TECOM
smiths microwave

Airborne Instrumentation Antennas

- **P & L Band Telemetry**
- **UHF Command**

The 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°F for 20 seconds, versus 1100°F 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 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

Extreme Thermal Environment

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

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

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

*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

AIRBORNE/MISSILE

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