

Positec Technology (China)Co., Ltd MPE ASSESSMENT REPORT

Report Type:

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

Model:

NR001L, NR001L.* (*=0-20, A-Z, * denote different accessories)

REPORT NUMBER:

201000238SHA-002

ISSUE DATE:

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DOCUMENT CONTROL NUMBER:

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Report no.: 201000238SHA-002

Applicant: Positec Technology (China) Co., Ltd

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P.R. China

Positec Technology (China) Co., Ltd Manufacturer:

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P.R. China

Positec Technology (China) Co., Ltd **Factory:**

18, Dongwang Road, Suzhou Industrial park, Jiangsu 215123,

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2ASC3NR001L FCC ID:

SUMMARY:

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

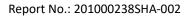
KDB447498 D01 General RF Exposure Guidance v06 FCC Part2.1091, FCC Part2.1093 FCC Part1.1307(b)

PREPARED BY: **REVIEWED BY:** frie. li

Project Engineer

Reviewer Eric Li **Daniel Zhao**

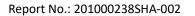
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Revision History

Report No.	Version	Description	Issued Date	
201000238SHA-002	Rev. 01	Initial issue of report	June 17, 2021	





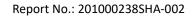
1 GENERAL INFORMATION

1.1 Description of Equipment Under Test (EUT)

Product name:	Robotic mopping cleaner
Trung (NA gradul)	· · · · ·
Type/Model:	NR001L, NR001L.* (*=0-20, A-Z, * denote different accessories)
Description of EUT:	EUT is Robotic mopping cleaner with WIFI function, we test it and list
	the worst results in this report.
Rating:	Adapter:
	Input: 100-240V~ 50-60Hz 0.5A
	Output: 19Vd.c. 0.6A 11.4W
	Working: 14.4V d.c.
EUT type:	☐ Table top ☐ Floor standing
Software Version:	/
Hardware Version:	/
Sample received date:	December 8, 2020
Date of test:	December 12, 2020~ December 16, 2020

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)
	2412MHz to 2462MHz for IEEE 802.11b/g/n(HT20)
Operating Frequency:	2422MHz to 2452MHz for 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 Information:	PCB Antenna, gain is 4.0dBi

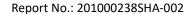




1.3 Description of Test Facility

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	FCC Accredited Lab
accredited by these	
	Designation Number: CN1175
organizations:	<u> </u>
	IC Registration Lab
	CAB identifier.: CN0051
	GAB Identifies. GN0051
	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

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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 201000238SHA-001:

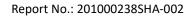
The calculations in the table below use the highest gain of antenna for client EUT. These calculations represent worst case in terms of the exposure levels.

The WiFi can support simultaneous transmission.

Mode	Frequency band	Max Power	Antenna Gain	R	S	Limits
	(MHz)	dBm	dBi	(cm)	(mW/cm2)	(mW/cm2)
WiFi	2400 -2483.5	11.60	4.0	20	0.0072	1

Note: 1 mW/cm2 from 1.310 Table 1

For the device can support simultaneous transmission, according to 447498 D01 General RF Exposure Guidance v06,





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.
