# MPE TEST REPORT

## FCC ID: 2AJYL-AB23

| | | |
|---|---|---|
| **Product Name** | : | AIRBOLT CELLULAR GPS |
| **Brand Name** | : | AIRBOLT |
| **Test Model** | : | ABGPS-23 |
| **Series Model** | : | N/A |
| **Applicant** | : | AirBolt Pty Ltd |
| **Address** | : | PO Box 192,Bulleen,Victoria,Australia 3105 |
| **Manufacturer** | : | BOTERLAN TECHNOLOGY CO.,LIMITED |
| **Address** | : | 4F,Buliding B2,Guangshen high and new science and technology park Youmagang,Jiangshi,Gongming,Guangming new zone,Shenzhen, Guangdong,China |
| **Date of Receipt** | : | 2022.12.27 |
| **Date of Test** | : | 2022.12.27-2023.01.06 |
| **Issued Date** | : | 2023.01.06 |
| **Report Version** | : | V1.0 |
| **Test Sample** | : | Engineering Sample No.: AIT22122704-1 |
| **Standard(s)** | : | FCC Title 4 7 Part 2. 1091<br>KDB 447498 001 General RF exposure guidance v06 |

Lab:Dongguan Yaxu (AiT) Technology Limited
Add:No.22,Jinqianling 3rd Street,Jitigang,Huangjiang,Dongguan, Guangdong,China
Tel.: +86-769-8202 0499 Fax.: +86-769-8202 0495

This device described above has been tested by Dongguan Yaxu (AiT) Technology Limited and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

Note: This report shall not be reproduced except in full, without the written approval of Dongguan Yaxu (AiT) Technology Limited, this document may be altered or revised by Dongguan Yaxu (AiT) Technology Limited, personal only, and shall be noted in the revision of the document. This test report must not be used by the client to claim product endorsement.

**Reviewed by:** Simba huang **Approved by:** Seal Chen

**Revision History**

| Revision | Issue Date | Revisions | Revised By |
|---|---|---|---|
| V1.0 | 2023.01.06 | Initial Issue | Seal Chen |

## 1. TEST FACILITY

| | |
|---|---|
| Company: | Dongguan Yaxu (AiT) Technology Limited |
| Address: | No.22, Jinqianling 3rd Street, Jitigang, Huangjiang,Dongguan, Guangdong, China |
| CNAS Registration Number: | CNAS L6177 |
| A2LA Registration Number: | 6317.01 |
| FCC Accredited Lab. Designation Number: | CN1313 |
| FCC Test Firm Registration Number: | 703111 |

## 2. MPE CALCULATION METHOD

Calculation Method of RF Safety Distance:

$$S = \frac{PG}{4\pi r^2} = \frac{EIRP}{4\pi r^2}$$

where:
S = power density
P = power input to the antenna
G = power gain of the antenna in the direction of interest relative to an isotropic radiator
R = distance to the center of radiation of the antenna

Antenna Specification:

For BLE :

| Ant. | Brand | Model Name | Antenna Type | Connector | Gain (dBi) |
|---|---|---|---|---|---|
| 1 | N/A | N/A | N/A | N/A | 1.50 |

For LTE-BAND2:

| Ant. | Brand | Model Name | Antenna Type | Connector | Gain (dBi) |
|---|---|---|---|---|---|
| 1 | N/A | N/A | N/A | N/A | 1.39 |

For LTE-BAND4:

| Ant. | Brand | Model Name | Antenna Type | Connector | Gain (dBi) |
|---|---|---|---|---|---|
| 1 | N/A | N/A | N/A | N/A | 0.76 |

For LTE-BAND12:

| Ant. | Brand | Model Name | Antenna Type | Connector | Gain (dBi) |
|---|---|---|---|---|---|
| 1 | N/A | N/A | N/A | N/A | -0.49 |

For LTE-band13:

| Ant. | Brand | Model Name | Antenna Type | Connector | Gain (dBi) |
|---|---|---|---|---|---|
| 1 | N/A | N/A | N/A | N/A | 2.42 |

Note: The antenna gain is provided by the manufacturer.

## 3. TEST RESULTS

For BLE:

| Directional Gain (dBi) | Directional Gain (numeric) | Max. Output Power (dBm) | Max. Output Power (mW) | Power Density (S) (mW/cm$^2$) | Limit of Power Density (S) (mW/cm$^2$) | Test Result |
|---|---|---|---|---|---|---|
| 1.50 | 1.41 | 2.11 | 1.6255 | 0.0046 | 1 | Complies |

For LTE-BAND2:

| Directional Gain (dBi) | Directional Gain (numeric) | Max. Output Power (dBm) | Max. Output Power (mW) | Power Density (S) (mW/cm$^2$) | Limit of Power Density (S) (mW/cm$^2$) | Test Result |
|---|---|---|---|---|---|---|
| 1.39 | 1.38 | 24.00 | 251.189 | 0.0688 | 1 | Complies |

For LTE-BAND4:

| Directional Gain (dBi) | Directional Gain (numeric) | Max. Output Power (dBm) | Max. Output Power (mW) | Power Density (S) (mW/cm$^2$) | Limit of Power Density (S) (mW/cm$^2$) | Test Result |
|---|---|---|---|---|---|---|
| 0.76 | 1.19 | 23.89 | 244.906 | 0.0580 | 1 | Complies |

For LTE-BAND12:

| Directional Gain (dBi) | Directional Gain (numeric) | Max. Output Power (dBm) | Max. Output Power (mW) | Power Density (S) (mW/cm$^2$) | Limit of Power Density (S) (mW/cm$^2$) | Test Result |
|---|---|---|---|---|---|---|
| -0.49 | 0.89 | 21.74 | 149.279 | 0.0265 | 0.47 | Complies |

For LTE-BAND13:

| Directional Gain (dBi) | Directional Gain (numeric) | Max. Output Power (dBm) | Max. Output Power (mW) | Power Density (S) (mW/cm$^2$) | Limit of Power Density (S) (mW/cm$^2$) | Test Result |
|---|---|---|---|---|---|---|
| 2.42 | 1.75 | 24.72 | 296.483 | 0.1030 | 0.52 | Complies |

**Note:**
1.Only the worst case recorded.
2. The BT, LTE band can transmit simultaneously.
3. Output power including tune up tolerance.
4. The calculated distance is 20 cm.

**Transmit Simultaneously (Worst):**

Power Density :

LTE-Band13/0.52 +BLE/1 =0.10983/0.52 +0.00056/1=0.211＜1

## 4. CONCLUSION

Remark: EUT meets the basic requirements in the standard.

**----END OF REPORT----**