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Test Report - Products

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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

FCC requirement:

The measured maximum conducted output power of the EUT is 7.63dBm \approx 5.79mW, 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: 7.63 dBm

Antenna Gain: 0.54 dBi

The Max. e.i.r.p. for Lora DTS: 8.17dBm = 0.007 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."