	Model:	B4305	Test Number:	211230				
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 (dBm)	16.65					
		Transmitter Output power (mW)	46.24					
Output Power for % duty Cycle operation (Watts)		100	0.0462			Antenna Gain (dBi)	3	
	Output Power for 100% duty Cycle operation (Watts)		0.05			Antenna Gain (Numeric)	2.00	
Tx Frequency (MHz)	2437	Calcualtion power (Watts)	0.05	dBd + 2.17 = dBi		dBi to dBd	2.2	
						Antenna Gain (dBd)	0.83	
Cable Loss (dB)	0.0	Adjusted Power (dBm)	16.65			Antenna minus cable (dBi)	3.00	
	Calculated ERP (mw)	55.976				EIRP = Po(dBM) + Gain (dB)		
	Calculated EIRP (mw)	92.257				Radiated (EIRP) dBm	19.650	
						ERP = EIRP - 2.17 dB		
						Radiated (ERP) dBm	17.480	

Power density (S) $mW/cm^2 = \frac{EIRP}{4 \pi r^2}$

r (cm) EIRP (mW)

		FCC radio frequency radiation exposure limits per 1.1310		
Occupational Limit				
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			

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

f = Transmit Frequecny (MHz)			f (MHz) =	2437	MHz
P_T = Power Input to Antenna (mW)			P_T (mW) =	46.2381	mW
Duty cycle (percentage of operation)			% =	100	%
P_A = Adjusted Power due to Duty cycle or Cable Loss (mW)			P_A (mW) =	46.24	mW
G_N = Numeric Gain of the Antenna			GN (numeric) =	2.17	numeric
S_{20} = Power Density of device at 20cm (mW/m^2)		$S_{20}=(P_A G_N)/(4\pi R_{20})^2$	S_{20} (mW/m^2) =	0.02	mW/m^2
S_{20} = Power Density of device at 20cm (W/m^2)		$S_{20}=(P_A G_N)/(4\pi R_{20})^2$	S_{20} (W/m^2) =	0.20	W/m^2
S_L = Power Density Limit (W/m^2)			S_L (W/m^2)=	5.404	W/m^2
R_C = Minimum distance to the Radiating Element for Compliance (cm)		$R_C=\sqrt{(P_A G_N/4\pi S_L)}$	R_C (cm) =	3.8	cm
S_C = Power Density of the device at the Compliance Distance R_C (W/m^2)		$S_C=(P_A G_N)/(4\pi R_C)^2$	S_C (W/m^2) =	5.40	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			3.8	cm
	Or in Meters for Complaince with Canada General Population Limits, a minimum seperation distance of			0.04	Meters

Summary: Standalone MPE Calculations and Summary								
Band (MHZ)	Tx Duty Cycle (%)	Tx Frequeny (MHz)	Power Total (mW)	Antenna Gain (dBi)	S_L (W/m^2)	S_{20} (W/m^2)	R_C (cm)	S_C (W/m^2)
2402-2480	100	2437	46	3	5.404	0.20	3.8	5.40