MPE Calculation page

MPE Calculator DMP 1100xH Series Tx Test 080110

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	dBi to dBd
Tx Frequency (MHz)	903.3	(Watts)	0.720000	Antenna Gain (dBd)	-1.17
Cable Loss (dB)	0.0	(dBm)	28.57	Antenna minus cable (dBi)	1.00

Antenna Gain (dBi) 1

Calculated ERP (mw) 549.962
Calculated EIRP (mw) 906.426

EIRP = Po(dBM) + Gain (dB)
Radiated (EIRP) dBm 29.573
ERP = EIRP - 2.17 dB
Radiated (ERP) dBm 27.403

Occupational Limit
3.01100 **mW/cm²**

General Public Limit
0.60220 **mW/cm²**

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	3.011	0.6022
1,500-10,000	5	1

EIRP	Distance	Distance	S
milliwatts	cm	inches	mW/cm²
906.426	50.00	19.69	0.02885
906.426	40.00	15.75	0.04508
906.426	30.00	11.81	0.08015
906.426	25.00	9.84	0.11541
906.426	20.00	7.87	0.18033
906.426	15.00	5.91	0.32058
906.426	14.00	5.51	0.36802
906.426	13.00	5.12	0.42681
906.426	12.00	4.72	0.50091
906.426	11.00	4.33	0.59612
906.426	10.00	3.94	0.72131
906.426	9.00	3.54	0.89051
906.426	8.00	3.15	1.12705
906.426	7.00	2.76	1.47206
906.426	6.00	2.36	2.00364
906.426	5.00	1.97	2.88524
906.426	4.00	1.57	4.50819
906.426	3.00	1.18	8.01457
906.426	2.00	0.79	18.03278
906.426	1.50	0.59	32.05827
906.426	1.25	0.49	46.16391
906.426	1.00	0.39	72.13111
906.426	0.75	0.30	128.23309
906.426	0.70	0.28	147.20635
906.426	0.33	0.13	662.36100

Frequency (MHz)	Occupational Limit minimum Distance (cm)	Public Limit minimum distance (cm)
300-1,500	5.00	11.00
1,500-10,000	N/A	N/A