



1 Cover Page

RF Exposure Evaluation Report

Application No.: SHEM2107008180CR
FCC ID: 2ASN7-LOGGER4000
Applicant: Sungrow Power Supply Co., Ltd.
Address of Applicant: No.1699, Xiyou Road, New & High Technology Industrial Development Zone, Hefei City, Anhui Province, P. R. China
Manufacturer: Sungrow Power Supply Co., Ltd.
Address of Manufacturer: No. 608, Changning Avenue, New & High Technology Industrial Development Zone, HeFei City, Anhui Province, P.R.China
Factory: 1. Sungrow Power Supply Co., Ltd.
2. Sungrow Power Supply Co., Ltd.
3. Sungrow Developers (India) Private Limited
1. No.1699, Xiyou Road, New & High Technology Industrial Development Zone, HeFei City, Anhui Province, P.R.China
Address of Factory: 2. No. 608, Changning Avenue, New & High Technology Industrial Development Zone, HeFei City, Anhui Province, P.R.China
3. No. 85, Kaniminike village, Kengeri hobli Bangalore South Taluk, 560074 Bangalore, India
Equipment Under Test (EUT):
EUT Name: Data Logger
Model No.: Logger4000
Trade mark: SUNGROW
Standard(s) : FCC Rules 47 CFR §2.1091
KDB447498 D01 General RF Exposure Guidance v06
Date of Receipt: 2021-08-25
Date of Test: 2021-10-28 to 2021-11-16
Date of Issue: 2021-11-17

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

Parlan Zhan

Parlan Zhan
Laboratory Manager



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Revision Record			
Version	Description	Date	Remark
00	Original	2021-11-17	/

Authorized for issue by:			
			
		Micheal Niu / Project Engineer	
			
		Parlam Zhan / Reviewer	



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3 General Information

3.1 General Description of E.U.T.

Power supply:	DC 24V,1.25A or AC 100-277V,50/60Hz,0.48A
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3.2 Technical Specifications

2.4GHz

Antenna Gain:	3.71dBi (Provided by manufacturer)
Antenna Type:	PCB Antenna
Channel Spacing:	5MHz
Modulation Type:	802.11b: DSSS (CCK, DQPSK, DBPSK) 802.11g/n: OFDM (64QAM, 16QAM, QPSK, BPSK)
Number of Channels:	802.11b/g/n(HT20):11 802.11n(HT40):7
Data Rate:	802.11b:1/2/5.5/11Mbps 802.11g:6/9/12/18/24/36/48/54Mbps 802.11n:MCS0-MCS7
Operation Frequency:	802.11b/g/n(HT20): 2412MHz to 2462MHz 802.11n(HT40): 2422MHz to 2452MHz

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3.3 Test Location

All tests were performed at:

Compliance Certification Services (Kunshan) Inc.

No.10 Weiye Rd, Innovation park, Eco&Tec, Development Zone, Kunshan City, Jiangsu, China.

Tel: +86 512 5735 5888 Fax: +86 512 5737 0818

No tests were sub-contracted.

3.4 Test Facility

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

- **CNAS (No. CNAS L4354)**

CNAS has accredited Compliance Certification Services (Kunshan) Inc. to ISO/IEC 17025:2017 General Requirements for the Competence of Testing and Calibration Laboratories (CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing.

- **A2LA (Certificate No. 2541.01)**

Compliance Certification Services (Kunshan) Inc. is accredited by the American Association for Laboratory Accreditation (A2LA). Certificate No. 2541.01.

- **FCC (Designation Number: CN1172)**

Compliance Certification Services Inc. has been recognized as an accredited testing laboratory. Designation Number: CN1172.

- **ISED (CAB identifier: CN0072)**

Compliance Certification Services (Kunshan) Inc. has been recognized by Innovation, Science and Economic Development Canada (ISED) as an accredited testing laboratory.

Company Number: 2324E

- **VCCI (Member No.: 1938)**

The 3m and 10m Semi-anechoic chamber and Shielded Room of Compliance Certification Services (Kunshan) Inc. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-20134, R-11600, C-11707, T-11499, G-10216 respectively.



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4 Test Standards and Limits

4.1 FCC Radiofrequency radiation exposure limits:

According to §1.1310, the limit for general population/uncontrolled exposures

Frequency	Power density(mW/cm ²)	Averaging time(minutes)
300MHz~1.5GHz	f/1500	30
1.5GHz~100GHz	1.0	30





5 Measurement and Calculation

5.1 Maximum transmit power

The Power Data is based on the RF Test Report SHEM210700818001

Test Mode	Test Channel	Ant	Power [dBm]	Power [mW]
11B	2412	Ant1	19.38	86.70
11B	2437	Ant1	19.69	93.11
11B	2462	Ant1	20.78	119.67
11G	2412	Ant1	18.59	72.28
11G	2437	Ant1	19.60	91.20
11G	2462	Ant1	20.55	113.50
11N20SISO	2412	Ant1	18.71	74.30
11N20SISO	2437	Ant1	19.68	92.90
11N20SISO	2462	Ant1	20.94	124.17
11N40SISO	2422	Ant1	19.34	85.90
11N40SISO	2437	Ant1	19.50	89.13
11N40SISO	2452	Ant1	20.30	107.15

5.2 MPE Calculation

According to the formula $S=P/4\pi R^2$, we can calculate S which is MPE.

Note:

- 1) P (mW)
- 2) R = distance to the center of radiation of antenna (in meter) = 20cm
- 3) MPE limit = 1mW/cm²

For FCC:

For 2.4G WiFi

The max. antenna gain is		3.71	dBi		
Max. Conducted Power P(mW)	Gain in Linear Scale G	Operation Distance R(cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)	Result
124.17	2.350	20	0.05804	1	Pass

So the device is exclusion from SAR test

--End of the Report--



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