



5473A Clouds Rest Road : Mariposa, CA 95338 : Phone 209-966-5420 : Fax 209-742-6133

## Maximum Permissible Exposure Calculations

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Calculations prepared for:

*Powerwave Technologies*  
1801 E. St. Andrew Place  
Santa Ana, CA 92705

Calculations prepared by:

*Eddie Wong*  
110 N. Olinda Place  
Brea, CA 9283

Model Number: S18000 MCPS Cabinet  
FCC Identification: NA

Fundamental Operating Frequency: 1930-1990 MHz

Maximum Rated Output Power: 480 Watt  
Measured Output Power: 480 Watt

MPE Limit in accordance with 1.1310(b): Limits for general population/uncontrolled exposure

MPE Limit for 1930-1990 MHz = 1 mW/cm<sup>2</sup> (10 W/m<sup>2</sup>)

Power Output (Watts)	Power Density Limit (mW/cm <sup>2</sup> )	Minimum Distance (Meters)
<b>480</b>	<b>1</b>	<b>1.95</b>

$$\text{Power Density (W/m}^2\text{)} = \frac{30 \times P_t \times G}{d^2 \times Z_0}$$

$P_t$  = Power Delivered to the Antenna  
 $d$  = Distance in meters

$G$  = Antenna Gain  
 $Z_0$  = Impedance of Free Space

The typical antennas to be used with the EUT are structure mount antennas which under normal operation has an antenna height of at least 5 meters. As can be seen from the MPE result, this device passes the limit specified in 1.1310 at a distance of 1.95 meter.

Calculation:

$$d = \sqrt{\frac{30 \times 480 \times 1}{10 \times 377}}$$

= 1.95 meter.