MPE TEST REPORT

Applicant	:	PETKIT Network Technology (Shanghai) Co., Ltd.
Address of Applicant	:	Room 4139, Building 2, 588 Zixing Road, Minhang District, Shanghai
Product Name	:	PETKIT PUROBOT MAX PRO WITH CAMERA SELF-CLEANING CAT LITTER BOX
Brand Name	:	PETKIT
Model Name	:	P9904
Sample Acquisition Method	:	Sent by Client
Sample No.	:	E24080036-01#06 E24080036-01#13
FCC ID	:	2A72N-P9904
Standard	:	FCC Part 2.1091

Date of Receipt	:	2024-09-03
Date of Test	:	2024-09-04~ 2024-09-26
Date of Issue	:	2024-09-29

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 (Erik Yang) Reviewed by: Jennifer Zhou (Jennifer Zhou) 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	PETKIT Network Technology (Shanghai) Co., Ltd.
Address	Room 4139, Building 2, 588 Zixing Road, Minhang District, Shanghai
Contact Person	TingHe
Telephone	+86 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.

1.4 Details of EUT

Product Name	PETKIT PUROBOT MAX PRO WITH CAMERA SELF-CLEANING CAT LITTER BOX	
Brand Name	PETKIT	
Test Model Name	P9904	
FCC ID	2A72N-P9904	
Mode of Operation	WLAN 802.11b/g/n(HT20) for 2.4GHz WLAN 802.11a/n(HT20) for 5GHz Bluetooth LE Version 5.0	
Frequency Range	Band	Frequency (MHz)
	802.11b/g/n(HT20)	2400~2483.5

	802.11a/n(HT20))	5150~5250
		5725~5850
	Bluetooth LE	2400~2483.5
Modulation Type	DSSS/OFDM for WLAN 2.4GHz and OFDM for WLAN 5GHz GFSK for Bluetooth LE	
Antenna Type	Internal Antenna for Wi-Fi PCB Antenna for Bluetooth LE	
Antenna Gain	WLAN 2.4G: 3.90dBi WLAN 5G: 3.90dBi Bluetooth LE: -5.45dBi	
Hardware Version	V1.0 (Correspond to Bluetooth LE Main board Version) V4.0 (Correspond to WiFi CAM Main board Version)	
Software Version	2.49	

2 Maximum Permissible Exposure (MPE)

2.1 Limits

According to KDB 447498 D01 General RF Exposure Guidance v06, Per § 1.1310(d)(2) MPE limits in § 1.1310(e)(1) - Table 1, 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 TO § 1.1310(E)(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)
(i) 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
(ii) 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:

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

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)

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)
WLAN 2.4GHz	2400~2483.5	14.99	3.90	77.45	0.015406	1.0
WLAN 5GHz	5150~5250	14.27	3.90	65.61	0.013052	1.0
	5725~5850	15.35	3.90	84.14	0.016738	1.0
BLE	2400~2483.5	0.26	-5.45	0.30	0.000060	1.0

2.4 Results for transmit simultaneously

Configurations	Maximum MPE Value (Ratio)			Limit
	WLAN 5GHz	BLE	Transmit Simultaneously	
WLAN 5GHz + BLE	0.016738	0.000060	0.016798	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/cm^2

3. Since Bluetooth LE and WiFi use different mainboards and antennas, so Bluetooth LE and WiFi can be transmit simultaneously.

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.

3 Appendixes

3.1 Sample Photograph

All of the sample

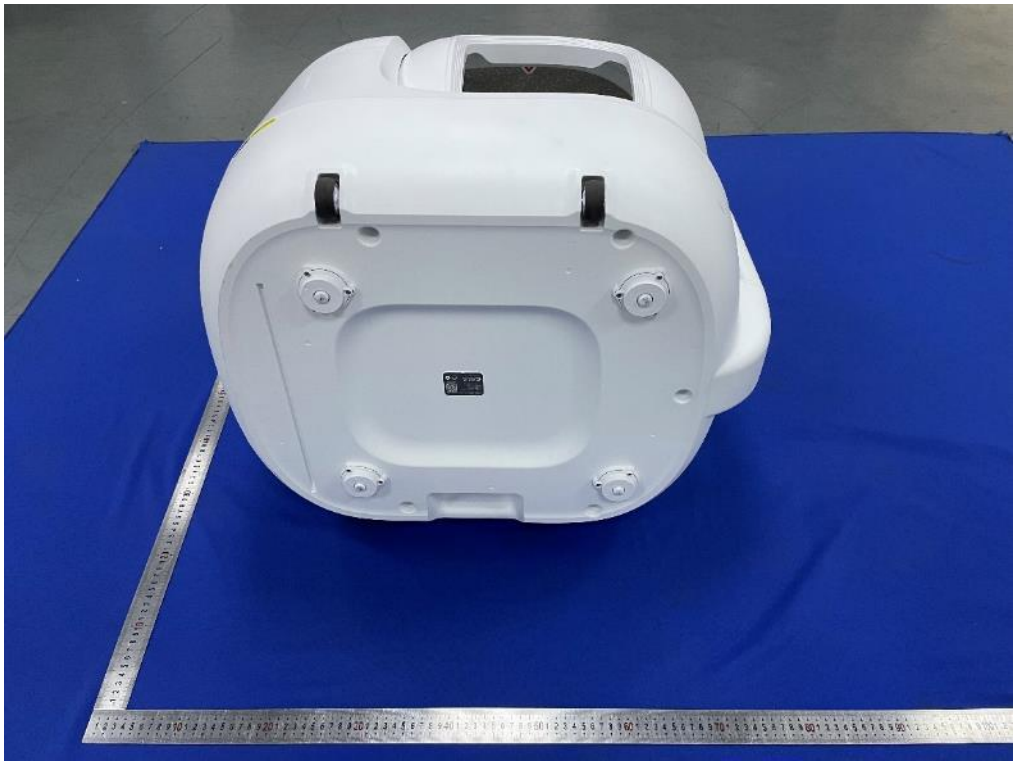
Front of the sample

Rear of the sample

Left of the sample

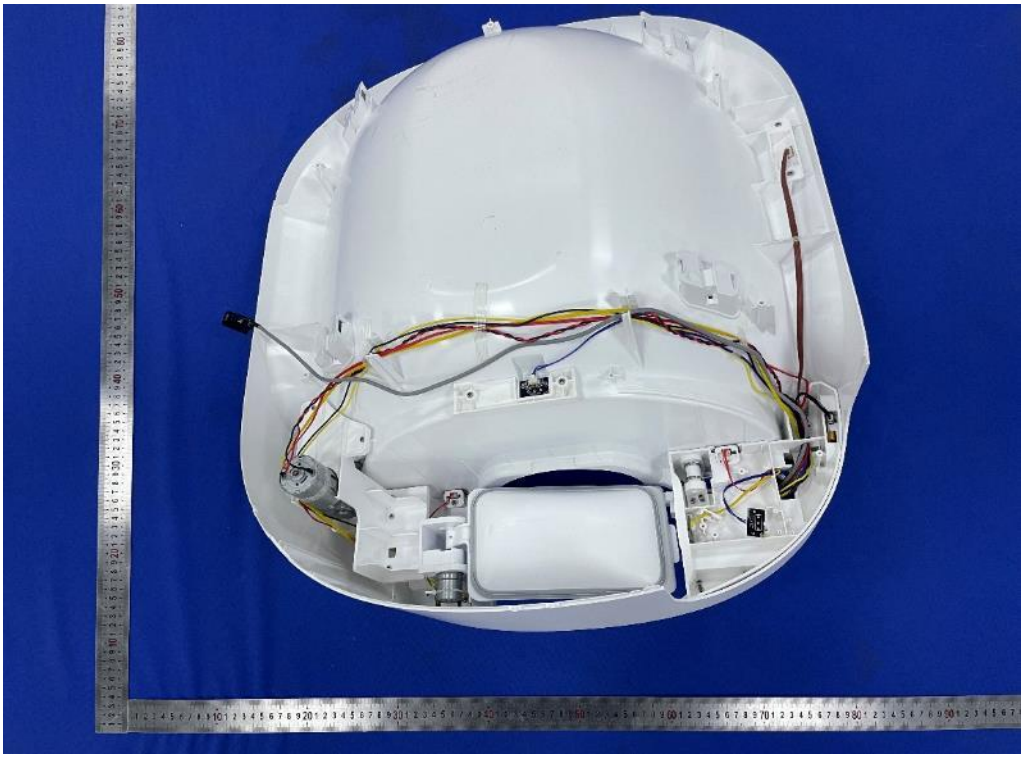
Right of the sample

Top of the sample



Bottom of the sample

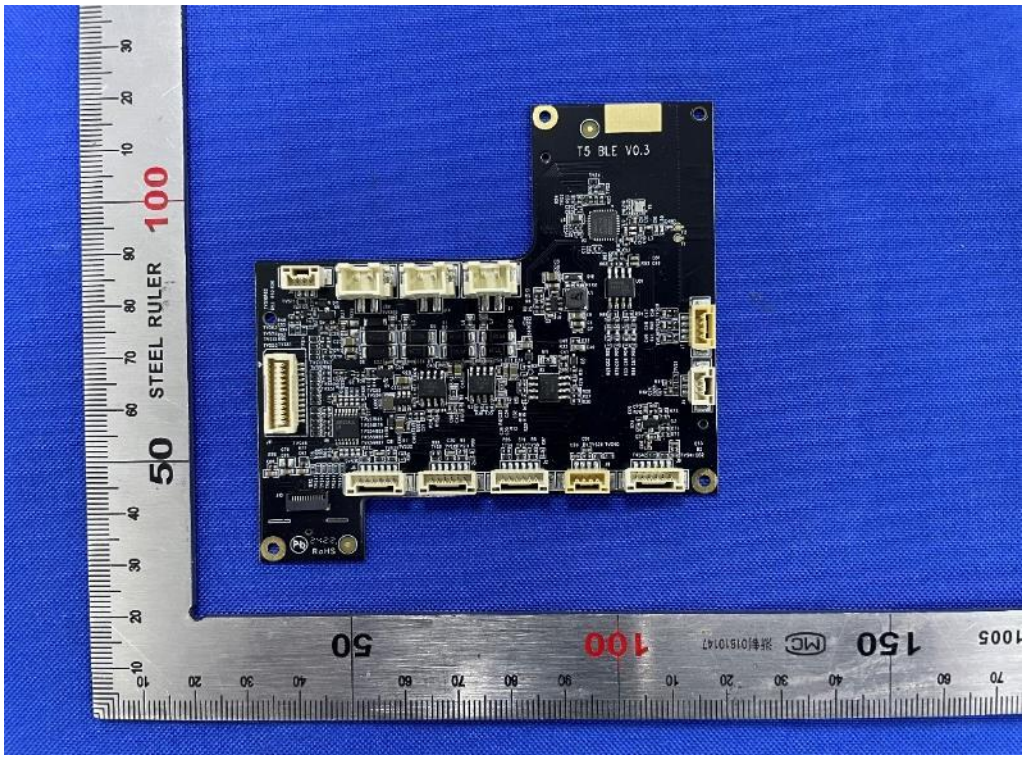
Open-1 of the sample



Open-2 of the sample

Open-3 of the sample

Open-4 of the sample



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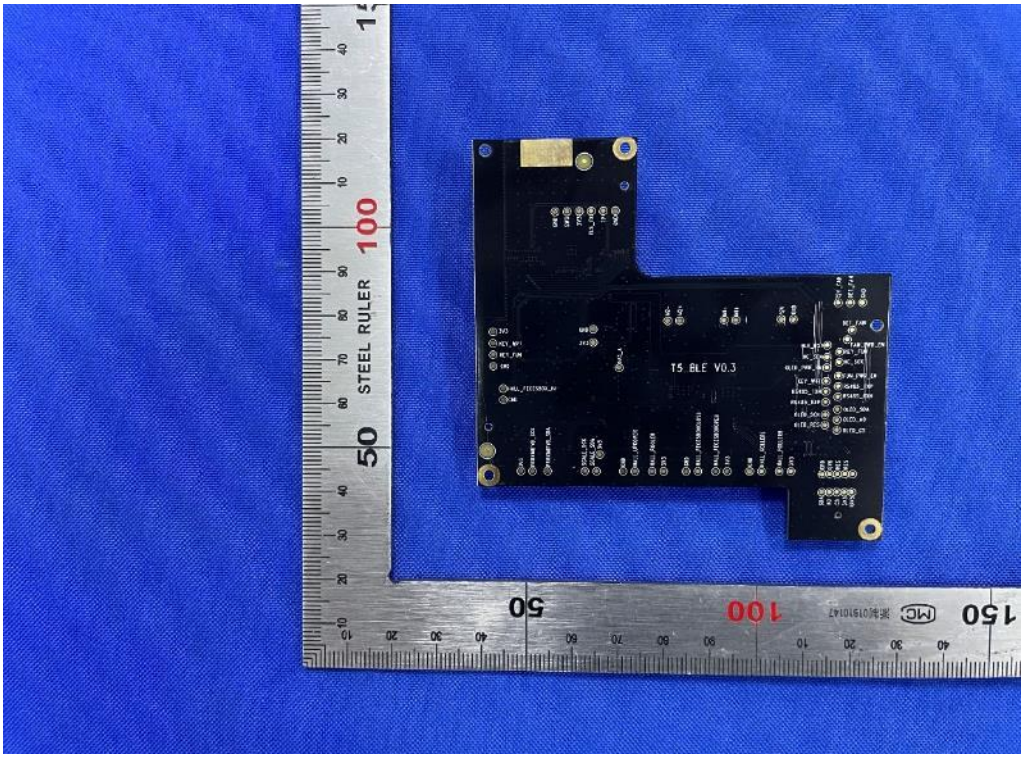
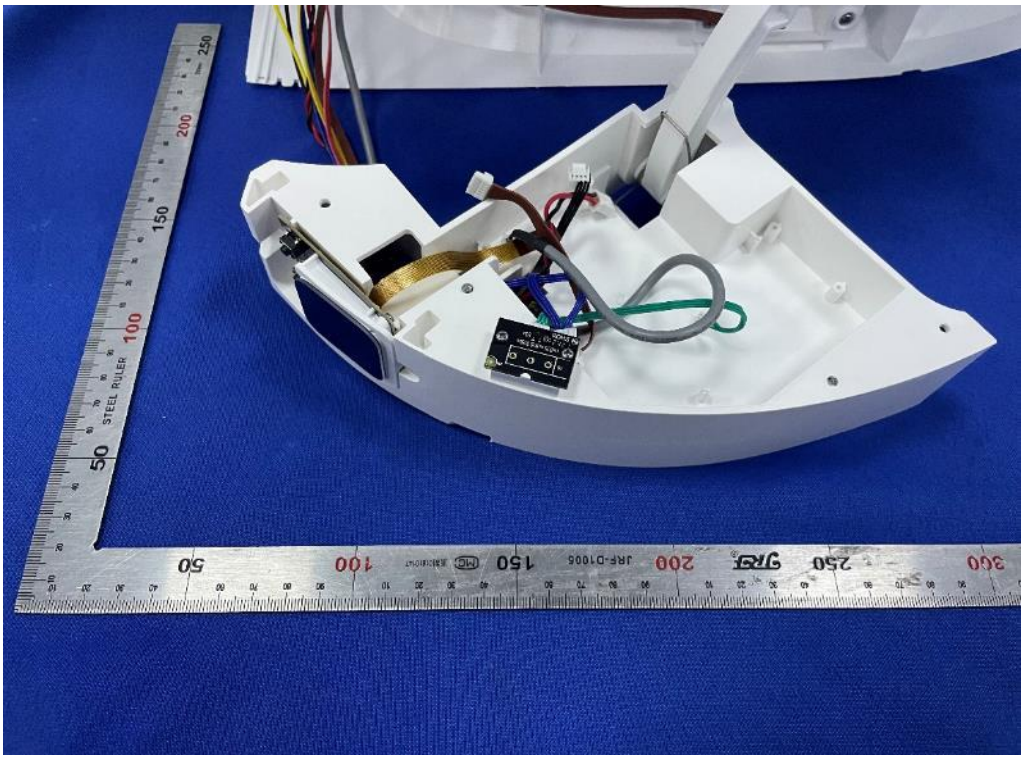


Internal-2 of the sample



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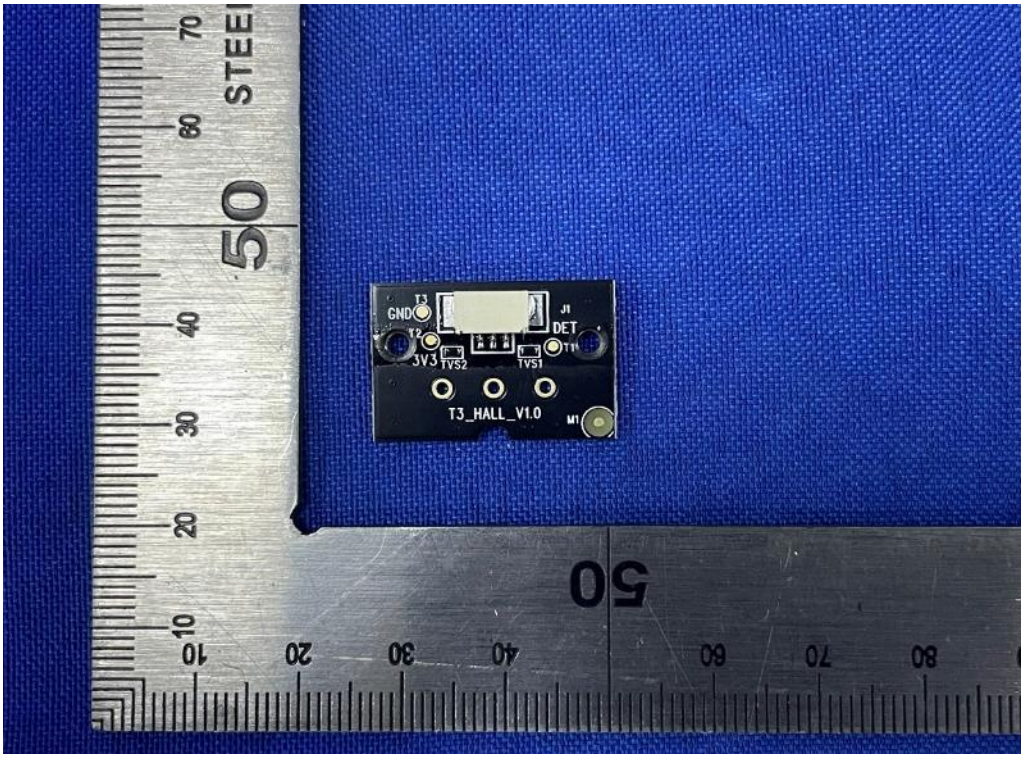

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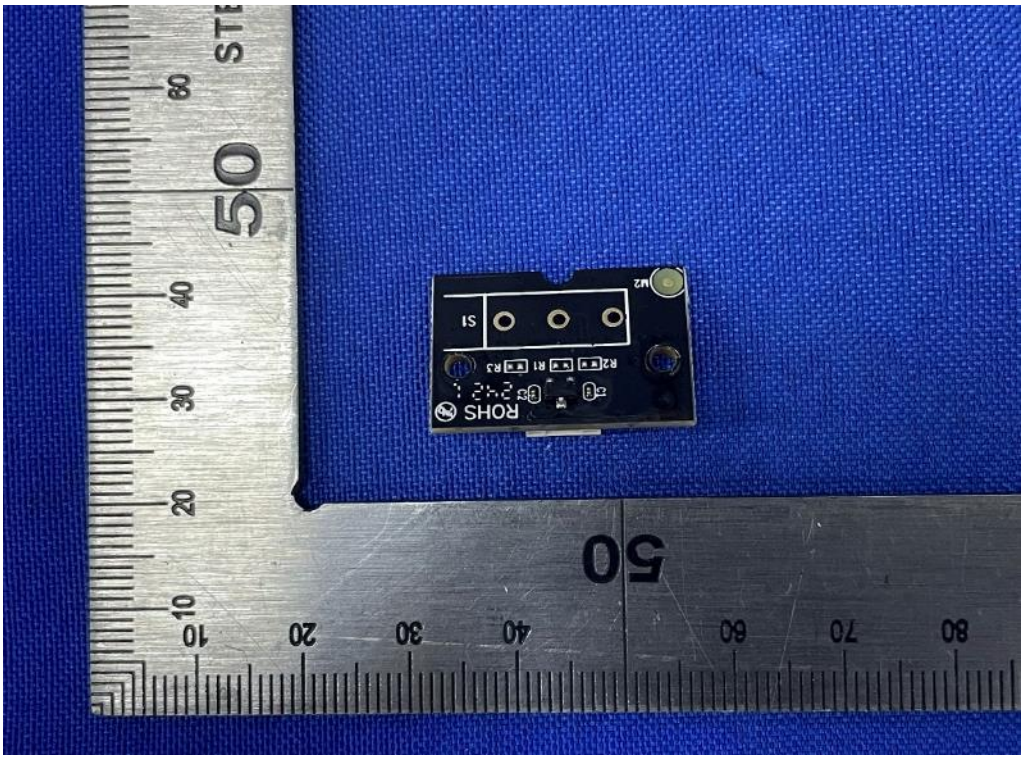
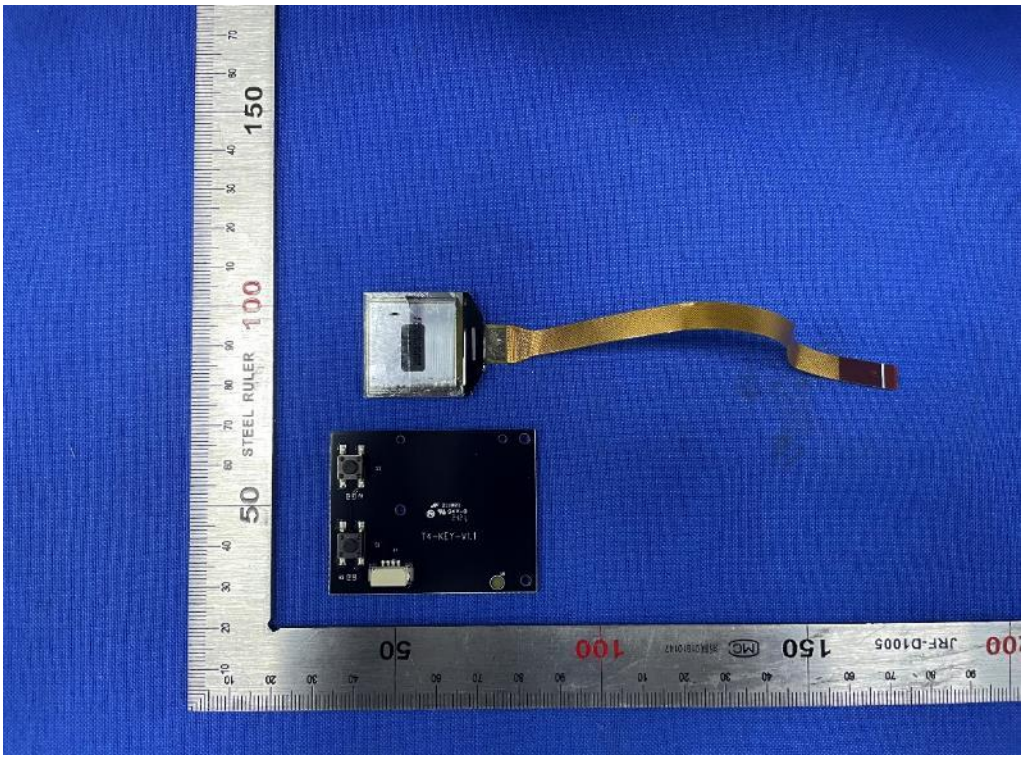


Internal-5 of the sample

Internal-6 of the sample



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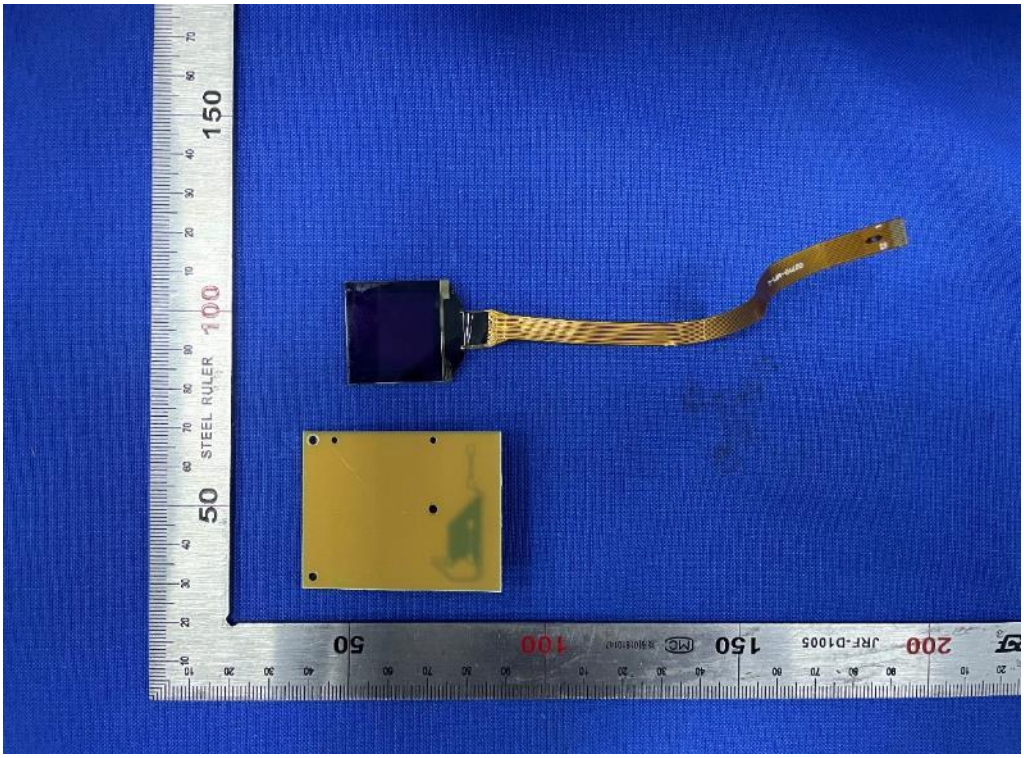

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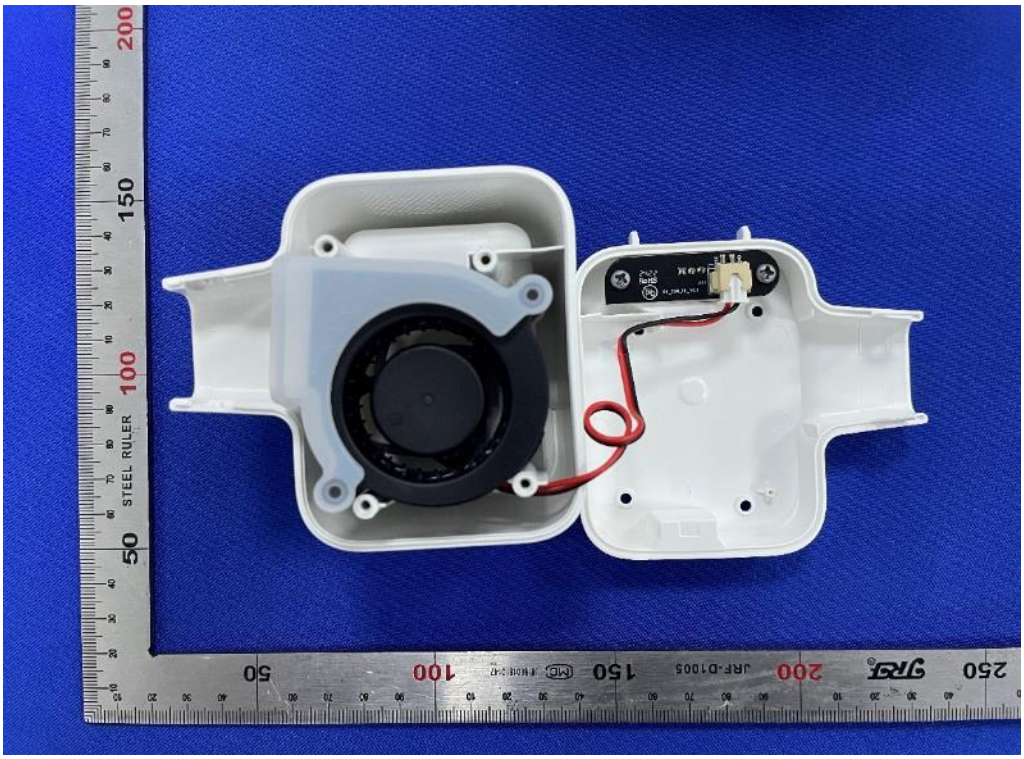
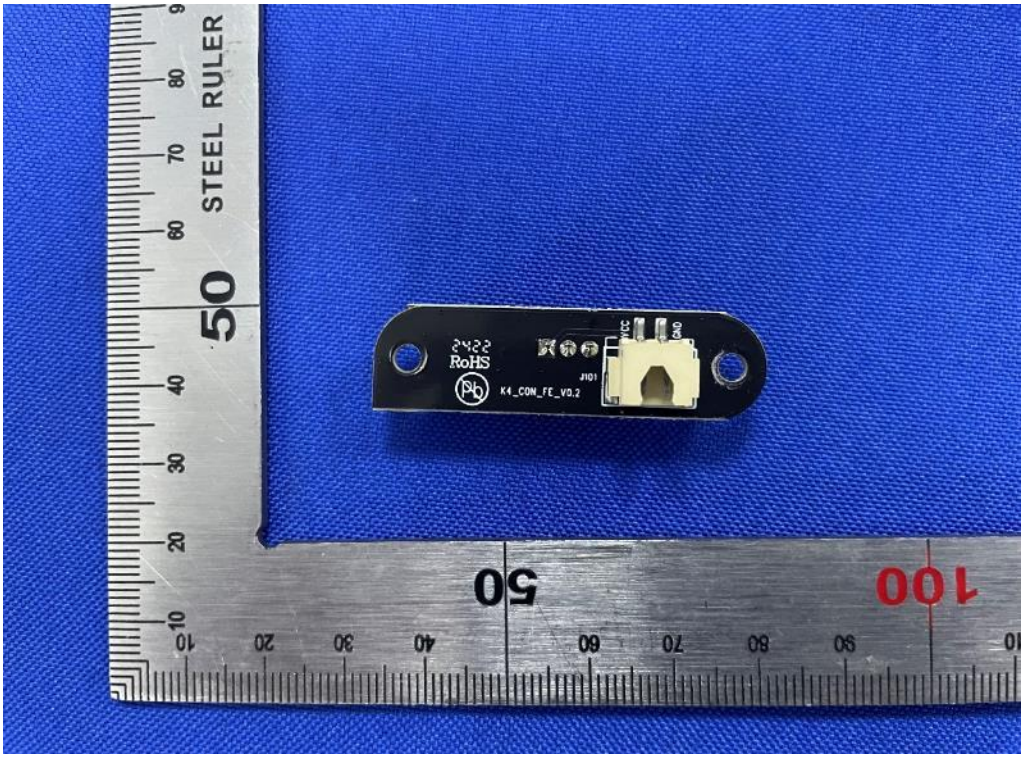
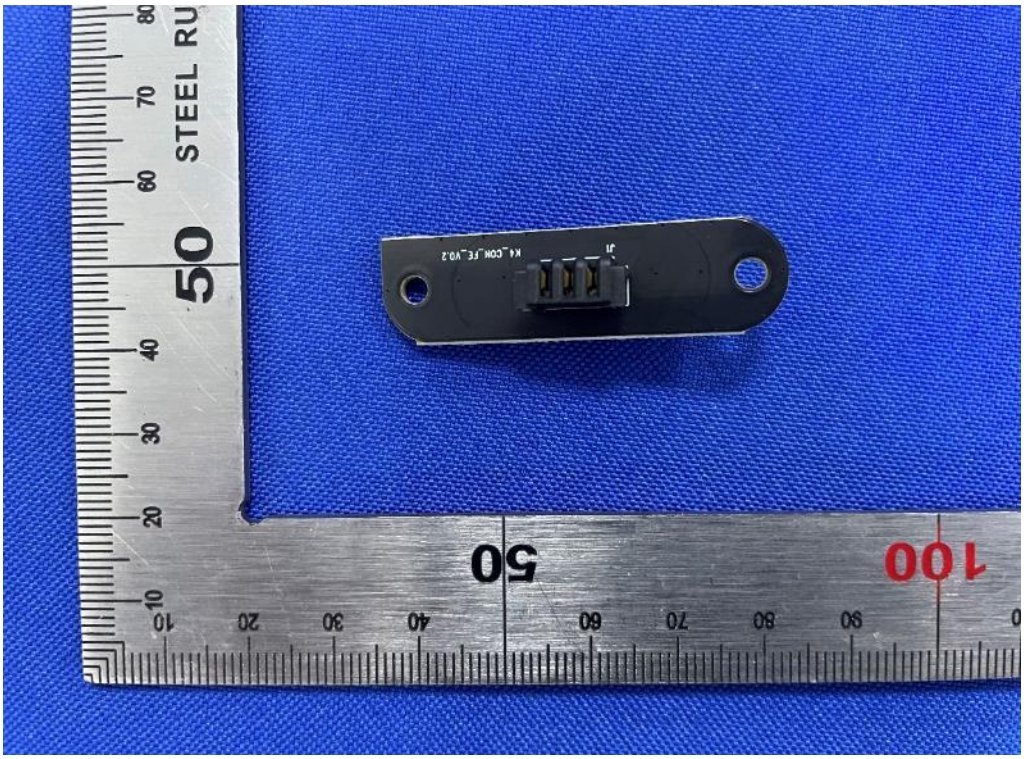


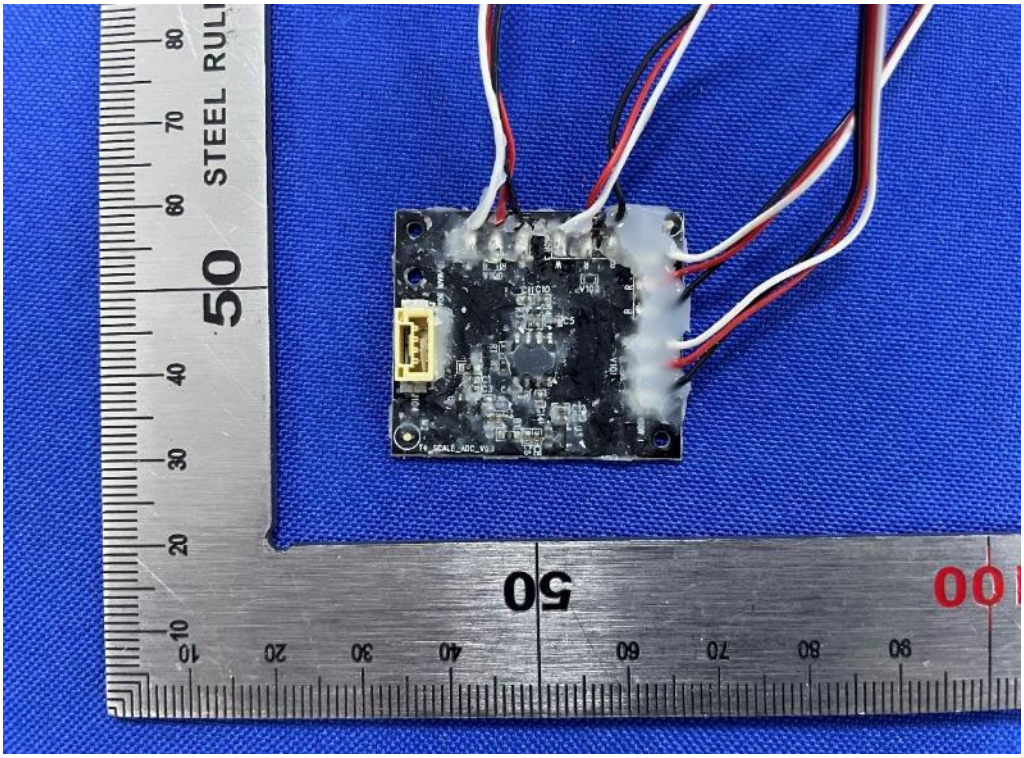
Internal-9 of the sample



Internal-10 of the sample



Internal-11 of the sample



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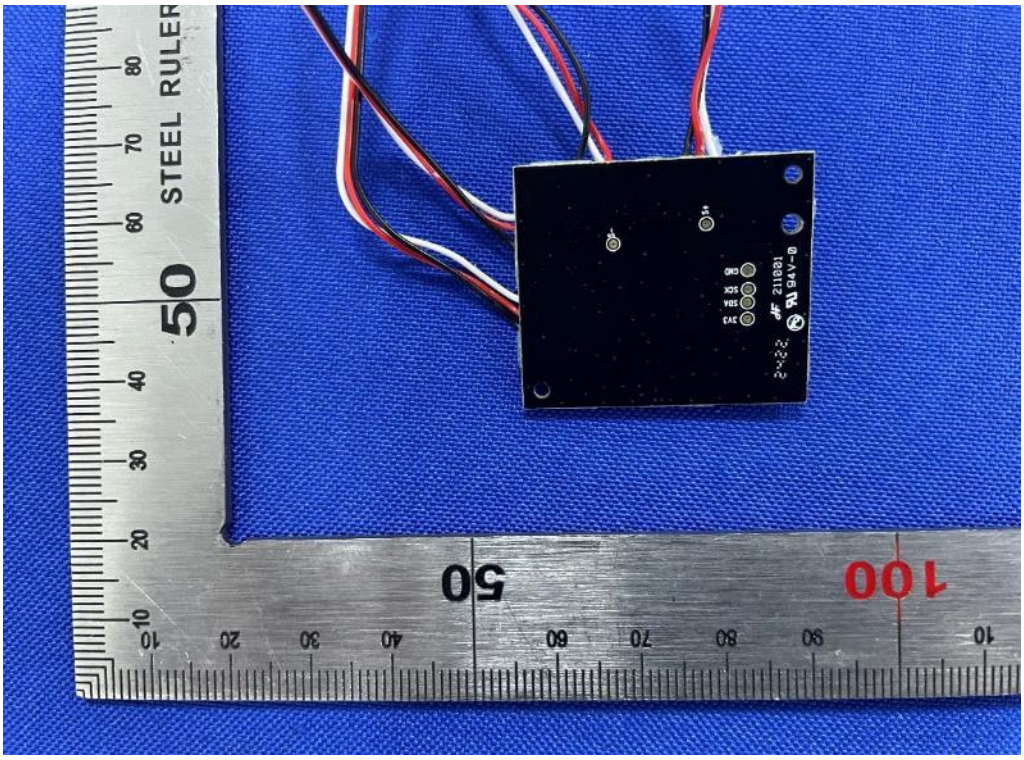

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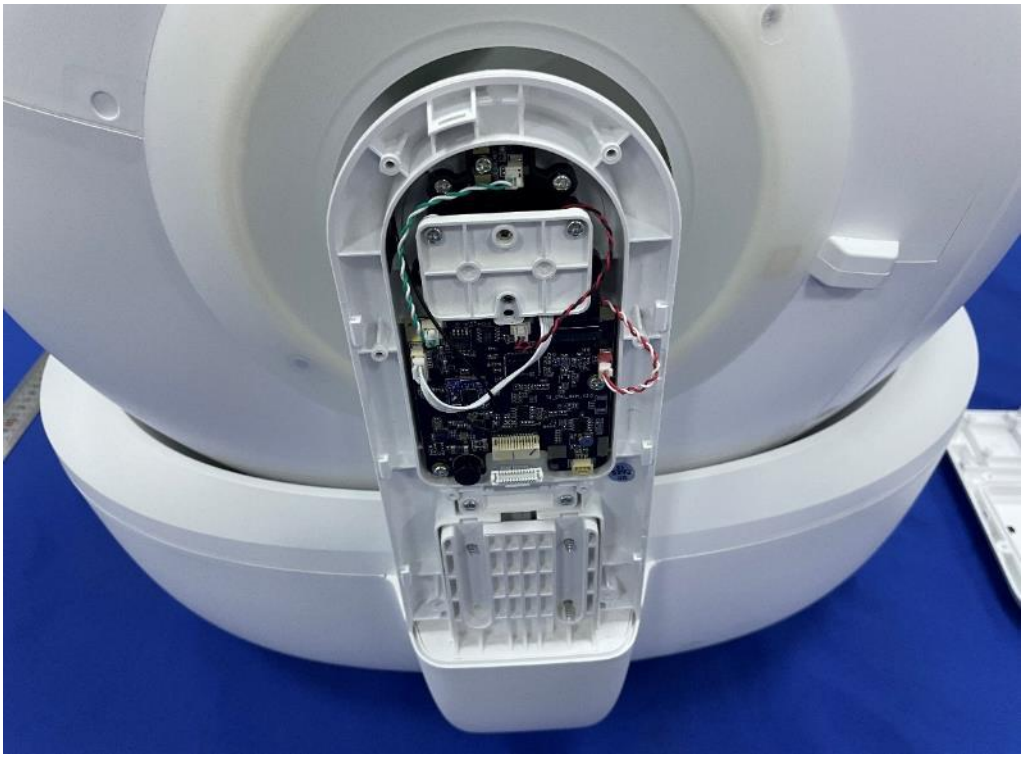
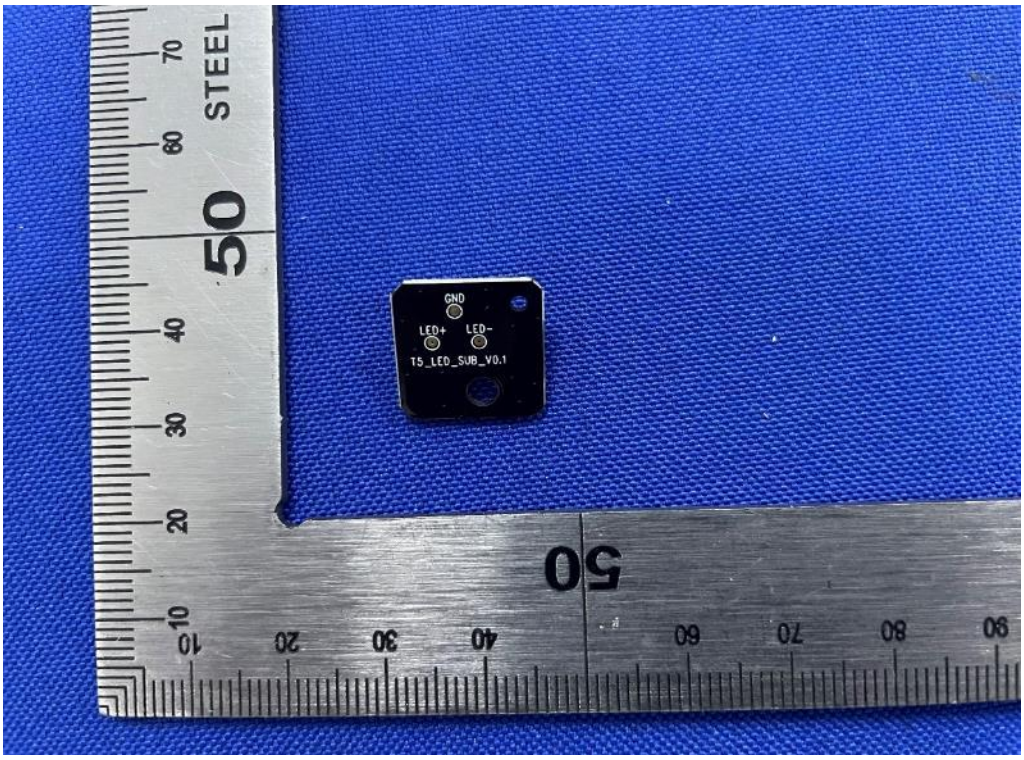
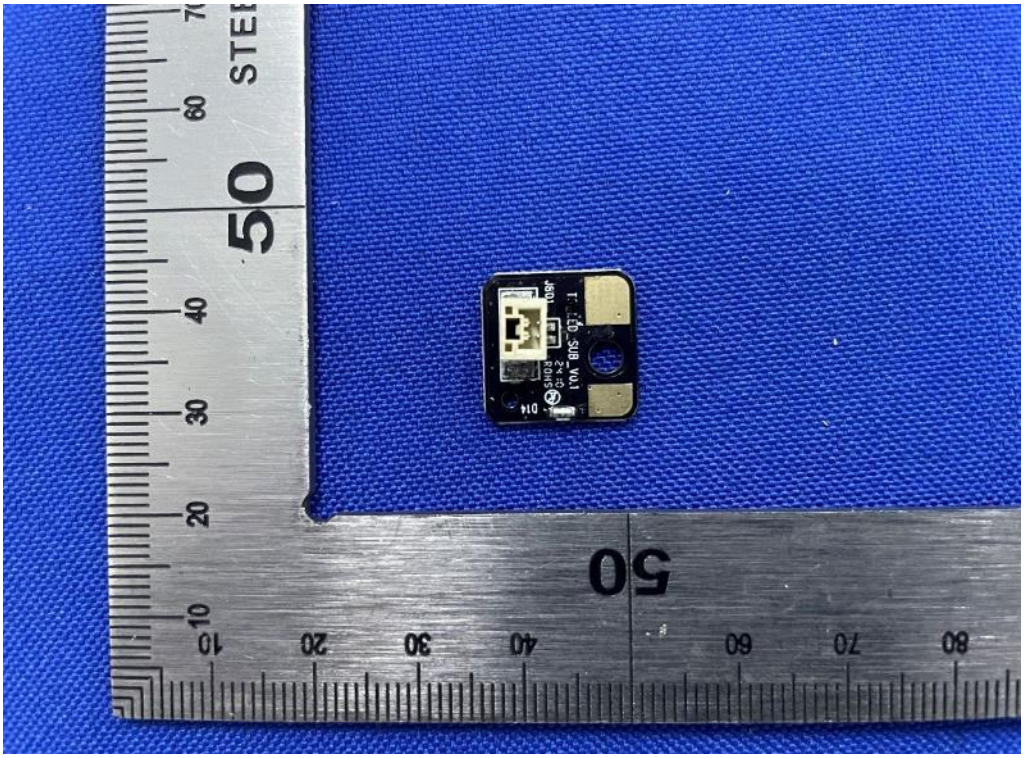


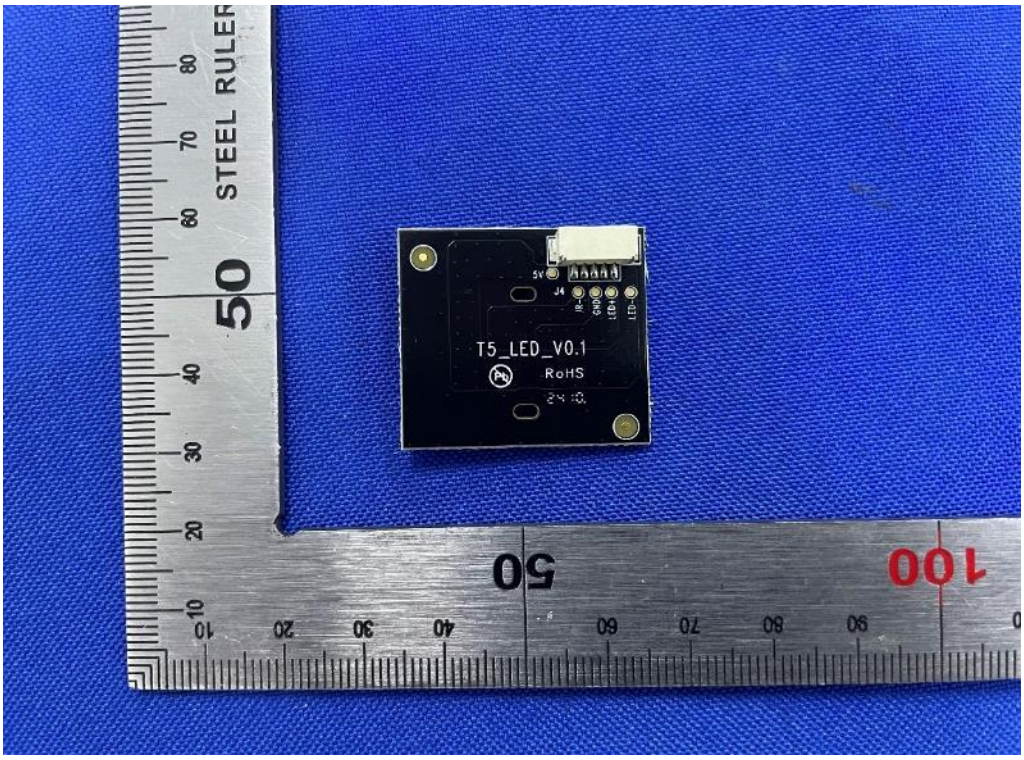
Internal-14 of the sample



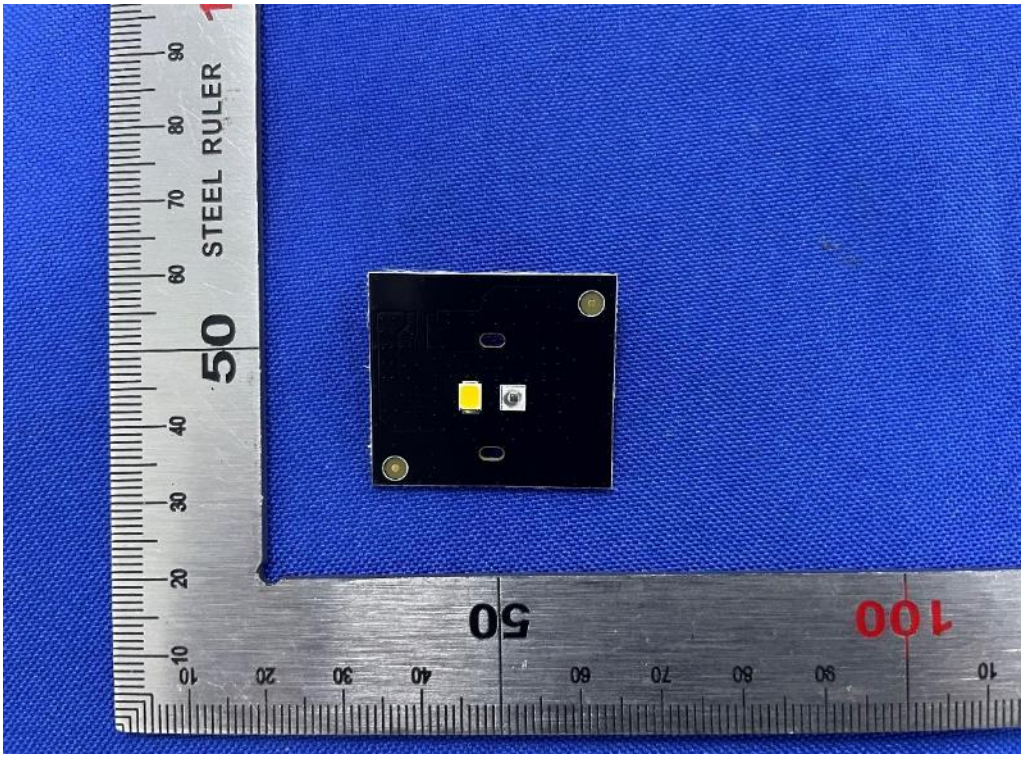
Internal-15 of the sample



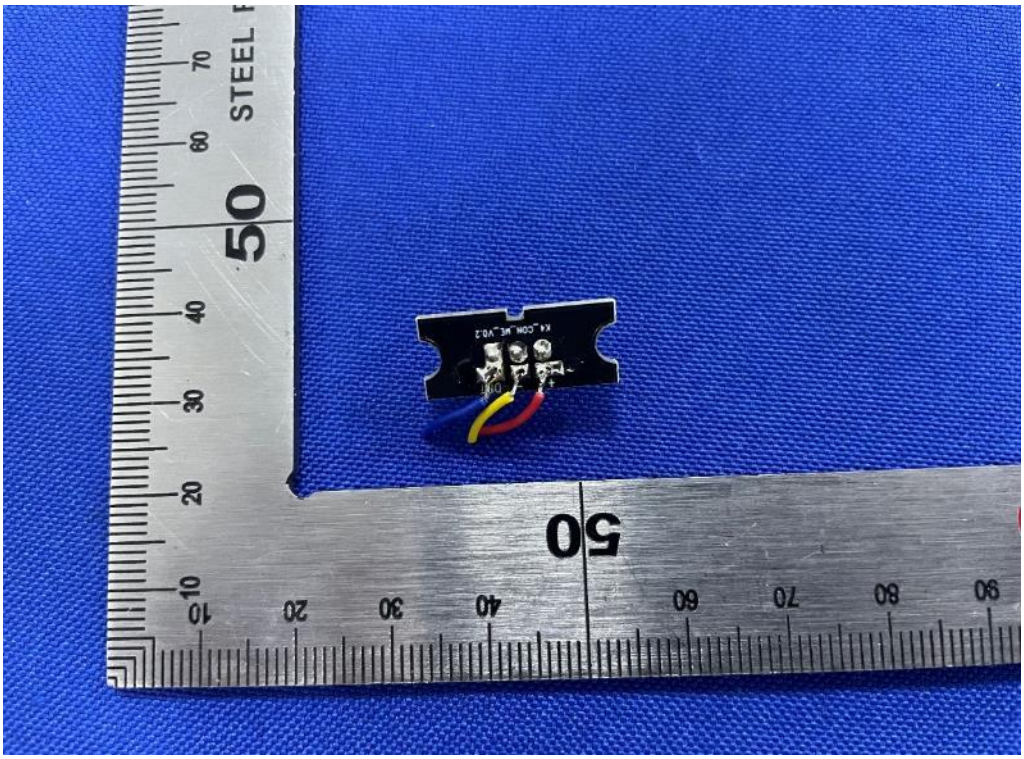
Internal-16 of the sample



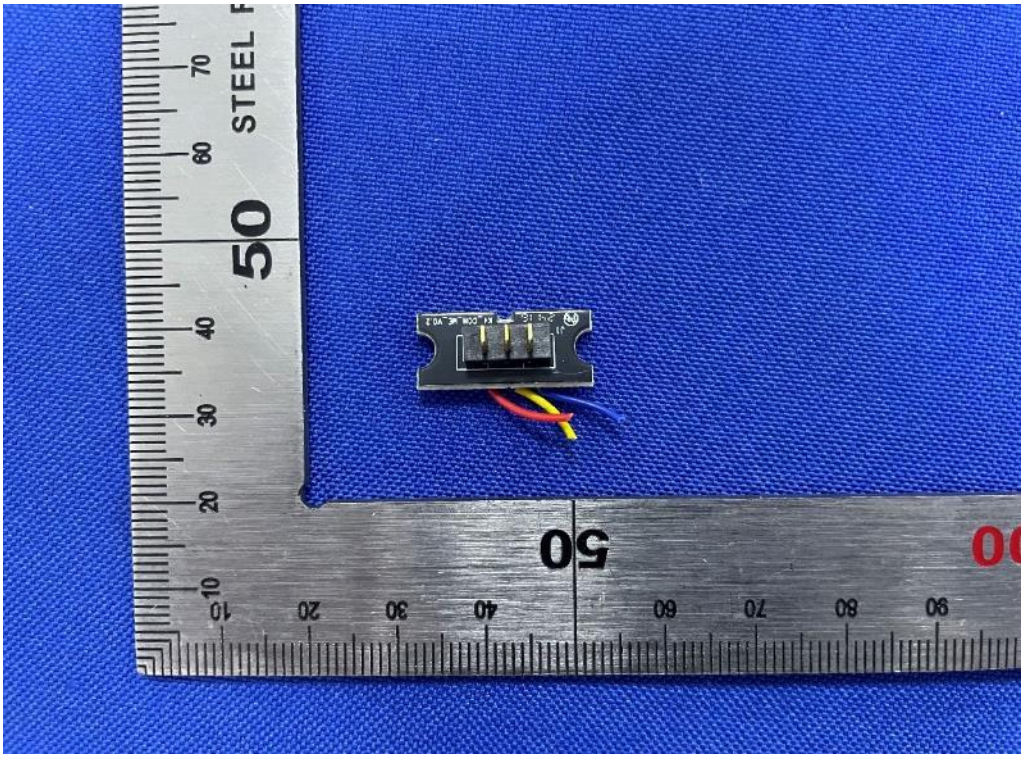
Internal-17 of the sample



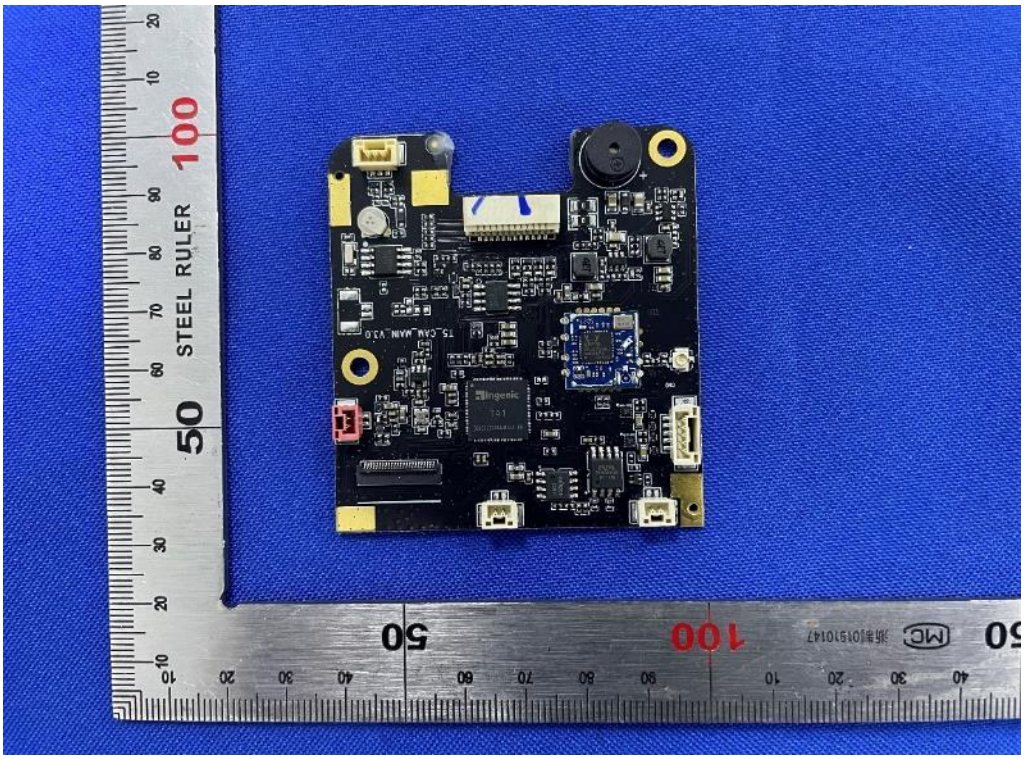
Internal-18 of the sample



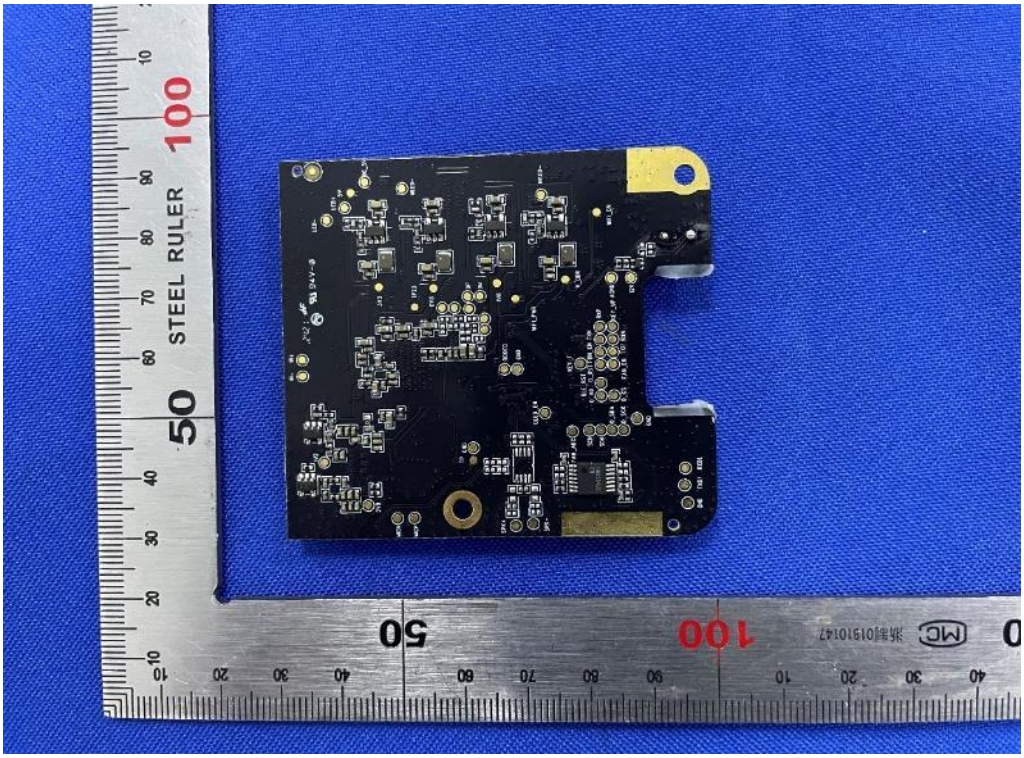
Internal-19 of the sample



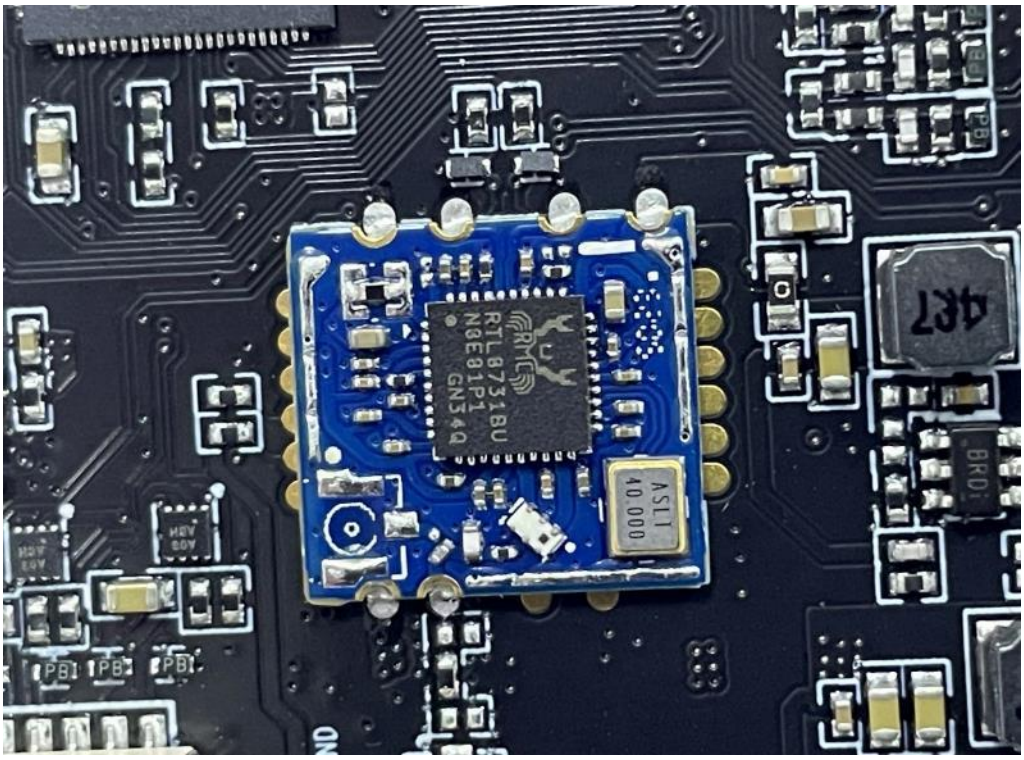
Internal-20 of the sample



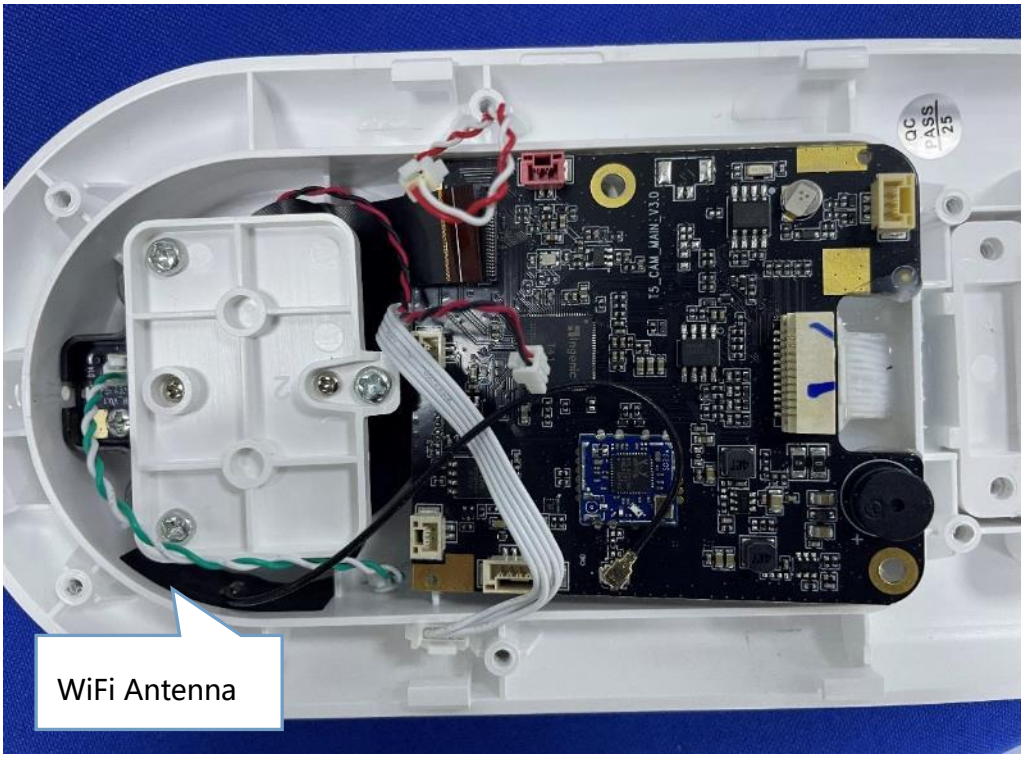
Internal-21 of the sample



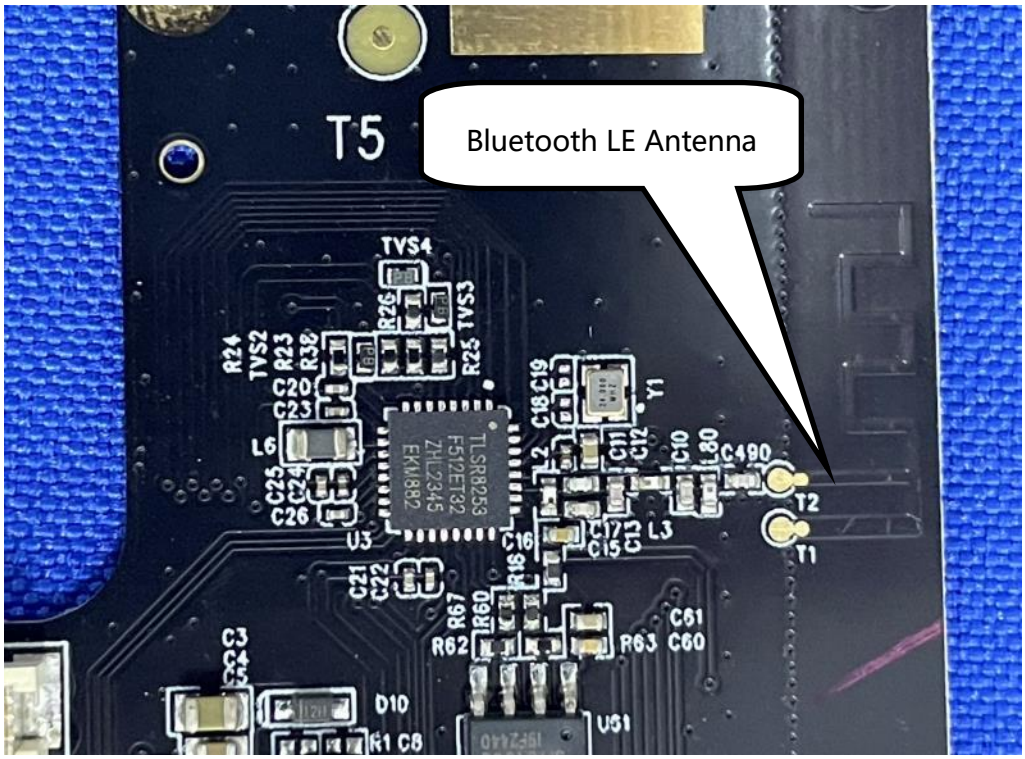
Internal-22 of the sample



Internal-23 of the sample



WiFi Antenna position



Bluetooth LE Antenna position

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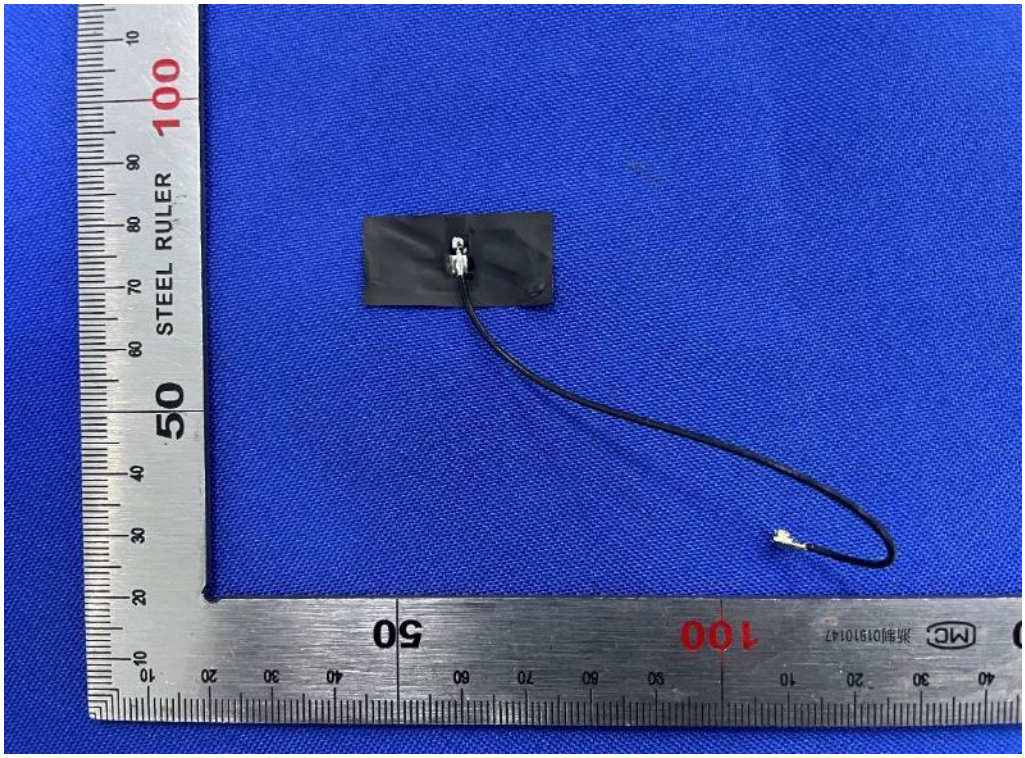
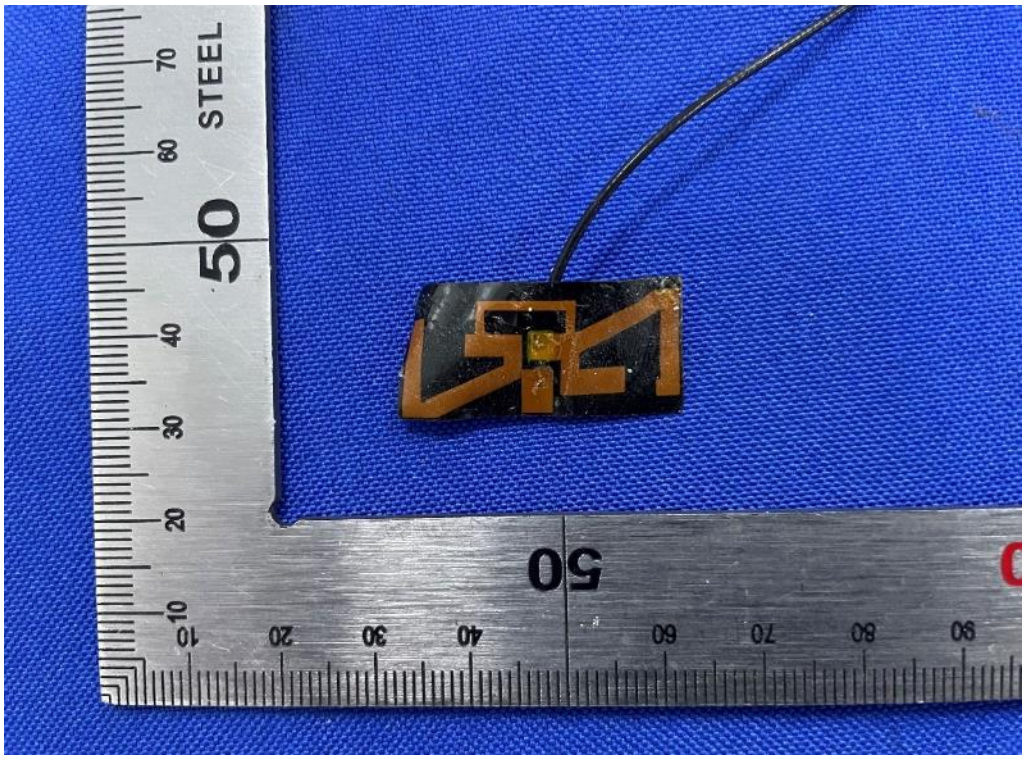


WiFi Antenna Photo-Front



WiFi Antenna Photo-Back

Adapter

Input Port of the sample

End of the report