



RF EXPOSURE REPORT

Applicant	:	Tonly Technology Co., Ltd.
Address of Applicant	:	Section 37, Zhongkai High-tech Development Zone, Huizhou City, Guangdong Province, P.R. China
Manufacturer	:	Tonly Technology Co., Ltd.
Address of Manufacturer	:	Section 37, Zhongkai High-tech Development Zone, Huizhou City, Guangdong Province, P.R. China
Equipment under Test	:	BDX Character Robot
Model No.	:	BDX-PROD-01
FCC ID	:	ZVAOH000037
Test Standard(s)	:	KDB447498 D01 General RF Exposure Guidance v06
Report No.	:	DDT-RE26030329-2E12
Issue Date	:	2026/04/24
Issue By	:	Guangdong Dongdian Testing Service Co., Ltd. Unit 2, Building 1, No. 17, Zongbu 2nd Road, Songshan Lake Park, Dongguan, Guangdong, China, 523808

REPORT

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Test Report Declare

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Test Standard Used:
KDB447498 D01 General RF Exposure Guidance v06

We Declare:
The equipment described above is tested by Guangdong Dongdian Testing Service Co., Ltd. and in the configuration tested the equipment complied with the standards specified above. The test results are contained in this test report and Guangdong Dongdian Testing Service Co., Ltd. is assumed of full responsibility for the accuracy and completeness of these tests.

Report No.:	DDT-RE26030329-2E12		
Date of Receipt:	2026/03/05	Date of Test:	2026/03/05~2026/04/17

Created: Chen Ziqin	Reviewed: Zoe Peng	Approved: Ella Gong
		
2026/04/17	2026/04/24	2026/04/24

Note: This report applies to above tested sample only. This report shall not be reproduced in parts without written approval of Guangdong Dongdian Testing Service Co., Ltd.

Revision History

Version	Revision Content	Issue Date	Approved
V0	Initial issue	2026/04/24	Ella Gong

1. General Test Information

1.1. Description of EUT

EUT Name	: BDX Character Robot
Model Number	: BDX-PROD-01
Difference of model number	: /
EUT Function Description	: Please reference user manual of this device
Power Supply	: DC 22.2V from Rechargeable Li-ion Battery

Note: The above EUT information is declared by manufacturer and for more detailed features description please refer to the manufacturer's specifications or User's Manual.

1.2. Accessories of EUT

Accessories	Manufacturer	Model number	Description
Adapter Connector	N/A	N/A	N/A

1.3. Assistant equipment used for test

Accessories	Manufacturer	Model number	Description
LoRa Backpack	N/A	LBP-001	N/A
Battery charging cradle	N/A	CC-001	N/A
Remote control	N/A	N/A	N/A
Rechargeable Li-ion Battery	N/A	I0971A	Nominal Voltage: 22.2V DC Rated Capacity: 5600mAh
SWITCHING ADAPTER	Shenzhen SOY Technology Co., Ltd.	SOY-2401000-244-B	Input: 100-240V ~ 50/60Hz 3.0A Max.Output: 24.0V===10.0A 240W

1.4. Test laboratory

Guangdong Dongdian Testing Service Co., Ltd.

Add.: Unit 2, Building 1, No. 17, Zongbu 2nd Road, Songshan Lake Park, Dongguan, Guangdong, China, 523808.

Tel.: +86-0769-38826678, <http://www.dgddt.com>, Email: ddt@dgddt.com.

CNAS Accreditation No. L6451; A2LA Accreditation Number: 3870.01

FCC Designation Number: CN1182, Test Firm Registration Number: 540522

Innovation, Science and Economic Development Canada Site Registration Number: 10288A

Conformity Assessment Body identifier: CN0048

VCCI facility registration number: C-20087, T-20088, R-20123, R-20240, G-20118

2. RF Exposure evaluation for FCC

2.1. Assessment procedure

Requirement:

Systems operating under the provisions of FCC 47 CFR section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as mobile device whereby a distance of 0.2 m normally can be maintained between the user and the device, and below RF Permissible Exposure limit shall comply with.

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)*	30
30-300	27.5	0.073	0.2	30
300-1500			F/1500	30
1500-100000			1.0	30
Note: f= frequency in MHz; *Plane-wave equivalent power density				

Calculation method

$$E(\text{V/m}) = \frac{\sqrt{30 \times P \times G}}{d} \quad \text{Power Density: } S(\text{mW/cm}^2) = \frac{E^2}{377}$$

E = Electric field (V/m)

P = Peak RF output power (mW)

G = EUT Antenna numeric gain (numeric)=

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

The formula can be changed to

We can change the formula to:

$$S = \frac{30 \times P \times G}{377 \times d^2} \quad \text{or, } d = \sqrt{\frac{30 \times P \times G}{377 \times S}}$$

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

2.2. Assess result

Mode	Output power (dBm)	Output power (mW)	Tune up power (dBm)	Tune up power (mW)	Antenna Gain (dBi)	Antenna Gain (linear)	MPE Values (mW/cm ²)	MPE Limit (mW/cm ²)
2.4G WiFi	25.98	396.28	26.5	446.68	3.24	2.11	0.1874	1
5G WiFi	24.32	270.4	25.0	316.23	5	3.16	0.1989	1
Lora	8.35	6.84	9.0	7.94	2.02	1.59	0.0025	1
Lora	8.11	6.47	9.0	7.94	2.25	1.68	0.0027	1
Lora	11.58	14.39	12	15.85	-0.87	0.82	0.0026	1
UWB	-0.53	0.89	0	1.00	0.00	1.00	0.0002	1

Note: This product comes with 3 UWB modules.

Simultaneous transmit evaluation result:

$0.1874+0.1989+0.0025+0.0027+0.0026+0.0002*3=0.3947<1$.

Note: The estimation distance is 20 cm

Conclusion: MPE evaluation required since transmitter power is below FCC threshold

-----End Report-----