47 C.F.R. Part 1, Subpart I, Section 1.1310
47 C.F.R. Part 2, Subpart J, Section 2.1091
Maximum Permissible Exposure Calculations

For FCC ID: 2AB8I-TR4X

EUT Device Category = General Population/Uncontrolled Exposure

EUT consists of an ISM band transmitter operating over a range of **910.2 MHz to 920 MHz.**

MPE Summary:

According subpart 1.1307 (b)(1) and 2.1091 systems operating under the provisions of this section shall be operated in a manner that ensures the public is not exposed to RF energy level in excess of the communication guidelines.

Limits for General Population/Uncontrolled Exposure

Limits for General Population/Uncontrolled Exposure				
Frequency Range (MHz)	**Electric Field Strength (V/m)**	**Magnetic Field Strength (A/m)**	**Power Density (mW/cm2)**	**Averaging Time (Minutes)**
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f2)	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	f/1500	30
1500-100,000	/	/	1.0	30

f = frequency in MHz; * = Plane-wave equivalent power density

Calculated Formulary:

Predication of MPE limit at a given distance

$$S = \frac{PG}{4\pi R^2}$$

S = power density (in appropriate units, e.g. mW/cm^2)
R = distance to the center of radiation of the antenna (appropriate units, e.g., cm)
PG = EIRP

MPE and Limit are calculated for this device as follows:

910.2 MHz to 920.0 MHz Frequency Band							
Freq	Output Power (dBm)	Max Antenna Gain (dBi)	Max EIRP (dBm)	Max EIRP (mW)	Power Density at 20 cm (mW/cm2)	Limit (mW)	Margin (mW)
910.2	24.00	0.0	24.00	251.2	0.050	0.607	0.557
915.0	23.82	0.0	23.82	241.0	0.048	0.610	0.562
920.0	23.61	0.0	23.61	229.6	0.046	0.613	0.567

Result: The device meets FCC MPE limit at 20 cm for General Population/Uncontrolled Exposure as specified in 47 CRF §1.1310 and §2.1091.