	Model:	A4305	Test Number:	211229		
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)		16.13			
	Transmitter Output power (mW)		41.02			
Output Power for % duty Cycle operation (Watts)	100		0.0410		Antenna Gain (dBi)	3
	Output Power for 100% duty Cycle operation (Watts)		0.04		Antenna Gain (Numeric)	2.00
Tx Frequency (MHz)	2437	Calcualtion power (Watts)	0.04	dBd + 2.17 = dBi	dBi to dBd	2.2
					Antenna Gain (dBd)	0.83
Cable Loss (dB)	0.0	Adjusted Power (dBm)	16.13		Antenna minus cable (dBi)	3.00
	Calculated ERP (mw)	49.659				
	Calculated EIRP (mw)	81.846		EIRP = Po(dBM) + Gain (dB)		
					Radiated (EIRP) dBm	19.130
					ERP = EIRP - 2.17 dB	
					Radiated (ERP) dBm	16.960

Power density (S) mW/cm² = 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		
39.7	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	
5.4	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) =	2437 MHz
P_T = Power Input to Antenna (mW)			P_T (mW) =	41.0204 mW
Duty cycle (percentage of operation)			% =	100 %
P_A = Adjusted Power due to Duty cycle or Cable Loss (mW)			P_A (mW) =	41.02 mW
G_N = Numeric Gain of the Antenna			GN (numeric) =	2.17 numeric
S_{20} = Power Density of device at 20cm (mW/m^2)		$S_{20}=(P_AG_N)/(4\pi R_{20})^2$	S_{20} (mW/m^2) =	0.02 mW/m^2
S_{20} = Power Density of device at 20cm (W/m^2)		$S_{20}=(P_AG_N)/(4\pi R_{20})^2$	S_{20} (W/m^2) =	0.18 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)		$R_C=\sqrt{(P_AG_N/4\pi S_L)}$	R_C (cm) =	3.6 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) =	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			3.6 cm
	Or in Meters for Complaince with Canada General Population Limits, a minimum seperation distance of			0.04 Meters