

RF Exposure evaluation

According to 447498 D04 Interim General RF Exposure Guidance v01

2.1.2 1-mW Test Exemption

Per §1.1307(b)(3)(i)(A), a single RF source is exempt RF device (from the requirement to show data demonstrating compliance to RF exposure limits, as previously mentioned) if the available maximum time-averaged power is no more than 1 mW, regardless of separation distance.

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

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

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

Field strength = 77.70dB μ V/m @3m

Antenna gain=0dBi

So EIRP=77.70-95.2=-17.5dBm

$$10^{-17.5}=0.0178 \text{ mW} < 1 \text{ mW}$$

Then SAR evaluation is not required