

MPE Calculator

Microtronics

Test 070227

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
		Output Power	dBd + 2.17 = dBi	dBi to dBd	2.17
Tx Frequency (MHz)	2440	(Watts)	0.0010	Antenna Gain (dBd)	-1.17
Cable Loss (dB)	0.0	(dBm)	0.00	Antenna minus cable (dBi)	1.00
Calculated ERP (mw) 0.764					EIRP = Po(dBm) + Gain (dB)
Calculated EIRP (mw) 1.259					Radiated (EIRP) dBm 1.000
					ERP = EIRP - 2.17 dB
					Radiated (ERP) dBm -1.170
Occupational Limit			Occupational Limit		
8.13333 mW/cm ² 300-1500 MHz			5 mW/cm ² 1500-10000 MHz		

General Public Limit**General Public Limit** 1500-10000 MHz1.62667 mW/cm² 300-1500 MHz1 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

Power density (S)
EIRP
----- = mW/cm²
 $4 \pi r^2$
r (cm) EIRP (mW)

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	8.133333333	1.626666667
1,500-10,000	5	1

EIRP	Distance	Distance	S
milliwatts	cm	inches	mW/cm ²
1.259	50.00	19.69	0.00004
1.259	40.00	15.75	0.00006
1.259	30.00	11.81	0.00011
1.259	25.00	9.84	0.00016
1.259	20.00	7.87	0.00025
1.259	15.00	5.91	0.00045
1.259	14.00	5.51	0.00051
1.259	13.00	5.12	0.00059
1.259	12.00	4.72	0.00070
1.259	11.00	4.33	0.00083
1.259	10.00	3.94	0.00100
1.259	9.00	3.54	0.00124
1.259	8.00	3.15	0.00157
1.259	7.00	2.76	0.00204
1.259	6.00	2.36	0.00278
1.259	5.00	1.97	0.00401
1.259	4.00	1.57	0.00626
1.259	3.00	1.18	0.01113
1.259	2.00	0.79	0.02505
1.259	1.50	0.59	0.04453
1.259	1.25	0.49	0.06412
1.259	1.00	0.39	0.10018
1.259	0.75	0.30	0.17810
1.259	0.50	0.20	0.40073
1.259	0.35	0.14	0.81781

Frequency (MHz)	Occupational Limit minimum Distance (cm)	Public Limit minimum distance (cm)
300-1,500	N/A	N/A
1,500-10,000	N/A	0.35

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Microtronics, Inc.
Model: B067B 2.4 Transceiver
Test #: 070227
Test to: CFR47 15c (15.249), IC RSS-210

FCC ID#: I7CAYB06724
IC:

Page 1 of 1

B067B MPE Calculation 3/26/2007