

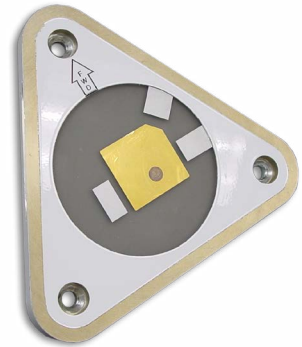


AS-49090

SINGLE-LAYER MICROSTRIP PATCH ANTENNA

The AS-49090 has flown on the Titan/Centaur rocket as the telemetry antenna. It consists of a single-layer microstrip patch antenna with parasitic tabs on fused silica. It is fed by a perpendicular probe. This antenna is inherently circularly polarized. It has the advantage of low height, high efficiency, and full-hemispherical coverage. The materials used in the construction of the antenna were chosen to minimize the effects of the extreme environments. Its baseplate is curved to mount to a 100-inch radius vehicle. The baseplate can be modified to suit the mounting requirements of a particular vehicle. An aerospace test coupler, P/N 750606, is available for this antenna. This enables open loop testing while the vehicle is on the launch pad.

ELECTRICAL						
Frequency range	2.26 to 2.28 GHz					
VSWR	1.8:1, max					
Gain	6 dBi nom					
Over 70% of hemisphere	-5 dBic, min					
Peak	7 dBic, nom					
Polarization	Right-hand circular					
3 dB beamwidth	70°, nom					
Power handling	50 W CW					
MECHANICAL						
Connector	TNC female					
Weight	1 lb (454 gm)					
ENVIRONMENTAL						
Temperature	-300° F (-184° C), +300° F (+149° C)					
Temperature shock	+500° F (+288° C)					
Altitude	Operating 10-5 torr					
Humidity	95% at 179.6° F (+82° C)					
Pyrotechnic shock	Triaxial Freq: 100-2,000-3,000 G level: 125-2,000-2,000					
Vibration	Radial axis	Freq. (Hz)	G ²	dB/oct	G ^{rms}	Duration/axis
		20-80		+12		
		80-2,000	12.0			
	Transverse axis	20-50		+6	152.4	3 min/axis
		50-100	0.48			
		100-250		Norm		
		250-2,000	3.0		74.3	3 min/axis



KEY FEATURES

- > S-band frequency coverage
- > Hemispheric radiation pattern
- > Right-hand circular polarization
- > Test coupler available

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

AS-49090 Single-Layer Microstrip Patch Antenna

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