



21-50-132
Combined VHF / L-Band
Antenna for Supersonic
Aircraft
116 MHz to 174 MHz
960 MHz to 1220 MHz

FEATURES

- **High Strength blade for extreme vibration and side load acceptance**
- **Footprint compatible with existing VHF and UHF/L-band blades**
- **50 dB isolation**
- **Covers IFF/JTIDS/MIDS/TACAN and VHF comms.**
- **Designed to meet MIL-STD-810 B environmental conditions for fighter aircraft**



The 21-50-132 is a high performance combined VHF/L-band antenna designed to operate over the bands 116 - 174 MHz and 960 - 1220 MHz and is intended for use in supersonic airborne applications.

The 21-50-132 is configured as a broadband radiating element with frequency dependant reactive and resistive loading to optimise gain and ensure VSWR compliance. The matched radiating structure is fed via a VHF/L-band diplexer contained in a sealed aluminum base block to provide 50 dB of isolation between the two bands.

The 21-50-132 comprises a high strength, high temperature, pressure moulded CE9000 (per FMS1023) composite blade of aerofoil section which supports the radiating element. This is mounted on an aluminium alloy baseplate which houses the matching circuitry and supports the diplexer box with its integral coaxial connectors.

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SPECIFICATIONS

Cooper Antennas 21-50-132

Combined VHF / L-Band Antenna for Supersonic Aircraft

116 MHz to 174 MHz
960 MHz to 1220 MHz

ELECTRICAL

Frequency	116 MHz to 174 MHz, 960 MHz to 1220 MHz
Gain	116 MHz ≥ -13 dBi 130 MHz ≥ -8 dBi 150 MHz ≥ -3 dBi 174 MHz ≥ 0 dBi 960-1220 MHz ≥ +2dBi
VSWR	≤ 2.5:1 VHF ≤ 2.0:1 960-1220 MHz ≤ 1.8:1 1020-1100 MHz
Impedance (nominal)	50 Ohms
Power	45 Watts CW max (VHF) 2KW peak, 100W ave. L-band
Polarization	Predominantly vertical when mounted vertically
Radiation	Essentially omni-directional in azimuth plane
Antenna RF Connectors	TNC Female VHF N type female L-band

MECHANICAL

Fixing	8 x 0.208 inch (nom) diameter 100° countersunk
Height	9.5 inches max (242mm)
Base Length	7.63 inches max (194mm)
Weight	3.5 lbs (1.59kg)

FINISH

Semi-gloss Grey to MIL-C-83286, Color FED-STD-595-26493

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.