

MPE Calculator Lectrosonics DBZSMQM Test 060815M

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) 653 (Watts) 0.2500 Antenna Gain (dBd) -2.17

Cable Loss (dB) 0.0 (dBm) 23.98 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

ERP = EIRP - 2.17 dB

Radiated (ERP) dBm 21.809

Occupational Limit Power density (S)
2.17667 mW/cm² EIRP
----- = mW/cm²

General Public Limit 4 π r²
0.43533 mW/cm² 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	2.17666667	0.43533333
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	7.00	2.76	0.40601
250.000	6.90	2.72	0.41786
250.000	6.80	2.68	0.43024
250.000	6.00	2.36	0.55262
250.000	5.00	1.97	0.79577
250.000	4.00	1.57	1.24340
250.000	3.00	1.18	2.21049
250.000	3.50	1.38	1.62403
250.000	3.10	1.22	2.07017
250.000	3.00	1.18	2.21049
250.000	2.00	0.79	4.97359
250.000	1.00	0.39	19.89437

Frequency (MHz)	Occupational Limit minimum Distance (cm)	Public Limit minimum distance (cm)
300-1,500	3.10	6.80
1,500-10,000	N/A	N/A