

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:

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

for 1-g SAR and ≤ 7.5 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:

The worst case:

The minimum distance from antenna to human body (hand) is 20mm.

$$(29.7 \text{ mW} / 20\text{mm}) \cdot [\sqrt{2.480} \text{ (GHz)}] = 2.34 < 3.0 \text{ for 1-g SAR}$$

Then SAR evaluation is not required

