

## R.F Exposure/Safety Calculation for FCC ID: OJFDMRUDPAM17 (AWS)

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 2155MHz is: 1mW/cm<sup>2</sup>

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<sub>t</sub>- Transmitted Peak Power (worst case)

G<sub>T</sub>- 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 <sub>T</sub> (dBi)	G <sub>T</sub> numeric	R (cm)	S <sub>AV</sub> (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )
5G	16QAM	38.12	6.486	External	12.5	17.8	120	0.63786	1
	64QAM	38.48	7.047	External	12.5	17.8	120	0.69319	1
	256QAM	38.15	6.531	External	12.5	17.8	120	0.64243	1
	QPSK	38.19	6.592	External	12.5	17.8	120	0.64843	1
4G	16QAM	37.66	5.834	External	12.5	17.8	120	0.57387	1
	64QAM	37.64	5.808	External	12.5	17.8	120	0.57131	1
	QPSK	37.69	5.875	External	12.5	17.8	120	0.57790	1
3G	WCDMA	37.12	5.152	External	12.5	17.8	120	0.50678	1

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(e) This is below the FCC limit.