19-429P58SR

CHELTON

UHF SATCOM Antenna

The 19-429P58SR UHF SatCOM Antenna is a combined low-high angle, low weight, high efficiency, UHF satellite communications antenna that is suitable for use in rugged vehicular applications.

The antenna comprises a cylindrical high strength mast, with a rectangular boxsection base, supporting a pair of cross dipoles. High strength glass reinforced plastics (GRP) are used throughout t he construction for strength, rigidity and lightness.

The **19-429P58SR** provides hemispheric pattern coverage by means of two, independent, collocated elements built into a single shell.

Low angle (0 to approximately 45) coverage is provided by the vertical element and high angle (approximately 45 to 90) coverage is provided by the circularly polarised element. In this way, full hemispheric coverage is achieved.

ENVIRONMENTAL

	MIL-STD-810E, Method 520.1, Procedure III		
Temperature	Storage: -57 C to +85 C		
	Operational: -54 C to +71 C		
Altitude	Operational: 7620 m		
Humidity	75% at 45 C		
Salt Fog	MIL-STD-810E, Method 509.3, Procedure I 48 hours exposed to 5% salt solution		
Mechanical Shock	MIL-STD-810E, Method 516.4, Procedures I and V		
	20 g 11 ms terminal sawtooth functional		
	40 g 11 ms terminal sawtooth crash safety		
Vibration	MIL-STD-810E, Method 514.4, Procedure l Profile overleaf		
Magnetic Effect	Less than 1 deflection at 300 mm		



ELECTRICAL

Frequency	Low Angle:	240 MHz - 400 MHz		
капде	High Angle :	225 MHz - 400 MHz		
Gain	Low Angle:	Average within 2 dB of a quarter-wave monopole (+4 dBi typical)		
	High Angle:	+4.5 dBiC minimum (average full band)at zenith (+6 dBiC typical at zenith)		
Polarisation	Low Angle:	Predominantly vertical when mounted vertically		
	High Angle:	Right Hand Circular Polarisation (RHCP) at zenith		
Radiation	Low Angle:	Omnidirectional in azimuth		
Pattern	Combined*:	Hemispherical		
	*Low/high angle combined			
Power Rating	Low Angle:	100W max		
	High Angle:	200W max		
Impedance	50 ohm (nominal)			
VSWR	Low Angle:	2.7:1 max		
	High Angle:	2.0:1 max		
Isolation	20 dB (mid-band)			
Connectors	Low Angle:	TNC Female		
	High Angle:	N Type Female		

MECHANICAL

Height	0.30 m	
Width	0.49 m	
Weight	1.43 kg	
Mounting	4 holes fixed location	

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