



21-50-165
Wide Band VHF/UHF
Blade Antenna
30 to 520 & 760 to 960 MHz

FEATURES

- **Suitable for aircraft operating at Mach 2+**
- **High Strength Composite Blade with Integrated Aluminum Mounting plate**
- **Low Side Area, Low Drag**
- **Covers all VHF/UHF and P25 Frequency Bands**
- **Single RF Connector can be externally diplexed**
- **Environmental Performance to MIL-STD-810**



The 21-50-165 is a high performance wide band VHF/UHF airborne blade antenna suitable for aircraft operating in excess of Mach 2.

Construction is from a one piece fiberglass blade molding intimately bonded into an aluminum alloy base block which houses the matching circuits and provides for very solid attachment to airframe via 8 fixing holes.

Internal radiating elements are shaped in such a way as to optimize elevation patterns throughout the wide frequency band and proprietary matching techniques maintain a VSWR below 2.7:1.

The antenna assembly is completely sealed and filled with closed cell foam for reliable operation in world-wide conditions of service.

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SPECIFICATIONS

Cooper Antennas Model 21-50-165 Wide Band Blade Antenna

ELECTRICAL

Frequency	30 to 520 & 760 to 960 MHz
Gain	-40 dBi 30 MHz -18 dBi 88 MHz -10 dBi average 118-174 MHz 0 dBi average 225-520 & 760-960 MHz
VSWR	2.7:1 30-118 MHz 2.5:1 119-520 MHz 2.0:1 760-960 MHz
Impedance (nominal)	50 Ohms
Power	50 Watts CW
Polarization	Vertical (when mounted vertically)
Radiation (nominal)	Omni directional in azimuth plane
Antenna RF Connector	N - Type Female

MECHANICAL

Antenna Shell Type	Epoxy/fiber glass blade in aluminum alloy base collar
Height	9.5 inches (241mm)
Weight	1.8 lbs (0.8kg)
Side Loading	≥ 8 psi ultimate
Base Plate Shape	Oval shape
Fixing Holes	8 x Ø 0.208 inch (5.28mm) holes, counter sunk 100°.

FINISH

Antenna	Grey Urethane
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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.