

Maximum Permissible Exposure

RF Exposure Limit

According to KDB 447498D01 v06:

The 1g and 10g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

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

- $f(\text{GHz})$ 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

The test exclusions are applicable only when the minimum test separation distance is ≤ 50 mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.

| | |
|-----------------------------------|---------------------------------------|
| Device category | : Portable device |
| Transmitting mode | : Single transmitting |
| Max. transmitting frequency | : 2 480 MHz |
| Min. test separation distance | : 5 mm |
| Max. Antenna Gain | : Left : 2.23 dBi Right : 2.21 dBi |
| Max. time average power | : 8 dBm |
| Max. power with turn-up tolerance | : 9 dBm 7.94 mW |

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For this device:

$$8 \text{ mW}[\text{maximum average output power}] / 5 \text{ mm}[\text{minimum separation distance}] \times \sqrt{2.48 \text{ GHz}}$$
$$= 2.52$$

Note. The calculation result was rounded to one decimal place for comparison.

Test Result :

This is less than 3.0 for 1-g SAR.

SAR evaluation for general population exposure conditions by measurement or numerical simulation is not required.