

MPE Calculation

$$S = \text{EIRP} / (4R^2\pi)$$

S = Maximum power density (mW/cm²)

P = Power input to the antenna (mW)

G = Numeric power gain of the antenna

R = Distance to the center of the radiation of the antenna

EIRP = Equivalent Isotropic Radiated Power(mW) (=P*G)

Frequency range (MHz)			Electric Field strength (V/m)	Magnetic field strength (A/m)	Power Density (mW/cm ²)	Averaging time (minutes)
0.3	~	1.34	614	1.63	*100	30
1.34	~	30	824 / f	2.19 / f	*180 / f ²	30
30	~	300	27.5	0.073	0.2	30
300	~	1,500			f / 1500	30
1,500	~	100,000			1	30

Model Name : **IDRO900FE**

FCC ID : **XVY-IDRO900FE**

Separation distance (R) : **24.0 cm**

Modulation	Frequency (MHz)	Measured Maximum Average power	Tune-up tolerance	Max. Power with tune-up tolerance (P)		Antenna Gain (G)		Power Density (S)	Limit of Power Density (S)	Result
		(dBm)	(dB)	(dBm)	(mW)	(dBi)	(numeric)	(mW/cm ²)	(mW/cm ²)	
RFID	902.75	29.13	± 1.00	30.13	1030.39	6.00	3.98	0.5667	0.60	PASS
	914.75	29.09		30.09	1020.94	6.00	3.98	0.5615	0.60	PASS
	927.25	29.10		30.10	1023.29	6.00	3.98	0.5628	0.61	PASS

The EUT will only be used with a separation of 21 centimeters or greater between the antenna and the body of the user.