R.F Exposure/Safety Calculation

The E.U.T. is rack or wall mounted. The typical distance between the E.U.T. and the general population is >50cm.

Calculation of Maximum Permissible Exposure (MPE)
Based on Section 1.1310 Requirements

(a)FCC limit at 2135 MHz is: $1\frac{mW}{cm^2}$

Using table 1 of Section 1.1310 limit for general population/uncontrolled exposures, the above level is an average over 30 minutes.

(b)The power density produced by the E.U.T. is

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

P_t- Transmitted Peak Power (worst case)

G_T- Antenna Gain, dBi

R- Distance from Transmitter

(c)Peak power density at worst case continuous transmission:

Modulation	Pt (mW)	Antenna type	G_T (dBi)	G_T numeric	R (cm)	S_{AV} (mW/cm^2)	Spec (mW/cm^2)
QPSK	1175	External	12.5	17.8	50	0.666	1.0
16QAM	891	External	12.5	17.8	50	0.505	1.0
64QAM	851	External	12.5	17.8	50	0.482	1.0