Nemko

Prediction of MPE limit at a given distance

Equation from page 18 of OET Bulletin 65, Edition 97-01
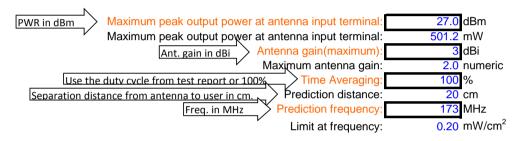
$$S = \frac{PG}{4\pi R^2}$$

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

PWR in dBm → Maximum peak output power at antenna input terminal:	27.0	dBm
Maximum peak output power at antenna input terminal:	501.2	mW
Ant. gain in dBi → Antenna gain(maximum):	3	dBi
Maximum antenna gain:	2.0	numeric
Use the duty cycle from test report or 100% → Time Averaging:	100	%
Separation distance from antenna to user in cm. → Prediction distance:	20	cm
Freq. in MHz → Prediction frequency:	173	MHz
Limit at frequency:	0.20	mW/cm^2
Power density at prediction frequency:	0.20	mW/cm^2
This equates to:	1.99	W/m^2