

ULTRAMINIATURE C-BAND RADAR TRANSPONDER

MODEL MD25C-2



SUPPLYING HIGH PERFORMANCE FLIGHT INSTRUMENTATION, RF/MICROWAVE ASSEMBLIES, POWER AMPLIFIERS, IFF AND DATA ACQUISITION SYSTEMS FOR SEVERE ENVIRONMENTS.

DESCRIPTION

The Ultra Electronics Herley Lancaster MD25C-2 Radar Transponder is a 30 Watt nominal, ultraminiature, precision augmentation device used to enhance the capability of C-band tracking radars. This unit is extremely compact, and desirable for applications where size, weight, and DC input power are at a premium. It is particularly suitable for small missiles, small targets, and compact UAVs where space and weight need to be minimized without sacrificing performance. The design of the MD25C-2 utilizes the latest in modern devices and circuitry. The Solid-state design provides a reliable product with extremely long operating life.

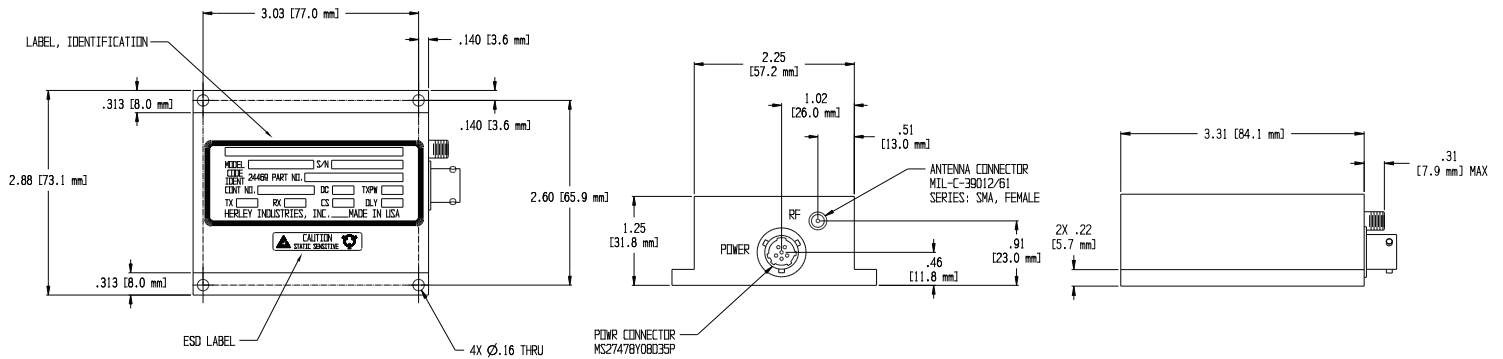
FEATURES

- RCC 262-14 Compliant (20 W Transponder)
- 20 Watt minimum peak power output (30 W pk nominal)
- All solid-state design – low DC input power
- -65 dBm receiver sensitivity minimum
- Small, less than 10 cubic inches (155 cubic cms)
- Lightweight, less than 15 ounces (340 grams)
- Frequency Range 5.4 to 5.9 GHz
- User configurable fixed delay, code spacing, transmit pulse width, and single/double pulse response through a simple Graphical Use Interface (GUI)
- Reverse polarity power lead protection
- Built-in circulator for single antenna operation and protection from poor VSWR



Due to U.S. Export Control Reform Ultra Electronics Herley Lancaster's Radar Transponders have transitioned from ITAR to Department of Commerce Export Administration Regulations (EAR) making them ITAR-free!





ELECTRICAL

- Frequency Range: 5.4 to 5.9 GHz
- Impedance, Input/Output: 50 ohms
- Reverse Polarity Protection: Series diode protection
- Short and Open Circuit Protection: Built-in to provide antenna mismatch protection
- Input Voltage: 22 to 34 VDC
- Input Current: 300 mA max (160 mA typical at 28 VDC)

PHYSICAL

- Size: 3.31 x 2.88 x 1.25 inches (8.4 x 7.3 x 3.2 cms)
- Volume: 9.7 cubic inches (159 cubic cms)
- Weight: Less than 9 ounces (255 gms)
- Antenna Connector: SMA Female
- Power Connector: MS27478Y-08D35P

RECEIVER

- Frequency: 5.4 to 5.9 GHz, factory set
- Sensitivity: -65 dBm minimum, 99% reply
- Bandwidth (3dB): 14.5 ±2.5 MHz
- Pulse Decoder: Single or double pulse, programmable
- Pulse Width: 0.25 to 1.0 µsecs
- Pulse Coding: 3.0 to 15.5 µsecs, programmable
- Second Pulse Spacing: Accepts ±0.15 µsecs. Rejects ±0.2 µsecs

TRANSMITTER

- Frequency: 5.4 to 5.9 GHz, factory set
- Power Output: 20 W pk minimum (30 W pk nominal)
- Output Device: Solid-state
- Frequency Stability: ±5 MHz
- Pulse Width: 0.5 ±0.1 µsec., programmable
- PRF: Up to 2600 pps
- Reply Delay: 1.5 µsec to 9.0 µsec, programmable

ENVIRONMENTAL

- Temperature, Operating: -40°C to +71°C
- Temperature, Storage: -60°C to +95°C
- Altitude: Unlimited
- Humidity: 95%
- Vibration, Random: Per MIL-STD-810 (12 g's RMS)
- Acceleration: 60 g's applied along any axis for 3 minutes
- Shock: 100 g's for 11 msec in any axis

OPTIONS

- Extended Temperature Range: Per customer requirements.

PRODUCT NUMBERS

- *PIN 550009-XXX* - Standard Unit



making a difference

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