



EN 55032:2015+A1:2020  
EN 55035:2017+A11:2020  
EN IEC 61000-3-2:2019+A1:2021  
EN 61000-3-3:2013+A2:2021

## TEST REPORT

For

**XonTel Technology Trd. Co. W.L.L**

Kuwait City, Qibla, Aladel Tower, F21, state of Kuwait. zip code: 13065

**Tested Model: XT-12P**

<b>Report Type:</b> Amended Report	<b>Product Type:</b> Door Phone
<b>Report Number:</b>	<u>RXM220104050 -01A</u>
<b>Report Date:</b>	<u>2022-01-11</u>
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## TABLE OF CONTENTS

<b>DOCUMENT REVISION HISTORY .....</b>	<b>5</b>
<b>GENERAL INFORMATION.....</b>	<b>6</b>
PRODUCT DESCRIPTION FOR EQUIPMENT UNDER TEST (EUT) .....	6
OBJECTIVE .....	6
RELATED SUBMITTAL(S)/GRANT(S).....	6
TEST METHODOLOGY .....	7
TEST FACILITY .....	7
<b>SYSTEM TEST CONFIGURATION .....</b>	<b>8</b>
DESCRIPTION OF TEST CONFIGURATION .....	8
EQUIPMENT SOFTWARE .....	8
EQUIPMENT MODIFICATIONS .....	8
SUPPORT EQUIPMENT LIST AND DETAILS .....	8
EXTERNAL I/O CABLE.....	9
BLOCK DIAGRAM OF RADIATED TEST SETUP.....	9
<b>SUMMARY OF TEST RESULTS .....</b>	<b>11</b>
<b>EN 55032 §5 Requirements ,Refer to Annex A A.3 Requirements for Conducted Emissions.....</b>	<b>12</b>
MEASUREMENT UNCERTAINTY.....	12
EUT SETUP.....	12
EMI TEST RECEIVER SETUP.....	13
TEST EQUIPMENT LIST AND DETAILS.....	13
TEST PROCEDURE .....	13
FACTOR & OVER LIMIT CALCULATION.....	13
TEST DATA .....	14
<b>EN 55032 §5 Requirements ,Refer to Annex A A.2 Requirements for Radiated Emissions .....</b>	<b>20</b>
MEASUREMENT UNCERTAINTY.....	20
TEST SYSTEM SETUP.....	20
EMI TEST RECEIVER SETUP.....	21
TEST EQUIPMENT LIST AND DETAILS.....	22
TEST PROCEDURE .....	22
CORRECTED AMPLITUDE & MARGIN CALCULATION .....	22
TEST DATA .....	22
<b>EN 55035 §4.2.1 ELECTROSTATIC DISCHARGE (IEC 61000-4-2) .....</b>	<b>25</b>
MEASUREMENT UNCERTAINTY.....	25
TEST EQUIPMENT .....	25
TEST SYSTEM SETUP.....	25
TEST STANDARD .....	26
TEST PROCEDURE .....	26
TEST DATA .....	27
<b>EN 55035 §4.2.2.2 CONTINUOUS RF ELECTROMAGNETIC FIELD DISTURBANCES (IEC 61000-4-3) ..29</b>	<b>29</b>
TEST EQUIPMENT .....	29
TEST SYSTEM SETUP.....	29
TEST STANDARD .....	30
TEST PROCEDURE .....	30
TEST DATA .....	31
<b>EN 55035 §4.2.4 ELECTRICAL FAST TRANSIENT/BUSRST (IEC 61000-4-4) .....</b>	<b>32</b>

MEASUREMENT UNCERTAINTY .....	32
TEST EQUIPMENT .....	32
TEST SYSTEM SETUP .....	32
TEST STANDARD .....	32
TEST PROCEDURE .....	33
TEST DATA .....	33
<b>EN 55035 §4.2.5 SURGES (IEC 61000-4-5).....</b>	<b>35</b>
TEST EQUIPMENT .....	35
TEST SYSTEM SETUP .....	35
TEST STANDARD .....	35
TEST PROCEDURE .....	36
TEST DATA .....	36
<b>EN 55035 §4.2.2.3 CONTINUOUS INDUCED RF DISTURBANCES .....</b>	<b>37</b>
<b>(IEC 61000-4-6).....</b>	<b>37</b>
MEASUREMENT UNCERTAINTY .....	37
TEST EQUIPMENT .....	37
TEST SETUP .....	37
TEST STANDARD .....	37
TEST PROCEDURE .....	38
TEST DATA .....	38
<b>EN 55035 §4.2.6 VOLTAGE DIPS AND INTERRUPTIONS (IEC 61000-4-11).....</b>	<b>40</b>
TEST EQUIPMENT .....	40
TEST SETUP .....	40
TEST STANDARD .....	40
TEST PROCEDURE .....	41
TEST DATA .....	41
<b>EN 55035 §4.2.3 POWER FREQUENCY MAGNETIC FIELD (IEC 61000-4-8).....</b>	<b>42</b>
TEST EQUIPMENT .....	42
TEST SETUP .....	42
TEST STANDARD .....	42
TEST PROCEDURE .....	43
TEST DATA .....	43
<b>EN 61000-3-3 VOLTAGE FLUCTUATION AND FLICKER .....</b>	<b>44</b>
TEST EQUIPMENT .....	44
TEST SYSTEM SETUP .....	44
TEST STANDARD .....	44
TEST DATA .....	45
<b>EXHIBIT A - EUT PHOTOGRAPHS .....</b>	<b>47</b>
<b>EXHIBIT B – TEST SETUP PHOTOGRAPHS.....</b>	<b>61</b>
RADIATED EMISSIONS - FRONT VIEW (BELOW 1GHz) .....	63
RADIATED EMISSIONS - REAR VIEW (BELOW 1GHz) .....	63
ESD TEST SETUP PHOTO .....	64
RS TEST SETUP PHOTO (BELOW 1GHz) .....	64
RS TEST SETUP PHOTO (ABOVE 1GHz) .....	65
EFT/B TEST SETUP PHOTO FOR AC MAINS PORT .....	65
EFT/B TEST SETUP PHOTO FOR RJ45 PORT .....	66
EFT/B TEST SETUP PHOTO FOR SIGNAL PORT-1 .....	66
EFT/B TEST SETUP PHOTO FOR SIGNAL PORT-2 .....	67
SURGE TEST SETUP PHOTO FOR AC MAINS PORT .....	67
CS TEST SETUP PHOTO FOR AC MAINS PORT .....	68
CS TEST SETUP PHOTO FOR RJ45 PORT .....	68
DIPS TEST SETUP PHOTO .....	69

FLICKER TEST SETUP PHOTO .....	69
PFMF TEST SETUP PHOTO.....	70
RADIATED EMISSIONS - FRONT VIEW (BELOW 1GHZ).....	73
RADIATED EMISSIONS - REAR VIEW (BELOW 1GHz).....	73
ESD TEST SETUP PHOTO .....	74
RS TEST SETUP PHOTO (BELOW 1GHz) .....	74
RS TEST SETUP PHOTO (ABOVE 1GHz).....	75
EFT/B TEST SETUP PHOTO FOR AC MAINS PORT .....	75
EFT/B TEST SETUP PHOTO FOR RJ45 PORT .....	76
EFT/B TEST SETUP PHOTO FOR SIGNAL PORT-1 .....	76
EFT/B TEST SETUP PHOTO FOR SIGNAL PORT-2 .....	77
SURGE TEST SETUP PHOTO FOR AC MAINS PORT .....	77
CS TEST SETUP PHOTO FOR AC MAINS PORT .....	78
CS TEST SETUP PHOTO FOR RJ45 PORT .....	78
DIPS TEST SETUP PHOTO .....	79
FLICKER TEST SETUP PHOTO .....	79
PFMF TEST SETUP PHOTO.....	80

## DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Issue
1	RXM200819050-01A	Original Report	2020-09-14
2	RXM220104050-01A	Amended Report	2022-01-11

**Note:**

This is an amended report application based on RXM200819050-01A, the details as below:

1. Changing the applicant to “XonTel Technology Trd. Co. W.L.L”.
2. Changing the address to “Kuwait City, Qibla, Aladel Tower, F21, state of Kuwait. zip code: 13065.”
3. Changing the trade name “Xontel”.
4. Changing model name to “XT-12P”
5. Updated the standard version to “EN 55032:2015+A1:2020, EN 55035:2017+A11:2020  
EN IEC 61000-3-2:2019+A1:2021, EN 61000-3-3:2013+A2:2021”.

For above difference, We Updated the EUT external photographs, all test data and other photos were referred to the original report RXM200819050-01A that issued on 2020-09-14.

## GENERAL INFORMATION

### Product Description for Equipment under Test (EUT)

Applicant:	XonTel Technology Trd. Co. W.L.L
Tested Model:	XT-12P
Product	Door Phone
Power Supply:	DC 12 V from Adapter and DC 48 V from POE
* Highest Operating Frequency:	13.56 MHz

*\*Note 1: The highest operating frequency was provided by the applicant.*

*All measurement and test data in this report was gathered from production sample serial number: 20200819050.  
(Assigned by the BACL(Kunshan). The EUT supplied by the applicant was received on 2020-08-19)*

### Objective

This test report is prepared on behalf of *XonTel Technology Trd. Co. W.L.L.* in accordance with

EN 55032: Electromagnetic compatibility of multimedia equipment - Emission requirements.

EN 55035: Electromagnetic compatibility of multimedia equipment - Immunity requirements.

EN IEC 61000-3-2, Limits - Limits for harmonic current emissions (equipment input current up to and including 16A per phase), and also in accordance with EN 61000-3-3, Limits Section 3; Limitation of voltage fluctuations and flicker in low-voltage supply systems for equipment with rated current<16A.

The objective of the manufacturer is to determine compliance with EN 55032, EN 55035, EN IEC 61000-3-2 and EN 61000-3-3.

### Related Submittal(s)/Grant(s)

No related submittal(s).

## Test Methodology

CISPR 16-1-1:2019, Specification for radio disturbance and immunity measuring apparatus and methods  
Part 1-1: Radio disturbance and immunity measuring apparatus - Measuring apparatus.

CISPR 16-1-4:2019+A1:2020, Specification for radio disturbance and immunity measuring apparatus and methods-Part 1-4: Radio disturbance and immunity measuring apparatus -Antennas and test sites for radiated disturbance measurements

CISPR 16-2-1:2014+COR1:2020, Specification for radio disturbance and immunity measuring apparatus and methods -Part 2-1: Methods of measurement of disturbance and immunity - Conducted disturbance measurements.

CISPR 16-2-3:2016+A1:2019, Specification for radio disturbance and immunity measuring apparatus and methods- Part 2-3: Methods of measurement of disturbances and immunity - Radiated disturbance measurements.

CISPR 16-4-2: 2011+A2:2018+COR1:2019, Specification for radio disturbance and immunity measuring apparatus and methods-Part 4-2: Uncertainties, statistics and limit modeling-Measurement instrumentation uncertainty.

All radiated and conducted emissions measurement was performed at Bay Area Compliance Laboratories Corp. (Kunshan).

## Test Facility

The test site used by Bay Area Compliance Laboratories Corp. (Kunshan) to collect test data is located on the No.248 Chenghu Road, Kunshan, Jiangsu Province, China.

## SYSTEM TEST CONFIGURATION

### Description of Test Configuration

The system was configured for testing in a typical mode (as normally used by a typical user)

*Test Mode1: Camera on + NFC on + LAN Link + Adapter power supply*

*Test Mode2: Camera on + NFC on + LAN Link + POE power supply*

### Equipment Software

No exercise software was used to test.

### Equipment Modifications

No modifications were made to the EUT.

### Support Equipment List and Details

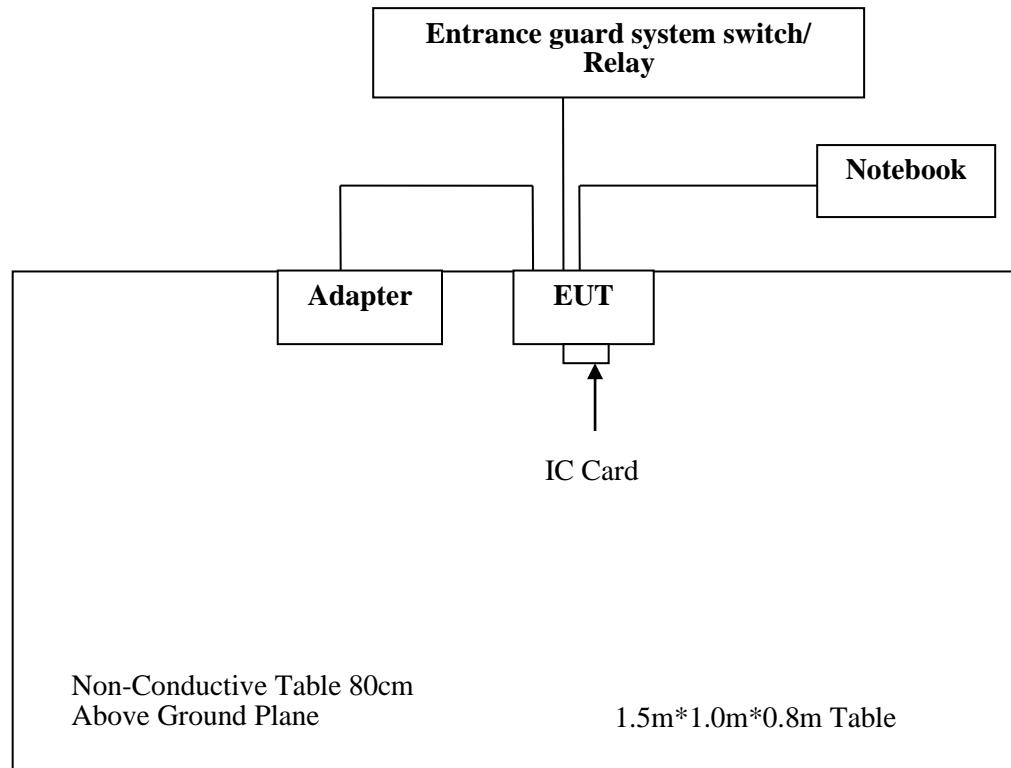
Manufacturer	Description	Model	Serial Number
Channel Well Technology (Guangzhou)	Adapter	2ABF060R	080-638-4327
ORIENTAL HERO ELECTRICITY	Adapter	OH-1015E12010003	/
NETGEAR	POE	GS308P	4F217B5000891
HP	Notebook	4441s	2CE3130VWY
/	IC Card	/	/
Weishi	Entrance guard system	/	/
Fushi	switch	AR22PR-310B	/
Schneider Electric	Relay	RXM2LB2BD	/

## External I/O Cable

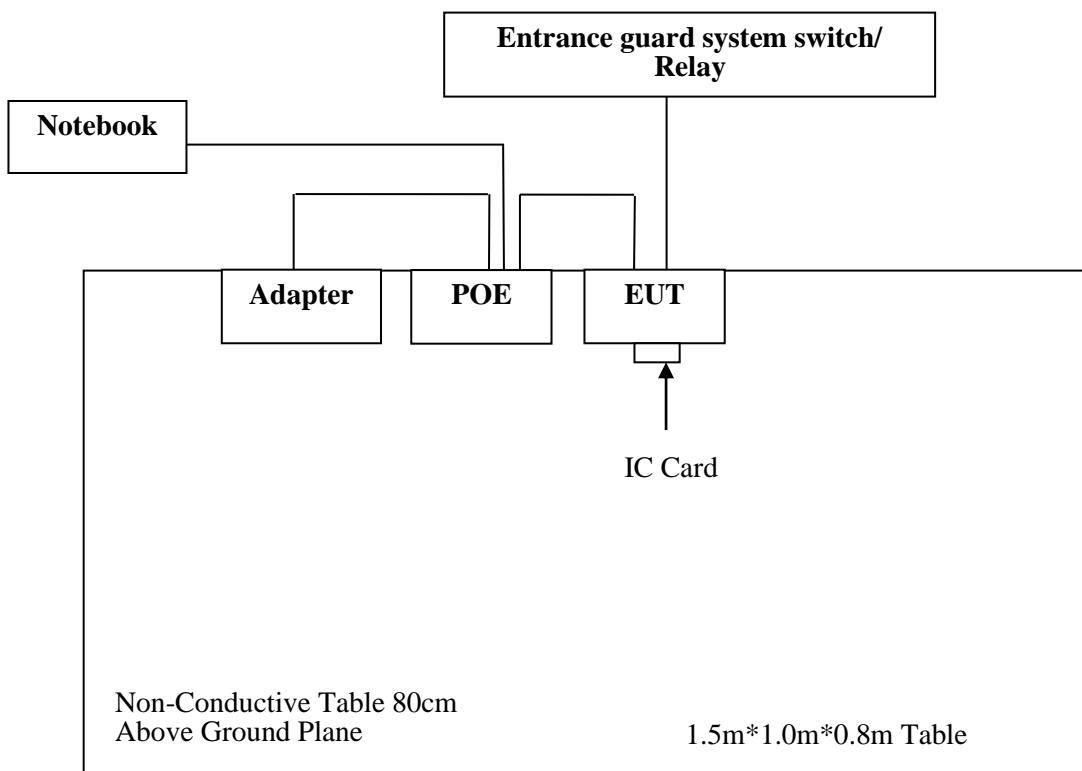
Cable Description	Length (m)	From Port	To
USB Cable	1.0	EUT	Adapter
RJ45 Cable	1.0	EUT	Notebook
Power Cable	1.0	EUT	Entrance guard system switch/ Relay
Power Cable	1.0	EUT	AC Source
Power Cable	1.0	EUT	POE
Power Cable	1.0	POE	Notebook
USB Cable	1.0	POE	Adapter

## Block Diagram of Radiated Test Setup

*Test Mode 1 :*



Test Mode 2 :



## SUMMARY OF TEST RESULTS

### EN 55032

RULE	DESCRIPTION	RESULTS
§ 5	Requirements ,Refer to Annex A A.3 Requirements for conducted emissions	Compliant
§ 5	Requirements ,Refer to Annex A A.2 Requirements for radiated emissions	Compliant

### EN 55035

RULE	DESCRIPTION	RESULTS
§4.2.1	Electrostatic discharges IEC 61000-4-2	Compliant
§4.2.4	Electrical fast transients/burst IEC 61000-4-4	Compliant
§4.2.2.2	Continuous RF electromagnetic field disturbances IEC 61000-4-3	Compliant
§4.2.2.3	Continuous induced RF disturbances IEC 61000-4-6	Compliant
§4.2.3	Power frequency magnetic field IEC 61000-4-8	Compliant
§4.2.5	Surges IEC 61000-4-5	Compliant
§4.2.6	Voltage dips and interruptions IEC 61000-4-11	Compliant

### EN IEC 61000-3-2

RULE	DESCRIPTION	RESULTS
§6, §7	Harmonic Current Emissions	Not Applicable

### EN 61000-3-3

RULE	DESCRIPTION	RESULTS
§5, §6	Voltage Fluctuations and Flicker	Compliant

Not Applicable: The Equipment with a rated power of 75 W or less, other than lighting equipment, are not included in this standard.

## EN 55032 §5 Requirements ,Refer to Annex A A.3 Requirements for Conducted Emissions

### Measurement Uncertainty

Compliance or non- compliance with a disturbance limit shall be determined in the following manner:

If  $U_{\text{lab}}$  is less than or equal to  $U_{\text{cispr}}$  of Table 1, then:

- compliance is deemed to occur if no measured disturbance level exceeds the disturbance limit;
- Non - compliance is deemed to occur if any measured disturbance level exceeds the disturbance limit.

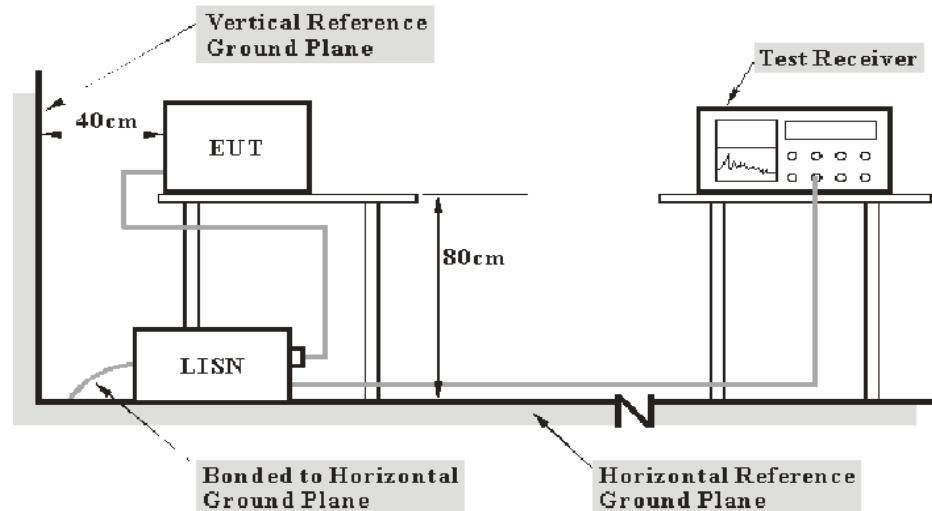
If  $U_{\text{lab}}$  is greater than  $U_{\text{cispr}}$  of Table 1, then:

- compliance is deemed to occur if no measured disturbance level, increased by  $(U_{\text{lab}} - U_{\text{cispr}})$ , exceeds the disturbance limit;
- Non - compliance is deemed to occur if any measured disturbance level, increased by  $(U_{\text{lab}} - U_{\text{cispr}})$ , exceeds the disturbance limit.

Table 1 - Values of  $U_{\text{cispr}}$

Item	Measurement Uncertainty	$U_{\text{cispr}}$
Conducted Emissions	150kHz~30MHz	3.19 dB
	150kHz~30MHz	4.69 dB

### EUT Setup



- Note: 1. Support units were connected to second LISN.  
 2. Both of LISNs (AMIN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

The setup of EUT is according with per EN 55032 measurement procedures. The specification used was with the EN 55032 Class B limits.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle. The spacing between the peripherals was 10 cm.

## EMI Test Receiver Setup

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30 MHz.

During the conducted emission test, the EMI test receiver was set with the following configurations:

Frequency Range	IF B/W
150 kHz - 30 MHz	9 kHz

## Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	EMI Test Receiver	ESR	1316.3003K0 3-101746-zn	2020-07-28	2021-07-27
Rohde & Schwarz	LISN	ENV216	3560655016	2019-11-30	2020-11-29
Audix	Test Software	e3	V9	--	--
MICRO-COAX	Coaxial Cable	Cable-15	015	2020-08-15	2021-08-14
Rohde & Schwarz	Pluse limiter	ESH3-Z2	100552	2020-08-15	2021-08-14
COM-POWER	ISN	ISN-T8	24010012	2020-04-01	2021-03-31

\* **Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Kunshan) attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

## Test Procedure

Maximizing procedure was performed on the six (6) highest emissions of the EUT.

All data was recorded in the Quasi-peak and average detection mode.

## Factor & Over Limit Calculation

The Factor is calculated by adding LISN VDF (Voltage Division Factor), Cable Loss and Attenuator. The basic equation is as follows:

$$\text{Factor (dB)} = \text{LISN VDF (dB)} + \text{Cable Loss (dB)} + \text{Attenuator (dB)}$$

The “Over Limit” column of the following data tables indicates the degree of compliance within the applicable limit. For example, an over limit of -7dB means the emission is 7dB below the limit. The equation for over limit calculation is as follows:

$$\text{Over Limit} = \text{Level} - \text{Limit}$$

## Test Data

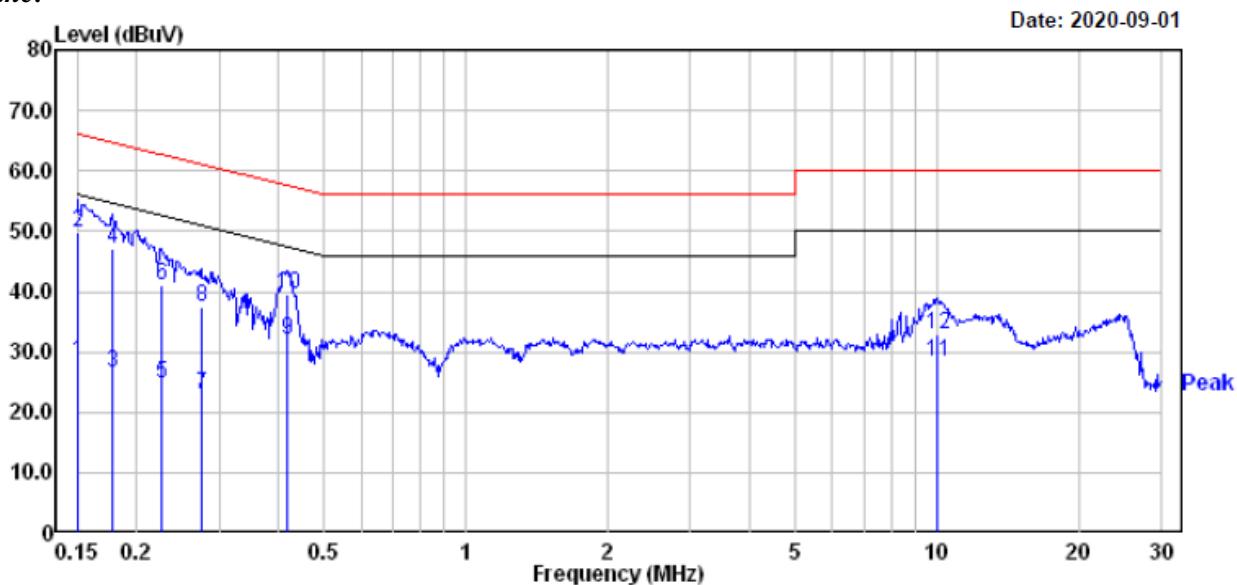
### Environmental Conditions

<b>Temperature:</b>	23.5 °C-24.9 °C
<b>Relative Humidity:</b>	53 %-55 %
<b>ATM Pressure:</b>	101 kPa-102 kPa

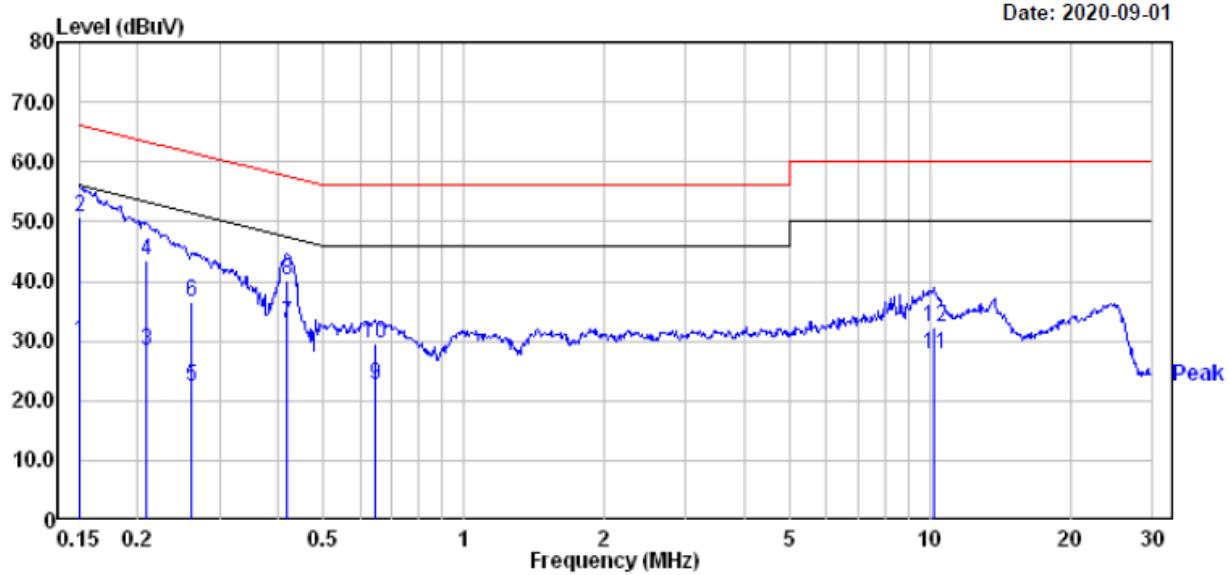
The testing was performed by Jett Zhao on 2020-09-01.

Test Mode1:

**Line:**



Freq	Read			Limit Line	Over Limit	Remark
	MHz	Level dBuV	Factor dB			
1	0.150	8.70	19.82	28.52	56.00	-27.48 Average
2	0.150	30.10	19.82	49.92	66.00	-16.08 QP
3	0.178	6.80	19.83	26.63	54.59	-27.96 Average
4	0.178	27.30	19.83	47.13	64.59	-17.46 QP
5	0.227	4.90	19.82	24.72	52.57	-27.85 Average
6	0.227	21.10	19.82	40.92	62.57	-21.65 QP
7	0.274	3.10	19.82	22.92	50.98	-28.06 Average
8	0.274	17.60	19.82	37.42	60.98	-23.56 QP
9	0.419	12.30	19.74	32.04	47.46	-15.42 Average
10	0.419	19.70	19.74	39.44	57.46	-18.02 QP
11	10.019	8.80	19.56	28.36	50.00	-21.64 Average
12	10.019	13.30	19.56	32.86	60.00	-27.14 QP

***Neutral:***

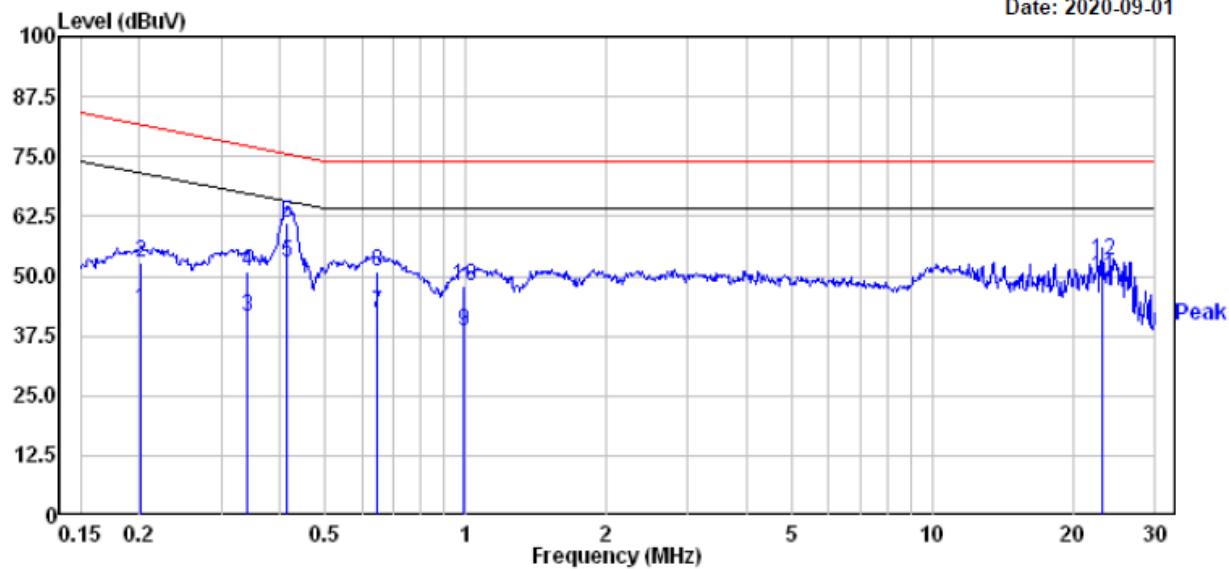
Freq	Read Level	Read Factor		Level	Limit Line	Over Limit	Remark
		MHz	dB				
1	0.150	10.10	19.82	29.92	56.00	-26.08	Average
2	0.150	31.00	19.82	50.82	66.00	-15.18	QP
3	0.209	8.60	19.82	28.42	53.23	-24.81	Average
4	0.209	23.60	19.82	43.42	63.23	-19.81	QP
5	0.262	2.50	19.82	22.32	51.38	-29.06	Average
6	0.262	16.70	19.82	36.52	61.38	-24.86	QP
7	0.419	13.20	19.74	32.94	47.46	-14.52	Average
8	0.419	20.50	19.74	40.24	57.46	-17.22	QP
9	0.644	3.00	19.75	22.75	46.00	-23.25	Average
10	0.644	9.70	19.75	29.45	56.00	-26.55	QP
11	10.179	8.30	19.56	27.86	50.00	-22.14	Average
12	10.179	12.70	19.56	32.26	60.00	-27.74	QP

**Note:**

- 1) Factor (dB) = LISN VDF (dB) + Cable Loss (dB) + Transient Limiter Attenuation (dB)  
 2) Over Limit (dB) = Read level (dB $\mu$ V) + Factor (dB) - Limit (dB $\mu$ V)

**ISN:**

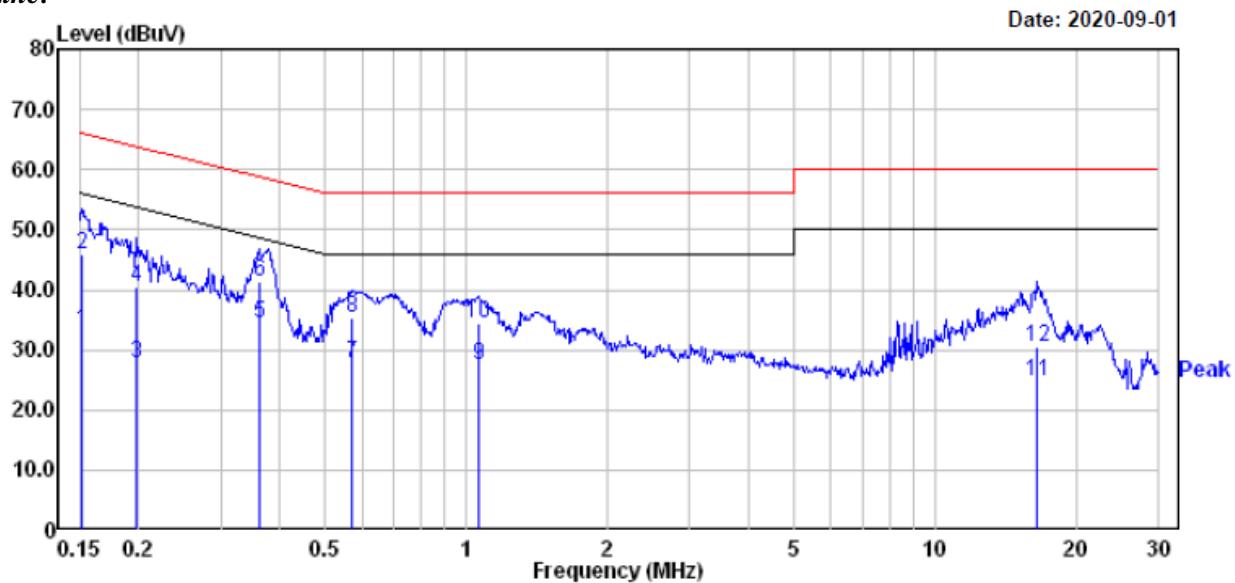
Date: 2020-09-01



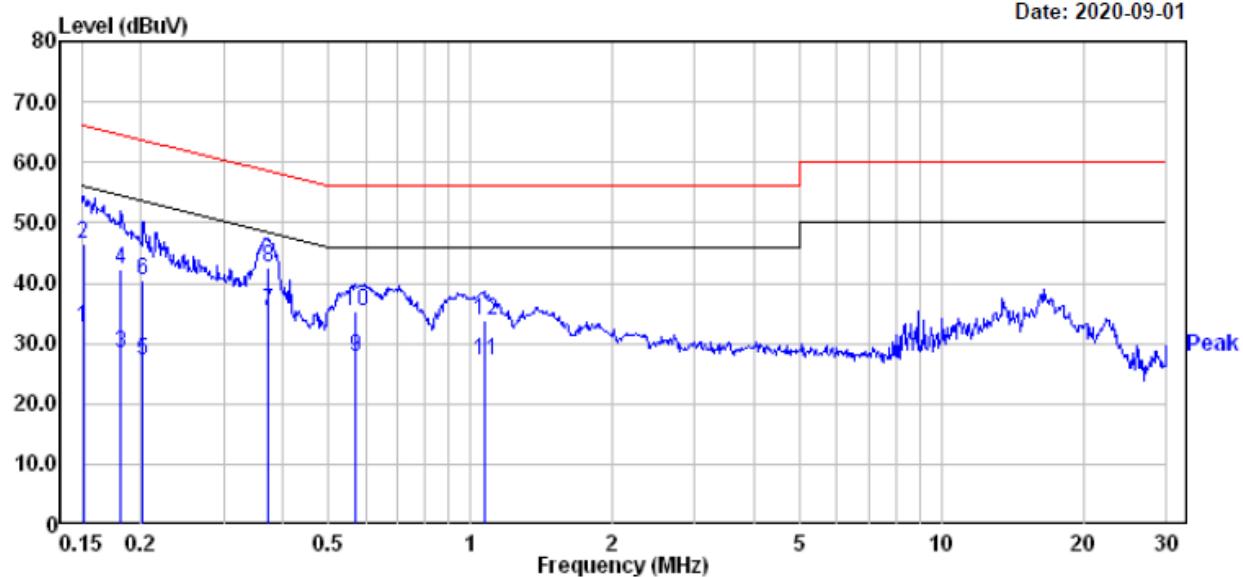
Freq	Read		Limit	Over	Remark		
	Freq	Level	Factor	Level	Line	Limit	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.202	23.20	19.65	42.85	71.54	-28.69	Average
2	0.202	33.30	19.65	52.95	81.54	-28.59	QP
3	0.341	21.69	19.67	41.36	67.18	-25.82	Average
4	0.341	31.19	19.67	50.86	77.18	-26.32	QP
5	0.415	33.30	19.66	52.96	65.55	-12.59	Average
6	0.415	41.60	19.66	61.26	75.55	-14.29	QP
7	0.644	22.70	19.67	42.37	64.00	-21.63	Average
8	0.644	31.40	19.67	51.07	74.00	-22.93	QP
9	0.994	18.80	19.70	38.50	64.00	-25.50	Average
10	0.994	28.20	19.70	47.90	74.00	-26.10	QP
11	23.140	29.50	20.44	49.94	64.00	-14.06	Average
12	23.140	32.70	20.44	53.14	74.00	-20.86	QP

*Test Mode2:*

*Line:*



Freq	Read			Limit	Over	Remark
	MHz	Level	Factor			
1	0.152	13.50	19.68	33.18	55.91	-22.73 Average
2	0.152	26.20	19.68	45.88	65.91	-20.03 QP
3	0.199	8.10	19.65	27.75	53.67	-25.92 Average
4	0.199	20.80	19.65	40.45	63.67	-23.22 QP
5	0.361	14.80	19.66	34.46	48.69	-14.23 Average
6	0.361	21.70	19.66	41.36	58.69	-17.33 QP
7	0.573	8.20	19.67	27.87	46.00	-18.13 Average
8	0.573	15.70	19.67	35.37	56.00	-20.63 QP
9	1.060	7.90	19.70	27.60	46.00	-18.40 Average
10	1.060	14.80	19.70	34.50	56.00	-21.50 QP
11	16.486	4.40	20.22	24.62	50.00	-25.38 Average
12	16.486	10.30	20.22	30.52	60.00	-29.48 QP

***Neutral:***

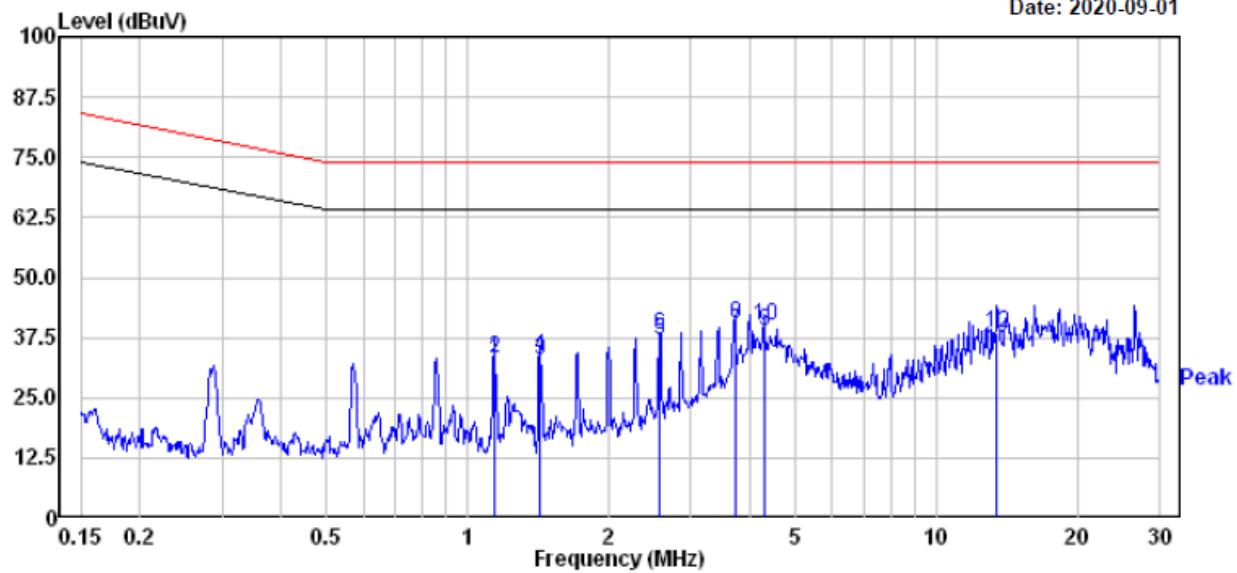
Freq	Read Level	Read Factor		Level	Limit Line	Over Limit	Remark
		MHz	dBuV	dB	dBuV	dBuV	
1	0.151	12.90	19.68	32.58	55.96	-23.38	Average
2	0.151	26.80	19.68	46.48	65.96	-19.48	QP
3	0.182	8.70	19.66	28.36	54.42	-26.06	Average
4	0.182	22.70	19.66	42.36	64.42	-22.06	QP
5	0.202	7.40	19.65	27.05	53.54	-26.49	Average
6	0.202	20.90	19.65	40.55	63.54	-22.99	QP
7	0.373	15.60	19.66	35.26	48.43	-13.17	Average
8	0.373	22.80	19.66	42.46	58.43	-15.97	QP
9	0.573	8.10	19.67	27.77	46.00	-18.23	Average
10	0.573	15.50	19.67	35.17	56.00	-20.83	QP
11	1.071	7.41	19.70	27.11	46.00	-18.89	Average
12	1.071	14.21	19.70	33.91	56.00	-22.09	QP

**Note:**

- 1) Factor (dB) = LISN VDF (dB) + Cable Loss (dB) + Transient Limiter Attenuation (dB)  
 2) Over Limit (dB) = Read level (dB $\mu$ V) + Factor (dB) - Limit (dB $\mu$ V)

**ISN:**

Date: 2020-09-01



Freq	Read			Limit		Over Limit	Remark
	MHz	Level	Factor	Level	Line		
1	1.141	13.10	19.71	32.81	64.00	-31.19	Average
2	1.141	13.50	19.71	33.21	74.00	-40.79	QP
3	1.426	13.00	19.73	32.73	64.00	-31.27	Average
4	1.426	14.00	19.73	33.73	74.00	-40.27	QP
5	2.567	17.20	19.78	36.98	64.00	-27.02	Average
6	2.567	18.50	19.78	38.28	74.00	-35.72	QP
7	3.720	19.00	19.83	38.83	64.00	-25.17	Average
8	3.720	20.60	19.83	40.43	74.00	-33.57	QP
9	4.292	18.91	19.85	38.76	64.00	-25.24	Average
10	4.292	20.21	19.85	40.06	74.00	-33.94	QP
11	13.479	14.60	20.13	34.73	64.00	-29.27	Average
12	13.479	18.30	20.13	38.43	74.00	-35.57	QP

## EN 55032 §5 Requirements ,Refer to Annex A A.2 Requirements for Radiated Emissions

### Measurement Uncertainty

Compliance or non- compliance with a disturbance limit shall be determined in the following manner:

If  $U_{\text{lab}}$  is less than or equal to  $U_{\text{cispr}}$  of Table 1, then:

- compliance is deemed to occur if no measured disturbance level exceeds the disturbance limit;
- Non - compliance is deemed to occur if any measured disturbance level exceeds the disturbance limit.

If  $U_{\text{lab}}$  is greater than  $U_{\text{cispr}}$  of Table 1, then:

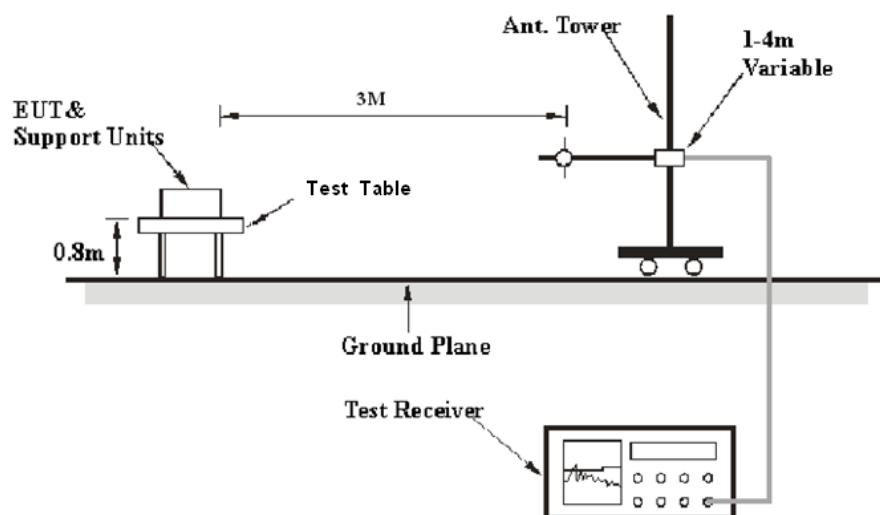
- compliance is deemed to occur if no measured disturbance level, increased by  $(U_{\text{lab}} - U_{\text{cispr}})$ , exceeds the disturbance limit;
- Non - compliance is deemed to occur if any measured disturbance level, increased by  $(U_{\text{lab}} - U_{\text{cispr}})$ , exceeds the disturbance limit.

Table 1 - Values of  $U_{\text{cispr}}$

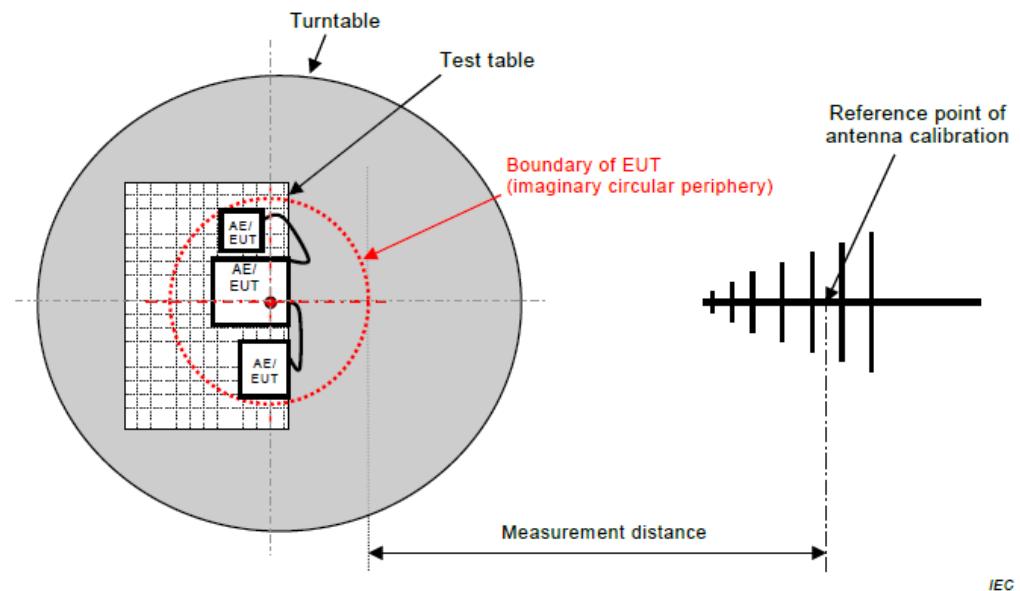
Item	Measurement Uncertainty	$U_{\text{cispr}}$
Radiated Emission	30MHz~1GHz	5.91dB

### Test System Setup

Below 1GHz:



Radiated Top View:



**Figure C.1 – Measurement distance**

The radiated emission tests below 1GHz was performed in the 3 meters chamber test site, above 1GHz were performed in the 3 meters chamber test site, using the setup accordance with the CISPR 16-1-1:2019, CISPR16-1-4: 2019+A1:2020, CISPR 16-2-3: 2016+A1:2019. The specification used was EN 55032 Class B limits.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

The spacing between the peripherals was 10 cm.

### EMI Test Receiver Setup

The system was investigated from 30 MHz to 1 GHz.

During the radiated emission test, the EMI test receiver Setup was set with the following configurations:

Frequency Range	RBW	Video B/W	IF B/W	Detector Type
30MHz - 1000 MHz	120 kHz	300 kHz	120 kHz	QP

## Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Sonoma Instrument	Amplifier	310N	185700	2020-08-14	2021-08-13
Rohde & Schwarz	EMI Test Receiver	ESCI	100195	2019-12-14	2020-12-13
Sunol Sciences	Broadband Antenna	JB3	A060217	2020-08-04	2023-08-03
Champrotek	Chamber 1#	3m-SAC 966	NA	2019-05-08	2022-05-07
Rohde & Schwarz	Auto Test Software	EMC32	100361	-	-
MICRO-COAX	Coaxial Cable	Cable-8	008	2020-08-15	2021-08-14
MICRO-COAX	Coaxial Cable	Cable-9	009	2020-08-15	2021-08-14
MICRO-COAX	Coaxial Cable	Cable-10	010	2020-08-15	2021-08-14

\* **Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Kunshan) attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

## Test Procedure

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

All data was recorded in the Quasi-peak detection mode from 30MHz to 1GHz.

## Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Factor and Cable Loss, and subtracting the Amplifier Gain from the Meter reading. The basic equation is as follows:

$$\text{Corr. Amp.} = \text{Meter Reading} + \text{Antenna Factor} + \text{Cable Loss} - \text{Amplifier Gain}$$

The “Margin” column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of 7dB means the emission is 7dB below the limit. The equation for margin calculation is as follows:

$$\text{Margin} = \text{Limit} - \text{Corrected Amplitude}$$

## Test Data

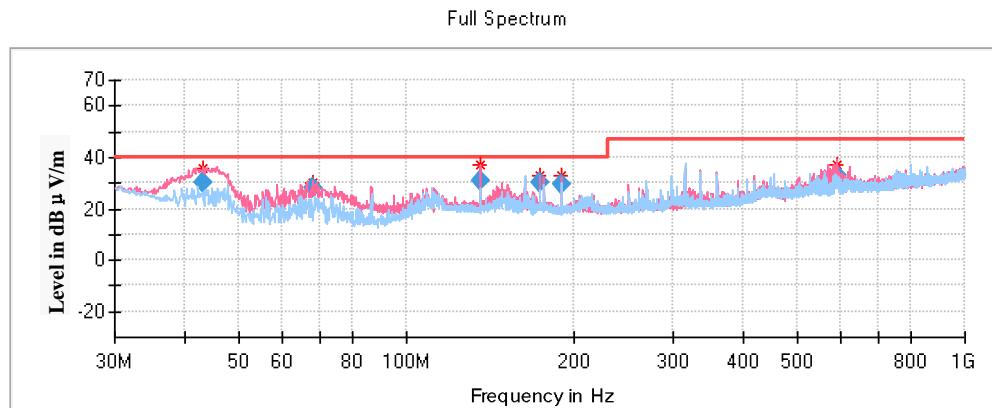
### Environmental Conditions

Temperature:	23.5 °C-24.5 °C
Relative Humidity:	53 %-55 %
ATM Pressure:	101.5 kPa-103.1 kPa

\* The testing was performed by Jett Zhao on 2020-08-28.

*Test mode 1:*

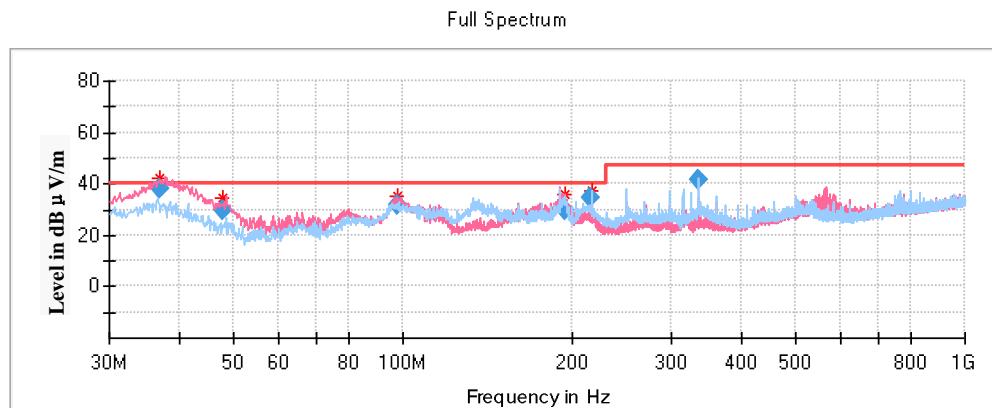
**1) Below 1GHz:**



Frequency (MHz)	Corrected Amplitude	Limit (dB $\mu$ V/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
	QuasiPeak (dB $\mu$ V/m)						
43.329950	30.46	40.00	9.54	100.0	V	0.0	-13.4
67.825800	27.89	40.00	12.11	100.0	V	268.0	-17.9
135.485550	31.06	40.00	8.94	100.0	V	210.0	-12.2
173.191500	30.09	40.00	9.91	100.0	V	335.0	-13.8
189.847100	29.33	40.00	10.67	100.0	V	324.0	-13.4
588.388700	32.59	47.00	14.41	100.0	V	340.0	-5.5

Test mode 2:

**2) Below 1GHz:**



Frequency (MHz)	QuasiPeak (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
36.852200	37.71	40.00	2.29	100.0	V	24.0	-9.0
47.764900	29.35	40.00	10.65	100.0	V	44.0	-16.5
97.700550	31.62	40.00	8.38	100.0	V	65.0	-15.9
194.459100	29.48	40.00	10.52	100.0	V	2.0	-13.4
216.026400	34.66	40.00	5.34	200.0	H	28.0	-12.7
336.041000	41.72	47.00	5.28	100.0	H	25.0	-10.2

## EN 55035 §4.2.1 ELECTROSTATIC DISCHARGE (IEC 61000-4-2)

### Measurement Uncertainty

$U_{\text{lab}}$  (measurement uncertainty of lab) and  $U_{\text{EN}}$  (measurement uncertainty of EN 61000-4-2) please refer to the following:

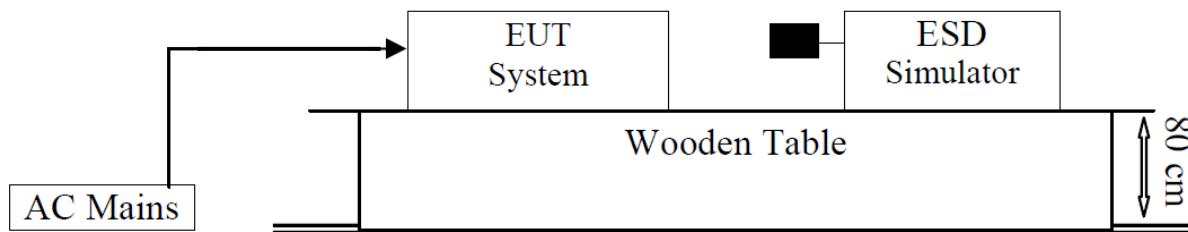
Parameter	$U_{\text{EN}}$	$U_{\text{lab}}$
Rise time $t_r$	$\leq 15\%$	15%
Peak current $I_p$	$\leq 7\%$	6.30%
Current at 30 ns	$\leq 7\%$	6.30%
Current at 60 ns	$\leq 7\%$	6.30%

### Test Equipment

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
TESEQ	ESD Simulator	NSG 438	1079	2020-05-17	2021-05-16

\* **Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Kunshan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

### Test System Setup



Remark: ■ is the tip of the electrode

IEC 61000-4-2 specifies that a tabletop EUT shall be placed on a non-conducting table which is 80 centimeters above a ground reference plane and that floor mounted equipment shall be placed on an insulating support approximately 10 centimeters above a ground plane. During the tests, the EUT is positioned over a ground reference plane in conformance with this requirement.

For tabletop equipment, a 1.6 by 0.8-meter metal sheet (HCP) is placed on the table and connected to the ground plane via a metal strap with two 470 k Ohms resistors in series. The EUT and attached cables are isolated from this metal sheet by *0.5-millimeter* thick insulating material. A Vertical Coupling Plane (VCP) grounded on the ground plane through the same configuration as in the HCP is used.

## Test Standard

EN 55035:2017+A11:2020 (IEC 61000-4-2:2008)

Test level 3 for Air Discharge at  $\pm 8$  kV

Test level 2 for Contact Discharge at  $\pm 4$  kV

## Test Level

Level	Test Voltage Contact Discharge ( $\pm$ kV)	Test Voltage Air Discharge ( $\pm$ kV)
1.	2	2
2.	4	4
3.	6	8
4.	8	15
X.	Special	Special

## Performance criteria: B

## Test Procedure

### Air Discharge:

This test is done on a non-conductive surface. The round discharge tip of the discharge electrode shall be approached as fast as possible to touch the EUT. After each discharge, the discharge electrode shall be removed from the EUT. The generator is then re-triggered for a new single discharge and repeated 10 times for each pre-selected test point. This procedure shall be repeated until all the air discharge completed.

### Contact Discharge:

All the procedure shall be same as Section 8.3.1 of IEC 61000-4-2, except that the tip of the discharge electrode shall touch the EUT before the discharge switch is operated.

### Indirect discharge for horizontal coupling plane:

At least 50 single discharges shall be applied to the horizontal coupling plane, at points on each side of the EUT. The discharge electrode positions vertically at a distance of 0.1 m from the EUT and with the discharge electrode touching the coupling plane.

### Indirect discharge for vertical coupling plane:

At least 50 single discharges shall be applied to the center of one vertical edge of the coupling plane. The coupling plane, of dimensions 0.5m \* 0.5m, is placed parallel to, and positioned at a distance of 0.1m from the EUT. Discharges shall be applied to the coupling plane, with this plane in sufficient different positions that the four faces of the EUT are completely illuminated.

## Test Data

### Environmental Conditions

<b>Temperature:</b>	23.5 °C-24.3 °C
<b>Relative Humidity:</b>	53 %-55 %
<b>ATM Pressure:</b>	101.3 kPa-102 kPa

The testing was performed by Jett Zhao on 2020-08-31.

Test mode1 & 2:

**Table 1: Electrostatic Discharge Immunity (Contact Discharge)**

<b>IEC 61000-4-2 Test Points Location</b>	<b>Test Levels</b>								
	<b>-2 kV</b>	<b>+2 kV</b>	<b>-4 kV</b>	<b>+4 kV</b>	<b>-6 kV</b>	<b>+6 kV</b>	<b>-8 kV</b>	<b>+8 kV</b>	<b>X</b>
1~15	A	A	A	A	A	A	/	/	/

**Table 2: Electrostatic Discharge Immunity (Air Discharge)**

<b>IEC 61000-4-2 Test Points Location</b>	<b>Test Levels</b>								
	<b>-2 kV</b>	<b>+2 kV</b>	<b>-4 kV</b>	<b>+4 kV</b>	<b>-8 kV</b>	<b>+8 kV</b>	<b>-15 kV</b>	<b>+15 kV</b>	<b>X</b>
/	/	/	/	/	/	/	/	/	/

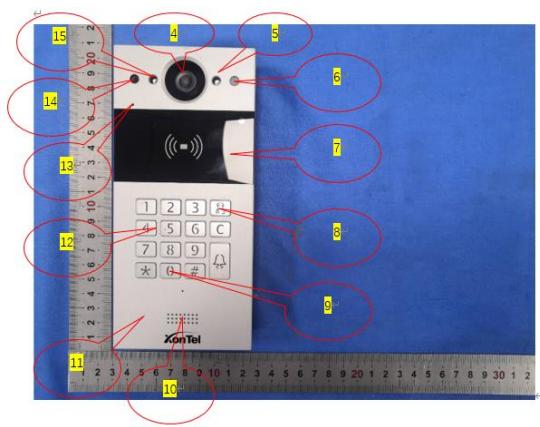
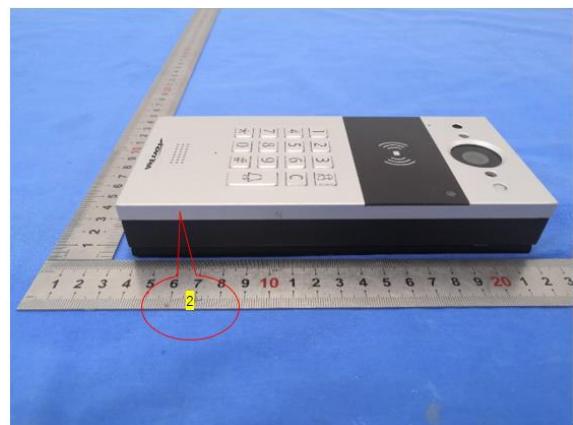
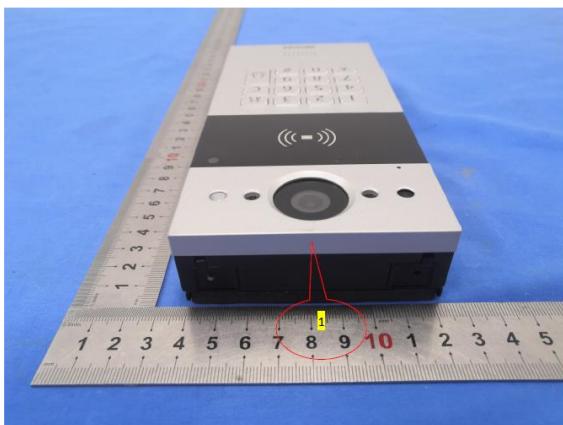
**Table 3: Electrostatic Discharge Immunity (Indirect Contact HCP)**

<b>IEC 61000-4-2 Test Points Location</b>	<b>Test Levels</b>								
	<b>-2 kV</b>	<b>+2 kV</b>	<b>-4 kV</b>	<b>+4 kV</b>	<b>-6 kV</b>	<b>+6 kV</b>	<b>-8 kV</b>	<b>+8 kV</b>	<b>X</b>
Front Side	A	A	A	A	/	/	/	/	/
Back Side	A	A	A	A	/	/	/	/	/
Left Side	A	A	A	A	/	/	/	/	/
Right Side	A	A	A	A	/	/	/	/	/

**Table 4: Electrostatic Discharge Immunity (Indirect Contact VCP)**

<b>IEC 61000-4-2 Test Points Location</b>	<b>Test Levels</b>								
	<b>-2 kV</b>	<b>+2 kV</b>	<b>-4 kV</b>	<b>+4 kV</b>	<b>-6 kV</b>	<b>+6 kV</b>	<b>-8 kV</b>	<b>+8 kV</b>	<b>X</b>
Front Side	A	A	A	A	/	/	/	/	/
Back Side	A	A	A	A	/	/	/	/	/
Left Side	A	A	A	A	/	/	/	/	/
Right Side	A	A	A	A	/	/	/	/	/

Test point as follows:



Note: "A" stands for, during test, operate as intended no loss of function, no degradation of performance, no unintentional transmissions and after test, no degradation of performance, no loss of function, no loss of stored data or user programmable functions.

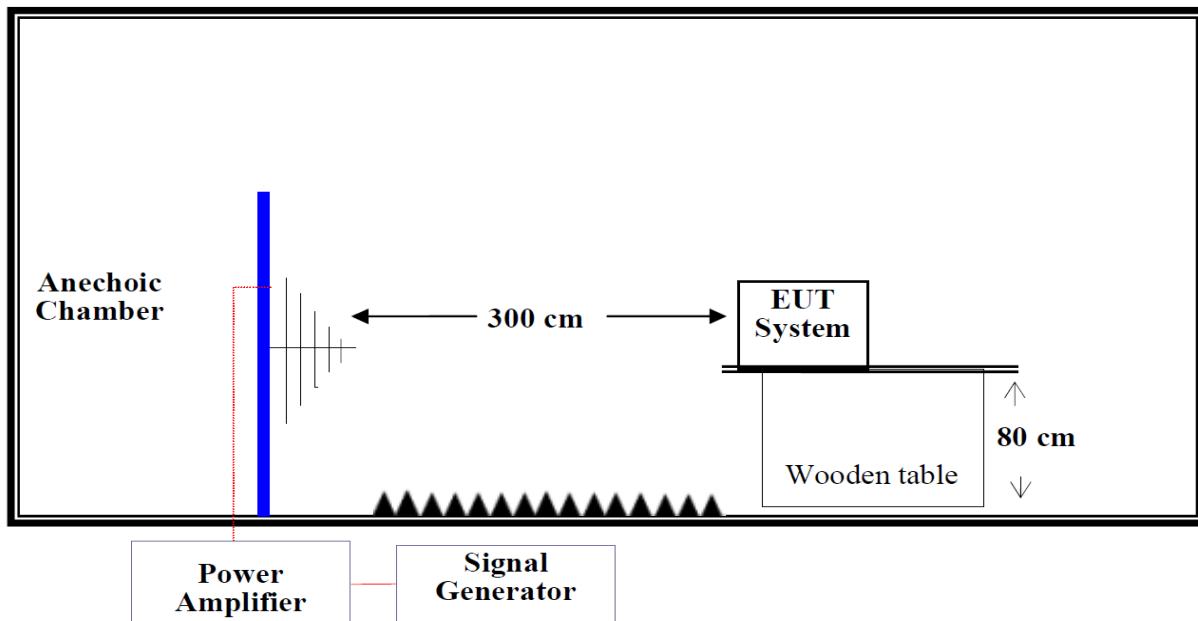
## EN 55035 §4.2.2.2 CONTINUOUS RF ELECTROMAGNETIC FIELD DISTURBANCES (IEC 61000-4-3)

### Test Equipment

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
HP	Signal Generator	E4428C	MY49070179	2020-07-21	2021-07-20
A&R	Power Amplifier	60S1G6	0349442	NCR	NCR
Amplifier Research	Power Amplifier	200W1000M3A	18062	NCR	NCR
Ar	Log Periodic Antenna	ATL80M1G	350122	NCR	NCR
Ar	Log Periodic Antenna	ATT700M12G	350307	NCR	NCR

\* **Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Kunshan) attests that all calibrations have been performed in accordance to requirements, traceable to National Primary Standards and International System of Units (SI).

### Test System Setup



## Test Standard

EN 55035:2017+A11:2020 (IEC 61000-4-3:2020)  
Test level 2 at 3V / m

## Test Level

Level	Field Strength (V/m)
1.	1
2.	3
3.	10
X.	Special

## Performance criteria: A

## Test Procedure

The EUT and its simulators are placed on a turn table which is 0.8 meter above the ground. The EUT is set 3 meters away from the transmitting antenna which is mounted on an antenna tower. Both horizontal and vertical polarizations of the antenna are set on test. Each of the four sides of EUT must be faced this transmitting antenna and measured individually.

In order to judge the EUT performance, a CCD camera is used to monitor the EUT and Notebook.

All the scanning conditions are as follows:

Condition of Test	Remarks
1. Field Strength	3 V/m (Test Level 2)
2. Radiated Signal	AM 80% , 1kHz sin wave
3. Scanning Frequency	80 - 1000 MHz ,
4. Dwell Time	3 Sec.
5. Test step	1%
6. Field Strength	3 V/m (Test Level 2)
7. Radiated Signal	AM 80%, 1kHz sin wave
8. Scanning Frequency	1800MHz, 2600MHz, 3500MHz, 5000MHz
9. Dwell Time	3 Sec.
10. Test step	1%

## Test Data

### Environmental Conditions

<b>Temperature:</b>	23.5 °C-24.3 °C
<b>Relative Humidity:</b>	53 %-55 %
<b>ATM Pressure:</b>	101.3 kPa-102 kPa

The testing was performed by Jett Zhao on 2020-08-30.

Test mode1 & 2:

<b>Frequency Range (MHz)</b>	<b>Front Side (3 V/m)</b>		<b>Rear Side (3 V/m)</b>		<b>Left Side (3 V/m)</b>		<b>Right Side (3 V/m)</b>	
	<b>VERT</b>	<b>HORI</b>	<b>VERT</b>	<b>HORI</b>	<b>VERT</b>	<b>HORI</b>	<b>VERT</b>	<b>HORI</b>
80-1000	A	A	A	A	A	A	A	A
1800	A	A	A	A	A	A	A	A
2600	A	A	A	A	A	A	A	A
3500	A	A	A	A	A	A	A	A
5000	A	A	A	A	A	A	A	A

Note: "A" stand for, during test, operate as intended no loss of function, no degradation of performance, no unintentional transmissions and after test, no degradation of performance, no loss of function or user programmable functions.

## **EN 55035 §4.2.4 ELECTRICAL FAST TRANSIENT/BUSRST (IEC 61000-4-4)**

### **Measurement Uncertainty**

$U_{\text{lab}}$  (measurement uncertainty of lab) and  $U_{\text{EN}}$  (measurement uncertainty of EN 61000-4-4) please refer to the following:

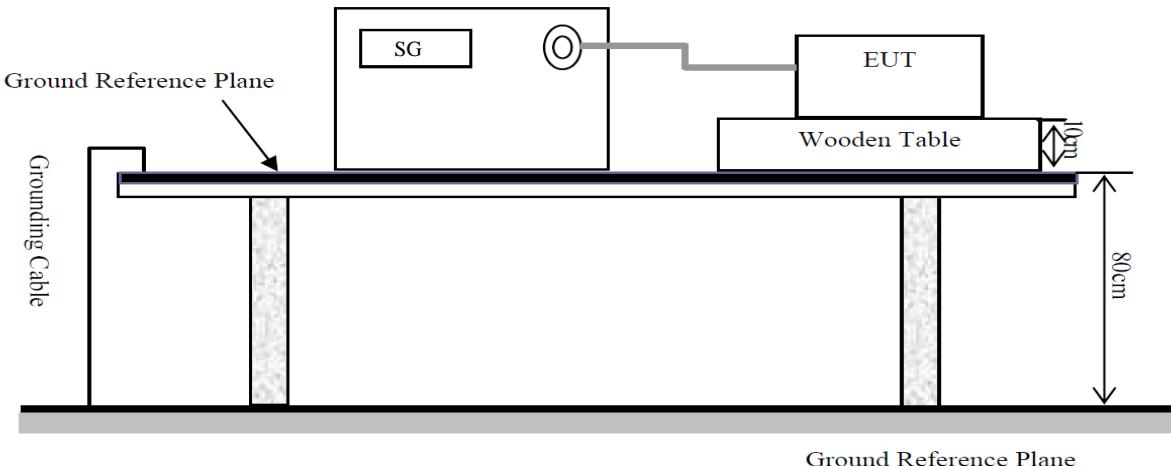
Parameter	$U_{\text{EN}}$	$U_{\text{lab}}$
Rise time $t_r$	6.20%	6.20%
Peak voltage value $V_p$	8.60%	8.60%
Voltage pulse width $t_w$	5.90%	5.90%

### **Test Equipment**

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
EM TEST	Auto Transformer	MV2616	V0939105172	NCR	NCR
EM TEST	Ultra Compact Generator	UCS 500 N5	P1406130994	2020-07-21	2021-07-20
Schaffner	EFT Clamp	CDN 125	240-9219	2020-08-05	2021-08-04

\* **Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Kunshan) attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

### **Test System Setup**



### **Test Standard**

EN 55035:2017+A11:2020 (IEC 61000-4-4:2012)  
AC Mains: Test level 2 at 1 kV  
Signal port: Test level 2 at 0.5 kV

## Test Level

Open Circuit Output Test Voltage ±10%				
Level	Power ports,earth port(PE)		Signal and control ports	
	Voltage(kV)	Repetition frequency(kHz)	Voltage(kV)	Repetition frequency(kHz)
1	0.5	5 or 100	0.25	5 or 100
2	1		0.5	
3	2		1	
4	4		2	
X	Special	Special	Special	Special

## Performance Criterion: B

### Test Procedure

The EUT was arranged for Power Line Coupling and for I/O Line Coupling through a capacitive clamp, where applicable. (Note: The I/O coupling test using a capacitive clamp is performed on the I/O interface cables that are longer in length than 3 meters.) A metal ground plane 2.4 meter by 2.0 meter was placed between the floor and the table and is connected to the earth by a 2.0 meter ground rod. The ground rod is connected to the test facility's electrical earth.

### Test Data

Temperature:	23.5 °C-24.3 °C
Relative Humidity:	53 %-55 %
ATM Pressure:	101.3 kPa-102 kPa

*The testing was performed by Jett Zhao on 2020-08-31.*

*Test mode1 & 2:*

<b>IEC 61000-4-4 Test Points</b>		<b>Test Levels (kV) Repetition frequency(5kHz)</b>							
		+0.5	-0.5	+1.0	-1.0	+2.0	-2.0	+4.0	-4.0
AC Mains Power Input Ports	L	/	/	A	A	/	/	/	/
	N	/		A	A	/			
	L-N	/		A	A	/			
	L-PE	/	/	A	A	/	/	/	/
	N-PE	/	/	A	A	/	/	/	/
	L-N-PE	/	/	A	A	/	/	/	/
Signal Port	RJ45 Port	A	A	/	/	/	/	/	/
	Signal Port	A	A						

Note: "A" stand for, during test, operate as intended no loss of function, no degradation of performance, no unintentional transmissions and after test, no degradation of performance, no loss of function or user programmable functions.

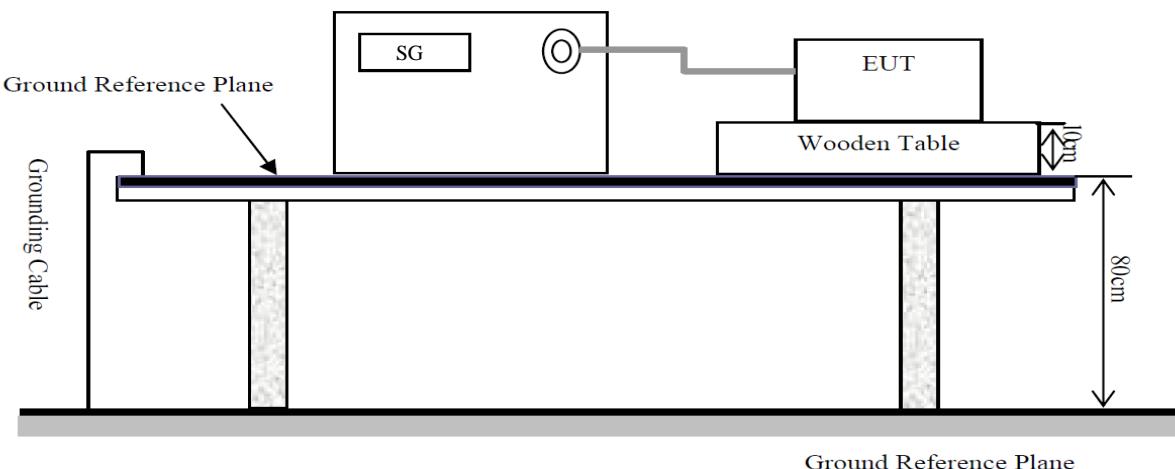
## EN 55035 §4.2.5 SURGES (IEC 61000-4-5)

### Test Equipment

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
EM TEST	Auto Transformer	MV2616	V0939105172	NCR	NCR
EM TEST	Ultra Compact Generator	UCS500-N	P1406130994	2020-07-21	2021-07-20
EM TEST	CDN	CNV 504N	V0939105174	2019-12-21	2020-12-20

\* **Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Kunshan) attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

### Test System Setup



### Test Standard

EN 55035:2017+A11:2020 (IEC 61000-4-5:2014)

AC Mains: L-N: Test level 3 at 1 kV

L-PE; N-PE: Test level 3 at 2 kV

Signal Port: Test level 1 at 0.5 kV

### Test Level

Level	Open Circuit Output Test Voltage $\pm 10\%$ (kV)		Performance Criterion	
	Line-to-line	Line-to-ground	AC Mains	Signal Port
1	---	0.5	---	B
2	0.5	1	---	---
3	1	2	B	---
4	2	4	---	---
X	Special	Special	---	---

## Test Procedure

- 1) For line to line coupling mode, provide a 1 kV 1.2/50us voltage surge (at open-circuit condition).
- 2) At least 5 positive and 5 negative (polarity) tests with a maximum 1/min repetition rate are conducted during test.
- 3) Different phase angles are done individually.
- 4) Record the EUT operating situation during compliance test and decide the EUT immunity criterion for above each test.

## Test Data

### Environmental Conditions

<b>Temperature:</b>	23.5 °C-24.3 °C
<b>Relative Humidity:</b>	53 %-55 %
<b>ATM Pressure:</b>	101.3 kPa-102 kPa

The testing was performed by Jett Zhao on 2020-08-31.

Test mode1 & 2:

IEC61000-4-5 Test Points		Test Levels (kV)							
		+0.5	-0.5	+1.0	-1.0	+2.0	-2.0	+4.0	-4.0
AC Mains Power Input Ports	L-N	/	/	A	A	/	/	/	/
	L-PE	/	/	/	/	A	A	/	/
	N-PE	/	/	/	/	A	A	/	/
Signal port	RJ45 port	/	/	/	/	/	/	/	/

Note:

“A” stand for, during test, operate as intended no loss of function, no degradation of performance, no unintentional transmissions and after test, no degradation of performance, no loss of function or user programmable functions

The cable is used for indoor connections and the length is shorter than 30m. The surge of the network port is not tested.

## EN 55035 §4.2.2.3 CONTINUOUS INDUCED RF DISTURBANCES (IEC 61000-4-6)

### Measurement Uncertainty

$U_{\text{lab}}$  (measurement uncertainty of lab) and  $U_{\text{EN}}$  (measurement uncertainty of EN 61000-4-6) please refer to the following:

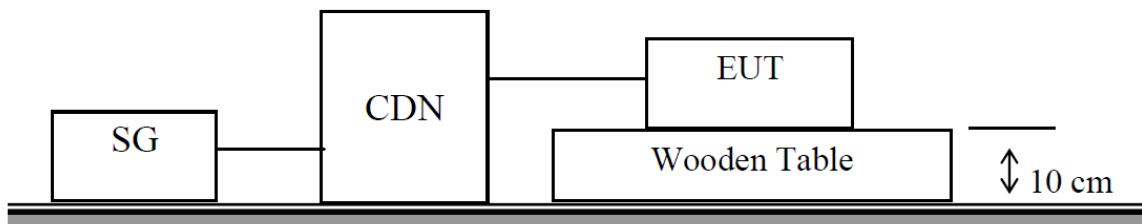
Parameter	$U_{\text{EN}}$	$U_{\text{lab}}$
CDN calibration process	1.27 dB	1.27 dB
CDN test process	1.36 dB	1.36 dB

### Test Equipment

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Agilent	Signal Generator	8648C	3537A01810	2020-07-21	2021-07-20
R&S	Power Amplifier	500A100M2	18117	NCR	NCR
Dressler	Attenuator	ATT 6/75	510020010004	NCR	NCR
COM-POWER	CDN	CDN M325E	521164	2020-02-14	2021-02-13
EM TEST	CDN	T8RJ45	1101-04	2020-07-21	2021-07-20

\* **Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Kunshan) attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

### Test Setup



### Test Standard

EN 55035:2017+A11:2020 (IEC 61000-4-6:2013)  
Test level 2 at 3 V (r.m.s.), 0.15 MHz ~ 10 MHz,  
Test level X at 3 V -1V(r.m.s.), 10 MHz ~ 30 MHz,  
Test level 1 at 1 V (r.m.s.), 30 MHz ~ 80 MHz

**Test Level**

<b>Level</b>	<b>Voltage Level (r.m.s.) (U<sub>0</sub>)</b>
1	1
2	3
3	10
X	Special

**Performance Criterion: A****Test Procedure**

- 1) Let the EUT work in test mode and test it.
- 2) The EUT are placed on an insulating support 0.1 m high above a ground reference plane. CDN (coupling and decoupling device) is placed on the ground plane about 0.3 m 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).
- 3) The disturbance signal described below is injected to EUT through CDN.
- 4) The EUT operates within its Charingal mode(s) under intended climatic conditions after power on.
- 5) The frequency range is swept from 150 kHz to 80 MHz using 3V signal level, and with the disturbance signal 80% amplitude modulated with a 1 kHz sine wave.
- 6) The rate of sweep shall not exceed 1.5\*10-3decades/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.
- 7) Recording the EUT operating situation during compliance testing and decide the EUT immunity criterion.

**Test Data****Environmental Conditions**

<b>Temperature:</b>	23.5 °C-24.3 °C
<b>Relative Humidity:</b>	53 %-55 %
<b>ATM Pressure:</b>	101.3 kPa-102 kPa

*The testing was performed by Jett Zhao on 2020-08-31.*

*Test mode1 & 2:*

IEC 61000-4-6 Test Ports	Test equipment	Frequency Range (MHz)	Voltage Level (e.m.f.) U0			
			1V	3V	10V	3V~1V
AC mains power input ports	M3	0.15~10	/	A	/	/
		10~30	/	/	/	A
		30~80	A	/	/	/
Signal ports	RJ45 port	0.15~10	/	A	/	/
	RJ45 port	10~30	/	/	/	A
	RJ45 port	30~80	A	/	/	/
	Signal port	0.15~10	/	A	/	/
	Signal port	10~30	/	/	/	A
	Signal port	30~80	A	/	/	/

Note: "A" stand for, during test, operate as intended no loss of function, no degradation of performance, no unintentional transmissions and after test, no degradation of performance, no loss of function or user programmable functions.

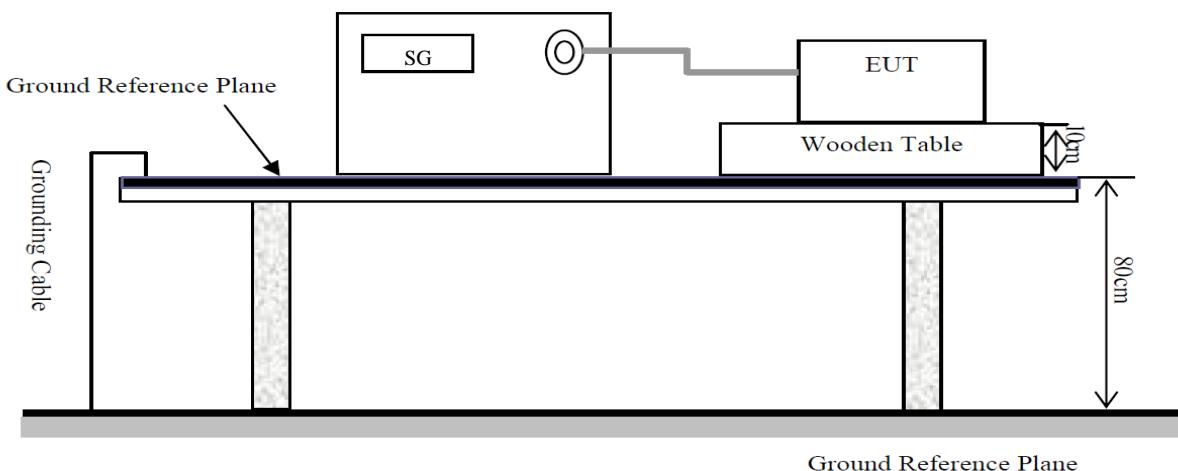
## EN 55035 §4.2.6 VOLTAGE DIPS AND INTERRUPTIONS (IEC 61000-4-11)

### Test Equipment

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
EM TEST	Auto Transformer	MV2616	V0939105172	NCR	NCR
EM TEST	Ultra Compact Generator	UCS500-N5	P1406130994	2020-07-21	2021-07-20

\* **Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Kunshan) attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

### Test Setup



### Test Standard

EN 55035:2017+A11:2020 (IEC 61000-4-11:2020+COR1:2020)  
Test levels and Performance Criterion

### Test Level

Test Level	Test Level	Cycle	Performance criterion
1	Voltage dips : <5 % residual voltage	0.5	B
2	Voltage dips : 70 % residual voltage	25/30	C
3	Voltage interruptions : <5 % residual voltage	250/300	C

## Test Procedure

- 1) The interruption is introduced at selected phase angles with specified duration.
- 2) Record any degradation of performance.

## Test Data

### Environmental Conditions

<b>Temperature:</b>	23.5 °C-24.3 °C
<b>Relative Humidity:</b>	53 %-55 %
<b>ATM Pressure:</b>	101.3 kPa-102 kPa

The testing was performed by Jett Zhao on 2020-08-31.

Test mode1 & 2:

Test Level	Cycle	Phase Angle	Result
Voltage dip : 0 % residual voltage	0.5	0°	A
Voltage dip : 70 % residual voltage	25	0°	A
Voltage interruptions : 0 % residual voltage	250	0°/90°/270°	C

Note:

“A” stand for, during test, operate as intended no loss of function, no degradation of performance, no unintentional transmissions and after test, no degradation of performance, no loss of function or user programmable functions.

“C” stand for, during the test, In case of short-time voltage interruption, power failure will occur. After manual restart, it can work normally without loss of function.

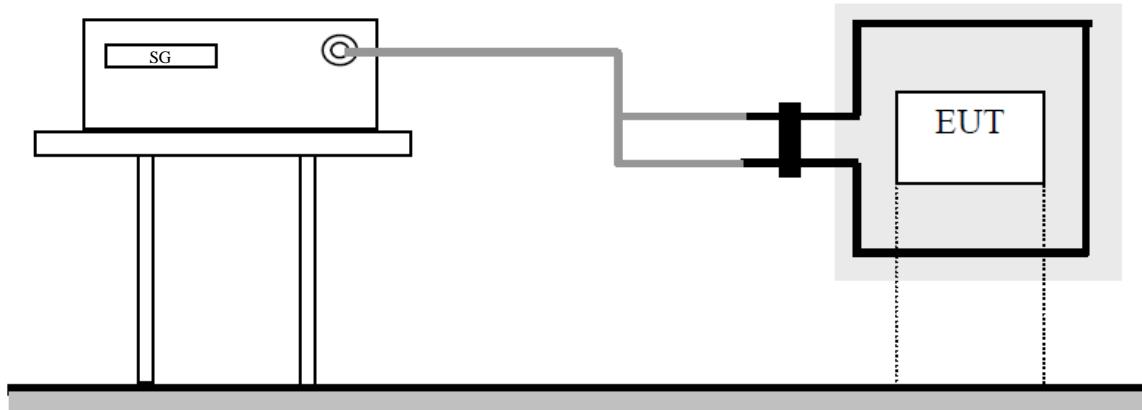
## **EN 55035 §4.2.3 POWER FREQUENCY MAGNETIC FIELD (IEC 61000-4-8)**

### **Test Equipment**

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
EM TEST	Loop Antenna	MS100	P1334123835	2020-02-14	2021-02-13
EM TEST	Current Transformer	MC2630	P1303109259	2019-02-14	2022-02-13
EM TEST	AC Power Source	ACS 500N	P1251107475	2019-11-30	2020-11-29

\* **Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Kunshan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

### **Test Setup**



### **Test Standard**

EN 55035:2017 (IEC 61000-4-8:2009)  
Test level 1 at 1 A/m

### **Test Level**

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

### **Performance Criteria: A**

## Test Procedure

The EUT shall be subjected to the test magnetic field by using the induction coil of standard dimensions (1 m\*1 m). The induction coil shall then be rotated by 90° in order to expose the EUT to the test field with different orientations.

## Test Data

### Environmental Conditions

Temperature:	24.3 °C
Relative Humidity:	55 %
ATM Pressure:	102 kPa

The testing was performed by Jett Zhao on 2020-08-31.

Test mode1 &2:

Level	Magnetic Field Strength A/m	X (Horizontal)	Y (Vertical)	Z (Special)
1	1	A	A	A
2	3	/	/	/
3	10	/	/	/
4	30	/	/	/
5	100	/	/	/
X	Special	/	/	/

Note: "A" stand for, during test, operate as intended no loss of function, no degradation of performance, no unintentional transmissions and after test, no degradation of performance, no loss of function or user programmable functions.

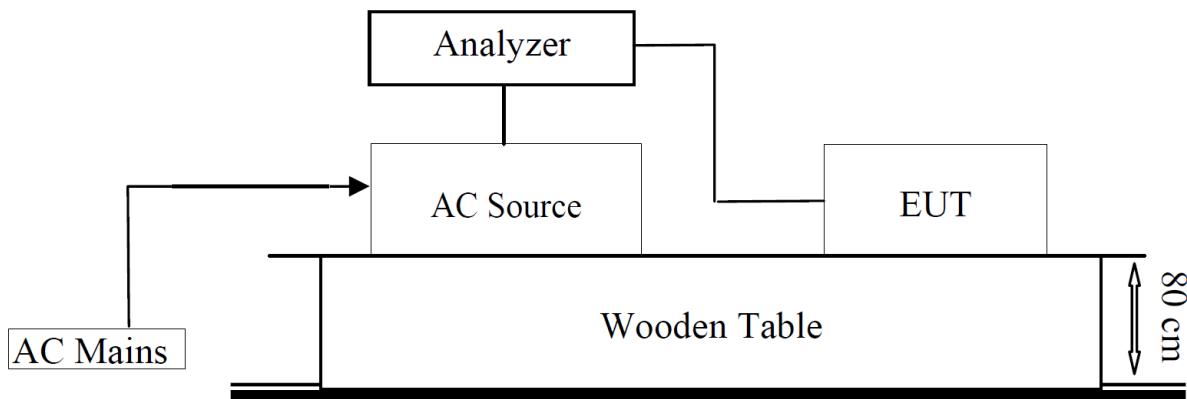
## EN 61000-3-3 VOLTAGE FLUCTUATION AND FLICKER

### Test Equipment

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
EM TEST	Harmonic & Flicker Analyzer	DPA 500N	P1402129120	2019-11-12	2020-11-11
EM TEST	AC Power Source	ACS 500N	P1251107475	2019-11-12	2020-11-11

\* **Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Kunshan) attests that all calibrations have been performed in accordance to requirements, traceable to National Primary Standards and International System of Units (SI).

### Test System Setup



### Test Standard

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

### Flicker Test Limits:

The limits shall be applicable to voltage fluctuations and flicker at the supply terminals of the equipment under test, measured or calculated according to clause 4 under test conditions described in clause 6 and annex A. Tests made to prove compliance with the limits are considered to be type tests.

The following limits apply:

- the value of  $P_{st}$  shall not be greater than 1,0;
- the value of  $P_{lt}$  shall not be greater than 0,65;
- the  $T_{max}$ , the accumulated time value of  $d(t)$  with a deviation exceeding 3,3 % during a single voltage change at the EUT terminals, shall not exceed 500 ms;
- the relative steady-state voltage change,  $dc$ , shall not exceed 3,3 %;
- the maximum relative voltage change  $d_{max}$ , shall not exceed
  - a) 4 % without additional conditions;
  - b) 6 % for equipment which is:
    - switched manually;
    - switched automatically more frequently than twice per day, and also has either a delayed restart (the delay being not less than a few tens of seconds), or manual restart, after a power supply interruption.

Note: The cycling frequency will be further limited by the Pst and Plt limit. For example: a dmax of 6 % producing a rectangular voltage change characteristic twice per hour will give a Plt of about 0.65. c) 7 % for equipment which is - attended whilst in use (for example: hair dryers, vacuum cleaners, kitchen equipment such as mixers, garden equipment such as lawn mowers, portable tools such as electric drills), or- switched on automatically, or is intended to be switched on manually, no more than twice per day, and also has either a delayed restart (the delay being not less than a few tens of seconds) or manual restart, after a power supply interruption.

In the case of equipment having several separately controlled circuits in accordance with 6.6, limits b) and c) shall apply only if there is delayed or manual restart after a power supply interruption; for all equipment with automatic switching which is energized immediately on restoration of supply after a power supply interruption, limits a) shall apply; for all equipment with manual switching, limits b) or c) shall apply depending on the rate of switching. Pst and Plt requirements shall not be applied to voltage changes caused by manual switching. The limits shall not be applied to voltage changes associated with emergency switching or emergency interruptions.

## Test Data

### Environmental Conditions

<b>Temperature:</b>	23.5 °C
<b>Relative Humidity:</b>	53 %
<b>ATM Pressure:</b>	101.5 kPa

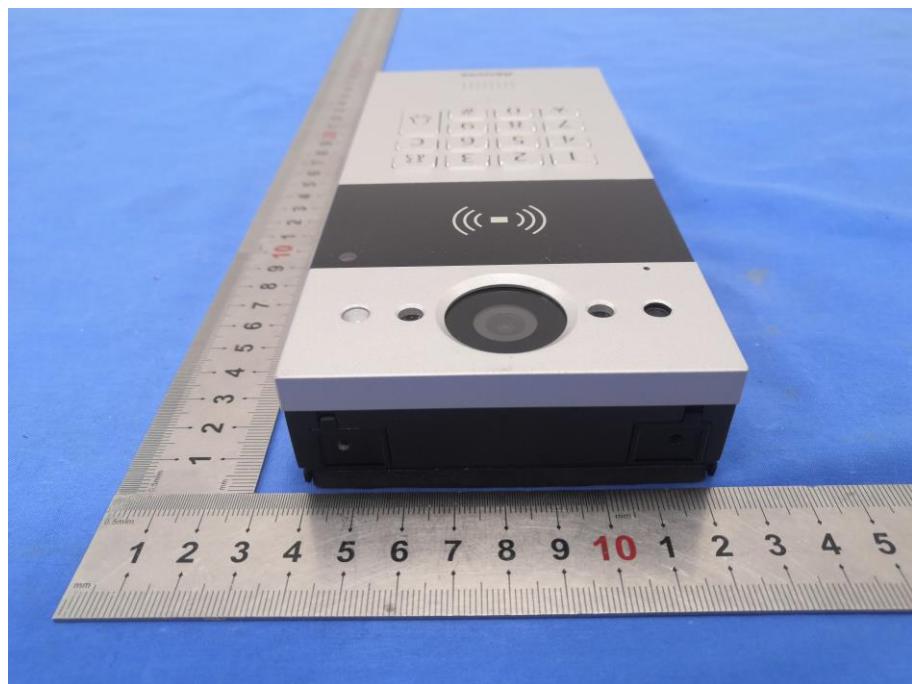
<b>Date of test:</b>	12:15 5.Sept 2020
<b>Tester:</b>	Jett Zhao
<b>Standard used:</b>	EN/IEC 61000-3-3 Ed.3 Flicker
<b>Short time (Pst):</b>	10 min
<b>Observation time:</b>	120 min (12 Flicker measurement)
<b>Flicker meter:</b>	230V / 50Hz
<b>Flicker Impedance:</b>	Zref (IEC 60725)
<b>Customer:</b>	AKUVOX (XIAMEN) NETWORKS CO., LTD.
<b>E. U. T.:</b>	Door Phone
<b>Model:</b>	XT-12P
<b>EUT operation mode</b>	<i>Test Model &amp; Test Mode2</i>

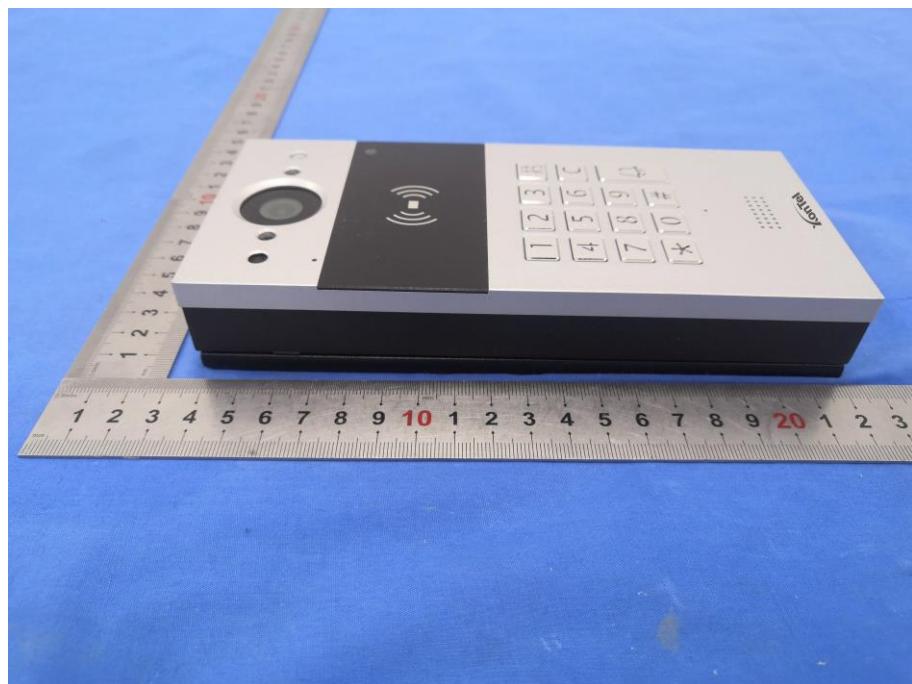
### Maximum Flicker results

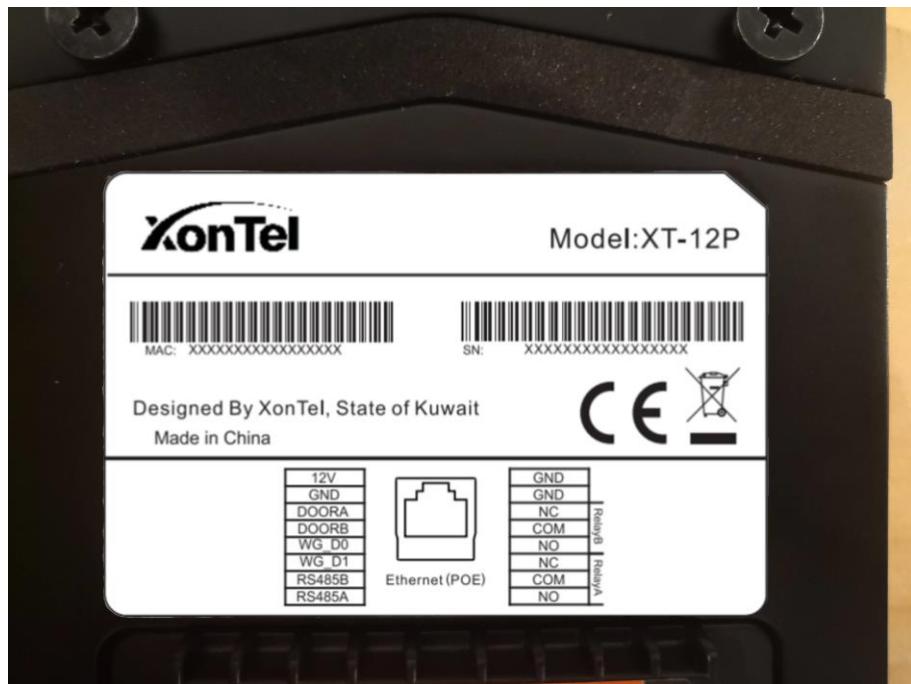
	EUT values	Limit	Result
Pst	0.047	1.00	Pass
Plt	0.047	0.65	Pass
dc [%]	0.275	3.30	Pass
dmax [%]	0.297	7.00	Pass
Tmax [s]	0.000	0.50	Pass

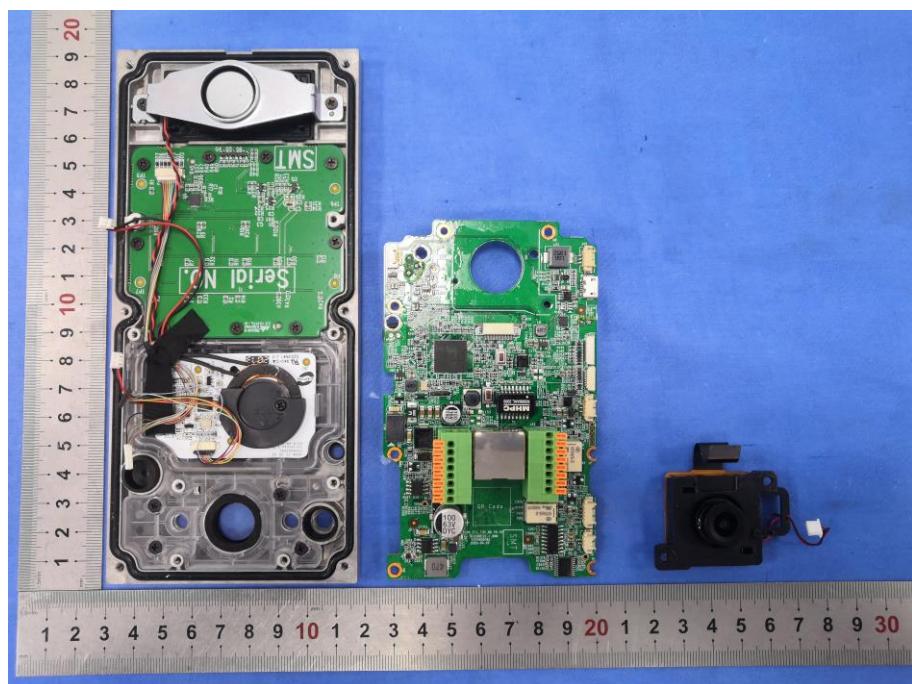
## EXHIBIT A - EUT PHOTOGRAPHS

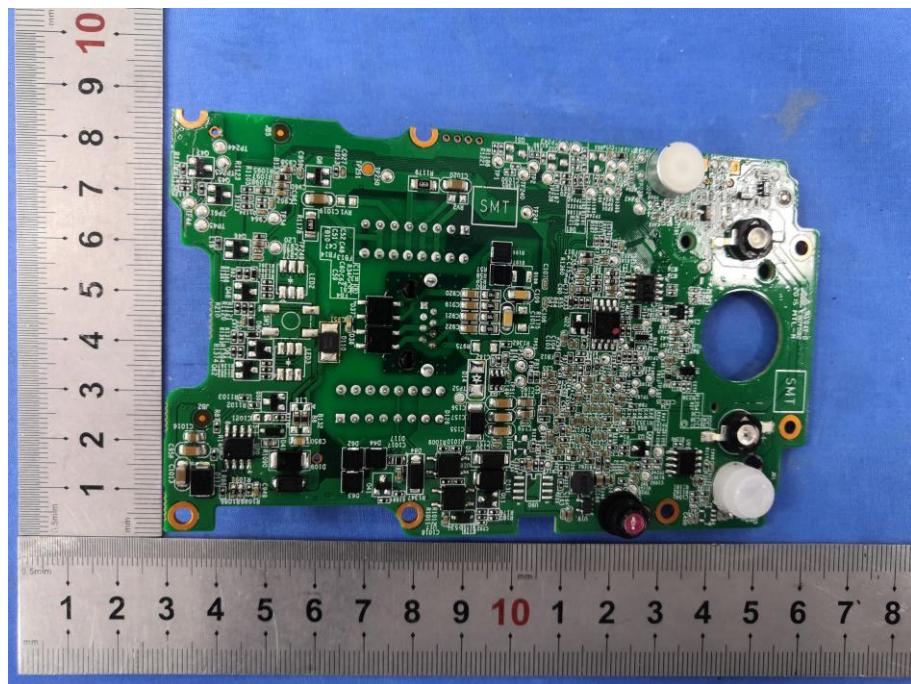
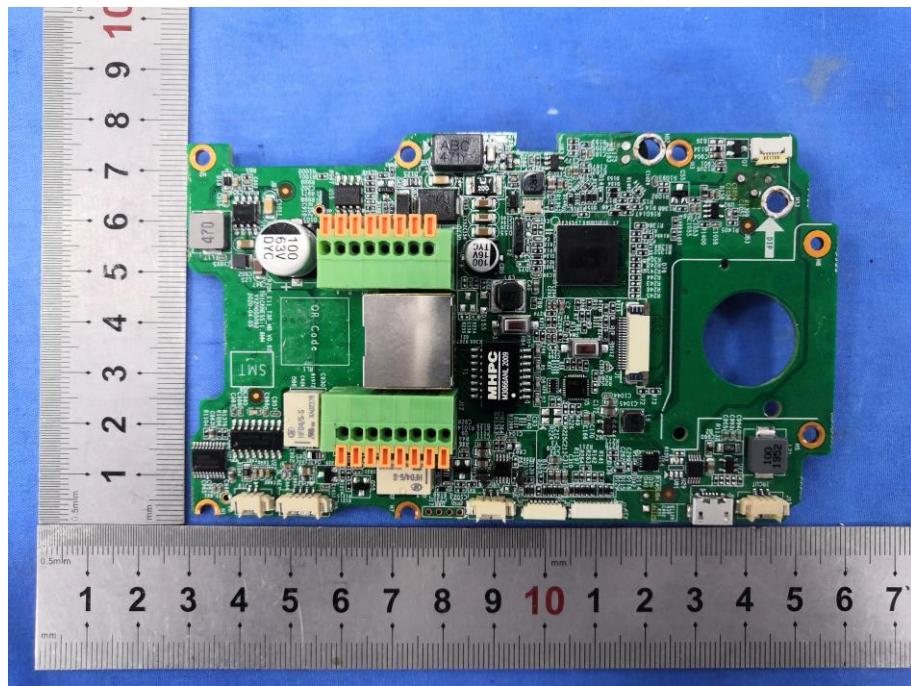


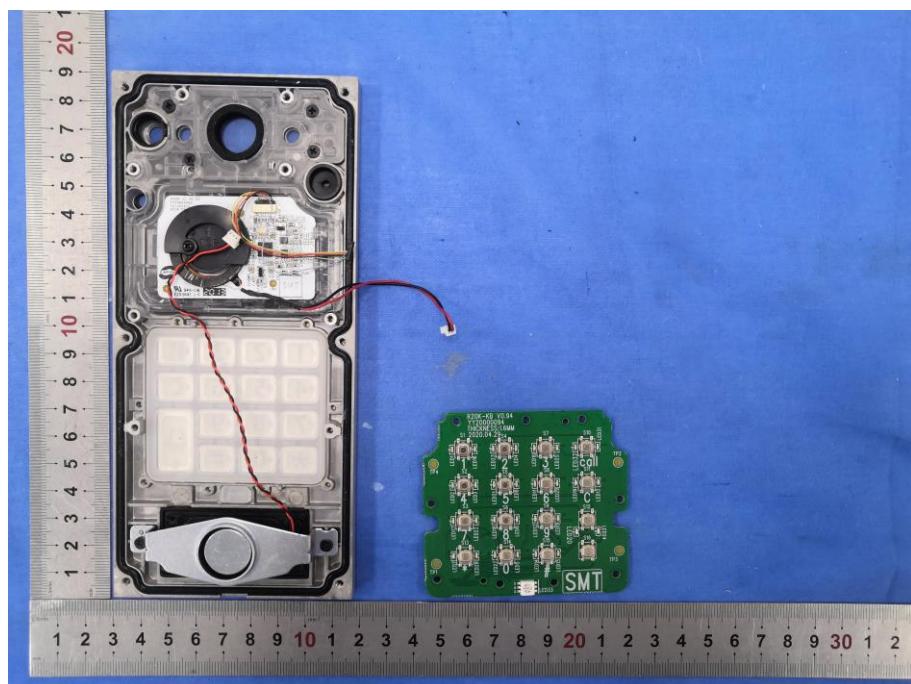
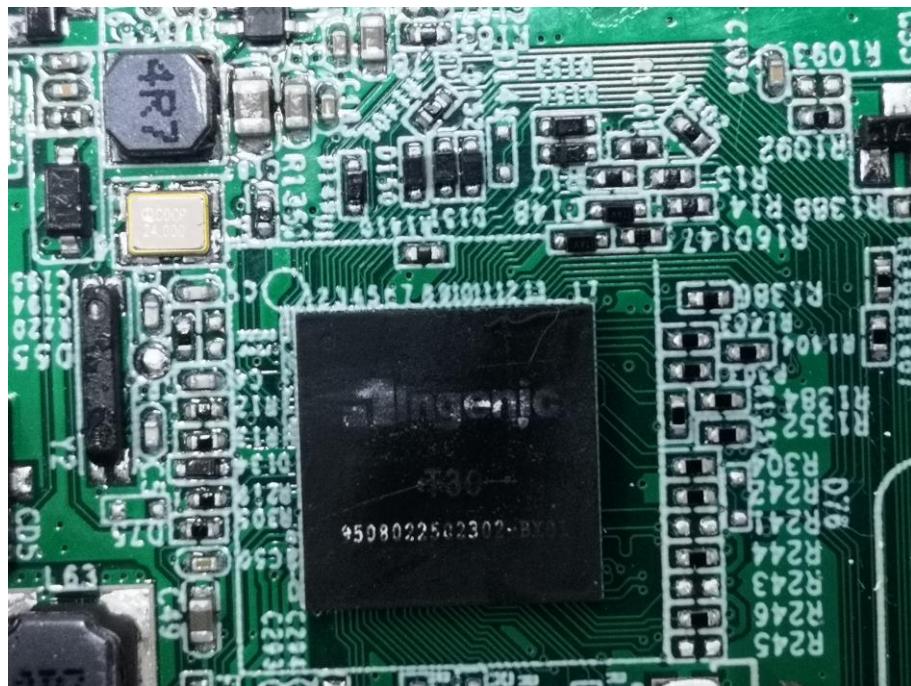


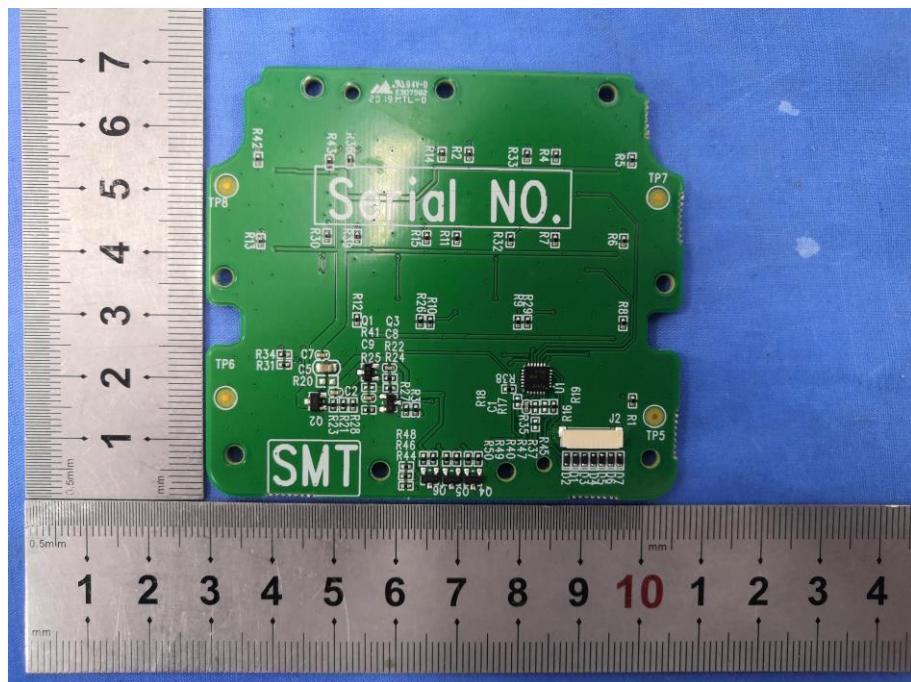
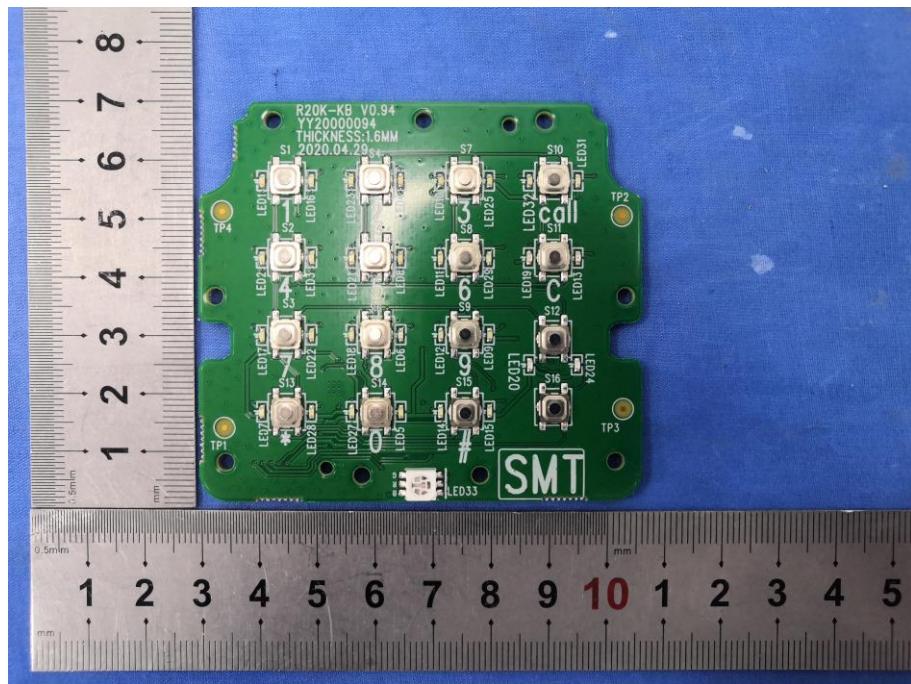


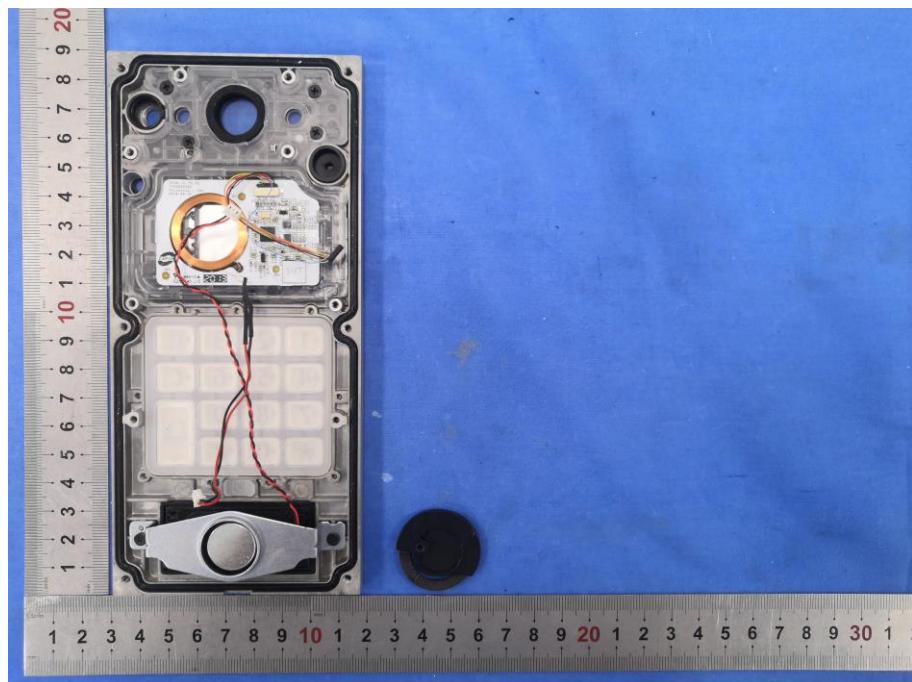
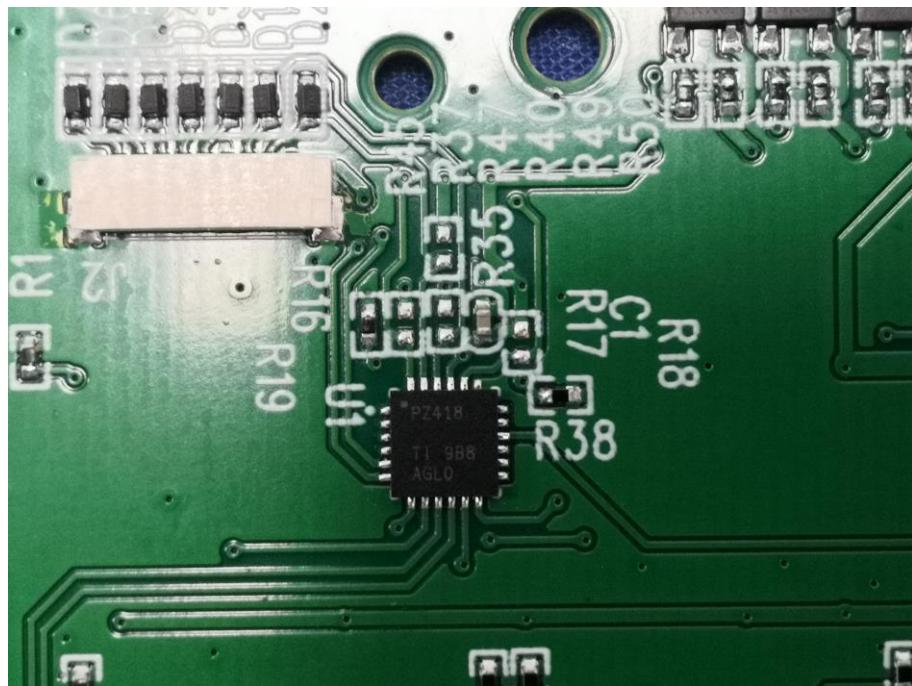


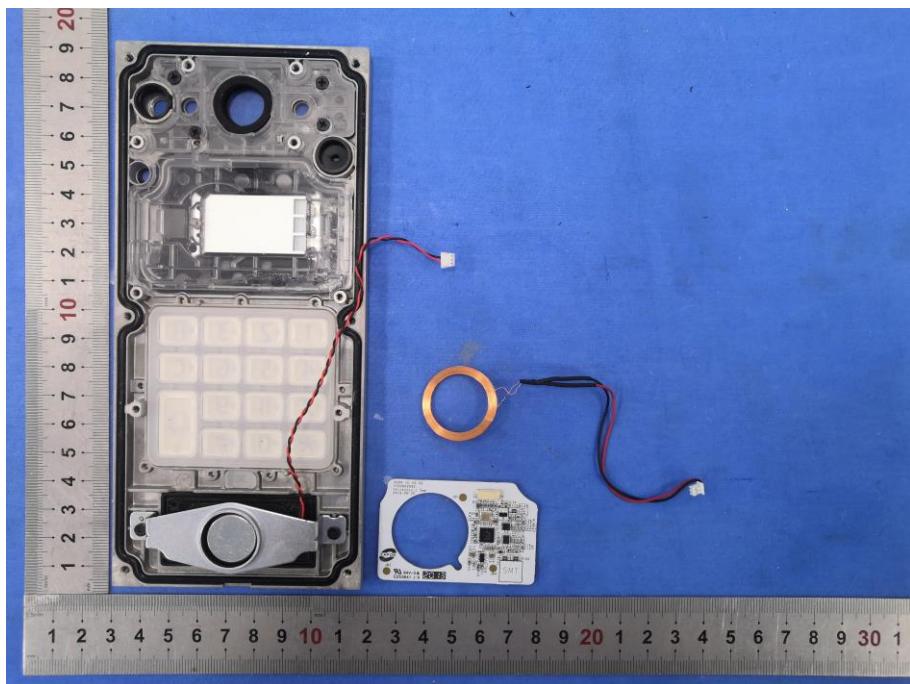


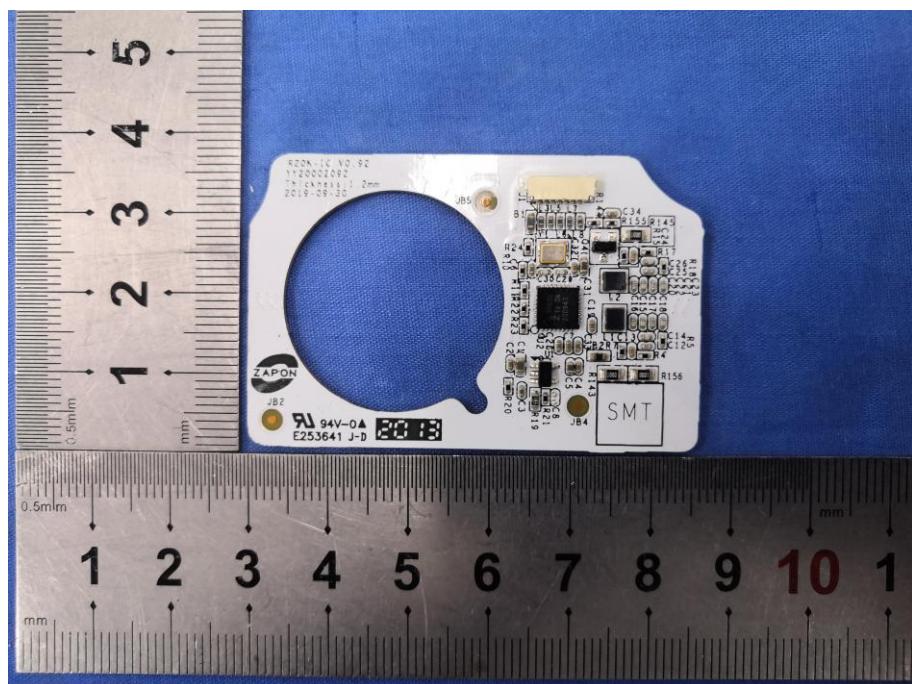
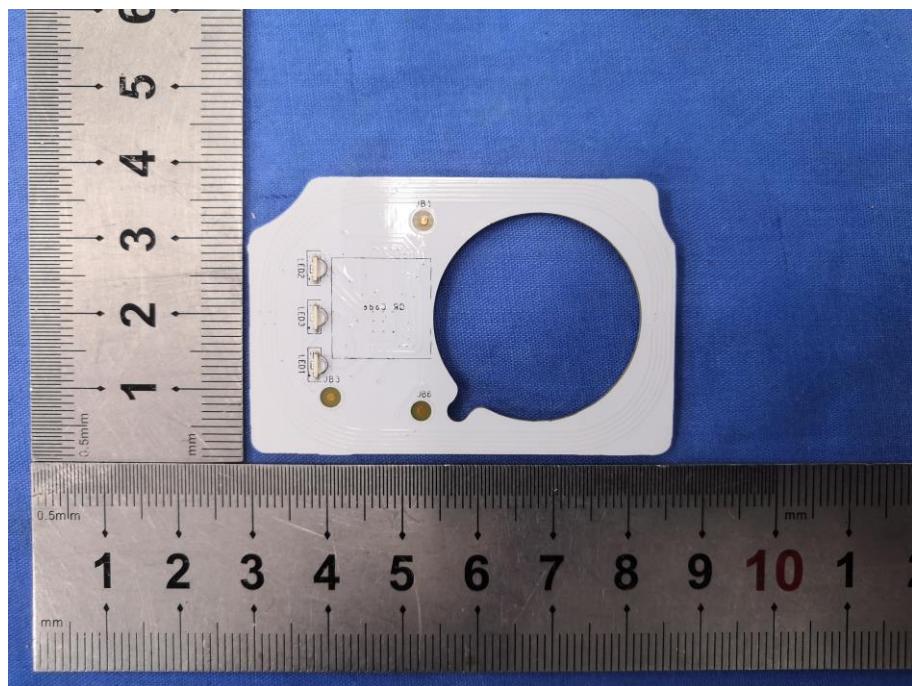


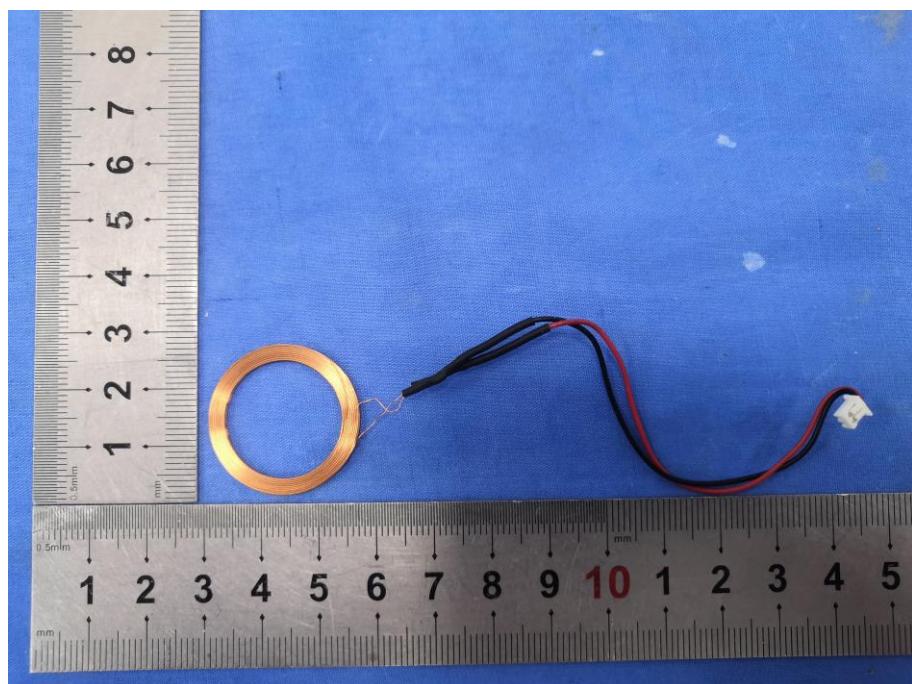
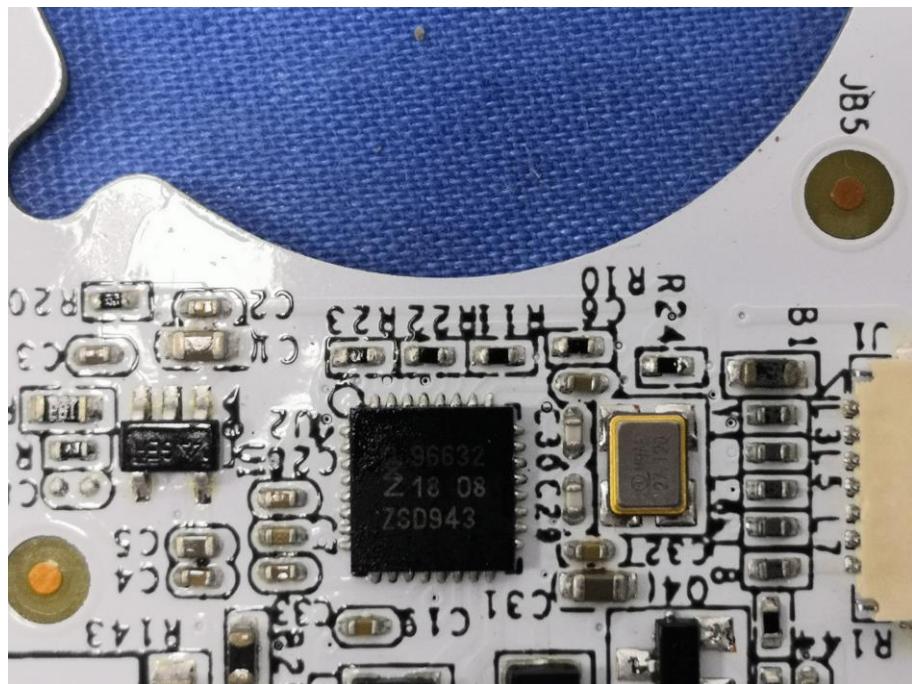


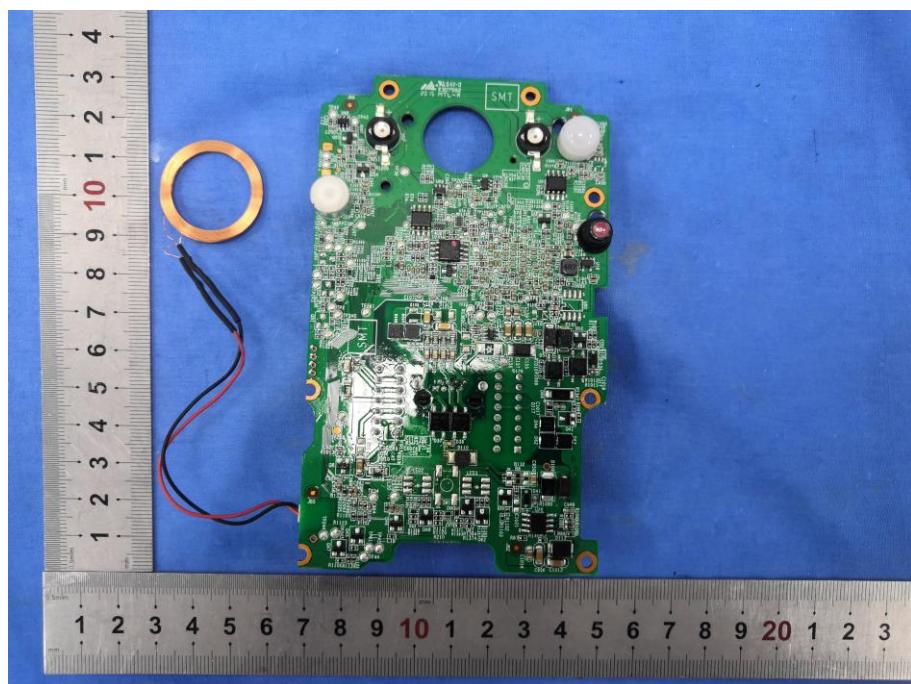
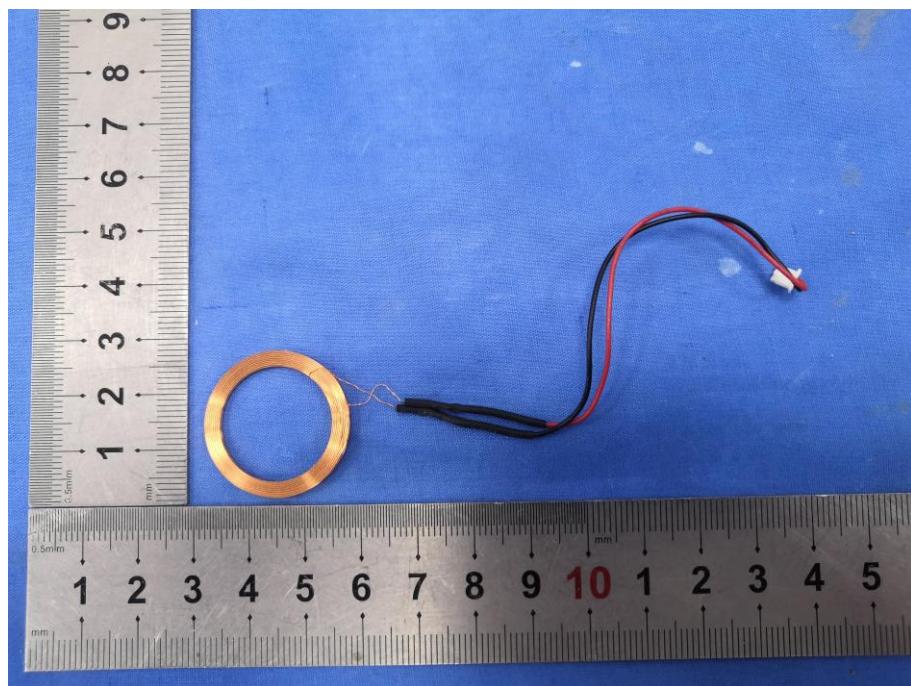


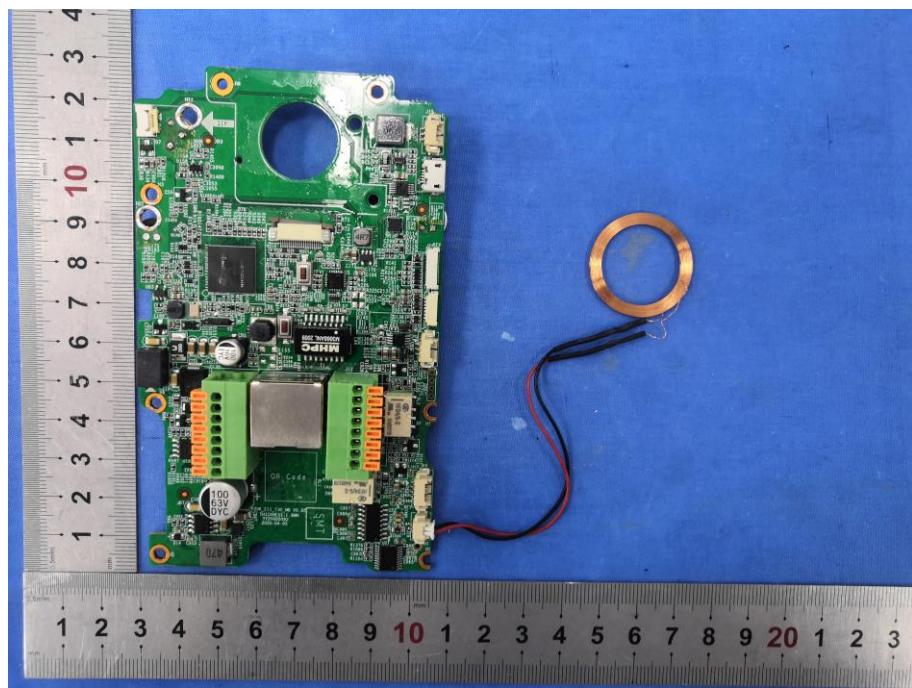










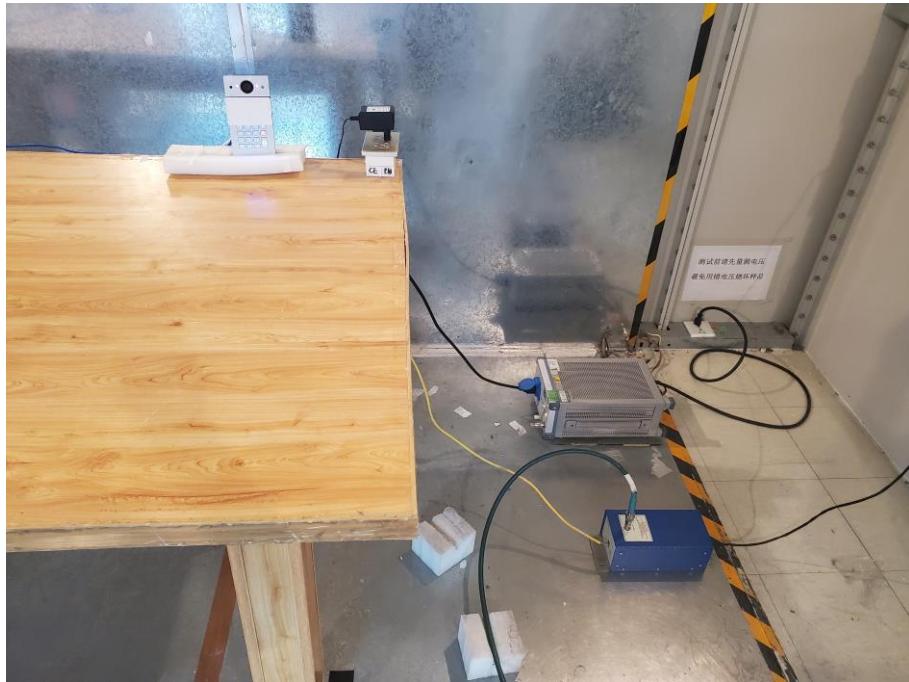


**EXHIBIT B – TEST SETUP PHOTOGRAPHS**

*Test Mode1 :*

**Conducted Emissions - Front Side For AC Mains Port****Conducted Emissions - Left Side For AC Mains Port**

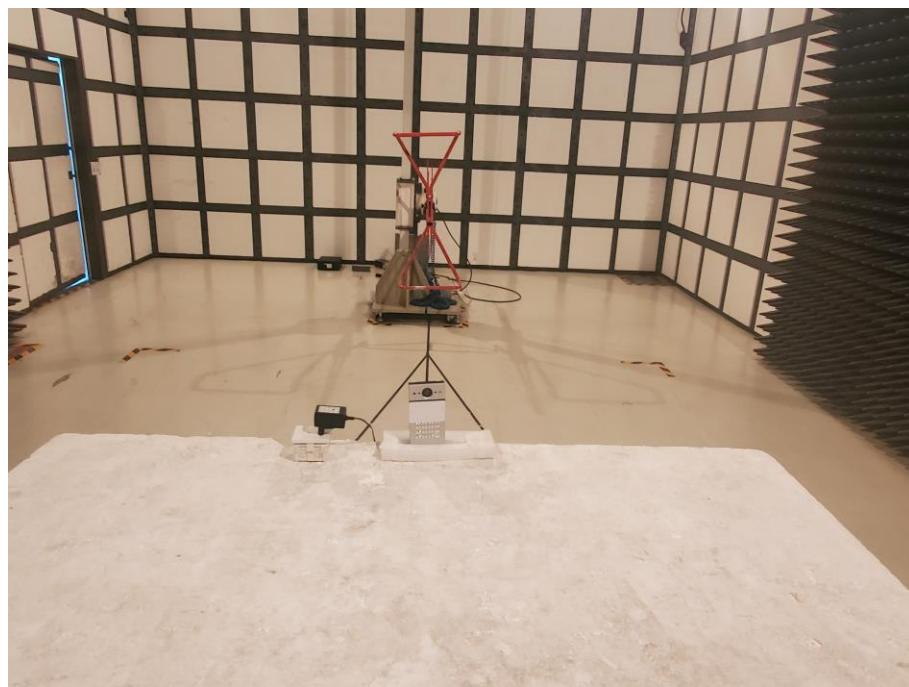
### Conducted Emissions - Front Side For Signal Port



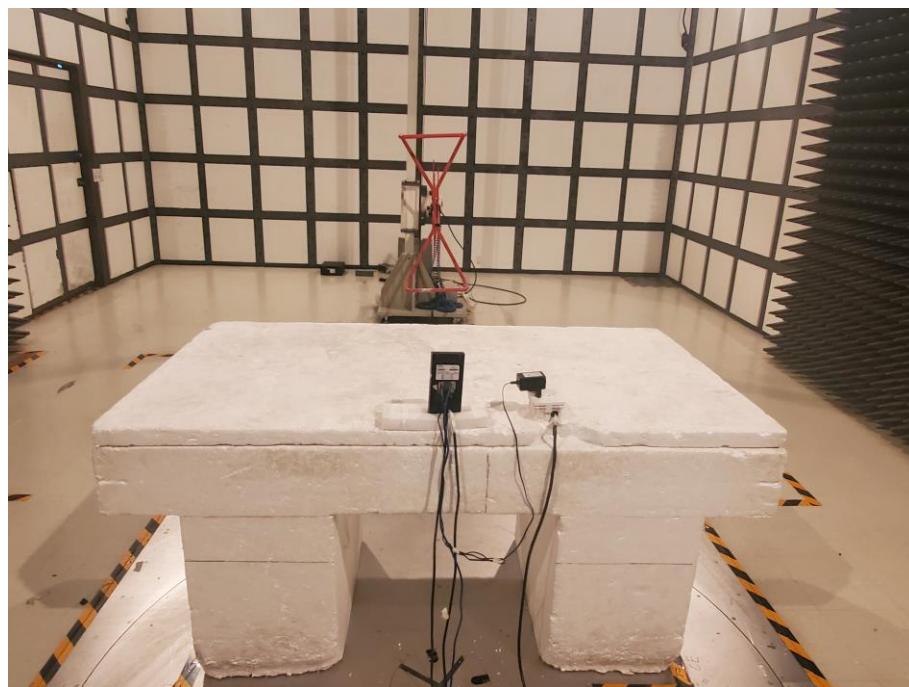
### Conducted Emissions - Left Side For Signal Port



**Radiated Emissions - Front View (Below 1GHz)**



**Radiated Emissions - Rear View (Below 1GHz)**



### ESD Test Setup Photo



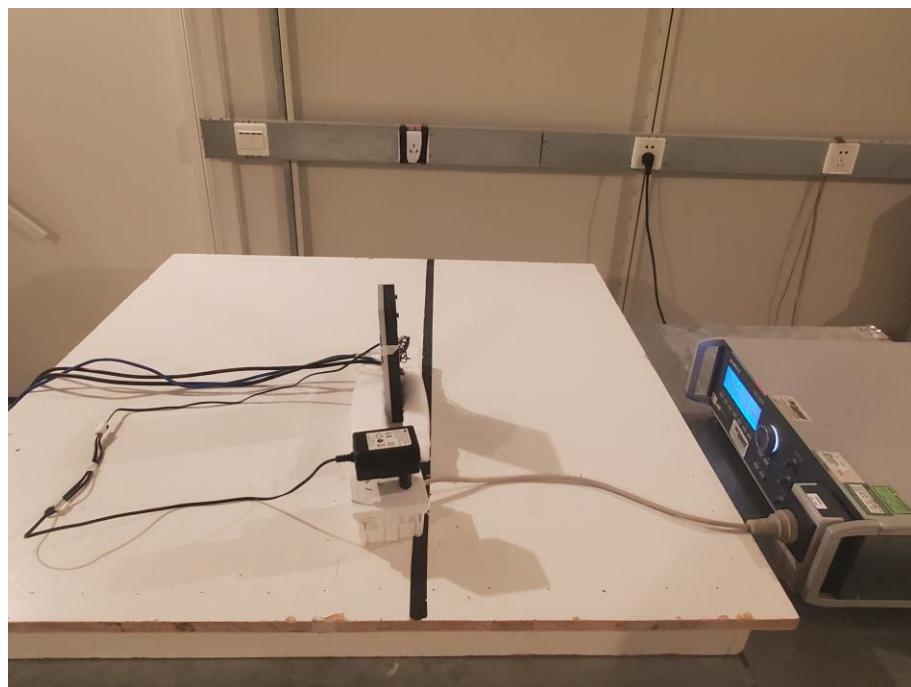
### RS Test Setup Photo (Below 1GHz)



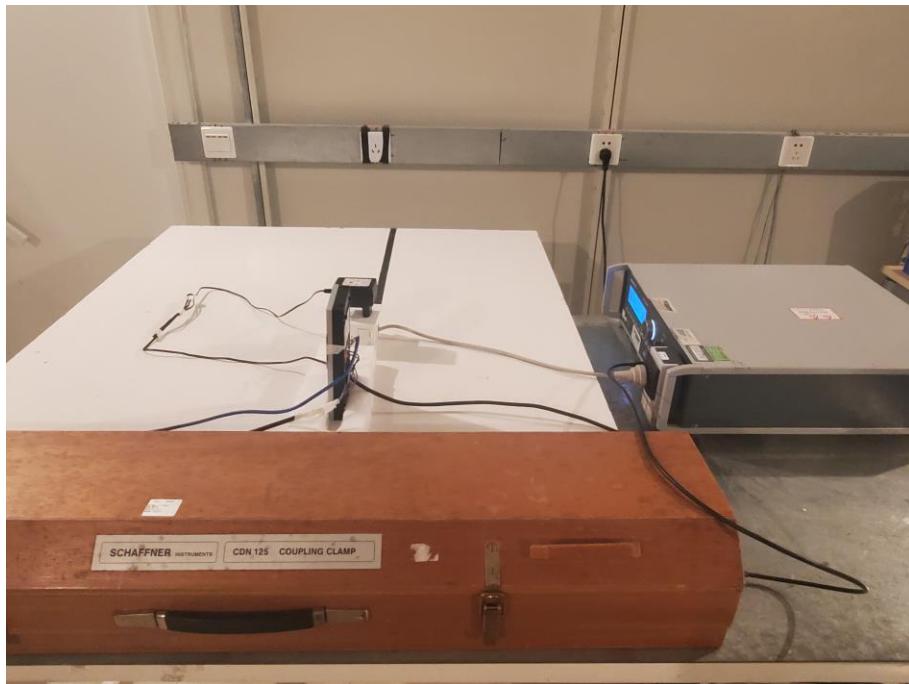
**RS Test Setup Photo (Above 1GHz)**



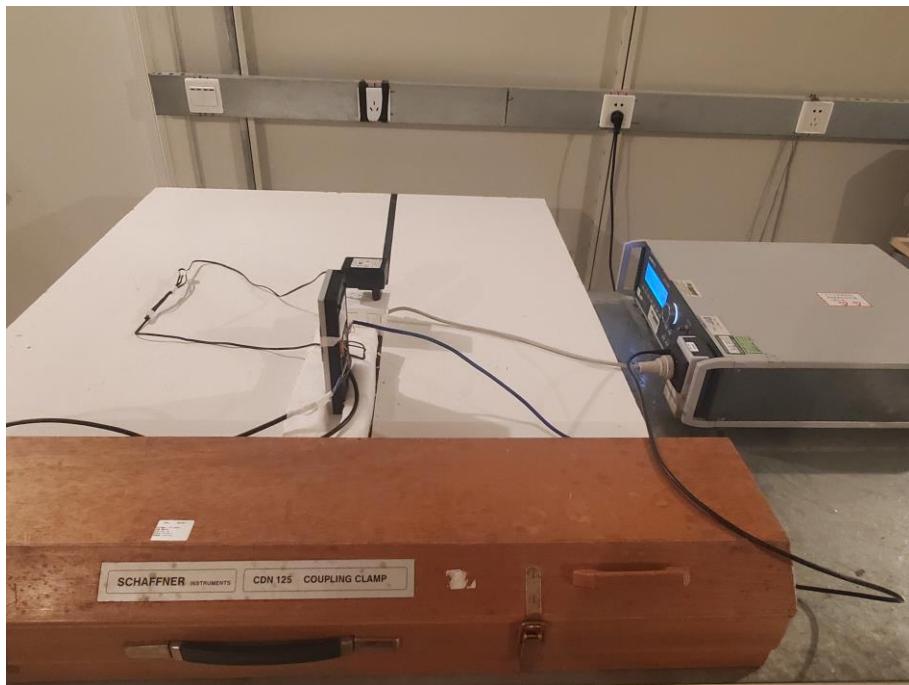
**EFT/B Test Setup Photo For AC Mains Port**



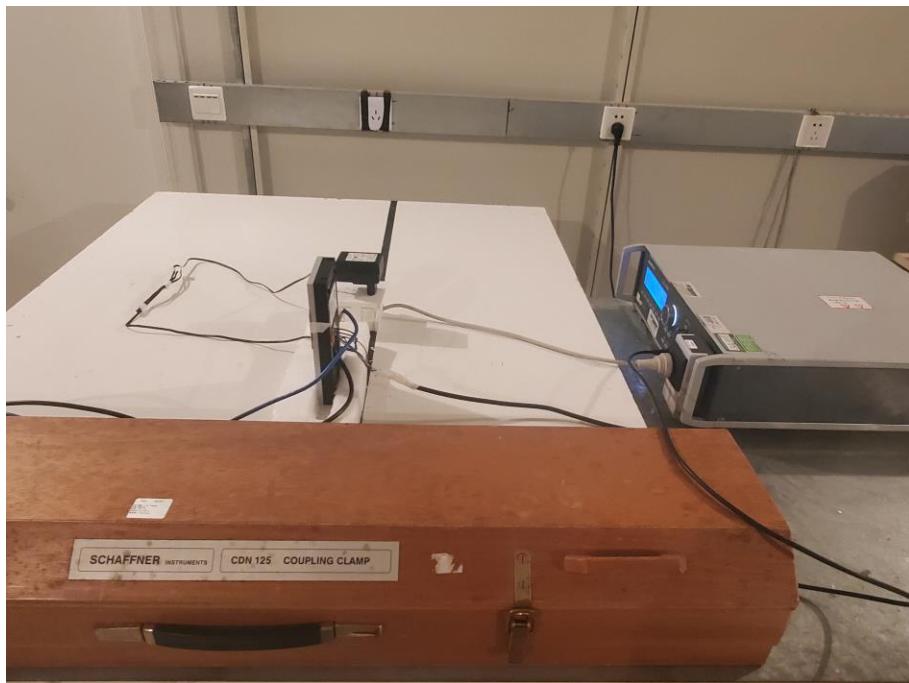
**EFT/B Test Setup Photo For RJ45 Port**



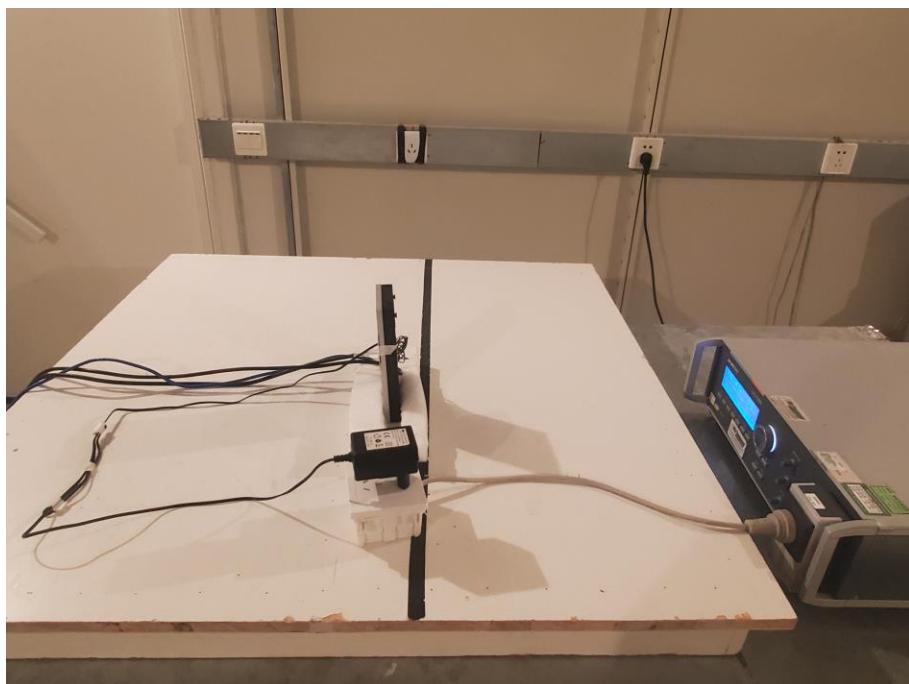
**EFT/B Test Setup Photo For Signal Port-1**



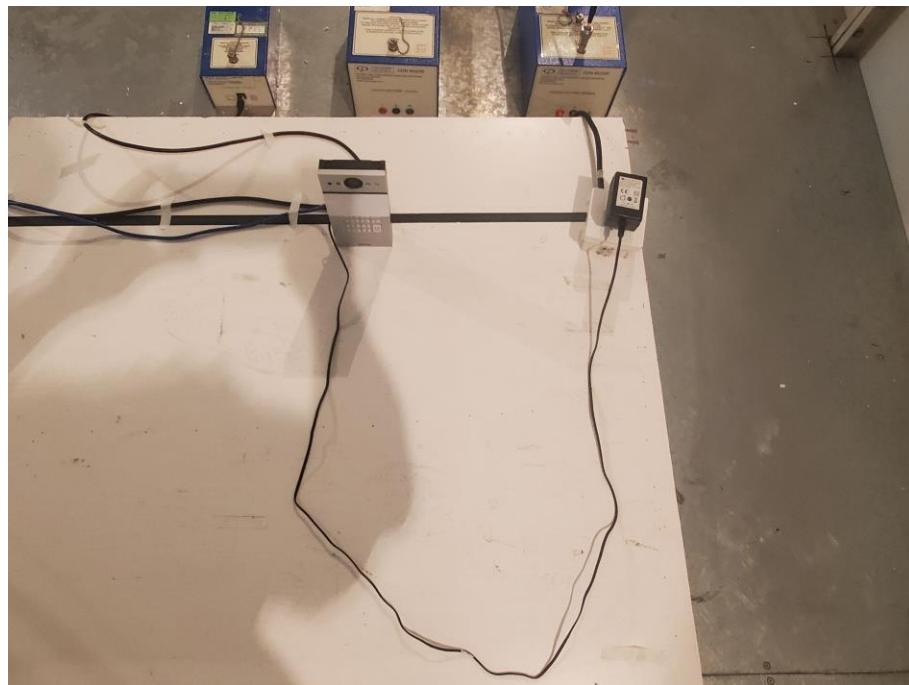
**EFT/B Test Setup Photo For Signal Port-2**



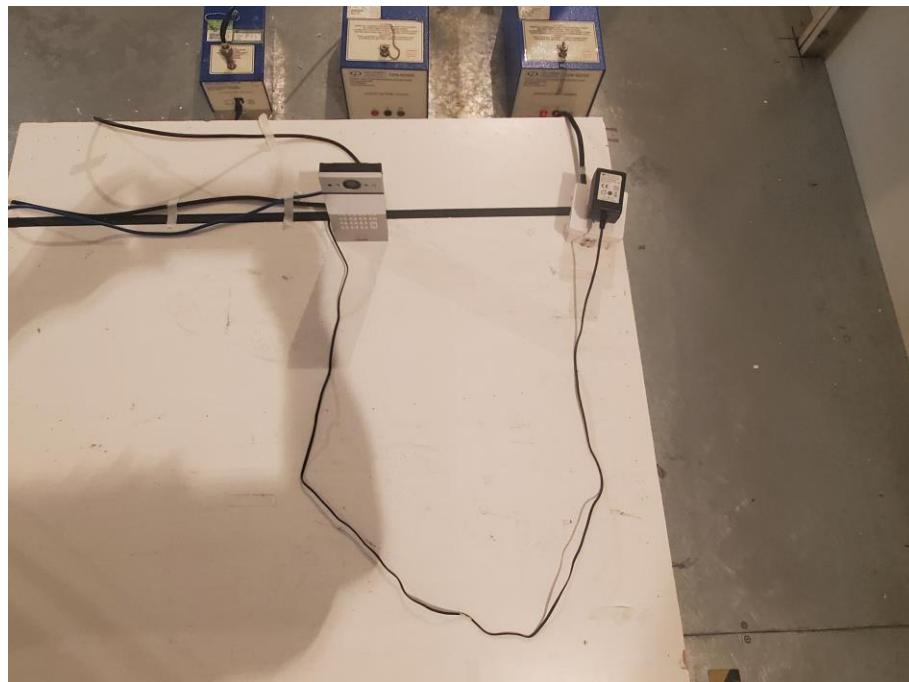
**SURGE Test Setup Photo For AC Mains Port**



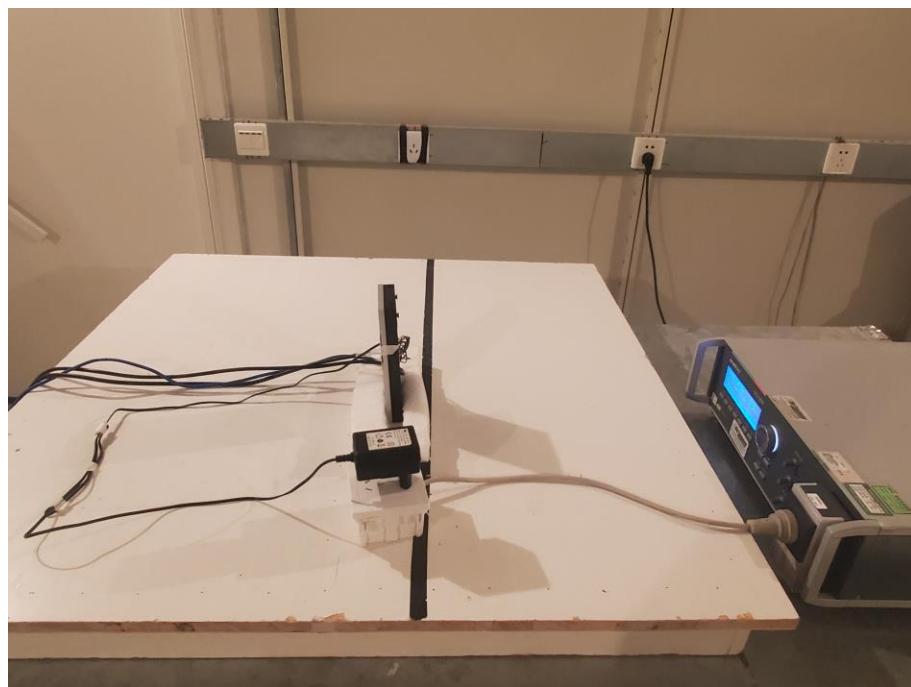
**CS Test Setup Photo For AC Mains Port**



**CS Test Setup Photo For RJ45 Port**



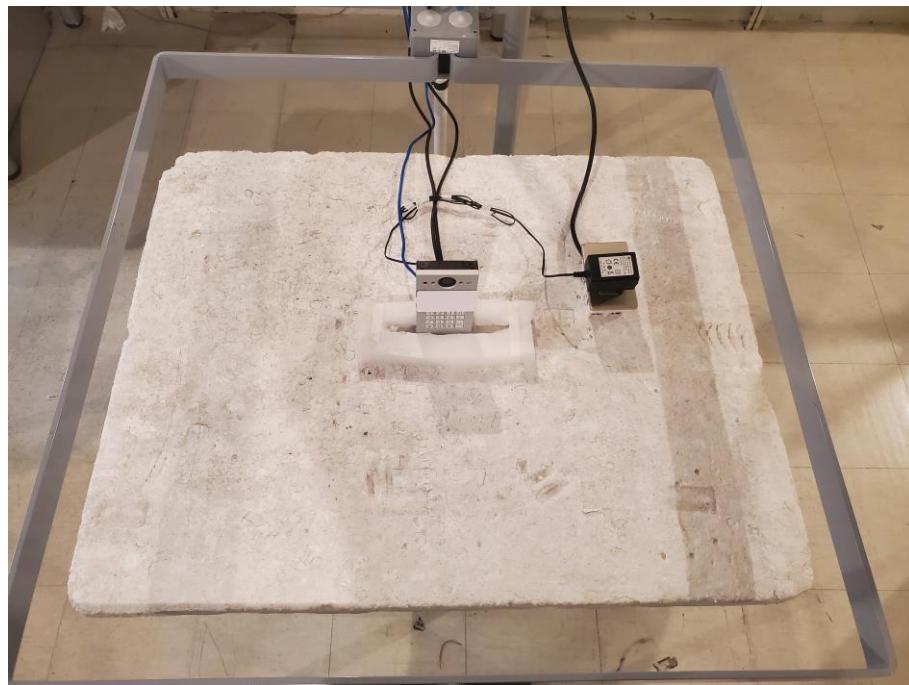
### DIPS Test Setup Photo



### Flicker Test Setup Photo

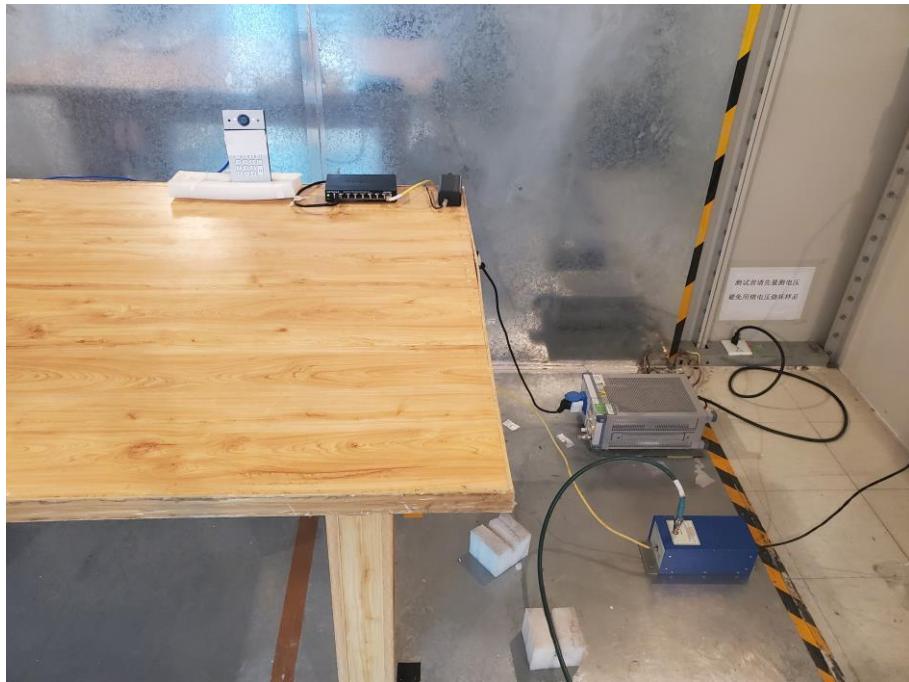


**PFMF Test Setup Photo**



*Test Mode2 :*

**Conducted Emissions - Front Side For AC Mains Port**



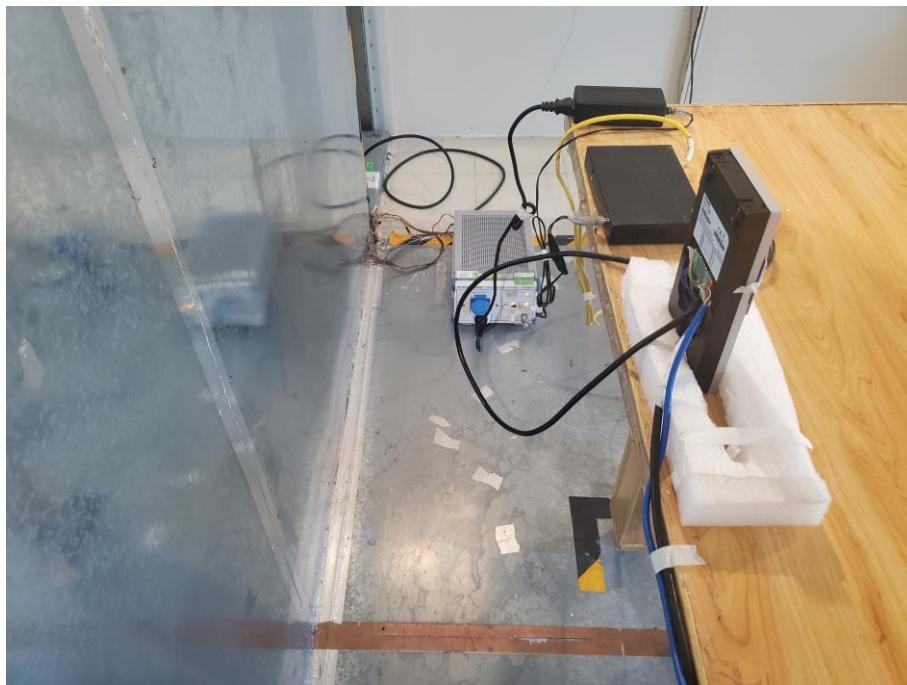
**Conducted Emissions - Left Side For AC Mains Port**



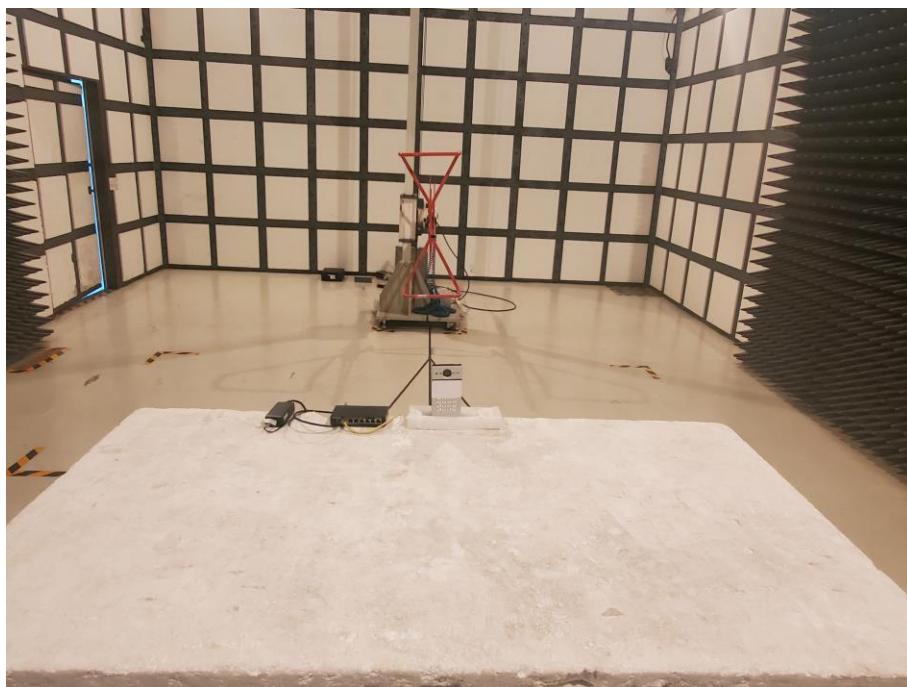
### Conducted Emissions - Front Side For Signal Port



### Conducted Emissions - Left Side For Signal Port



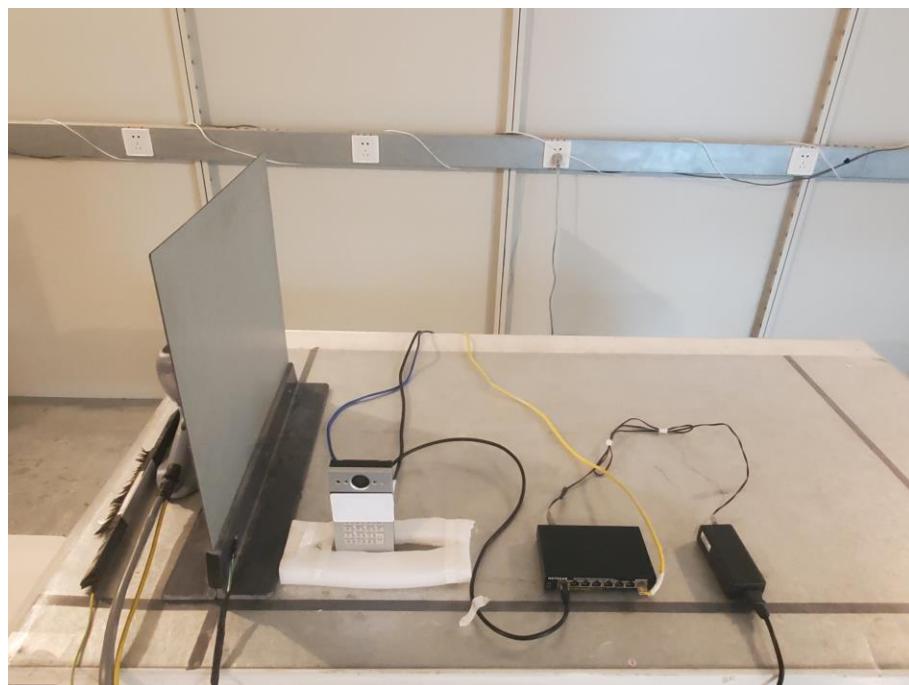
**Radiated Emissions - Front View (Below 1GHz)**



**Radiated Emissions - Rear View (Below 1GHz)**



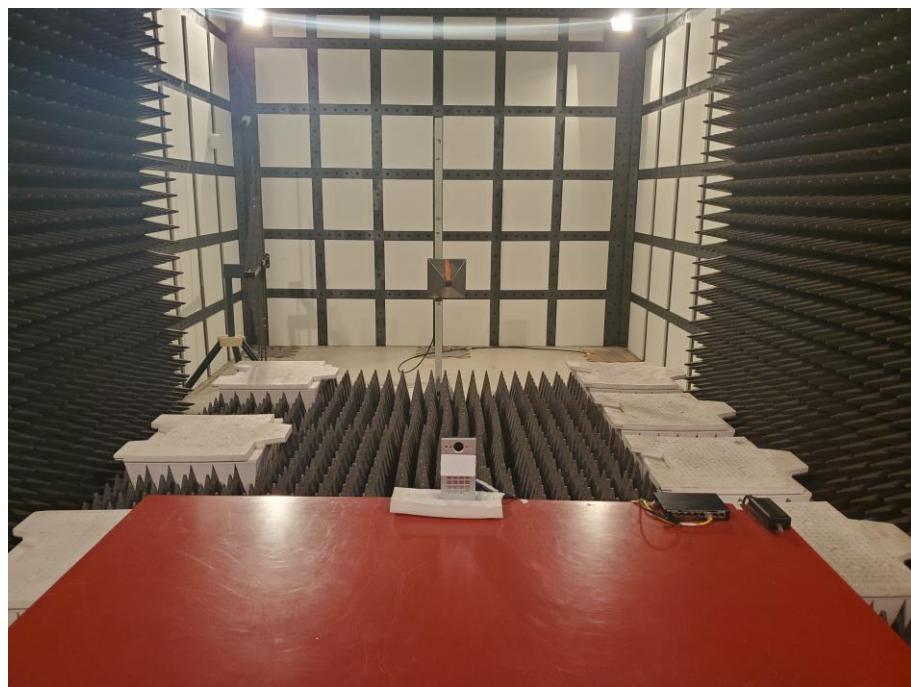
**ESD Test Setup Photo**



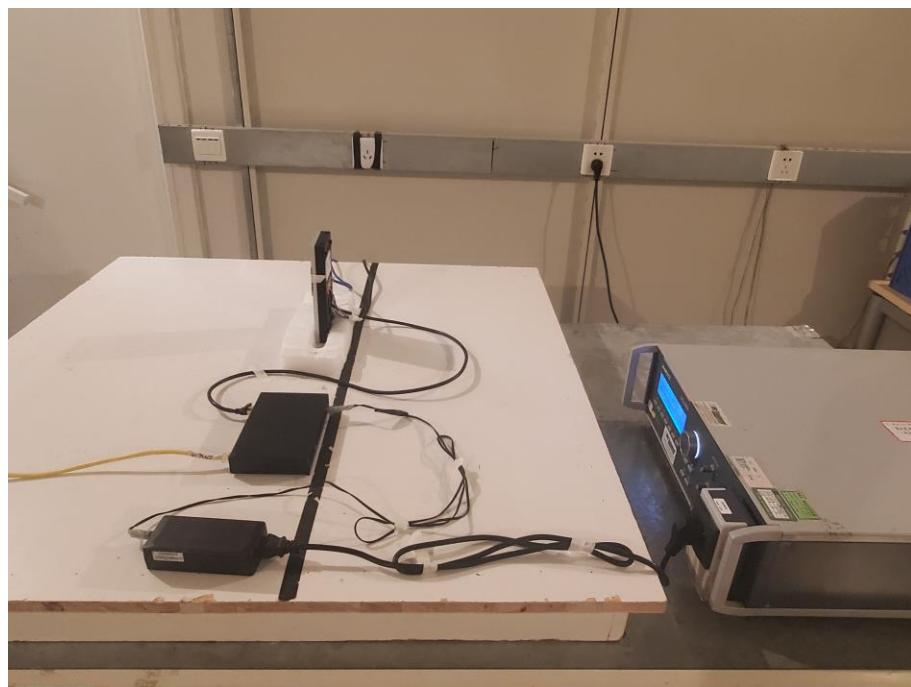
**RS Test Setup Photo (Below 1GHz)**



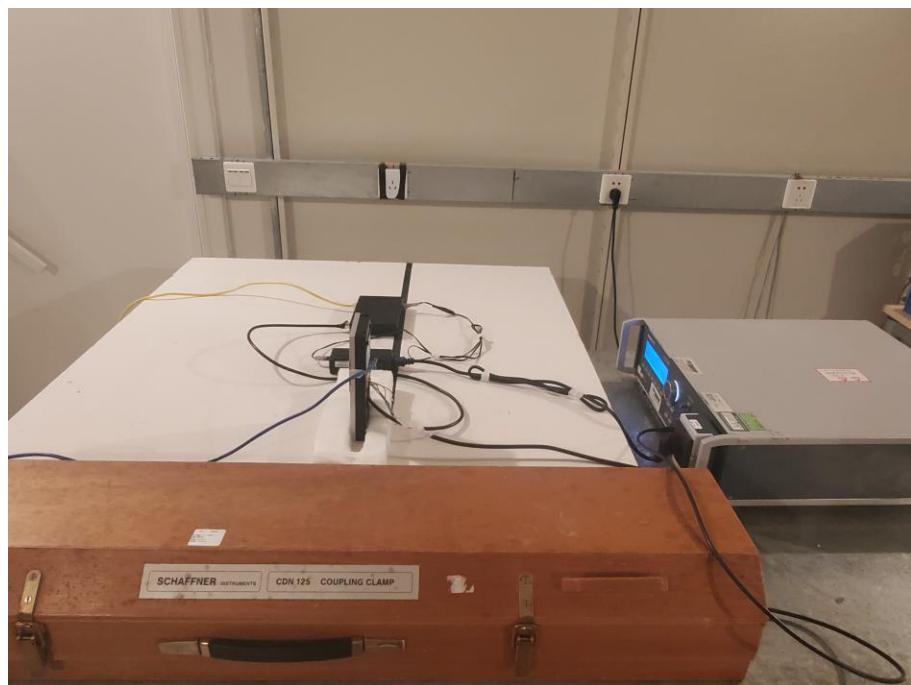
**RS Test Setup Photo (Above 1GHz)**



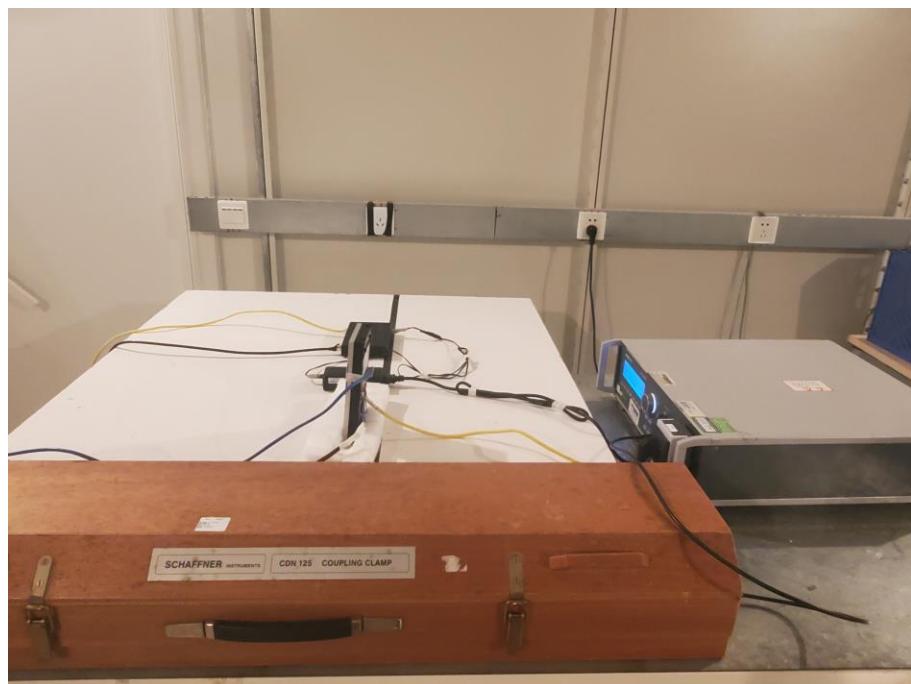
**EFT/B Test Setup Photo For AC Mains Port**



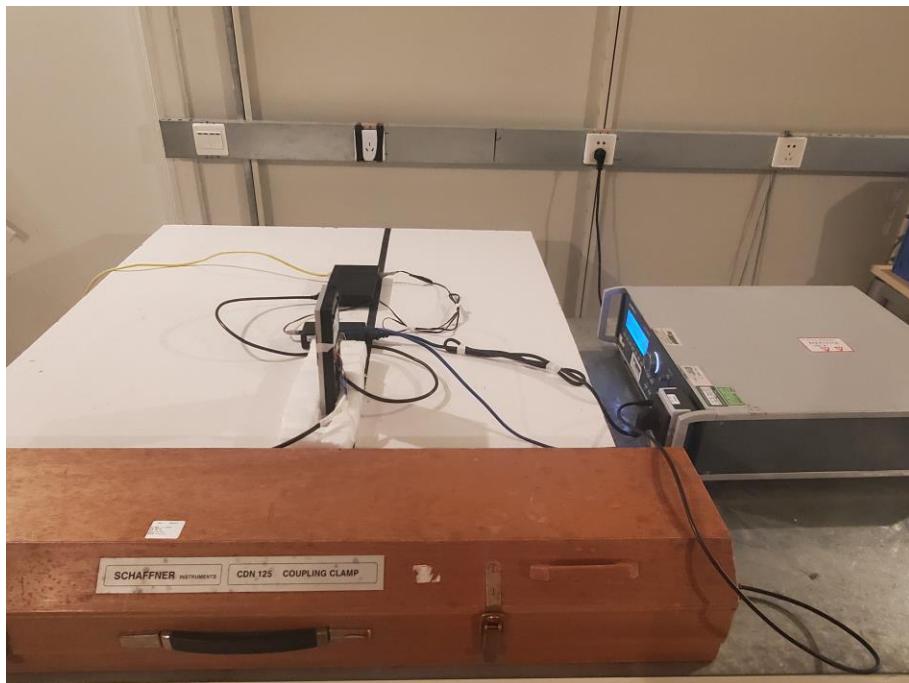
**EFT/B Test Setup Photo For RJ45 Port**



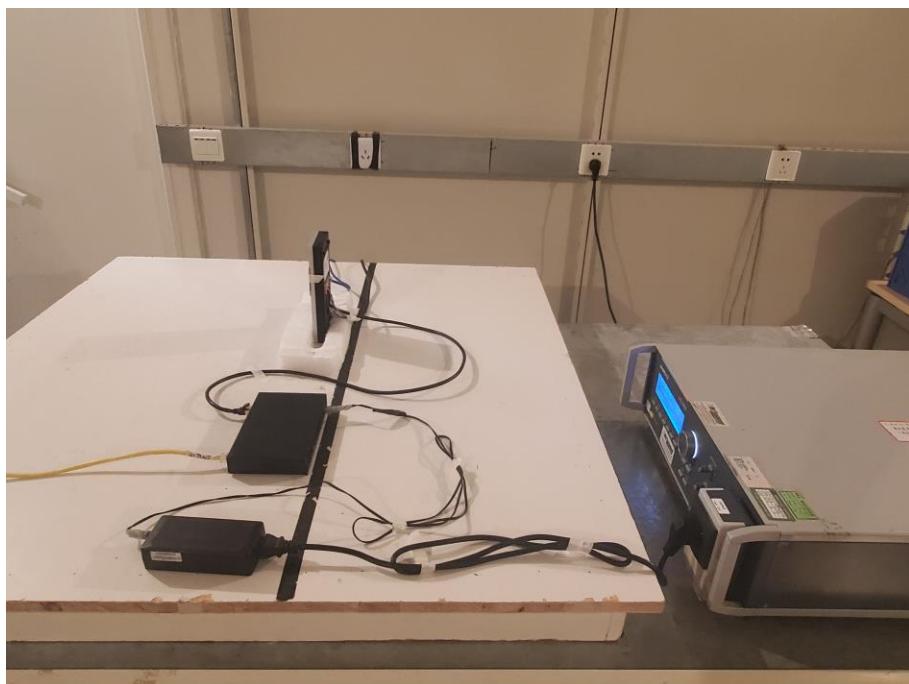
**EFT/B Test Setup Photo For Signal Port-1**



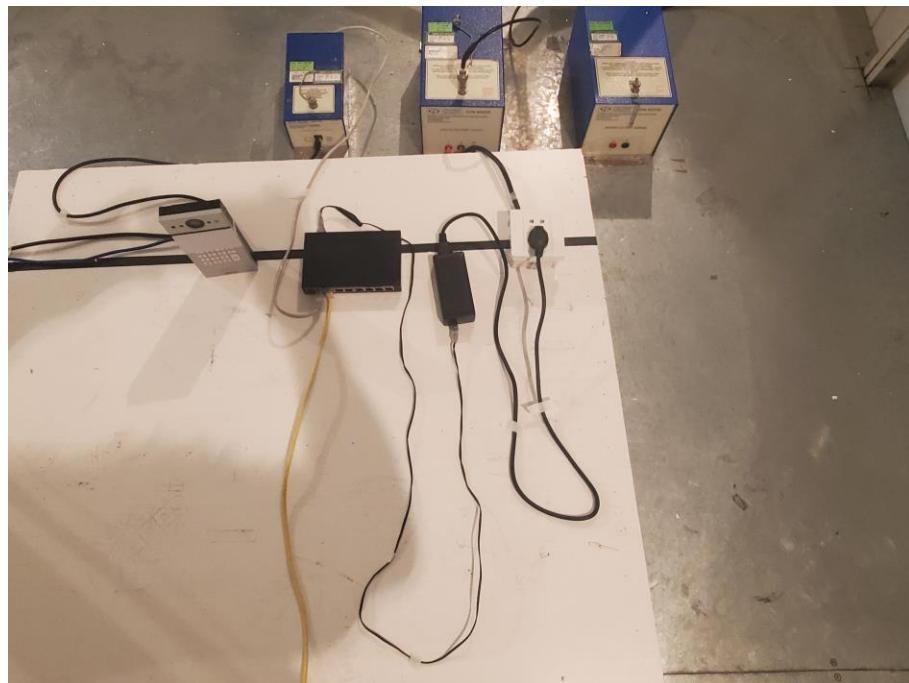
**EFT/B Test Setup Photo For Signal Port-2**



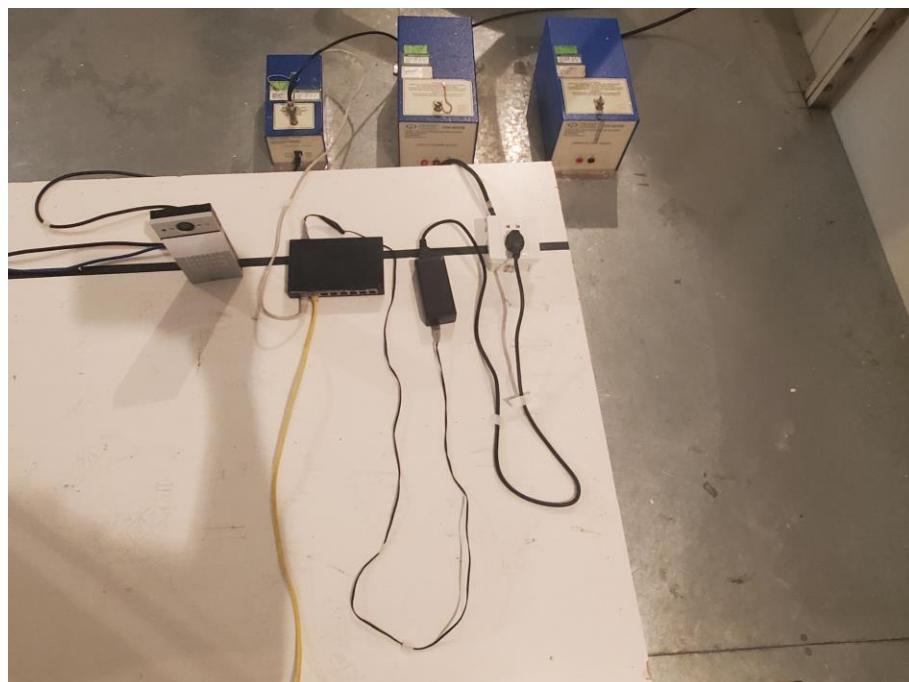
**SURGE Test Setup Photo For AC Mains Port**



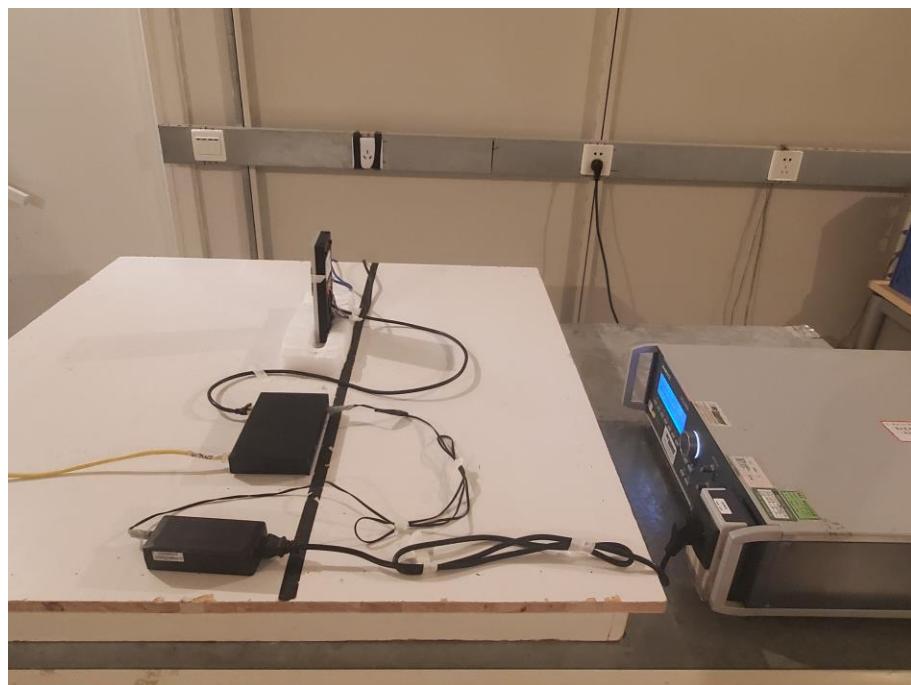
**CS Test Setup Photo For AC Mains Port**



**CS Test Setup Photo For RJ45 Port**



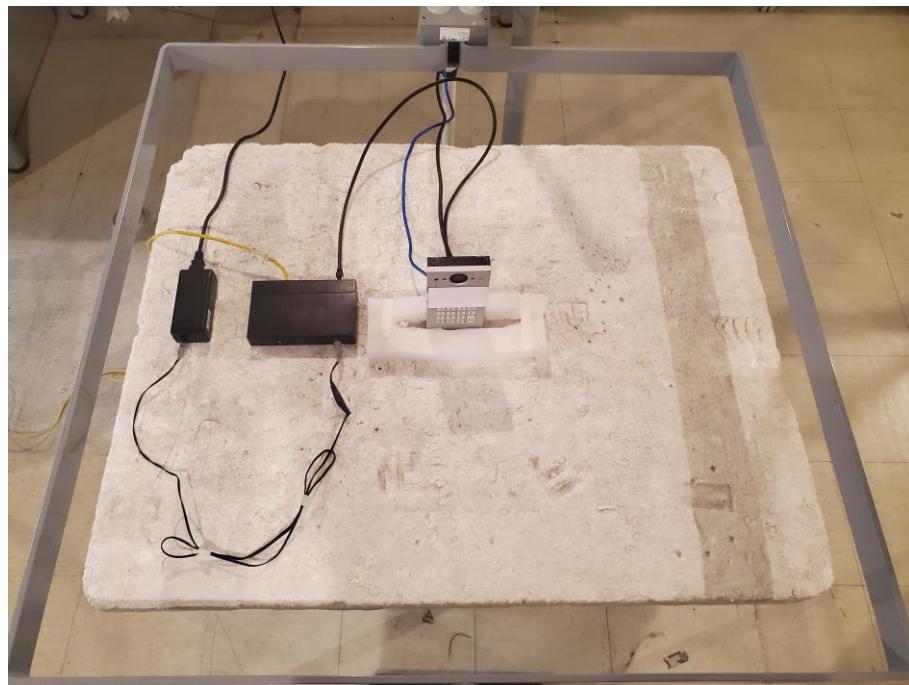
### DIPS Test Setup Photo



### Flicker Test Setup Photo



**PFMF Test Setup Photo**



## Declarations

- 1: BACL is not responsible for the authenticity of any test data provided by the applicant. Data included from the applicant that may affect test results are marked with an asterisk '\*'. Customer model name, addresses, names, trademarks etc. are not considered data.
- 2: Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.
- 3: Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.
- 4: The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval.
- 5: This report cannot be reproduced except in full, without prior written approval of the Company.
- 6: This report is valid only with a valid digital signature. The digital signature may be available only under the Adobe software above version 7.0.

\*\*\*\*\* END OF REPORT \*\*\*\*\*