

March 30th 2010

Maximum Permissible Exposure

FCC, Part 1 Subpart C §1.1310
Industry Canada RSS-Gen §5.5

Calculations for Maximum Permissible Exposure Levels

$$\text{Power Density} = P_d \text{ (mW/cm}^2\text{)} = \text{EIRP}/(4\pi d^2)$$

P = Peak output power (mW)

G = Antenna numeric gain (numeric)

d = Separation distance (cm)

$$\text{Numeric Gain} = 10^{\text{G (dBi)/10}}$$

The peak power in the table below is calculated by assuming a worst case scenario where the transmitter is operating maximum power.

Because the EUT belongs to the General Population/Uncontrolled Exposure the limit of power density is 1.0 mW/cm²

Freq. Band (GHz)	Antenna Gain (dBi)	Numeric Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Calculated Safe Distance @ 1mW/cm ² Limit(cm)	Minimum Separation Distance (cm)
60.48	34.5	2818.4	+3.10	2.059	21.5	21.5

***Note:** for mobile or fixed location transmitters the minimum separation distance is 20cm, even if calculations indicate the MPE distance to be less.

Specification

Maximum Permissible Exposure Limits

FCC §1.1310 Limit = 1mW / cm² from 1.310 Table 1

RSS-Gen §5.5 Before equipment certification is granted, the application requirements of RSS-102 shall be met.