

MPE TEST REPORT

Report No.: SHE25110056-02DE

Date: 2026-04-16

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Applicant : Shanghai AllyNav Technology Co.,Ltd.
Address of Applicant : Room 201, Building 1, No 215, Gaoguang RD, Qingpu District, Shanghai, China

Product Name : GNSS Receiver
Brand Name : N/A
Model Name : R73
Sample Acquisition Method : Sent by Client
Sample No. : E25110056-01#01

FCC ID : 2AT4H-R73

Standard : FCC Part 2.1091

Date of Receipt : 2026-01-16
Date of Test : 2026-01-26 ~ 2026-04-11
Date of Issue : 2026-04-16

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	Shanghai Ingeer Testing Technology Co., Ltd.
Address	No.1298, Pingan Road, Minhang District, Shanghai, China
Telephone	0086 21-51682999

1.2 Details of Application

Applicant Company Name	Shanghai AllyNav Technology Co.,Ltd.
Applicant Company Address	Room 201, Building 1,No 215, Gaoguang RD, Qingpu District,Shanghai, China
Contact Person	Kaibin Yao
Telephone	+86-021-61200339
Email	yaokaibin@allynav.cn
Manufacturer Company Name	Shanghai AllyNav Technology Co.,Ltd.
Manufacturer Company Address	Room 201, Building 1,No 215, Gaoguang RD, Qingpu District,Shanghai, China
Factory Company Name	Shanghai AllyNav Technology Co.,Ltd.
Factory Company Address	Room 201, Building 1,No 215, Gaoguang RD, Qingpu District,Shanghai, China

1.3 Details of EUT

Product Name	GNSS Receiver		
Brand Name	N/A		
Test Model Name	R73		
FCC ID	2AT4H-R73		
Mode of Operation	LTE FDD Band 2/4/5/12/13/25/26/66 LTE TDD Band 41 WLAN 802.11b/g/n(HT20/40) for 2.4GHz		
Frequency Range	Band	Tx (MHz)	Rx (MHz)
	LTE FDD Band 2	1850 ~ 1910	1930 ~ 1990
	LTE FDD Band 4	1710 ~ 1755	2110 ~ 2155
	LTE FDD Band 5	824 ~ 849	869 ~ 894
	LTE FDD Band 12	699 ~ 716	729 ~ 746
	LTE FDD Band 13	777 ~ 787	746 ~ 756
	LTE FDD Band 25	1850 ~ 1915	1930 ~ 1995
	LTE FDD Band 26	814 ~ 849	859 ~ 894
	LTE TDD Band 41	2496 ~ 2690	2496 ~ 2690
	LTE FDD Band 66	1710 ~ 1780	2110 ~ 2200
	WLAN 2.4G	2412MHz ~ 2462MHz	
Modulation Type	QPSK/16QAM for LTE; DSSS/OFDM for WLAN 2.4GHz		

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Antenna Type	Internal Antenna
Antenna Gain	LTE FDD Band 2: -5.70 dBi LTE FDD Band 4: 1.00 dBi LTE FDD Band 5: -3.10 dBi LTE FDD Band 12: -3.10 dBi LTE FDD Band 13: -3.10 dBi LTE FDD Band 25: -5.70 dBi LTE FDD Band 26: -3.10 dBi LTE TDD Band 41: -5.50 dBi LTE FDD Band 66: 1.00 dBi WLAN 2.4G: 3.5 dBi
Extreme Temperature Range	-40℃~ +75℃
Hardware version	PCBR70V1.3
Software version	LS-GNSS-R73 V1.3.3

1. The above information was declared by the manufacture.
2. 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 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:

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

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)	Power Density / Limit	Limit (mW/cm ²)
LTE Band 2	1850 ~ 1910	23.50	-5.70	60.26	0.01199	0.01199	1.0
LTE Band 4	1710 ~ 1755	24.30	1.00	338.84	0.06740	0.06740	1.0
LTE Band 5	824 ~ 849	25.16	-3.10	160.69	0.03197	0.05813	0.55
LTE Band 12	699 ~ 716	24.50	-3.10	138.04	0.02746	0.05843	0.47
LTE Band 13	777 ~ 787	22.43	-3.10	85.70	0.01705	0.03279	0.52
LTE Band 25	1850 ~ 1915	23.15	-5.70	55.59	0.01106	0.01106	1.0
LTE Band 26(Part90)	814 ~ 824	23.12	-3.10	100.46	0.01998	0.03633	0.55
LTE Band 26(Part22)	824 ~ 849	23.84	-3.10	118.58	0.02359	0.04289	0.55
LTE Band 41	2496 ~ 2690	22.57	-5.50	50.93	0.01013	0.01013	1.0
LTE Band 66	1710 ~ 1780	22.78	1.00	238.78	0.04750	0.04750	1.0
WLAN 2.4GHz	2400~2483.5	18.01	3.50	141.58	0.02816	0.02816	1.0

2.4 Results for transmit simultaneously

Configurations	Maximum MPE Value(WWAN + WLAN)			Limit
	WWAN	2.4G WLAN	Transmit Simultaneously	
LTE+ 2.4G_WLAN	0.06740	0.02816	0.09556	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. Since WWAN and WIFI can be transmit simultaneously.
4. 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 External Photo of the Sample



All of the sample



Front of the sample

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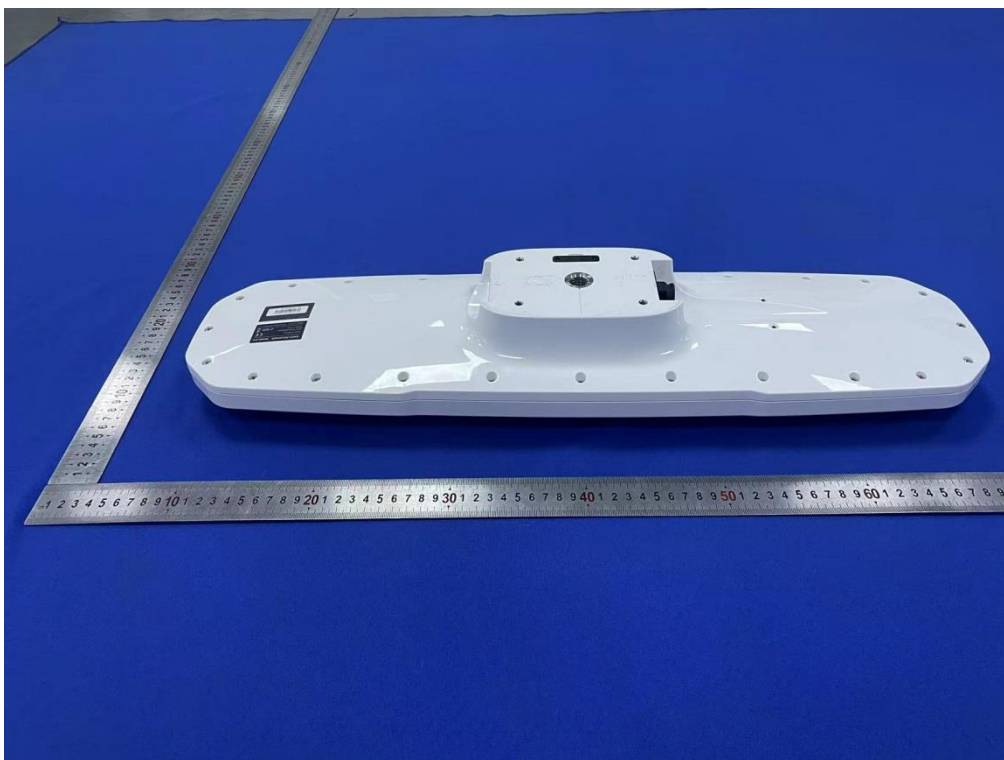
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Rear of the sample



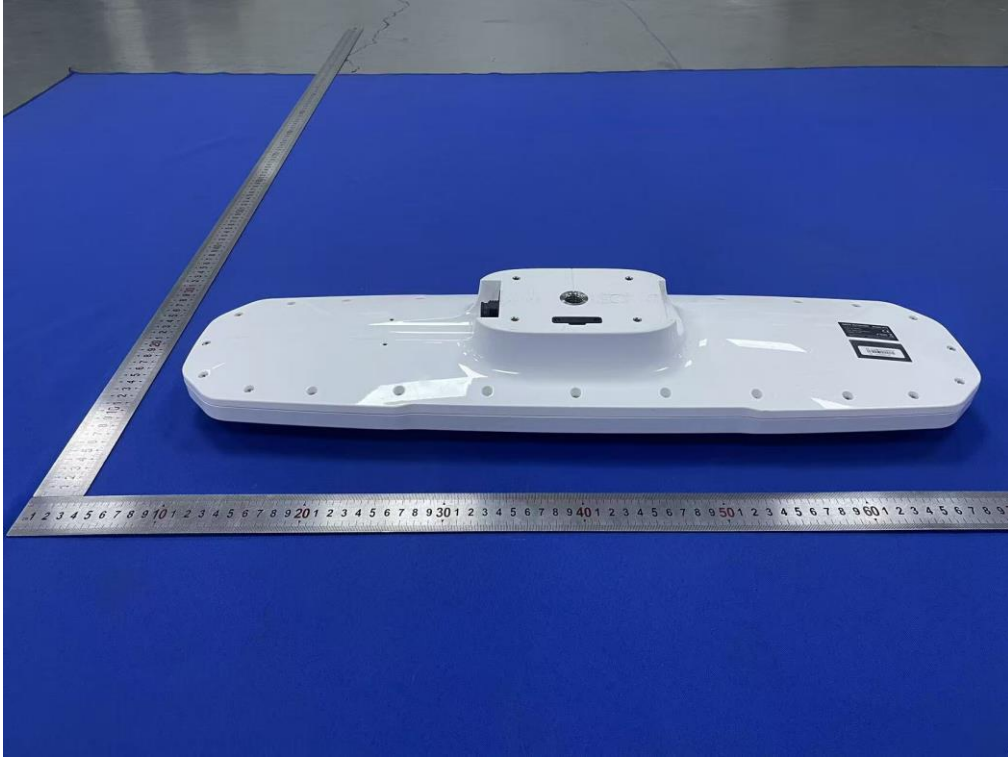
Left of the sample

MPE TEST REPORT

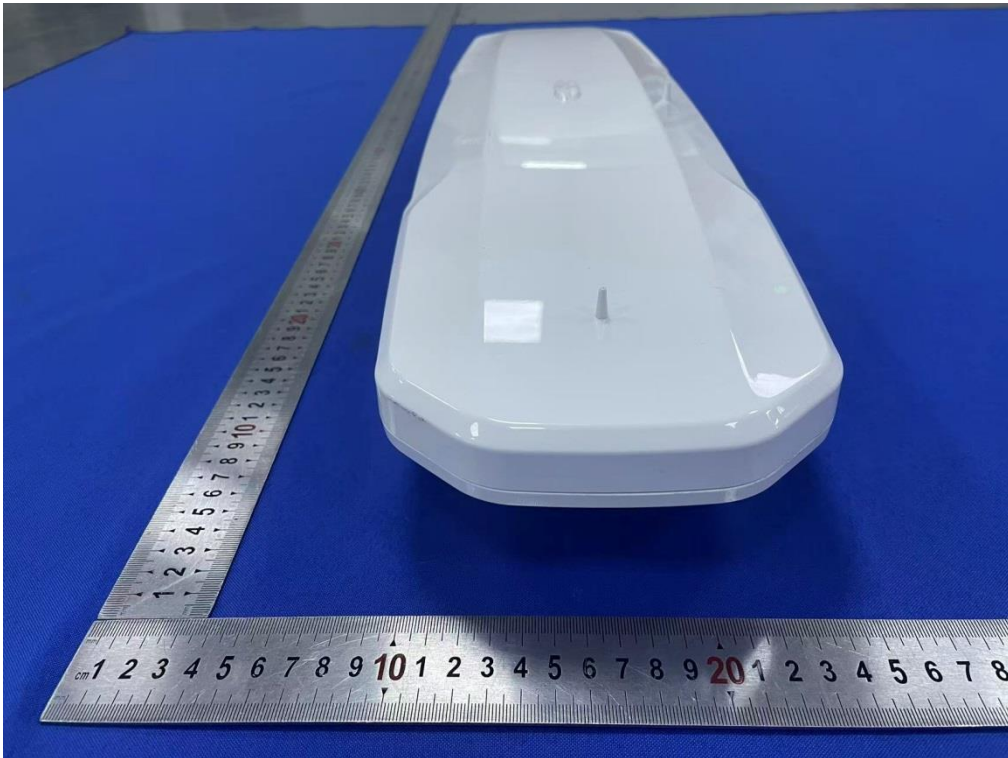
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Right of the sample



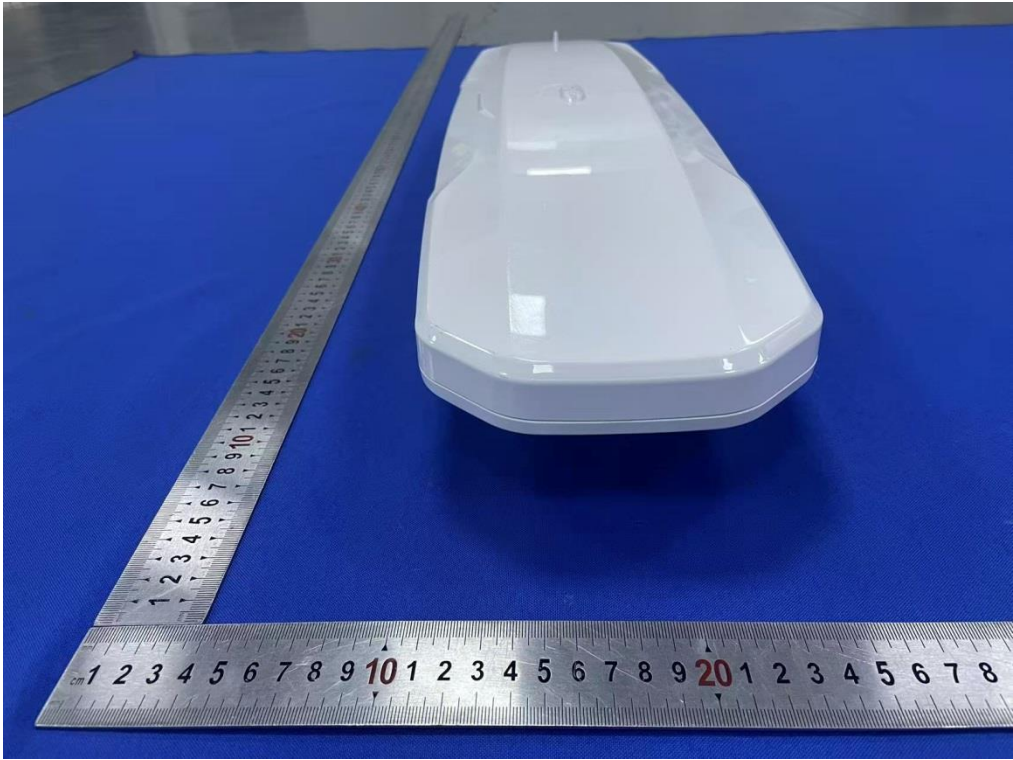
Top of the sample

MPE TEST REPORT

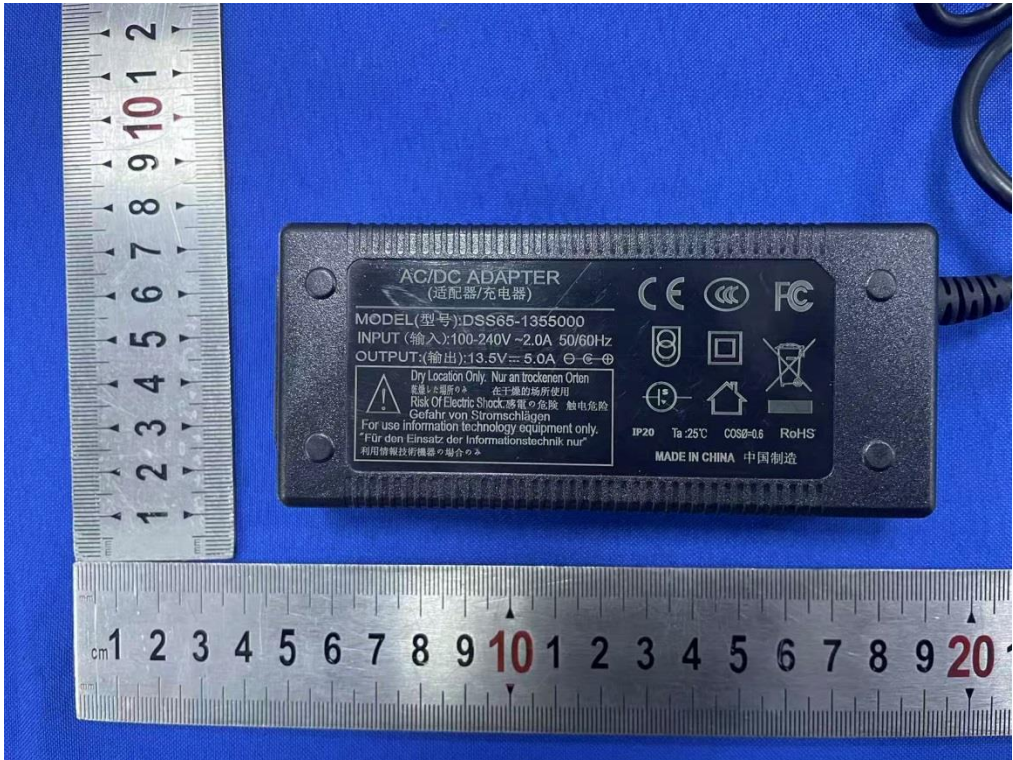
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Bottom of the sample



Adapter of the sample

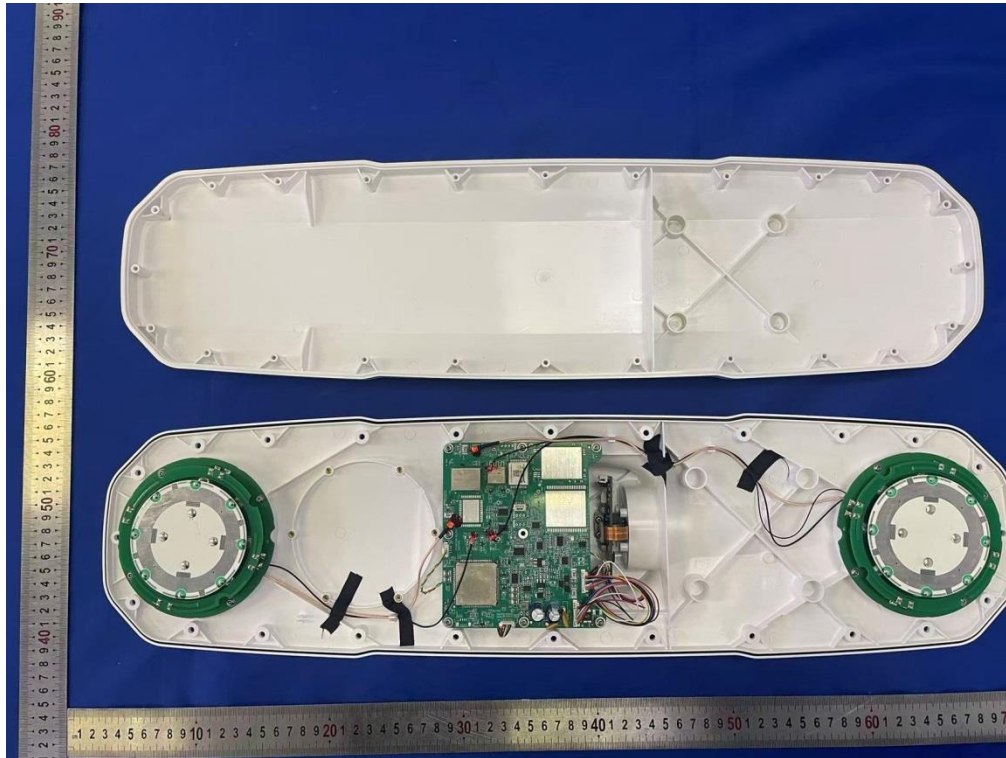
MPE TEST REPORT

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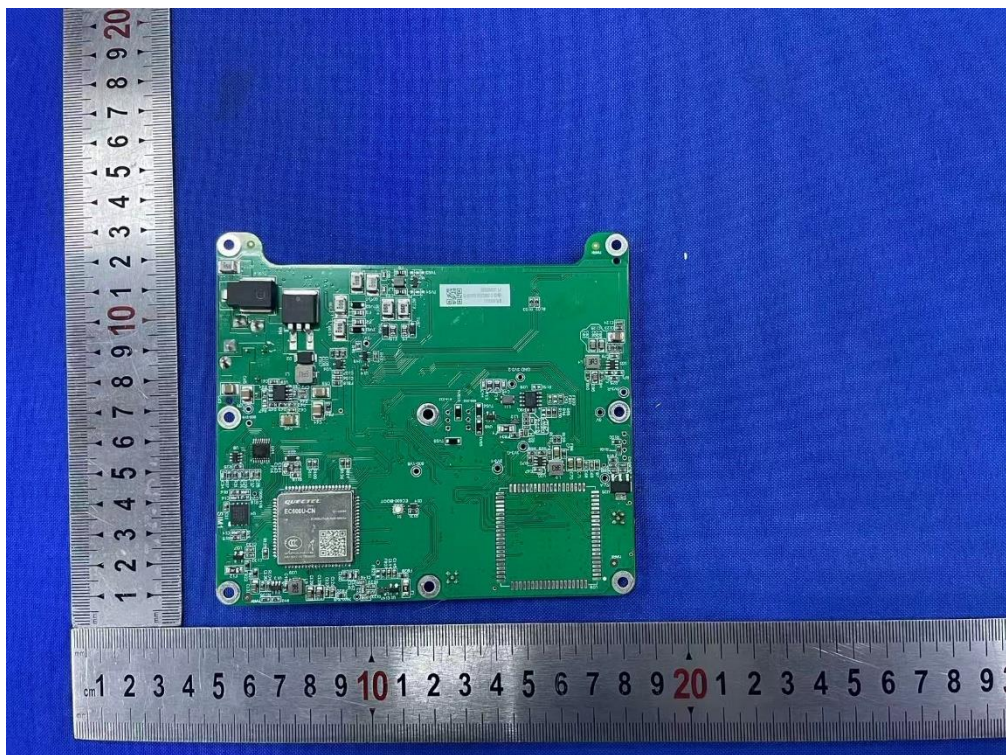
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3.2 Internal Photo of the Sample



Open of the sample



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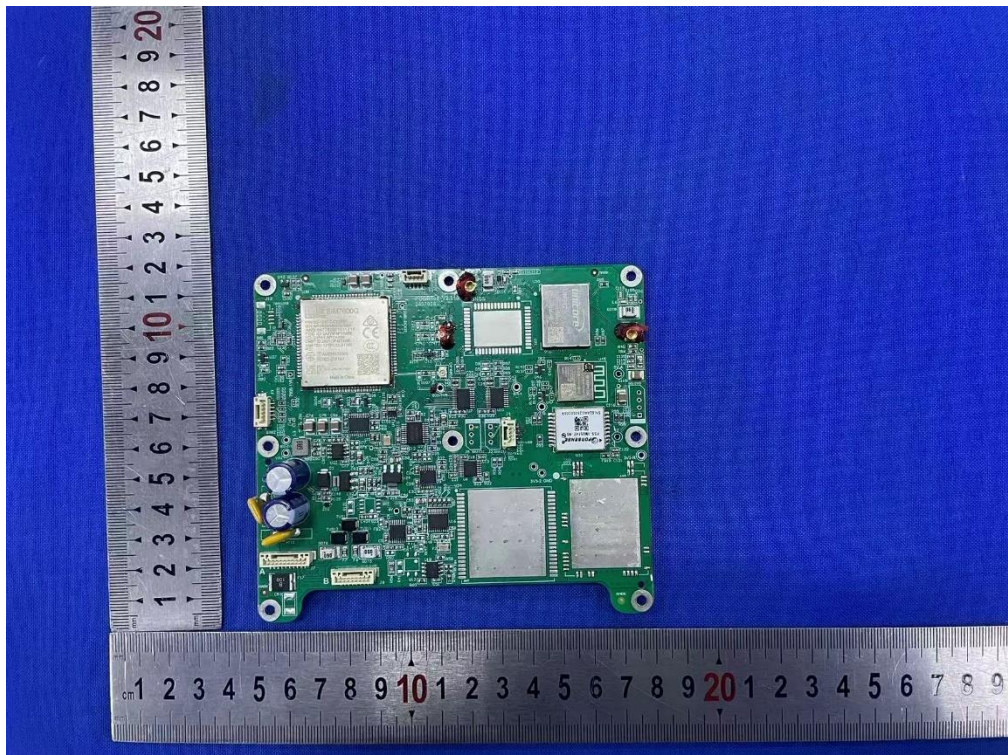
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Internal-1 of the sample



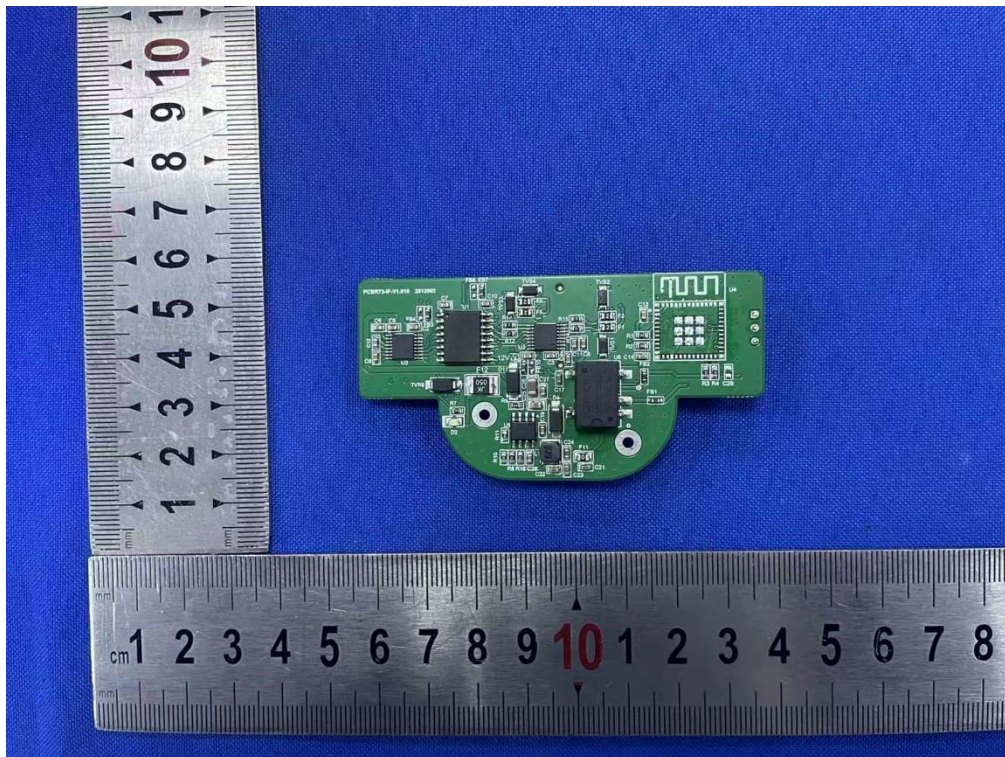
Internal-2 of the sample

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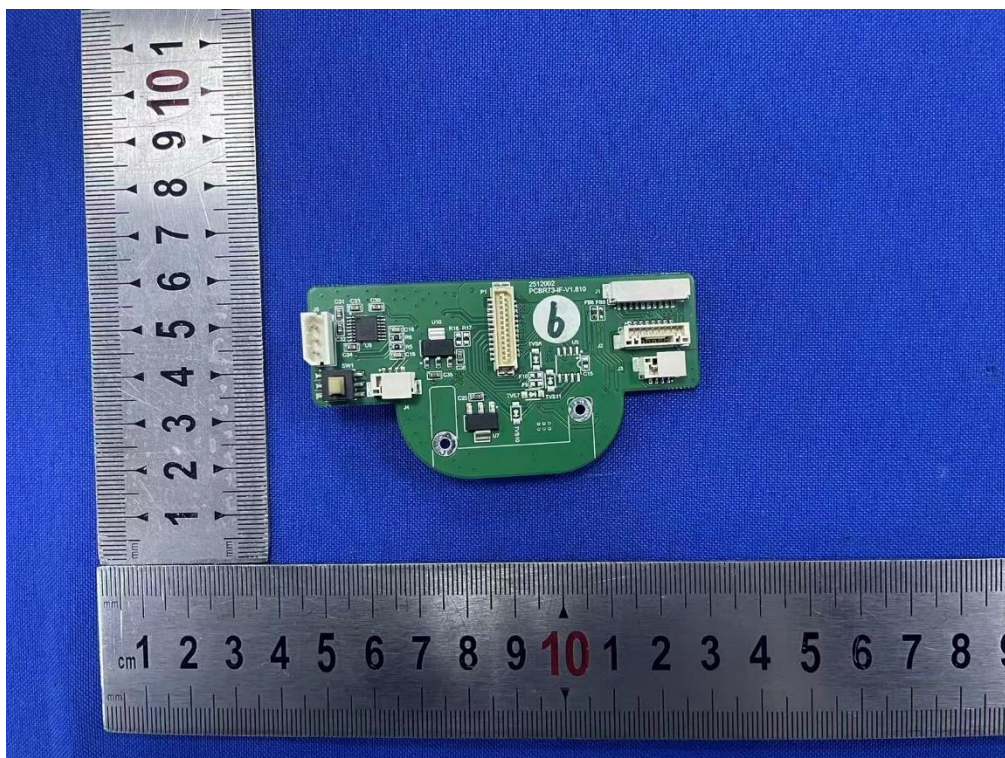
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Internal-3 of the sample



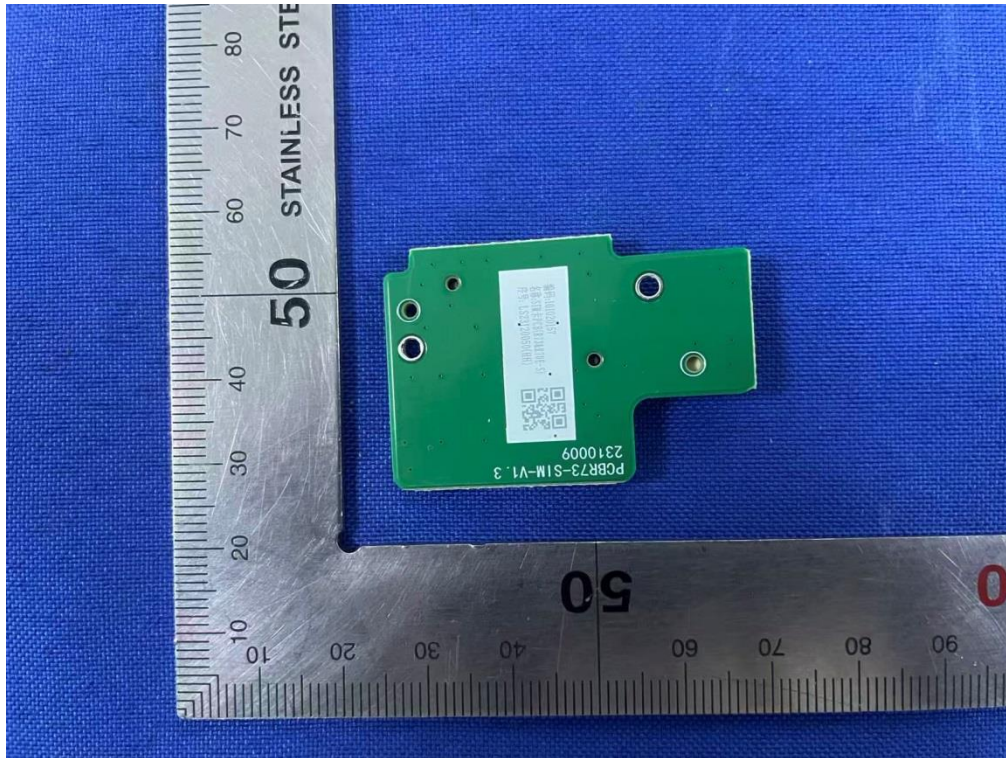
Internal-4 of the sample

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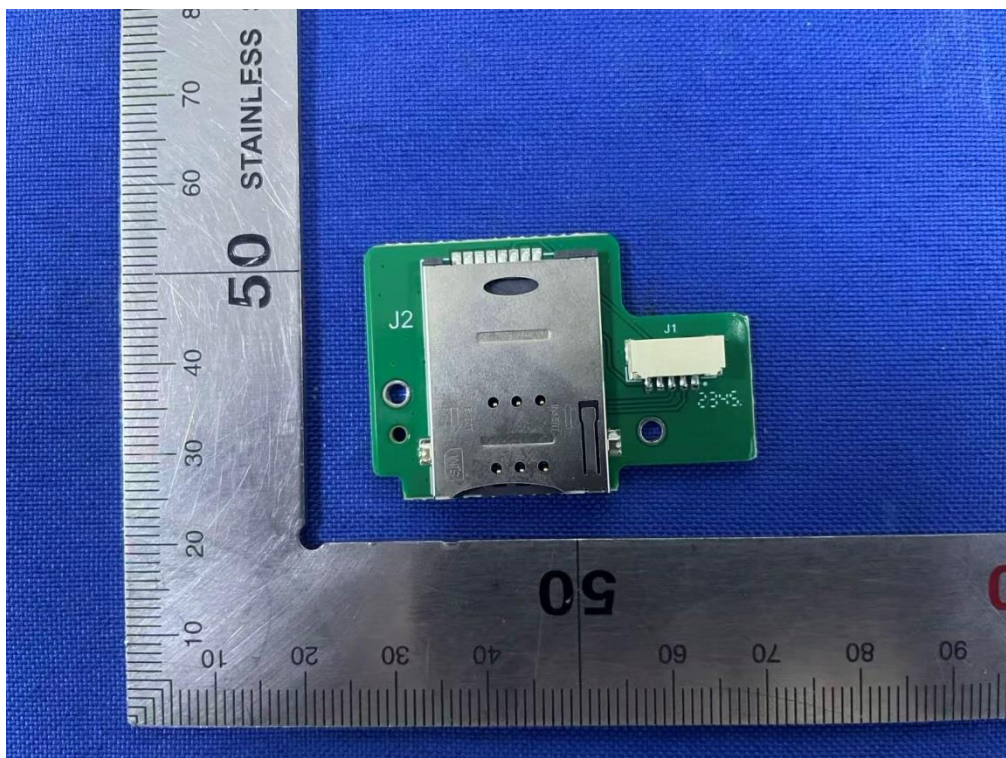
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Internal-5 of the sample



Internal-6 of the sample

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LTE Module



Wi-Fi Module

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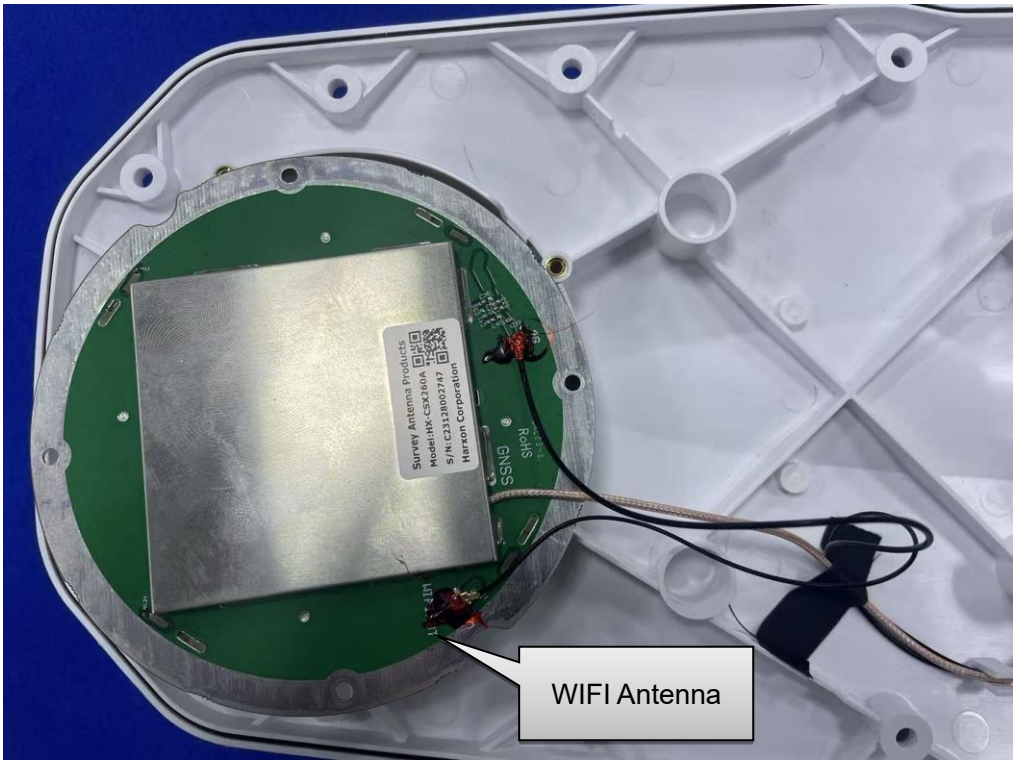
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GNSS Module



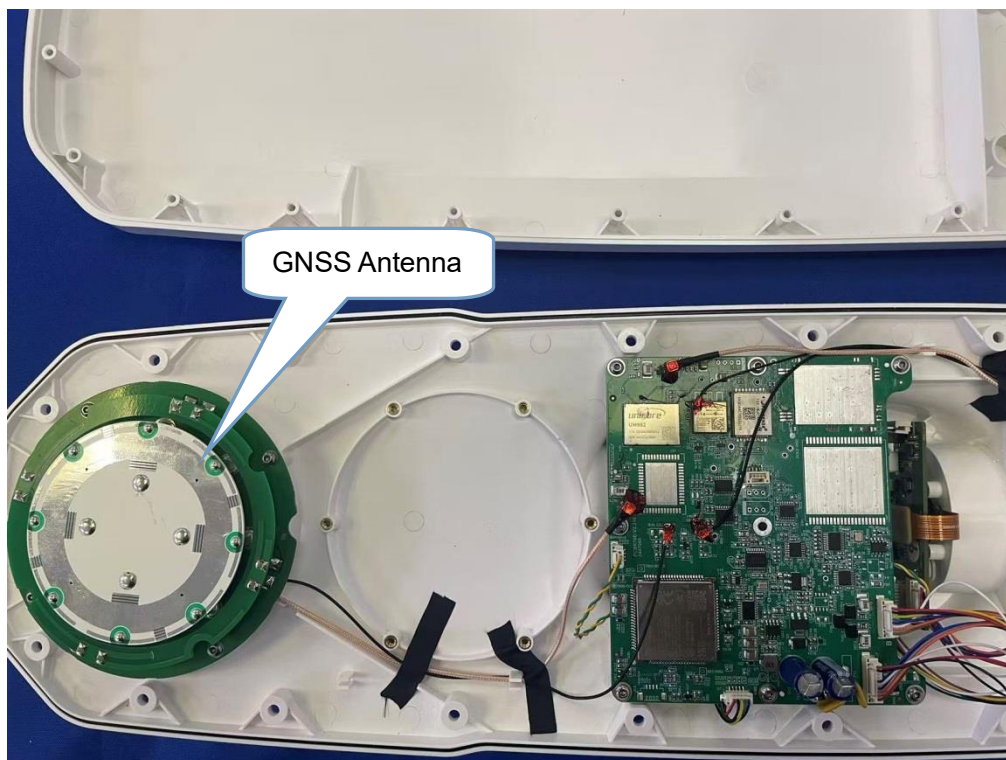
WIFI Antenna of the sample

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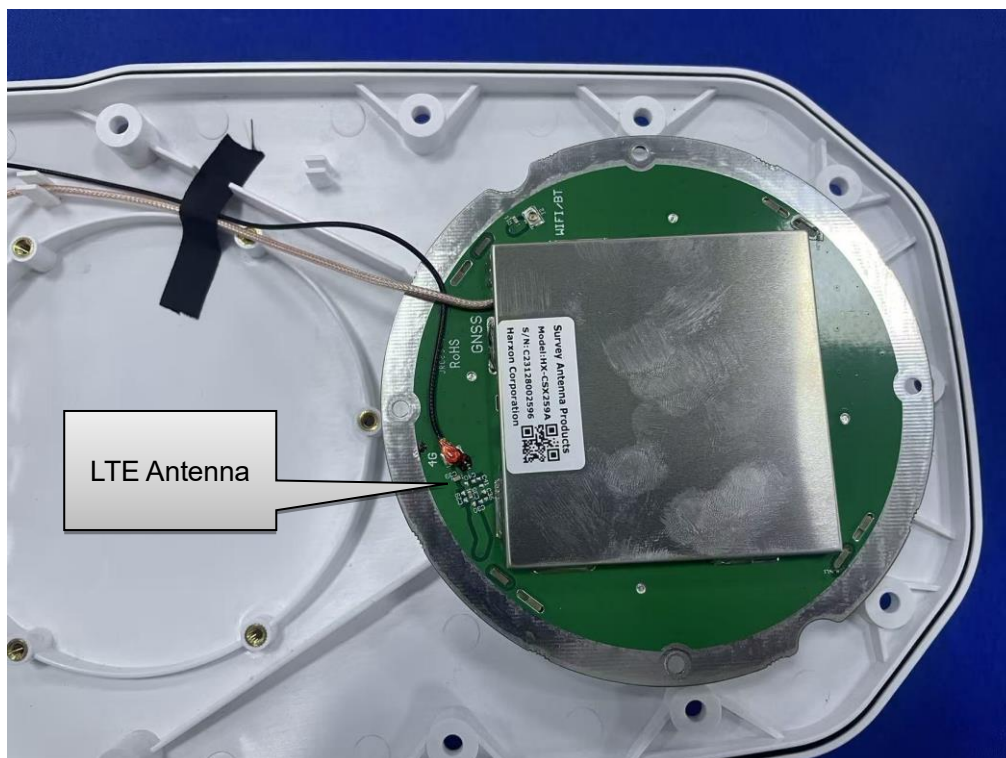
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GNSS Antenna of the sample



LTE Antenna(7600-4G) of the sample

End of the report