

MPE CALCULATIONS – Dipole Antenna

The following MPE calculations are based on a measured conducted RF power of +20.5 dBm as presented to the antenna. The gain of this antenna, based on the data sheet is 2.0 dBi.

<u>Prediction of MPE limit at a given distance</u>			
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 an isotropic radiator		
	R = distance to the center of radiation of the antenna		
	Maximum peak output power at antenna input terminal:	20.50	(dBm)
	Maximum peak output power at antenna input terminal:	112.202	(mW)
	Antenna gain(typical):	2	(dBi)
	Maximum antenna gain:	1.585	(numeric)
	Prediction distance:	20	(cm)
	Prediction frequency:	2405	(MHz)
	MPE limit for uncontrolled exposure at prediction frequency:	1	(mW/cm ²)
	Power density at prediction frequency:	0.035378	(mW/cm ²)
	Maximum allowable antenna gain:	16.5	(dBi)
	Margin of Compliance at	20	cm =
			14.5 dB