



## **MPE/RF EXPOSURE REPORT**

**FCC CFR 47 Part 1.1310**

**Report No.: AIRI02-U6 Rev A**

**Company:** Airvine Scientific

**Model Name:** WaveTunnel (WT-2041SM-US00)

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**To:** FCC CFR 47 Part 1.1310

**Report Serial No.:** AIRI02-U6 Rev A

This report supersedes: None

**Applicant:** Airvine Scientific  
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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

Power Density =  $P_d$  (mW/cm<sup>2</sup>) =  $EIRP / (4 \cdot \pi \cdot d^2)$

$EIRP = 10^{[(E_{meas})/10]}$  in mW

$d$  = Separation distance (cm)

### FCC CFR 47 Part 1.1310 Power Density Limits for General Population/Uncontrolled Exposure:

1.34 – 30 MHz Plane Wave Power Density =  $(180/f^2)$  mW/cm<sup>2</sup>

300-1,500 MHz; Power Density =  $f/1500$  mW/cm<sup>2</sup>

1,500-100,000 MHz; Power Density = 1.0 mW/cm<sup>2</sup>

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

### Specification - Maximum Permissible Exposure Limits.

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

Freq. Band (MHz)	Highest Measured Average EIRP (dBm)	EIRP (mW)	Calculated Power Density (mW/cm <sup>2</sup> ) @ 20cm	Power Density Limit (mW/cm <sup>2</sup> )	Min Calculated safe distance for Limit (cm)
57-71 GHz	31.60	1444.9756	0.2875	1.00	10.723

Note 1: for mobile or fixed location transmitters the minimum separation distance is 20cm, even if calculations indicate the MPE distance to be less.



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