EMC Test Report

Client Name	:	**Shenzhen JHC Technology Development Co., LTD**
Client Address	:	**B Area, 3rd floor, A Block Junxiangda Building, N0.9 Zhongshanyuan Road, Nanshan Distr., Shenzhen, China**
Product Name	:	**Industrial Touch panel**
Report Date	:	**Sept. 21, 2022**

Shenzhen Anbotek Compliance Laboratory Limited

Contents

TEST REPORT

Applicant	:	Shenzhen JHC Technology Development Co.,LTD
Manufacturer	:	Shenzhen JHC Technology Development Co.,LTD
Product Name	:	Industrial Touch panel
Test Model No.	:	ALAD-K1520T/T004-G
Reference Model No.	:	ALAD-K1520T/T001-G, ALAD-K1520T(P)/T001-G, ALAD-K1520T/T002-G ALAD-K1520T(P)/T002-G, ALAD-K1520T/T003-G, ALAD-K1520T(P)/T003-G, ALAD-K1520T(P)/T004-G
Trade Mark	:	JHCTECH
Rating(s)	:	DC 12V, 2.95A, 35.4W
Test Standard(s)	:	**EN 55032: 2015+A1:2020; EN IEC 61000-3-2: 2019/A1:2021; EN 61000-3-3: 2013+A1:2019+A2:2021; EN 55035: 2017+A11:2020; (IEC 61000-4-2; IEC 61000-4-3; IEC 61000-4-4; IEC 61000-4-5; IEC 61000-4-6; IEC 61000-4-8; IEC 61000-4-11)**

The device described above is tested by Shenzhen Anbotek Compliance Laboratory Limited to determine the maximum emission levels emanating from the device and the severe levels of the device can endure and its performance criterion. The measurement results are contained in this test report and Shenzhen Anbotek Compliance Laboratory Limited is assumed full of responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT (Equipment Under Test) is technically compliant with the EN 55032, EN IEC 61000-3-2, EN 61000-3-3, EN 55035 requirements.

This report applies to above tested sample only and shall not be reproduced in part without written approval of Shenzhen Anbotek Compliance Laboratory Limited.

Date of Receipt: Sept. 08, 2022

Date of Test: Sept. 08~Sept. 15, 2022

Prepared By: Yee Huang

(Yee Huang)

Approved & Authorized Signer: KingKong Jin

(KingKong Jin)

1. General Information

1.1. Client Information

Applicant	:	Shenzhen JHC Technology Development Co., LTD
Address	:	B Area, 3rd floor, A Block Junxiangda Building, N0.9 Zhongshanyuan Road, Nanshan Distr., Shenzhen, China
Manufacturer	:	Shenzhen JHC Technology Development Co., LTD
Address	:	B Area, 3rd floor, A Block Junxiangda Building, N0.9 Zhongshanyuan Road, Nanshan Distr., Shenzhen, China
Factory	:	Shenzhen JHC Technology Development Co., LTD
Address	:	B Area, 3rd floor, A Block Junxiangda Building, N0.9 Zhongshanyuan Road, Nanshan Distr., Shenzhen, China

1.2. Description of Device (EUT)

Product Name	:	Industrial Touch panel
Test Model No.	:	ALAD-K1520T/T004-G
Reference Model No.	:	ALAD-K1520T/T001-G, ALAD-K1520T(P)/T001-G, ALAD-K1520T/T002-G ALAD-K1520T(P)/T002-G, ALAD-K1520T/T003-G, ALAD-K1520T(P)/T003-G, ALAD-K1520T(P)/T004-G (Note: All samples are the same except the touch screen type & color, so we prepare “ALAD-K1520T/T004-G ” for test only.)
Trade Mark	:	JHCTECH
Test Power Supply	:	AC 230V, 50Hz
Test Sample No.	:	1-1-1
Product Description	:	Model: KPL-060F-VI Input: 100-240V~,50/60Hz, 1.7A Output: +12.0V⎓5.0A, 60.0W
Remark: (1) For a more detailed features description, please refer to the manufacturer’s specifications or the User’s Manual. (2)The test report 18230EC20224101-M1 supersedes the test report 18230EC20224101 which is withdrawn.		

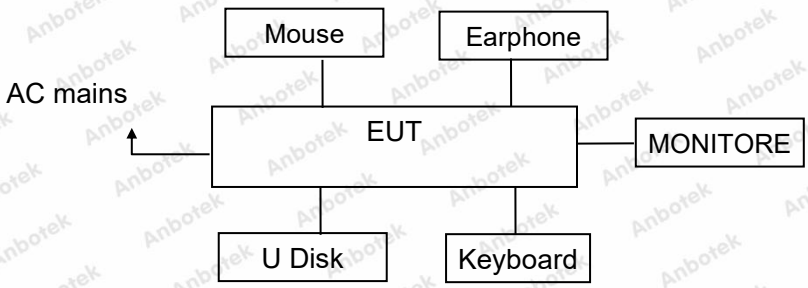
1.3. Auxiliary Equipment Used During Test

MONITOR	:	Manufacturer: AOC
	:	M/N: LV273HUPR S/N: APMM79A00124 7Q Input: 100-240~50/60Hz 1.5A
KEYBOARD	:	Manufacturer: DELL
		M/N: SK-8120 S/N: CN-0DJ365-71616-49J-0MVR-A00 Input Rating: DC 5V, 0.05A CE, FCC, VCCI, KCC, TUV-GS Cable: 1.8m, unshielded

1.4. Description of Test Mode

Pretest Mode	Description
Mode 1	HDMI Mode

For Mode 1 Block Diagram of Test Setup



1.5. Test Summary

Test Items	Test Mode	Status
Power Line Conducted Emission Test	Mode 1	P
Asymmetric Mode Conducted Emission at Telecom Port	Mode 1	P
Radiated Emission Test (Below 1 GHz)	Mode 1	P
Radiated Emission Test (Above 1GHz)	Mode 1	P
Harmonic Current Test	Mode 1	P
Voltage Fluctuations & Flicker Test	Mode 1	P
Electrostatic Discharge Immunity Test	Mode 1	P
RF Field Strength Immunity Test	Mode 1	P
Electrical Fast Transient/Burst Immunity Test	Mode 1	P
Surge Immunity Test	Mode 1	P
Injected Currents Susceptibility Test	Mode 1	P
Power frequency Magnetic Field Immunity Test	/	N
Voltage Dips and Interruptions Immunity Test	Mode 1	P
P) Indicates “PASS”. F) Indicates “Fail”. N) Indicates “Not applicable”.		

1.6. Test Equipment List

☒ Power Line Conducted Emission Test

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	L.I.S.N. Artificial Mains Network	Rohde & Schwarz	ENV216	100055	Oct. 22, 2021	1 Year
2.	Three Phase V-type Artificial Power Network	CYBERTEK	EM5040DT	E215040DT001	Jul. 05, 2022	1 Year
3.	EMI Test Receiver	Rohde & Schwarz	ESCI	100627	Oct. 22, 2021	1 Year
4.	RF Switching Unit	Compliance Direction	RSU-M2	38303	Oct. 22, 2021	1 Year
5.	Software Name EZ-EMC	Ferrari Technology	ANB-03A	N/A	N/A	N/A

☒ Asymmetric Mode Conducted Emission at Telecom Port

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	ISN	Schwarzbeck	NTFM 8158	#172	Oct. 22, 2021	1 Year
2.	EMI Test Receiver	Rohde & Schwarz	ESCI	100627	Oct. 22, 2021	1 Year
3.	RF Switching Unit	Compliance Direction	RSU-M2	38303	Oct. 22, 2021	1 Year
4.	Software Name EZ-EMC	Ferrari Technology	ANB-03A	N/A	N/A	N/A
5.	Three Phase V-type Artificial Power Network	CYBERTEK	EM5040DT	E215040DT001	Jul 05, 2022	1 Year

☒ Radiated Emission Test (Below 1 GHz)

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	EMI Test Receiver	Rohde & Schwarz	ESR26	101481	Oct. 22, 2021	1 Year
2.	Pre-amplifier	SONOMA	310N	186860	Oct. 22, 2021	1 Year
3.	Bilog Broadband Antenna	Schwarzbeck	VULB9163	VULB 9163-289	Oct. 22, 2021	2 Year
4.	Software Name EZ-EMC	Ferrari Technology	ANB-03A	N/A	N/A	N/A

Address:1/F.,Building D,Sogood Science and Technology Park, Sanwei Community, Hangcheng Street, Bao'an District, Shenzhen, Guangdong, China.
Tel:(86) 0755-26066440 Fax:(86) 0755-26014772 Email:service@anbotek.com
Hotline 400-003-0500
www.anbotek.com.cn

☒ Radiated Emission Test (Above 1GHz)

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	EMI Test Receiver	Rohde & Schwarz	ESR26	101481	Oct. 22, 2021	1 Year
2.	Bilog Broadband Antenna	Schwarzbeck	VULB9163	VULB 9163-289	Oct. 22, 2021	2 Year
3.	Pre-amplifier	SONOMA	310N	186860	Oct. 22, 2021	1 Year
4.	Software Name EZ-EMC	Ferrari Technology	ANB-03A	N/A	N/A	N/A
5.	Preamplifier	SKET Electronic	BK1G18G30D	KD17503	Oct. 22, 2021	1 Year
6.	Double Ridged Horn Antenna	Instruments corporation	GTH-0118	351600	Oct. 22, 2021	2 Year

☒ Harmonic Current and Flicker Test

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Programmable AC Power source	IVYTECH	APS-5005A	632734	Oct. 22, 2021	1 Year
2.	Harmonic and Flicker Analyzer	EMC-PARTNER	HMONICS 1000-1P	164	Oct. 22, 2021	1 Year
3.	Harmonics-1000	N/A	Ed.3.0+4.0	N.A	N/A	N/A

☒ Electrostatic Discharge Immunity Test

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	ESD Simulators	emtest	ESD NX30.1	11936	Mar. 25, 2022	1 Year

☒ RF Field Strength Immunity Test

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Signal Generator	Agilent	N5182A	MY48180656	Oct. 22, 2021	1 Year
2.	Amplifier	Micotoop	MPA-80-1000-250	MPA1903096	Oct. 22, 2021	1 Year
3.	Amplifier	Micotoop	MPA-1000-6000-100	MPA1903122	Oct. 22, 2021	1 Year
4.	Log-Periodic Antenna	Schwarzbeck	VULP9118E	00992	N/A	N/A
5.	Horn Antenna	Instruments corporation	GTH-0118	351600	Oct. 22, 2021	2 Year
6.	Power Sensor	Agilent	E9301A	MY41498906	Oct. 22, 2021	1 Year
7.	Power Sensor	Agilent	E9301A	MY41498088	Oct. 22, 2021	1 Year
8.	Power Meter	Agilent	E4419B	GB40202909	Oct. 22, 2021	1 Year
9.	Electric field Probe	Narda	EP 601	811ZX10351	Oct. 22, 2021	1 Year
10.	RS Test software	EMtrace	EM 3	V1.1.7	N/A	N/A

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Hotline 400-003-0500 www.anbotek.com.cn

☒ Electrical Fast Transient/Burst Immunity Test

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Surge Generator	TESEQ	NSG 3060	1480	Oct. 22, 2021	1 Year
2.	CDN	TESEQ	CDN 3061	1408	Oct. 22, 2021	1 Year
3.	EFT-Clamp	PRIMA	EFT-Clamp	/	Oct. 22, 2021	1 Year

☒ Surge Immunity Test

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Combined Wave Lightning Surge Simulator	3Ctest	CCS600	ES3771702	Jul. 05, 2022	1 Year
2.	Three Phase Power Coupling Network	3Ctest	SEPN69100T	ES0801757	Jul. 05, 2022	1 Year
3.	Telecom port surge generator	PMI	TW101	190411	May 13, 2022	1 Year

☒ Injected Currents Susceptibility Test

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	C/S Conducted Immunity Test System	FRANKONIA	CIT-10	126A1196/2012	Oct. 22, 2021	1 Year
2.	CDN	FRANKONIA	CDN - M2+M3	A2210178/2012	Oct. 22, 2021	1 Year
3.	6dB Attenuator	FRANKONIA	DAM 26W	1172202	Oct. 22, 2021	1 Year
4.	CIT-10	FRANKONIA	Version1.1.7	N/A	N/A	N/A
5.	EM-Clamp	FRANKONIA	EMCL-20	18101728-0103	May 17,2022	1 Year

☐ Power frequency Magnetic Field Immunity Test

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Power Frequency Magnetic Field Generator	EVERFINE	EMS61000-8K	906002	Oct. 22, 2021	1 Year

☒ Voltage Dips and Interruptions Immunity Test

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	CYCLE SAG Simulator	PRIMA	DRP61011AG	PR12046234	Oct. 22, 2021	1 Year

Address:1/F.,Building D,Sogood Science and Technology Park, Sanwei Community, Hangcheng Street, Bao'an District, Shenzhen, Guangdong, China.
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Hotline 400-003-0500 www.anbotek.com.cn

1.7. Description of Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

FCC-Registration No.: 184111

Shenzhen Anbotek Compliance Laboratory Limited, EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration No. 184111.

ISED-Registration No.: 8058A

Shenzhen Anbotek Compliance Laboratory Limited, EMC Laboratory has been registered and fully described in a report filed with the (ISED) Innovation, Science and Economic Development Canada. The acceptance letter from the ISED is maintained in our files. Registration 8058A.

Test Location

Shenzhen Anbotek Compliance Laboratory Limited.
1/F, Building D, Sogood Science and Technology Park, Sanwei community, Hangcheng Street, Bao'an District, Shenzhen, Guangdong, China.518128

1.8. EMS Performance Criteria

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.

2. Power Line Conducted Emission Test

2.1. Test Standard and Limit

Test Standard:	EN 55032

☒ **Limits for conducted emission at the AC mains power ports of Class A equipment**

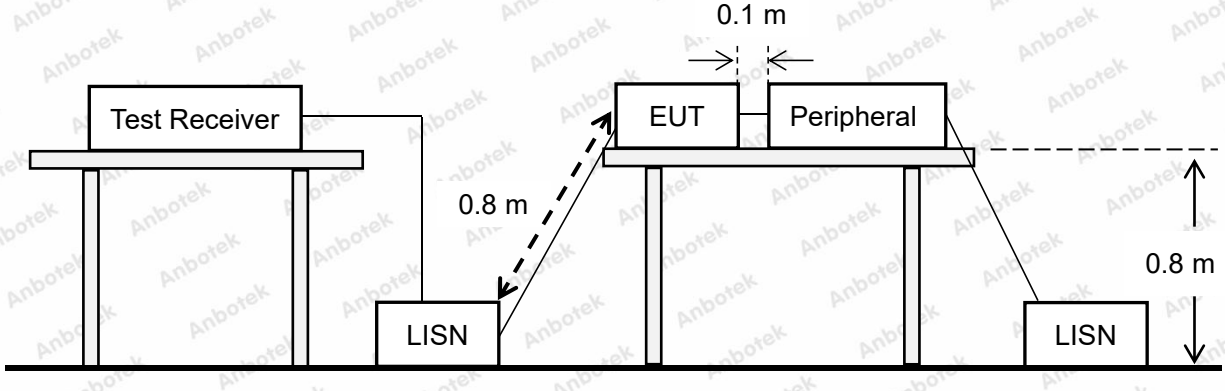
Frequency (MHz)	Limits (dBμV)	
	Quasi-peak Level	Average Level
0.15 ~ 0.50	79.0	66.0
0.50 ~ 30.00	73.0	60.0
Remark: The lower limit shall apply at the transition frequencies.		

☐ **Limits for conducted emission at the AC mains power ports of Class B equipment**

Frequency (MHz)	Limits (dBμV)	
	Quasi-peak Level	Average Level
0.15 ~ 0.50	66.0 ~ 56.0 *	56.0 ~ 46.0 *
0.50 ~ 5.00	56.0	46.0
5.00 ~ 30.00	60.0	50.0

Remark:
(1) The lower limit shall apply at the transition frequencies.
(2) The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.50MHz.

2.2. Test Setup



2.3. Test Procedure

The table-top EUT is placed on a non-conductive table 0.8 m above the horizontal ground reference plane, and the back of the EUT is 0.4 m away from the vertical ground reference plane, and at least 0.8 m from any other metal surface or ground plane. The floor-standing EUT is placed on an insulating support 0.1 m above the horizontal ground reference plate, at least 0.8 m away from other metal objects.

Connect EUT to the power mains through an LISN. Where the mains cable supplied by the manufacturer is longer than 1 m, the excess should be folded at the center into a bundle no longer than 0.4 m, so that its length is shortened to 1 m. All the peripherals are connecting to the other LISN.

The initial testing identified the frequency that has the highest disturbance relative to the limit while operating the EUT in typical modes of operation and cable positions in a test setup representative of typical system configuration.

The identification of the frequency of highest disturbance with respect to the limit was found by investigating disturbances at a number of significant frequencies. The probable frequency of maximum disturbance had been found and that the associated cable and EUT configuration and mode of operation had been identified.

Set the test-receiver to quasi peak detect function and average detect function, and to measure the conducted emissions values.

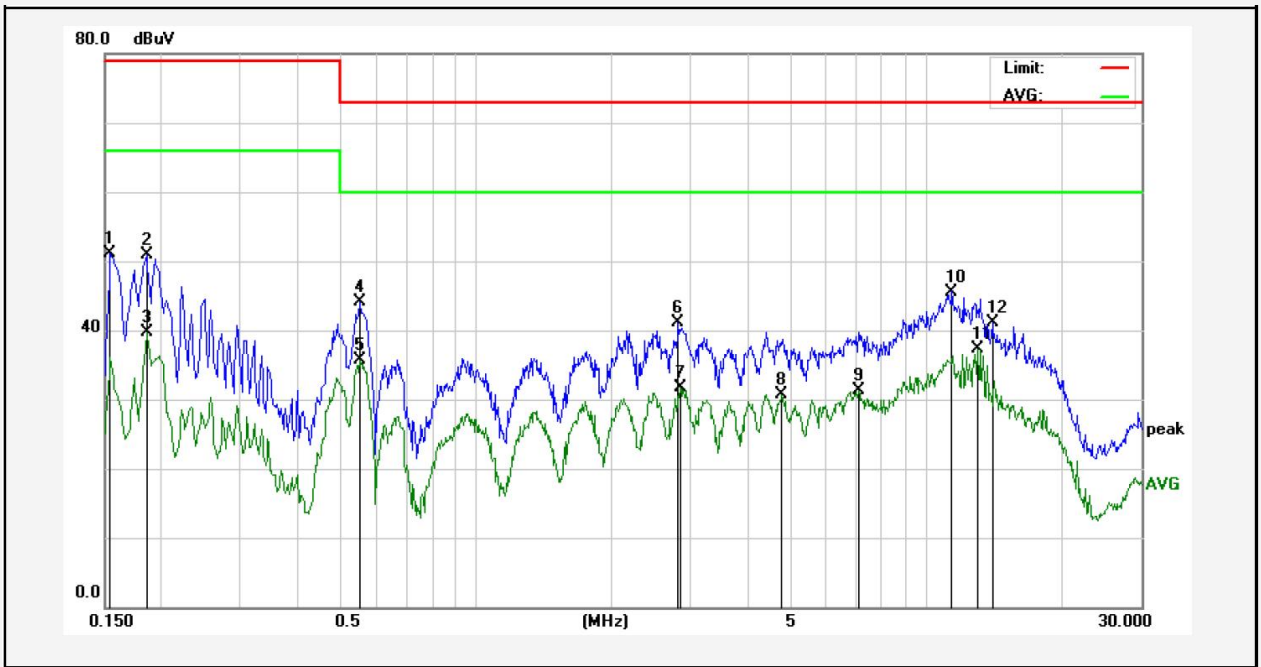
2.4. Test Results

PASS

The test curves are shown in the following pages.

Power Line Conducted Test Data

Test Site: 1# Shielded Room
Test Specification: AC 230V, 50Hz
Comment: Live Line
Temp.: 23.5℃ Hum.: 48%

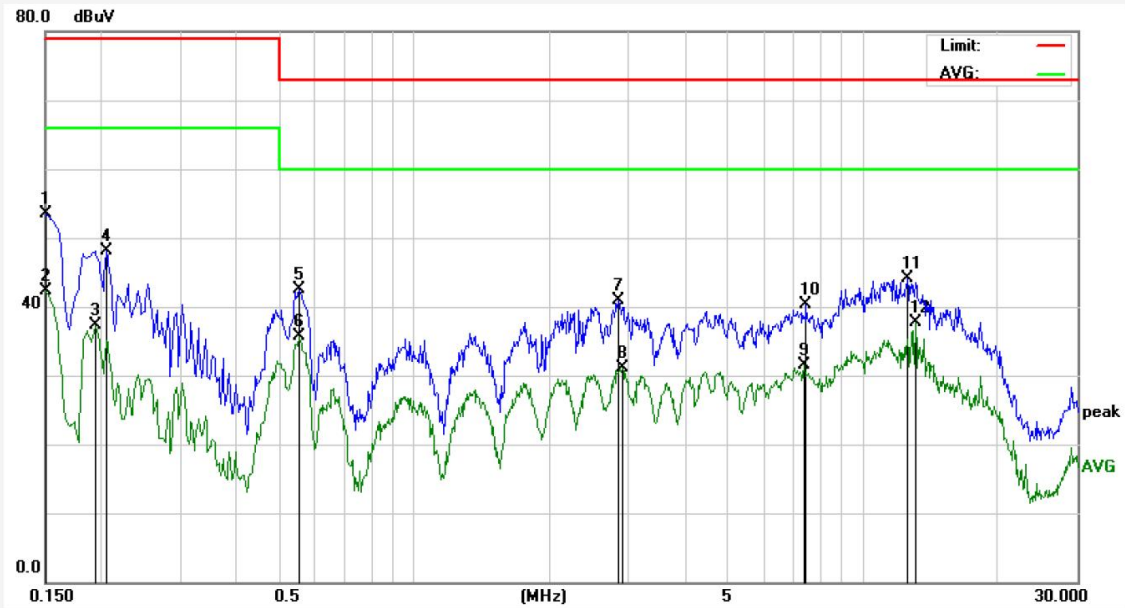


No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit (dBuV)	Over Limit (dB)	Detector	Remark
1	0.1539	41.39	9.70	51.09	79.00	-27.91	QP	
2	0.1860	41.29	9.71	51.00	79.00	-28.00	QP	
3	0.1860	30.01	9.71	39.72	66.00	-26.28	AVG	
4	0.5540	34.27	9.76	44.03	73.00	-28.97	QP	
5	0.5540	26.03	9.76	35.79	60.00	-24.21	AVG	
6	2.8220	31.39	9.73	41.12	73.00	-31.88	QP	
7	2.8460	21.96	9.73	31.69	60.00	-28.31	AVG	
8	4.7819	20.96	9.74	30.70	60.00	-29.30	AVG	
9	7.0940	21.45	9.78	31.23	60.00	-28.77	AVG	
10	11.3820	35.73	9.87	45.60	73.00	-27.40	QP	
11	13.0340	27.32	9.93	37.25	60.00	-22.75	AVG	
12	14.0300	31.12	9.96	41.08	73.00	-31.92	QP	

Note: Result = Reading + Factor Over Limit = Result - Limit

Power Line Conducted Test Data

Test Site: 1# Shielded Room
Test Specification: AC 230V, 50Hz
Comment: Neutral Line
Temp.: 23.5℃ Hum.: 48%



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit (dBuV)	Over Limit (dB)	Detector	Remark
1	0.1500	43.78	9.69	53.47	79.00	-25.53	QP	
2	0.1500	32.63	9.69	42.32	66.00	-23.68	AVG	
3	0.1940	27.60	9.71	37.31	66.00	-28.69	AVG	
4	0.2060	38.44	9.71	48.15	79.00	-30.85	QP	
5	0.5540	32.69	9.76	42.45	73.00	-30.55	QP	
6	0.5540	25.85	9.76	35.61	60.00	-24.39	AVG	
7	2.8460	31.20	9.73	40.93	73.00	-32.07	QP	
8	2.9140	21.35	9.73	31.08	60.00	-28.92	AVG	
9	7.3700	21.65	9.79	31.44	60.00	-28.56	AVG	
10	7.4660	30.45	9.79	40.24	73.00	-32.76	QP	
11	12.5659	34.14	9.92	44.06	73.00	-28.94	QP	
12	13.0980	27.83	9.93	37.76	60.00	-22.24	AVG	

Note: Result = Reading + Factor Over Limit = Result - Limit

3. Asymmetric Mode Conducted Emission at Telecom Port

3.1. Test Standard and Limit

Test Standard	EN 55032

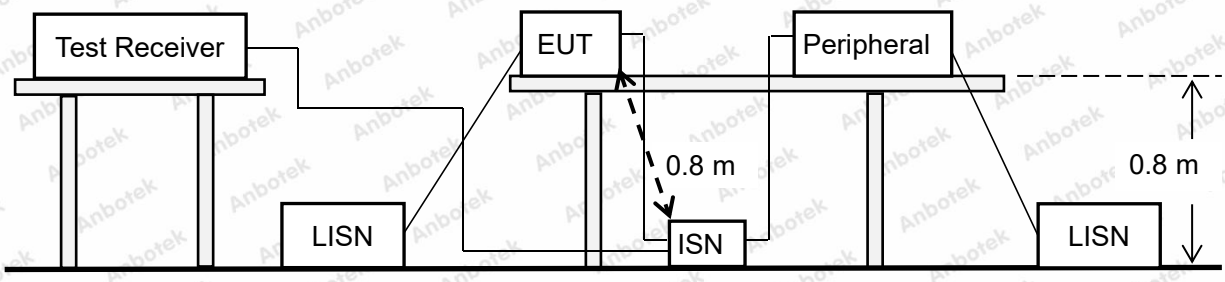
☒ **Limits for asymmetric mode conducted emissions of Class A equipment**

Frequency (MHz)	Limits (dBμV)	
	Quasi-peak Level	Average Level
0.15 ~ 0.50	97.0 ~ 87.0 *	87.0 ~ 74.0 *
0.50 ~ 30.00	87.0	74.0
Remark: The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.50MHz.		

☐ **Limits for asymmetric mode conducted emissions of Class B equipment**

Frequency (MHz)	Limits (dBμV)	
	Quasi-peak Level	Average Level
0.15 ~ 0.50	84.0 ~ 74.0 *	74.0 ~ 44.0 *
0.50 ~ 30.00	74.0	64.0
Remark: The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.50MHz.		

3.2. Test Setup



3.3. Test Procedure

The table-top EUT is placed on a non-conductive table 0.8 m above the horizontal ground reference plane, and the back of the EUT is 0.4 m away from the vertical ground reference plane, and at least 0.8 m from any other metal surface or ground plane. The floor-standing EUT is placed on an insulating support 0.1 m above the horizontal ground reference plane, at least 0.8 m away from other metal objects.

Connect EUT to the power mains through an LISN. Where the mains cable supplied by the manufacturer is longer than 1 m, the excess should be folded at the center into a bundle no longer than 0.4 m, so that its length is shortened to 1 m. All the peripherals are connecting to the other LISN.

The EUT was connected to the peripheral equipment through the ISN and linked in normal condition.

Set the test-receiver to quasi peak detect function and average detect function, and to measure the asymmetric mode conducted emission values.

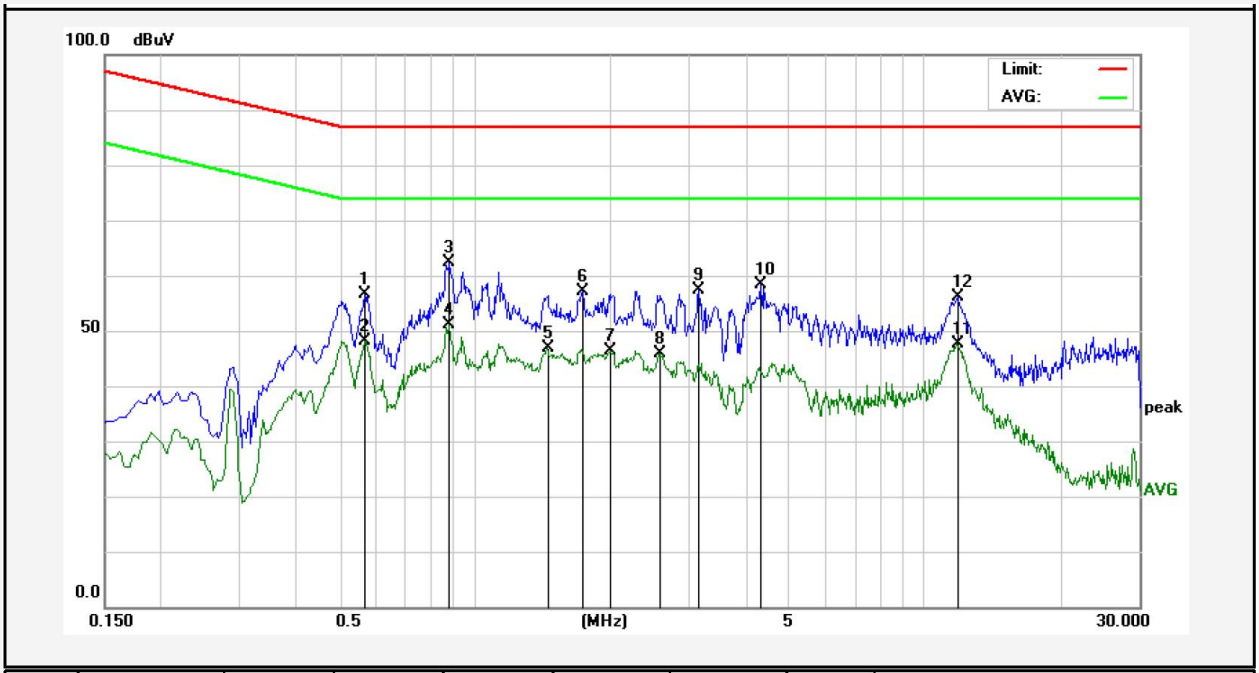
3.4. Test Results

PASS

The test curves are shown in the following pages.

Asymmetric Mode Conducted Emission Test Data

Test Site: 1# Shielded Room
Test Specification: AC 230V, 50Hz
Comment: Telecom Port
Temp.: 23.5℃ Hum.: 48%



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit (dBuV)	Over Limit (dB)	Detector	Remark
1	0.5700	37.59	19.14	56.73	87.00	-30.27	QP	
2	0.5700	28.97	19.14	48.11	74.00	-25.89	AVG	
3	0.8780	43.36	19.11	62.47	87.00	-24.53	QP	
4	0.8780	32.09	19.11	51.20	74.00	-22.80	AVG	
5	1.4460	27.76	19.11	46.87	74.00	-27.13	AVG	
6	1.7380	37.93	19.11	57.04	87.00	-29.96	QP	
7	1.9940	27.31	19.11	46.42	74.00	-27.58	AVG	
8	2.5540	26.72	19.12	45.84	74.00	-28.16	AVG	
9	3.1500	38.17	19.12	57.29	87.00	-29.71	QP	
10	4.3220	39.34	19.14	58.48	87.00	-28.52	QP	
11	11.7860	28.22	19.30	47.52	74.00	-26.48	AVG	
12	11.8100	36.75	19.30	56.05	87.00	-30.95	QP	

Note: Result = Reading + Factor Over Limit = Result - Limit

4. Radiated Emission Test (Below 1 GHz)

4.1. Test Standard and Limit

Test Standard	EN 55032

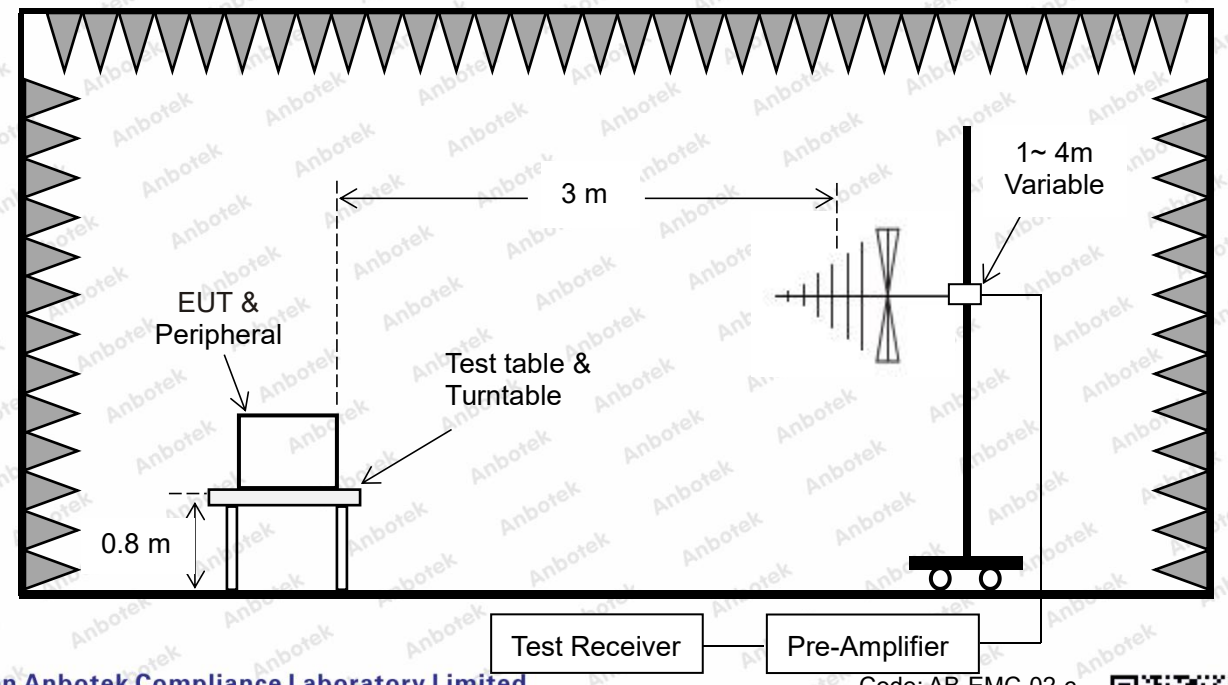
☒ **Limit for radiated emissions at frequencies up to 1 GHz for class A equipment**

Frequency (MHz)	Distance (Meters)	Field Strengths Limit (dBμV/m)
30 ~ 230	3	50
230 ~ 1000	3	57
Remark: The lower limit shall apply at the transition frequencies.		

☐ **Limit for radiated emissions at frequencies up to 1 GHz for class B equipment**

Frequency (MHz)	Distance (Meters)	Field Strengths Limit (dBμV/m)
30 ~ 230	3	40
230 ~ 1000	3	47
Remark: The lower limit shall apply at the transition frequencies.		

4.2. Test Setup



4.3. Test Procedure

The table-top EUT is placed on a non-conductive table 0.8 m above the horizontal ground reference plane. The floor-standing EUT is placed on an insulating support 0.1 m above the horizontal ground reference plane.

The EUT was set 3 m away from the receiving antenna that was mounted on a non-conductive mast. The antenna can move up and down between 1 to 4 m to find out the maximum emission level.

The turntable can rotate 360 degree to determine the position of the maximum emission level.

The initial testing identified the frequency that has the highest disturbance relative to the limit while operating the EUT in typical modes of operation and cable positions in a test setup representative of typical system configuration.

The identification of the frequency of highest emission with respect to the limit was found by investigating emissions at a number of significant frequencies. The probable frequency of maximum emission had been found and that the associated cable and EUT configuration and mode of operation had been identified.

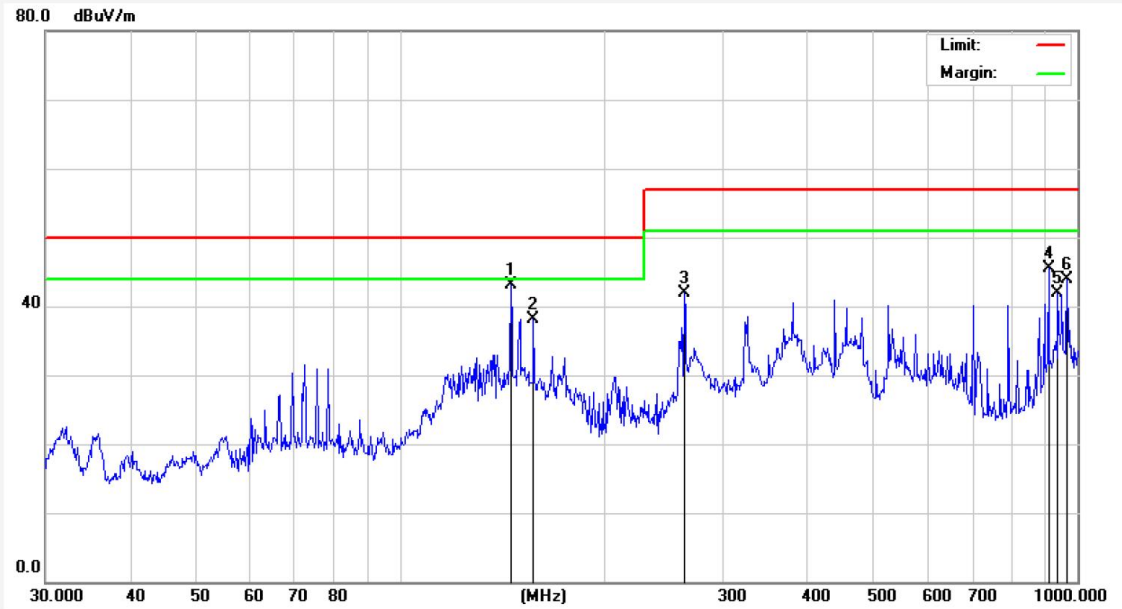
The bandwidth of the Receiver is set at 120 kHz.

4.4. Test Results

PASS

The test curves are shown in the following pages.

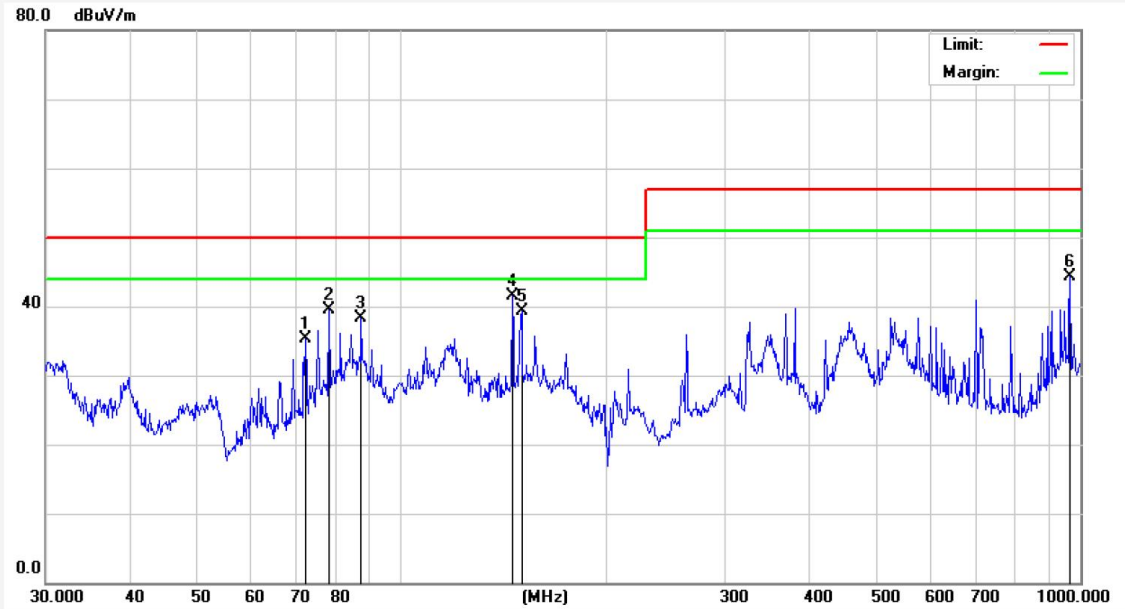
Test item:	Radiation Test	Polarization:	Horizontal
Standard:	(RE)EN 55032	Power Source:	AC 230V, 50Hz
Frequency Range:	30MHz ~ 1000MHz	Temp.(℃)/Hum.(%RH):	22.6(℃)/56%RH
Distance:	3m		



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	145.8611	66.06	-22.94	43.12	50.00	-6.88	QP			
2	157.5588	61.90	-23.74	38.16	50.00	-11.84	QP			
3	262.8955	62.24	-20.38	41.86	57.00	-15.14	QP			
4	906.4824	51.72	-6.14	45.58	57.00	-11.42	QP			
5	935.5463	47.70	-5.81	41.89	57.00	-15.11	QP			
6	965.5421	49.33	-5.36	43.97	57.00	-13.03	QP			

Note: Result= Reading + Factor Over Limit=Result-Limit

Test item:	Radiation Test	Polarization:	Vertical
Standard:	(RE)EN 55032	Power Source:	AC 230V, 50Hz
Frequency Range:	30MHz ~ 1000MHz	Temp.(℃)/Hum.(%RH):	22.6(℃)/56%RH
Distance:	3m		



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	72.3376	55.29	-19.93	35.36	50.00	-14.64	QP			
2	78.4133	59.07	-19.49	39.58	50.00	-10.42	QP			
3	87.4177	56.41	-18.07	38.34	50.00	-11.66	QP			
4	145.8611	63.63	-22.13	41.50	50.00	-8.50	QP			
5	150.5378	61.40	-22.07	39.33	50.00	-10.67	QP			
6	965.5421	49.70	-5.36	44.34	57.00	-12.66	QP			

Note: Result= Reading + Factor Over Limit=Result-Limit

5. Radiated Emission Test (Above 1GHz)

5.1. Test Standard and Limit

Test Standard	EN 55032

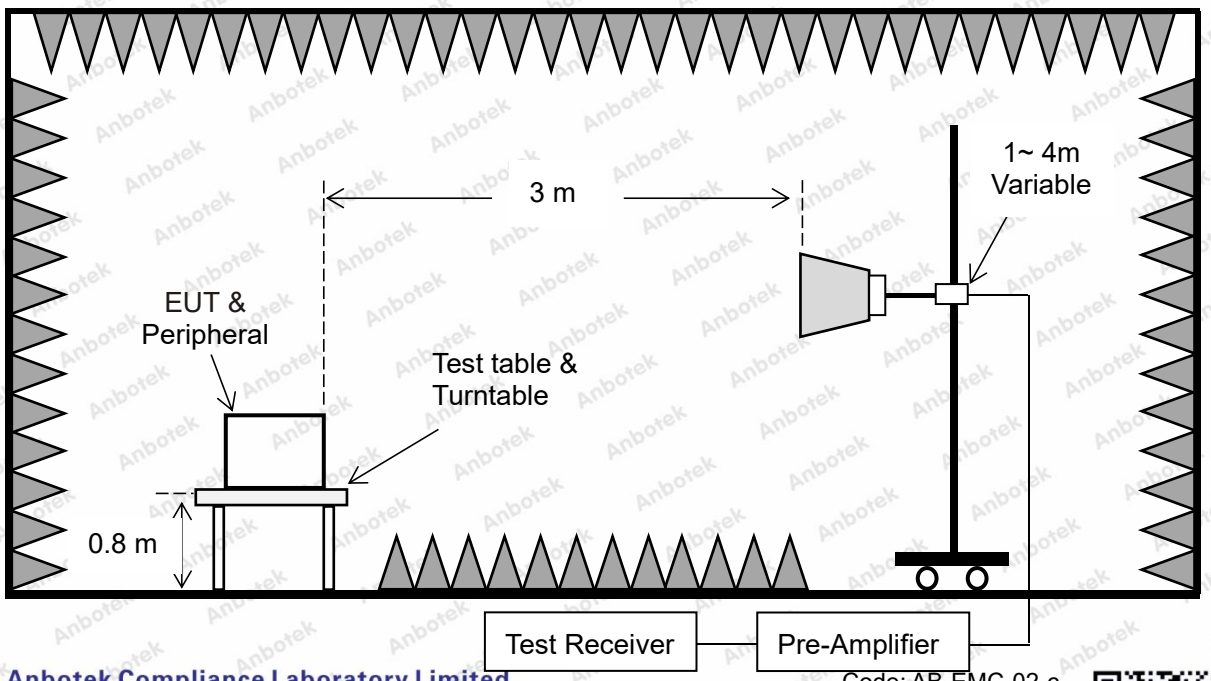
☒ **Limit for radiated emissions at frequencies above 1 GHz for class A equipment**

Frequency (MHz)	Distance (Meters)	Field Strengths Limit (dBμV/m)	
		Peak	Average
1000 ~ 3000	3	76	56
3000 ~ 6000	3	80	60
Remark: The lower limit shall apply at the transition frequencies.			

☐ **Limit for radiated emissions at frequencies above 1 GHz for class B equipment**

Frequency (MHz)	Distance (Meters)	Field Strengths Limit (dBμV/m)	
		Peak	Average
1000 ~ 3000	3	70	50
3000 ~ 6000	3	74	54
Remark: The lower limit shall apply at the transition frequencies.			

5.2. Test Setup



5.3. Test Procedure

The table-top EUT is placed on a non-conductive table 0.8 m above the horizontal ground reference plane. The floor-standing EUT is placed on an insulating support 0.1 m above the horizontal ground reference plane.

The EUT was set 3 m away from the receiving antenna that was mounted on a non-conductive mast. The antenna can move up and down between 1 to 4 m to find out the maximum emission level.

The turntable can rotate 360 degree to determine the position of the maximum emission level.

The initial testing identified the frequency that has the highest disturbance relative to the limit while operating the EUT in typical modes of operation and cable positions in a test setup representative of typical system configuration.

The identification of the frequency of highest emission with respect to the limit was found by investigating emissions at a number of significant frequencies. The probable frequency of maximum emission had been found and that the associated cable and EUT configuration and mode of operation had been identified.

The test receiver is set to peak and average detects function.

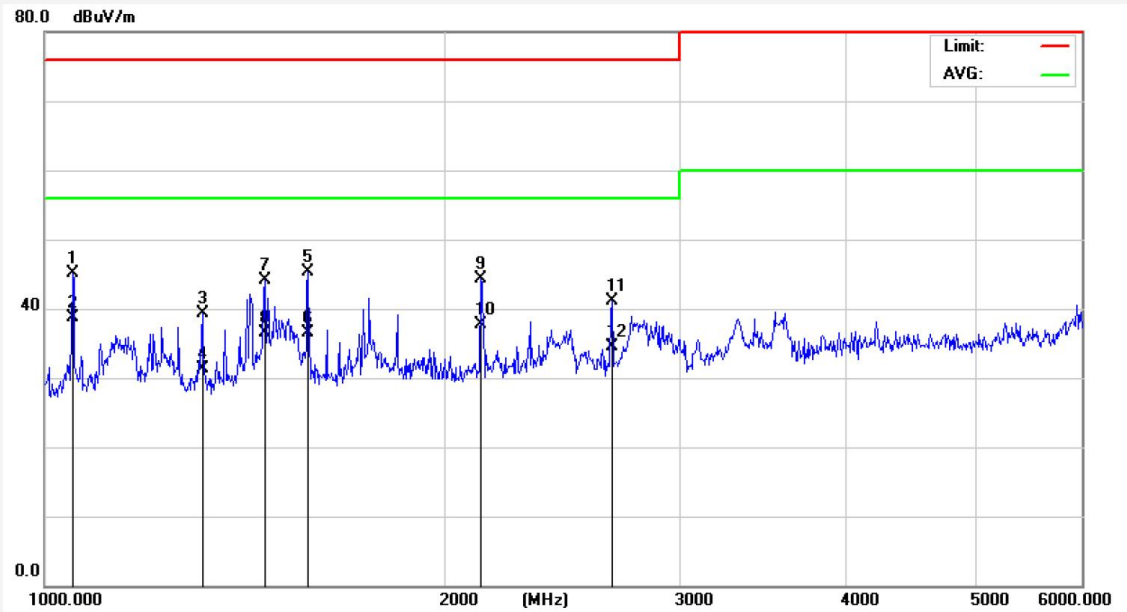
The bandwidth of the test receiver is set at 1MHz.

5.4. Test Results

PASS

The test curves are shown in the following pages.

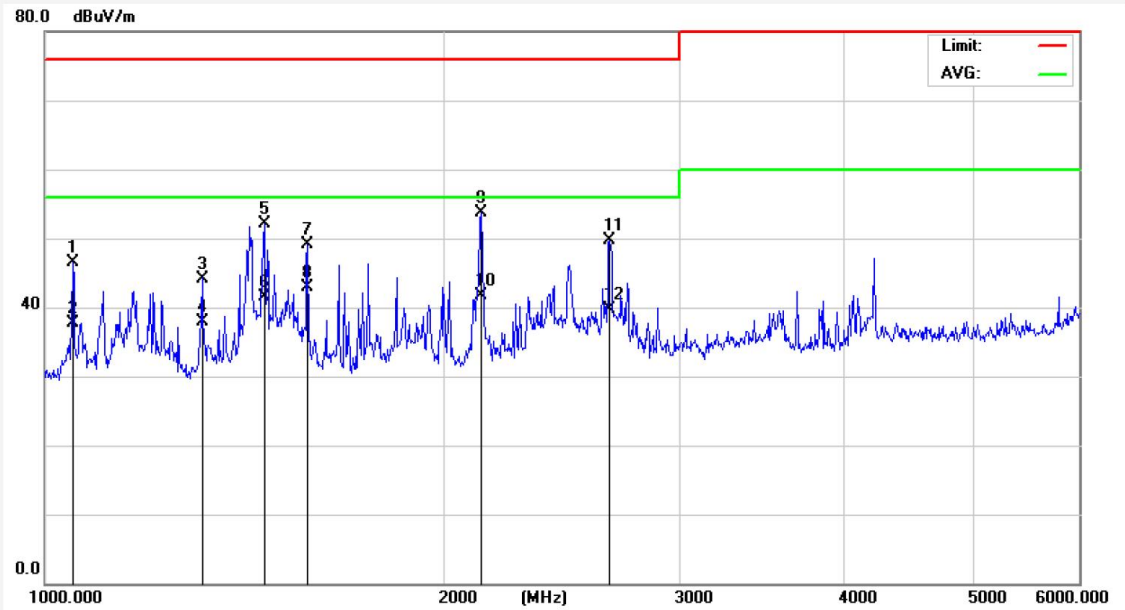
Test item:	Radiation Test	Polarization:	Horizontal
Standard:	(RE)EN 55032	Power Source:	AC 230V, 50Hz
Frequency Range:	1GHz ~ 6GHz	Temp.(℃)/Hum.(%RH):	22.6(℃)/56%RH
Distance:	3m		



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	1049.567	72.84	-27.70	45.14	76.00	-30.86	peak			
2	1049.567	66.36	-27.70	38.66	56.00	-17.34	AVG			
3	1313.043	66.37	-27.09	39.28	76.00	-36.72	peak			
4	1313.043	58.36	-27.09	31.27	56.00	-24.73	AVG			
5	1576.342	72.28	-26.89	45.39	76.00	-30.61	peak			
6	1576.342	63.33	-26.89	36.44	56.00	-19.56	AVG			
7	1462.070	71.00	-26.88	44.12	76.00	-31.88	peak			
8	1462.070	63.33	-26.88	36.45	56.00	-19.55	AVG			
9	2122.382	69.30	-24.96	44.34	76.00	-31.66	peak			
10	2122.382	62.58	-24.96	37.62	56.00	-18.38	AVG			
11	2664.702	64.93	-23.75	41.18	76.00	-34.82	peak			
12	2664.702	58.31	-23.75	34.56	56.00	-21.44	AVG			

Note: Result=Reading + Factor Over Limit=Result - Limit

Test item:	Radiation Test	Polarization:	Vertical
Standard:	(RE)EN 55032	Power Source:	AC 230V, 50Hz
Frequency Range:	1GHz ~ 6GHz	Temp.(℃)/Hum.(%RH):	22.6(℃)/56%RH
Distance:	3m		



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	1049.567	74.29	-27.70	46.59	76.00	-29.41	peak			
2	1049.567	65.39	-27.70	37.69	56.00	-18.31	AVG			
3	1313.043	71.29	-27.09	44.20	76.00	-31.80	peak			
4	1313.043	64.92	-27.09	37.83	56.00	-18.17	AVG			
5	1462.070	78.96	-26.88	52.08	76.00	-23.92	peak			
6	1462.070	68.32	-26.88	41.44	56.00	-14.56	AVG			
7	1576.342	75.96	-26.89	49.07	76.00	-26.93	peak			
8	1576.342	69.74	-26.89	42.85	56.00	-13.15	AVG			
9	2130.001	78.60	-24.94	53.66	76.00	-22.34	peak			
10	2130.001	66.59	-24.94	41.65	56.00	-14.35	AVG			
11	2659.932	73.53	-23.75	49.78	76.00	-26.22	peak			
12	2659.932	63.51	-23.75	39.76	56.00	-16.24	AVG			

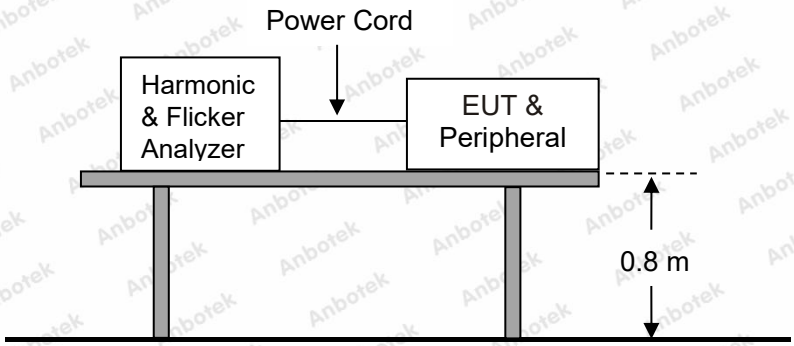
Note: Result=Reading + Factor Over Limit=Result - Limit

6. Harmonic Current Test

6.1. Test Standard

Test Standard:	EN IEC 61000-3-2

6.2. Test Setup



6.3. Test Procedure

The table-top EUT is placed on the top of a wooden table 0.8 m above the ground (0.1 m for the floor-standing EUT) and operated to produce the maximum harmonic components under normal operating conditions for each successive harmonic component in turn. The correspondent test program of test instrument to measure the current harmonics emanated from EUT is chosen. The measure time shall be not less than the necessary for the EUT to be exercised.

6.4. Test Results

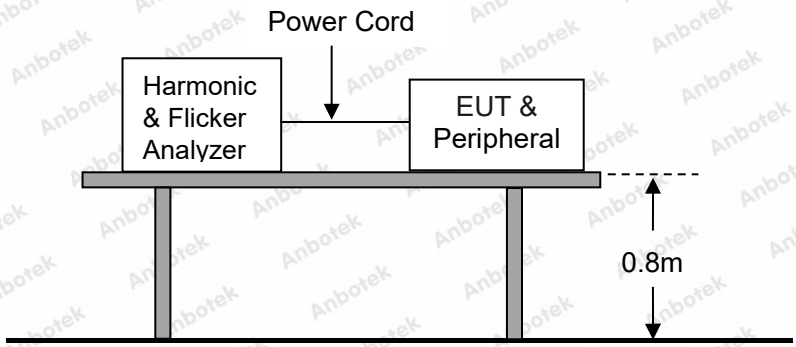
The active input power of the EUT is less than 75W. Therefore, according to EN IEC 61000-3-2, no limits are necessary.

7. Voltage Fluctuations & Flicker Test

7.1. Test Standard

Test Standard:	EN 61000-3-3

7.2. Test Setup



7.3. Test Procedure

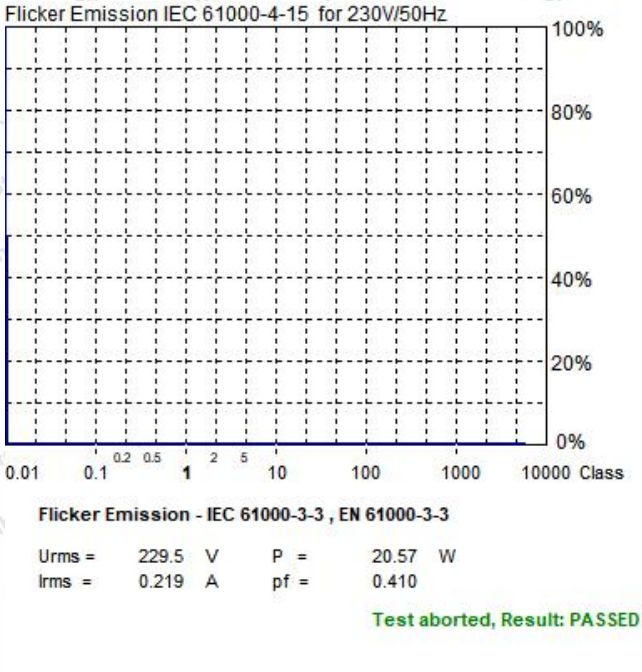
The table-top EUT is placed on the top of a wooden table 0.8 m above the ground (0.1 m for the floor-standing EUT) and operated to produce the most unfavorable sequence of voltage changes under normal conditions during the flicker measurement. The observation period for short-term flicker indicator is 10 minutes and the observation period for long-term flicker indicator is 2 hours.

7.4. Test Results

PASS

The test curves are shown in the following pages.

Flicker Test Summary (Run time)



Full Bar : Actual Values
Empty Bar : Maximum Values
Circles : Average Values
Blue : Current , Green : Voltage , Red : Failed

Urms = 229.5V Freq = 49.987 Range: 2 A
Irms = 0.219A Ipk = 1.040A cf = 4.754
P = 20.57W S = 50.21VA pf = 0.410

Test - Time : 10 x 1min = 10min (100 %)

LIN (Line Impedance Network) : L: 0.24ohm +j0.15ohm N: 0.16ohm +j0.10ohm

Limits : Plt : 0.65 Pst : 1.00
dmax : 4.00 % dc : 3.30 %
dtLim: 3.30 % dt>Lim: 500ms

Test aborted, Result: PASSED

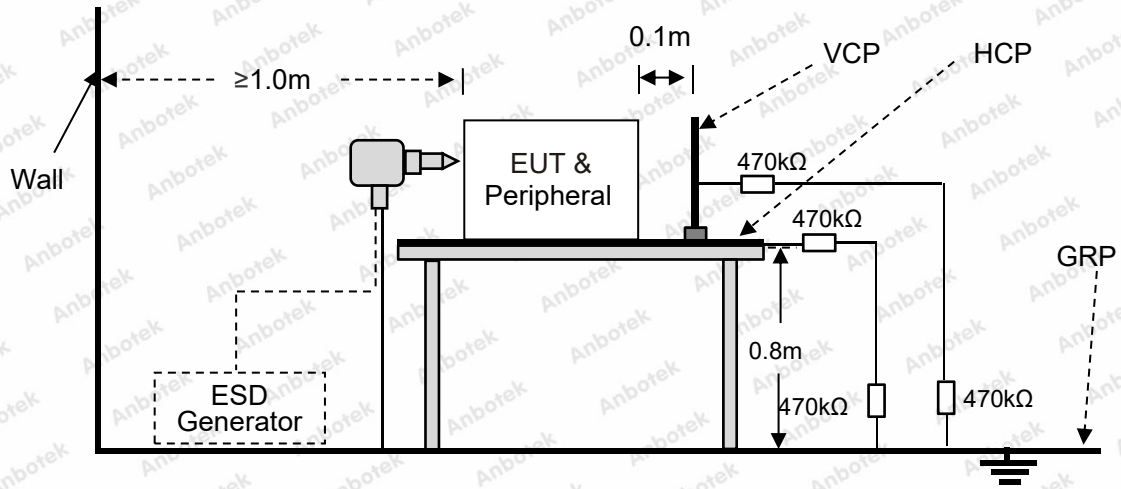
	dmax [%]	dc [%]	dt>Lim [ms]
1	0.000	0.000	0.000

8. Electrostatic Discharge Immunity Test

8.1. Test Specification

Test Standard :	EN 55035	
Basic standard :	IEC 61000-4-2: 2008	
Performance criteria:	B	
Test Level :	± 8kV (Air Discharge)	± 4kV (Contact Discharge)

8.2. Test Setup



8.3. Test Procedure

a. In the case of air discharge testing, the climatic conditions shall be within the following ranges:
- Ambient temperature: 15°C to 35°C;
- Relative humidity: 30% to 60%;
- Atmospheric pressure: 86 kPa (860 mbar) to 106 kPa (1060 mbar)

b. In the case of contact discharges, the tip of the discharge electrode shall touch the EUT before the discharge switch is operated.

c. In the case of painted surface covering a conducting substrate, the following procedure shall be adopted: - If the coating is not declared to be an insulating coating by the equipment manufacturer, then the pointed tip of the generator shall penetrate the coating so as to make contact with the conducting substrate. - Coating declared as insulating by the manufacturer shall only be submitted to the air discharge. - The contact discharge test shall not be applied to such surfaces.

d. In the case of air discharges, the round discharge tip of the discharge electrode shall be approached as fast as possible (without causing mechanical damage) to touch the EUT. After each discharge, the ESD generator (discharge electrode) shall be removed from the EUT. The generator is then retriggered for a new single discharge. This procedure shall be repeated until the discharges are completed. In the case of an air discharge test, the discharge switch, which is used for contact discharge, shall be closed.

e. The test voltage shall be increased from the minimum to the selected test severity level, in order to determine any threshold of failure. The final test level should not exceed the product specification value in order to avoid damage to the equipment.

f. The test shall be performed with both air discharge and contact discharge. The test shall be performed with single discharges. On each pre-selected point at least 10 single discharges (in the most sensitive polarity) shall be applied. For the time interval between successive single discharges an initial value of 1 s is recommended. Longer intervals may be necessary to determine whether a system failure has occurred.

g. Ensure that the applied charge on the EUT has been dis-charged before next ESD pulse.

8.4. Test Results

PASS

Please refer to the following page.

Electrostatic Discharge Test Results

Test Result:	☒ Pass ☐ Fail	Temperature:	23.4℃
Power Supply:	AC 230V, 50Hz	Humidity:	51%

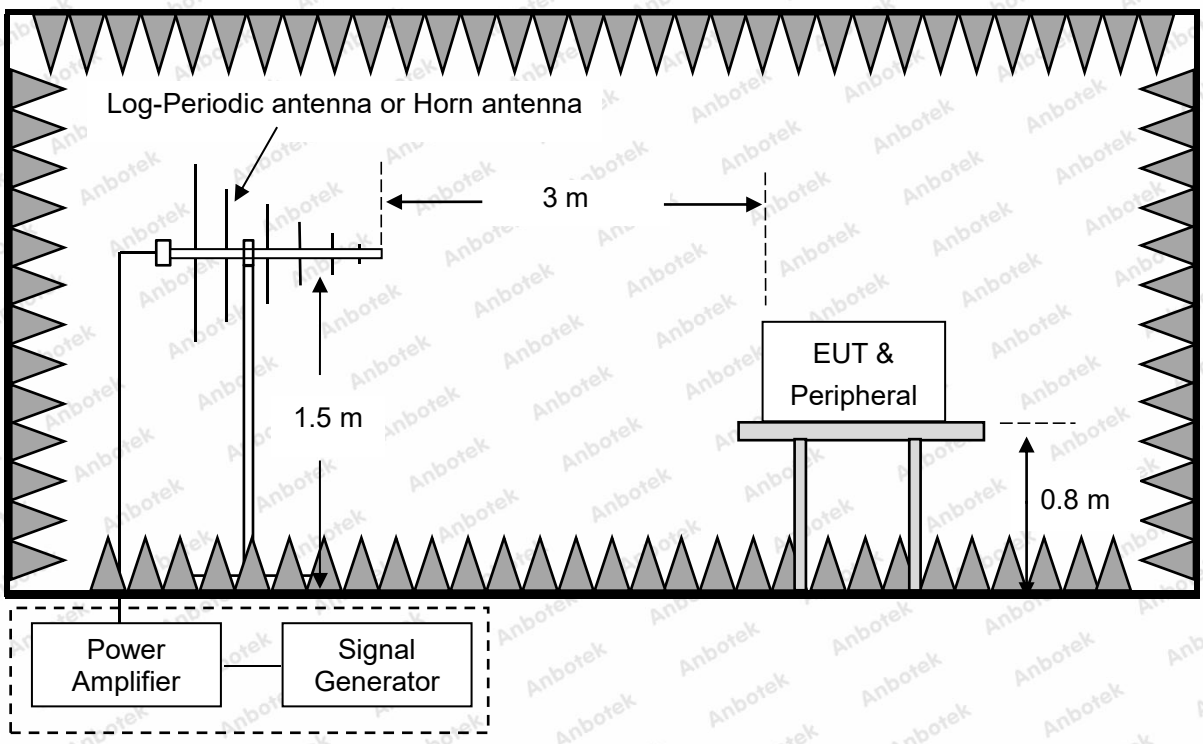
Location		Kind A-Air Discharge C-Contact Discharge	Result
Air discharge: ±2.0 kV, ±4.0 kV, ±8.0 kV		Contact discharge: ±4.0 kV	
DC Port	4 points	C	☒A ☐B ☐C
USB Port	4 points	C	☒A ☐B ☐C
LAN Port	4 points	C	☒A ☐B ☐C
COM Port	4 points	C	☒A ☐B ☐C
HDMI Port	4 points	C	☒A ☐B ☐C
Earphone Port	4 points	A	☒A ☐B ☐C
Screen	4 points	A	☒A ☐B ☐C
Screw	4 points	C	☒A ☐B ☐C
Slot	4 points	A	☐A ☒B ☐C
Metal	4 points	C	☒A ☐B ☐C
Button	4 points	C	☒A ☐B ☐C
Light	4 points	A	☒A ☐B ☐C
HCP	4 points	C	☒A ☐B ☐C
VCP of the front	4 points	C	☒A ☐B ☐C
VCP of the rear	4 points	C	☒A ☐B ☐C
VCP of the left	4 points	C	☒A ☐B ☐C
VCP of the right	4 points	C	☒A ☐B ☐C
Note: N/A			

9. RF Field Strength Immunity Test

9.1. Test Specification

Test Standard:	EN 55035		
Basic standard:	IEC 61000-4-3: 2006+A1:2007+A2:2010		
Performance criteria:	A	A	A
Frequency Range:	☒ 80MHz to 1000MHz	☒ Spot frequencies	☐ Additional spot frequencies
Test level:	3 V/m	3 V/m	3 V/m
Modulation:	1kHz Sine Wave, 80%, AM Modulation		
Frequency Step:	1 % of preceding frequency value		
Polarity of Antenna:	Horizontal and Vertical		
Test Distance:	3 m		
Antenna Height:	1.5 m		
Dwell Time:	at least 0.5s		
Spot frequencies: 1800 MHz, 2600 MHz, 3500 MHz and 5000 MHz; Additional spot frequencies: 80 MHz, 120 MHz, 160 MHz, 230 MHz, 434 MHz, 460 MHz, 600 MHz, 863 MHz and 900 MHz .			

9.2. Test Setup



9.3. Test Procedure

The procedure defined in this part requires the generation of electromagnetic fields within which the test sample is placed and its operation observed. To generate fields that are useful for simulation of actual (field) conditions may require significant antenna drive power and the resultant high field strength levels. To comply with local regulations and to prevent biological hazards to the testing personnel, it is recommended that these tests be carried out in a shielded enclosure or semi-anechoic chamber.

a. The antenna is placed 3 m from the equipment. The required field strength is determined by placing the field strength meter(s) on top of or directly alongside the equipment under test and monitoring the field strength meter via a remote field strength indicator outside the enclosure while adjusting the continuous-wave to the antenna.

b. The test shall normally be performed with the generating antenna facing each side of the EUT. When equipment can be used in different orientations (i.e. vertical or horizontal) all sides shall be exposed to the field during the test. When technically justified, some EUTs can be tested by exposing fewer faces to the generating antenna. In other cases, as determined for example by the type and size of EUT or the frequencies of test, more than four azimuths may need to be exposed.

c. The polarization of the field generated by each antenna necessitates testing each selected side twice, once with the antenna positioned vertically and again with the antenna positioned horizontally.

d. The step size of the frequency is set to 1%. The dwell time at each frequency shall not be less than the time necessary for the EUT to be exercised and to be able to respond. However, the dwell time should not exceed 5 s at each of the frequencies during the scan.

9.4. Test Results

PASS

Please refer to the following page.

RF Field Strength Susceptibility Test Results

Test Result:	☒ Pass ☐ Fail	Temperature:	22.2℃
Power Supply:	AC 230V, 50Hz	Humidity:	47%

Frequency Range	Antenna Polarity	R.F. Field Strength	Dwell Time	Azimuth	Result
80 MHz ~ 1000 MHz	H / V	3 V/m	1s	Front	☒ A ☐ B ☐ C
				Rear	
				Left	
				Right	
Spot frequencies	H / V	3 V/m	1s	Front	☒ A ☐ B ☐ C
				Rear	
				Left	
				Right	
Additional spot frequencies	H / V	3 V/m	1s	Front	☐ A ☐ B ☐ C
				Rear	
				Left	
				Right	

Note: N/A

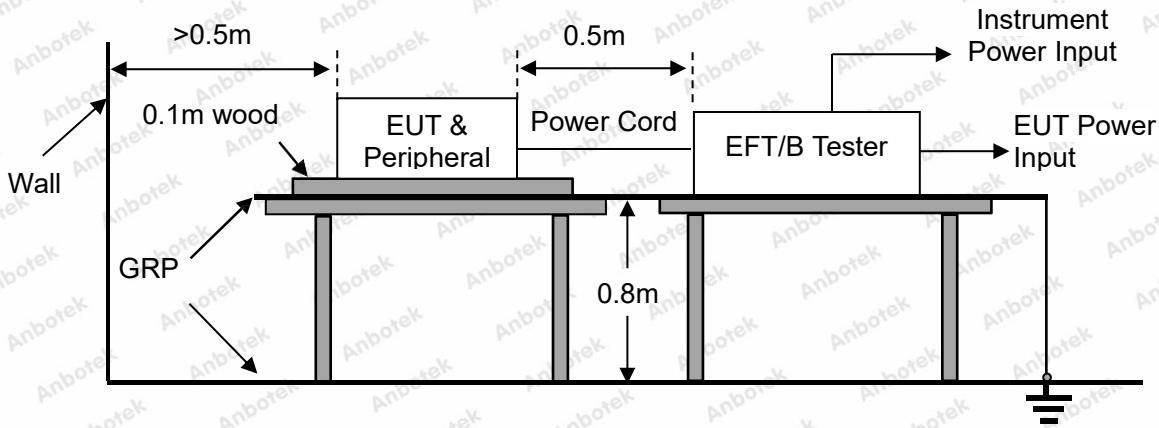
10. Electrical Fast Transient/Burst Immunity Test

10.1. Test Specification

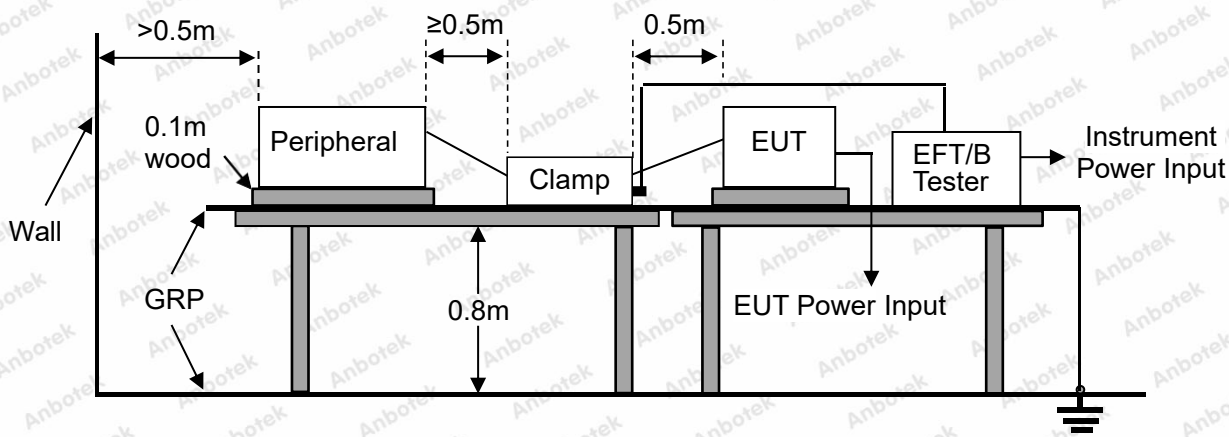
Test Standard:	EN 55035
Basic standard:	IEC 61000-4-4: 2012
Performance criteria:	B
Test Level:	☒ 1 kV, AC mains power ports
	☐ 0.5 kV, DC network power ports
	☐ 0.5 kV, Analogue/digital data ports

10.2. Test Setup

AC mains power ports and DC network power ports:



Analogue/digital data ports:



10.3. Test Procedure

The table-top EUT is placed on a table that is 0.8 m height, a ground reference plane is placed on the table, and uses 0.1 m insulation between the EUT and ground reference plane. The floor-standing EUT is placed on a ground reference plane and insulated from it by an insulating support with a thickness of 0.1 m. This reference ground plane shall project beyond the EUT by at least 0.1 m on all sides and the minimum distance between EUT and all other conductive structure, except the ground plane beneath the EUT, shall be more than 0.5 m.

All cables to the EUT shall be placed on the insulation support 0.1 m above the ground reference plane. Cables not subject to electrical fast transients shall be routed as far as possible from the cable under test to minimize the coupling between the cables.

10.4. Test Results

PASS

Please refer to the following page.

Electrical Fast Transient/Burst Test Results

Test Result:	☒ Pass ☐ Fail	Temperature:	23.4℃
Power Supply:	AC 230V, 50Hz	Humidity:	51%

Ports	Polarity	Inject Time(s)	Test Voltage (kV)	Result
AC mains power ports	±	120 s	1.0 kV	☒A ☐B ☐C
DC network power ports	±	120 s	0.5 kV	☐A ☐B ☐C
Analogue/digital data ports (xx Line)	±	120 s	0.5 kV	☐A ☐B ☐C

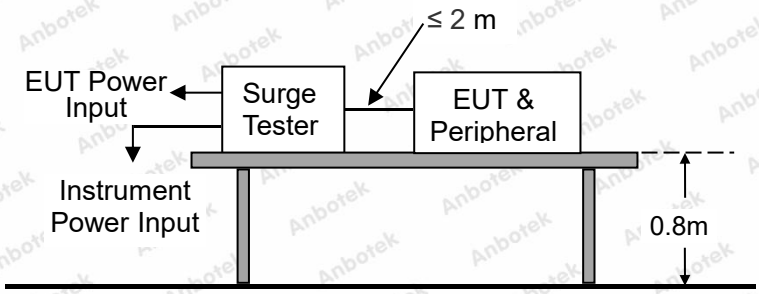
Note: N/A

11. Surge Immunity Test

11.1. Test Specification

Test Standard:		EN 55035
Basic standard:		IEC 61000-4-5: 2014+A1:2017
Test level	AC power port:	☒ 1 kV, Line to Line, Criterion B
		☒ 2kV, Line to Ground, Criterion B
	DC network power port:	☐ 0.5kV, Line to Reference Ground, Criterion B
	Coaxial or shielded port:	☐ 0.5kV, Shield to Ground, Criterion B
	Unshielded symmetrical port:	☐ 1 kV and 4 kV, Lines to Ground , Primary protection, Criterion C
		☐ 1 kV, Lines to Ground , Non primary protection, Criterion C
Number of surges		5 (for each combination of parameters)
Repetition rate		1 minute / time
Polarity:		Positive / Negative
Phase angle:		90º, 270º (Only AC mains power ports)

11.2. Test Setup



11.3. Test Procedure

Table-top EUT is placed on a table of 0.8 m heights above a metal ground reference plane. Floor standing EUT is placed on a ground reference plane and insulated from it by an insulating support with a thickness of 0.1 m. The length of the power cord between the EUT and the coupling/decoupling network is not more than 2 m, and the length of the interconnection line between the EUT and the coupling/decoupling network is not more than 2 m. The tests were done at repetition rate 1 per minute.

11.4. Test Results

PASS

Please refer to the following page.

Surge Immunity Test Results

Test Result:	☒ Pass ☐ Fail	Temperature :	23.4℃
Power Supply :	AC 230V, 50Hz	Humidity :	51%

Location	Polarity	Phase Angle	Number of Pulse	Pulse Voltage (kV)	Result
☒ AC power port (Waveform: 1.2 us / 50 us (8 us / 20us))					
L-N	+	☐0° ☒90° ☐180° ☐270°	5	0.5, 1kV	☒A ☐B ☐C
	-	☐0° ☐90° ☐180° ☒270°	5	0.5, 1kV	☒A ☐B ☐C
L-GND	+	☐0° ☒90° ☐180° ☐270°	5	0.5, 1, 2kV	☒A ☐B ☐C
	-	☐0° ☐90° ☐180° ☒270°	5	0.5, 1, 2kV	☒A ☐B ☐C
N-GND	-	☐0° ☒90° ☐180° ☐270°	5	0.5, 1, 2kV	☒A ☐B ☐C
	+	☐0° ☐90° ☐180° ☒270°	5	0.5, 1, 2kV	☒A ☐B ☐C
☐ DC network power ports (Waveform: 1.2 us / 50 us (8 us / 20us))					
Line to Reference ground	+	/	5	0.5kV	☐A ☐B ☐C
	-	/	5	0.5kV	☐A ☐B ☐C
☐ Analogue/digital data ports (Waveform: 10 us / 700 us (5 us / 320us)) :					
Lines to ground	+	/	5	0.5, 1kV	☐A ☐B ☐C
	-	/	5	0.5, 1kV	☐A ☐B ☐C
☐ Analogue/digital data ports (Waveform: 10 us / 700 us (5 us / 320us)) :					
Lines to ground	+	/	5	0.5, 1, 2, 4kV	☐A ☐B ☐C
	-	/	5	0.5, 1, 2, 4kV	☐A ☐B ☐C
☐ Analogue/digital data ports (Waveform: 1.2 us / 50 us (8 us / 20us)): Coaxial or shielded lines					
Shield to ground	+	/	5	0.5kV	☐A ☐B ☐C
	-	/	5	0.5kV	☐A ☐B ☐C
Note: N/A					

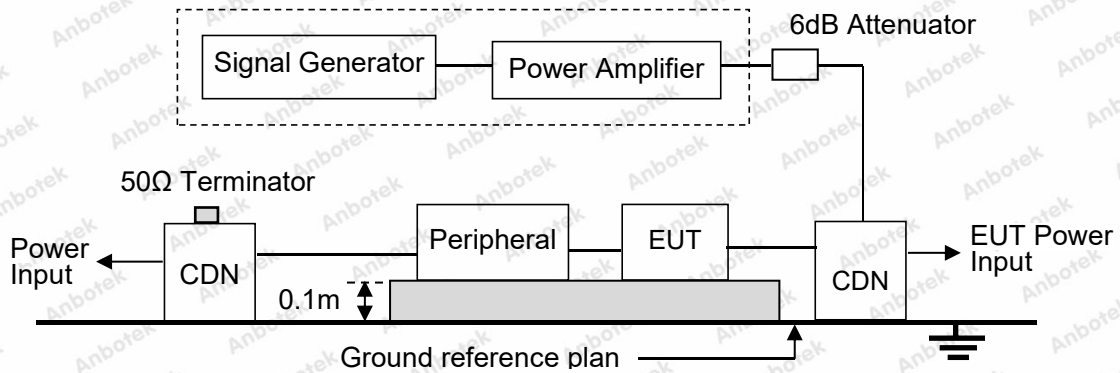
12. Injected Currents Susceptibility Test

12.1. Test Specification

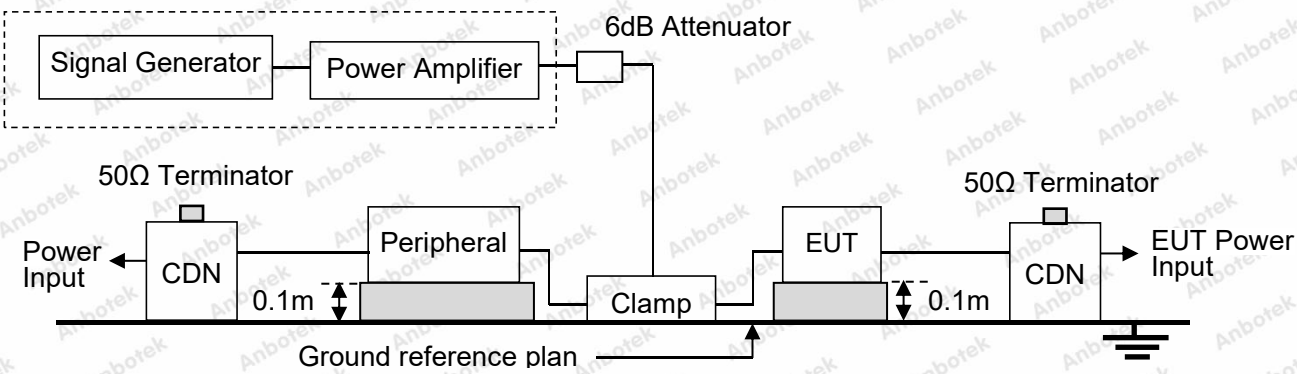
Test Standard:	EN 55035		
Basic standard:	IEC 61000-4-6: 2013		
Performance criteria:	A		
Frequency range:	0.15MHz to 10MHz	10MHz to 30MHz	30MHz to 80MHz
Test level:	3V	3V to 1V	1V
Modulation:	AM 80%, 1kHz sine-wave		
Frequency Step:	1% of fundamental		

12.2. Test Setup

CDN injection:



Clamp injection:



12.3. Test Procedure

a. The EUT and peripheral are placed on an insulating support of 0.1 m height above a ground reference plan. The distance between EUT and CDN is 0.1 m to 0.3 m. All cables exiting the EUT are supported at a height of at least 30 mm above the ground reference plan.

b. The frequency range is swept from 150 kHz to 80MHz, with the signal 80% amplitude modulated with a 1 kHz sine wave. The rate of sweep did not exceed 1.5x 10-3 decade/s. The frequency range is swept incrementally. The step size was 1% of fundamental from 0.15MHz to 80MHz.

c. The dwell time at each frequency isn't less than the time necessary for the EUT to be able to respond.

12.4. Test Results

PASS

Please refer to the following page.

Injected Currents Susceptibility Test Results

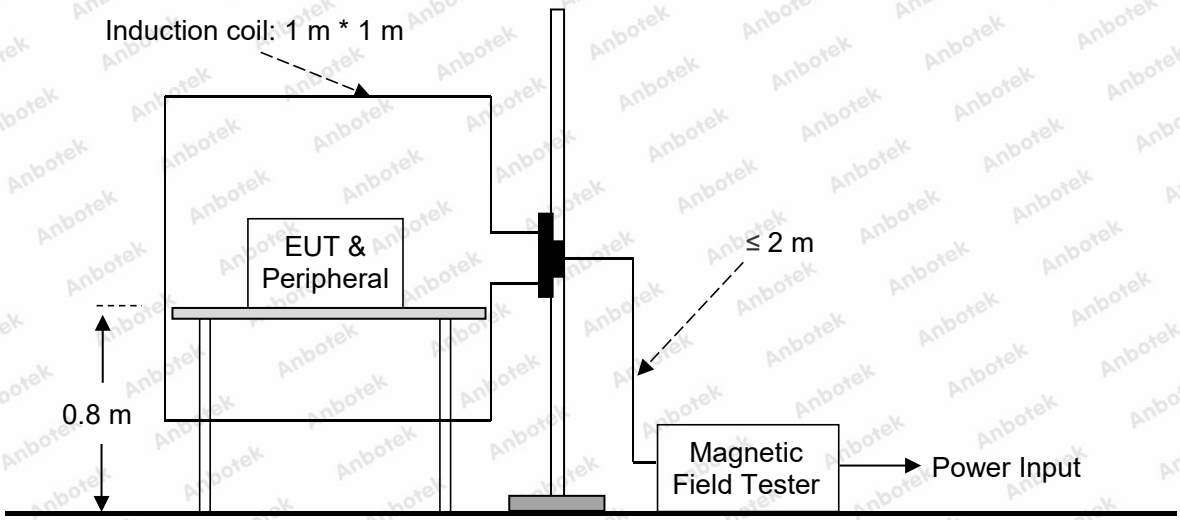
Test Result:	☒ Pass ☐ Fail	Temperature:	23.2℃
Power Supply:	AC 230V, 50Hz	Humidity:	50%
Frequency Range (MHz)	Injected Position	Strength (Un-modulated)	Result
0.15 ~ 10	AC Mains	3V	☒A ☐B ☐C
10 ~ 30	AC Mains	3V to 1V	☒A ☐B ☐C
30 ~ 80	AC Mains	1V	☒A ☐B ☐C
0.15 ~ 10		3V	☐A ☐B ☐C
10 ~ 30		3V to 1V	☐A ☐B ☐C
30 ~ 80		1V	☐A ☐B ☐C
Note: N/A			

13. Power Frequency Magnetic Field Immunity Test

13.1. Test Specification

Test Standard:	EN 55035
Basic Standard	IEC 61000-4-8: 2009
Performance criteria	A
Test level	1A/m

13.2. Test Setup



13.3. Test Procedure

Table-top EUT is placed on a table that is 0.8 m height. Floor standing EUT is placed on a ground reference plane and insulated from it by an insulating support with a thickness of 0.1 m.

The EUT is placed in the middle of an induction coil. The proximity method is used when the EUT does not fit into the standard inductive coil

13.4. Test Results

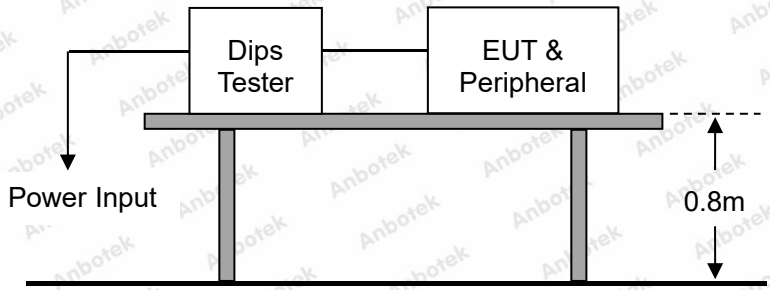
Not applicable.

14. Voltage Dips and Interruptions Immunity Test

14.1. Test Specification

Test Standard:	EN 55035
Basic standard:	IEC 61000-4-11: 2020
Test level:	☒0%, 0.5 period, Criterion B
	☒70%, 25 periods for 50Hz, Criteria C
	☒0%, 250 periods for 50Hz, Criteria C
	☐70%, 30 periods for 60Hz, Criteria C
	☐0%, 300 periods for 60Hz, Criteria C

14.2. Test Setup



14.3. Test Procedure

a. Where the equipment has a rated voltage the following shall apply:
- If the voltage range does not exceed 20% of the lower voltage specified for the rated voltage range, a single voltage within that range may be specified as a basis for test level specification.
- In all other cases, the test procedure shall be applied for both the lowest and highest voltages declared in the voltage range.
b. Test Conditions
- Select operated voltage and frequency of EUT - Test of interval: 10 sec.
- Level and duration: Sequence of 3 dips/interrupts.
- Voltage rise (and fall) time: 1.5 μs.
c. Changes to occur at 0 degree crossover point of the voltage waveform.

14.4. Test Results

PASS

Please refer to the following page.

Voltage Dips and Interruptions Test Results

Test Result:	☒ Pass ☐ Fail	Temperature :	23.4℃
Power Supply :	AC 230V, 50Hz	Humidity :	51%
Test Level % UT	Voltage Dips & Short Interruptions % UT	Duration (in periods)	Result
0	100	0.5P	☒A ☐B ☐C
70	30	25P	☒A ☐B ☐C
Test Level % UT	Voltage Dips & Short Interruptions % UT	Duration (in periods)	Result
0	100	250P	☐A ☐B ☒C
Note: N/A			

APPENDIX I -- TEST SETUP PHOTOGRAPH

Photo of Power Line Conducted Emission Test

Photo of Asymmetric Mode Conducted Emission at Telecom Port

Photo of Radiated Emission Test (Below 1 GHz)

Photo of Radiated Emission Test (Above 1GHz)

Photo of Harmonic Current And Flicker Test

Photo of Electrostatic Discharge Immunity Test

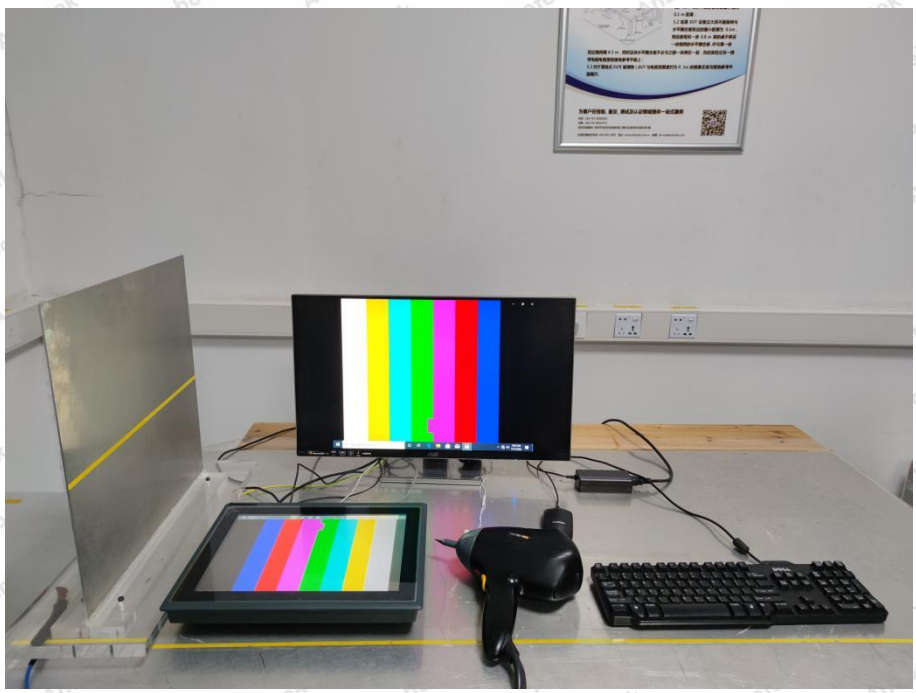


Photo of RF Field Strength Immunity Test

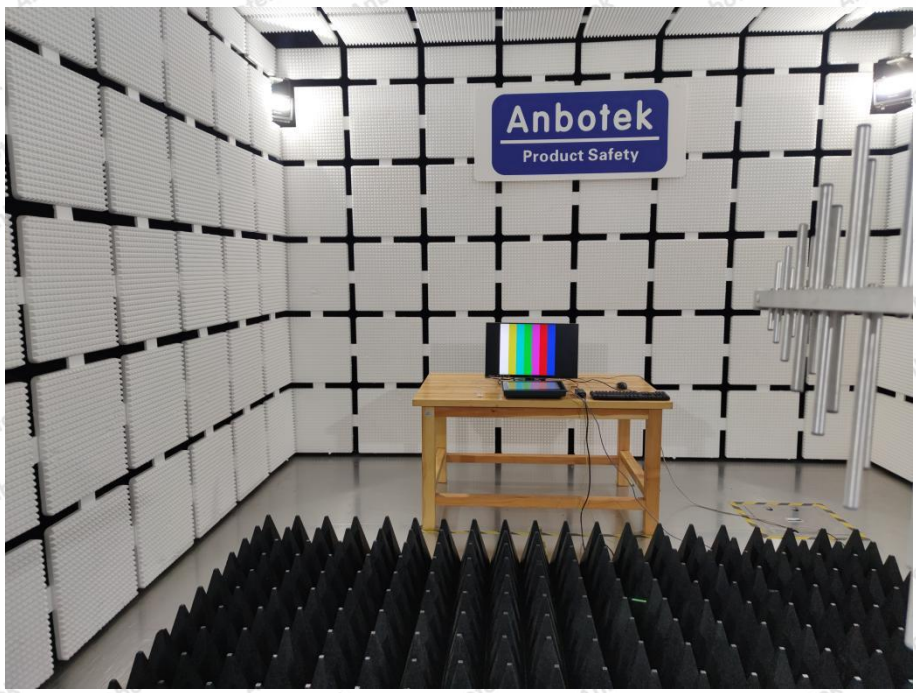


Photo of Electrical Fast Transient/Burst Immunity Test

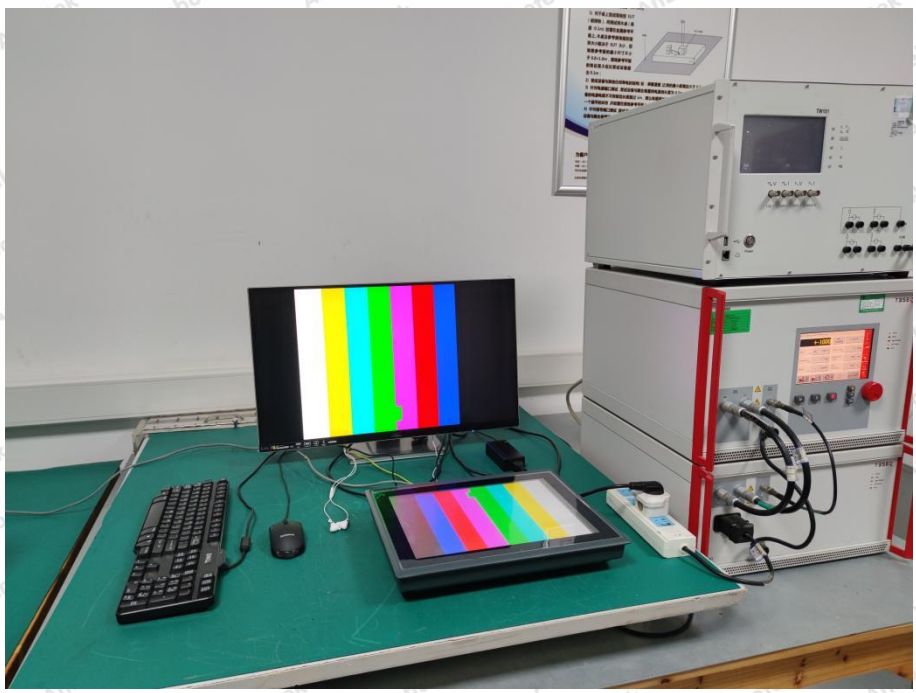


Photo of Surge Immunity Test

Photo of Injected Currents Susceptibility Test

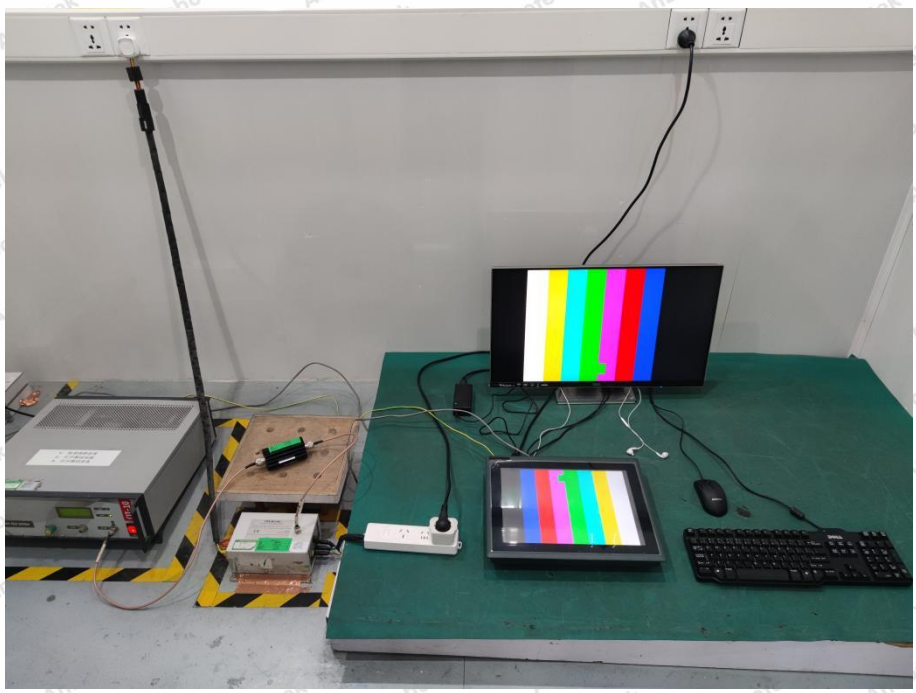
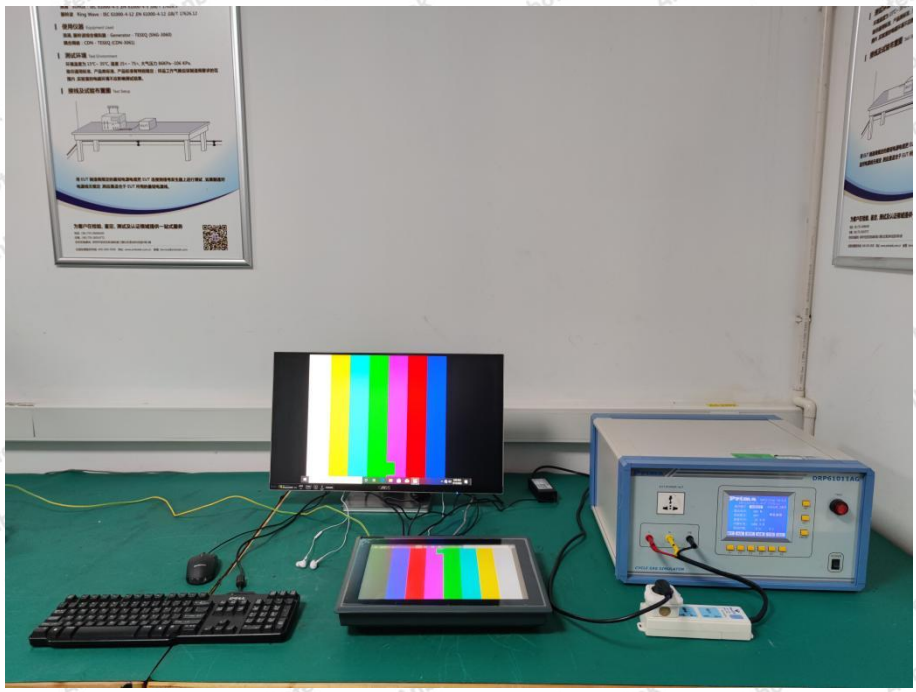


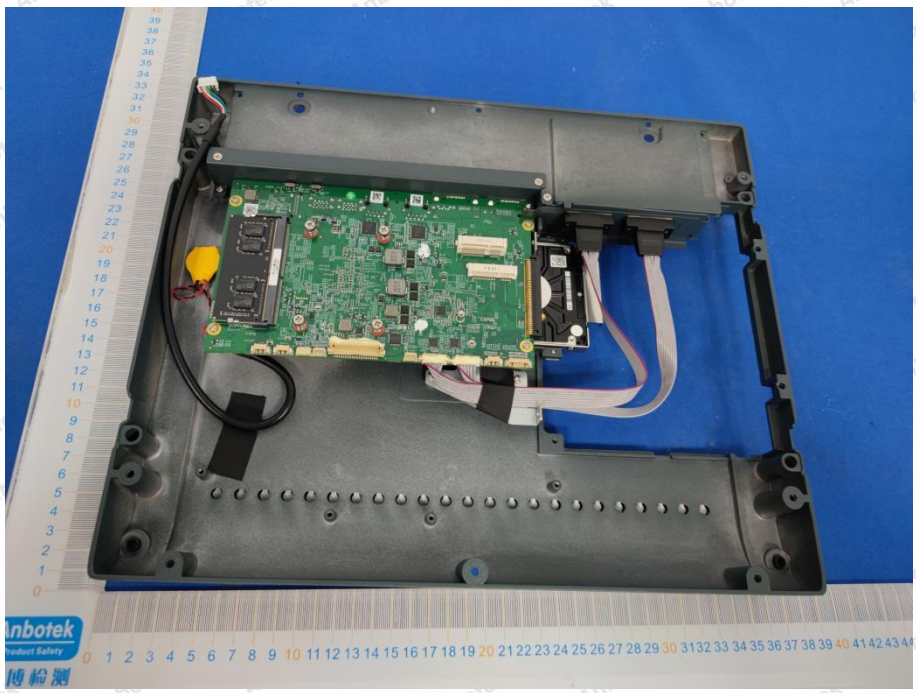
Photo of Voltage Dips and Interruptions Immunity Test

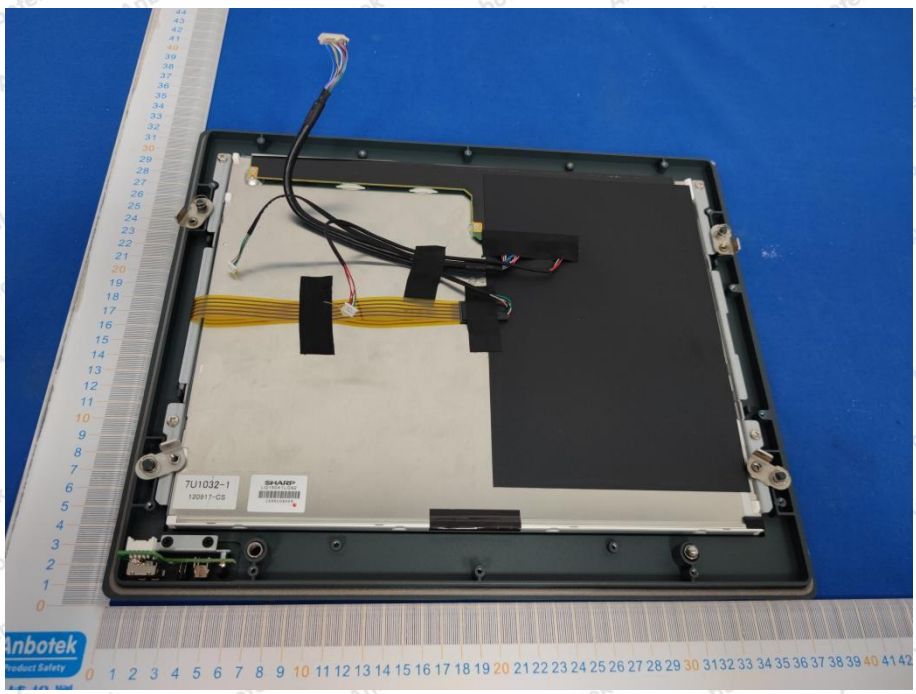


APPENDIX II -- EXTERNAL PHOTOGRAPH


CHANNEL WELL TECHNOLOGY
侨威科技股份有限公司/僑威科技股份有限公司
AC ADAPTER 电源适配器/電源供應器/직류전원장치
MODEL /型号/型號/모델명: KPL-060F-VI
INPUT /输入/輸入/정격입력:
100-240V ~ 50/60Hz 1.7A
OUTPUT /输出/輸出/정격출력:
+12.0V⎓ 5.0A 60.0W
EFFICIENCY LEVEL: VI
I.T.E. POWER SUPPLY.
仅供信息技术设备使用.
僅供資訊類設備使用.
Energy Verified
LPS

APPENDIX III -- INTERNAL PHOTOGRAPH





CE Label

1. The CE conformity marking must consist of the initials ‘CE’ taking the following form:
   If the CE marking is reduced or enlarged, the proportions given in the above graduated drawing must be respected.
2. The CE marking must have a height of at least 5 mm except where this is not possible on account of the nature of the apparatus.
3. The CE marking must be affixed to the product or to its data plate. Additionally it must be affixed to the packaging, if any, and to the accompanying documents.
4. The CE marking must be affixed visibly, legibly and indelibly.
   It must have the same height as the initials ‘CE’.

---------- End of Report ----------