



ANTENNA EXPERTS

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Model # LPDS-225-400

225 – 400 MHz.

13 dBi Gain

UHF Aviation Band Log Periodic Dual Stacked Dipole Array

DESIGN FEATURES: The LPDS-225-400 is a set of two similar log periodic dipole array which be stacked or bayed. The LPDS-225-400 high gain UHF aeronautical band log periodic dipole antenna use 6063T6 ultra corrosion resistant architectural anodized aluminum alloy and designed to provide wideband directional transmission/reception of radio signals from 225-400 MHz bands for military aeronautical ATC sites for ground-to-ground and ground-to-air communication without having the requirement of multiple antennas. The complete log periodic antenna is supplied with epoxy based powder coating finish to protect it further from severe environmental conditions. The extra spacers are used between the support booms to improve mechanical durability of log periodic antenna. The specially designed mounting arrangement results in fast installation. The LP antenna can be assembled in less than 5 minutes. This log periodic dipole antenna system is particular suitable for transmission, reception, monitoring, scanning and jamming applications due to its broad band design feature, and small size. This log periodic antenna provides strong performance over the entire 225-400 MHz UHF aviation band. Log periodic antenna does not use loading technique to reduce the overall size of array. The shipping length of antenna is less than 4 feet making it highly suitable for mobile and tactical applications. The antenna is designed as per 810G MIL-STD.

CONSTRUCTIONS: The LPDS-225-400 assembled log periodic antennas (Single Antenna) outer-most dimensions are 1.1 meter (43 Inches) long and 0.66 meters (26 Inches) wide. The antenna has removable elements, the longest of which is 0.33 meter (13 Inches), making it highly suitable for easy of shipping/carrying/transportation and handling. All elements are supplied in two segments for easy of shipping and handling. The elements are attached via stainless steel nuts & bolts systems at points along the boom. The tactical log periodic antenna operates at D.C. ground with low resistance discharge path for protection against lightning and immunity to noise. All the screws, nuts and bolts of tactical log periodic dipole antenna are made of type 316 marine grade stainless steel. The mounting arrangement of log periodic antenna permits to change the polarization from horizontal to vertical and vice-versa.

DUAL ARRAY FORMATION: The LPDS series antenna be stacked/bayed in following way to get the max gain: (1) Vertical Polarized Horizontal Stacking VPHS (2) Horizontal Polarized Vertical Stacking HPVS. In VPHS configuration, the horizontal beamwidth will become half and vertical beamwidth remains unchanged. In HPVS configuration, the vertical beamwidth will become half and horizontal beamwidth remains unchanged. This high power log periodic antenna is supplied with either N-Female or DIN-Female connector depending on customer choice. The complete array is supplied with suitable 2 way power combiner/splitter & phasing harness cable.

ELECTRICAL SPECIFICATIONS:

Frequency Range	225-400 MHz.
Gain - Typical	13 dBi.
Bandwidth	Entire Band
Polarization	Vertical or Horizontal
Input Impedance	50 Ohms
Radiation Pattern	Directional
Vertical Beam-width –Half Power Points - VPHS	60 Degrees (if stacked horizontally)
Horizontal Beam-width –Half Power Points - VPHS	30 Degrees (if stacked horizontally)
Horizontal Beam-width –Half Power Points - HPVS	60 Degrees (if stacked vertically)
Vertical Beam-width –Half Power Points - HPVS	30 Degrees (if stacked vertically)
Front to Back Ratio – Better Than	18 dB.
VSWR – Equal to or Better Than	2:1
RF Power Handling Capacity	800 Watts
Input Termination	N-Female or DIN-Female
Lightning Protection	Direct Ground

MECHANICAL SPECIFICATIONS:

Antenna Materials	6063T6 Aluminum Alloy
Mounting Hardware	Marine Grade Stainless Steel
Gross Weight	12 Kgs. (26.45 lbs)
Wind Rating	200 Km/Hr. (125 mph)
Overall Length – Each LP Antenna	1100 mm (43 Inches)
Overall Width – Each LP Antenna	660 mm (23 Inches)
Shipping Length	1200 mm (48 Inches)
Support Boom –Cross Section –Outer diameter	Aluminum-Square Tube-25.4mm (1 Inch)
Elements -Cross Section –Outer diameter	Aluminum-Round Tube-12.7mm (1/2 Inch)
Insulator Material	Teflon & Nylon
Maximum Mount Pipe Diameter	52 mm (2 Inches)
Final Finish	Olive Green Mil Color

ENVIRONMENTAL SPECIFICATIONS:

Operating Temperature	(-) 30 to +70 Degrees Celsius
Storage Temperature	(-) 40 to +80 Degrees Celsius
Humidity	0 to 95% RH

Note: All information contained in the datasheet is subject to change without any prior notice.