pre : 101.7kPa
Engineer : Alex

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level dBuV/m)	Limits (dBuV/m)	Magin (dB)	Remark
1	66.860	12.48	1.11	13.17	26.76	40.00	13.24	QP
2	74.620	10.71	1.17	11.59	23.47	40.00	16.53	QP
3	136.700	12.67	1.51	12.12	26.30	40.00	13.70	QP
4	355.920	14.46	2.08	13.81	30.35	47.00	16.65	QP
5	519.850	18.20	2.47	6.41	27.08	47.00	19.92	QP
6	939.860	24.10	3.45	7.14	34.69	47.00	12.31	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

3. The worst emission was detected at 939.860 MHz with corrected signal level of 34.69 dBμV/m (Limit is 47.00dBμV/m) when the antenna was at vertical polarization and at 2.8m high and the turn table was at 315°.

4. 0° was the table front facing the antenna. Degree is calculated from 0° clockwise facing the antenna.

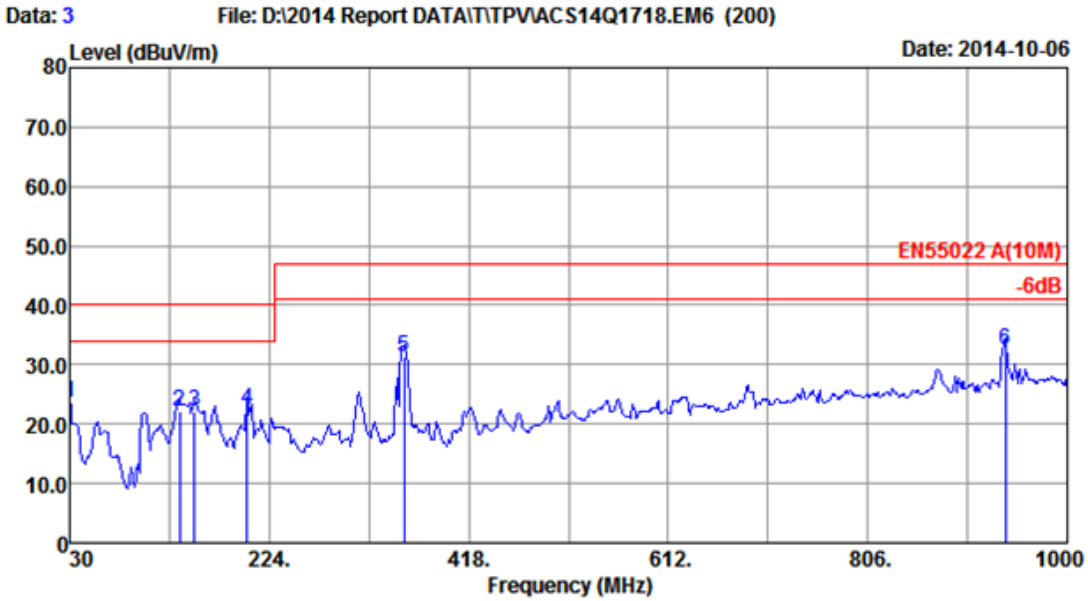


Site no. : 10m Chamber
Dis. / Ant. : 10m 2013 9168-429
Limit : EN55022 A(10M)
Env. / Ins. : 22.6*C/47%
EUT : E705
Power Rating : AC 230V/50Hz
Test Mode : DVD Playing
HDMI 1:1080P
Line:1.8m

Data No. : 4
Ant. pol. : HORIZONTAL
Pre : 101.7kPa
Engineer : Alex

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level dBuV/m	Limits (dBuV/m)	Magin (dB)	Remark
1	156.100	13.40	1.36	5.02	19.78	40.00	20.22	QP
2	176.470	12.05	1.44	6.73	20.22	40.00	19.78	QP
3	352.040	14.98	1.98	5.34	22.30	47.00	24.70	QP
4	442.250	16.89	2.27	3.79	22.95	47.00	24.05	QP
5	602.300	19.80	2.90	6.35	29.05	47.00	17.95	QP
6	907.850	23.60	3.96	3.57	31.13	47.00	15.87	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



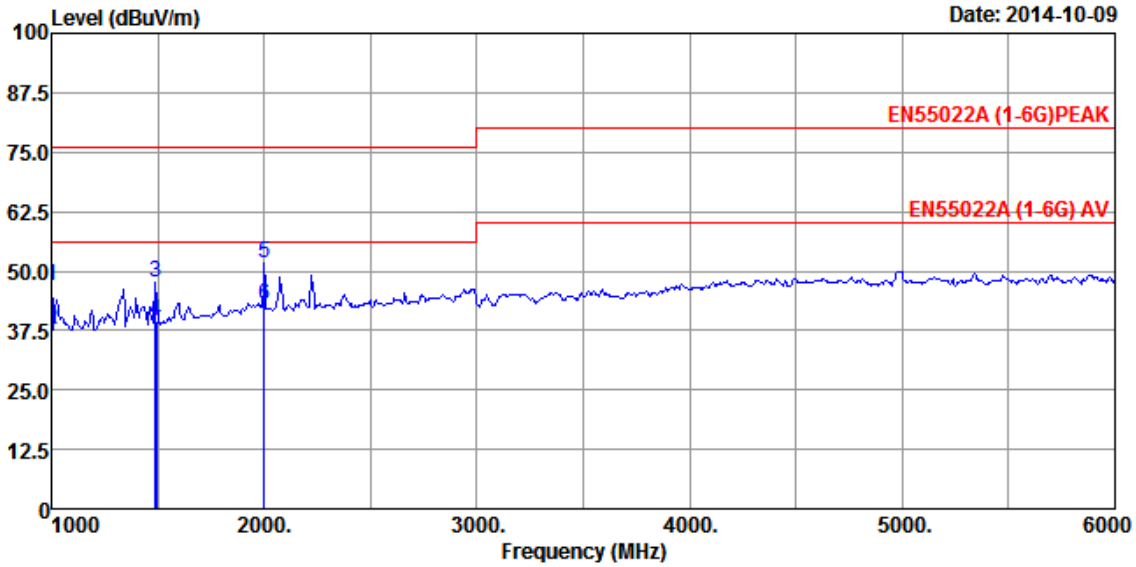
Site no. : 10m Chamber
Dis. / Ant. : 10m 2014 9168-493
Limit : EN55022 A(10M)
Env. / Ins. : 22.6*C/47%
EUT : E705
Power Rating : AC 230V/50Hz
Test Mode : DVD Playing
HDMI 1:1080P
Line:1.8m

Data No. : 3
Ant. pol. : VERTICAL
Pre : 101.7kPa
Engineer : Alex

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level dBuV/m	Limits (dBuV/m)	Magin (dB)	Remark
1	30.000	12.10	0.83	10.57	23.50	40.00	16.50	QP
2	136.700	12.67	1.51	7.88	22.06	40.00	17.94	QP
3	151.250	13.57	1.56	6.98	22.11	40.00	17.89	QP
4	202.660	10.17	1.71	10.53	22.41	40.00	17.59	QP
5	354.950	14.40	2.08	14.79	31.27	47.00	15.73	QP
6	939.860	24.10	3.45	4.90	32.45	47.00	14.55	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

Data: 1 File: D:\2014 Report DATA\T\TPV\ACS14Q1718.EM6 (124)



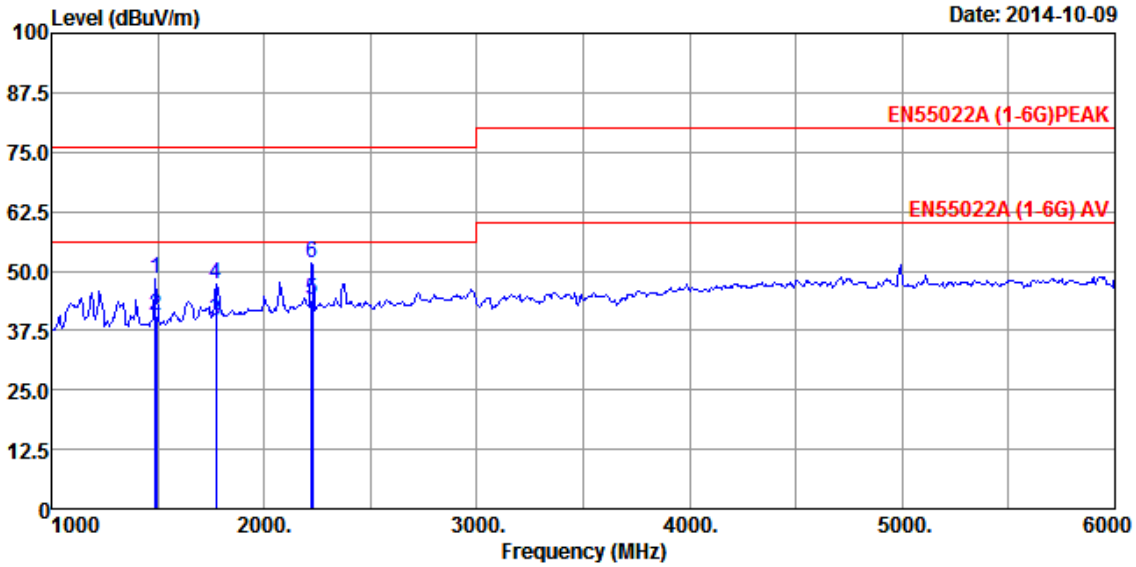
Site no. : 10m Chamber
Dis. / Ant. : 3m 2013 3115 4580
Limit : EN55022A (1-6G) PEAK
Env. / Ins. : 22.5*C/42.8%
EUT : E705
Power Rating : AC 230V/50Hz
Test Mode : Running "H" Pattern And 1kHz Playing
DVI:1920*1080@60Hz
Line:1.8m

Data No. : 1
Ant. pol. : HORIZONTAL
Pre : 101.6kPa
Engineer : Bery_Guo

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Magin (dB)	Remark
1	1000.569	23.40	1.66	36.01	57.67	46.72	76.00	29.28	Peak
2	1001.125	23.40	1.66	36.01	48.70	37.75	56.00	18.25	Average
3	1490.528	25.17	2.22	35.27	55.51	47.63	76.00	28.37	Peak
4	1491.163	25.17	2.22	35.27	47.23	39.35	56.00	16.65	Average
5	2000.635	27.30	3.40	34.97	55.92	51.65	76.00	24.35	Peak
6	2001.263	27.30	3.40	34.97	47.25	42.98	56.00	13.02	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading-Amp Factor(Peak/Average).
2. The emission levels that are 20dB below the official limit are not reported.

Data: 2 File: D:\2014 Report DATA\T\TPV\ACS14Q1718.EM6 (124)



Site no. : 10m Chamber Data No. : 2
Dis. / Ant. : 3m 2013 3115 4580 Ant. pol. : VERTICAL
Limit : EN55022A (1-6G) PEAK Pre : 101.6kPa
Env. / Ins. : 22.5*C/42.8% Engineer : Bery_Guo
EUT : E705
Power Rating : AC 230V/50Hz
Test Mode : Running "H" Pattern And 1kHz Playing
DVI:1920*1080@60Hz
Line:1.8m

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Magin (dB)	Remark
1	1490.714	25.17	2.22	35.27	56.20	48.32	76.00	27.68	Peak
2	1491.659	25.17	2.22	35.27	48.52	40.64	56.00	15.36	Average
3	1774.128	26.35	2.91	35.09	45.39	39.56	56.00	16.44	Average
4	1775.526	26.36	2.92	35.09	53.15	47.34	76.00	28.66	Peak
5	2224.218	27.79	3.43	34.90	47.60	43.92	56.00	12.08	Average
6	2225.635	27.80	3.43	34.90	55.41	51.74	76.00	24.26	Peak

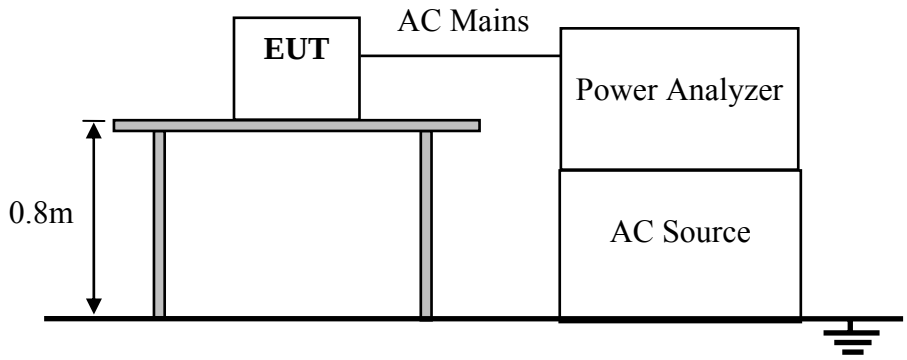
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading-Amp Factor(Peak/Average).
2. The emission levels that are 20dB below the official limit are not reported.

6. HARMONIC CURRENT TEST

6.1. Test Equipments

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	AC Source	California Instruments	5001ix	58481	Oct.31, 13	1 Year
2.	Power Analyzer	California Instruments	PACS-1	72627	Oct.31, 13	1 Year

6.2. Block Diagram of Test Setup



6.3. Test Standard

EN 61000-3-2: 2006+A1: 2009+A2: 2009; Class D

6.4. Limits of Harmonic Current

Limits for Class D Equipment		
Harmonic order (n)	**Maximum permissible harmonic current per watt (mA/W)**	**Maximum permissible harmonic current (A)**
3	3.4	0.23
5	1.9	1.14
7	1.0	0.77
9	0.5	0.40
11	0.35	0.33
13	0.30	0.21
15≤n≤39 (odd harmonic only)	3.85/n	0.15×15/n

Remark: if the EUT Power level is below 75 Watts and therefore has no defined limits.

6.5. EUT Configuration on Test

The configurations of EUT are listed in Section 3.5.

6.6. Operating Condition of EUT

Same as Conducted Emission test that is listed in Section 3.6. except the test set up replaced by Section 6.2.

6.7. Test Procedure

The EUT was placed on the top of a wooden table 0.8 meters above the ground and operated to produce the maximum harmonic components under normal operating conditions for each successive harmonic component in turn. The correspondent test program of test instrument to measure the current harmonics emanated from EUT is chosen. The measure time shall be not less than the necessary for the EUT to be exercised.

6.8. Test Results

PASS.

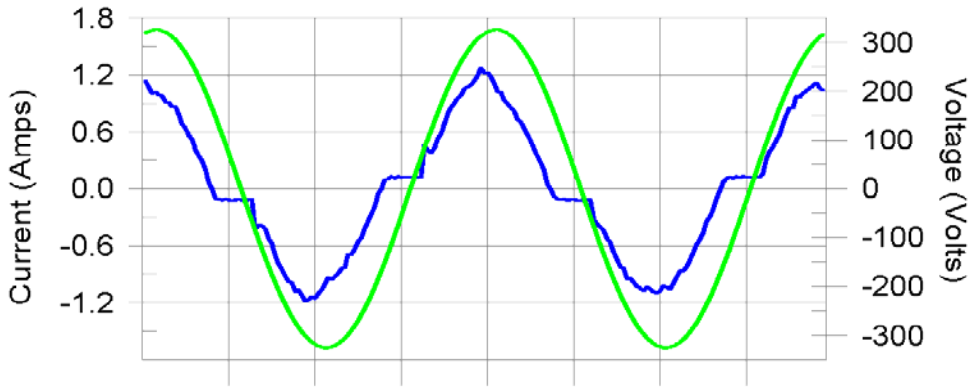
The EUT was tested and all the test results are listed in next pages.

Harmonics – Class-D per Ed. 4.0 (2014)(Run time) incl. inter-harmonics

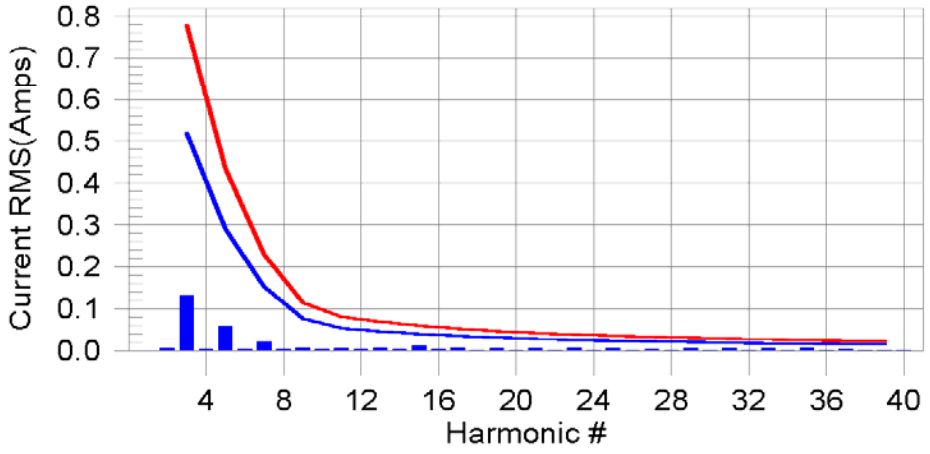
EUT: E705 **Tested by: SUN**
Test category: Class-D per Ed. 4.0 (2014) (European limits) **Test Margin: 100**
Test date: 2014-10-9 **Start time: 19:27:48** **End time: 19:30:40**
Test duration (min): 2.5 **Data file name: H-000382.cts_data**
Comment: Running "H" Pattern And 1KHz Playing
Customer: TPV

Test Result: Pass **Source qualification: Normal**

Current & voltage waveforms



Harmonics and Class D limit line **European Limits**



Test result: Pass Worst harmonic was #35 with 41.0% of the limit.

Current Test Result Summary (Run time)

EUT: E705 Tested by: SUN
Test category: Class-D per Ed. 4.0 (2014) (European limits) Test Margin: 100
Test date: 2014-10-9 Start time: 19:27:48 End time: 19:30:40
Test duration (min): 2.5 Data file name: H-000382.cts_data
Comment: Running "H" Pattern And 1KHz Playing
Customer: TPV

Test Result: Pass Source qualification: Normal
THC(A): 0.147 I-THD(%): 21.2 POHC(A): 0.013 POHC Limit(A): 0.066
Highest parameter values during test:

V_RMS (Volts):	230.04	Frequency(Hz):	50.00
I_Peak (Amps):	1.371	I_RMS (Amps):	0.710
I_Fund (Amps):	0.692	Crest Factor:	1.935
Power (Watts):	152.6	Power Factor:	0.938

Harm#	Harms(avg)	100%Limit	%of Limit	Harms(max)	150%Limit	%of Limit	Status
2	0.005	0.000	N/A	0.007	0.000	N/A	Pass
3	0.131	0.519	25.2	0.132	0.778	17.0	Pass
4	0.004	0.000	N/A	0.006	0.000	N/A	Pass
5	0.057	0.290	19.7	0.058	0.435	13.4	Pass
6	0.003	0.000	N/A	0.004	0.000	N/A	Pass
7	0.021	0.153	13.7	0.022	0.229	9.5	Pass
8	0.003	0.000	N/A	0.004	0.000	N/A	Pass
9	0.007	0.076	9.2	0.008	0.114	6.8	Pass
10	0.003	0.000	N/A	0.003	0.000	N/A	Pass
11	0.005	0.053	N/A	0.005	0.080	N/A	Pass
12	0.002	0.000	N/A	0.004	0.000	N/A	Pass
13	0.006	0.046	13.6	0.007	0.069	9.9	Pass
14	0.002	0.000	N/A	0.003	0.000	N/A	Pass
15	0.011	0.040	28.2	0.012	0.060	19.9	Pass
16	0.002	0.000	N/A	0.002	0.000	N/A	Pass
17	0.008	0.035	22.4	0.008	0.053	15.6	Pass
18	0.002	0.000	N/A	0.002	0.000	N/A	Pass
19	0.005	0.031	N/A	0.005	0.046	N/A	Pass
20	0.002	0.000	N/A	0.002	0.000	N/A	Pass
21	0.006	0.028	20.0	0.006	0.042	15.0	Pass
22	0.002	0.000	N/A	0.002	0.000	N/A	Pass
23	0.008	0.025	30.7	0.008	0.038	21.3	Pass
24	0.002	0.000	N/A	0.002	0.000	N/A	Pass
25	0.004	0.024	N/A	0.005	0.035	N/A	Pass
26	0.002	0.000	N/A	0.002	0.000	N/A	Pass
27	0.004	0.022	N/A	0.004	0.033	N/A	Pass
28	0.002	0.000	N/A	0.002	0.000	N/A	Pass
29	0.004	0.020	N/A	0.005	0.030	N/A	Pass
30	0.002	0.000	N/A	0.002	0.000	N/A	Pass
31	0.005	0.019	27.1	0.005	0.028	19.0	Pass
32	0.002	0.000	N/A	0.002	0.000	N/A	Pass
33	0.005	0.018	N/A	0.005	0.027	N/A	Pass
34	0.002	0.000	N/A	0.002	0.000	N/A	Pass
35	0.007	0.017	41.0	0.007	0.025	28.4	Pass
36	0.002	0.000	N/A	0.002	0.000	N/A	Pass
37	0.002	0.016	N/A	0.002	0.024	N/A	Pass
38	0.001	0.000	N/A	0.002	0.000	N/A	Pass
39	0.002	0.015	N/A	0.002	0.023	N/A	Pass
40	0.001	0.000	N/A	0.001	0.000	N/A	Pass

Note: Dynamic limits were applied for this test. The highest harmonics values in the above table may not occur at the same window as the maximum harmonics/limit ratio.

Voltage Source Verification Data (Run time)

EUT: E705 Tested by: SUN
Test category: Class-D per Ed. 4.0 (2014) (European limits) Test Margin: 100
Test date: 2014-10-9 Start time: 19:27:48 End time: 19:30:40
Test duration (min): 2.5 Data file name: H-000382.cts_data
Comment: Running "H" Pattern And 1KHz Playing
Customer: TPV

Test Result: Pass Source qualification: Normal

Highest parameter values during test:

Voltage (Vrms):	230.04	Frequency(Hz):	50.00
I_Peak (Amps):	1.371	I_RMS (Amps):	0.710
I_Fund (Amps):	0.692	Crest Factor:	1.935
Power (Watts):	152.6	Power Factor:	0.938

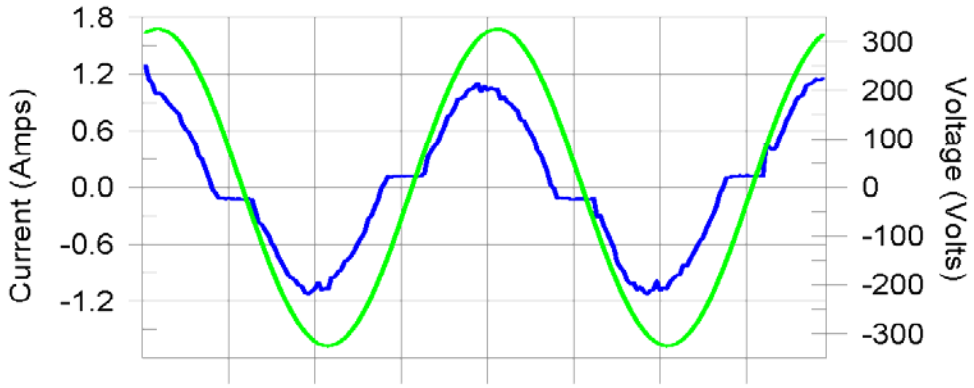
Harm#	Harmonics V-rms	Limit V-rms	% of Limit	Status
2	0.075	0.460	16.31	OK
3	0.459	2.070	22.16	OK
4	0.051	0.460	11.04	OK
5	0.054	0.920	5.85	OK
6	0.028	0.460	6.12	OK
7	0.055	0.690	7.96	OK
8	0.010	0.460	2.26	OK
9	0.015	0.460	3.23	OK
10	0.014	0.460	3.08	OK
11	0.013	0.230	5.67	OK
12	0.014	0.230	5.97	OK
13	0.009	0.230	3.85	OK
14	0.006	0.230	2.41	OK
15	0.012	0.230	5.39	OK
16	0.009	0.230	4.08	OK
17	0.010	0.230	4.22	OK
18	0.010	0.230	4.20	OK
19	0.009	0.230	4.08	OK
20	0.007	0.230	3.14	OK
21	0.013	0.230	5.65	OK
22	0.004	0.230	1.76	OK
23	0.011	0.230	4.68	OK
24	0.004	0.230	1.91	OK
25	0.007	0.230	2.87	OK
26	0.004	0.230	1.60	OK
27	0.008	0.230	3.40	OK
28	0.003	0.230	1.41	OK
29	0.009	0.230	3.87	OK
30	0.003	0.230	1.28	OK
31	0.009	0.230	3.77	OK
32	0.003	0.230	1.36	OK
33	0.007	0.230	3.00	OK
34	0.003	0.230	1.21	OK
35	0.012	0.230	5.19	OK
36	0.003	0.230	1.09	OK
37	0.005	0.230	2.10	OK
38	0.003	0.230	1.34	OK
39	0.004	0.230	1.68	OK
40	0.003	0.230	1.46	OK

Harmonics – Class-D per Ed. 4.0 (2014)(Run time) incl. inter-harmonics

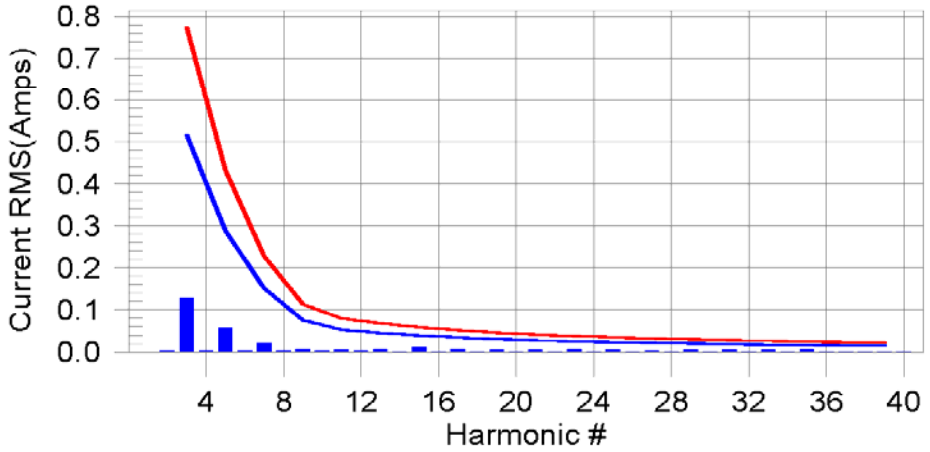
EUT: E705 **Tested by: SUN**
Test category: Class-D per Ed. 4.0 (2014) (European limits) **Test Margin: 100**
Test date: 2014-10-9 **Start time: 19:33:17** **End time: 19:36:09**
Test duration (min): 2.5 **Data file name: H-000383.cts_data**
Comment: DVD Playing
Customer: TPV

Test Result: Pass **Source qualification: Normal**

Current & voltage waveforms



Harmonics and Class D limit line **European Limits**



Test result: Pass Worst harmonic was #35 with 42.7% of the limit.

Current Test Result Summary (Run time)

EUT: E705 Tested by: SUN
Test category: Class-D per Ed. 4.0 (2014) (European limits) Test Margin: 100
Test date: 2014-10-9 Start time: 19:33:17 End time: 19:36:09
Test duration (min): 2.5 Data file name: H-000383.cts_data
Comment: DVD Playing
Customer: TPV

Test Result: Pass Source qualification: Normal
THC(A): 0.145 I-THD(%): 21.1 POHC(A): 0.013 POHC Limit(A): 0.065
Highest parameter values during test:

V_RMS (Volts):	230.04	Frequency(Hz):	50.00
I_Peak (Amps):	1.365	I_RMS (Amps):	0.705
I_Fund (Amps):	0.688	Crest Factor:	1.940
Power (Watts):	151.7	Power Factor:	0.938

Harm#	Harms(avg)	100%Limit	%of Limit	Harms(max)	150%Limit	%of Limit	Status
2	0.004	0.000	N/A	0.005	0.000	N/A	Pass
3	0.129	0.516	25.0	0.130	0.774	16.8	Pass
4	0.003	0.000	N/A	0.004	0.000	N/A	Pass
5	0.058	0.288	20.0	0.058	0.432	13.4	Pass
6	0.003	0.000	N/A	0.003	0.000	N/A	Pass
7	0.020	0.152	13.4	0.021	0.228	9.2	Pass
8	0.003	0.000	N/A	0.004	0.000	N/A	Pass
9	0.007	0.076	8.8	0.007	0.114	6.2	Pass
10	0.002	0.000	N/A	0.003	0.000	N/A	Pass
11	0.005	0.053	N/A	0.005	0.080	N/A	Pass
12	0.002	0.000	N/A	0.003	0.000	N/A	Pass
13	0.007	0.046	15.0	0.007	0.068	10.5	Pass
14	0.002	0.000	N/A	0.002	0.000	N/A	Pass
15	0.011	0.039	28.1	0.011	0.059	19.4	Pass
16	0.002	0.000	N/A	0.002	0.000	N/A	Pass
17	0.007	0.035	21.3	0.008	0.052	15.4	Pass
18	0.002	0.000	N/A	0.002	0.000	N/A	Pass
19	0.005	0.031	17.0	0.006	0.046	12.0	Pass
20	0.002	0.000	N/A	0.002	0.000	N/A	Pass
21	0.006	0.028	21.1	0.006	0.042	14.6	Pass
22	0.002	0.000	N/A	0.002	0.000	N/A	Pass
23	0.008	0.025	30.2	0.008	0.038	21.0	Pass
24	0.002	0.000	N/A	0.002	0.000	N/A	Pass
25	0.004	0.023	N/A	0.005	0.035	N/A	Pass
26	0.002	0.000	N/A	0.002	0.000	N/A	Pass
27	0.004	0.022	N/A	0.004	0.033	N/A	Pass
28	0.002	0.000	N/A	0.002	0.000	N/A	Pass
29	0.004	0.020	N/A	0.005	0.030	N/A	Pass
30	0.002	0.000	N/A	0.002	0.000	N/A	Pass
31	0.005	0.019	N/A	0.005	0.028	N/A	Pass
32	0.001	0.000	N/A	0.002	0.000	N/A	Pass
33	0.005	0.018	29.1	0.006	0.026	23.9	Pass
34	0.002	0.000	N/A	0.002	0.000	N/A	Pass
35	0.007	0.017	42.7	0.007	0.025	29.4	Pass
36	0.001	0.000	N/A	0.002	0.000	N/A	Pass
37	0.002	0.016	N/A	0.002	0.024	N/A	Pass
38	0.001	0.000	N/A	0.001	0.000	N/A	Pass
39	0.002	0.015	N/A	0.002	0.023	N/A	Pass
40	0.001	0.000	N/A	0.001	0.000	N/A	Pass

Note: Dynamic limits were applied for this test. The highest harmonics values in the above table may not occur at the same window as the maximum harmonics/limit ratio.

Voltage Source Verification Data (Run time)

EUT: E705 Tested by: SUN
Test category: Class-D per Ed. 4.0 (2014) (European limits) Test Margin: 100
Test date: 2014-10-9 Start time: 19:33:17 End time: 19:36:09
Test duration (min): 2.5 Data file name: H-000383.cts_data
Comment: DVD Playing
Customer: TPV

Test Result: Pass Source qualification: Normal

Highest parameter values during test:

Voltage (Vrms):	230.04	Frequency(Hz):	50.00
I_Peak (Amps):	1.365	I_RMS (Amps):	0.705
I_Fund (Amps):	0.688	Crest Factor:	1.940
Power (Watts):	151.7	Power Factor:	0.938

Harm#	Harmonics V-rms	Limit V-rms	% of Limit	Status
2	0.083	0.460	18.08	OK
3	0.467	2.070	22.58	OK
4	0.052	0.460	11.37	OK
5	0.057	0.920	6.21	OK
6	0.029	0.460	6.24	OK
7	0.057	0.690	8.30	OK
8	0.010	0.460	2.12	OK
9	0.016	0.460	3.51	OK
10	0.015	0.460	3.32	OK
11	0.014	0.230	6.25	OK
12	0.014	0.230	5.87	OK
13	0.010	0.230	4.20	OK
14	0.006	0.230	2.58	OK
15	0.012	0.230	5.43	OK
16	0.011	0.230	4.60	OK
17	0.010	0.230	4.34	OK
18	0.011	0.230	4.94	OK
19	0.009	0.230	3.77	OK
20	0.007	0.230	3.03	OK
21	0.014	0.230	5.97	OK
22	0.004	0.230	1.83	OK
23	0.010	0.230	4.45	OK
24	0.004	0.230	1.94	OK
25	0.007	0.230	3.11	OK
26	0.004	0.230	1.60	OK
27	0.008	0.230	3.41	OK
28	0.003	0.230	1.39	OK
29	0.008	0.230	3.60	OK
30	0.003	0.230	1.38	OK
31	0.008	0.230	3.30	OK
32	0.003	0.230	1.46	OK
33	0.007	0.230	3.02	OK
34	0.003	0.230	1.28	OK
35	0.013	0.230	5.51	OK
36	0.003	0.230	1.15	OK
37	0.005	0.230	2.18	OK
38	0.003	0.230	1.19	OK
39	0.004	0.230	1.55	OK
40	0.003	0.230	1.46	OK

7. VOLTAGE FLUCTUATIONS & FLICKER TEST

7.1. Test Equipment

Same as Section 6.1.

7.2. Block Diagram of Test Setup

Same as Section 6.2.

7.3. Test Standard

EN 61000-3-3: 2013

7.4. Limits of Voltage Fluctuation and Flick

Test Item	Limit	Note
P_{st}	1.0	P_{st} means Short-term flicker indicator
P_{lt}	0.65	P_{lt} means long-term flicker indicator
T_{max}	500ms	T_{max} means maximum time that d(t) exceeds 3.3%
d_{max}(%)	4%	d_{max} means maximum relative voltage change.
d_c(%)	3.3%	d_c means relative steady-state voltage change.

7.5. EUT Configuration on Test

The configurations of EUT are listed in Section 3.5.

7.6. Operating Condition of EUT

Same as Section 6.6.

7.7. Test Procedure

The EUT was placed on the top of a wooden table 0.8 meters above the ground and operated to produce the most unfavorable sequence of voltage changes under normal conditions During the flick measurement, the measure time shall include that part of whole operation changes. The observation period for short-term flicker indicator is 10 minutes and the observation period for long-term flicker indicator is 2 hours.

7.8. Test Results

PASS.

Please refer to the following page.

Flicker Test Summary per EN/IEC61000-3-3 (Run time)

EUT: E705 Tested by: SUN
Test category: All parameters (European limits) Test Margin: 100
Test date: 2014-10-9 Start time: 19:37:20 End time: 19:47:51
Test duration (min): 10 Data file name: F-000384.cts_data
Comment: DVD Playing
Customer: TPV

Test Result: Pass Status: Test Completed

Pst_i and limit line European Limits

Plt and limit line

Parameter values recorded during the test:

Vrms at the end of test (Volt):	229.81			
Highest dt (%):	0.00	Test limit (%):	N/A	N/A
T-max (mS):	0	Test limit (mS):	500.0	Pass
Highest dc (%):	0.00	Test limit (%):	3.30	Pass
Highest dmax (%):	0.00	Test limit (%):	4.00	Pass
Highest Pst (10 min. period):	0.064	Test limit:	1.000	Pass
Highest Plt (2 hr. period):	0.028	Test limit:	0.650	Pass

Flicker Test Summary per EN/IEC61000-3-3 (Run time)

EUT: E705 Tested by: SUN
Test category: All parameters (European limits) Test Margin: 100
Test date: 2014-10-9 Start time: 19:52:16 End time: 20:02:48
Test duration (min): 10 Data file name: F-000385.cts_data
Comment: Running "H" Pattern And 1KHz Playing
Customer: TPV

Test Result: Pass Status: Test Completed

Pst_t and limit line European Limits

Plt and limit line

Parameter values recorded during the test:

Vrms at the end of test (Volt):	229.77			
Highest dt (%):	0.00	Test limit (%):	N/A	N/A
T-max (mS):	0	Test limit (mS):	500.0	Pass
Highest dc (%):	0.00	Test limit (%):	3.30	Pass
Highest dmax (%):	0.00	Test limit (%):	4.00	Pass
Highest Pst (10 min. period):	0.064	Test limit:	1.000	Pass
Highest Plt (2 hr. period):	0.028	Test limit:	0.650	Pass

8. IMMUNITY PERFORMANCE CRITERIA

Performance Level

The test results shall be classified in terms of the loss of function or degradation of performance of the equipment under test, relative to a performance level by its manufacturer or the requestor of the test, or the agreed between the manufacturer and the purchaser of the product.

Definition related to the performance level:
1. Based on the used product standard
2. Based on the declaration of the manufacturer, requestor or purchaser

Performance criterion A

When seen from the normal viewing distance, the EUT shall operate with no change beyond the manufacturer's specification, in flicker, colour, focus and jitter (except for the power frequency magnetic field test).

Power frequency magnetic field test

For CRT monitors, the following also applies:
The jitter shall be measured using a measuring microscope as specified in 6.6.14 of ISO 9241-3.

The jitter (in mm) shall not exceed the value $\frac{(\text{character height in mm} + 0{,}3)\ \text{x}\ 2{,}5}{33{,}3}$ when the monitor is immersed in a continuous magnetic field of 1A/m (r.m.s.) at one of the power frequencies of 50Hz.

Alternatively, a field of 50A/m may be applied, and a transparent graduated mask used to assess the jitter. In that case, the jitter shall not exceed 50 times the value in the above formula.

NOTE-This test level is used to simplify the measurement of jitter. Lesser values of the test level may be used if non-linearity is experienced, due to, for example, saturation of screening material.

The EUT shall be tested in two positions, both perpendicular to the magnetic field.

Performance criterion B

Screen disturbances during the application of the test are permissible.

Performance criterion C

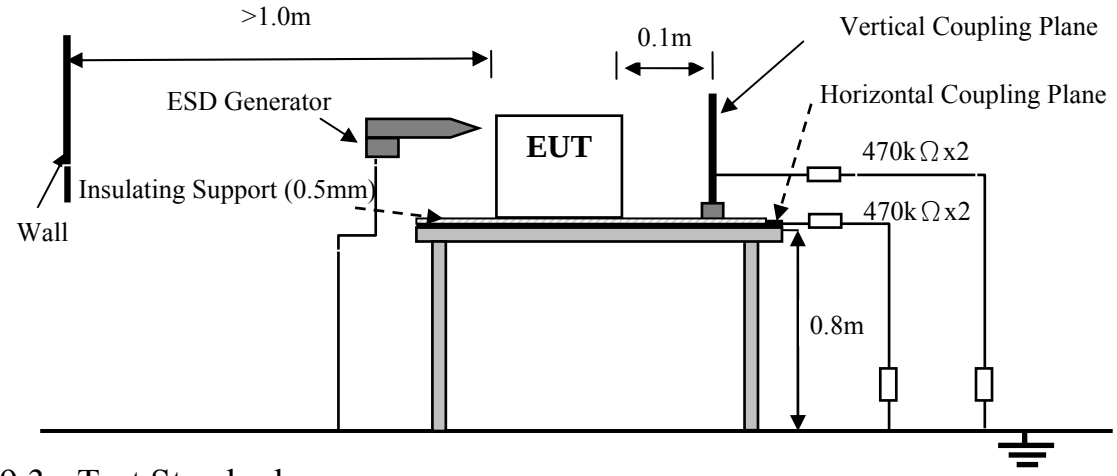
Failures which are not self-recovered after removal of the external disturbance, but which can be recovered to normal operation by reset or reboot are permissible.

9. ELECTROSTATIC DISCHARGE IMMUNITY TEST

9.1. Test Equipments

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	ESD Tester	EM Test	Dito	P1349126669	Jun. 05,14	1 Year

9.2. Block Diagram of Test Setup



9.3. Test Standard

EN 55024: 2010 (IEC 61000-4-2: 2008)
(Severity for Air Discharge were Level 1 at ±2 kV& Level 2 at ±4 kV& Level 3 at ±8 kV
Severity for Contact Discharge were Level 1 at ±2 kV & Level 2 at ±4 kV)

9.4. Severity Levels and Performance Criterion

Severity Level	Test Voltage Contact Discharge (kV)	Test Voltage Air Discharge (kV)	Performance criterion
1.	2	2	B
2.	4	4	
3.	6	8	
4.	8	15	
X	Special	Special	

9.5. EUT Configuration

The configurations of EUT are listed in Section 3.5.

9.6. Operating Condition of EUT

Same as Conducted Emission test that is listed in Section 3.6. except the test set up replaced by Section 9.2.

9.7. Test Procedure

9.7.1. Air Discharge:

The test was applied on non-conductive surfaces of EUT. The round discharge tip of the discharge electrode was approached as fast as possible to touch the EUT. After each discharge, the discharge electrode was removed from the EUT. The generator was re-triggered for a new single discharge and repeated 20 times for each pre-selected test point. This procedure was repeated until all the air discharge completed

9.7.2. Contact Discharge:

All the procedure was same as Section 9.7.1. except that the generator was re-triggered for a new single discharge and repeated 50 times for each pre-selected test point. The tip of the discharge electrode was touching the EUT before the discharge switch was operated.

9.7.3. Indirect discharge for horizontal coupling plane:

At least 20 single discharges were applied to the horizontal coupling plane, at points on each side of the EUT. The discharge electrode positions vertically at a distance of 0.1m from the EUT and with the discharge electrode touching the coupling plane.

9.7.4. Indirect discharge for vertical coupling plane:

At least 20 single discharges were applied to the center of one vertical edge of the coupling plane. The coupling plane, of dimensions 0.5m X 0.5m, was placed parallel to, and positioned at a distance of 0.1m from the EUT. Discharges were applied to the coupling plane, with this plane in sufficient different positions that the four faces of the EUT are completely illuminated.

9.8. Test Results

PASS.

The EUT was tested and all the test results are listed in next page.

Electrostatic Discharge Test Results

Audix Technology (Shenzhen) Co., Ltd.

Applicant	:	TPV Electronics (FuJian) Co., Ltd.	Test Date	:	Oct.17,2014
EUT	:	LCD Monitor	Temperature	:	25.4±0.6℃
M/N	:	E705	Humidity	:	47±3%
Test Voltage	:	AC 230V/50Hz	Test Mode	:	Same as Section 3.6
Test Engineer	:	Sun	Pressure	:	100.4±1kPa
Required Performance	:	B	Actual Performance	:	A & B

Air Discharge: ±2kV ±4kV ±8kV # For Air Discharge each Point Positive 10 times and negative 10 times discharge.

Contact Discharge: ±2kV ±4kV # For Contact Discharge each point positive 25 times and negative 25 times discharge

For the time interval between successive single discharges an initial value of one second.

Discharge Voltage (kV)	Type of discharge	Dischargeable Points	Performance		Result
			Requir	Observati	(Pass/Fail
±2	Contact	3,4,5,6,7,9,11	B	A	**Pass**
±4	Contact	3,4,5,6,7,9,11	B	A	**Pass**
±2	Air	1,2,3,4,5,6,7,810,11,12,13,14,15	B	A	**Pass**
±4	Air	1,2,3,4,5,6,7,810,11,12,13,14,15	B	A	**Pass**
±8	Air	1,2,3,4,5,6,7,810,11,12,13,14,15	B	B	**Pass**
±2	HCP-Bottom	Edge of the HCP	B	A	**Pass**
±2	VCP-Front	Center of the VCP	B	A	**Pass**
±2	VCP-Left	Center of the VCP	B	A	**Pass**
±2	VCP-Back	Center of the VCP	B	A	**Pass**
±2	VCP-Right	Center of the VCP	B	A	**Pass**
±4	HCP-Bottom	Edge of the HCP	B	A	**Pass**
±4	VCP-Front	Center of the VCP	B	A	**Pass**
±4	VCP-Left	Center of the VCP	B	A	**Pass**
±4	VCP-Back	Center of the VCP	B	A	**Pass**
±4	VCP-Right	Center of the VCP	B	A	**Pass**

Discharge Points Description

1	Slots	9	Screws / Metal
2	Screen	10	AC In Port
3	Rs232 Port	11	USB Port
4	VGA Port	12	Buttons / LED
5	HDMI/ Display Port	13	Key lock
6	DVI Port	14	Spencer Port
7	LAN Port	15	Switch
8	Audio In / out Port	16	

Remark: After discharge to the ungrounded part of EUT, it needs the bleeder resistor to remove the charge prior to next ESD pulse.
The Class "B" Means the screen will twinkle ; data transmitting from LAN port was delayed for one second during test, but it will recover to normal when stop test.

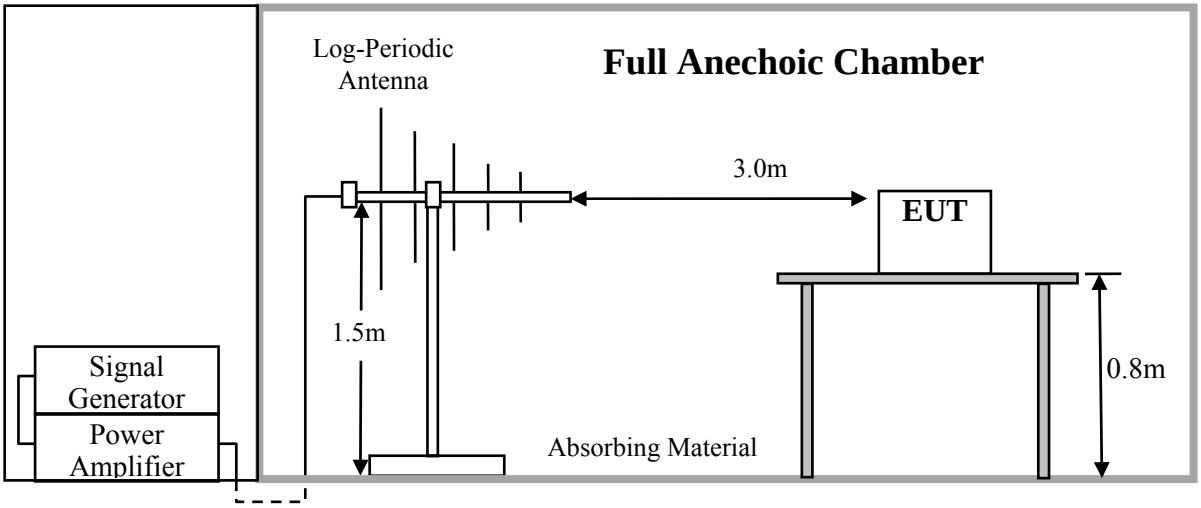
Discharge was considered on Contact and Air and Horizontal Coupling Plane (HCP) and Vertical Coupling Plane (VCP).

10. RF FIELD STRENGTH SUSCEPTIBILITY TEST

10.1. Test Equipments

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	2#Chamber	AUDIX	N/A	N/A	Apr. 28,14	1Year
2.	Signal Generator	Agilent	N5181A	MY49061013	Oct.31, 13	1Year
3	Amplifier	A&R	100W/1000M1	17028	NCR	NCR
4.	Power Meter	Anritsu	ML2487A	6K00002472	Aug. 20,14	1Year
5.	Power Sensor	Anritsu	MA2491A	032516	Aug. 20,14	1Year
6.	Log-periodic Antenna	A&R	AT1080	16512	NCR	NCR
NCR: No Calibration required (Calibrated with system)						

10.2. Block Diagram of Test Setup



10.3. Test Standard

EN 55024: 2010 (IEC 61000-4-3: 2010)
(Severity Level 2 at 3V / m)

10.4. Test Severity Level and Performance Criterion

Severity Level	Test Field Strength V/m	Performance Criteria
1.	1	**A**
2.	3	
3.	10	
X.	Special	

10.5. EUT Configuration

The configurations of EUT are listed in Section 3.5.

10.6. Operating Condition of EUT

Same as Conducted Emission test that is listed in Section 3.6. except the test set up replaced by Section 10.2.

10.7. Test Procedure

Testing was performed in a Fully anechoic chamber as recommended by IEC 61000-4-3. The EUT was placed on an 80 cm high non-conductive table located in the area of field uniformity. The radiating antenna was placed 3m in front of the EUT and Support system, and dwell time of the radiated interference was controlled by an automated, computer-controlled system. The signal source was stepped through the applicable frequency range at a rate no faster than 1% of the fundamental. The signal was amplitude modulated 80% over the frequency range 80 MHz to 1GHz at a level of 3 V/m. The dwell time was set at 3 s. Field presence was monitored during testing via a field probe placed in close proximity to the EUT. Throughout testing, the EUT was closely monitored for signs of susceptibility. The test was performed with the antennae oriented in both a horizontal and vertical polarization.

All the scanning conditions are as follows:

Test conditions	
Frequency	80MHz-1GHz
Frequency increments step	1% of momentary used
Test level	3V/m (unmodulated)
Dwell time	3s
Test signal	80% amplitude modulated by 1kHz sinusoidal audio signal

10.8. Test Results

PASS.

The EUT was tested and all the test results are listed in next page.

RF Field Strength Susceptibility Test Results

Audix Technology (Shenzhen) Co., Ltd.

Applicant	:	TPV Electronics (FuJian) Co., Ltd.	Test Date	:	Oct.20, 2014
EUT	:	LCD Monitor	Temperature	:	24.7±0.6℃
M/N	:	E705	Humidity	:	45.3±3%
Test Voltage	:	AC 230V/50Hz	Pressure	:	100.8±1kPa
Test Engineer	:	Mark	Test Mode	:	Same as Section 3.6
Required Performance	:	A	Actual Performance	:	A

Modulation: ☑ AM ☐ Pulse ☐ none 1 kHz 80%

Frequency Rang :80 MHz -1000MHz

	Horizontal		Vertical		Result
	Required	Observation	Required	Observation	(Pass / Fail)
Front	A	A	A	A	Pass
Right	A	A	A	A	Pass
Rear	A	A	A	A	Pass
Left	A	A	A	A	Pass

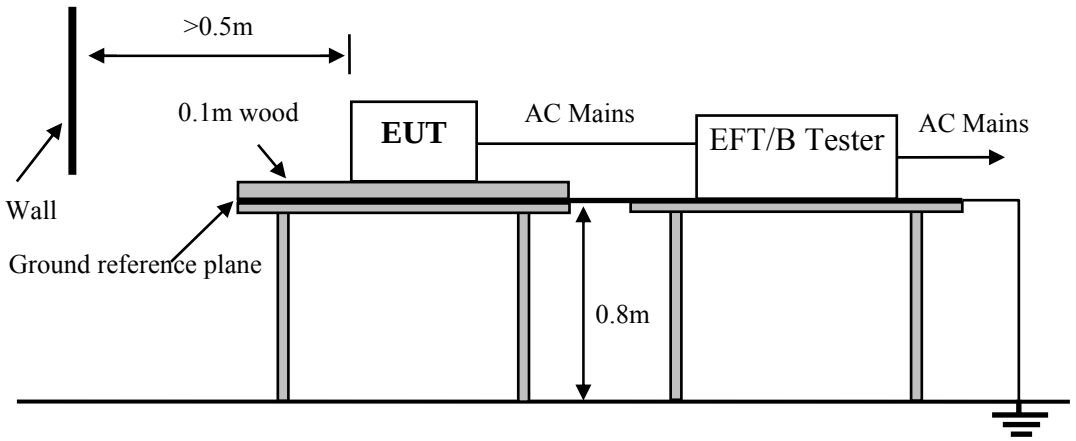
Remark:

11. ELECTRICAL FAST TRANSIENT/BURST IMMUNITY TEST

11.1. Test Equipments

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Burst Tester	TESEQ	NSG3025	28017	Apr. 28,14	1 Year
2.	CDN	TESEQ	CDN8014	29638	Apr. 28,14	1 Year

11.2. Block Diagram of Test Setup



11.3. Test Standard

EN 55024: 2010 (IEC 61000-4-4: 2012)
(Severity Level 1 at 0.5kV & Level 2 at 1kV)

11.4. Severity Levels and Performance Criterion

Open Circuit Output Test Voltage ±10%			
Severity Level	On Power Supply Lines	On I/O (Input/Output) Signal data and control lines	Performance criterion
1.	0.5 kV	0.25 kV	B
2.	1 kV	0.5 kV	
3.	2 kV	1 kV	
4.	4 kV	2 kV	
X	Special	Special	

11.5. EUT Configuration

The configurations of EUT are listed in Section 3.5.

11.6. Operating Condition of EUT

Same as Conducted Emission test that is listed in Section 3.6. except the test set up replaced by Section 11.2.

11.7. Test Procedure

The EUT and its simulators were placed on the ground reference plane and were insulated from it by a wood support 0.1m ± 0.01m thick. The ground reference plane was 1m*1m metallic sheet with 0.65mm minimum thickness. This reference ground plane was pMarkect beyond the EUT by at least 0.1m on all sides and the minimum distance between EUT and all other conductive structure, except the ground plane was more than 0.5m. All cables to the EUT was placed on the wood support, cables not subject to EFT/B was routed as far as possible from the cable under test to minimize the coupling between the cables.

11.7.1. For input and AC power ports:

The EUT was connected to the power mains by using a coupling device that couples the EFT interference signal to AC power lines. Both positive transients and negative transients of test voltage were applied during compliance test and the duration of the test can't less than 1min.

11.7.2. For signal lines and control lines ports:

Ports which are intended to be connected to telecommunication networks (e.g. public switched telecommunication networks, integrated services digital networks, local area networks and similar networks.)

11.7.3. For DC input and DC output power ports:

It's unnecessary to test.

11.8. Test Results

PASS.

The EUT was tested and all the test results are listed in next page.

Electrical Fast Transient/Burst Test Results

Audix Technology (Shenzhen)Co., Ltd.

Applicant	:	TPV Electronics (FuJian) Co., Ltd.	Test Date	:	Oct.17,2014
EUT	:	LCD Monitor	Temperature	:	25.4±0.6℃
M/N	:	E705	Humidity	:	47±3%
Test Voltage	:	AC 230V/50Hz	Test Mode	:	Same as Section 3.6
Test Engineer	:	Sun	Pressure	:	100.4±1kPa
Required Performance	:	B	Actual Performance	:	A&B

Repetition Frequency : 5 kHz / 100 kHz Burst Duration : 15ms Burst Period: 300ms

Inject Time(s): 120s Inject Method: Direct

Inject Line: ☑ AC Mains ☐ DC Supply ☑ Signal

Line	Test Voltage	Performance			Result
		Required	Observation(+)	Observation(-)	(Pass/Fail)
L	0.5kV	B	A	A	Pass
	1kV	B	B	B	Pass
N	0.5kV	B	A	A	Pass
	1kV	B	B	B	Pass
PE	0.5kV	B	A	A	Pass
	1kV	B	B	B	Pass
L N	0.5kV	B	A	A	Pass
	1kV	B	B	B	Pass
L PE	0.5kV	B	A	A	Pass
	1kV	B	B	B	Pass
N PE	0.5kV	B	A	A	Pass
	1kV	B	B	B	Pass
L N PE	0.5kV	B	A	A	Pass
	1kV	B	B	B	Pass
Signal Line	0.5kV	B	B	B	Pass

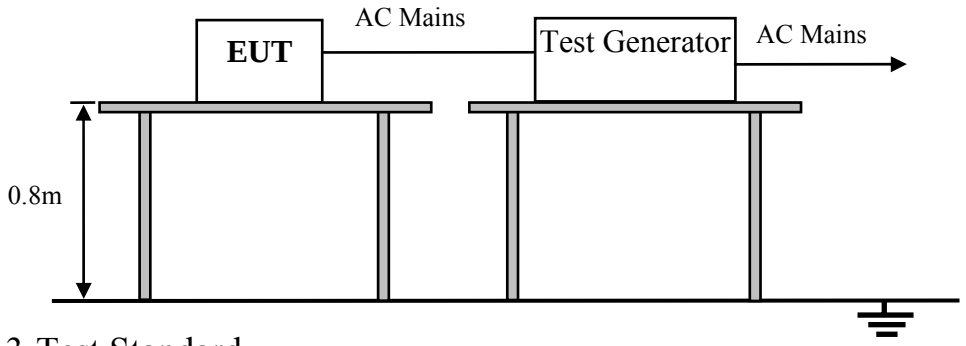
Remark: The Class “B” Means the screen will twinkle ; data transmitting from LAN port was delayed for one second during test, but it will recover to normal when stop test.

12. SURGE TEST

12.1. Test Equipments

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	Transient Test System	EMC PARTNER	TRANSIENT 2000	TRA2006 F-S-T-D-R -1500	Oct.31, 13	1 Year
2	CDN	EMC PARTNER	CDN-UTP8	CDN-UTP8-1508	Oct.31, 13	1 Year
3	CDN	EMC PARTNER	CDN2000-06-25	CDN2000-06-25 0111	Oct.31, 13	1 Year

12.2. Block Diagram of Test Setup



12.3. Test Standard

EN 55024: 2010 (IEC 61000-4-5: 2005)

(Severity Level**:** Line to Line was Level 1 at 0.5kV & Level 2 at 1kV;
Line to ground was Level 1 at 0.5kV & Level 2 at 1kV;level 3 at 2kV)

12.4. Severity Levels and Performance Criterion

Severity Level	Open-Circuit Test Voltage kV	Performance criterion
1 2 3 4 *	0.5 1.0 2.0 4.0 Special	B

12.5. EUT Configuration

The configurations of EUT are listed in Section 3.5.

12.6. Operating Condition of EUT

Same as Conducted Emission test that is listed in Section 3.6. except the test set up replaced by Section 12.2

12.7. Test Procedure

1) Set up the EUT and test generator as shown on Section 12.2.
2) For line-to-line coupling mode, provide a 1kV 1.2/50us voltage surge (at open-circuit condition) and 8/20us current surge to EUT selected points, and for active line / neutral lines to ground are same except test level is 2kV.
3) At least 5 positive and 5 negative (polarity) tests with a maximum 1/min repetition rate are applied during test.
4) Different phase angles are done individually.
5) Record the EUT operating situation during compliance test and decide the EUT immunity criterion for above each test.

12.8. Test Results

PASS.

The EUT was tested and all the test results are listed in next page.

Surge Immunity Test Results

Audix Technology (Shenzhen) Co., Ltd.

Applicant	:	TPV Electronics (FuJian) Co., Ltd.	Test Date	:	Oct.17,2014
EUT	:	LCD Monitor	Temperature	:	25.4±0.6℃
M/N	:	E705	Humidity	:	47±3%
Power Supply	:	AC 230V/50Hz	Test Mode	:	Same as Section 3.6
Test Engineer	:	Sun	Pressure	:	100.4±1kPa
Required Performance	:	**B&C**	Actual Performance	:	**A&B**

No.of pluse: 5 Interval:60 Seconds

Line : ☑ AC Mains ☐ DC Supply ☑ Signal

Location	Volt	500V			1kV			2kV			Result
	Phase	Performance			Performance			Performance			(Pass/Fail)
		Required	+	-	Required	+	-	Required	+	-	
L-N	0°	B	A	A	B	B	B				Pass
	90°	B	A	A	B	B	B				Pass
	180°	B	A	A	B	B	B				Pass
	270°	B	A	A	B	B	B				Pass
L-PE	0°	B	A	A	B	A	A	B	A	A	Pass
	90°	B	A	A	B	A	A	B	A	A	Pass
	180°	B	A	A	B	A	A	B	A	A	Pass
	270°	B	A	A	B	A	A	B	A	A	Pass
N-PE	0°	B	A	A	B	A	A	B	A	A	Pass
	90°	B	A	A	B	A	A	B	A	A	Pass
	180°	B	A	A	B	A	A	B	A	A	Pass
	270°	B	A	A	B	A	A	B	A	A	Pass
Signal Line		C	A	A	C	B	B				Pass

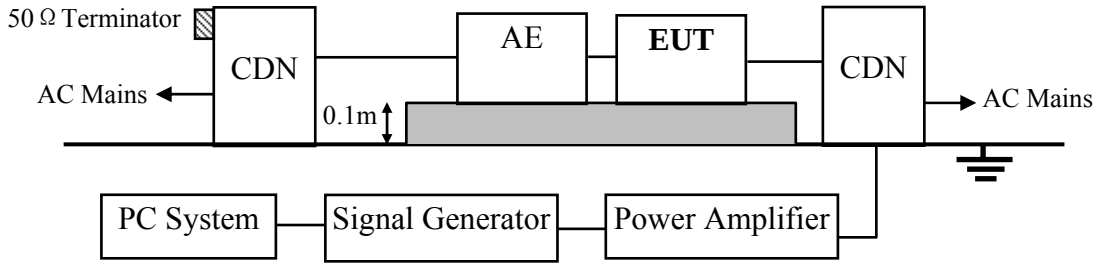
Remark: The Class “B” Means data transmitting from LAN Port was interrupted during test but it can recover by itself.

13. INJECTED CURRENTS SUSCEPTIBILITY TEST

13.1. Test Equipments

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Signal Generator	Agilent	N5181A	MY49061013	Oct.31, 13	1 Year
2.	Amplifier	AR	25A250A	19152	NCR	NCR
3.	Power meter	HP	436A	2016A07891	Apr. 28,14	1Year
4.	Power sensor	Agilent	8482B	MY41090514	Nov.23, 13	1Year
5.	CDN	FCC	FCC-801-M3-25	107	Apr. 28,14	1 Year
6.	CDN	FCC	FCC-801-M3-25	07045	Apr. 28,14	1 Year
7.	PC	N/A	N/A	N/A	N/A	N/A
8.	Attenuator	Weinschel	40-6-34	LJ092	Apr. 28,14	1 Year
9.	EM Injection Clamp	FCC	F-203I-23mm	403	Apr. 28,14	1 Year
10.	RF Cable	MICABLE	A04-07-07-2M	09111340	NCR	NCR
11.	RF Cable	STORM	MFR-57500	90-195-2MTR	NCR	NCR
NCR: No Calibration required (Calibrated with system)						

13.2. Block Diagram of Test Setup



13.3. Test Standard

EN 55024: 2010 (IEC 61000-4-6: 2013)
(Severity Level 2 at 3V (r.m.s.) and frequency is from 0.15MHz to 80MHz)

13.4. Severity Levels and Performance Criterion

Severity Level	Voltage Level (e.m.f.) V	Performance criterion
1	1	A
2	3	
3	10	
X	Special	

13.5. EUT Configuration

The configurations of EUT are listed in Section 3.5.

13.6. Operating Condition of EUT

Same as Conducted Emission test that is listed in Section 3.6. except the test set up replaced by Section 13.2.

13.7. Test Procedure

1) Set up the EUT, CDN and test generators as shown on Section 13.2.
2) Let the EUT work in test mode and test it.
3) The EUT are placed on an insulating support 0.1m high above a ground reference plane. CDN (coupling and decoupling device) is placed on the ground plane about 0.3m from EUT. Cables between CDN and EUT are as short as possible, and their height above the ground reference plane shall be between 10 and 30 mm (where possible).
4) The disturbance signal described below is injected to EUT through CDN.
5) The EUT operates within its operational mode(s) under intended climatic conditions after power on.
6) The frequency range is swept from 0.150MHz to 80MHz using 3V signal level, and with the disturbance signal 80% amplitude modulated with a 1kHz sine wave.
7) The rate of sweep shall not exceed $1.5*10^{-3}$decades/s. Where the frequency is swept incrementally, the step size shall not exceed 1% of the start and thereafter 1% of the preceding frequency value.
8) Recording the EUT operating situation during compliance testing and decide the EUT immunity criterion.

13.8. Test Results

PASS.

The EUT was tested and all the test results are listed in next page.

Injected Currents Susceptibility Test Results

Audix Technology (Shenzhen)Co.,Ltd.

Applicant	:	TPV Electronics (FuJian) Co., Ltd.	Test Date	:	Oct.19, 2014
EUT	:	LCD Monitor	Temperature	:	23.7±0.6℃
M/N	:	E705	Humidity	:	45±3%
Power Supply	:	AC 230V/50Hz	Test Mode	:	Same as Section 3.6
Test Engineer	:	Mark	Pressure	:	101.6±1kPa
Required Performance	:	A	Actual Performance	:	A

Frequency Range (MHz)	Injected Position	Voltage Level (e.m.f.)	Required	Observation	Result (Pass / Fail)
0.15 ~ 20	AC Mains	3V	A	A	PASS
20 ~ 80	AC Mains	3V	A	A	PASS
0.15 ~ 20	Lan line	3V	A	A	PASS
20 ~ 80	Lan line	3V	A	A	PASS

Modulation Signal: 1kHz 80% AM

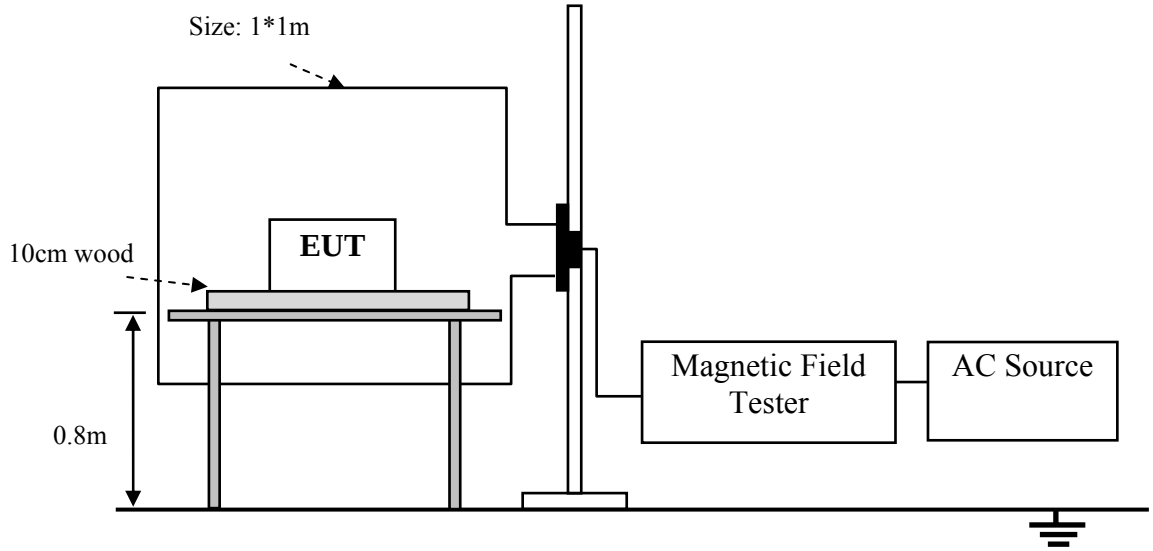
Remark:

14. MAGNETIC FIELD IMMUNITY TEST

14.1. Test Equipments

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Magnetic Field Tester	HEAFELY	MAG100.1	083858-10	Apr. 28,14	1 Year

14.2. Block Diagram of Test Setup



14.3. Test Standard

EN 55024: 2010 (IEC 61000-4-8: 2009)
(Severity Level 1 at 1A/m)

14.4. Severity Levels and Performance Criterion

Severity Level	Magnetic Field Strength A/m	Performance criterion
1.	1	A
2.	3	
3.	10	
4.	30	
5.	100	
X.	Special	

14.5. EUT Configuration on Test

The configurations of EUT are listed in Section 3.5.

14.6. Operating Condition of EUT

Same as Conducted Emission test that is listed in Section 3.6. except the test set up replaced by Section 14.2.

14.7. Test Procedure

The EUT was subjected to the test magnetic field by using the induction coil of standard dimensions (1m*1m) and shown in Section 14.2. The induction coil was then rotated by 90° in order to expose the EUT to the test field with different orientations.

14.8. Test Results

PASS.

The EUT was tested and all the test results are listed in next page.

Magnetic Field Immunity Test Results

Audix Technology (Shenzhen) Co., Ltd.

Applicant	:	TPV Electronics (FuJian) Co., Ltd.	Test Date	:	Oct.19, 2014
EUT	:	LCD Monitor	Temperature	:	23.5±0.6℃
M/N	:	E705	Humidity	:	43.6±3%
Test Voltage	:	AC 230V/50Hz	Test Mode	:	Same as Section 3.6
Test Engineer	:	Mark	Pressure	:	101.2±1KPa
Required Performance	:	A	Actual Performance	:	A

Test Level	Testing Duration	Coil Orientation	Required	Observation	Result (Pass/Fail)
1A/m	5 min / coil	X	A	A	PASS
1A/m	5 min / coil	Y	A	A	PASS
1A/m	5 min / coil	Z	A	A	PASS

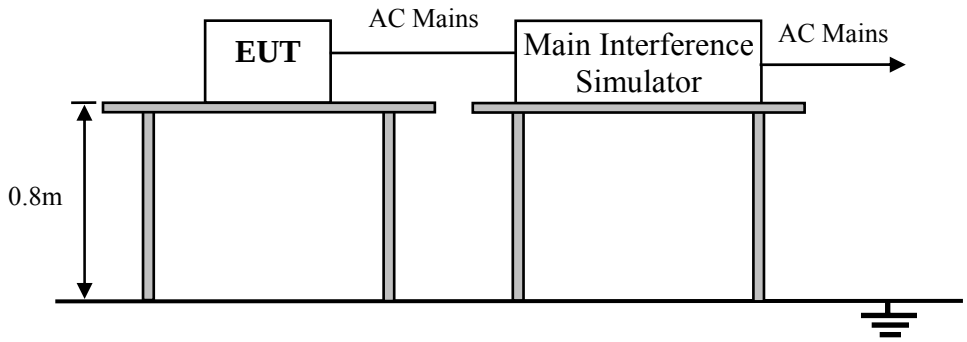
Remark:

15. VOLTAGE DIPS AND INTERRUPTIONS TEST

15.1. Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Main Interference Simulator	HAEFELY	PLINE 1610	083690-05	Apr. 28,14	1 Year

15.2. Block Diagram of Test Setup



15.3. Test Standard

EN 55024: 2010 (IEC 61000-4-11: 2004)

15.4. Severity Levels and Performance Criterion

Test Level %U_T	Voltage dip and short interruptions %U_T	Duration (in period)	Performance Criterion
0	100	250	C
0	100	0.5	B
70	30	25	C

15.5. EUT Configuration

The configurations of EUT are listed in Section 3.5.

15.6. Operating Condition of EUT

Same as Conducted Emission test that is listed in Section 3.6. except the test set up replaced by Section 15.2.

15.7. Test Procedure

1) The EUT and test generator were setup as shown on Section 15.2.
2) The interruption is introduced at selected phase angles with specified duration.
3) Record any degradation of performance.

15.8. Test Results

PASS.

The EUT was tested and all the test results are listed in next page.

Voltage Dips And Interruptions Test Results

Audix Technology (Shenzhen) Co., Ltd.

Applicant	:	TPV Electronics (FuJian) Co., Ltd.	Test Date	:	Oct.18, 2014
EUT	:	LCD Monitor	Temperature	:	24±0.6℃
M/N	:	E705	Humidity	:	46±3%
Power Supply	:	AC 100V/50Hz ; AC 230V/50Hz	Test Mode	:	Same as Section 3.6
Test Engineer	:	Mark	Pressure	:	100.7±1kPa
Required Performance	:	B & C	Actual Performance	:	A & B & C

Test Level % U_T	Voltage Dips & Short Interruptions % U_T	Duration (in period)	Phase Angle	Required	Observation	Result (Pass / Fail)
0	100	0.5P	0°-360°	B	A	PASS
70	30	25P	0°-360°	C	B	PASS
0	100	250P	0°-360°	C	B	PASS

Note 1: U_T is the rated voltage for the equipment.
Note 2: The frequency of the test voltage shall be within ±2% of the rated frequency, the output voltage shall be within ±5% of the rated voltage.

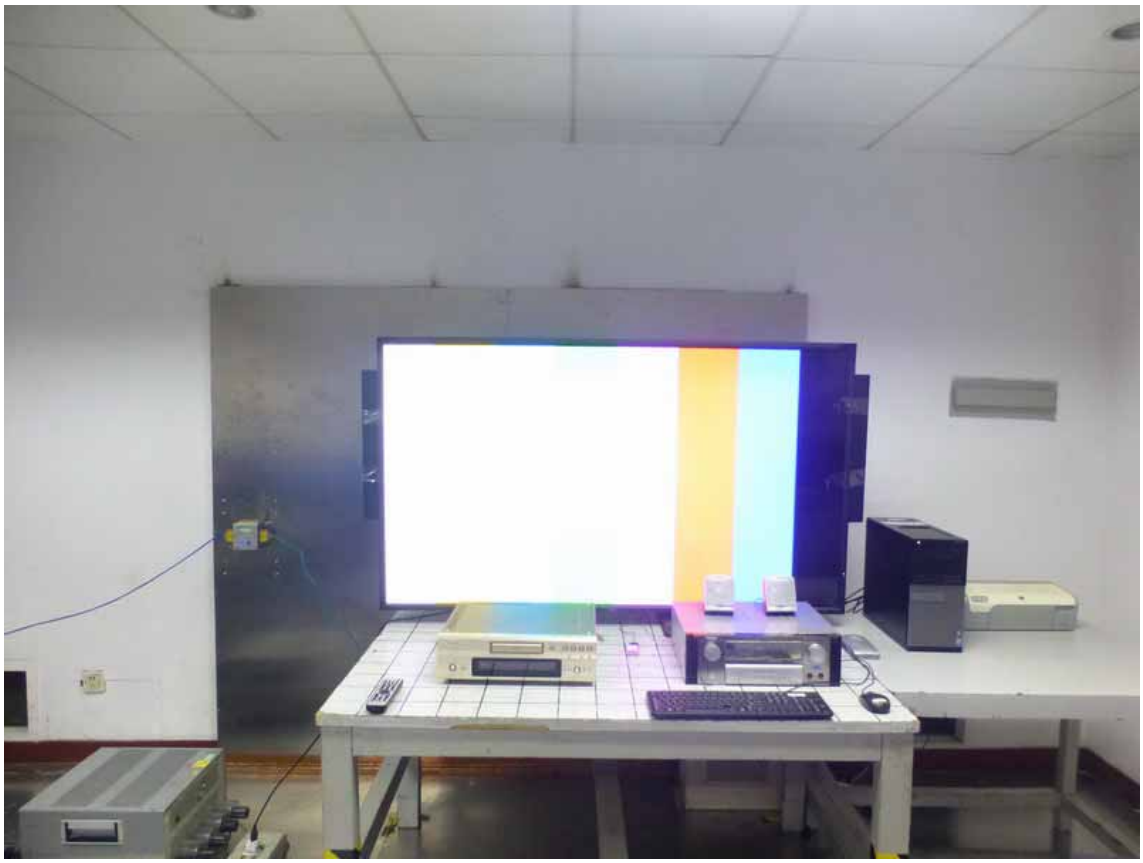
Remark: The Class "B" means the screen of EUT was be black data transmitting form LAN Port was interrupted but it can recover to normal by self

16. PHOTOGRAPHS

16.1. Photos of Power Line Conducted Emission Test

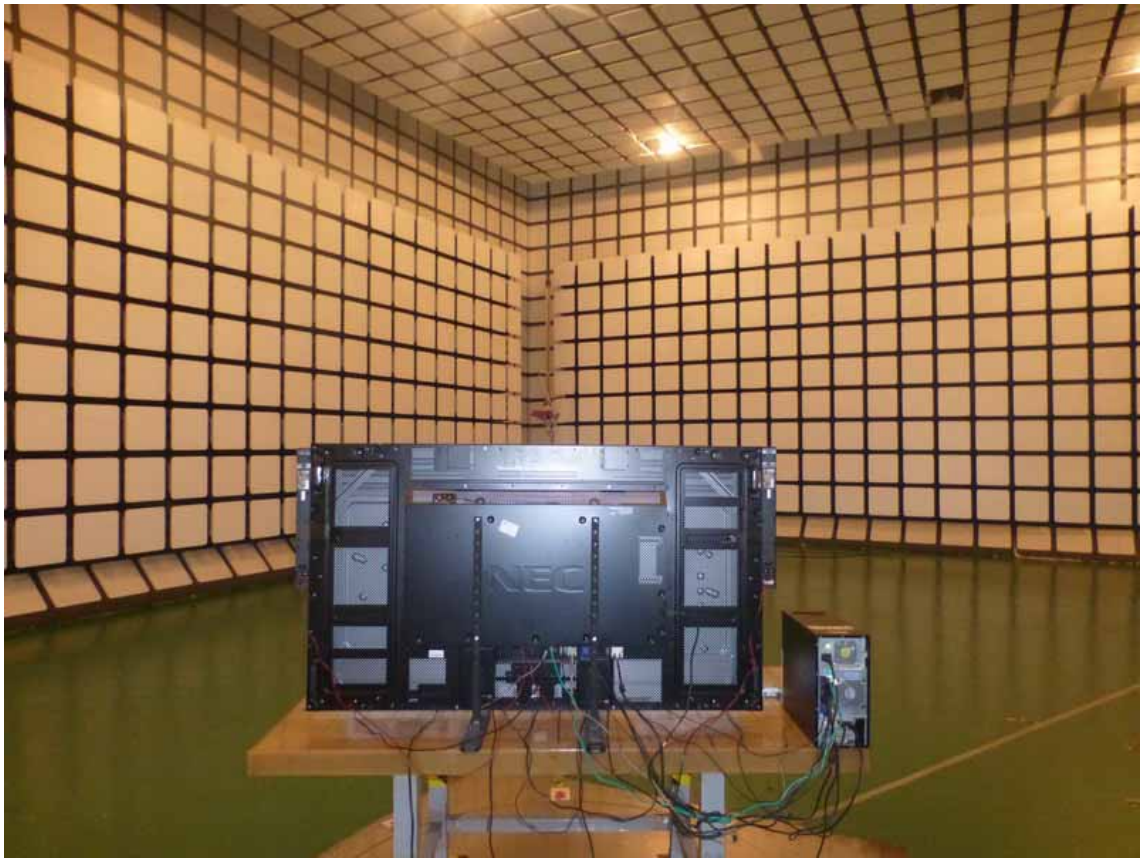
PC Mode:

DVD Mdoe:



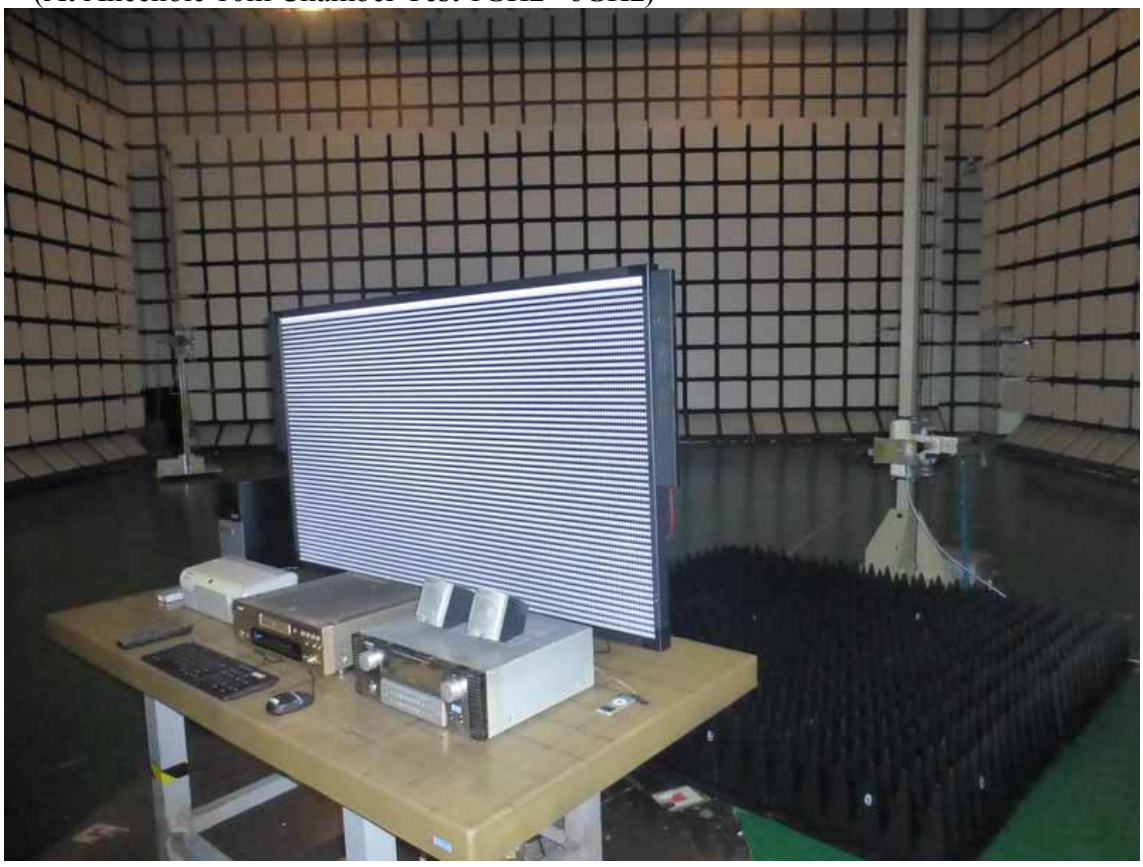
16.2. Photos of Conducted Disturbance at Telecommunication Ports Test

16.3. Photos of Radiated Emission Test (In Anechoic Chamber)



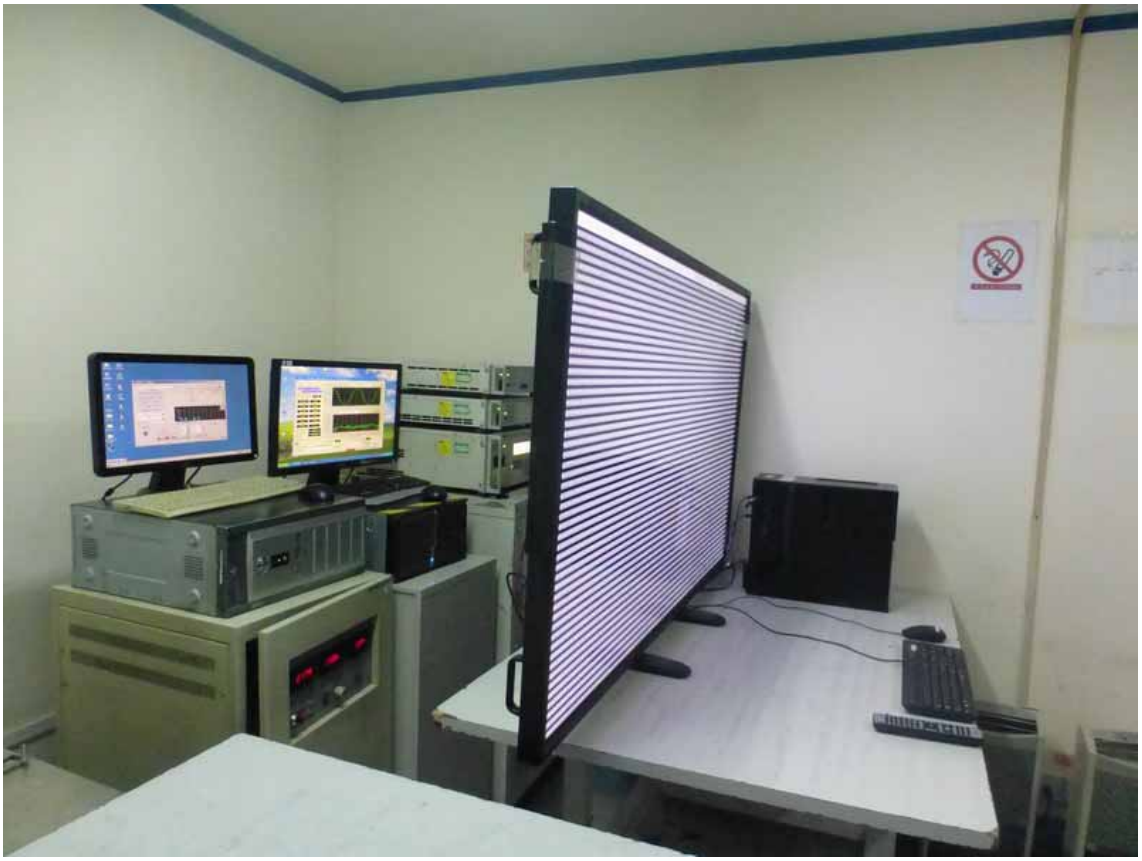
DVD Mode:

(At Anechoic 10m Chamber Test 1GHz –6GHz)

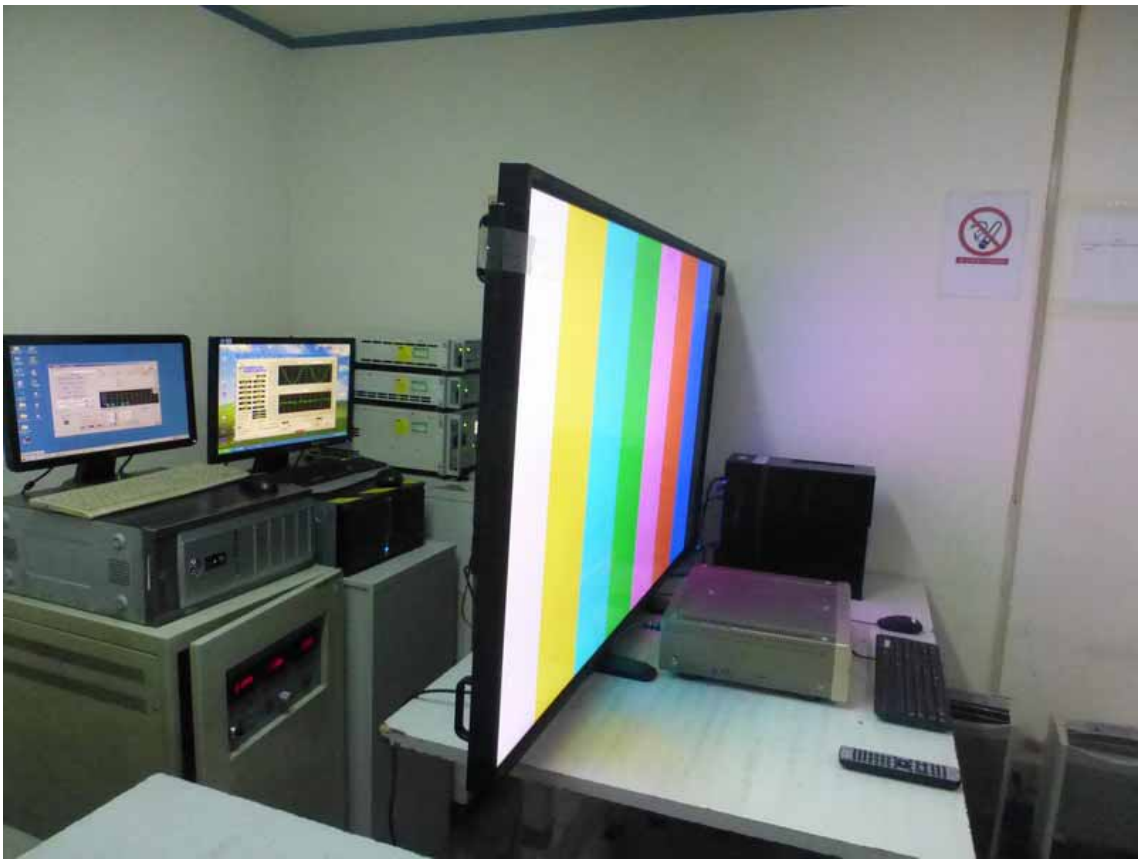


16.4. Photo of Harmonic / Flicker Test

PC Mode

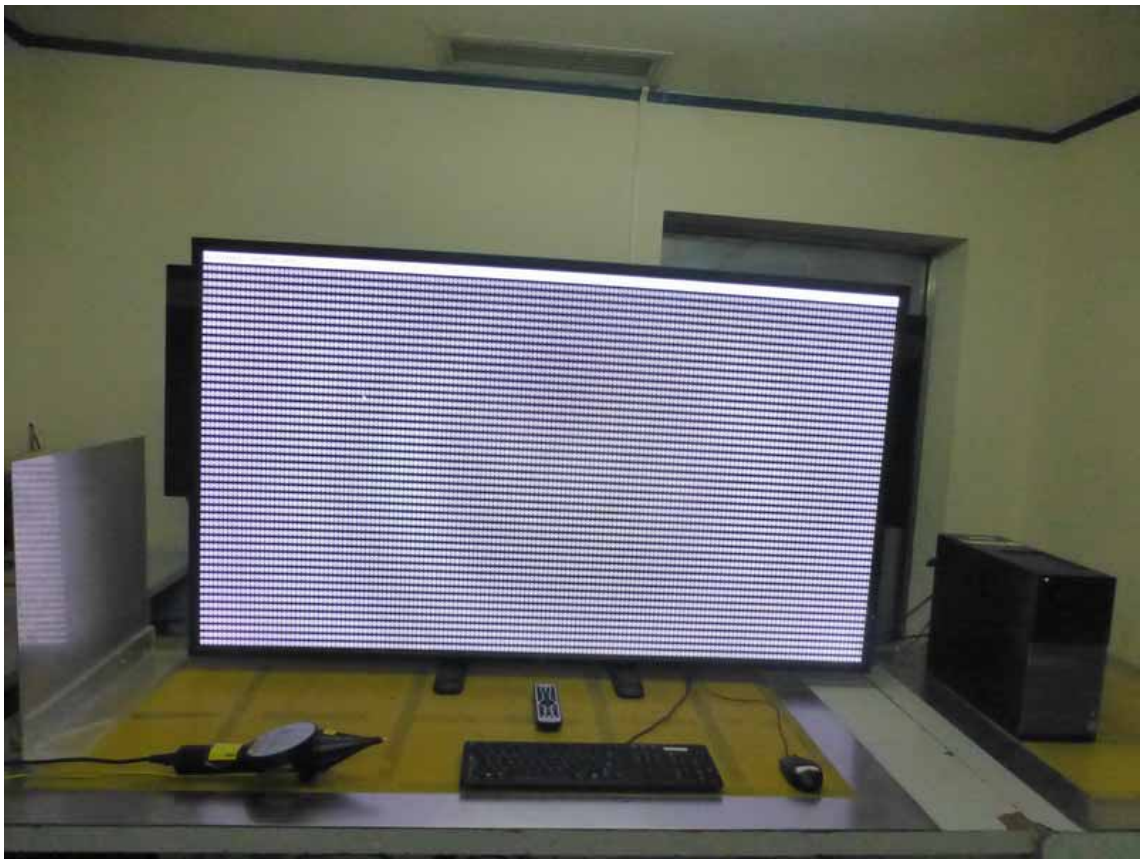


DVD Mode

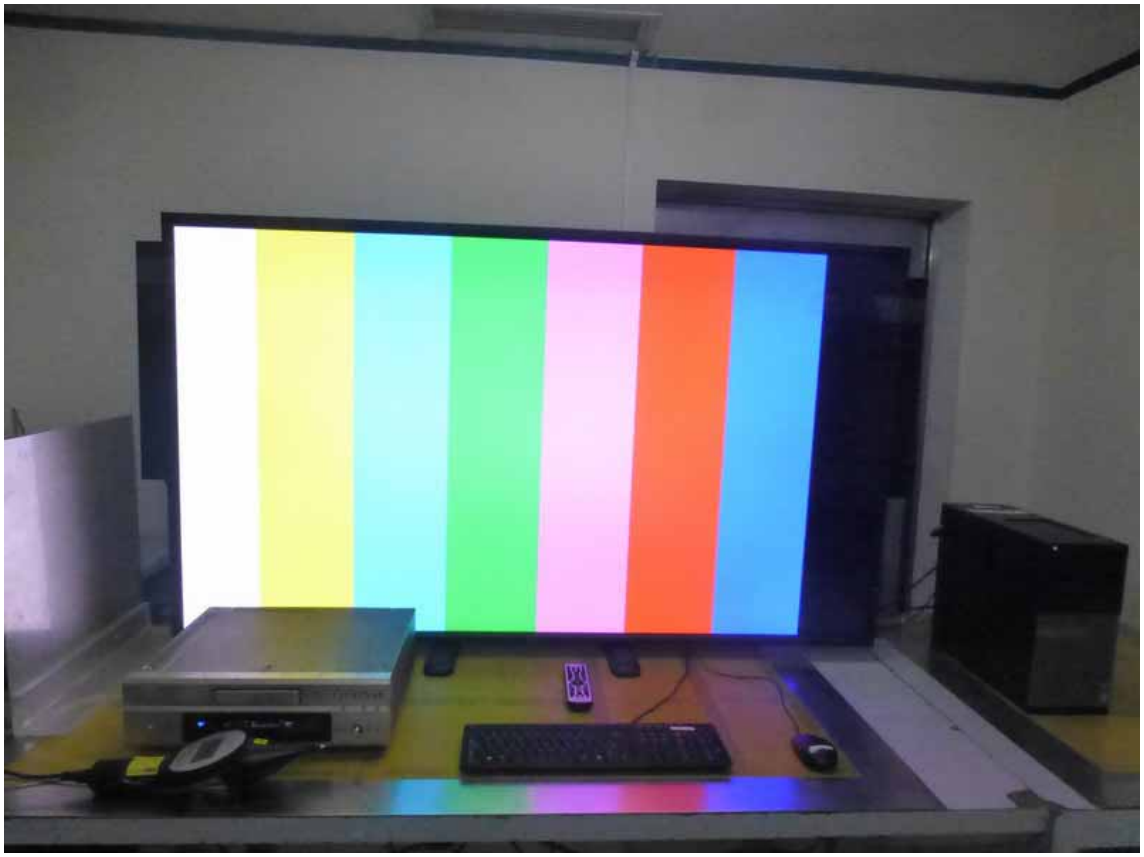


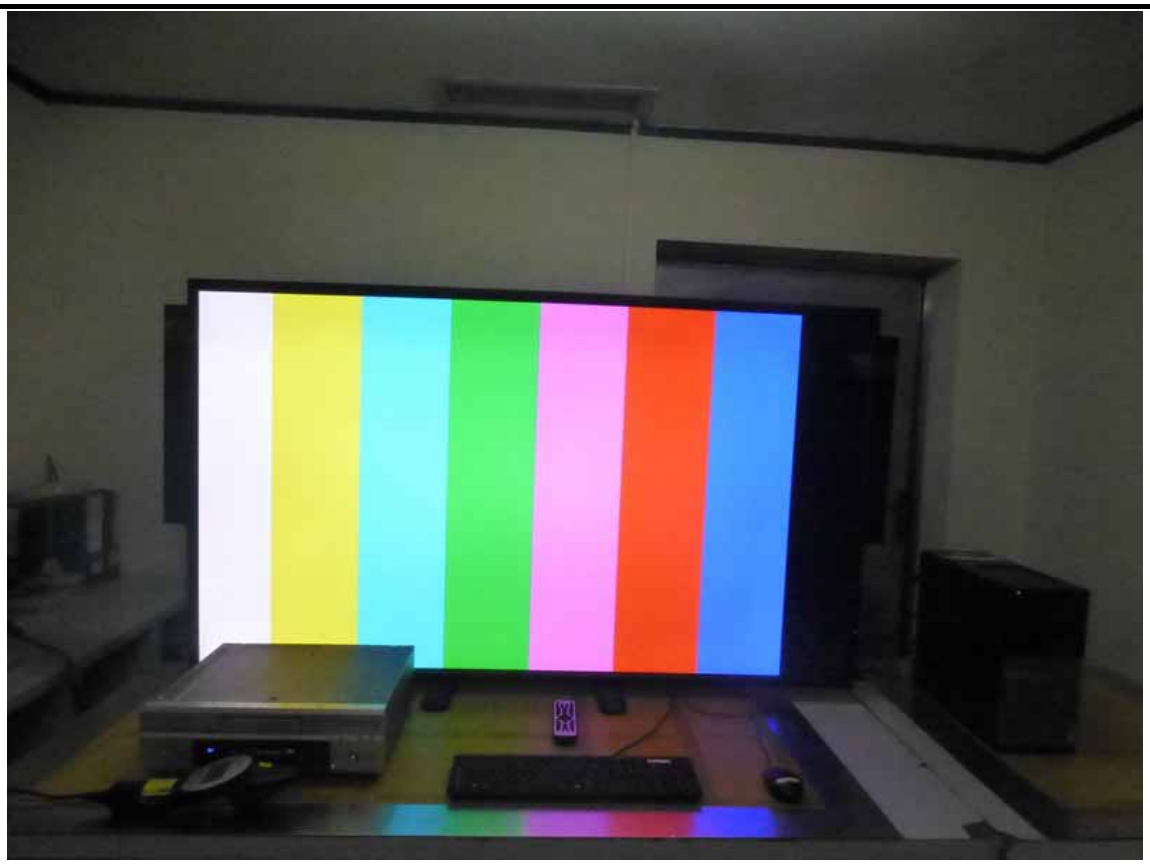
16.5. Photos of Electrostatic Discharge Immunity Test

PC Mode



DVD Mode

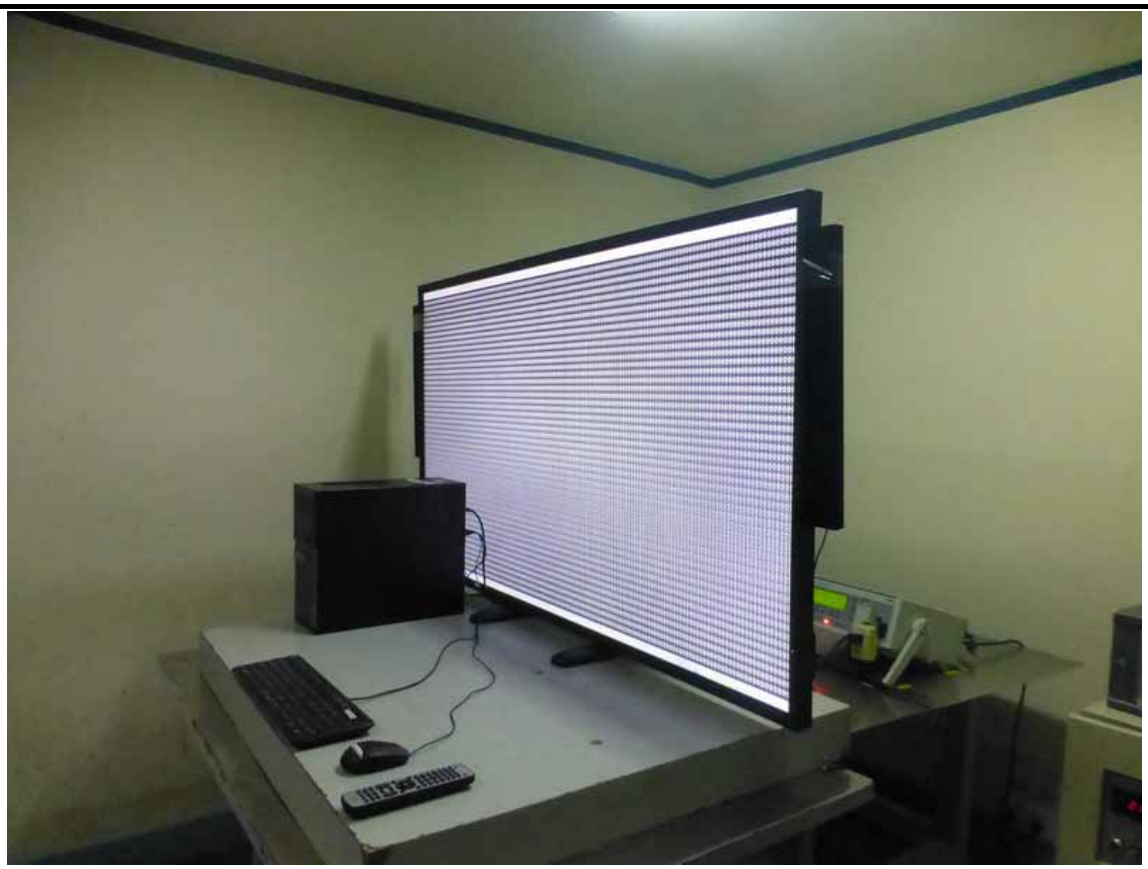




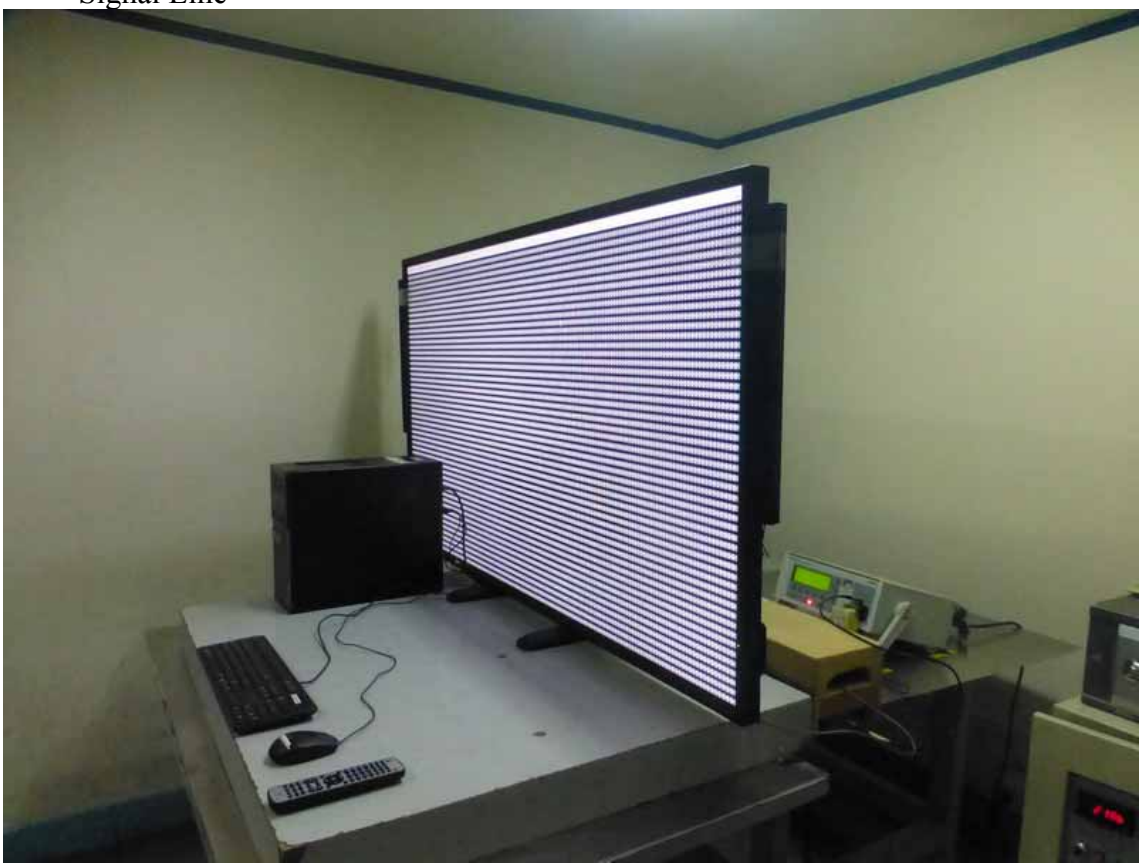
16.6. Photo of RF Strength Susceptibility Test

16.7. Photo of Electrical Fast Transient/Burst Immunity Test

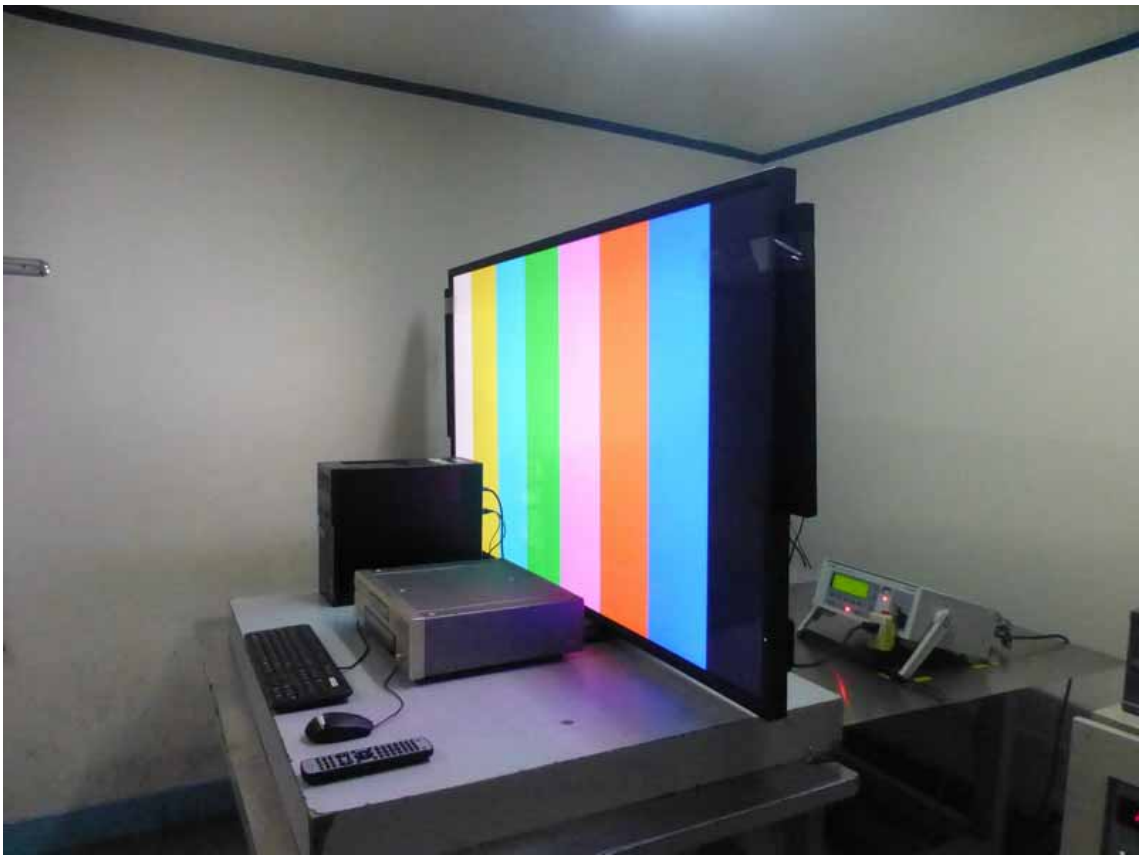
PC Mode



Signal Line



DVD Mode



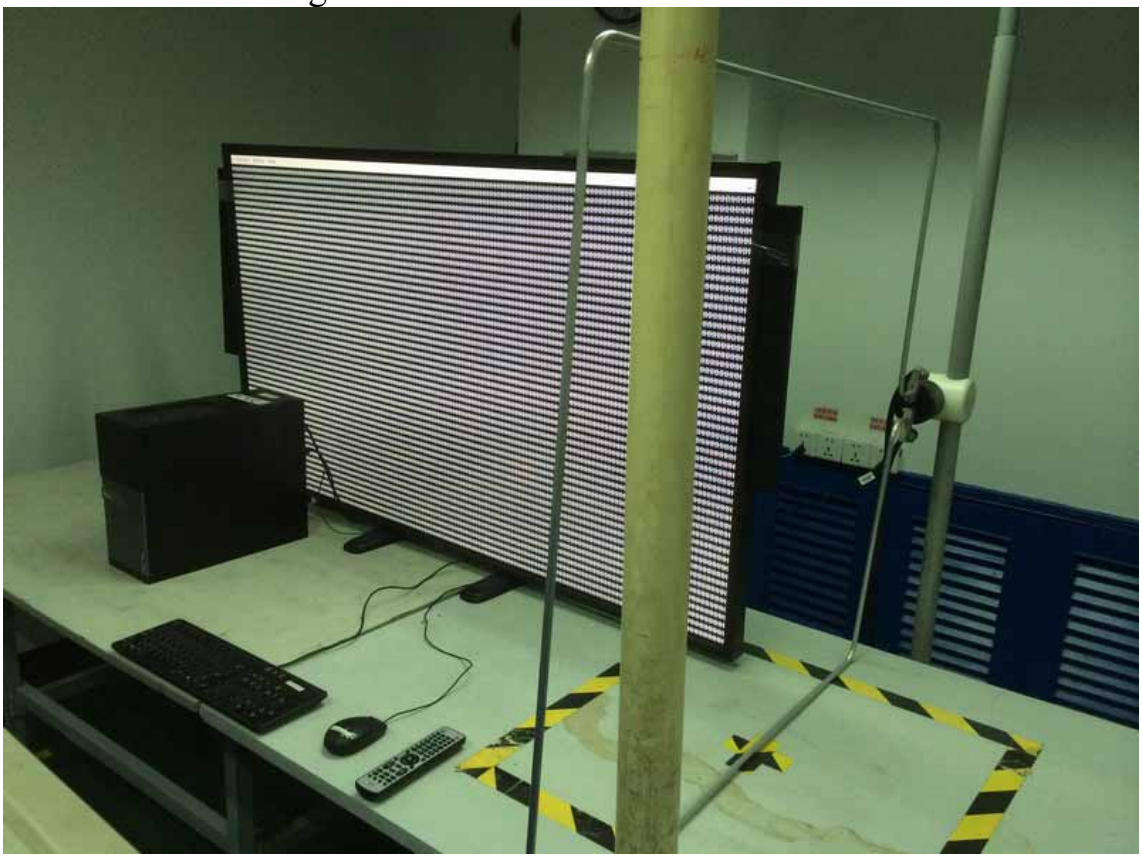
16.8. Photo of Surge Test

Signal Line

16.9. Photo of Injected Currents Susceptibility Test

Signal Line

16.10. Photo of Magnetic Field Test



16.11. Photo of Voltage Dips and interruptions test