



RF EXPOSURE Test Report

Report No.: MTi220228013-04E2

Date of issue: 2022-07-21

Applicant: MAXMADE AUTO ELECTRONICS CO.,
LTD.

Product name: Car infotainer

Model(s): Z-N528L

FCC ID: 2AT9B-Z-N528L

Shenzhen Microtest Co., Ltd.

<http://www.mtitest.com>

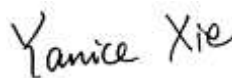
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5. Any objection to this report shall be submitted to the laboratory within 15 days from the date of receipt of the report.

TEST RESULT CERTIFICATION	
Applicant:	MAXMADE AUTO ELECTRONICS CO., LTD.
Address:	Building 2, GIEC Industrial Park, Puzai Road, Pingdi, Longgang District, Shenzhen, China
Manufacturer:	MAXMADE AUTO ELECTRONICS CO., LTD.
Address:	Building 2, GIEC Industrial Park, Puzai Road, Pingdi, Longgang District, Shenzhen, China
Factory:	MAXMADE AUTO ELECTRONICS CO., LTD.
Address:	Building 2, GIEC Industrial Park, Puzai Road, Pingdi, Longgang District, Shenzhen, China
Product description	
Product name	Car infotainer
Trademark	ZENEC
Model Name	Z-N528L
Serial Model	N/A
Standards.....	N/A
Test procedure	KDB 447498 D01 v06
Date of Test	
Date (s) of performance of tests	2022-04-12 ~ 2022-07-21
Test Result.....	Pass

Testing Engineer

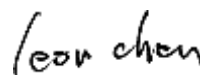
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(Yanice Xie)

Technical Manager

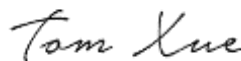
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(Leon Chen)

Authorized Signatory

:



(Tom Xue)

RF EXPOSURE EVALUATION

According to FCC 1.1310: 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)

Limits for Maximum Permissible Exposure (MPE)

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

MPE Calculation Method

Friis transmission formula: $P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot R^2)$

Where

P_d = Power density in mW/cm²

P_{out} = output power to antenna in mW

G = Numeric gain of the antenna relative to isotropic antenna

π = 3.1415926

R = distance between observation point and center of the radiator in cm (20cm)

P_d the limit of MPE, 1mW/cm². If we know the maximum gain of the antenna and total power input to the antenna, through the calculation, we will know the distance where the MPE limit is reached.

Measurement Result

BT:

Operation Frequency: 2402-2480MHz,

Power density limited: 1mW/ cm²

Antenna Type: PCB Antenna;

BT antenna gain: 1.69dBi

R=20cm

$mW=10^{(dBm/10)}$

antenna gain Numeric= $10^{(dBi/10)}=10^{(1.69/10)}=1.48$

BR+EDR:

Chann el Freq. (MHz)	modulatio n	conducte d power	Tune- up powe r (dBm)	Max		Antenna		Evaluation result	Power density Limits
		(dBm)		tune-up power		Gain		(mW/cm2)	(mW/c m2)
				(dBm)	(mW)	(dBi)	Nume ric		
2402	GFSK	3.35	4±1	5	3.162	1.69	1.48	0.0009	1
2441		3.41	4±1	5	3.162	1.69	1.48	0.0009	1
2480		3.03	4±1	5	3.162	1.69	1.48	0.0009	1
2402	π/4- DQPSK	4.20	5±1	6	3.981	1.69	1.48	0.0012	1
2441		4.96	5±1	6	3.981	1.69	1.48	0.0012	1
2480		4.98	5±1	6	3.981	1.69	1.48	0.0012	1
2402	8DPSK	4.64	5±1	6	3.981	1.69	1.48	0.0012	1
2441		4.70	5±1	6	3.981	1.69	1.48	0.0012	1
2480		4.90	5±1	6	3.981	1.69	1.48	0.0012	1

Conclusion:

For the max result: 0.0012 ≤ 1.0 SAR, No SAR is required.

----END OF REPORT----