RF Exposure/Safety Calculation for FCC ID: OJFDMRUDPAM25

The E.U.T. is rack or wall mounted. The typical distance between the E.U.T. and the general population is >160 cm.

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

(a) FCC limit at 2593 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 $S = \frac{P_t G_t}{4\pi R^2}$

Where:

P_t: Transmitted Peak Power (worst case)

G_t: Antenna Gain (worst case), 12.5dBi = 17.8 numeric

R: Distance from Transmitter 160 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	39.63	9.183	External	12.5	17.8	160	0.5081	1
	64QAM	41.85	15.311	External	12.5	17.8	160	0.8471	1
	256QAM	42.16	16.444	External	12.5	17.8	160	0.9098	1
	QPSK	40.36	10.864	External	12.5	17.8	160	0.6011	1
4G	16QAM	40.96	12.474	External	12.5	17.8	160	0.6902	1
	64QAM	40.99	12.560	External	12.5	17.8	160	0.6949	1
	QPSK	40.85	12.162	External	12.5	17.8	160	0.6729	1

Band: TDD

(e) According to the grantee's (Corning Optical Communication LLC) tune up declaration factory value, the max. conducted power is 39dBm; In accordance, the calculated RF is S_{AV}= 0.44 <1.0
This is below the FCC limit