

EMC TEST REPORT

Report No. : ACS-E17627

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

Product : LCD Monitor

Model No. : EA245Wmi

Serial No. : EA245Wmi-BK ; EA245Wmi-2

Brand : NEC

Test Lab. : Audix Technology (Shenzhen) Co., Ltd.
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Date of Test : Apr.09~20, 2016

Date of Report : Oct.31,2017



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TEST REPORT VERIFICATION

Applicant : TPV Electronics (FuJian) Co., Ltd.
 Product : LCD Monitor
 Model No. : EA245Wmi
 Serial No. : EA245Wmi-BK ; EA245Wmi-2
 Brand : NEC
 Report No. : ACS-E17627
 Power Supply : AC 100-240V, 50/60Hz
 Test Voltage : AC 230V/50Hz, AC 110V/60Hz
 Standards : EN 55032: 2012+AC: 2013 (Class B)
 CISPR 32: 2012 (AS/NZS CISPR 32: 2015)
 EN 61000-3-2: 2014, EN 61000-3-3: 2013
 EN 55024: 2010
 EN 55024: 2010+A1: 2015
 (IEC 61000-4-2: 2008, IEC 61000-4-3: 2010,
 IEC 61000-4-4: 2012, IEC 61000-4-5: 2014,
 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 requirements of EN 55032, EN 61000-3-2, EN 61000-3-3, and EN 55024 standards.

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 : Aug.01~17, 2017 Report of date: Oct.31,2017

Prepared by : Dora Xu Reviewed by : Mario Wu
 Dora Xu / Assistant Mario Wu / Deputy Manager

Approved & Authorized Signer :



1. SUMMARY OF STANDARDS AND RESULTS

1.1. Description of Standards and Results

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

EMISSION				
Description of Test Item	Standard	Results	Remark	
Conducted emission at mains terminals	EN 55032: 2012+AC:2013	PASS	Minimum passing margin is 14.10dB at 2.678MHz	
Conducted emission at telecommunication port	EN 55032: 2012+AC:2013	N/A	N/A	
Radiated emission (30-1000MHz)	EN 55032: 2012+AC:2013	PASS	Minimum passing margin is 4.66dB at 138.64MHz	
Radiated emission (1-6GHz)	EN 55032: 2012+AC:2013	PASS	Minimum passing margin is 10.73dB at 1350.53MHz	
Harmonic current emissions	EN 61000-3-2: 2014	PASS	Meets the Class D requirement	
Voltage fluctuations & flicker	EN 61000-3-3: 2013	PASS	Meets the requirement	
IMMUNITY (EN 55024: 2010+A1: 2015)				
Description of Test Item	Basic Standard	Results	Performance Criteria	Observation Criteria
Electrostatic discharge (ESD)	IEC 61000-4-2: 2008	PASS	B	A & B
Radiated, radio-frequency, electromagnetic field immunity test	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: 2014	PASS	B	A & B
Surge(Telecommunication port)		N/A	N/A	N/A
Radio-frequency, Continuous conducted emission	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	A
Voltage interruptions		PASS	C	C
N/A is an abbreviation for Not Applicable.				

2. GENERAL INFORMATION

2.1. Description of Device (EUT)

Product	: LCD Monitor
Model No.	: EA245WMi
Serial No.	: EA245WMi-BK ; EA245WMi-2 Above all models difference are in sales marketing. This Product have two bracket Specification one is 100mm another is 150mm.
Brand Name	: NEC
Test Model	: EA245WMi
Applicant	: TPV Electronics (FuJian) Co., Ltd. Rongqiao Economic and Technological Development Zone, Fuqing City, Fujian Province, P.R. China
Max. Resolution	: 1920*1200@60Hz
Max. Work Frequency	: 246MHz
Panel	: LG Display, M/N: LM240WUA
I/O Port	: (1)One AC In Port (2)One DVI Port (3)One HDMI Port (4)A Serial of Display In / Out Ports (5)One VGA Port (6)A Serial of RS232 In / Out Ports (7)One Audio In Port (8)One Audio Out Port (9)One USB Up-stream Port (10)Three USB Down-stream Ports
VGA Cable	: Shielded, Detachable, 1.8m/1.5m(with two cores)
DVI Cable	: Shielded, Detachable, 1.8m/1.5m(with two cores)
HDMI Cable	: Shielded, Detachable, 1.8m/1.5m
Audio Cable	: Shielded, Detachable, 1.8m/1.5m
Display Cable	: Shielded, Detachable, 1.8m/1.5m

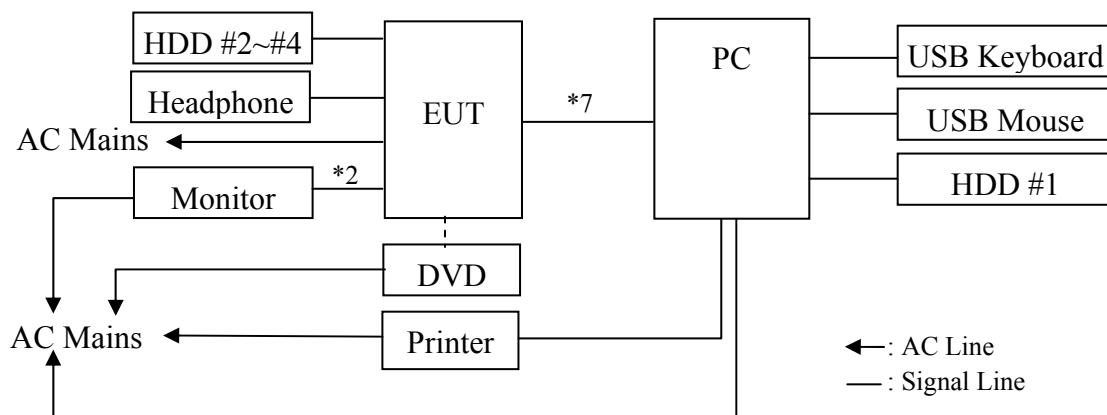
USB Cable	: Shielded, Detachable, 1.8m/1.5m
Power Cord	: Unshielded, Detachable, 1.8m/1.5m (3 pins)
Date of Test	: Apr.09~20, 2016
Date of Receipt	: Apr.07, 2016
Sample Type	: Prototype production

2.2. Tested Supporting System Details

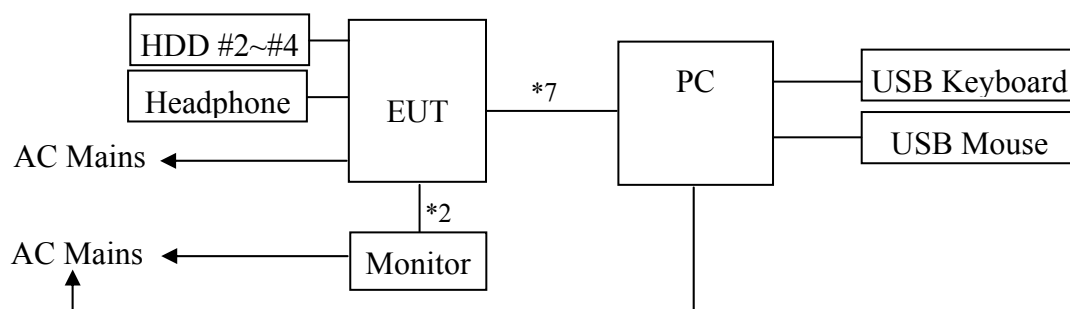
No.	Description	ACS No.	Manufacturer	Model	Serial Number
1.	Personal Computer	Test PC GQ1	DELL	Dptiplex 9020MT	18MW91 A00DC2,Z248779
		Power Cord: Unshielded, Detachable, 1.8m RS232 Cable: Shielded, Undetachable, 1.8m			
2.	USB Keyboard	ACS-EMC- K03R	DELL	SK-8120	CN-ODJ365-71616-2BE-0DCE-A00
		Data Cable: Shielded, Undetachable, 2.0m			
3.	USB Mouse	ACS-EMC-M03R	DELL	M0C5UO	512023253
		Data Cable: Shielded, Undetachable, 1.8m			
4.	Printer	ACS-EMC-PT04	HP	C9079A	--
		USB Cable: Shielded, Detachable, 1.8m Power Cord: Unshielded, Detachable, 1.8m			
5.	HDD#1	ACS-EMC-HDD01	Terasys	F12-UF	A0100215-5390031
		USB Cable: Shielded, Detachable, 1.8m			
6.	USB3.0 HDD#2	ACS-EMC-HDD38	WD	WD Elements	WXA1E63CEME4
		Data Cable: Shielded, Detachable, 1.0m			
7.	USB3.0 HDD#3	ACS-EMC-HDD39	WD	WD Elements	WX61A8360420
		Data Cable: Shielded, Detachable, 1.0m			
8.	USB3.0 HDD#4	ACS-EMC-HDD40	WD	WD Elements	WXA1E63CEMWP7
		Data Cable: Shielded, Detachable, 1.0m			
9.	DVD Player	--	PHILIPS	BDP3100/12	--
		IR In Cable: Shielded, Undetachable, 1.8m Power Cord: Unshielded, Detachable, 1.8m			
10.	Monitor	--	BenQ	BL2420-Tu	--
		Display Cable: Shielded, Detachable, 1.8m RS232 Cable: Shielded, Detachable, 1.8m Power Cord: Unshielded, Detachable, 1.8m			
11.	Headphone	ACS-EMC-EP01	OVANN	OV880V	N/A
		Data Cable: Shielded, Undetachable, 1.2m			

2.3. Block Diagram of connection between EUT and simulators

For EMI Tests



For EMS Tests



Remark: PC Mode, DVD Mode can not link the HDMI port at the same time.

← : AC Line
— : Signal Line

(EUT: LCD Monitor)

2.4. Test Facility

Site Description

Name of Firm	: Audix Technology (Shenzhen) Co., Ltd. No. 6, Kefeng Road, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China
EMC Lab.	: Certificated by DAkkS, Germany Registration No: D-PL-12151-01-00 Valid Date: Dec.07, 2021
	: Accredited by NVLAP, USA NVLAP Code: 200372-0 Valid Date: Mar.31, 2018
	: Certificated by FCC, USA Registration Number: 399142 Valid Date: May.31, 2018

2.5. Measurement Uncertainty (95% confidence levels, k=2)

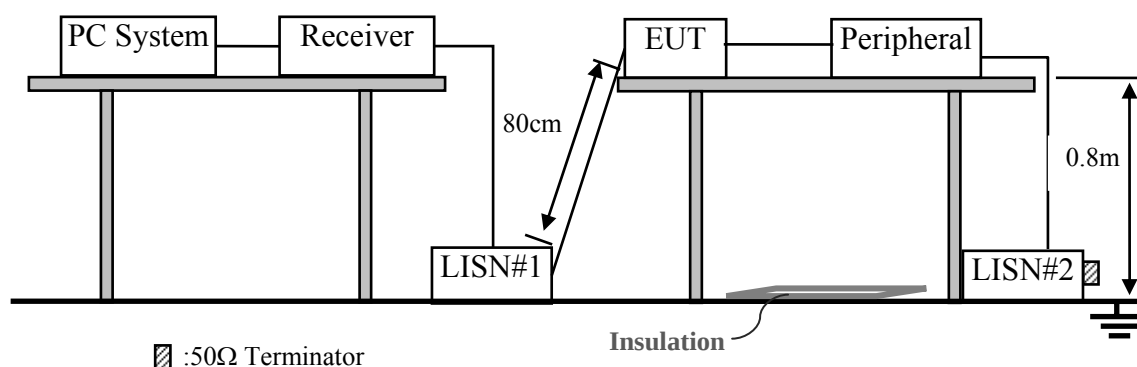
Test Item	Uncertainty
Uncertainty for Conduction emission test in No. 2 Conduction	2.8dB (150kHz to 30MHz)
Uncertainty for Radiation Emission test in 10m chamber (Distance: 10m)	3.0dB (30~200MHz, Polarization: H)
	3.0dB (30~200MHz, Polarization: V)
	3.4dB (200M~1GHz, Polarization: H)
	3.4dB (200M~1GHz, Polarization: V)
Uncertainty for Radiation Emission test in 10m chamber (1GHz-18GHz)	4.4dB (1-6GHz, Distance: 3m)
	5.4dB (6-18GHz, Distance: 3m)
Uncertainty for S _{VSWR} in 10m Chamber	2.8dB (1-6GHz, Distance: 3m)
	2.8dB (6-18GHz, Distance: 3m)
Uncertainty for Flicker test	5.2%
Uncertainty for Harmonic test	9.4%
Uncertainty for C/S Test	1.4dB (Using CDN test)
	3.2dB (Using EM clamp test)
Uncertainty for R/S Test	1.8dB (80MHz~200MHz)
	1.8dB (200MHz~1000MHz)
Uncertainty for Magnetic field immunity test	3%
Uncertainty for test site temperature and humidity and Pressure	0.6℃
	3%
	1kPa

3. CONDUCTED EMISSION AT MAINS TERMINALS TEST

3.1. Test Equipments

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	2# Shielding Room	AUDIX	N/A	N/A	Apr.17,15	1 Year
2.	EMI Test Receiver	Rohde & Schwarz	ESR3	101931	Aug.26,15	1 Year
3.	L.I.S.N.#1	Rohde & Schwarz	ENV4200	100041	Apr.28,15	1 Year
4.	L.I.S.N.#2	Kyoritsu	KNW-407	8-1636-1	Apr.28,15	1 Year
5.	Terminator	Hubersuhner	50Ω	No.1	Apr.28,15	1 Year
6.	Terminator	Hubersuhner	50Ω	No.2	Apr.28,15	1 Year
7.	RF Cable	Fujikura	RG-55/U	No.1	Apr.28,15	1 Year
8.	Coaxial Switch	Anritsu	MP59B	6201397223	Apr.28,15	1 Year
9.	Test Software	AUDIX	e3	6.100913a	N/A	N/A

3.2. Block Diagram of Test Setup



3.3. Test Standard

EN 55032: 2012+AC: 2013, Class B

3.4. Power Line Conducted Emission at Mains Terminals Limit

Frequency	Maximum RF Line Voltage	
	Quasi-Peak Level dB(μV)	Average Level dB(μV)
150kHz ~ 500kHz	66 ~ 56*	56 ~ 46*
500kHz ~ 5MHz	56	46
5MHz ~ 30MHz	60	50

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 55032 requirement and operating in a manner which tends to maximize its emission characteristics in a normal application.

3.5.1. LCD Monitor (EUT)

Model No : EA245W Mi

Serial No : 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. Turn on the power of all equipments.

3.6.3. PC system sent “Color Bars with moving picture element” to LCD Monitor (EUT) through VGA / DVI / Display / HDMI card.

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 55032 Class B on conducted Emission test.

The bandwidth of test receiver (R & S ESR3) is set at 9kHz.

The frequency range from 150kHz to 30MHz is checked. These test results of the conducted disturbance are recorded in section 3.8.

3.8. Conducted Emission 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 (No.3 ~ 11) to read Q.P values, all the test results are listed in next pages.

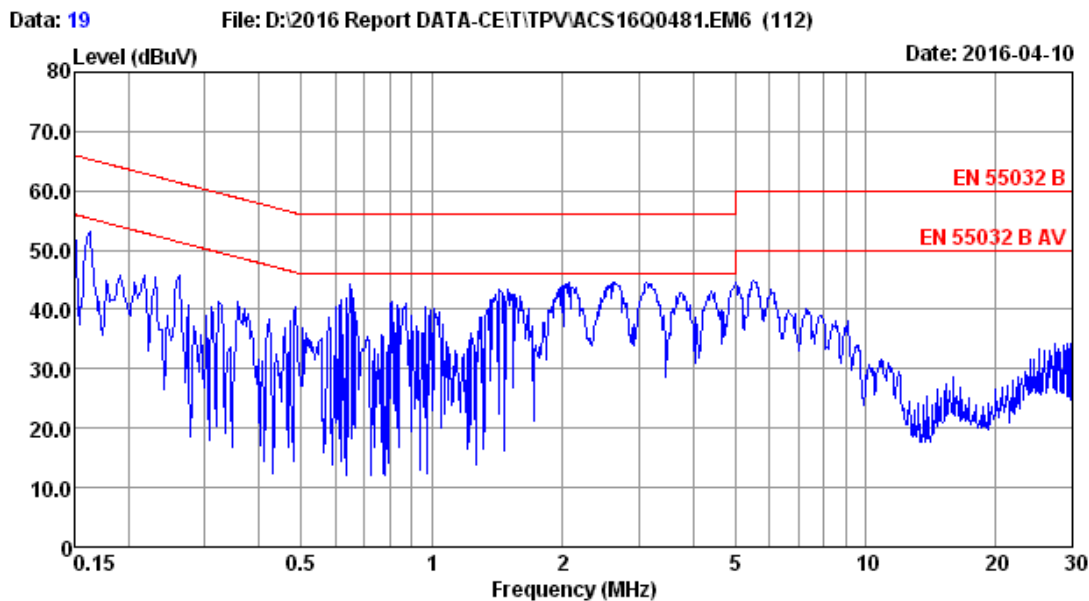
EUT: LCD Monitor Model No. : EA245Wmi Test Date: Apr.10, 2016

Temperature: 23.7℃ Humidity: 51.2% Pressure: 101.3kPa

The details of test modes are as follows :

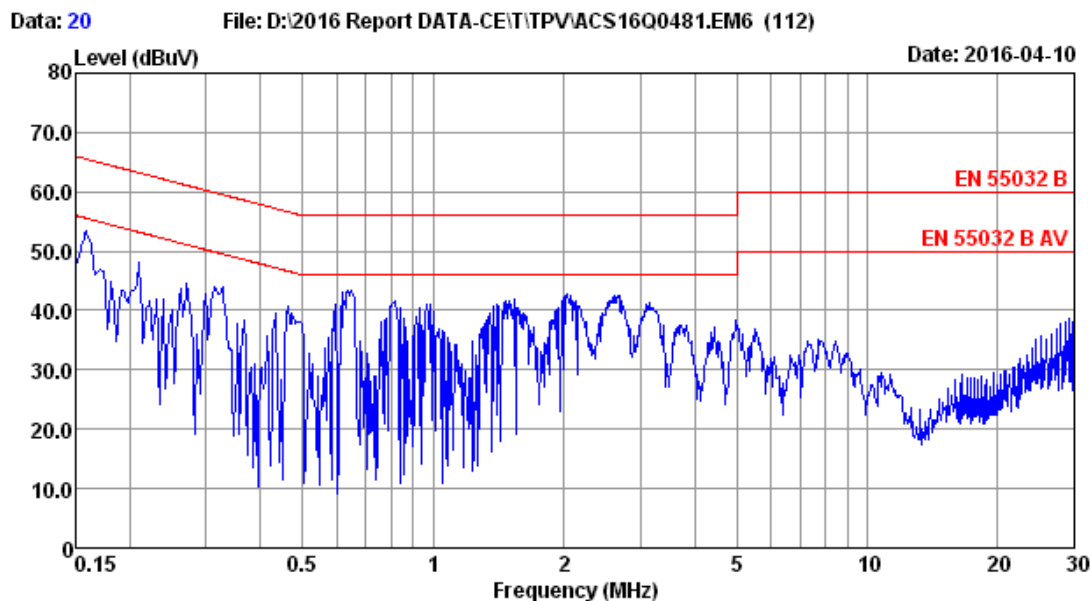
No.	Test Voltage	Test Mode	Input Port	Cable Length	Resolution & Frequency	Reference Test Data No.	
						Line	Neutral
1.	AC 230V/50Hz	PC Mode	VGA	1.8m	640*480@60Hz	#19	#20
2.					1280*1024@75Hz	#21	#22
3. ✖					1920*1200@60Hz	#23	#24
4.				1.5m	1920*1200@60Hz	#25	#26
5.			DVI		1920*1200@60Hz	#27	#28
6.			VGA	1.8m	1200*1920@60Hz (Panel is Vertical)	#29	#30
7.			Display		1920*1200@60Hz	#31	#32
8.			HDMI		1920*1200@60Hz	#33	#34
9.		DVD Mode	HDMI		Color Bar	#35	#36
10.		Standby	--		--	#37	#38
11.	AC 110V/60Hz	PC Mode	VGA		1920*1200@60Hz	#39	#40

(✖ Worst test mode)



Site no :2# Conduction
 Dis./Lisn :15 ENV4200 L1
 Limit :EN 55032 B
 Env./Ins. :23.7°C/51.2%
 EUT :EA245WMI
 Power Rating :AC 230V/50Hz
 Test Mode :VGA:640*480@60Hz
 Line:1.8m

Data No :19
 LISN phase:LINE
 Pre :101.3kPa
 Engineer :Evan



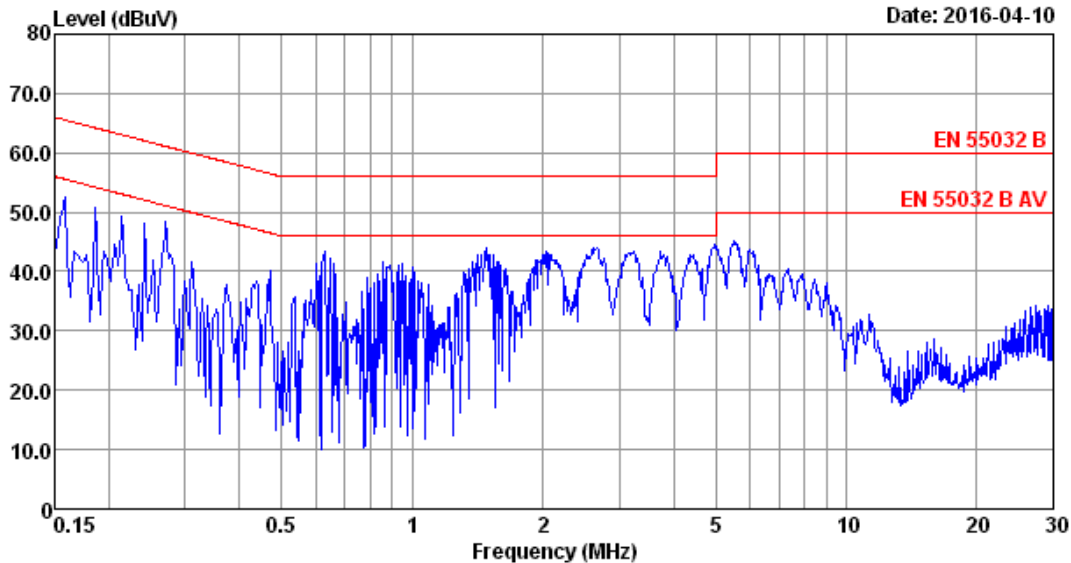
Site no :2# Conduction
 Dis./Lisn :15 ENV4200 N
 Limit :EN 55032 B
 Env./Ins. :23.7°C/51.2%
 EUT :EA245WMI
 Power Rating :AC 230V/50Hz
 Test Mode :VGA:640*480@60Hz
 Line:1.8m

Data No :20
 LISN phase:NEUTRAL
 Pre :101.3kPa
 Engineer :Evan

Data: 21

File: D:\2016 Report DATA-CEIT\TPV\ACS16Q0481.EM6 (112)

Date: 2016-04-10



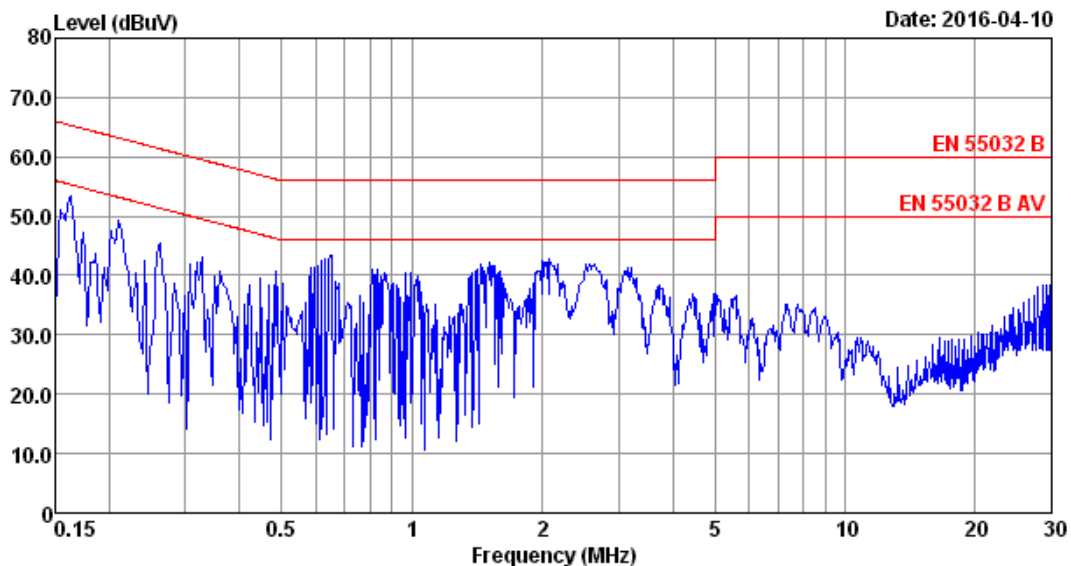
Site no :2# Conduction
Dis./Lisn :15 ENV4200 L1
Limit :EN 55032 B
Env./Ins. :23.7°C/51.2%
EUT :EA245Wmi
Power Rating :AC 230V/50Hz
Test Mode :VGA:1280*1024@75Hz
Line:1.8m

Data No :21
LISN phase:LINE
Pre :101.3kPa
Engineer :Evan

Data: 22

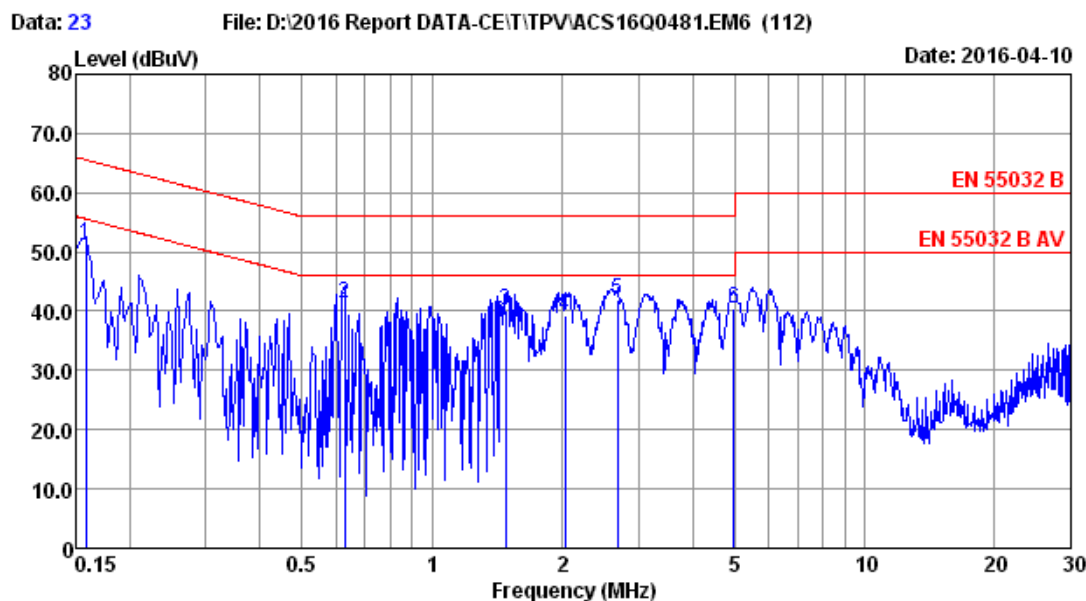
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Date: 2016-04-10



Site no :2# Conduction
Dis./Lisn :15 ENV4200 N
Limit :EN 55032 B
Env./Ins. :23.7°C/51.2%
EUT :EA245Wmi
Power Rating :AC 230V/50Hz
Test Mode :VGA:1280*1024@75Hz
Line:1.8m

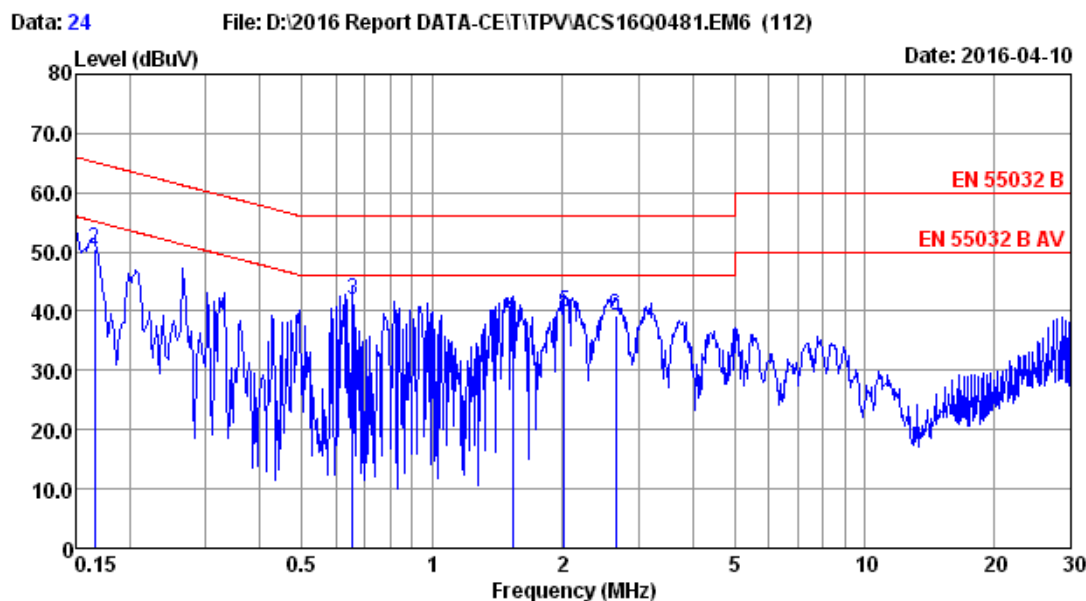
Data No :22
LISN phase:NEUTRAL
Pre :101.3kPa
Engineer :Evan



Site no	:2# Conduction	Data No	:23
Dis./Lisn	:15 ENV4200 L1	LISN phase	:LINE
Limit	:EN 55032 B	Pre	:101.3kPa
Env./Ins.	:23.7°C/51.2%	Engineer	:Evan
EUT	:EA245WMI		
Power Rating	:AC 230V/50Hz		
Test Mode	:VGA:1920*1200@60Hz		
	Line:1.8m		

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.158	9.91	0.04	41.50	51.45	65.56	14.11	QP
2	0.627	9.66	0.07	31.50	41.23	56.00	14.77	QP
3	1.480	9.62	0.12	30.39	40.13	56.00	15.87	QP
4	2.033	9.62	0.16	29.38	39.16	56.00	16.84	QP
5	2.678	9.65	0.19	32.06	41.90	56.00	14.10	QP
6	4.978	9.70	0.27	30.57	40.54	56.00	15.46	QP

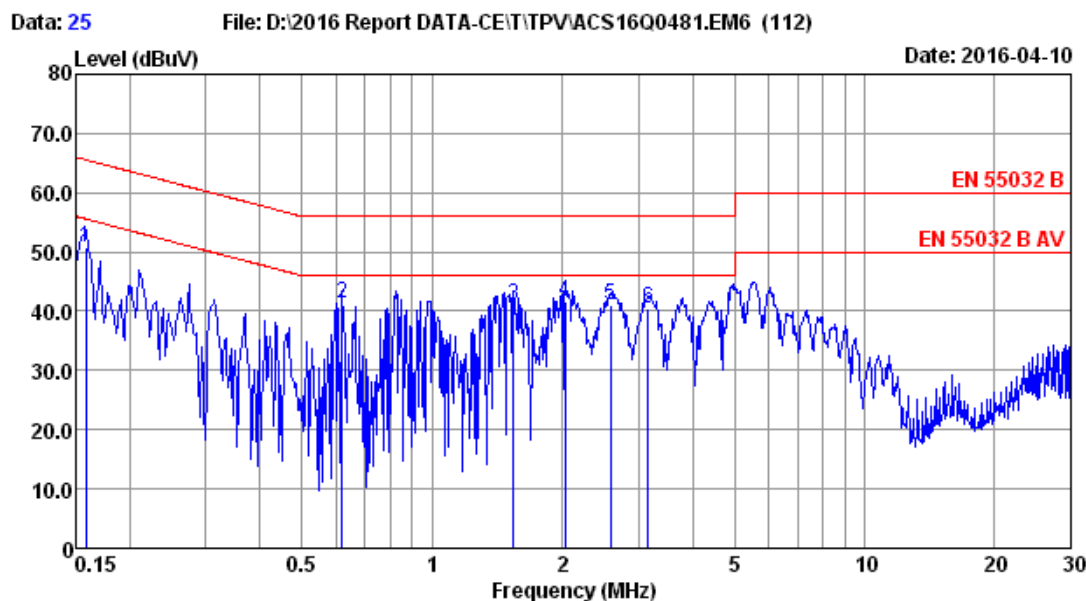
Remarks: 1.Emission Level=LISN Factor+Cable Loss+Reading.
 2.If the average limit is met when using a quasi-peak detector,
 the EUT shall be deemed to meet both limits and measurement
 with average detector is unnecessary.



Site no :2# Conduction Data No :24
 Dis./Lisn :15 ENV4200 N LISN phase:NEUTRAL
 Limit :EN 55032 B Pre :101.3kPa
 Env./Ins. :23.7°C/51.2% Engineer :Evan
 EUT :EA245WMI
 Power Rating :AC 230V/50Hz
 Test Mode :VGA:1920*1200@60Hz
 Line:1.8m

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.150	9.82	0.04	41.92	51.78	66.00	14.22	QP
2	0.166	9.80	0.05	40.51	50.36	65.16	14.80	QP
3	0.654	9.51	0.07	32.28	41.86	56.00	14.14	QP
4	1.535	9.46	0.13	29.27	38.86	56.00	17.14	QP
5	2.023	9.45	0.16	30.12	39.73	56.00	16.27	QP
6	2.664	9.46	0.19	29.66	39.31	56.00	16.69	QP

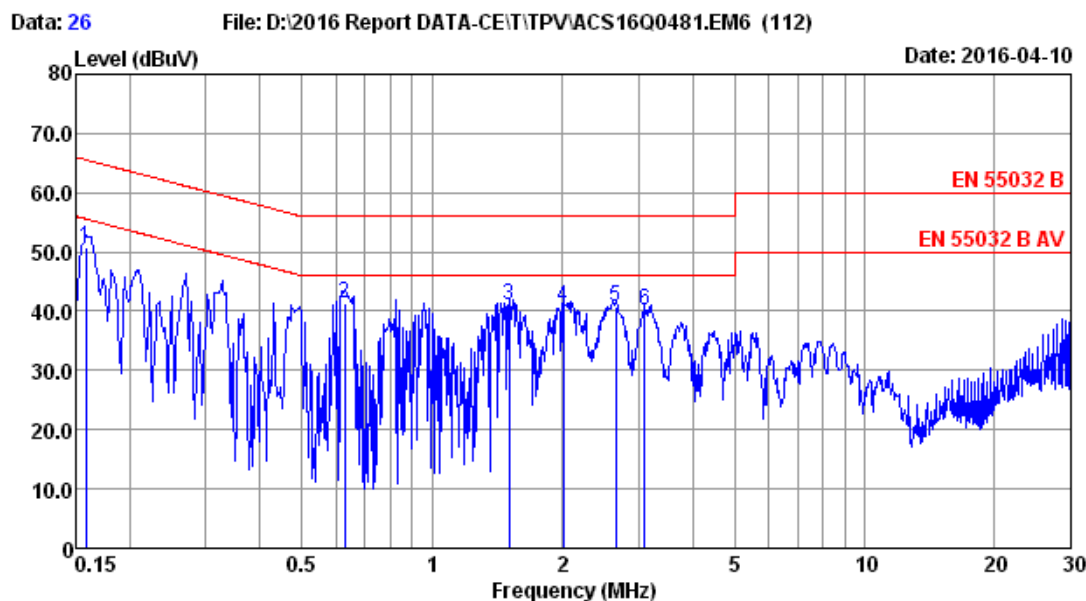
Remarks: 1.Emission Level=LISN Factor+Cable Loss+Reading.
 2.If the average limit is met when using a quasi-peak detector.
 the EUT shall be deemed to meet both limits and measurement
 with average detector is unnecessary.



Site no	:2# Conduction	Data No	:25
Dis./Lisn	:15 ENV4200 L1	LISN phase:	LINE
Limit	:EN 55032 B	Pre	:101.3kPa
Env./Ins.	:23.7°C/51.2%	Engineer	:Evan
EUT	:EA245WMI		
Power Rating	:AC 230V/50Hz		
Test Mode	:VGA:1920*1200@60Hz		
	Line:1.5m		

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.158	9.91	0.04	40.86	50.81	65.56	14.75	QP
2	0.621	9.66	0.07	31.68	41.41	56.00	14.59	QP
3	1.544	9.62	0.13	31.31	41.06	56.00	14.94	QP
4	2.033	9.62	0.16	31.86	41.64	56.00	14.36	QP
5	2.581	9.64	0.19	31.13	40.96	56.00	15.04	QP
6	3.156	9.66	0.21	30.61	40.48	56.00	15.52	QP

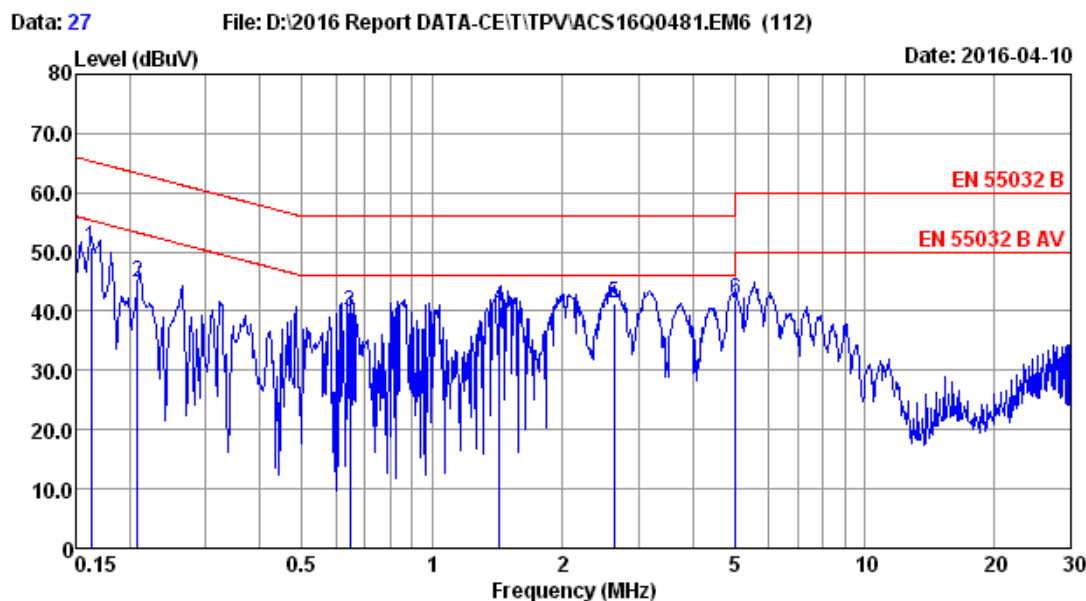
Remarks: 1.Emission Level=LISN Factor+Cable Loss+Reading.
 2.If the average limit is met when using a quasi-peak detector.
 the EUT shall be deemed to meet both limits and measurement
 with average detector is unnecessary.



Site no :2# Conduction Data No :26
 Dis./Lisn :15 ENV4200 N LISN phase:NEUTRAL
 Limit :EN 55032 B Pre :101.3kPa
 Env./Ins. :23.7°C/51.2% Engineer :Evan
 EUT :EA245WMI
 Power Rating :AC 230V/50Hz
 Test Mode :VGA:1920*1200@60Hz
 Line:1.5m

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.158	9.81	0.04	40.86	50.71	65.56	14.85	QP
2	0.627	9.51	0.07	31.79	41.37	56.00	14.63	QP
3	1.503	9.46	0.12	31.36	40.94	56.00	15.06	QP
4	2.012	9.45	0.16	31.01	40.62	56.00	15.38	QP
5	2.664	9.46	0.19	31.12	40.77	56.00	15.23	QP
6	3.107	9.46	0.21	30.45	40.12	56.00	15.88	QP

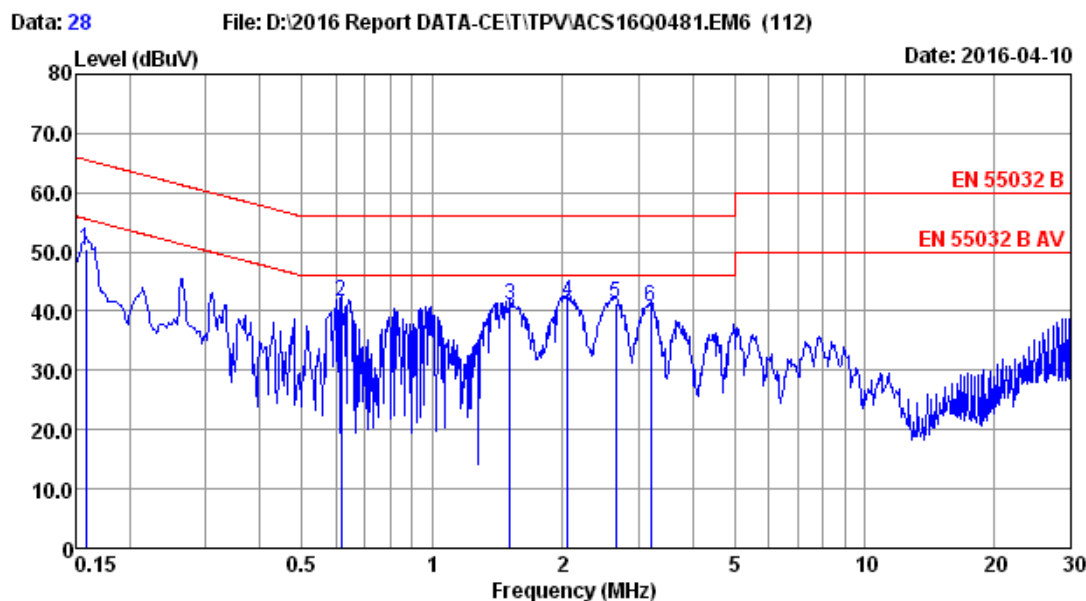
Remarks: 1.Emission Level=LISN Factor+Cable Loss+Reading.
 2.If the average limit is met when using a quasi-peak detector.
 the EUT shall be deemed to meet both limits and measurement
 with average detector is unnecessary.



Site no	:2# Conduction	Data No	:27
Dis./Lisn	:15 ENV4200 L1	LISN phase:	LINE
Limit	:EN 55032 B	Pre	:101.3kPa
Env./Ins.	:23.7°C/51.2%	Engineer	:Evan
EUT	:EA245WMI		
Power Rating	:AC 230V/50Hz		
Test Mode	:DVI:1920*1200@60Hz		
	Line:1.8m		

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.162	9.90	0.04	40.72	50.66	65.34	14.68	QP
2	0.208	9.85	0.05	35.01	44.91	63.28	18.37	QP
3	0.647	9.66	0.07	30.00	39.73	56.00	16.27	QP
4	1.433	9.62	0.12	30.91	40.65	56.00	15.35	QP
5	2.636	9.64	0.19	31.40	41.23	56.00	14.77	QP
6	5.031	9.70	0.27	31.81	41.78	60.00	18.22	QP

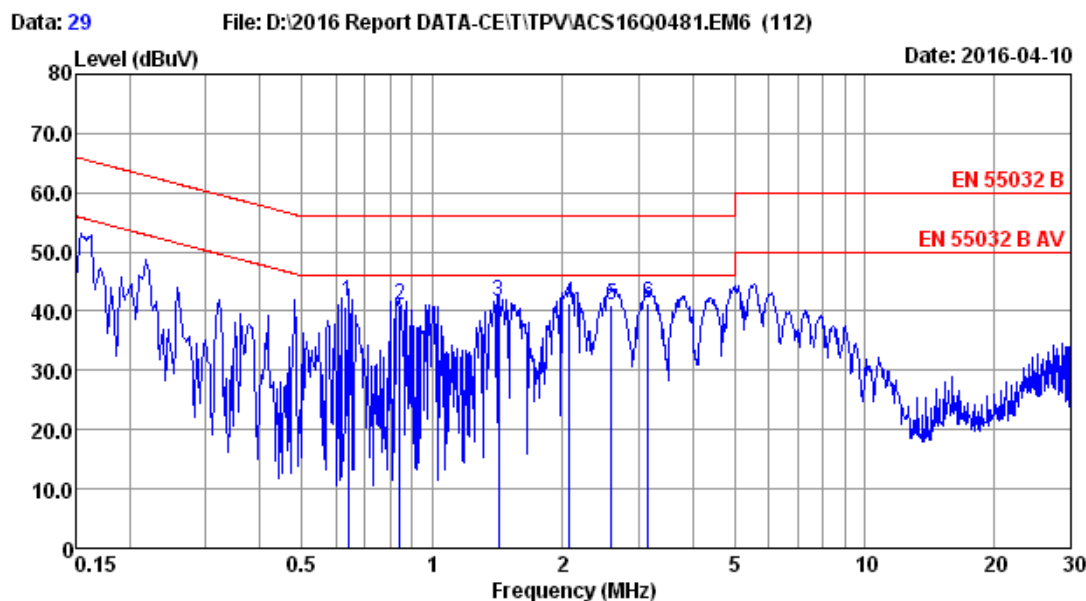
Remarks: 1.Emission Level=LISN Factor+Cable Loss+Reading.
 2.If the average limit is met when using a quasi-peak detector,
 the EUT shall be deemed to meet both limits and measurement
 with average detector is unnecessary.



Site no :2# Conduction Data No :28
 Dis./Lisn :15 ENV4200 N LISN phase:NEUTRAL
 Limit :EN 55032 B Pre :101.3kPa
 Env./Ins. :23.7°C/51.2% Engineer :Evan
 EUT :EA245WMI
 Power Rating :AC 230V/50Hz
 Test Mode :DVI:1920*1200@60Hz
 Line:1.8m

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.158	9.81	0.04	40.69	50.54	65.56	15.02	QP
2	0.617	9.51	0.07	32.12	41.70	56.00	14.30	QP
3	1.511	9.46	0.13	31.55	41.14	56.00	14.86	QP
4	2.055	9.45	0.16	32.08	41.69	56.00	14.31	QP
5	2.664	9.46	0.19	31.71	41.36	56.00	14.64	QP
6	3.207	9.46	0.22	30.97	40.65	56.00	15.35	QP

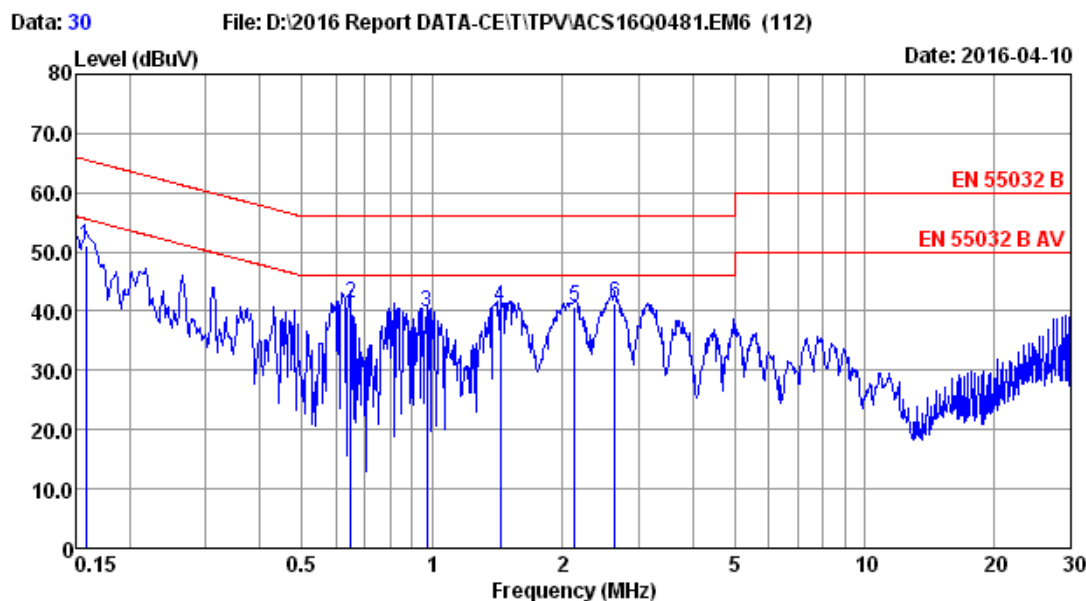
Remarks: 1.Emission Level=LISN Factor+Cable Loss+Reading.
 2.If the average limit is met when using a quasi-peak detector.
 the EUT shall be deemed to meet both limits and measurement
 with average detector is unnecessary.



Site no	:2# Conduction	Data No	:29
Dis./Lisn	:15 ENV4200 L1	LISN phase	:LINE
Limit	:EN 55032 B	Pre	:101.3kPa
Env./Ins.	:23.7°C/51.2%	Engineer	:Evan
EUT	:EA245WMI		
Power Rating	:AC 230V/50Hz		
Test Mode	:VGA:1200*1920@60Hz		
	Line:1.8m		
	Panel is Vertical		

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.641	9.66	0.07	31.86	41.59	56.00	14.41	QP
2	0.844	9.64	0.07	31.44	41.15	56.00	14.85	QP
3	1.426	9.62	0.12	32.02	41.76	56.00	14.24	QP
4	2.077	9.62	0.16	31.44	41.22	56.00	14.78	QP
5	2.594	9.64	0.19	31.13	40.96	56.00	15.04	QP
6	3.156	9.66	0.21	31.44	41.31	56.00	14.69	QP

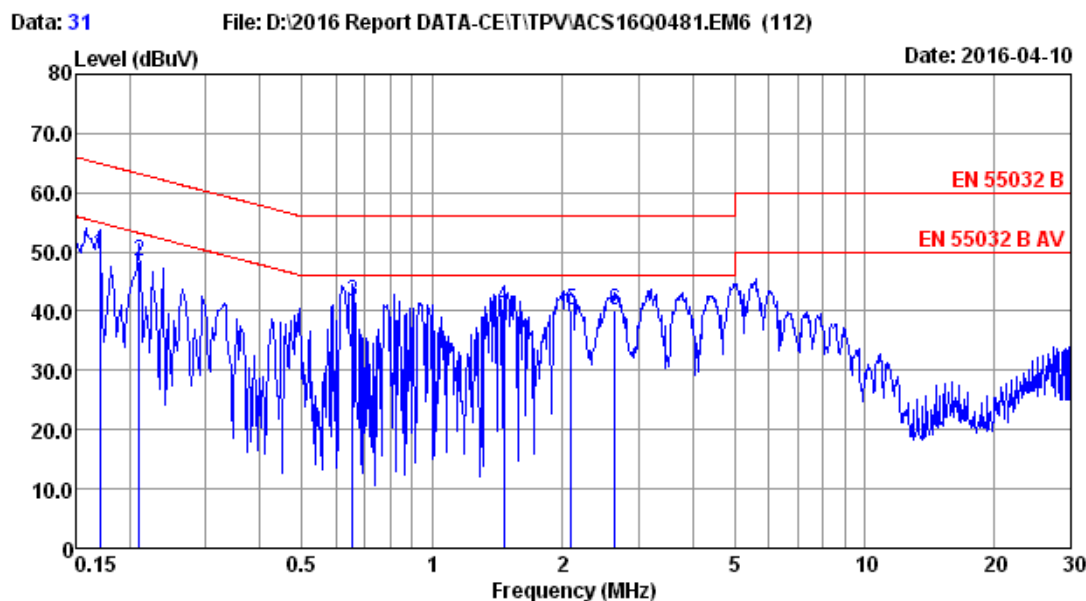
Remarks: 1.Emission Level=LISN Factor+Cable Loss+Reading.
 2.If the average limit is met when using a quasi-peak detector.
 the EUT shall be deemed to meet both limits and measurement
 with average detector is unnecessary.



Site no :2# Conduction Data No :30
 Dis./Lisn :15 ENV4200 N LISN phase:NEUTRAL
 Limit :EN 55032 B Pre :101.3kPa
 Env./Ins. :23.7°C/51.2% Engineer :Evan
 EUT :EA245WMI
 Power Rating :AC 230V/50Hz
 Test Mode :VGA:1200*1920@60Hz
 Line:1.8m
 Panel is Vertical

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.158	9.81	0.04	41.30	51.15	65.56	14.41	QP
2	0.647	9.51	0.07	31.78	41.36	56.00	14.64	QP
3	0.974	9.47	0.08	30.24	39.79	56.00	16.21	QP
4	1.441	9.46	0.12	31.18	40.76	56.00	15.24	QP
5	2.133	9.45	0.16	31.24	40.85	56.00	15.15	QP
6	2.650	9.46	0.19	31.65	41.30	56.00	14.70	QP

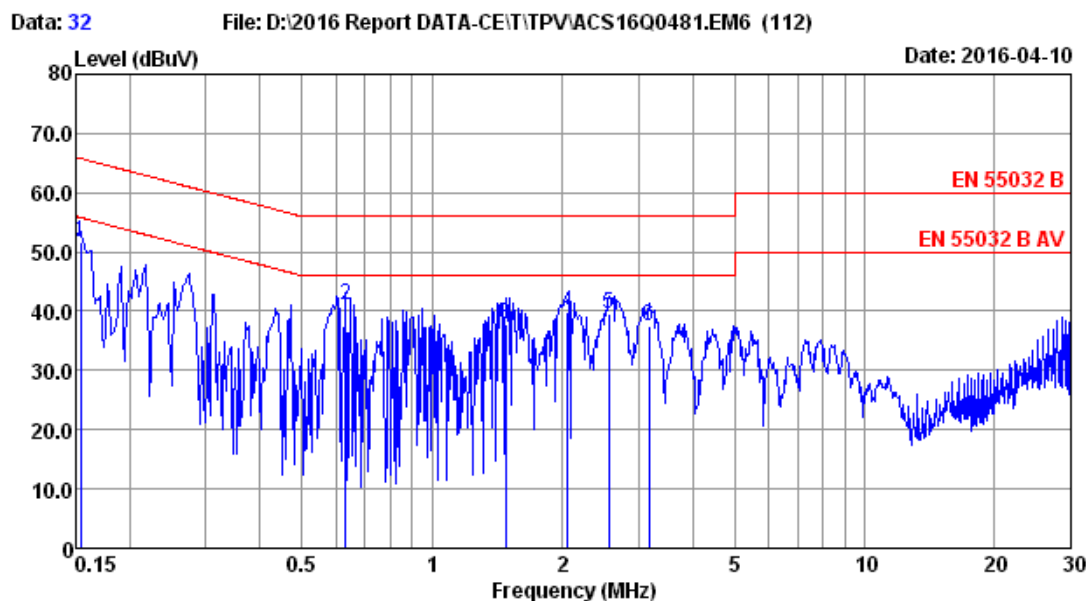
Remarks: 1.Emission Level=LISN Factor+Cable Loss+Reading.
 2.If the average limit is met when using a quasi-peak detector.
 the EUT shall be deemed to meet both limits and measurement
 with average detector is unnecessary.



Site no :2# Conduction Data No :31
 Dis./Lisn :15 ENV4200 L1 LISN phase:LINE
 Limit :EN 55032 B Pre :101.3kPa
 Env./Ins. :23.7°C/51.2% Engineer :Evan
 EUT :EA245WMI
 Power Rating :AC 230V/50Hz
 Test Mode :Display:1920*1200@60Hz
 Line:1.8m

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.170	9.89	0.05	39.80	49.74	64.94	15.20	QP
2	0.211	9.85	0.05	38.55	48.45	63.18	14.73	QP
3	0.654	9.66	0.07	31.95	41.68	56.00	14.32	QP
4	1.464	9.62	0.12	31.00	40.74	56.00	15.26	QP
5	2.099	9.62	0.16	30.32	40.10	56.00	15.90	QP
6	2.650	9.64	0.19	30.40	40.23	56.00	15.77	QP

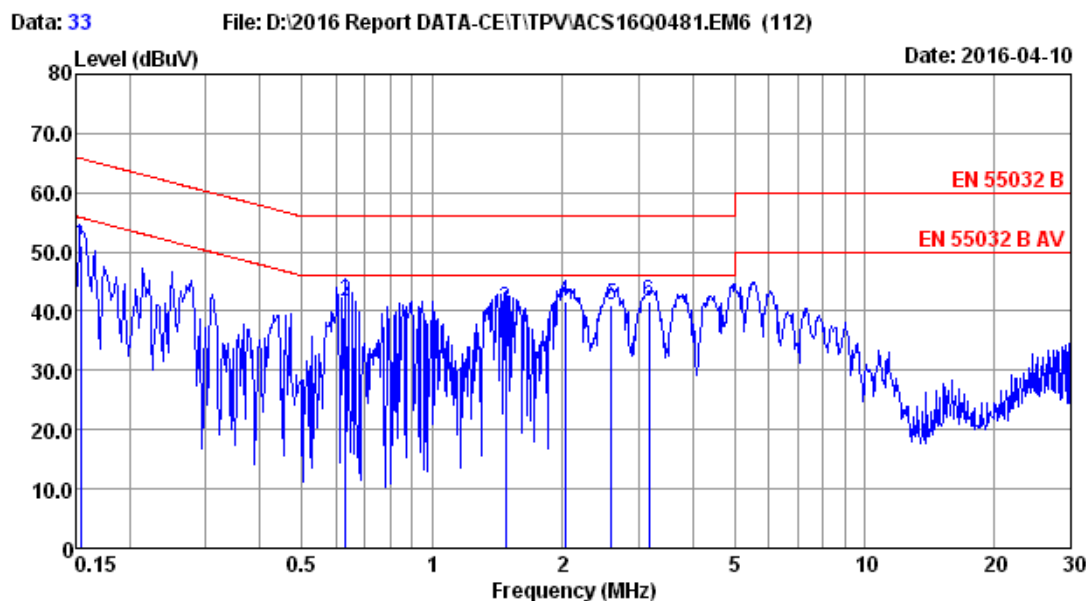
Remarks: 1.Emission Level=LISN Factor+Cable Loss+Reading.
 2.If the average limit is met when using a quasi-peak detector.
 the EUT shall be deemed to meet both limits and measurement
 with average detector is unnecessary.



Site no :2# Conduction Data No :32
 Dis./Lisn :15 ENV4200 N LISN phase:NEUTRAL
 Limit :EN 55032 B Pre :101.3kPa
 Env./Ins. :23.7°C/51.2% Engineer :Evan
 EUT :EA245WMI
 Power Rating :AC 230V/50Hz
 Test Mode :Display:1920*1200@60Hz
 Line:1.8m

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.154	9.81	0.04	41.68	51.53	65.78	14.25	QP
2	0.630	9.51	0.07	31.41	40.99	56.00	15.01	QP
3	1.480	9.46	0.12	28.20	37.78	56.00	18.22	QP
4	2.055	9.45	0.16	30.19	39.80	56.00	16.20	QP
5	2.567	9.46	0.19	29.88	39.53	56.00	16.47	QP
6	3.173	9.46	0.22	27.67	37.35	56.00	18.65	QP

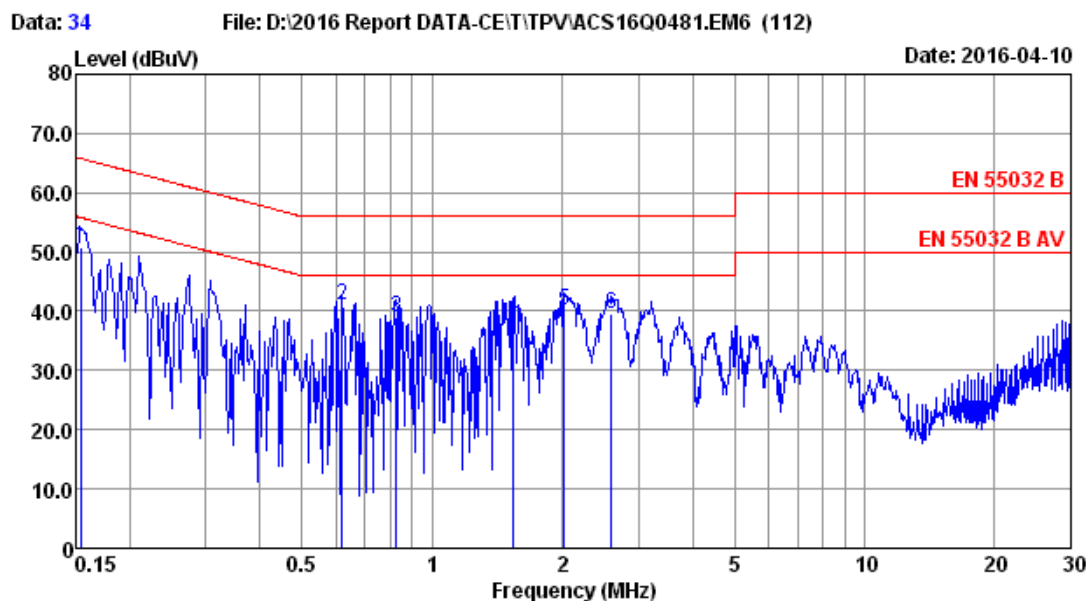
Remarks: 1.Emission Level=LISN Factor+Cable Loss+Reading.
 2.If the average limit is met when using a quasi-peak detector.
 the EUT shall be deemed to meet both limits and measurement
 with average detector is unnecessary.



Site no	:2# Conduction	Data No	:33
Dis./Lisn	:15 ENV4200 L1	LISN phase:	LINE
Limit	:EN 55032 B	Pre	:101.3kPa
Env./Ins.	:23.7°C/51.2%	Engineer	:Evan
EUT	:EA245WMI		
Power Rating	:AC 230V/50Hz		
Test Mode	:HDMI:1920*1200@60Hz		
	Line:1.8m		

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.154	9.91	0.04	41.27	51.22	65.78	14.56	QP
2	0.630	9.66	0.07	31.80	41.53	56.00	14.47	QP
3	1.480	9.62	0.12	30.77	40.51	56.00	15.49	QP
4	2.033	9.62	0.16	31.83	41.61	56.00	14.39	QP
5	2.594	9.64	0.19	31.26	41.09	56.00	14.91	QP
6	3.173	9.66	0.22	31.64	41.52	56.00	14.48	QP

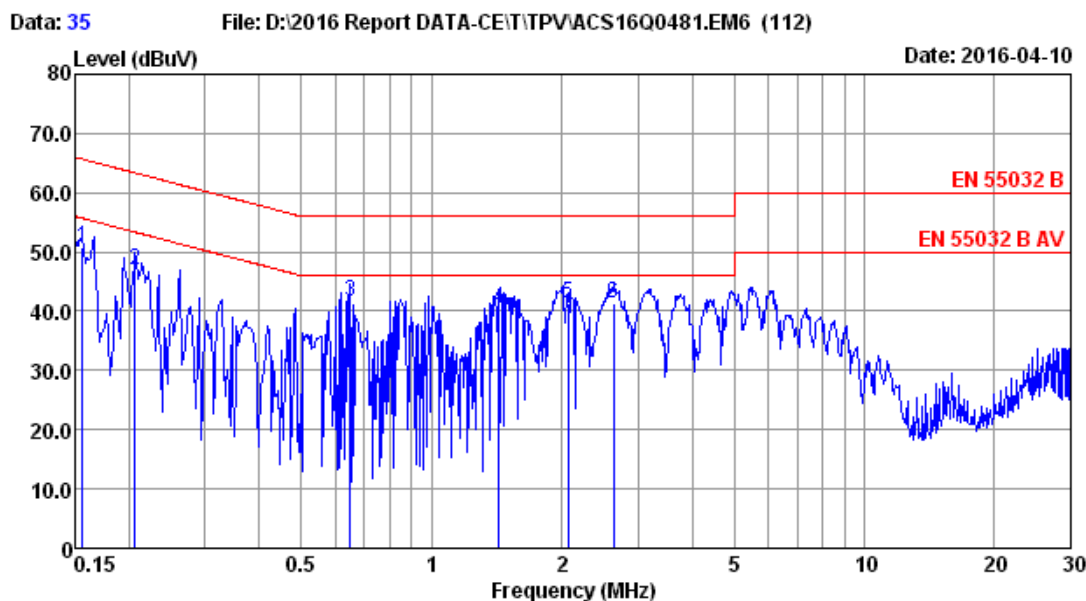
Remarks: 1.Emission Level=LISN Factor+Cable Loss+Reading.
 2.If the average limit is met when using a quasi-peak detector.
 the EUT shall be deemed to meet both limits and measurement
 with average detector is unnecessary.



Site no	:2# Conduction	Data No	:34
Dis./Lisn	:15 ENV4200 N	LISN phase:	NEUTRAL
Limit	:EN 55032 B	Pre	:101.3kPa
Env./Ins.	:23.7°C/51.2%	Engineer	:Evan
EUT	:EA245WMI		
Power Rating	:AC 230V/50Hz		
Test Mode	:HDMI:1920*1200@60Hz		
	Line:1.8m		

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.154	9.81	0.04	41.07	50.92	65.78	14.86	QP
2	0.621	9.51	0.07	31.33	40.91	56.00	15.09	QP
3	0.826	9.49	0.07	29.49	39.05	56.00	16.95	QP
4	1.544	9.46	0.13	29.52	39.11	56.00	16.89	QP
5	2.023	9.45	0.16	30.45	40.06	56.00	15.94	QP
6	2.594	9.46	0.19	29.90	39.55	56.00	16.45	QP

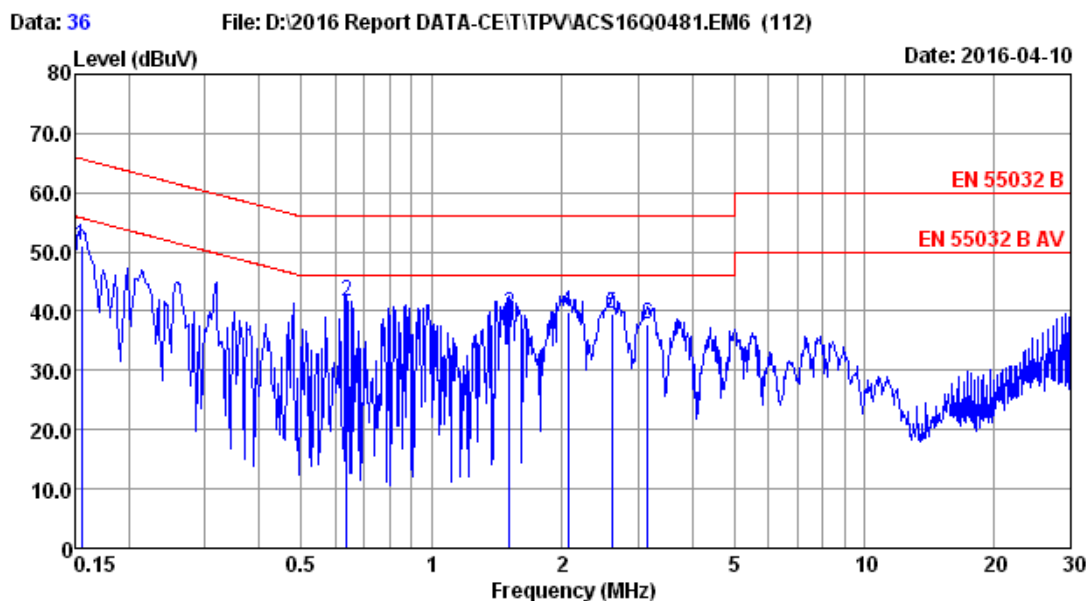
Remarks: 1.Emission Level=LISN Factor+Cable Loss+Reading.
 2.If the average limit is met when using a quasi-peak detector.
 the EUT shall be deemed to meet both limits and measurement
 with average detector is unnecessary.



Site no	:2# Conduction	Data No	:35
Dis./Lisn	:15 ENV4200 L1	LISN phase:	LINE
Limit	:EN 55032 B	Pre	:101.3kPa
Env./Ins.	:23.7°C/51.2%	Engineer	:Evan
EUT	:EA245WMI		
Power Rating	:AC 230V/50Hz		
Test Mode	:HDMI:Color Bar		
	Line:1.8m		

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.156	9.91	0.04	40.80	50.75	65.67	14.92	QP
2	0.206	9.85	0.05	37.12	47.02	63.36	16.34	QP
3	0.647	9.66	0.07	31.89	41.62	56.00	14.38	QP
4	1.433	9.62	0.12	30.84	40.58	56.00	15.42	QP
5	2.066	9.62	0.16	31.41	41.19	56.00	14.81	QP
6	2.636	9.64	0.19	31.63	41.46	56.00	14.54	QP

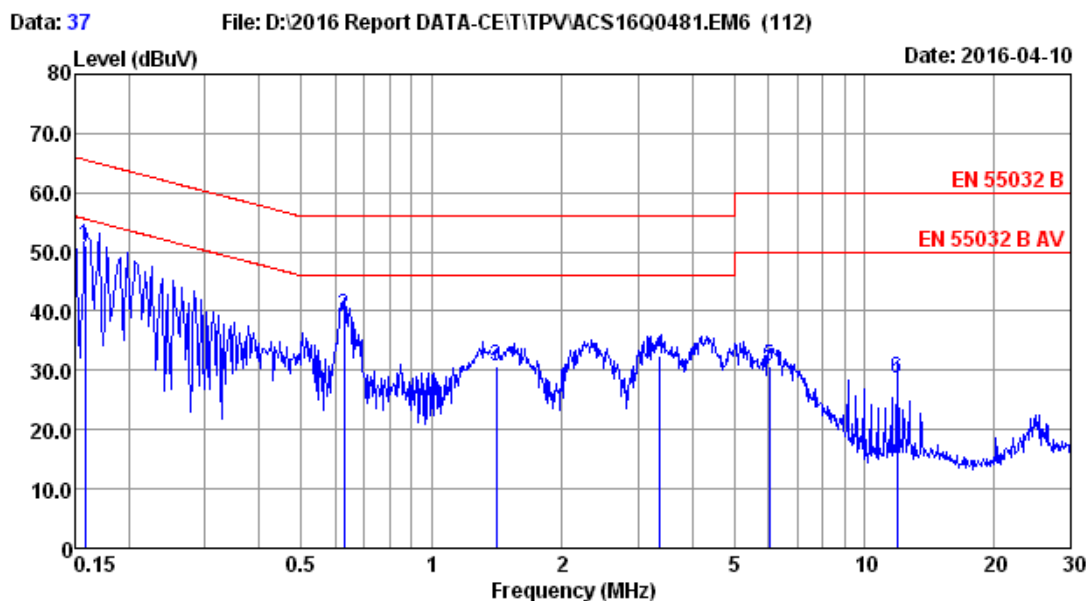
Remarks: 1.Emission Level=LISN Factor+Cable Loss+Reading.
 2.If the average limit is met when using a quasi-peak detector,
 the EUT shall be deemed to meet both limits and measurement
 with average detector is unnecessary.



Site no	:2# Conduction	Data No	:36
Dis./Lisn	:15 ENV4200 N	LISN phase:	NEUTRAL
Limit	:EN 55032 B	Pre	:101.3kPa
Env./Ins.	:23.7°C/51.2%	Engineer	:Evan
EUT	:EA245WMI		
Power Rating	:AC 230V/50Hz		
Test Mode	:HDMI:Color Bar		
	Line:1.8m		

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.156	9.81	0.04	41.30	51.15	65.69	14.54	QP
2	0.637	9.51	0.07	32.18	41.76	56.00	14.24	QP
3	1.511	9.46	0.13	29.99	39.58	56.00	16.42	QP
4	2.066	9.45	0.16	30.28	39.89	56.00	16.11	QP
5	2.608	9.46	0.19	30.05	39.70	56.00	16.30	QP
6	3.156	9.46	0.21	28.15	37.82	56.00	18.18	QP

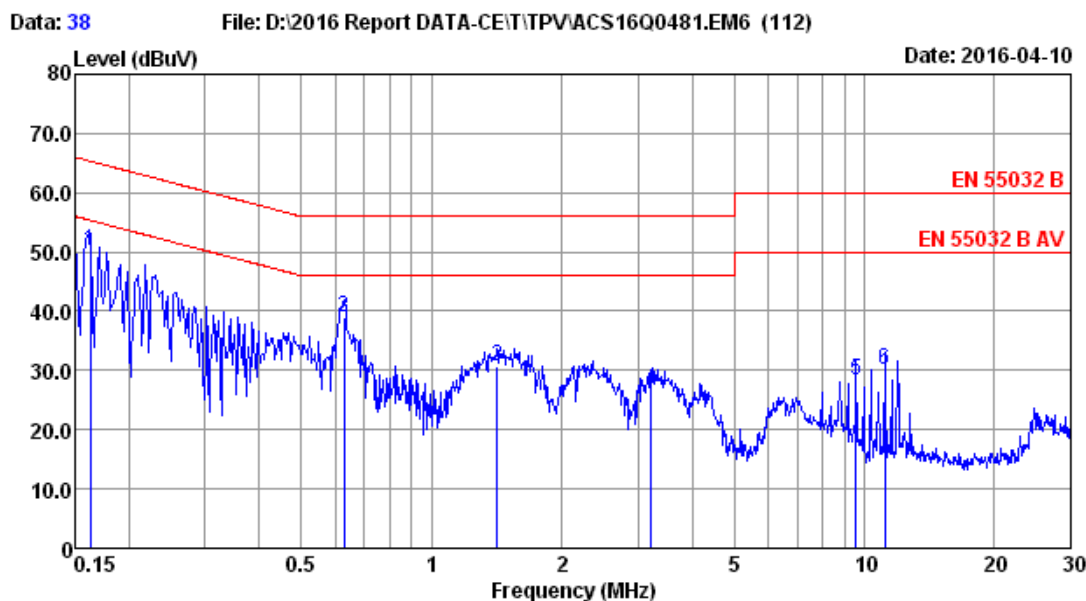
Remarks: 1.Emission Level=LISN Factor+Cable Loss+Reading.
 2.If the average limit is met when using a quasi-peak detector.
 the EUT shall be deemed to meet both limits and measurement
 with average detector is unnecessary.



Site no	:2# Conduction	Data No	:37
Dis./Lisn	:15 ENV4200 L1	LISN phase:	LINE
Limit	:EN 55032 B	Pre	:101.3kPa
Env./Ins.	:23.7°C/51.2%	Engineer	:Evan
EUT	:EA245WMI		
Power Rating	:AC 230V/50Hz		
Test Mode	:STANDBY Mode		
	Line:1.8m		

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.158	9.91	0.04	41.00	50.95	65.56	14.61	QP
2	0.627	9.66	0.07	29.58	39.31	56.00	16.69	QP
3	1.411	9.63	0.12	20.98	30.73	56.00	25.27	QP
4	3.364	9.67	0.22	22.54	32.43	56.00	23.57	QP
5	6.024	9.72	0.30	20.78	30.80	60.00	29.20	QP
6	11.933	9.94	0.40	18.30	28.64	60.00	31.36	QP

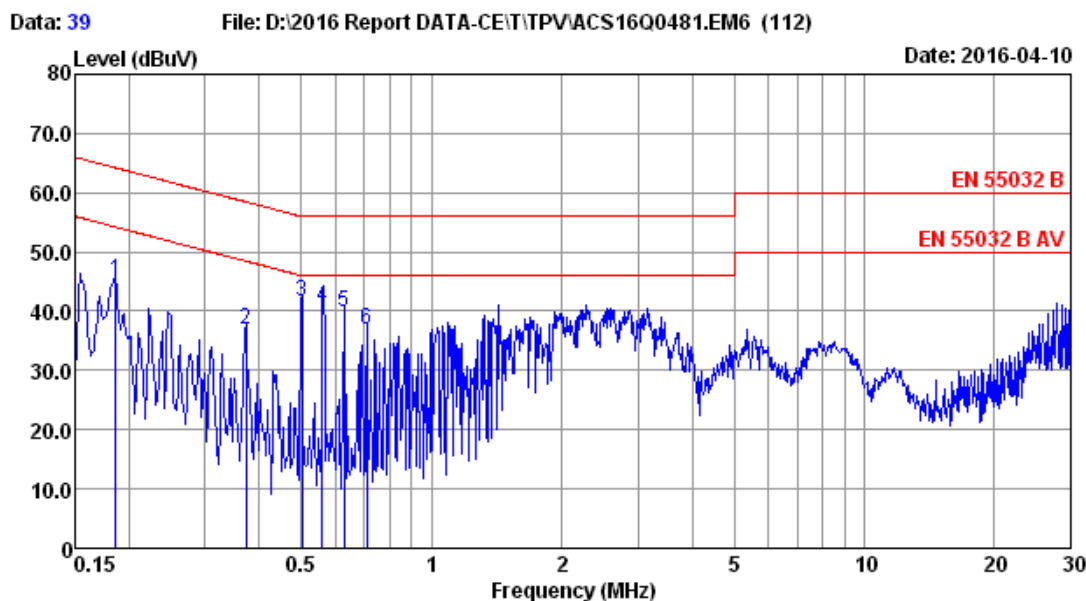
Remarks: 1.Emission Level=LISN Factor+Cable Loss+Reading.
 2.If the average limit is met when using a quasi-peak detector.
 the EUT shall be deemed to meet both limits and measurement
 with average detector is unnecessary.



Site no	:2# Conduction	Data No	:38
Dis./Lisn	:15 ENV4200 N	LISN phase:	NEUTRAL
Limit	:EN 55032 B	Pre	:101.3kPa
Env./Ins.	:23.7°C/51.2%	Engineer	:Evan
EUT	:EA245WMI		
Power Rating	:AC 230V/50Hz		
Test Mode	:STANDBY Mode		
	Line:1.8m		

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.162	9.80	0.04	40.39	50.23	65.34	15.11	QP
2	0.627	9.51	0.07	29.24	38.82	56.00	17.18	QP
3	1.418	9.46	0.12	21.11	30.69	56.00	25.31	QP
4	3.224	9.46	0.22	17.08	26.76	56.00	29.24	QP
5	9.552	9.52	0.37	18.56	28.45	60.00	31.55	QP
6	11.139	9.59	0.39	20.18	30.16	60.00	29.84	QP

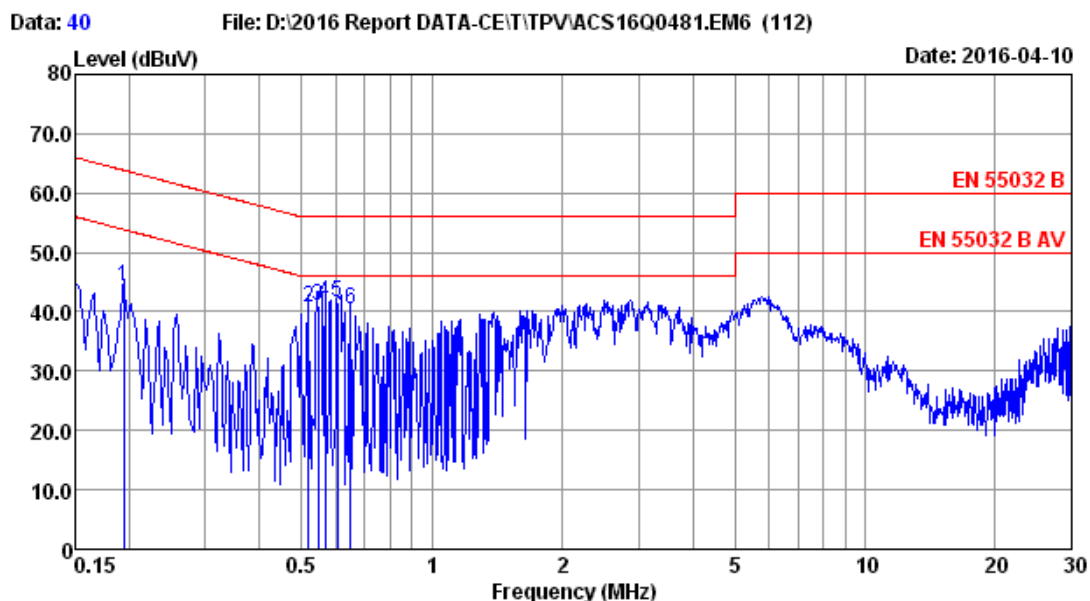
Remarks: 1.Emission Level=LISN Factor+Cable Loss+Reading.
 2.If the average limit is met when using a quasi-peak detector.
 the EUT shall be deemed to meet both limits and measurement
 with average detector is unnecessary.



Site no	:2# Conduction	Data No	:39
Dis./Lisn	:15 ENV4200 L1	LISN phase:	LINE
Limit	:EN 55032 B	Pre	:101.3kPa
Env./Ins.	:23.7°C/51.2%	Engineer	:Evan
EUT	:EA245WMI		
Power Rating	:AC 110V/60Hz		
Test Mode	:VGA:1920*1200@60Hz		
	Line:1.8m		

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.186	9.87	0.05	35.14	45.06	64.20	19.14	QP
2	0.373	9.74	0.06	27.18	36.98	58.43	21.45	QP
3	0.502	9.68	0.07	31.90	41.65	56.00	14.35	QP
4	0.558	9.67	0.07	30.92	40.66	56.00	15.34	QP
5	0.627	9.66	0.07	30.01	39.74	56.00	16.26	QP
6	0.708	9.65	0.07	27.13	36.85	56.00	19.15	QP

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



Site no	:2# Conduction	Data No	:40
Dis./Lisn	:15 ENV4200 N	LISN phase:	NEUTRAL
Limit	:EN 55032 B	Pre	:101.3kPa
Env./Ins.	:23.7°C/51.2%	Engineer	:Evan
EUT	:EA245WMI		
Power Rating	:AC 110V/60Hz		
Test Mode	:VGA:1920*1200@60Hz		
	Line:1.8m		

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.194	9.76	0.05	34.59	44.40	63.84	19.44	QP
2	0.518	9.53	0.07	31.23	40.83	56.00	15.17	QP
3	0.546	9.52	0.07	31.48	41.07	56.00	14.93	QP
4	0.567	9.52	0.07	32.11	41.70	56.00	14.30	QP
5	0.604	9.51	0.07	31.98	41.56	56.00	14.44	QP
6	0.647	9.51	0.07	30.75	40.33	56.00	15.67	QP

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

4. RADIATED EMISSION MEASUREMENT

4.1. Test Equipments

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

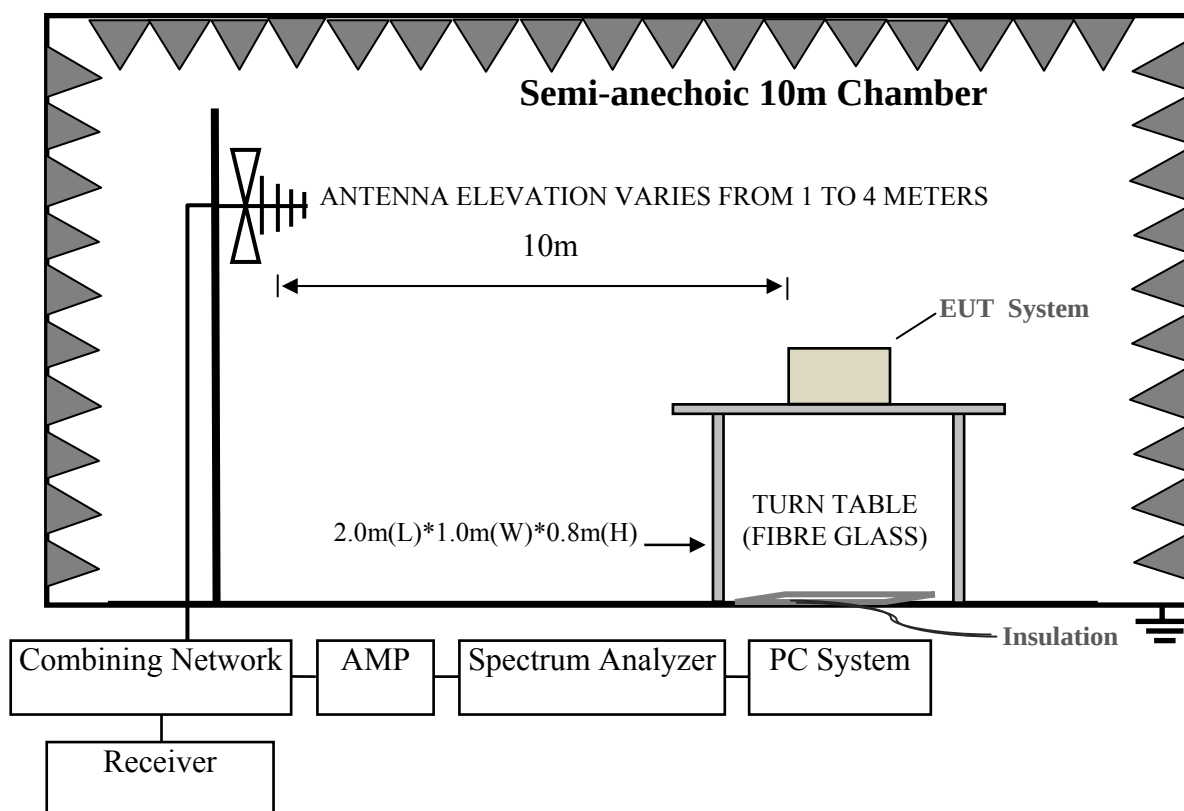
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	10m Chamber	AUDIX	N/A	N/A	Apr.18,15	1 Year
2.	EMC Analyzer	Agilent	E7403A	MY42000106	Apr.28,15	1 Year
3.	EMC Analyzer	Agilent	E7405A	MY45116588	Oct.18,15	1 Year
4.	Test Receiver	Rohde & Schwarz	ESCI	100843	Oct.17,15	1 Year
5.	Amplifier	Agilent	8447D	2944A10684	Apr.28,15	1 Year
6.	Amplifier	Agilent	8447D	2944A11140	Apr.28,15	1 Year
7.	Trilog-Broadband Antenna	SCHWARZBEC K	VULB 9168	9168-493	May.06,15	1 Year
8.	Trilog-Broadband Antenna	SCHWARZBEC K	VULB 9168	9168-429	Jan.08,16	1 Year
9.	RF Cable	MIYAZAKI	CFD400-LW(3.5M)	10m Chamber No.1	Apr.28,15	1 Year
10.	RF Cable	MIYAZAKI	CFD400-LW(3.5M)	10m Chamber No.2	Apr.28,15	1 Year
11.	RF Cable	MIYAZAKI	CFD400-LW(22M)	10m Chamber No.5	Apr.28,15	1 Year
12.	RF Cable	MIYAZAKI	CFD400-LW(22M)	10m Chamber No.6	Apr.28,15	1 Year
13.	Coaxial Switch	Anritsu	MP59B	6201397220	Apr.28,15	1 Year
14.	Coaxial Switch	Anritsu	MP59B	6201397221	Apr.28,15	1 Year
15.	Coaxial Switch	Anritsu	MP59B	620313662	Apr.28,15	1 Year
16.	Test Software	AUDIX	e3	6.100913a	N/A	N/A

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

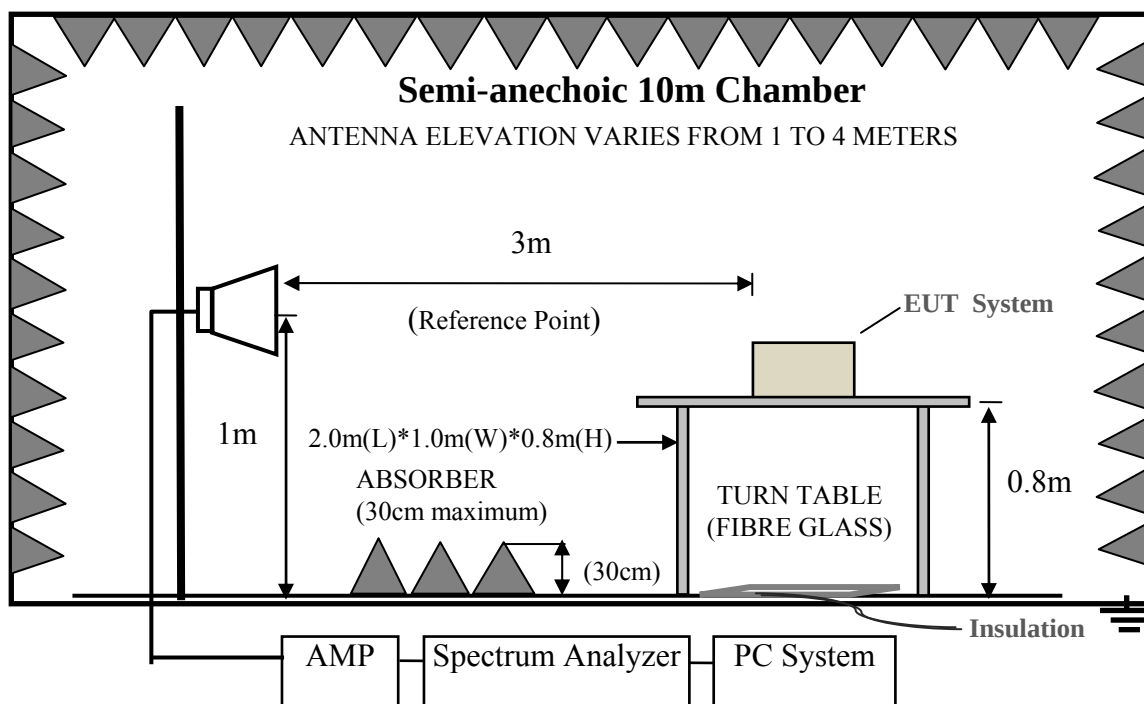
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	10m Chamber	AUDIX	N/A	N/A	Mar.21s,16	1 Year
2.	EMC Analyzer	Agilent	N9030A	MY51380221	Oct.18,15	1 Year
3.	Horn Antenna	ETS	3115	9510-4580	Oct.15,15	1 Year
4.	Amplifier	Agilent	83017A	MY53270085	May.25,15	1 Year
5.	RF Cable	Hubersuhner	SUCOFLEX106	505239/6+28610/2	Apr.28,15	1 Year
6.	Test Software	AUDIX	e3	6.100913a	N/A	N/A

4.2. Block Diagram of Test Setup

4.2.1. In 10m Anechoic Chamber Test Setup Diagram for 30-1000MHz



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



4.3. Test Standard

EN 55032: 2012+AC: 2013, Class B

4.4. Radiated Emission Limit

All emanations from a Class B 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 (dB μ V/m)
30 ~ 230	10	30
230 ~ 1000	10	37
1000~3000	3	70(Peak) 50(Average)
3000~6000	3	74(Peak) 54(Average)

- Notes: (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 EUT.

4.5. EUT Configuration on Test

The configurations of EUT are listed in Section 3.5.

4.6. Operating Condition of EUT

Same as Conducted Emission test that 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, 80 cm above the ground plane measurement distance was 10m at a semi-anechoic chamber. An antenna was located 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 55032 Class B on Radiated Emission test.

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

The resolution bandwidth of the Agilent Spectrum 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 EUT were rotated and the antenna height was varied between 1m and 4m in order to maximize the emission. 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 4.8.

4.8. Radiated Emission Test Results

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

EUT: LCD Monitor

Model No. : EA245WMi

For frequency range 30MHz~1000MHz

The EUT with the following test modes were tested and selected (No.3 ~ 10) to read Q.P values, all the test results are listed in next pages.

Test Date: Apr.11, 2016 Temperature: 23.6℃ Humidity: 51.1% Pressure: 101.7kPa

The details of test modes are as follows :

No.	Test Mode	Input Port	Cable Length	Resolution & Frequency	Reference Test Data No.	
					Horizontal	Vertical
1.	PC Mode	Display	1.8m	640*480@60Hz	#20	#19
2.				1280*1024@75Hz	#22	#21
3. ※				1920*1200@60Hz	#24	#23
4.			1.5m	1920*1200@60Hz	#26	#25
5.		1.8m	1200*1920@60Hz (Panel is Vertical)	#28	#27	
6.			HDMI	1920*1200@60Hz	#30	#29
7.			VGA	1920*1200@60Hz	#32	#31
8.			DVI	1920*1200@60Hz	#34	#33
9.			DVD Mode	HDMI	Color Bar	#36
10.	Standby	--	--	#38	#37	

(※ Worst test mode)

For frequency range 1GHz~6GHz

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

Test Date: Apr.09, 2016 Temperature: 22.5℃ Humidity: 51.2% Pressure: 101.5kPa

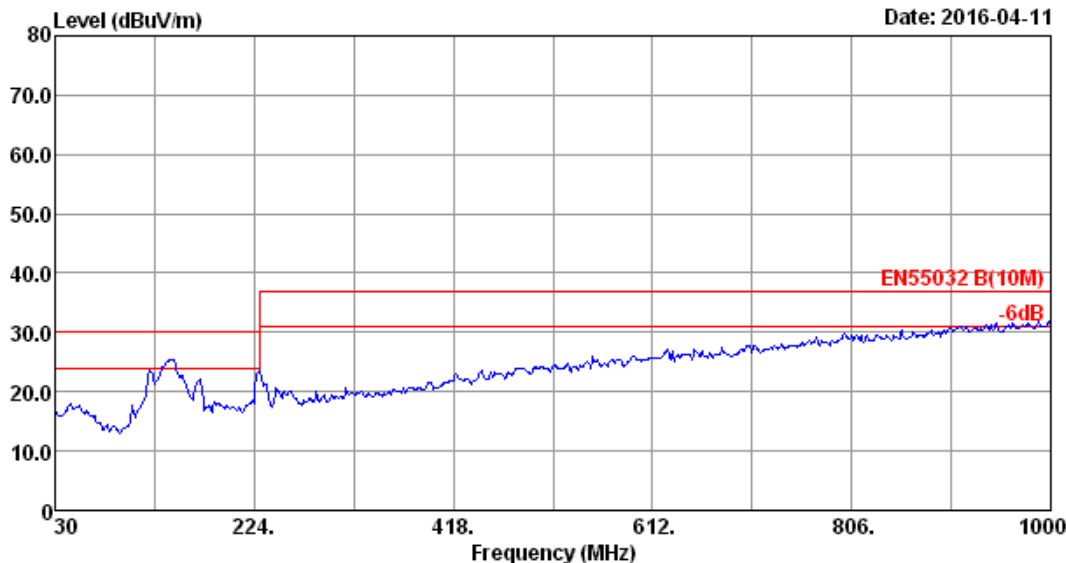
No.	Test Mode	Input Port	Cable Length	Resolution & Frequency	Reference Test Data No.	
					Horizontal	Vertical
1.	PC Mode	HDMI	1.8m	1280*1024@75Hz	#12	#11
2. ※				1920*1200@60Hz	#13	#14
3.		VGA		1920*1200@60Hz	#16	#15
4.		DVI		1920*1200@60Hz	#18	#17
5.		Display		1920*1200@60Hz	#19	#20

(※ Worst test mode)

Data: 20

File: D:\2016 Report DATA\TPV\ACS16Q0481-L.EM6 (136)

Date: 2016-04-11

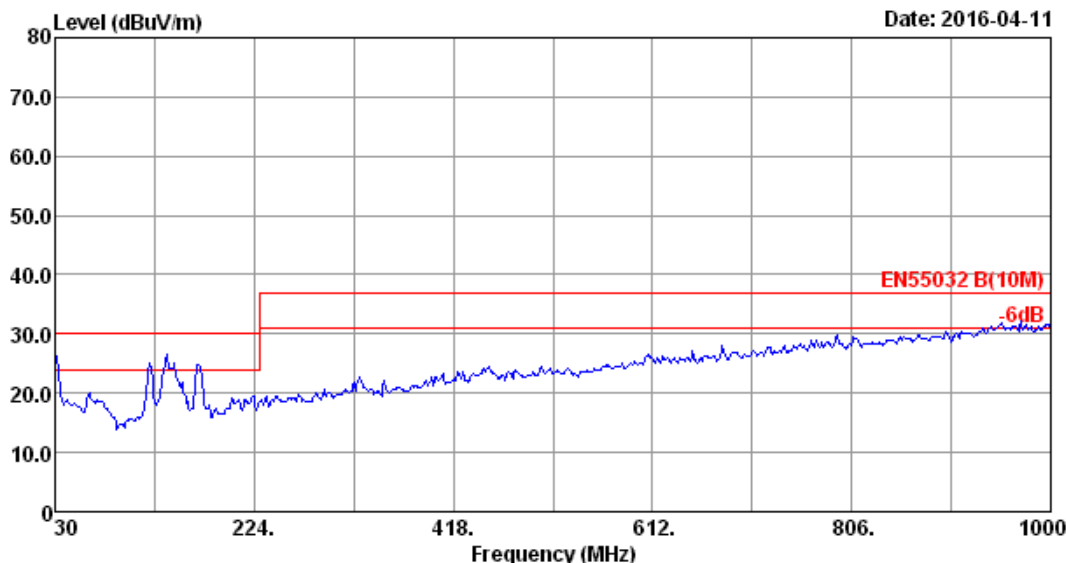


Site no.	: 10m Chamber	Data no.	: 20
Dis. / Ant.	: 10m 2016 9168-429	Ant. pol.	: HORIZONTAL
Limit	: EN55032 B(10M)	Pre	: 101.7kPa
Env. / Ins.	: 23.6°C/51.1%	Engineer	: Saxon
EUT	: EA245Wmi		
Power rating	: AC 230V/50Hz		
Test Mode	: Display:640*480@60Hz		
	Line:1.8m		

Data: 19

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Date: 2016-04-11

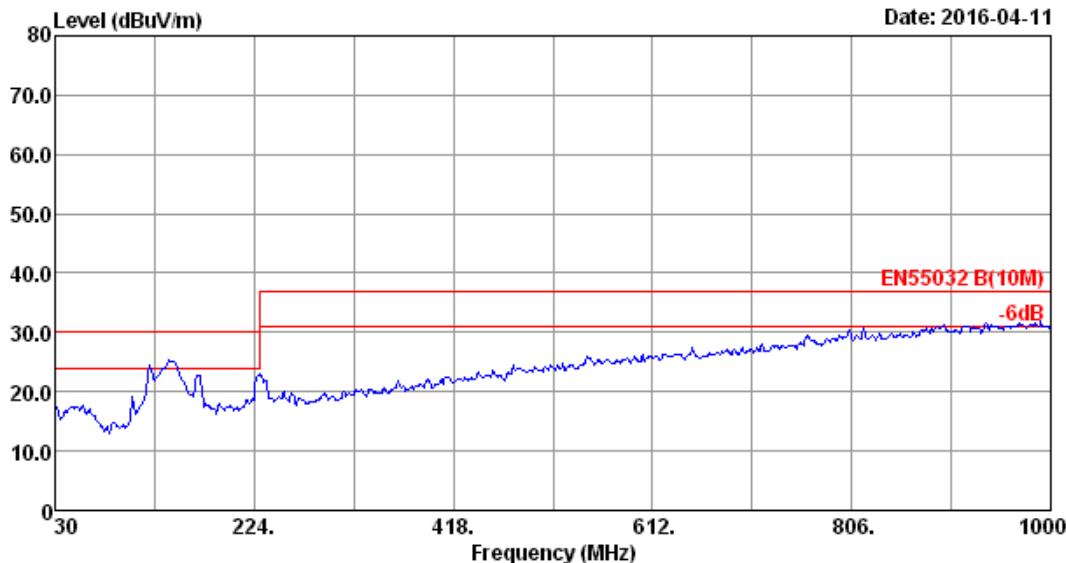


Site no.	: 10m Chamber	Data no.	: 19
Dis. / Ant.	: 10m 2015 9168-493	Ant. pol.	: VERTICAL
Limit	: EN55032 B(10M)	Pre	: 101.7kPa
Env. / Ins.	: 23.6°C/51.1%	Engineer	: Saxon
EUT	: EA245Wmi		
Power rating	: AC 230V/50Hz		
Test Mode	: Display:640*480@60Hz		
	Line:1.8m		

Data: 22

File: D:\2016 Report DATA\TPV\ACS16Q0481-L.EM6 (136)

Date: 2016-04-11

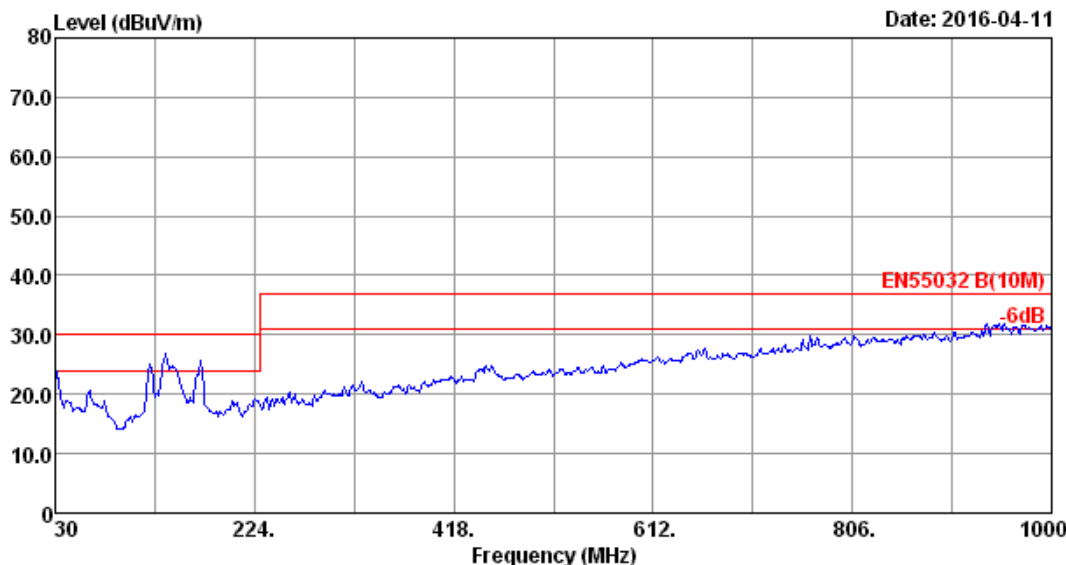


Site no.	: 10m Chamber	Data no.	: 22
Dis. / Ant.	: 10m 2016 9168-429	Ant. pol.	: HORIZONTAL
Limit	: EN55032 B(10M)	Pre	: 101.7kPa
Env. / Ins.	: 23.6°C/51.1%	Engineer	: Saxon
EUT	: EA245Wmi		
Power rating	: AC 230V/50Hz		
Test Mode	: Display:1280*1024@75Hz		
	Line:1.8m		

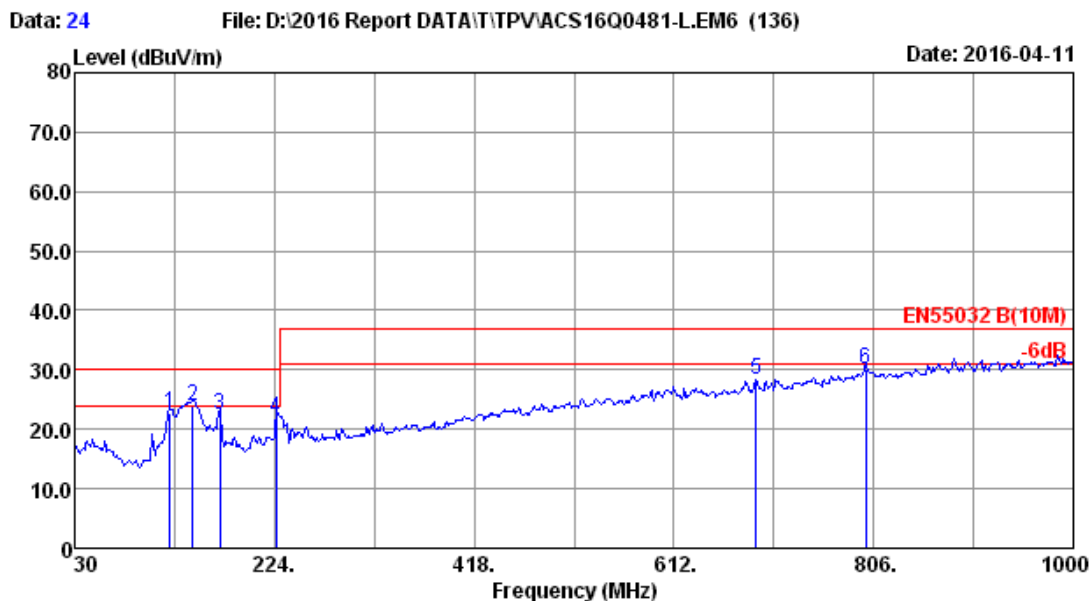
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Date: 2016-04-11



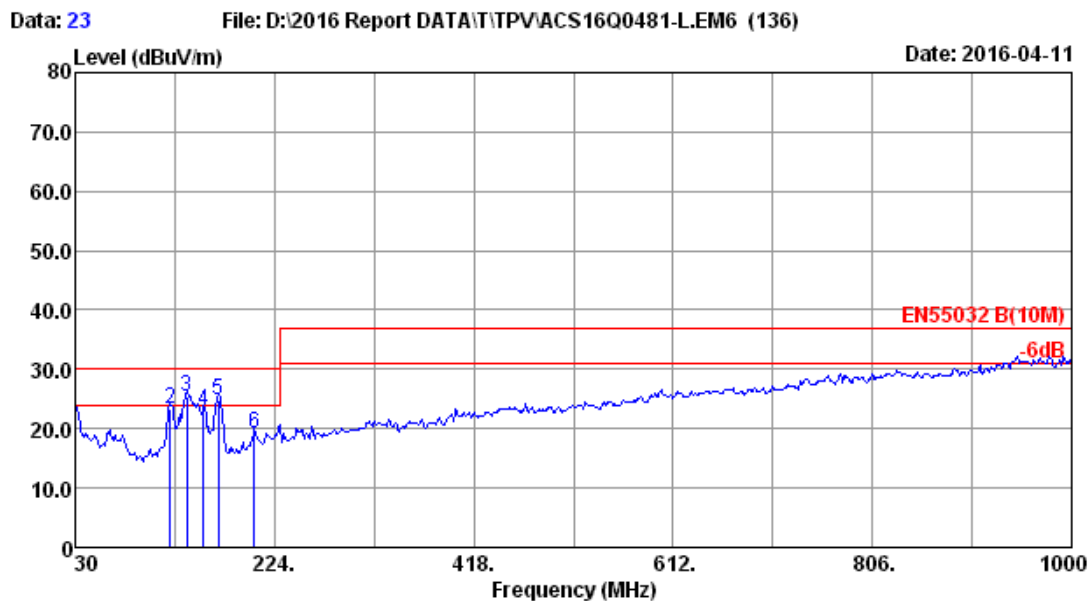
Site no.	: 10m Chamber	Data no.	: 21
Dis. / Ant.	: 10m 2015 9168-493	Ant. pol.	: VERTICAL
Limit	: EN55032 B(10M)	Pre	: 101.7kPa
Env. / Ins.	: 23.6°C/51.1%	Engineer	: Saxon
EUT	: EA245Wmi		
Power rating	: AC 230V/50Hz		
Test Mode	: Display:1280*1024@75Hz		
	Line:1.8m		



Site no. : 10m Chamber Data no. : 24
 Dis. / Ant. : 10m 2016 9168-429 Ant. pol. : HORIZONTAL
 Limit : EN55032 B(10M) Pre : 101.7kPa
 Env. / Ins. : 23.6°C/51.1% Engineer : Saxon
 EUT : EA245WMI
 Power rating : AC 230V/50Hz
 Test Mode : Display:1920*1200@60Hz
 Line:1.8m

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	122.15	11.04	4.21	7.34	22.59	30.00	7.41	QP
2	144.46	13.00	4.22	6.78	24.00	30.00	6.00	QP
3	170.65	12.31	4.28	5.95	22.54	30.00	7.46	QP
4	225.94	10.33	4.49	7.02	21.84	30.00	8.16	QP
5	691.54	20.71	6.00	1.60	28.31	37.00	8.69	QP
6	798.24	22.37	6.29	1.59	30.25	37.00	6.75	QP

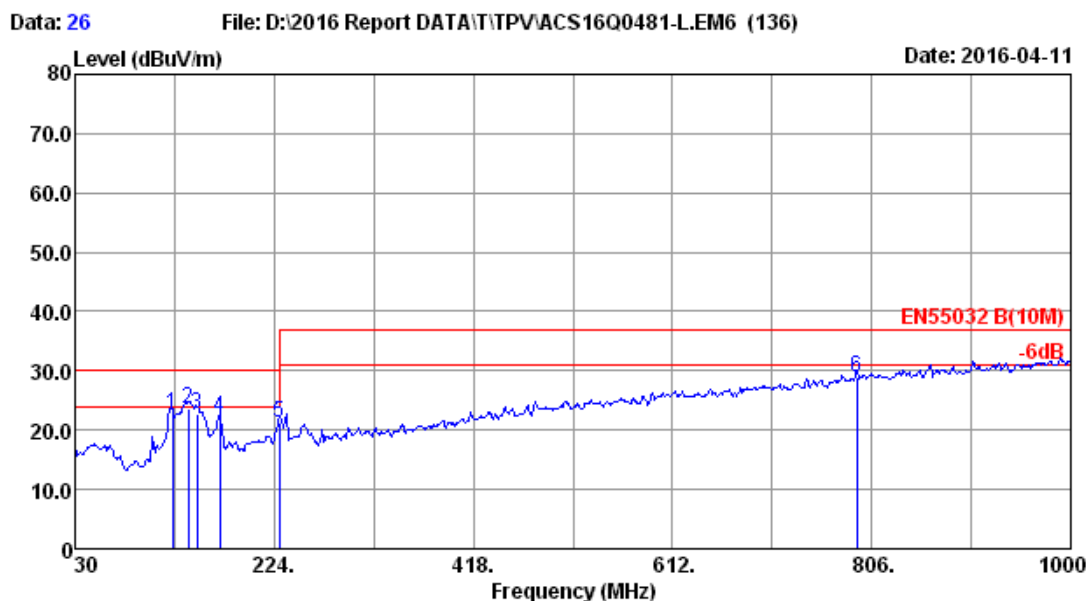
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.
 3. The worst emission was detected at 144.46MHz with corrected signal level of 24.00dBuV/m. (Antenna height 4.0m; Turntable degree 133°).
 4. 0° was the table front facing the antenna. Degree is calculated from 0° clockwise facing the antenna.



Site no. : 10m Chamber Data no. : 23
 Dis. / Ant. : 10m 2015 9168-493 Ant. pol. : VERTICAL
 Limit : EN55032 B(10M) Pre : 101.7kPa
 Env. / Ins. : 23.6°C/51.1% Engineer : Saxon
 EUT : EA245WMI
 Power rating : AC 230V/50Hz
 Test Mode : Display:1920*1200@60Hz
 Line:1.8m

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	30.00	13.30	3.43	6.38	23.11	30.00	6.89	QP
2	122.15	12.45	4.19	6.65	23.29	30.00	6.71	QP
3	138.64	13.35	4.24	7.75	25.34	30.00	4.66	QP
4	155.13	13.71	4.30	4.89	22.90	30.00	7.10	QP
5	169.68	13.61	4.35	6.96	24.92	30.00	5.08	QP
6	204.60	9.95	4.47	4.69	19.11	30.00	10.89	QP

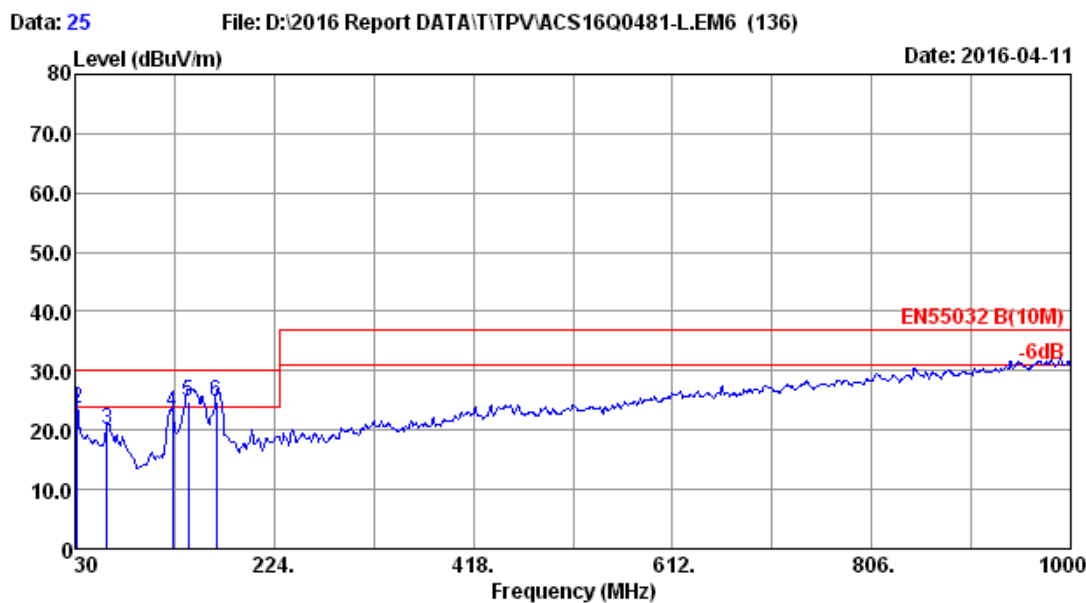
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.
 3. The worst emission was detected at 138.64MHz with corrected signal level of 25.34dBuV/m. (Antenna height 1.0m; Turntable degree 309°).
 4. 0° was the table front facing the antenna. Degree is calculated from 0° clockwise facing the antenna.



Site no. : 10m Chamber Data no. : 26
 Dis. / Ant. : 10m 2016 9168-429 Ant. pol. : HORIZONTAL
 Limit : EN55032 B(10M) Pre : 101.7kPa
 Env. / Ins. : 23.6°C/51.1% Engineer : Saxon
 EUT : EA245WM1
 Power rating : AC 230V/50Hz
 Test Mode : Display:1920*1200@60Hz
 Line:1.5m

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	125.06	11.36	4.21	7.02	22.59	30.00	7.41	QP
2	140.58	13.00	4.22	6.48	23.70	30.00	6.30	QP
3	149.31	13.00	4.23	5.63	22.86	30.00	7.14	QP
4	170.65	12.31	4.28	5.45	22.04	30.00	7.96	QP
5	228.85	10.60	4.51	6.22	21.33	30.00	8.67	QP
6	791.45	22.26	6.27	0.52	29.05	37.00	7.95	QP

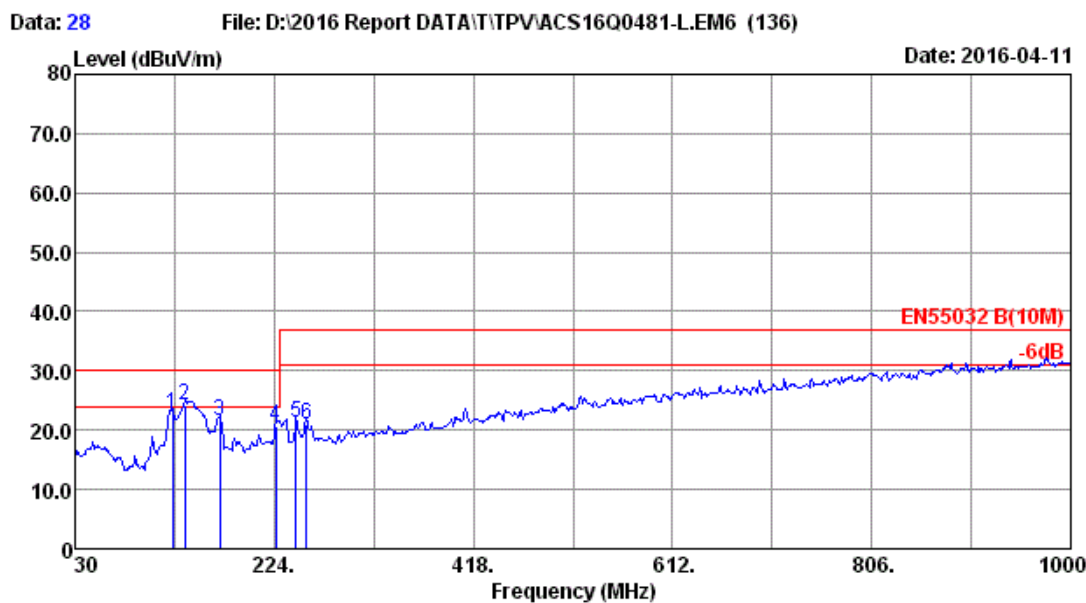
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 10m Chamber Data no. : 25
 Dis. / Ant. : 10m 2015 9168-493 Ant. pol. : VERTICAL
 Limit : EN55032 B(10M) Pre : 101.7kPa
 Env. / Ins. : 23.6°C/51.1% Engineer : Saxon
 EUT : EA245W1
 Power rating : AC 230V/50Hz
 Test Mode : Display:1920*1200@60Hz
 Line:1.5m

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	31.94	13.51	3.47	6.50	23.48	30.00	6.52	QP
2	31.94	13.51	3.47	6.50	23.48	30.00	6.52	QP
3	61.04	13.18	3.92	2.99	20.09	30.00	9.91	QP
4	125.06	12.65	4.20	6.05	22.90	30.00	7.10	QP
5	140.58	13.40	4.25	7.17	24.82	30.00	5.18	QP
6	167.74	13.69	4.34	6.81	24.84	30.00	5.16	QP

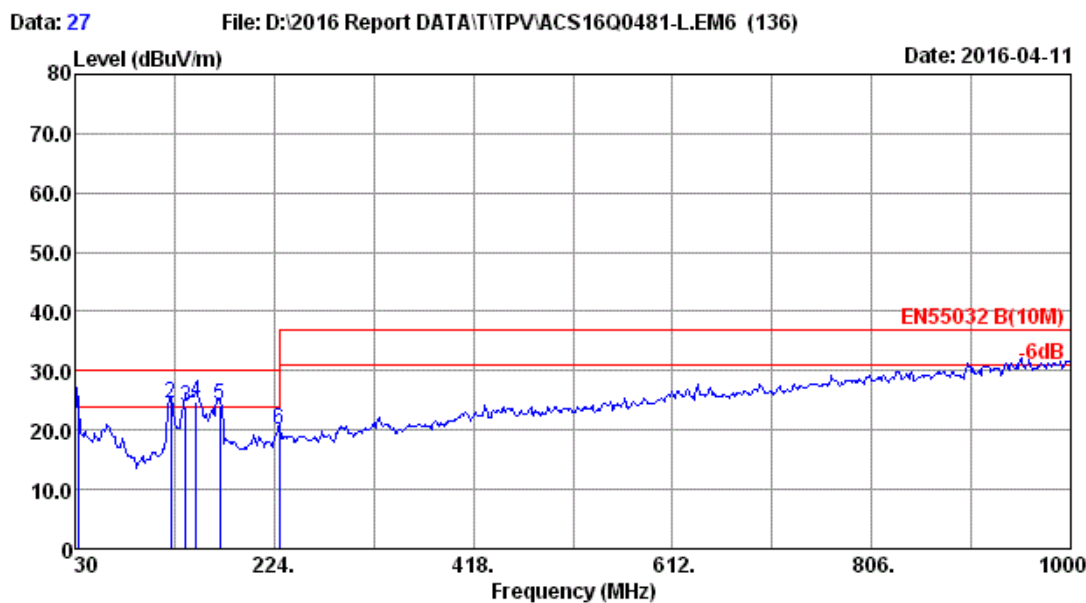
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 10m Chamber Data no. : 28
 Dis. / Ant. : 10m 2016 9168-429 Ant. pol. : HORIZONTAL
 Limit : EN55032 B(10M) Pre : 101.7kPa
 Env. / Ins. : 23.6°C/51.1% Engineer : Saxon
 EUT : EA245WM1
 Power rating : AC 230V/50Hz
 Test Mode : Display:1200*1920@60Hz
 Line:1.8m
 Panel is Vertical

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	125.06	11.36	4.21	7.11	22.68	30.00	7.32	QP
2	136.70	12.64	4.22	7.28	24.14	30.00	5.86	QP
3	170.65	12.31	4.28	4.98	21.57	30.00	8.43	QP
4	225.94	10.33	4.49	5.91	20.73	30.00	9.27	QP
5	245.34	11.73	4.60	4.84	21.17	37.00	15.83	QP
6	255.04	11.98	4.65	4.37	21.00	37.00	16.00	QP

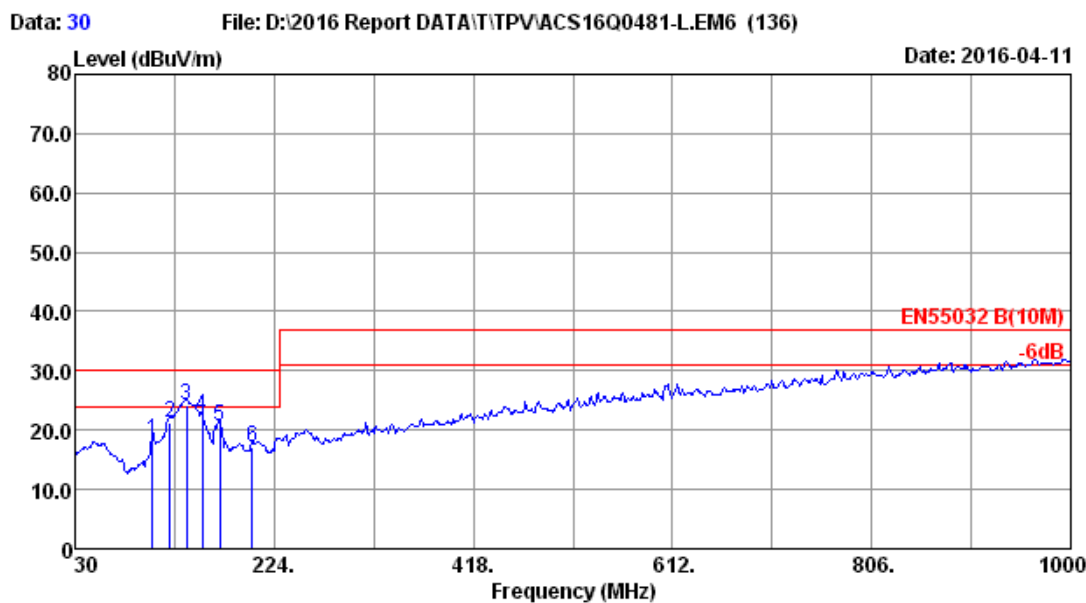
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 10m Chamber Data no. : 27
 Dis. / Ant. : 10m 2015 9168-493 Ant. pol. : VERTICAL
 Limit : EN55032 B(10M) Pre : 101.7kPa
 Env. / Ins. : 23.6°C/51.1% Engineer : Saxon
 EUT : EA245WM1
 Power rating : AC 230V/50Hz
 Test Mode : Display:1200*1920@60Hz
 Line:1.8m
 Panel is Vertical

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	32.91	13.62	3.49	6.56	23.67	30.00	6.33	QP
2	123.12	12.52	4.19	7.73	24.44	30.00	5.56	QP
3	137.67	13.31	4.24	6.38	23.93	30.00	6.07	QP
4	148.34	13.40	4.28	6.99	24.67	30.00	5.33	QP
5	170.65	13.50	4.35	6.38	24.23	30.00	5.77	QP
6	228.85	10.46	4.55	4.93	19.94	30.00	10.06	QP

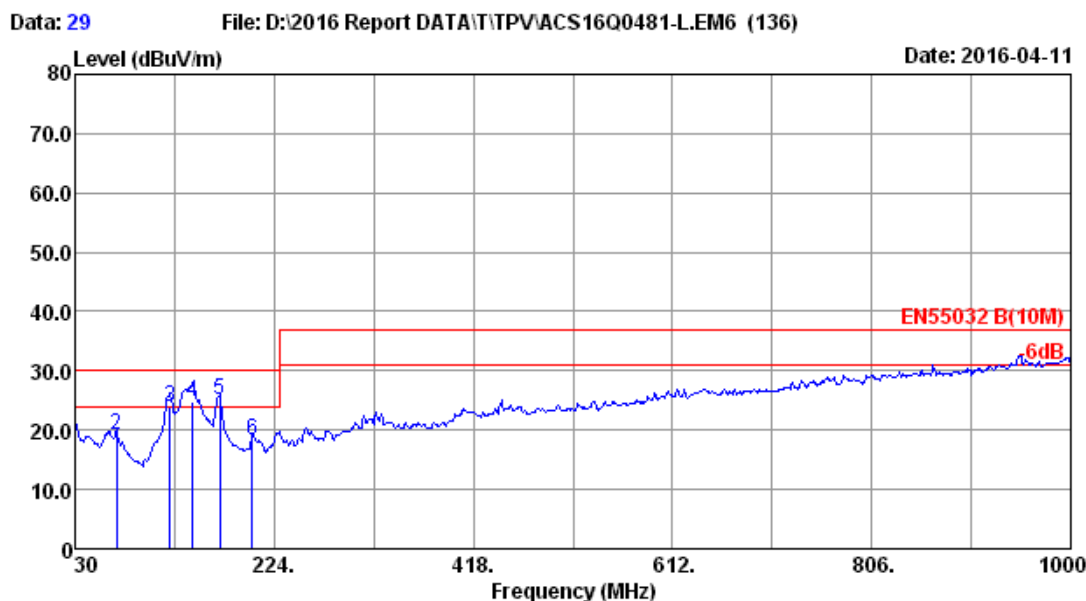
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no.	: 10m Chamber	Data no.	: 30
Dis. / Ant.	: 10m 2016 9168-429	Ant. pol.	: HORIZONTAL
Limit	: EN55032 B(10M)	Pre	: 101.7kPa
Env. / Ins.	: 23.6°C/51.1%	Engineer	: Saxon
EUT	: EA245WM1		
Power rating	: AC 230V/50Hz		
Test Mode	: HDMI:1920*1200@60Hz		
	Line:1.8m		

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission		Margin (dB)	Remark
					Level (dBuV/m)	Limits (dBuV/m)		
1	105.66	9.51	4.20	4.72	18.43	30.00	11.57	QP
2	122.15	11.04	4.21	6.02	21.27	30.00	8.73	QP
3	138.64	12.85	4.22	7.11	24.18	30.00	5.82	QP
4	154.16	13.00	4.24	5.05	22.29	30.00	7.71	QP
5	170.65	12.31	4.28	4.20	20.79	30.00	9.21	QP
6	202.66	9.89	4.37	2.88	17.14	30.00	12.86	QP

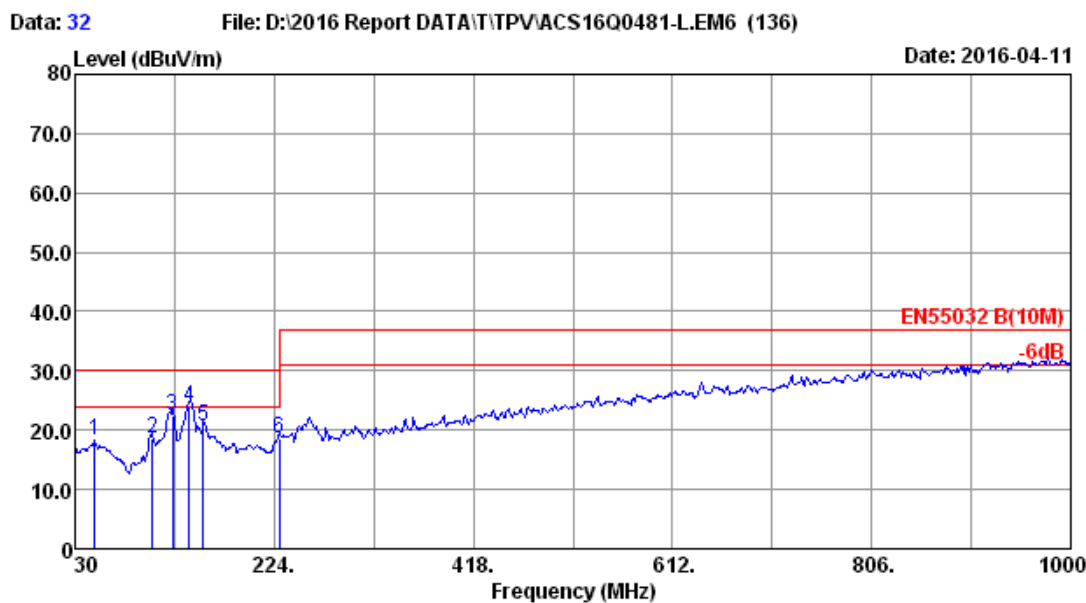
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 10m Chamber Data no. : 29
 Dis. / Ant. : 10m 2015 9168-493 Ant. pol. : VERTICAL
 Limit : EN55032 B(10M) Pre : 101.7kPa
 Env. / Ins. : 23.6°C/51.1% Engineer : Saxon
 EUT : EA245WMI
 Power rating : AC 230V/50Hz
 Test Mode : HDMI:1920*1200@60Hz
 Line:1.8m

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	30.00	13.30	3.43	2.47	19.20	30.00	10.80	QP
2	70.74	11.96	3.97	3.17	19.10	30.00	10.90	QP
3	122.15	12.45	4.19	7.32	23.96	30.00	6.04	QP
4	144.46	13.40	4.26	7.10	24.76	30.00	5.24	QP
5	170.65	13.50	4.35	7.11	24.96	30.00	5.04	QP
6	202.66	9.97	4.46	3.74	18.17	30.00	11.83	QP

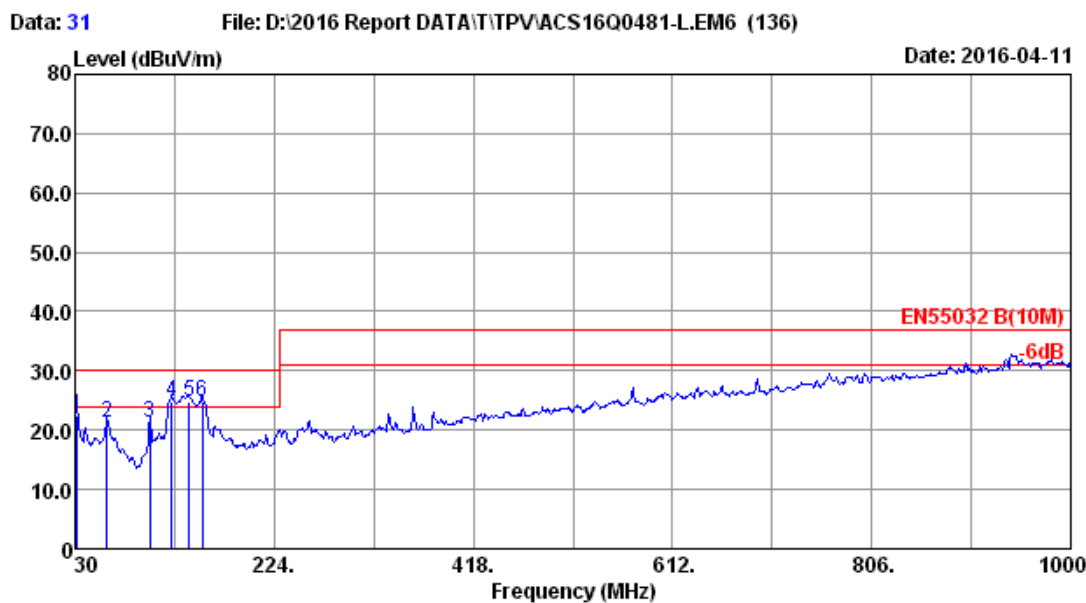
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no.	: 10m Chamber	Data no.	: 32
Dis. / Ant.	: 10m 2016 9168-429	Ant. pol.	: HORIZONTAL
Limit	: EN55032 B(10M)	Pre	: 101.7kPa
Env. / Ins.	: 23.6°C/51.1%	Engineer	: Saxon
EUT	: EA245WM1		
Power rating	: AC 230V/50Hz		
Test Mode	: VGA:1920*1200@60Hz		
	Line:1.8m		

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission		Margin (dB)	Remark
					Level (dBuV/m)	Limits (dBuV/m)		
1	49.40	13.86	3.87	0.58	18.31	30.00	11.69	QP
2	105.66	9.51	4.20	4.75	18.46	30.00	11.54	QP
3	125.06	11.36	4.21	6.96	22.53	30.00	7.47	QP
4	141.55	13.00	4.22	6.64	23.86	30.00	6.14	QP
5	155.13	13.00	4.24	3.50	20.74	30.00	9.26	QP
6	228.85	10.60	4.51	3.47	18.58	30.00	11.42	QP

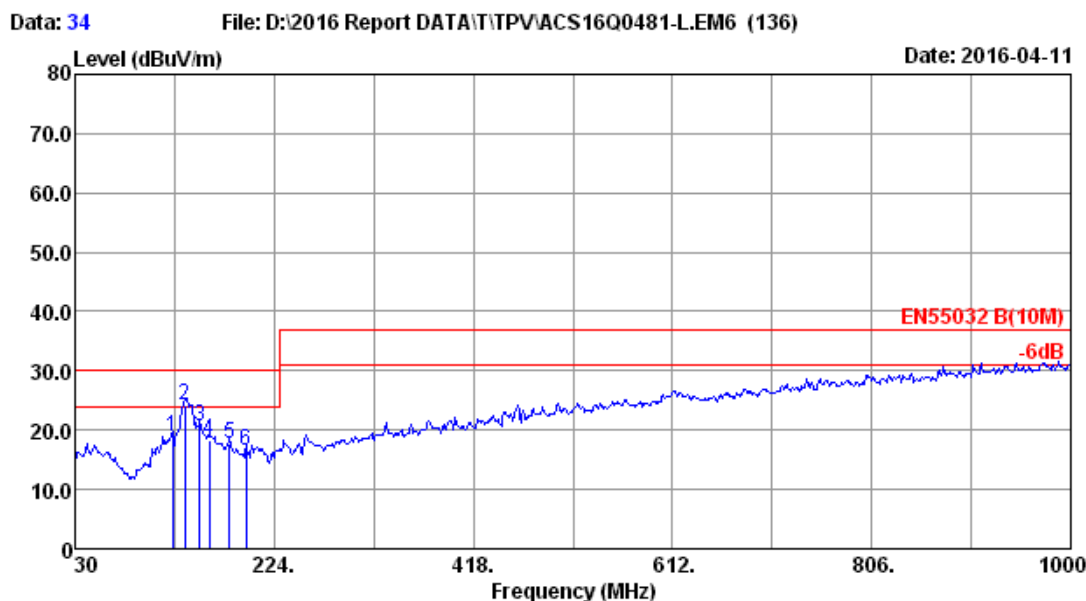
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 10m Chamber Data no. : 31
 Dis. / Ant. : 10m 2015 9168-493 Ant. pol. : VERTICAL
 Limit : EN55032 B(10M) Pre : 101.7kPa
 Env. / Ins. : 23.6°C/51.1% Engineer : Saxon
 EUT : EA245WM1
 Power rating : AC 230V/50Hz
 Test Mode : VGA:1920*1200@60Hz
 Line:1.8m

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	31.94	13.51	3.47	5.50	22.48	30.00	7.52	QP
2	61.04	13.18	3.92	4.07	21.17	30.00	8.83	QP
3	102.75	9.67	4.12	7.54	21.33	30.00	8.67	QP
4	124.09	12.59	4.19	8.09	24.87	30.00	5.13	QP
5	141.55	13.40	4.25	7.02	24.67	30.00	5.33	QP
6	154.16	13.65	4.30	6.88	24.83	30.00	5.17	QP

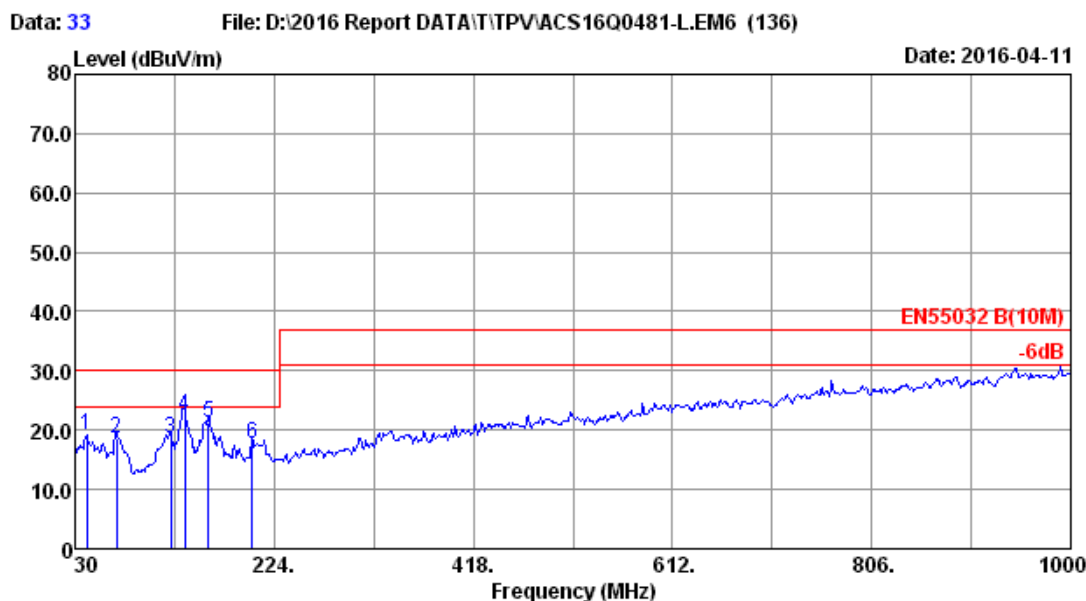
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no.	: 10m Chamber	Data no.	: 34
Dis. / Ant.	: 10m 2016 9168-429	Ant. pol.	: HORIZONTAL
Limit	: EN55032 B(10M)	Pre	: 101.7kPa
Env. / Ins.	: 23.6°C/51.1%	Engineer	: Saxon
EUT	: EA245WM1		
Power rating	: AC 230V/50Hz		
Test Mode	: DVI:1920*1200@60Hz		
	Line:1.8m		

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission		Margin (dB)	Remark
					Level (dBuV/m)	Limits (dBuV/m)		
1	125.06	11.36	4.21	3.31	18.88	30.00	11.12	QP
2	136.70	12.64	4.22	7.27	24.13	30.00	5.87	QP
3	151.25	13.00	4.23	3.42	20.65	30.00	9.35	QP
4	160.95	12.94	4.25	1.03	18.22	30.00	11.78	QP
5	180.35	11.67	4.30	1.66	17.63	30.00	12.37	QP
6	196.84	10.18	4.34	2.03	16.55	30.00	13.45	QP

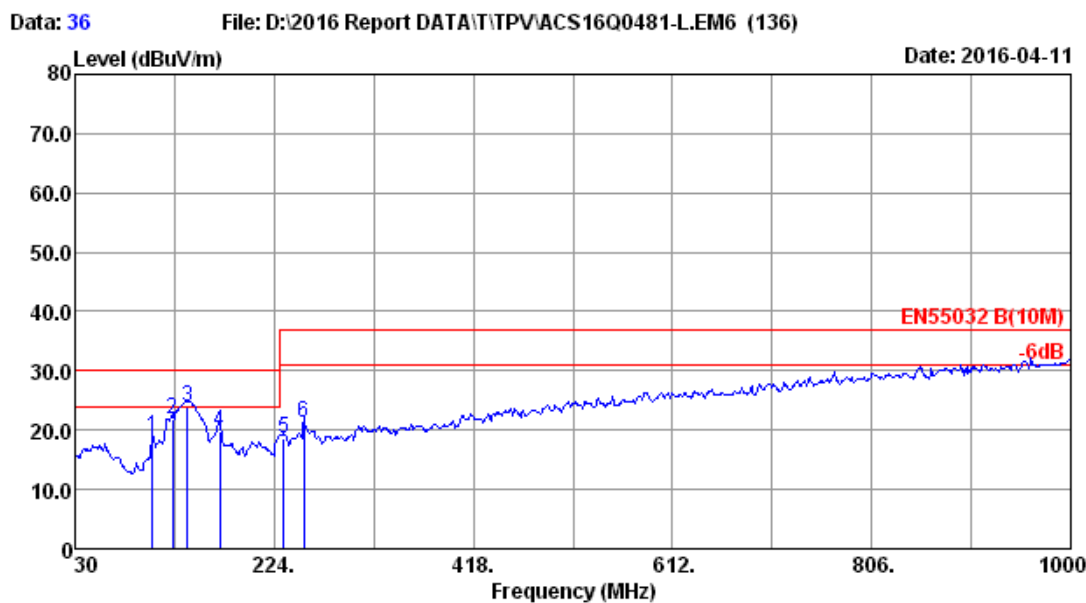
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 10m Chamber Data no. : 33
 Dis. / Ant. : 10m 2015 9168-493 Ant. pol. : VERTICAL
 Limit : EN55032 B(10M) Pre : 101.7kPa
 Env. / Ins. : 23.6°C/51.1% Engineer : Saxon
 EUT : EA245WM1
 Power rating : AC 230V/50Hz
 Test Mode : DVI:1920*1200@60Hz
 Line:1.8m

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	41.64	14.45	3.69	0.93	19.07	30.00	10.93	QP
2	70.74	11.96	3.97	2.75	18.68	30.00	11.32	QP
3	123.12	12.52	4.19	2.02	18.73	30.00	11.27	QP
4	136.70	13.27	4.24	5.00	22.51	30.00	7.49	QP
5	159.98	14.00	4.32	3.00	21.32	30.00	8.68	QP
6	202.66	9.97	4.46	3.42	17.85	30.00	12.15	QP

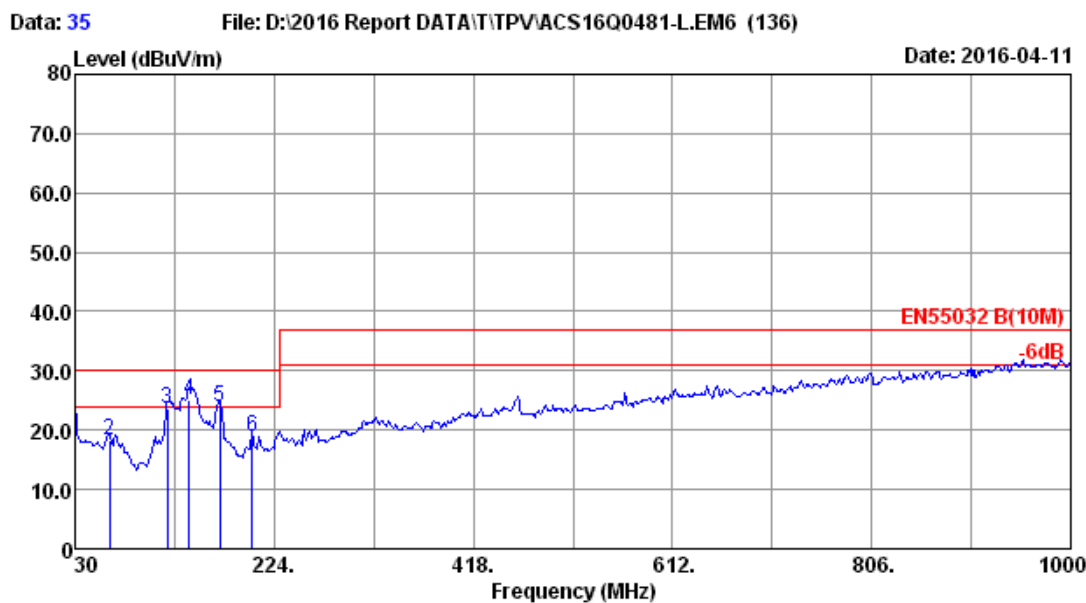
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no.	: 10m Chamber	Data no.	: 36
Dis. / Ant.	: 10m 2016 9168-429	Ant. pol.	: HORIZONTAL
Limit	: EN55032 B(10M)	Pre	: 101.7kPa
Env. / Ins.	: 23.6°C/51.1%	Engineer	: Saxon
EUT	: EA245WM1		
Power rating	: AC 230V/50Hz		
Test Mode	: HDMI:Color Bar		
	Line:1.8m		

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission		Margin (dB)	Remark
					Level (dBuV/m)	Limits (dBuV/m)		
1	105.66	9.51	4.20	5.16	18.87	30.00	11.13	QP
2	125.06	11.36	4.21	6.23	21.80	30.00	8.20	QP
3	139.61	12.96	4.22	6.81	23.99	30.00	6.01	QP
4	170.65	12.31	4.28	3.20	19.79	30.00	10.21	QP
5	233.70	11.03	4.54	2.92	18.49	37.00	18.51	QP
6	253.10	11.93	4.64	4.68	21.25	37.00	15.75	QP

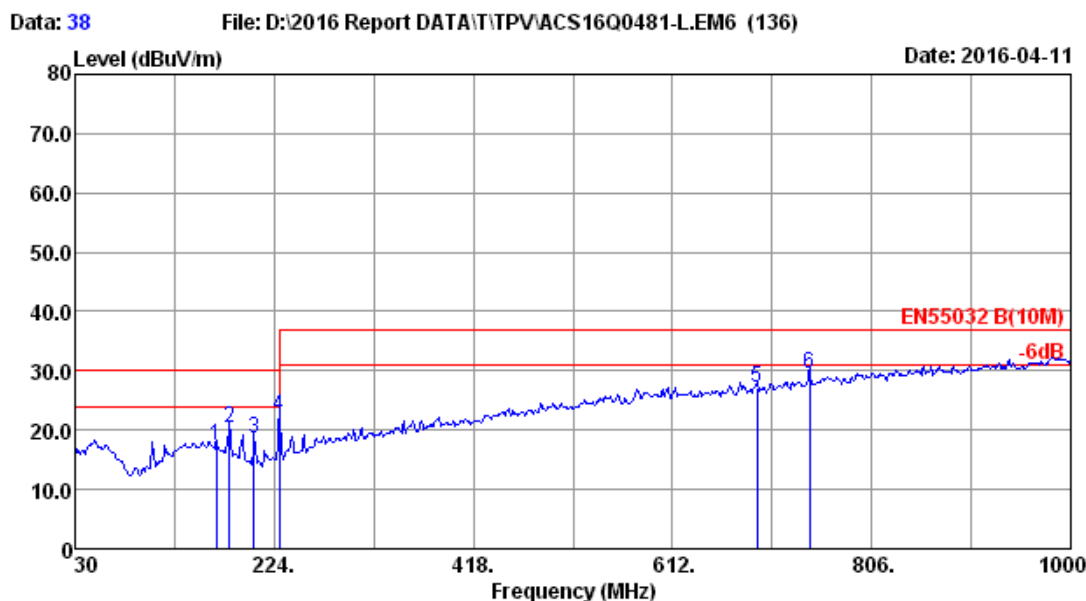
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no.	: 10m Chamber	Data no.	: 35
Dis. / Ant.	: 10m 2015 9168-493	Ant. pol.	: VERTICAL
Limit	: EN55032 B(10M)	Pre	: 101.7kPa
Env. / Ins.	: 23.6°C/51.1%	Engineer	: Saxon
EUT	: EA245WM1		
Power rating	: AC 230V/50Hz		
Test Mode	: HDMI:Color Bar		
	Line:1.8m		

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission		Margin (dB)	Remark
					Level (dBuV/m)	Limits (dBuV/m)		
1	30.00	13.30	3.43	6.57	23.30	30.00	6.70	QP
2	63.95	12.83	3.94	1.62	18.39	30.00	11.61	QP
3	120.21	12.31	4.18	7.20	23.69	30.00	6.31	QP
4	141.55	13.40	4.25	7.44	25.09	30.00	4.91	QP
5	170.65	13.50	4.35	6.17	24.02	30.00	5.98	QP
6	202.66	9.97	4.46	4.44	18.87	30.00	11.13	QP

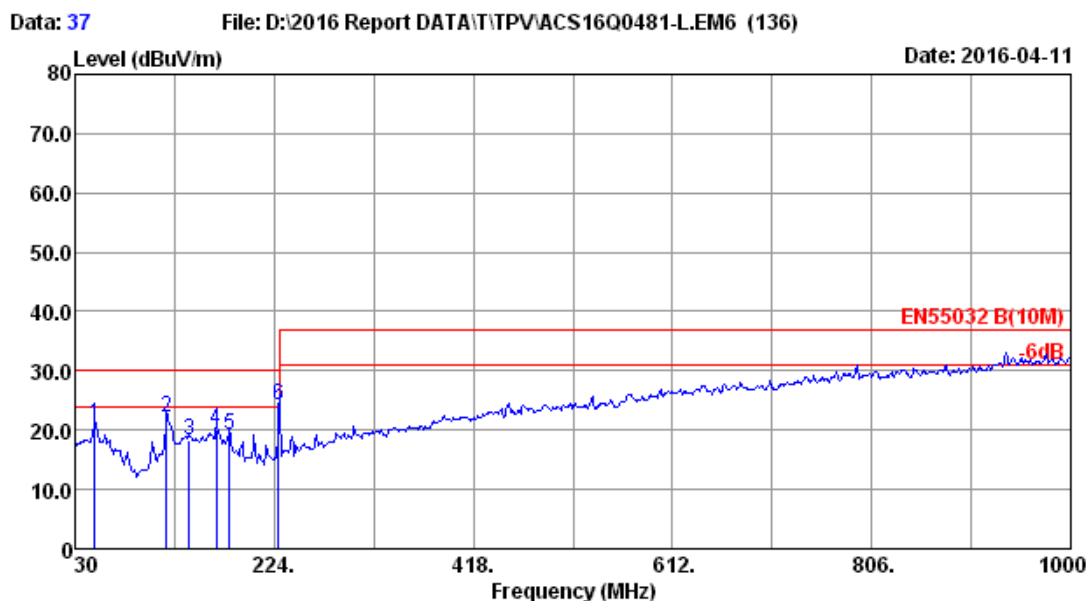
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no.	: 10m Chamber	Data no.	: 38
Dis. / Ant.	: 10m 2016 9168-429	Ant. pol.	: HORIZONTAL
Limit	: EN55032 B(10M)	Pre	: 101.7kPa
Env. / Ins.	: 23.6°C/51.1%	Engineer	: Saxon
EUT	: EA245WM1		
Power rating	: AC 230V/50Hz		
Test Mode	: STANDBY Mode		
	Line:1.8m		

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission		Margin (dB)	Remark
					Level (dBuV/m)	Limits (dBuV/m)		
1	167.74	12.50	4.27	0.67	17.44	30.00	12.56	QP
2	180.35	11.67	4.30	4.37	20.34	30.00	9.66	QP
3	204.60	9.88	4.38	4.20	18.46	30.00	11.54	QP
4	228.85	10.60	4.51	7.28	22.39	30.00	7.61	QP
5	694.45	20.74	6.00	0.36	27.10	37.00	9.90	QP
6	745.86	21.53	6.14	1.95	29.62	37.00	7.38	QP

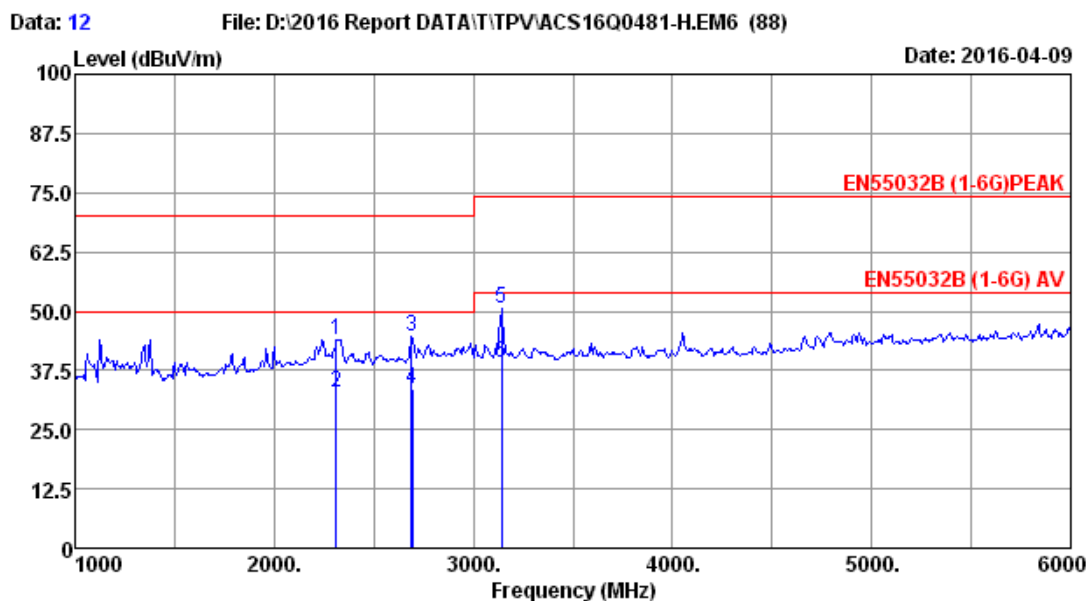
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no.	: 10m Chamber	Data no.	: 37
Dis. / Ant.	: 10m 2015 9168-493	Ant. pol.	: VERTICAL
Limit	: EN55032 B(10M)	Pre	: 101.7kPa
Env. / Ins.	: 23.6°C/51.1%	Engineer	: Saxon
EUT	: EA245WM1		
Power rating	: AC 230V/50Hz		
Test Mode	: STANDBY Mode		
	Line:1.8m		

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	49.40	14.68	3.86	2.49	21.03	30.00	8.97	QP
2	119.24	12.19	4.18	5.91	22.28	30.00	7.72	QP
3	141.55	13.40	4.25	0.55	18.20	30.00	11.80	QP
4	167.74	13.69	4.34	2.19	20.22	30.00	9.78	QP
5	180.35	11.94	4.39	2.99	19.32	30.00	10.68	QP
6	228.01	10.40	4.55	9.40	24.35	30.00	5.65	QP

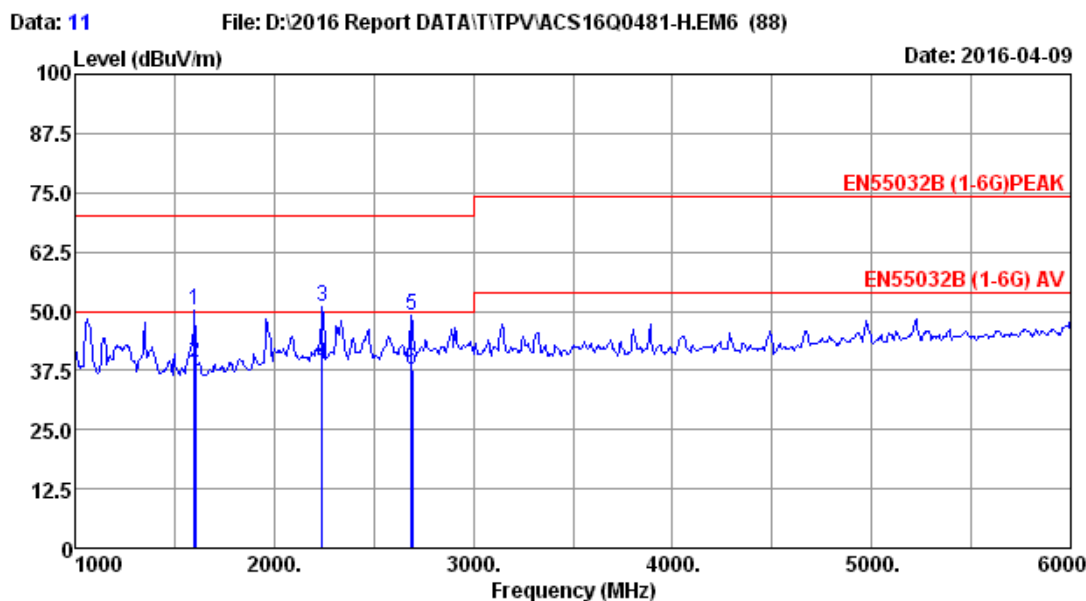
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 10m Chamber Data no. : 12
 Dis. / Ant. : 3m 2015 3115-4580 Ant. pol. : HORIZONTAL
 Limit : EN55032B (1-6G) PEAK Pre : 101.5kPa
 Env. / Ins. : 22.5°C/51.2% Engineer : Brown
 EUT : EA245WMI
 Power rating : AC 230V/50Hz
 Test Mode : HDMI:1280*1024@75Hz
 Line:1.8m

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	AMP factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2310.42	28.19	2.75	47.63	34.56	44.01	70.00	25.99	Peak
2	2311.54	28.19	2.75	36.32	34.56	32.70	50.00	17.30	Average
3	2690.17	28.85	2.89	47.19	34.42	44.51	70.00	25.49	Peak
4	2691.78	28.90	2.91	36.29	34.42	33.68	50.00	16.32	Average
5	3140.06	30.13	3.21	51.65	34.48	50.51	74.00	23.49	Peak
6	3142.78	30.13	3.21	40.23	34.48	39.09	54.00	14.91	Average

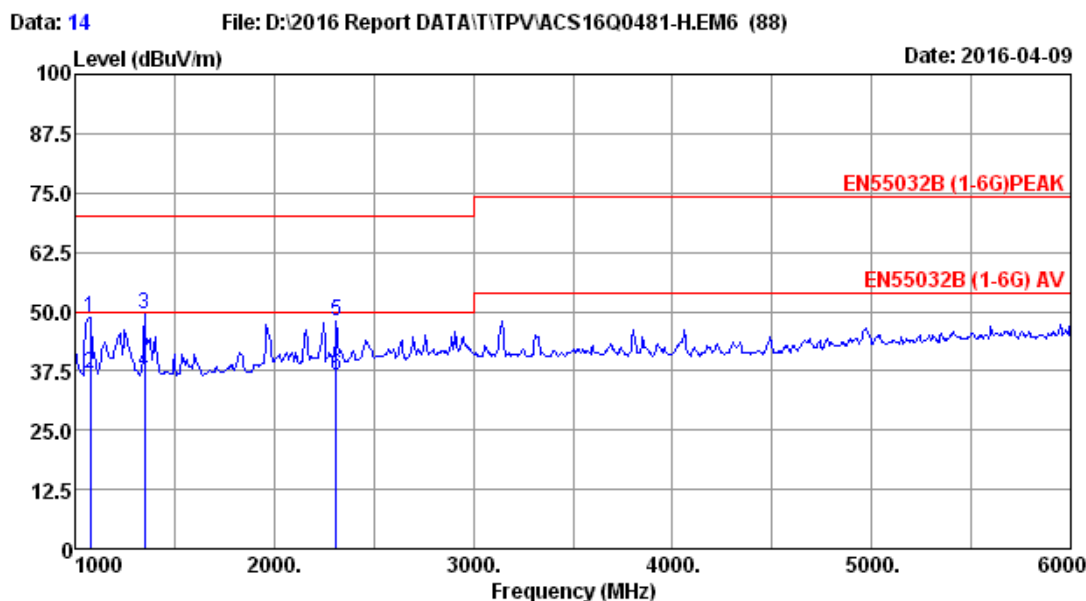
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading
 -Amp Factor
 2. The emission levels that are 20dB below the official
 limit are not reported.



Site no. : 10m Chamber Data no. : 11
 Dis. / Ant. : 3m 2015 3115-4580 Ant. pol. : VERTICAL
 Limit : EN55032B (1-6G) PEAK Pre : 101.5kPa
 Env. / Ins. : 22.5°C/51.2% Engineer : Brown
 EUT : EA245WMI
 Power rating : AC 230V/50Hz
 Test Mode : HDMI:1280*1024@75Hz
 Line:1.8m

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	AMP factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1600.46	26.32	2.48	56.35	35.15	50.00	70.00	20.00	Peak
2	1602.78	26.32	2.48	45.33	35.15	38.98	50.00	11.02	Average
3	2240.07	28.14	2.74	54.67	34.58	50.97	70.00	19.03	Peak
4	2241.69	28.14	2.74	42.33	34.58	38.63	50.00	11.37	Average
5	2690.42	28.85	2.89	51.66	34.42	48.98	70.00	21.02	Peak
6	2691.80	28.90	2.91	40.31	34.42	37.70	50.00	12.30	Average

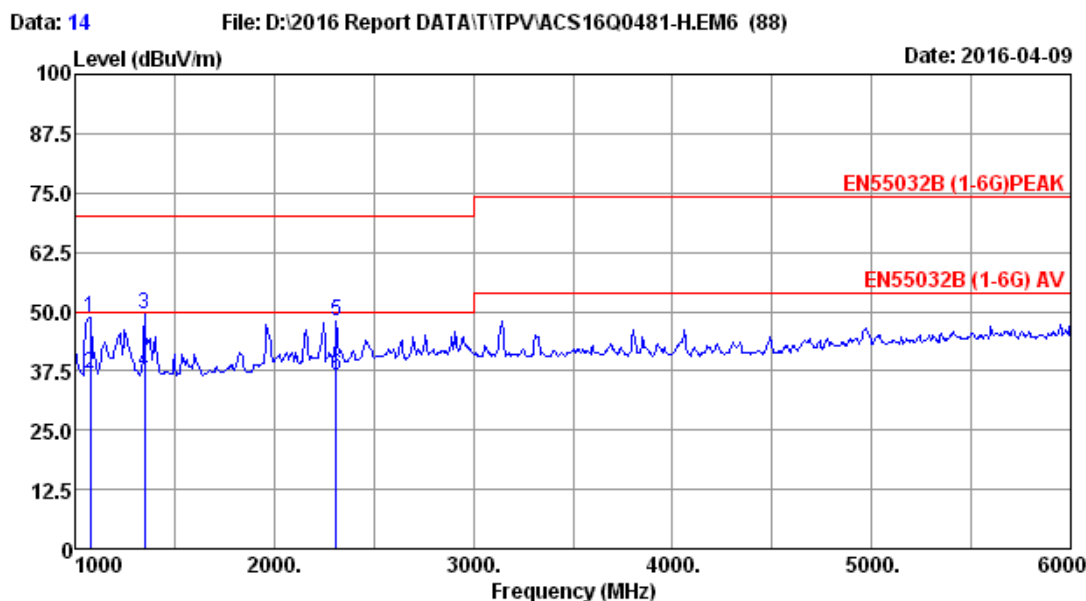
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading
 -Amp Factor
 2. The emission levels that are 20dB below the official
 limit are not reported.



Site no. : 10m Chamber Data no. : 14
 Dis. / Ant. : 3m 2015 3115-4580 Ant. pol. : VERTICAL
 Limit : EN55032B (1-6G) PEAK Pre : 101.5kPa
 Env. / Ins. : 22.5°C/51.2% Engineer : Brown
 EUT : EA245WMI
 Power rating : AC 230V/50Hz
 Test Mode : HDMI:1920*1200@60Hz
 Line:1.8m

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	AMP factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1075.50	25.30	1.76	57.40	35.77	48.69	70.00	21.31	Peak
2	1075.97	25.30	1.76	45.66	35.77	36.95	50.00	13.05	Average
3	1350.53	25.71	2.21	56.79	35.43	49.28	70.00	20.72	Peak
4	1350.99	25.71	2.21	44.78	35.43	37.27	50.00	12.73	Average
5	2310.53	28.19	2.75	51.54	34.56	47.92	70.00	22.08	Peak
6	2310.99	28.19	2.75	40.12	34.56	36.50	50.00	13.50	Average

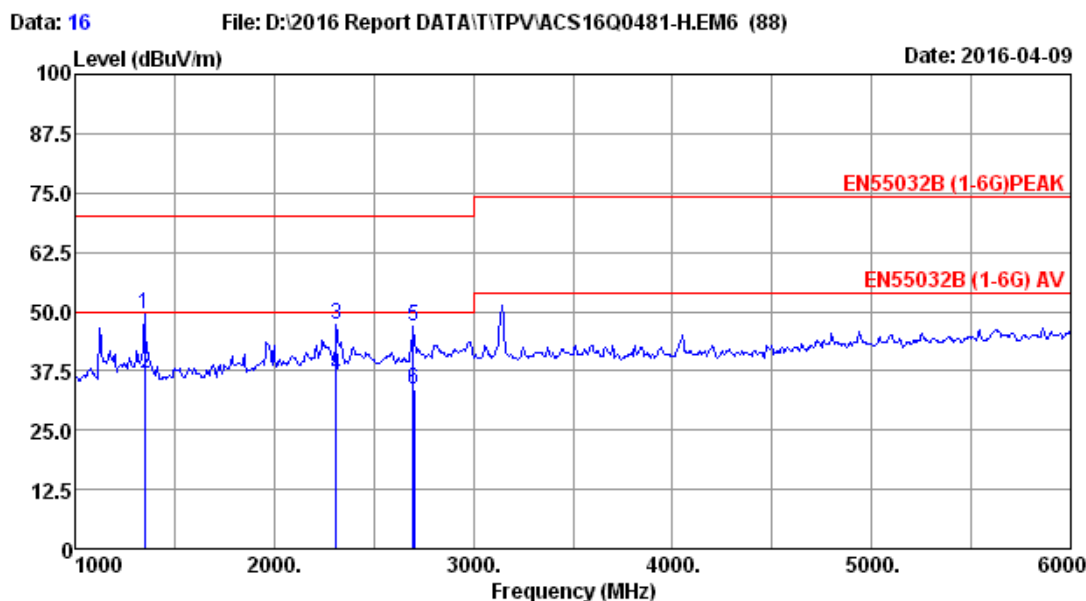
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading
 -Amp Factor
 2. The emission levels that are 20dB below the official
 limit are not reported.



Site no. : 10m Chamber Data no. : 14
 Dis. / Ant. : 3m 2015 3115-4580 Ant. pol. : VERTICAL
 Limit : EN55032B (1-6G) PEAK Pre : 101.5kPa
 Env. / Ins. : 22.5°C/51.2% Engineer : Brown
 EUT : EA245WM1
 Power rating : AC 230V/50Hz
 Test Mode : HDMI:1920*1200@60Hz
 Line:1.8m

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	AMP factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1075.50	25.30	1.76	57.40	35.77	48.69	70.00	21.31	Peak
2	1075.97	25.30	1.76	45.66	35.77	36.95	50.00	13.05	Average
3	1350.53	25.71	2.21	56.79	35.43	49.28	70.00	20.72	Peak
4	1350.99	25.71	2.21	44.78	35.43	37.27	50.00	12.73	Average
5	2310.53	28.19	2.75	51.54	34.56	47.92	70.00	22.08	Peak
6	2310.99	28.19	2.75	40.12	34.56	36.50	50.00	13.50	Average

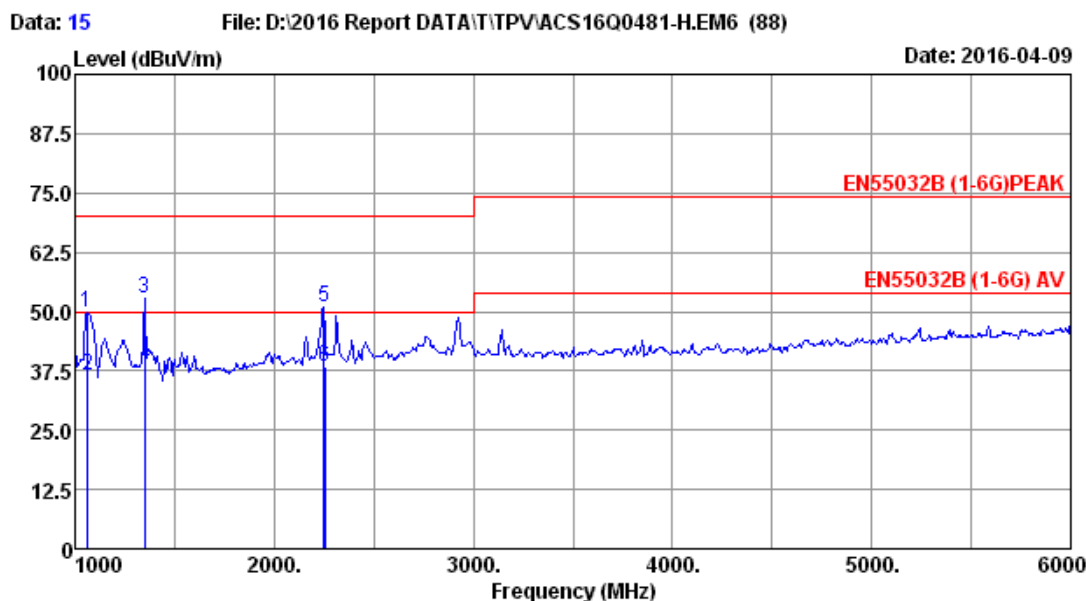
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading
 -Amp Factor
 2. The emission levels that are 20dB below the official
 limit are not reported.



Site no. : 10m Chamber Data no. : 16
 Dis. / Ant. : 3m 2015 3115-4580 Ant. pol. : HORIZONTAL
 Limit : EN55032B (1-6G) PEAK Pre : 101.5kPa
 Env. / Ins. : 22.5°C/51.2% Engineer : Brown
 EUT : EA245WMI
 Power rating : AC 230V/50Hz
 Test Mode : VGA:1920*1200@60Hz
 Line:1.8m

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	AMP factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1350.74	25.71	2.21	56.86	35.43	49.35	70.00	20.65	Peak
2	1351.69	25.71	2.21	44.30	35.43	36.79	50.00	13.21	Average
3	2310.12	28.19	2.75	51.00	34.56	47.38	70.00	22.62	Peak
4	2312.84	28.19	2.75	40.23	34.56	36.61	50.00	13.39	Average
5	2700.05	28.90	2.91	49.39	34.42	46.78	70.00	23.22	Peak
6	2702.97	28.90	2.91	36.32	34.42	33.71	50.00	16.29	Average

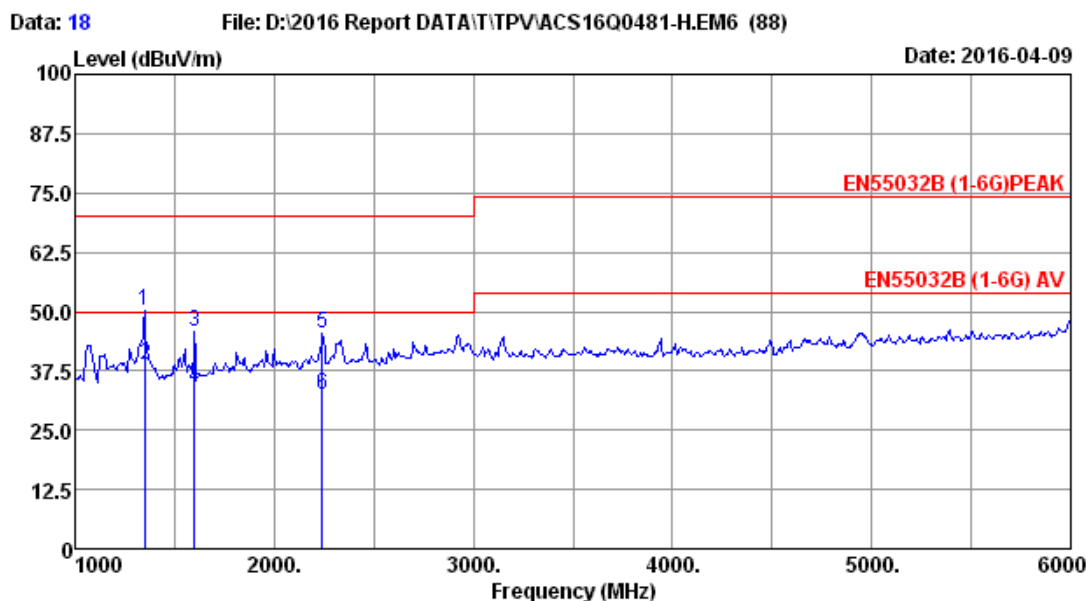
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading
 -Amp Factor
 2. The emission levels that are 20dB below the official
 limit are not reported.



Site no. : 10m Chamber Data no. : 15
 Dis. / Ant. : 3m 2015 3115-4580 Ant. pol. : VERTICAL
 Limit : EN55032B (1-6G) PEAK Pre : 101.5kPa
 Env. / Ins. : 22.5°C/51.2% Engineer : Brown
 EUT : EA245WM1
 Power rating : AC 230V/50Hz
 Test Mode : VGA:1920*1200@60Hz
 Line:1.8m

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	AMP factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1060.06	25.30	1.76	58.67	35.77	49.96	70.00	20.04	Peak
2	1061.96	25.30	1.76	45.32	35.77	36.61	50.00	13.39	Average
3	1350.04	25.71	2.21	60.37	35.43	52.86	70.00	17.14	Peak
4	1352.35	25.71	2.21	46.10	35.43	38.59	50.00	11.41	Average
5	2250.18	28.16	2.75	54.50	34.58	50.83	70.00	19.17	Peak
6	2252.63	28.16	2.75	42.22	34.58	38.55	50.00	11.45	Average

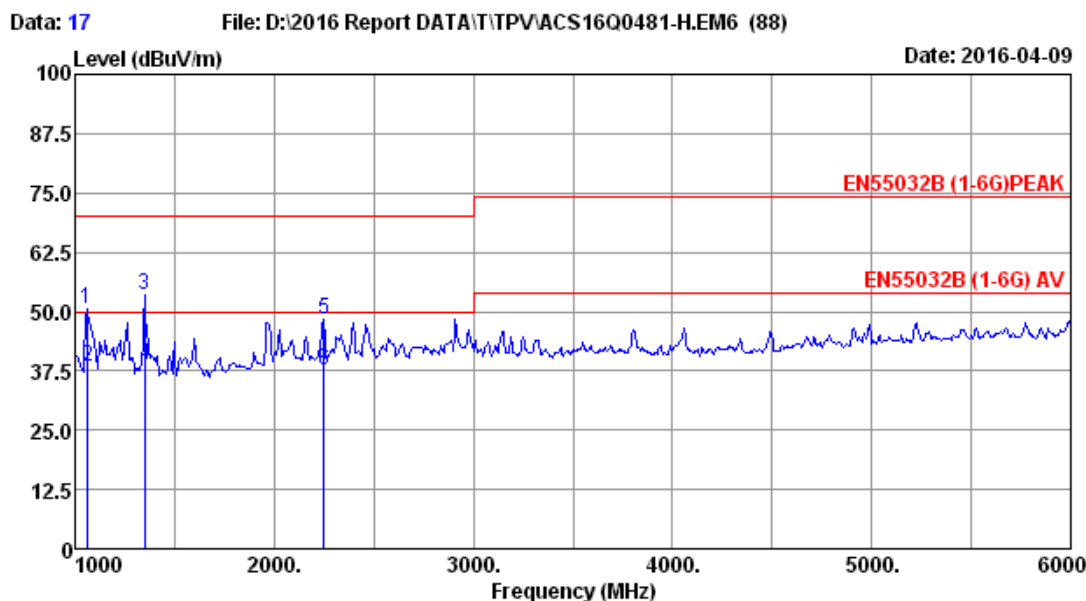
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading
 -Amp Factor
 2. The emission levels that are 20dB below the official
 limit are not reported.



Site no. : 10m Chamber Data no. : 18
 Dis. / Ant. : 3m 2015 3115-4580 Ant. pol. : HORIZONTAL
 Limit : EN55032B (1-6G) PEAK Pre : 101.5kPa
 Env. / Ins. : 22.5°C/51.2% Engineer : Brown
 EUT : EA245WM1
 Power rating : AC 230V/50Hz
 Test Mode : DVI:1920*1200@60Hz
 Line:1.8m

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	AMP factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1350.37	25.71	2.21	57.62	35.43	50.11	70.00	19.89	Peak
2	1351.74	25.71	2.21	46.12	35.43	38.61	50.00	11.39	Average
3	1600.06	26.32	2.48	52.12	35.15	45.77	70.00	24.23	Peak
4	1601.86	26.32	2.48	40.24	35.15	33.89	50.00	16.11	Average
5	2240.53	28.14	2.74	48.91	34.58	45.21	70.00	24.79	Peak
6	2241.76	28.14	2.74	36.33	34.58	32.63	50.00	17.37	Average

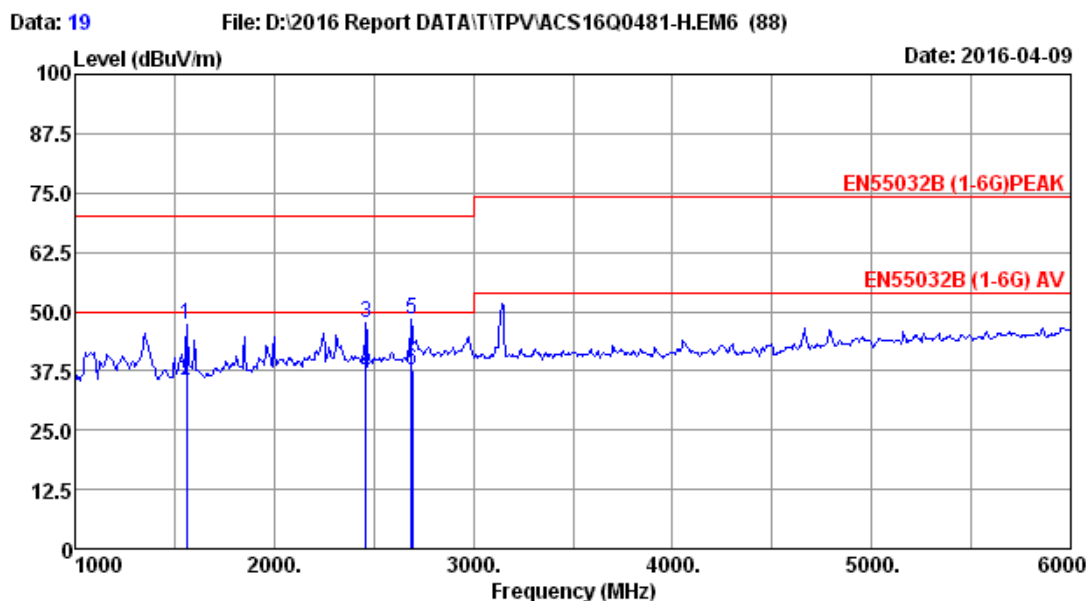
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading
 -Amp Factor
 2. The emission levels that are 20dB below the official
 limit are not reported.



Site no. : 10m Chamber Data no. : 17
 Dis. / Ant. : 3m 2015 3115-4580 Ant. pol. : VERTICAL
 Limit : EN55032B (1-6G) PEAK Pre : 101.5kPa
 Env. / Ins. : 22.5°C/51.2% Engineer : Brown
 EUT : EA245WM1
 Power rating : AC 230V/50Hz
 Test Mode : DVI:1920*1200@60Hz
 Line:1.8m

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	AMP factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1060.50	25.30	1.76	59.39	35.77	50.68	70.00	19.32	Peak
2	1062.98	25.30	1.76	47.12	35.77	38.41	50.00	11.59	Average
3	1350.05	25.71	2.21	60.84	35.43	53.33	70.00	16.67	Peak
4	1351.96	25.71	2.21	46.20	35.43	38.69	50.00	11.31	Average
5	2250.06	28.16	2.75	52.16	34.58	48.49	70.00	21.51	Peak
6	2251.90	28.16	2.75	41.22	34.58	37.55	50.00	12.45	Average

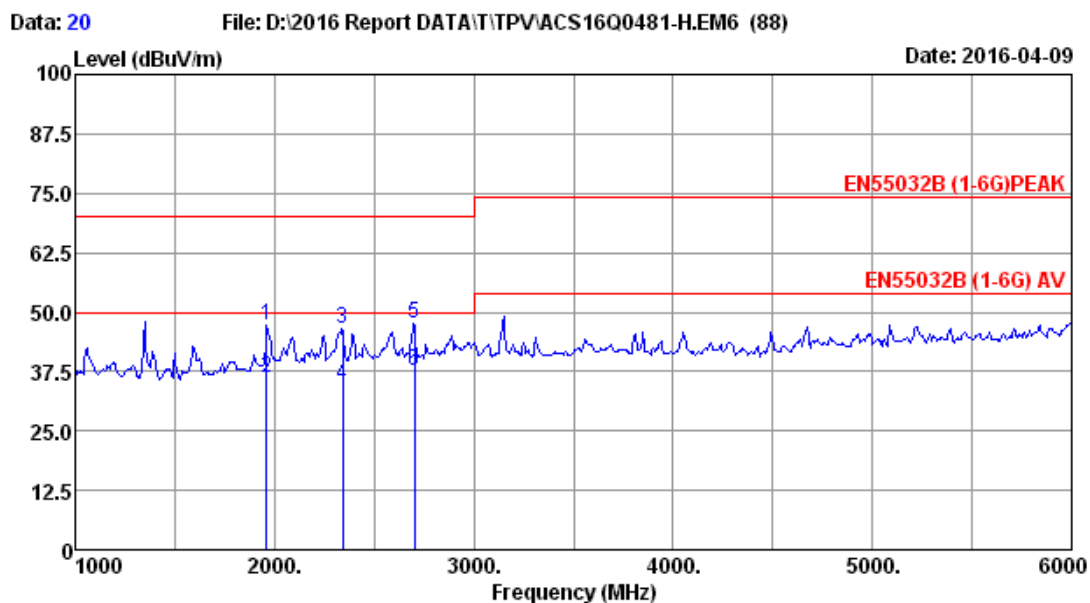
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading
 -Amp Factor
 2. The emission levels that are 20dB below the official
 limit are not reported.



Site no. : 10m Chamber Data no. : 19
 Dis. / Ant. : 3m 2015 3115-4580 Ant. pol. : HORIZONTAL
 Limit : EN55032B (1-6G) PEAK Pre : 101.5kPa
 Env. / Ins. : 22.5°C/51.2% Engineer : Brown
 EUT : EA245WM1
 Power rating : AC 230V/50Hz
 Test Mode : Display:1920*1200@60Hz
 Line:1.8m

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	AMP factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1560.00	26.18	2.46	53.70	35.20	47.14	70.00	22.86	Peak
2	1561.69	26.18	2.46	42.12	35.20	35.56	50.00	14.44	Average
3	2460.05	28.28	2.75	50.99	34.50	47.52	70.00	22.48	Peak
4	2461.74	28.28	2.75	40.23	34.50	36.76	50.00	13.24	Average
5	2690.37	28.85	2.89	51.04	34.42	48.36	70.00	21.64	Peak
6	2691.89	28.90	2.91	40.11	34.42	37.50	50.00	12.50	Average

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



Site no. : 10m Chamber Data no. : 20
 Dis. / Ant. : 3m 2015 3115-4580 Ant. pol. : VERTICAL
 Limit : EN55032B (1-6G) PEAK Pre : 101.5kPa
 Env. / Ins. : 22.5°C/51.2% Engineer : Brown
 EUT : EA245WMI
 Power rating : AC 230V/50Hz
 Test Mode : Display:1920*1200@60Hz
 Line:1.8m

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	AMP factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1960.06	27.79	2.71	51.57	34.73	47.34	70.00	22.66	Peak
2	1961.74	27.86	2.72	40.23	34.73	36.08	50.00	13.92	Average
3	2340.53	28.21	2.75	49.90	34.55	46.31	70.00	23.69	Peak
4	2341.96	28.21	2.75	38.12	34.55	34.53	50.00	15.47	Average
5	2700.45	28.90	2.91	50.11	34.42	47.50	70.00	22.50	Peak
6	2701.63	28.90	2.91	40.20	34.42	37.59	50.00	12.41	Average

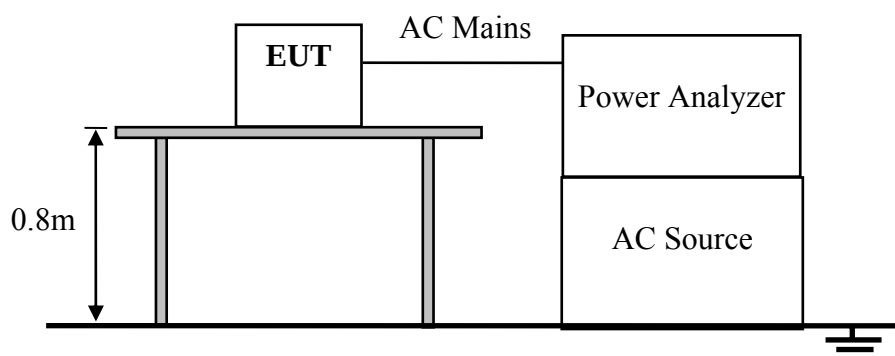
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading
 -Amp Factor
 2. The emission levels that are 20dB below the official
 limit are not reported.

5. HARMONIC CURRENT TEST

5.1. Test Equipments

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	AC Source	California Instruments	5001ix	58481	Oct.17,15	1 Year
2.	Impedance Network	California Instruments	OMNI 1-18i	1247A02235	Oct.17,15	1 Year
3.	Power Analyzer	California Instruments	PACS-1	72627	Oct.17,15	1 Year
4.	Test Software	California Instruments	CTS 4.0	V 4.2.12	N/A	N/A

5.2. Block Diagram of Test Setup



5.3. Test Standard

EN 61000-3-2: 2014; Class D

5.4. 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	2.30
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.

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 listed in Section 3.6. except the test set up replaced by Section 5.2.

5.7. 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.

5.8. Test Results

PASS. (Test results are recorded in next page)

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

EUT: EA245WMI

Test category: Class-D per Ed. 4.0 (2014) (European limits)

Test date: 2016-04-18

Test duration (min): 2.5

Comment: Running "H" Pattern And 1kHz Playing

Customer: TPV

Tested by: Aaron

Test Margin: 100

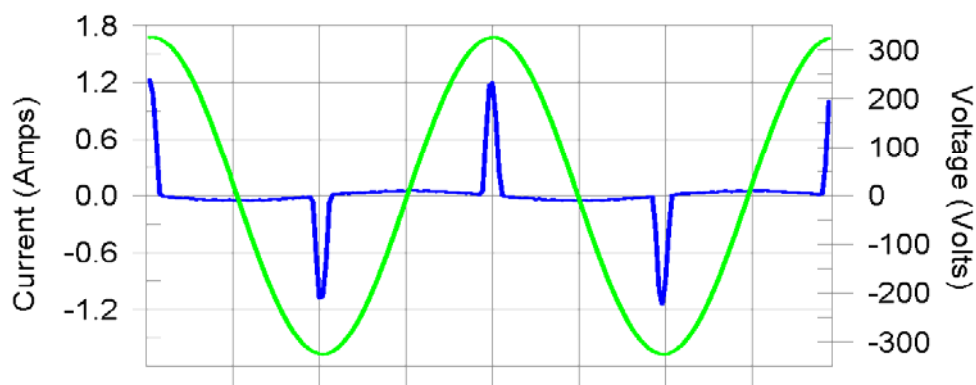
End time: 19:27:17

Start time: 19:24:25

Data file name: H-000493.cts_data

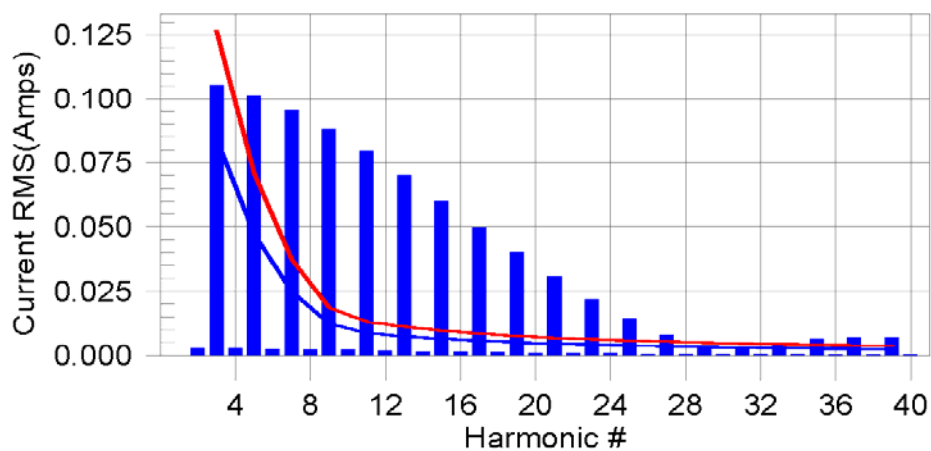
Test Result: N/L Source qualification: Normal

Current & voltage waveforms



Harmonics and Class D limit line

European Limits



Test result: N/L Worst harmonic was #13 with 939.8% of the limit.

Current Test Result Summary (Run time)

EUT: EA245WMI **Tested by:** Aaron
Test category: Class-D per Ed. 4.0 (2014) (European limits) **Test Margin:** 100
Test date: 2016-04-18 **Start time:** 19:24:25 **End time:** 19:27:17
Test duration (min): 2.5 **Data file name:** H-000493.cts_data
Comment: Running "H" Pattern And 1kHz Playing
Customer: TPV

Test Result: N/L **Source qualification:** Normal
THC(A): 0.000 **I-THD(%):** 0.0 **POHC(A):** 0.000 **POHC Limit(A):** 0.000
Highest parameter values during test:
V_RMS (Volts): 230.08 **Frequency(Hz):** 50.00
I_Peak (Amps): 1.254 **I_RMS (Amps):** 0.271
I_Fund (Amps): 0.114 **Crest Factor:** 4.676
Power (Watts): 24.8 **Power Factor:** 0.403

Harm#	Harms(avg)	100%Limit	%of Limit	Harms(max)	150%Limit	%of Limit	Status
2	0.003	0.000	N/A	0.005	0.000	N/A	N/L
3	0.105	0.084	N/A	0.106	0.127	N/A	N/L
4	0.003	0.000	N/A	0.004	0.000	N/A	N/L
5	0.101	0.047	N/A	0.102	0.071	N/A	N/L
6	0.002	0.000	N/A	0.004	0.000	N/A	N/L
7	0.095	0.025	N/A	0.096	0.037	N/A	N/L
8	0.002	0.000	N/A	0.003	0.000	N/A	N/L
9	0.088	0.012	N/A	0.089	0.019	N/A	N/L
10	0.002	0.000	N/A	0.003	0.000	N/A	N/L
11	0.079	0.009	N/A	0.080	0.013	N/A	N/L
12	0.002	0.000	N/A	0.003	0.000	N/A	N/L
13	0.070	0.007	N/A	0.071	0.011	N/A	N/L
14	0.002	0.000	N/A	0.002	0.000	N/A	N/L
15	0.060	0.006	N/A	0.060	0.010	N/A	N/L
16	0.001	0.000	N/A	0.002	0.000	N/A	N/L
17	0.050	0.006	N/A	0.050	0.009	N/A	N/L
18	0.001	0.000	N/A	0.002	0.000	N/A	N/L
19	0.040	0.005	N/A	0.040	0.008	N/A	N/L
20	0.001	0.000	N/A	0.001	0.000	N/A	N/L
21	0.031	0.005	N/A	0.031	0.007	N/A	N/L
22	0.001	0.000	N/A	0.001	0.000	N/A	N/L
23	0.022	0.004	N/A	0.022	0.006	N/A	N/L
24	0.001	0.000	N/A	0.001	0.000	N/A	N/L
25	0.014	0.004	N/A	0.015	0.006	N/A	N/L
26	0.001	0.000	N/A	0.001	0.000	N/A	N/L
27	0.008	0.004	N/A	0.008	0.005	N/A	N/L
28	0.001	0.000	N/A	0.001	0.000	N/A	N/L
29	0.003	0.003	N/A	0.003	0.005	N/A	N/L
30	0.001	0.000	N/A	0.001	0.000	N/A	N/L
31	0.003	0.003	N/A	0.003	0.005	N/A	N/L
32	0.000	0.000	N/A	0.001	0.000	N/A	N/L
33	0.005	0.003	N/A	0.005	0.004	N/A	N/L
34	0.000	0.000	N/A	0.001	0.000	N/A	N/L
35	0.006	0.003	N/A	0.007	0.004	N/A	N/L
36	0.000	0.000	N/A	0.000	0.000	N/A	N/L
37	0.007	0.003	N/A	0.007	0.004	N/A	N/L
38	0.000	0.000	N/A	0.000	0.000	N/A	N/L
39	0.007	0.002	N/A	0.007	0.004	N/A	N/L
40	0.000	0.000	N/A	0.000	0.000	N/A	N/L

Note: The EUT power level is below 75.0 Watts and therefore has no defined limits

Voltage Source Verification Data (Run time)

EUT: EA245WMI **Tested by:** Aaron
Test category: Class-D per Ed. 4.0 (2014) (European limits) **Test Margin:** 100
Test date: 2016-04-18 **Start time:** 19:24:25 **End time:** 19:27:17
Test duration (min): 2.5 **Data file name:** H-000493.cts_data
Comment: Running "H" Pattern And 1kHz Playing
Customer: TPV

Test Result: N/L **Source qualification:** Normal

Highest parameter values during test:

Voltage (Vrms): 230.08	Frequency(Hz): 50.00
I_Peak (Amps): 1.254	I_RMS (Amps): 0.271
I_Fund (Amps): 0.114	Crest Factor: 4.676
Power (Watts): 24.8	Power Factor: 0.403

Harm#	Harmonics V-rms	Limit V-rms	% of Limit	Status
2	0.087	0.460	18.92	OK
3	0.460	2.070	22.22	OK
4	0.072	0.460	15.57	OK
5	0.037	0.920	4.03	OK
6	0.028	0.460	6.16	OK
7	0.033	0.690	4.80	OK
8	0.013	0.460	2.93	OK
9	0.048	0.460	10.35	OK
10	0.014	0.460	3.14	OK
11	0.045	0.230	19.46	OK
12	0.015	0.230	6.31	OK
13	0.050	0.230	21.75	OK
14	0.005	0.230	2.07	OK
15	0.040	0.230	17.38	OK
16	0.012	0.230	5.30	OK
17	0.044	0.230	19.04	OK
18	0.008	0.230	3.65	OK
19	0.038	0.230	16.35	OK
20	0.008	0.230	3.68	OK
21	0.032	0.230	13.89	OK
22	0.003	0.230	1.37	OK
23	0.026	0.230	11.15	OK
24	0.004	0.230	1.94	OK
25	0.018	0.230	7.67	OK
26	0.003	0.230	1.16	OK
27	0.010	0.230	4.14	OK
28	0.004	0.230	1.90	OK
29	0.009	0.230	3.99	OK
30	0.003	0.230	1.20	OK
31	0.005	0.230	2.31	OK
32	0.003	0.230	1.16	OK
33	0.008	0.230	3.50	OK
34	0.003	0.230	1.09	OK
35	0.011	0.230	4.60	OK
36	0.002	0.230	1.02	OK
37	0.012	0.230	5.43	OK
38	0.002	0.230	1.07	OK
39	0.013	0.230	5.45	OK
40	0.003	0.230	1.18	OK

6. VOLTAGE FLUCTUATIONS & FLICKER TEST

6.1. Test Equipment

Same as Section 5.1.

6.2. Block Diagram of Test Setup

Same as Section 5.2.

6.3. Test Standard

EN 61000-3-3: 2013

6.4. 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.

6.5. EUT Configuration on Test

The configurations of EUT are listed in Section 3.5.

6.6. Operating Condition of EUT

Same as Section 5.6.

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 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.

6.8. Test Results

PASS. (Test results are recorded in next page)

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

EUT: EA245WMI
 Test category: All parameters (European limits)
 Test date: 2016-04-18 Start time: 19:12:49
 Test duration (min): 10 Data file name: F-000492.cts_data
 Comment: Running "H" Pattern And 1kHz Playing
 Customer: TPV

Tested by: Aaron
 Test Margin: 100
 End time: 19:23:20

Test Result: Pass

Status: Test Completed

Pst and limit line

European Limits



Plt and limit line



Parameter values recorded during the test:

Vrms at the end of test (Volt): 229.93
 Highest dt (%): 0.00
 T-max (mS): 0
 Highest dc (%): 0.00
 Highest dmax (%): 0.00
 Highest Pst (10 min. period): 0.064
 Highest Plt (2 hr. period): 0.028

Test limit (%):	N/A	N/A
Test limit (mS):	500.0	Pass
Test limit (%):	3.30	Pass
Test limit (%):	4.00	Pass
Test limit:	1.000	Pass
Test limit:	0.650	Pass

7. 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, color, 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 $\frac{(\text{character height in mm} + 0,3) \times 2,5}{33,3}$ 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

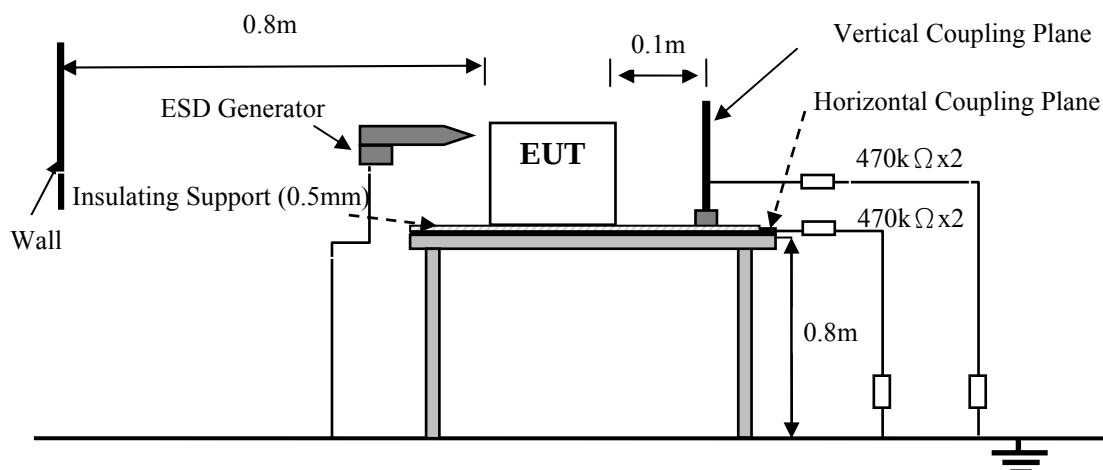
Failures which are not self-recovered after removal of the external disturbance, but which can be recovered to normal operation by reset or reboot are permissible.

8. ELECTROSTATIC DISCHARGE IMMUNITY TEST

8.1. Test Equipments

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	ESD Tester	EM Test	Dito	P1349126669	May.27,15	1 Year

8.2. Block Diagram of Test Setup



8.3. Test Standard

EN 55024: 2010+A1: 2015 (IEC 61000-4-2: 2008)

(Severity for Air Discharge was Level 1 at ± 2 kV & Level 2 at ± 4 kV & Level 3 at ± 8 kV, for Contact Discharge was Level 1 at ± 2 kV & Level 2 at ± 4 kV)

8.4. 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	

8.5. EUT Configuration

The configurations of EUT are listed in Section 3.5.

8.6. Operating Condition of EUT

Same as Conducted Emission test that listed in Section 3.6. except the test set up replaced by Section 8.2.

8.7. Test Procedure

8.7.1. 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

8.7.2. Contact Discharge:

All the procedure was same as Section 8.7.1. 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.

8.7.3. Indirect discharge for horizontal coupling plane:

At least 25 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.

8.7.4. Indirect discharge for vertical coupling plane:

At least 25 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.

8.8. Test Results

PASS. (Test results are recorded in next page)

Electrostatic Discharge Test Results

Audix Technology (Shenzhen) Co., Ltd.

Applicant	: TPV Electronics (FuJian) Co., Ltd.	Test Date	: Apr.18, 2016
EUT	: LCD Monitor	Temperature	: 23.2±0.6℃
M/N	: EA245Wmi	Humidity	: 49±3%
Test Voltage	: AC 230V/50Hz	Test Mode	: Same as section 3.6
Test Engineer	: Aaron	Pressure	: 101.3±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 (Pass/Fail)
			Required	Observation	
± 2	Contact	2,8,9,10	B	A	Pass
± 4	Contact	2,8,9,10	B	B*	Pass
± 2	Air	1,2,3,4,5,6,7,8,10,11,12	B	A	Pass
± 4	Air	1,2,3,4,5,6,7,8,10,11,12	B	A	Pass
± 8	Air	1,2,3,4,5,6,7,8,10,11,12	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

<u>1</u>	AC In Port	<u>7</u>	Key Lock
<u>2</u>	Display / HDMI Ports	<u>8</u>	VGA / DVI Port
<u>3</u>	Audio Out Port	<u>9</u>	Metal / Screws
<u>4</u>	Slots	<u>10</u>	USB Ports
<u>5</u>	Screen	<u>11</u>	Audio In Port
<u>6</u>	LED / Buttons	<u>12</u>	RS232 Ports

Remark: The class “B*” means the screen of EUT will be twinkle, and the USB data transmitting will delay, but it will recover to normal by itself.

After discharge to the ungrounded part of EUT, it needs the bleeder resistor to remove the charge prior to next ESD pulse. Discharge was considered on Contact and Air and Horizontal Coupling Plane (HCP) and Vertical Coupling Plane (VCP).

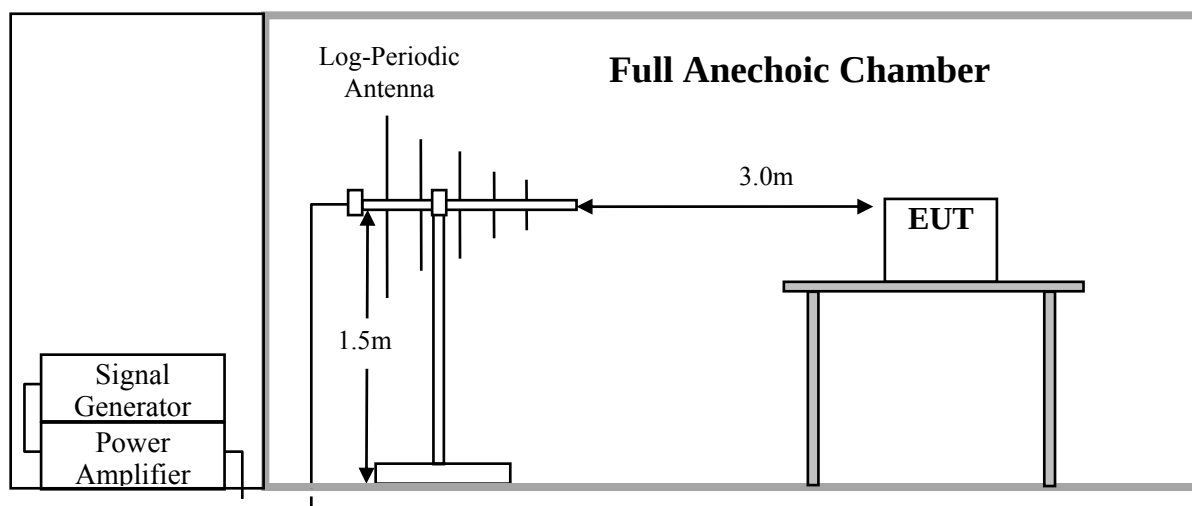
9. RF FIELD STRENGTH SUSCEPTIBILITY TEST

9.1. Test Equipments

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	2#Chamber	AUDIX	N/A	N/A	Sep.28,15	1Year
2.	Signal Generator	Marconi	2031	119606/058	Apr.28,15	1 Year
3.	Amplifier	A&R	100W/1000M1	17028	NCR	NCR
4.	Power Meter	Anritsu	ML2487A	6K00002472	Oct.17,15	1Year
5.	Power Sensor	Anritsu	MA2491A	0033005	Oct.17,15	1Year
6.	Log-periodic Antenna	A&R	AT1080	16512	NCR	NCR
7.	Test Software	AUDIX	i2	3.2010-1-8	N/A	N/A

Note: NCR means no calibration required(calibrated with system)

9.2. Block Diagram of Test Setup



9.3. Test Standard

EN 55024: 2010+A1: 2015 (IEC 61000-4-3: 2010)
(Severity Level: 2 at 3V/m)

9.4. Severity Levels and Performance Criterion

Severity Level	Test Field Strength V/m	Performance Criteria
1.	1	A
2.	3	
3.	10	
X.	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 listed in Section 3.6. Except the test set up replaced by Section 9.2.

9.7. Test Procedure

Testing was performed in a fully anechoic chamber as recommended by IEC 61000-4-3. The EUT was placed on an 80cm 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 80MHz to 1GHz at a level of 3 V/m. The dwell time was set at 3s. 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 (un-modulated)
Dwell time	3s
Test signal	80% amplitude modulated by 1kHz sinusoidal audio signal

9.8. Test Results

PASS. (Test results are recorded in next page)

RF Field Strength Susceptibility Test Results

Audix Technology(Shenzhen) Co.,Ltd.

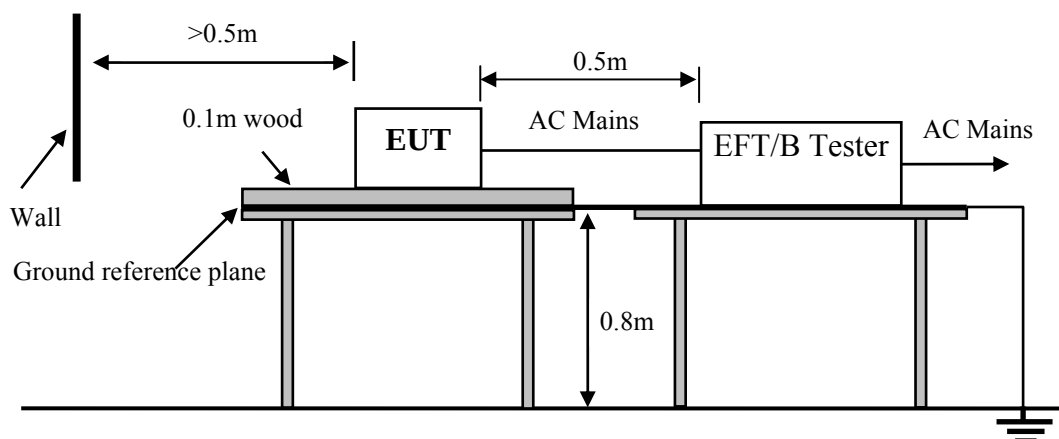
Applicant : TPV Electronics (FuJian) Co., Ltd. EUT : LCD Monitor M/N : EA245Wmi Test Voltage : AC 230V/50Hz Test Engineer : Carl Required Performance : A	Test Date : Apr.20, 2016 Temperature : 24±0.6℃ Humidity : 43±3% Pressure : 101±1kPa Test Mode : Same as section 3.6 Actual Performance : A																																				
Modulation: ☒ AM ☐ Pulse ☐ none 1kHz 80%																																					
Frequency Range :80MHz -1000MHz																																					
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th colspan="2">Horizontal</th> <th colspan="2">Vertical</th> <th>Result</th> </tr> <tr> <th></th> <th>Required</th> <th>Observation</th> <th>Required</th> <th>Observation</th> <th>(Pass / Fail)</th> </tr> </thead> <tbody> <tr> <td>Front</td> <td>A</td> <td>A</td> <td>A</td> <td>A</td> <td>Pass</td> </tr> <tr> <td>Right</td> <td>A</td> <td>A</td> <td>A</td> <td>A</td> <td>Pass</td> </tr> <tr> <td>Rear</td> <td>A</td> <td>A</td> <td>A</td> <td>A</td> <td>Pass</td> </tr> <tr> <td>Left</td> <td>A</td> <td>A</td> <td>A</td> <td>A</td> <td>Pass</td> </tr> </tbody> </table>		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
	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																																

10. ELECTRICAL FAST TRANSIENT/BURST IMMUNITY TEST

10.1. Test Equipments

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Burst Tester	TESEQ	NSG3025	28017	Jul.21,15	1 Year
2.	CDN	TESEQ	CDN8014	29638	Apr.28,15	1 Year
3.	Test Software	Schaffner	Win3025	V 4.00	N/A	N/A

10.2. Block Diagram of Test Setup



10.3. Test Standard

EN 55024: 2010+A1: 2015 (IEC 61000-4-4: 2012)
(Severity Level: Level 1 at 0.5kV, Level 2 at 1kV)

10.4. Severity Levels and Performance Criterion

Open Circuit Output Test Voltage $\pm 10\%$			
Severity Level	On Power Supply Lines	On I/O (Input / Output) Signal data and control lines	Performance criterion
1.	0.5kV	0.25kV	B
2.	1kV	0.5kV	
3.	2kV	1kV	
4.	4kV	2kV	
X	Special	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 listed in Section 3.6. except the test set up replaced by Section 10.2.

10.7. Test Procedure

The EUT and its simulators were placed on the ground reference plane and were insulated from it by a wood support $0.1\text{m} \pm 0.01\text{m}$ thick. The ground reference plane was $1\text{m} \times 1\text{m}$ metallic sheet with 0.65mm minimum thickness. This reference ground plane was project 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.

10.7.1. 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.

10.7.2. For signal lines and control lines ports:

It's unnecessary to test.

10.7.3. For DC input and DC output power ports:

It's unnecessary to test.

10.8. Test Results

PASS. (Test results are recorded in next page)

Electrical Fast Transient/Burst Test Results

Audix Technology (Shenzhen) Co., Ltd.

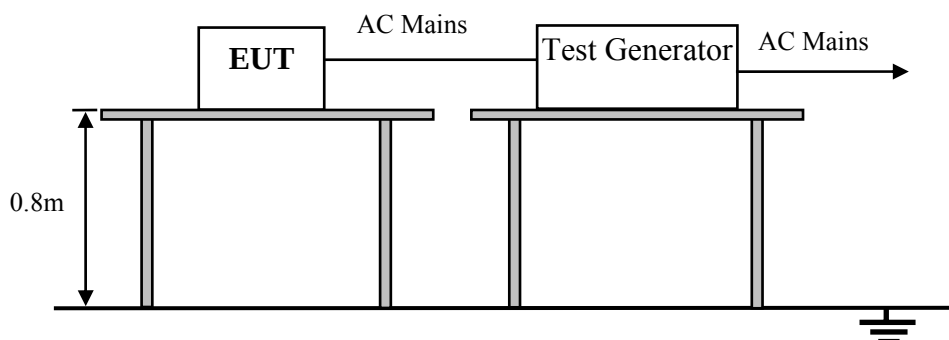
Applicant : <u>TPV Electronics (FuJian) Co., Ltd.</u> EUT : <u>LCD Monitor</u> M/N : <u>EA245Wmi</u> Test Voltage : <u>AC 230V/50Hz</u> Test Engineer : <u>Aaron</u> Required Performance : <u>B</u>	Test Date : <u>Apr.18, 2016</u> Temperature : <u>23.5±0.6℃</u> Humidity : <u>51±3%</u> Test Mode : <u>Same as section 3.6</u> Pressure : <u>101.2±1kPa</u> Actual Performance : <u>A&B*</u>				
Repetition Frequency : <u>5 kHz</u> Burst Duration : <u>15ms</u> Burst Period: <u>300ms</u>					
Inject Time(s): <u>120s</u> Inject Method: <u>Direct</u> 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	A	A	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	---	---	---	---	---
Remark: The class “B*” means the screen of EUT will be twinkle, but it will recover to normal by itself.					

11. SURGE TEST

11.1. 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	Jul.23,15	1 Year
2.	CDN	EMC PARTNER	CDN-UTP8	CDN-UTP8-1508	Oct.17,15	1 Year
3.	CDN	EMC PARTNER	CDN2000-06-25	CDN2000-06-25 0111	Oct.17,15	1 Year
4.	Test Software	EMC PARTNER	Genecs	V3.25	N/A	N/A

11.2. Block Diagram of Test Setup



11.3. Test Standard

EN 55024: 2010+A1: 2015 (IEC 61000-4-5: 2014)

(Severity Level: Line to Line was Level 1 at 0.5kV& Level 2 at 1kV,

Line to Ground Level 1 at 0.5kV& Level 2 at 1kV& Level 3 at 2kV)

11.4. Severity Levels and Performance Criterion

Severity Level	Open-Circuit Test Voltage kV	Performance criterion
1	0.5	B
2	1.0	
3	2.0	
4	4.0	
*	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 listed in Section 3.6. except the test set up replaced by Section 11.2

11.7. Test Procedure

- 1) Set up the EUT and test generator as shown on Section 11.2.
- 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.

11.8. Test Results

PASS. (Test results are recorded in next page)

Surge Immunity Test Results

Audix Technology (Shenzhen) Co., Ltd.

<table style="width: 100%;"> <tr> <td style="width: 15%;">Applicant</td> <td style="width: 35%;">: TPV Electronics (FuJian) Co., Ltd.</td> </tr> <tr> <td>EUT</td> <td>: LCD Monitor</td> </tr> <tr> <td>M/N</td> <td>: EA245WMi</td> </tr> <tr> <td>Power Supply</td> <td>: AC 230V/50Hz</td> </tr> <tr> <td>Test Engineer</td> <td>: Aaron</td> </tr> <tr> <td>Required Performance</td> <td>: B</td> </tr> </table>	Applicant	: TPV Electronics (FuJian) Co., Ltd.	EUT	: LCD Monitor	M/N	: EA245WMi	Power Supply	: AC 230V/50Hz	Test Engineer	: Aaron	Required Performance	: B	<table style="width: 100%;"> <tr> <td style="width: 15%;">Test Date</td> <td style="width: 35%;">: Apr.18, 2016</td> </tr> <tr> <td>Temperature</td> <td>: 23.1±0.6℃</td> </tr> <tr> <td>Humidity</td> <td>: 49±3%</td> </tr> <tr> <td>Test Mode</td> <td>: Same as section 3.6</td> </tr> <tr> <td>Pressure</td> <td>: 101±1kPa</td> </tr> <tr> <td>Actual Performance</td> <td>: A & B*</td> </tr> </table>	Test Date	: Apr.18, 2016	Temperature	: 23.1±0.6℃	Humidity	: 49±3%	Test Mode	: Same as section 3.6	Pressure	: 101±1kPa	Actual Performance	: A & B*
Applicant	: TPV Electronics (FuJian) Co., Ltd.																								
EUT	: LCD Monitor																								
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Required Performance	: B																								
Test Date	: Apr.18, 2016																								
Temperature	: 23.1±0.6℃																								
Humidity	: 49±3%																								
Test Mode	: Same as section 3.6																								
Pressure	: 101±1kPa																								
Actual Performance	: A & B*																								
No.of pluse: ±5 Interval:60 Seconds																									
Line : ☒ AC Mains ☐ DC Supply ☐ Signal																									
Location	Volt	500V			1kV			2kV			Result (Pass/Fail)														
	Phase	Performance			Performance			Performance																	
		Required	+	-	Required	+	-	Required	+	-															
L-N	0°	B	A	A	B	A	A	---	---	---	Pass														
	90°	B	A	A	B	A	A	---	---	---	Pass														
	180°	B	A	A	B	A	A	---	---	---	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	B*	B*	Pass														
	180°	B	A	A	B	A	A	B	B*	B*	Pass														
	270°	B	A	A	B	B*	B*	B	A	A	Pass														
N-PE	0°	B	A	A	B	A	A	B	B*	B*	Pass														
	90°	B	A	A	B	A	A	B	B*	B*	Pass														
	180°	B	A	A	B	A	A	B	B*	B*	Pass														
	270°	B	A	A	B	A	A	B	A	A	Pass														
Signal Line	---	---	---	---	---	---	---	---	---	---	---														
Remark: The class “B*” means the screen of EUT will be twinkle, but it will recover to normal by itself.																									

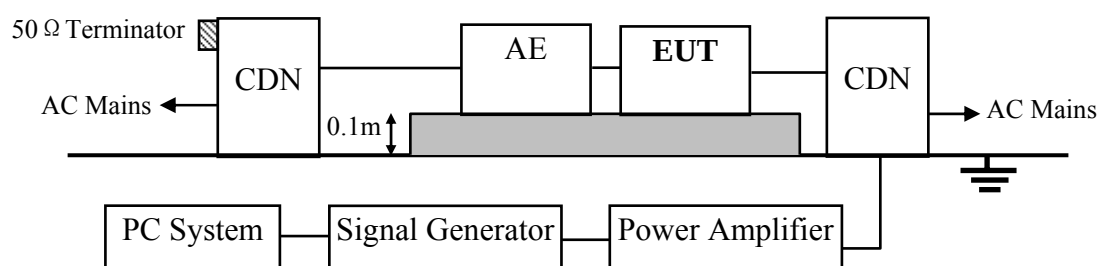
12. INJECTED CURRENTS SUSCEPTIBILITY TEST

12.1. Test Equipments

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Signal Generator	Marconi	2031	119606/058	Apr.28,15	1 Year
2.	Amplifier	AR	25A250A	19152	NCR	NCR
3.	Power meter	HP	436A	2016A07891	Apr.28,15	1Year
4.	Power sensor	Agilent	8482B	MY41090514	Oct.18,15	1Year
5.	CDN	FCC	FCC-801-M3-25	07045	Apr.28,15	1 Year
6.	CDN	TESEQ	CDN M016	34608	Apr.28,15	1 Year
7.	PC	N/A	N/A	N/A	N/A	N/A
8.	Attenuator	Weinschel	40-6-34	LJ092	Apr.28,15	1 Year
9.	EM Injection Clamp	FCC	F-203I-23mm	403	Apr.28,15	1 Year
10.	RF Cable	MICABLE	A04-07-07-2M	09111340	NCR	NCR
11.	RF Cable	STORM	MFR-57500	90-195-2MTR	NCR	NCR
12.	Test Software	AUDIX	i2	3.2010-1-8	N/A	N/A

Note: NCR means no calibration required(calibrated with system)

12.2. Block Diagram of Test Setup



12.3. Test Standard

EN 55024: 2010+A1: 2015 (IEC 61000-4-6: 2013)
(Severity Level 2 at 3V (r.m.s.) and frequency is from 0.15MHz to 80MHz)

12.4. Severity Levels and Performance Criterion

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

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, CDN and test generators as shown on Section 12.2.
- 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.

12.8. Test Results

PASS. (Test results are recorded in next page)

Injected Currents Susceptibility Test Results

Audix Technology (Shenzhen) Co., Ltd.

<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;">Applicant</td> <td style="width: 30%;">: TPV Electronics (FuJian) Co., Ltd.</td> </tr> <tr> <td>EUT</td> <td>: LCD Monitor</td> </tr> <tr> <td>M/N</td> <td>: EA245Wmi</td> </tr> <tr> <td>Power Supply</td> <td>: AC 230V/50Hz</td> </tr> <tr> <td>Test Engineer</td> <td>: Carl</td> </tr> <tr> <td>Required Performance</td> <td>: A</td> </tr> </table>	Applicant	: TPV Electronics (FuJian) Co., Ltd.	EUT	: LCD Monitor	M/N	: EA245Wmi	Power Supply	: AC 230V/50Hz	Test Engineer	: Carl	Required Performance	: A	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;">Test Date</td> <td style="width: 30%;">: Apr.20, 2016</td> </tr> <tr> <td>Temperature</td> <td>: 25±0.6℃</td> </tr> <tr> <td>Humidity</td> <td>: 43±3%</td> </tr> <tr> <td>Test Mode</td> <td>: Same as section 3.6</td> </tr> <tr> <td>Pressure</td> <td>: 101±1kPa</td> </tr> <tr> <td>Actual Performance</td> <td>: A</td> </tr> </table>	Test Date	: Apr.20, 2016	Temperature	: 25±0.6℃	Humidity	: 43±3%	Test Mode	: Same as section 3.6	Pressure	: 101±1kPa	Actual Performance	: A
Applicant	: TPV Electronics (FuJian) Co., Ltd.																								
EUT	: LCD Monitor																								
M/N	: EA245Wmi																								
Power Supply	: AC 230V/50Hz																								
Test Engineer	: Carl																								
Required Performance	: A																								
Test Date	: Apr.20, 2016																								
Temperature	: 25±0.6℃																								
Humidity	: 43±3%																								
Test Mode	: Same as section 3.6																								
Pressure	: 101±1kPa																								
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

Modulation Signal: 1kHz 80% AM

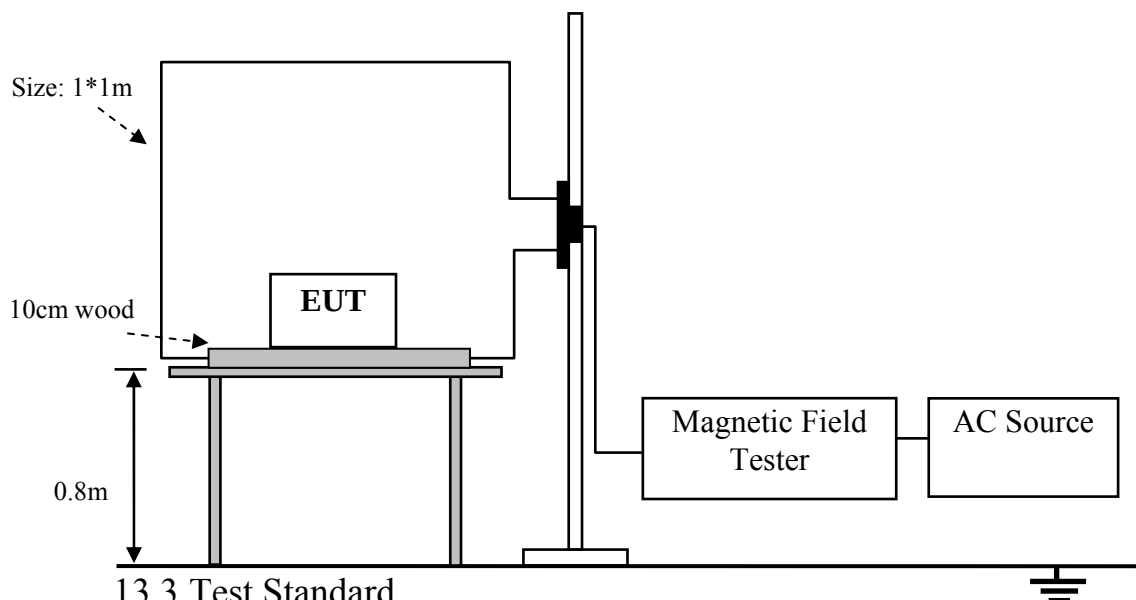
Remark:

13. MAGNETIC FIELD IMMUNITY TEST

13.1. Test Equipments

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Magnetic Field Tester	HAEFELY	MAG100.1	083858-10	Apr.28,15	1 Year

13.2. Block Diagram of Test Setup



13.3. Test Standard

EN 55024: 2010+A1: 2015 (IEC 61000-4-8: 2009)
(Severity Level 1 at 1A/m)

13.4. 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	

13.5. EUT Configuration on Test

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

The EUT was subjected to the test magnetic field by using the induction coil of standard dimensions (1m*1m) and shown in Section 13.2. The induction coil was then rotated by 90° in order to expose the EUT to the test field with different orientations.

13.8. Test Results

PASS. (Test results are recorded in next page)

Magnetic Field Immunity Test Results

Audix Technology (Shenzhen) Co., Ltd.

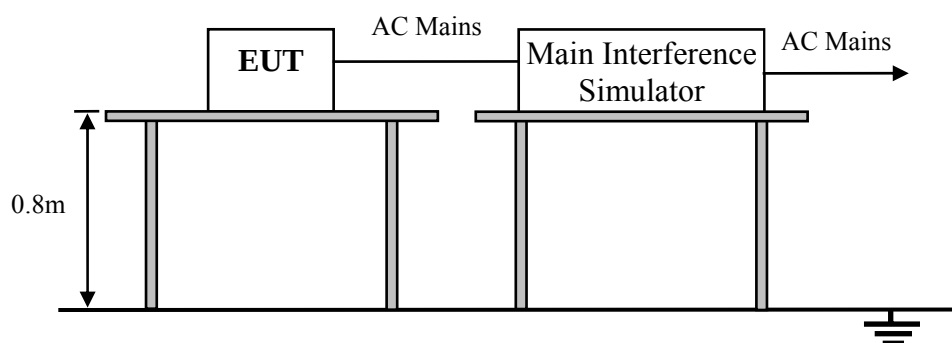
Applicant	:	TPV Electronics (FuJian) Co., Ltd.	Test Date	:	Apr.20, 2016
EUT	:	LCD Monitor	Temperature	:	25±0.6℃
M/N	:	EA245WMi	Humidity	:	44±3%
Test Voltage	:	AC 230V/50Hz	Test Mode	:	Same as section 3.6
Test Engineer	:	Carl	Pressure	:	101±1kPa
Required Performance	:	A	Actual Performance	:	A
Test Level	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

14. VOLTAGE DIPS AND INTERRUPTIONS TEST

14.1. Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Main Interference Simulator	HAEFELY	PLINE 1610	083690-05	Apr.26,15	1 Year

14.2. Block Diagram of Test Setup



14.3. Test Standard

EN 55024: 2010+A1: 2015 (IEC 61000-4-11: 2004)

14.4. 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

14.5. EUT Configuration

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

- 1) The EUT and test generator were setup as shown on Section 14.2.
- 2) The interruption is introduced at selected phase angles with specified duration.
- 3) Record any degradation of performance.

14.8. Test Results

PASS. (Test results are recorded in next page)

Voltage Dips And Interruptions Test Results

Audix Technology (Shenzhen) Co., Ltd.

Applicant	: TPV Electronics (FuJian) Co., Ltd.	Test Date	: Apr.20, 2016
EUT	: LCD Monitor	Temperature	: 23±0.6℃
M/N	: EA245Wmi	Humidity	: 42±3%
Power Supply	: AC 230V/50Hz & AC 100V/50Hz	Test Mode	: Same as section 3.6
Test Engineer	: Carl	Pressure	: 101±1kPa
Required Performance	: B & C	Actual Performance	: A&C*

AC 230V/50Hz

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°, 90°, 180°, 270°	B	A	PASS
70	30	25P	0°, 90°, 180°, 270°	C	A	PASS
0	100	250P	0°, 90°, 180°, 270°	C	C*	PASS

AC 100V/50Hz

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°, 90°, 180°, 270°	B	A	PASS
70	30	25P	0°, 90°, 180°, 270°	C	A	PASS
0	100	250P	0°, 90°, 180°, 270°	C	C*	PASS

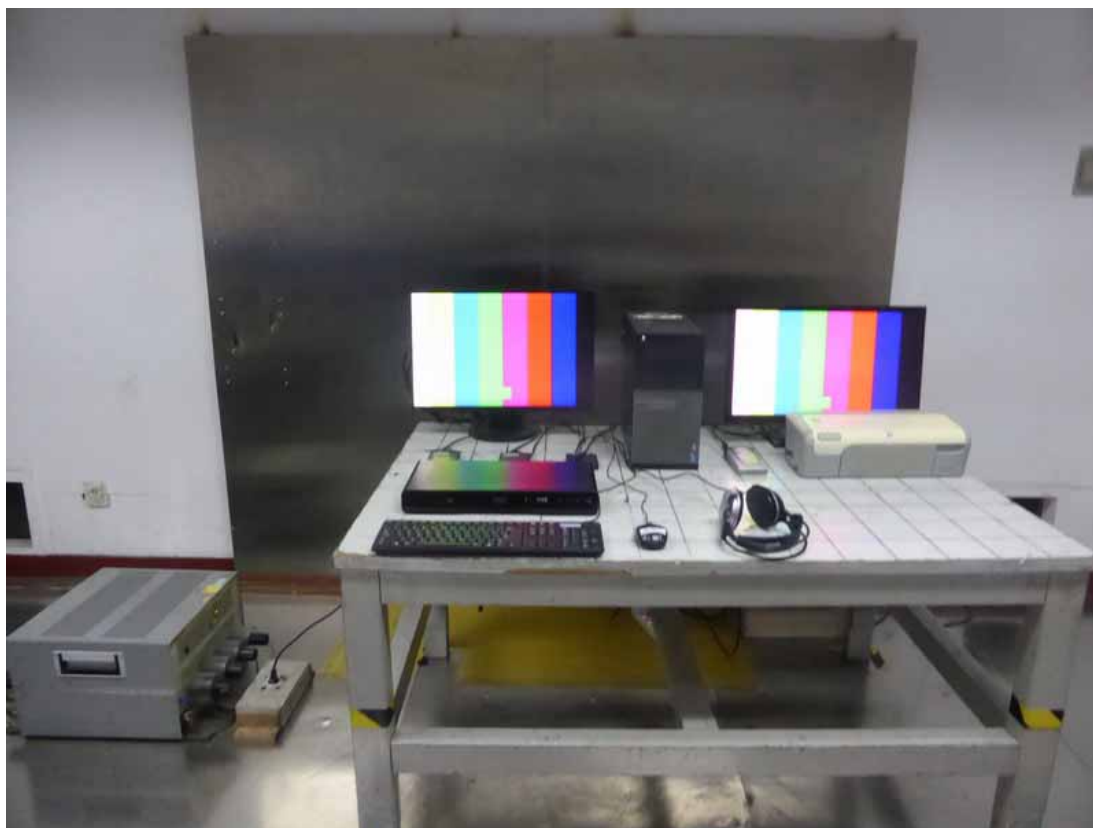
Note 1: U_T is the rated voltage for the equipment.

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.

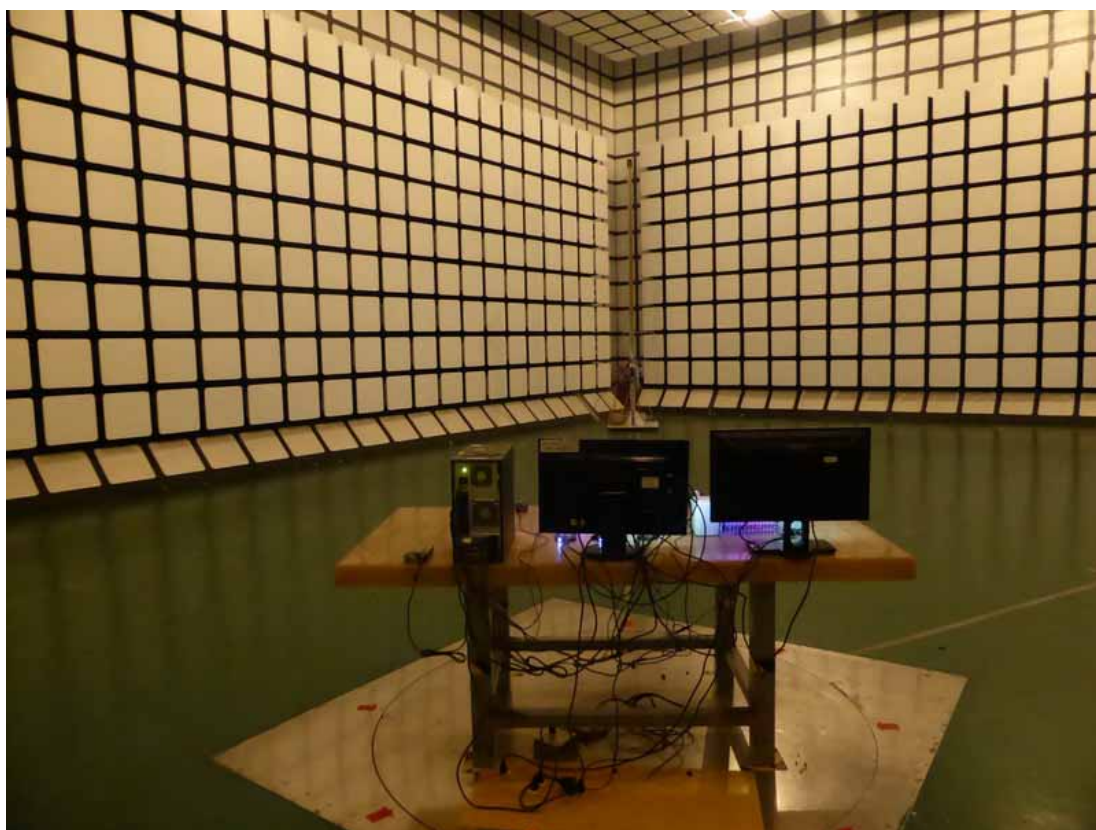
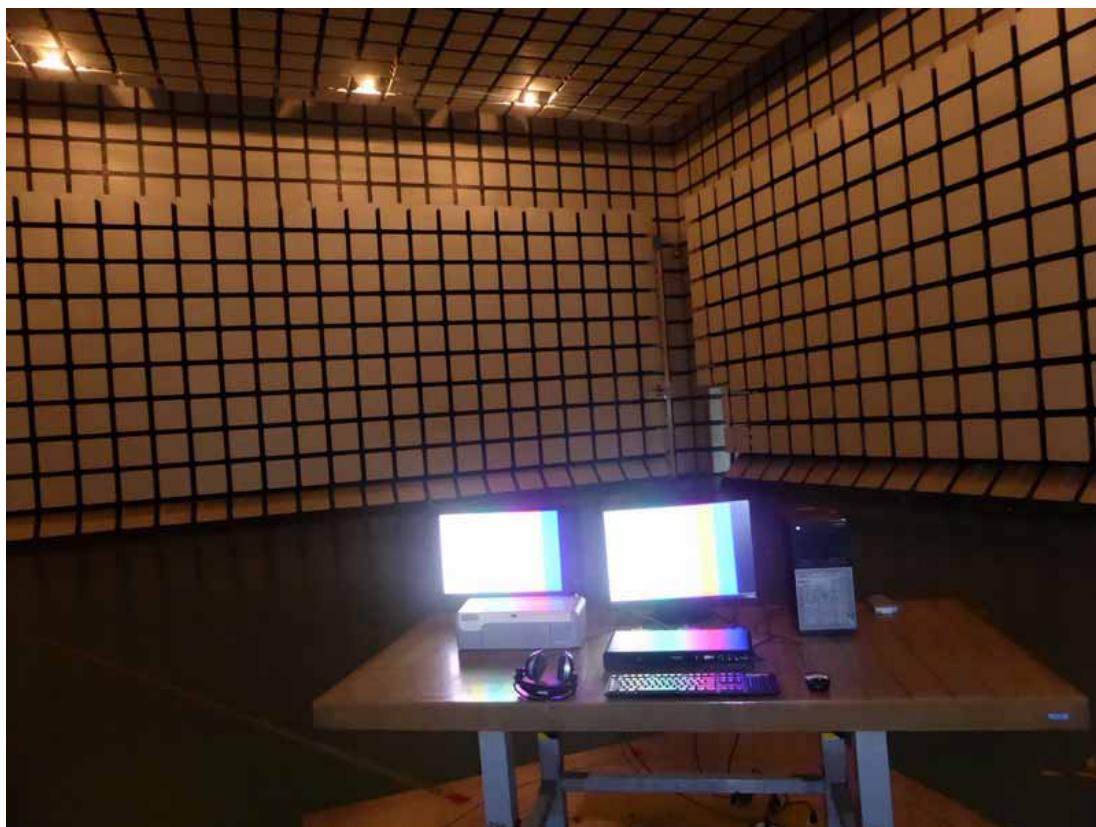
Remark: The class “C*” means the EUT will restart, and the USB data transmitting will interrupt, it need recover to normal by manual.

15. PHOTOGRAPHS

15.1. Photos of Power Line Conducted Emission Test



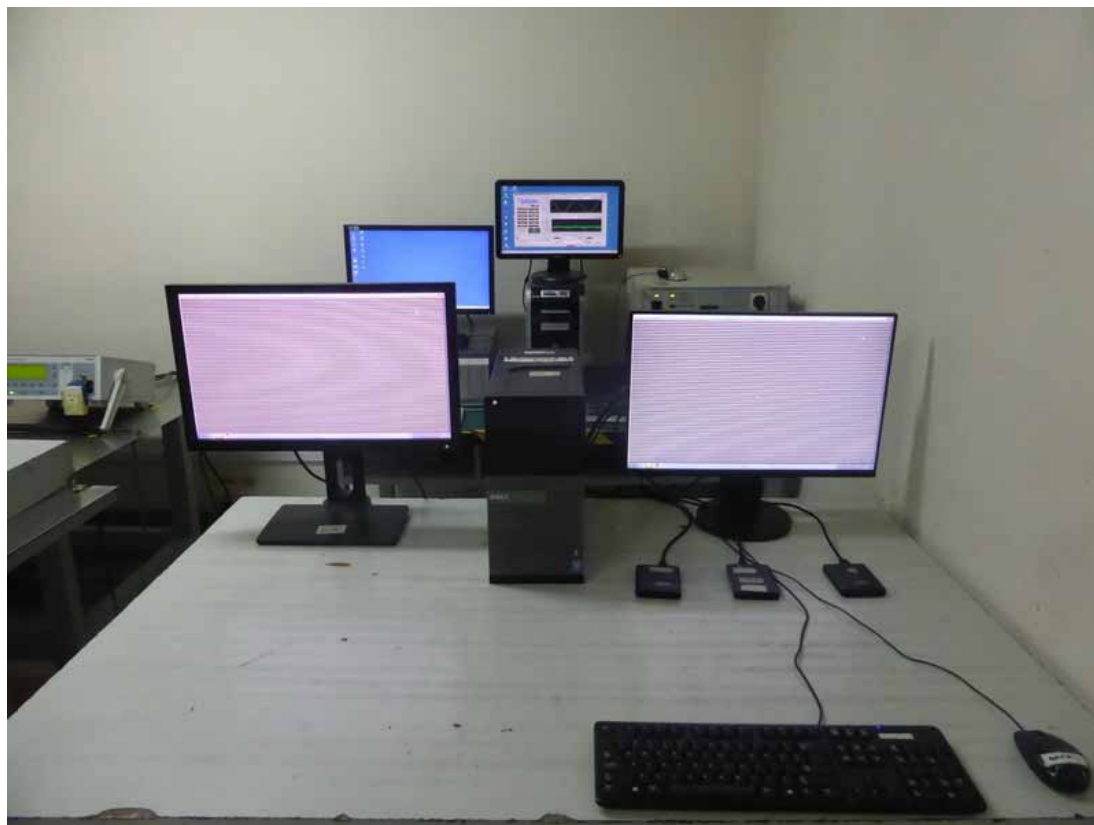
15.2. Photos of Radiated Emission Test (In 10m Anechoic Chamber)



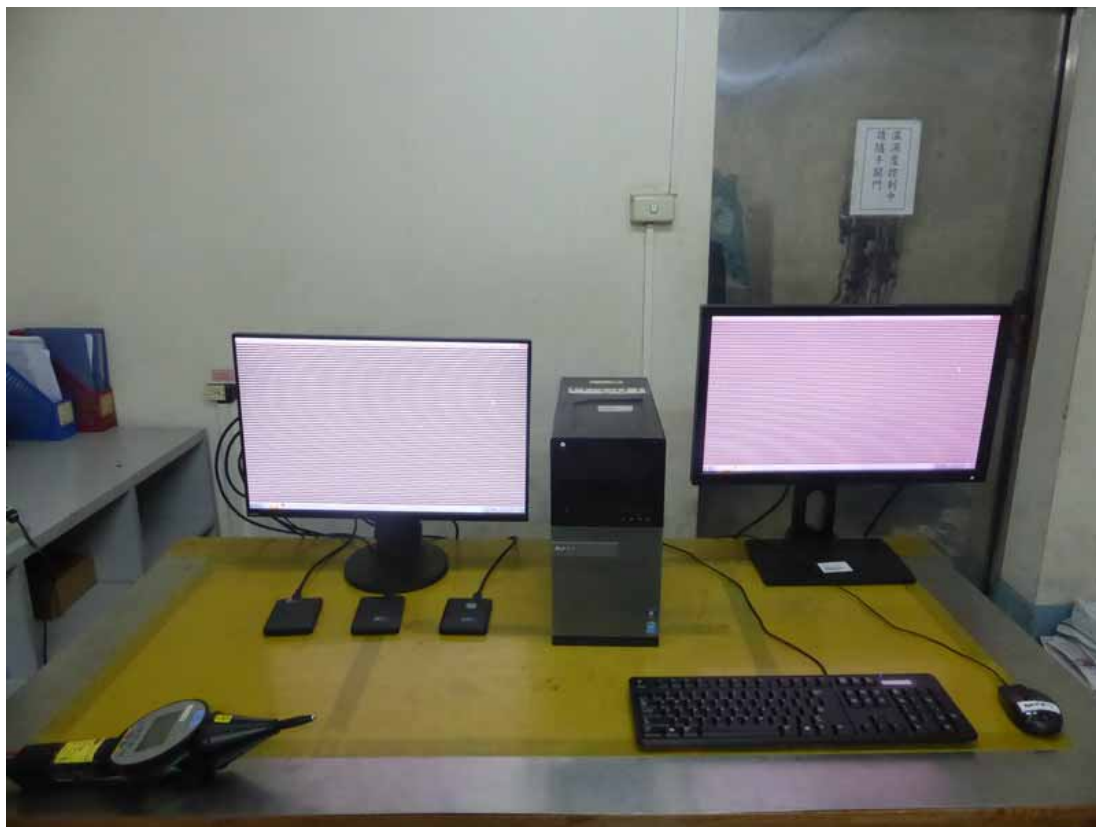
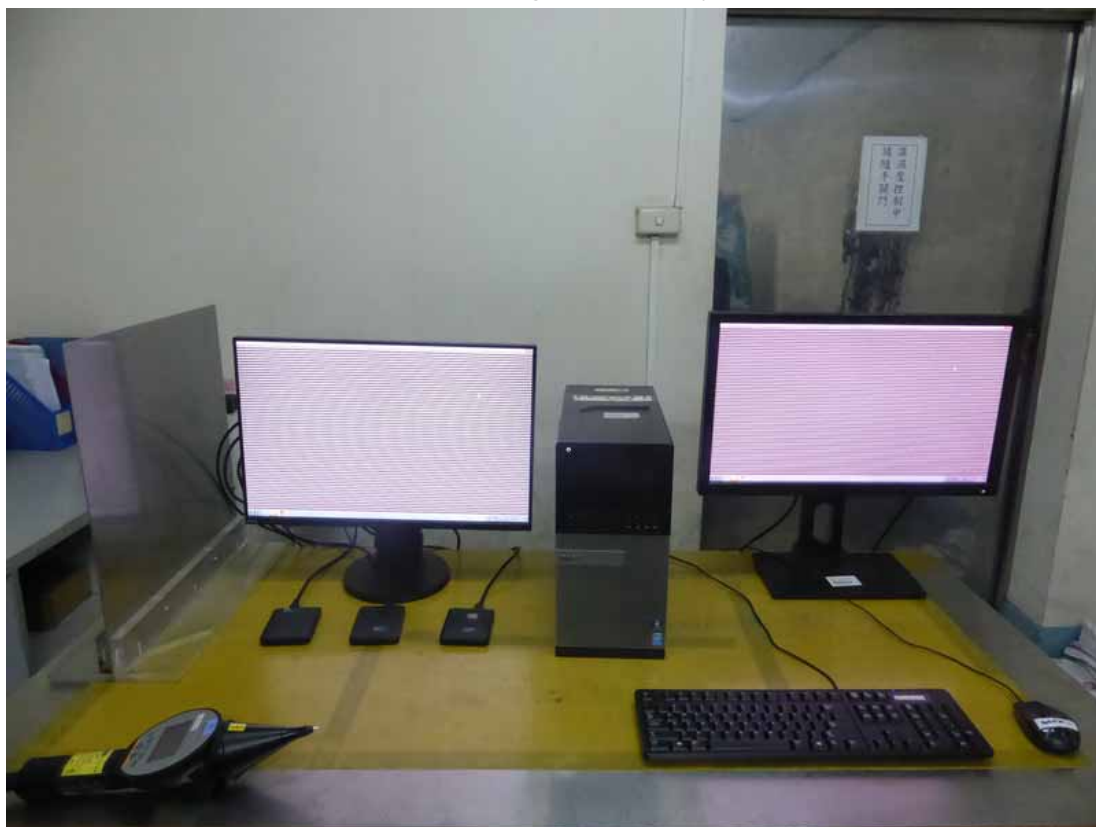
In 10m Anechoic Chamber Test 1GHz – 6GHz



15.3.Photo of Harmonic / Flicker Test



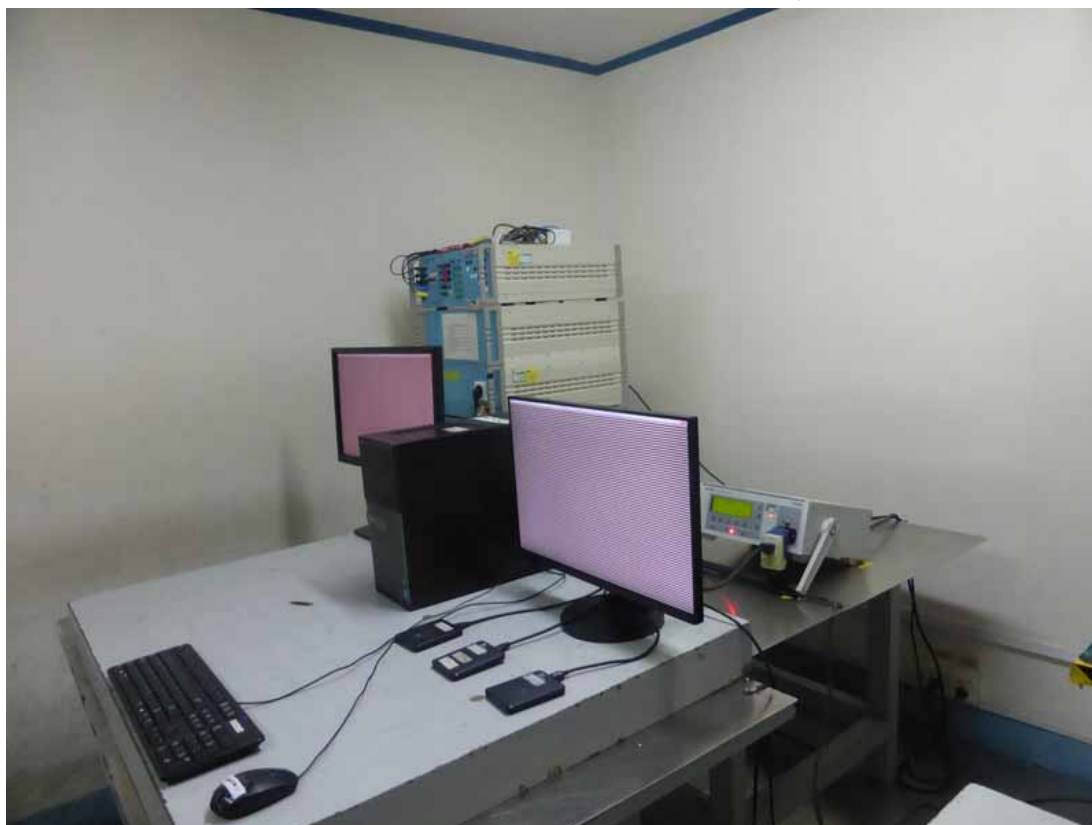
15.4. Photos of Electrostatic Discharge Immunity Test



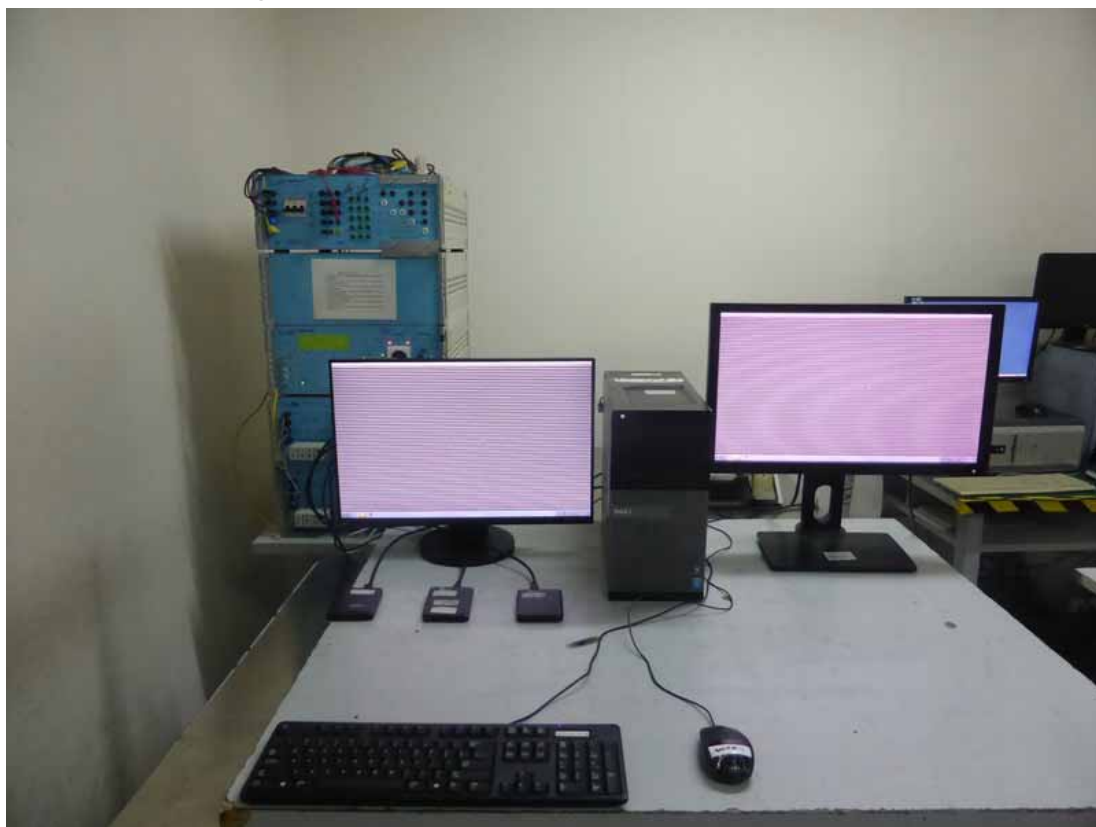
15.5.Photo of RF Strength Susceptibility Test



15.6.Photo of Electrical Fast Transient/Burst Immunity Test



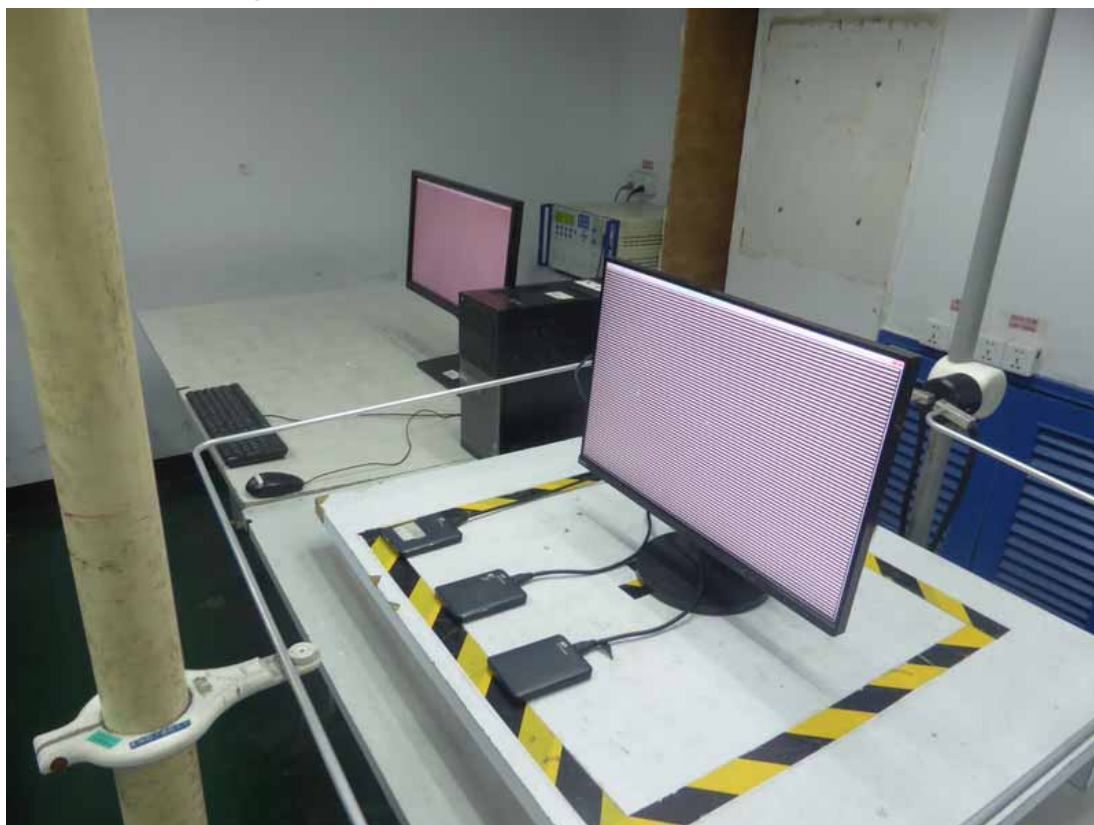
15.7.Photo of Surge Test



15.8.Photo of Injected Currents Susceptibility Test



15.9. Photo of Magnetic Field Test



15.10. Photo of Voltage Dips and Interruptions Test

