

Low Profile Airborne Instrumentation Antennas



Standard Features

- P & L band telemetry
- UHF command

The TRAK TECOM series of airborne instrumentation antennas serve a critical need for use on small and medium-sized vehicles where internal space is not available for flush cavity antennas. Their streamlined aerodynamic form factor yields a lightweight, low drag antenna, which universally mounts to any vehicle structure without modification. Two types of antennas have been designed for each discrete operating band, depending on thermal environment. Those referred to as normal thermal environment will handle temperatures of 600 degree fahrenheit for 20 seconds versus 1100 degree fahrenheit for 20 seconds for those models designated extreme thermal environment. The antennas may be used alone or in arrays of two or more depending on pattern requirements. Matched power dividers and cables are available from TRAK TECOM for interconnecting multi-antenna installations.

Electrical Performance Specifications

Normal Thermal Environment

Type Number	Frequency Range	Function	Continuous Temperature		20 Seconds Temperature		Weight (oz/g)	
103003	215 - 260 MHz	(P) Telemetry	400°F	205°C	600°F	315°C	3.0	85
105002	406 - 549 MHz	(UHF) Command	400°F	205°C	600°F	315°C	3.0	85
109001	790 - 850 MHz	(L) Telemetry	400°F	205°C	600°F	315°C	3.0	85

Common Electrical Performance Data:
Power Handling (Watts) 2.0*
VSWR 1.5:1**
Impedance (Ohms) 50***
Polarization: Linear
Radiation Pattern: Hemispherical

*At critical altitude for voltage breakdown
 (10 Watts average at sea level to 75K ft)

**At tuned frequency and over bandwidth of:

103003, typically ± 0.3 MHz
 105002, typically ± 0.5 MHz
 109001, typically ± 0.5 MHz

***100 Ohms available upon request

Note: These antennas are tuned to perform over a solid metallic ground plane

Extreme Thermal Environment

Type Number	Frequency Range	Function	Continuous Temperature	20 Seconds Temperature	Weight (oz/g)	
103016	215 - 260 MHz	(P) Telemetry	400°F 205°C	1100°F 600°C	6.86	180
105020	406 - 549 MHz	(UHF) Command	400°F 205°C	1100°F 600°C	6.86	180
109002	790 - 850 MHz	(L) Telemetry	400°F 205°C	1100°F 600°C	6.86	180



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