Prediction of MPE Limit for a Specified Distance

Reference: OET Bulletin 65, Edition 97-01

The power density formula is as follows:

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

where: S = power density
        P = power input to the antenna
        G = power gain of the antenna in the direction of interest relative to an isotropic radiator
        R = distance to the center of radiation of the antenna

Table 1 – MPE Calculation for OET Bulletin 65 & RSS-102 Compliance

Maximum peak output power at antenna terminal:	19.83	(dBm)
Maximum peak output power at antenna terminal:	96.16	(mW)
Antenna Gain (typical):	4.83	(dBi)
Maximum Antenna Gain:	3.04	(numeric)
Prediction Distance:	20.00	(cm)
Prediction Frequency:	2405.00	(MHz)
MPE Limit for Uncontrolled Exposure at Prediction Frequency:	1.00	(mW/cm^2)
Power Density at the Prediction Frequency:	0.0582	(mW/cm^2)
Maximum Allowable Antenna Gain:	17.18	(dBi)
Margin of Compliance at 20 cm:	12.35	(dB)