

MPE TEST REPORT

Report No.: SHE24110067-02HE

Date: 2025-03-27

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Applicant : SKYTECH USA LLC.
Address of Applicant : INCORP SERVICES, INC. 3458 LAKESHORE DRIVE
TALLAHASSEE, FL 32312 US

Product Name : Desktop Computer
Brand Name : STGSivir & STGSivir
Model Name : ABR1924
Sample Acquisition Method : Sent by Client

Sample No. : E24110067-01#03

FCC ID : 2BGCAABR1924

Standard : FCC Part 2.1091

Date of Receipt : 2024-11-21
Date of Test : 2024-11-21~ 2025-03-26
Date of Issue : 2025-03-27

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)	15-35
Humidity (%RH)	30-60
Barometric Pressure (mbar)	860-1060
Ambient noise & Reflection (W/kg)	< 0.012

1.3 Details of Application

Applicant Company Name	SKYTECH USA LLC.
Address	INCORP SERVICES, INC. 3458 LAKESHORE DRIVE TALLAHASSEE, FL 32312 US
Contact Person	Hu yan
Telephone	001-647-8892-868
Email	yan.hu@astsys.com
Manufacturer Company Name	SKYTECH USA LLC.
Address	INCORP SERVICES, INC. 3458 LAKESHORE DRIVE TALLAHASSEE, FL 32312 US
Factory Company Name	SKYTECH USA LLC.
Address	INCORP SERVICES, INC. 3458 LAKESHORE DRIVE TALLAHASSEE, FL 32312 US

1.4 Details of EUT

Product Name	Desktop Computer	
Brand Name	STGSivir & STGSivir	
Test Model Name	ABR1924	
FCC ID	2BGCAABR1924	
Mode of Operation	WIFI 802.11b/g/n(HT20/40)/ax(HE20/40) for 2.4GHz WIFI 802.11a/n(HT20/HT40)/ac(VHT20/VHT40/VHT80) /ax(HE20/40/80) for 5GHz Bluetooth dual mode	
Frequency Range	Mode of Operation	Frequency Range (MHz)

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	802.11b/g/n(HT20/HT40)/ax(HE20/40)	2412~2462
	802.11a/n(20M/40M)/ac(20M/40M/80M)	5180~5240
	/ax(HE20/40/80)	5745~5825
	Bluetooth	2402~2480
Modulation Type	DSSS/OFDM for WLAN 2.4GHz and OFDM/OFDMA for WIFI 5GHz GFSK/8DPSK/π/4DQPSK for Bluetooth	
Antenna Type	Internal Antenna	
Antenna Gain	WIFI 2.4GHz: 1.51dBi WIFI 5GHz U-NII-1: -0.78dBi WIFI 5GHz U-NII-3: 2.19dBi Bluetooth: 1.51dBi	
Hardware version	H311M-K PLUS	
Software version	5.12	

Note:

1. The above information was declared by the manufacture.
2. For more details, please refer to the User's manual of the EUT.

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.

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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)

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)
		Chain 1	Chain 2		ANT 1	ANT 2	MIMO	ANT 1	ANT 2	MIMO	
WIFI 2.4GHz 802.11b	2412~2462	16.69	15.22	1.51	66.07	47.10	N/A	0.013	0.009	N/A	1.0
WIFI 2.4GHz 802.11ax	2412~2462	13.29	13.28	4.52*	30.20	30.13	120.8	0.006	0.006	0.024	1.0
BR/EDR	2402~2480	8.17	N/A	1.51	9.29	N/A	N/A	0.002	N/A	N/A	1.0
BLE	2402~2480	4.75	N/A	1.51	4.23	N/A	N/A	0.001	N/A	N/A	1.0
WIFI 5GHz	5180~5240	11.88	11.95	2.23*	12.88	13.09	52.00	0.003	0.003	0.010	1.0
	5745~5825	13.32	13.67	5.20*	35.56	38.55	148.3	0.007	0.008	0.030	1.0

Note: The * sign in the antenna gain means the directional gain value in the MIMO mode.

Note(s):

- 1 For 1,500 – 100,000MHz: Power Density limit is 1.0 mW/cm²
2. The device can not transmit with WIFI and BT simultaneously, In addition, the chain interface of 2.4Gwifi and 5Gwifi cannot be transmitted simultaneously, so MPE is not evaluated in this configuration.
3. 802.11a/b/g support SISO and 802.11n/ac/ax support MIMO.
4. 2.4GHz Band: Directional gain = GANT +10 log(NANT) =4.52.
5GHz Band:
For U-NII-1: Directional gain = GANT +10 log(NANT) =2.23
For U-NII-3: Directional gain = GANT +10 log(NANT) =5.20.
5. EIRP = Total Transmit Power+ Directional Gain

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



Rear of the sample

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Left of the sample



Right of the sample

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Top of the sample



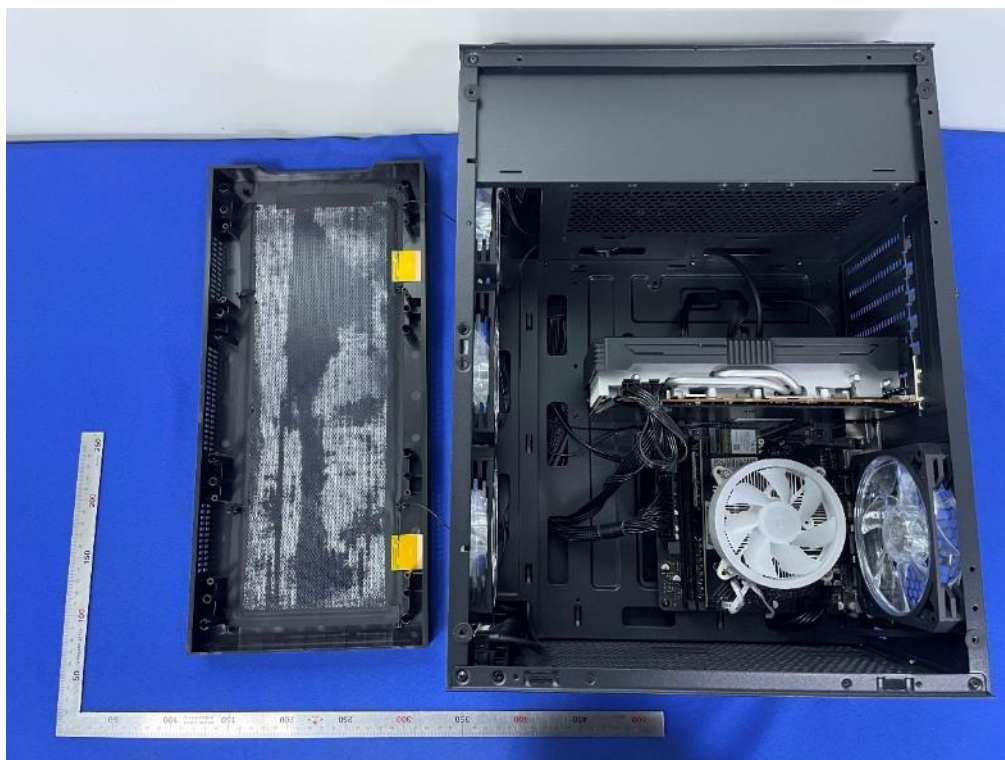
Bottom of the sample

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Open-1 of the sample



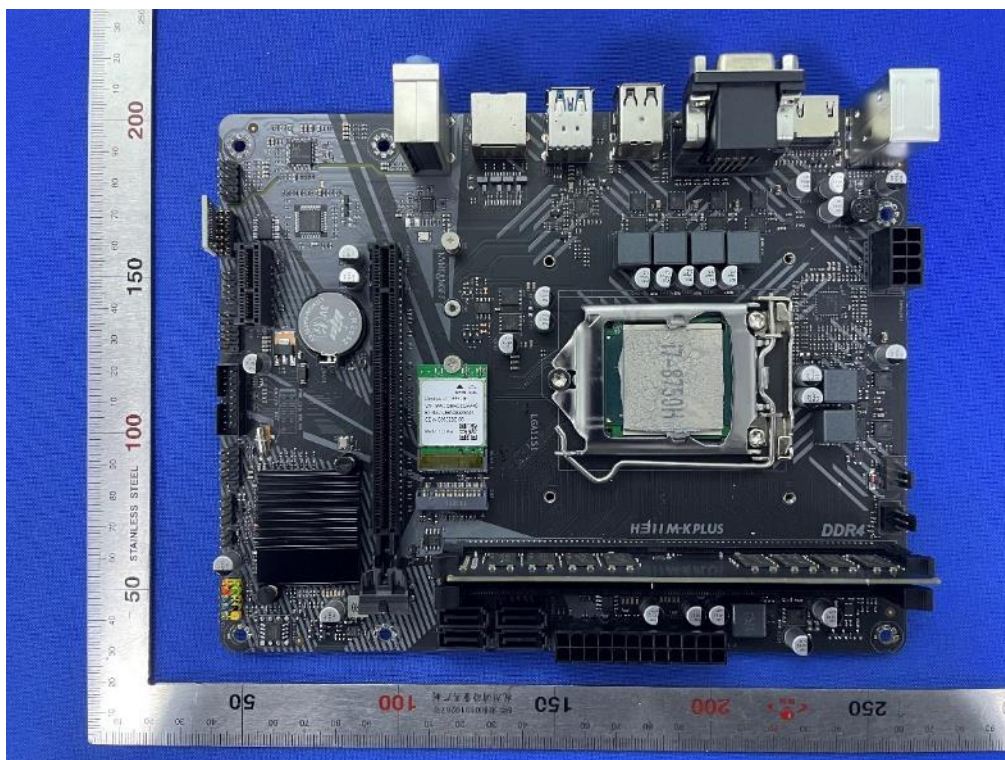
Internal-1 of the sample

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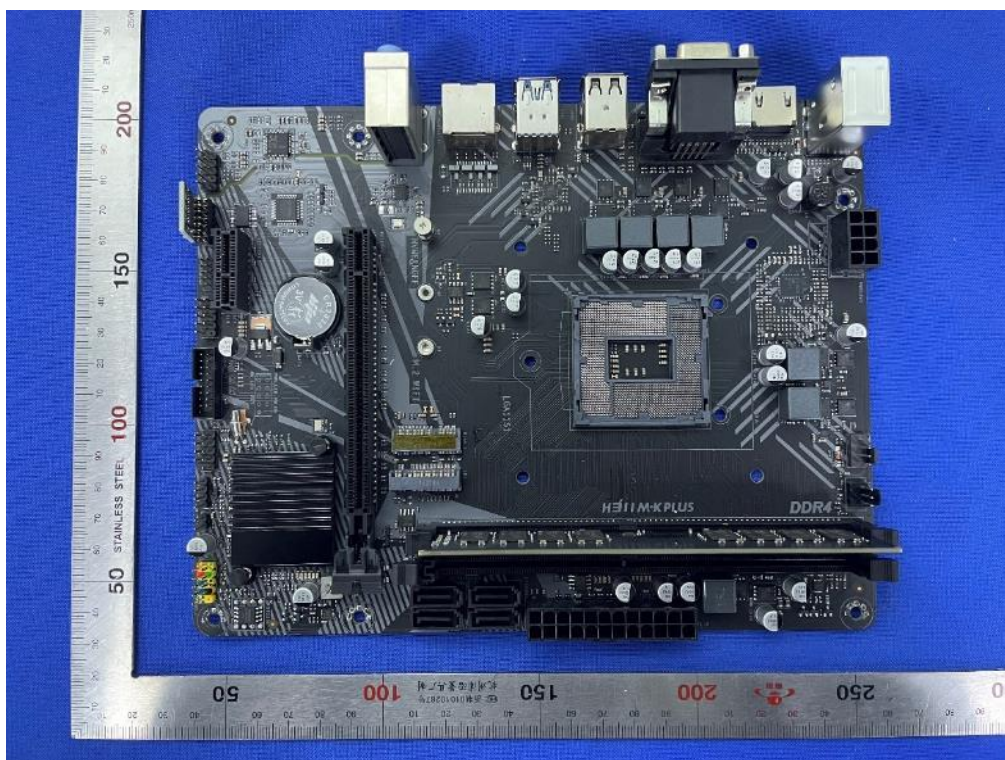
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Internal-2 of the sample



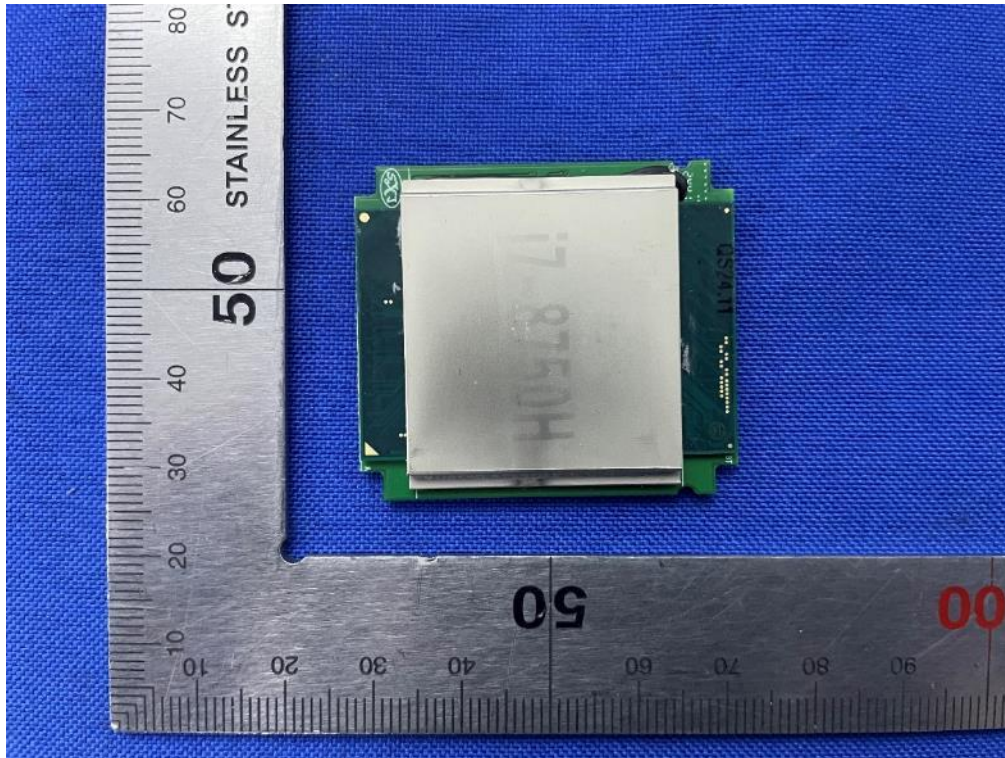
Internal-3 of the sample

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Internal-4 of the sample



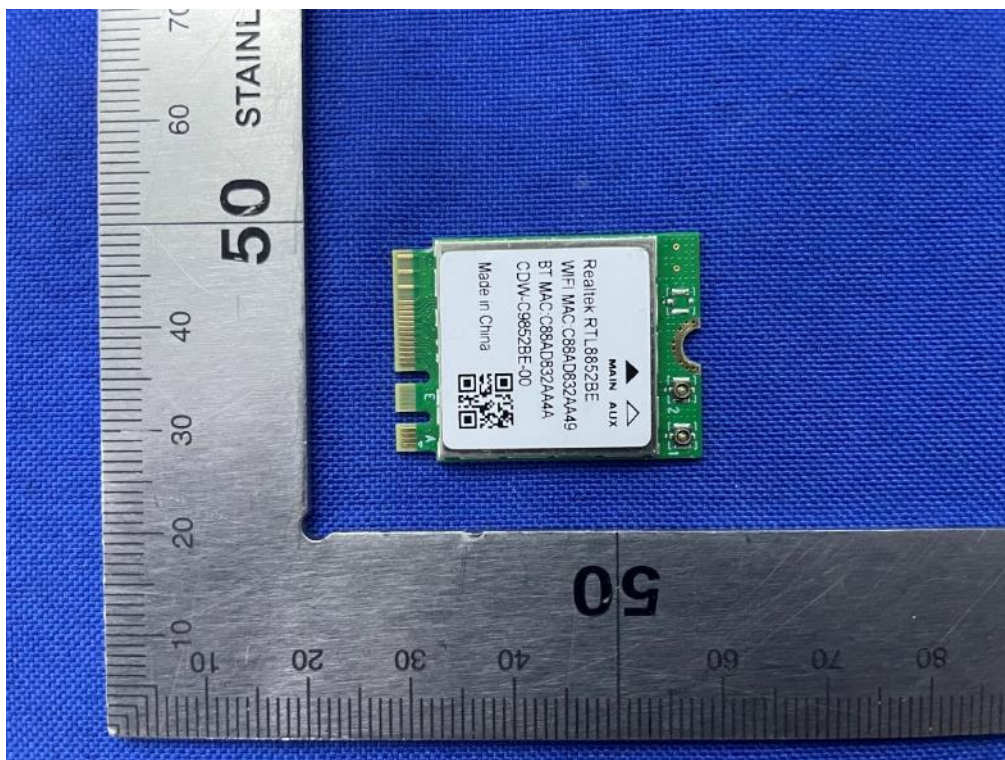
Internal-5 of the sample

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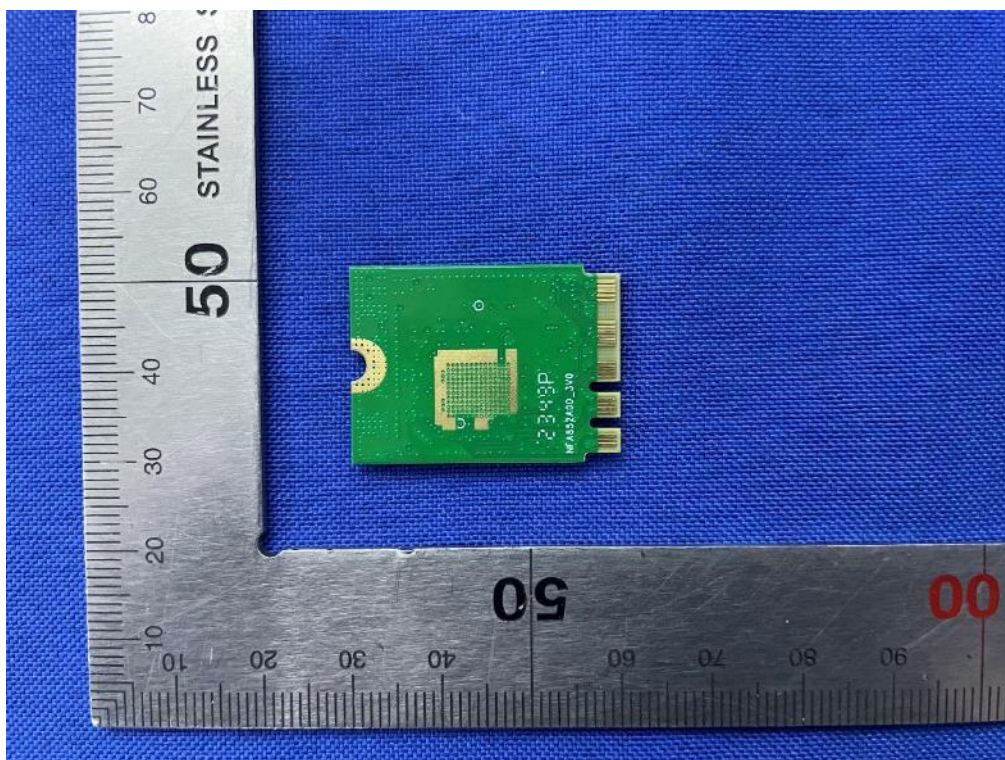
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Internal-6 of the sample



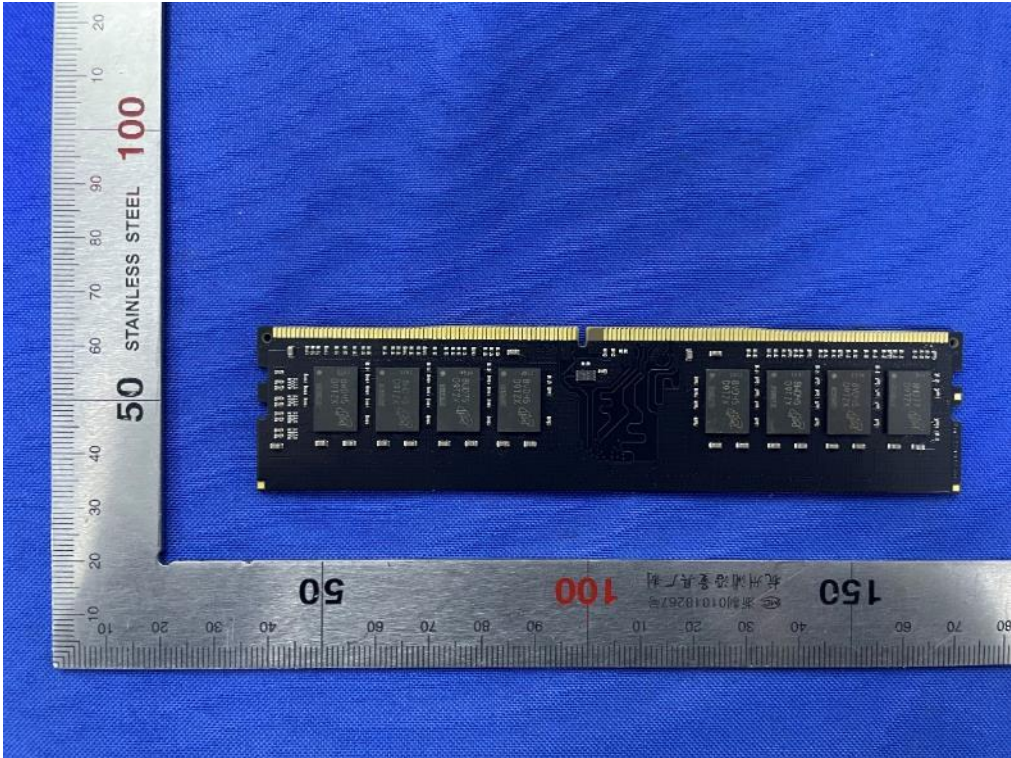
Internal-7 of the sample

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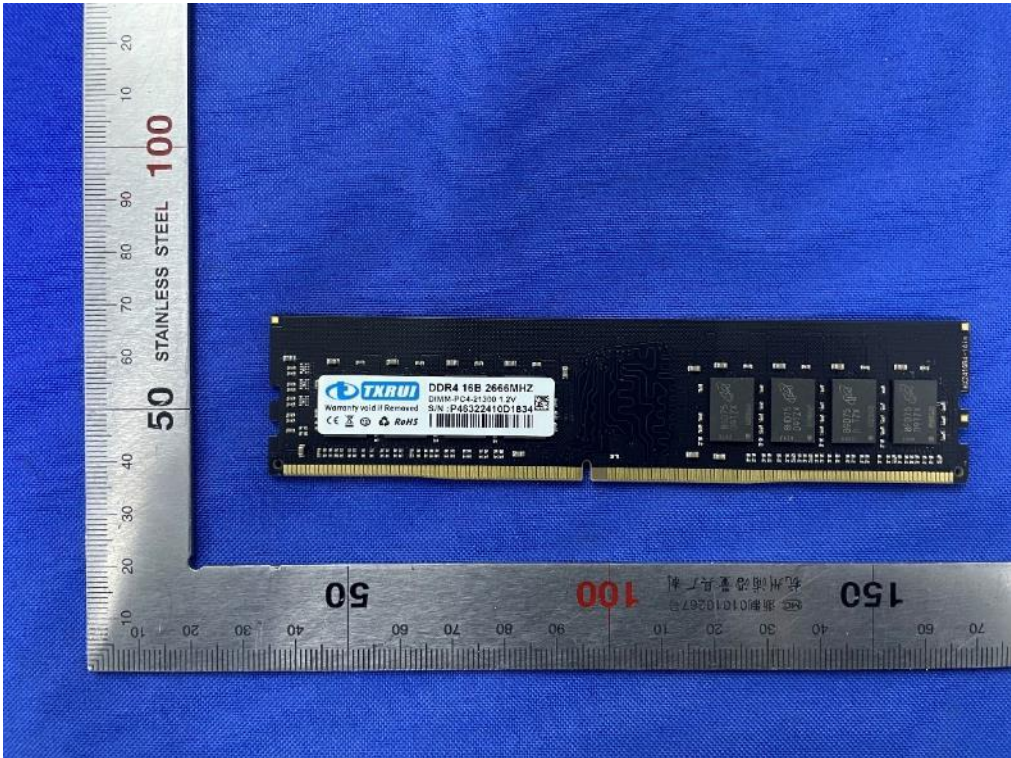
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Internal-8 of the sample



Internal-9 of the sample

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Internal-10 of the sample



Internal-11 of the sample

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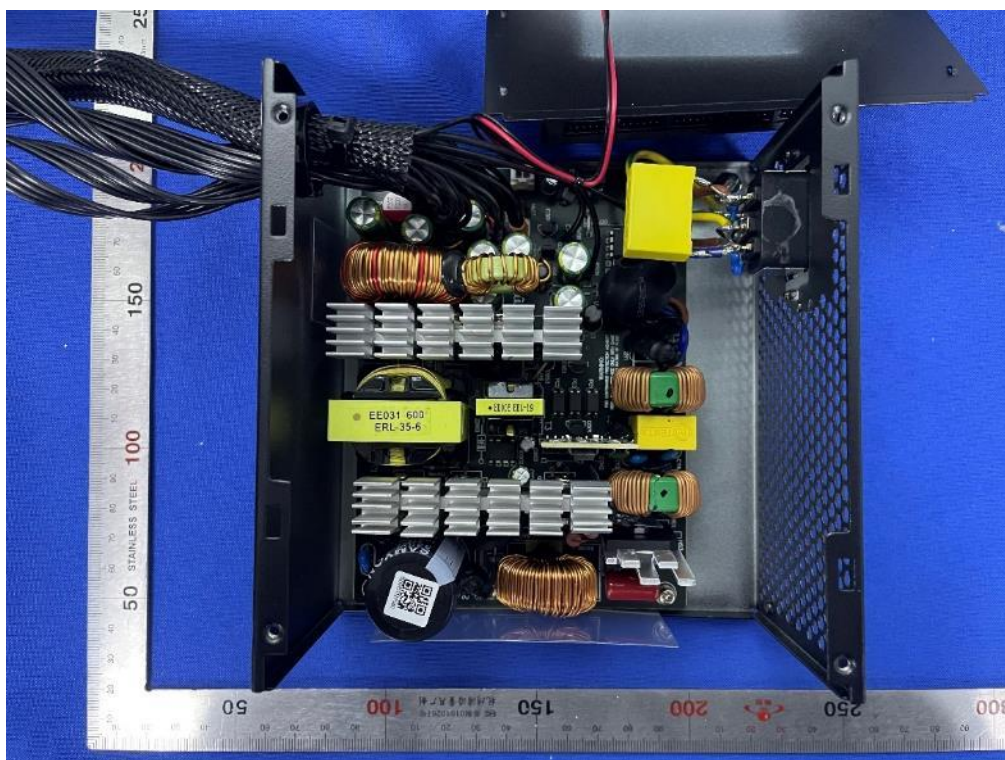
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Internal-12 of the sample



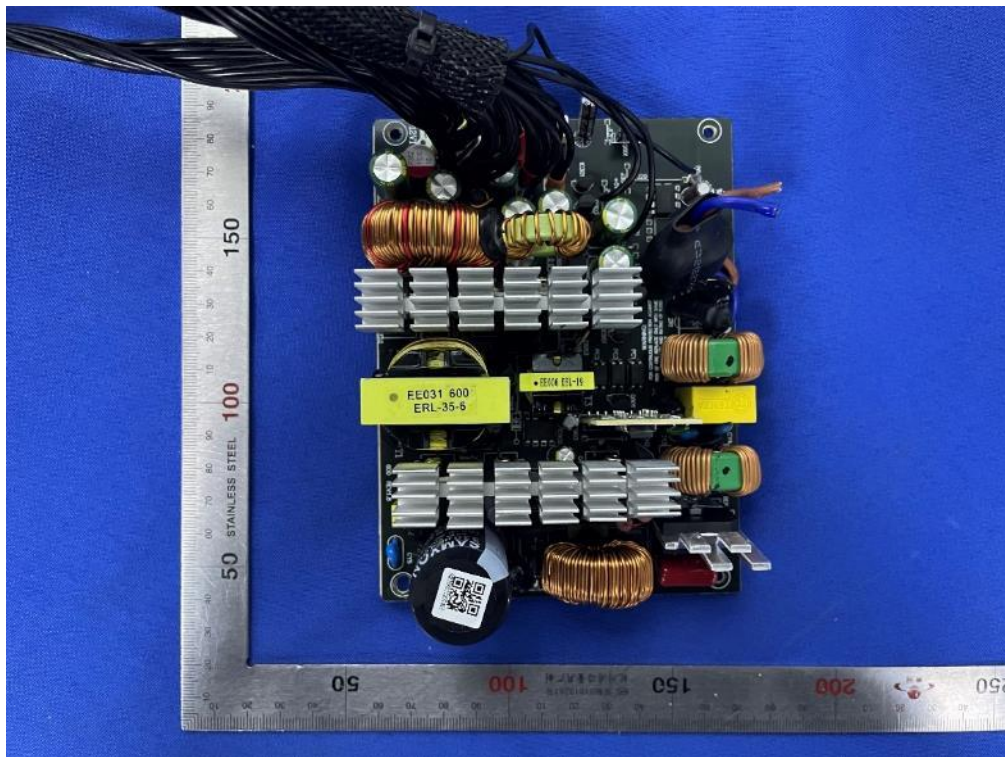
Internal-13 of the sample

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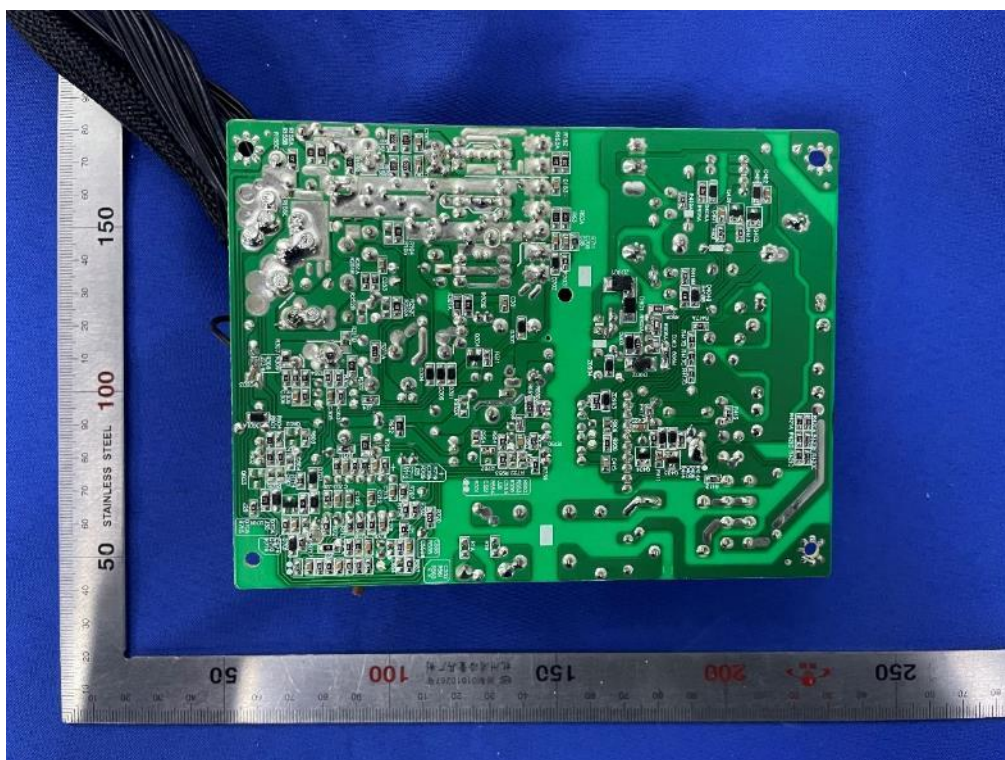
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Internal-14 of the sample



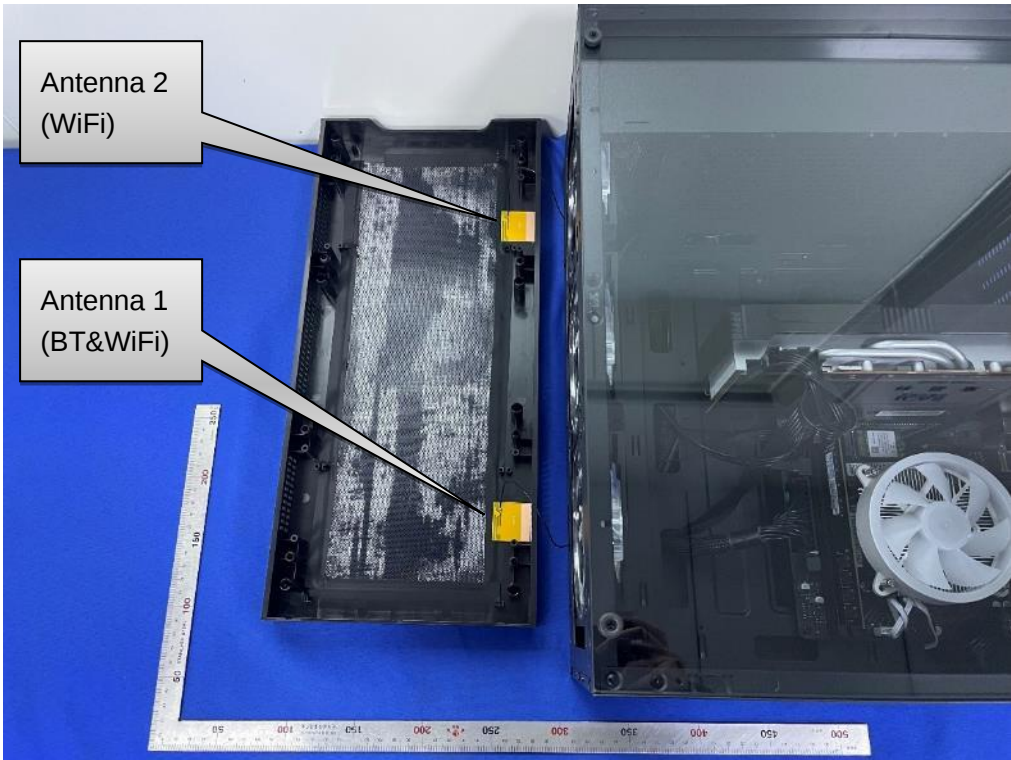
Internal-15 of the sample

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Antenna Position



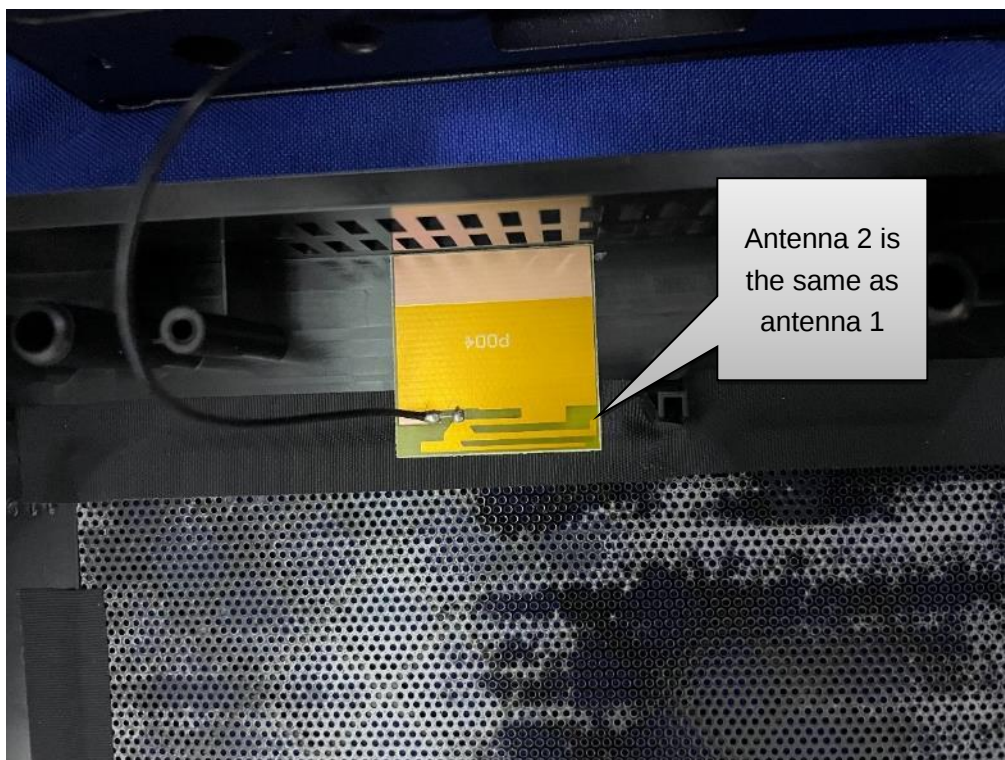
Antenna Interface

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Antenna Photo

End of the report