

EXHIBIT 13. MPE CALCULATIONS

The following MPE calculations are based on a ceramic chip antenna, with a measured ERP of 95.4 dB μ V/m (at 3 meters) and conducted RF power of -0.1 dBm as presented to the antenna. The peak gain of this antenna, based on the data sheet is 1.0 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:	-0.10 (dBm)
Maximum peak output power at antenna input terminal:	0.977 (mW)
Antenna gain(typical):	1 (dBi)
Maximum antenna gain:	1.259 (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:	0.000245 (mW/cm ²)
Maximum allowable antenna gain:	37.1 (dBi)
Margin of Compliance at 20 cm =	36.1 dB