

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: [2412 MHz 9.19dBm (8.3mW) output power]

$(8.3\text{mW} / 5\text{mm}) \cdot [\sqrt{2.412(\text{GHz})}] = 2.6 < 3.0$ for 1-g SAR

Worse case of 5G WIFI is as below: [5200 MHz 8.10dBm (6.46 mW) output power]

$(6.46 \text{ mW} / 5\text{mm}) \cdot [\sqrt{5.200(\text{GHz})}] = 2.94 < 3.0$ for 1-g SAR

Then SAR evaluation is not required