



RF exposure evaluation

Subject: FCC Application for FCC ID: AHL-ALMOND3S

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:

Devices operating in standalone mobile device, the test exclusion thresholds for test minimum test separation distance $\geq$ 20 cm.

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

$[\sqrt{f(\text{GHz})}] \leq 3.0$ 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

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

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 = 75.47 dBuV/m @3m (2440 MHz) (Test Report page 26)

Ant gain = 3.28 dBi ;so Ant numeric gain = $10^{(3.28/10)} = 2.13$

$$\text{So pt} = \{ \{ [10^{(75.47/20)} / 10^6] \times 3 \}^2 / (30 \times 2.13) \} \times 1000 \text{ mW} = 0.00479 \text{ mW}$$

$$\text{So } (0.00479 \text{ mW} / 200\text{mm}) \times \sqrt{2.440} = 0.0000388 < 3$$

Then SAR testing/evaluation is not required