

## 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  $\leq$  50 mm are determined by:

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

Power and distance are rounded to the nearest mW and mm before calculation

The result is rounded to one decimal place for comparison

$$\text{eirp} = \text{pt} \times \text{gt} = (\text{Exd})^2 / 30$$

where:

$\text{pt}$  = transmitter output power in watts,

$\text{gt}$  = numeric gain of the transmitting antenna (unitless),

$\text{E}$  = electric field strength in V/m, ---  $10^{(\text{dBuV/m})/20} / 10^6$

$\text{d}$  = measurement distance in meters (m)---3m

$$\text{So } \text{pt} = (\text{Exd})^2 / 30 \times \text{gt}$$

Field strength = 64.97 dBuV/m @3m

Ant gain 0dBi ;so Ant numeric gain=1

$$\text{So } \text{pt} = \{ [10^{(64.97)/20} / 10^6 \times 3]^2 / 30 \times 1 \} \times 1000 \text{ mW} = 0.0009 \text{ mW}$$

$$\text{So } (0.0009 \text{ mW} / 5\text{mm}) \times \sqrt{0.915\text{GHz}} = 0.0002 < 3$$

Then SAR evaluation is not required