

MPE TEST REPORT

Report No.: SHE23100070-02CE

Date: 2023-12-05

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Applicant : DLAB Scientific Co., Ltd.
Address of Applicant : YuAn Road 31, Airport Economic Core Zone,
Shunyi District, Beijing 101318, P.R. China

Product Name : UV Visible Spectrophotometer
Brand Name : N/A
Model Name : SP-UV1000, SCI-UV1000, SP-V1000, SCI-V1000,
SP-V1100, SCI-V1100, SP-UV1100, SCI-UV1100,
SP-UV3101, SCI-3101UV, SP-UV2102, SCI-2102UV,
SP-UV3102, SCI-3102UV, SP-UV2101, SCI-2101UV,
SP-XUV5102, SCI-5102XUV, SP-XUV5101,
SCI-5101XUV

Sample Acquisition Method : Sent by Client

Sample No. : E23100070-01#02

FCC ID : 2BDRA-SPSCIUV

Standard : FCC Part 2.1091

Date of Receipt : 2023-10-24

Date of Test : 2023-10-27~ 2023-11-03

Date of Issue : 2023-12-05

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 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	DLAB Scientific Co., Ltd.
Address	YuAn Road 31, Airport Economic Core Zone, Shunyi District, Beijing 101318, P.R. China
Contact Person	Xiaoli Liu
Telephone	18201853137
Email	2050365105@qq.com
Manufacturer Company Name	DLAB Scientific Co., Ltd.
Address	YuAn Road 31, Airport Economic Core Zone, Shunyi District, Beijing 101318, P.R. China
Factory Company Name	DLAB Scientific Co., Ltd.
Address	YuAn Road 31, Airport Economic Core Zone, Shunyi District, Beijing 101318, P.R. China

1.4 Details of EUT

Product Name	UV Visible Spectrophotometer
Brand Name	N/A
Test Model Name	SP-UV1000
Series Models Name	SCI-UV1000, SP-V1000, SCI-V1000, SP-V1100, SCI-V1100, SP-UV1100, SCI-UV1100, SP-UV3101, SCI-3101UV, SP-UV2102, SCI-2102UV, SP-UV3102, SCI-3102UV, SP-UV2101, SCI-2101UV, SP-XUV5102, SCI-5102XUV, SP-XUV5101, SCI-5101XUV
Difference Description	All the same except for the model name
FCC ID	2BDRA-SPSCIUV
Mode of Operation	Bluetooth BR/EDR Version 5.0

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Frequency Range	2400MHz ~ 2483.5MHz
Modulation Type	GFSK, $\pi/4$ -DQPSK, 8-DPSK
Antenna Type	PCB Antenna
Antenna Gain	1.97dBi
Hardware Version	V1.0
Software Version	V1.0.2

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)
BR/EDR	2400~ 2483.5	0.92	1.97	1.95	0.00039	1.0

Note(s):

1. For 1,500 – 100,000MHz: Power Density limit is 1.0 mW/cm²

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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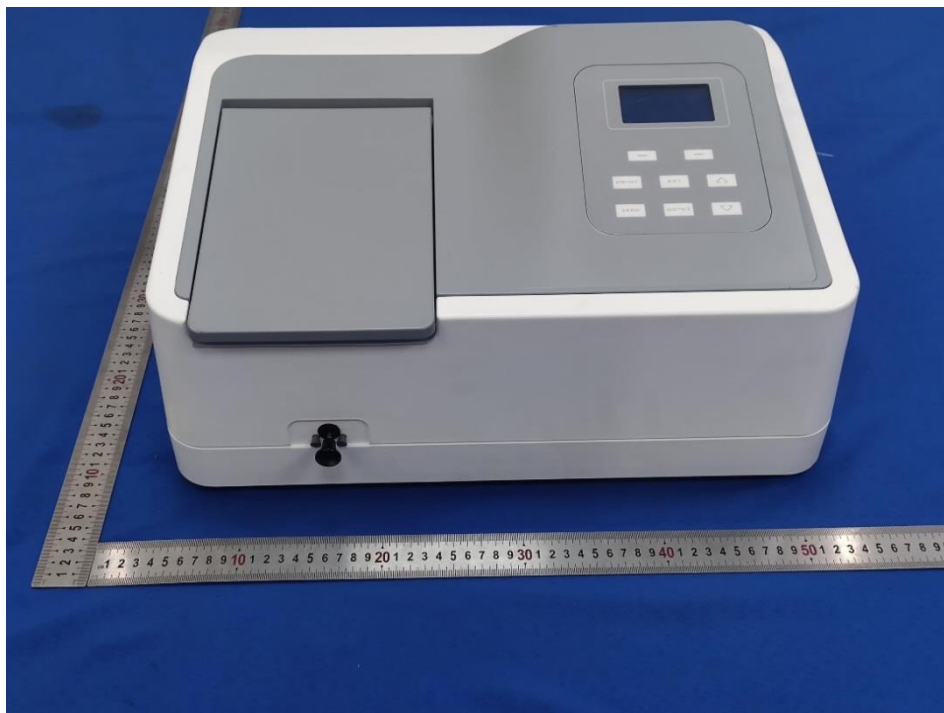
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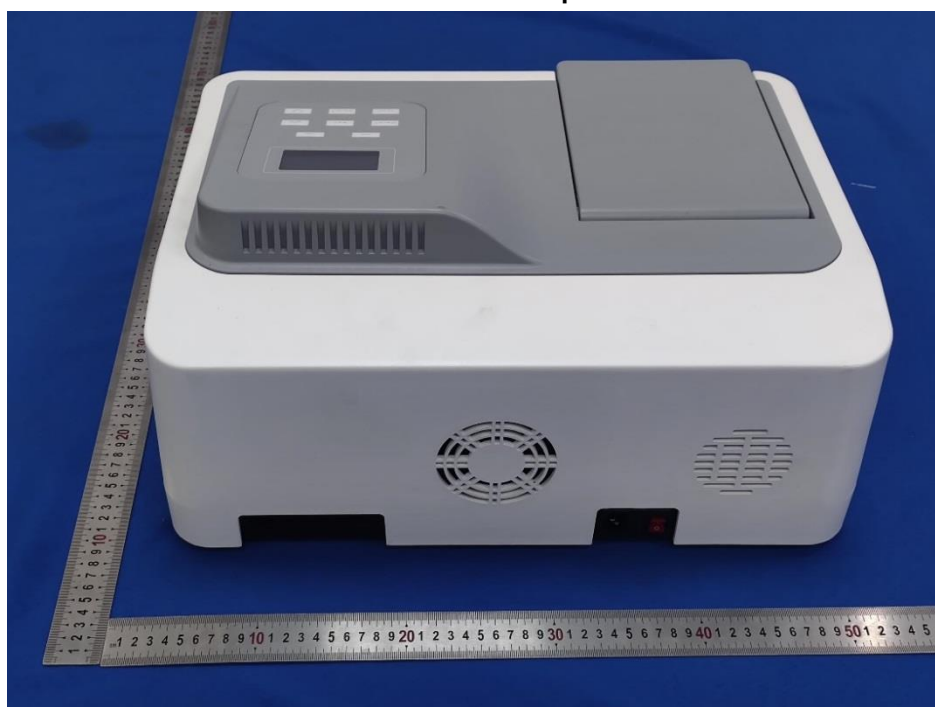
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3 Appendixes

3.1 Sample Photograph



Front of the sample



Rear of the sample

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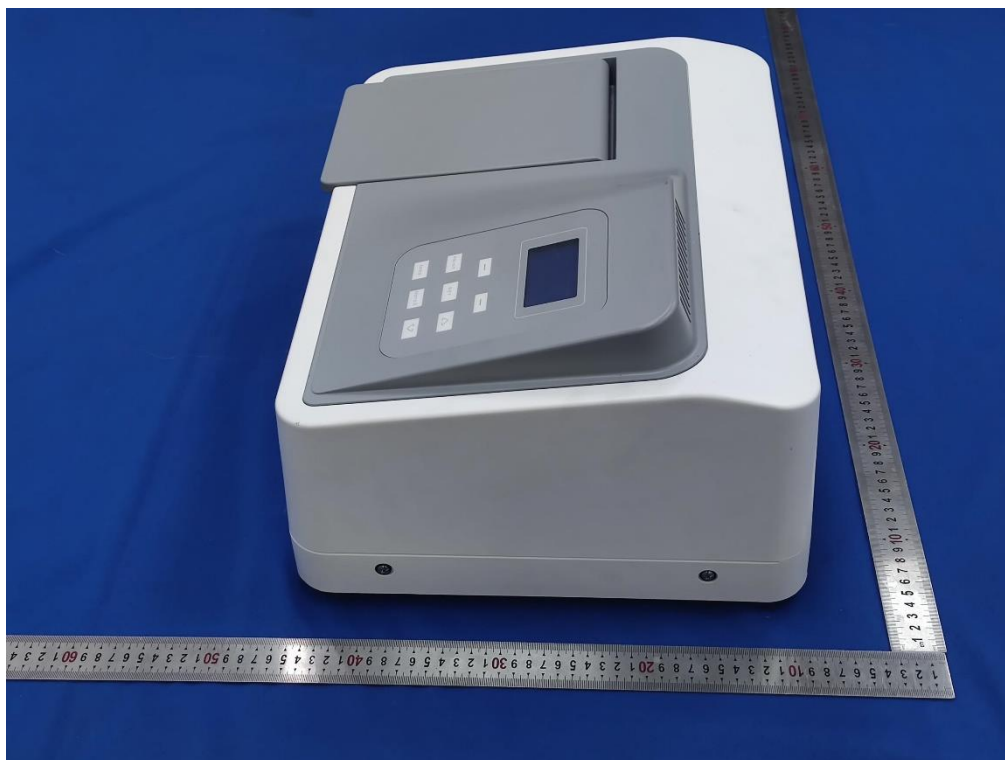
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Left of the sample



Right of the sample

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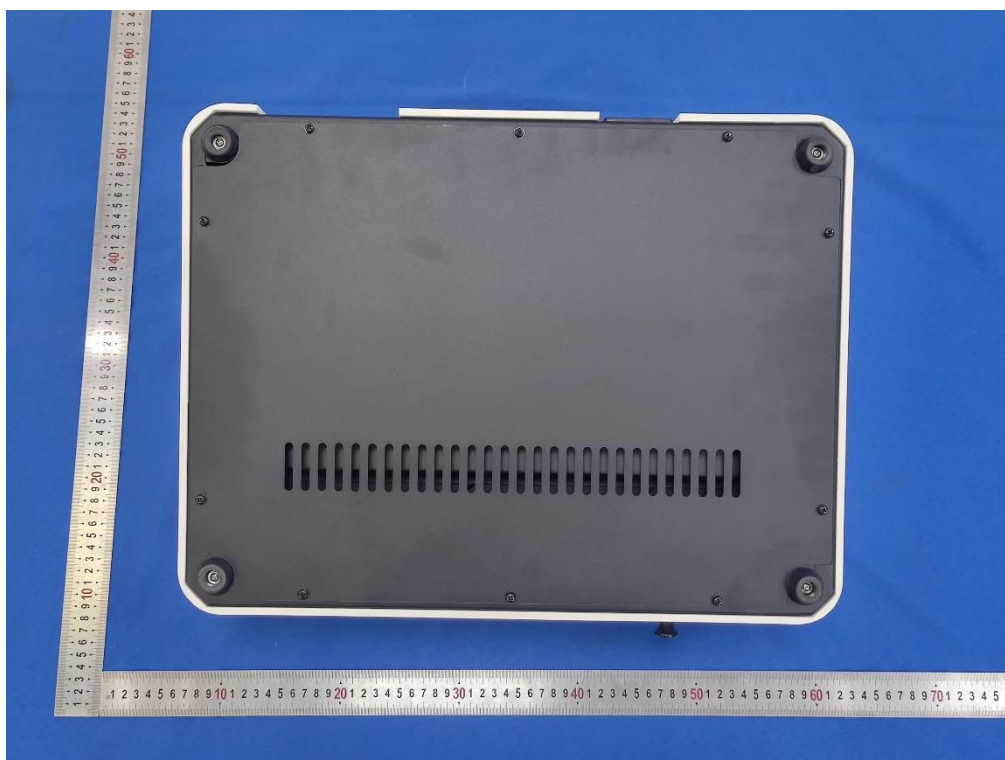
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Top of the sample



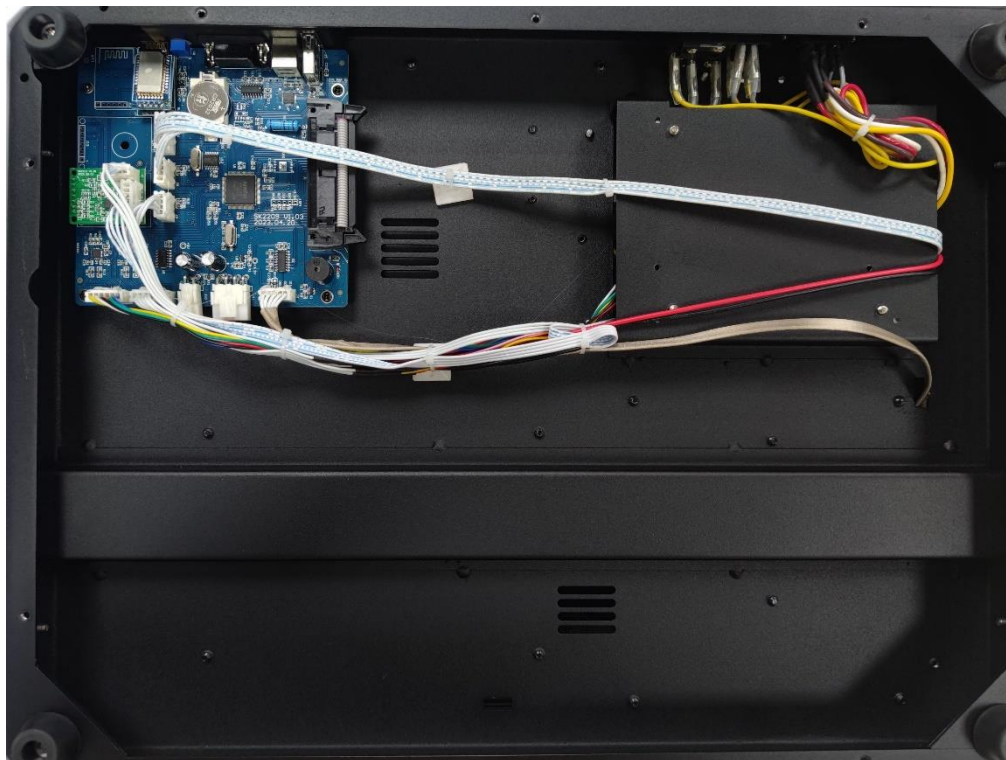
Bottom of the sample

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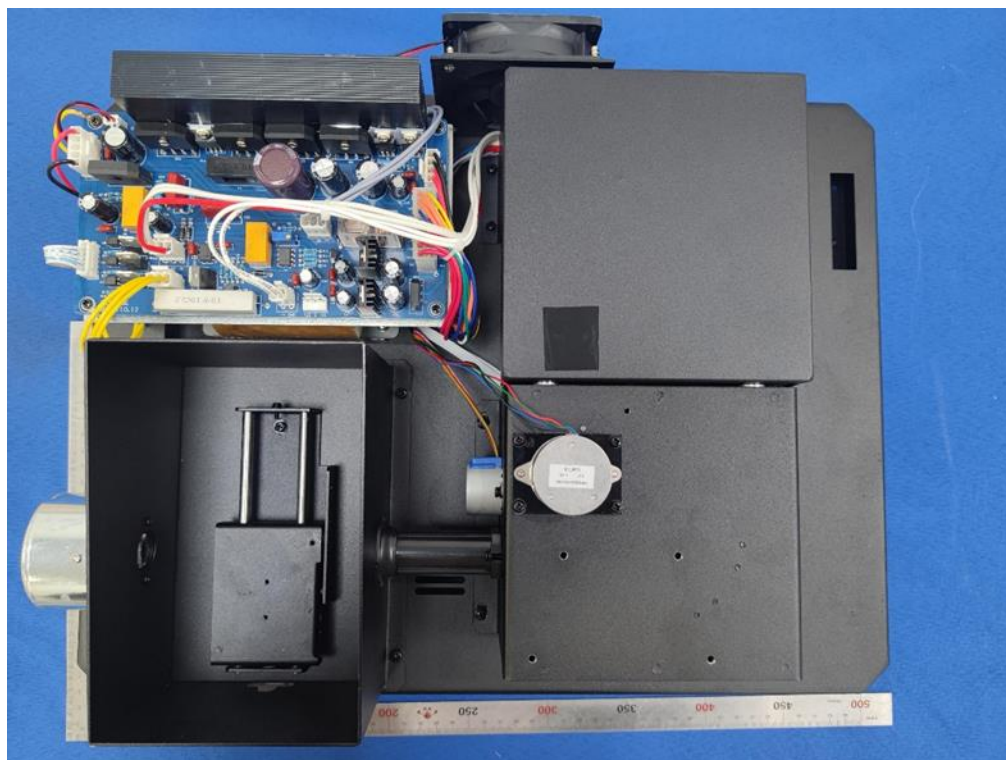
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Open-1 of the sample



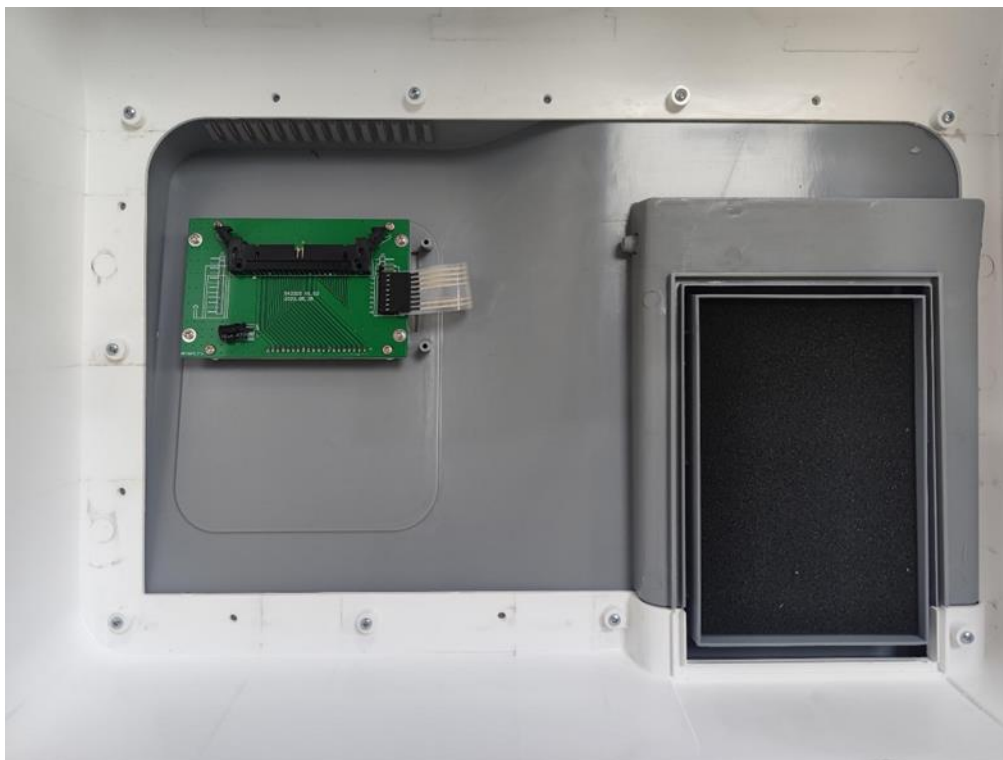
Open-2 of the sample

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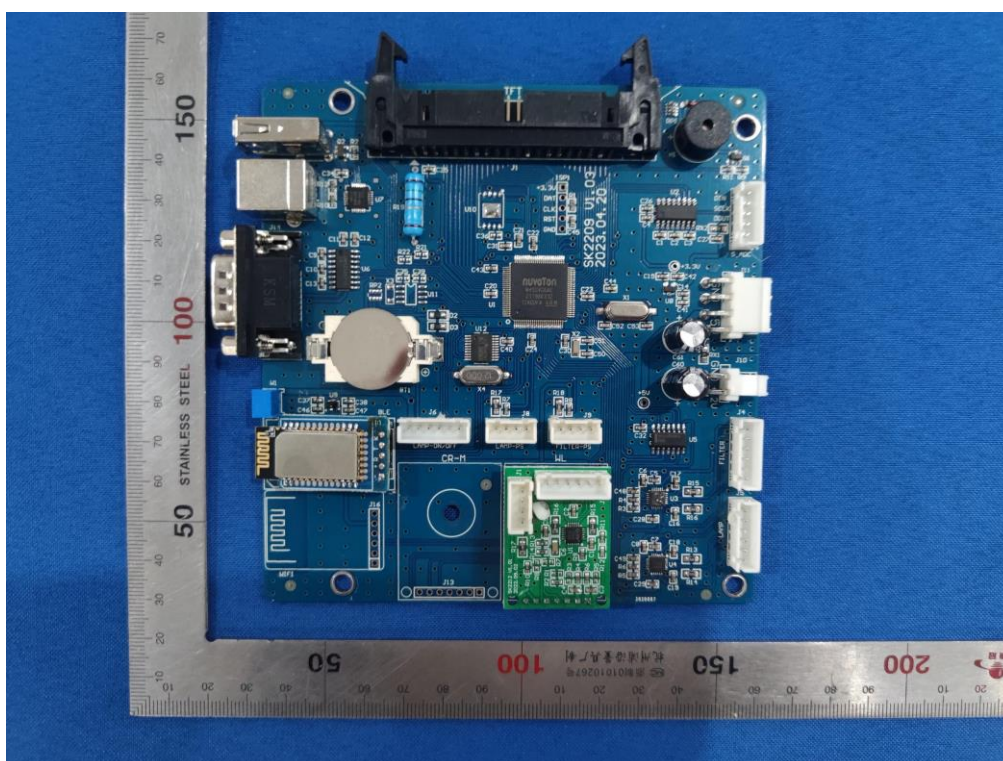
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Open-3 of the sample



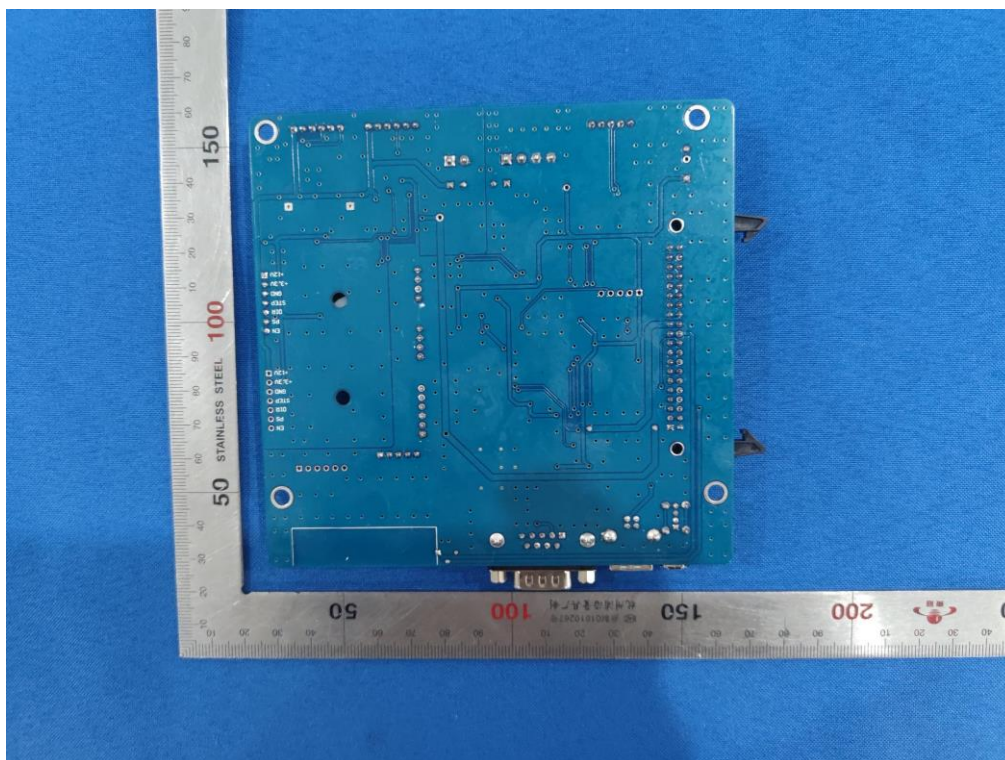
Internal-1 of the sample

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Internal-2 of the sample



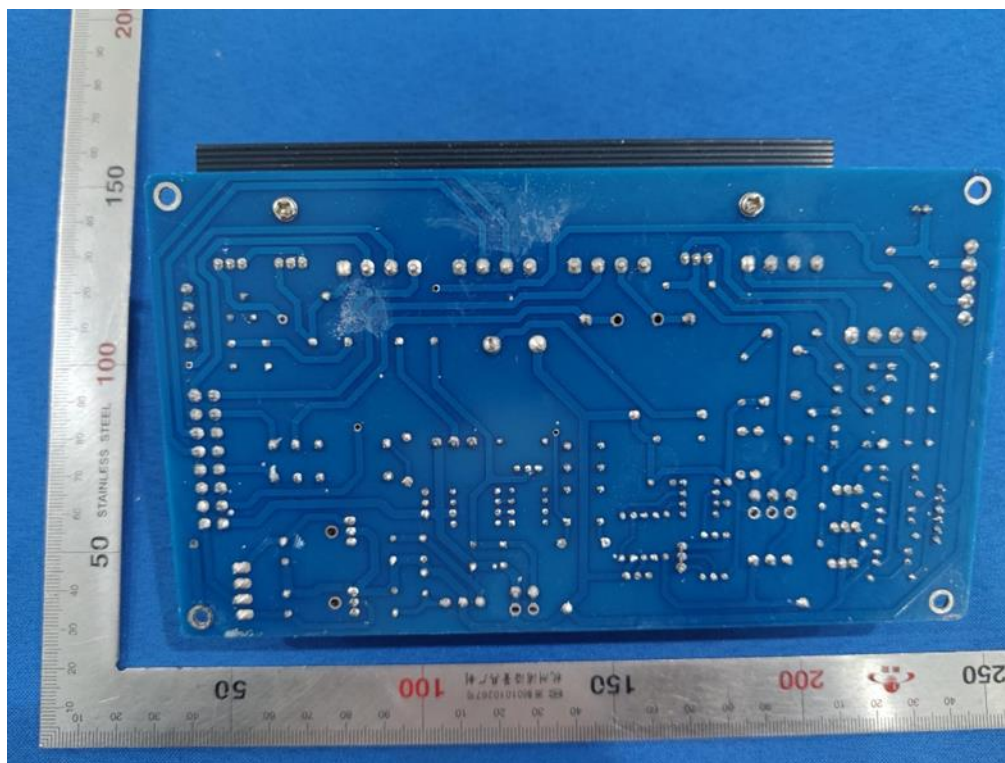
Internal-3 of the sample

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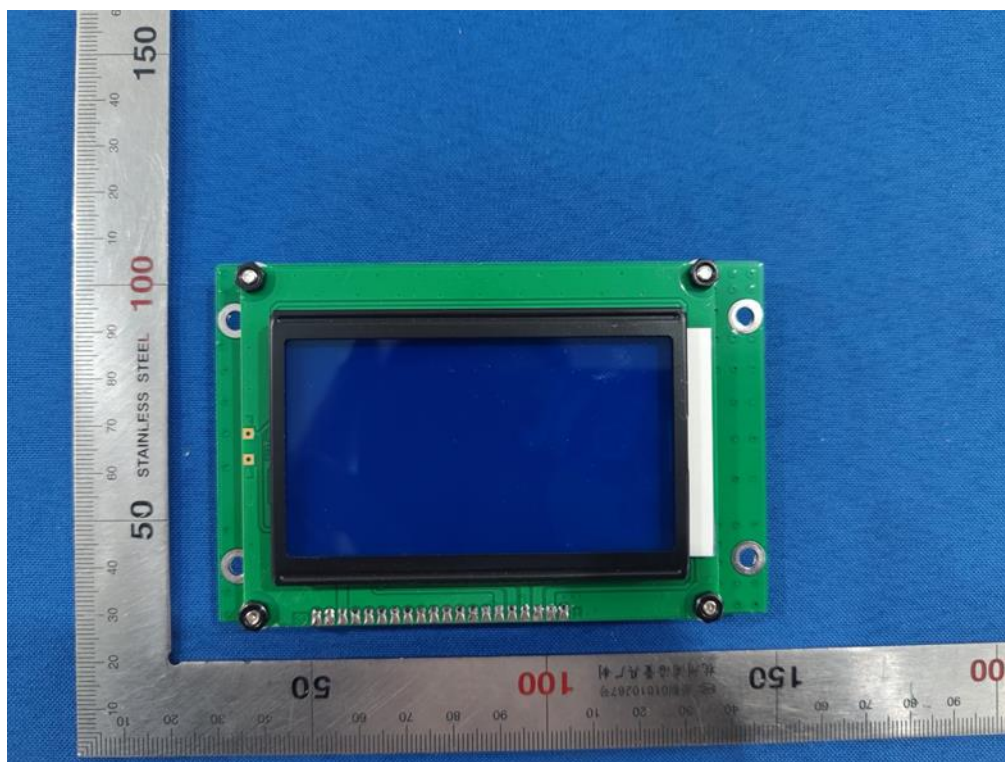
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Internal-4 of the sample



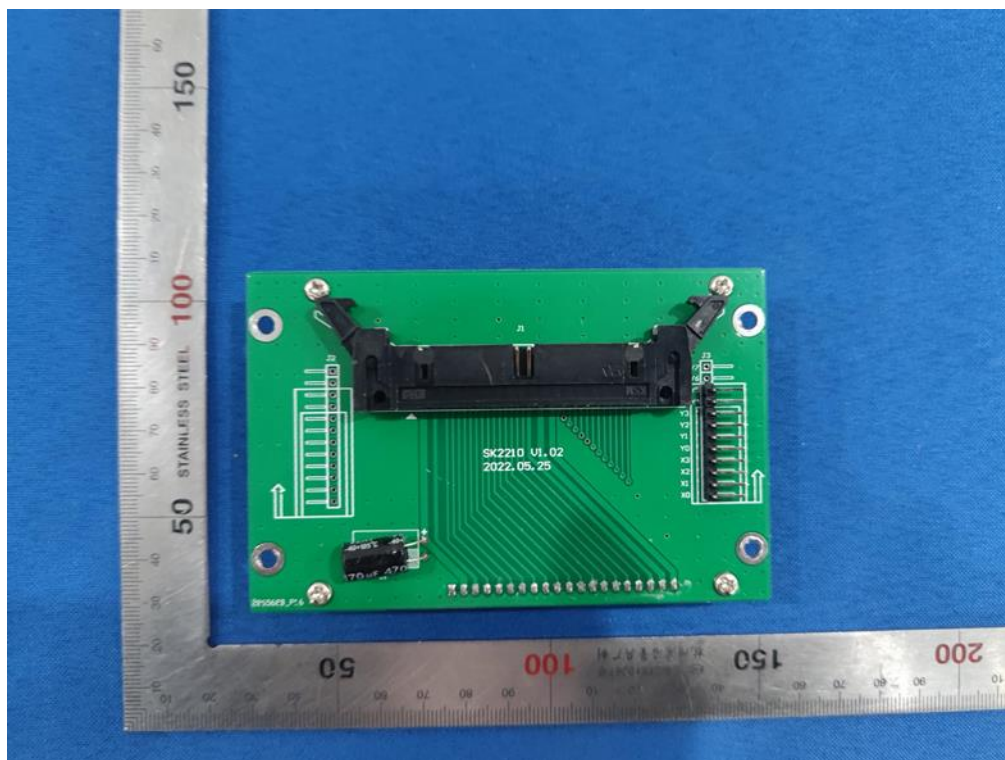
Internal-5 of the sample

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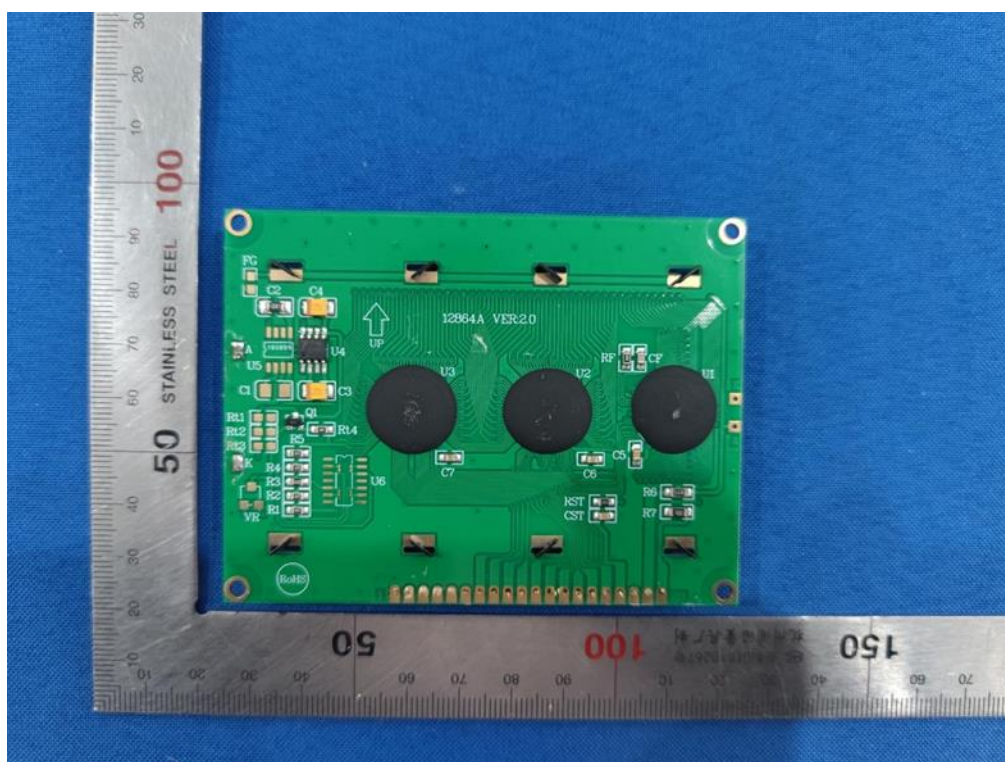
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Internal-6 of the sample



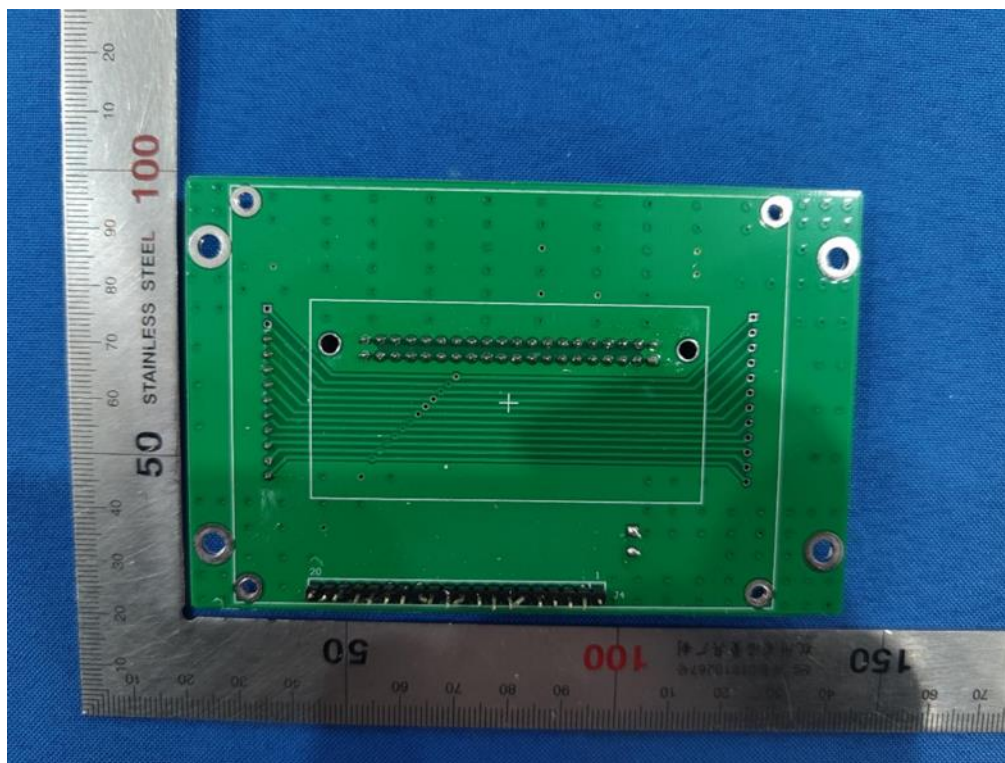
Internal-7 of the sample

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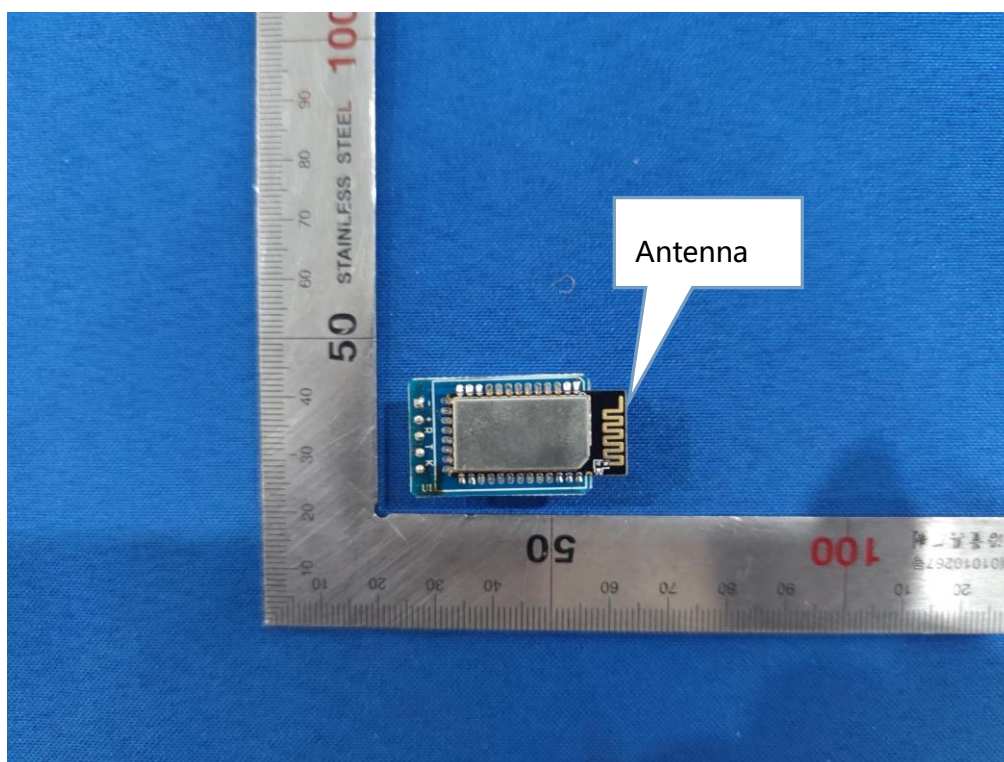
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Internal-8 of the sample



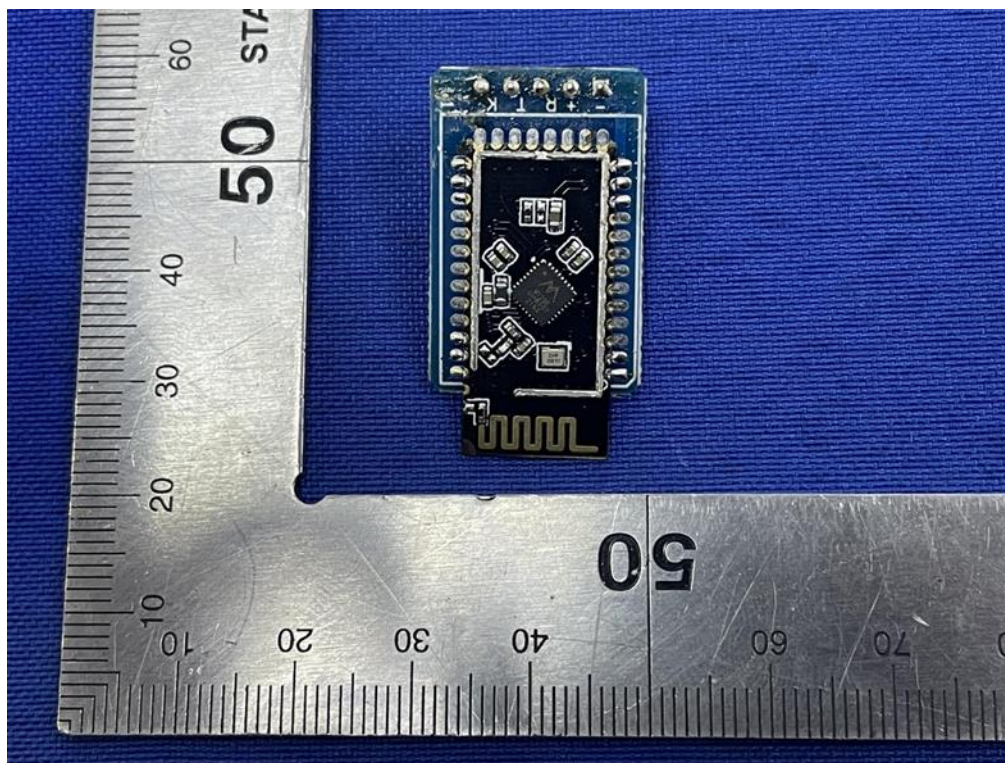
Internal-9 of the sample

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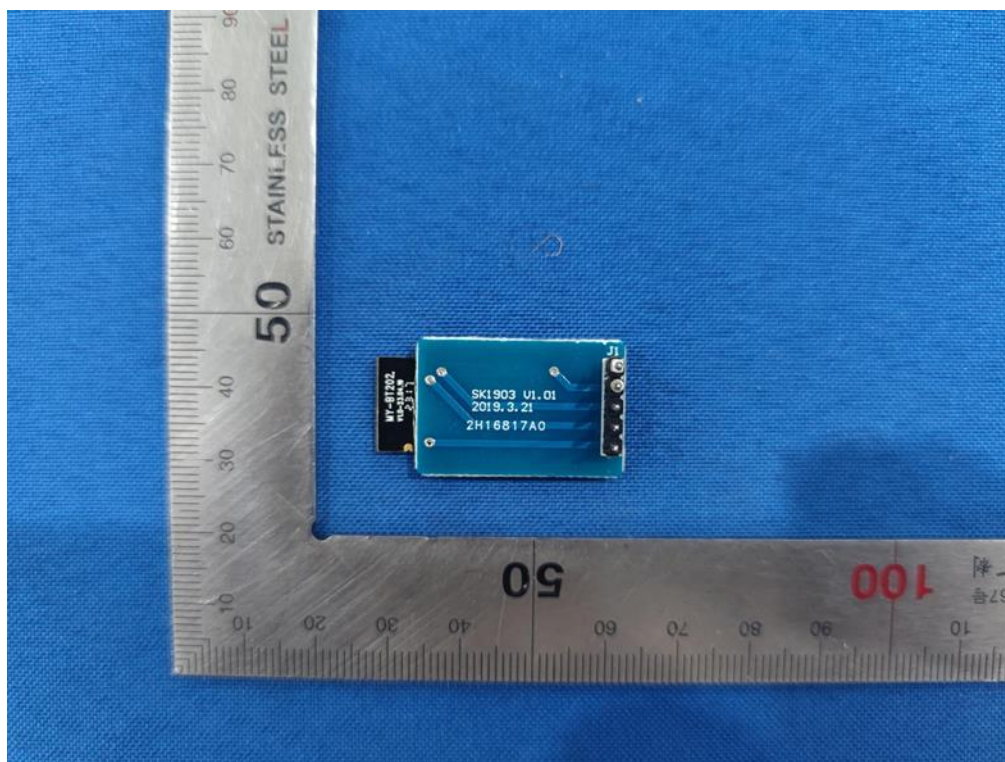
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Internal-10 of the sample



Internal-11 of the sample

End of the report