

MPE Calculator Lectrosonics SMQa Test 080313D
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/cm² Antenna Gain (dBi) 0
Output Power dBd + 2.17 = dBi dBi to dBd 2.17
Tx Frequency (MHz) 503 (Watts) 0.2500 Antenna Gain (dBd) -2.17
(dBm) 23.98
Cable Loss (dB) 0.0 Antenna minus cable (dBi) 0.00
Calculated ERP (mw) 151.684 EIRP = Po(dBM) + Gain (dB)
Calculated EIRP (mw) 250.000 Radiated (EIRP) dBm 23.979

Occupational Limit
1.67667 mW/cm²

General Public Limit
0.33533 mW/cm²

Power density (S)
EIRP
----- = mW/cm²
4 π r²
r (cm) EIRP (mW)

ERP = EIRP - 2.17 dB
Radiated (ERP) dBm 21.809

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	1.67666667	0.335333333
1,500-10,000	5	1

EIRP	Distance	Distance	S
milliwatts	cm	inches	mW/cm ²
250.000	50.00	19.69	0.00796
250.000	40.00	15.75	0.01243
250.000	30.00	11.81	0.02210
250.000	25.00	9.84	0.03183
250.000	20.00	7.87	0.04974
250.000	15.00	5.91	0.08842
250.000	14.00	5.51	0.10150
250.000	13.00	5.12	0.11772
250.000	12.00	4.72	0.13816
250.000	11.00	4.33	0.16442
250.000	10.00	3.94	0.19894
250.000	9.00	3.54	0.24561
250.000	8.00	3.15	0.31085
250.000	7.70	3.03	0.33554
250.000	6.00	2.36	0.55262
250.000	5.75	2.26	0.60172
250.000	5.50	2.17	0.65767
250.000	5.00	1.97	0.79577
250.000	4.00	1.57	1.24340
250.000	3.50	1.38	1.62403
250.000	3.45	1.36	1.67144
250.000	2.20	0.87	4.11041
250.000	2.00	0.79	4.97359
250.000	1.00	0.39	19.89437
250.000	0.50	0.20	79.57747

Frequency (MHz)	Occupational Limit minimum Distance (cm)	General Public Limit minimum distance (cm)
300-1,500	3.45	7.70
1,500-10,000	N/A	N/A