

1 Cover Page

RF MPE REPORT

Application No.: SHCR2308001541AT
FCC ID: 2AEJ4R2220708
Applicant: Sunwave Communications Co., Ltd.
Address of Applicant: 581 Huoju Avenue, Binjiang District, Hangzhou, China
Manufacturer: Sunwave Communications Co., Ltd.
Address of Manufacturer: 581 Huoju Avenue, Binjiang District, Hangzhou, China
Equipment Under Test (EUT):
EUT Name: Remote Unit
Model No.: PS-R222030708
Standard(s) : FCC Rules 47 CFR §2.1091
KDB447498 D01 General RF Exposure Guidance v06
Date of Receipt: 2023-07-11
Date of Test: 2023-07-11 to 2023-07-31
Date of Issue: 2023-07-31

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

Parlam Zhan

Parlam Zhan
Laboratory Manager



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

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Revision Record			
Version	Description	Date	Remark
00	Original	2023-07-31	/

Authorized for issue by:			
		<i>Michael Niu</i>	

		Micheal Niu /Project Engineer	
		<i>Parlam Zhan</i>	

		Parlam Zhan /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

Frequency Band:	Downlink 758MHz to 775MHz (The frequency bands 768MHz-775MHz for public safety services) Downlink 851MHz to 869MHz
Antenna Type:	External
Antenna Gain:	0.1 dBi for 758MHz to 775MHz (Provided by manufacturer) 0.1 dBi for 851MHz to 869MHz (Provided by manufacturer)
Modulation Type:	CQPSK/12.5kHz FM/TETRA in 758MHz to 775MHz CQPSK/12.5kHz FM/TETRA in 851MHz to 869MHz
Antenna Delivery:	SISO
Temperature Range:	-40°C to 50°C

Note:

The antenna gain value is provided by the customer. The test lab will not be responsible for wrong test result due to incorrect information about antenna gain values.



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3.3 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).

3.4 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 Test Standards and Limits

4.1 FCC Radiofrequency radiation exposure limits:

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

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
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
300-1500	/	/	f/1500	30
1500-100,000	/	/	1.0	30



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5 Measurement and Calculation

5.1 Maximum transmit power

The Power Data is based on the RF Test Report SHCR230800154101

5.2 MPE Calculation

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

Note:

1)P (mW)

2)R = distance to the center of radiation of antenna (in centimeter)

Frequency Band (MHz)	EIRP (including Tune-up tolerance) (dBm)	Conduct power (including Tune-up tolerance) (dBm)	Operation Distance	Power Density	Limit of Power Density	Result
	(dBm)	(dBm)	R(cm)	(mW/cm ²)	S(mW/cm ²)	
758-775	38	38	160	0.0196	0.2455	Pass
851-869	38	38	160	0.0196	0.2633	Pass

According to the KDB447498 section 7.2 determine the device is exclusion from SAR test.

--End of the Report--

