

R.F Exposure/Safety Calculation for VE LTE700

The E.U.T. is an in-building antenna distribution system, supporting a single frequency band. The “worst case” distance between the E.U.T. and the general population is 10 cm.

Calculation of Maximum Permissible Exposure (MPE)

Based on Section 1.1307(b)(1) Requirements

(a) FCC Occupational user limit at 751 MHz is: $\frac{f}{300} = \frac{751}{300} = 2.50 \frac{mW}{cm^2}$

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 Power 208.46 mW, (combined)(peak).

G_T - Antenna Gain 10 dBi (10 numeric)

R- Distance from Transmitter using 10 cm worst case

(c) Peak power density:

$$S_{AV} = \frac{208.46 \times 10}{4\pi(10)^2} = 1.66 \frac{mW}{cm^2}$$