FCC TEST REPORT
FCC ID: 2AWN3RBVFFJA

Product	:	Robotic Vacuum Cleaner
Model Name	:	BDXRBV660
Additional model	:	N/A
Brand	:	BLACK+DECKER
Report No.	:	PTC20073105401E-FC03

Prepared for
CT Nova Limited
6/F, Building 20E, Phase 3, Hong Kong Science Park, 20 Science Park East Avenue, Shatin, New Territories, Hong Kong
Prepared by
Precise Testing & Certification Co., Ltd
Building 1, No. 6, Tongxin Road, Dongcheng Street, Dongguan, Guangdong, China

TEST RESULT CERTIFICATION

Applicant's name	:	CT Nova Limited
Address	:	6/F, Building 20E, Phase 3, Hong Kong Science Park, 20 Science Park East Avenue, Shatin, New Territories, Hong Kong
Manufacture's name	:	Matsutek Enterprises Co., Ltd.
Address	:	2F,No. 2, Lane 15, Ziqiang St., Tu Cheng Dist., New Taipei City, Taiwan 23678
Product name	:	Robotic Vacuum Cleaner
Model name	:	BDXRBV660
Test procedure		KDB 447498 D01 General RF Exposure Guidance v06
Test Date	:	Aug 17, 2020 to Aug 24, 2020
Date of Issue	:	Aug 24, 2020
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:

Leo Yang

Leo Yang / Engineer

Technical Manager:

Chris Du

Chris Du / Manager

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Test Items	Test Requirement	Result
Maximum Permissible Exposure (Exposure of Humans to RF Fields)	1.1307(b)(1)	PASS
Remark:		
N/A: Not Applicable		

3 General Information

3.1 General Description of E.U.T.

Product Name	:	Robotic Vacuum Cleaner
Model Name	:	BDXRBV660
Additional model		N/A
Model Description	:	N/A
Bluetooth Version	:	N/A
Operating frequency	:	802.11b/g/n HT20: 2412-2462MHz
Max. RF output power	:	WiFi: 18.67dBm
Type of Modulation	:	DSSS with DBPSK/DQPSK/CCK for 802.11b; OFDM with BPSK/QPSK/16QAM/64QAM for 802.11g/n;
Antenna installation:	:	Pcb antenna
Antenna Gain:	:	0 dbi
Power supply	:	Adapter model:ZD24W200120US Input:AC100-240V 50/60HZ /0.8A Output:DC 20V/1200mA Battery:14.6v 2500mAh

4 RF Exposure

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

Evaluation Method   :   FCC Part 2.1091

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

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

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

Item	Antenna Gain (numeric)	Max. Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (mW/cm2)	Limit of Power Density (mW/cm2)	Result
WIFI	1	18.67	73.62	0.0146	1	Pass

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