

TEST REPORT

Report No..... : KS2407S2782E
FCC ID..... : 2AGOFRC492A
Applicant..... : HCS (Suzhou) Limited
Address..... : 19F-20F, Building B-3rd, No.209 Zhuyuan Road, New District, Suzhou, P.R.China
Manufacturer..... : HCS (Suzhou) Limited
Address..... : 19F-20F, Building B-3rd, No.209 Zhuyuan Road, New District, Suzhou, P.R.China
Product Name..... : Remote Control
Model/Type reference..... : RC4921401/01BRP, RC4921402/01BRP, RC492XXXX/XXRP,
RC492XXXX/XXBRP ('X'=0-9, 'B' means packed with battery)
Standard..... : 47 CFR Part 15, Subpart B
Date of Receipt..... : July 12, 2024
Date of Test Date..... : July 12, 2024 to July 17, 2024
Date of issue..... : August 2, 2024
Test result..... : Pass

Conclusion..... : The submitted sample was found to COMPLY with the standards above.

Prepared by:
(Printed name + Signature) Chad Lin



Approved by:
(Printed name + Signature) Sky Dong



Testing Laboratory Name....: KSIGN(Guangdong) Testing Co., Ltd.

Address..... : West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China

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1. TEST SUMMARY

1.1. Test Standards

The tests were performed according to following standards:

47 CFR Part 15, Subpart B: Unintentional Radiators

ANSI C63.4 (2014) +A1 (2017): American National Standard for Methods of Measurement of Radio Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz

1.2. Report Version

Revised No.	Date of issue	Description
01	August 2, 2024	Original

1.3. Test Description

Test Item	Standard	Requirement	Result
Radiated emissions (Below 1GHz)	47 CFR Part 15, Subpart B	15.109, Class B	Pass
Radiated emissions (Above 1GHz)	47 CFR Part 15, Subpart B	15.109, Class B	Pass
Conducted Emission at AC power line	7 CFR Part 15, Subpart B	15.107, Class B	N/A

N/A:According to the EUT functions of EUT, this test is not applicable.

1.4. Test Facility

KSIGN(Guangdong) Testing Co., Ltd .

West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China

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

CNAS-Lab Code: L 13261

KSIGN(Guangdong) Testing Co., Ltd. has been assessed and proved to be in Compliance with CNAS-CL01 Accreditation Criteria for Testing and Calibration Laboratories (identical to ISO/IEC17025: 2017 General Requirements) for the Competence of Testing and Calibration Laboratories.

A2LA-Lab Cert. No.: 5457.01

KSIGN(Guangdong) Testing Co., Ltd. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025:2017 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing

ISED# : 25693 CAB identifier.: CN0096

KSIGN(Guangdong) Testing Co., Ltd. has been listed by Innovation, Science and Economic Development Canada to perform electromagnetic emission measurement.

FCC-Registration No.: 294912 Designation Number: CN1328

KSIGN(Guangdong) Testing Co., Ltd. EMC Laboratory has been listed on the US Federal Communications Commission list of test facilities recognized to perform electromagnetic emissions measurements.

1.5. Measurement Uncertainty

Test Items	Measurement Uncertainty
RE (30-1000MHz)	± 5.7dB
RE (1-18GHz)	± 4.68dB
Conducted Emission (150k-30MHz)	± 3.34dB

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 %. Otherwise required by the applicant or Product Regulations. Decision Rule in this report did not consider the uncertainty.

2. GENERAL INFORMATION

2.1. General Description Of EUT

Test Sample Number:	1-1 (Normal Sample)
Product Name:	Remote Control
Model / Type reference:	RC4921401/01BRP, RC4921402/01BRP, RC492XXXX/XXRP, RC492XXXX/XXBRP ('X'=0-9, 'B' means packed with battery)
Model difference:	The differences between product models are the appearance and whether to carry batteries for sale. Different model names are available to meet market demands. Other power supply methods, internal structures, circuits and key components are the same, and do not affect safety and electromagnetic compatibility performance. According to the above information, all tests were performed on RC4921401/01BRP.
Ratings:	DC 3V
Highest Internal Frequency:	Above 1GHz
Classification of Equipment:	Class B

2.2. Accessory Equipment Information

Title	Manufacturer	Model No.	Technical Parameters	Provided by
GP Alkaline Battery	/	GN15A	1.5V	Applicant

2.3. Description of Test Modes

No.	Title	Description of Mode
Test Mode1	Normal Work	N/A

2.4. Measurement Instruments List

Radiated emissions (Below 1GHz) Radiated emissions (Above 1GHz)				
Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Until
Color Signal Generator	Philips	PM5418	672926	2025-01-21
Log Periodic Antenna	Schwarzbeck	VULB 9163	1230	2025-01-29
Pre-Amplifier	Schwarzbeck	BBV 9745	9745#129	2025-01-21
Broadcast Television Signal Generator	R&S	SFE100	141038	2025-01-21
Analog Signal Generator	Agilent	8648A	3847M00445	2025-01-21
EMI Test Receiver	R&S	ESR	102525	2025-01-21
Loop Antenna	Beijin ZHINAN	ZN30900C	18050	2025-01-29
Horn Antenna	Schwarzbeck	BBHA 9120 D	2023	2025-01-22
Pre-Amplifier	EMCI	EMC051835SE	980662	2025-01-21
Spectrum Analyzer	Keysight	N9020A	MY46471971	2025-01-21

3. Emission Test Results (EMI)

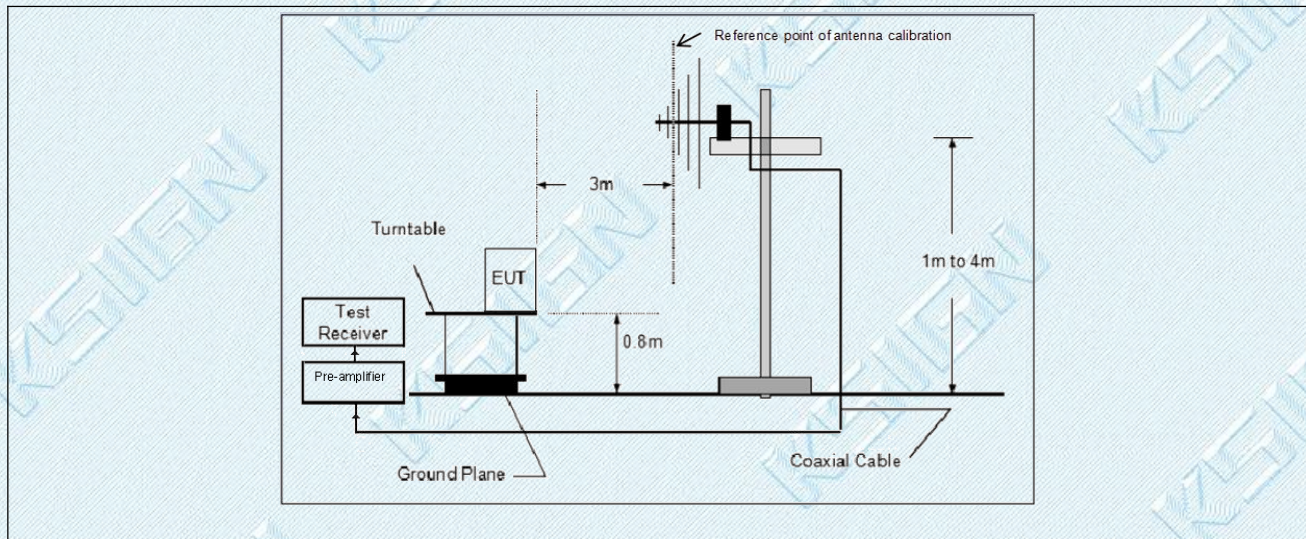
3.1. Radiated emissions (Below 1GHz)

Test Requirement:	15.109, Class B				
Test Limit:	Except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:				
	Frequency of emission (MHz)	Field strength @3m		Field strength @10m	
		(uV/m)	(dBuV/m)	(uV/m)	(dBuV/m)
	30 – 88	100	40	30	29.5
	88 – 216	150	43.5	45	33.1
	216 – 960	200	46	60	35.6
	Above 960	500	54	150	43.5
Test Method:	ANSI C63.4-2014				
Procedure:	An initial pre-scan was performed in the chamber using the spectrum analyser in peak detection mode. Quasi-peak measurements were conducted based on the peak sweep graph. The EUT was measured by BiConiLog antenna with 2 orthogonal polarities. Remark: Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor				

3.1.1. E.U.T. Operation:

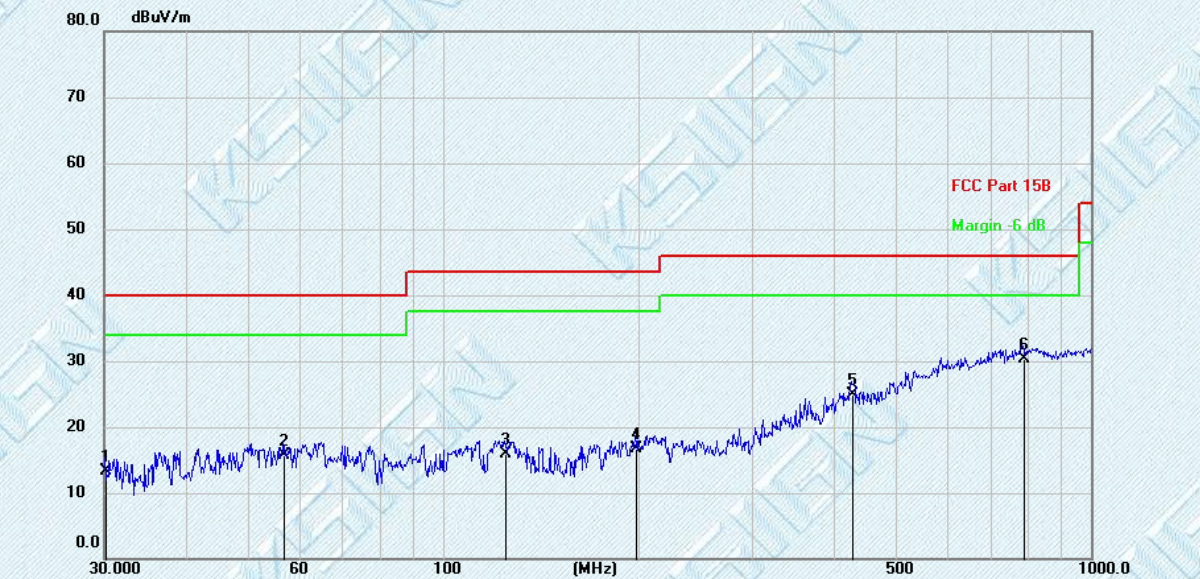
Operating Environment:	
Temperature:	23 °C
Humidity:	50.3 %
Atmospheric Pressure:	102 kPa
Final test mode:	Test Mode1

3.1.2. Test Setup Diagram:

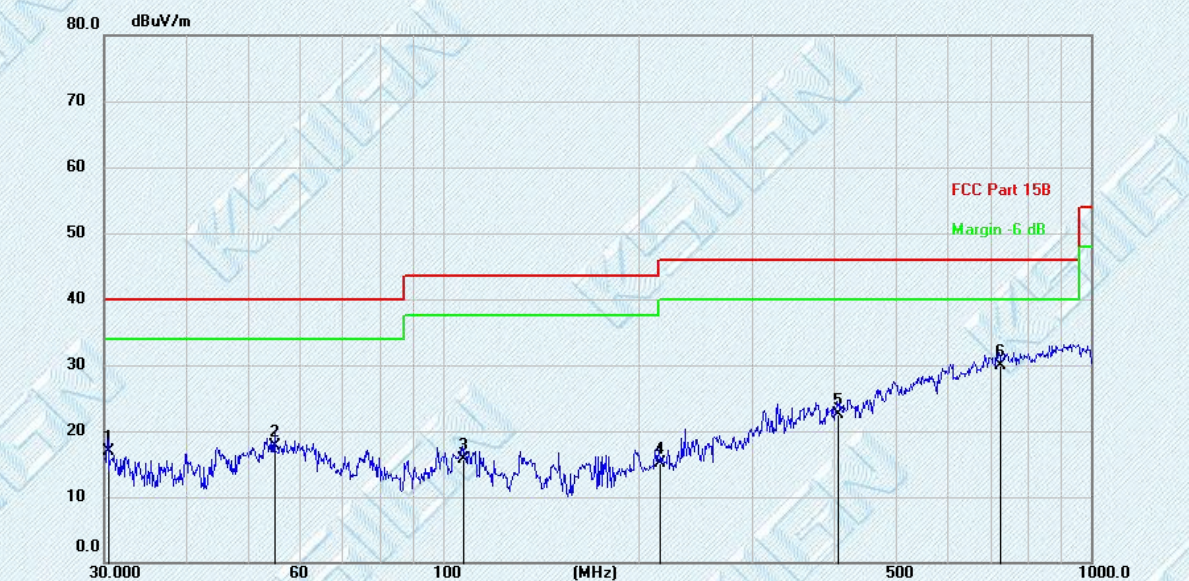


3.1.3. Test Data:

Test Mode1 / Polarization: Horizontal



No.	Mk.	Freq. MHz	Reading Level (dBuV)	Correct Factor (dB/m)	Measurement (dBuV/m)	Limit (dBuV/m)	Over (dB)	Detector
1		30.1900	25.24	-11.86	13.38	40.00	-26.62	QP
2		56.6921	25.83	-10.08	15.75	40.00	-24.25	QP
3		124.7437	29.20	-13.21	15.99	43.50	-27.51	QP
4		198.4487	28.21	-11.48	16.73	43.50	-26.77	QP
5		426.9700	28.11	-3.17	24.94	46.00	-21.06	QP
6	*	787.2989	27.31	3.04	30.35	46.00	-15.65	QP

Test Mode1 / Polarization: Vertical


No.	Mk.	Freq. MHz	Reading Level (dBuV)	Correct Factor (dB/m)	Measurement (dBuV/m)	Limit (dBuV/m)	Over (dB)	Detector
1		30.3704	28.83	-11.91	16.92	40.00	-23.08	QP
2		54.8924	27.55	-9.91	17.64	40.00	-22.36	QP
3		107.2463	26.98	-11.28	15.70	43.50	-27.80	QP
4		215.6451	26.53	-11.44	15.09	43.50	-28.41	QP
5		405.5187	26.24	-3.79	22.45	46.00	-23.55	QP
6	*	722.4855	27.82	2.16	29.98	46.00	-16.02	QP

TRF No. EMC_R1

Add: West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, China

Tel: +(86) 0755-2985 2678 Fax: +(86) 0755-2985 2397 E-mail: info@gdksign.cn Web: www.gdksign.com

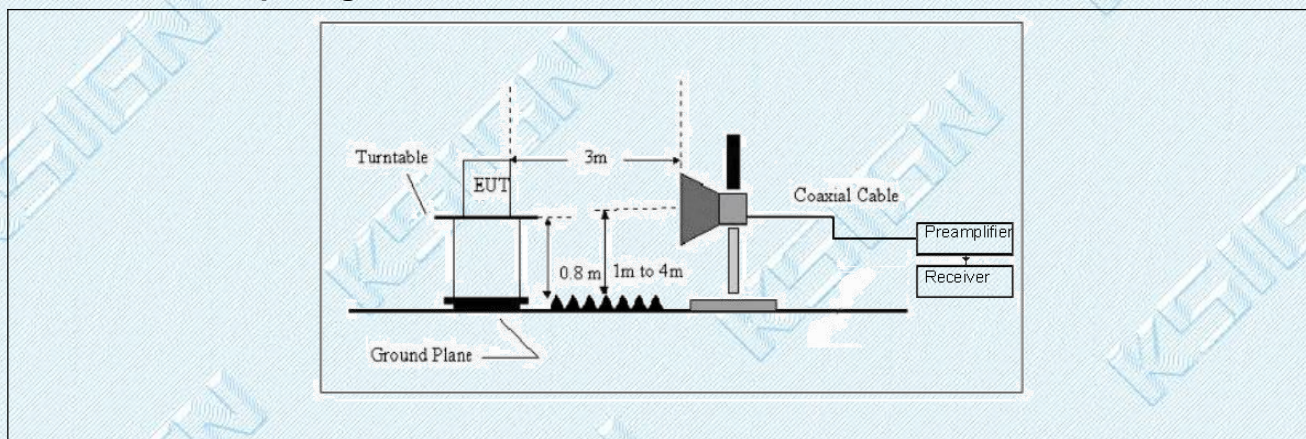
3.2. Radiated emissions (Above 1GHz)

Test Requirement:	15.109, Class B			
Test Limit:	Frequency of emission (MHz)	Field strength @3m		
		Average (uV/m)	Average(dB uV/m)	Peak (dBuV/m)
	Above 1GHz	500	54	74
Test Method:	ANSI C63.4-2014			
Procedure:	An initial pre-scan was performed in the chamber using the spectrum analyser in peak detection mode. For below 1GHz test, Quasi-peak measurements were conducted based on the peak sweep graph. The EUT was measured by BiConiLog antenna with 2 orthogonal polarities. For above 1GHz test, Average measurements were conducted based on the peak sweep graph. The EUT was measured by Horn antenna with 2 orthogonal polarities. Remark: Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor			

3.2.1. E.U.T. Operation:

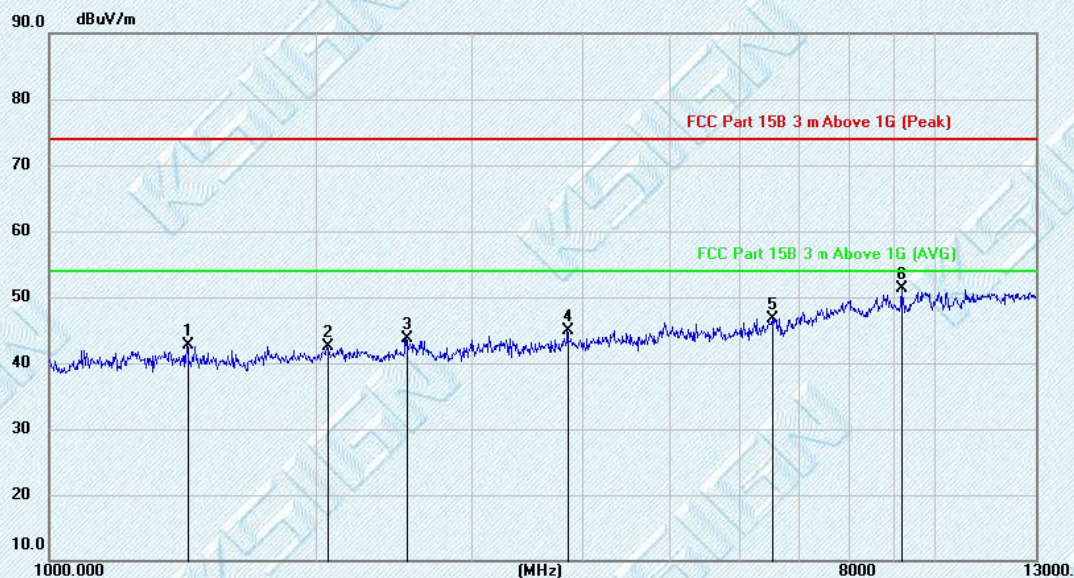
Operating Environment:	
Temperature:	23 °C
Humidity:	50.3 %
Atmospheric Pressure:	102 kPa
Final test mode:	Test Mode1

3.2.2. Test Setup Diagram:

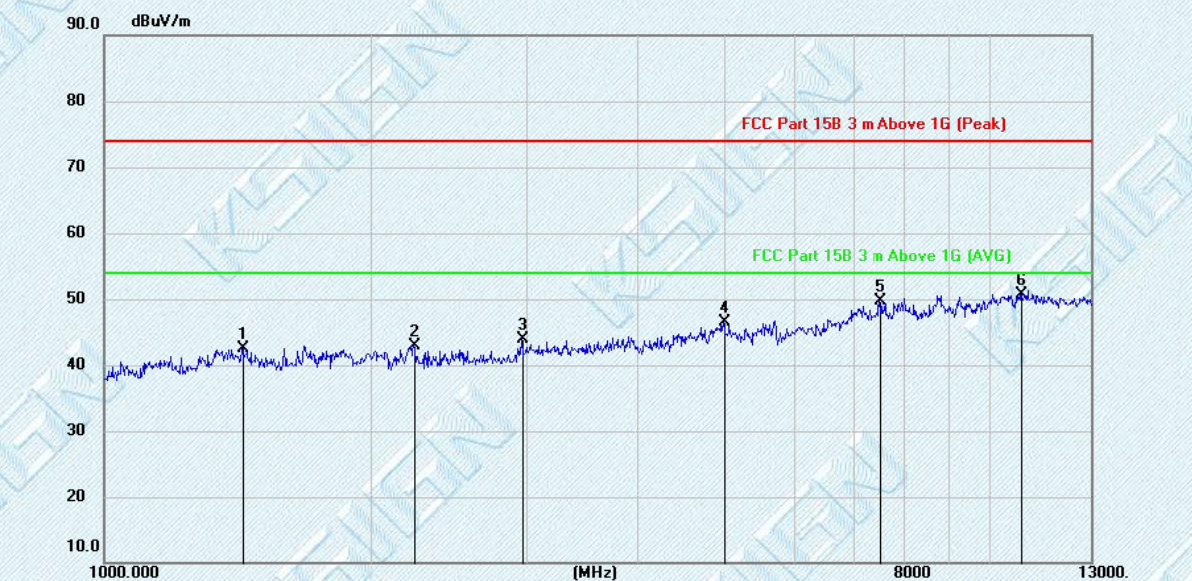


3.2.3. Test Data:

Test Mode1 / Polarization: Horizontal



No.	Mk.	Freq. MHz	Reading Level (dBuV)	Correct Factor (dB/m)	Measurement (dBuV/m)	Limit (dBuV/m)	Over (dB)	Detector
1		1430.800	44.02	-1.35	42.67	74.00	-31.33	peak
2		2063.200	42.58	-0.07	42.51	74.00	-31.49	peak
3		2534.800	43.01	0.72	43.73	74.00	-30.27	peak
4		3851.200	42.69	2.26	44.95	74.00	-29.05	peak
5		6544.000	38.96	7.74	46.70	74.00	-27.30	peak
6	*	9187.600	40.23	11.04	51.27	74.00	-22.73	peak

Test Mode1 / Polarization: Vertical


No.	Mk.	Freq. MHz	Reading Level (dBuV)	Correct Factor (dB/m)	Measurement (dBuV/m)	Limit (dBuV/m)	Over (dB)	Detector
1		1435.600	43.91	-1.34	42.57	74.00	-31.43	peak
2		2238.400	41.63	1.37	43.00	74.00	-31.00	peak
3		2959.600	42.73	1.24	43.97	74.00	-30.03	peak
4		4998.400	42.15	4.33	46.48	74.00	-27.52	peak
5		7512.400	39.94	9.86	49.80	74.00	-24.20	peak
6	*	10862.800	37.19	13.56	50.75	74.00	-23.25	peak

Not: The maximum operating frequency of the product is 2400MHz.

4. EUT TEST PHOTOS

Radiated emissions (Below 1GHz)



Radiated emissions (Above 1GHz)

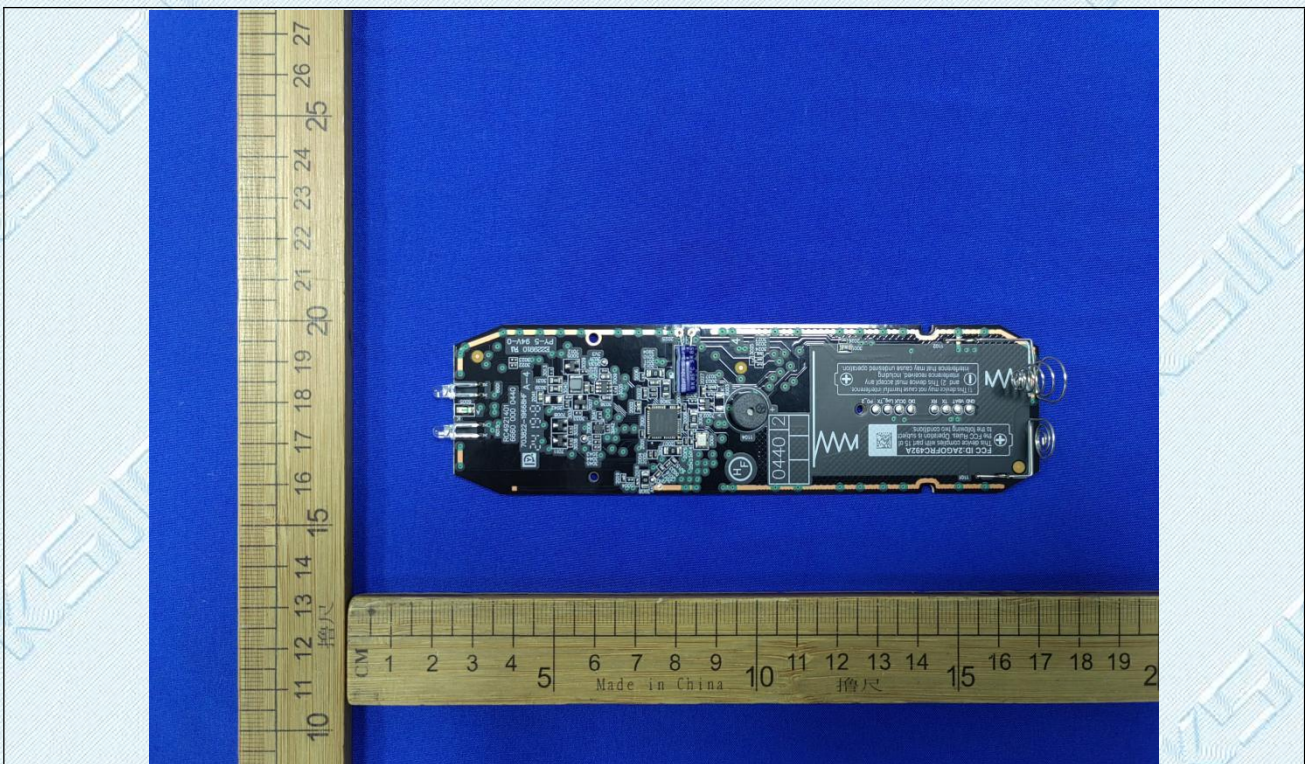


5. PHOTOGRAPHS OF EUT CONSTRUCTIONAL









--THE END--

Important Notice

1. The results are valid only for the samples submitted.
2. The report is invalid without the "APPROVED Seal" and the "Riding Seam Seal".
3. This report is invalid without the signature of the main inspector, reviewer, or approver.
4. The testing report cannot be partially copied without the written consent of our laboratory.
5. If the report is not stamped with the "CMA" logo, it indicates that the report does not have any social certification effect in China.
6. Product information, customer information, and sample sources are all provided by the client, and we are not responsible for their authenticity.
7. The inspection basis or inspection items marked with "★" are not within the scope of CNAS, CMA and A2LA accreditation in this laboratory.
8. Reports that are transferred, copied, stolen, impersonated, altered, or tampered with in any media form without authorization are invalid.
9. If you have any objections to this report, you can appeal to our unit within 15 days after receiving the report. Failure to do so will not be accepted.
10. For situations where compliance decision needs to be made based on test result, such as when there are no relevant decision rules required by the regulations, standards, or technical specifications used, or when there are no relevant customer requirements, the report issued by our laboratory refer to ILAC-G8:09-2019 and CNAS-GL015:2022 using simple acceptance decision rules.

Laboratory: KSIGN(Guangdong) Testing Co., Ltd.

Address: First Floor West Side, Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu Village, Shatou Community, Shajing Street, Bao'an District, Shenzhen City, Guangdong Province, P. R. China. 518104

Tel.: +(86) 0755-29852678

Fax.: +(86) 0755-29852397

E-mail: info@gdksign.cn

Web: www.gdksign.com