



RF EXPOSURE REPORT

Report No.: 20240517G09580X-W3

Product Name: Automotive Al Thermal Master

Model No.: NV300

FCC ID: 2BHGX-NV300

Applicant: Thermal Master Technology Co., Ltd.

Building C, Room 606, Bajiaowan International Science and

Address: Technology Innovation Center, No. 3 Nanchang Street, Guxian

Street, Yantai Area, China (Shandong) Pilot Free Trade Zone

Dates of Testing: 05/31/2024 - 07/19/2024

Issued by: CCIC Southern Testing Co., Ltd.

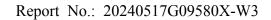
Electronic Testing Building, No.43, Shahe Road, Xili Street,

Lab Location:

Nanshan District, Shenzhen, Guangdong, China.

Tel: 86 755 26627338 E-Mail: manager@ccic-set.com

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Test Report

Product.....: Automotive AI Thermal Master

Applicant...... Thermal Master Technology Co., Ltd.

Building C, Room 606, Bajiaowan International Science Applicant Address....:

> and Technology Innovation Center, No. 3 Nanchang Street, Guxian Street, Yantai Area, China (Shandong)

Pilot Free Trade Zone

Manufacturer...... Thermal Master Technology Co., Ltd.

Building C, Room 606, Bajiaowan International Science Manufacturer Address....:

> and Technology Innovation Center, No. 3 Nanchang Street, Guxian Street, Yantai Area, China (Shandong)

Pilot Free Trade Zone

Test Standards...... 47 CFR Part 2.1091

Test Result.....: Pass

Tested by 2024.07.19

Chuiwang Zhang, Test Engineer

Reviewed by...... Sun Jiaohui 2024.07.19

Sun Jiaohui, Senior Engineer

Chris You Approved by.....:: 2024.07.19

Chris You, Manager



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Change History				
Issue	Date	Reason for change		
1.0	2024.07.19	First edition		



1. GENERAL INFORMATION

1.1. EUT Description

Product Name	Automotive AI Thermal Master
Device Type	Fixed devices
Frequency Range	WLAN 2.4GHz 802.11b/g/n (HT20/HT40)
Modulation Type	DSSS (802.11b), OFDM (802.11g/n)
Antenna Type	FPC Antenna
Antenna Gain	2.5dBi

Note 1: The information of antenna gain and cable loss is provided by the manufacturer and our lab is not responsible for the accuracy of the antenna gain and cable loss information.



1.2. EUT Description

EUT has been tested according to the following standards.

No.	Identity	Document Title		
1	47 CFR Part 1	Practice and Procedure		
2	47 CFR Part 2	Frequency Allocations and Radio Treaty Matters; General		
	4/ CFR Part 2	Rules and Regulations		
2	KDB 447498 D01 General	RF Exposure Procedures and Equipment Authorization		
3	RF Exposure Guidance v06	Policies for Mobile and Portable Devices		
4	OET Bulletin 65	Evaluating Compliance with FCC Guidelines for Human		
4	Edition 97-01	Exposure to Radiofrequency Electromagnetic Fields		

1.3. Laboratory Facilities

FCC-Registration No.: CN1283

CCIC Southern Testing Co., Ltd EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files. Designation Number: CN1283, valid time is until Jun. 30th, 2025.

ISED Registration: 11185A

CCIC Southern Testing Co., Ltd. EMC Laboratory has been registered by Certification and Engineering Bureau of Industry Canada for the performance of radiated measurements with Registration No. 11185A on Aug. 04, 2016, valid time is until Jun. 30th, 2025.

CAB number: CN0064

A2LA Code: 5721.01

CCIC-SET is a third party testing organization accredited by A2LA according to ISO/IEC 17025. The accreditation certificate number is 5721.01.

1.4. Laboratory Location

Company Name:	CCIC Southern Testing Co., Ltd.				
Address:	Electronic Testing Building, No.43, Shahe Road, Xili Street, Nanshan				
	District, Shenzhen, Guangdong, China				



2. Technical Requirements Specification in CFR Title 47 Part 2.1091

2.1. Evaluation method

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 1.1307(b).

Table 1 to § 1.1310(e)(1) - Limits for Maximum Permissible Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm2)	Averaging Time (minutes)				
	(i) Limits for Occupational/Controlled Exposure							
0.3-3.0	0.3-3.0 614 1.63 *(100) < 6							
3.0-30	1824/f	4.89/f	*(900/f ²)	< 6				
30-300	61.4	0.163	1.0	< 6				
300-1500	/	/	f/300	< 6				
1500-100,000	/	/	5	< 6				
(ii) Limits for General Population/Uncontrolled Exposure								
0.3-1.34	614	*(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				
Note: f = frequency in MHz. * = Plane-wave equivalent power density.								

Predication of MPE limit at a given distance

Refer to formulas on page 19 of OET Bulletin 65, Edition 97-01.

$$S = \frac{PG}{4\pi R^2}$$

Where:

2.2.

S = power density (in appropriate units, e.g. mW/cm²)

P = power input to the antenna (in appropriate units, e.g., mW)

G = numeric gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the centre of radiation of the antenna (appropriate units, e.g., cm)



2.3. Evaluation Results

Worst-Case mode Conducted Output Power Results for WLAN

Operation	Frequency	Maximum Output power	Max Tune up power	Max Tune up power	
Mode	(MHz)	(dBm)	(dBm)	(mW)	
WIFI 802.11b	2412	16.11	16±1	50.12	

Calculation results: Worst-Case mode

Operation	Antenna Gain	Antenna Gain	Distance	Result	Power Density	Ratio	
Mode	(dBi)	(numeric)	(cm)	(mW/cm2)	(mW/cm2)		
WIFI 802.11b	2.50	1.78	20	0.018	1.00	0.018	

2.4. Conclusion

According to the KDB 447498 D01 General RF Exposure Guidance v06 section 7.2 determine the device is exclusion from SAR test.

** END OF REPORT **