

MPE Calculation

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

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)	Averageing 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 : **IDRO900RWe**

FCC ID : **XVY-IDRO900RWE**

Separation distance (R) : **20.0 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)		(dBm)	(mW)	(dBi)	(numeric)	(mW/cm ²)	(mW/cm ²)	
RFID	917.1	29.36	± 1.00	30.36	1086.43	-1.32	0.74	0.1595	0.61	PASS
	921.9	29.33		30.33	1078.95	-1.32	0.74	0.1584	0.61	PASS
	926.9	29.30		30.30	1071.52	-1.32	0.74	0.1573	0.61	PASS
GFSK	2402	7.96	± 1.00	8.96	7.87	1.00	1.26	0.0020	1.00	PASS
	2442	7.81		8.81	7.60	1.00	1.26	0.0019	1.00	PASS
	2480	7.24		8.24	6.67	1.00	1.26	0.0017	1.00	PASS
π/4DQPSK	2402	5.13	± 1.00	6.13	4.10	1.00	1.26	0.0010	1.00	PASS
	2442	5.39		6.39	4.36	1.00	1.26	0.0011	1.00	PASS
	2480	4.89		5.89	3.88	1.00	1.26	0.0010	1.00	PASS
8DPSK	2402	5.24	± 1.00	6.24	4.21	1.00	1.26	0.0011	1.00	PASS
	2442	5.39		6.39	4.36	1.00	1.26	0.0011	1.00	PASS
	2480	4.83		5.83	3.83	1.00	1.26	0.0010	1.00	PASS
BLE 1M	2405	5.48	± 1.00	6.48	4.45	1.00	1.26	0.0011	1.00	PASS
	2445	5.90		6.90	4.90	1.00	1.26	0.0012	1.00	PASS
	2470	5.47		6.47	4.44	1.00	1.26	0.0011	1.00	PASS

* The EUT will only be used with a separation of 20 centimeters or greater between the antenna and the body of the user.

* The Maximum Average Power of RF test report(KR0140-RF2411-003, KES-RF1-22T0189-R1, KES-RF1-22T0190-R1) was used for this calculation.