



Compliance Certification Services (Kunshan) Inc.

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

Report No.: KSCR240500096903

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1 Cover Page

RF MPE REPORT

Application No.:	KSCR2405000969AT
FCC ID:	2AEJ4R22207
Applicant:	Sunwave Communications Co., Ltd.
Address of Applicant:	581 Houju Avenue, Binjiang District, Hangzhou, China
Manufacturer:	Sunwave Communications Co., Ltd.
Address of Manufacturer:	581 Houju Avenue, Binjiang District, Hangzhou, China
Factory:	Sunwave Communications Co., Ltd.
Address of Factory:	581 Houju Avenue, Binjiang District, Hangzhou, China
Equipment Under Test (EUT):	
EUT Name:	Remote Unit
Model No.:	PS-R222
Trade mark:	CROSSFIRE
Standard(s) :	FCC Rules 47 CFR §2.1091 KDB447498 D01 General RF Exposure Guidance v06
Date of Receipt:	2024-05-30
Date of Test:	2024-06-26 to 2024-08-05
Date of Issue:	2024-08-05
Test Result:	Pass*

* 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.

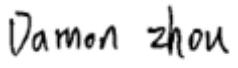
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Revision Record			
Version	Description	Date	Remark
00	Original	2024-08-05	/

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

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3 General Information

3.1 General Description of E.U.T.

Power Supply:	AC :100-240V~ 3A 50/60Hz DC: -48VDC 6.5A
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3.2 Technical Specifications

Frequency Band:	758MHz to 768MHz 769MHz to 775MHz
Antenna Type:	External
Antenna Gain:	0 dBi for 758MHz to 768MHz (Provided by manufacturer) 0 dBi for 769MHz to 775MHz (Provided by manufacturer)
Modulation Type:	TRTRA/P25/DMR/PMR/FM
MIMO:	SISO
Temperature Range:	-40°C to 55°C
Nominal Gain:	50dBi

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:

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. 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.

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.



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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 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

5 Measurement and Calculation

5.1 Maximum transmit power

The Power Data is based on the RF Test Report KSCR240500096901, KSCR240500096902

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)	Max Tune up (dBm)	Operation Distance R(cm)	Power Density (mW/cm ²)	Limit of Power Density S(mW/cm ²)	Result
758 ~ 768	42	72	0.243	0.505	Pass
769 ~ 775	42	72	0.243	0.513	Pass

Simultaneous transmission:

Frequency Band (MHz)	Max Tune up(dBm)	Power Density S at R = 72 cm (mW/cm ²)	Limit of Power Density S(mW/cm ²)	Ratio (Power Density/Limit)	Limit
758 ~ 768	42	0.243	0.505	0.955	1
769 ~ 775	42	0.243	0.513		

Note:

The EUT can support two band simultaneous transmitted.

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

--End of the Report--