

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/cm²

Antenna Gain (dBi) **9**
 dBi to dBd **3**
 Tx Frequency (MHz) **75** Output Power Average (Watts) **3.0000** dBd + 2.17 = dBi
 Antenna Gain (dBd) **6**
 Cable Loss (dB) **0.0** (dBm) **34.77** Antenna minus cable (dBd) **9.00**

Calculated ERP (mw) 11943.215
 Calculated EIRP (mw) 23829.847

EIRP = Po(dBM) + Gain (dB)
 Radiated (EIRP) dBm **43.771**
 ERP = EIRP - 2.17 dB
 Radiated (ERP) dBm **40.771**

Occupational Limit
0.25000 mW/cm²
General Public Limit
0.05000 mW/cm²

Power density (S)
 EIRP
 ----- = mW/cm²
 4 π r²
 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	0.25	0.05
1,500-10,000	5	1

EIRP	Distance	Distance	S	Distance
milliwatts	cm	inches	mW/cm ²	Feet
23829.847	350.00	137.80	0.01548	11.48293963
23829.847	300.00	118.11	0.02107	9.842519685
23829.847	275.00	108.27	0.02508	9.022309711
23829.847	250.00	98.43	0.03034	8.202099738
23829.847	225.00	88.58	0.03746	7.381889764
23829.847	200.00	78.74	0.04741	6.56167979
23829.847	175.00	68.90	0.06192	5.741469816
23829.847	150.00	59.06	0.08428	4.921259843
23829.847	125.00	49.21	0.12136	4.101049869
23829.847	100.00	39.37	0.18963	3.280839895
23829.847	90.00	35.43	0.23411	2.952755906
23829.847	80.00	31.50	0.29630	2.624671916
23829.847	70.00	27.56	0.38700	2.296587927
23829.847	60.00	23.62	0.52676	1.968503937
23829.847	50.00	19.69	0.75853	1.640419948
23829.847	40.00	15.75	1.18520	1.312335958
23829.847	30.00	11.81	2.10702	0.984251969
23829.847	25.00	9.84	3.03411	0.820209974
23829.847	20.00	7.87	4.74080	0.656167979
23829.847	15.00	5.91	8.42808	0.492125984
23829.847	14.00	5.51	9.67510	0.459317585
23829.847	13.00	5.12	11.22082	0.426509186
23829.847	12.00	4.72	13.16888	0.393700787
23829.847	11.00	4.33	15.67206	0.360892388
23829.847	10.00	3.94	18.96319	0.32808399
23829.847	9.00	3.54	23.41135	0.295275591
23829.847	8.00	3.15	29.62998	0.262467192
23829.847	7.00	2.76	38.70039	0.229658793
23829.847	6.00	2.36	52.67553	0.196850394
23829.847	5.00	1.97	75.85276	0.164041995
23829.847	1.60	0.63	740.74960	0.052493438

Frequency (MHz)	Occupational Limit minimum Distance (inches)	Public Limit minimum distance (inches)
300-1,500	0.63	3.20
1,500-10,000	N/A	N/A

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Selex Sistemi Integrati Inc.
 Model: 2130 FCCID#: JPAMKR2
 Test #: 060822 SN: EDM1511
 Test to: FCC Parts 2 and 87