

MPE Calculator	Transcore	EPC Adapter	Test 080808		
	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			Antenna Gain (dBi)	14
	S = power density in mW/cm ²			dBd + 2.17 = dBi	
		Output Power		dBi to dBd	2.17
Tx Frequency (MHz)	915	(Watts)	1.0000	Antenna Gain (dBd)	11.83
		(dBm)	30.00		
Cable Loss (dB)	0.0			Antenna minus cable (dBi)	14.00
	Calculated ERP (mw)	15240.528	EIRP = Po(dBm) + Gain (dB)		
	Calculated EIRP (mw)	25118.864		Radiated (EIRP) dBm	44.000
			ERP = EIRP - 2.17 dB		
	Occupational Limit			Radiated (ERP) dBm	41.830
	3.05000 mW/cm ²	<div style="border: 1px solid black; padding: 5px;"> Power density (S) EIRP ----- = mW/cm² $4 \pi r^2$ r (cm) EIRP (mW) </div>			
	General Public Limit				
	0.61000 mW/cm ²				
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 ²)	Public Limit @ Tx Freq (mW/cm ²)		
	300-1,500	3.05	0.61		
	1,500-10,000	5	1		
	EIRP	Distance	Distance	S	
	milliwatts	cm	inches	mW/cm ²	
	25118.864	200.00	78.74	0.050	
	25118.864	150.00	59.06	0.089	
	25118.864	100.00	39.37	0.200	
	25118.864	90.00	35.43	0.247	
	25118.864	80.00	31.50	0.312	
	25118.864	70.00	27.56	0.408	
	25118.864	60.00	23.62	0.555	
	25118.864	58.00	22.83	0.594	
	25118.864	50.00	19.69	0.800	
	25118.864	40.00	15.75	1.249	
	25118.864	30.00	11.81	2.221	
	25118.864	25.00	9.84	3.198	
	25118.864	26.00	10.24	2.957	
	25118.864	20.00	7.87	4.997	
	25118.864	15.00	5.91	8.884	
	25118.864	10.00	3.94	19.989	
	25118.864	5.00	1.97	79.956	
	Frequency (MHz)	Occupational Limit minimum Distance cm (inches)	General Public Limit minimum Distance cm / (inches)		
	300-1,500	26 / (10.24")	58 / (22.83")		
	1,500-10,000	N/A	N/A		