

RF exposure evaluation

According to 447498 D01 General RF Exposure Guidance v05.

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:

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

- $f(\text{GHz})$ 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

Worse case is as below:

[2442MHz -8.52dBm(0.14mW) output power]

$(0.14\text{mW} / 5\text{mm}) \cdot \sqrt{2.442(\text{GHz})} = 0.04 < 3.0$ for 1-g SAR

Then SAR evaluation is not required