



21-50-56-1
Broadband Airborne Blade
Antenna
30 to 512 MHz & 960 to 2500 MHz

FEATURES

- **Suitable for Mach 2.5+**
- **Passive design-requires no external tuning**
- **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, AN/ARC-231 and Similar Multi-Mode Radios**
- **Designed to MIL-STD-810**



The 21-50-56-1 is a vertically polarized, omni-directional antenna, compatible with airborne radios operating within the 30 to 512 MHz frequency range plus Link16, Tacan, IFF, JTIDS and other L-band systems.

This antenna is constructed as a one-piece, high strength radomes built using high temperature resin and woven fibre glass and has an operating side load acceptance of 8 p.s.i. As such, it is suitable for use on subsonic and supersonic aircraft operating in excess of Mach 2.5.

The element is DC grounded for high voltage transfer protection.

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Cooper Antennas Ltd is Accredited to: ISO9001, AS9100, ISO14001 and MAA Approved

SPECIFICATIONS

Cooper Antennas Model 21-50-56-1 Broadband & L-Band Blade Antenna

ELECTRICAL

Frequency	30 - 88 MHz, 108 - 174 MHz, 225 - 512 MHz 960 - 2500 MHz
Gain	30 MHz ≥ -23.0 dBi 60 MHz ≥ -18.0 dBi 88 MHz ≥ -10.0 dBi 118 MHz ≥ -7.0 dBi 156 MHz ≥ -2.0 dBi 174 MHz ≥ -1.0 dBi 225-512 MHz ≥ 0 dBi average 960-2500MHz +2dBi average
VSWR	≤ 2.5:1 30 - 88 MHz ≤ 3.0:1 108 - 117 MHz ≤ 2.5:1 118 - 174 MHz & 225 - 400 MHz ≤ 2.75:1 401 - 512 MHz ≤ 2.0:1 960 - 2500 MHz
Impedance (nominal)	50 Ohms
Power	V/UHF - 50 Watts CW, L-band - 100 Watts
Polarization	Essentially vertical (when mounted vertically)
Antenna RF Connector	V/UHF - TNC Female L-Band - N Female

MECHANICAL

Antenna Shell Type	High density foam filled epoxy/fiber glass shell set in aluminum alloy base collar
Height	14.75 inches (375mm)
Weight	4.5 lbs (2.05kg)
Side Loading	≥8 psi operating limit load over - 70 to + 135°C (+ 155°C short term)
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 Grey
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Other finish options are available. Please specify required finish 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.