

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:

For this hand held controller, 10-g extremity SAR evaluation
shall be applied.

The minimum separation distance between user's hand and device
antenna is 35 mm.

[2478MHz 16.375 dBm (43.4 mW) output power]

$$(43.4 \text{ mW} / 35\text{mm}) \cdot [\sqrt{2.478(\text{GHz})}] = 1.95 < 7.5 \text{ for 10-g SAR}$$

Then extremity SAR evaluation is not required.



