



RF EXPOSURE REPORT

Report No.: DDT-B22011002-2E03

Applicant	:	WHST CO., LTD.
Applicant Address	:	Factory 1, Wanchun High-tech Innovation Park, East District of Economic & Technological Development Zone, Wuhu, Anhui
Equipment Under Test	:	High Resolution Short Range Corner Radar
Model No.	:	STA79-2S
Trade Mark	:	WHST
FCC ID	:	2A3Y9STA792S019A
Manufacturer	:	WHST CO., LTD.
Manufacturer Address	:	Factory 1, Wanchun High-tech Innovation Park, East District of Economic & Technological Development Zone, Wuhu, Anhui

Issued By: Tianjin Dongdian Testing Service Co., Ltd.

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REPORT

Table of Contents

Test report declares.....	3
1. General information.....	5
1.1. Description of Equipment.....	5
1.2. Assess laboratory.....	5
2. RF Exposure Evaluation	6
2.1. Requirement.....	6
2.2. Calculation method	7
2.3. Estimation result.....	7

Test Report Declare

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Standard Used:

KDB447498 D01 General RF Exposure Guidance v06

We Declare:

The equipment described above is evaluated by Tianjin Dongdian Testing Service Co., Ltd and in the configuration evaluated the equipment complied with the standards specified above. The results are contained in this report and Tianjin Dongdian Testing Service Co., Ltd is assumed of full responsibility for the accuracy and completeness of these result.

After test and evaluation, our opinion is that the equipment provided for test compliance with the requirement of the above FCC standards.

Report No:	DDT-B22011002-2E03		
Date of Receipt:	Mar. 17, 2022	Date of Test:	Mar. 17, 2022 ~ Mar. 17, 2022

Prepared By:

Sunny Zhang

Sunny Zhang/Engineer

Approved By: (天津)

Leon Li

Leon Li / Manager



Note: This report applies to above sample only. This report shall not be reproduced in parts without written approval of Tianjin Dongdian Testing Service Co., Ltd.

The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the U.S. Government.

Revision History

Rev.	Revisions	Issue Date	Revised By
---	Initial issue	Mar. 17, 2022	

1. General information

1.1. Description of Equipment

EUT Name	:	High Resolution Short Range Corner Radar
Model Number	:	STA79-2S
Model Differences	:	N/A
Hardware Version	:	1.0.0
Software Version	:	0.1.0
EUT function description	:	Please refer to user manual of this device
Power supply	:	DC 9-16V
Sample Type	:	single production
Support Frequency Range	:	76GHz-77GHz
Max. EIRP	:	16.57dbm (45.39mW)
Type of Modulation	:	FMCW
TX. Antenna Gain	:	16.5dBi
Antenna Type	:	Integrated antenna

1.2. Assess laboratory

Tianjin Dongdian Testing Service Co., Ltd.

Address: Building D-1, No. 19, Weisi Road, Microelectronics Industrial Park Development Area, Tianjin, China., 300385

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NVLAP (National Voluntary Laboratory Accreditation Program) CODE: 500036-0

CNAS (China National Accreditation Service for Conformity Assessment) CODE: L13402

FCC Designation Number: CN5004; FCC Test Firm Registration Number: 368676

ISED (Innovation, Science and Economic Development Canada) Company Number: 27768

Conformity Assessment Body Identifier: CN0125

VCCI Facility Registration Number: C-20089, T-20093, R-20125, G-20122

2. RF Exposure Evaluation

2.1. Requirement

Systems operating under the provisions of FCC 47 CFR section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as mobile device whereby a distance of 0.2 m normally can be maintained between the user and the device, and below RF Permissible Exposure limit shall comply with.

Limits for General Population/Uncontrolled Exposure

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
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(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

f = frequency in MHz. * = Plane-wave equivalent power density.

Note1: Occupational/controlled exposure limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure.

Note2: General population/uncontrolled exposure limits apply in situations in which the general public may be exposed, or in which persons who are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

2.2. Calculation method

$$E(V/m) = \frac{\sqrt{30 * P * G}}{d}$$

$$S(W/m^2) = \frac{E^2}{377} = \frac{30 * P * G}{377 * d^2}$$

$$H(A/m) = \frac{S}{H} = \frac{\sqrt{30 * P * G}}{377 * d}$$

$$B(\mu T) = 1.25 * H = 1.25 \frac{\sqrt{30 * P * G}}{377 * d}$$

P=Peak RF output power(W)

G=EUT Antenna numeric gain

D=Separation distance between radiator and human body(m)

From the peak EUT RF output power, the minimum mobile separation distance, d=0.2 m, as well as the gain of the used antenna, the RF power density can be obtained.

2.3. Estimation result

Mode	Frequency	EIRP (dBm)	EIRP (mW)	MPE Value (mW/cm ²)	MPE ratio	MPE Limit (mW/cm ²)	Result
Transmitter Emissions	76GHz-77GHz	16.57	45.39	0.009031	0.009031	1.00	Pass

Note1: The estimation distance is 20 cm.

Note2: The The above "EIRP" items data are refer from the original report issued by MRT Technology(Suzhou) Co., Ltd. (Date of Test: 2022/2/24 ~2022/3/16).

Conclusion: No SAR evaluation required since transmitter power is below FCC threshold.

END OF REPORT