

## RF EXPOSURE EVALUATION

### 1. PRODUCT INFORMATION

Product Description	BDE Bluetooth 5 Low Energy Module
Model Name	BDE-BLEM203D
FCC ID	2ABRU-BLEM203D

### 2. EVALUATION METHOD

According to 447498 D01 General RF Exposure Guidance v05

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances  $\leq 50$  mm are determined by:

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$  for 1-g SAR and  $\leq 7.5$  for 10-g extremity SAR.

Where  $f(\text{GHz})$  is the RF channel transmit frequency in GHz

Power and distance are rounded to the nearest mW and mm before calculation

### 3. CALCULATION

BLE 1M:

$$P_t = 4.514 \text{ dBm} = 2.83 \text{ mW}$$

The value of the Maximum output power  $P_t$  is referred to the test report of the CFR47

§15.247.

The result for RF exposure evaluation  $\text{SAR} = (2.83 \text{ mW} / 5 \text{ mm}) \cdot [\sqrt{2.440(\text{GHz})}] = 0.88 < 3.0$  for 1-g SAR and  $\leq 7.5$  for 10-g extremity SAR.

BLE 2M:

$$P_t = 4.659 \text{ dBm} = 2.92 \text{ mW}$$

The value of the Maximum output power  $P_t$  is referred to the test report of the CFR47

§15.247.

The result for RF exposure evaluation  $\text{SAR} = (2.92 \text{ mW} / 5 \text{ mm}) \cdot [\sqrt{2.402(\text{GHz})}] = 0.91 < 3.0$  for 1-g SAR and  $\leq 7.5$  for 10-g extremity SAR.

### 4. CONCLUSION

The SAR evaluation is not required.