



**21-50-99**  
**Broadband Airborne Blade**  
**Antenna**  
**100 to 530 MHz**

## FEATURES

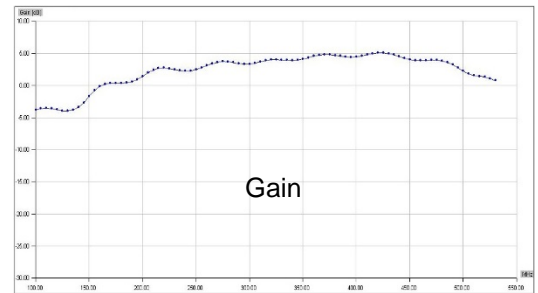
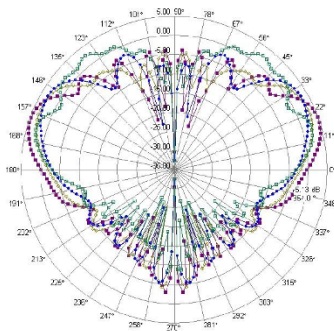
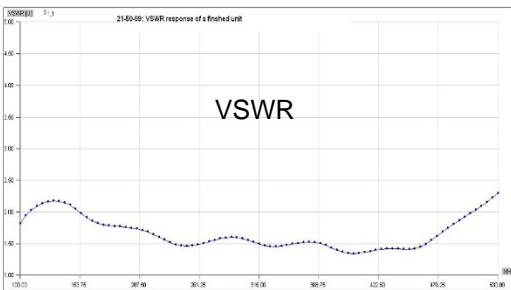
- **High Strength Broadband Blade Antenna**
- **Frequency Selective Matching Network**
- **Fully Foamed to Provide High Environmental Integrity**
- **Aluminum Alloy Retaining Collar Accepts High Side Loading**
- **Designed to MIL-DTL-85670B Specification**
- **Drop-on Replacement for AT-1108**
- **Complies with MIL-STD-810**
- **Meets Lightning protection requirements of AS3191**



The 21-50-99 is vertically polarized, omni-directional antennas, compatible with all popular airborne radios operating within the 100 to 530 MHz frequency range. The antenna can handle 75 Watts of power and requires no external tuning.

This wideband multifunction antenna developed by Cooper Antennas Ltd is particularly suited to tactical military communications. Rugged design ensures reliability in world wide conditions of service on aircraft operating at speeds up to Mach 0.95.

Use of a surface deposited radiating element optimizes efficiency and the radiating element is DC grounded for static protection.



Elevation Pattern

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# SPECIFICATIONS

## Cooper Antennas Model 21-50-99 Broadband Airborne Blade Antenna

### ELECTRICAL

Frequency	100 - 530 MHz
Gain	100 MHz ≥ -4.0 dBi 108 MHz ≥ -3.0 dBi 130 MHz ≥ -3.0 dBi 174 MHz ≥ 0 dBi 225 MHz ≥ +2.5 dBi 300 MHz ≥ +3.0 dBi 400 MHz ≥ +4.0 dBi 530 MHz ≥ +2.0 dBi
VSWR	100 - 174 MHz ≤ 2.5:1 225 - 400 MHz ≤ 2.25:1 400 - 450 MHz ≤ 2.5:1 450 - 530 MHz ≤ 3.0:1
Impedance (nominal)	50 Ohms
Power	75 Watts CW 100 - 530 MHz
Polarization	Vertical
Radiation (typical)	Azimuth : Omni-directional Elevation : As stub
Antenna RF Connector	TNC Female

### MECHANICAL

Antenna Shell Type	High density foam filled epoxy/fiber glass shell set in aluminum alloy base collar
Height	14.65 inches (372 mm)
Weight	3.5 lbs (1.6 kg)
Side Loading	≥8 psi ultimate
Base Plate Shape	Tear drop
Fixing Holes	6 x Ø 0.234 inches (5.9 mm) holes, counter bore Ø 0.39 inches (9.9mm)

### FINISH

Antenna	Urethane Lusterless Black
Baseplate	Unpainted

Other finish options are available. Please specify finish required when ordering.

Note: Cooper Antennas Ltd has a policy of continuous product improvement and data herein is therefore subject to change.  
Please check with Cooper Antennas Ltd that this data sheet is at latest issue before initiating contract activity.