

Per CFR 47, section 1.1307.b(1), Table 1, all applications for experimental operations with an ERP greater than 100 watts require evaluation for compliance with human exposure limits defined in section 1.1310, and if exceeded require submission of an Environmental Assessment as defined in section 1.1311.

The below calculations define the minimum safe working distance for both Occupational and General Public, which are based on the maximum permissible exposure limits of 5 mW/cm² and 1 mW/cm² respectively.

The antennas are a AvL Technologies 2.4 meter, and a GetSAT MicroSAT antenna system. The antenna will be operated in a controlled area. Only authorized occupational workers will be allowed access to the area of operation. In addition the transmitter will be secured prior to conducting maintenance, and the area will be monitored during the operation to ensure that personnel are clear of any radiation hazard area.



Transmitter Peak Power (Watts):	21
Maximum Antenna Gain (dBi):	50.5
Duty Cycle (%):	100
Transmitter Power (dBm):	43.2222
EIRP (dBm):	93.7222
Non-dimensional Antenna Gain:	112201.8454
Transmitter Avg Power (Watts):	21
EIRP Watts:	2356238.754
Avg EIRP Watts:	2356238.754

Minimum Safe Distance

	Occupational	General Public
Meters:	61.2378	136.9319
Feet:	200.909	449.2463

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Transmitter Peak Power (Watts):	11
Maximum Antenna Gain (dBi):	50.5
Duty Cycle (%):	100
Transmitter Power (dBm):	40.4139
EIRP (dBm):	90.9139
Non-dimensional Antenna Gain:	112201.8454
Transmitter Avg Power (Watts):	11
EIRP Watts:	1234220.2997
Avg EIRP Watts:	1234220.2997

Minimum Safe Distance

	Occupational	General Public
Meters:	44.3207	99.1041
Feet:	145.4073	325.1406