



# FCC TEST REPORT

## FCC ID: 2BFEX-V3

Product	:	Robot vacuum cleaner
Model Name	:	V3
Brand	:	N/A
Report No.	:	PTC24031206101E-FC04
<b>Prepared for</b>		
Shenzhen Pureatic Electromechanical Technology Co., Ltd		
Room 301, Building A2, Rongchang Industry Park, NO.440, Hedongcountry, guancheng community, guanhu street, longhua district, shenzhen city.		
<b>Prepared by</b>		
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## TEST RESULT CERTIFICATION

Applicant's name : Shenzhen Pureatic Electromechanical Technology Co., Ltd

Address : Room 301, Building A2, Rongchang Industry Park,  
NO.440, Hedong country, guancheng community, guanhu  
street, longhua district, shenzhen city.

Manufacture's name : Shenzhen Pureatic Electromechanical Technology Co., Ltd

Address : Room 301, Building A2, Rongchang Industry Park,  
NO.440, Hedong country, guancheng community, guanhu  
street, longhua district, shenzhen city.

Product name : Robot vacuum cleaner

Model name : V3

Test procedure : FCC CFR47 Part 1.1307(b)(1)

Test Date : Mar. 12, 2024 to Mar. 28, 2024

Date of Issue : Mar. 28, 2024

Test Result : PASS

This device described above has been tested by PTC, 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.

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Test Engineer:

A handwritten signature in black ink, appearing to read 'Jack Zhou'.

Jack Zhou / Engineer

Technical Manager:

A handwritten signature in black ink, appearing to read 'Simon Pu'.

Simon Pu / Manager



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## 2 Test Summary

Test Items	Test Requirement	Result
Maximum Permissible Exposure (Exposure of Humans to RF Fields)	15.247 (i)	PASS
Remark:		
N/A: Not Applicable		



### 3 General Information

#### 3.1 General Description of E.U.T.

Product Name	:	Robot vacuum cleaner
Model Name	:	V3
Additional model	:	N/A
Operating frequency	:	2402-2480MHz 2412-2462MHz for 802.11b/g/ n(HT20)
Numbers of Channel	:	11 channels for 802.11b/g/ n(HT20) 79 channels for BDR+EDR 40 channels For DTS
Type of Modulation	:	GFSK, Π/4-DQPSK,8DPSK For DSS GFSK, For DTS DSSS with DBPSK/DQPSK/CCK for 802.11b; OFDM with BPSK/QPSK/16QAM/64QAM for 802.11g/n;
Operating frequency	:	2402-2480MHz 2412-2462MHz for 802.11b/g/ n(HT20)
Antenna installation	:	PCB antenna
Antenna Gain	:	2.54 dBi
Power supply	:	Input: DC 15V 0.8A; DC 15V 1A Output: 30W Adapter1: JF018WR-1500080UH Input: 100-240V~50/60Hz 0.5A Output:DC15V $\overline{\text{---}}$ 0.8A 12.0W Adapter2: XHD15-150080-A Input: 100-240V~50/60Hz 0.8A Output:DC15V $\overline{\text{---}}$ 0.8A Adapter3:NLB080150W1A5S58 Input: 100-240V~50/60Hz 0.35A Output:DC15V $\overline{\text{---}}$ 800mA Li-ion Battery1 : 21700 Rated Voltage: 11.1V Rated Capacity:4500mAh Li-ion Battery2 : 18650 Rated Voltage: 11.1V Rated Capacity:2600mAh 28.86Wh Li-ion Battery3 : 18650 Rated Voltage: 11.1V Rated Capacity:3200mAh 35.52Wh
Hardware Version	:	V1.1



Report No.: PTC24031206101E-FC04

Software Version	:	0.1.1
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## 4 RF Exposure

Test Requirement : FCC Part 1.1307(b)(1)

Evaluation Method : KDB 447498 D01 General RF Exposure Guidance v06

### 4.1 Requirements

Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess limit for maximum permissible exposure. In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as a mobile device whereby a distance of 0.2 m normally can be maintained between the user and the device.

### 4.2 The procedures / limit

(A) Limits for Occupational / Controlled Exposure

Frequency Range	Electric Field	Magnetic Field	Power Density (S)	Averaging Time
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842 / f	4.89 / f	(900 / f)*	6
30-300	61.4	0.163	1.0	6
300-1500			F/300	6
1500-100,000			5	6

(B) Limits for General Population / Uncontrolled Exposure

Frequency Range	Electric Field	Magnetic Field	Power Density (S)	Averaging Time
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f)*	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



### 4.3 MPE Calculation Method

$$E \text{ (V/m)} = \frac{\sqrt{30 \times P \times G}}{d} \qquad \text{Power Density: } Pd \text{ (W/m}^2\text{)} = \frac{E^2}{377}$$

E = Electric field (V/m)

P = Peak RF output power (W)

G = EUT Antenna numeric gain (numeric)

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

The formula can be changed to

$$Pd = \frac{30 \times P \times G}{377 \times d^2} \theta\phi$$

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

### 4.4 Test Result

Test Mode	Frequency (MHz)	Antenna Gain (numeric)	Max. Peak Output Power (dBm)	Tune up tolerance (dBm)	Max Tune Up Power (mW)	Power Density (mW/cm <sup>2</sup> )	Limit of Power Density (mW/cm <sup>2</sup> )	Result
EDR	2402	1.79	10.08	10.08 ± 1	12.823306	0.004579	1	Pass
BLE	2402	1.79	5.92	5.92 ± 1	4.920395	0.001757	1	Pass
11N20SISO	2412	1.79	20.80	20.80 ± 1	120.226443	0.042927	1	Pass

\*\*\*\*\*THE END REPORT\*\*\*\*\*