

RF Exposure evaluation

According to KDB 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:

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

where

- $f(\text{GHz})$ 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: [2480 MHz 5.73 dBm (3.741 mW) output power]

$$(3.741 \text{ mW} / 5\text{mm}) \cdot [\sqrt{2.480 \text{ (GHz)}}] = 1.2 < 3.0 \text{ for 1-g SAR}$$

Then SAR evaluation is not required