

# MPE Calculation page

MPE Calculator

Test 061213

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<sup>2</sup>

				Antenna Gain (dBi)	0.5
			dBd + 2.17 = dBi	dBi to dBd	2.17
Tx Frequency (MHz)	2457	Output Power (Watts)	0.000006	Antenna Gain (dBd)	-1.67
Cable Loss (dB)	0.0	(dBm)	-22.22	Antenna minus cable (dB)	0.50

Calculated ERP (mw) 0.004

Calculated EIRP (mw) 0.007

EIRP = Po(dBm) + Gain (dB)

Radiated (EIRP) dBm -21.718

ERP = EIRP - 2.17 dB

Radiated (ERP) dBm -23.888

<b>Occupational Limit</b>	Power density (S)
<b>5.00000</b> mW/cm <sup>2</sup>	EIRP
	----- =
<b>General Public Limit</b>	mW/cm <sup>2</sup>
<b>1.00000</b> mW/cm <sup>2</sup>	4 π r <sup>2</sup>
	r (cm) EIRP

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 <sup>2</sup> )	Public Limit @ Tx Freq (mW/cm <sup>2</sup> )
300-1,500	8.19	1.638
1,500-10,000	5	1

EIRP	Distance	Distance	S
milliwatts	cm	inches	mW/cm <sup>2</sup>
0.007	50.00	19.69	0.00000
0.007	40.00	15.75	0.00000
0.007	30.00	11.81	0.00000
0.007	25.00	9.84	0.00000
0.007	20.00	7.87	0.00000
0.007	15.00	5.91	0.00000
0.007	14.00	5.51	0.00000
0.007	13.00	5.12	0.00000
0.007	12.00	4.72	0.00000
0.007	11.00	4.33	0.00000
0.007	10.00	3.94	0.00001
0.007	9.00	3.54	0.00001
0.007	8.00	3.15	0.00001
0.007	7.00	2.76	0.00001
0.007	6.00	2.36	0.00001
0.007	5.00	1.97	0.00002
0.007	4.00	1.57	0.00003
0.007	3.00	1.18	0.00006
0.007	2.00	0.79	0.00013
0.007	1.75	0.69	0.00017
0.007	1.50	0.59	0.00024
0.007	1.25	0.49	0.00034
0.007	1.00	0.39	0.00054
0.007	0.75	0.30	0.00095
0.007	0.50	0.20	0.00214

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	N/A

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Test #:061213

Test to: FCC Parts 2 and 15.249

FCC ID#: IPH-01097

SN: ENG 1

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