

R.F Exposure/Safety Calculation for CMP3000-B41-2496-2690 MHz

The E.U.T. is pole mounted.

Calculation of Maximum Permissible Exposure (MPE)
Based on Section 1.1307(b)(1) Requirements

(a) FCC limit at 2496-2690 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

$$S = \frac{P_t G_t}{4\pi R^2} \quad R = \sqrt{\frac{P_t G_t}{4\pi S}}$$

P_t - Transmitted Peak Power (worst case)

G_T - Antenna Gain, dBi

R- Distance from Transmitter

S- MPE =1

(c) The calculated minimum distance between the EUT antenna and the general public is:

Operation Frequency (MHz)	Modulation	MIMO Pt (dBm)	MIMO Pt (mW)	Antenna Type	G_T (dBi)	G_T numeric	R (cm)
2506	QPSK	45.0	31623	External	18.0	63.1	398.5
	16QAM	45.0	31623	External	18.0	63.1	398.5
	64QAM	44.9	30903	External	18.0	63.1	393.9
2593	QPSK	45.3	33884	External	18.0	63.1	412.5
	16QAM	45.5	35481	External	18.0	63.1	422.1
	64QAM	45.4	34674	External	18.0	63.1	417.3
2680	QPSK	44.9	30903	External	18.0	63.1	393.9
	16QAM	44.9	30903	External	18.0	63.1	393.9
	64QAM	44.9	30903	External	18.0	63.1	393.9

20MHz Bandwidth, MIMO Operation