



MPE/RF EXPOSURE EVALUATION REPORT

FCC CFR 47 Part 1.1310

Report No.: PELC01-U3 Rev A

Company: Pelican Wireless Systems

Model Name: 915 MHz Module

Model Number: 45-5105

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To: FCC CFR 47 Part 1.1310

Test Report Serial No.: PELC01-U3 Rev A

This report supersedes: NONE

Applicant: Pelican Wireless Systems
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This Test Report is Issued Under the Authority of:

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1. MAXIMUM PERMISSABLE EXPOSURE

Calculations for Maximum Permissible Exposure Levels

$$\text{Power Density} = P_d \text{ (mW/cm}^2\text{)} = \text{EIRP}/(4\pi d^2)$$

$$\text{EIRP} = P * G$$

P = Peak output power (mW)

G = Antenna numeric gain (numeric)

d = Separation distance (cm)

$$\text{Numeric Gain} = 10 ^ (G \text{ (dBi)})/10$$

The calculations in the table below use the highest conducted power values together with the highest antenna gain specified for the EUT. These calculations represent worst case in terms of the exposure levels.

Frequency Band (MHz)	Ant Gain (dBi)	Numeric Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Calculated Power Density (mW/cm ²) @ 20cm	Power Density Limit (mW/cm ²)	Min Calculated safe distance for Limit (cm)
902.0 - 928.0	1.0	1.26	23.82	240.99	0.0604	0.61	6.34

Note: for mobile or fixed location transmitters the minimum separation distance is 20cm, even if calculations indicate the MPE distance to be less.

Specification - Maximum Permissible Exposure Limits

The Limit is defined in Table 1 of FCC §1.1310.

Table 1 to [§ 1.1310\(e\)\(1\)](#)—Limits for Maximum Permissible Exposure (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(ii) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	<30
1.34-30	824/f	2.19/f	*(180/f ²)	<30
30-300	27.5	0.073	0.2	<30
300-1,500			f/1500	<30
1,500-100,000			1.0	<30



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