

### Prediction of MPE limit at a given distance

Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S = \frac{PG}{4\pi R^2}$$

where: S = power density

P = power input to the antenna

G = power gain of the antenna in the direction of interest relative to isotropic

R = distance to the center of radiation of the antenna

Maximum peak output power at antenna input terminal:	23.48	(dBm)
Maximum peak output power at antenna input terminal:	222.8	(mW)
Antenna gain(typical):	7.77	(dBi)
Maximum antenna gain:	5.984	(numeric)
Prediction distance:	20	(cm)
Source Based Time Average Duty Cycle:	100	(%)
Prediction frequency:	5745	(MHz)
MPE limit for uncontrolled exposure at prediction frequency:	1.000	(mW/cm <sup>2</sup> )
Power density at prediction frequency:	0.26530	(mW/cm <sup>2</sup> )
Power density at prediction frequency:	2.6530	(W/m <sup>2</sup> )
Margin of Compliance:	5.76	(dB)

Sum power density of 2.4 GHz and 5.8 GHz : 0.40154+0.26530 = 0.66684 < 1 mW/cm<sup>2</sup>