



RF Exposure evaluation

According to 447498 D01 General RF Exposure Guidance v06

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

$$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0 \text{ for 1-g SAR and } \leq 7.5 \text{ for 10-g extremity SAR, where}$$
$$f(\text{GHz}) \text{ is the RF channel transmit frequency in GHz}$$

Power and distance are rounded to the nearest mW and mm before calculation

The result is rounded to one decimal place for comparison

BLE:

Worse case output power is as below: [2480MHz: -8.98dBm]

Antenna Gain is -5.10dBi

Maximum output power is -8.98dBm (0.13 mW).

$(0.13\text{mW} / 5\text{mm}) \cdot [\sqrt{2.480(\text{GHz})}] = 0.04 < 3.0$ for 1-g SAR.

2.4G SRD:

Worse case output power is as below: [2474MHz: -8.75dBm]

Antenna Gain is -5.10dBi

Maximum output power is -8.75dBm (0.13 mW).

$(0.13\text{mW} / 5\text{mm}) \cdot [\sqrt{2.474(\text{GHz})}] = 0.04 < 3.0$ for 1-g SAR.

Then SAR evaluation is not required.