

EMC TEST REPORT

Report No. : ACS-E25163

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

Product : LCD Monitor

Model No. : CS24*****; **U27G4*****
(* = 0-9, A-Z, a-z, +, -, /, \ or blank)

Brand : AOC

Test Lab. : Audix Technology (Shenzhen) Co., Ltd.
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Date of Test : May.28~Jun.23, 2025

Date of Report : Jun.30, 2025



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TEST REPORT VERIFICATION

Applicant : TPV Electronics (FuJian) Co., Ltd.
Product : LCD Monitor
Model No. : CS24*****; AG246*****(*=0-9,A-Z,a-z,+,-,/,\ or blank)
Brand : AOC
Report No. : ACS-E25163
Power Supply : AC 100-240V, 50/60Hz
Test Voltage : AC 230V/50Hz; AC 110V/60Hz; AC 100V/50Hz; AC 240V/50Hz
Standards : EN 55032: 2015 (Class B), EN 55032: 2015+A11: 2020
EN 55032: 2015+A1: 2020
CISPR 32:2015+A1:2019, AS/NZS CISPR 32: 2015+A1: 2020
BS EN 55032: 2015 (Class B), BS EN 55032: 2015+A11: 2020
BS EN55032:2015+A1:2020
EN 61000-3-2: 2014, Class D / EN IEC 61000-3-2:2019+A1:2021
BS EN 61000-3-2: 2014, BS EN IEC 61000-3-2:2019+A1: 2021
EN 61000-3-3: 2013, EN 61000-3-3: 2013+A1:2019
EN 61000-3-3: 2013+A2:2021
BS EN 61000-3-3: 2013, BS EN 61000-3-3: 2013+A1:2019
BS EN 61000-3-3: 2013+A2: 2021
EN 55035: 2017, CISPR 35: 2016, EN 55035: 2017+A11:2020
BS EN 55035: 2017, BS EN 55035: 2017+A11: 2020
(IEC 61000-4-2: 2008, IEC 61000-4-3: 2020, IEC 61000-4-4: 2012
IEC 61000-4-5: 2014+A1:2017, IEC 61000-4-6: 2023
IEC 61000-4-8: 2009, IEC 61000-4-11: 2020)

The device described above is tested by Audix Technology (Shenzhen) Co., Ltd. to determine the maximum emission levels emanating from the device, the severe levels which the device can endure and EUT's 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, EN 55035, EN IEC 61000-3-2; BS EN 55032, BS EN 61000-3-2, BS EN 61000-3-3, BS EN IEC 61000-3-2, BS EN 55035 standards.

The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the U.S. Government.

This report applies to single evaluation of one sample of above mentioned products. This report shall not be reproduced in parts without written approval of Audix Technology (Shenzhen) Co., Ltd.

Date of Test : May.28~Jun.23, 2025 Date of Report: Jun.30, 2025

Prepared by : Hally Qiu
Hally Qiu / Assistant

Reviewed by : Fire Zhang
Fire Zhang / Assistant Manager

Approved & Authorized Signer :

Signature: Sunny Lu

Sunny Lu / Manager



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; BS EN 55032	PASS	Minimum passing margin is 12.09dB at 0.442MHz	
Conducted Emission at telecommunication port	EN 55032; BS EN 55032	N/A	N/A	
Radiated Emission (30MHz-1000MHz)	EN 55032; BS EN 55032	PASS	Minimum passing margin is 4.10dB at 148.340MHz	
Radiated Emission (1GHz-6GHz)	EN 55032; BS EN 55032	PASS	Minimum passing margin is 15.24dB at 2192.770MHz	
Harmonic current emissions	EN 61000-3-2 EN IEC 61000-3-2 BS EN 61000-3-2	PASS	Meet the Class D requirement	
Voltage fluctuations & flicker	EN 61000-3-3 BS EN 61000-3-3	PASS	Meet the requirement	
IMMUNITY				
Description of Test Item	Basic Standard	Results	Performance Criteria	Observation
Electrostatic discharge (ESD)	IEC 61000-4-2	PASS	B	A&B
Radiated, radio-frequency, electromagnetic field immunity test	IEC 61000-4-3	PASS	A	A
Electrical fast transient (EFT)	IEC 61000-4-4	PASS	B	A&B
Surge (Input a.c. power port)	IEC 61000-4-5	PASS	B	A&B
Surge(Telecommunication port)		N/A	N/A	N/A
Surge (Coaxial or Shielding)		N/A	N/A	N/A
Continuous Conducted disturbance	IEC 61000-4-6	PASS	A	A
Power frequency magnetic field	IEC 61000-4-8	PASS	A	A
Voltage dips, >95% reduction	IEC 61000-4-11	PASS	B	A
Voltage dips, 30% reduction		PASS	C	A
Voltage interruptions		PASS	C	C

Note 1: Measurement uncertainty affection to the result is not considered, the EUT is not technically compliant with standard requirements.

Note 2: N/A is an abbreviation for Not Applicable.

2. GENERAL INFORMATION

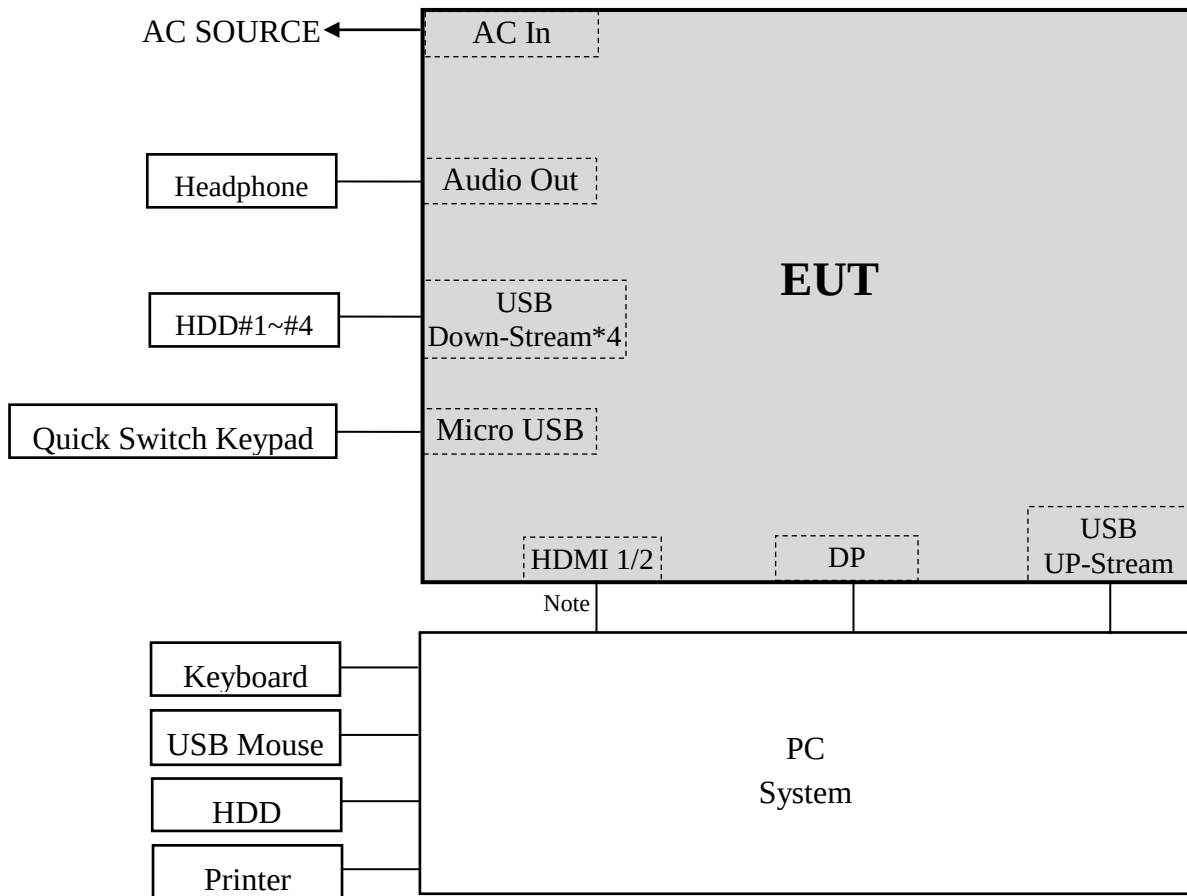
2.1. Description of Device (EUT)

Product	: LCD Monitor
Applicant Model No.	: CS24*****; AG246*****(*=0-9,A-Z,a-z,+,-,/,\ or blank) Model differences (Declared by the Applicant): Above all models difference are in sale marketing
Test Model	: CS24A
Brand	: AOC
Applicant	: TPV Electronics (FuJian) Co., Ltd. Rongqiao Economic and Technological Development Zone, Fuqing City, Fujian Province, P.R. China
Max. Resolution	: 1920*1080@600Hz
Max.Work Frequency	: 1427.7MHz
I/O Port	: (1)One AC In Port (2)Two HDMI Ports (3)One DP Port (4)One Audio Out Port (5)One Micro USB Port (6)One USB UP-Stream Port (7)Four USB Down-Stream Ports
Quick Switch Keypad	: Manufacturer: Jiangsu Huitong Group Co., Ltd; M/N:SF20102 Shielded, Undetachable, 1.5m
CS Light FX Sync lighting	: Manufacturer: Xiamen Guangpu Electronics Co., Ltd; M/N:GP6202 Shielded, Undetachable, 0.8m
Power Cord	: Unshielded, Detachable, 1.8m/1.5m/1.2m (3 pins)
HDMI Cable	: Shielded, Detachable, 1.8m/1.5m/1.2m
DP Cable	: Shielded, Detachable, 1.8m/1.5m /1.2m
USB B-A Cable	: Shielded, Detachable, 1.8m/1.5m/1.2m
Date of Test	: May.28~Jun.23, 2025
Date of Receipt	: May.26, 2025
Sample Type	: Prototype production

2.2. Tested Supporting System Details

No.	Description	ACS No.	Manufacturer	Model	Serial Number
1.	Personal Computer (For CE & RE Test)	---	ASUS	S502MER	S7PFT00F24028H
		Power Cord(3C): Unshielded, Detachable, 1.8m HDMI Cable: Shielded, Detachable, 1.8m Graphics Card: NVIDIA; M/N: NVIDIA RTX 5080			
2.	Personal Computer (For H/F & EMS Test)	Test PC X	ACER	Veriton T630	DTVMKCN00560900F 639600
		Power Cord(3C): Unshielded, Detachable, 1.8m			
3.	USB Keyboard	ACS-EMC-K03R	DELL	SK-8120	CN-ODJ365-71616-2B E-0DCE-A00
		USB Cable: Shielded, Undetachable, 1.8m			
4.	USB Mouse	ACS-EMC-M03R	DELL	M0C5UO	512023253
		USB Cable: Shielded, Undetachable, 1.8m			
5.	Printer	---	Canon	MG3080	---
		USB Cable: Shielded, Detachable, 1.8m Power Cord(2C): Unshielded, Detachable, 1.8m			
6.	DVD	---	Pioneer	DV-310NC-K	---
		Power Cord(2C): Unshielded, Detachable, 1.5m			
7.	HDD	ACS-EMC-HDD33	WD	WD My Book Studio	WCAV5C987862
		Data Cable: Shielded, Detachable, 1.8m			
8.	HDD#1	ACS-EMC-HDD34	WD	WD My Book Studio	WCAV4302542
		Data Cable: Shielded, Detachable, 0.4m			
9.	HDD#2	ACS-EMC-HDD35	WD	WD My Book Studio	WCAV5D02502
		Data Cable: Shielded, Detachable, 0.4m			
10.	HDD#3	ACS-EMC-HDD36	WD	WD My Book Studio	WCAV52038833
		Data Cable: Shielded, Detachable, 0.4m			
11.	HDD#4	ACS-EMC-HDD37	WD	WD My Book Studio	WCAV5C912667
		Data Cable: Shielded, Detachable, 0.4m			
12.	Headphone	ACS-EMC-EP01	OVANN	0V-T880V	---
		Data Cable: Shielded, Detachable, 2.0m			
13.	R Load	5V/1.5A			

2.3. Block Diagram of connection between EUT and simulators(Worst Test)



Note: PC Mode and DVD Mode cannot link the HDMI Port at the same time.
(EUT: LCD Monitor)

2.4.Method of Exercising EUT

Operating System	Windows 10 of PC system
Test Program	BurnIn Test V10.2
Video Signal (Display Image)	Color bars with moving picture element “H” Pattern(Only for H/F test)
Audio	1kHz signal playing
USB Port	Hard drive data read and write; Connect resistive load(5V/1.5A) Connect CS Light FX Sync lighting
Other	Other peripheral devices were driven and operated in turn

Display and video parameters

Function	Setting
Hardware acceleration	Maximum
Screen settings	High/medium/low effective resolution
Color quality	Highest color bit depth
Brightness, contrast, color saturation	Use either the factory default settings or typical settings
Other	Adjusted to obtain a typical picture using settings giving the highest performance

2.5. 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. : Accredited by NVLAP, USA
NVLAP Code: 200372-0
Valid Date: Mar.31, 2026

Certificated by FCC, USA
Designation No: CN5022
Valid Date: Aug.03, 2025

Accredited by TAF, Taiwan
Registration No: 1418
Valid Date: Nov.30, 2026

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

Test Item	Uncertainty
Uncertainty for Conduction emission test in No. 2 Conduction	±2.4dB (150kHz to 30MHz)
Uncertainty for Radiation Emission test in 10m chamber (Distance: 10m)	±3.8dB (30MHz ~200MHz, Polarization: H)
	±3.8dB (30MHz ~200MHz, Polarization: V)
	±4.0dB (200MHz~1GHz, Polarization: H)
	±4.4dB (200MHz~1GHz, Polarization: V)
Uncertainty for Radiation Emission test in 10m chamber (1GHz-18GHz)	±4.4dB (1GHz -6GHz, Distance: 3m)
	±4.6dB (6GHz -18GHz, Distance: 3m)
Uncertainty for S _{VSWR} in 10m Chamber	±2.8dB (1GHz -6GHz, Distance: 3m)
	±2.8dB (6GHz -18GHz, Distance: 3m)
Uncertainty for Flicker test	±1.5%
Uncertainty for Harmonic test	±8.0%
Uncertainty for C/S Test	±2.26dB (Using CDN test)
	±3.0dB (Using EM clamp test)
Uncertainty for R/S Test	±2.7dB (80MHz~1000MHz)
	±2.7dB (1GHz~2.5GHz)
	±2.7dB (2.5GHz to 6GHz)
Uncertainty for Magnetic field immunity test	±2%
Uncertainty for test site temperature and humidity and Pressure	±0.6℃
	±3%
	±1kPa

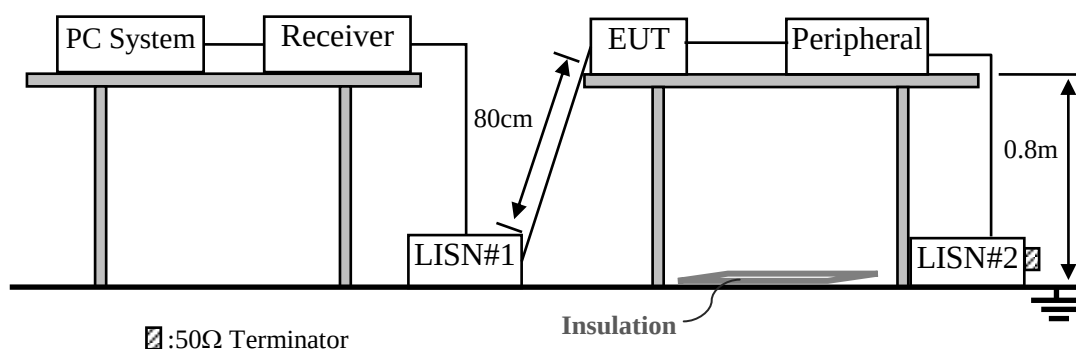
3. CONDUCTED EMISSION AT MAINS TERMINALS TEST

3.1. Test Equipments.

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	2# Shielding Room(SE)	AUDIX	N/A	N/A	Sep.16,22	3 Year
2.	EMI Test Receiver	Rohde & Schwarz	ESCI	100843	Mar.10,25	1 Year
3.	L.I.S.N.#1	Rohde & Schwarz	ENV216	102834	Jun.19,24	1 Year
4.	L.I.S.N.#2	Kyoritsu	KNW-407	8-1636-1	Mar.10,25	1 Year
5.	RF Cable	Eastsheep	KTR-141FEP-50	2501002	Jan.15,25	1 Year
6.	Terminator	Hubersuhner	50Ω	No.4	Mar.10,25	1 Year
7.	Test Software	AUDIX	e3	6.100913a	N/A	N/A

Note: N/A means Not applicable.

3.2. Block Diagram of Test Setup



3.3. Test Standard

EN 55032: 2015 (Class B)
 EN 55032: 2015+A11: 2020
 EN 55032: 2015+A1: 2020
 BS EN 55032: 2015 (Class B)
 BS EN 55032: 2015+A11: 2020
 BS EN55032:2015+A1:2020

3.4. Power Line Conducted Emission Class B Limits

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 limits shall apply at the transition frequencies.
 3. Emission Level (dBμV) = Factor (L.I.S.N.) (dB) + Cable Loss (dB)+Reading (Receiver) (dBμV)

3.5. 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). This provided a 50ohm coupling impedance for the tested equipments. Both sides of AC line are checked to find out the maximum conducted emission levels according to the EN 55032 & BS EN 55032 Class B regulations during conducted emission test.

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

The frequency range from 150kHz to 30MHz is checked. These test results of the conducted disturbance are recorded in section 3.6.

3.6.Power Line Conducted Emission Test Results

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

EUT: LCD Monitor

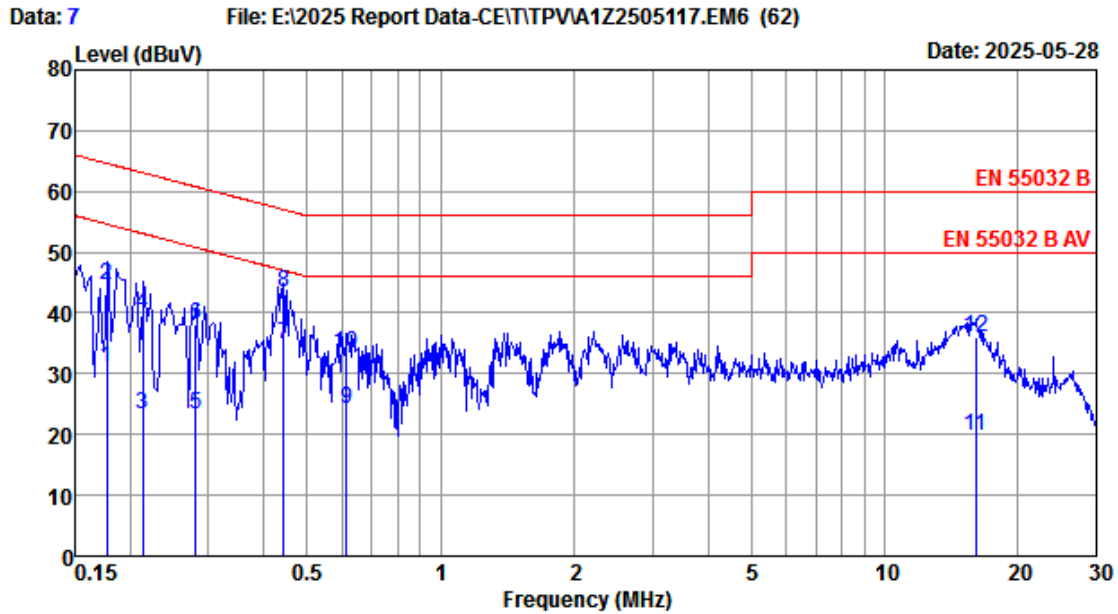
Model No. : CS24A

The EUT with following test modes were pre-tested:

No.	Test Voltage	Test Mode	Input Port	Cable Length	Resolution & Frequency
1.	AC 230V/50Hz	PC Mode	DP	1.8m	640*480@60Hz
2.					1280*1024@75Hz
3.					1920*1080@600Hz
4.					1080*1920@600Hz (Panel is Vertical) (+90°)
5.					1080*1920@600Hz (Panel is Vertical) (-90°)
6.					1920*1080@600Hz USB: R load(5V/1.5A)
7.					1920*1080@600Hz USB: CS Light FX Sync lighting
8.				1.5m	1920*1080@600Hz
9.				1.2m	1920*1080@600Hz
10.			HDMI1	1.8m	640*480@60Hz
11.					1280*1024@75Hz
12.					1920*1080@600Hz
13.			HDMI 2	1.8m	640*480@60Hz
14.					1280*1024@75Hz
15.					1920*1080@600Hz
16.		DVD Mode	HDMI 1	1.8m	Color Bar
17.			HDMI 2	1.8m	Color Bar
18.		PIP Mode	DP+ HDMI 1	1.8m	1920*1080@600Hz
19.		PBP Mode	DP+ HDMI 1	1.8m	960*1080@600Hz
20.		Standby	---	---	---
21.	AC 110V/60Hz	PC Mode	DP	1.8m	1920*1080@600Hz

The result of worst test mode is presented in the report as below and the test data are listed in next pages.

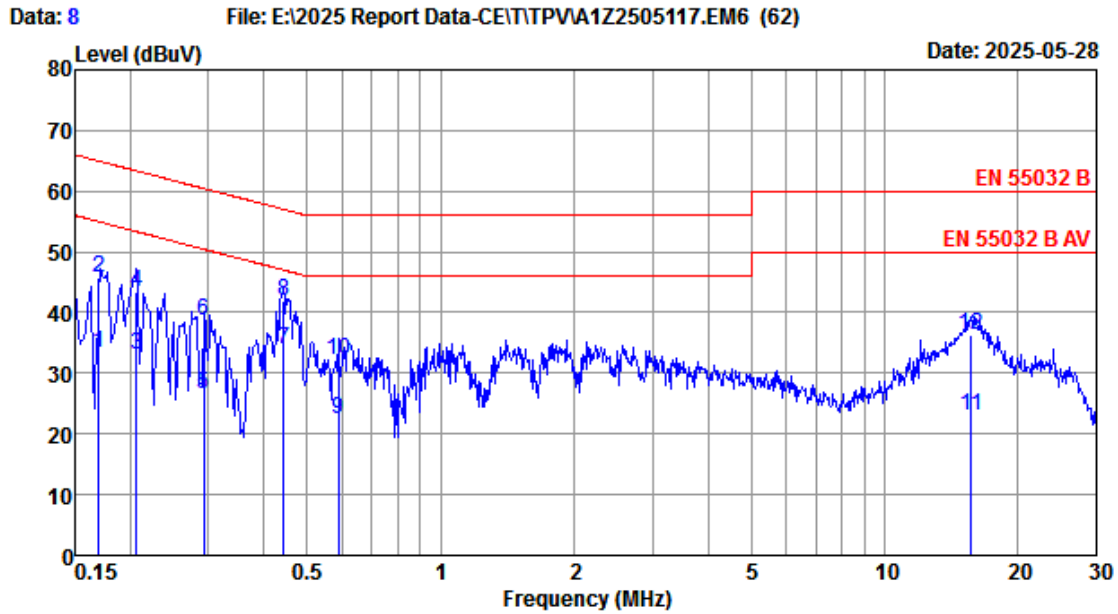
No.	Test Voltage	Cable Length	Test Mode	Input Port	Resolution & Frequency	Reference Test Data No.	
						Line	Neutral
1.	AC 230V/50Hz	1.8m	PC Mode	DP	1920*1080@600Hz	#7	#8



Site no	:2# Conduction	Data No	:7
Dis./Lisn	:2024 ENV216 0.15-30M	LISN phase	:LINE
Limit	:EN 55032 B	Pressure	:101.6kPa
Env./Ins.	:23.5°C/55%	Engineer	:Cinder
EUT	:CS24A		
Power Rating	:AC 230V/50Hz		
Test Mode	:DP:1920*1080@600Hz		
	Line:1.8m		

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.177	9.64	0.01	21.40	31.05	54.63	23.58	Average
2	0.177	9.64	0.01	34.90	44.55	64.63	20.08	QP
3	0.213	9.64	0.01	13.80	23.45	53.09	29.64	Average
4	0.213	9.64	0.01	30.30	39.95	63.09	23.14	QP
5	0.281	9.63	0.01	13.60	23.24	50.79	27.55	Average
6	0.281	9.63	0.01	28.30	37.94	60.79	22.85	QP
7	0.442	9.62	0.01	25.30	34.93	47.02	12.09	Average
8	0.442	9.62	0.01	33.70	43.33	57.02	13.69	QP
9	0.613	9.63	0.01	14.68	24.32	46.00	21.68	Average
10	0.613	9.63	0.01	23.84	33.48	56.00	22.52	QP
11	16.054	9.71	0.10	10.10	19.91	50.00	30.09	Average
12	16.054	9.71	0.10	26.30	36.11	60.00	23.89	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	:8
Dis./Lisn	:2024 ENV216 0.15-30M	LISN phase	:NEUTRAL
Limit	:EN 55032 B	Pressure	:101.6kPa
Env./Ins.	:23.5°C/55%	Engineer	:Cinder
EUT	:CS24A		
Power Rating	:AC 230V/50Hz		
Test Mode	:DP:1920*1080@600Hz		
	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	9.62	0.01	23.61	33.24	54.96	21.72	Average
2	0.170	9.62	0.01	36.05	45.68	64.96	19.28	QP
3	0.206	9.63	0.01	23.50	33.14	53.37	20.23	Average
4	0.206	9.63	0.01	33.90	43.54	63.37	19.83	QP
5	0.293	9.64	0.01	16.80	26.45	50.44	23.99	Average
6	0.293	9.64	0.01	29.10	38.75	60.44	21.69	QP
7	0.442	9.65	0.01	24.25	33.91	47.02	13.11	Average
8	0.442	9.65	0.01	32.38	42.04	57.02	14.98	QP
9	0.588	9.65	0.01	12.81	22.47	46.00	23.53	Average
10	0.588	9.65	0.01	22.56	32.22	56.00	23.78	QP
11	15.634	9.73	0.10	13.10	22.93	50.00	27.07	Average
12	15.634	9.73	0.10	26.50	36.33	60.00	23.67	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 TEST

4.1. Test Equipments

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

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(NSA)	AUDIX	N/A	N/A	Aug.12,23	3 Year
2.	10m Chamber(SE)	AUDIX	N/A	N/A	Sep.16,22	3 Year
3.	Signal Analyzer	Rohde & Schwarz	FSV30	103669	Sep.15,24	1 Year
4.	Signal Analyzer	Rohde & Schwarz	FSV30	103670	Jun.19,24	1 Year
5.	EMI Test Receiver	Rohde & Schwarz	ESR3	102891	Sep.15,24	1 Year
6.	Amplifier	EM	EM101	060952	Mar.10,25	1 Year
7.	Amplifier	EMCI	EMC9135	980347	Sep.13,24	1 Year
8.	Tri-log-Broadband Antenna	Schwarzbeck	VULB 9168	493	Jan.20,25	1 Year
9.	Tri-log-Broadband Antenna	SCHWARZBECK	VULB 9168	01317	Nov.22,24	1 Year
10.	RF Cable	EMCI	EMCCFD400-N M-NM-2500	No.4+190413	Mar.10,25	1 Year
11.	RF Cable	SPUMA	CFD400-NM-NM	160727+160728	Mar.10,25	1 Year
12.	Coaxial Switch	Anritsu	MP59B	6201397220	Mar.10,25	1 Year
13.	Coaxial Switch	Anritsu	MP59B	6201397221	Mar.10,25	1 Year
14.	Coaxial Switch	Anritsu	MP59B	6201397224	Mar.10,25	1 Year
15.	Test Software	AUDIX	e3	6.100913a	N/A	N/A

Note: N/A means Not applicable.

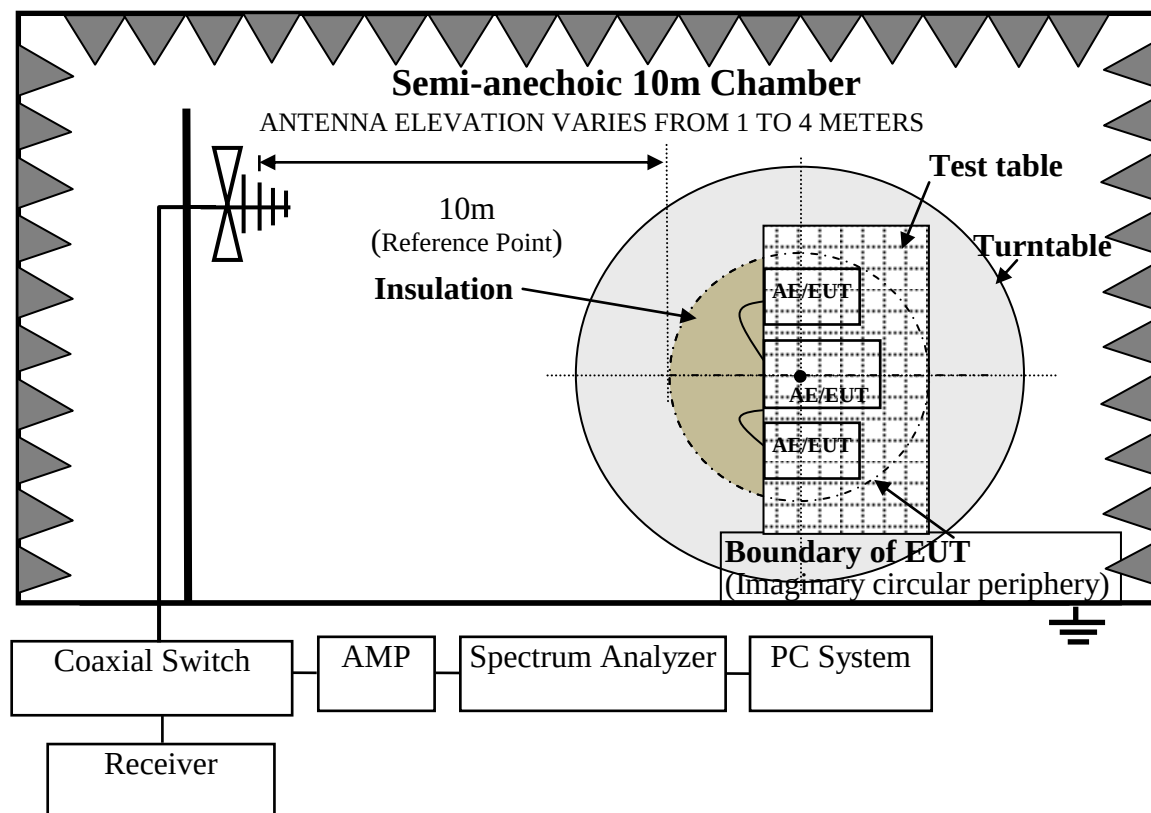
4.1.2. For frequency range 1GHz~6GHz (In 10m Anechoic Chamber)

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	10m Chamber(Svswr)	AUDIX	N/A	N/A	Aug.08,23	3 Year
2.	10m Chamber(SE)	AUDIX	N/A	N/A	Sep.16,22	3 Year
3.	Signal Analyzer	Rohde & Schwarz	FSV30	103669	Sep.15,24	1 Year
4.	Horn Antenna	ETS	3117	00218552	Mar.05,25	1 Year
5.	Amplifier	Agilent	83017A	MY53270084	Sep.15,24	1 Year
6.	RF Cable	TIMES MICROWAVE	SFT205-SMNM-6M	20231214-0001	Sep.13,24	1 Year
7.	Test Software	AUDIX	e3	6.100913a	N/A	N/A

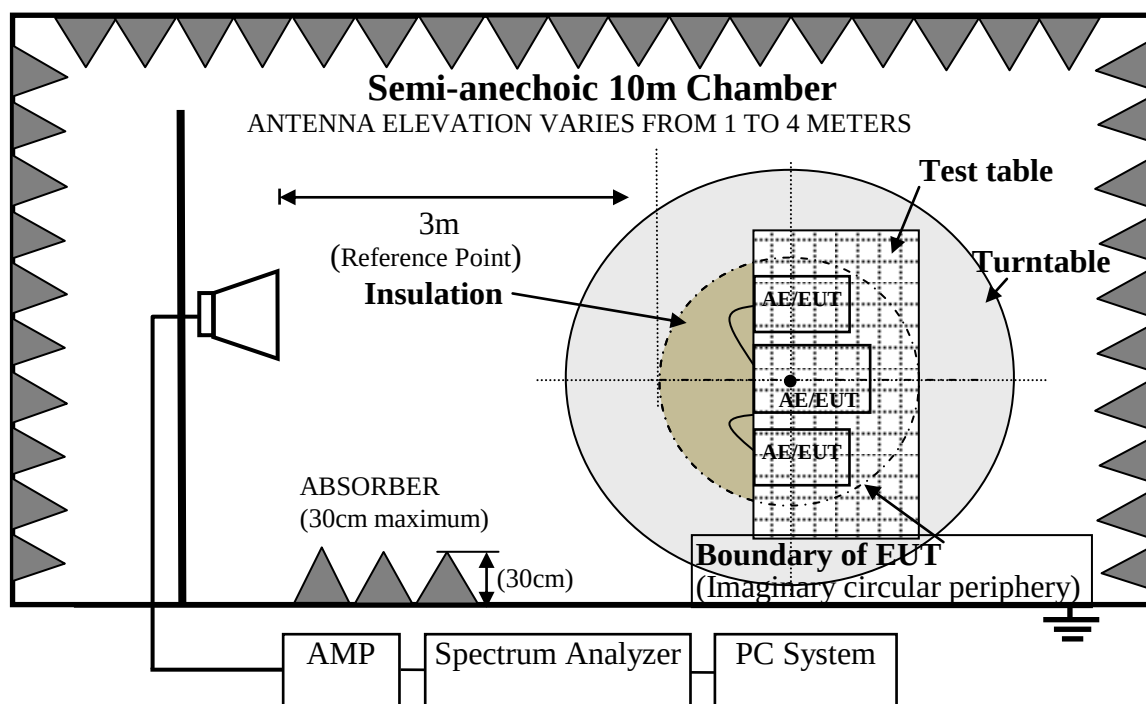
Note: N/A means Not applicable.

4.2. Block Diagram of Test Setup

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



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



4.3. Test Standard

EN 55032: 2015 (Class B)
 EN 55032: 2015+A11: 2020
 EN 55032: 2015+A1: 2020
 BS EN 55032: 2015 (Class B)
 BS EN 55032: 2015+A11: 2020
 BS EN 55032: 2015+A1: 2020

4.4. Radiated Emission Class B Limits

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:

Table 1:

Frequency (MHz)	Distance (Meters)	Field Strengths Limits (dBμV/m)
30 ~ 230	10	30
230 ~ 1000	10	37
1000~3000	3	70(Peak) 50(Average)
3000~6000	3	74(Peak) 54(Average)

Note: (1) Emission Level (dBμV/m) = Reading (Receiver) (dBμV) + Antenna Factor (dB/m) + Cable Loss (dB)
 Emission Level (dBμV/m) = Reading (Spectrum) (dBμV) + Antenna Factor (dB/m) – AMP Factor (dB) + Cable Loss (dB)(above 1000MHz)
 (2) The lower limit shall apply at the transition frequencies.

Table 2: Limit for EN 55032:2015+A1:2020

Frequency (MHz)	Distance (Meters)	Field Strengths Limits (dBμV/m)
30 ~ 230	10	30
230 ~ 1000	10	37
1000~6000	3	74(Peak) 54(Average)

The limits listed in table 1 is strict than the limits listed in table 2.
 The EUT which complies with table 1 limit is deemed to comply with table 2 limit.

Note: (1) Emission Level (dBμV/m) = Reading (Receiver) (dBμV) + Antenna Factor (dB/m) + Cable Loss (dB)
 Emission Level (dBμV/m) = Reading (Spectrum) (dBμV) + Antenna Factor (dB/m) – AMP Factor (dB) + Cable Loss (dB)(above 1000MHz)
 (2) The lower limit shall apply at the transition frequencies.

4.5. Test Procedure

The EUT was placed on a non-metallic table, 80 cm above the ground plane inside a semi-anechoic chamber. An antenna was located 10 meters from the periphery of test system 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 for EN 55032; BS EN 55032. 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 of the interface cables were changed according to EN 55032; BS EN 55032 Class B on radiated disturbance test.

The bandwidth setting on the test receiver is 120 kHz.

The resolution bandwidth of the Signal Analyzer 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 4.6.

4.6. Radiated Emission Test Results

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

EUT: LCD Monitor Model No. : CS24A

For frequency range 30MHz~1000MHz

The EUT with following test modes were pre-tested:

No.	Test Voltage	Test Mode	Input Port	Cable Length	Resolution & Frequency
1.	AC 230V/50Hz	PC Mode	DP	1.8m	640*480@60Hz
2.					1280*1024@75Hz
3.					1920*1080@60Hz
4.					1920*1080@600Hz
5.					1080*1920@600Hz (Panel is Vertical) (+90°)
6.					1080*1920@600Hz (Panel is Vertical) (-90°)
7.					1920*1080@600Hz USB: R load(5V/1.5A)
8.					1920*1080@600Hz USB: CS Light FX Sync lighting
9.			HDMI1	1.5m	1920*1080@600Hz
10.				1.2m	1920*1080@600Hz
11.				1.8m	640*480@60Hz
12.					1280*1024@75Hz
13.					1920*1080@60Hz
14.					1920*1080@600Hz
15.			HDMI 2	1.8m	640*480@60Hz
16.					1280*1024@75Hz
17.					1920*1080@60Hz
18.					1920*1080@600Hz
19.		DVD Mode	HDMI 1	1.8m	Color Bar
20.			HDMI 2	1.8m	Color Bar
21.		PIP Mode	DP+ HDMI 1	1.8m	1920*1080@600Hz
22.		PBP Mode	DP+ HDMI 1	1.8m	960*1080@600Hz
23.		Standby	---	---	---
24.	AC 110V/60Hz	PC Mode	DP	1.8m	1920*1080@600Hz

The result of worst test mode is presented in the report as below and the test data are listed in next pages.

No.	Test Voltage	Cable Length	Test Mode	Input Port	Resolution & Frequency	Reference Test Data No.	
						Horizontal	Vertical
1.	AC 230V/50Hz	1.8m	PC Mode	DP	1920*1080@600Hz	#10	#9

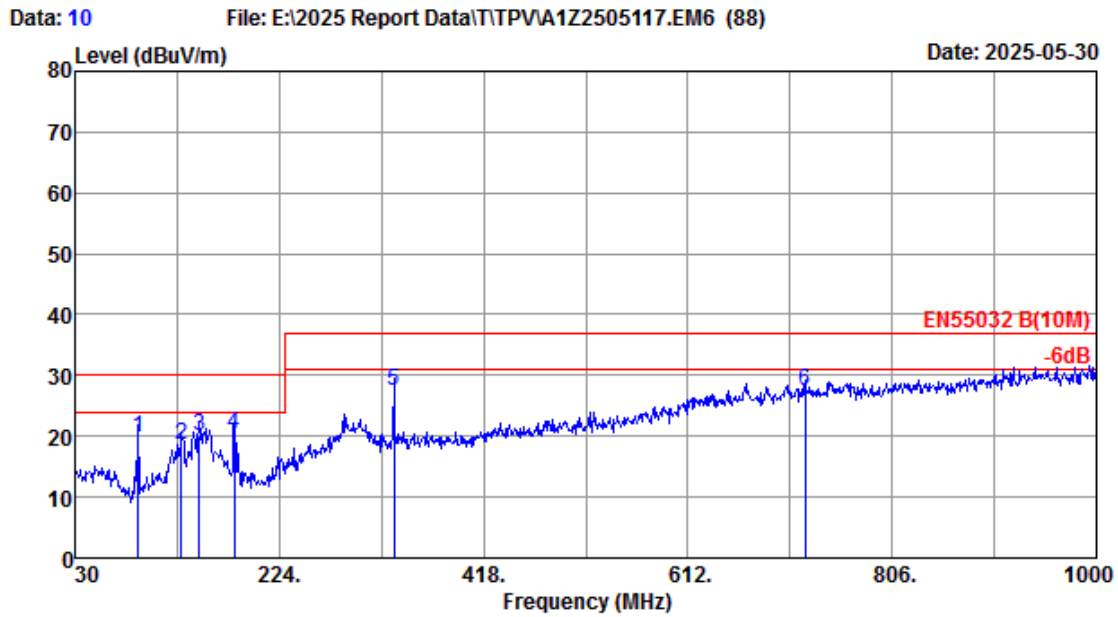
For frequency range 1GHz~6GHz

The EUT with following test modes were pre-tested:

No.	Test Voltage	Test Mode	Input Port	Cable Length	Resolution & Frequency
1.	AC 230V/50Hz	PC Mode	DP	1.8m	1280*1024@75Hz
2.					1920*1080@60Hz
3.					1920*1080@600Hz
4.					1080*1920@600Hz (Panel is Vertical) (+90°)
5.					1080*1920@600Hz (Panel is Vertical) (-90°)
6.					1920*1080@600Hz USB: R load(5V/1.5A)
7.					1920*1080@600Hz USB: CS Light FX Sync lighting
8.				1.5m	1920*1080@600Hz
9.				1.2m	1920*1080@600Hz
10.			HDMI1	1.8m	1280*1024@75Hz
11.					1920*1080@60Hz
12.					1920*1080@600Hz
13.			HDMI 2	1.8m	1280*1024@75Hz
14.					1920*1080@60Hz
15.					1920*1080@600Hz
16.		DVD Mode	HDMI 1	1.8m	Color Bar
17.			HDMI 2	1.8m	Color Bar
18.		PIP Mode	DP+ HDMI 1	1.8m	1920*1080@600Hz
19.		PBP Mode	DP+ HDMI 1	1.8m	960*1080@600Hz
20.		Standby	---	---	---
21.	AC 110V/60Hz	PC Mode	DP	1.8m	1920*1080@600Hz

The result of worst test mode is presented in the report as below and the test data are listed in next pages.

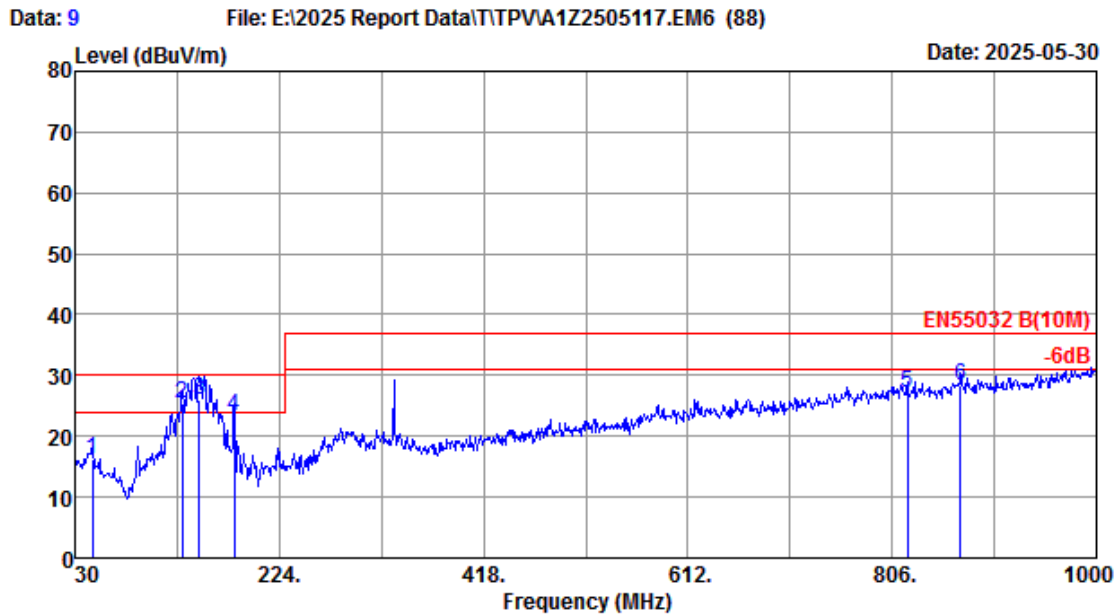
No.	Test Voltage	Cable Length	Test Mode	Input Port	Resolution & Frequency	Reference Test Data No.	
						Horizontal	Vertical
1.	AC 230V/50Hz	1.8m	PC Mode	DP	1920*1080@600Hz	#8	#7



Site no. : 10m Chamber Data no. : 10
 Dis. / Ant. : 10m 2024 VULB9168-01317 Ant. pol. : HORIZONTAL
 Limit : EN55032 B(10M) Pressure : 101.6kPa
 Env. / Ins. : 23.2°C/51% Engineer : Cinder
 EUT : M/N:CS24A
 Power rating : AC 230V/50Hz
 Test Mode : DP:1920*1080@600Hz
 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	90.140	13.60	1.12	5.16	19.88	30.00	10.12	QP
2	130.880	17.70	1.40	-0.57	18.53	30.00	11.47	QP
3	148.340	19.20	1.52	-0.66	20.06	30.00	9.94	QP
4	181.320	17.34	1.75	1.22	20.31	30.00	9.69	QP
5	332.640	20.20	2.53	4.68	27.41	37.00	9.59	QP*
6	723.550	27.24	4.87	-4.78	27.33	37.00	9.67	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The worst emission was detected at 332.640MHz with corrected signal level of 27.41dBuV/m. (Antenna height 1.35m; Turntable degree 207°).
 3. 0° was the table front facing the antenna. Degree is calculated from 0° clockwise facing the antenna.



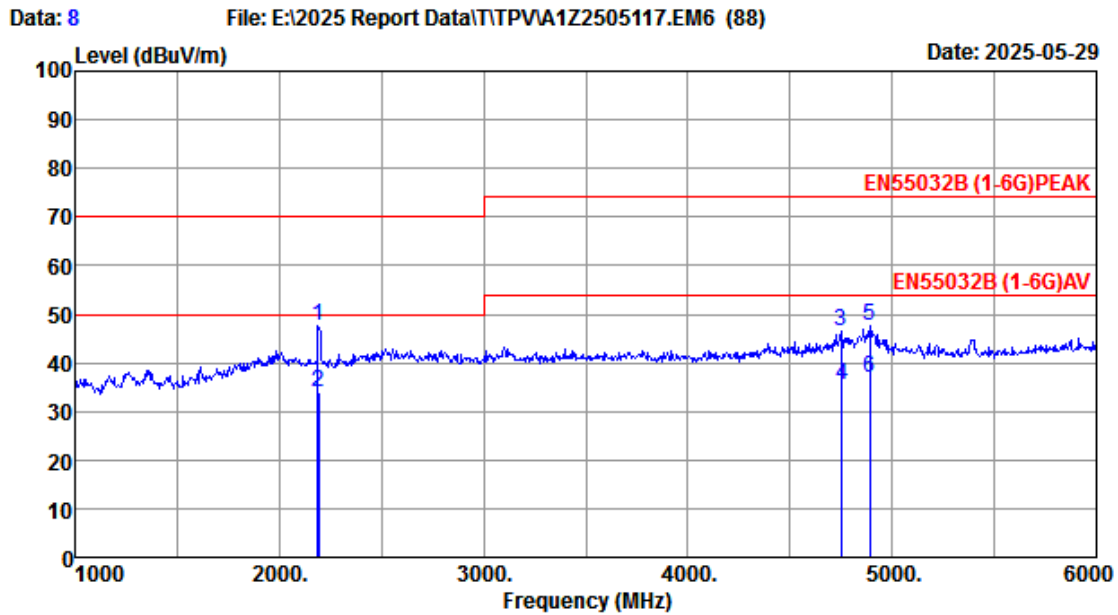
Site no.	: 10m Chamber	Data no.	: 9
Dis. / Ant.	: 10m 2025 VULB9168 493	Ant. pol.	: VERTICAL
Limit	: EN55032 B(10M)	Pressure	: 101.6kPa
Env. / Ins.	: 23.2°C/51%	Engineer	: Cinder
EUT	: M/N:CS24A		
Power rating	: AC 230V/50Hz		
Test Mode	: DP:1920*1080@600Hz		
	Line:1.8m		

No.	Freq. (MHz)	Ant.	Cable	Emission				Remark
		Factor (dB/m)	Loss (dB)	Reading (dBuV)	Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	
1	46.490	19.85	1.05	-4.57	16.33	30.00	13.67	QP
2	131.850	17.99	1.70	5.82	25.51	30.00	4.49	QP
3	148.340	19.33	1.80	4.77	25.90	30.00	4.10	QP*
4	181.320	17.27	2.01	4.03	23.31	30.00	6.69	QP
5	820.550	28.79	5.51	-7.23	27.07	37.00	9.93	QP
6	870.990	29.28	5.74	-6.71	28.31	37.00	8.69	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.

2. The worst emission was detected at 148.340MHz with corrected signal level of 25.90dBuV/m. (Antenna height 3.08m; Turntable degree 168°).

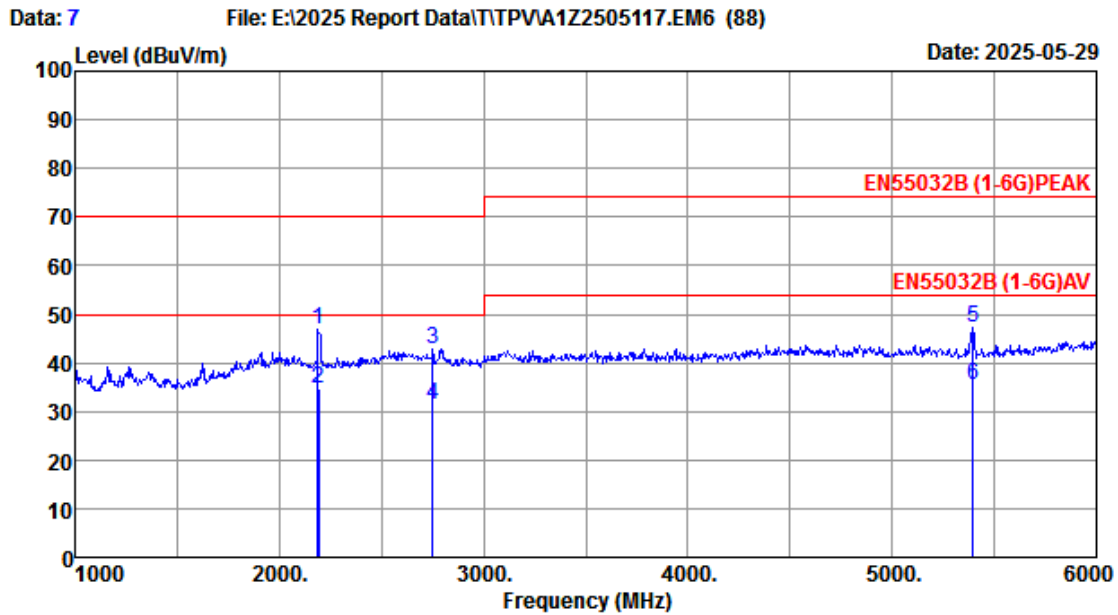
3. 0° was the table front facing the antenna. Degree is calculated from 0° clockwise facing the antenna.



Site no.	: 10m Chamber	Data no.	: 8
Dis. / Ant.	: 3m 2025 3117	Ant. pol.	: HORIZONTAL
Limit	: EN55032B (1-6G) PEAK	Pressure	: 101.6kPa
Env. / Ins.	: 21.5°C/59%	Engineer	: Cinder
EUT	: M/N:CS24A		
Power rating	: AC 230V/50Hz		
Test Mode	: DP:1920*1080@600Hz		
	Line:1.8m		

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dB)	Reading (dBuV)	Emission			
						Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2190.000	31.23	2.10	32.99	47.12	47.46	70.00	22.54	Peak
2	2192.690	31.23	2.10	32.98	33.69	34.04	50.00	15.96	Average
3	4750.000	34.10	3.10	31.83	40.96	46.33	74.00	27.67	Peak
4	4752.580	34.10	3.10	31.82	30.16	35.54	54.00	18.46	Average
5	4890.000	34.10	3.16	31.76	42.08	47.58	74.00	26.42	Peak
6	4892.670	34.10	3.16	31.75	31.27	36.78	54.00	17.22	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading
-Amp Factor



Site no. : 10m Chamber Data no. : 7
 Dis. / Ant. : 3m 2025 3117 Ant. pol. : VERTICAL
 Limit : EN55032B (1-6G) PEAK Pressure : 101.6kPa
 Env. / Ins. : 21.5°C/59% Engineer : Cinder
 EUT : M/N:CS24A
 Power rating : AC 230V/50Hz
 Test Mode : DP:1920*1080@600Hz
 Line:1.8m

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	AMP factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2190.000	31.23	2.10	32.99	46.42	46.76	70.00	23.24	Peak
2	2192.770	31.23	2.10	32.98	34.41	34.76	50.00	15.24	Average
3	2750.000	32.50	2.38	32.65	40.66	42.89	70.00	27.11	Peak
4	2752.300	32.50	2.38	32.65	29.30	31.53	50.00	18.47	Average
5	5395.000	34.30	3.32	31.82	41.36	47.16	74.00	26.84	Peak
6	5396.600	34.30	3.32	31.82	29.50	35.30	54.00	18.70	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading
 -Amp Factor

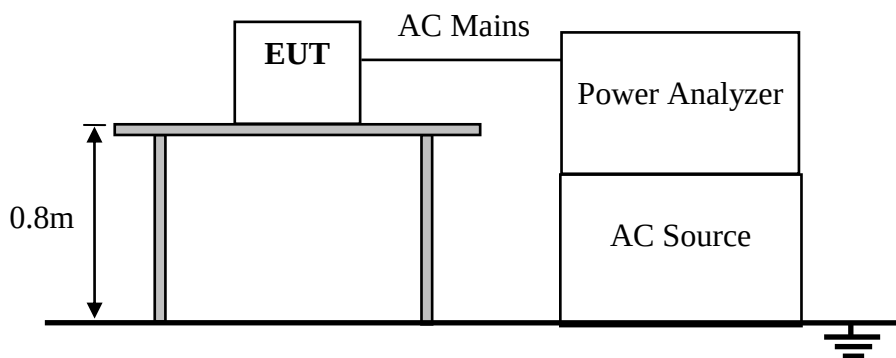
5. HARMONIC CURRENT EMISSION TEST

5.1. Test Equipments

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	AC Power Source	California Instruments	5001iX	58481	Sep.13,24	1 Year
2.	Impedance Network	California Instruments	OMNI 1-18i	1247A02235	Sep.13,24	1 Year
3.	Power Analyzer	California Instruments	PACS-1	72627	Sep.12,24	1 Year
4.	Test Software	California Instruments	CTS 4.0	V 4.29	N/A	N/A

Note: N/A means Not applicable.

5.2. Block Diagram of Test Setup



5.3. Test Standard

EN 61000-3-2: 2014, Class D

EN IEC 61000-3-2:2019+A1:2021

BS EN 61000-3-2: 2014

BS EN IEC 61000-3-2:2019+A1: 2021

5.4.Limits of Harmonic Current

Limits for Class D Equipment		
Harmonic order (h)	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≤h≤39 (odd harmonic only)	3.85/h	0.15×15/h

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

5.5.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.

5.6. Test Results

PASS. (Test results are recorded in next page)

Harmonics – Class-D per IEC 61000-3-2:2018/AMD1:2020(Run time) incl.
inter-harmonics

EUT: CS24A

Test category: Class-D (European limits)

Test date: 2025-6-15

Start time: 10:01:24

Test duration (min): 2.5

Data file name: H-000310.cts_data

Comment: Running "H" Pattern And 1KHz Playing

Customer: TPV

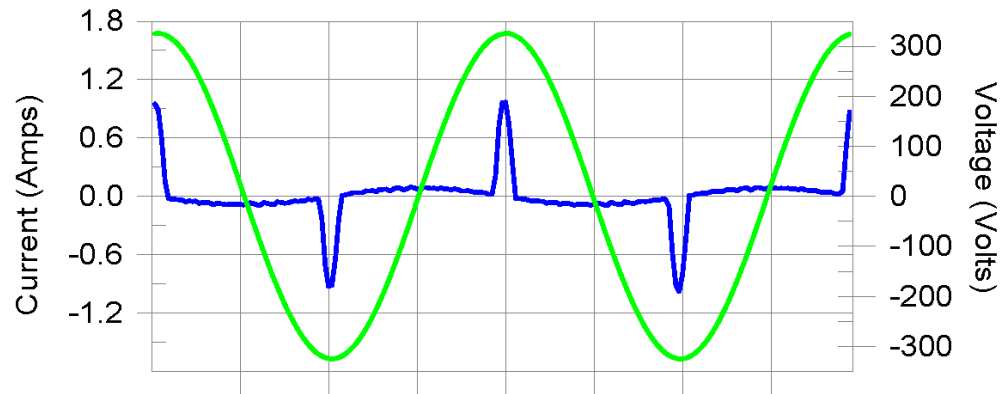
Tested by: Kennen

Test Margin: 100

End time: 10:04:06

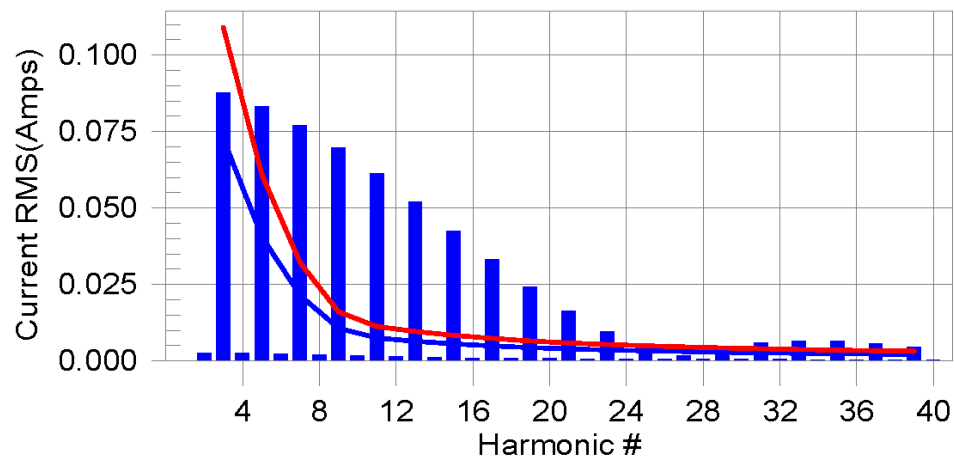
Test Result: N/L Source qualification: Normal

Current & voltage waveforms



Harmonics and Class D limit line

European Limits



Test result: N/L Worst harmonics H0-0.0% of 150% limit, H0-0% of 100% limit

Current Test Result Summary (Run time)

EUT: CS24A
 Test category: Class-D (European limits)
 Test date: 2025-6-15 Start time: 10:01:24
 Test duration (min): 2.5 Data file name: H-000310.cts_data
 Comment: Running "H" Pattern And 1KHz Playing
 Customer: TPV

Tested by: Kennen
 Test Margin: 100
 End time: 10:04:06

Test Result: N/L Source qualification: Normal
 THCA: 0.190 I-THD(%): 169.3 POHC(A): 0.024 POHC Limit(A): 0.009

Highest parameter values during test:

V_RMS (Volts): 230.11 Frequency(Hz): 50.00
 I_Peak (Amps): 0.994 I_RMS (Amps): 0.240
 I_Fund (Amps): 0.112 Crest Factor: 4.205
 Power (Watts): 21.4 Power Factor: 0.421

Harm#	Harms(avg)	100%Limit	%of Limit	Harms(max)	150%Limit	%of Limit	Status
2	0.003	0.000	N/A	0.004	0.000	N/A	N/L
3	0.088	0.073	N/A	0.091	0.109	N/A	N/L
4	0.002	0.000	N/A	0.003	0.000	N/A	N/L
5	0.083	0.041	N/A	0.086	0.061	N/A	N/L
6	0.002	0.000	N/A	0.003	0.000	N/A	N/L
7	0.077	0.021	N/A	0.080	0.032	N/A	N/L
8	0.002	0.000	N/A	0.002	0.000	N/A	N/L
9	0.070	0.011	N/A	0.072	0.016	N/A	N/L
10	0.002	0.000	N/A	0.002	0.000	N/A	N/L
11	0.061	0.007	N/A	0.063	0.011	N/A	N/L
12	0.001	0.000	N/A	0.002	0.000	N/A	N/L
13	0.052	0.006	N/A	0.053	0.010	N/A	N/L
14	0.001	0.000	N/A	0.001	0.000	N/A	N/L
15	0.042	0.006	N/A	0.043	0.008	N/A	N/L
16	0.001	0.000	N/A	0.001	0.000	N/A	N/L
17	0.033	0.005	N/A	0.033	0.007	N/A	N/L
18	0.001	0.000	N/A	0.001	0.000	N/A	N/L
19	0.024	0.004	N/A	0.024	0.007	N/A	N/L
20	0.001	0.000	N/A	0.001	0.000	N/A	N/L
21	0.016	0.004	N/A	0.016	0.006	N/A	N/L
22	0.001	0.000	N/A	0.001	0.000	N/A	N/L
23	0.010	0.004	N/A	0.010	0.005	N/A	N/L
24	0.001	0.000	N/A	0.001	0.000	N/A	N/L
25	0.004	0.003	N/A	0.004	0.005	N/A	N/L
26	0.001	0.000	N/A	0.001	0.000	N/A	N/L
27	0.002	0.003	N/A	0.002	0.005	N/A	N/L
28	0.001	0.000	N/A	0.001	0.000	N/A	N/L
29	0.004	0.003	N/A	0.005	0.004	N/A	N/L
30	0.001	0.000	N/A	0.001	0.000	N/A	N/L
31	0.006	0.003	N/A	0.006	0.004	N/A	N/L
32	0.001	0.000	N/A	0.001	0.000	N/A	N/L
33	0.006	0.002	N/A	0.007	0.004	N/A	N/L
34	0.000	0.000	N/A	0.000	0.000	N/A	N/L
35	0.006	0.002	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	0.006	0.002	N/A	0.006	0.003	N/A	N/L
38	0.000	0.000	N/A	0.000	0.000	N/A	N/L
39	0.004	0.002	N/A	0.004	0.003	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: CS24A
 Test category: Class-D (European limits)
 Test date: 2025-6-15 Start time: 10:01:24
 Test duration (min): 2.5 Data file name: H-000310.cts_data
 Comment: Running "H" Pattern And 1KHz Playing
 Customer: TPV

Tested by: Kennen
 Test Margin: 100
 End time: 10:04:06

Test Result: N/L Source qualification: Normal

Highest parameter values during test:

Voltage (Vrms): 230.11
 I_Peak (Amps): 0.994
 I_Fund (Amps): 0.112
 Power (Watts): 21.4
 Frequency(Hz): 50.00
 I_RMS (Amps): 0.240
 Crest Factor: 4.205
 Power Factor: 0.421

Harm#	Harmonics V-rms	Limit V-rms	% of Limit	Status
2	0.094	0.460	20.49	OK
3	0.474	2.070	22.92	OK
4	0.070	0.460	15.12	OK
5	0.055	0.920	5.99	OK
6	0.027	0.460	5.87	OK
7	0.036	0.690	5.20	OK
8	0.008	0.460	1.72	OK
9	0.038	0.460	8.16	OK
10	0.017	0.460	3.65	OK
11	0.037	0.230	16.13	OK
12	0.018	0.230	7.75	OK
13	0.039	0.230	17.02	OK
14	0.010	0.230	4.14	OK
15	0.031	0.230	13.51	OK
16	0.009	0.230	3.82	OK
17	0.029	0.230	12.61	OK
18	0.014	0.230	5.88	OK
19	0.024	0.230	10.31	OK
20	0.014	0.230	5.97	OK
21	0.019	0.230	8.42	OK
22	0.003	0.230	1.44	OK
23	0.013	0.230	5.75	OK
24	0.004	0.230	1.71	OK
25	0.006	0.230	2.68	OK
26	0.004	0.230	1.78	OK
27	0.006	0.230	2.56	OK
28	0.005	0.230	1.99	OK
29	0.009	0.230	3.85	OK
30	0.004	0.230	1.57	OK
31	0.009	0.230	3.97	OK
32	0.003	0.230	1.10	OK
33	0.010	0.230	4.35	OK
34	0.002	0.230	1.05	OK
35	0.011	0.230	4.59	OK
36	0.002	0.230	0.84	OK
37	0.009	0.230	4.05	OK
38	0.002	0.230	0.73	OK
39	0.008	0.230	3.49	OK
40	0.004	0.230	1.54	OK

Harmonics – Class-D per IEC 61000-3-2:2018/AMD1:2020(Run time) incl. inter-harmonics

EUT: CS24A

Test category: Class-D (European limits)

Test date: 2025-6-15

Test duration (min): 2.5

Comment: Default Mode

Customer: TPV

Tested by: Kennen

Test Margin: 100

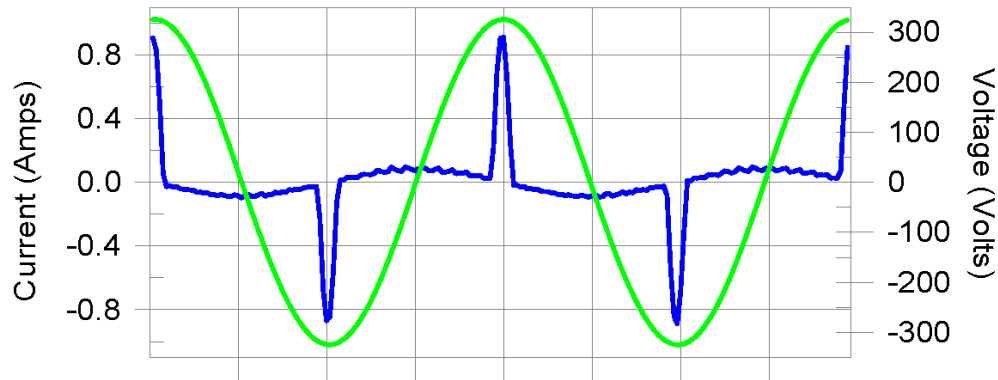
End time: 10:07:45

Start time: 10:05:03

Data file name: H-000311.cts_data

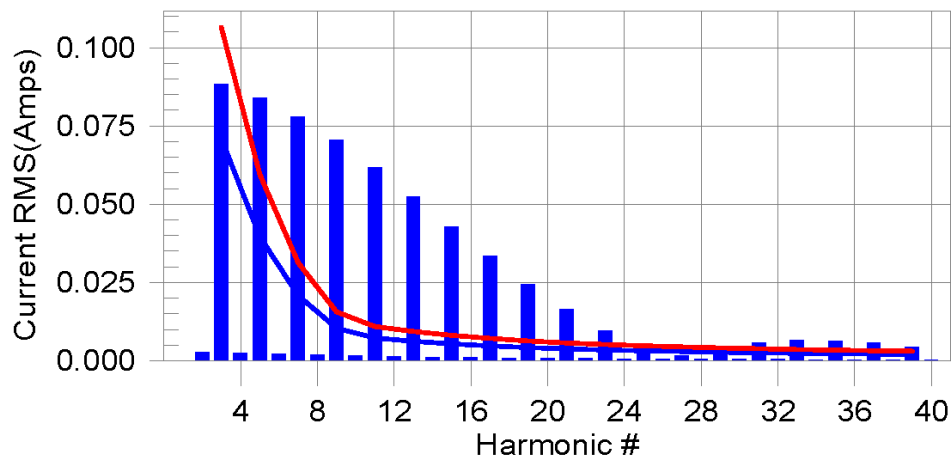
Test Result: N/L Source qualification: Normal

Current & voltage waveforms



Harmonics and Class D limit line

European Limits



Test result: N/L Worst harmonics H0-0.0% of 150% limit, H0-0% of 100% limit

Current Test Result Summary (Run time)

EUT: CS24A
 Test category: Class-D (European limits)
 Test date: 2025-6-15
 Test duration (min): 2.5
 Comment: Default Mode
 Customer: TPV

Tested by: Kennen
 Test Margin: 100
 Start time: 10:05:03
 End time: 10:07:45
 Data file name: H-000311.cts_data

Test Result: N/L Source qualification: Normal
 THCA: 0.191 I-THD(%): 174.3 POHC(A): 0.024 POHC Limit(A): 0.009

Highest parameter values during test:

V_RMS (Volts): 230.11
 I_Peak (Amps): 0.941
 I_Fund (Amps): 0.110
 Power (Watts): 20.9

Frequency(Hz): 50.00
 I_RMS (Amps): 0.223
 Crest Factor: 4.211
 Power Factor: 0.413

Harm#	Harms(avg)	100%Limit	%of Limit	Harms(max)	150%Limit	%of Limit	Status
2	0.003	0.000	N/A	0.004	0.000	N/A	N/L
3	0.088	0.071	N/A	0.089	0.106	N/A	N/L
4	0.002	0.000	N/A	0.003	0.000	N/A	N/L
5	0.084	0.040	N/A	0.084	0.059	N/A	N/L
6	0.002	0.000	N/A	0.003	0.000	N/A	N/L
7	0.078	0.021	N/A	0.078	0.031	N/A	N/L
8	0.002	0.000	N/A	0.002	0.000	N/A	N/L
9	0.070	0.010	N/A	0.071	0.016	N/A	N/L
10	0.002	0.000	N/A	0.002	0.000	N/A	N/L
11	0.062	0.007	N/A	0.062	0.011	N/A	N/L
12	0.001	0.000	N/A	0.002	0.000	N/A	N/L
13	0.052	0.006	N/A	0.053	0.009	N/A	N/L
14	0.001	0.000	N/A	0.001	0.000	N/A	N/L
15	0.043	0.005	N/A	0.043	0.008	N/A	N/L
16	0.001	0.000	N/A	0.001	0.000	N/A	N/L
17	0.033	0.005	N/A	0.033	0.007	N/A	N/L
18	0.001	0.000	N/A	0.001	0.000	N/A	N/L
19	0.024	0.004	N/A	0.025	0.006	N/A	N/L
20	0.001	0.000	N/A	0.001	0.000	N/A	N/L
21	0.016	0.004	N/A	0.017	0.006	N/A	N/L
22	0.001	0.000	N/A	0.001	0.000	N/A	N/L
23	0.010	0.003	N/A	0.010	0.005	N/A	N/L
24	0.001	0.000	N/A	0.001	0.000	N/A	N/L
25	0.004	0.003	N/A	0.004	0.005	N/A	N/L
26	0.001	0.000	N/A	0.001	0.000	N/A	N/L
27	0.002	0.003	N/A	0.002	0.004	N/A	N/L
28	0.001	0.000	N/A	0.001	0.000	N/A	N/L
29	0.004	0.003	N/A	0.004	0.004	N/A	N/L
30	0.001	0.000	N/A	0.001	0.000	N/A	N/L
31	0.006	0.003	N/A	0.006	0.004	N/A	N/L
32	0.001	0.000	N/A	0.001	0.000	N/A	N/L
33	0.007	0.002	N/A	0.007	0.004	N/A	N/L
34	0.000	0.000	N/A	0.001	0.000	N/A	N/L
35	0.006	0.002	N/A	0.006	0.003	N/A	N/L
36	0.000	0.000	N/A	0.000	0.000	N/A	N/L
37	0.006	0.002	N/A	0.006	0.003	N/A	N/L
38	0.000	0.000	N/A	0.000	0.000	N/A	N/L
39	0.005	0.002	N/A	0.005	0.003	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: CS24A
Test category: Class-D (European limits)
Test date: 2025-6-15
Test duration (min): 2.5
Comment: Default Mode
Customer: TPV

Tested by: Kennen
Test Margin: 100
Start time: 10:05:03
End time: 10:07:45
Data file name: H-000311.cts_data

Test Result: N/L Source qualification: Normal

Highest parameter values during test:

Voltage (Vrms): 230.11
I_{Peak} (Amps): 0.941
I_{Fund} (Amps): 0.110
Power (Watts): 20.9

Frequency(Hz): 50.00
I_{RMS} (Amps): 0.223
Crest Factor: 4.211
Power Factor: 0.413

Harm#	Harmonics V-rms	Limit V-rms	% of Limit	Status
2	0.090	0.460	19.54	OK
3	0.470	2.070	22.70	OK
4	0.071	0.460	15.53	OK
5	0.059	0.920	6.42	OK
6	0.028	0.460	6.16	OK
7	0.036	0.690	5.15	OK
8	0.008	0.460	1.76	OK
9	0.037	0.460	8.07	OK
10	0.016	0.460	3.56	OK
11	0.037	0.230	16.09	OK
12	0.016	0.230	7.00	OK
13	0.040	0.230	17.58	OK
14	0.009	0.230	4.02	OK
15	0.031	0.230	13.50	OK
16	0.009	0.230	3.77	OK
17	0.031	0.230	13.39	OK
18	0.013	0.230	5.66	OK
19	0.024	0.230	10.37	OK
20	0.014	0.230	6.17	OK
21	0.019	0.230	8.21	OK
22	0.003	0.230	1.25	OK
23	0.013	0.230	5.84	OK
24	0.004	0.230	1.92	OK
25	0.006	0.230	2.80	OK
26	0.004	0.230	1.72	OK
27	0.006	0.230	2.49	OK
28	0.005	0.230	2.30	OK
29	0.008	0.230	3.57	OK
30	0.004	0.230	1.63	OK
31	0.010	0.230	4.26	OK
32	0.003	0.230	1.11	OK
33	0.011	0.230	4.57	OK
34	0.003	0.230	1.13	OK
35	0.010	0.230	4.49	OK
36	0.002	0.230	0.85	OK
37	0.009	0.230	4.07	OK
38	0.002	0.230	0.80	OK
39	0.008	0.230	3.55	OK
40	0.003	0.230	1.39	OK

6. VOLTAGE FLUCTUATIONS & FLICKER TEST

6.1. Test Equipments

Same as Section 6.1.

6.2. Block Diagram of Test Setup

Same as Section 6.2.

6.3. Test Standard

EN 61000-3-3: 2013

EN 61000-3-3: 2013+A1:2019

EN 61000-3-3: 2013+A2:2021

BS EN 61000-3-3: 2013; BS EN 61000-3-3: 2013+A1:2019

BS EN 61000-3-3: 2013+A2: 2021

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. 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.

6.6. Test Results

PASS. (Test results are recorded in next page)

Flicker Test Summary per IEC61000-3-3:2013/AMD1:2017 (Run time)

EUT: CS24A
 Test category: All parameters (European limits)
 Test date: 2025-6-15 Start time: 9:47:45
 Test duration (min): 10 Data file name: F-000309.cts_data
 Comment: Running "H" Pattern And 1KHz Playing
 Customer: TPV

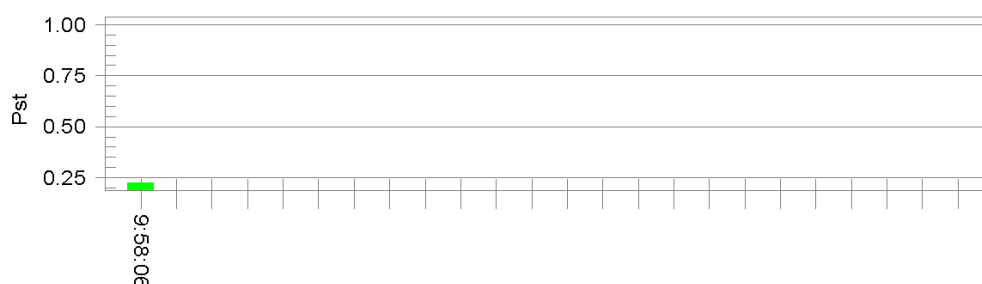
Tested by: Kennen
 Test Margin: 100
 End time: 9:58:12

Test Result: Pass

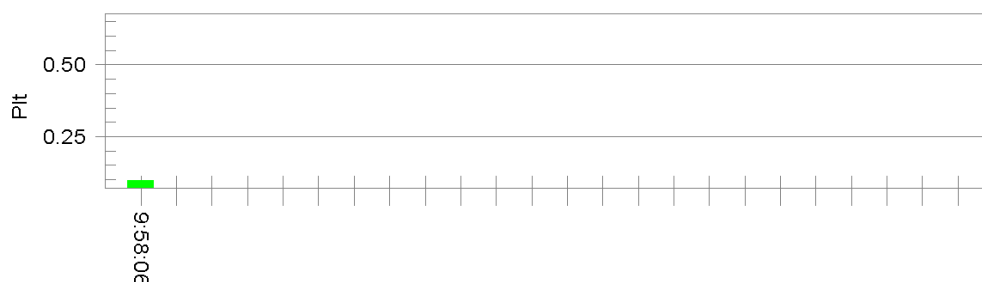
Status: Test Completed

Pst_i and limit line

European Limits



Plt and limit line



Parameter values recorded during the test:

Vrms at the end of test (Volt): 229.74

Highest dt (%):

T-max (mS): 0

Highest dc (%): 0.00

Highest dmax (%): 0.00

Highest Pst (10 min. period): 0.224

Highest Plt (2 hr. period): 0.098

Test limit (%):

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 DESCRIPTION

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

For EN 55035 & BS EN 55035

Performance criterion A:

The equipment shall continue to operate as intended without operator intervention. No degradation of performance, loss of function or change of operating state is allowed below a performance level specified by the manufacturer when the equipment is used as intended. The performance level may be replaced by a permissible loss of performance. If the minimum performance level or the permissible performance loss is not specified by the manufacturer, then either of these may be derived from the product description and documentation, and by what the user may reasonably expect from the equipment if used as intended.

Performance criterion B:

During the application of the disturbance, degradation of performance is allowed. However, no unintended change of actual operating state or stored data is allowed to persist after the test.

After the test, the equipment shall continue to operate as intended without operator intervention; no degradation of performance or loss of function is allowed, below a performance level specified by the manufacturer, when the equipment is used as intended. The performance level may be replaced by a permissible loss of performance.

If the minimum performance level (or the permissible performance loss), or recovery time, is not specified by the manufacturer, then either of these may be derived from the product description and documentation, and by what the user may reasonably expect from the equipment if used as intended.

Performance criterion C:

Loss of function is allowed, provided the function is self-recoverable, or can be restored by the operation of the controls by the user in accordance with the manufacturer's instructions. A reboot or re-start operation is allowed.

Information stored in non-volatile memory, or protected by a battery backup, shall not be lost.

Performance criteria for audio output function

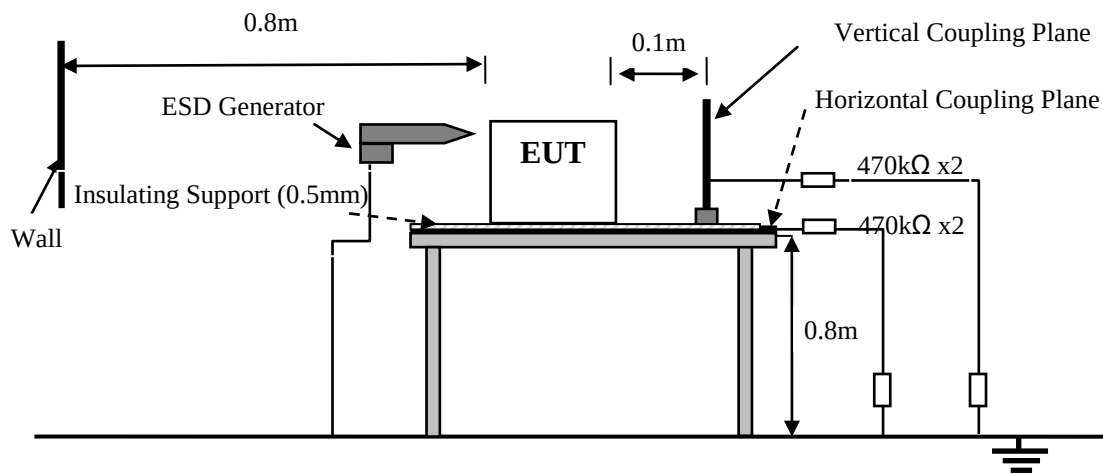
Performance criterion for all other devices	
Criteria A	The measured acoustic interference ratio and/or the measured electrical interference ratio during the test shall be -20 dB or better.
Criteria B	Use the general performance criterion B.
Criteria C	Use the general performance criterion C

8. ELECTROSTATIC DISCHARGE IMMUNITY TEST

8.1. Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	ESD Tester	EM Test	Dito	P1723199429	Sep.19,24	1 Year

8.2. Block Diagram of Test Setup



8.3. Test Standard

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 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. Test Procedure

8.5.1. 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

8.5.2. Contact Discharge:

All the procedure was same as Section 8.5.1. except that the generator was re-triggered for a new single discharge and repeated 20 times for each pre-selected test point. The tip of the discharge electrode was touching the EUT before the discharge switch was operated.

8.5.3. Indirect discharge for horizontal coupling plane:

At least 10 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.

8.5.4. Indirect discharge for vertical coupling plane:

At least 10 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.

8.6. Test Results

PASS. (Test results are recorded in next page)

Electrostatic Discharge Test Results

Audix Technology (Shenzhen) Co., Ltd.

EUT	LCD Monitor	Model No.	CS24A
Test Date	Jun.08, 2025	Temperature	22.4±0.6℃
Input Power	AC 230V/50Hz & AC 100V/50Hz	Humidity	49±3%RH
Test Mode	PC Mode	Pressure	101.6±1kPa
Tested By	Kennen	Result	Pass

Air Discharge	Voltage Level kV / Discharge per polarity 10 / Observation								
Test Location	+2	-2	+4	-4	+8	-8	---	---	Comments
AC Port (1)	ND	ND	ND	ND	ND	ND	---	---	---
HDMI Ports (2)	A	A	A	A	B*	B*	---	---	---
DP Port (3)	A	A	A	A	B*	B*	---	---	---
USB Ports (4)	A	A	A	A	B*	B*	---	---	---
Audio Out Port (5)	ND	ND	ND	ND	B*	B*	---	---	---
Slots (6)	ND	ND	ND	ND	B*	B*	---	---	---
Screen (7)	ND	ND	ND	ND	B*	B*	---	---	---
LED (8)	ND	ND	ND	ND	B*	B*	---	---	---
Buttons (9)	ND	ND	ND	ND	ND	ND	---	---	---
Keylock (10)	ND	ND	ND	ND	ND	ND	---	---	---
CS Light FX Sync lighting (13)	ND	ND	ND	ND	ND	ND	---	---	---
Quick Switch Keypad(14)	ND	ND	ND	ND	ND	ND	---	---	---

Contact Discharge	Voltage Level kV / Discharge per polarity 10 / Observation								
Test Location	+4	-4	---	---	---	---	---	---	Comments
Metal (11)	B*	B*	---	---	---	---	---	---	---
Screws (12)	B*	B*	---	---	---	---	---	---	---

Indirect Contact	Voltage Level kV / Discharge per polarity 10 / Observation								
Test Location	+4	-4	---	---	---	---	---	---	Comments
VCP Front	A	A	---	---	---	---	---	---	---
VCP Right	A	A	---	---	---	---	---	---	---
VCP Left	A	A	---	---	---	---	---	---	---
VCP Back	A	A	---	---	---	---	---	---	---
HCP Bottom	A	A	---	---	---	---	---	---	---

Additional Notes

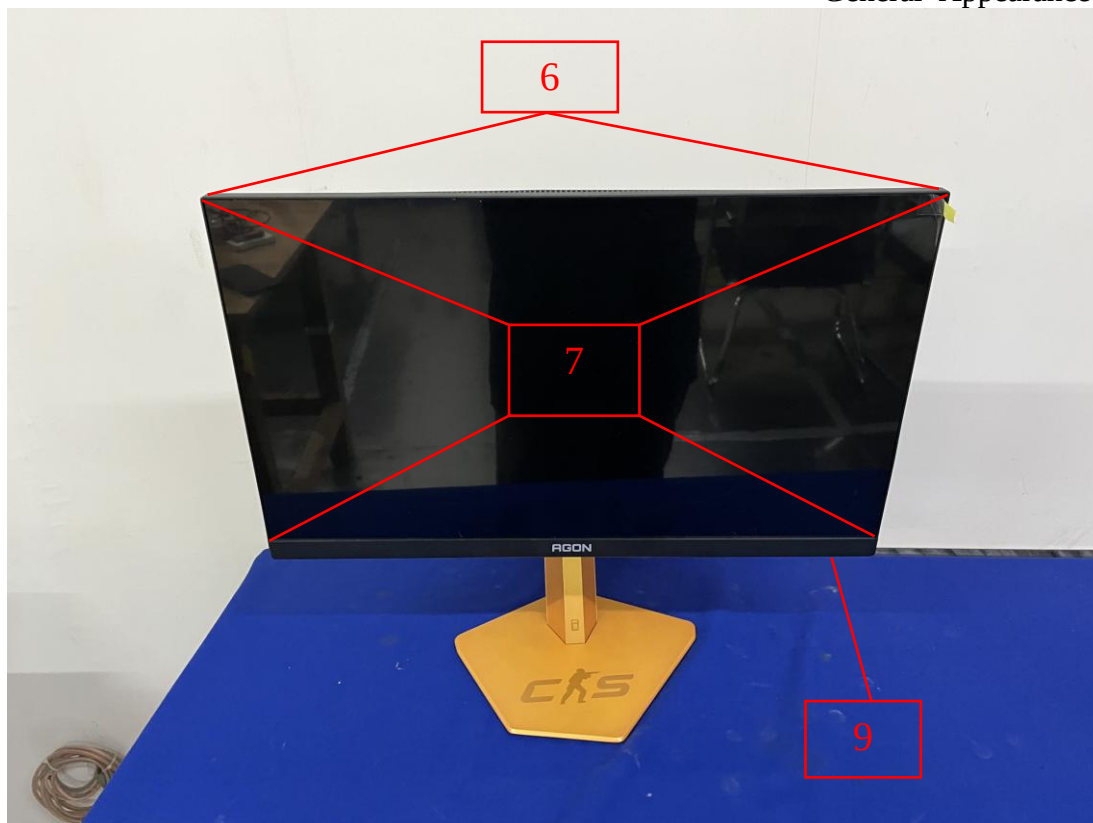
Measurement Points Please refer to the Photos of ESD Test Points

ND=No Discharge; Meets criteria but unable to obtain an electrostatic discharge (ESD) at this test point.
Note: Criterion B:During the test, the screen was flickered, but it was self-recovering immediately after the test was finished.

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).

8.7.ESD TEST POINT PHOTOS

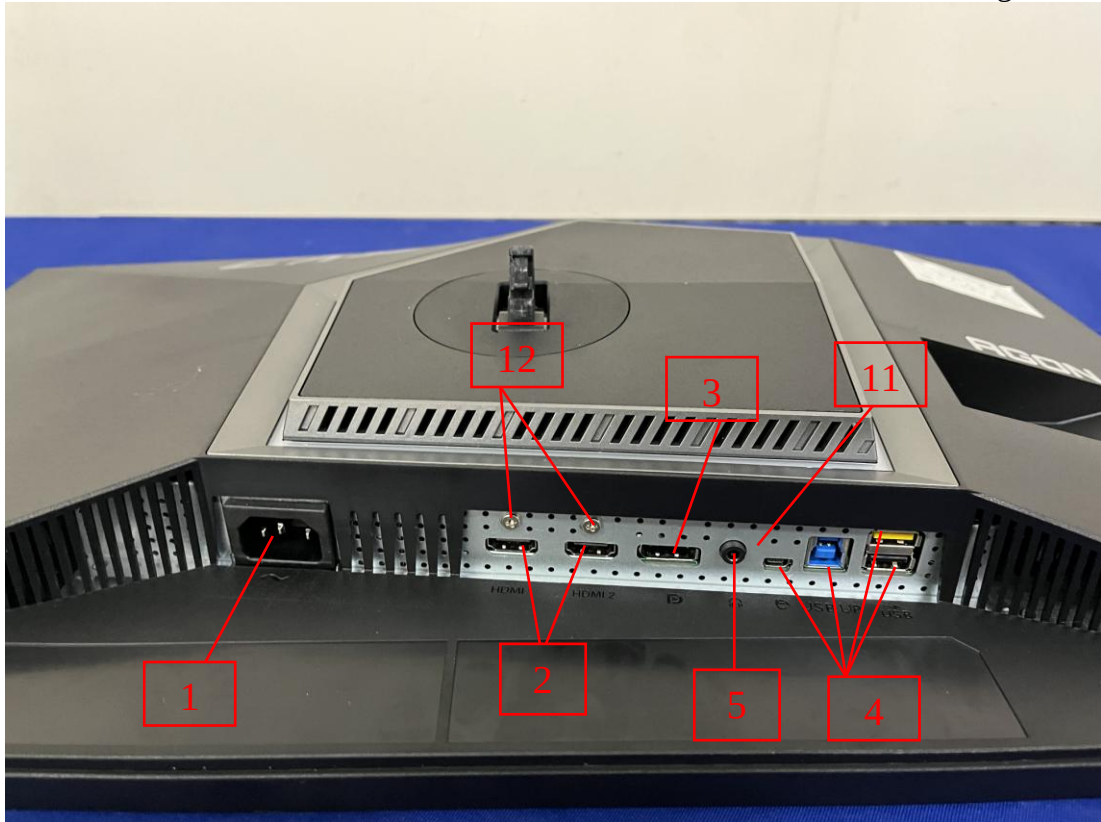
ESD Figure 1
General Appearance of the EUT



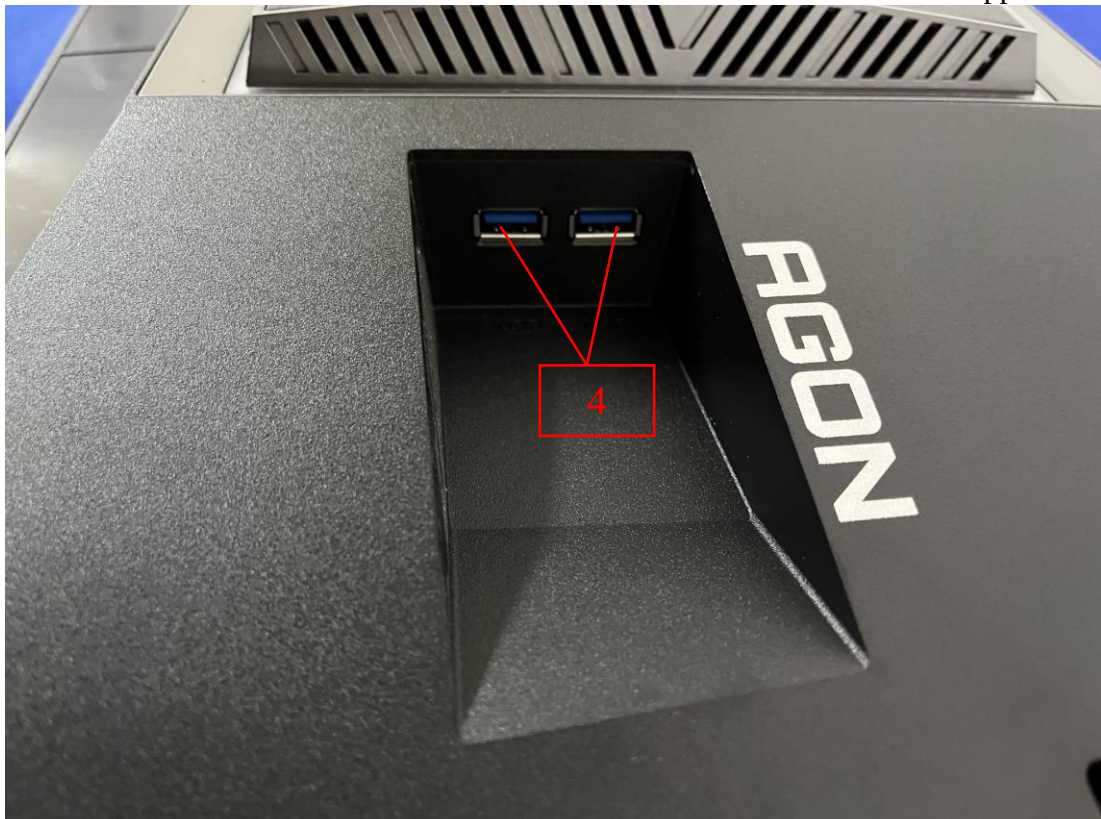
ESD Figure 2
General Appearance of the EUT



ESD Figure 3
Signal Port of the EUT



ESD Figure 4
General Appearance of the EUT



ESD Figure 4
General Appearance of the EUT



ESD Figure 4
General Appearance of the EUT



9. RF FIELD STRENGTH SUSCEPTIBILITY TEST

9.1. Test Equipments

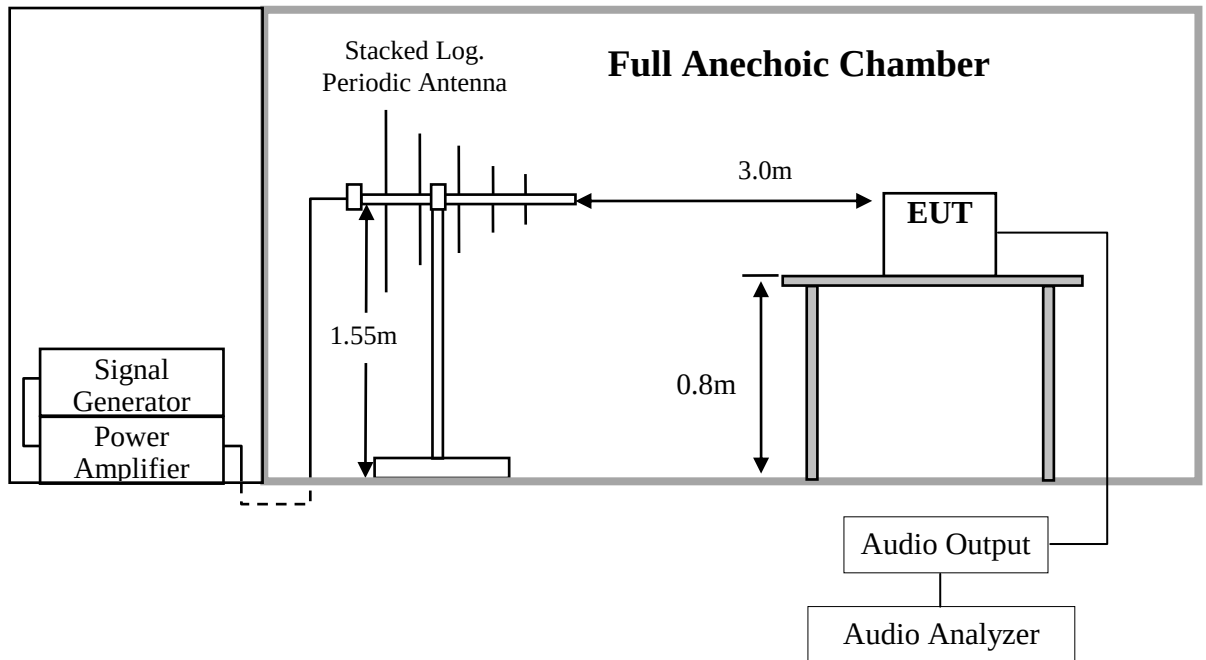
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	RS Chamber(FU)	AUDIX	N/A	N/A	Sep.14,22	3 Year
2.	RS Chamber(SE)	AUDIX	N/A	N/A	Sep.17,22	3 Year
3.	MXG Analog Signal Generator	Agilent	N5181A	MY49061013	Sep.15,24	1Year
4.	Amplifier	Rflight	NTWPA-00810200E	19053131	Mar.10,25	1Year
5.	Amplifier	Rflight	NTWPA-1060100E	19053151	Mar.10,25	1Year
6.	Stacked Log. Periodic Antenna	SCHWARZBECK	STLP 9129	281	NCR	NCR
7.	RF Cable	STORM	MFR-57500	NO.2	NCR	NCR
8.	RF Cable	EMCI	EMCCFD400-NM-NM-5000	190410	NCR	NCR
9.	Test Software	AUDIX	i2	3.2010-1-7	N/A	N/A
10.	Audio Analyzer	Rohde & Schwarz	UPL	NO.1	Aug.16,24	1Year

Notes: NCR means no calibration required(calibrated with system).

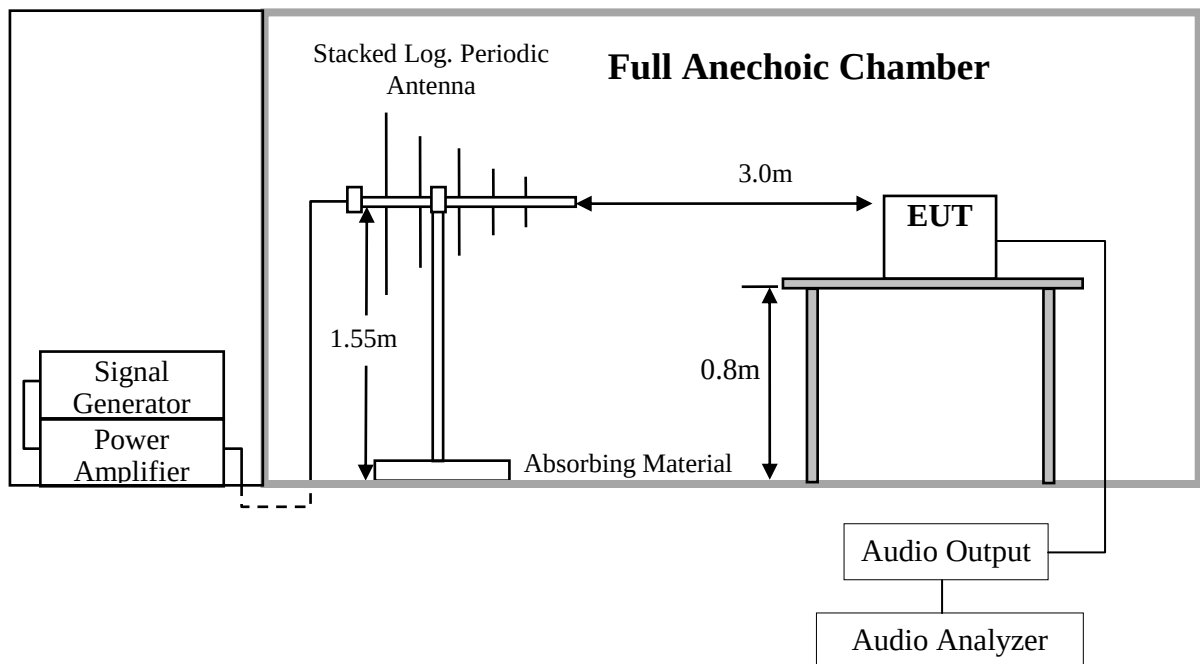
Notes: N/A means Not applicable.

9.2. Block Diagram of Test Setup

9.2.1. For frequency range: 80-1000MHz



9.2.2. For frequency range above 1GHz



9.3. Test Standard

IEC 61000-4-3: 2020

(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. 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-1GHz; 1.8GHz; 2.6GHz; 3.5GHz; 5GHz at a level of 3V/m. The dwell time was set at 3.0s. 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; 1.8GHz; 2.6GHz; 3.5GHz; 5GHz
Frequency increments step	1 % of the preceding frequency
Test level	3V/m (un-modulated)
Dwell time	3s
Test signal	80% amplitude modulated by 1kHz sinusoidal audio signal

9.6. Test Results

PASS. (Test results are recorded in next page)

RF Field Strength Susceptibility Test Results

Audix Technology(Shenzhen) Co.,Ltd.

EUT	LCD Monitor	Model No.	CS24A
Test Date	Jun.10, 2025	Temperature	22.5±0.6℃
Input Power	AC 230V/50Hz; AC 100V/50Hz	Humidity	49±3%RH
Test Mode	PC Mode	Pressure	101.6±1kPa
Tested By	Hogen	Result	Pass

Test Field Strength: 3V/m

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

Frequency Range : 80MHz-1000MHz; 1.8GHz; 2.6GHz; 3.5GHz; 5GHz

	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

Audio output function test

Port	Polarization	Demodulated Audio Level (dBV)	Electrical Reference Level(dBV)	Electrical interference ratio(dB)	Limit(dB)
AUDIO OUT	V	-69.5 ^{Note}	-13.2	-56.3 ^{Note}	-20
AUDIO OUT	H	-68.7 ^{Note}	-13.2	-55.5 ^{Note}	-20

Note means worst frequency between 80-5000MHz.

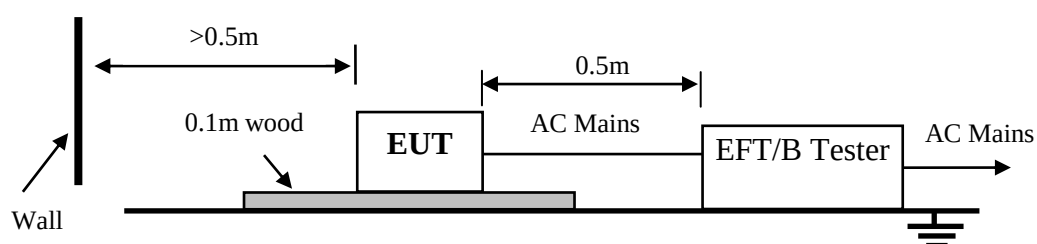
10.ELECTRICAL FAST TRANSIENT/BURST IMMUNITY TEST

10.1.Test Equipments

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Burst Tester	TESEQ	NSG3025	28017	Mar.10,25	1 Year
2.	Test Software	Schaffner	Win3025	V 4.00	N/A	N/A

Note:N/A means Not applicable.

10.2.Block Diagram of Test Setup



10.3.Test Standard

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.	0.5 kV	0.25 kV	B
2.	1 kV	0.5 kV	
3.	2 kV	1 kV	
4.	4 kV	2 kV	
X	Special	Special	

10.5. 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.

10.5.1. 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.

10.5.2. For signal lines and control lines ports:

It's unnecessary to test.

10.5.3. For DC input and DC output power ports:

It's unnecessary to test.

10.6. Test Results

PASS. (Test results are recorded in next page)

Electrical Fast Transient/Burst Test Results

Audix Technology (Shenzhen) Co., Ltd.

EUT	LCD Monitor	Model No.	CS24A
Test Date	Jun.15, 2025	Temperature	21.4±0.6℃
Input Power	AC 230V/50Hz; AC 100V/50Hz	Humidity	51±3%RH
Test Mode	PC Mode	Pressure	101.6±1kPa
Tested By	Kennen	Result	Pass

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

Inject Time(s): 120s

Inject Line(Inject Method): ☒AC Mains (Direct) ☐DC Supply (Direct) ☐Signal(Capacitive Clamp)

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

Remark: Criterion B:During the test, the screen was flickered, but it was self-recovering immediately after the test was finished.

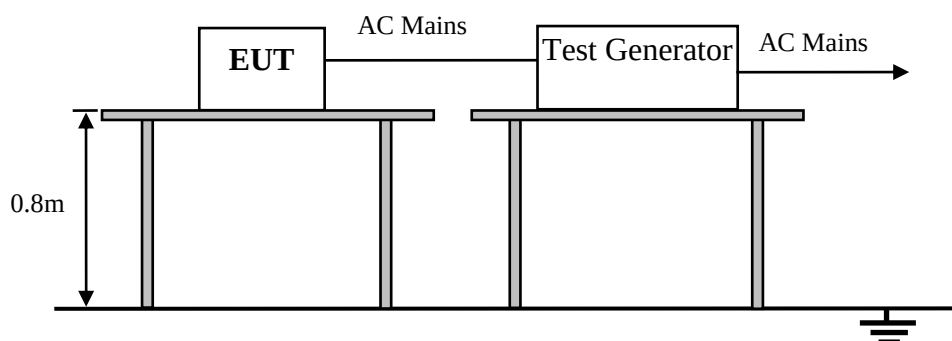
11.SURGE TEST

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.19,24	1 Year
2.	Test Software	EMC PARTNER	Genecs	V3.25	N/A	N/A

Note: N/A means Not applicable.

11.2.Block Diagram of Test Setup



11.3.Test Standard

IEC 61000-4-5: 2014+A1: 2017

(Severity Level: Line to Line was Level 2 at 1kV,
Line to Ground 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 & C
2	1.0	
3	2.0	
4	4.0	
*	Special	

11.5. 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 1.2/50 μ s voltage surge (at open-circuit condition) and 8/20 μ s current surge to EUT selected points, and for active line / neutral line to ground are same except test level is 2kV.
- 3) Signal mode: 10/700 μ s & 1.2/50 μ s combination wave generators are specified. Each has its own particular applications, depending on the type of port to be tested. The 10/700 μ s combination wave generator is used to test ports intended for directly connection to outdoor symmetrical communication lines. The 1.2/50 μ s combination wave generator is used in all other cases
- 4) At least 5 positive and 5 negative (polarity) tests with a maximum 1/min repetition rate are conducted during test.
- 5) Different phase angles are done individually.
Record the EUT operating situation during compliance test and decide the EUT immunity criterion for above each test.

11.6. Test Results

PASS. (Test results are recorded in next page)

Surge Immunity Test Results

Audix Technology (Shenzhen) Co., Ltd.

EUT	LCD Monitor	Model No.	CS24A
Test Date	Jun.20, 2025	Temperature	22.4±0.6℃
Input Power	AC 230V/50Hz; AC 100V/50Hz	Humidity	52±3%RH
Test Mode	PC Mode	Pressure	101.6±1kPa
Tested By	Kennen	Result	Pass

Repetition: 5 times per test Interval:60 Seconds

Line : ☒ AC Mains(1.2/50μs) ☐ DC Supply(1.2/50μs) ☐ Signal(10/700μs)

Location	Volt	500V			1kV			2kV			Result
	Phase	Performance			Performance			Performance			(Pass/Fail)
		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	A	A	---	---	---	Pass
L-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	B*	B*	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	B*	B*	Pass

Note : Criterion B:During the test, the screen was flickered, but it was self-recovering immediately after the test was finished.

12.CONTINUOUS CONDUCTED DISTURBANCE TEST

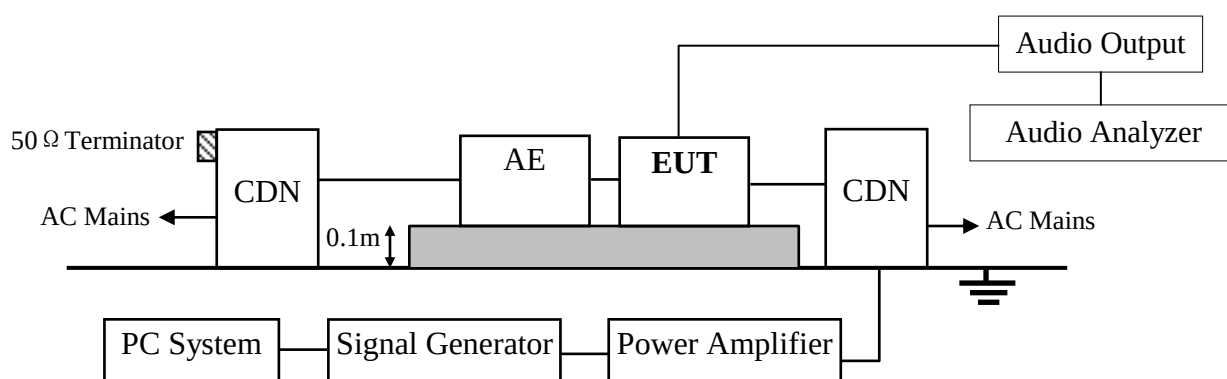
12.1.Test Equipments

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	MXG Analog Signal Generator	Agilent	N5181A	MY49061013	Sep.15,24	1 Year
2.	Amplifier	Rflight	NTWPA-4K04100	20073132	Mar.10,25	1 Year
3.	CDN	TESEQ	CDN M016	34608	Mar.10,25	1 Year
4.	CDN	FCC	FCC-801-M3-25A	07045	Mar.10,25	1 Year
5.	Attenuator	Weinschel	40-6-34	LJ092	Mar.10,25	1 Year
6.	RF Cable	MICABLE	A04-07-07-7M	09111341	NCR	NCR
7.	RF Cable	STORM	MFR-57500	NO.2	NCR	NCR
8.	RF Cable	STORM	MFR-57500	NO.3	NCR	NCR
9.	Test Software	AUDIX	i2	3.2010-1-7	N/A	N/A
10.	EM Injection Clamp	FCC	F-203I-23MM	403	Mar.10,25	1 Year
11.	Audio Analyzer	Rohde & Schwarz	UPL	NO.1	Aug.16,24	1Year

Notes: NCR means no calibration required (calibrated with system).

Notes: N/A means Not applicable.

12.2.Block Diagram of Test Setup



12.3.Test Standard

IEC 61000-4-6: 2023

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. 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 30 and 50 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 10MHz using 3V signal level, from 10MHz to 30MHz using 3V to 1V signal level, from 30MHz to 80MHz using 1V 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.

12.6. Test Results

PASS. (Test results are recorded in next page)

Continuous Conducted disturbance Test Results

Audix Technology (Shenzhen)Co.,Ltd.

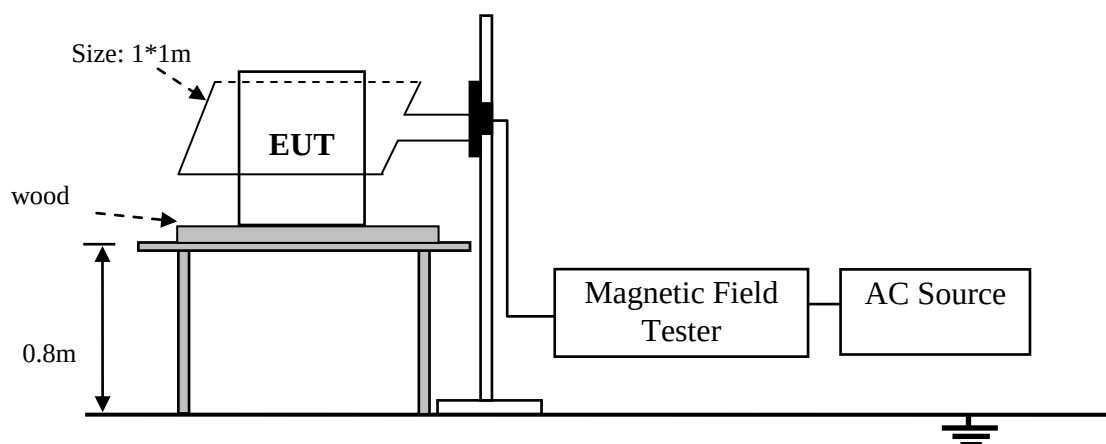
EUT	LCD Monitor			Model No.	CS24A
Test Date	Jun.20, 2025			Temperature	22.4±0.6℃
Input Power	AC 230V/50Hz; AC 100V/50Hz			Humidity	50±3%RH
Test Mode	PC Mode			Pressure	101.6±1kPa
Tested By	Hogen			Result	Pass
Frequency Range (MHz)	Injected	Voltage Level (e.m.f.)	Required	Observation	Result
					(Pass / Fail)
0.15 ~ 10	AC Mains	3V	A	A	PASS
10 ~ 30	AC Mains	3V~1V	A	A	PASS
30 ~ 80	AC Mains	1V	A	A	PASS
Audio output function test					
Port	Injected	Demodulated Audio Level (dBV)	Electrical Reference Level(dBV)	Electrical interference ratio(dB)	Limit (dB)
Audio Out	AC Mains	-60.7 ^{Note}	-11.3	-49.4 ^{Note}	-20
Modulation Signal:1kHz 80% AM					
Dwell time: 3s					
Note means worst frequency between 0.15-80 MHz.					

13.MAGNETIC FIELD IMMUNITY TEST

13.1.Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Magnetic Field Tester	HAEFELY	Mag100.1	083858-10	Mar.10,25	1 Year

13.2.Block Diagram of Test Setup



13.3.Test Standard

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.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.

13.6.Test Results

PASS. (Test results are recorded in next page)

Magnetic Field Immunity Test Results

Audix Technology (Shenzhen) Co., Ltd.

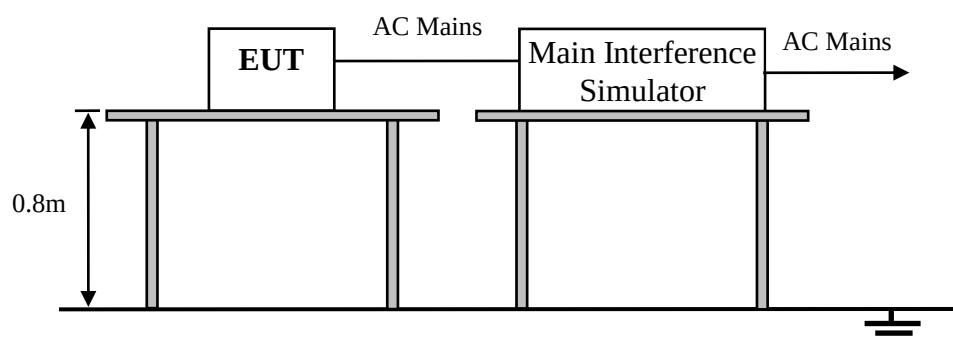
EUT	LCD Monitor		Model No.	CS24A	
Test Date	Jun.23, 2025		Temperature	22.1±0.6℃	
Input Power	AC 230V/50Hz; AC 100V/50Hz		Humidity	49±3%RH	
Test Mode	PC Mode		Pressure	101.6±1kPa	
Tested By	Hogen		Result	Pass	
Test Level	Testing Duration	Coil Orientation	Required	Observation	Result
					(Pass/Fail)
1A/m	5 min / coil	X-axis	A	A	PASS
1A/m	5 min / coil	Y-axis	A	A	PASS
1A/m	5 min / coil	Z-axis	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.	Line Disturbances Tester	HAEFELY	PLINE 1610	083690-05	Mar.10,25	1 Year

14.2.Block Diagram of Test Setup



14.3.Test Standard

IEC 61000-4-11: 2020

14.4.Severity Levels and Performance Criterion

Test Level %UT	Voltage dip and short interruptions %UT	Duration (in period)	Performance Criterion
0	100	250/300 ^{Note}	C
0	100	0.5	B
70	30	25/30 ^{Note}	C

Note: “25/30 Cycles” means “25 cycles for 50Hz test” and “30 cycles for 60Hz test”.
“250/300 Cycles” means “250 cycles for 50Hz test” and “300 cycles for 60Hz test”

14.5.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.

14.6.Test Results

PASS. (Test results are recorded in next page)

Voltage Dips And Interruptions Test Results

Audix Technology (Shenzhen) Co., Ltd.

EUT	LCD Monitor	Model No.	CS24A
Test Date	Jun.23, 2025	Temperature	21.8±0.6℃
Input Power	AC 240V/50Hz; AC 100V/50Hz	Humidity	51±3%RH
Test Mode	PC Mode	Pressure	101.6±1kPa
Tested By	Hogen	Result	Pass

Power Supply: AC 240V/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

Power Supply: 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

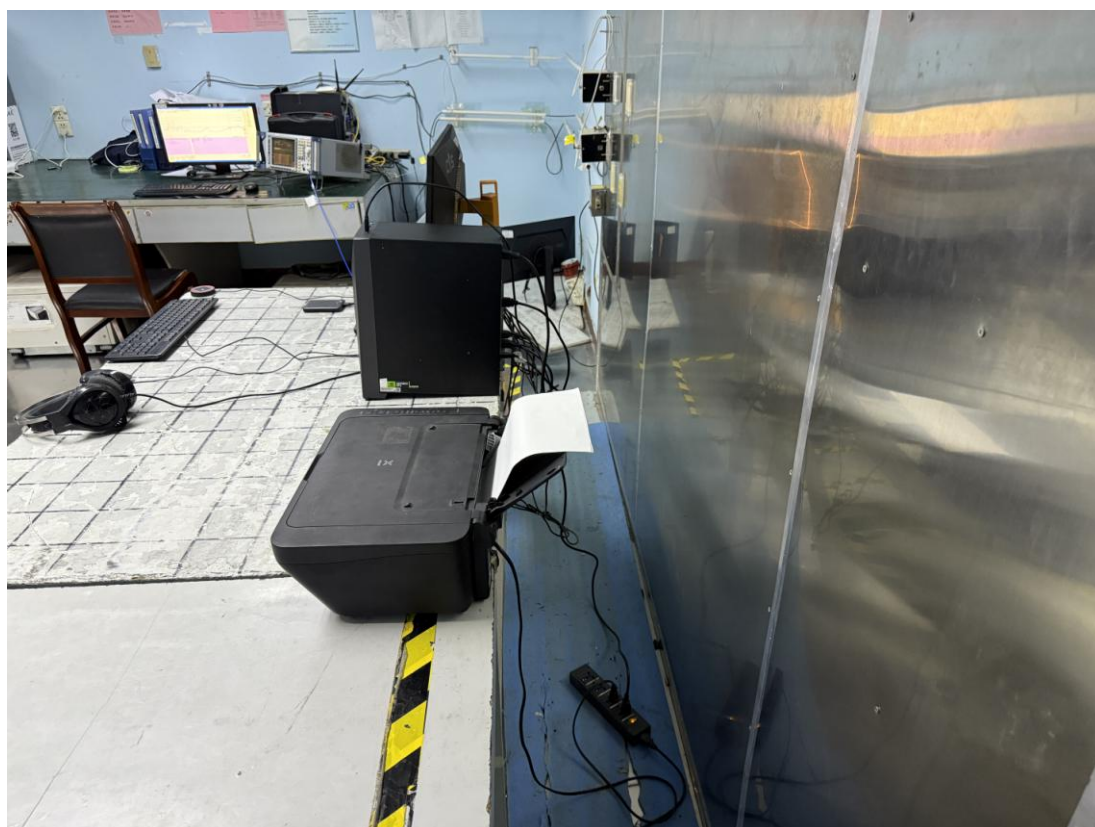
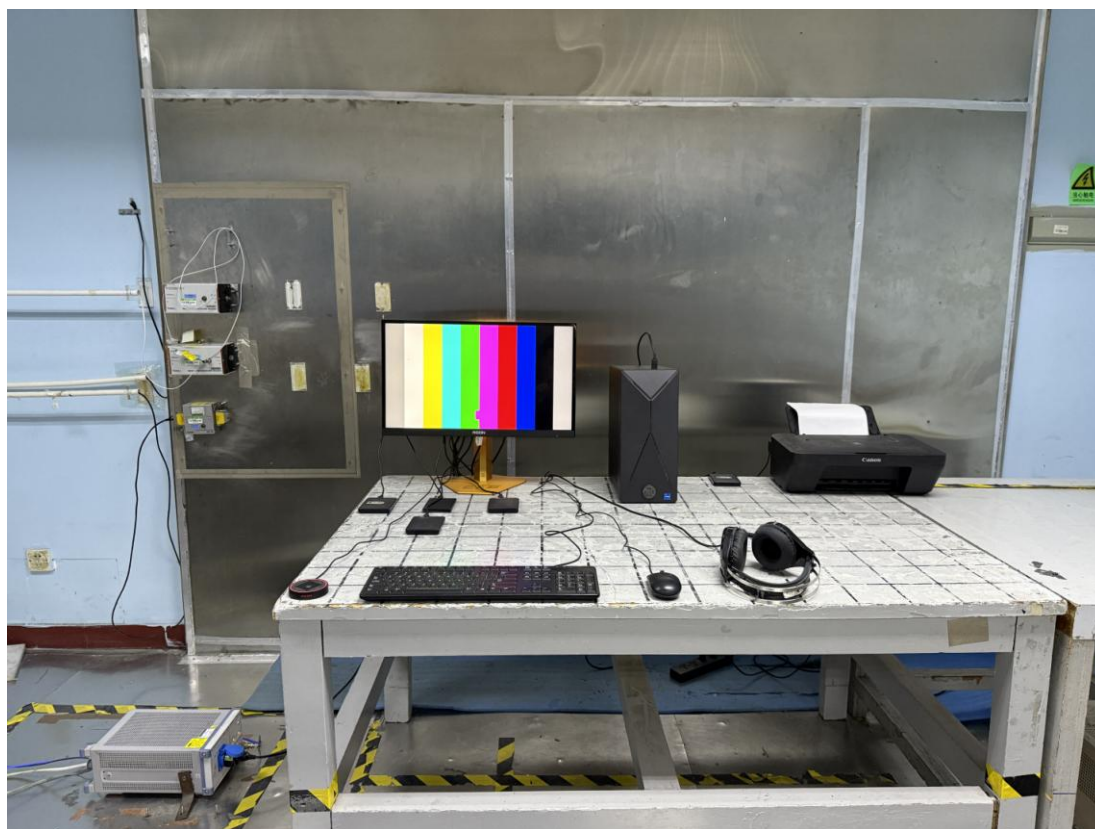
Note 1: UT is the rated voltage for the equipment.

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.

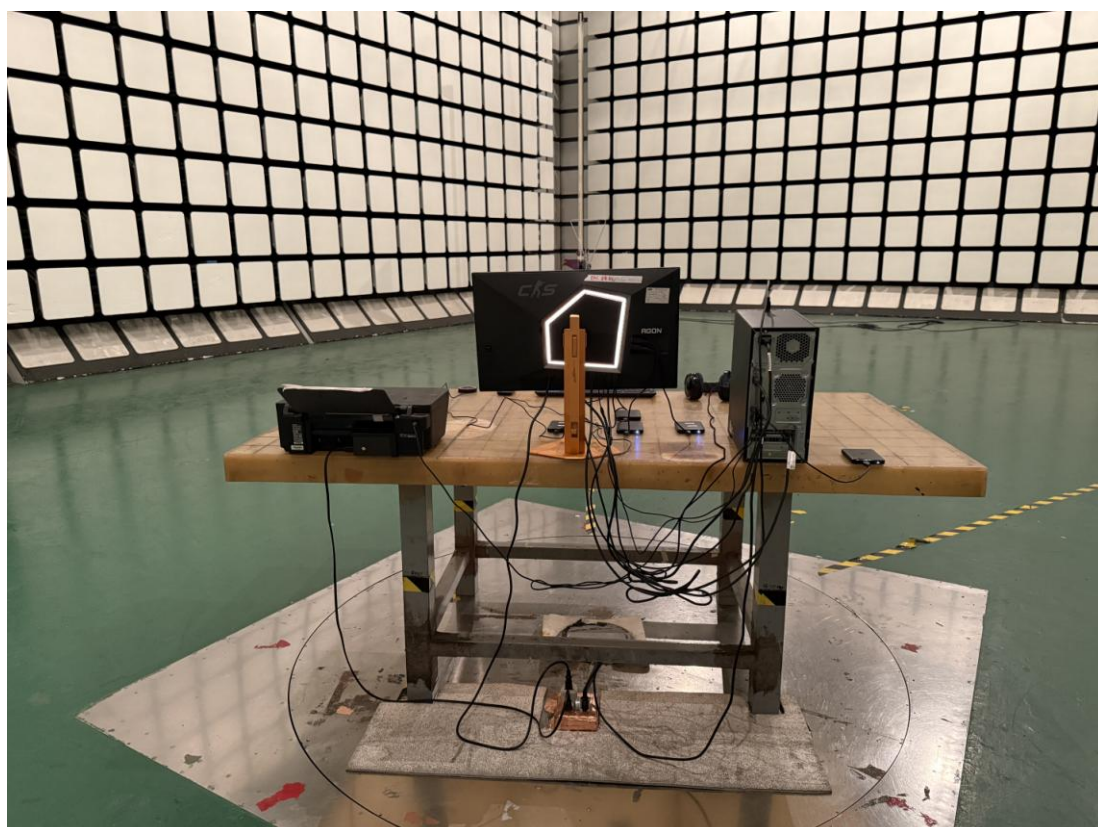
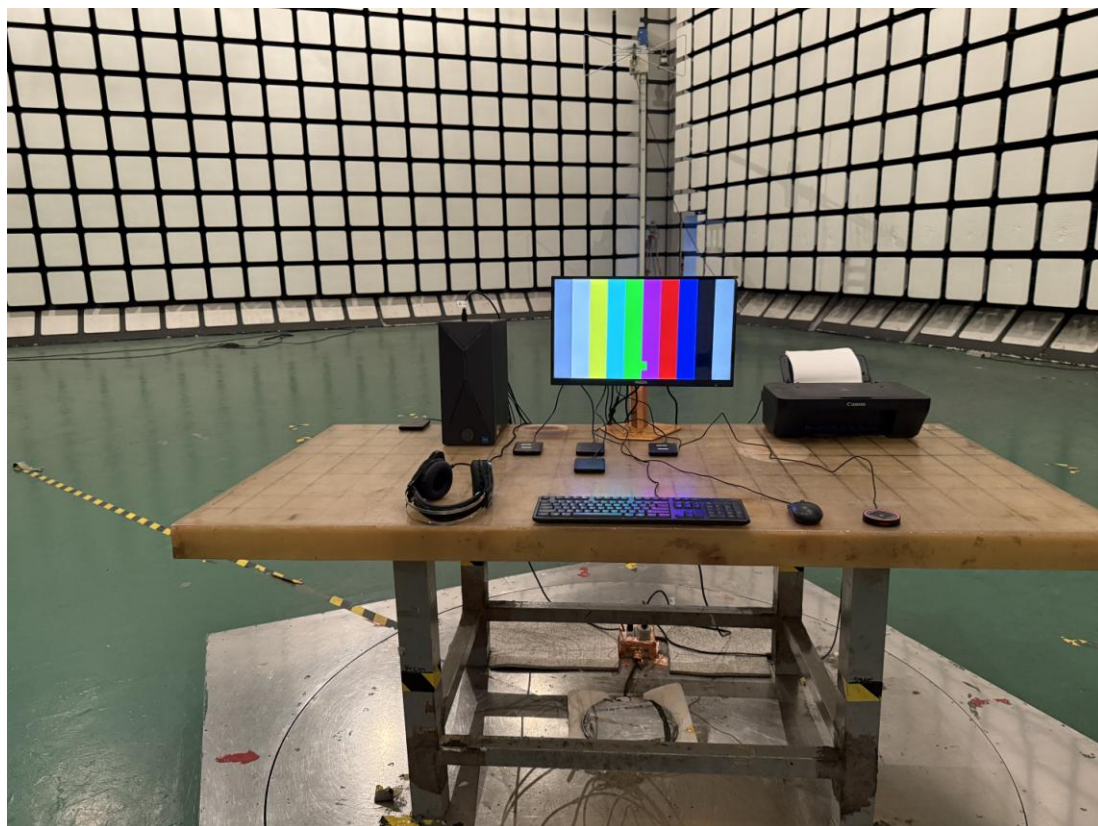
Note: Criterion C: During the test, the EUT output screen turned black and the data transmission was interrupted, and the data transmission needed to be manually restored after the experiment.

15. PHOTOGRAPH

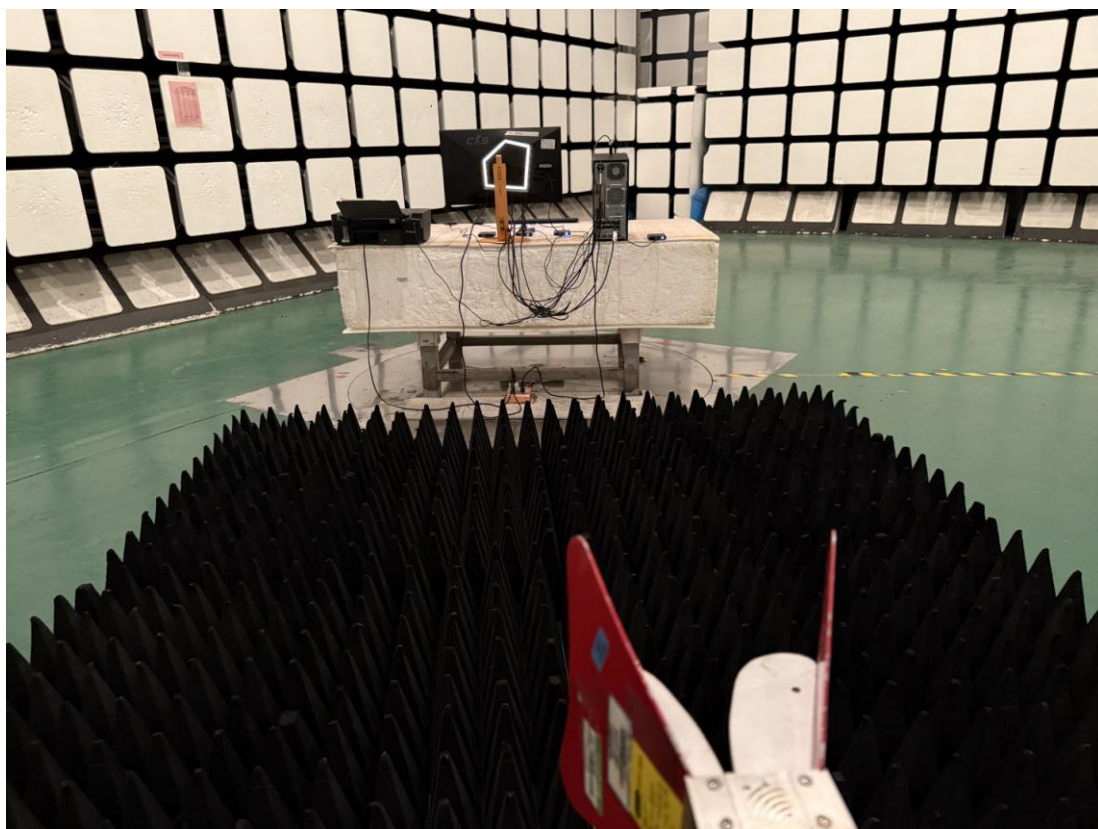
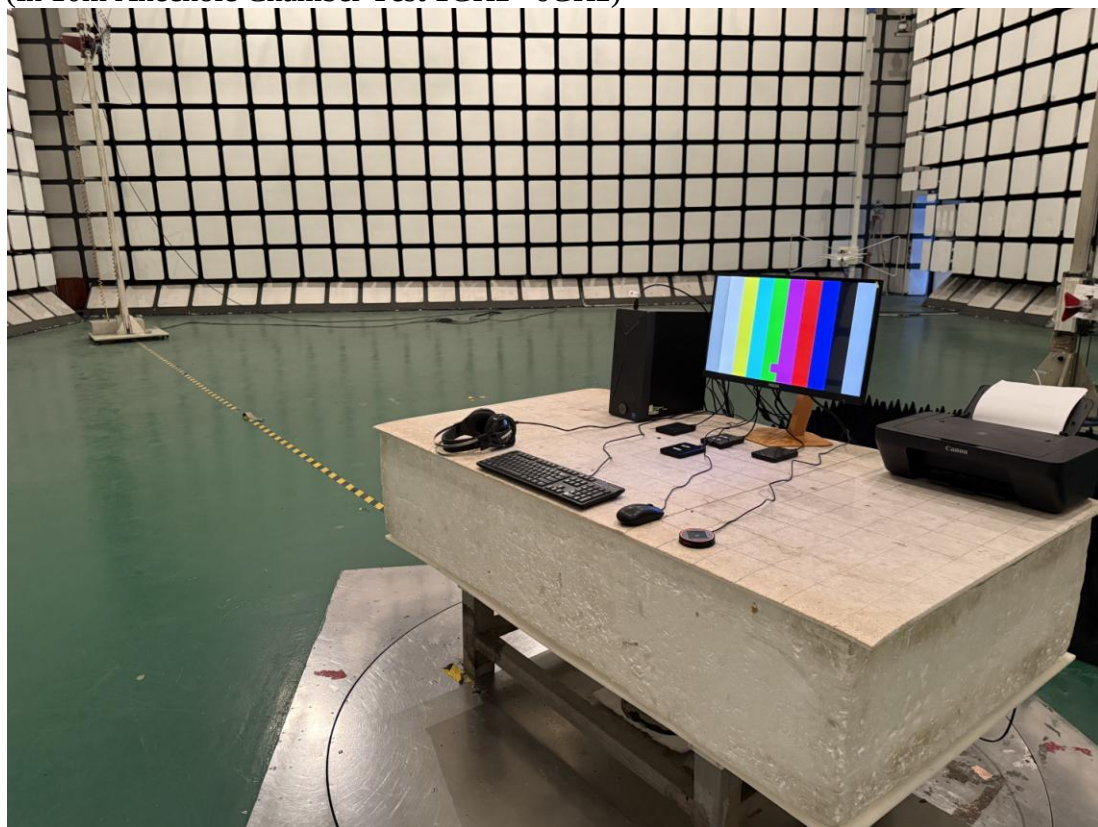
15.1.Photos of Power Line Conducted Emission Test



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





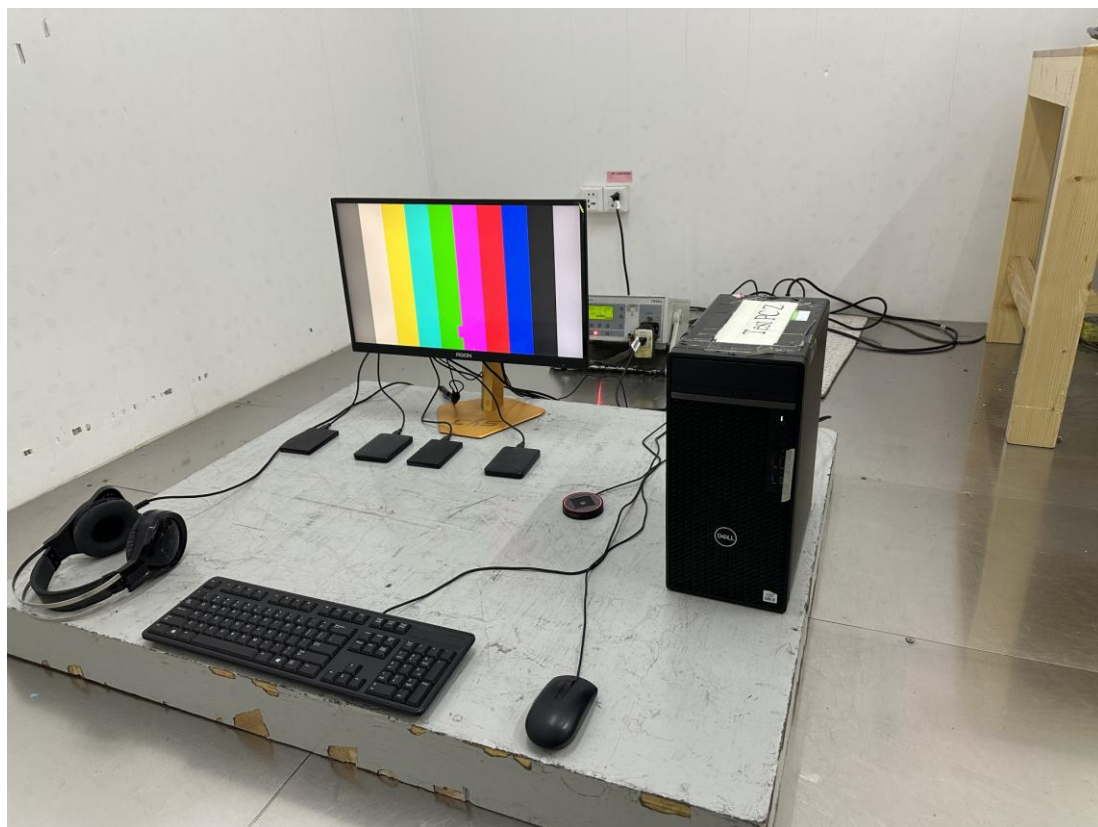
15.5.Photos of RF Strength Susceptibility Test



For frequency range above 1GHz



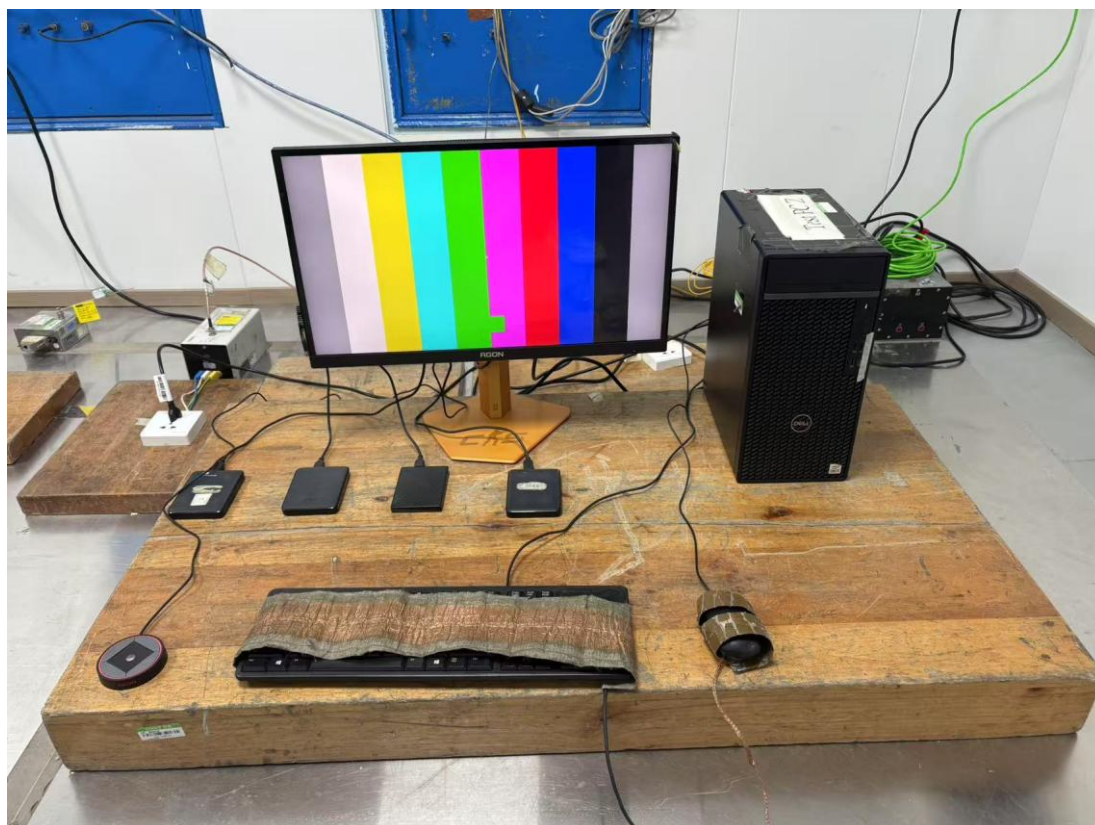
15.6.Photo of Electrical Fast Transient/Burst Immunity Test



15.7.Photo of Surge Test



15.8.Photo of Continuous Conducted disturbance Test



15.9.Photo of Magnetic Field Test



15.10.Photo of Voltage Dips and interruptions test



THE END