

## RF exposure evaluation

Subject: FCC Application for FCC ID: FSUGMZLO

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.

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

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

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

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

### **DTS (2.4G Band) :**

Field strength = 83.80 dBuV/m @3m (2480 MHz) (Test Report page 34)

Ant gain = 0 dBi ;so Ant numeric gain =  $10^{(0/10)} = 1.00$

$$\text{So pt} = \{ \{ [10^{(83.80/20)} / 10^6] \times 3 \}^2 / (30 \times 1) \} \times 1000 \text{ mW} = 0.07196 \text{ mW}$$

$$\text{So } (0.07196 \text{ mW} / 200\text{mm}) \times \sqrt{2.480} = 0.018 < 3$$

Then SAR testing/evaluation is not required