Maximum Permissible Exposure

Calculations for Maximum Permissible Exposure Levels

Power Density = Pd (mW/cm^2) = EIRP/($4\pi d^2$)

EIRP = P * G

P = Peak output power (mW)

G = Antenna numeric gain (numeric)

d = Separation distance (cm)

Numeric Gain = 10 ^ (G (dBi)/10)

P (worst case) = +45 dBm, 31,622 mW

Antenna Gain (Worst Case) = 9.0 dBi, 7.94 numeric,

Because the EUT belongs to the General Population/Uncontrolled Exposure the limit of power density is f/1500.

At 430 MHz operation;

Limit = 430/1500 = 0.287 mW/cm^2

Antenna Gain (dBi)	Numeric Gain (numeric)	Max Power (dBm)	Max Allowable Peak Power (mW)	Calculated Safe Distance at 0.287 mW/cm^2 (cm)
0.0	1.000	45	31,622	93.6
3.0	1.995	42	15,849	93.6
5.0	3.162	40	10,000	93.6
9.0	7.943	36	3981	93.6

Safe distance under all circumstances is 93.6 cm