

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 30 mm (please refer to below photos).

[2441MHz 15.947dBm (39.33mW) output power]

$$(39.33\text{mW} / 30\text{mm}) \cdot [\sqrt{2.441(\text{GHz})}] = 2.05 < 7.5 \text{ for 10-g SAR}$$

Then extremity SAR evaluation is not required

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