MPE Calculation page

Purple Tree Technologies Test Number: 090212

Model: PT2-A-01-RPT0

MPE Calculator MPE uses EIRP for calculation. EIRP is based on TX power added to the antenna gain in dBi.
dBi = dB gain compared to an isotropic radiator.
S = power density in mW/cm^2

					Antenna Gain (dBi)	8.2
		Output Power		dBd + 2.17 = dBi	dBi to dBd	2.2
Tx Frequency (MHz)	915	Maximum (Watts)	1.0000		Antenna Gain (dBd)	6.03
Cable Loss (dB)	0.0	(dBm)	30.00		Antenna minus cable (dBi)	8.20

Calculated ERP (mw) 4008.667
Calculated EIRP (mw) 6606.934

EIRP = Po(dBM) + Gain (dB)
Radiated (EIRP) dBm 38.200
ERP = EIRP - 2.17 dB
Radiated (ERP) dBm 36.030

Occupational Limit
3.05000 **mW/cm^2**

General Public Limit
0.61000 **mW/cm^2**

Power density (S)
EIRP
------- = mW/cm^2
4 π r^2
r (cm) EIRP (mW)

FCC radio frequency radiation exposure limits per 1.1310		
Frequency (MHz)	Occupational Limit	Public Limit
300-1,500	f/300	f/1500
1,500-10,000	5	1

FCC radio frequency radiation exposure limits per 1.1310		
Frequency (MHz)	Occupational Limit @ Tx Freq (mW/cm^2)	Public Limit @ Tx Freq (mW/cm^2)
300-1,500	3.05	0.61
1,500-10,000	5	1

EIRP	Distance	Distance	S	Distance
milliwatts	cm	inches	mW/cm^2	Feet
6606.934	100.00	39.37	0.05258	3.28
6606.934	90.00	35.43	0.06491	2.95
6606.934	80.00	31.50	0.08215	2.62
6606.934	70.00	27.56	0.10730	2.30
6606.934	60.00	23.62	0.14605	1.97
6606.934	50.00	19.69	0.21031	1.64
6606.934	40.00	15.75	0.32860	1.31
6606.934	35.00	13.78	0.42919	1.15
6606.934	30.00	11.81	0.58418	0.98
6606.934	29.50	11.61	0.60415	0.97
6606.934	29.00	11.42	0.62516	0.95
6606.934	25.00	9.84	0.84122	0.82
6606.934	22.00	8.66	1.08629	0.72
6606.934	21.00	8.27	1.19221	0.69
6606.934	20.00	7.87	1.31441	0.66
6606.934	15.00	5.91	2.33673	0.49
6606.934	13.20	5.20	3.01747	0.43

Frequency (MHz)	Occupational Limit minimum Distance (cm / inches)	Public Limit minimum distance (cm / inches)
300-1,500	N/A	N/A
1,500-10,000	13.2 /5.2	29.5 / 11.6