

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 ≤ 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

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

where:

pt = transmitter output power in watts,

gt = numeric gain of the transmitting antenna (unit less),

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

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

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

Field strength = **102.40** dBuV/m @3m

Ant gain =2dB_i, so Ant numeric gain= 1.58

$$\text{So } \text{pt} = \{ [10^{(102.40/20)/10^6} \times 3]^2 / 30 \times 1.58 \} \times 1000 \text{ mW} = \text{3.30mW}$$

$$\text{So } (3.30 \text{ mW} / 5\text{mm}) \times \sqrt{2.462} = \text{1.036} < 3$$

Then SAR evaluation is not required