



FCC Minimum Safe RF Distance Calculation

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Product: AVIATOR UAV 200
FCC ID: 2AS39-AVIATORUAV200

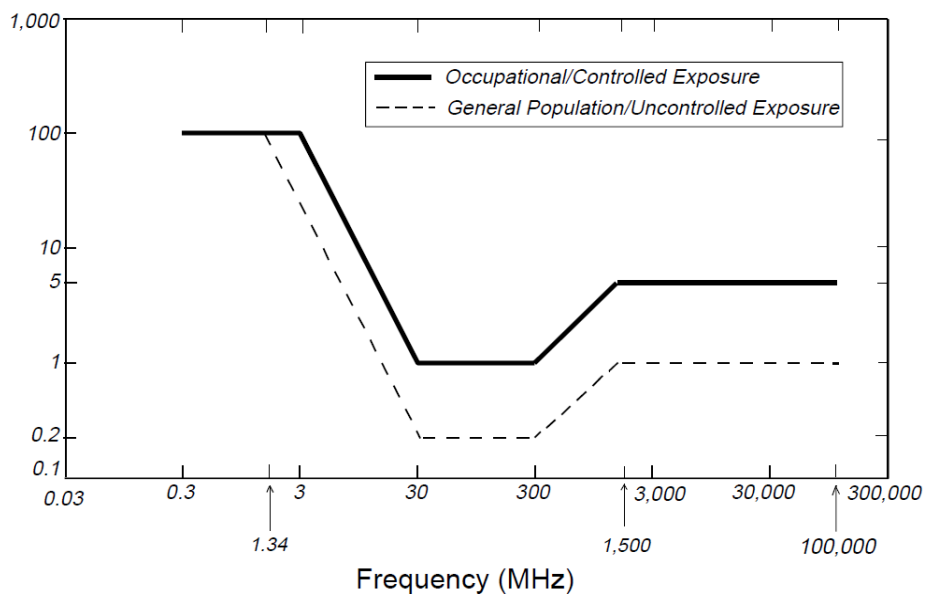
Reference: FCC OET Bulletin 65 - Evaluating Compliance with FCC Guidelines
for Human Exposure to Radiofrequency Electromagnetic Fields

RF Safety Calculations

Exposure Limits

FCC Maximum Permissible Exposure based on
whole body averaged SAR of 4W/kg

Figure 1. FCC Limits for Maximum Permissible Exposure (MPE)
Plane-wave Equivalent Power Density



For AVIATOR UAV 200 operating in the L-Band (1626.5 to 1660.5 MHz), MPE limit =
FCC General Public
(Uncontrolled Exposure): S = 1 mW/cm²

RF Field Prediction

$$S = \frac{PG}{4\pi R^2}$$

$$S = \frac{EIRP}{4\pi R^2}$$

- EIRP Equivalent Isotropic Radiated Power
- S Power Density limit
- P Power input to the antenna
- G Numerical Antenna Gain (in direction of interest relative to isotropic antenna)
- R Distance to the center of radiation of the antenna

UAV 200 Parameters

Power calculation:		
Power	3,1 dBW	2,04 W
Tune accuracy (EIRP accuracy)	0,3 dB	1,07 W
P _{total}	3,4 dBW	2,19 W
Antenna Gain	8 dBiC	6,31 Numerical Gain
NOM_EIRP	11,1 dBW	12,88 W
MAX_EIRP	11,4 dBW	13,80 W
Safe Distance:		
R	0,5 m	50,00 cm

Power Density Calculation		
MAX_EIRP	11,4 dBW	13804 mW
R	50 cm	
S(calc)	0,44 mW/cm ²	

Summary: FCC General Public

The Safe Distance of 50 cm results in a Power Density of 0,44 mW/cm² which is less than the required maximum of 1 mW/cm²

