MPE Calculator	RF Exposure 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							
	Transmitter Output power (mW)		550.4					
	Transmitter Output power (W)		0.550					
Output Power for % duty Cycle (Watts)		100	0.550		Antenna Gain (dBi)	5		
Output Power for 100% duty Cycle operation (Watts)			0.550		Antenna Gain (Numeric)	3.16		
Tx Frequency (MHz)	5785	Calcualtion power (Watts)	0.55	dBd + 2.17 = dBi	dBi to dBd	2.2		
					Antenna Gain (dBd)	2.83		
Cable Loss (dB)	0.0	Adjusted Power (dBm)	27.41		Antenna minus cable (dBi)	5.00		
					Antenna Gain (Numeric)	3.16		
	Calculated ERP (mw)	1056.045			EIRP = Po(dBM) + Gain (dB)			
	Calculated EIRP (mw)	1740.534			Radiated (EIRP) dBm	32.407		
					ERP = EIRP - 2.17 dB			
					Radiated (ERP) dBm	30.237		

Power density (S) mW/cm^2 = EIRP / (4 p r^2)

r (cm) EIRP (mW)

	Occupational Limit	FCC radio frequency radiation exposure limits per 1.1310		
5	mW/cm^2	Frequency (MHz)	Occupational Limit (mW/cm^2)	Public Limit (mW/cm^2)
50	W/m^2	30-300	1	0.2
	General Public Limit	300-1,500	f/300	f/1500
1	mW/cm^2	1,500-10,000	5	1
10	W/m^2			

	Occupational Limit			
$0.6455f^{0.5}$	W/m^2	IC radio frequency radiation exposure limits per RSS-102		
61.1	W/m^2	Frequency (MHz)	Occupational Limit (W/m^2)	Public Limit (W/m^2)
	General Public Limit	100-6,000	$0.6455f^{0.5}$	
$0.02619f^{0.6834}$	W/m^2	6,000-15,000	50	
9.8	W/m^2	48-300		1.291
		300-6,000		$0.02619f^{0.6834}$
		6,000-15,000	50	10

f = Transmit Frequecny (MHz)			f (MHz) =	5785	MHz
P_T = Power Input to Antenna (mW)			P_T (mW) =	550.4052	mW
Duty cycle (percentage of operation)			% =	100	%
P_A = Adjusted Power due to Duty cycle or Cable Loss (mW)			P_A (mW) =	550.41	mW
G_N = Numeric Gain of the Antenna			GN (numeric) =	3.16	numeric
S_{20} = Power Density of device at 20cm (mW/m^2)		$S_{20}=(P_AG_N)/(4\pi R_{20})^2$	S_{20} (mW/m^2) =	0.35	mW/m^2
S_{20} = Power Density of device at 20cm (W/m^2)		$S_{20}=(P_AG_N)/(4\pi R_{20})^2$	S_{20} (W/m^2) =	3.46	W/m^2
S_L = Power Density Limit (W/m^2)			S_L (W/m^2)=	9.756	W/m^2
R_C = Minimum distance to the Radiating Element for Compliance (cm)		$R_C=\sqrt{(P_AG_N/4\pi S_L)}$	R_C (cm) =	11.9	cm
S_C = Power Density of the device at the Compliance Distance R_C (W/m^2)		$S_C=(P_AG_N)/(4\pi R_C)^2$	S_C (W/m^2) =	9.76	W/m^2
R_{20} = 20cm			R20=	20	cm
	For Complaince with Canada General Population Limits, User Manual must indicate a minimum seperation distance of			11.9	cm
	Or in Meters for Complaince with Canada General Population Limits, a minimum seperation distance of			0.12	Meters

Summary: Standalone MPE Calculations and Summary

Band (MHZ)	Tx Duty Cycle (%)	Tx Frequeny (MHz)	Power Total (mW)	Antenna Gain (dBi)	S_L (W/m2)	S_{20} (W/m2)	R_C (cm)	S_C (W/m2)
5150-5825	100	5785	550.41	5	9.756	3.46	11.9	9.76