Alien Technology ALR-9680

ALNT65

Maximum Permissible Exposure

FCC, Part 15 Subpart C §15.247(i)
Industry Canada RSS-Gen §5.6

Calculations for Maximum Permissible Exposure Levels

Power Density = Pd (mW/cm^2) = EIRP/($4\pi d^2$)

EIRP = P * G

P = Peak output power (mW)

G = Antenna numeric gain (numeric)

d = Separation distance (cm)

Numeric Gain = 10 ^ (G (dBi)/10)

The ALR-9680 has 4 antennas ports only one of which is actively transmitting at any one time. Measurements were made on the antenna port with the highest power.

Highest Gain Antenna: 8 dBi (ALR-8698)

Because the EUT belongs to the General Population/Uncontrolled Exposure the limit of power density is 0.6 mW/cm^2

Because Antenna Gain (dBi)	Numeric Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Calculated Safe Distance @ 0.6mW/cm^2 Limit(cm)
8.0	6.31	+27.70	588.8	22.2

Specification

Maximum Permissible Exposure Limits

> **§15.247(i)** Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency levels in excess of the Commission's guidelines.
>
> **FCC §1.1310** Limit = f/1500 = 0.6 mW / cm^2 from 1.310 Table 1
>
> **RSS-Gen §5.6** Category I and Category II equipment shall comply with the applicable requirements of RSS-102.

Laboratory Measurement Uncertainty for Power Measurements

Measurement uncertainty	$\pm$1.33 dB