



Xsight Proprietary Information / Secret Commercial Information

Environmental evaluation and exposure limit according to FCC CFR 47part 1,
§1.1307, §1.1310

Applicant: Xsight Systems

Type of equipment: FOD Detect System with Radar Operating in 76-77 GHz band

Model: SDU-600-CR

FCC ID: ZNWFODE6MWR

Xsight Systems

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The calculation was done to confirm required safe distance for fixed device.

Limit for power density for general population/uncontrolled exposure:

Frequency range, MHz	Power Density, W/m ²
1500 - 100000	10

The power density:

$$P (W/m^2) = P_T / 4\pi r^2 \text{ where}$$

P_T - maximum equivalent isotropically radiated power (EIRP) in Watts

Results:

Frequency, MHz	Peak field strength, dBuV/m	Output Power EIRP*, dBm	Output Power EIRP, W	Power Density, W/m ²	Safe distance, m
76500.00	141.6	46.37	43.35	0.38	0.59

*The output power EIRP was yielded from field strength results using Field Strength to EIRP conversion factor: -95.23dB

The minimum safe distance “ r ”, was calculated as:

$$r = \sqrt{P_T / (P \times 4\pi)}, \text{ where}$$

P_T - Maximum equivalent isotropically radiated power (EIRP) in Watts

P - Power density limit, W/m²

General public cannot be exposed to dangerous RF level.

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