MPE Calculator: Ent	ter frequen	icy, cable loss, anten	na gain in dBi and o	output power in watts	5		
	MPE uses	EIRP for calculation.	EIRP is based on TX p	ower added to the ante	enna gain in dBi.		
dBi = dB gain compared to an isotropic radiator.							
	S = power	density in mW/cm ²					
					Antenna	Gain (dBi)	9.5
		Output Power		dBd + 2.17 = dBi		dBi to dBd	2.17
Tx Frequency (MHz)	915	(Watts)	2.0000		Antenna Gain (dBd)		7.33
Cable Loss (dB)	0.0	(dBm)	33.01		Antenna minus	cable (dBi)	9.50
			Power density (S)				
Calculated ERP (mw) 10815		10815.086	EIRP		EIRP = Po(dBM) + Gain (dB)		
Calculated	EIRP (mw)	17825.019	$ = mW/cm^{2}$		Radiated (I	EIRP) dBm	42.510
			4 p r^2		ERP = EIRP - 2.17 dE	3	
					Radiated (ERP) dBm	40.340
	FCC	FCC radio frequer	ncy radiation exposure	limits per 1.1310			
		Power Density Limits					
		Frequency (MHz)	Occupational Limit	Public Limit			
		300-1,500	f/300	f/1500			
			Occupational	General Public			
		Calculated Limits	(mW/cm2)	(mW/cm2)			
			3.05	0.61			
			MPE Minimum	Distance (cm)			
			21.6	48.2			
			MPE Minimun	n Distance (in)			
			8.5	19.0			
	IC	IC radio frequency radiation exposure limits per RSS-102					
		Power Density Limits					
		Frequency (MHz)	Controlled Env	Uncontrolled Env			
		100-6,000	0.6455f^0.5				
		300-6,000		0.02619f^0.6834			
			Occupational	General Public			
		Calculated Limits	(mW/cm2)	(mW/cm2)			
			2.43	0.877			
		MPE Minimum Distance (cm)					
			24.2	40.2			
			MPE Minimun	n Distance (in)			
			9.5	15.8			
	OSHA	OSHA radio frequency radiation exposure limits per 1910.97					
		Power Density Limits					
		Frequency (MHz)	Limit				
		10-100,000	10 mV	V/cm ²			
			Occupational	General Public			
		Calculated Limits	(mW/cm2)	(mW/cm2)			
			10.00	10.00			
		MPE Minimum Distance (cm)					
			11.9	11.9			
			MPE Minimun	n Distance (in)			
	4.7						

Rogers Labs, Inc. 4405 West 259th Terrace Louisburg, KS 66053 Phone/Fax: (913) 837-3214 Revision 1

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