



Compliance Certification Services (Kunshan) Inc.

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

Report No.: KSCR230900155302

Page: 1 of 7

1 Cover Page

RF Exposure Evaluation Report

Application No.: KSCR2309001553AT
FCC ID: 2A7HDARS131
Applicant: Nanjing Chuhan Technology Co., Ltd.
Address of Applicant: 12F, Building A, No.9, Yunzheng Street, Nanjing, P.R. China
Manufacturer: Nanjing Chuhan Technology Co., Ltd.
Address of Manufacturer: 12F, Building A, No.9, Yunzheng Street, Nanjing, P.R. China
Factory: Anqing Chuhan Electronic Technology Co.,Ltd.
Address of Factory: 1st Floor,Building 1,New Energy Vehicle Industrial Park,Economic and Technological Development Zone,Anqing,P.R.China

Equipment Under Test (EUT):

EUT Name: millimeter wave radar
Model No.: ARS1.31
Standard(s) : FCC Rules 47 CFR §2.1091
KDB 447498 D01 General RF Exposure Guidance v06
Date of Receipt: 2023-09-05
Date of Test: 2023-09-13 to 2023-09-21
Date of Issue: 2023-09-22

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

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Revision Record			
Version	Description	Date	Remark
00	Original	2023-09-22	/

Authorized for issue by:				
Tested By		<i>Tommie Tang</i>		
		<hr/> Tommie_Tang/Project Engineer		
Approved By		<i>Terry Hou</i>		
		<hr/> Terry Hou /Reviewer		

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3 General Information

3.1 General Description of E.U.T.

Power supply:	DC 9-16V
Frequency:	59.3GHz-64.0GHz
Modulation Type:	FMCW
Antenna Type:	Integrated Patch Antenna
Antenna Gain:	6.1dBi (Provided by the manufacturer)



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3.2 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).

3.3 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 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	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 KSCR230900155301

Test Mode	Test Channel	E.I.R.P [dBm]	E.I.R.P. [mW]	Tune up E.I.R.P. [dBm]	Tune up E.I.R.P. [mW]
mmWave	61.884GHz	13.25	21.13	14	25.12



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5.2 MPE Calculation

According to the formula $S = \frac{PG}{4R^2\pi}$, we can calculate S which is MPE.

Note:

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

$$S = \frac{PG}{4R^2\pi} = 25.12 / (4 \times 400 \times 3.14) = 0.005 \text{ mW/cm}^2 < 1 \text{ mW/cm}^2$$

So the device is exclusion from SAR test.

--End of the Report--



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