Nemko

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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

Fundamental transmit (prediction) frequency:	915	MHz
Maximum measured conducted peak output power:	29.87	dBm
Cable and/or jumper loss:	0.0	dB
Maximum peak power at antenna input terminal:	29.87	dBm
Tx On time:	1.000	ms
Tx period time:	1.000	ms
Average factor:	100	%
Maximum calculated average power at antenna input terminal:	970.510	mW
Single Antenna gain (typical):	2.15	dBi
Number of antennae:	1	
Total system gain (typical):	2.150	dBi
MPE limit for uncontrolled exposure at prediction frequency:	0.61	mW/cm^2
	6.1	W/m^2
Minimum calculated prediction distance for compliance:	14	cm
Typical (declared) distance:	22	cm
Average power density at prediction frequency:	**0.261785**	**mW/cm^2**
	2.61785	W/m^2
Margin of Compliance:	**3.67385**	**dB**
Maximum allowable antenna gain:	5.82385	dBi