

MPE Calculation page

MPE Calculator DMP 1100 xi/di Series Tx 071219
 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) 1
 dBi to dBd 2.17

Output Power dBd + 2.17 = dBi 2.17
 (Watts) 0.013100
 (dBm) 11.17

Tx Frequency (MHz) 927
 Cable Loss (dB) 0.0 Antenna minus cable (dBi) 1.00

Calculated ERP (mw) 10.006
 Calculated EIRP (mw) 16.492 Radiated (EIRP) dBm 12.173

Occupational Limit Power density (S)
 3.09000 mW/cm² EIRP
 ----- = mW/cm²
 4 π r²
General Public Limit r (cm) EIRP (mW)
 0.61800 mW/cm²

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	3.09	0.618
1,500-10,000	5	1

EIRP	Distance	Distance	S
milliwatts	cm	inches	mW/cm ²
16.492	50.00	19.69	0.00052
16.492	40.00	15.75	0.00082
16.492	30.00	11.81	0.00146
16.492	25.00	9.84	0.00210
16.492	20.00	7.87	0.00328
16.492	15.00	5.91	0.00583
16.492	14.00	5.51	0.00670
16.492	13.00	5.12	0.00777
16.492	12.00	4.72	0.00911
16.492	11.00	4.33	0.01085
16.492	10.00	3.94	0.01312
16.492	9.00	3.54	0.01620
16.492	8.00	3.15	0.02051
16.492	7.00	2.76	0.02678
16.492	6.00	2.36	0.03646
16.492	5.00	1.97	0.05250
16.492	4.00	1.57	0.08202
16.492	3.00	1.18	0.14582
16.492	2.00	0.79	0.32810
16.492	1.50	0.59	0.58328
16.492	1.46	0.57	0.61568
16.492	1.00	0.39	1.31239
16.492	0.75	0.30	2.33313
16.492	0.70	0.28	2.67834
16.492	0.65	0.26	3.10624

Frequency (MHz)	Occupational Limit minimum Distance (cm)	Public Limit minimum distance (cm)
300-1,500	0.65	1.46
1,500-10,000	N/A	N/A