

Transcore - Ametech	Model: AI1422E	Test Number:	170711		
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/cm ²				
				Antenna Gain (dBi)	13.8
		Output Power	dBd + 2.17 = dBi	dBi to dBd	2.2
Tx Frequency (MHz)	915	Maximum (Watts)	2.000	Antenna Gain (dBd)	11.63
Cable Loss (dB)	0.0	(dBm)	33.0	Antenna minus cable (dB)	13.80
	Calculated ERP (mw)	29109.182	EIRP = Po(dBm) + Gain (dB)		
	Calculated EIRP (mw)	47976.658		Radiated (EIRP) dBm	46.810
	Power density (S) EIRP ----- = mW/cm ² 4 π r ²		ERP = EIRP - 2.17 dB	Radiated (ERP) dBm	44.640
	Occupational Limit	FCC radio frequency radiation exposure limits per 1.1310			
3.05	mW/cm ²	Frequency (MHz)	Occupational Limit (mW/cm ²)	Public Limit (mW/cm ²)	
30.50	W/m ²	300-1,500	f/300	f/1500	
	General Public Limit	1,500-10,000	5	1	
0.61	mW/cm ²				
6.10	W/m ²				
	Occupational Limit	IC radio frequency radiation exposure limits per RSS-102			
0.6455 f ^{0.5}	W/m ²	Frequency (MHz)	Occupational Limit (W/m ²)	Public Limit (W/m ²)	
19.52571	W/m ²	100-6,000	0.6455 f ^{0.5}		
	General Public Limit	6,000-15,000	50		
0.02619 f ^{0.6834}	W/m ²	48-300		1.291	
2.76675	W/m ²	300-6,000		0.02619 f ^{0.6834}	
		6,000-15,000	50	10	
EIRP	S	S	Distance	Distance	Distance
milliwatts	mW/cm ²	W/m ²	cm	meter	inches
47976.658	0.26513	2.65129	120.00	1.20	47.24
47976.658	0.47134	4.71341	90.00	0.90	35.43
47976.658	0.59654	5.96541	80.00	0.80	31.50
47976.658	0.77916	7.79155	70.00	0.70	27.56
47976.658	1.06052	10.60517	60.00	0.60	23.62
47976.658	1.52714	15.27144	50.00	0.50	19.69
47976.658	1.88536	18.85364	45.00	0.45	17.72
47976.658	2.38616	23.86163	40.00	0.40	15.75
47976.658	2.94588	29.45881	36.00	0.36	14.17
47976.658	9.54465	95.44653	20.00	0.20	7.87
47976.658	16.96827	169.68272	15.00	0.150	5.91
47976.658	31.55257	315.52572	11.00	0.110	4.33
47976.658	38.17861	381.78612	10.00	0.100	3.94
47976.658	47.13409	471.34088	9.00	0.090	3.54
47976.658	59.65408	596.54081	8.00	0.080	3.15
47976.658	77.91553	779.15534	7.00	0.070	2.76
47976.658	106.05170	1060.51699	6.00	0.060	2.36
		Frequency (MHz)	Occupational Limit minimum Distance (meters)	Public Limit minimum distance (meters)	
		47CFR 1.1310	0.36	0.80	
		RSS-102	0.45	1.20	

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Revision 1

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