

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:

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

- $f(\text{GHz})$ 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 of BT is as below:

[2441MHz 2.13 dBm (1.633mW) output power]

$(1.633\text{mW} / 5\text{mm}) \cdot [\sqrt{2.441 \text{ (GHz)}}] = 0.51 < 3.0 \text{ for 1-g SAR}$

Worse case of WIFI 2.4G is as below:

[2412MHz 6.36 dBm (4.325 mW) output power]

$(4.325\text{mW} / 5\text{mm}) \cdot [\sqrt{2.412 \text{ (GHz)}}] = 1.34 < 3.0 \text{ for 1-g SAR}$

Worse case of WIFI 5G is as below:

[5825MHz 6.40 dBm (4.365mW) output power]

$(4.365 \text{ mW} / 5\text{mm}) \cdot [\sqrt{5.825 \text{ (GHz)}}] = 2.11 < 3.0 \text{ for 1-g SAR}$

$2.11 + 0.51 = 2.62 < 3.0 \text{ for 1-g SAR}$

Then SAR evaluation is not required