

MPE TEST REPORT

Report No.: SHE23020098-02CE

Date: 2023-03-30

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Applicant : ShangHai Ehong Technology Co.,Ltd
Address of Applicant : Suite501,No.3 building,No.439 Jinglian road,Minhang district,Shanghai,China

Product Name : Ehong BLE Module
Brand Name : Ehong
Model Name : EH-MC25, EH-MC25B
Sample Acquisition Method : Sent by Client
Sample No. : E23020098-01#04(EH-MC25 Model)
E23020098-01#05(EH-MC25B Model)

FCC ID : 2ACCRM25

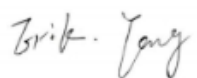
Standard : FCC Part 2.1091

Date of Receipt : 2023-03-08
Date of Test : 2023-03-21~ 2023-03-28
Date of Issue : 2023-03-30

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:



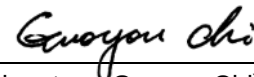
(Erik Yang)

Reviewed by:



(Jennifer Zhou)

Approved by:



(Authorized signatory: Guoyou Chi)

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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	ShangHai Ehong Technology Co.,Ltd.
Address	Suite501,No.3 building,No.439 Jinglian road,Minhang district,Shanghai,China
Contact Person	Rik Tang
Telephone	02164769993
Email	rik.tang@ehonglink.com
Manufacturer Company Name	ShangHai Ehong Technology Co.,Ltd.
Address	Suite501,No.3 building,No.439 Jinglian road,Minhang district,Shanghai,China
Factory Company Name	ShangHai Ehong Technology Co.,Ltd.
Address	Suite501,No.3 building,No.439 Jinglian road,Minhang district,Shanghai,China

1.4 Details of EUT

Product Name	Ehong BLE Module
Brand Name	Ehong
Test Model Name	EH-MC25, EH-MC25B
Difference Description	All the same except for the antenna EH-MC25 Model is the pcb antenna EH-MC25B Model is the external antenna
FCC ID	2ACCRMC25
Mode of Operation	Bluetooth BLE Version 5.2
Frequency Range	2402MHz ~ 2480MHz
Modulation Type	GFSK
RF Output Power	EH-MC25(4.08dBm)

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	EH-MC25B(3.46dBm)
Antenna Type	EH-MC25(PCB Antenna) EH-MC25B(External Antenna)
Antenna Gain	EH-MC25: 0.4dBi EH-MC25B: 3.0dBi
Hardware Version	V2.0
Software Version	V1.0.0

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

Model: EH-MC25

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)
BLE	2402 ~ 2480	4.08	0.40	2.81	0.00056	1.0

Model: EH-MC25B

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)
BLE	2402 ~ 2480	3.46	3.00	4.43	0.00088	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

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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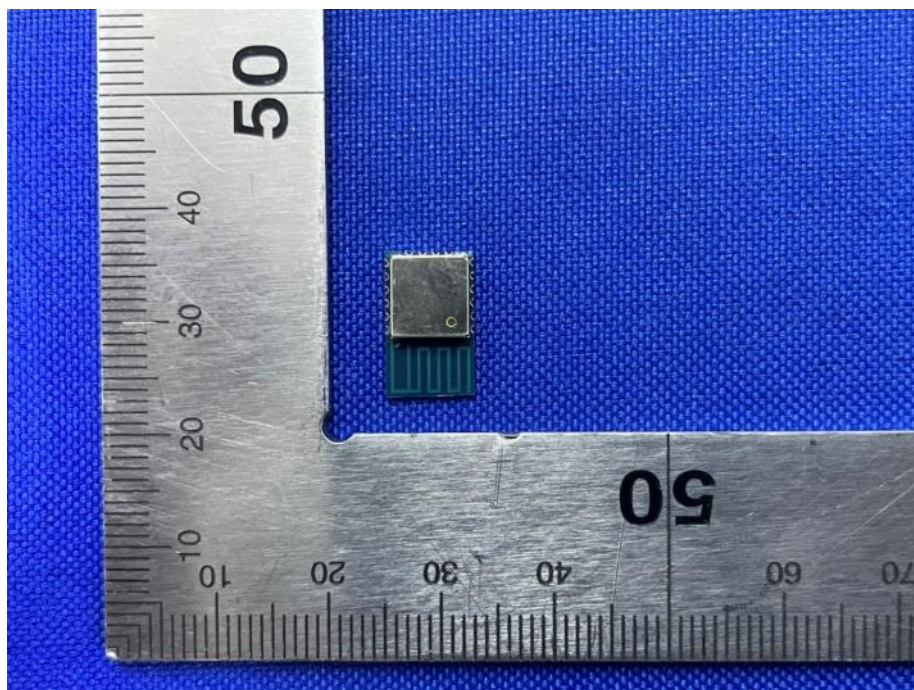
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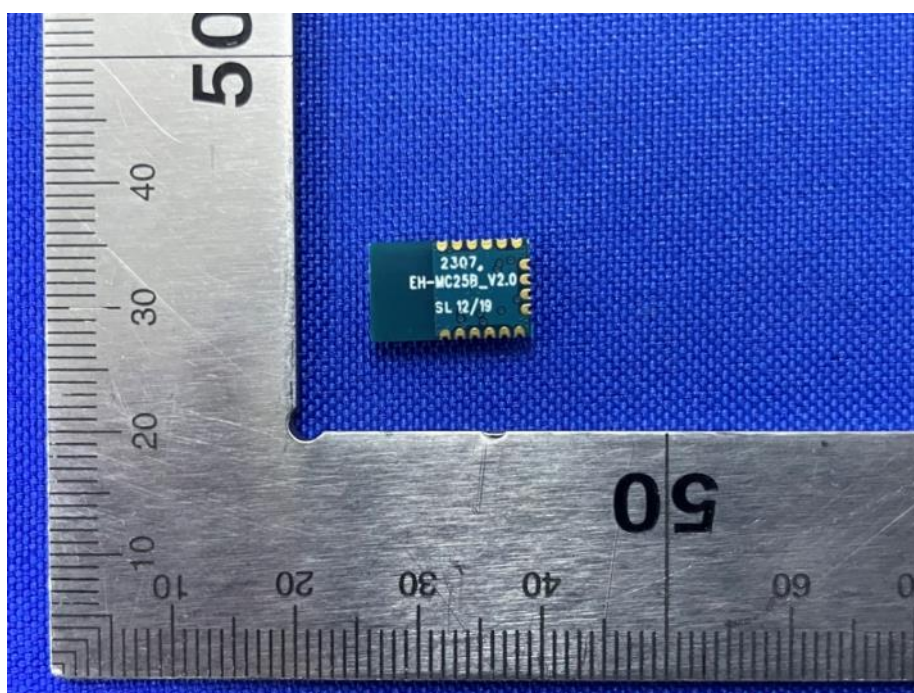
3 Appendixes

3.1 Sample Photograph

Model:EH-MC25



Front of the sample



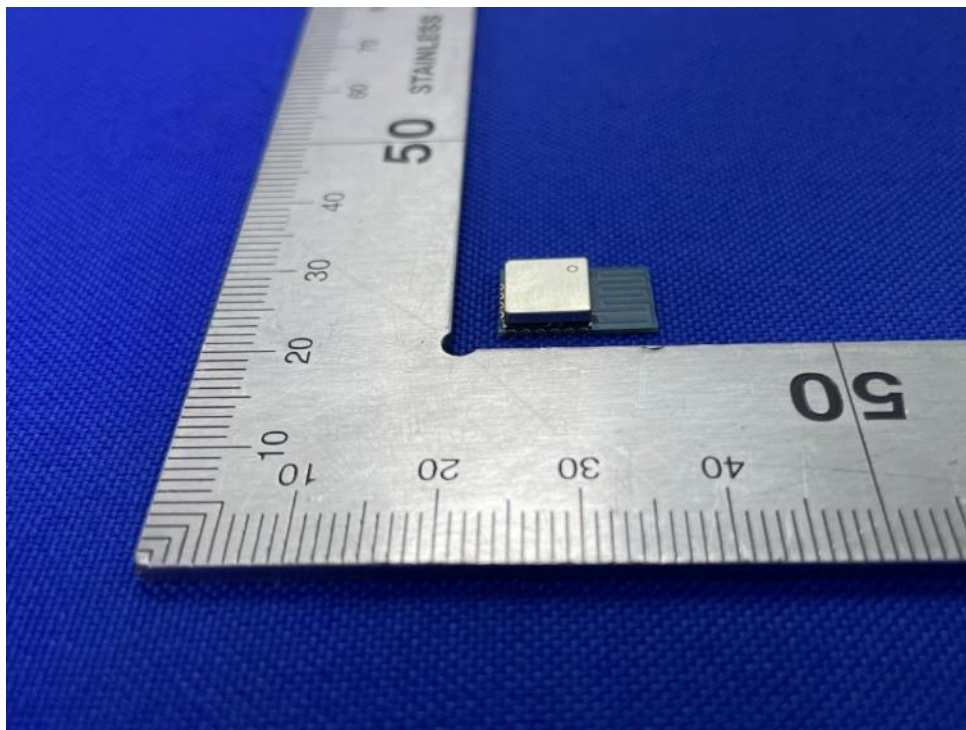
Rear of the sample

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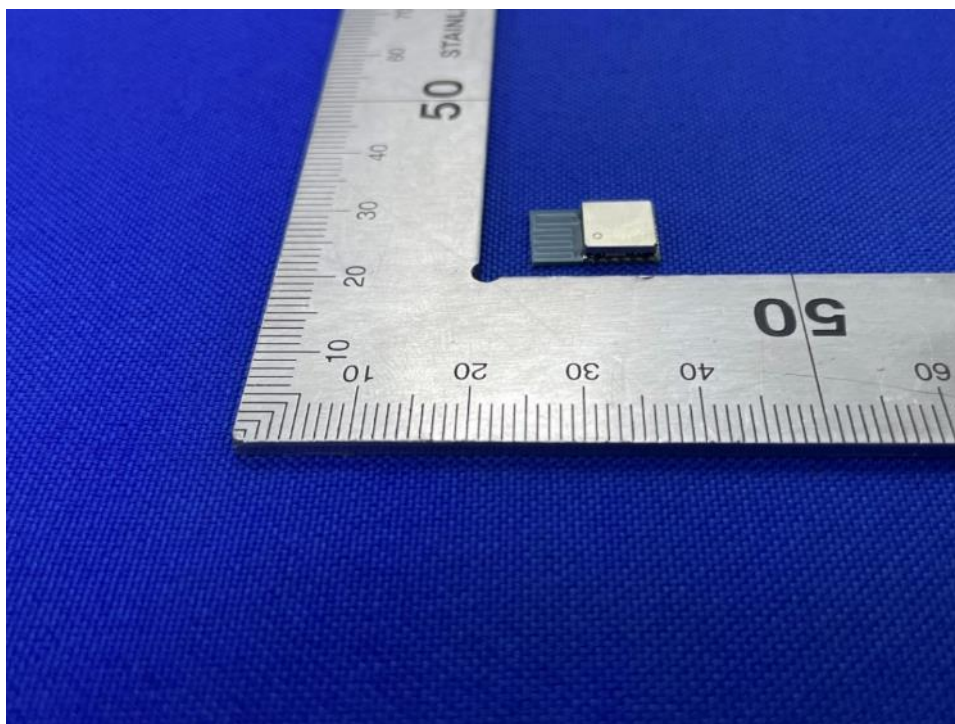
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Left of the sample



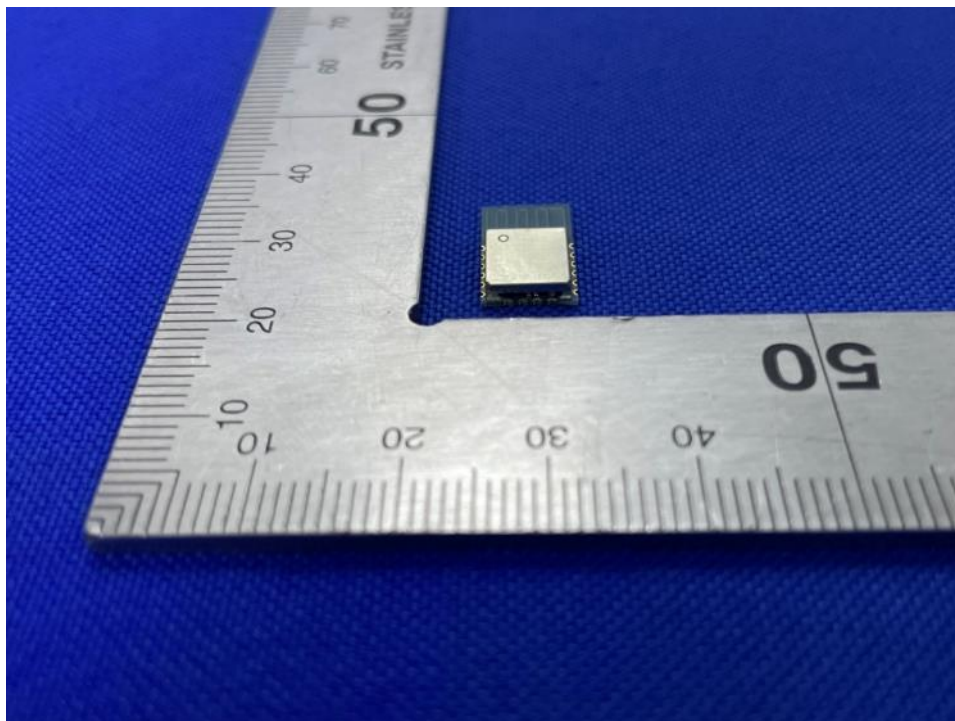
Right of the sample

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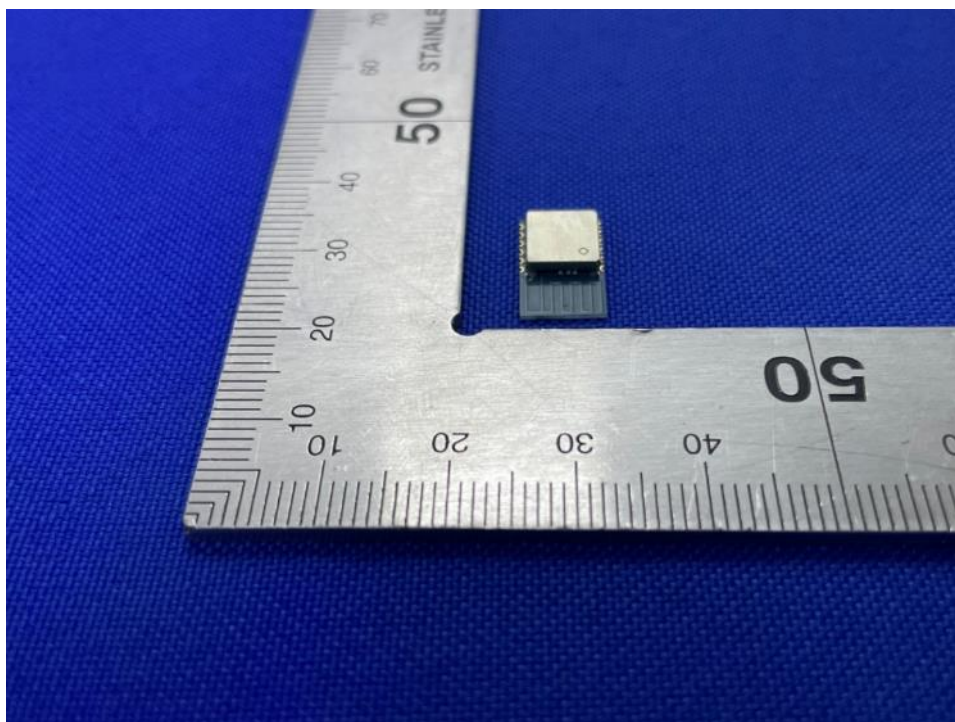
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Top of the sample



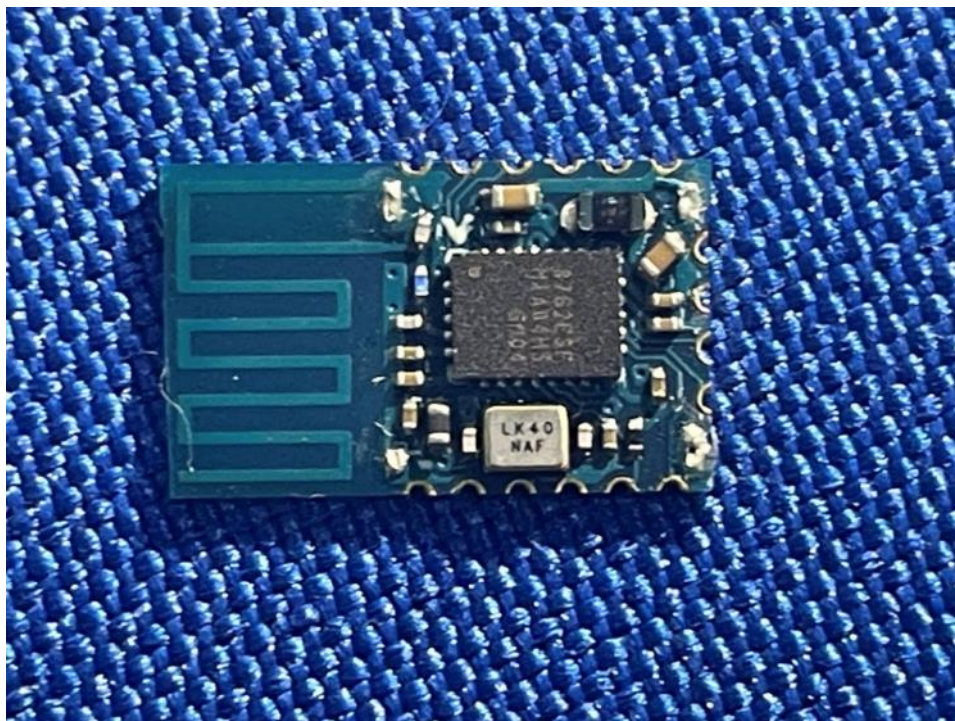
Bottom of the sample

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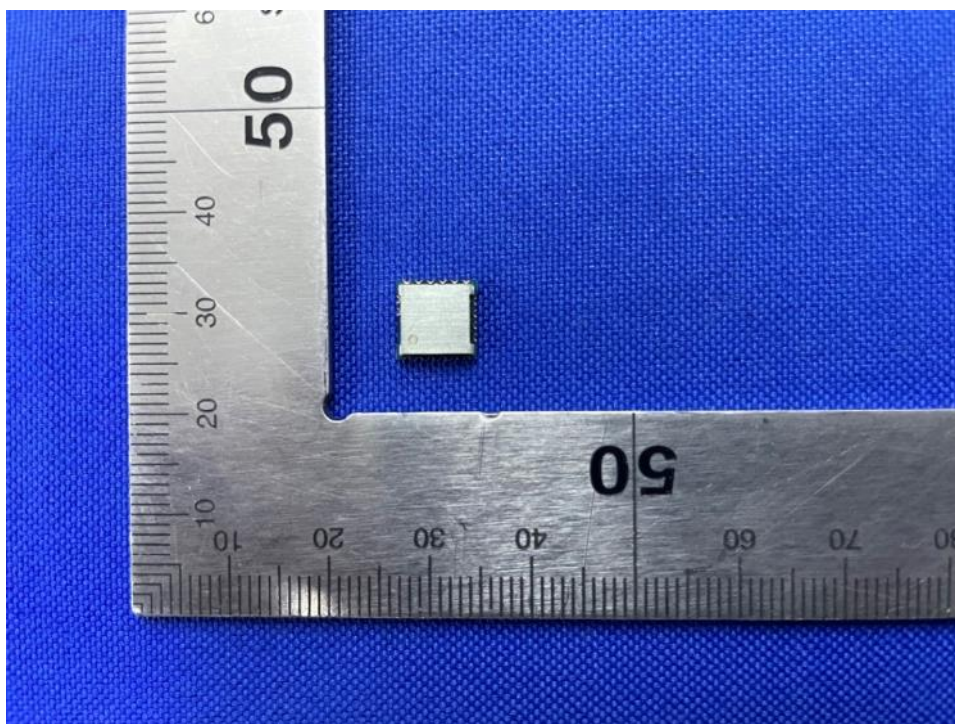
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Internal of the sample

Model:EH-MC25B



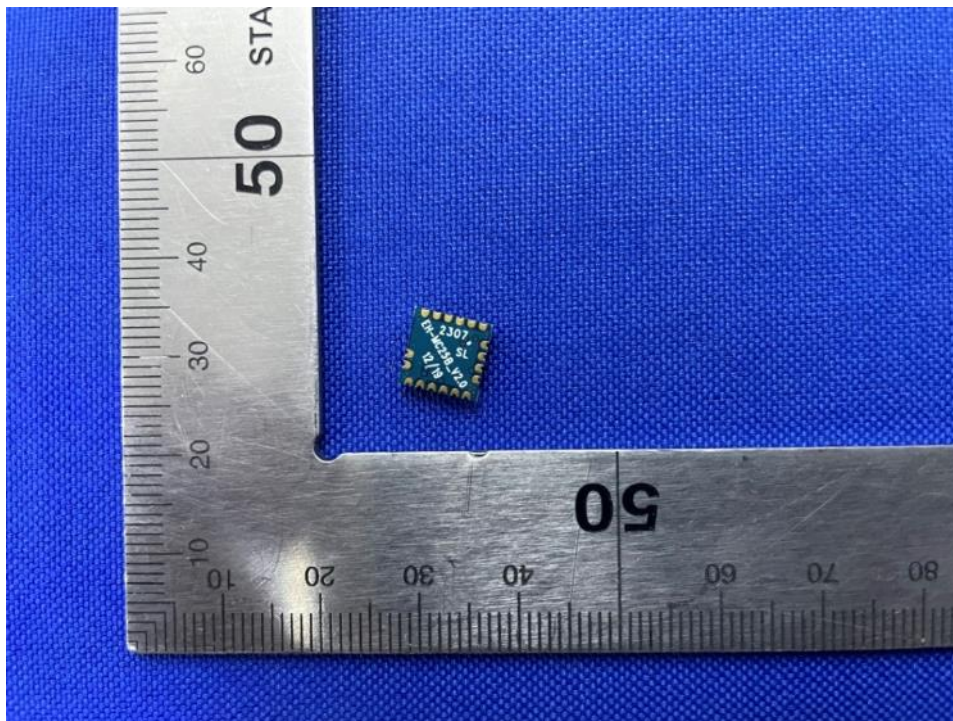
Front of the sample

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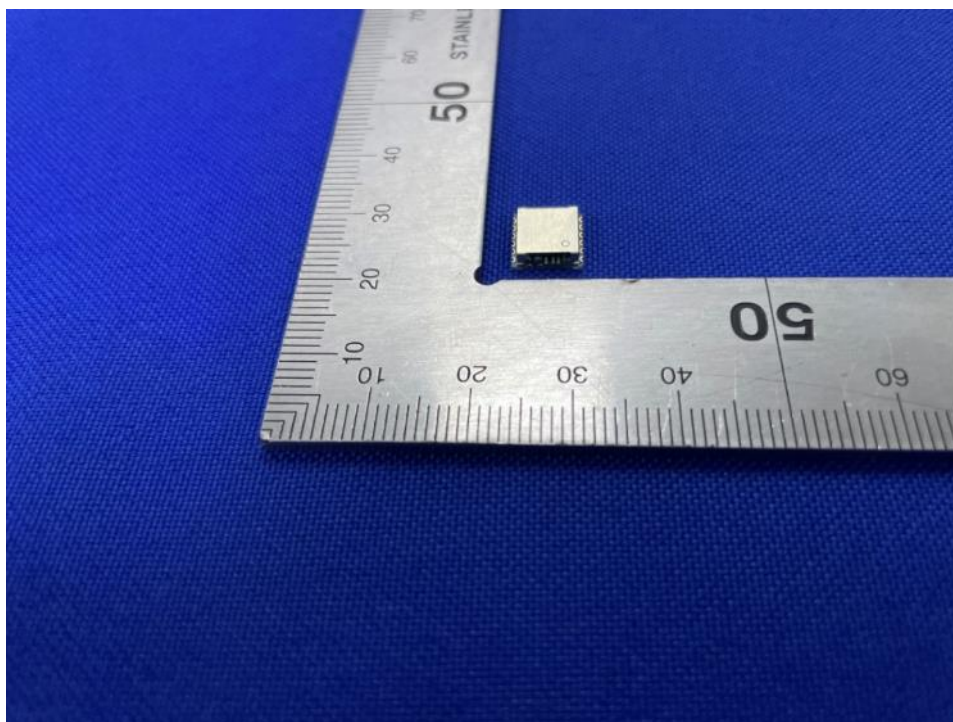
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Rear of the sample



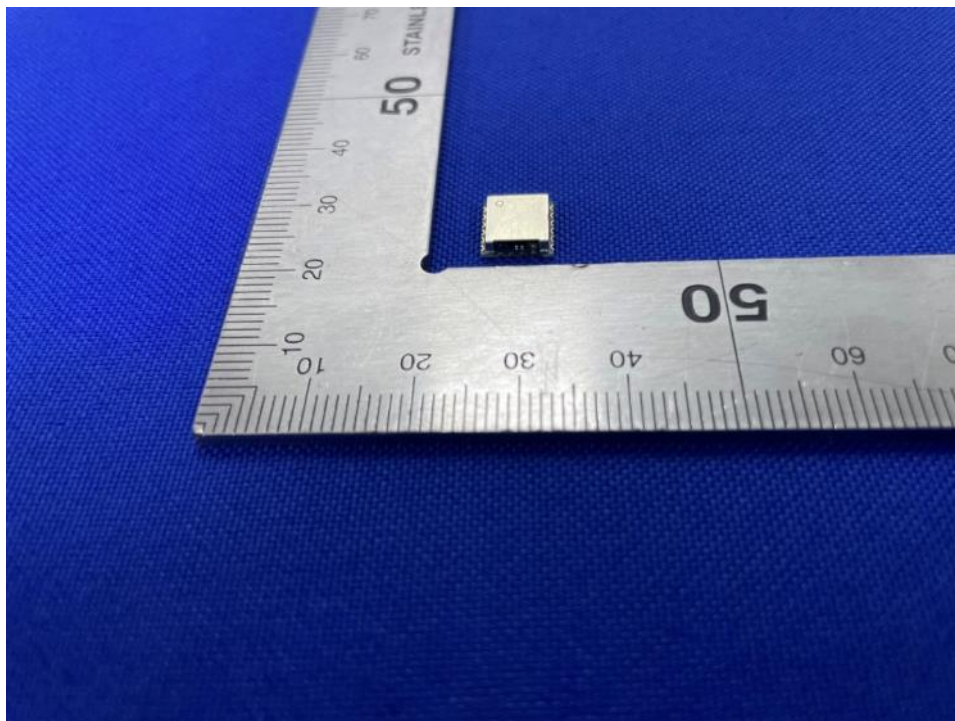
Left of the sample

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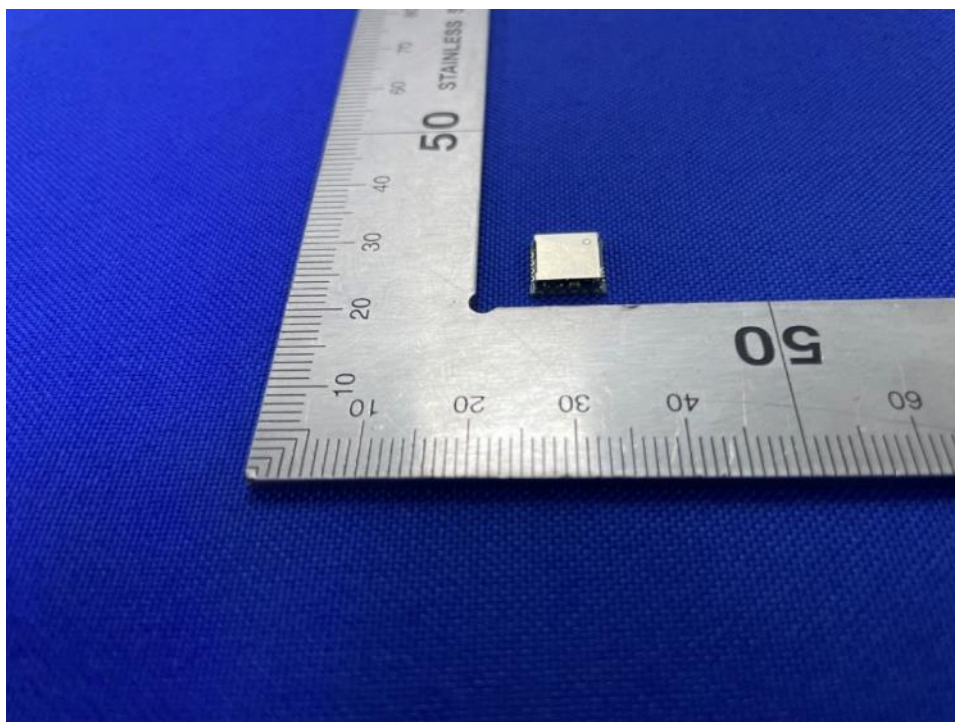
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Right of the sample



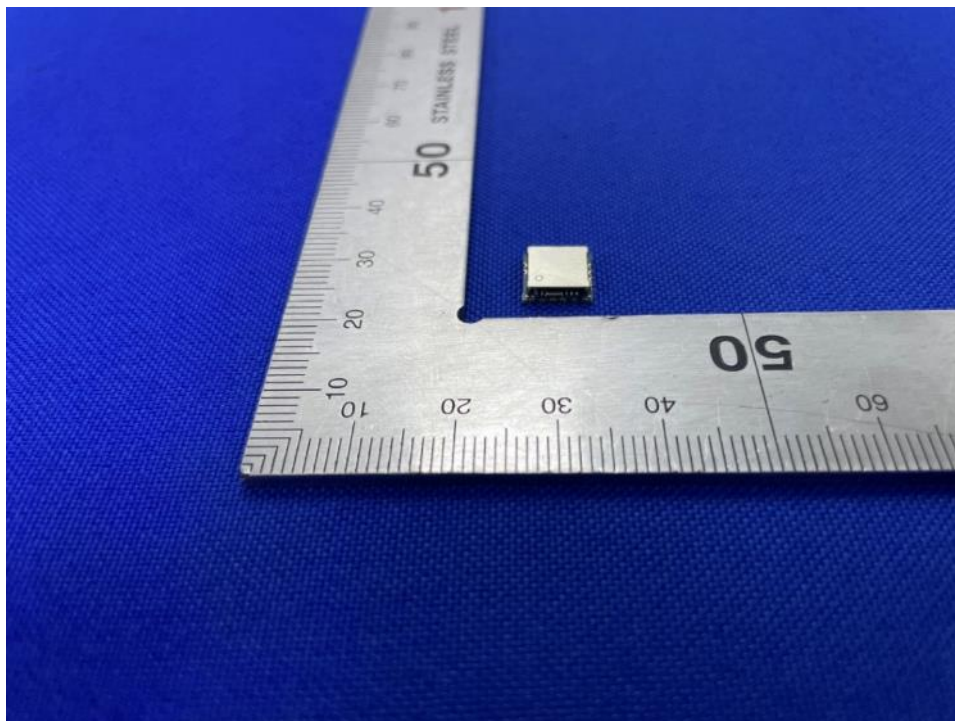
Top of the sample

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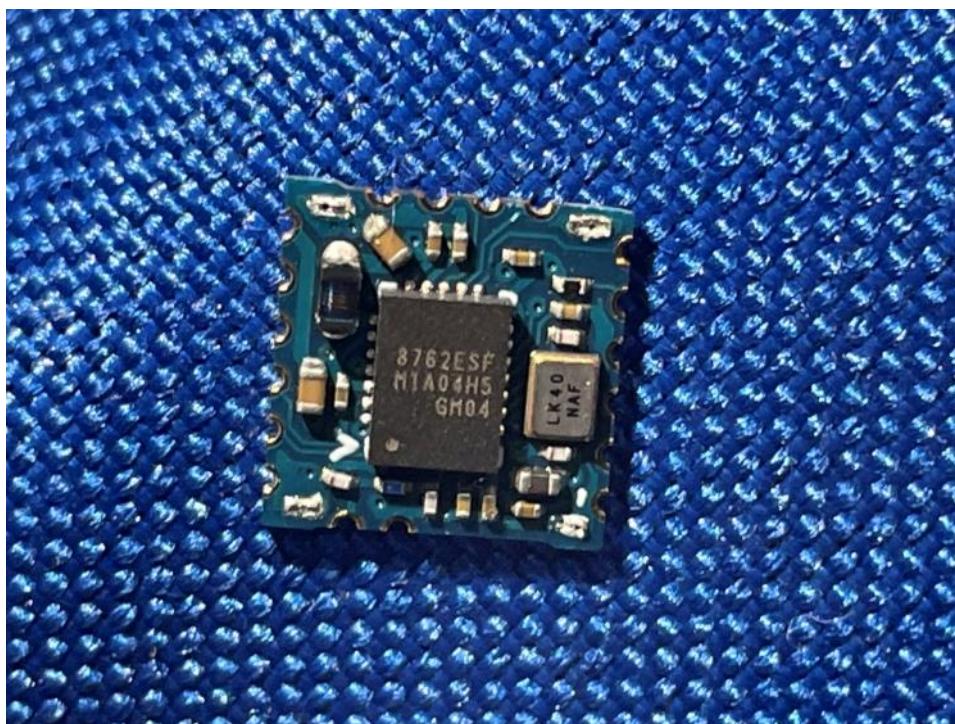
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Bottom of the sample



Internal of the sample

End of the report