



Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR240200025402

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1 Cover Page

RF Exposure Evaluation Report

Application No.:	KSCR2402000254AT
FCC ID:	2BFVY-SLC-PV-G1000
Applicant:	Shenzhen Siliconator Technology Co., Ltd.
Address of Applicant:	Room401,Building 122,No.72 Guowei Road,Xianhu Community,Liantang Street,Luohu District,Shenzhen,China
Manufacturer:	Shenzhen Siliconator Technology Co., Ltd.
Address of Manufacturer:	Room401,Building 122,No.72 Guowei Road,Xianhu Community,Liantang Street,Luohu District,Shenzhen,China
Factory:	Beijing Siliconator Technology Co., Ltd. Huizhou Branch
Address of Factory:	4th Floor, Building 2, No. 319 Longshan Third Road, Dayawan West District, Huizhou City, Guangdong Province, China
Equipment Under Test (EUT):	
EUT Name:	PV Smart Gateway
Model No.:	PV-G1000, SL-SRSD-TYPE A2
Standard(s) :	FCC Rules 47 CFR §2.1091 KDB 447498 D04 interim General RF Exposure Guidance v01
Date of Receipt:	2024-02-20
Date of Test:	2024-03-05 to 2024-03-13
Date of Issue:	2024-04-01
Test Result:	Pass*

* In the configuration tested, the EUT complied with the standards specified above.

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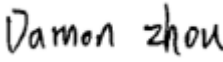

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<i>Revision Record</i>			
<i>Version</i>	<i>Description</i>	<i>Date</i>	<i>Remark</i>
00	Original	2024-04-01	/

Authorized for issue by:			
Tested By			
	<hr/> Damon Zhou //Project Engineer		
Approved By			
	<hr/> Terry Hou /Reviewer		



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3 General Information

3.1 General Description of E.U.T.

Power supply:	AC 120V/60Hz
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3.2 Technical Specifications

2.4GHz WiFi

Operation Frequency:	802.11b/g/n(HT20): 2412MHz to 2462MHz; 802.11n(HT40): 2422MHz to 2452MHz
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
Channel Spacing:	5MHz
Antenna Type:	Monopole Antenna
Antenna Gain:	3.62dBi (Provided by the manufacturer)

2G

Support Network:	GSM, GPRS, EGPRS
Operation Frequency Band:	GSM850/GSM1900
Modulation Type:	GMSK for GSM/GPRS/EGPRS 8PSK for EGPRS
GPRS Class:	8/10/12
EGPRS Class:	8/10/12
Antenna Type:	Monopole Antenna
Antenna Gain:	GSM850: 2.71dBi (Provided by the manufacturer) GSM1900: 1.83dBi (Provided by the manufacturer)

3G

Operation Frequency Band:	UMTS B2, B4, B5
Modulation Type:	UL QPSK, BPSK DL QPSK, BPSK
Antenna Type:	Monopole Antenna
Antenna Gain:	UMTS B2: 1.83dBi (Provided by the manufacturer) UMTS B4: 4.76dBi (Provided by the manufacturer) UMTS B5: 2.71dBi (Provided by the manufacturer)



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4G

LTE Operation Frequency Band:	LTE Band 2,4,5,7,12,13, 25,26, 38, 41
Modulation Type:	QPSK, 16QAM
Antenna Type:	Monopole Antenna
Antenna Gain:	Band 2: 1.83dBi(Provided by the manufacturer) Band 4: 4.76dBi(Provided by the manufacturer) Band 5: 2.71dBi(Provided by the manufacturer) Band 7: 4.61dBi(Provided by the manufacturer) Band 12: -0.86dBi(Provided by the manufacturer) Band 13: 2.55dBi(Provided by the manufacturer) Band 25: 1.83dBi(Provided by the manufacturer) Band 26 (814-824): 2.71dBi(Provided by the manufacturer) Band 26 (824-849): 2.71dBi(Provided by the manufacturer) Band 38: 4.53dBi(Provided by the manufacturer) Band 41: 4.61dBi(Provided by the manufacturer)

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.

Note:

- 1.SGS is not responsible for wrong test results due to incorrect information (e.g. max. clock frequency, highest internal 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.

3.4 Test Facility

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

- **A2LA**

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

- **FCC**

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

- **ISED**

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**

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.

4 FCC Radiofrequency radiation exposure limits

According to §1.1310, The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in part 1.1307(b)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(i) Limits for Occupational/Controlled Exposure				
0.3–3.0	614	1.63	*(100)	≤6
3.0–30	1842/f	4.89/f	*(900/f ²)	<6
30–300	61.4	0.163	1.0	<6
300–1,500			f/300	<6
1,500–100,000			5	<6
(ii) Limits for General Population/Uncontrolled Exposure				
0.3–1.34	614	1.63	*(100)	<30
1.34–30	824/f	2.19/f	*(180/f ²)	<30
30–300	27.5	0.073	0.2	<30
300–1,500			f/1500	<30
1,500–100,000			1.0	<30

5 Measurement and Calculation

5.1 Maximum transmit power

The Power Data is based on the RF Test Report KSCR240200025401, HR/2019/10016E-0102

Operating Band	Max Conducted Average output Power (dBm)	Max Conducted Average output Power (mW)	Antenna Gain (dBi)	Operation Distance R(cm)	Power Density (mW/cm ²)	Limit of Power Density S(mW/cm ²) for FCC	Result
GSM850	25.81	381.07	2.71	20	0.141	0.55	Pass
GSM1900	22.81	190.99	1.83	20	0.058	1	Pass
UMTS B2	25.00	316.23	2.71	20	0.117	1	Pass
UMTS B4	25.00	316.23	4.76	20	0.188	1	Pass
UMTS B5	25.00	316.23	1.83	20	0.096	0.55	Pass
LTE B2	25.00	316.23	1.83	20	0.096	1	Pass
LTE B4	25.00	316.23	4.76	20	0.188	1	Pass
LTE B5	25.00	316.23	2.71	20	0.117	0.55	Pass
LTE B7	25.00	316.23	4.61	20	0.182	1	Pass
LTE B12	25.00	316.23	-0.86	20	0.052	0.47	Pass
LTE B13	25.00	316.23	2.55	20	0.113	0.52	Pass
LTE B25	25.00	316.23	1.83	20	0.096	1	Pass
LTE B26 (814-824)	25.00	316.23	2.71	20	0.117	0.54	Pass
LTE B26 (824-849)	25.00	316.23	2.71	20	0.117	0.55	Pass
LTE B38	25.00	316.23	4.53	20	0.179	1	Pass
LTE B41	25.00	316.23	4.61	20	0.182	1	Pass
2.4G WLAN	16.44	44.06	3.62	20	0.020	1	Pass

The 2.4GHz WLAN, WWAN can transmit simultaneously, but the maximum rate of MPE is $0.141/0.55+0.020/1=0.276 \leq 1$. So the device is exclusion from SAR test.

--End of the Report--