

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 : **CARINA**

FCC ID : **2AA7K-CARINA08000**

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)	(dB)	(dBm)	(mW)	(dBi)	(numeric)	(mW/cm ²)	(mW/cm ²)	
RFID	917.1	28.03	± 1.00	29.03	799.83	-1.32	0.74	0.1174	0.61	PASS
	921.9	28.04		29.04	801.68	-1.32	0.74	0.1177	0.61	PASS
	926.9	28.00		29.00	794.33	-1.32	0.74	0.1166	0.61	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(NW2112-F005-1) was used for this calculation.