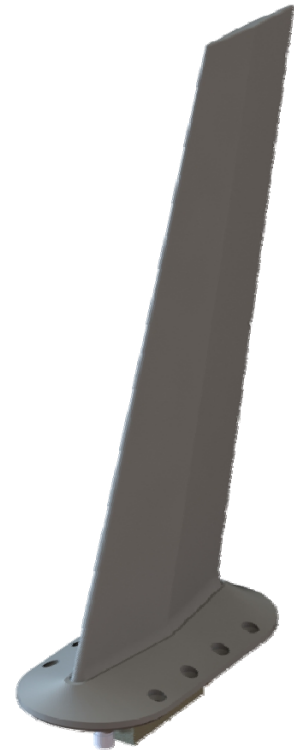




**21-50-318**  
VHF/UHF/L-Band  
Antenna  
30 to 512 MHz & 960 to 2500 MHz

## FEATURES

- **Swept back blade**
- **Isolated V/UHF and L-band outputs**
- **Suitable for Mach 2+**
- **Gain in UHF and L-band similar to stand-alone blades**
- **Nominally Omni pattern thru band**
- **Drop on replacement for NSN  
5985-01-329-4335**
- **Designed to MIL-STD-810  
environmental conditions**



The 21-50-318 is a high speed passive blade antenna providing full VHF, UHF and L-band performance in a double raked, low RCS design. Intended as a bolt on replacement for existing UHF/L-band and VHF/UHF/L-band antennas, this antenna is built using a high temperature resin/glass composite radome encapsulating a wide band, specially contoured radiating element. A high isolation diplexer is built into the machined aluminium base, allowing simultaneous operation of LOS Communications and L-Band/Data link systems such as JTIDS, MIDS and IFF. Lightning and P-static protection is provided by all elements being DC grounded.

**Cooper Antennas Ltd for non-USA customers**  
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Tel: +44 (0) 1628 482 360  
Email: sales@cooperantennas.com  
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**ROJONE, PTY LTD.**  
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# SPECIFICATIONS

## Cooper Antennas Model 21-50-318

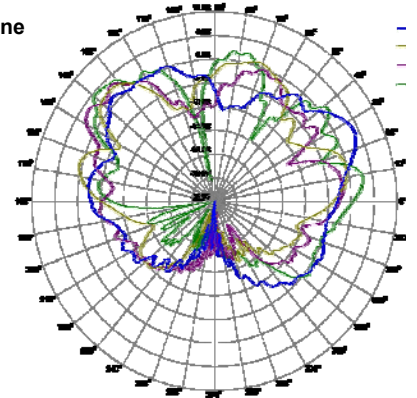
### VHF/UHF/L-band Antenna

#### ELECTRICAL

Frequency	30-174 MHz 225-512 MHz 960-2500 MHz
Impedance (nominal)	50 Ohms
VSWR (typical)	30 - 88 MHz $\leq 2.7$ 108 - 174 MHz $\leq 2.7$ 225 - 360 MHz $\leq 2.0$ 360 - 410 MHz $\leq 2.2$ 410 - 512 MHz $\leq 3.5$ 960 - 2500 MHz $\leq 2.0$
Gain (typical)	30 MHz $\geq -26$ dBi 88 MHz $\geq -14$ dBi 174 MHz $\geq -4$ dBi 225-410 MHz 0 dBi average 960-2500 MHz 0 dBi average
Radiation Patterns	Nominally Omni-directional in azimuth, see typical plots on 20" radius fuselage section
Power	VHF/UHF : 25 Watts CW 100 Watts peak L-Band : 2 KW Peak at 0.004 duty cycle
Isolation	Between V/UHF and L-band (bi-directional) $\geq 50$ dB
Connector	SC Female L-band TNC Female V/UHF

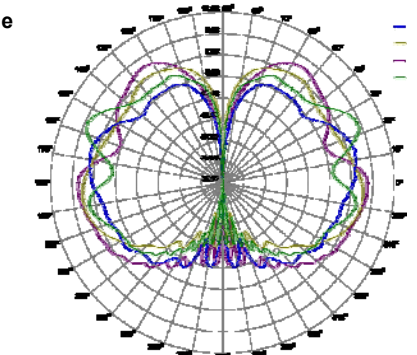
#### Pitch Plane

0.96 GHz  
1.3 GHz  
1.8 GHz  
2.5 GHz



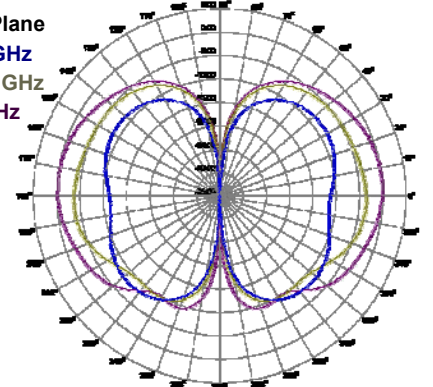
#### Roll Plane

0.96 GHz  
1.3 GHz  
1.8 GHz  
2.5 GHz



#### Roll Plane

0.13 GHz  
0.225 GHz  
0.4 GHz



#### MECHANICAL

Height	13 inches (330mm) maximum
Weight	2.6lbs (1.2kg) maximum
Mounting hole	8 hole

#### FINISH

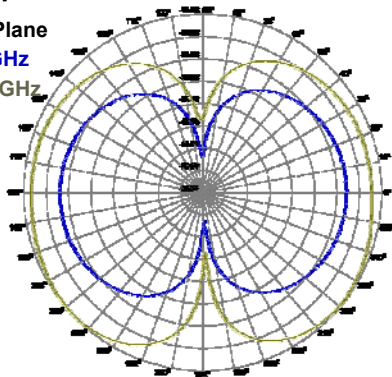
Antenna Urethane Matt Grey Fed-Std-595 36320

Other finish options are available.

Please specify finish required when ordering.

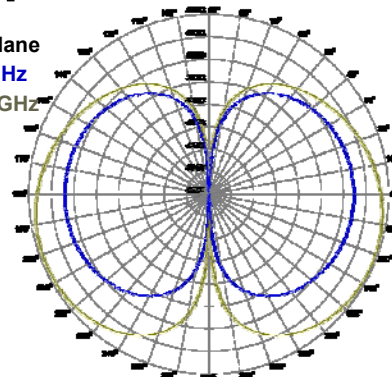
#### Pitch Plane

0.03 GHz  
0.088 GHz



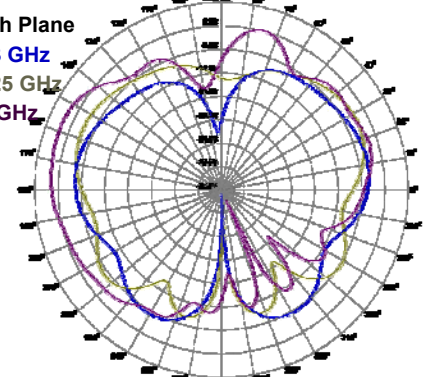
#### Roll Plane

0.03 GHz  
0.088 GHz



#### Pitch Plane

0.13 GHz  
0.225 GHz  
0.4 GHz



**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.**