



RF exposure evaluation

Subject: FCC Application for FCC ID: 2AH2P683345

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:

$[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] \cdot$

$[\sqrt{f(\text{GHz})}] \leq 3.0$ for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where

f(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

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

Field strength = 84.29 dBuV/m @3m (2440 MHz) (Test Report page 25/52)

Ant gain = 1.57 dBi ;so Ant numeric gain = $10^{(1.57 / 10)} = 1.435$

$$\text{So pt} = \{ \{ [10^{(84.29 / 20)} / 10^6] \times 3 \}^2 / (30 \times 1.435) \} \times 1000 \text{ mW} = 0.056 \text{ mW}$$

$$\text{So } (0.056 \text{ mW} / 5 \text{ mm}) \times \sqrt{2.440} = 0.0175 < 3$$

Then SAR testing/evaluation is not required