

R.F Exposure/Safety Calculation for FCC ID: OJFDMRUDPAM23 (WCS)

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 2355MHz is: 1mW/cm²

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	37.52	5.649	External	12.5	17.8	120	0.55567	1
	64QAM	37.33	5.408	External	12.5	17.8	120	0.53196	1
	256QAM	37.58	5.728	External	12.5	17.8	120	0.56344	1
	QPSK	37.11	5.140	External	12.5	17.8	120	0.50560	1
4G	16QAM	37.49	5.610	External	12.5	17.8	120	0.55183	1
	64QAM	37.37	5.458	External	12.5	17.8	120	0.53688	1
	QPSK	37.59	5.741	External	12.5	17.8	120	0.56472	1

BAND-WCS

(e) This is below the FCC limit.