

## 6 Safety Human Exposure

### 6.1 Radio Frequency Exposure Compliance

#### 6.1.1 Electromagnetic Fields

**RESULT:****Pass****Test Specification**

Test standard : FCC KDB Publication 447498 v06  
CFR47 FCC Part 2: Section 2.1093  
CFR47 FCC Part 1: Section 1.1310  
RSS-102 Issue 5 February 2021

**This module has two different antennas, and the maximum e.i.r.p. configuration be evaluated as below:**

**FCC requirement:**

The measured maximum conducted output power of the EUT is 6.2dBm  $\approx$  4.17mW, which is far below the SAR exclusion threshold level 10mW (SAR Test Exclusion Thresholds for 100 MHz – 6 GHz and  $\leq$  50 mm), hence the EUT is excluded from SAR evaluation according to FCC KDB publication 447498 D01: Mobile and Portable RF Exposure. Guidance v06.

**IC requirements:** The EUT shall comply with the requirement of RSS-102 section 2.5.2.

**Exemption from Routine Evaluation Limits – RF Exposure Evaluation**

RF exposure evaluation is required if the separation distance between the user and/or bystander and the device's radiating element is greater than 20 cm, except when the device operates as follows:

at or above 300 MHz and below 6 GHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than  $1.31 \times 10^{-2} f^{0.6834}$  W (adjusted for tune-up tolerance), where  $f$  is in MHz;

- RF exposure evaluation exempted power for BLE: 2.67 W

**The worst-case mode (the configuration having highest EIRP) specified:**

BLE: 6.20 dBm

Antenna Gain: 4.7 dBi

The Max. e.i.r.p. for Lora DTS: 10.80dBm = 0.012 W

The e.i.r.p. for the BLE are less than the RF exposure evaluation exempted power. So RF exposure evaluation is not required.

**“RF Radiation Exposure Statement Caution: This Transmitter must be installed to provide a separation distance of at least 20 cm from all persons.”**