



Microtest
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RF EXPOSURE Test Report

Report No.: MTi220228001-04E3

Date of issue: 2022-07-07

Applicant: Shenzhen Gudsen Technology Co., LTD

Product name: R9 Direct Drive Wheel Base

Model(s): R9, R5, R6, S3, S4

FCC ID: 2AMJR-R9D01

Shenzhen Microtest Co., Ltd.

<http://www.mtitest.com>



Instructions

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2. The test results of this report are only responsible for the samples submitted;
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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's name.....:	Shenzhen Gudsen Technology Co., LTD
Address.....:	Room 1903-1904, Building 3, Nanshan Zhiyuan Chongwen Park, No. 3370 Liuxian Avenue, Nanshan District, Shenzhen
Manufacturer's Name.....:	Shenzhen Gudsen Technology Co., LTD
Address.....:	Room 1903-1904, Building 3, Nanshan Zhiyuan Chongwen Park, No. 3370 Liuxian Avenue, Nanshan District, Shenzhen
Product description	
Product name.....:	R9 Direct Drive Wheel Base
Trademark	MOZA
Model Name	R9
Serial Model.....	R5, R6, S3, S4
Standards.....	N/A
Test procedure.....	KDB 447498 D01 v06
Date of Test	
Date (s) of performance of tests.....:	2022-02-28 ~2022-06-07
Test Result.....:	Pass
This device described above has been tested by Shenzhen Microtest Co., Ltd. and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.	

Testing Engineer

:

Eugene Qiu

(Eugene Qiu)

Technical Manager

:

Leon Chen

(Leon Chen)

Authorized Signatory

:

Tom Xue

(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

BLE:

Operation Frequency: 2402-2480MHz,

Power density limited: 1mW/ cm²

Antenna Type: PCB Antenna;

antenna gain: 1.87dBi

R=20cm

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

antenna gain Numeric= $10^{(dBi/10)}=10^{(2.5/10)}=1.78$

BLE:

Chann el Freq. (MHz)	modulation	conducted power	Tune- up power (dBm)	Max		Antenna		Evaluation result	Power density Limits
		(dBm)		tune-up power		Gain			
				(dBm)	(dBm)	(mW)	(dBi)	Nu meric	(mW/cm2)
2402	GFSK	-4.77	(-4)±1	-3	0.501	1.87	1.51	0.0002	1
2440		-4.20	(-4)±1	-3	0.501	1.87	1.51	0.0002	1
2480		-2.88	(-3)±1	-2	0.631	1.87	1.51	0.0002	1

Conclusion:

For the max result: $0.0002 \leq 1.0$ SAR, No SAR is required.

----END OF REPORT----