

7.10 RF Exposure

KDB 447498D01(V05) has the following exclusion for portable devices:

The 1g and 10g SAR test exclusion thresholds for 100MHz to 6GHz at test separation distances $\leq 50\text{mm}$ are determined by:

$$[p(\text{mW}) / d(\text{mm})] * [\sqrt{f(\text{GHz})}] \leq 3.0$$

for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where

- $p(\text{mW})$ is max. power of channel, including tune-up tolerance.
- $d(\text{mm})$ is min. test separation distance.
- $f(\text{GHz})$ 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 $\leq 50\text{mm}$ and for transmission frequencies between 100MHz and 6GHz. When the minimum test separation distance is $< 5\text{mm}$, a distance of 5mm is applied to determine SAR test exclusion.

This device has $f=2.48\text{GHz}$ and distance = 5mm (minimum separation distance: 5mm was used in the calculation) and the maximum tune-up tolerance limit was 1.6mW

So for this device:

$$1.6(\text{mW}) / 5(\text{mm}) * \sqrt{2.48(\text{GHz})} = 0.5$$

*This is less than 3.0, so no SAR is required.