

MPE TEST REPORT

Report No.: SHE23120009-02CE

Date: 2024-02-01

Page 1 of 11

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 : EQM100-1B, EQM100-1P, EQM100-1U
Sample Acquisition Method : Sent by Client
Sample No. : E23120009-01#02

FCC ID : 2ACCREQM1001

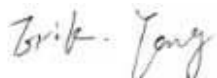
Standard : FCC Part 2.1091

Date of Receipt : 2023-12-07
Date of Test : 2023-12-08~ 2024-02-01
Date of Issue : 2024-02-01

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)

MPE TEST REPORT

Report No.: SHE23120009-02CE

Date: 2024-02-01

Page 2 of 11

Contents

| | | |
|----------|--|----------|
| 1 | GENERAL INFORMATION | 3 |
| 1.1 | TESTING LABORATORY..... | 3 |
| 1.2 | ENVIRONMENTAL CONDITIONS | 3 |
| 1.3 | DETAILS OF APPLICATION | 3 |
| 1.4 | DETAILS OF EUT | 3 |
| 2 | MAXIMUM PERMISSIBLE EXPOSURE (MPE)..... | 4 |
| 2.1 | LIMITS | 4 |
| 2.2 | ASSESSMENT METHODS..... | 5 |
| 2.3 | TEST RESULT | 5 |
| 2.4 | CONCLUSION | 5 |
| 3 | APPENDIXES | 6 |
| 3.1 | SAMPLE PHOTOGRAPH..... | 6 |

MPE TEST REPORT

Report No.: SHE23120009-02CE

Date: 2024-02-01

Page 3 of 11

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 | EQM100-1B |
| Series Model Name | EQM100-1P, EQM100-1U |
| Difference Description | All the same except for the antenna type: EQM100-1B Model is the pcb antenna EQM100-1P Model is the pin antenna EQM100-1U Model is the external antenna |
| FCC ID | 2ACCREQM1001 |
| Mode of Operation | Bluetooth BLE Version 5.4 |
| Frequency Range | 2402MHz ~ 2480MHz |

MPE TEST REPORT

Report No.: SHE23120009-02CE

Date: 2024-02-01

Page 4 of 11

| | |
|--------------------------------------|---|
| Modulation Type | BLE <input checked="" type="checkbox"/> GFSK 1Mbps <input checked="" type="checkbox"/> GFSK 2Mbps |
| Max RF Output Power-Conducted | 6.44dBm |
| Antenna Type | EQM100-1B (PCB Antenna) EQM100-1U (External Antenna) EQM100-1P (PIN Antenna) |
| Antenna Gain | EQM100-1B (-1.34dBi) EQM100-1U (3.0dBi) EQM100-1P (1.99dBi) |
| Hardware Version | V2.0 |
| 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

MPE TEST REPORT

Report No.: SHE23120009-02CE

Date: 2024-02-01

Page 5 of 11

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

Model: EQM100-1B

| 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 | 6.44 | -1.34 | 3.24 | 0.000645 | 1.0 |

Model: EQM100-1P

| 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 | 6.44 | 1.99 | 6.97 | 0.001387 | 1.0 |

Model: EQM100-1U

| 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 | 6.44 | 3.00 | 8.79 | 0.001749 | 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.

MPE TEST REPORT

Report No.: SHE23120009-02CE

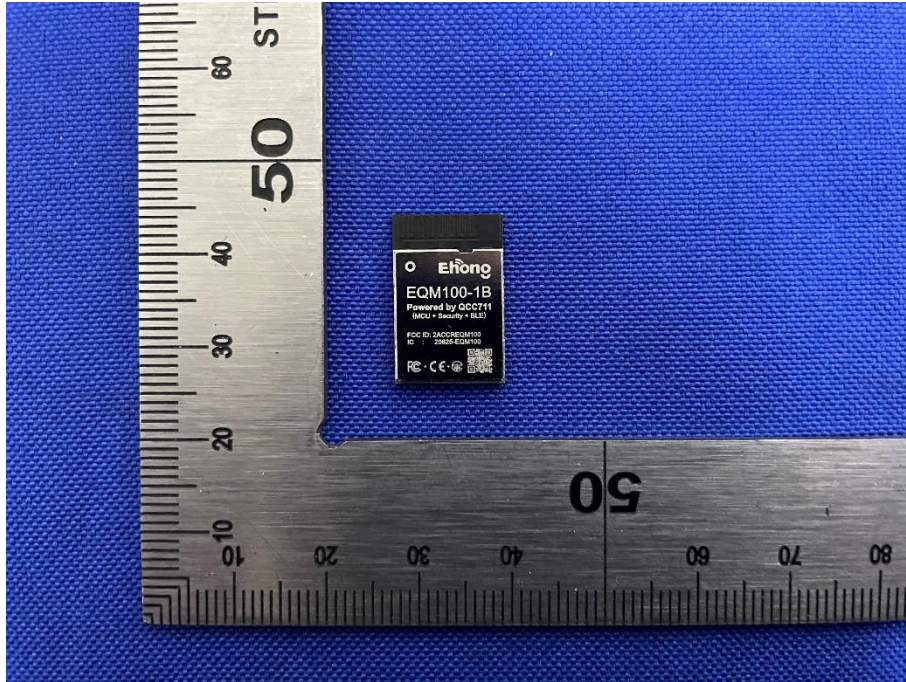
Date: 2024-02-01

Page 6 of 11

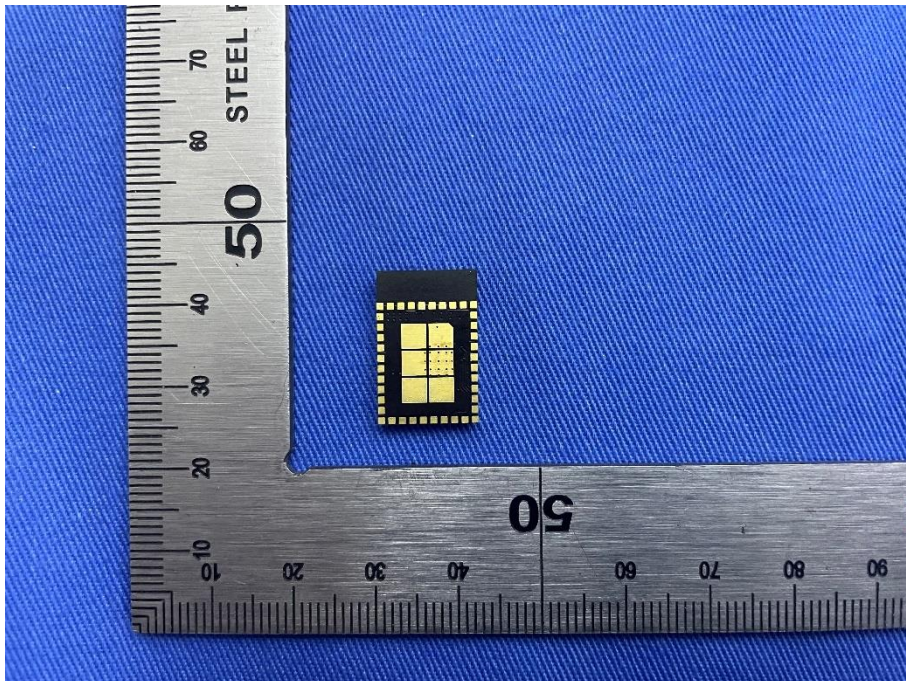
3 Appendixes

3.1 Sample Photograph

Model: EQM100-1B



Front of the sample



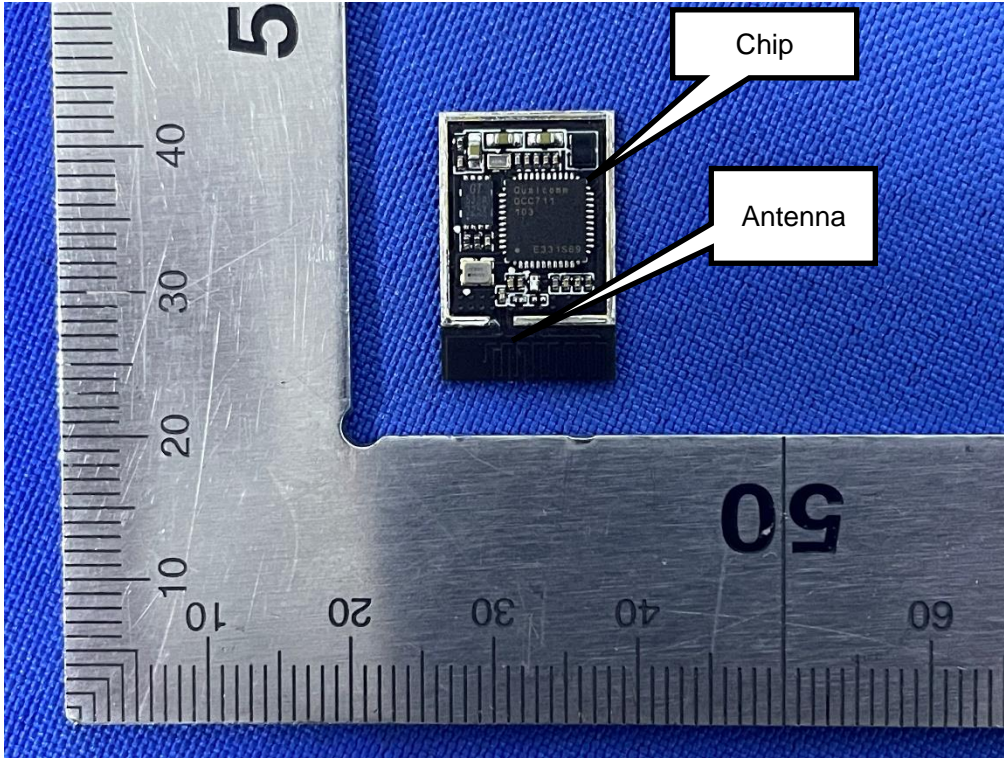
Rear of the sample

MPE TEST REPORT

Report No.: SHE23120009-02CE

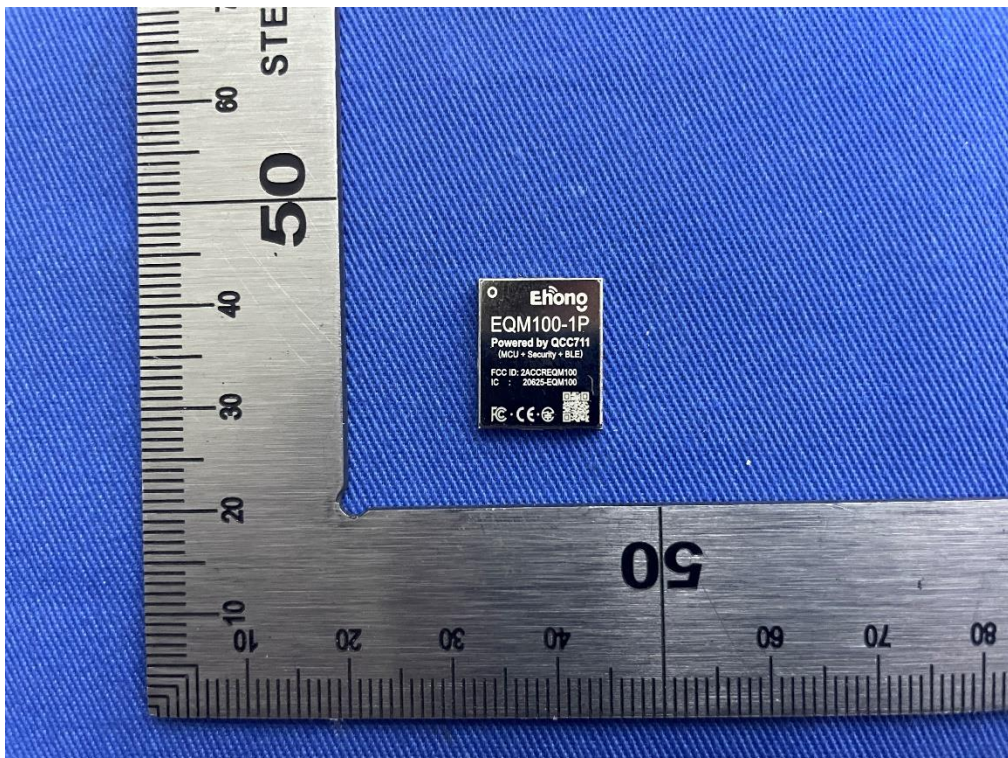
Date: 2024-02-01

Page 7 of 11



Remove the shield cover and Antenna Position

Model: EQM100-1P



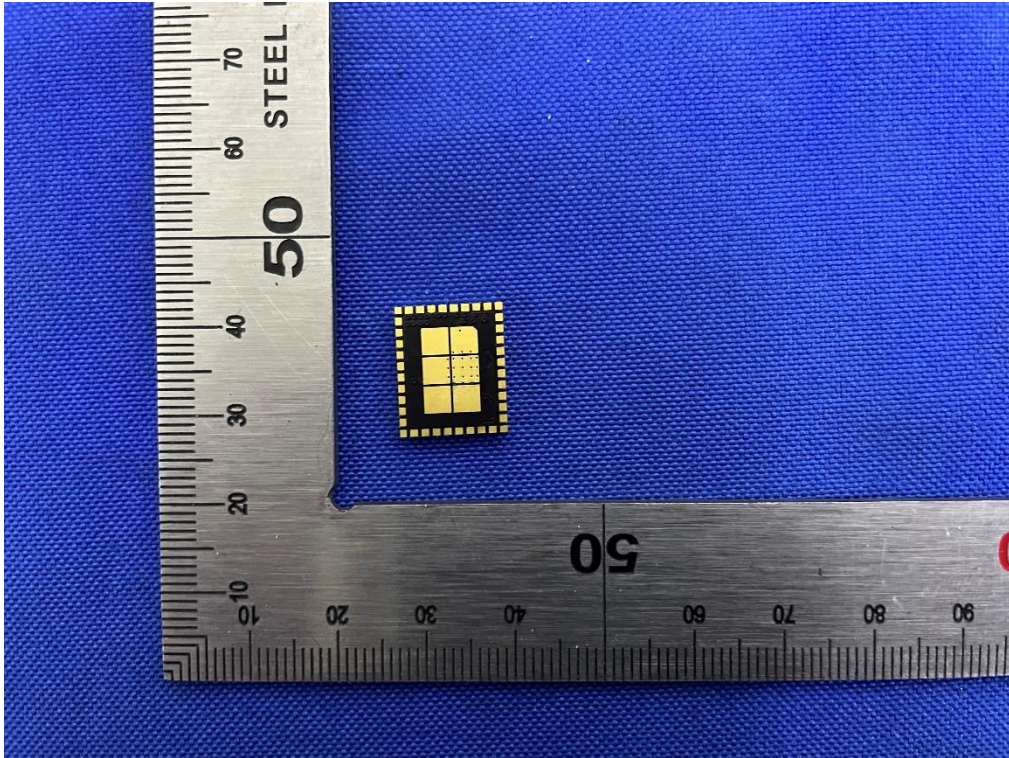
Front of the sample

MPE TEST REPORT

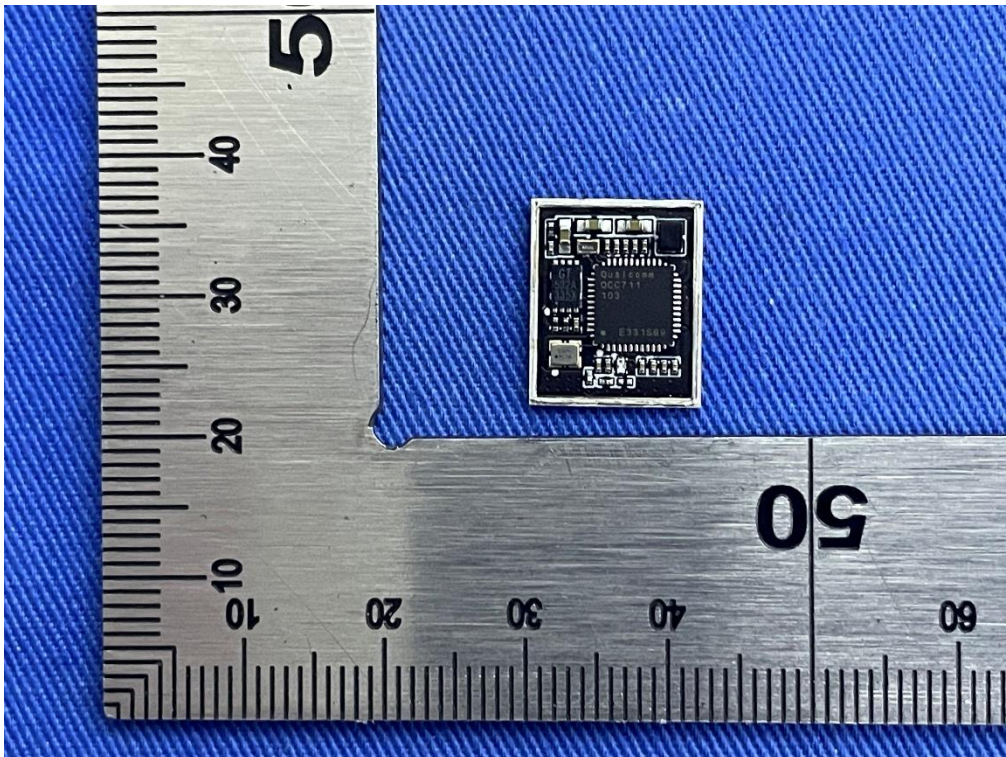
Report No.: SHE23120009-02CE

Date: 2024-02-01

Page 8 of 11



Rear of the sample



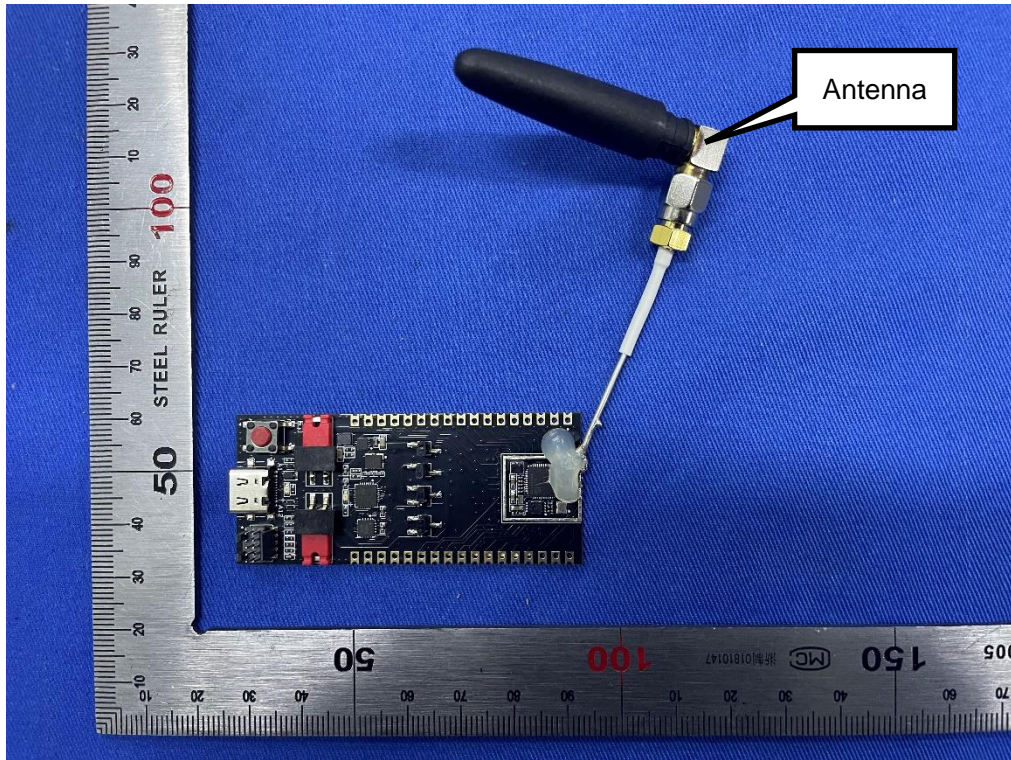
Remove the shield cover

MPE TEST REPORT

Report No.: SHE23120009-02CE

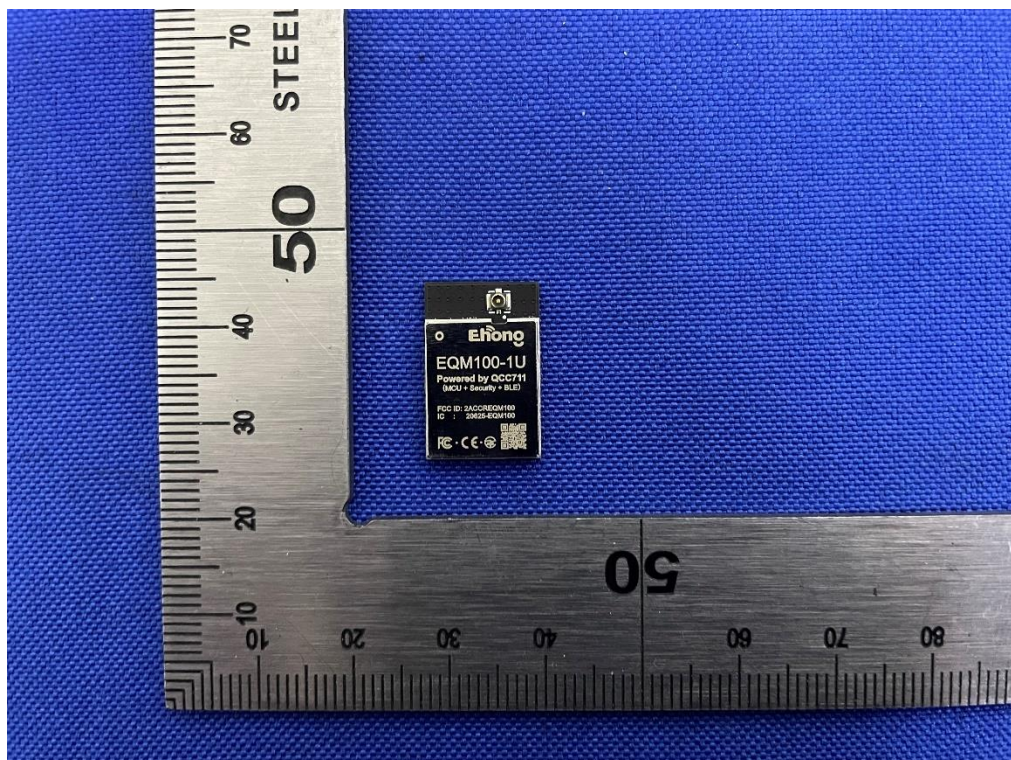
Date: 2024-02-01

Page 9 of 11



Antenna Position

Model: EQM100-1U



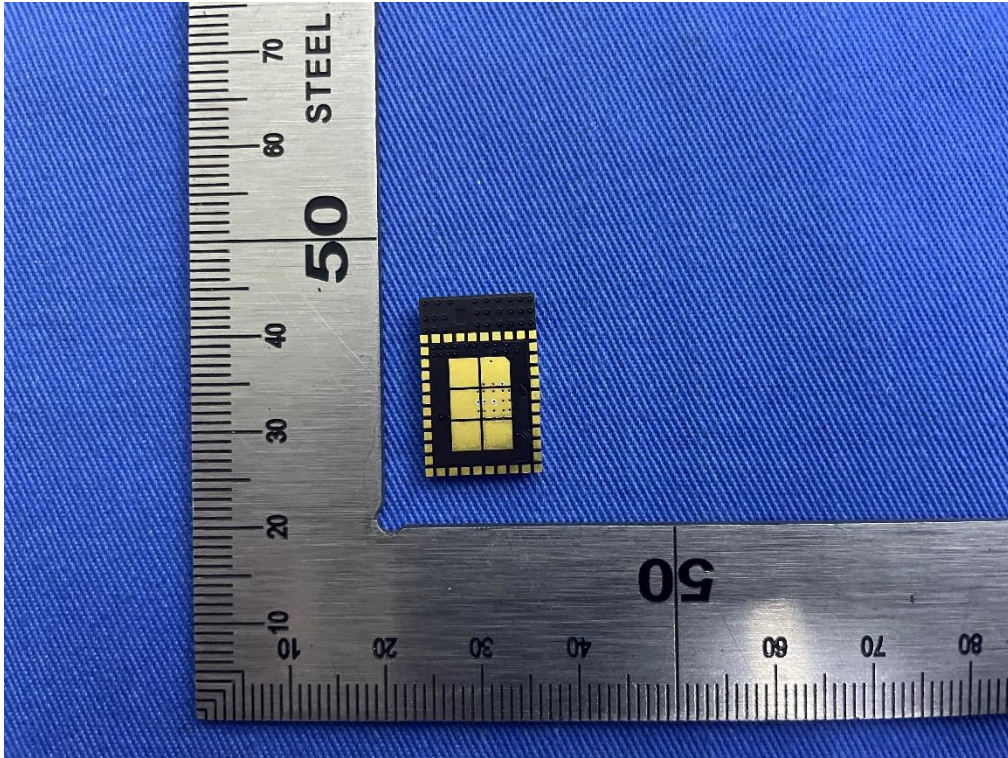
Front of the sample

MPE TEST REPORT

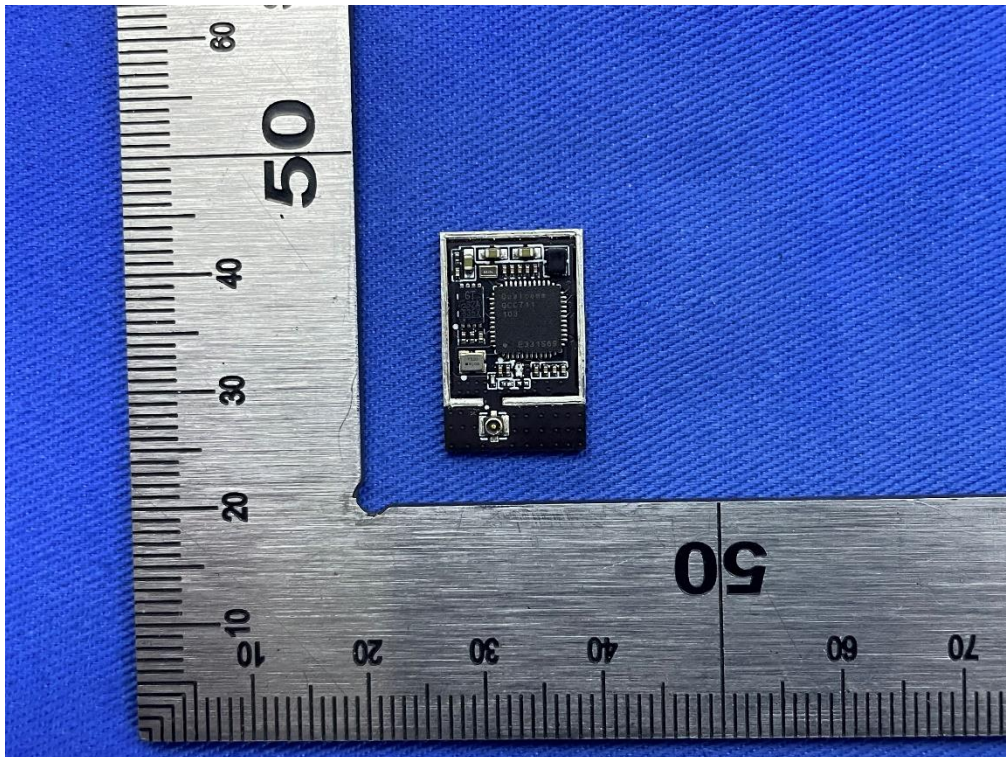
Report No.: SHE23120009-02CE

Date: 2024-02-01

Page 10 of 11



Rear of the sample



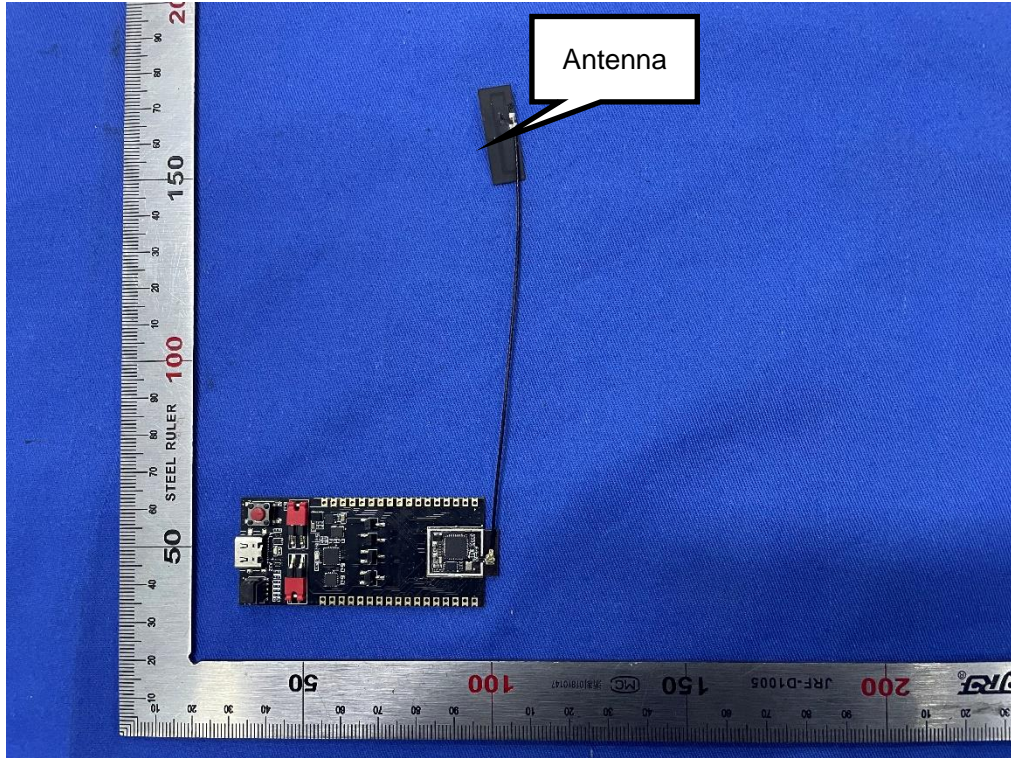
Remove the shield cover

MPE TEST REPORT

Report No.: SHE23120009-02CE

Date: 2024-02-01

Page 11 of 11



Antenna Position

End of the report