5   FCC §30.207, §1.1307 & §1.1310 - RF Exposure

5.1   Applicable Standards

FCC §1.1307 & §1.1310.

According to FCC §1.1310 (e)(1), the following table sets forth limits for Maximum Permissible Exposure (MPE) to radiofrequency electromagnetic fields.

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)
Limits for General Population/Uncontrolled Exposure				
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

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

5.2   MPE Prediction

Predication of MPE limit at a given distance, Equation from OET Bulletin 65, Edition 97-01

$$S = PG/4\pi R^2$$

Where: S = power density
           P = power input to antenna
           G = power gain of the antenna in the direction of interest relative to an isotropic radiator
           R = distance to the center of radiation of the antenna

5.3   MPE Results

Maximum turn-up EIRP(dBm):   43.0
Maximum turn-up EIRP(mW):   20000
Prediction frequency (MHz):   37050
FCC MPE limit for uncontrolled exposure at prediction frequency (mW/cm²):   1.0
Prediction distance (cm):   39.90

In order to meet the RF exposure requirements for general population, the device must be installed to maintain separation distance of at least 39.90 cm. This device is clarified as fixed station.