

Shenzhen Reecoo Electronic Co., Ltd.

MPE ASSESSMENT REPORT

Report Type:

FCC Part §2.1091, §2.1093 and §1.1307(b) assessment report

Model:

YDVN21

REPORT NUMBER:

211200881SHA-006

ISSUE DATE:

January 13, 2022

DOCUMENT CONTROL NUMBER:

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Report no.: 211200881SHA-006

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No.518 Songwei Road, Wusongjiang industry Park, Guoxiang Street,

Wuzhong District, Suzhou, Jiangsu, China

FCC ID: 2AZMB-YDVN21

SUMMARY:

The equipment complies with the requirements according to the following standard(s) or Specification:

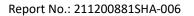
KDB447498 D01 General RF Exposure Guidance v06 FCC Part2.1091, FCC Part2.1093 FCC Part1.1307(b)

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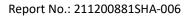
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Revision History

Report No.	Version	Description	Issued Date
211200881SHA-006	Rev. 01	Initial issue of report	January 13, 2022





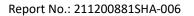
1 GENERAL INFORMATION

1.1 Description of Equipment Under Test (EUT)

Product name:	Floor Cleaning Robot	
Type/Model:	YDVN21	
Description of EUT:	The EUT is a Floor Cleaning Robot, it supports WIFI functions, there	
	is only one model. we test them and list the worst results in this	
	report.	
Rating:	20V DC, 1A	
	Docking station(CH1822):	
	Input: 100-240V~, 50-60Hz, 0.5A	
	Output: 20V DC, 1A	
	Docking station(CH1918):	
	Input: 120V~, 50-60Hz, 8A	
	Output: 20V DC, 1A	
EUT type:	☐ Table top ☐ Floor standing	
Software Version:	/	
Hardware Version:	/	
Sample Identification		
No.:	0220105-11-003	
Sample received date:	2022.1.5	
Date of test:	2022.1.7-2022.1.12	

1.2 Technical Specification

Frequency Band:	2400MHz ~ 2483.5MHz
Support Standards:	IEEE 802.11b, IEEE 802.11g, IEEE 802.11n-HT20, IEEE 802.11n-HT40
	IEEE 802.11b: DSSS (CCK, DQPSK, DBPSK)
	IEEE 802.11g: OFDM (64-QAM, 16-QAM, QPSK, BPSK)
	IEEE 802.11n-HT20: OFDM (64-QAM, 16-QAM, QPSK, BPSK)
Type of Modulation:	IEEE 802.11n-HT40: OFDM (64-QAM, 16-QAM, QPSK, BPSK)
	11 Channels for 802.11b, 802.11g and 802.11n(HT20)
Channel Number:	7 Channels for 802.11n(HT40)
Channel Separation:	5 MHz
Antenna:	PCB Antenna, 1.88dBi

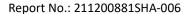




1.3 Description of Test Facility

Name:	Intertek Testing Services Shanghai
Address:	Building 86, No. 1198 Qinzhou Road(North), Shanghai 200233, P.R. China
Telephone:	86 21 61278200
Telefax:	86 21 54262353

The test facility is	CNAS Accreditation Lab
recognized,	Registration No. CNAS L0139
certified, or accredited by these	FCC Accredited Lab Designation Number: CN1175
organizations:	IC Registration Lab CAB identifier.: CN0051
	VCCI Registration Lab Registration No.: R-14243, G-10845, C-14723, T-12252
	A2LA Accreditation Lab Certificate Number: 3309.02





2 MPE Assessment

Test result: Pass

2.1 MPE Assessment Limit

Mobile device exposure for standalone operations:

Frequency range	E-field strength	H-field strength	B-field	Equivalent plane wave	
	(V/m)	(A/m)	(uT)	power density	
				S _{eq} (W/m²)	
0-1 Hz	-	$3,2 \times 10^4$	4×10^{4}	-	
1-8 Hz	10 000	$3.2 \times 10^4/f^2$	$4 \times 10^4/f^2$	-	
8-25 Hz	10 000	4 000/f	5 000/f	-	
0,025-0,8 kHz	250/f	4/f	5/f	-	
0,8-3 kHz	250/f	5	6,25	-	
3-150 kHz	87	5	6,25	-	
0,15-1 MHz	87	0,73/f	0,92/f	-	
1-10 MHz	87/f ^{1/2}	0,73/f	0,92/f	-	
10-400 MHz	28	0,073	0,092	2	
400-2 000 MHz	1,375 f ^{1/2}	0,0037 f ^{1/2}	0,0046 f ^{1/2}	f/200	
2-300 GHz	61	0,16	0,20	10	

Mobile device exposure for simultaneous transmission operations: the sum of the MPE ratios for all simultaneously transmitting antennas incorporated in a host device is \leq 1.0



TEST REPORT

2.2 Assessment Results

Power density (S) is calculated according to the formula:

 $S = PG / (4\pi R^2)$

Where $S = power density in mW/cm^2$

P = Radiated transmit power in mW

G = numeric gain of transmit antenna

R = distance (cm)

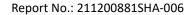
As we can see from the test report 211200881SHA-005:

The calculations in the table below use the highest gain of antenna for client EUT. These calculations represent worst case in terms of the exposure levels.

Mode	Frequency band	Max Power	Antenna Gain	R	S	Limits
	(MHz)	dBm	dBi	(cm)	(mW/cm2)	(mW/cm2)
WIFI	2412-2462	12.52	1.88	20	0.0055	1

Note: 1 mW/cm2 from 1.310 Table 1

The MPE assessment value is 0.0055 < 1.0, therefore, the MPE requirement is deemed to be satisfied without test.





Appendix I

Definition below must be outlined in the User Manual:

To satisfy FCC RF exposure requirements, a separation distance of 20 cm or more should be
maintained between the antenna of this device and persons during device operation.
To ensure compliance, operations at closer than this distance is not recommended.
