

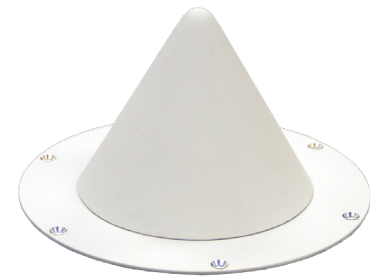


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AS-48917

GPS BAND OMNIDIRECTIONAL ANTENNA

The AS-48917 omnidirectional antenna provides superior circular polarized radio frequency (RF) performance over both the L1 and L2 GPS frequency bands. RF design configuration is a two-arm conical log-spiral radiating element fed at the tip by a compensated balun. The spiral cone angle and the tip and base diameters were selected to provide satisfactory operation over the operational frequency band. The complementary two-arm spiral is wound to provide an inherent circular polarization. This results in broad-lobed unidirectional circularly polarized radiation off the small end or apex of the cone. It is ideal for application where hemispherical coverage is required. The antenna is optionally provided with a nine-inch diameter ground plane (as shown in the photograph). The mechanical configuration of the antenna incorporates materials and construction techniques, which yield high reliability and low outgassing required for space operation.



ELECTRICAL					
Frequency range	1,217 to 1,585 MHz				
VSWR	1.5:1, max				
Gain	0 dBi (at $\theta = \pm 10^\circ$) >-5 dBi (at $\theta = \pm 76^\circ$)				
Polarization	Right- or left-hand circular				
3 dB beamwidth	110°, min 145°, nom				
Front-to-back ratio	>20 dB				
Axial ratio	3 dB, max, 0° to 45° 5 dB, max, $\pm 45^\circ$ to $\pm 90^\circ$				
Power handling	Receive only				
MECHANICAL					
Connector	SMA female				
Weight	6 ounces (454 grams)				
ENVIRONMENTAL					
Temperature	-148° F (-100° C) to +212° F (+100° C)				
Thermal vacuum	1.33 x 10 ⁻³ Newton/M ² (10 ⁻⁵ torr) at $\pm 100^\circ$ C (the pressure values are approximate)				
Vibration	Freq. (Hz)	g ²	dB/oct	G _{rms}	Duration/axis
	20-100	1.0	+9.0		
	100-200		-6.0		
	200-400	0.25	-6.0	21.9	3 min/axis
	400-1,000		-6.0		
1,000-2,000					

KEY FEATURES

- > L1 and L2 GPS frequencies
- > Conical log spiral design
- > Hemispheric pattern coverage
- > Space qualified

For further details and specifications, contact the factory at antenna.info@L3Harris.com

AS-48917 GPS Band Omnidirectional Antenna

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