

RF exposure information

Product description

Test item	: Receiver
Applicant	: Metrol Co., Ltd.
Address	: 1-100 Takamatsu-cho, Tachikawa City, Tokyo 190-0011 Japan
Model	: RC-R02
FCC ID	: AORMETROLRCR001
Operating frequency range	: 2404 - 2476 MHz
TX output power (Cond)	: -4.68dBm @2.404GHz, -4.17dBm @2.440GHz, -3.43dBm @2.476GHz
Maximum Antenna Gain	: +2.08dBi

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 -3.43dBm (2.476GHz).

The best case gain of the antenna is +2.08dBi.

$$\text{EIRP} = (-3.43\text{dBm}) + (+2.08\text{dBi}) = -1.35\text{dBm}$$

-1.35dBm logarithmic terms covert to numeric result is nearby 0.733mW

$$\text{General RF Exposure} = (0.733\text{mW} / 5\text{mm}) * \sqrt{2.476\text{GHz}} = 0.231 \leq 3.0$$

Other frequency results are

$$\text{General RF Exposure} = (0.550\text{mW} / 5\text{mm}) * \sqrt{2.404\text{GHz}} = 0.170 \leq 3.0$$

$$\text{General RF Exposure} = (0.618\text{mW} / 5\text{mm}) * \sqrt{2.440\text{GHz}} = 0.193 \leq 3.0$$

Receiver RC-R02 meets the SAR exclusion. So SAR evaluation is not needed.

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