

		Model: VPR		Test Number: 230720	
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)	120.0			
	Transmitter Output power (W)	0.12			
Output Power for % duty Cycle operation (Watts)	100	0.12		Antenna Gain (dBi)	1
	Output Power for 100% duty Cycle operation (Watts)	0.12		Antenna Gain (Numeric)	1.26
Tx Frequency (MHz)	24125	Calculation power (Watts)	0.12	dBd + 2.17 = dBi	dBi to dBd 2.17
				Antenna Gain (dBd)	-1.17
Cable Loss (dB)	0.0	Adjusted Power (dBm)	20.79	Antenna minus cable (dB)	1.00
				Antenna Gain (Numeric)	1.26
	Calculated ERP (mw) 91.660			EIRP = Po(dBm) + Gain (dB)	
	Calculated EIRP (mw) 151.071			Radiated (EIRP) dBm	21.792
				ERP = EIRP - 2.17 dB	
				Radiated (ERP) dBm	19.622
	Power density (S) mW/cm² = $\frac{\text{EIRP}}{4 \pi r^2}$ r (cm) EIRP (mW)				
	Occupational Limit	FCC radio frequency radiation exposure limits per 1.1310			
	mW/cm²	Frequency (MHz)	Occupational Limit (mW/cm²)	Public Limit (mW/cm²)	
5	W/m²	30-300	1	0.2	
50.0		300-1,500	ƒ300	ƒ1500	
	General Public Limit	1,500-100,000	5	1	
1	mW/cm²				
10.0	W/m²				
	Occupational Limit	IC radio frequency radiation exposure limits per RSS-102			
	W/m²	Frequency (MHz)	Occupational Limit (W/m²)	Public Limit (W/m²)	
50	W/m²	100-6,000	$0.6455 f^{0.5}$		
	General Public Limit	6,000-15,000	50		
10	W/m²	48-300		1.291	
10	W/m²	300-6,000		$0.02619 f^{0.6834}$	
		6,000-15,000	50	10	
		15,000-150,000	50	10	
f = Transmit Frequency (MHz)				f (MHz) =	24125
P _T = Power Input to Antenna (mW)				P _T (mW) =	120.0000
Duty cycle (percentage of operation)				% =	100
P _A = Adjusted Power due to Duty cycle or Cable Loss (mW)				P _A (mW) =	120.00
G _N = Numeric Gain of the Antenna				GN (numeric) =	1.26
S ₂₀ = Power Density of device at 20cm (mW/m²)		$S_{20}=(P_A G_N)/(4\pi R_{20}^2)$		S ₂₀ (mW/m²) =	0.03
S ₂₀ = Power Density of device at 20cm (W/m²)		$S_{20}=(P_A G_N)/(4\pi R_{20}^2)$		S ₂₀ (W/m²) =	0.30
S _L = Power Density Limit (W/m²) FCC				S _L (W/m²) =	10.000
S _L = Power Density Limit (W/m²) Canada				S _L (W/m²) =	10.000
R _C = Minimum distance to the Radiating Element for Compliance (cm) FCC		$R_C=\sqrt{(P_A G_N/4\pi S_L)}$		R _C (cm) =	3.5
R _C = Minimum distance to the Radiating Element for Compliance (cm) Canada		$R_C=\sqrt{(P_A G_N/4\pi S_L)}$		R _C (cm) =	3.5
S _C = Power Density of the device at the Compliance Distance R _C (W/m²) FCC		$S_C=(P_A G_N)/(4\pi R_C^2)$		S _C (W/m²) =	10.00
S _C = Power Density of the device at the Compliance Distance R _C (W/m²) Canada		$S_C=(P_A G_N)/(4\pi R_C^2)$		S _C (W/m²) =	10.00
R ₂₀ = 20cm				R ₂₀ =	20
				General Public	Occupational
				24125 MHz	24125 MHz
				120.0000 mW	120.0000 mW
				100 %	100 %
				120.00 mW	120.00 mW
				1.26 numeric	1.26 numeric
				0.03 mW/m²	0.03 mW/m²
				0.30 W/m²	0.30 W/m²
				50.000 W/m²	50.000 W/m²
				50.000 W/m²	50.000 W/m²
				1.6 cm	1.6 cm
				1.6 cm	1.6 cm
				50.00 W/m²	50.00 W/m²
				50.00 W/m²	50.00 W/m²
				20 cm	20 cm
				3.5 cm	
				0.03 Meters	
For Compliance with Canada General Population Limits, User Manual must indicate a minimum separation distance of					
Or in Meters for Compliance with Canada General Population Limits, a minimum separation distance of					
Summary: Standalone MPE Calculations and Summary				Public Limit	
	Tx Duty Cycle (%)	Tx Frequency (MHz)	Power Total (mW)	Antenna Gain (numeric)	S _L (W/m²)
FCC	100	24125	120	1.26	10.000
Canada	100	24125	120	1.26	10.000
					0.30
					3.5
					10.00
					0.30
					3.5
					10.00
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					0.30
					3.5
					10.00

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Revision 1

MS Sedco
Model/HVIN: VPR PMN: VaPR
Test: 230720
Test to: CFR47 15.245, RSS-210, RSS-Gen
File: VPR RFExp

SN: 629003
FCC ID: OHRVPR
IC: 6775A-VPR
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