

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 of 2.4G WIFI is as below: [2462 MHz 8.64dBm (7.31 mW) output power]

$$(7.31 \text{ mW} / 5 \text{ mm}) \cdot [\sqrt{2.462 \text{ (GHz)}}] = 2.31 < 3.0 \text{ for 1-g SAR}$$

Worse case of 5G WIFI is as below: [5745 MHz 7.89dBm (6.152 mW) output power]

$$(6.152 \text{ mW} / 5 \text{ mm}) \cdot [\sqrt{5.745 \text{ (GHz)}}] = 2.95 < 3.0 \text{ for 1-g SAR}$$