

RF exposure information

Product description

Test item	: Bluetooth Low Energy Wireless Module
Applicant	: LAPIS Semiconductor Co., Ltd.
Address	: 2-4-8 Shinyokohama, Kouhoku-ku, Yokohama 222-8575 Japan
Model	: MK71351
FCC ID	: 2ACIJ71351
ISED Cert. No.	: 20971-71351
Operating frequency range	: 2402 - 2480 MHz
TX output power (Cond)	: -0.7 dBm @2402 MHz, -0.9 dBm @2440 MHz, -0.9 dBm @2480 MHz
Maximum Antenna Gain	: -0.8 dBi

Analysis for portable use

Standalone SAR test exclusion considerations are defined in the KDB 447498 Chapter 4.3.1. 1-g head or body SAR exclusion threshold is defined with formula.

$$[(\text{Max. power of channel, mW}) / (\text{Min. test separation distance, mm})] * [\sqrt{f} (\text{GHz})] \leq 3.0 \text{ for 1-g SAR}$$

The maximum Conducted Peak Output Power is -0.7 dBm (2.402 GHz).
-0.7 dBm logarithmic terms covert to numeric result is nearby 0.85 mW

$$\text{General RF Exposure} = (0.85 \text{ mW} / 5\text{mm}) * \sqrt{2.402 \text{ GHz}} = 0.26 \leq 3.0$$

Other frequency results are

$$\text{General RF Exposure} = (0.81 \text{ mW} / 5\text{mm}) * \sqrt{2.440 \text{ GHz}} = 0.25 \leq 3.0$$

$$\text{General RF Exposure} = (0.81 \text{ mW} / 5\text{mm}) * \sqrt{2.480 \text{ GHz}} = 0.26 \leq 3.0$$

Bluetooth Low Energy Wireless Module (MK71351) meets the SAR exclusion. So SAR evaluation is not needed.