8.1 RF Safety Requirements to 2.1091 for Mobile Transmitters

Part 95 transmitters are considered categorically excluded from routine environmental evaluation as given in 47 CFR 2.1091. However, the following information is presented to prove compliance with the limits.

Power Output

The EUT's maximum expected output power as shown in section 2.6 is

Frequency of Fundamental (MHz)	Measurement (Watt) Based on Dipole Substitution	Correction from dBd to dBi	Antenna Gain (dBi)	P_{EIRP} (Watt)
218.025829	0.7762	+2.1	-2.0	0.7942

Source Based Time Averaging

The EUT incorporates a very low duty cycle. However this information has not been included and the MPE calculations specified below do not take into consideration any duty cycle correction.

MPE Calculations

The limits for this unit (uncontrolled exposure) are 0.2 mW/cm^2. Taking the RF Denisty Field Equation:

S = (EIRP in mW)/($4\pi R^2$) and solving for Distance R

R = SQRT (EIRP in mW)/($S4\pi$)

Solving the above equation yields

R (cm) = SQRT (794.2(mw))/(0.2(mW/cm^2)*4*π) = 17.8 cm

Since the EUT is designed only for mobile applications (where the expected separation distance between antenna and humans is greater than 20 cm), all manual instructions have specified 20 cm as the minimum exposure distance.