

### 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>20.90</u>	(dBm)	
Cable and Jumper loss	<u>0.0</u>	(dB)	
Maximum peak output power at antenna input terminal:	<u>20.90</u>	(dBm)	
Maximum peak output power at antenna input terminal:	<u>123.0268771</u>	(mW)	
Single Antenna gain(typical):	<u>15</u>	(dBi)	See note below
Number of Antennae	<u>2</u>		
Total Antenna gain(typical):	<u>18.01029996</u>	(dBi)	
Maximum antenna gain:	<u>63.2455532</u>	(numeric)	
Prediction distance:	<u>25</u>	(cm)	
Prediction frequency:	<u>5785</u>	(MHz)	
MPE limit for uncontrolled exposure at prediction frequency:	<u>1</u>	(mW/cm <sup>2</sup> )	
Power density at prediction frequency:	<u>0.990695</u>	(mW/cm <sup>2</sup> )	
	<u>9.906953</u>	(W/m <sup>2</sup> )	
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>9.906953</u>	(W/m <sup>2</sup> )	
Maximum allowable antenna gain:	<u>18.05089881</u>	(dBi)	
Margin of Compliance:	<u>0.040598857</u>	dB	

Note: Antenna gain: 12 dBi + 10 × log<sub>10</sub> (2) dB = 15 dBi

