

MPE CALCULATIONS

The following MPE calculations are based on an inverted-F printed circuit board trace antenna, with a 56mm straight section, and 18 mm away from the ground plane. The measured ERP of the EUT was 124.4 dBμV/m at 3 meters, and conducted RF power of +26.7 dBm as presented to the antenna. The calculated gain of this antenna, based on the ERP measurements is 2.5 dB.

<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:		26.70	(dBm)	
Maximum peak output power at antenna input terminal:		467.735	(mW)	
Antenna gain(typical):		2.5	(dBi)	
Maximum antenna gain:		1.778	(numeric)	
Prediction distance:		20	(cm)	
Prediction frequency:		915	(MHz)	
MPE limit for uncontrolled exposure at prediction frequency:		0.62	(mW/cm^2)	
Power density at prediction frequency:		0.165474	(mW/cm^2)	
Maximum allowable antenna gain:		8.2	(dBi)	
Margin of Compliance at		20	cm =	5.7 dB