TEST REPORT

Report No.:	BCTC2210364356E
Applicant:	Shenzhen LinkedSparx Technology Co., Ltd
Product Name:	SYRO-Bricks
Model/Type reference:	LS-B3
Tested Date:	2022-09-27 to 2022-10-17
Issued Date:	2022-11-07

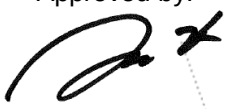
Shenzhen BCTC Testing Co., Ltd.

Product Name:	SYRO-Bricks
Trademark:	LinkedSparx
Model /Type Ref.:	LS-B3 LS-B3A, LS-B3B, LS-B3C, LS-B3D, LS-B3E, LS-B3F, LS-B3G, LS-B3H, LS-B3I, LS-B3J, LS-B3K, LS-B3L
Prepared For:	Shenzhen LinkedSparx Technology Co., Ltd
Address:	606, 82, 4th Industrial Park, Tantou, Songgang, Bao'an District, Shenzhen
Manufacturer:	Shenzhen LinkedSparx Technology Co., Ltd
Address:	606, 82, 4th Industrial Park, Tantou, Songgang, Bao'an District, Shenzhen
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:	2022-09-27
Sample tested Date:	2022-09-27 to 2022-10-17
Issue Date:	2022-11-07
Report No.:	BCTC2210364356E
Test Standards:	FCC Part 15B ANSI C63.4:2014
Test Results:	PASS

Tested by:

Jeff Fu/ Project Handler

Approved by:



Zero Zhou/Reviewer

Table Of Content

(Note: N/A Means Not Applicable)

1. Version

Report No.	Issue Date	Description	Approved
BCTC2210364356E	2022-11-07	Original	Valid

2. Test Summary

The Product has been tested according to the following specifications:

Standard	Test Item	Test result
FCC 15.107	Conducted Emission	Pass
FCC 15.109	Radiated Emission	Pass

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)
Conducted Emission (150kHz-30MHz)	3.20
Radiated Emission(30MHz~1GHz)	4.80
Radiated Emission(1GHz~6GHz)	4.90

4. Product Information And Test Setup

4.1 Product Information

Ratings: DC 5V2A From Adapter
Model differences： All models are identical except for the appearance color.

Cable of Product

No.	Cable Type	Quantity	Provider	Length (m)	Shielded	Note
1	--	--	Applicant	---	Yes/No	---
2	--	--	BCTC	--	Yes/No	--

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	--	CD122	---	---

Notes:

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 Emission (150KHz-30MHz) Class B	Link Mode	AC 120V/60Hz
Radiated emission(30MHz-1GHz) Class B	Link Mode	AC 120V/60Hz

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

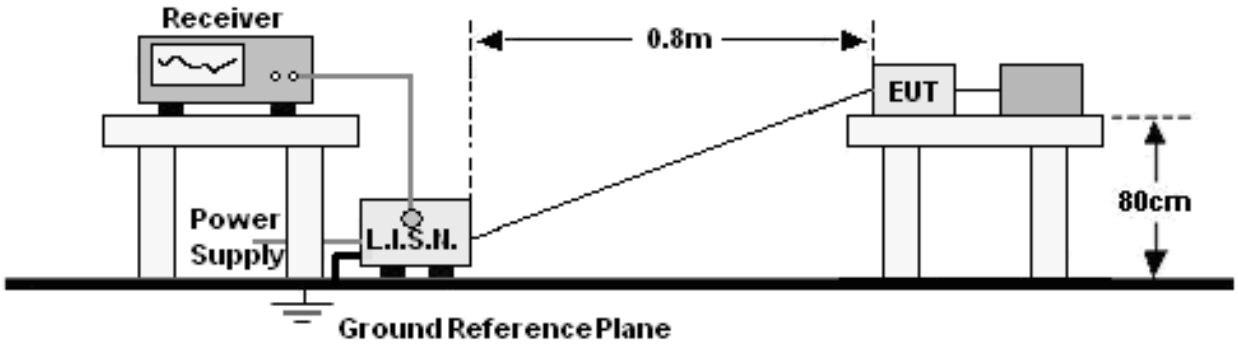
Conducted emissions Test					
Equipment	**Manufacturer**	**Model#**	**Serial#**	**Last Cal.**	**Next Cal.**
Receiver	R&S	ESR3	102075	May 24, 2022	May 23, 2023
LISN	R&S	ENV216	101375	May 24, 2022	May 23, 2023
Software	Frad	EZ-EMC	EMC-CON 3A1	\	\
Attenuator	\	10dB DC-6GHz	1650	May 24, 2022	May 23, 2023
Cable	\	\	\	\	\

Radiated Emissions Test (966 Chamber#01)					
Equipment	**Manufacturer**	**Model#**	**Serial#**	**Last Cal.**	**Next Cal.**
966 chamber	ChengYu	966 Room	966	Jun. 06. 2020	Jun. 05, 2023
Receiver	R&S	ESRP	101154	May 24, 2022	May 23, 2023
Receiver	R&S	ESR3	102075	May 24, 2022	May 23, 2023
Amplifier	SKET	LAPA_01G18G-45dB	\	May 24, 2022	May 23, 2023
Amplifier	Schwarzbeck	BBV9744	9744-0037	May 24, 2022	May 23, 2023
TRILOG Broadband Antenna	schwarzbeck	VULB9163	942	May 26, 2022	May 25, 2023
Horn Antenna	schwarzbeck	BBHA9120D	1541	Jun. 06, 2022	Jun. 06, 2023
Software	Frad	EZ-EMC	FA-03A2 RE	\	\

6. Conducted Emission At The Mains Terminals Test

6.1 Block Diagram Of Test Setup

For mains ports:



6.2 Limit

Limits for Class B devices

(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:

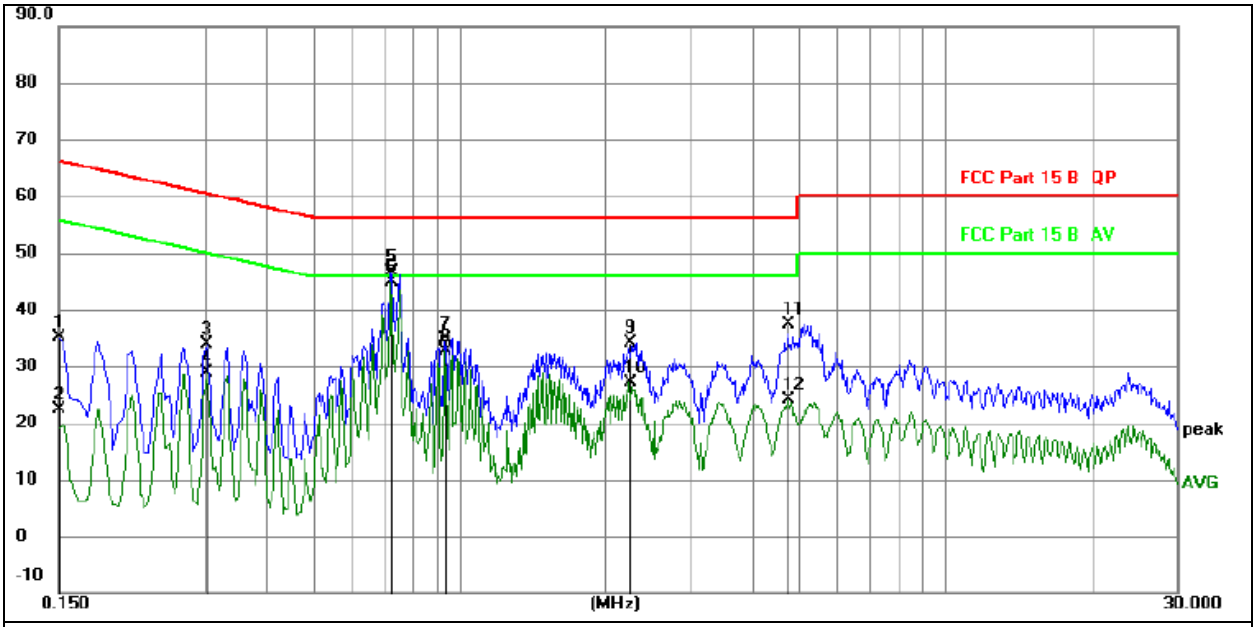
a. The Product was placed on a nonconductive table 0.8 m above the horizontal ground reference plane, and 0.4 m from the vertical ground reference plane, and connected to the main through Line Impedance Stability Network (L.I.S.N).

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

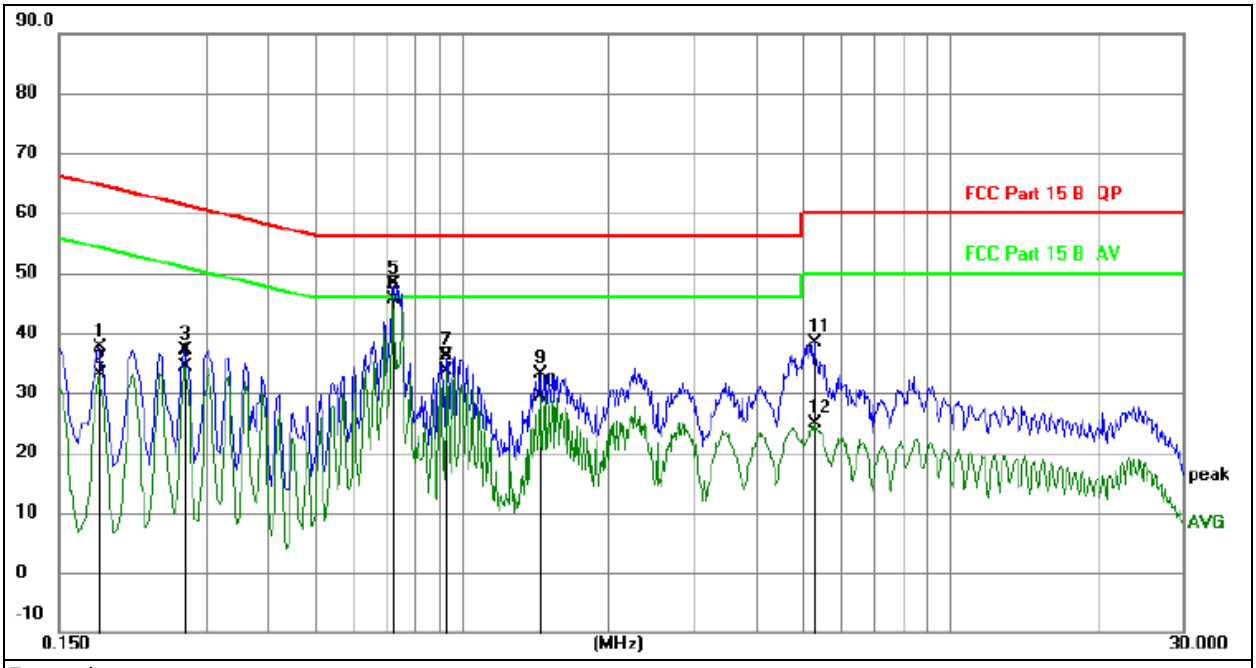
Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101kPa	Phase :	Line
Test Voltage :	AC 120V/60Hz	Test Mode:	Link Mode



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		0.1500	15.50	19.67	35.17	66.00	-30.83	QP
2		0.1500	2.73	19.67	22.40	56.00	-33.60	AVG
3		0.3030	14.19	19.77	33.96	60.16	-26.20	QP
4		0.3030	9.14	19.77	28.91	50.16	-21.25	AVG
5		0.7260	26.80	19.74	46.54	56.00	-9.46	QP
6	*	0.7260	25.14	19.74	44.88	46.00	-1.12	AVG
7		0.9375	15.13	19.76	34.89	56.00	-21.11	QP
8		0.9375	12.90	19.76	32.66	46.00	-13.34	AVG
9		2.2380	14.15	19.91	34.06	56.00	-21.94	QP
10		2.2380	7.10	19.91	27.01	46.00	-18.99	AVG
11		4.7670	17.35	20.12	37.47	56.00	-18.53	QP
12		4.7670	4.07	20.12	24.19	46.00	-21.81	AVG

Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101kPa	Phase :	Neutral
Test Voltage :	AC 120V/60Hz	Test Mode:	Link Mode



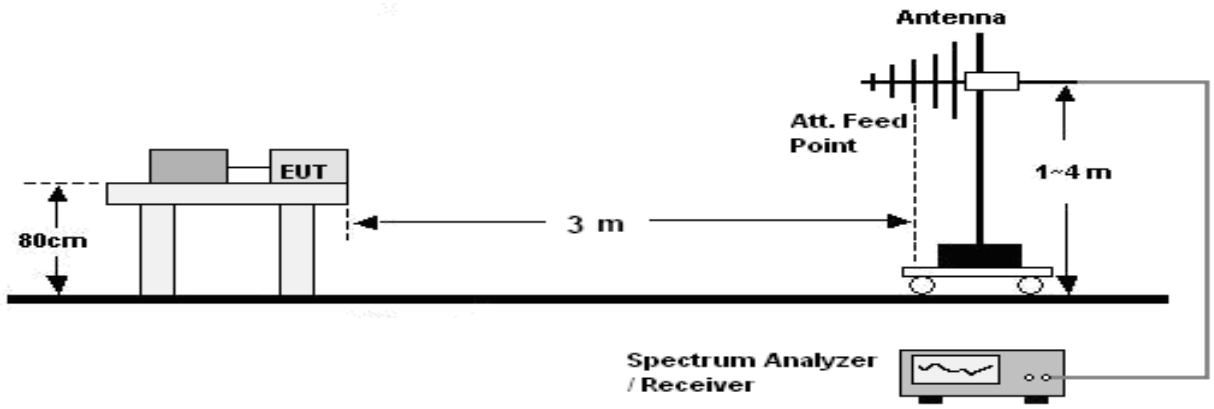
Remark:
1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.
3. Measurement=Reading Level+ Correct Factor
4. Over= Measurement-Limit

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz		dB	dBuV	dBuV	dB	Detector
1		0.1806	17.81	19.75	37.56	64.46	-26.90	QP
2		0.1806	13.35	19.75	33.10	54.46	-21.36	AVG
3		0.2701	17.40	19.78	37.18	61.11	-23.93	QP
4		0.2701	14.60	19.78	34.38	51.11	-16.73	AVG
5		0.7236	28.50	19.74	48.24	56.00	-7.76	QP
6	*	0.7236	25.85	19.74	45.59	46.00	-0.41	AVG
7		0.9331	16.40	19.76	36.16	56.00	-19.84	QP
8		0.9331	13.95	19.76	33.71	46.00	-12.29	AVG
9		1.4485	13.26	19.81	33.07	56.00	-22.93	QP
10		1.4485	9.69	19.81	29.50	46.00	-16.50	AVG
11		5.2770	18.37	20.13	38.50	60.00	-21.50	QP
12		5.2770	4.82	20.13	24.95	50.00	-25.05	AVG

7. Radiation Emission Test

7.1 Block Diagram Of Test Setup

30MHz ~ 1GHz:



7.2 Limit

Limits for Class B devices

Frequency (MHz)	limits at 3m dB(μV/m)		
	QP Detector	PK Detector	AV Detector
30-88	40.0	--	--
88-216	43.5	--	--
216-960	46.0	--	--
960 to 1000	54.0	--	--
Above 1000	--	74.0	54.0

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

7.3 Test Procedure

30MHz ~ 1GHz:

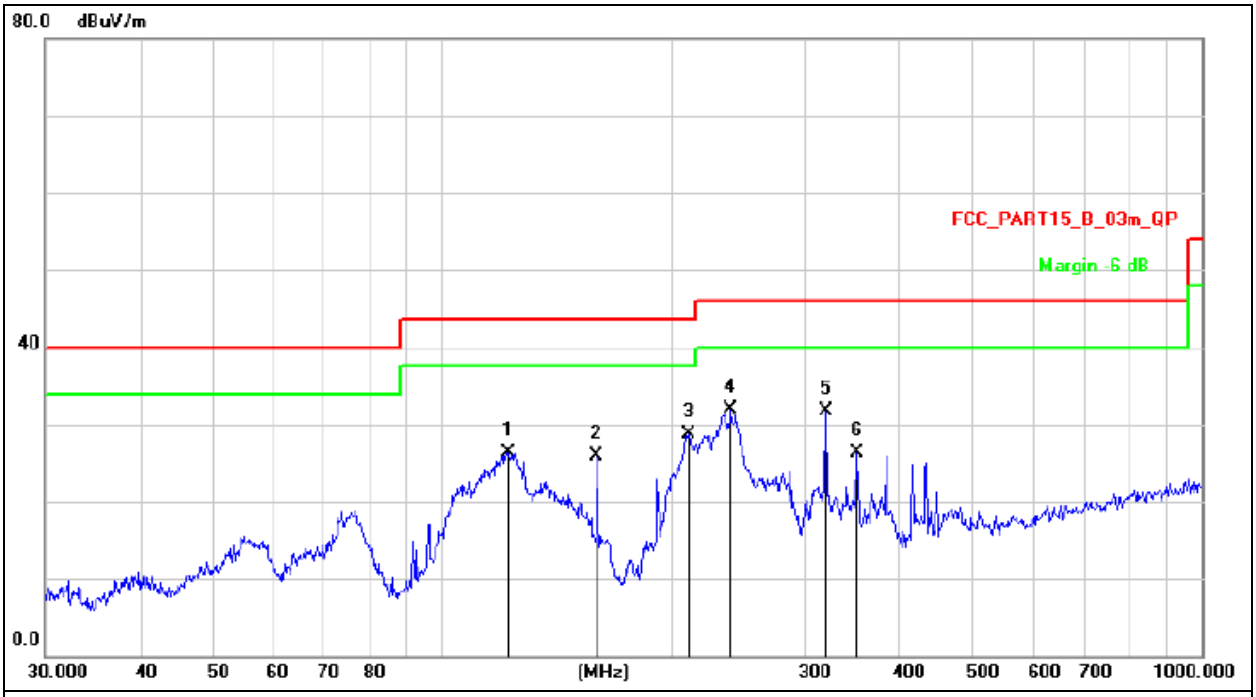
a. The Product was placed on the nonconductive turntable 0.8 m above the ground at a chamber.

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.

7.4 Test Result

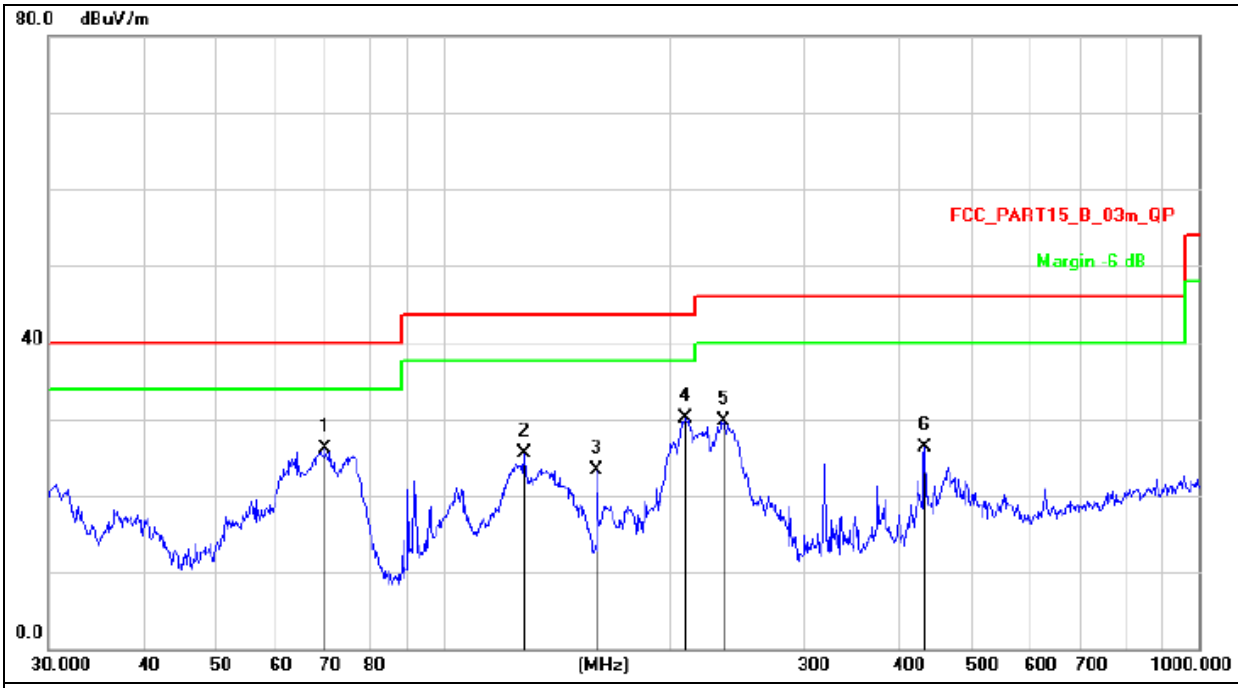
Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101KPa	Phase :	Horizontal
Test Voltage :	AC 120V/60Hz	Test Mode:	Link Mode



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		122.4039	45.59	-19.23	26.36	43.50	-17.14	QP
2		159.7844	46.31	-20.33	25.98	43.50	-17.52	QP
3		210.7860	45.69	-17.04	28.65	43.50	-14.85	QP
4	*	239.9874	48.11	-16.14	31.97	46.00	-14.03	QP
5		319.9370	45.52	-13.87	31.65	46.00	-14.35	QP
6		351.7078	39.14	-12.77	26.37	46.00	-19.63	QP

Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101KPa	Phase :	Vertical
Test Voltage :	AC 120V/60Hz	Test Mode:	Link Mode

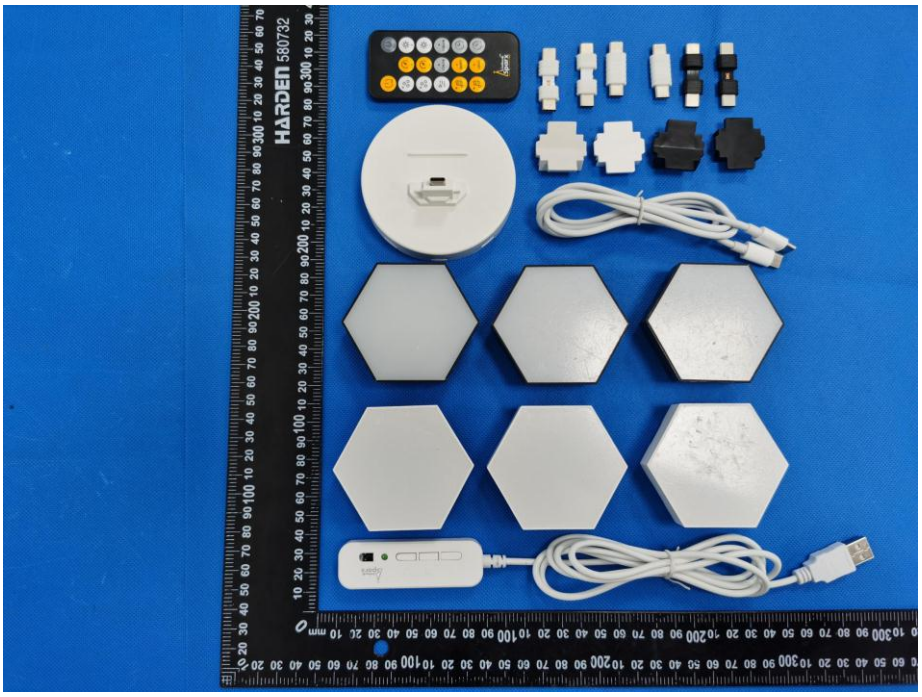


Remark:
1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.
2. Measurement=Reading Level+ Correct Factor
3. Over= Measurement-Limit

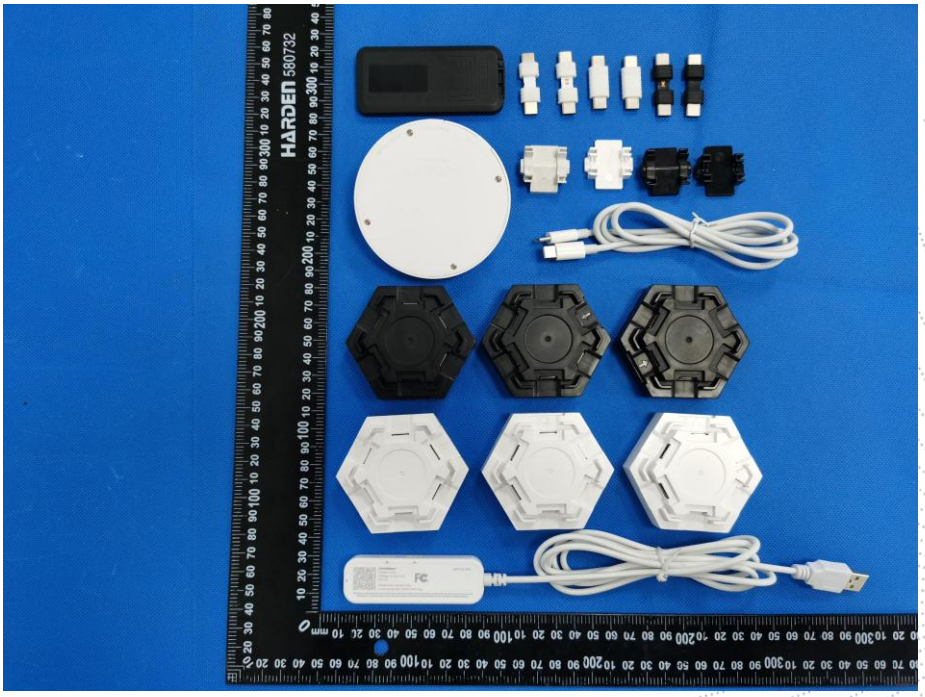
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector
1		69.8450	46.06	-19.91	26.15	40.00	-13.85	QP
2		128.1130	45.05	-19.61	25.44	43.50	-18.06	QP
3		159.7844	43.69	-20.33	23.36	43.50	-20.14	QP
4	*	209.3129	47.21	-17.08	30.13	43.50	-13.37	QP
5		234.9909	46.05	-16.29	29.76	46.00	-16.24	QP
6		434.0651	38.01	-11.72	26.29	46.00	-19.71	QP

8. EUT Photographs

EUT Photo 1



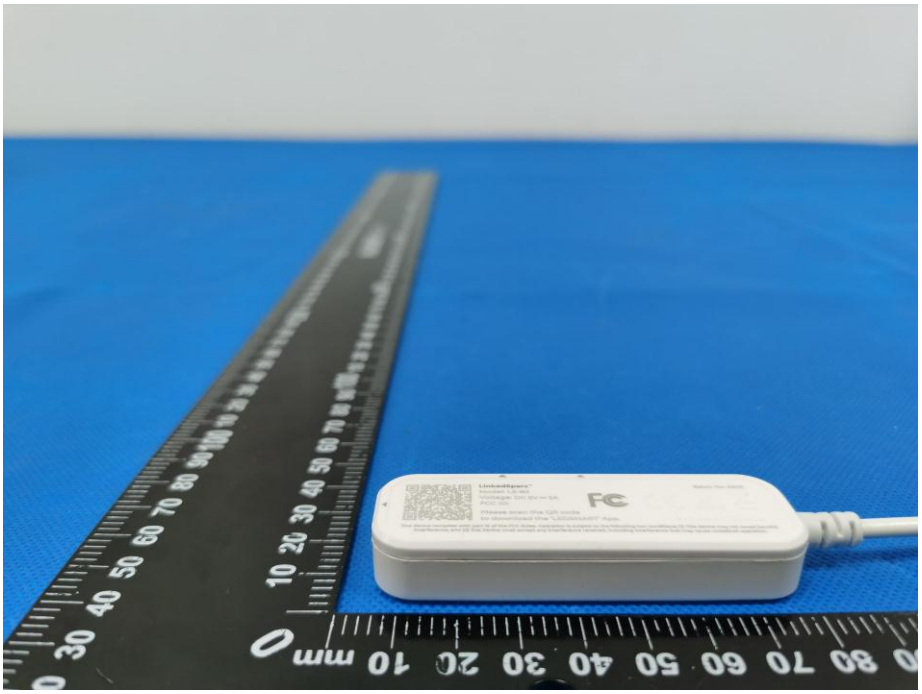
EUT Photo 2



EUT Photo 3

EUT Photo 4

EUT Photo 5



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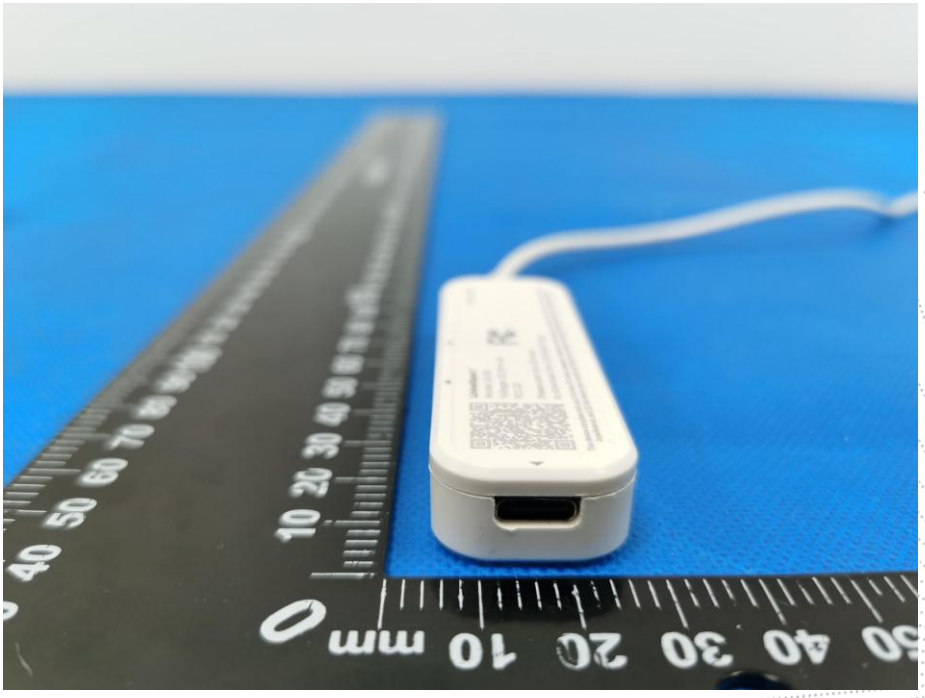
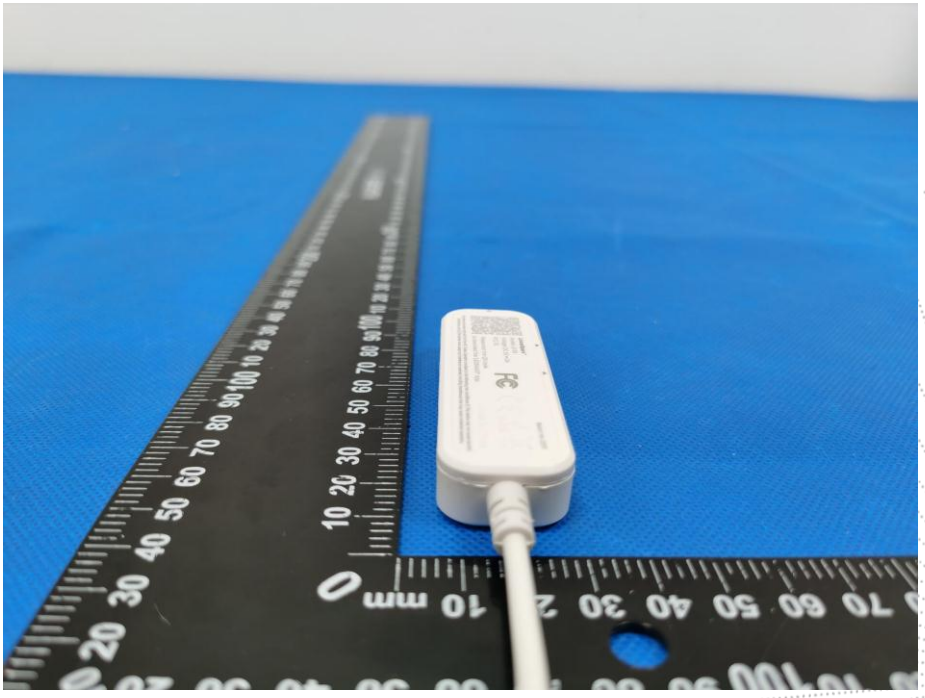


EUT Photo 7

EUT Photo 8



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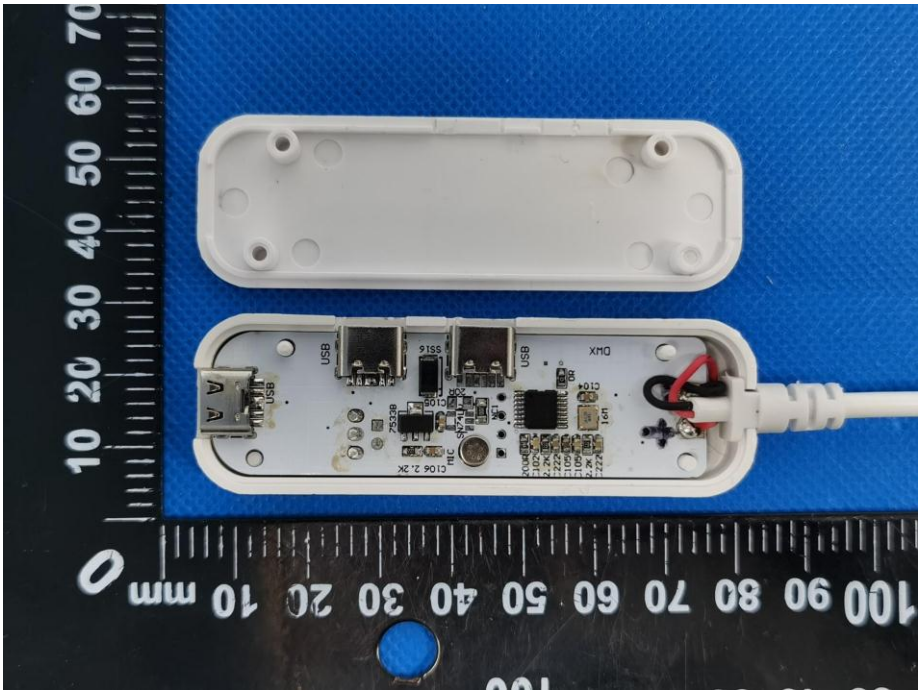

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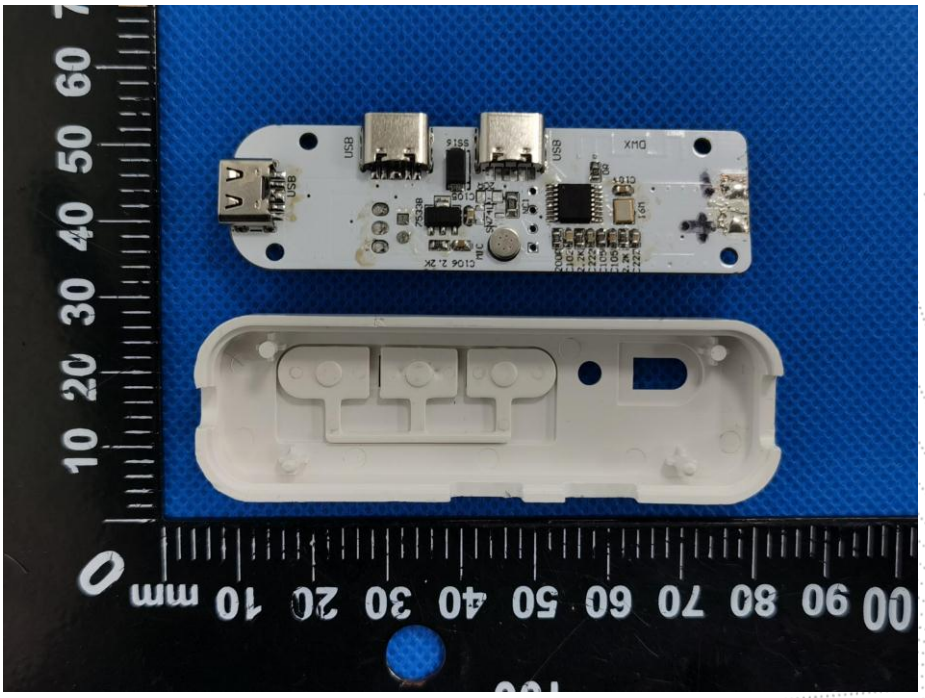

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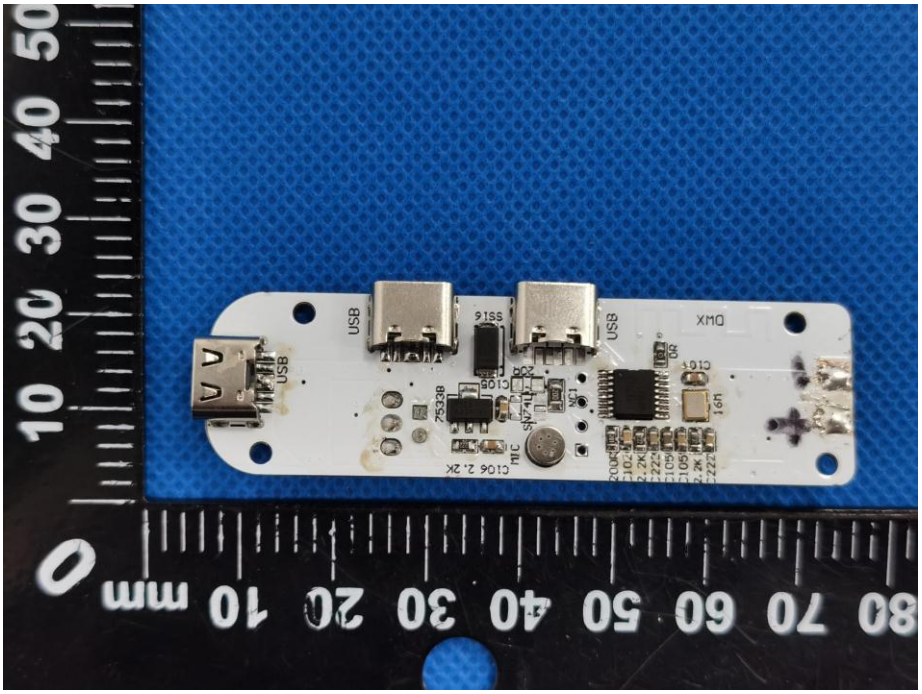

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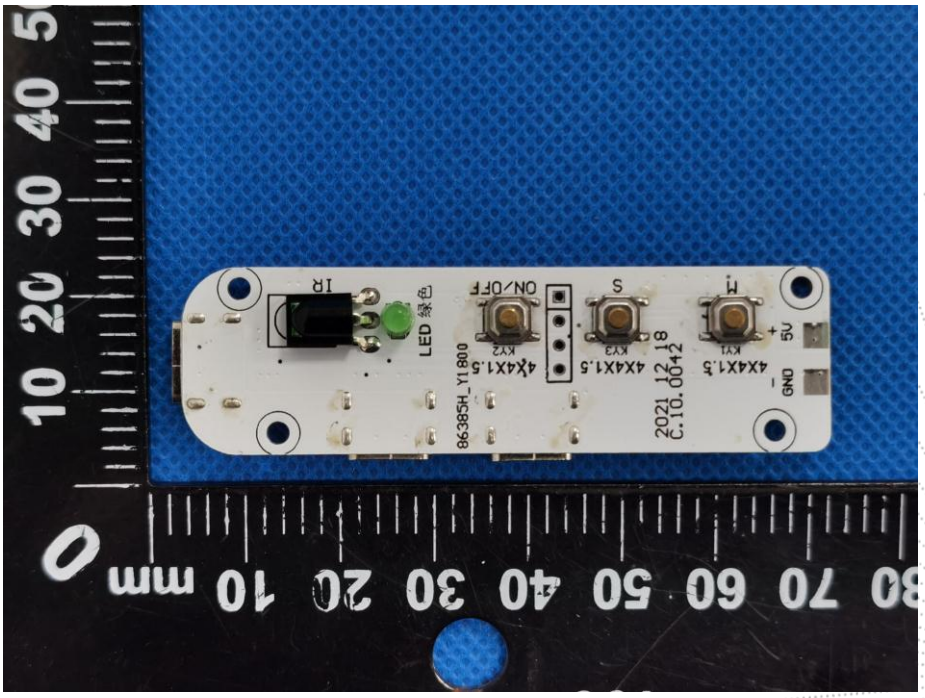

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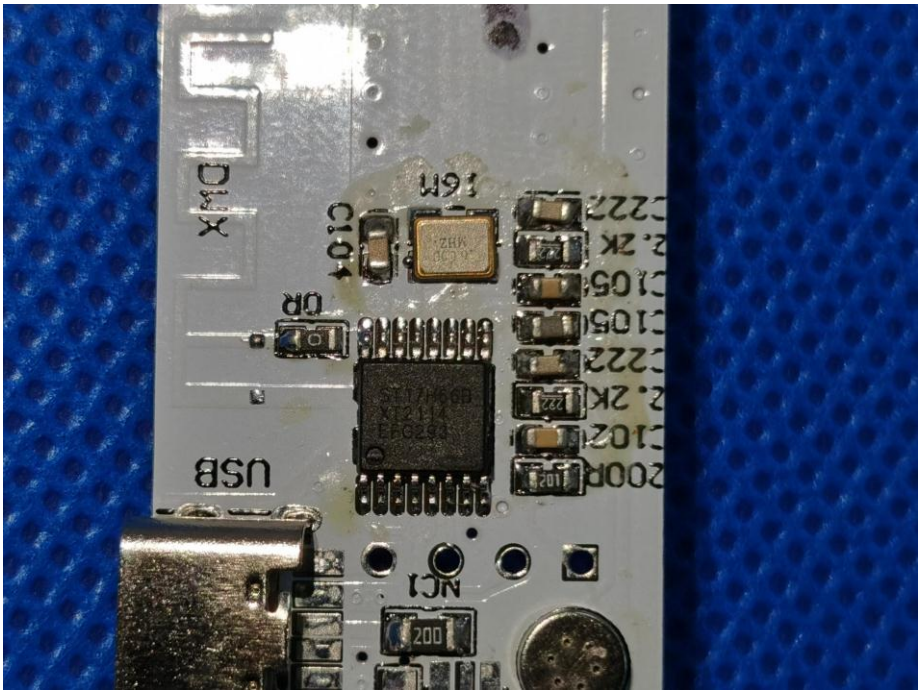

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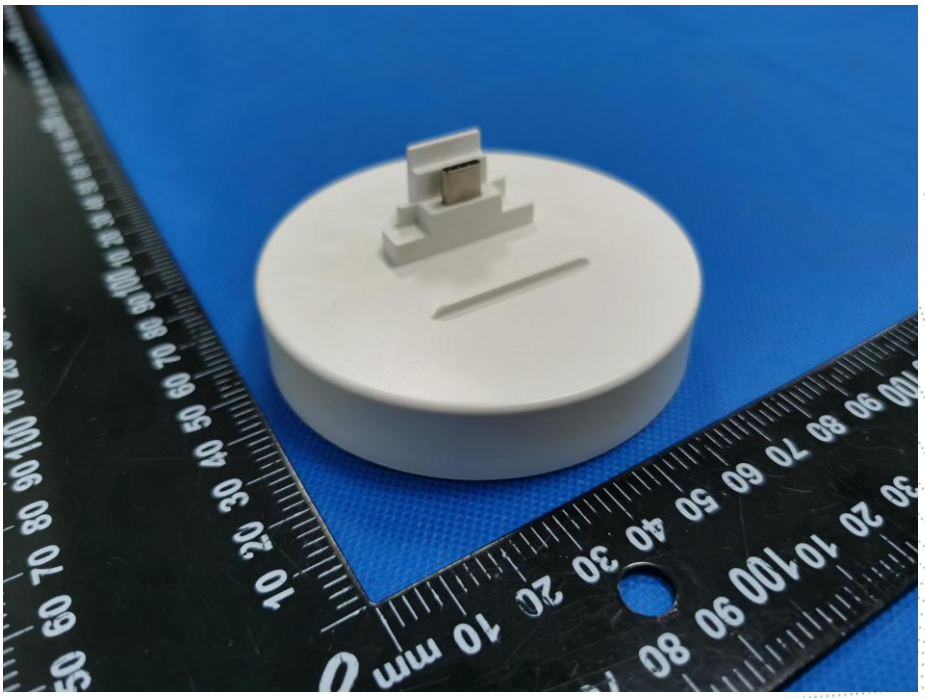

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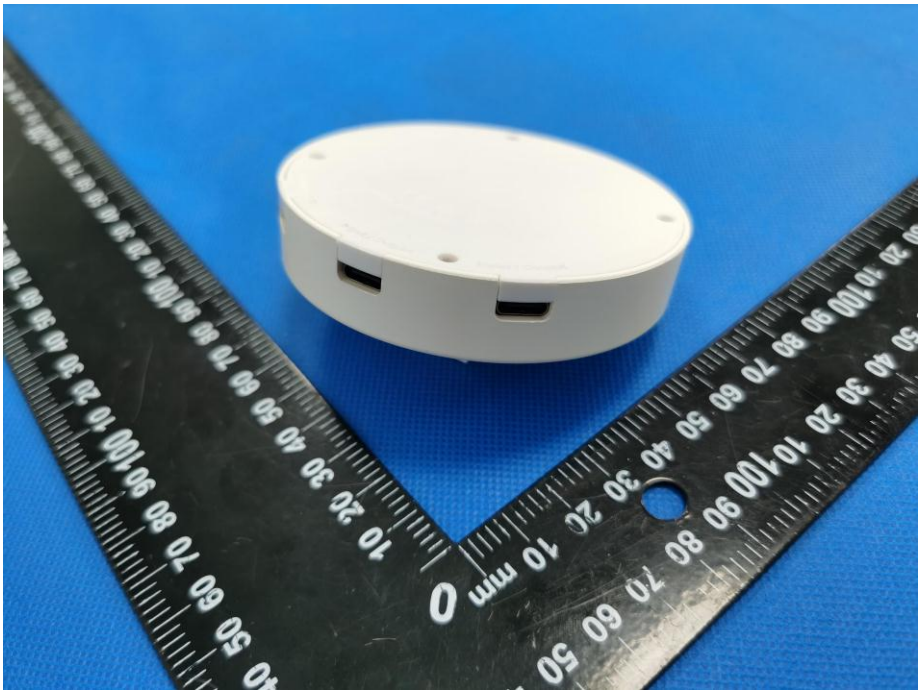

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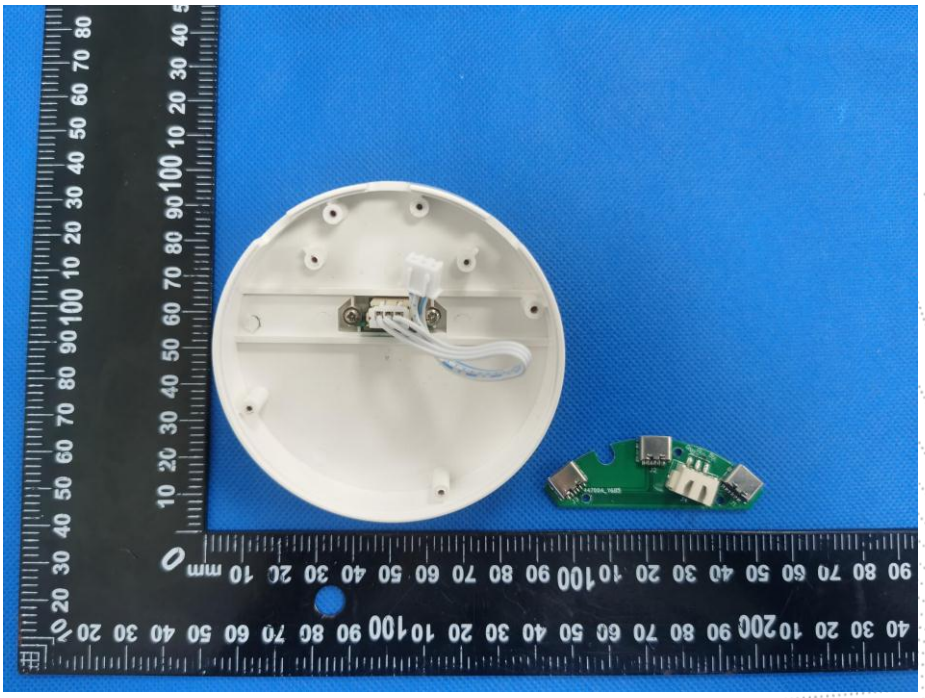

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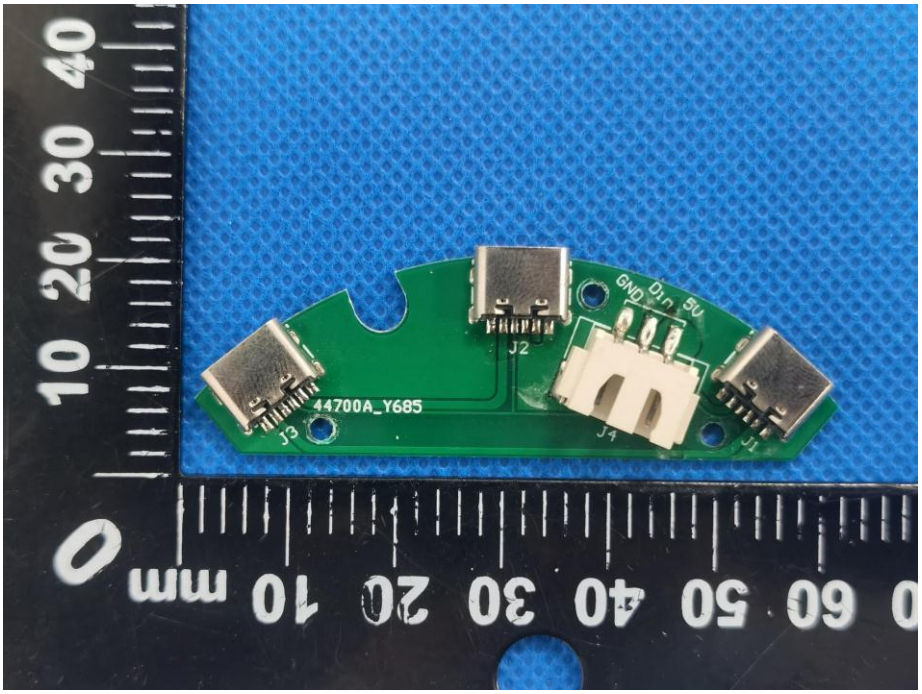

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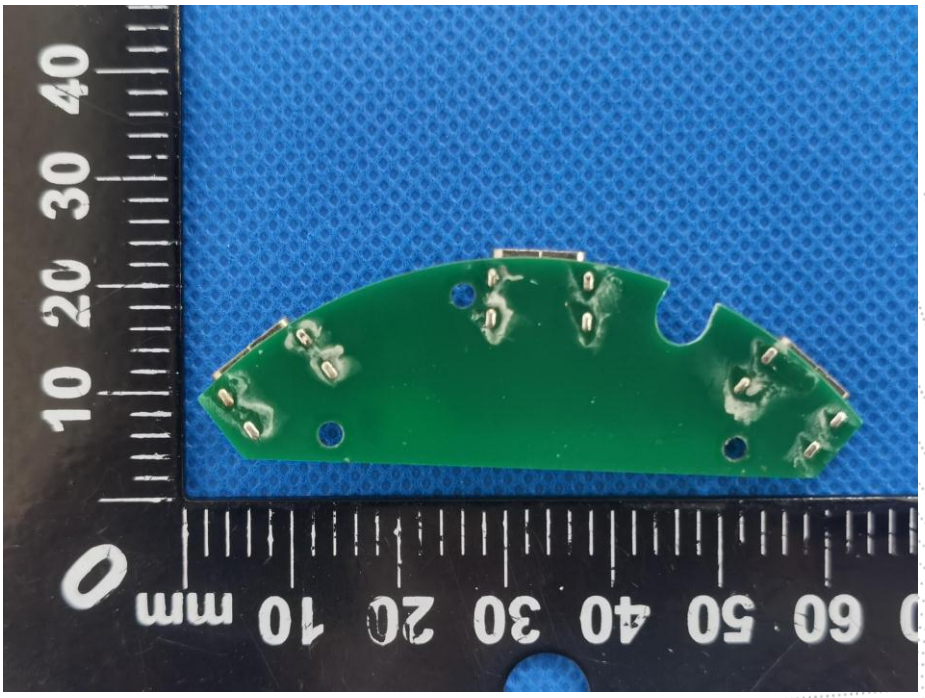

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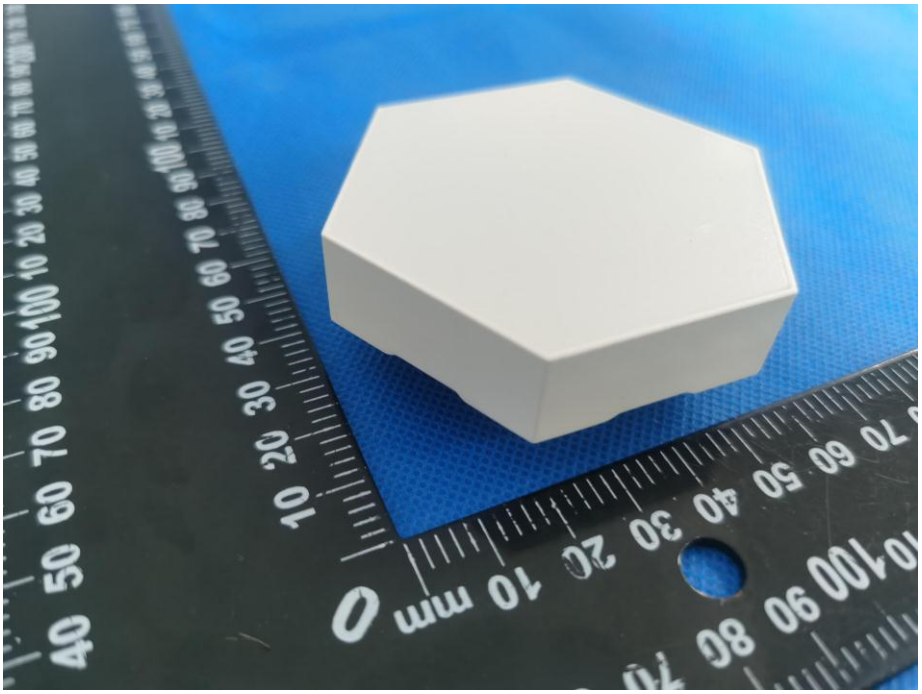

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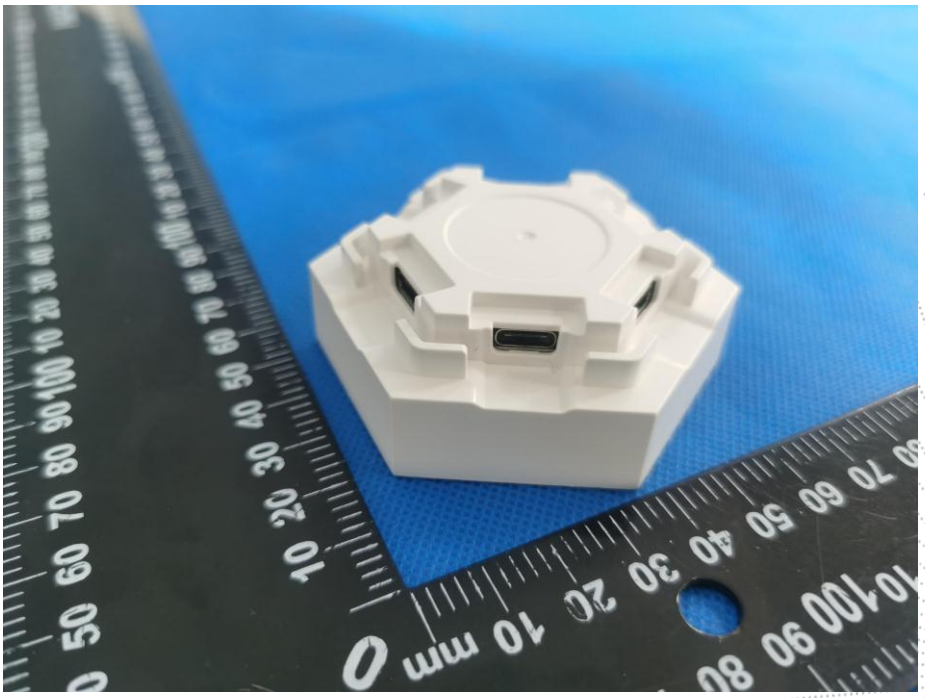

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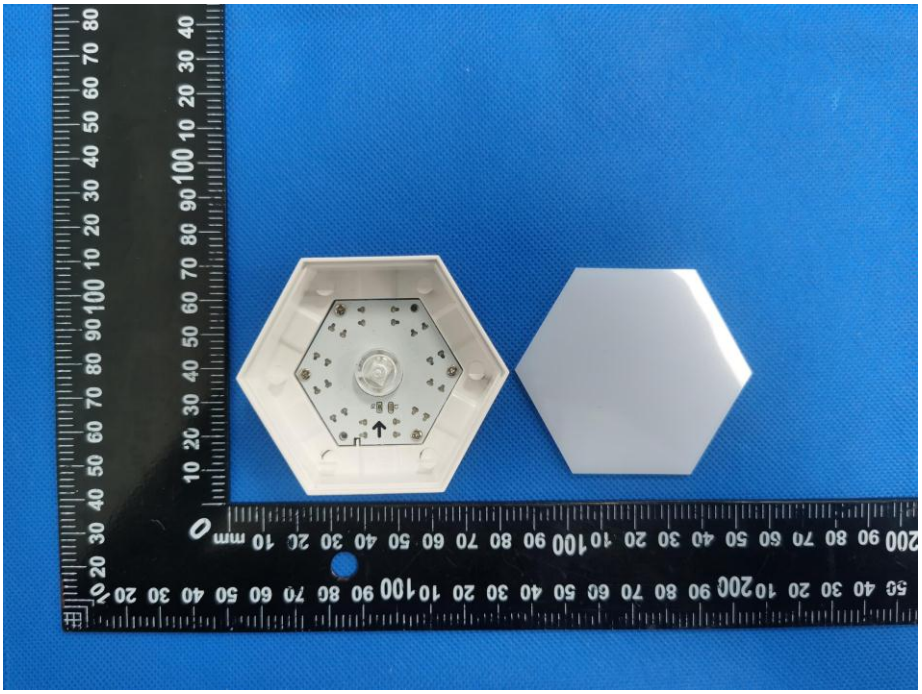

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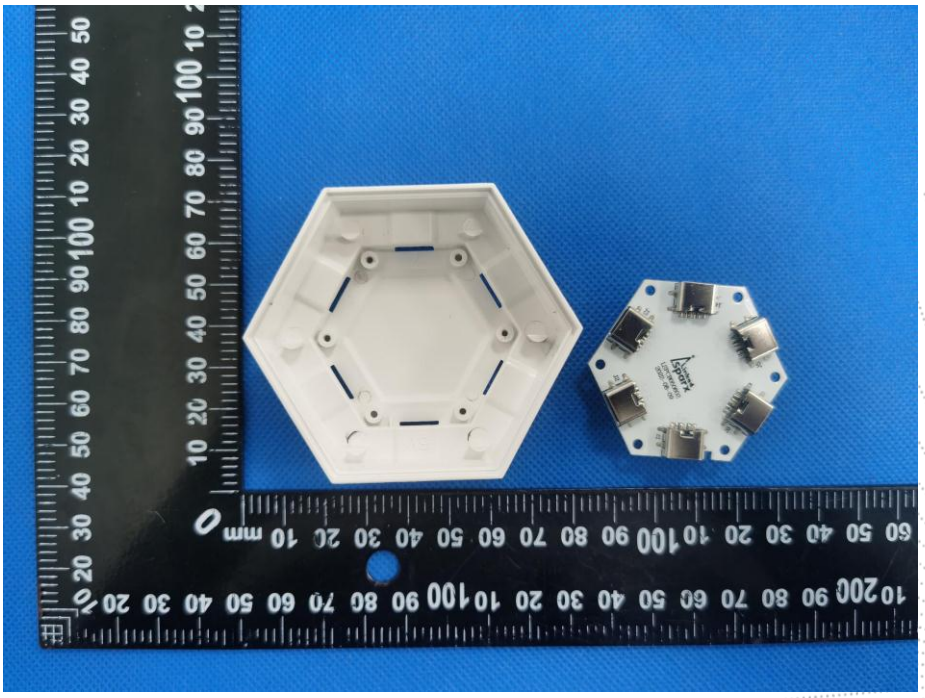

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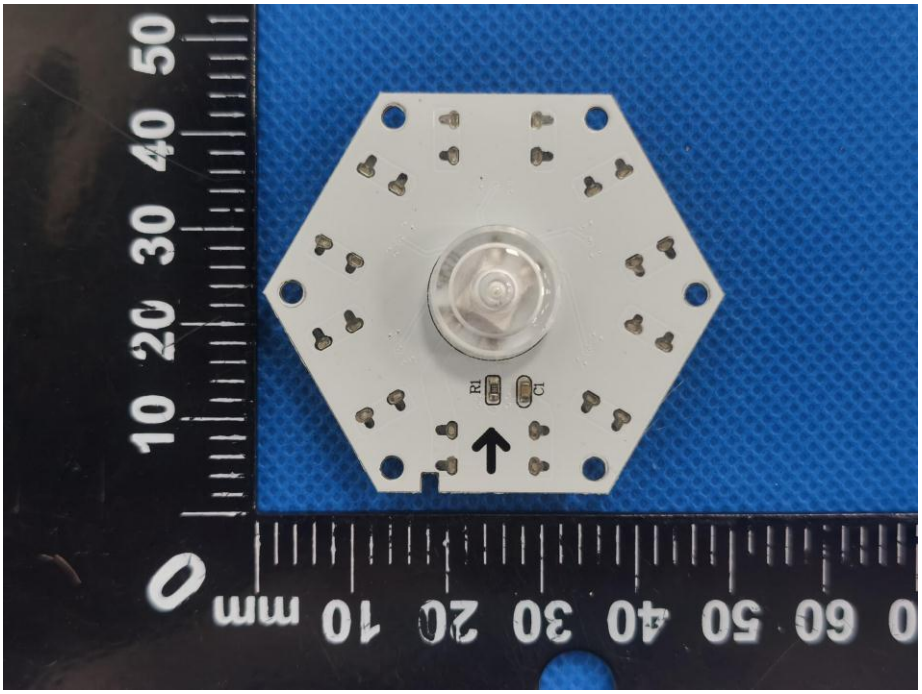

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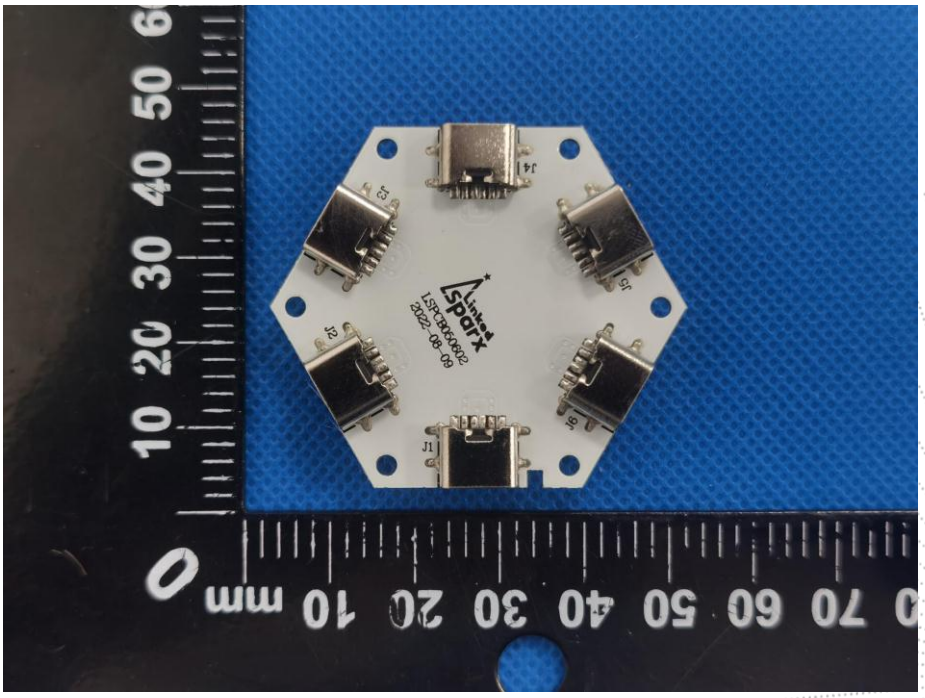
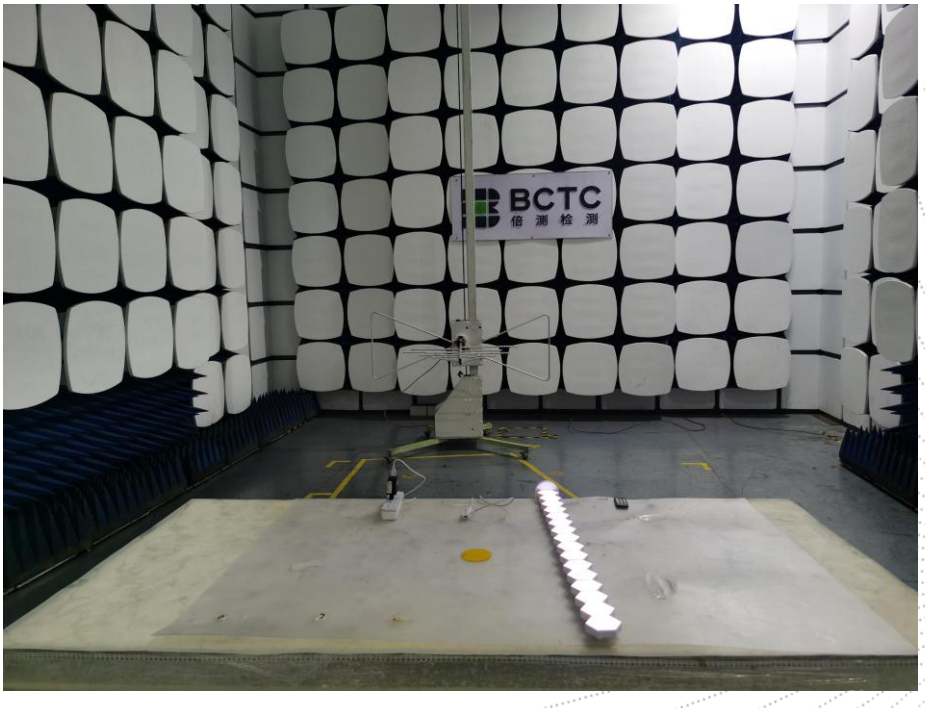


9. EUT Test Setup Photographs

Conducted emissions

Radiated emissions



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 test report without CMA mark is only used for scientific research, teaching, enterprise product development and internal quality control purposes.

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

9. 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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