

## RF Exposure evaluation

According to 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:  
[(max. power of channel, including tune-up tolerance, mW) / (min. test  
separation distance, mm)]  $\cdot [\sqrt{f(\text{GHz})}] \leq 3.0$  for 1-g SAR and  $\leq 7.5$  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

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

where:

pt = transmitter output power in watts,

gt = numeric gain of the transmitting antenna (unitless),

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

d = measurement distance in meters (m) --- 3m

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

Ant gain=0dBi ; so Ant numeric gain=1

Field strength = 70.75dBuV/m @ 3m

$$\text{So Pt} = \{ [10^{(70.75/20)}/10^6 \times 3]^2/30 \times 1 \} \times 1000 \text{ mW} = 0.00357 \text{ mW}$$

$$\text{So } (0.00357 \text{ mW}/5 \text{ mm}) \times \sqrt{0.315 \text{ GHz}} = 0.0004 < 3$$

Then SAR evaluation is not required