



RF EXPOSURE Test Report

Report No.: MTi230417017-01E2
Date of issue: 2023-08-02
Applicant: Shenzhen GEERLEPOL Intelligent Technology Co., Ltd
Product: Robotic Vacuum Cleaners
Model(s): V8, V8pro
FCC ID: 2BBFW-V8

Shenzhen Microtest Co., Ltd.

<http://www.mtitest.com>

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Test Result Certification	
Applicant:	Shenzhen GEERLEPOL Intelligent Technology Co., Ltd
Address:	Room201, Building 18, Shapuwei ChuangYe Industrial Zone, SongGang Street, Bao'an District, Shenzhen city, China.
Manufacturer:	Shenzhen GEERLEPOL Intelligent Technology Co., Ltd
Address:	Room201, Building 18, Shapuwei ChuangYe Industrial Zone, SongGang Street, Bao'an District, Shenzhen city, China.
Product description	
Product name:	Robotic Vacuum Cleaners
Trademark:	N/A
Model name:	V8
Serial Model:	V8pro
Standards:	N/A
Test procedure:	KDB 447498 D01 v06
Date of Test	
Date of test:	2023-07-12 to 2023-07-31
Test result:	Pass

Test Engineer :

David. Lee

(David Lee)

Reviewed By: :

Leon Chen

(Leon Chen)

Approved By: :

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

2.4GWiFi:

Operation Frequency: WIFI 802.11b/g/n HT20: 2412-2462MHz,

Power density limited: 1mW/ cm²

2.4GWiFi: ANT GAIN :2dBi

Channel Freq. (MHz)	modulation	conducted power (dBm)	Tune-up power (dBm)	Max		Antenna Gain	Evaluation result at 20cm Power density(mW/cm2)	Power density Limits (mW/cm2)
				tune-up power				
				(dBm)	(dBm)	(dBm)	(mW)	Numeric
2412	802.11b	14.35	14±1	15	31.623	1.58	0.00997	1
2437		13.86	14±1	15	31.623	1.58	0.00997	1
2462		14.90	14±1	15	31.623	1.58	0.00997	1
2412	802.11g	12.78	12±1	13	19.953	1.58	0.00629	1
2437		12.64	12±1	13	19.953	1.58	0.00629	1
2462		13.59	13±1	14	25.119	1.58	0.00792	1
2412	802.11n H20	12.81	12±1	13	19.953	1.58	0.00629	1
2437		12.84	12±1	13	19.953	1.58	0.00629	1
2462		13.61	13±1	14	25.119	1.58	0.00792	1
2422	802.11n H40	12.84	12±1	13	19.953	1.58	0.00629	1
2437		12.53	12±1	13	19.953	1.58	0.00629	1
2452		12.70	12±1	13	19.953	1.58	0.00629	1

Conclusion:

For the max result: $0.00997 \leq 1.0$, No SAR is required.

----END OF REPORT----