

R.F Exposure/Safety Calculation for FCC ID: OJF1MRU21-3CR

The E.U.T. is rack or wall mounted. The typical distance between the E.U.T. and the general population is >100cm.

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

(a) FCC limit at 2175 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.

(c) 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, 12.5dBi= 17.8 numeric

R- Distance from Transmitter 100 cm

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

Band	Modulation	Pt (dBm)	Pt (mW)	Antenna type	G _T (dBi)	G _T numeric	R (cm)	S _{AV} (mW/cm ²)	Spec (mW/cm ²)
AWS	GSM	34.8	3020	External	12.5	17.8	100	0.427777	1.0
	LTE 64QAM	35.0	3162	External	12.5	17.8	100	0.447891	1.0
	W-CDMA	34.7	2951	External	12.5	17.8	100	0.418003	1.0

(e) This is below the FCC limit.