

MPE Calculator      Lectrosonics      DBZUM450V      Test 0600809V  
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**  
Output Power      dBd + 2.17 = dBi      dBi to dBd      2.17  
Tx Frequency (MHz)      **947.5**      (Watts)      **0.2500**      Antenna Gain (dBd)      **-2.17**  
Cable Loss (dB)      **0.0**      (dBm)      23.98      Antenna minus cable (dBi)      0.00  
Calculated ERP (mw)      151.684      EIRP = Po(dBm) + Gain (dB)  
Calculated EIRP (mw)      250.000      Radiated (EIRP) dBm      23.979  
ERP = EIRP - 2.17 dB  
Radiated (ERP) dBm      21.809

**Occupational Limit**      Power density  
**3.15833**      (S)  
mW/cm<sup>2</sup>      EIRP  
----- =  
**General Public Limit**      mW/cm<sup>2</sup>  
**0.63167**      4 π r<sup>2</sup>

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	3.158333333	0.631666667
1,500-10,000	5	1

EIRP	Distance	Distance	S
milliwatts	cm	inches	mW/cm <sup>2</sup>
250.000	50.00	19.69	0.00796
250.000	40.00	15.75	0.01243
250.000	30.00	11.81	0.02210
250.000	25.00	9.84	0.03183
250.000	20.00	7.87	0.04974
250.000	15.00	5.91	0.08842
250.000	14.00	5.51	0.10150
250.000	13.00	5.12	0.11772
250.000	12.00	4.72	0.13816
250.000	11.00	4.33	0.16442
250.000	10.00	3.94	0.19894
250.000	9.00	3.54	0.24561
250.000	8.00	3.15	0.31085
250.000	7.00	2.76	0.40601
250.000	6.00	2.36	0.55262
250.000	<b>5.75</b>	<b>2.26</b>	<b>0.60172</b>
250.000	5.50	2.17	0.65767
250.000	3.00	1.18	2.21049
250.000	2.75	1.08	2.63066
250.000	<b>2.55</b>	<b>1.00</b>	<b>3.05950</b>
250.000	2.00	0.79	4.97359
250.000	1.50	0.59	8.84194
250.000	1.00	0.39	19.89437
250.000	0.75	0.30	35.36777
250.000	0.50	0.20	79.57747

Frequency (MHz)	Occupational Limit minimum Distance (cm)	Public Limit minimum distance (cm)
300-1,500	2.55	5.75
1,500-10,000	N/A	N/A

ROGERS LABS, INC.  
4405 W. 259th Terrace  
Louisburg, KS 66053  
Phone/Fax: (913) 837-3214

LectroSonics Inc.  
MODEL: UM450  
Test #: 060809V  
Test to: FCC Parts 2 and 74

FCCID#: DBZUM450V  
S/N: P404