MPE Calculator Systems Innovation, Inc. Test 051122A

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

		Output Power		dBd + 2.17 = dBi	Antenna Gain (dBi) 1
Tx Frequency (MHz)	24125	(Watts)	0.0060		dBi to dBd 2.17
					Antenna Gain (dBd) -1.17
Cable Loss (dB)	0.0	(dBm)	7.78		Antenna minus cable (dBi) 1.00

Calculated ERP (mw) 4.583
Calculated EIRP (mw) 7.554

EIRP = Po(dBM) + Gain (dB)
Radiated (EIRP) dBm 8.782
ERP = EIRP - 2.17 dB
Radiated (ERP) dBm 6.612

Occupational Limit
5.00000 mW/cm²

General Public Limit
1.00000 mW/cm²

Power density (S)

$$S = \frac{EIRP}{4\pi r^2} \quad \text{mW/cm}^2$$

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	80.41666667	16.08333333
1,500-10,000	5	1

EIRP	Distance	Distance	S
milliwatts	cm	inches	mW/cm²
7.554	50.00	19.69	0.00024
7.554	40.00	15.75	0.00038
7.554	30.00	11.81	0.00067
7.554	25.00	9.84	0.00096
7.554	20.00	7.87	0.00150
7.554	15.00	5.91	0.00267
7.554	14.00	5.51	0.00307
7.554	13.00	5.12	0.00356
7.554	12.00	4.72	0.00417
7.554	11.00	4.33	0.00497
7.554	10.00	3.94	0.00601
7.554	9.00	3.54	0.00742
7.554	8.00	3.15	0.00939
7.554	7.00	2.76	0.01227
7.554	6.00	2.36	0.01670
7.554	5.00	1.97	0.02404
7.554	4.00	1.57	0.03757
7.554	3.00	1.18	0.06679
7.554	2.00	0.79	0.15027
7.554	1.75	0.69	0.19628
7.554	1.50	0.59	0.26715
7.554	1.25	0.49	0.38470
7.554	1.00	0.39	0.60109
7.554	0.78	0.31	0.98799
7.554	0.40	0.16	3.75683

Frequency (MHz)	Occupational Limit minimum Distance (cm)	Public Limit minimum distance (cm)
300-1,500	N/A	N/A
1,500-10,000	0.40	0.78