



21-50-51
Broadband Airborne Blade
Antenna
30 to 600 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**
- **Drop-on Replacement for AT-1108 & AS3191**
- **Suitable for AN/ARC-210, 5400N and Similar Multi-Mode Radios**
- **Complies with MIL-STD-810/DO160D**

Lightning Protection



The 21-50-51 is a vertically polarized, omni-directional antenna, compatible with all popular airborne radios operating within the 30 to 600 MHz frequency range. These antennas can handle 30 Watts of power and require no external tuning.

This wideband, multi-function 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 1.0.

Addition of encapsulated top loading element optimizes efficiency. The element is DC grounded for high voltage transfer protection.

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SPECIFICATIONS

Cooper Antennas Model 21-50-51

Broadband Airborne Blade Antennas

ELECTRICAL

Frequency	30 - 88 MHz 108 - 174 MHz 225 - 600 MHz
Gain	30 MHz ≥ -24.0 dBi 60 MHz ≥ -18.0 dBi 88 MHz ≥ -11.0 dBi 118 MHz ≥ -7.0 dBi 156 MHz ≥ -2.0 dBi 174 MHz ≥ -1.0 dBi 225-600 MHz ≥ 0 dBi average
VSWR	≤ 2.5:1 30 - 88 MHz ≤ 3.0:1 108 - 117 MHz ≤ 2.5:1 118 - 174 MHz ≤ 2.5:1 225 - 400 MHz ≤ 2.75:1 401 - 600 MHz
Impedance (nominal)	50 Ohms
Power	30 Watts CW
Polarization	Essentially vertical (when mounted vertically)
Antenna RF Connector	N Female

MECHANICAL

Antenna Shell Type	High density foam filled epoxy/fiber glass shell set in aluminum alloy base collar
Height	14 inches (356mm)
Weight	4.5 lbs (2.05 kg)
Side Loading	≥ 8 psi ultimate
Base Plate Shape	Tear drop
Fixing Holes	6 x Ø 0.200 inches (5mm) holes, counter bore Ø 0.39 inches (9.9mm)

FINISH

Antenna	Urethane Lusterless Gray
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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.