FCC §2.1091- MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Applicable Standard

According to 1.1307 (b)(1), 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 Maximum Permissible Exposure (MPE)

Limits for Occupational/Controlled Exposure				
Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm^2)	Averaging Time |E|, |H| or S (minutes)
0.3- 3.0	614	1.63	(100)*	6
3.0 - 30	1842/f	4.89/f	(900/f^2)*	6
30-300	61.4	0.163	1.0	6
300-1500	/	/	f/300	6
1500-100,000	/	/	5	6

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

MPE Calculation

Predication of MPE limit at a given distance

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

Where: S = power density (in appropriate units, e.g. mW/cm^2);
P = power input to the antenna (in appropriate units, e.g., mW);
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 (appropriate units, e.g., cm);

Calculated Data:

Frequency	Max Target Output Power	Duty Cycle	Typical Antenna		Distance	Power Density	Power Density Limit
MHz	mW		dBi	numeric	cm	mW/cm^2	mW/cm^2
400.0125	28050	50%	0	1.0	65	0.26	0.27

Note1: The manufacturer does not specify an antenna to be used with this device   but a typical installation has a gain up to 0dBi.

Note2: The target power is 25W (43.98 dBm) ±0.5dB = 28050mW (44.48dBm)

Radio Exposure Statement:

Using the parameters given in the above calculation, a minimum antenna to person distance of 65 cm is required to meet the limits for occupational/controlled exposure.

Result: Compliance