TEST REPORT

Report No.:	BCTC2307219402E
Applicant:	Bless Technology Co., Ltd.
Product Name:	Digital camera
Model/Type reference:	BX-D18
Tested Date:	2023-07-24 to 2023-07-27
Issued Date:	2023-08-18

Shenzhen BCTC Testing Co., Ltd.

Product Name:	Digital camera
Trademark:	N/A
Model/Type reference:	BX-D18 BLS-C13, BLS-C23, BLS-C22, BLS-OE3, BLS-OL3, BLS-DC8, BLS-DC403, BLS-DC402, BLS-DC600, BLS-DC101L, BLS-WP09, BLS-WP06
Prepared For:	Bless Technology Co., Ltd.
Address:	Building C, Huixin Industrial Zone, Yonghe Road, Xinhe Community, Fuhai Street, Bao'an District, Shenzhen,China
Manufacturer:	Bless Technology Co., Ltd.
Address:	Building C, Huixin Industrial Zone, Yonghe Road, Xinhe Community, Fuhai Street, Bao'an District, Shenzhen,China
Prepared By:	Shenzhen BCTC Testing Co., Ltd.
Address:	1-2/F., Building B, Pengzhou Industrial Park, No.158, Fuyuan 1st Road, Zhancheng, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China.
Sample Received Date:	2023-07-24
Sample tested Date:	2023-07-24 to 2023-07-27
Issue Date:	2023-08-18
Report No.:	BCTC2307219402E
Test Standards:	EN 55032:2015+A11:2020+A1:2020, EN 55035:2017+A11:2020
Test Results	PASS

Tested by:

Lucas Chan /Project Handler

Approved by:

Zero Zhou/Reviewer

The test report is effective only with both signature and specialized stamp.This result(s) shown in this report refer only to the sample(s) tested. Without written approval of Shenzhen BCTC Testing Co., Ltd, this report can't be reproduced except in full.The tested sample(s) and the sample information are provided by the client.

Table Of Content

(Note: N/A Means Not Applicable)

1. Version

Report No.	Issue Date	Description	Approved
BCTC2307219402E	2023-08-18	Original	Valid

2. Test Summary

The Product has been tested according to the following specifications:

Emission		
Standard	**Test Item**	**Test result**
EN 55032	Conducted emissions from the AC mains power ports	Pass
EN 55032	Asymmetric mode conducted emissions	N/A[5]
EN 55032	Conducted differential voltage emissions	N/A[1]
EN 55032	Radiated emissions	Pass

Immunity (EN 55035)		
Standard	**Test Item**	**Test result**
EN 55035	Electrostatic discharge (ESD)	Pass
EN 55035	Continuous RF electromagnetic field disturbances(RS)	Pass
EN 55035	Electrical fast transients/burst (EFT)	N/A[2]
EN 55035	Surges	N/A[2]
EN 55035	Continuous induced RF disturbances (CS)	N/A[2]
EN 55035	Broadband impulse noise disturbances, repetitive	N/A[2]
EN 55035	Broadband impulse noise disturbances, isolated	N/A[2]
EN 55035	Power frequency magnetic field (PFMF)	N/A[4]
EN 55035	Voltage dips and interruptions (DIPS)	N/A[2]

Remark:
1. The Product has no antenna port.
2. The EUT is powered by the DC only , the test item is not applicable
3. Applicable only to CPE xDSL ports.
4. The Product doesn't contain any device susceptible to magnetic fields.
5. Applicable to ports listed above and intended to connect to cables longer than 3 m.

3. Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the Product as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

Test item	Value (dB)
Radiated Emission(30MHz~1GHz)	4.80
Conducted Emission (150kHz-30MHz)	3.20

4. Product Information And Test Setup

4.1 Product Information

Ratings:	Input: DC 5V from adapter
Model difference:	All models are identical except for the appearance color and model named.
The highest frequency of the internal sources of the EUT is (less than 108)MHz:	☒ less than 108 MHz, the measurement shall only be made up to 1 GHz. ☐ between 108 MHz and 500 MHz, the measurement shall only be made up to 2 GHz. ☐ between 500 MHz and 1 GHz, the measurement shall only be made up to 5 GHz. ☐ above 1 GHz, the measurement shall be made up to 5 times the highest frequency or 6 GHz, whichever is less.

4.2 Test Setup Configuration

See test photographs attached in EUT TEST SETUP Photographs for the actual connections between Product and support equipment.

4.3 Support Equipment

No.	Device Type	Brand	Model	Series No.	Note
1.	Adapter	HUAWEI	HW-110600C02	---	---
3.	SD card	SanDisk	32G	---	---

1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

4.4 Test Mode

Test item	Test Mode	Test Voltage
Conducted emissions from the AC mains power por (150KHz-30MHz) Class B	Charging	AC 230V/50Hz
Radiated emissions(30MHz-1GHz) Class B	Charging	AC 230V/50Hz
	Video recording*	DC 3.7V
Electrostatic discharge (ESD) B ☒Air Discharge: ±8kV ☒Contact Discharge: ±4kV ☒HCP & VCP: ±4Kv 10 times each point/	Charging	AC 230V/50Hz
	Video recording	DC 3.7V
Continuous RF electromagnetic field disturbances(RS) 80MHz-1000MHz, 1800MHz, 2600MHz,3500MHz,5000MHz 3V/m,80% AM Front, Rear, Left, Right H/V	Charging	AC 230V/50Hz
	Video recording	DC 3.7V
All test mode were tested and passed, only Radiated Emissions shows (*) is the worst case mode which were recorded in this report.		

5. Test Facility And Test Instrument Used

5.1 Test Facility

All measurement facilities used to collect the measurement data are located at Shenzhen BCTC Testing Co., Ltd. Address: 1-2/F., Building B, Pengzhou Industrial Park, No.158, Fuyuan 1st Road, Zhancheng, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China. The site and apparatus are constructed in conformance with the requirements of ANSI C63.4 and CISPR 16-1-1 other equivalent standards.

5.2 Test Instrument Used

Conducted Emissions Test					
Equipment	**Manufacturer**	**Model#**	**Serial#**	**Last Cal.**	**Next Cal.**
Receiver	R&S	ESR3	102075	May 15, 2023	May 14, 2024
LISN	R&S	ENV216	101375	May 15, 2023	May 14, 2024
Software	Frad	EZ-EMC	EMC-CON 3A1	\	\
Attenuator	\	10dB DC-6GHz	1650	May 15, 2023	May 14, 2024

Radiated Emissions Test (966 Chamber#01)					
Equipment	**Manufacturer**	**Model#**	**Serial#**	**Last Cal.**	**Next Cal.**
966 chamber	ChengYu	966 Room	966	May 15, 2023	May 14, 2026
Receiver	R&S	ESRP	101154	May 15, 2023	May 14, 2024
Receiver	R&S	ESR3	102075	May 15, 2023	May 14, 2024
Amplifier	SKET	LAPA_01G18G-45dB	\	May 15, 2023	May 14, 2024
Amplifier	Schwarzbeck	BBV9744	9744-0037	May 15, 2023	May 14, 2024
TRILOG Broadband Antenna	schwarzbeck	VULB9163	942	May 29, 2023	May 28, 2024
Horn Antenna	schwarzbeck	BBHA9120D	1541	May 31, 2023	May 30, 2024
Software	Frad	EZ-EMC	FA-03A2 RE	\	\

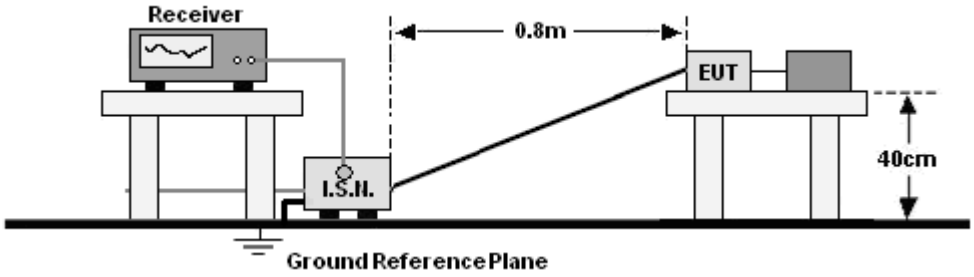
Electrostatic Discharge Test					
Equipment	**Manufacturer**	**Model#**	**Serial#**	**Last Cal.**	**Next Cal.**
ESD Tester	KIKUSUI	KES4201A	UH002321	May 15, 2023	May 14, 2024

Continuous RF Electromagnetic Field Disturbances Test					
Equipment	**Manufacturer**	**Model#**	**Serial#**	**Last Cal.**	**Next Cal.**
Power meter	Keysight	E4419	A00065	May 15, 2023	May 14, 2024
Power sensor	Keysight	E9300A	US39211659	May 15, 2023	May 14, 2024
Power sensor	Keysight	E9300A	US39211305	May 15, 2023	May 14, 2024
Amplifier	SKET	HAP_801000-250W	21201805013	May 15, 2023	May 14, 2024
Amplifier	SKET	HAP_0103-75W	21201805014	May 15, 2023	May 14, 2024
Amplifier	SKET	HAP_0306-50W	21201805015	May 15, 2023	May 14, 2024
Stacked double Log.-Per. Antenna	Schwarzbeck	STLP 9129	00077	\	\
Field Probe	Narda	EP-601	611WX80256	May 15, 2023	May 14, 2024
Signal Generator	Agilent	N5181A	MY50143748	May 15, 2023	May 14, 2024
Software	SKET	EMC-S	1.2.0.18	\	\

6. Conducted Emissions

6.1 Block Diagram Of Test Setup

For asymmetric mode ports:



6.2 Limit

Limits for Conducted emissions at the mains ports of Class B MME

Frequency range (MHz)	Limits dB(μV)	
	Quasi-peak	Average
0,15 to 0,50	66 to 56*	56 to 46*
0,50 to 5	56	46
5 to 30	60	50

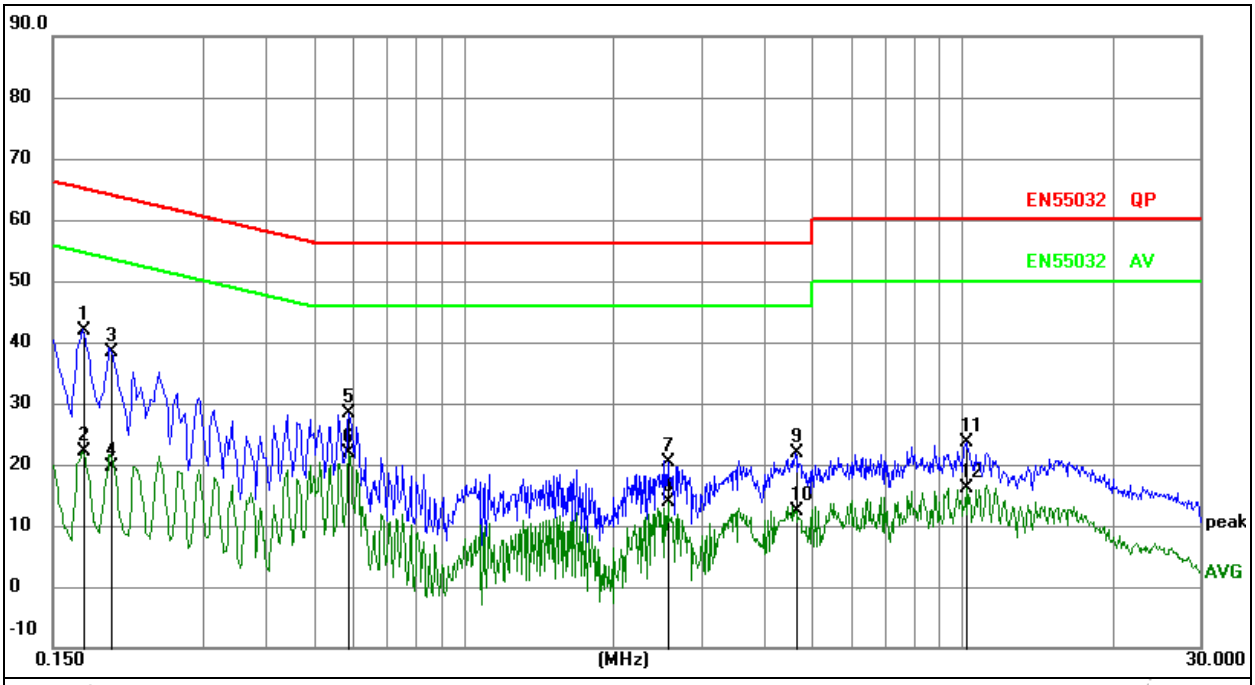
Notes: 1. *Decreasing linearly with logarithm of frequency.
2. The lower limit shall apply at the transition frequencies.

6.3 Test procedure

For mains ports:
a. The Product was placed on a nonconductive table 0.8 m above the horizontal ground reference plane, and 0.4 m from the vertical ground reference plane, and connected to the main through Line Impedance Stability Network (L.I.S.N).
b. The RBW of the receiver was set at 9 kHz in 150 kHz ~ 30MHz with Peak and AVG detector in Max Hold mode. Run the receiver's pre-scan to record the maximum disturbance generated from Product in all power lines in the full band.
c. For each frequency whose maximum record was higher or close to limit, measure its QP and AVG values and record.

6.4 Test Result

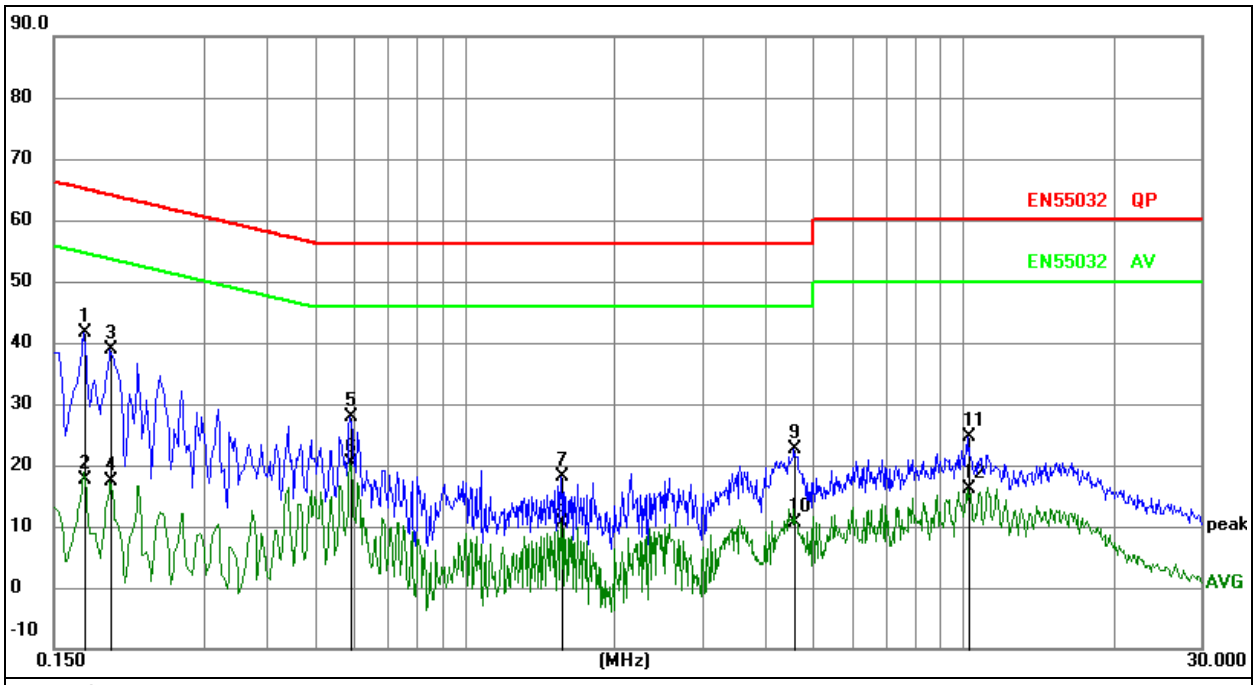
Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101kPa	Phase :	Line
Test Voltage :	AC 230V/50Hz	Test Mode:	Charging



Remark:
1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.
3. Measurement = Reading Level + Correct Factor
4. Over = Measurement - Limit

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz		dB	dBuV	dBuV	dB	Detector
1	*	0.1722	32.45	9.55	42.00	64.85	-22.85	peak
2		0.1722	12.53	9.55	22.08	54.85	-32.77	AVG
3		0.1965	28.70	9.60	38.30	63.76	-25.46	peak
4		0.1965	10.03	9.60	19.63	53.76	-34.13	AVG
5		0.5885	18.75	9.62	28.37	56.00	-27.63	peak
6		0.5885	12.21	9.62	21.83	46.00	-24.17	AVG
7		2.5671	10.65	9.76	20.41	56.00	-35.59	peak
8		2.5671	4.06	9.76	13.82	46.00	-32.18	AVG
9		4.6223	12.00	9.82	21.82	56.00	-34.18	peak
10		4.6223	2.64	9.82	12.46	46.00	-33.54	AVG
11		10.1791	14.01	9.66	23.67	60.00	-36.33	peak
12		10.1791	6.53	9.66	16.19	50.00	-33.81	AVG

Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101kPa	Phase :	Neutral
Test Voltage :	AC 230V/50Hz	Test Mode:	Charging



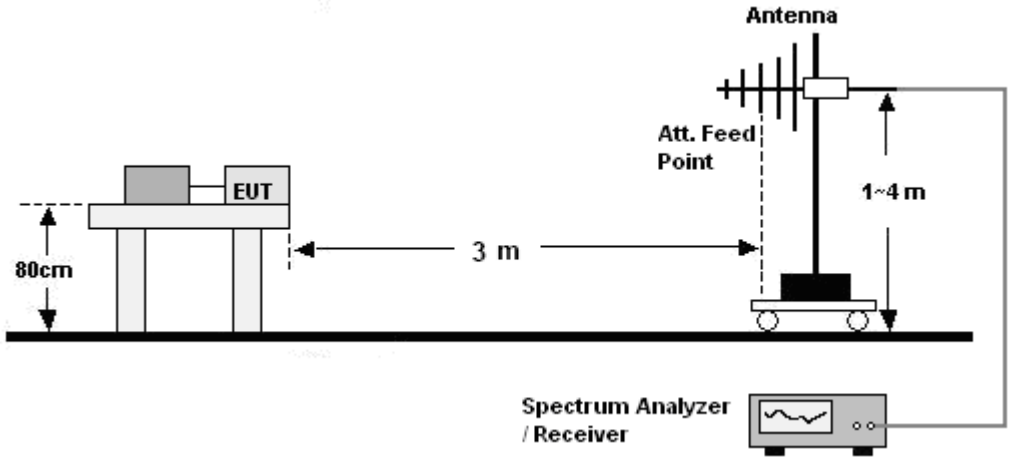
Remark:
1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.
3. Measurement = Reading Level + Correct Factor
4. Over = Measurement - Limit

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz		dB	dBuV	dBuV	dB	Detector
1	*	0.1725	31.97	9.56	41.53	64.84	-23.31	QP
2		0.1725	7.97	9.56	17.53	54.84	-37.31	AVG
3		0.1949	29.36	9.60	38.96	63.83	-24.87	QP
4		0.1949	7.85	9.60	17.45	53.83	-36.38	AVG
5		0.5910	18.15	9.62	27.77	56.00	-28.23	QP
6		0.5910	10.65	9.62	20.27	46.00	-25.73	AVG
7		1.5675	8.41	9.73	18.14	56.00	-37.86	QP
8		1.5675	0.96	9.73	10.69	46.00	-35.31	AVG
9		4.5780	12.78	9.82	22.60	56.00	-33.40	QP
10		4.5780	0.92	9.82	10.74	46.00	-35.26	AVG
11		10.2345	14.90	9.66	24.56	60.00	-35.44	QP
12		10.2345	6.36	9.66	16.02	50.00	-33.98	AVG

7. Radiated Emissions Test

7.1 Block Diagram Of Test Setup

30MHz ~ 1GHz:



7.2 Limits

Limits for radiated disturbance of Class B MME

Frequency (MHz)	Quasi-peak limits at 3m dB(μV/m)
30-230	40
230-1000	47

Note: The lower limit shall apply at the transition frequencies.

7.3 Test Procedure

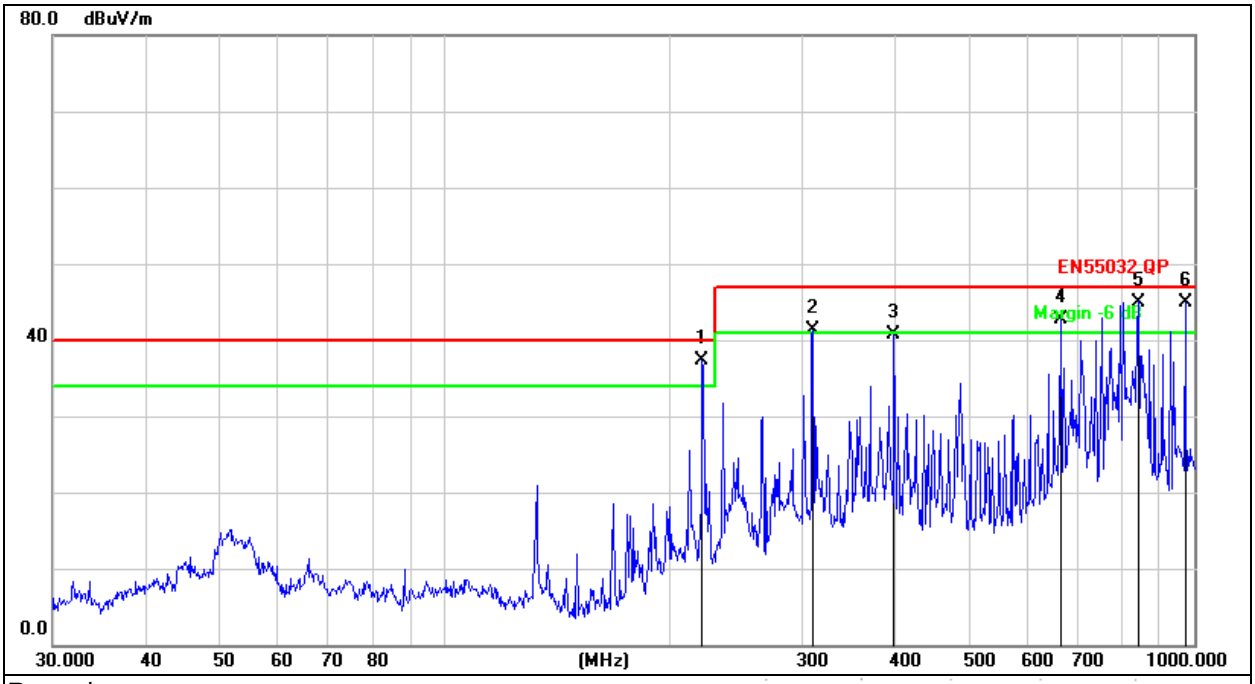
30MHz ~ 1GHz:
a. The Product was placed on the nonconductive turntable 0.8m above the ground in a semi anechoic chamber.
b. Set the spectrum analyzer/receiver in Peak detector, Max Hold mode, and 120 kHz RBW. Record the maximum field strength of all the pre-scan process in the full band when the antenna is varied between 1~4 m in both horizontal and vertical, and the turntable is rotated from 0 to 360 degrees.
c. For each frequency whose maximum record was higher or close to limit, measure its QP value: vary the antenna's height and rotate the turntable from 0 to 360 degrees to find the height and degree where Product radiated the maximum emission, then set the test frequency analyzer/receiver to QP Detector and specified bandwidth with Maximum Hold Mode, and record the maximum value.

Above 1GHz:
a. The Product was placed on the non-conductive turntable 0.8 m above the ground at a chamber.
b. Set the spectrum analyzer/receiver in Peak detector, Max Hold mode, and 1MHz RBW. Record the maximum field strength of all the pre-scan process in the full band when the antenna is varied in both horizontal and vertical, and the turntable is rotated from 0 to 360 degrees.
c. For each frequency whose maximum record was higher or close to limit, measure its AV value: rotate the turntable from 0 to 360 degrees to find the degree where Product radiated the maximum emission, then set the test frequency analyzer/receiver to AV value and specified bandwidth with Maximum Hold Mode, and record the maximum value.

Above 1GHz
The amplitude of spurious emissions which are attenuated by more than 20Db below the permissible value has no need to be reported.

7.4 Test Results

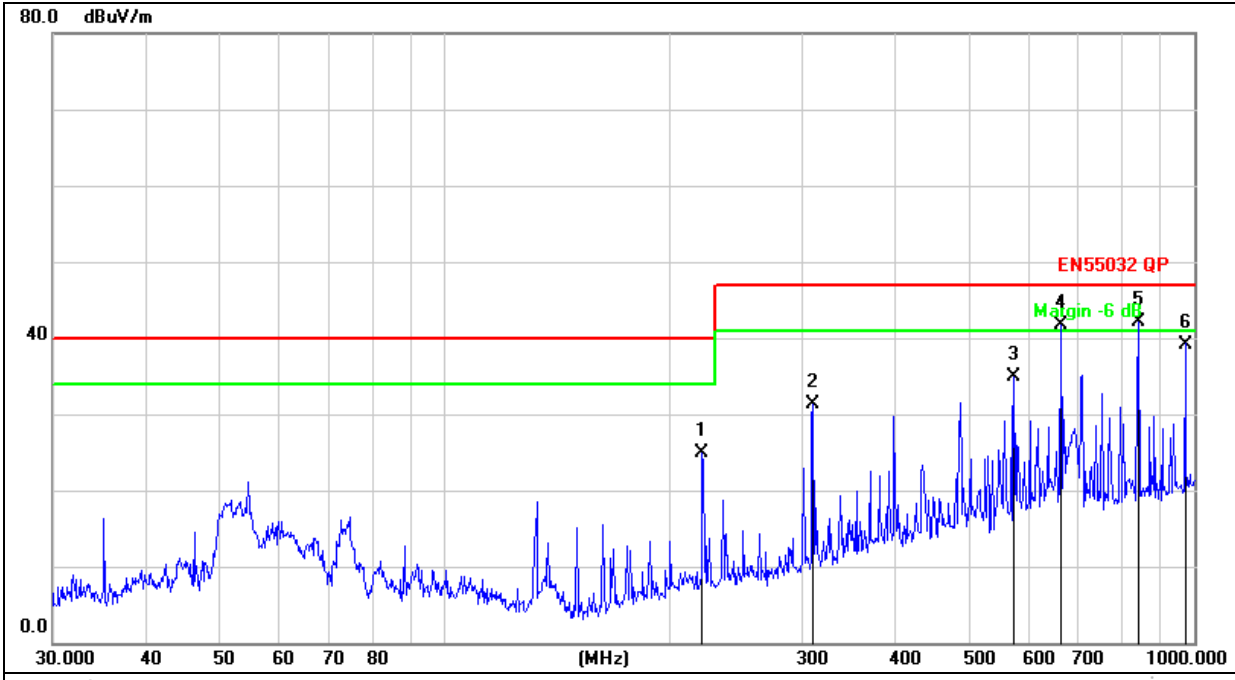
Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101KPa	Phase :	Horizontal
Test Voltage :	DC 3.7V	Test Mode:	The worst Mode



Remark:
1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.
2. Measurement = Reading Level + Correct Factor
3. Over = Measurement - Limit

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector
1	!	220.6168	54.05	-16.74	37.31	40.00	-2.69	QP
2	!	309.9977	55.52	-14.22	41.30	47.00	-5.70	QP
3		397.6334	52.99	-12.24	40.75	47.00	-6.25	QP
4	!	663.4729	50.33	-7.56	42.77	47.00	-4.23	QP
5	*	842.1295	50.22	-5.22	45.00	47.00	-2.00	QP
6	!	972.3374	48.89	-3.92	44.97	47.00	-2.03	QP

Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101KPa	Phase :	Vertical
Test Voltage :	DC 3.7V	Test Mode:	The worst Mode



Remark:
1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.
2. Measurement = Reading Level + Correct Factor
3. Over = Measurement - Limit

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector
1		220.6171	41.63	-16.73	24.90	40.00	-15.10	QP
2		309.9977	45.44	-14.22	31.22	47.00	-15.78	QP
3		574.6258	43.85	-8.97	34.88	47.00	-12.12	QP
4	!	663.4729	49.29	-7.56	41.73	47.00	-5.27	QP
5	*	842.1296	47.27	-5.22	42.05	47.00	-4.95	QP
6		972.3374	43.12	-3.92	39.20	47.00	-7.80	QP

8. Immunity Test Of General The Performance Criteria

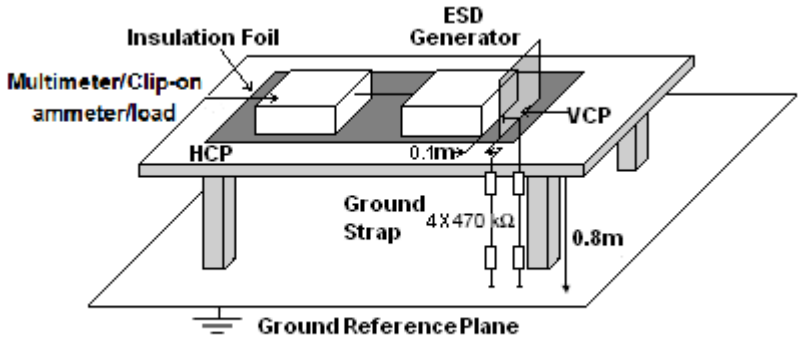
Product Standard	EN 55035:2017+A11:2020 clause 8
CRITERION A	The equipment shall continue to operate as intended without operator intervention. No degradation of performance, loss of function or change of operating state is allowed below a performance level specified by the manufacturer when the equipment 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.
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.
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.

9. Electrostatic Discharge (ESD)

9.1 Test Specification

Basic standard	:	IEC 61000-4-2
Test Port	:	Enclosure port
Discharge Impedance	:	330 ohm / 150 pF
Discharge Mode	:	Single Discharge
Discharge Period	:	one second between each discharge

9.2 Block Diagram of Test Setup



9.3 Test Procedure

a. Electrostatic discharges were applied only to those points and surfaces of the Product that are accessible to users during normal operation.
b. The test was performed with at least ten single discharges on the pre-selected points in the most sensitive polarity.
c. The time interval between two successive single discharges was at least 1 second.
d. The ESD generator was held perpendicularly to the surface to which the discharge was applied and the return cable was at least 0.2 meters from the Product.
e. Contact discharges were applied to the non-insulating coating, with the pointed tip of the generator penetrating the coating and contacting the conducting substrate.
f. Air discharges were applied with the round discharge tip of the discharge electrode approaching the Product as fast as possible (without causing mechanical damage) to touch the Product. After each discharge, the ESD generator was removed from the Product and re-triggered for a new single discharge. The test was repeated until all discharges were complete.
g. At least ten single discharges (in the most sensitive polarity) were applied to the Horizontal Coupling Plane at points on each side of the Product. The ESD generator was positioned vertically at a distance of 0.1 meters from the Product with the discharge electrode touching the HCP.
h. At least ten single discharges (in the most sensitive polarity) were applied to the center of one vertical edge of the Vertical Coupling Plane in sufficiently different positions that the four faces of the Product were completely illuminated. The VCP (dimensions 0.5m x 0.5m) was placed vertically to and 0.1 meters from the Product.

9.4 Test Results

Temperature:	26℃	Relative Humidity:	54%
Pressure:	101kPa	Test Mode:	Charging / Video recording
Test Voltage :	AC 230V/50Hz / DC 3.7V		

Discharge Method	Discharge Position	Voltage (±kV)	Min. No. of Discharge per polarity (Each Point)	Required Level	Performance Criterion
Contact Discharge	Conductive Surfaces	4	10	B	A
	Indirect Discharge HCP	4	10	B	A
	Indirect Discharge VCP	4	10	B	A
Air Discharge	Slots, Apertures, and Insulating Surfaces	8	10	B	A

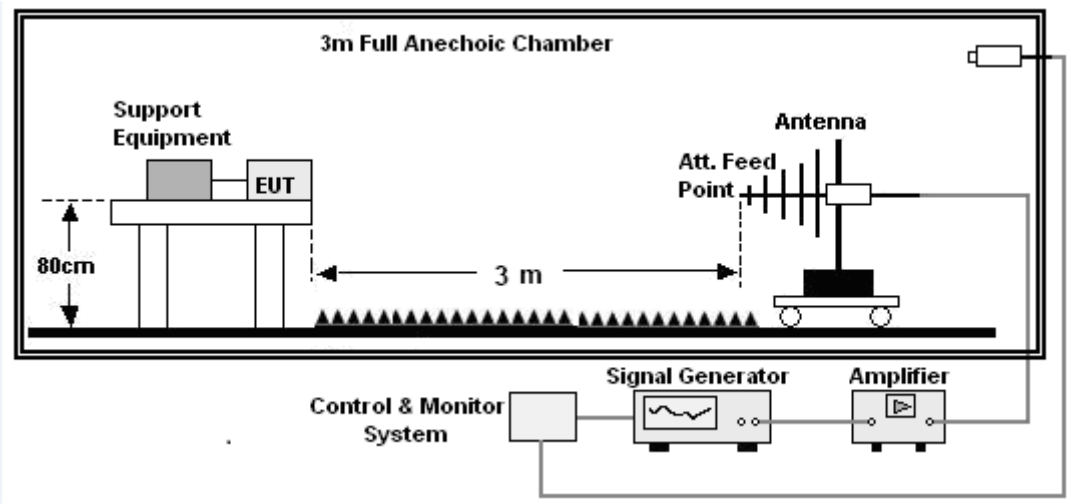
10. Continuous RF Electromagnetic Field Disturbances (RS)

10.1 Test Specification

Basic standard	:	IEC 61000-4-3
Test Port	:	Enclosure port
Step Size	:	1%
Modulation	:	1kHz, 80% AM
Dwell Time	:	1 second
Polarization	:	Horizontal & Vertical

10.2 Block Diagram of Test Setup

Below 1GHz:



10.3 Test Procedure

a. The testing was performed in a fully-anechoic chamber. The transmit antenna was located at a distance of 3 meters from the Product.
b. The frequency range is swept from 80MHz to 1000MHz, 1800MHz, 2600MHz, 3500MHz, 5000MHz,with the signal 80% amplitude modulated with a 1 kHz sine wave,and the step size was 1%.
c. 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, but should not exceed 5 s at each of the frequencies during the scan.
d. The test was performed with the Product exposed to both vertically and horizontally polarized fields on each of the four sides.
e. For Broadcast reception function:Group 2 not apply in this test.

10.4 Test Results

Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101kPa	Test Mode:	Charging / Video recording
Test Voltage :	AC 230V/50Hz / DC 3.7V		

Frequency	Position	Field Strength (V/m)	Required Level	Performance Criterion
80 - 1000MHz, 1800MHz, 2600MHz, 3500MHz, 5000MHz	Front, Right, Back, Left	3	A	A

11. EUT Photographs

EUT Photo 1

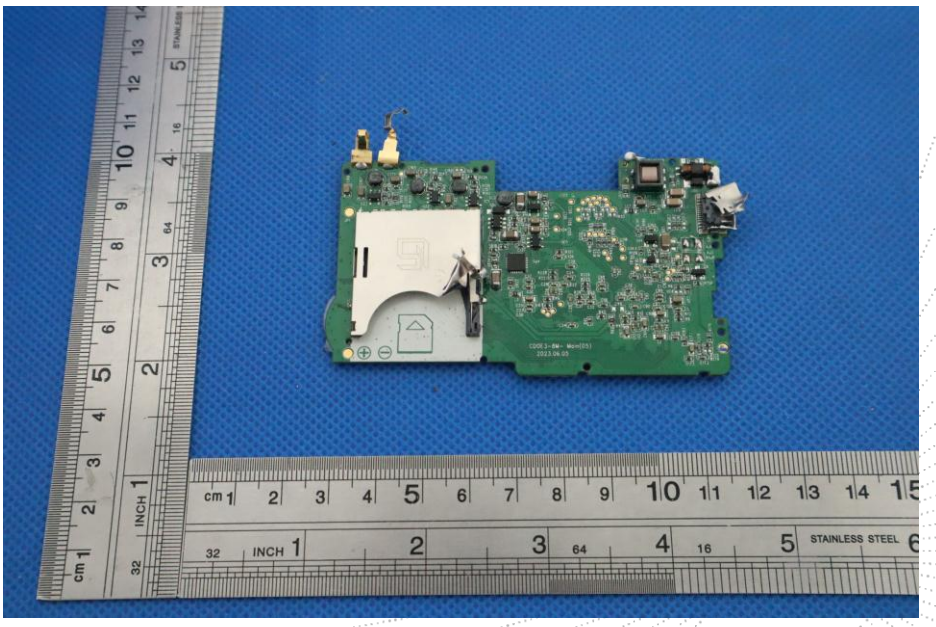
EUT Photo 2

EUT Photo 3

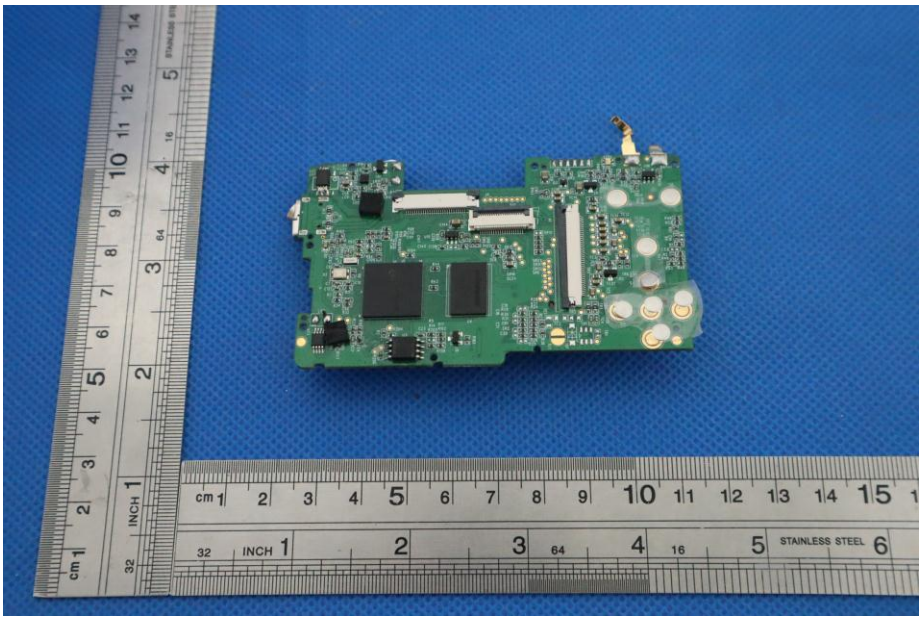
EUT Photo 4

EUT Photo 5

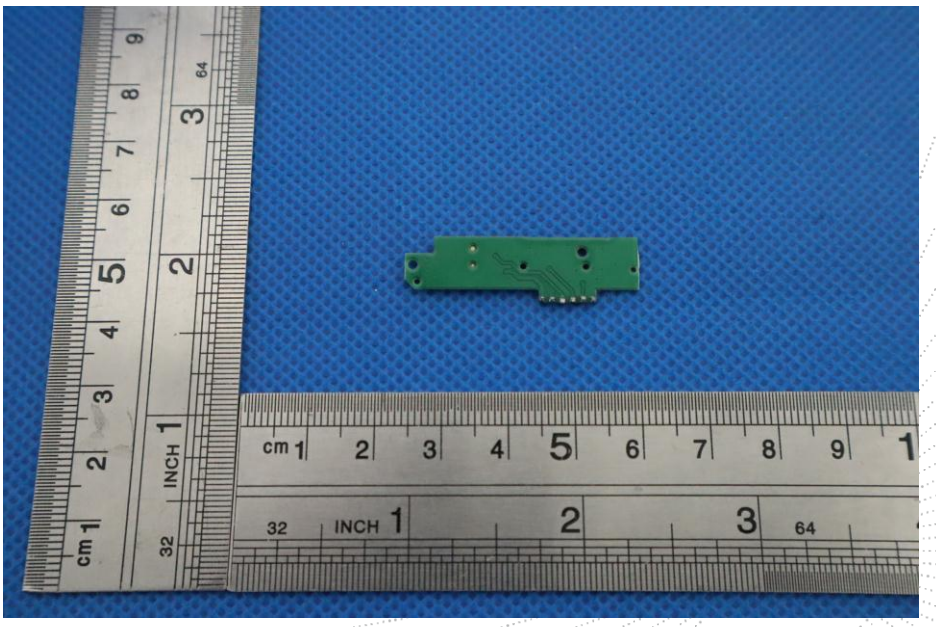
EUT Photo 6



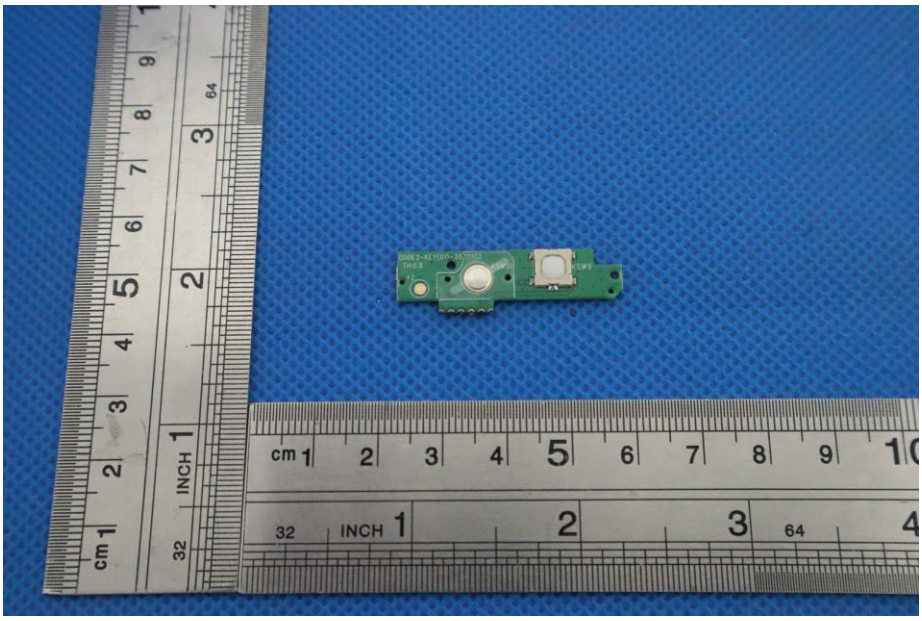
EUT Photo 7



EUT Photo 8



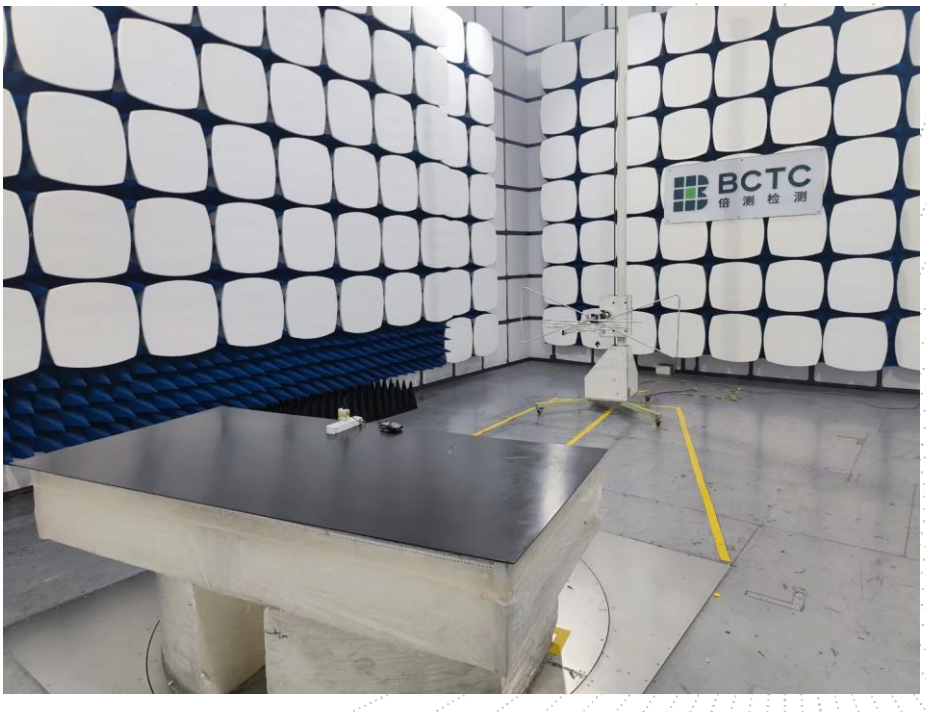
EUT Photo 9



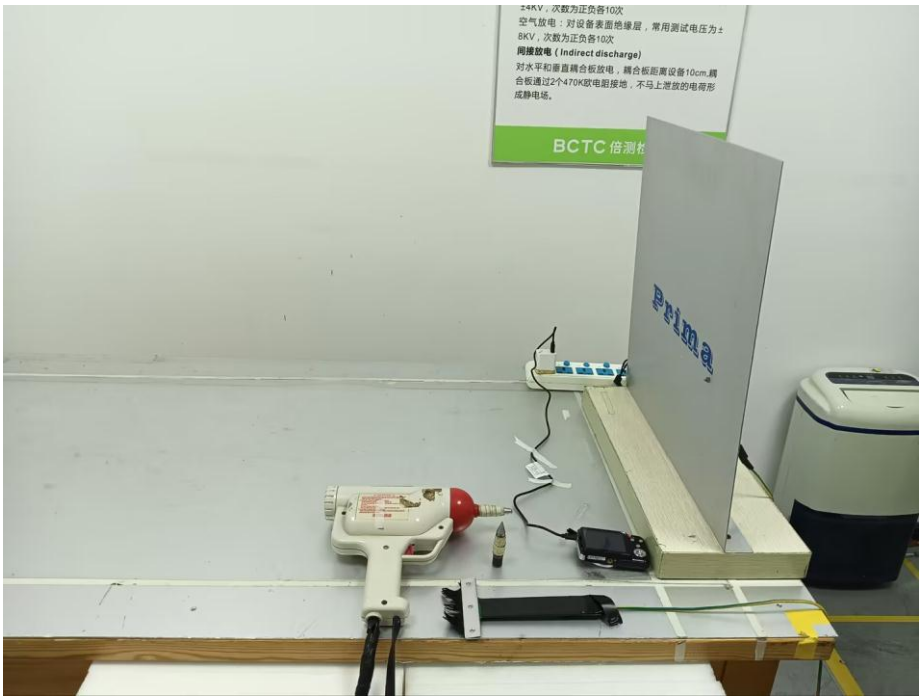
12. EUT Test Setup Photographs

Conducted emissions

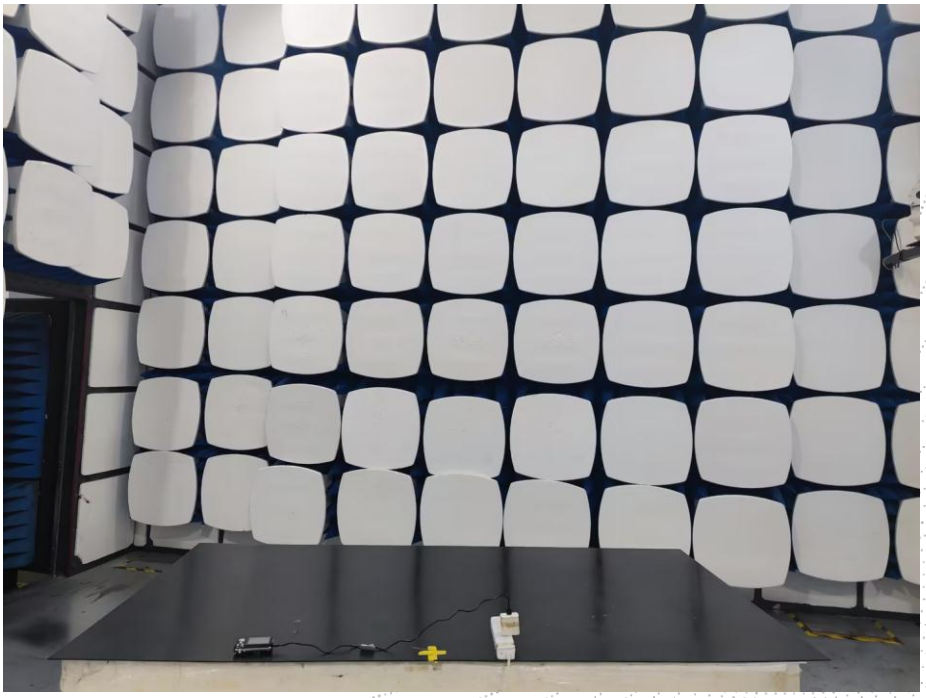
Radiated emissions



ESD


空气放电：对设备表面绝缘层，常用测试电压为±
8KV，次数为正负各10次
间接放电（Indirect discharge）
对水平和垂直耦合板放电，耦合板距离设备10cm,耦
合板通过2个470K欧电阻接地，不马上泄放的电荷形
成静电场。
BCTC 倍测检
Prima

RS



STATEMENT

1. The equipment lists are traceable to the national reference standards.

2. The test report can not be partially copied unless prior written approval is issued from our lab.

3. The test report is invalid without the "special seal for inspection and testing".

4. The test report is invalid without the signature of the approver.

5. The test process and test result is only related to the Unit Under Test.

6. Sample information is provided by the client and the laboratory is not responsible for its authenticity.

7. The quality system of our laboratory is in accordance with ISO/IEC17025.

8. If there is any objection to this test report, the client should inform issuing laboratory within 15 days from the date of receiving test report.

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※※※※※ **END** ※※※※※