# Product Bulletin

# **T4X0-S "Low Boy"**Ballistic Telemetry Transmitter

**Airborne Telemetry Products** 



# **FEATURES**

- High Shock
- 200 mW RF Power
- Phase Modulated
- Crystal Controlled to 0.003%
- Subminiature Construction
- Range Qualified

### DESCRIPTION

L-3 Communications Telemetry-East, Microcom heritage, Crystal Controlled, Phase Modulated T4X0 Transmitter was devel-oped to operate under the extremes of environmental stresses, including operation at longitudinal shock levels beyond 20,000g. The "Lowboy" Package provides a crystal controlled transmitter replacement for those applications previously using the free-running T4 series. Being crystal controlled, the T4X0 is ideally suited for ballistic applications requiring "in-bore" and flight data. This unit delivers 200mW of RF output power at any factory set frequency between 2200-2300 MHz.

Incorporating advanced RF and minia-turization technologies, the T4X0 provides a conversion efficiency and power output unequalled for its small size and light weight.

RF output circuit design allows the T4X0 to be operated (without damage) into an open or short circuit load condition.



# **SPECIFICATIONS**

# **Output Characteristics**

Output Power (into nominal 50 ohm load

with 1.5:1 VSWR max.):

Frequency Range:

200 mW min.

2200 MHz-2300 MHz

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200 mW min.

2200 MHz-2300 MHz

# **Power Requirements**

Voltage: 17 to 32 VDC
Current: 200 mA max.
Isolation: B- and Modulation Return are common to Chassis Ground

Reverse Polarity and Overvoltage

Protection: The application of ±\_40 VDC will not damage the unit

#### **Modulation Characteristics**

Type: PM
Coupling: AC
Deviation Sensitivity: 0.50 VRMS/M.I. = 5
Carrier Deviation: M.I. = 5 max.
Frequency Response: 100 Hz to
1 MHz ±1.5 dB
Input Impedance: 10 K ohm min. shunted

put Impedance: 10 K ohm min. shunted by 10 pF max.

Distortion: 5% max.

Incidental Frequency Modulation:

20 kHz peak max.

at 20kg shock

Incidental Amplitude Modulation: 5% max.

#### **Environmental**

Temperature

Operating: -20°C to +70°C, Baseplate Non-Operating: -55°C to +100°C

Vibration

Sine: 20g, 20-2000 Hz, 3 axes
Random: 0.1g<sup>2</sup>/Hz, 20-2000 Hz, 3 axes
Acceleration: 1000g, 3 axes
Shock: 20 kg, 3 mS, 1 axis
Altitude: Unlimited

Humidity: MIL-STD 810C, Method 507

#### Mechanical

Weight: 3.0 oz. max

Connectors

RF: SMA
Power/Mod: Solder pins
Pin Connections: See Outline Drawing

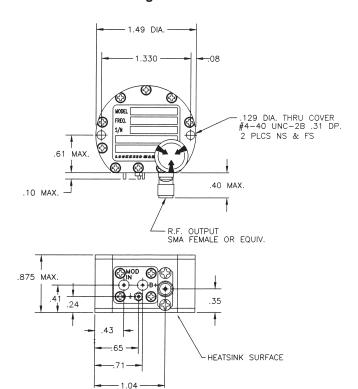
# Options (consult factory)

- Semi-rigid coax cable (6" ±.5") with SMA connector
- Higher Vibration/Shock Levels
- Extended Temperature

# Specify When Ordering

- Operating Frequency
- Any Optional Configurations

# T4X0 Outline Drawing





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