



## 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:

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

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

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

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

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

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

Field strength =  $\mathbf{A}$  dBuV/m @3m

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

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

$$\text{So } (\mathbf{B} \text{ mW}/5\text{mm}) \times \sqrt{\mathbf{C} \text{ GHz}} = \mathbf{D} < 3$$

Model	FLEX 4ES/4EX	FLEX 8ES/8EX	FLEX 12ES/12EX
<b>A</b> (dBuV/m @3m)	82.56	83.62	88.94
<b>B</b> (mW)	0.054	0.069	0.235
<b>C</b> (GHz)	0.43375	0.433	0.433
<b>D</b>	0.0071	0.009	0.031

Then SAR evaluation is not required

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