



RF Exposure evaluation

According to 447498 D01 General RF Exposure Guidance v06

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:

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

Power and distance are rounded to the nearest mW and mm before calculation
The result is rounded to one decimal place for comparison

For 5730-5844MHz, **Worst case** scenario: 5844MHz

Field strength = 98.66dBuV/m @3m

Ant gain 2.15 dBi; so Ant numeric gain=1.64

So $P_t = \{ [10(98.66/20)/10^6 \times 3]^2 / 30 \times 1.64 \} \times 1000 \text{ mW} = 3.6138 \text{ mW}$

So $(3.6138 \text{ mW} / 5 \text{ mm}) \times \sqrt{5.844 \text{ GHz}} = 1.7472 < 3$ for 1-g SAR

Then SAR evaluation is not required