

## RF Exposure / SAR / Health Hazard Statement

**Requirement:**

According to USA CFR 15 §1.1307 (b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures the public is not exposed to radio frequency energy level in excess of the Commission’s guideline. For Canada, RSS-102 Tests out the requirements and measurement techniques used to evaluate radio frequency (RF) exposure compliance of radiocommunication apparatus designed to be used within the vicinity of the human body.

**SAR Testing Exclusion:**

Per FCC 447498 General RF Exposure Guidance v05, Section 4.3.1, the 1-g (body) and 10-g (extremity) SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances 50 mm are determined by the following formula

$$SAR = \frac{P_c}{d} \sqrt{f_{GHz}}$$

where d = minimum test distance and Pc is the source-based time-averaged maximum conducted output power, or EIRP for a device without a removable antenna. For IC RSS-102, the SAR threshold is based on conducted output power of the radio device. The SAR threshold at a minimum test distance of 5 mm is thus computed to be:

**SAR Threshold**

Freq. (GHz)	EIRP/Po Avg (dBm)	EIRP/Po Avg (mW)	IC Po Threshold (mW)	dmin (mm)	Computed FCC SAR Threshold (Avg)	1-g SAR Body Threshold (Avg)	10-g SAR Extremity Threshold (Avg)
2.412	7.7	5.9	20	5	1.8	3	7.5
2.432	8.6	7.2	20	5	2.3	3	7.5
2.472	9.0	7.9	20	5	2.5	3	7.5

Thus the EUT meets the test exclusion thresholds for Industry Canada and the FCC 1-g and 10-g Extremity SAR evaluation threshold.