



RF Exposure Evaluation

FCC ID: 2A6VF-AB01

1. Client Information

| | | |
|---------------------|---|--|
| Applicant | : | Averia Electronics Inc. |
| Address | : | 142W 57th Street, Floor 11, New York, NY 10019 |
| Manufacturer | : | Averia Electronics Inc. |
| Address | : | 142W 57th Street, Floor 11, New York, NY 10019 |

2. General Description of EUT

| | | |
|---|----------------------|--|
| EUT Name | : | Averia Beacon |
| Model No. | : | AB01, 2301 |
| Model Different | : | All PCB boards and circuit diagrams are the same, the only difference is that color. |
| Sample ID | : | RW-C-202211-0254-1-1# & RW-C-202211-0254-1-2# |
| Product Description | Operation Frequency: | Bluetooth 5.1(BLE): 2402MHz~2480MHz |
| | Number of Channel: | Bluetooth 5.1(BLE): 40 channels |
| | Antenna Gain: | -5.09dBi PCB Antenna |
| Power Supply | : | DC 3.0V by button cell |
| Software Version | : | 1.0.x |
| Hardware Version | : | AEC_BB05_v01 |
| Remark: The antenna gain provided by the applicant, the adapter and verified for the RF conduction test and adapter provided by TOBY test lab. | | |

Note: More test information about the EUT please refer the RF Test Report.

The RF Exposure Evaluation for FCC:

SAR Test Exclusion Calculations

FCC: According to 447498 D04 Interim General RF Exposure Guidance v01.

The SAR-based exemption formula of § 1.1307(b)(3)(i)(B), repeated here as Formula (B.2), applies for single fixed, mobile, and portable RF sources with available maximum time-averaged power or effective radiated power (ERP), whichever is greater, of less than or equal to the threshold P_{th} (mW).

This method shall only be used at separation distances from 0.5 cm to 40 cm and at frequencies from 0.3 GHz to 6 GHz (inclusive). P_{th} is given by Formula (B.2).

$$P_{th} \text{ (mW)} = \begin{cases} ERP_{20 \text{ cm}}(d/20 \text{ cm})^x & d \leq 20 \text{ cm} \\ ERP_{20 \text{ cm}} & 20 \text{ cm} < d \leq 40 \text{ cm} \end{cases}$$

where

$$x = -\log_{10} \left(\frac{60}{ERP_{20 \text{ cm}} \sqrt{f}} \right)$$

and f is in GHz, d is the separation distance (cm), and $ERP_{20 \text{ cm}}$ is per Formula (B.1). The example values shown in Table B.2 are for illustration only.

Table B.2—Example Power Thresholds (mW)

| Frequency (MHz) | Distance (mm) | | | | | | | | | |
|-----------------|---------------|----|----|-----|-----|-----|-----|-----|-----|-----|
| | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 |
| 300 | 39 | 65 | 88 | 110 | 129 | 148 | 166 | 184 | 201 | 217 |
| 450 | 22 | 44 | 67 | 89 | 112 | 135 | 158 | 180 | 203 | 226 |
| 835 | 9 | 25 | 44 | 66 | 90 | 116 | 145 | 175 | 207 | 240 |
| 1900 | 3 | 12 | 26 | 44 | 66 | 92 | 122 | 157 | 195 | 236 |
| 2450 | 3 | 10 | 22 | 38 | 59 | 83 | 111 | 143 | 179 | 219 |
| 3600 | 2 | 8 | 18 | 32 | 49 | 71 | 96 | 125 | 158 | 195 |
| 5800 | 1 | 6 | 14 | 25 | 40 | 58 | 80 | 106 | 136 | 169 |



Calculation:

| Test separation: 5mm | | | | | |
|----------------------|-----------------------|------------------------------|--------------------------------------|-------------------------------------|----------------------------|
| Bluetooth LE Mode | | | | | |
| Frequency (GHz) | Conducted Power (dBm) | Turn-up Power Tolerance (dB) | Max power of tune up tolerance (dBm) | Max power of tune up tolerance (mW) | Limit P _{th} (mW) |
| 2.402 | 1.734 | 1±1 | 2 | 1.585 | 3 |
| 2.440 | 1.587 | 1±1 | 2 | 1.585 | 3 |
| 2.480 | 1.410 | 1±1 | 2 | 1.585 | 3 |

The measurement results comply with the FCC Limit per 47 CFR 2.1093 for the uncontrolled RF Exposure and SAR Exclusion Threshold per KDB 447498 D04, No SAR is required.

The measurement results comply with the FCC Limit per 47 CFR 2.1093 and the RSS-102§4 Table 4 for the uncontrolled RF Exposure and SAR Exclusion Threshold per KDB 447498 v06, No SAR is required.

-----END OF THE REPORT-----

