



RF EXPOSURE Test Report

Report No.: MTi220701002-01E2

Date of issue: 2022-07-29

Applicant: Shenzhen IF Digital Technology Co., Ltd.

Product name: Smart Curtain Robot

Model(s): CurBot 1S

FCC ID: 2A46D-CURBOT03

Shenzhen Microtest Co., Ltd.

<http://www.mtitest.com>



Instructions

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TEST RESULT CERTIFICATION	
Applicant's name	Shenzhen IF Digital Technology Co., Ltd.
Address	Room 2303, Building A1, Jixianglong Garden, Shekou Street, Shenzhen, China
Manufacturer's Name	Shenzhen IF Digital Technology Co., Ltd.
Address	Room 2303, Building A1, Jixianglong Garden, Shekou Street, Shenzhen, China
Product description	
Product name	Smart Curtain Robot
Trademark	OTER
Model Name	CurBot 1S
Serial Model	N/A
Standards	N/A
Test procedure	KDB 447498 D01 v06
Date of Test	
Date (s) of performance of tests	2022-07-08 ~ 2022-07-29
Test Result	Pass

Testing Engineer

:

David. Lee

(David Lee)

Technical Manager

:

Leon Chen

(Leon Chen)

Authorized Signatory

:

Tom Xue

(Tom Xue)



RF EXPOSURE EVALUATION

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) Radiation as specified in §1.1307(b)

Limits for Maximum Permissible Exposure (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposure				
0.3-3.0	614	1.63	*100	6
3.0-30	1842/f	4.89/f	*900/f ²	6
30-300	61.4	0.163	1.0	6
300-1,500			f/300	6
1,500-100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
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
300-1,500			f/1500	30
1,500-100,000			1.0	30

f = frequency in MHz * = Plane-wave equivalent power density

MPE Calculation Method

Friis transmission formula: $P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot R^2)$

Where

P_d = Power density in mW/cm²

P_{out} = output power to antenna in mW

G = Numeric gain of the antenna relative to isotropic antenna

π = 3.1415926

R = distance between observation point and center of the radiator in cm(20cm)

P_d the limit of MPE, 1mW/cm². If we know the maximum gain of the antenna and total power input to the antenna, through the calculation, we will know the distance where the MPE limit is reached.

Measurement Result

BLE:

Operation Frequency: 2402-2480MHz,

Power density limited: 1mW/ cm²

Antenna Type: FPC Antenna;

Antenna gain: 3.61dBi

R=20cm

$mW=10^{(dBm/10)}$

antenna gain Numeric= $10^{(dBi/10)}=10^{(3.61/10)}=2.30$

BLE:

Chann el Freq. (MHz)	modulatio n	conducte d power	Tune- up power (dBm)	Max		Antenna		Evaluation result	Power density Limits
		(dBm)		tune-up power		Gain		(mW/cm2)	(mW/cm 2)
				(dBm)	(mW)	(dBi)	Num eric		
2402	GFSK-1M	6.41	7±1	8	6.310	3.61	2.30	0.0029	1
2440		6.56	7±1	8	6.310	3.61	2.30	0.0029	1
2480		6.74	7±1	8	6.310	3.61	2.30	0.0029	1
2402	GFSK-2M	6.35	7±1	8	6.310	3.61	2.30	0.0029	1
2440		6.47	7±1	8	6.310	3.61	2.30	0.0029	1
2480		6.61	7±1	8	6.310	3.61	2.30	0.0029	1

Conclusion:

For the max result: $0.0029 \leq 1.0$ SAR, No SAR is required.

----END OF REPORT----