

MPE TEST REPORT

Report No.: SHE23070040-01CE

Date: 2023-08-15

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Applicant : DewertOkin Technology Group Co., Ltd.
Address of Applicant : Room 247, Floor 6, Jiaying Photovoltaic Science and Innovation Park, 1288 Kanghe Road, Xiuzhou District, Jiaying City, Zhejiang Province 314016 China

Product Name : Sleep Control Box
Brand Name : N/A
Model Name : FP2601
Sample Acquisition Method : Sent by Client

Sample No. : E23070040-01#02

FCC ID : 2AVJ8-FP2601

Standard : FCC Part 2.1091

Date of Receipt : 2023-07-11
Date of Test : 2023-07-11 ~ 2023-08-15
Date of Issue : 2023-08-15

Remark:

This report details the results of the testing carried out on one sample, the results contained in this report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

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Approved by: Echo Mu
(Authorized signatory: Echo Mu)

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1 General Information

1.1 Testing Laboratory

Company Name	ICAS Testing Technology Service (Shanghai) Co., Ltd.
Address	No.1298, Pingan Road, Minhang District, Shanghai, China
Telephone	0086 21-51682999
Fax	0086 21-54711112
Homepage	www.icasiso.com

1.2 Environmental conditions

Temperature (°C)	18-25
Humidity (%RH)	40-65
Barometric Pressure (mbar)	960-1060
Ambient noise & Reflection (W/kg)	< 0.012

1.3 Details of Application

Applicant Company Name	DewertOkin Technology Group Co., Ltd.
Address	Room 247, Floor 6, Jiaying Photovoltaic Science and Innovation Park, 1288 Kanghe Road, Xiuzhou District, Jiaying City, Zhejiang Province 314016 China
Contact Person	Mia Ye
Telephone	+86-573-82281072
Email	Mia.Ye@refinedchina.com
Manufacturer Company Name	DewertOkin Technology Group Co., Ltd.
Address	Room 247, Floor 6, Jiaying Photovoltaic Science and Innovation Park, 1288 Kanghe Road, Xiuzhou District, Jiaying City, Zhejiang Province 314016 China
Factory Company Name	DewertOkin Technology Group Co., Ltd.
Address	Room 247, Floor 6, Jiaying Photovoltaic Science and Innovation Park, 1288 Kanghe Road, Xiuzhou District, Jiaying City, Zhejiang Province 314016 China

1.4 Details of EUT

Product Name	Sleep Control Box
Brand Name	N/A
Test Model Name	FP2601
FCC ID	2AVJ8-FP2601
Mode of Operation	Bluetooth BLE Version 5.1
Operation Frequency Range	2402MHz ~ 2480MHz
Modulation Type	GFSK

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Maximum Field Strength	88.36dBuV/m(Peak)@3m
Antenna Type	PCB Antenna
Antenna Gain	1.225dBi
Hardware version	R5.109.00.1070B
Software version	V1.0

2 Maximum Permissible Exposure (MPE)

2.1 Limits

According to FCC Part 1.1307, systems operating under the provisions of this section shall be operated in a manner the ensures that the public is not exposed to radio frequency energy level in excess of the commission's guidelines.

TABLE 1—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

2.2 Assessment methods

Calculation Formula from FCC OET 65:

$$S = \frac{P * G}{4 * \pi * R^2}$$

Where:

S = Power Density (mW/cm²)

P = Input Power of the Antenna (mW)

G = Antenna Gain Relative to an Isotropic Antenna

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R = Distance from the Antenna to the Point of Investigation (cm)

2.3 Test Result

Operation Mode	Frequency Range (MHz)	Maximum Field Strength	Antenna Gain (dBi)	Max EIRP (mW)	Power Density at R = 20 cm (mW/cm ²)	Limit (mW/cm ²)
BLE	2400~2483.5	88.36dBuV/m(Peak)@3m	1.225	0.2070	0.0000412	1.0

Note(s):

1. For 300 – 1,500MHz: Power Density limit is $f/1500$ mW/cm²
2. For 1,500 – 100,000MHz: Power Density limit is 1.0 mW/cm²
3. $E[\text{dB}\mu\text{V}/\text{m}] = \text{EIRP}[\text{dBm}] + 95.2$, for $d = 3$ m.

2.4 Conclusion

The Power Density at the position which is 20 cm far from the EUT is smaller than the General Population/Uncontrolled Exposure limit.

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3 Appendixes

3.1 Sample Photograph



Front of the sample



Back of the sample

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Left of the sample



Right of the sample

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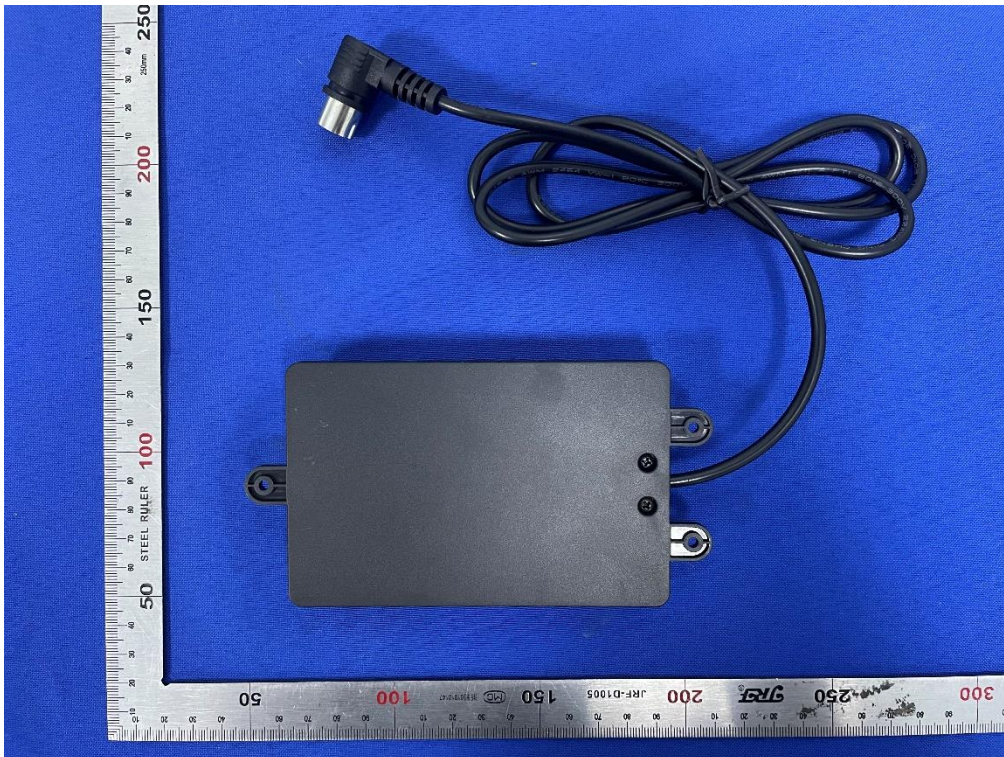
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Top of the sample



Bottom of the sample

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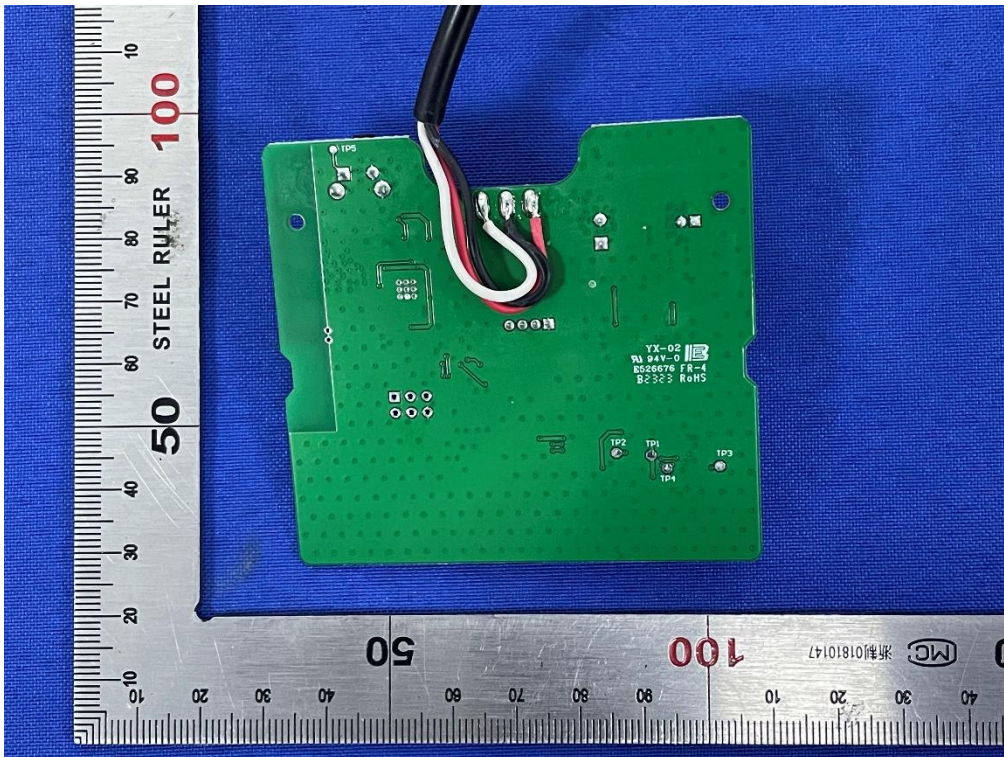
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Open of the sample



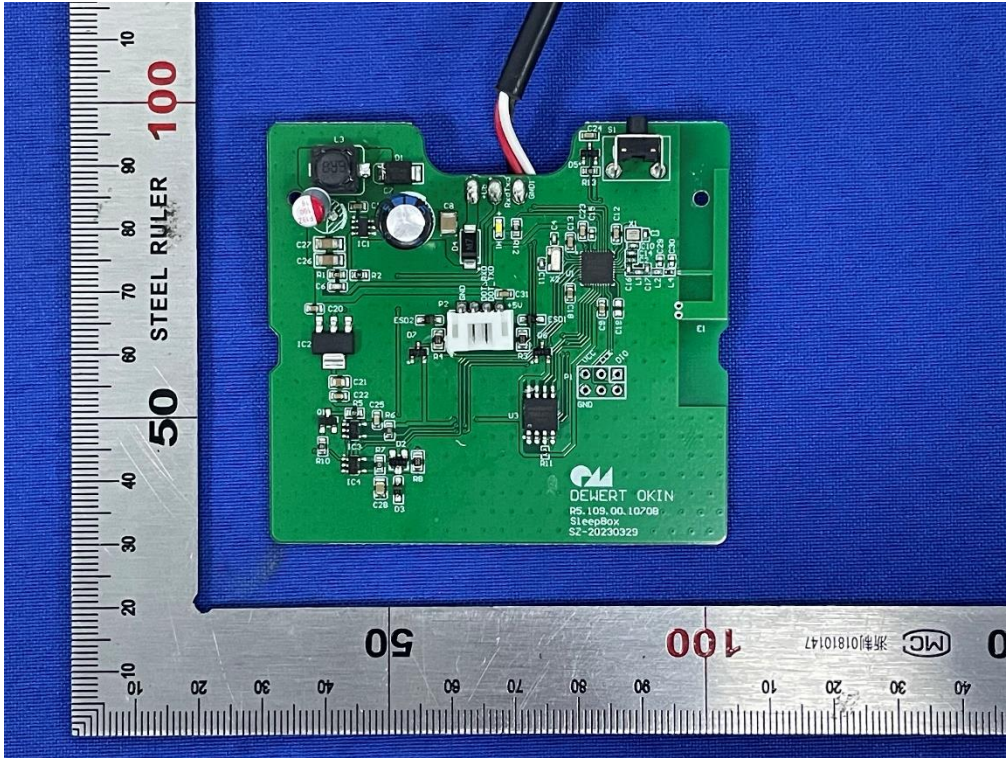
Internal-1 of the sample

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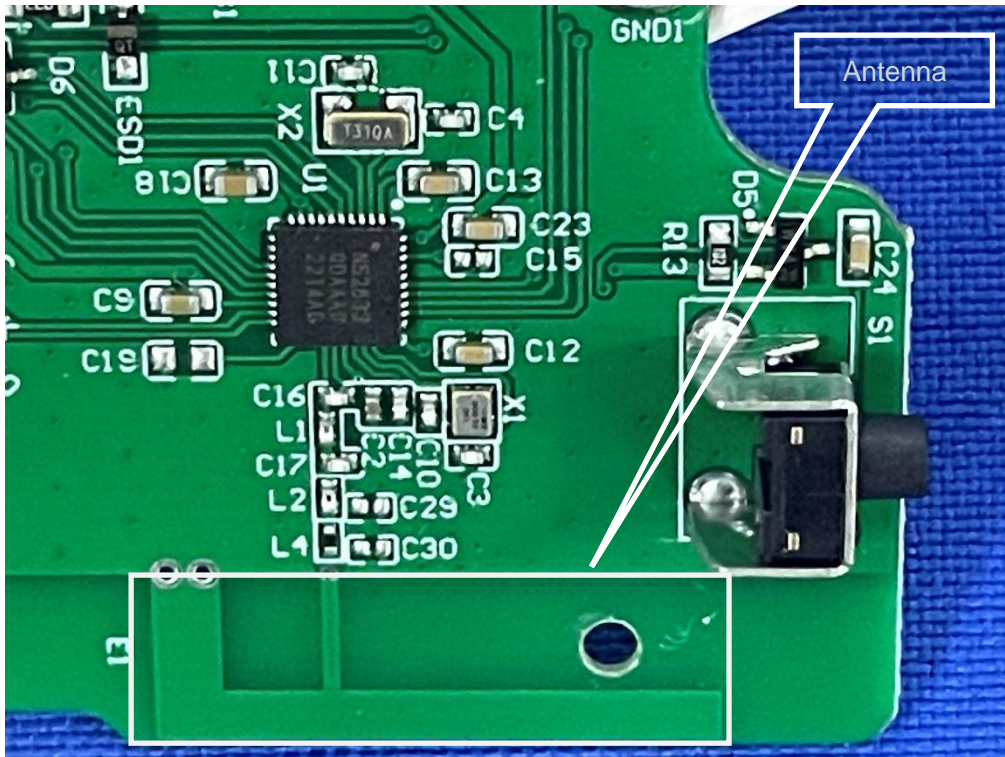
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Internal-2 of the sample



Antenna position of the sample

End of the report