

RF exposure information

Product information from applicant

Applicant	: TESSERA TECHNOLOGY INC.
Applicant address	: 6F, Oak Yokohama Bldg., 2-15-10, Kitasaiwai, Nishi-ku, Yokohama, Kanagawa 220-0004, JAPAN
FCC ID	: X8U0003
ISED ID	: 27334-0001
Product description	: RF MCU Evaluation Kit
Operating frequency range	: 2402 - 2480 MHz
Nominal Output power	: 4.0dBm (Manufacture specification)
Peak output power (Measured)	: -0.37dBm @2.402GHz, 0.60dBm @2.442GHz, 1.22dBm @2.480GHz (1Mbps) -0.36dBm @2.402GHz, 0.60dBm @2.442GHz, 1.23dBm @2.480GHz (2Mbps)
Maximum antenna gain	: -1.2 dBi

Analysis for portable use

For FCC

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.

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

The maximum Conducted Peak Output Power is 4.0dBm (Manufacture specification).

4.0dBm logarithmic terms convert to numeric result is nearby 2.5mW

$$\text{General RF Exposure (worst)} = (2.5\text{mW} / 5\text{mm}) * \sqrt{2.480\text{GHz}} = 0.787 \leq 3.0$$

RF MCU Evaluation Kit meets the SAR exclusion. So SAR evaluation is not needed.

For ISED

SAR evaluation is required if the separation distance between the user and/or bystander and the antenna and/or radiating element of the device is less than or equal to 20 cm, except when the device operates at or below the applicable output power level (adjusted for tune-up tolerance) for the specified separation distance defined in RSS-102 Table 1.

Output power level is 2.5mW < 4mW (Exemption limits at separation distance of $\leq 5\text{mm}$ @2450MHz)

RF MCU Evaluation Kit meets the SAR exclusion. So SAR evaluation is not needed.