MPE TEST REPORT

Applicant	:	Ehong Technology Co.,Ltd
Address of Applicant	:	Room 501, No.485 Xingmei Road, Minhang Dis,Shanghai, China.
Product Name	:	BLE Module
Brand Name	:	Ehong
Model Name	:	EH-MC17, EH-MC17B
Sample Acquisition Method	:	Sent by Client
Sample No.	:	E24040083-01#01
FCC ID	:	2ACCREHMC17
Standard	:	FCC Part 2.1091
Date of Receipt	:	2024-04-25
Date of Test	:	2024-04-26~ 2024-04-29
Date of Issue	:	2024-04-30

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 (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	Ehong Technology Co.,Ltd
Address	Room 501, No.485 Xingmei Road, Minhang Dis,Shanghai, China.
Contact Person	Rik Tang
Telephone	02164769993
Email	rik.tang@ehonglink.com
Manufacturer Company Name	Ehong Technology Co.,Ltd
Address	Room 501, No.485 Xingmei Road, Minhang Dis,Shanghai, China.
Factory Company Name	Ehong Technology Co.,Ltd
Address	Room 501, No.485 Xingmei Road, Minhang Dis,Shanghai, China.

1.4 Details of EUT

Product Name	BLE Module
Brand Name	Ehong
Test Model Name	EH-MC17
Series Model Name	EH-MC17B
Difference Description	All the same except for the antenna type: EH-MC17 Model is the chip ceramic Bluetooth antenna EH-MC17B Model is the external antenna
FCC ID	2ACCREHMC17
Mode of Operation	Bluetooth BLE Version 5.0
Frequency Range	2402MHz ~ 2480MHz
Modulation Type	BLE ☒GFSK 1Mbps ☒GFSK 2Mbps

Max RF Output Power-Conducted	4.22dBm
Antenna Type	EH-MC17 (chip ceramic Bluetooth antenna) EH-MC17B (External Antenna)
Antenna Gain	EH-MC17 (-0.081dBi) EH-MC17B (1.99dBi)
Hardware Version	V1.6
Software Version	V1.0

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:

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

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

EH-MC17 Model

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	4.22	-0.081	2.59	0.000515	1.0

EH-MC17B Model

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	4.22	1.99	4.18	0.000832	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

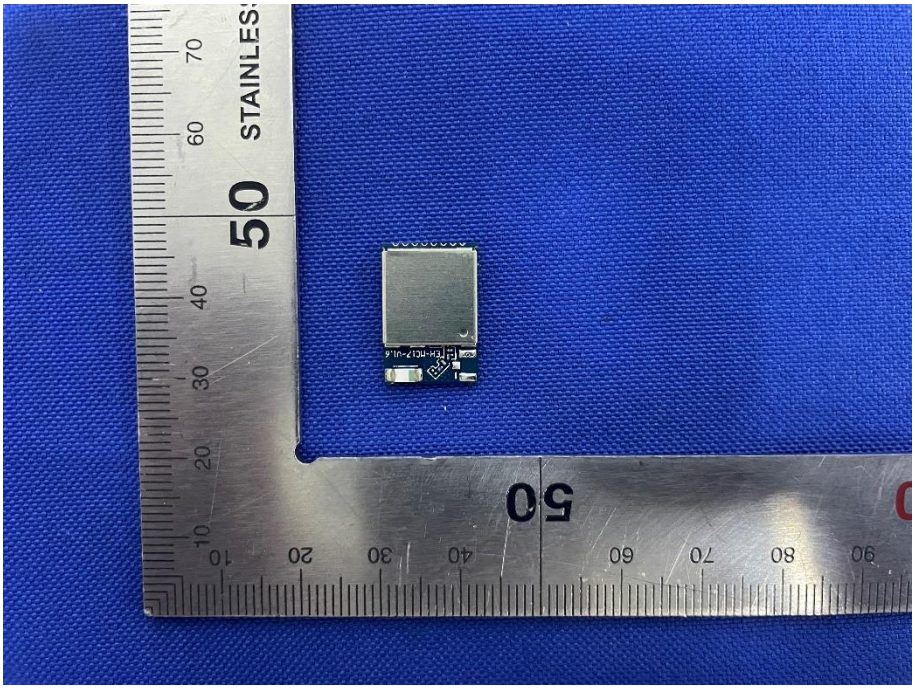
2.4 Conclusion

The Power Density at the position which is 20 cm far from the EUT is smaller than the General Population/Uncontrolled Exposure limit.

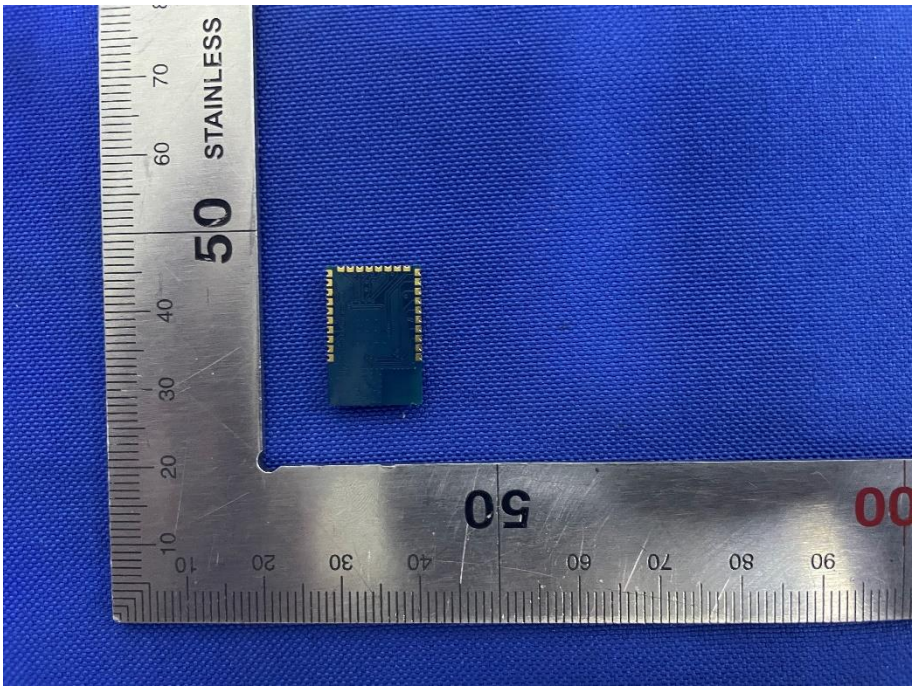
3 Appendixes

3.1 Sample Photograph

EH-MC17 Model



Front of the sample



Rear of the sample

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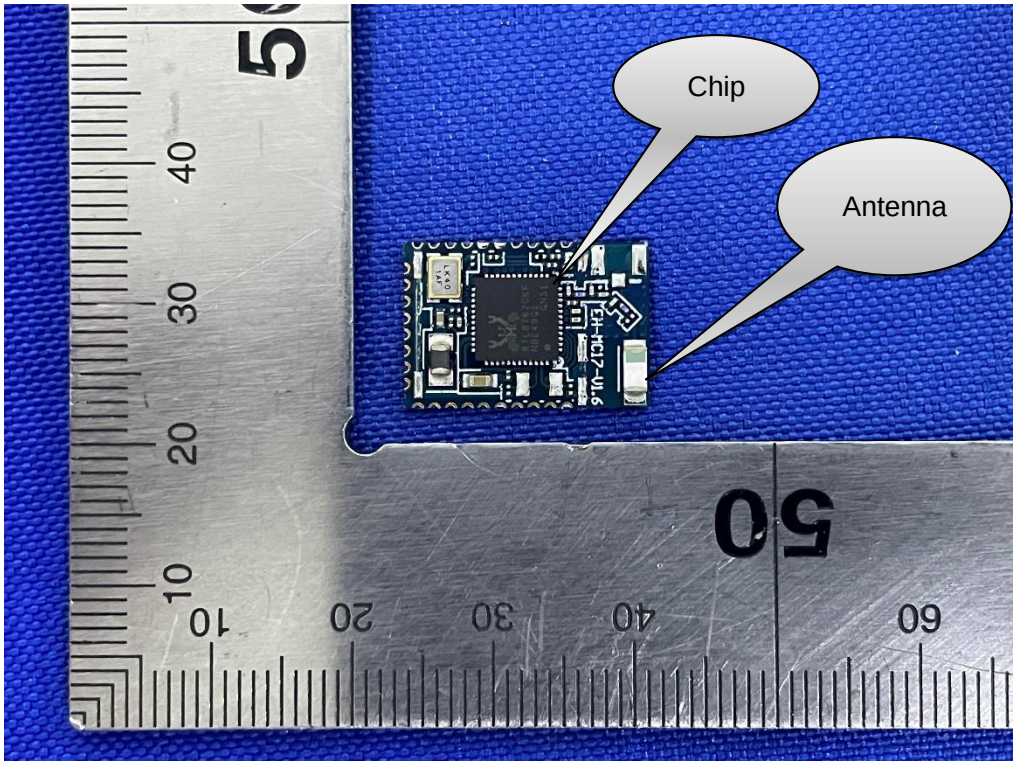
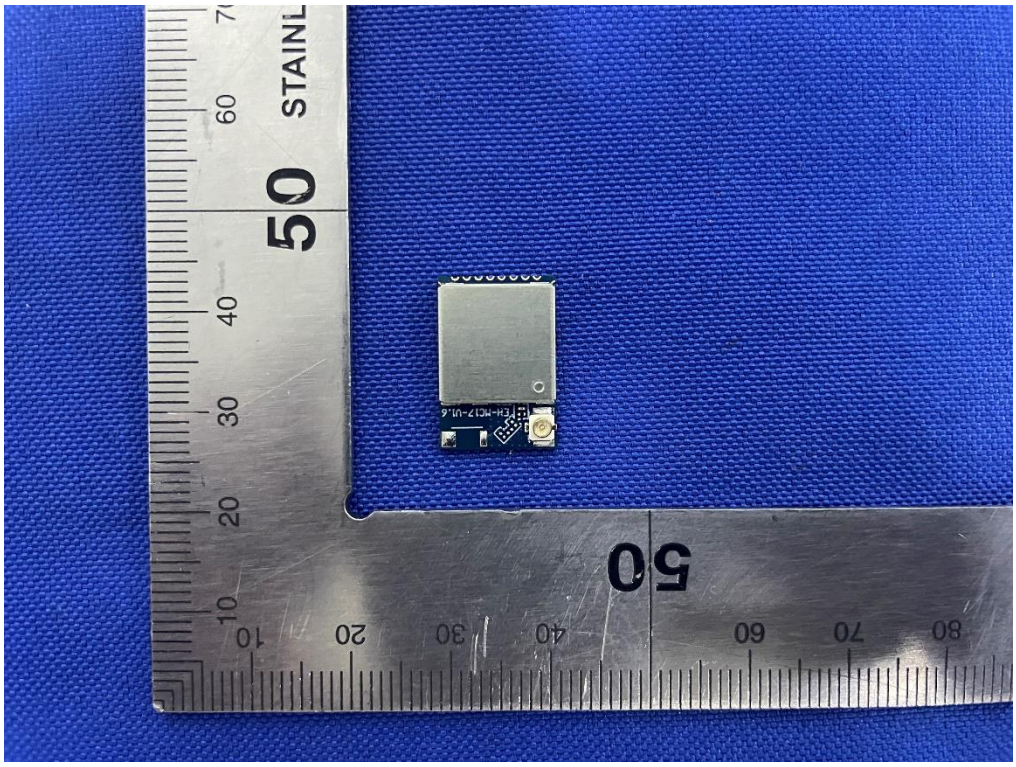


Internal of the sample

EH-MC17B Model



Front of the sample

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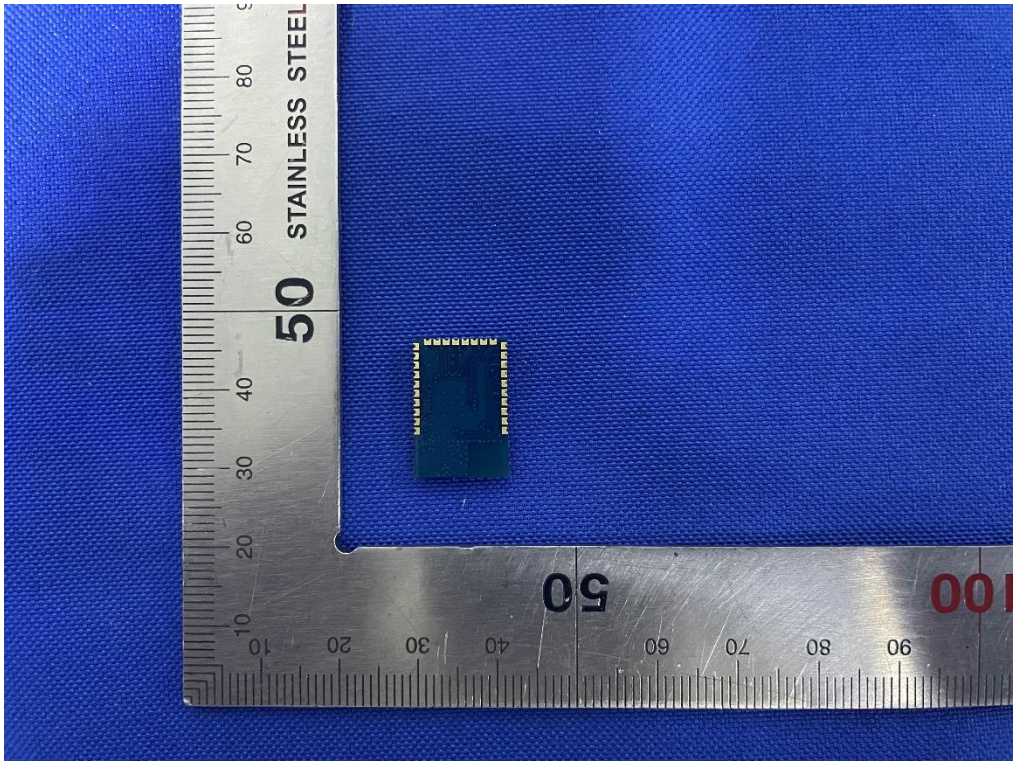
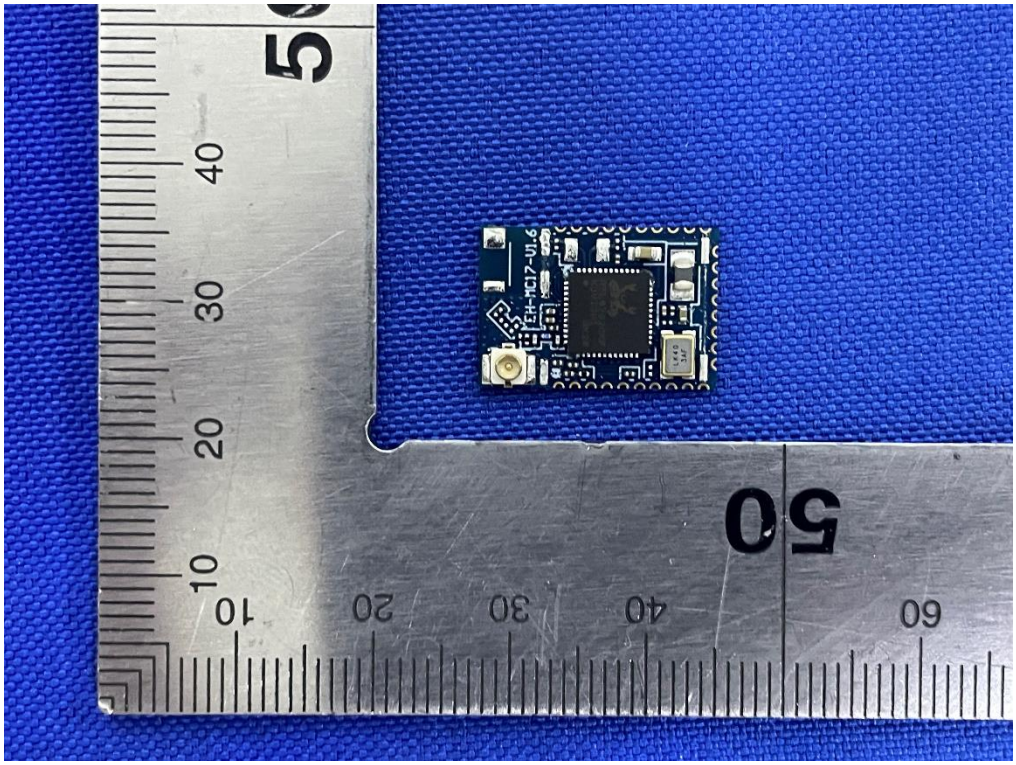


Rear of the sample



Internal of the sample

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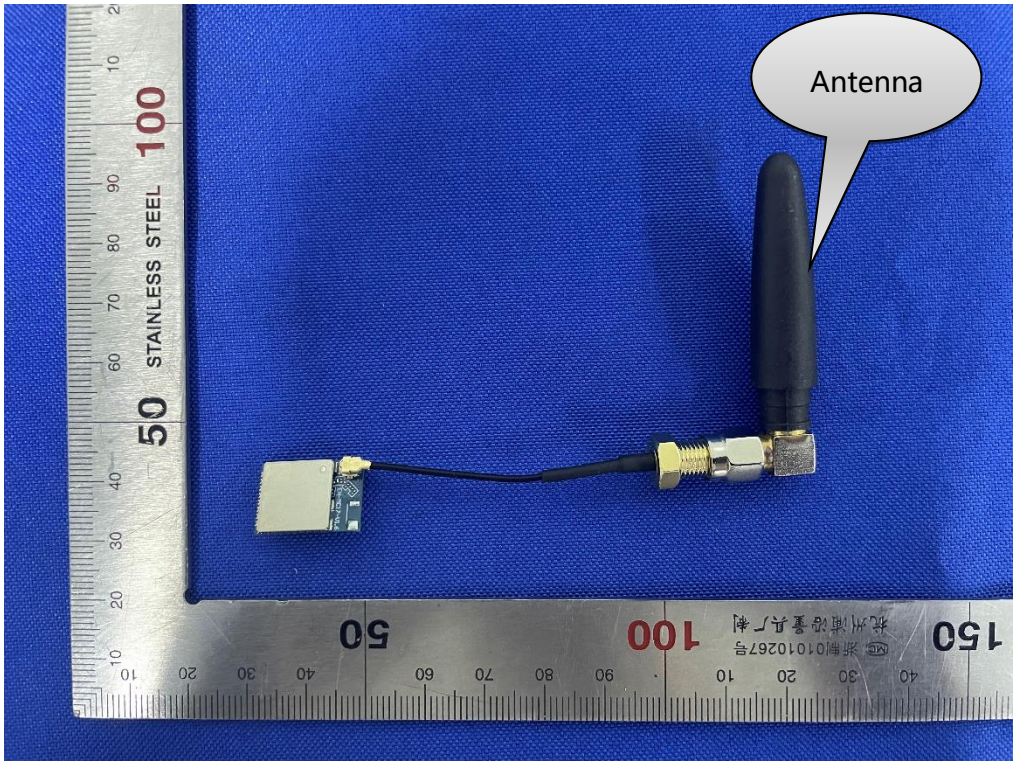

Antenna Position

End of the report