

MPE Calculation page

Dynastream	Model:	ANT C& 1823	Test Number:	110815B		
MPE Calculator	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					
				Antenna Gain (dBi)		1
		Output Power		dBd + 2.17 = dBi		2.2
Tx Frequency (MHz)	2441	Maximum (Watts)	0.0009	Antenna Gain (dBd)		-1.17
Cable Loss (dB)	0.0	(dBm)	-0.46	Antenna minus cable (dBi)		1.00
	Calculated ERP (mw)	0.687		EIRP = Po(dBM) + Gain (dB)		
	Calculated EIRP (mw)	1.133		Radiated (EIRP) dBm		0.542
				ERP = EIRP - 2.17 dB		
	Occupational Limit	Power density (S) EIRP ----- = mW/cm² 4 p r² r (cm) EIRP (mW)		Radiated (ERP) dBm		-1.628
	5.00000 mW/cm ²					
	50.00000 W/m ²					
	General Public Limit					
	1.00000 mW/cm ²					
	10.00000 W/m 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	Public Limit @ Tx Freq		
		300-1,500 (mW/cm ²)	8.136666667	1.627333333		
		300-1,500 (W/m ²)	81.36666667	16.27333333		
		1,500-10,000 (mW/cm ²)	5	1		
		1,500-10,000 (W/m ²)	50	10		
EIRP	S	S	Distance	Distance	Distance	Distance
milliwatts	mW/cm ²	W/m ²	cm	meter	inches	Feet
1.133	0.00001	0.00009	100.00	1.00	39.37	0.08
1.133	0.00001	0.00011	90.00	0.90	35.43	0.08
1.133	0.00001	0.00014	80.00	0.80	31.50	0.07
1.133	0.00002	0.00018	70.00	0.70	27.56	0.06
1.133	0.00003	0.00025	60.00	0.60	23.62	0.05
1.133	0.00004	0.00036	50.00	0.50	19.69	0.04
1.133	0.00006	0.00056	40.00	0.40	15.75	0.03
1.133	0.00010	0.00100	30.00	0.30	11.81	0.03
1.133	0.00023	0.00225	20.00	0.20	7.87	0.02
1.133	0.00090	0.00902	10.00	0.10	3.94	0.01
1.133	0.00184	0.01840	7.00	0.07	2.76	0.01
1.133	0.00250	0.02505	6.00	0.06	2.36	0.01
1.133	0.00361	0.03607	5.00	0.05	1.97	0.00
1.133	0.00564	0.05635	4.00	0.04	1.57	0.00
1.133	0.01002	0.10018	3.00	0.03	1.18	0.00
1.133	0.02254	0.22541	2.00	0.02	0.79	0.00
1.133	0.09016	0.90164	1.00	0.010	0.39	0.00
			Occupational Limit minimum Distance (meters)	Occupational Limit minimum Distance (cm / inches)	Public Limit minimum distance (meters)	Public Limit minimum distance (cm / inches)
		Frequency (MHz)				
		300-1,500	N/A	N/A	N/A	N/A
		1,500-10,000				