

# MPE Calculation page

MPE Calculator Test Number: 080219

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) 1  
 Output Power dBd + 2.17 = dBi 2.17  
 Tx Frequency (MHz) 916 (Watts) 0.000293  
 Cable Loss (dB) 0.0 (dBm) -5.33  
 Antenna minus cable (dBi) 1.00

Calculated ERP (mw) 0.224

Radiated (EIRP) dBm -4.331

Calculated EIRP (mw) 0.369

Radiated (ERP) dBm -6.501

**Occupational Limit**  
 5.00000 mW/cm<sup>2</sup>

**General Public Limit**  
 1.00000 mW/cm<sup>2</sup>

Power density (S) =  
 EIRP  
 ----- (mW/cm<sup>2</sup>)  
 4 π r<sup>2</sup>  
 [ 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 <sup>2</sup> )	Public Limit @ Tx Freq (mW/cm <sup>2</sup> )
300-1,500	3.053333333	0.610666667
1,500-10,000	5	1

EIRP	Distance	Distance	S
milliwatts	cm	inches	mW/cm <sup>2</sup>
0.369	50.00	19.69	0.00001
0.369	40.00	15.75	0.00002
0.369	30.00	11.81	0.00003
0.369	25.00	9.84	0.00005
0.369	20.00	7.87	0.00007
0.369	15.00	5.91	0.00013
0.369	14.00	5.51	0.00015
0.369	13.00	5.12	0.00017
0.369	12.00	4.72	0.00020
0.369	11.00	4.33	0.00024
0.369	10.00	3.94	0.00029
0.369	9.00	3.54	0.00036
0.369	8.00	3.15	0.00046
0.369	7.00	2.76	0.00060
0.369	6.00	2.36	0.00082
0.369	5.00	1.97	0.00117
0.369	4.00	1.57	0.00183
0.369	3.00	1.18	0.00326
0.369	2.00	0.79	0.00734
0.369	1.00	0.39	0.02935
0.369	0.50	0.20	0.11741
0.369	0.40	0.16	0.18346
0.369	0.30	0.12	0.32615
0.369	0.20	0.08	0.73383
0.369	0.17	0.07	1.01569

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	0.17

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Power Technology, Inc.  
 Model: 9-00C1-0908  
 Test #:080219  
 Test to: CFR47 Parts 2 and 15.249, RSS-210  
 File: RFExp 900c10908

FCC ID#: UW5-900C10908  
 SN: XXXXXX  
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