

MPE TEST REPORT

Report No.: SHE24090032-02FE

Date: 2025-04-22

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Applicant : PETKIT Network Technology (Shanghai) Co., Ltd.
Address of Applicant : Room 4139, Building 2, 588 Zixing Road, Minhang District, Shanghai

Product Name : PETKIT PUROBOT ULTRA WITH CAMERA
SELF-CLEANING CAT LITTER BOX

Brand Name : PETKIT
Model Name : P9903
Sample Acquisition Method : Sent by Client

Sample No. : E24060074-01#01
E24060074-01#08

FCC ID : 2A72N-P9903

Standard : FCC Part 2.1091

Date of Receipt : 2024-07-04
Date of Test : 2024-08-14~ 2024-08-30
Date of Issue : 2025-04-22

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.

Prepared by:



(Erik Yang)

Reviewed by:



(Jennifer Zhou)

Approved by:



(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 Details of Application

Applicant Company Name	PETKIT Network Technology (Shanghai) Co., Ltd.
Address	Room 4139, Building 2, 588 Zixing Road, Minhang District, Shanghai
Contact Person	TingHe
Telephone	13916991059
Email	ting.he@petkit.com
Manufacturer Company Name	Dongguan Zhihang Electronic Technology Co., LTD.
Address	Room 701, Building 15, No.1, Pushi Road I, Qiaotou Town, Dongguan City,Guangdong Province, China.
Factory Company Name	Dongguan Zhihang Electronic Technology Co., LTD.
Address	Room 701, Building 15, No.1, Pushi Road I, Qiaotou Town, Dongguan City,Guangdong Province, China.

1.3 Details of EUT

Product Name	PETKIT PUROBOT ULTRA WITH CAMERA SELF-CLEANING CAT LITTER BOX	
Brand Name	PETKIT	
Test Model Name	P9903	
FCC ID	2A72N-P9903	
Mode of Operation	WIFI 802.11b/g/n(HT20) for 2.4GHz WIFI 802.11a/n(HT20) for 5GHz Bluetooth LE NFC (13.56MHz) Radar	
Frequency Range	Mode	Frequency Range (MHz)
	802.11b/g/n(HT20)	2412~2462
	802.11a/n(HT20)	5180~5240
		5745~5825
	Bluetooth LE	2402~2480
	NFC	13.56

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	Radar	24075~24175
Modulation Type	DSSS/OFDM for WIFI 2.4GHz and OFDM for WIFI5GHz GFSK for Bluetooth LE FMCW for Radar ASK for NFC	
Antenna Type	WIFI: Internal Antenna BLE: PCB Antenna NFC: PCB Antenna Radar: Fixed Internal Antenna	
Antenna Gain	WIFI 2.4G: 3.70dBi WIFI 5G: 3.70dBi Bluetooth LE: -5.45dBi Radar: 3.3dBi	
Hardware version	V1.0	
Software version	2.49	

- Note:
- The above information was declared by the manufacture.
 - For more details, please refer to the User’s manual of the EUT.

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

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2.3 Test Result

Operation Mode	Frequency Range (MHz)	Max Conducted Power (dBm)	Antenna Gain (dBi)	Max EIRP (mW)	Power Density at R = 20 cm (mW/cm ²)	Limit (mW/cm ²)
WIFI 2.4G Band	2412~2462	15.08	3.70	75.51	0.015021	1.0
WIFI 5G Band	5180~5240	15.37	3.70	80.72	0.016058	1.0
	5745~5825	15.20	3.70	77.62	0.015442	1.0
BLE	2400~2483.5	-3.51	-5.45	0.13	0.000025	1.0

NFC Max. Field Strength of Fundamental is 47.06dBuV/m@3m

24G Radar Max. Field Strength of Fundamental is 92.24dBuV/m@3m

Operation Mode	Frequency Range (MHz)	Field Strength of Fundamental (dBuV/m@3m)	EIRP (dBm)	EIRP (mW)	Power Density at R = 20 cm (mW/cm ²)	Limit (mW/cm ²)
NFC	13.56	47.06	-48.14	0.0000153	0.000000003	0.98
Radar	24075~24175	92.24	-2.96	0.5058247	0.0001006	1.0

Note: E[dBμV/m] = EIRP[dBm] + 95.2, for d = 3 m.

2.4 Results for transmit simultaneously

Configurations	Maximum MPE Value			Limit
	WIFI 5GHz	BLE	Transmit Simultaneously	
WIFI 5GHz + BLE	0.016058	0.00003	0.016083	1.0

Configurations	Maximum MPE Value					Limit
	WIFI 5GHz	BLE	NFC	Radar	Transmit Simultaneously	
WIFI 5GHz + BLE+NFC+Radar	0.016058	0.00003	0.000000003	0.0001006	0.016188603	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. MPE Ratios are Calculated as [(MPE1/Limit)+ (MPE2/Limit) +]≤1

2.5 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



All of the sample



Front of the sample

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Rear of the sample



Left of the sample

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Right of the sample



Top of the sample

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Bottom of the sample



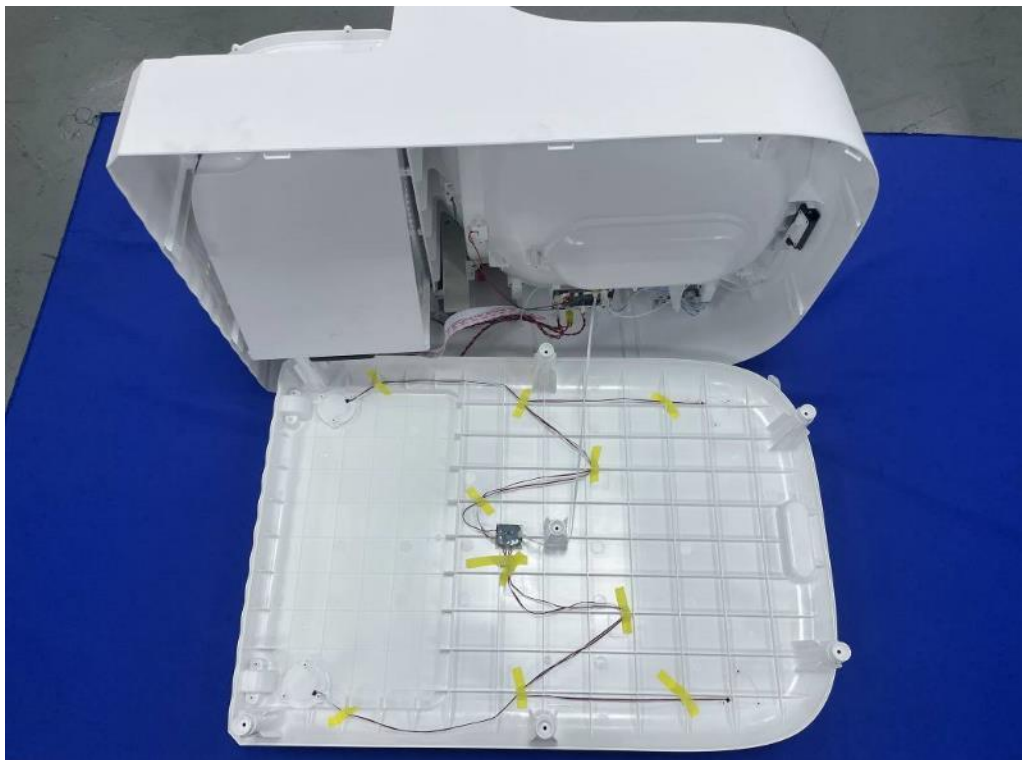
Open-1 of the sample

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Open-2 of the sample



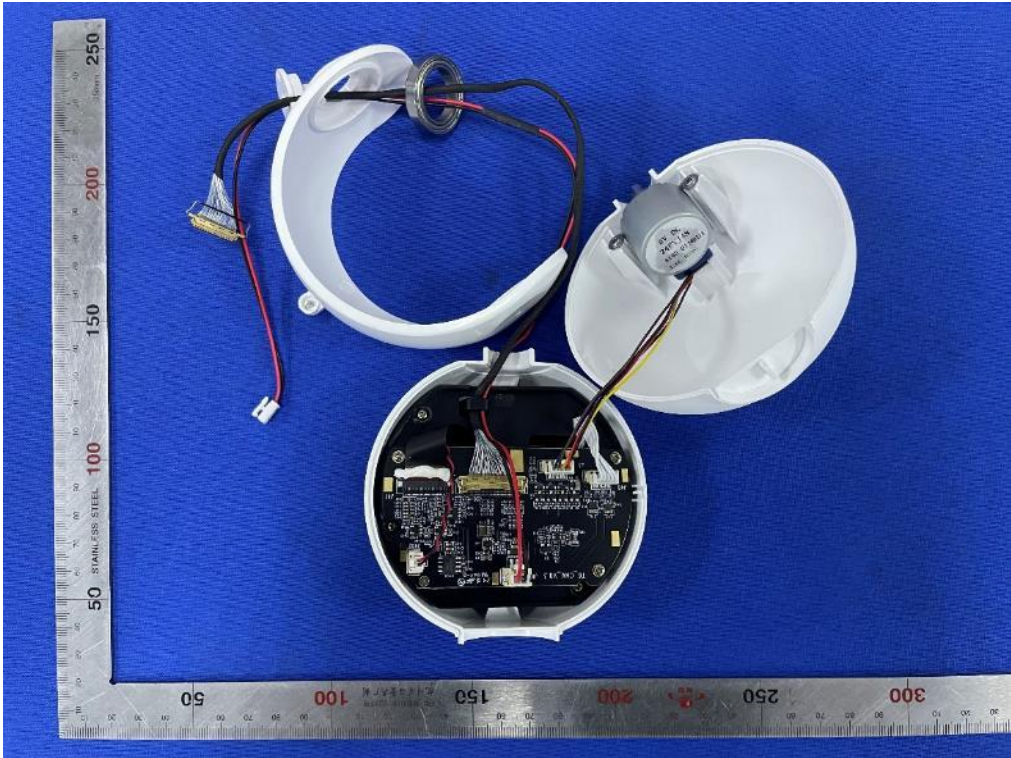
Open-3 of the sample

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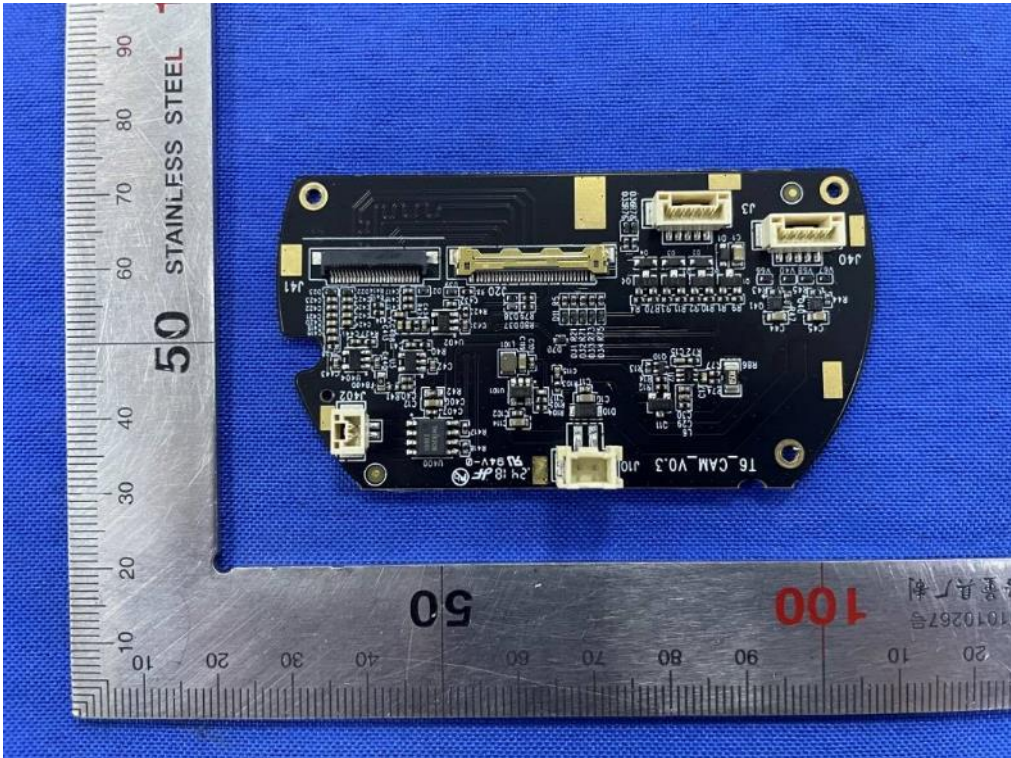
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Open-4 of the sample



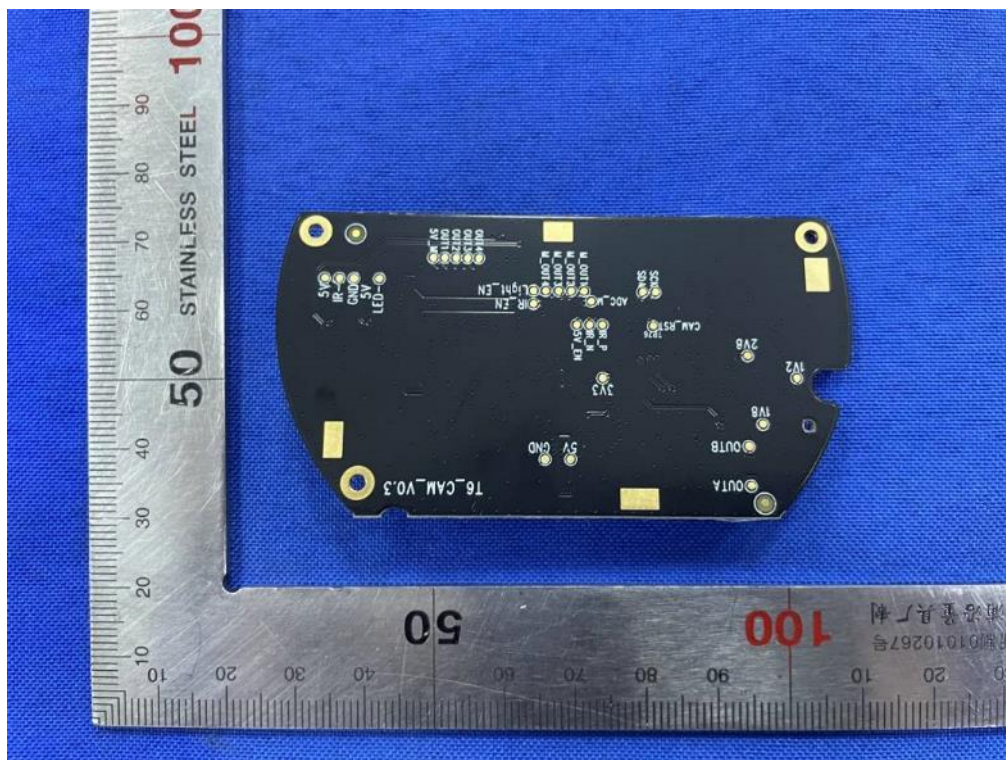
Internal-1 of the sample

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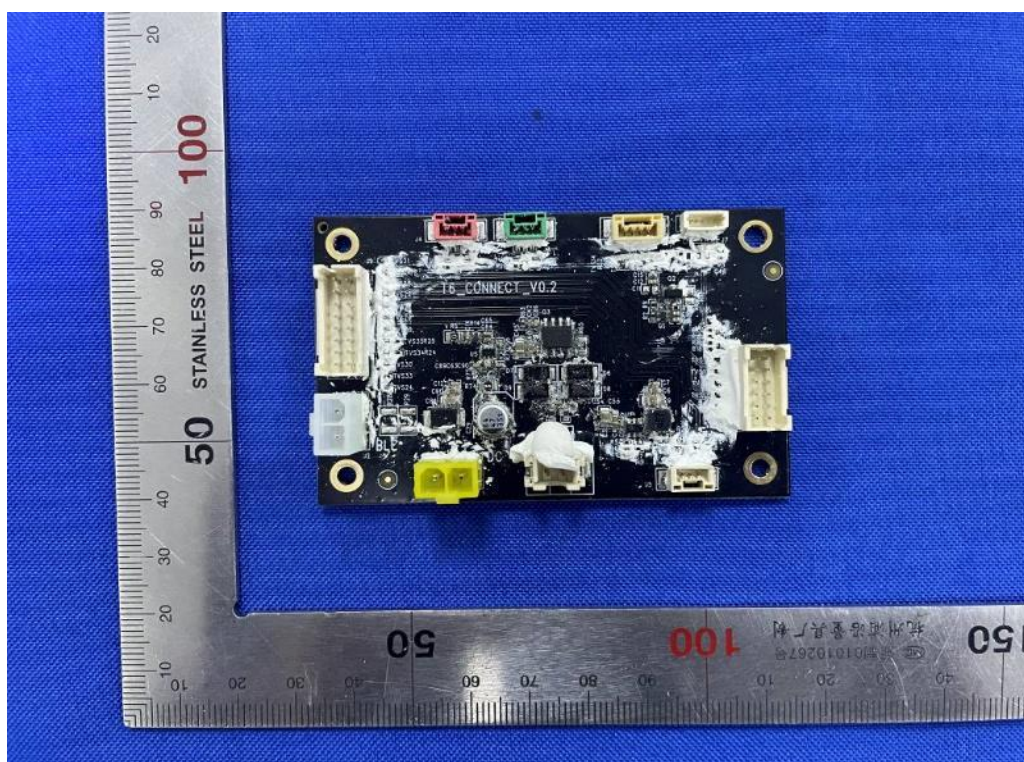
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Internal-2 of the sample



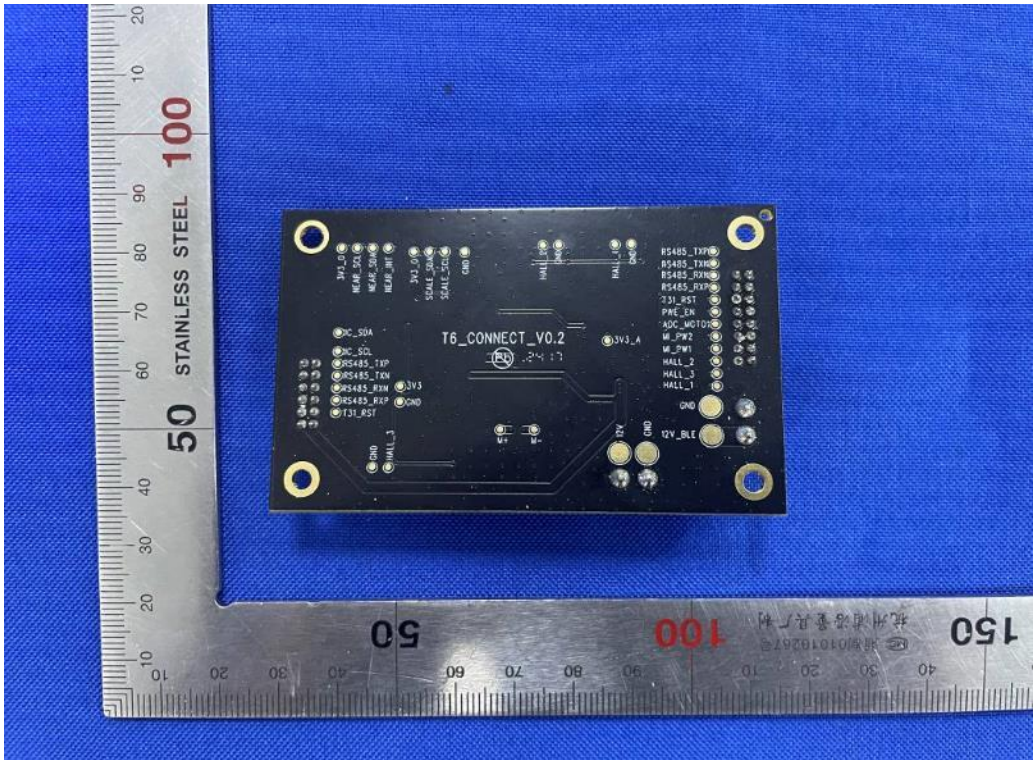
Internal-3 of the sample

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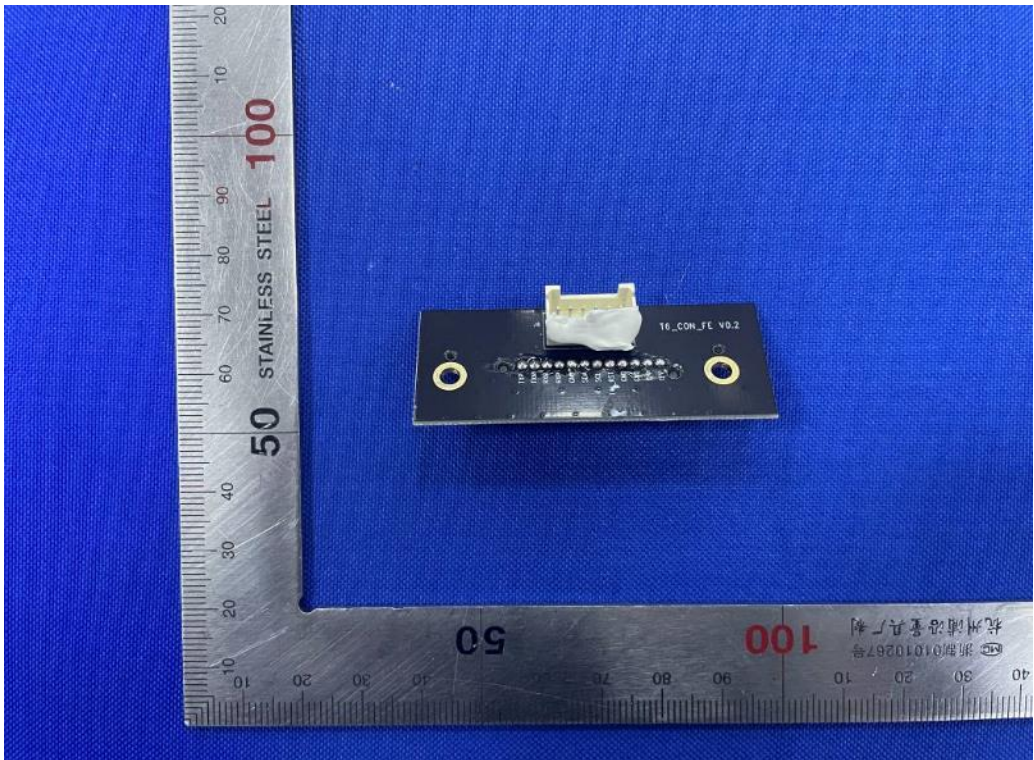
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Internal-4 of the sample



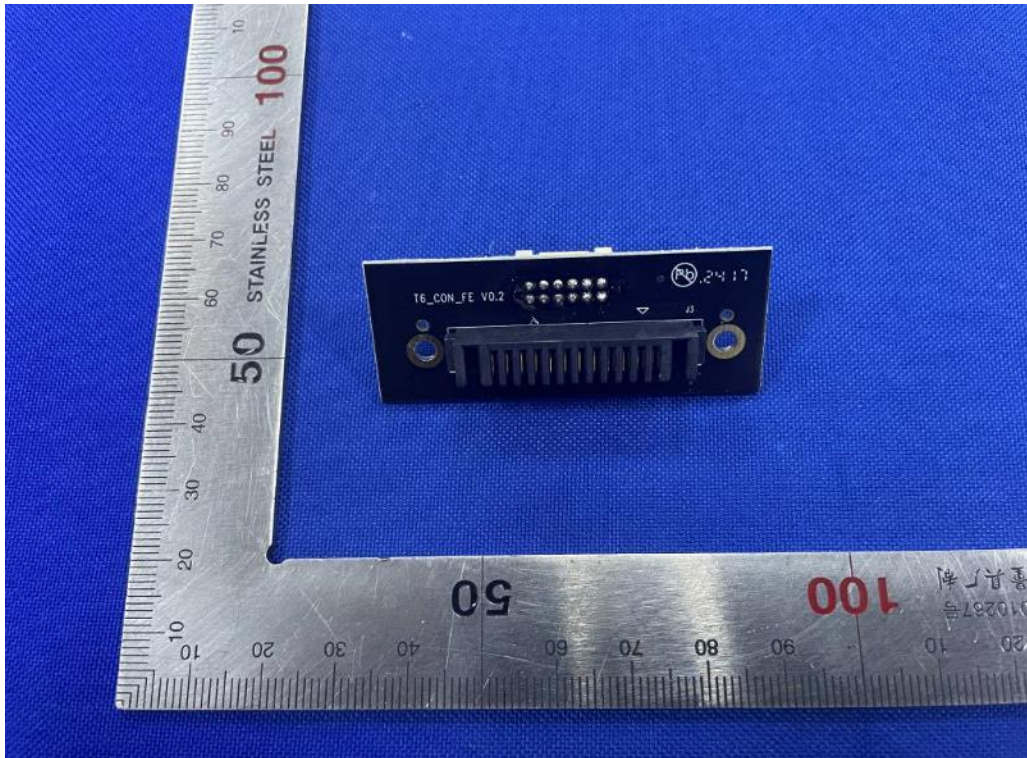
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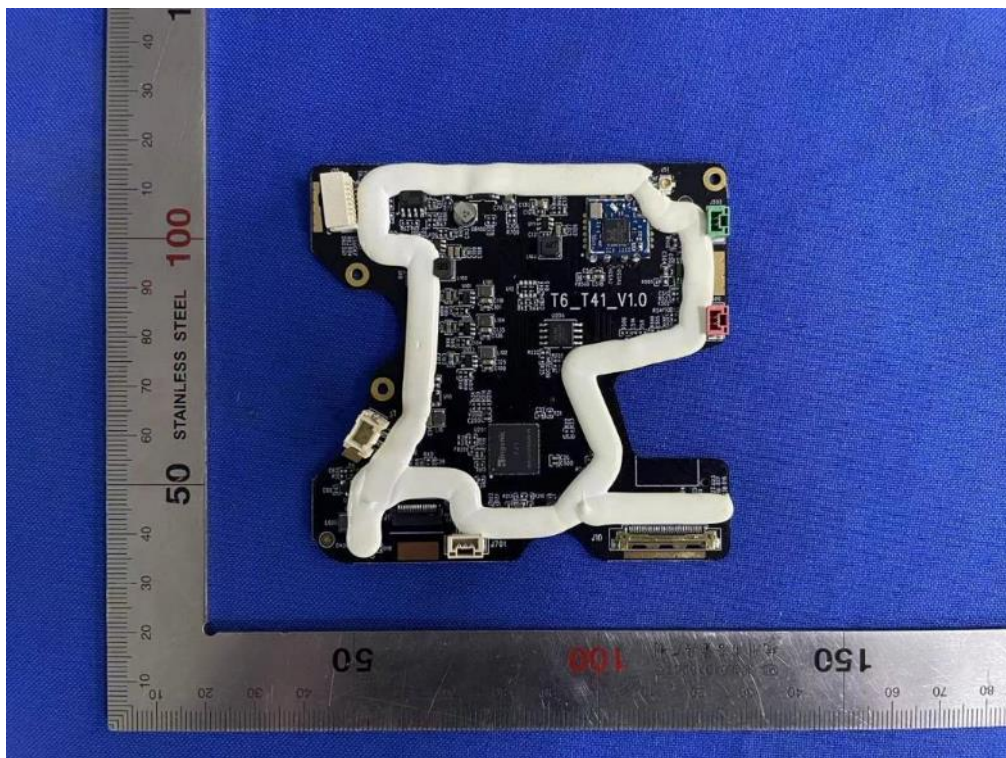
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Internal-6 of the sample



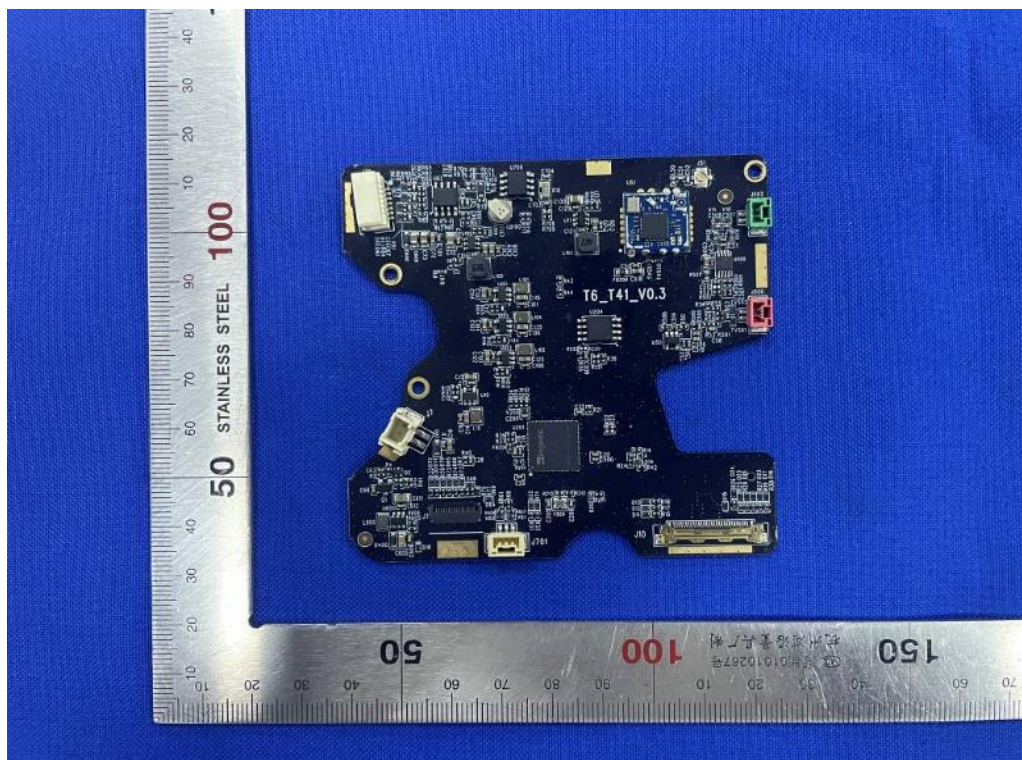
Internal-7 of the sample

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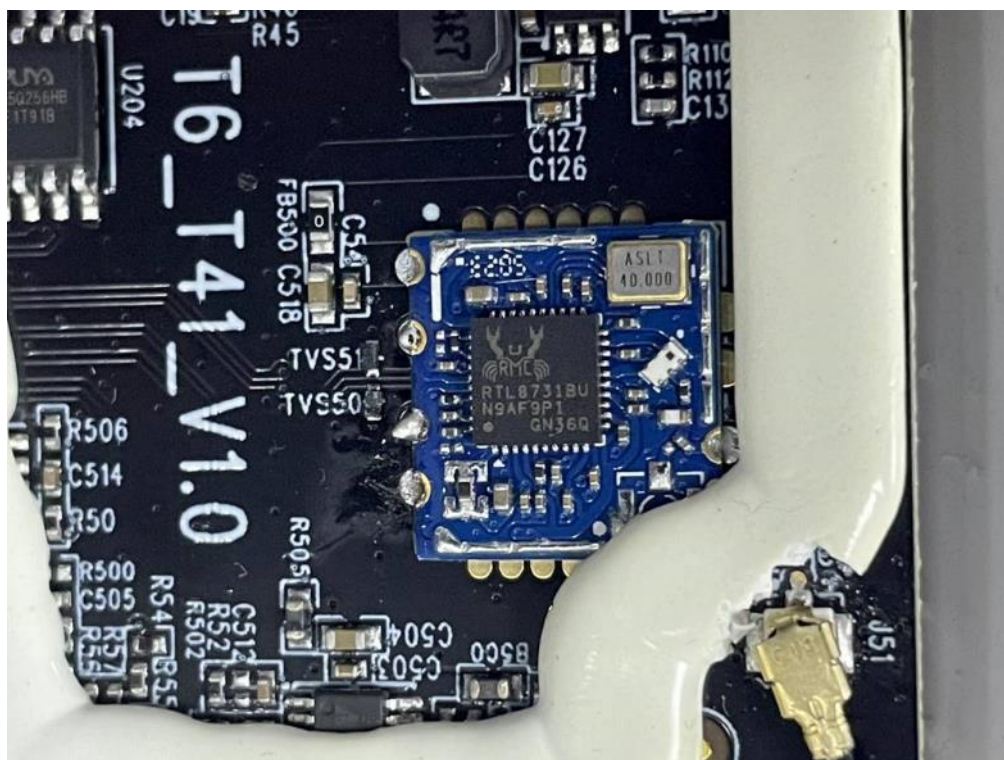
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Internal-8 of the sample



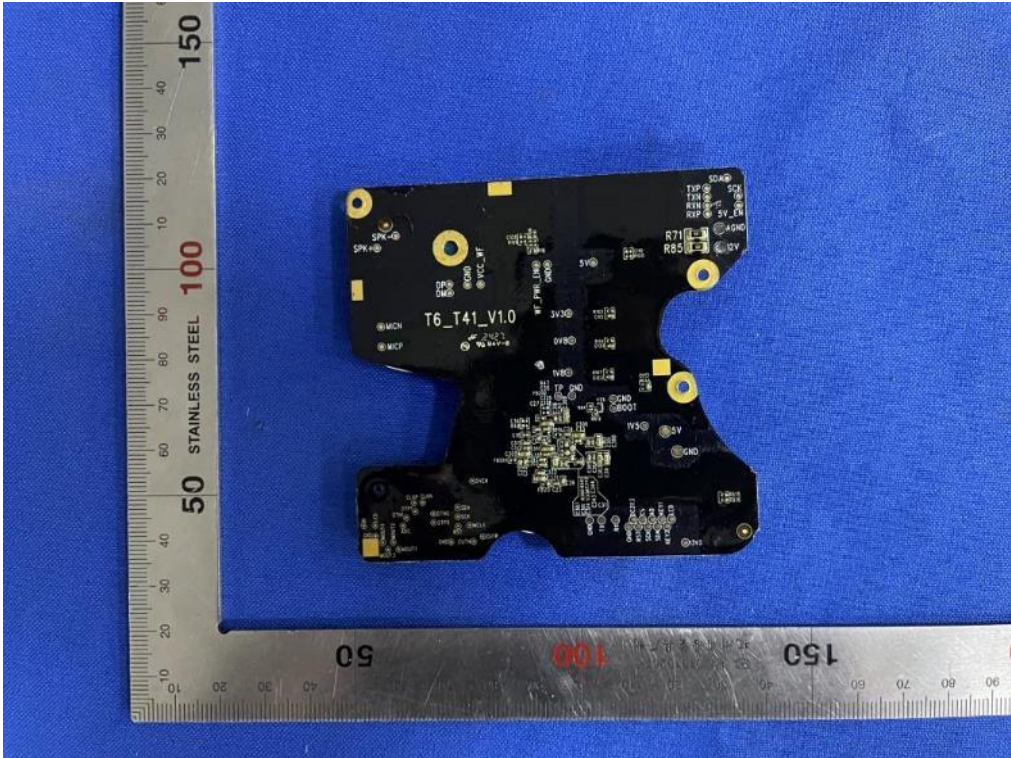
Internal-9 of the sample

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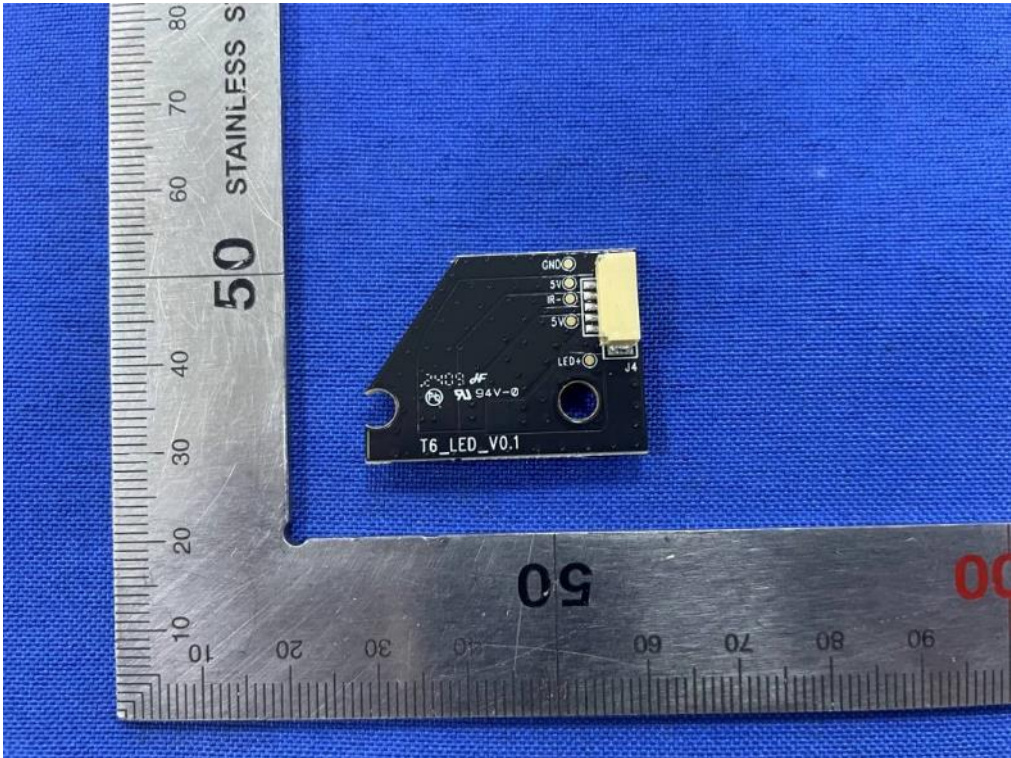
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Internal-10 of the sample



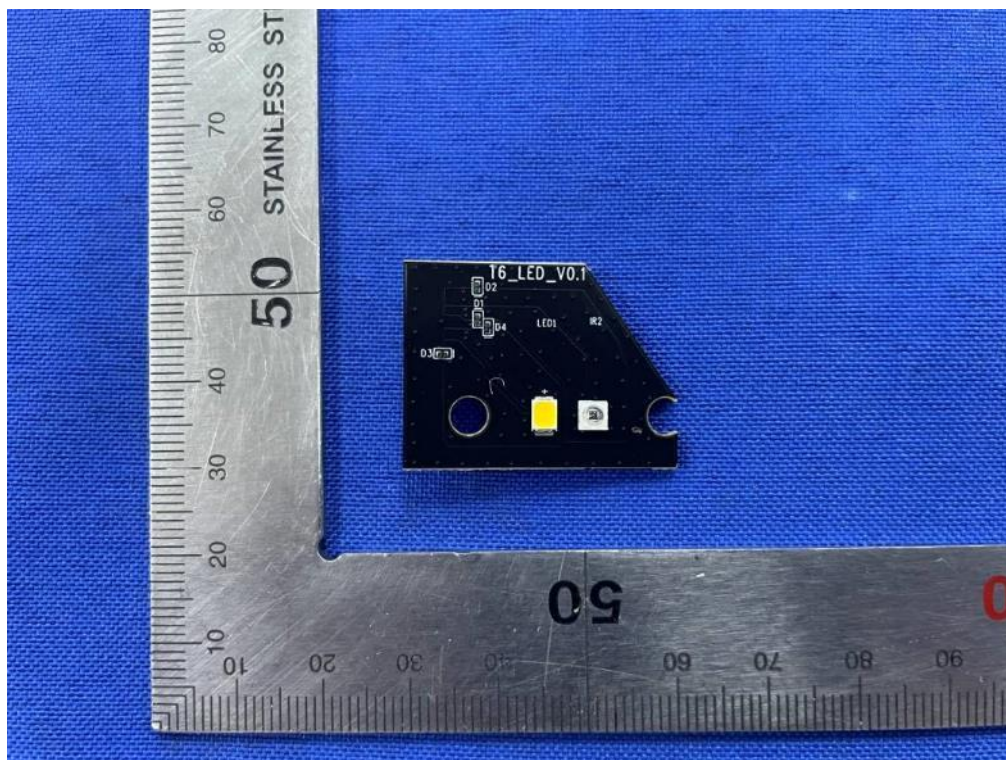
Internal-11 of the sample

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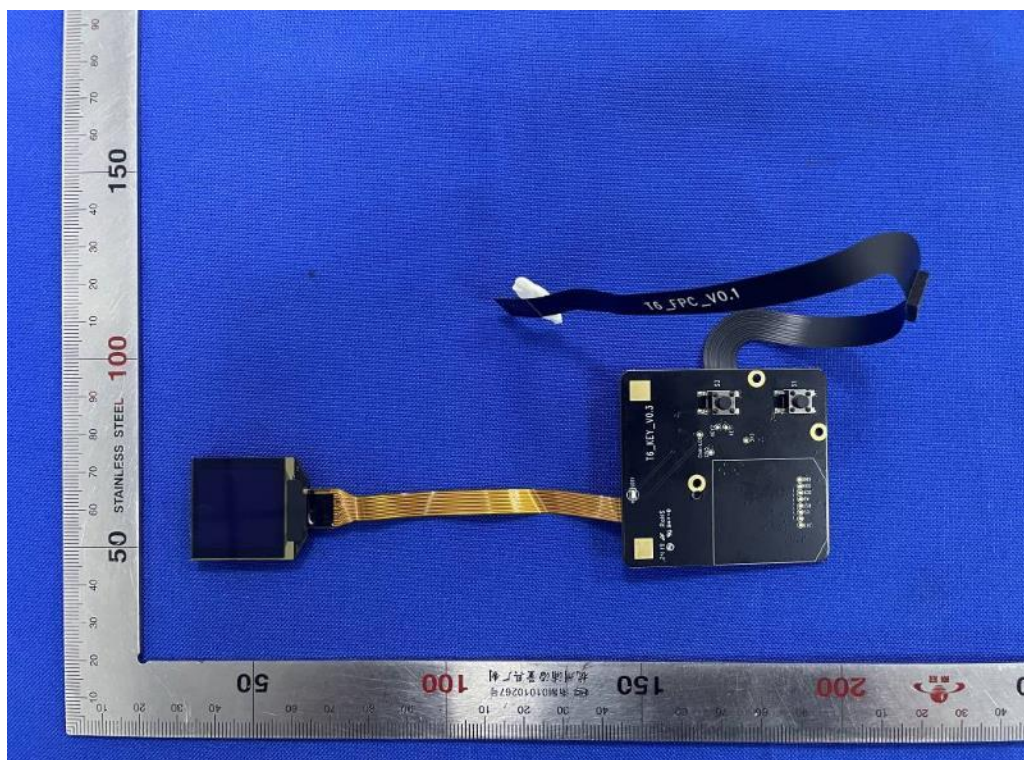
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Internal-12 of the sample



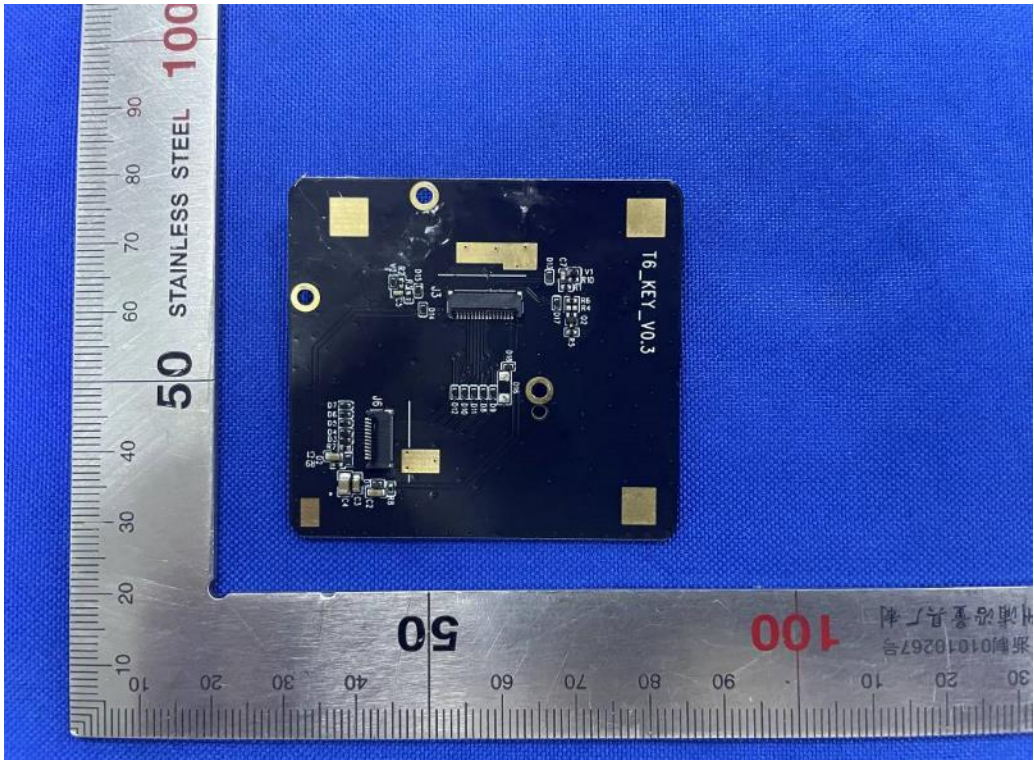
Internal-13 of the sample

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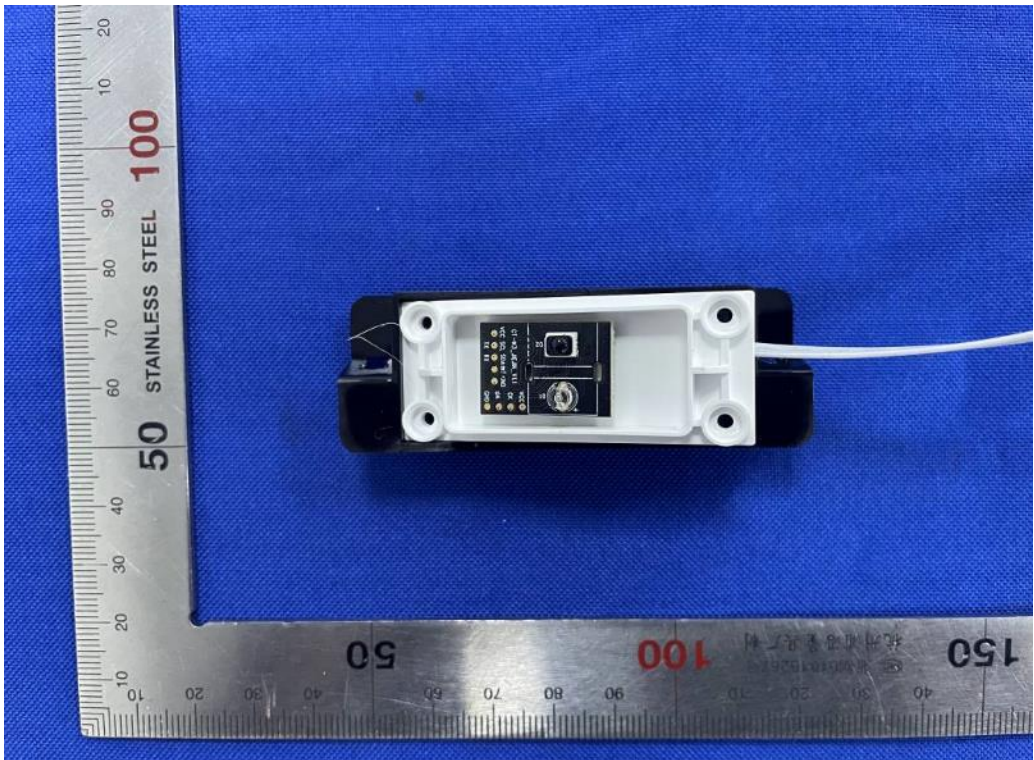
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Internal-14 of the sample



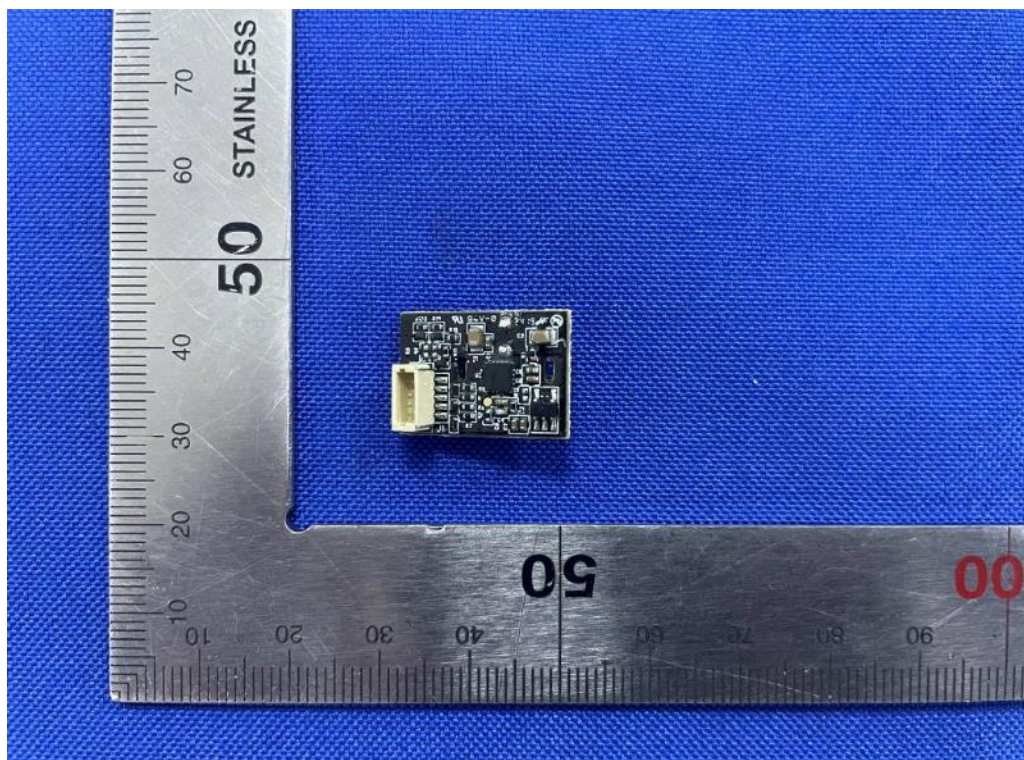
Internal-15 of the sample

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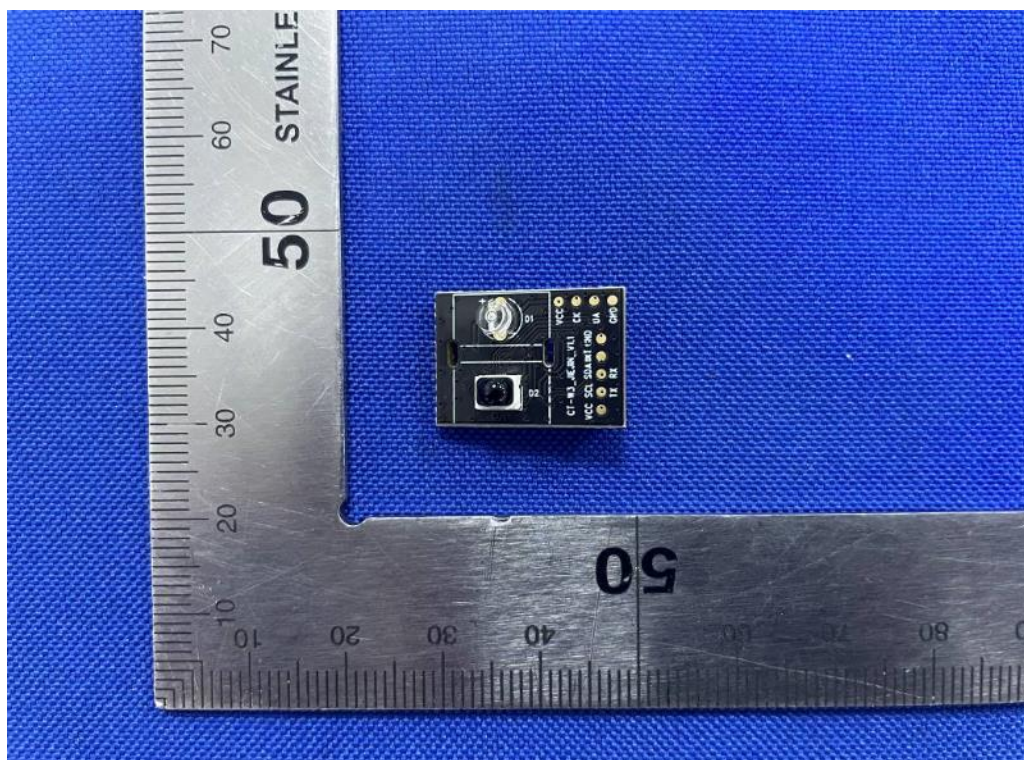
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Internal-16 of the sample



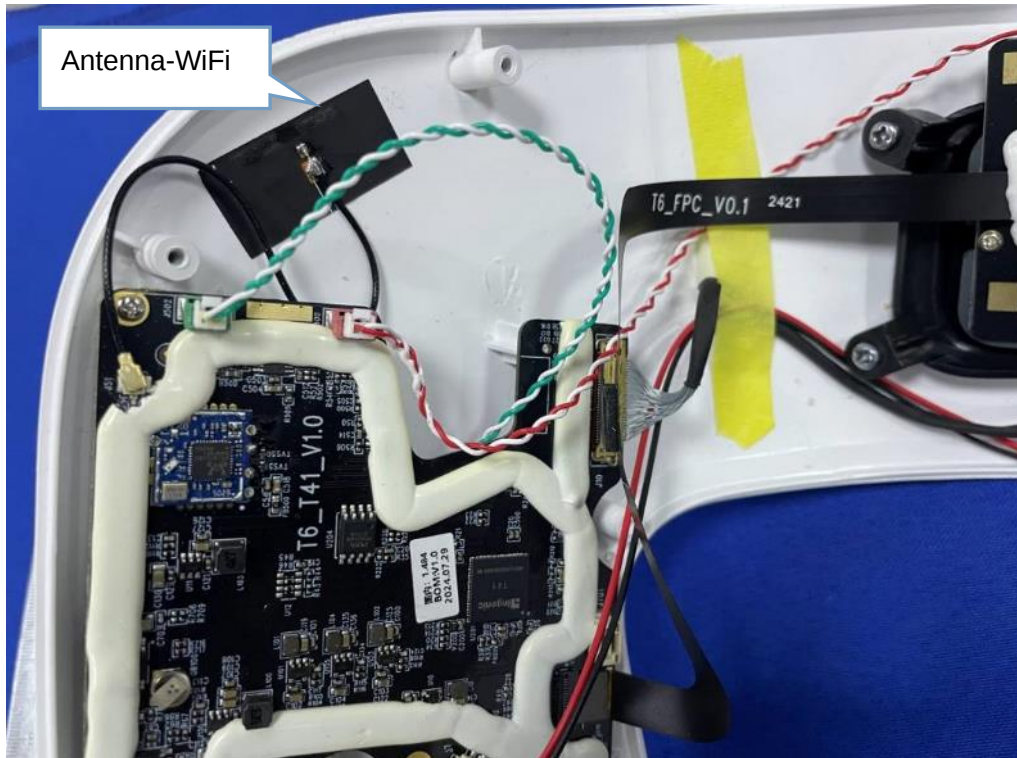
Internal-17 of the sample

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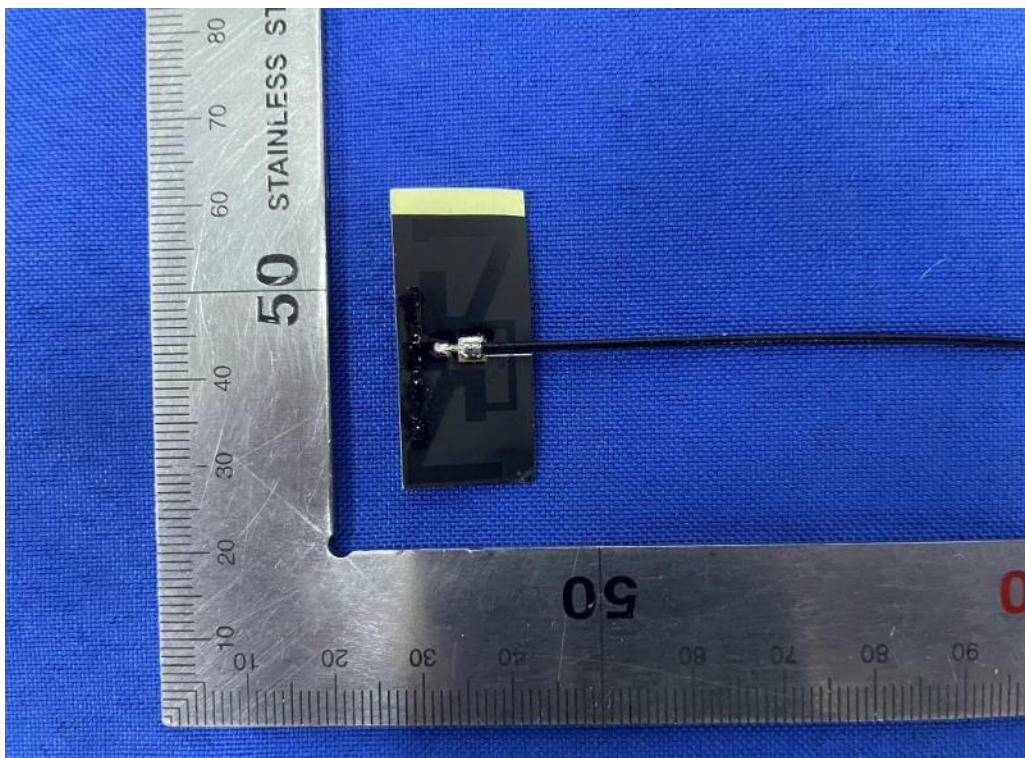
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Antenna position--WiFi



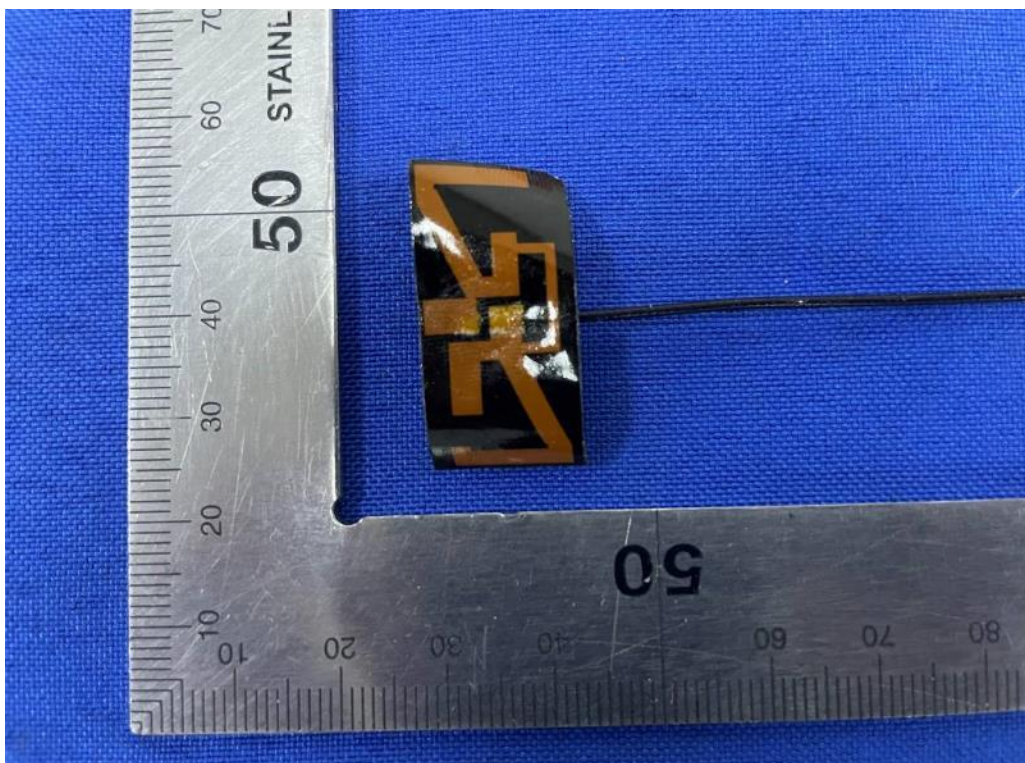
WiFi Antenna photo-1

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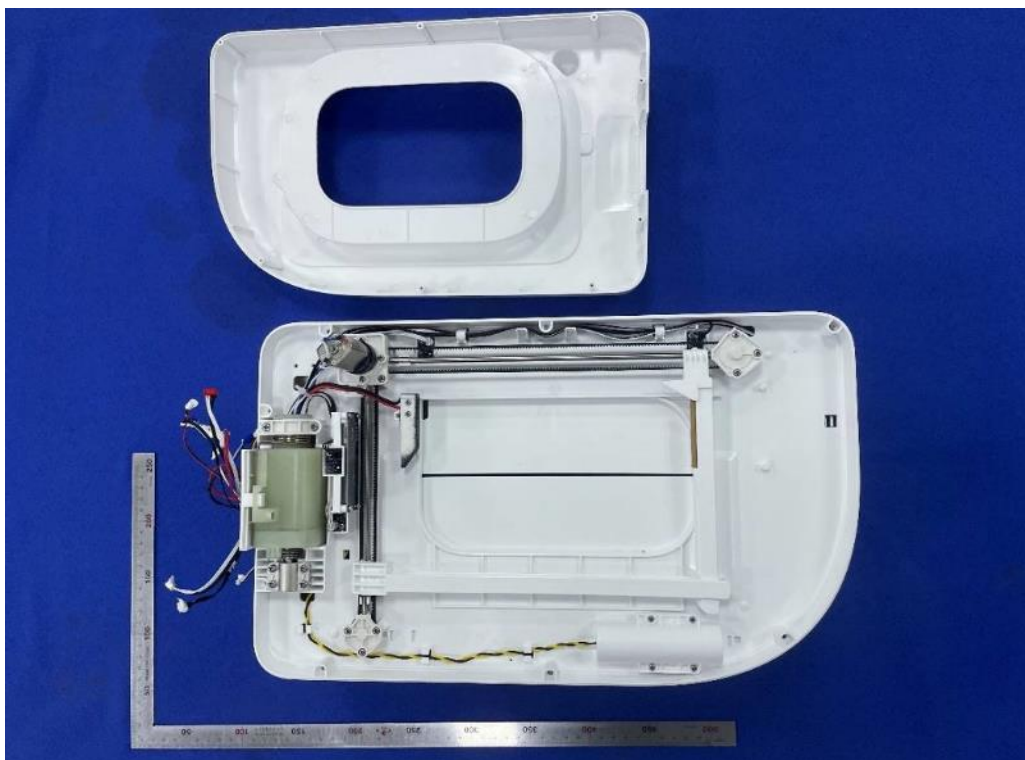
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WiFi Antenna photo-2



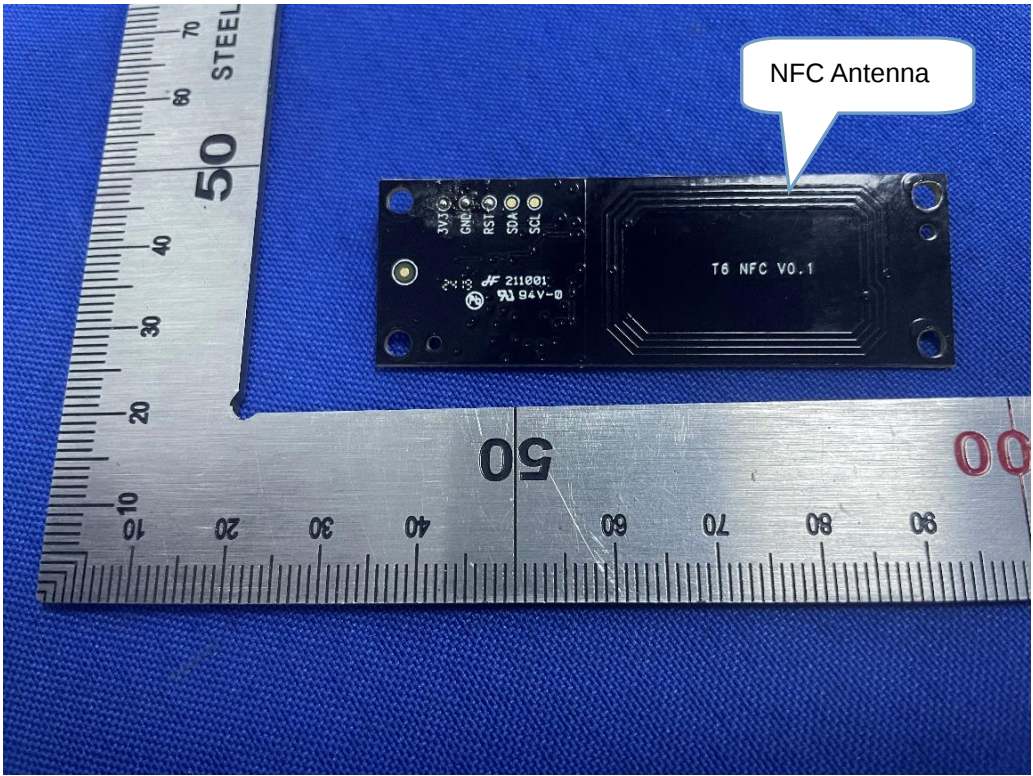
NFC-Open Photo

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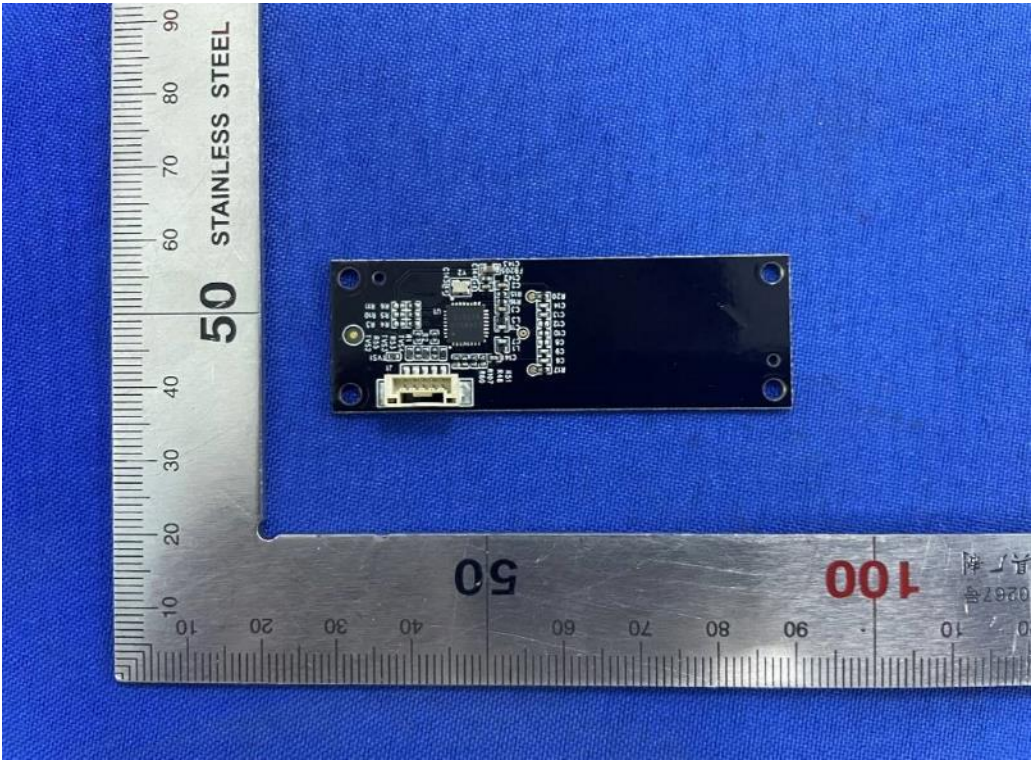
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NFC—PCB Board (Back)



NFC—PCB Board (Front)

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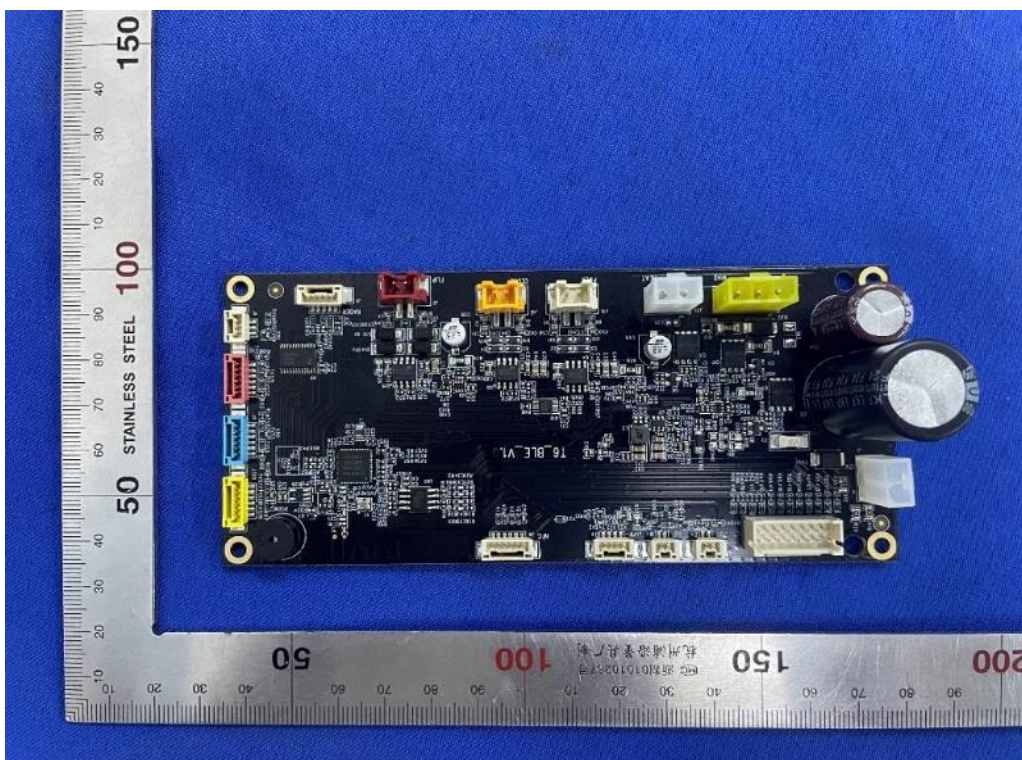
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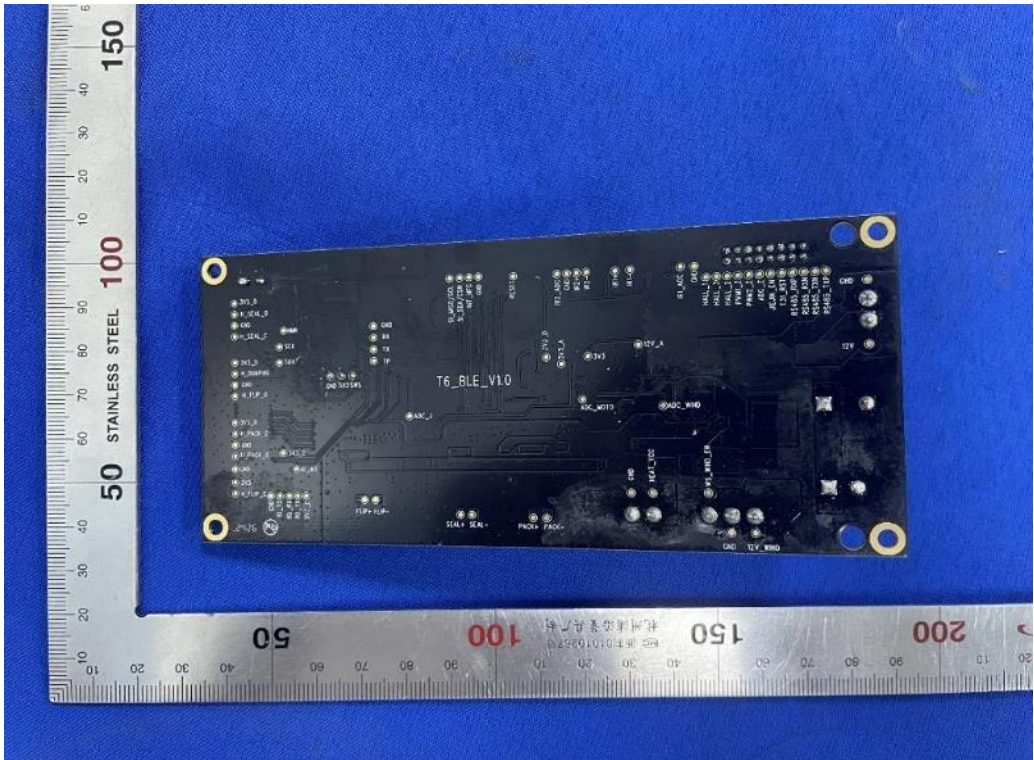


Bluetooth LE-Open Photo

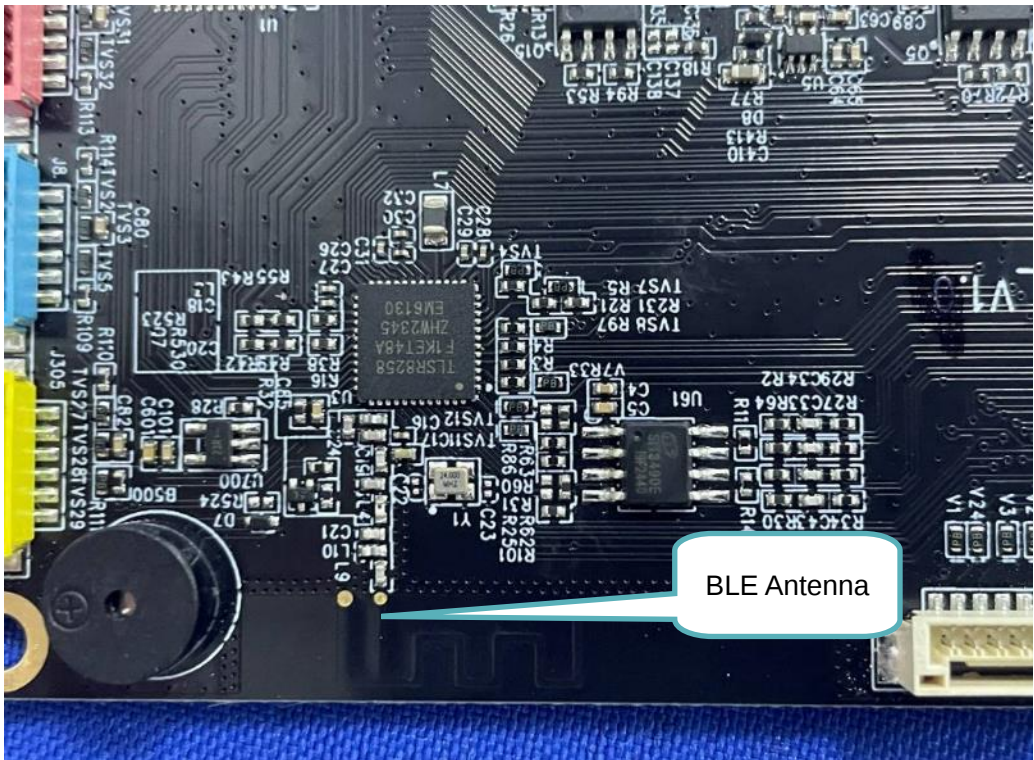


Bluetooth LE—PCB Board (Front)

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Bluetooth LE—PCB Board (Back)



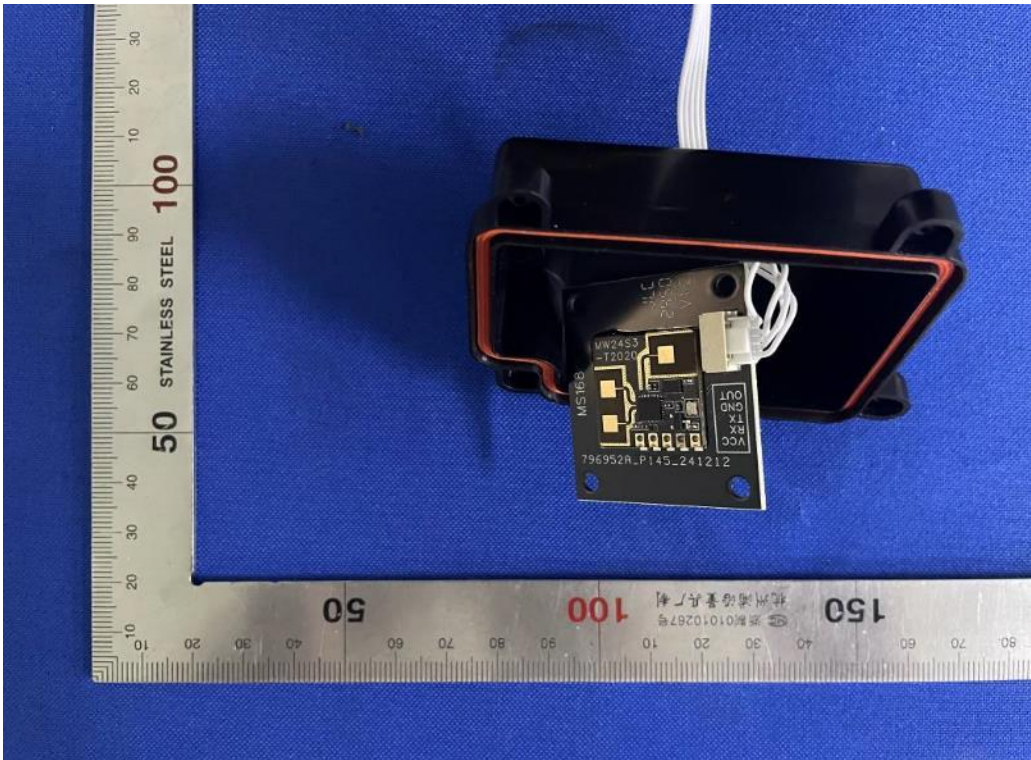
Bluetooth LE—Antenna Position

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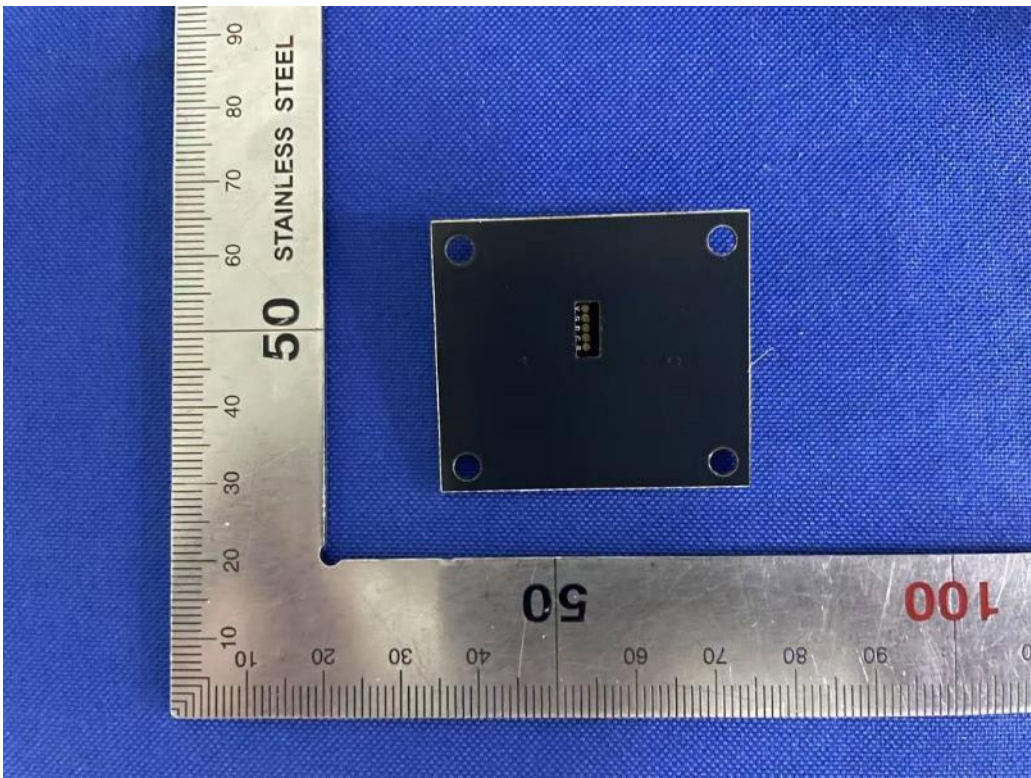
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Radar Photo-1



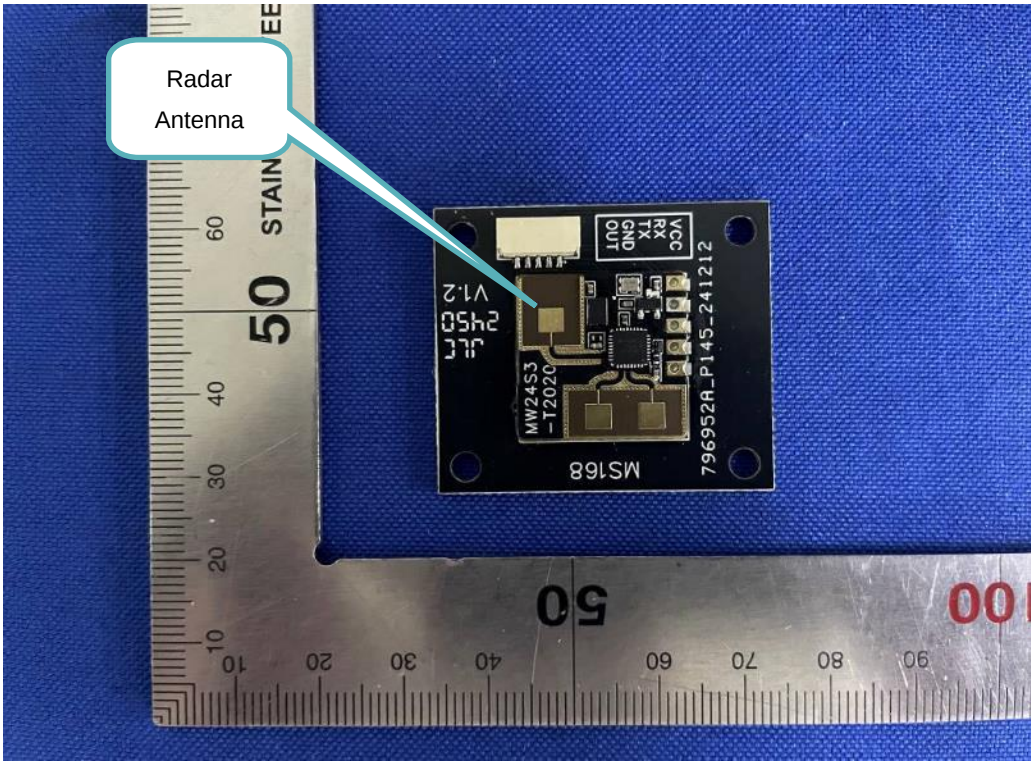
Radar Photo-2

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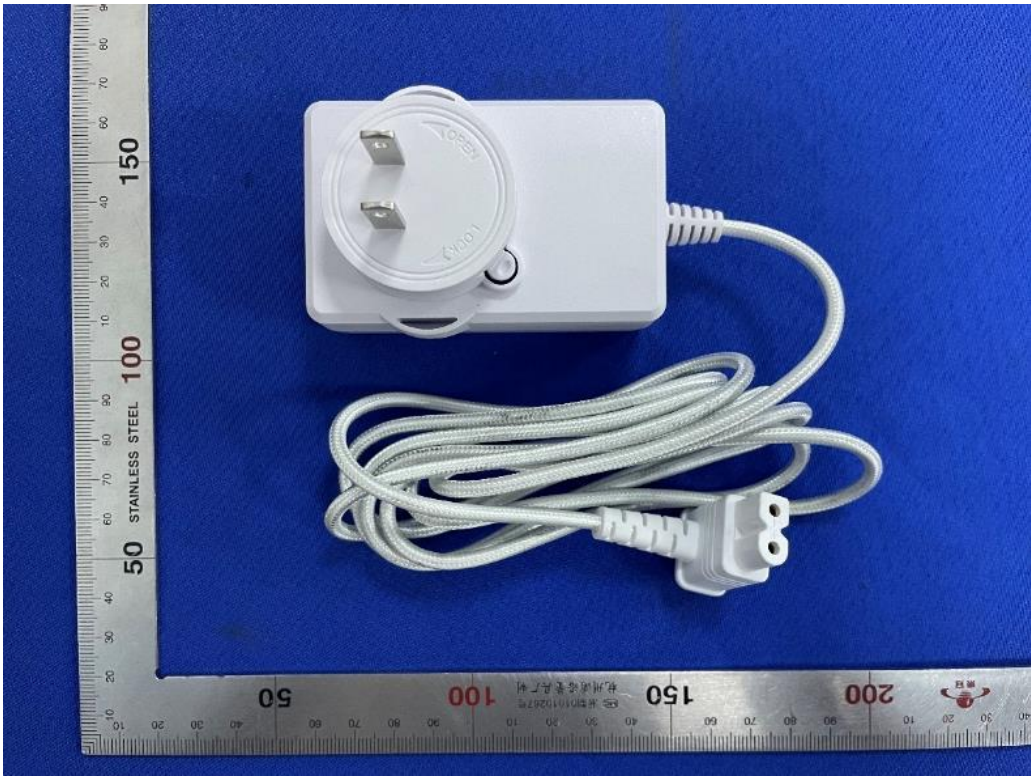
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Radar Photo-3



Adapter-1

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Adapter-2



Power Port

End of the report