FCC RF EXPOSURE REPORT

For

Robotic Vacuum Cleaner

MODEL NUMBER: QX1PEC

PROJECT NUMBER: 4791155019

REPORT NUMBER: 4791155019-2

FCC ID: 2AN2O-QX1PEC01

ISSUE DATE: Feb. 06, 2024

Prepared for

Beijing Roborock Technology Co., Ltd.

Prepared by

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The results reported herein have been performed in accordance with the laboratory's terms of accreditation. This report shall not be reproduced except in full without the written approval of the Laboratory. The results in this report apply to the test sample(s) mentioned above at the time of the testing period only and are not to be used to indicate applicability to other similar products.

Revision History

Rev.	Issue Date	Revisions	Revised By
V0	02/06/2024	Initial Issue	

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1. ATTESTATION OF TEST RESULTS

Applicant Information

Company Name:	Beijing Roborock Technology Co., Ltd.
Address:	Room 1001, Floor 10, Building 3, Yard 17, Anju Road, Changping District, Beijing, P.R. China

Manufacturer Information

Company Name:	Beijing Roborock Technology Co., Ltd.
Address:	Room 1001, Floor 10, Building 3, Yard 17, Anju Road, Changping District, Beijing, P.R. China

EUT Description

Product Name:	Robotic Vacuum Cleaner
Model Name:	QX1PEC
Additional No.:	/
Model Difference:	/
Sample Number:	6813106
Data of Receipt Sample:	Jan. 09, 2024
Test Date:	Jan. 09, 2024~ Feb. 02, 2024

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
FCC Guidelines for Human Exposure IEEE C95.1	Complies

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2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with KDB 447498 D01 General RF Exposure Guidance v06 and FCC Guidelines for Human Exposure IEEE C95.1.

3. FACILITIES AND ACCREDITATION

Accreditation Certificate	**A2LA (Certificate No.: 4829.01)** **UL-CCIC COMPANY LIMITED has been assessed and proved to be in compliance with A2LA.** **FCC (FCC Designation No.: CN1247)** **UL-CCIC COMPANY LIMITED has been recognized to perform compliance testing on equipment subject to the Commission's Declaration of Conformity (DoC) and Certification rules.** **IC (IC Designation No.: 25056; CAB No.: CN0073)** **UL-CCIC COMPANY LIMITED has been recognized to perform compliance testing on equipment subject to the Commission's Declaration of Conformity (DoC) and Certification rules.**

Note 1: All tests measurement facilities use to collect the measurement data are located at No. 2, Chengwan Road, Suzhou Industrial Park, Suzhou 215122, China.

Note 2: For below 30MHz, lab had performed measurements at test anechoic chamber and comparing to measurements obtained on an open field site. These measurements below 30MHz had been correlated to measurements performed on an OFS.

Note 3: The test anechoic chamber in UL-CCIC COMPANY LIMITED had been calibrated and compared to the open field sites and the test anechoic chamber is shown to be equivalent to or worst case from the open field site.

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4. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

Test Item	Uncertainty
Output Power to Antenna	1.3 dB
Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.	

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5. REQUIREMENT

LIMIT

Limits for General Population/Uncontrolled Exposure

Limits for General Population/Uncontrolled Exposure				
Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm^2)	Averaging Time $\|E\|^2$, $\|H\|^2$ or S (minutes)
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
300-1500	--	--	f/1500	30
1500-100,000	--	--	1.0	30
Note 1: f = frequency in MHz, * means Plane-wave equivalent power density				
Note 2: General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.				
Note 3: The limit value 1.0mW/cm^2 is available for this EUT.				

MPE CALCULATION METHOD

$S = PG/(4\pi R2)$

where: S = power density (in appropriate units, e.g. mW/ cm2)
P = power input to the antenna (in appropriate units, e.g., mW)
G = power gain of the antenna in the direction of interest relative to an isotropic radiator
R = distance to the center of radiation of the antenna (appropriate units, e.g., cm)

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CALCULATED RESULTS

2.4GHz WiFi (Worst case)								
Mode	Frequency	Output Power to Antenna		Antenna Gain		Power Density	Limit	Verdict
	(MHz)	(dBm)	(mW)	(dBi)	(Numeric)	(mW/cm2)	(mW/cm2)	
11B	2437	17.0	50.12	1.78	1.51	0.0150	1	Complies

Note:
1. The output power is from operation description.
2. The minimum separation distance of the device is greater than 20 cm.
3. All the channels had been tested, but only the worst data was recorded in the report.
4. The calculated result for the sample received is <Pass> according to < 47 CFR FCC Part 2 Subpart J, section 2.1091> when <Accuracy Method> decision rule is applied.

END OF REPORT

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