

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 BLE is as below: [2480MHz 7.251dBm (5.31mW) output power]

$(5.31 \text{ mW} / 5\text{mm}) \cdot [\sqrt{2.480(\text{GHz})}] = 1.7 < 3.0$ for 1-g SAR

Worse case of BT is as below: [2402MHz 6.321dBm (4.286mW) output power]

$(4.286 \text{ mW} / 5\text{mm}) \cdot [\sqrt{2.402(\text{GHz})}] = 1.33 < 3.0$ for 1-g SAR

Then SAR evaluation is not required