



RF exposure evaluation

Subject: FCC Application for FCC ID: ZME-CFD

According to 447498 D01 General RF Exposure Guidance v06

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:

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

$f(\text{GHz})$ 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

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

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

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

Field strength = 96.96 dBuV/m @3m (2401.35 MHz) (Test Report page 44/77)

Ant gain = 2.69 dBi ;so Ant numeric gain = $10^{(1.68/10)} = 1.858$

$$\text{So } pt = \{ [10^{(96.96/20)} / 10^6] \times 3 \}^2 / (30 \times 1.858) \times 1000 \text{ mW} = 0.802 \text{ mW}$$

$$\text{So } (0.802 \text{ mW} / 5 \text{ mm}) \times \sqrt{2.40135} = 0.0062 < 3$$

Then SAR testing/evaluation is not required