R.F Exposure/Safety Calculation for FCC ID: OJFDMRUDPAM19 (PCS+G+BAND70)

The E.U.T. is rack or wall mounted. The typical distance between the E.U.T. and the general population is >120cm.

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

(a) FCC limit at 1962.5MHz is: 1mW/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 (worst case) , 12.5dBi= 17.8 numeric

R- Distance from Transmitter 120 cm

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

generation	Modulation	Pt (dBm)	Pt (W)	Antenna type	G_T (dBi)	G_T numeric	R (cm)	S_{AV} (mW/cm^2)	Limit (mW/cm^2)
5G	16QAM	38.72	7.447	External	12.5	17.8	120	0.73253	1
	64QAM	38.86	7.691	External	12.5	17.8	120	0.75654	1
	256QAM	39.01	7.962	External	12.5	17.8	120	0.78319	1
	QPSK	38.80	7.586	External	12.5	17.8	120	0.74621	1
4G	16QAM	37.24	5.297	External	12.5	17.8	120	0.52104	1
	64QAM	38.89	7.745	External	12.5	17.8	120	0.76185	1
	QPSK	37.87	6.124	External	12.5	17.8	120	0.60239	1
3G	WCDMA	37.73	5.929	External	12.5	17.8	120	0.58321	1

BAND-PCS+G+BAND70

(e) This is below the FCC limit.