



TEST REPORT

Applicant : GREAT-ONE ELECTRONIC TECHNOLOGY CO., LTD
Address : 4/F,NO11,PINGDONG FOURTH RD, Building A.,NANPING HI-TECH INDUSTRIAL ZONE,ZHUHAI,GUANGDONG
Manufacturer : GREAT-ONE ELECTRONIC TECHNOLOGY CO., LTD
Address : 4/F,NO11,PINGDONG FOURTH RD, Building A.,NANPING HI-TECH INDUSTRIAL ZONE,ZHUHAI,GUANGDONG
Product Name : Multi-functional solar crank charging emergency radio
Model Number : HY-071, HY-008, HY-068, HY-028, HY-018, HY-088, HY-016, HY-019.
Trademark : GREATONE
Date of Receipt : Jul. 13, 2023
Test Date : Jul. 13, 2023 to Jul. 21, 2023
Date of Report : Jul. 21, 2023
Test Result : The equipment under test was found to be compliance with the requirements of the standards applied.
Test Procedure Used: J55032(H29)

Prepared by(Test Engineer):
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Ken Tan

Reviewer(Supervisor):
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Corbin Wang

Approved(Manager):
Levi Xiao



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**Revision History of This Test Report**

Report Number	Description	Issued Date
BKC23072705GE	Initial Issue	2023-07-21

1. GENERAL INFORMATION

1.1. Description of Device (EUT)

EUT : Multi-functional solar crank charging emergency radio

Trademark : GREATONE

Model List : HY-071, HY-008, HY-068, HY-028, HY-018, HY-088,
HY-016, HY-019.

Model Difference : The product is different for model name.

Power Supply : Input: 5VDC, MAX 2A
Output: 5VDC, MAX 2A

Work Frequency : Below 108MHz

Note:

1) EUT: Equipment under test

2) HY-071 was selected as the test model and the datas have been recorded in this report.

1.2. Independent Operation

Test Voltage: DC 5V From Adapter

Test Mode: Charging Mode+Working Mode+Discharging Mode

Remark: The test data of the worst case condition(s) was reported on the following page.

1.3. TEST SUMMARY

Test Procedures According To The Technical Standards:

EMC Emission				
Standard	Test Item	Limit	Judgment	Remark
J55032(H29)	AC Port Conducted Emission	Class B	PASS	
	Radiated Emission	Class B	PASS	
	Asymmetric Mode Conducted Emissions	Class B	N/A	

NOTE:

(1)"N/A" denotes test is not applicable in this Test Report

(2) For client's request and manual description, the test will not be executed.

1.4. Special Accessories and Auxiliary Equipment

Description	Manufacturer	Model No.	Serial No.
Adapter	Huawei	M7	HW56345

1.5. Test Uncertainty

The reported uncertainty of measurement $y \pm U$, where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95 %.

A. Conducted Measurement :

Method	Measurement Frequency Range	U,(dB)	NOTE
CISPR 16-4-2:2018	150 KHz ~ 30MHz	3.01	

B. Radiated Measurement :

Method	Measurement Frequency Range	U,(dB)	NOTE
CISPR 16-4-2:2018	30MHz ~ 1000MHz	4.25	
	1GHz ~6GHz	5.1	

1.6. Test Facility

Site Description

Name of Firm : Shenzhen BKC Testing Co., Ltd.

Site Location : 103, 1/F, Huaya Science Park, Longhua Community,
Longhua District, Shenzhen, Guangdong, China.



2. TEST INSTRUMENT USED

2.1 CONDUCTED TEST SITE

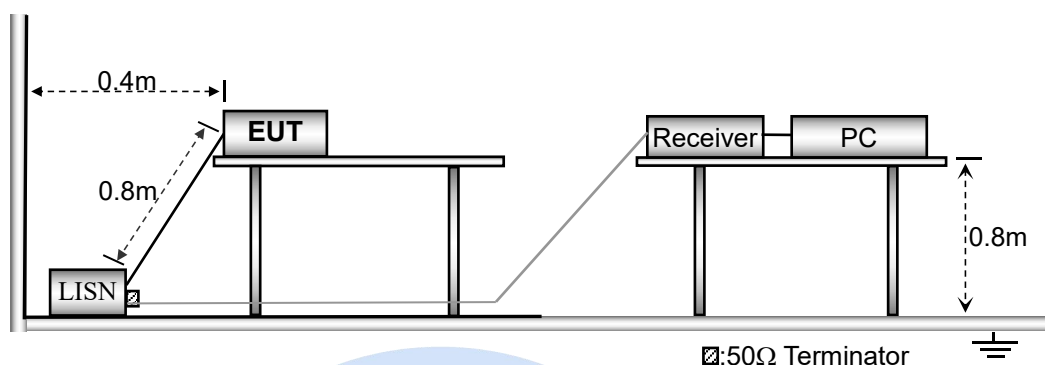
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	LISN	R&S	ENV216	102762	Mar .19 .2024
2	EMI Test Receiver	R&S	ESCI	101424	Mar .19 .2024
3	Rf cables	HTEC	HCE 2M-CE	N/A	Mar .19 .2024
4	Coupling/ Decoupling Network	Diamond	CX210	N/A	Mar .19 .2024

2.2 RADIATED TEST SITE

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Antenna	Schwarzbeck	VULB 9168	01321	Mar .31 .2025
2	EMI Test Receiver	R&S	ESRP	101478	Mar .19 .2024
3	Preamplifier	HP	8447D	2727A05345	Mar .19 .2024
4	Rf cables	HUBER+SUHNER	8M-RE	N/A	Mar .19 .2024
5	Rf cables	HUBER+SUHNER	1.5M-RE	N/A	Mar .19 .2024
6	Rf cables	HUBER+SUHNER	1.5M-AP-RE	N/A	Mar .19 .2024

3. CONDUCTED EMISSION AT THE MAINS TERMINALS TEST

3.1. Block Diagram Of Test Setup



3.2. Test Standard

J55032(H29)

3.3. Power Line Conducted Emission Limit

Frequency MHz	Limits dB(μV)	
	Quasi-peak Level	Average Level
0.15 ~ 0.50	66 ~ 56*	56 ~ 46*
0.50 ~ 5.00	56	46
5.00 ~ 30.00	60	50

Notes: 1. *Decreasing linearly with logarithm of frequency.

2. The lower limit shall apply at the transition frequencies.

3.4. EUT Configuration on Test

The following equipments are installed on conducted emission test to meet J55032(H29) Subpart B requirement and operating in a manner which tends to maximize its emission characteristics in a normal application.

3.5. Operating Condition of EUT

3.5.1 Setup the EUT and simulators as shown in Section 3.1.

3.5.2 Turn on the power of all equipments.

3.5.3 Let the EUT work in test modes and test it.

3.6. Test Procedure

The EUT is put on the ground and connected to the AC mains through a Artificial Mains Network (AMN). This provided a 50ohm coupling impedance for the tested equipments. Both sides of AC line are checked to find out the maximum conducted emission levels according to the J55032(H29) regulations during conducted emission test.

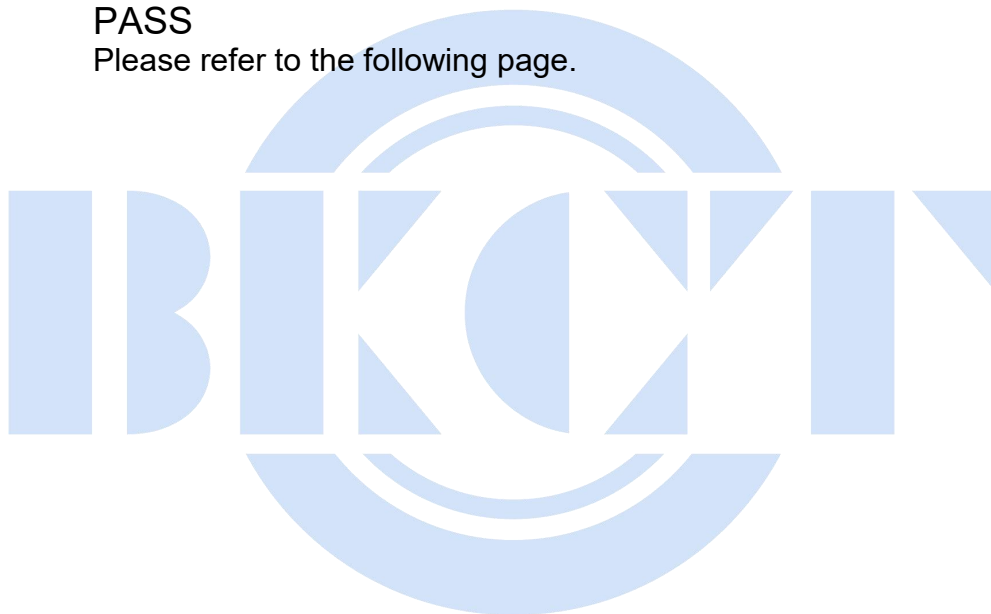
The bandwidth of the test receiver (R&S Test Receiver ESCI) is set at 9KHz.

The frequency range from 150 KHz to 30 MHz is investigated.

3.7. Test Result

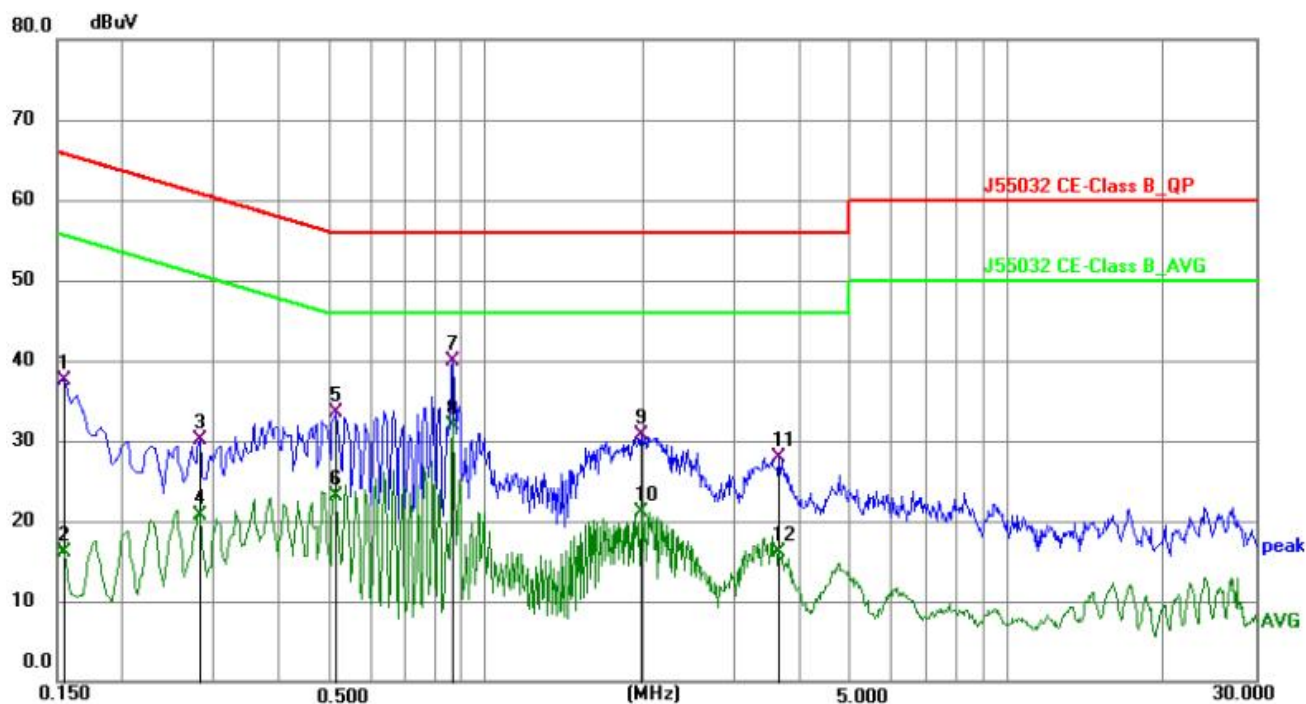
PASS

Please refer to the following page.



Conducted Emission At The Mains Terminals Test Data

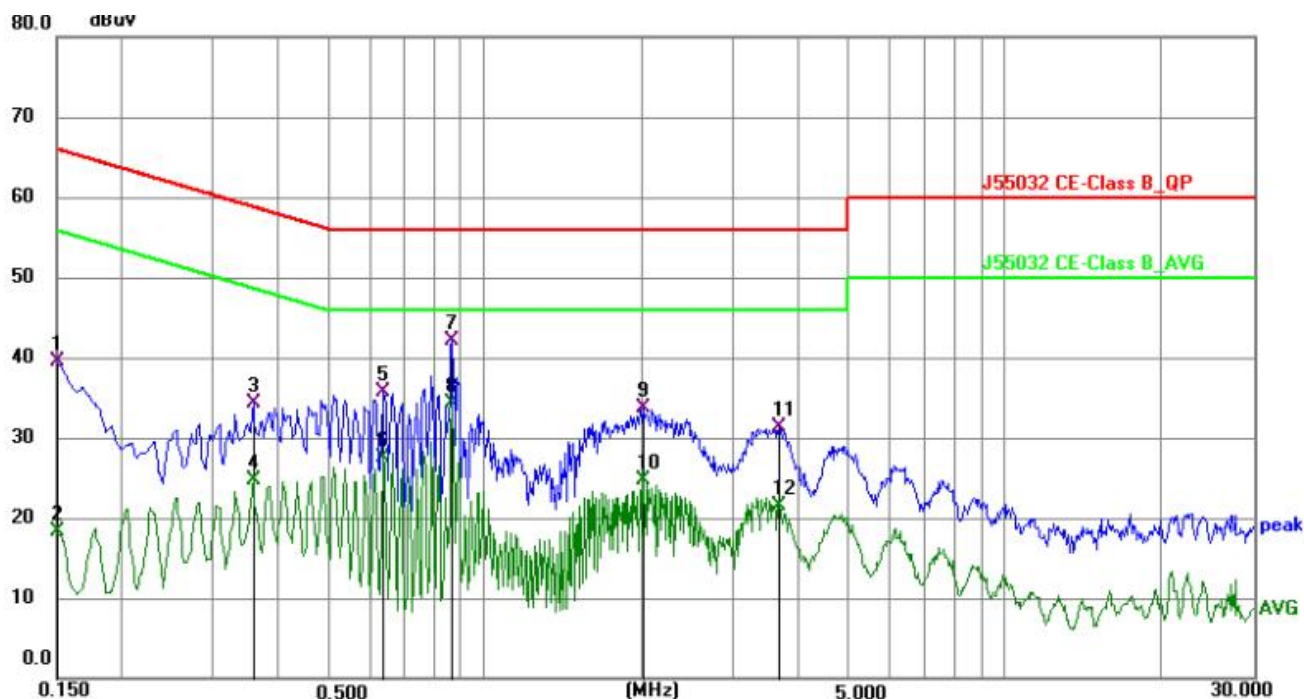
Temperature:	25.1°C	Relative Humidity:	56%
Pressure:	1008hPa	Phase :	Line
Test Voltage :	DC 5V	Test Mode:	charging mode+working mode



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.1544	28.06	9.53	37.59	65.76	-28.17	QP	P	
2	0.1544	6.55	9.53	16.08	55.76	-39.68	AVG	P	
3	0.2805	20.37	9.68	30.05	60.80	-30.75	QP	P	
4	0.2805	11.09	9.68	20.77	50.80	-30.03	AVG	P	
5	0.5144	23.85	9.63	33.48	56.00	-22.52	QP	P	
6	0.5144	13.45	9.63	23.08	46.00	-22.92	AVG	P	
7	0.8655	30.37	9.61	39.98	56.00	-16.02	QP	P	
8 *	0.8655	22.21	9.61	31.82	46.00	-14.18	AVG	P	
9	1.9859	20.94	9.72	30.66	56.00	-25.34	QP	P	
10	1.9859	11.37	9.72	21.09	46.00	-24.91	AVG	P	
11	3.6419	18.33	9.57	27.90	56.00	-28.10	QP	P	
12	3.6419	6.54	9.57	16.11	46.00	-29.89	AVG	P	

Conducted Emission At The Mains Terminals Test Data

Temperature:	25.1℃	Relative Humidity:	56%
Pressure:	1008hPa	Phase :	Neutral
Test Voltage :	DC 5V	Test Mode:	charging mode+working mode

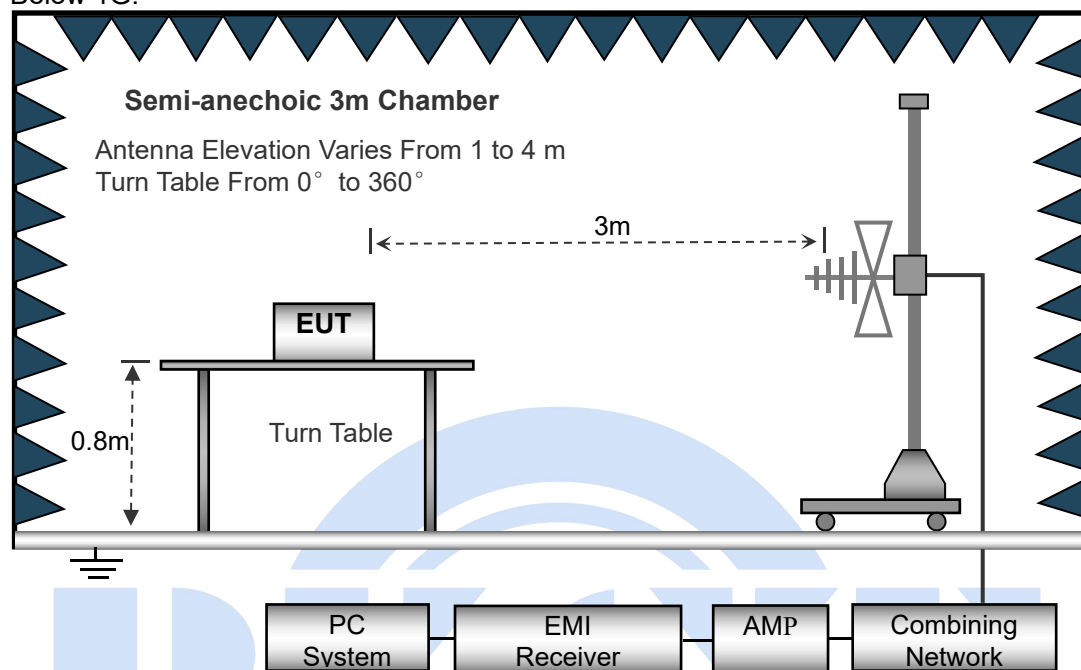


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.1500	29.99	9.51	39.50	66.00	-26.50	QP	P	
2	0.1500	8.85	9.51	18.36	56.00	-37.64	AVG	P	
3	0.3570	24.70	9.66	34.36	58.80	-24.44	QP	P	
4	0.3570	15.12	9.66	24.78	48.80	-24.02	AVG	P	
5	0.6360	25.97	9.69	35.66	56.00	-20.34	QP	P	
6	0.6360	17.90	9.69	27.59	46.00	-18.41	AVG	P	
7	0.8655	32.44	9.61	42.05	56.00	-13.95	QP	P	
8 *	0.8655	24.72	9.61	34.33	46.00	-11.67	AVG	P	
9	2.0130	23.96	9.72	33.68	56.00	-22.32	QP	P	
10	2.0130	14.98	9.72	24.70	46.00	-21.30	AVG	P	
11	3.6690	21.73	9.56	31.29	56.00	-24.71	QP	P	
12	3.6690	11.85	9.56	21.41	46.00	-24.59	AVG	P	

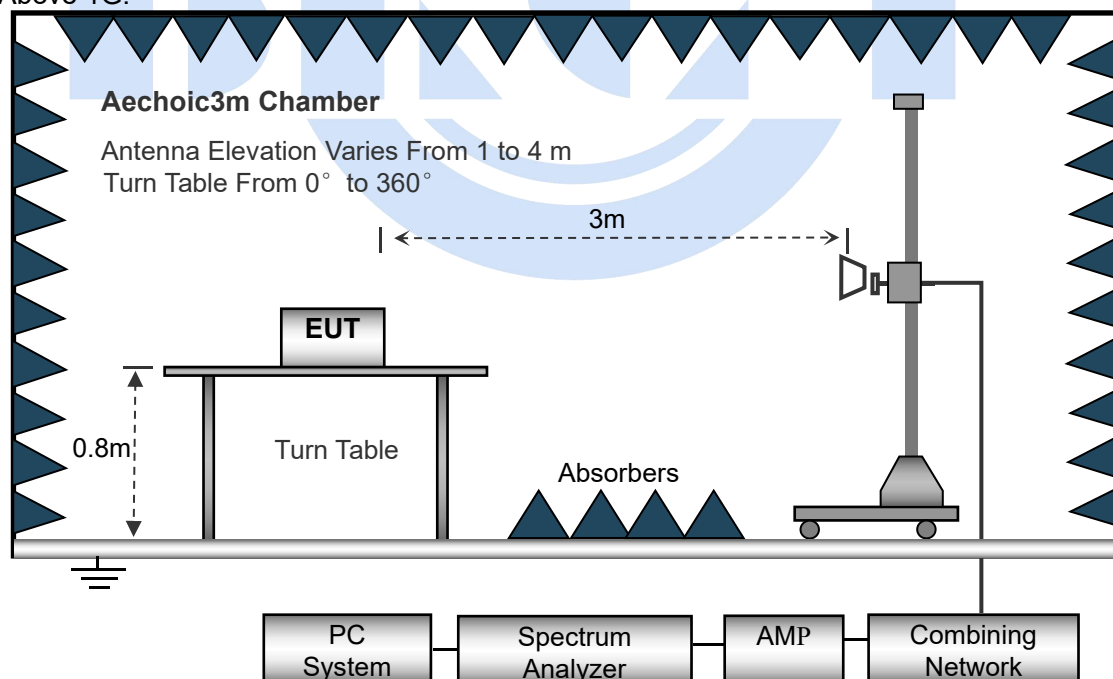
4. RADIATION EMISSION TEST

4.1. Block Diagram of Test Setup

Below 1G:



Above 1G:



4.2. Test Standard

J55032(H29)

4.3. Radiation Limit

Frequency MHz	Distance (Meters)	Field Strengths Limits dB(μ V)/m
30 ~ 230	3	40.0
230 ~ 1000	3	47.0

4.4. EUT Configuration on Test

The J55032(H29) regulations test method must be used to find the maximum emission during radiated emission test.

The configuration of EUT is the same as used in conducted emission test. Please refer to Section 3.4.

4.5. Operating Condition of EUT

Same as conducted emission test, which is listed in Section 3.5 except the test set up replaced as Section 4.1.

4.6. Test Procedure

The EUT and its simulators are placed on a turned table that is 0.8 meter above the ground. The turned table can rotate 360 degrees to determine the position of the maximum emission level. The EUT is set 3 meters away from the receiving antenna that is mounted on the antenna tower. The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated biconical and log periodical antenna) is used as receiving antenna. Both horizontal and vertical polarization of the antenna is set on test. In order to find the maximum emission levels, the interface cable must be manipulated according to J55032(H29) Subpart B on radiated emission test.

The bandwidth setting on the field strength meter (R&S Test Receiver ESCI) is set at 120KHz below 1GHz, set at 1MHz above 1GHz

The frequency range from 30MHz to 1000MHz is checked.

4.7. Test Result

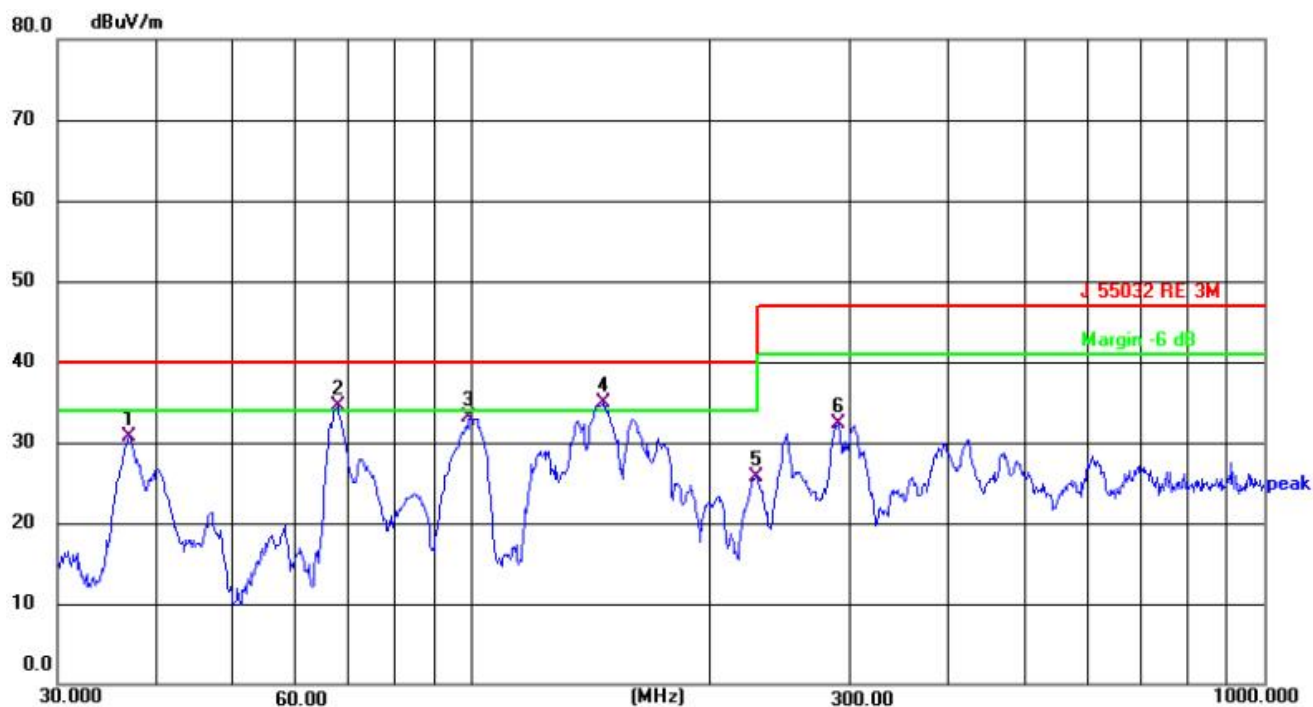
PASS

Please refer to the following page.



Radiation Emission Test Data

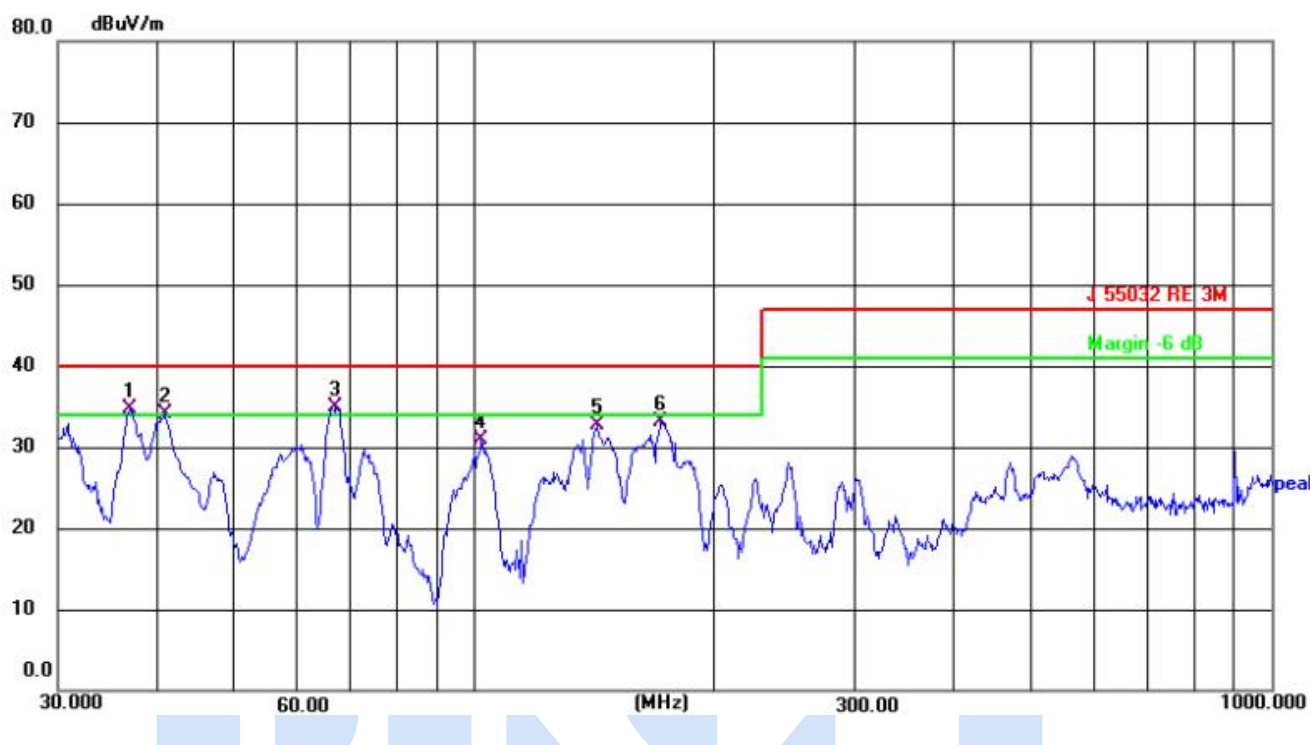
Temperature:	24.8 °C	Relative Humidity:	55%
Pressure:	1008hPa	Phase :	Horizontal
Test Voltage :	DC 5V	Test Mode:	charging mode+working mode



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	36.8952	46.87	-16.15	30.72	40.00	-9.28	QP			P	
2 !	67.6751	52.82	-18.40	34.42	40.00	-5.58	QP			P	
3	99.5279	53.16	-20.04	33.12	40.00	-6.88	QP			P	
4 *	146.8874	50.99	-16.10	34.89	40.00	-5.11	QP			P	
5	228.4902	44.54	-18.78	25.76	40.00	-14.24	QP			P	
6	290.0172	48.52	-16.23	32.29	47.00	-14.71	QP			P	

Radiation Emission Test Data

Temperature:	24.8 °C	Relative Humidity:	55%
Pressure:	1008hPa	Phase :	Vertical
Test Voltage :	DC 5V	Test Mode:	charging mode+working mode

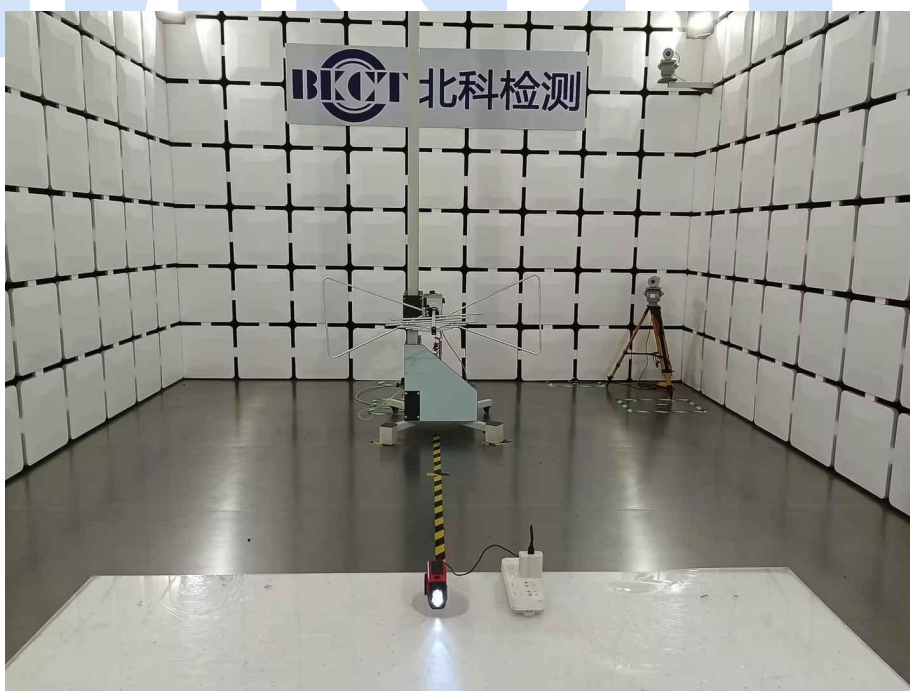


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1 !	36.8952	50.89	-16.15	34.74	40.00	-5.26	QP			P	
2 !	40.8444	49.92	-15.74	34.18	40.00	-5.82	QP			P	
3 *	66.9670	53.16	-18.22	34.94	40.00	-5.06	QP			P	
4	102.0013	50.68	-19.84	30.84	40.00	-9.16	QP			P	
5	142.8241	49.19	-16.52	32.67	40.00	-7.33	QP			P	
6	171.3925	49.77	-16.64	33.13	40.00	-6.87	QP			P	

5. TEST PHOTOGRAPHS



Conduction Emission Test



Radiated Emission Test(Below 1G)

6. PHOTOGRAPHS

Photo 1



Photo 2



Photo 3



Photo 4



Photo 5



Photo 6



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