

### 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 device output terminal:	<u>20.92</u>	(dBm)	
Cable and Jumper loss	<u>0.0</u>	(dB)	
Maximum peak output power at antenna input terminal:	<u>20.92</u>	(dBm)	
Maximum peak output power at antenna input terminal:	<u>123.5947433</u>	(mW)	
Single Antenna gain(typical):	<u>7.2</u>	(dBi)	
Number of Antennae	<u>1</u>		
Total Antenna gain(typical):	<u>7.2</u>	(dBi)	See note below
Maximum antenna gain:	<u>5.248074602</u>	(numeric)	
Prediction distance:	<u>20</u>	(cm)	
Prediction frequency:	<u>5580</u>	(MHz)	
MPE limit for uncontrolled exposure at prediction frequency:	<u>1</u>	(mW/cm^2)	
Power density at prediction frequency:	<u>0.129042</u>	(mW/cm^2)	
	<u>1.290417</u>	(W/m^2)	
Tx On time:	<u>1.000000</u>		
Tx period time:	<u>1.000000</u>		
Average Factor:	<u>100.000000</u>		
Average Power density at prediction frequency:	<u>1.290417</u>	(W/m^2)	
Maximum allowable antenna gain:	<u>16.09269855</u>	(dBi)	
Margin of Compliance:	<u>8.892698554</u>	dB	

Note: (Directional gain for MIMO cross-polarized 2 × 2 is 7.2 dBi. No summation of gain is needed for cross-polarized antennas as per manufacturer's definition of the cross-polarized MIMO type.)

