

EXHIBIT 13. MPE CALCULATIONS

The following MPE calculations are based on a ceramic chip antenna, with a measured ERP of 95.4 dBμV/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.

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 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	