



SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.

SHEM-TRF-001 Rev. 02 Sep01, 2023

Report No.: SHEM240600388801

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TEST REPORT

Application No.: SHEM2406003888LM
Applicant: Linhai Shi HongHao Electronics Co., Ltd
Address of Applicant: 209 Shennan Road, Dayang Street, Linhai City, Zhejiang, China
Manufacturer: Linhai Shi HongHao Electronics Co., Ltd
Address of Manufacturer: 209 Shennan Road, Dayang Street, Linhai City, Zhejiang, China
Factory: Linhai Shi HongHao Electronics Co., Ltd
Address of Factory: 209 Shennan Road, Dayang Street, Linhai City, Zhejiang, China
Equipment Under Test (EUT):
EUT Name: SOLAR LED LIGHT
Model No.: H2V-1.2, H5V-3.7
Remark: Please refer to section 2 of this report which indicates which model was actually tested and which were electrically identical.
Standard(s) : 47 CFR Part 15, Subpart B
Date of Receipt: 2024-06-25
Date of Test: 2024-07-01 to 2024-07-15
Date of Issue: 2024-07-17

Test Result:	Pass*
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* In the configuration tested, the EUT complied with the standards specified above.

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Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.



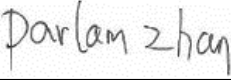
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Revision Record			
Version	Description	Date	Remark
00	Original	2024-07-17	/

Authorized for issue by:			
Tested By			
		Lemon Zhang/Project Engineer	
Approved By			
		Parlam Zhan / Reviewer	



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2 Test Summary

Emission Part				
Item	Standard	Method	Requirement	Result
Radiated Emissions (30MHz-1GHz)	47 CFR Part 15, Subpart B	ANSI C63.4:2014	15.109(a);Class B	Pass

Note1: There are series models mentioned in this report, and they are the similar in electrical and electronic characters. Only the model H2V-1.2 was tested since their differences were the model number and appearance.

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4 General Information

4.1 Details of E.U.T.

Power supply:	DC 1.2V Test Voltage: DC 1.2V Sample No.: SHEM2406003886LM-M1
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4.2 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
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The EUT has been tested as an independent unit.

4.3 Measurement Uncertainty & Decision Rule

Measurement Uncertainty:

No.	Item	Measurement Uncertainty (U_{Lab})	U_{CISPR}
1	Conducted Emission at mains port using AMN	3.4dB (9kHz to 150kHz)	3.8dB (9kHz to 150kHz)
		2.9dB (150kHz to 30MHz)	3.4dB (150kHz to 30MHz)
2	Conducted Emission at mains port using VP	2.2dB (9kHz to 30MHz)	2.9dB (9kHz to 30MHz)
3	Conducted Emission at telecommunication port using AAN	4.6dB (150kHz to 30MHz)	5.0dB (150kHz to 30MHz)
4	Radiated Power	3.4dB (30MHz to 300MHz)	4.5dB (30MHz to 300MHz)
5	Radiated emission	5.7dB (30MHz-1GHz)	6.3dB (30MHz-1GHz)
		4.8dB (1GHz-6GHz)	5.2dB (1GHz-6GHz)
		5.0dB (6GHz-18GHz)	5.5dB (6GHz-18GHz)
6	Radiated disturbance (disturbance current in a LLAS)	2.6dB (9kHz to 30MHz)	3.3dB (9kHz to 30MHz)

Note: The measurement uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=2$.

Decision Rule:

• CISPR 16-4-2 for emission measurements is as below described.

Pass means the test result passed the test standard requirement, please find the detailed decision rule in the report relative section.

U_{LAB} less than U_{CISPR} , therefore:

- 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.

4.4 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. E&E Lab
588 West Jindu Road, Xinqiao, Songjiang, 201612 Shanghai, China
Tel: +86 21 6191 5666 Fax: +86 21 6191 5678

No tests were sub-contracted.

Note:

1. SGS is not responsible for wrong test results due to incorrect information (e.g., max. internal working frequency, antenna gain, cable loss, etc) is provided by the applicant. (If applicable).
2. SGS is not responsible for the authenticity, integrity and the validity of the conclusion based on results of the data provided by applicant. (If applicable).
3. Sample source: sent by customer.

4.5 Test Facility

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

- **A2LA (Certificate No. 6332.01)**

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. is accredited by the American Association for Laboratory Accreditation(A2LA).

- **FCC (Designation Number: CN1301)**

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been recognized as an accredited testing laboratory.

- **ISED (CAB Identifier: CN0020)**

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. EMC Laboratory has been recognized by Innovation, Science and Economic Development Canada (ISED) as an accredited testing laboratory.
Company Number: 8617A

- **VCCI (Member No.: 3061)**

The 3m Semi-anechoic chamber and Shielded Room of SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-13868, C-14336, T-12221, G-10830 respectively.

4.6 Deviation from Standards

None

4.7 Abnormalities from Standard Conditions

None

5 Equipment List

Radiated Emissions (30MHz-1GHz)					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
EMI test receiver	Rohde & Schwarz	ESU40	SHEM051-1	2023/12/19	2024/12/18
EMI test receiver	Rohde & Schwarz	ESR7	SHEM201-1	2023/08/01	2024/07/31
CONTROLLER	INNCO	CO2000	SHEM047-1	N/A	N/A
ANTENNA MAST	INNCO	MA400-EP	SHEM047-2	N/A	N/A
TURN DEVICE	INNCO	DE 3600-RH	SHEM047-3	N/A	N/A
Broadband UHF-VHF ANTENNA	SCHWARZBECK	VULB9168	SHEM048-1	2023/09/03	2025/09/02
Broadband UHF-VHF ANTENNA	SCHWARZBECK	VULB9168	SHEM202-1	2023/04/17	2025/04/16
Semi/Fully Anechoic	ST	11*6*6M	SHEM078-2	2023/05/06	2026/05/05
Pre-amplifier	HP	8447D	SHEM236-1	2023/12/19	2024/12/18
Pre-amplifier	HP	8447D	SHEM143-1	2023/12/19	2024/12/18
RE test Cable	/	/	SHEM217-2	2023/12/19	2024/12/18
Test Software	ESE	e3	Version: 6.191211	N/A	N/A
Semi/Fully Anechoic	TIANDE	9*6*6M	SHEM198-1	2024/05/06	2027/05/05

General used equipment					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
Atmospheric Pressure Meter	Nanjing XiangRuiDe	DYM3	SHEM082-2	2024-01-18	2027-01-17
Temperature&humidity recorder	ShangHai weather meter work	ZJ 1-2B	SHEM042-9~10	2023-12-29	2024-12-28
Temperature&humidity recorder	ShangHai weather meter work	ZJ 1-2B	SHEM042-5	2024-07-13	2025-07-12
Digital Temperature& humidity recorder	Jianda Renke	RS-WS-N01-6J	SHEM247-1~8	2024-01-13	2025-01-12
Digital Multimeter	FLUKE	17B+	SHEM271-7	2024-07-13	2025-07-12
Autoformer regulator	Guangzhou bao de	TDGC2-5KVA	SHEM150-1	N/A	N/A
Multi-purpose tong tester	FLUKE	317	SHEM001-2	2023-11-08	2024-11-07

6 Emission Test Results

6.1 Radiated Emissions (30MHz-1GHz)

Test Requirement: 47 CFR Part 15, Subpart B

Test Method: ANSI C63.4:2014

Limit:

Class B

Test Distance: 3m

30MHz -88MHz 40.0(dBμV/m) quasi-peak

88MHz-216MHz 43.5(dBμV/m) quasi-peak

216MHz-960MHz 46.0(dBμV/m) quasi-peak

960MHz-1000MHz 54.0(dBμV/m) quasi-peak

Detector: Peak for pre-scan (120kHz resolution bandwidth) 30MHz to1000MHz

Class B

Test Distance: 10m

30MHz -88MHz 29.5(dBμV/m) quasi-peak

88MHz-216MHz 33.1(dBμV/m) quasi-peak

216MHz-960MHz 35.6(dBμV/m) quasi-peak

960MHz-1000MHz 43.5(dBμV/m) quasi-peak

Detector: Peak for pre-scan (120kHz resolution bandwidth) 30MHz to1000MHz

6.1.1 E.U.T. Operation

Operating Environment:

Temperature: 22 °C

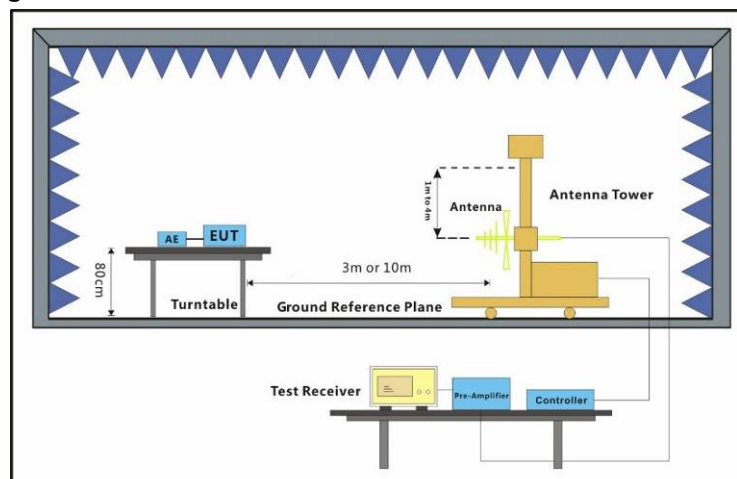
Humidity: 50 % RH

Atmospheric Pressure: 1010 mbar

6.1.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	Keep the lamp lighting continuously.

6.1.3 Test Setup Diagram

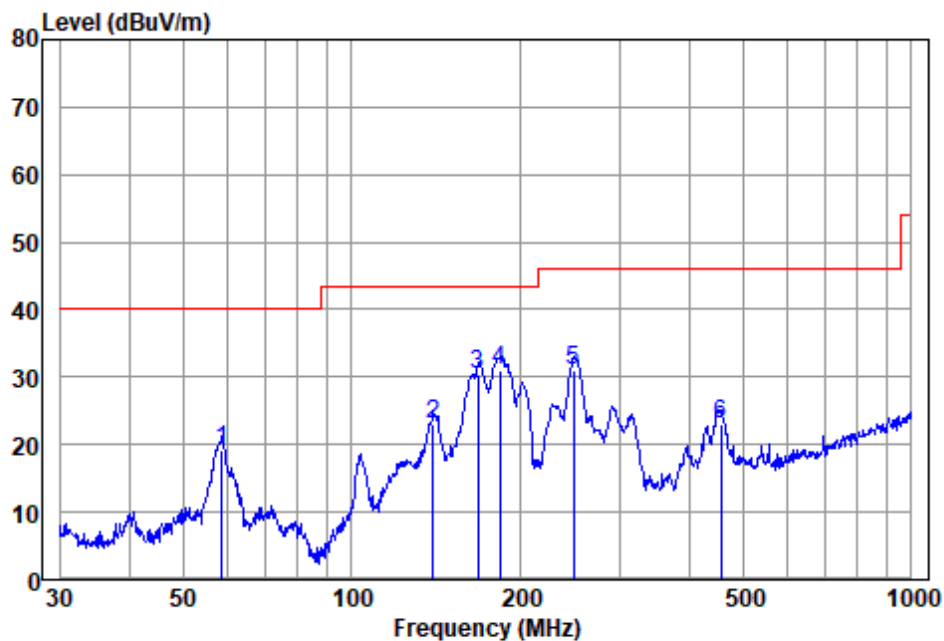


6.1.4 Measurement Procedure and Data

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

Test Mode: 00; Polarity: Horizontal



Antenna Polarity :HORIZONTAL

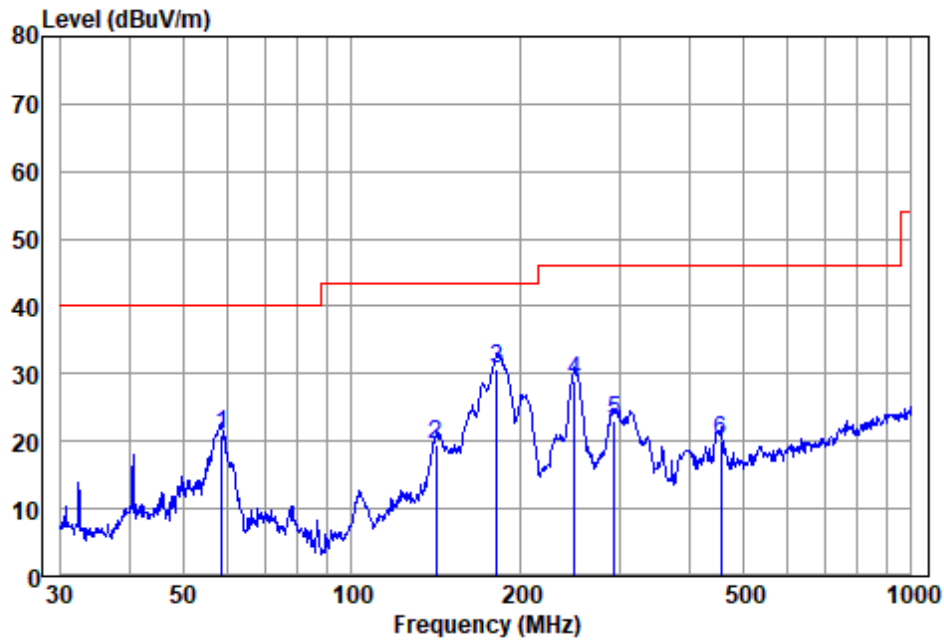
EUT/Project :3888LM

Test mode :00

	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	58.613	37.70	13.18	1.54	33.20	19.22	40.00	-20.78	QP
2	139.851	40.39	12.90	2.70	33.03	22.96	43.50	-20.54	QP
3	167.824	47.61	12.90	2.80	33.00	30.31	43.50	-13.19	QP
4	183.844	50.12	11.15	2.76	33.00	31.03	43.50	-12.47	QP
5	248.552	48.88	11.58	3.36	32.80	31.02	46.00	-14.98	QP
6	455.906	33.87	17.31	4.69	32.70	23.17	46.00	-22.83	QP

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 00; Polarity: Vertical



Antenna Polarity :VERTICAL
EUT/Project :3888LM
Test mode :00

	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	58.613	39.31	13.18	1.54	33.20	20.83	40.00	-19.17	QP
2	141.330	36.83	13.15	2.57	33.03	19.52	43.50	-23.98	QP
3	181.920	49.70	11.38	2.76	33.00	30.84	43.50	-12.66	QP
4	250.301	46.79	11.70	3.35	32.80	29.04	46.00	-16.96	QP
5	294.114	38.66	13.22	3.80	32.80	22.88	46.00	-23.12	QP
6	455.906	30.77	17.31	4.69	32.70	20.07	46.00	-25.93	QP

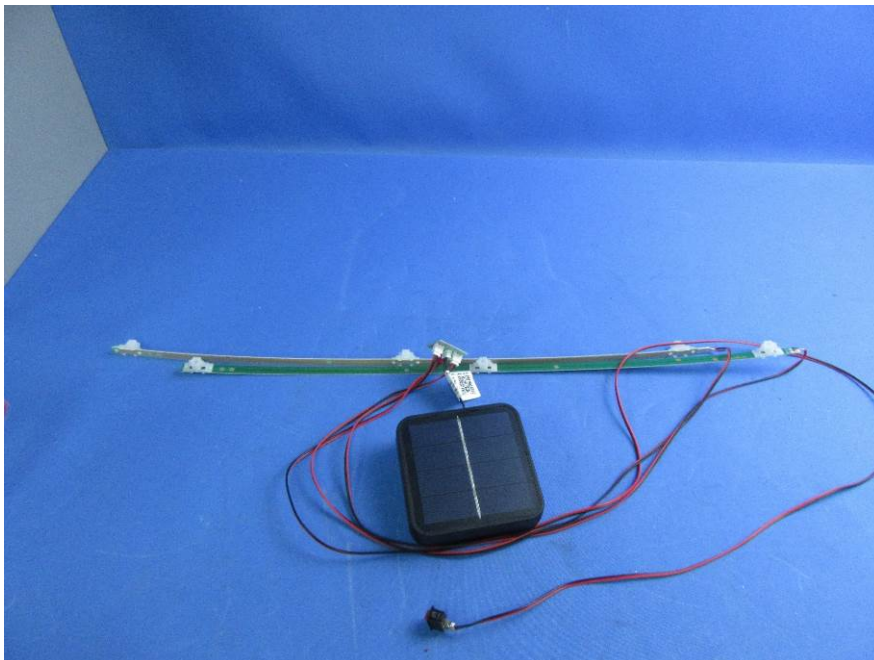
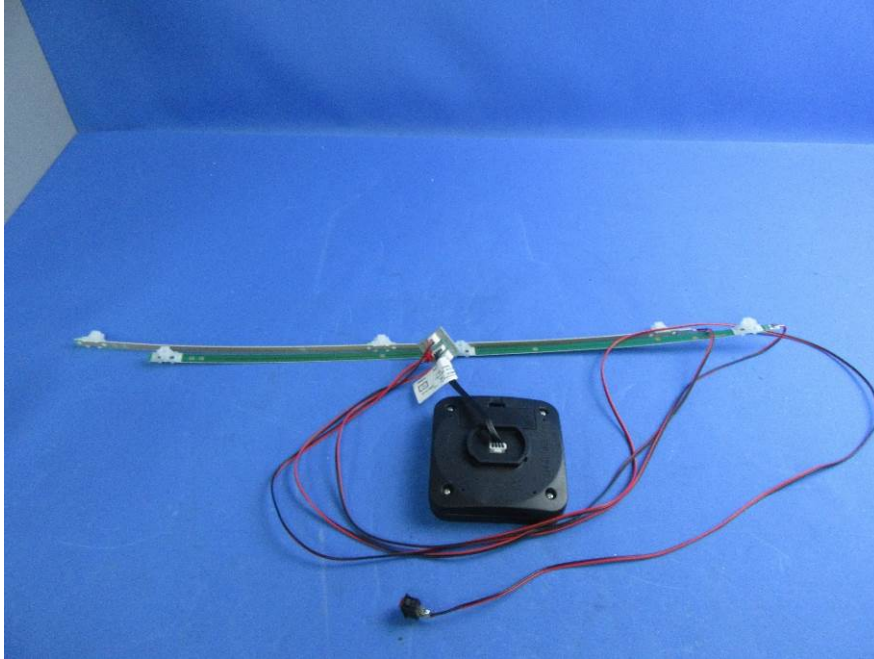
Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

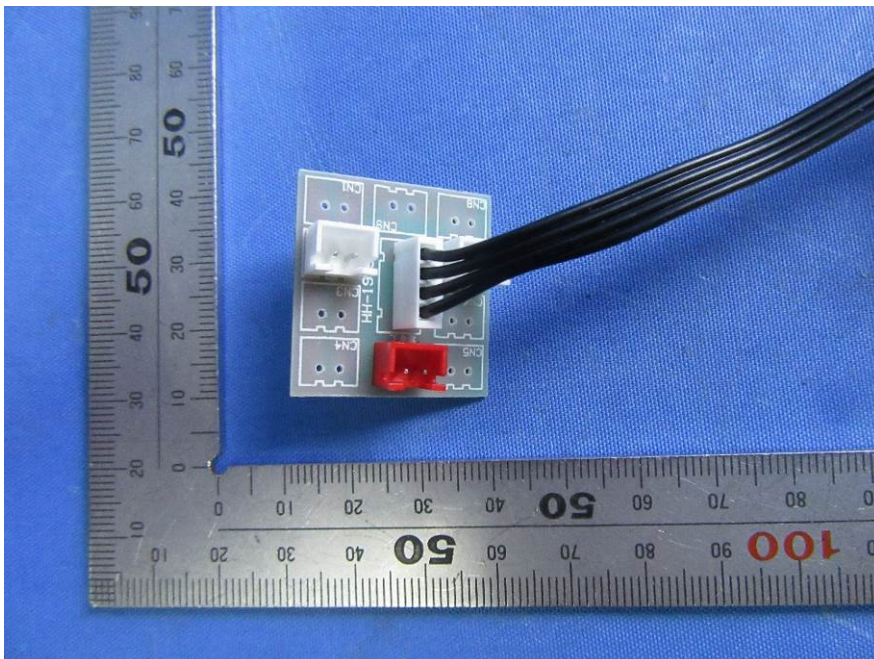
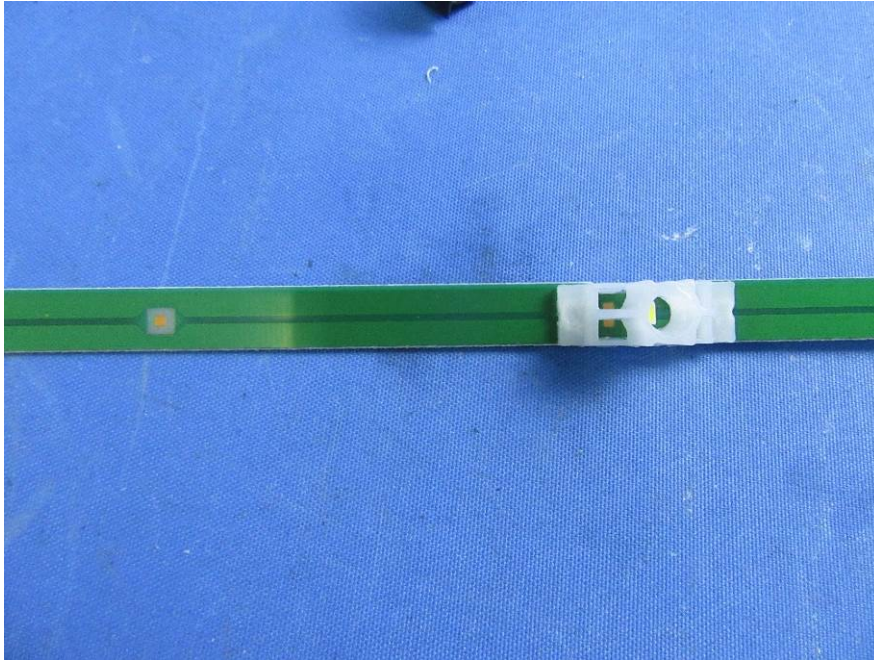
7 Test Setup Photo

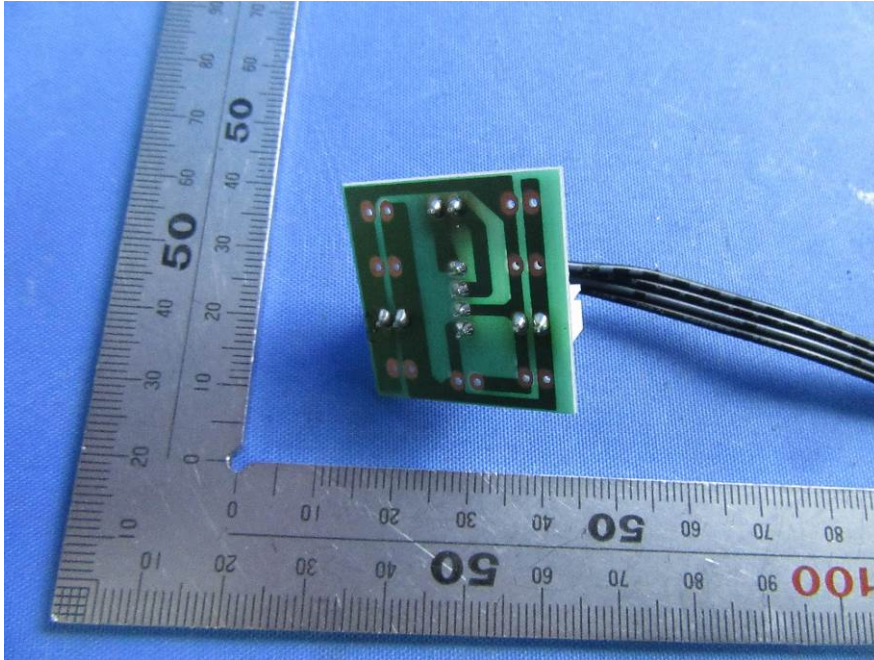
Radiated Emissions (30MHz-1GHz)

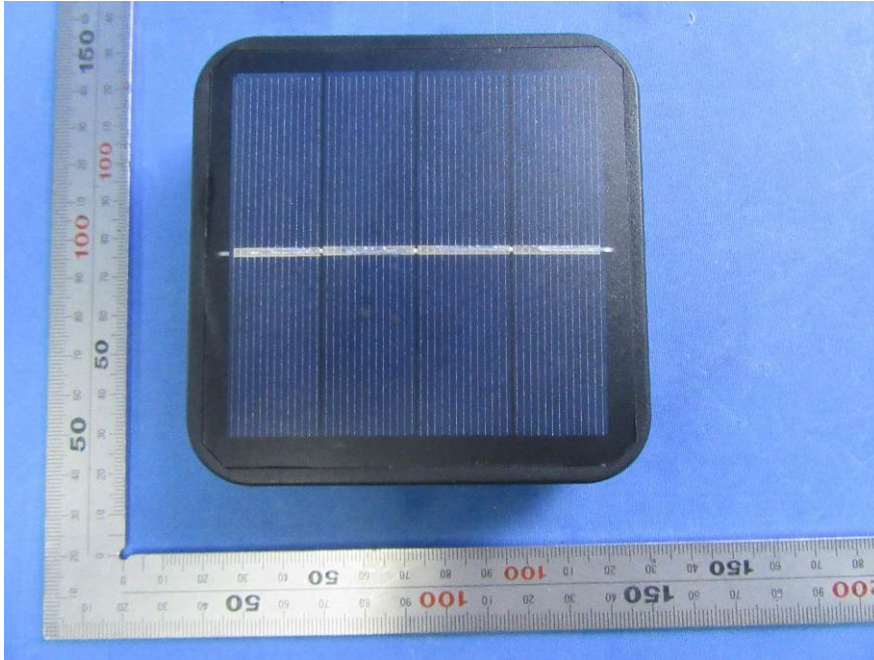


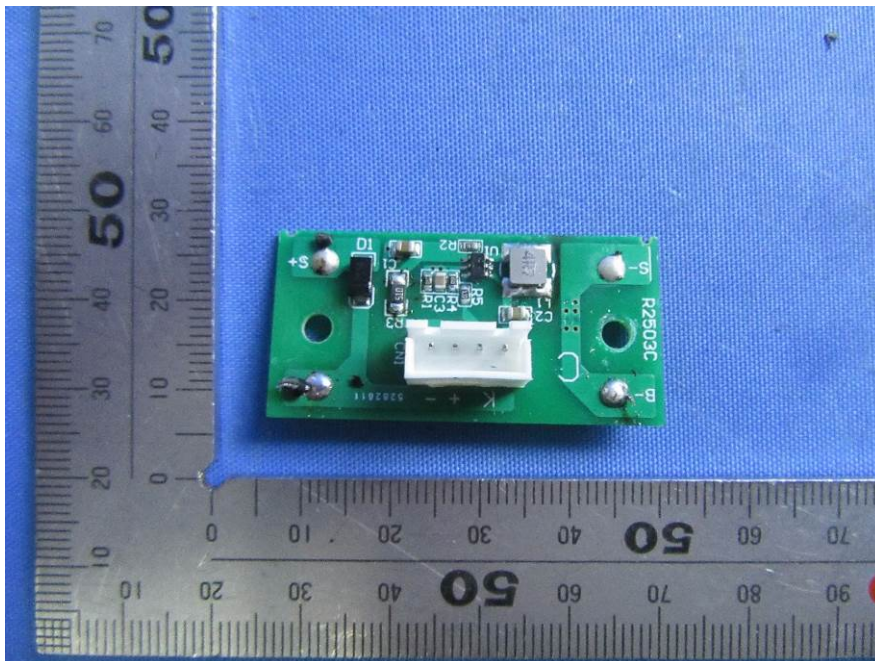
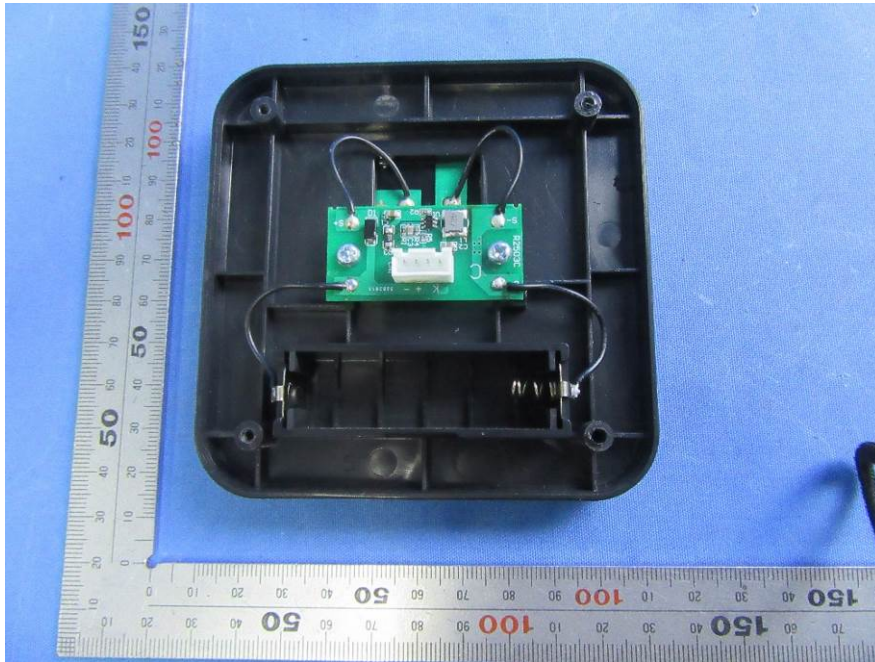
8 EUT Constructional Details (EUT Photos)

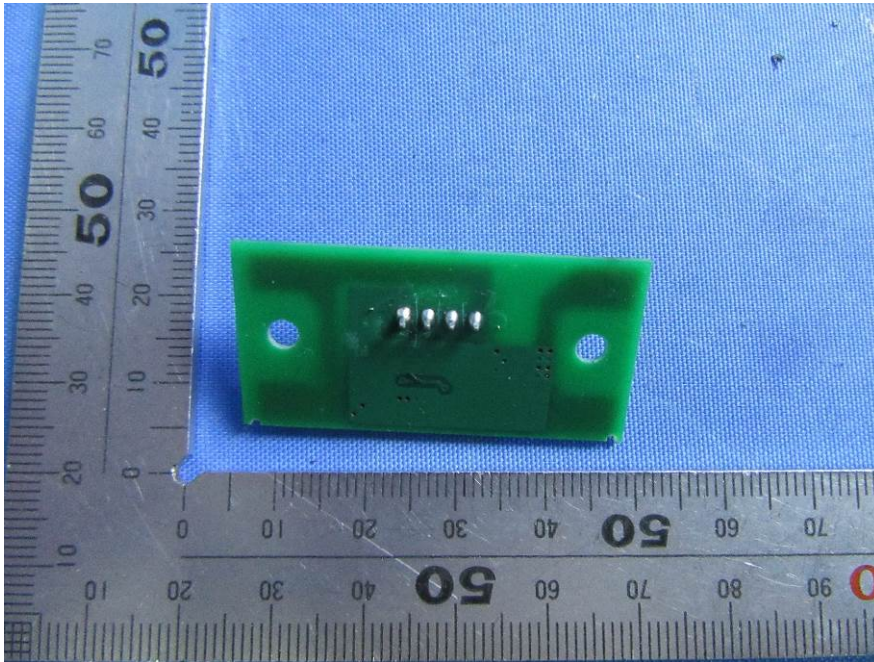




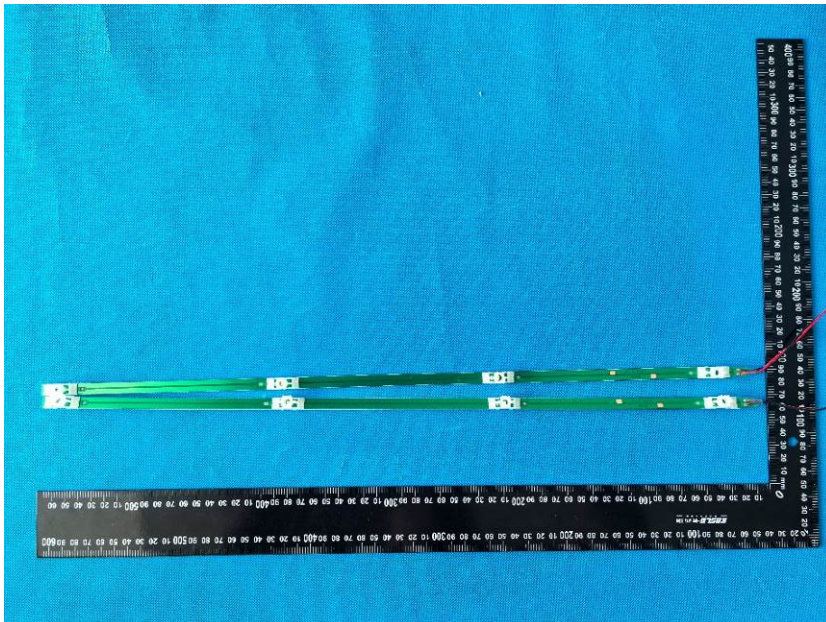
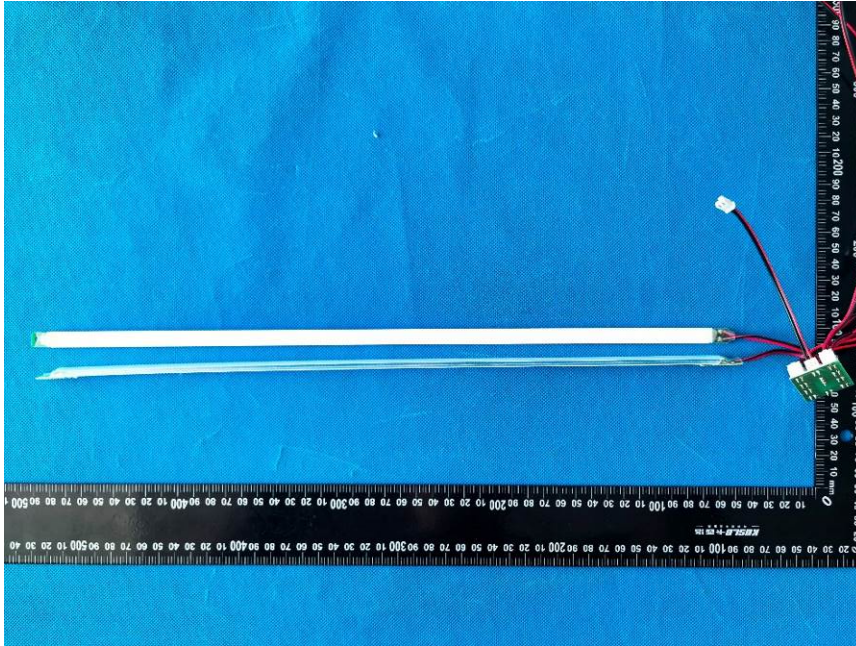








H5V-3.7



- End of the Report -