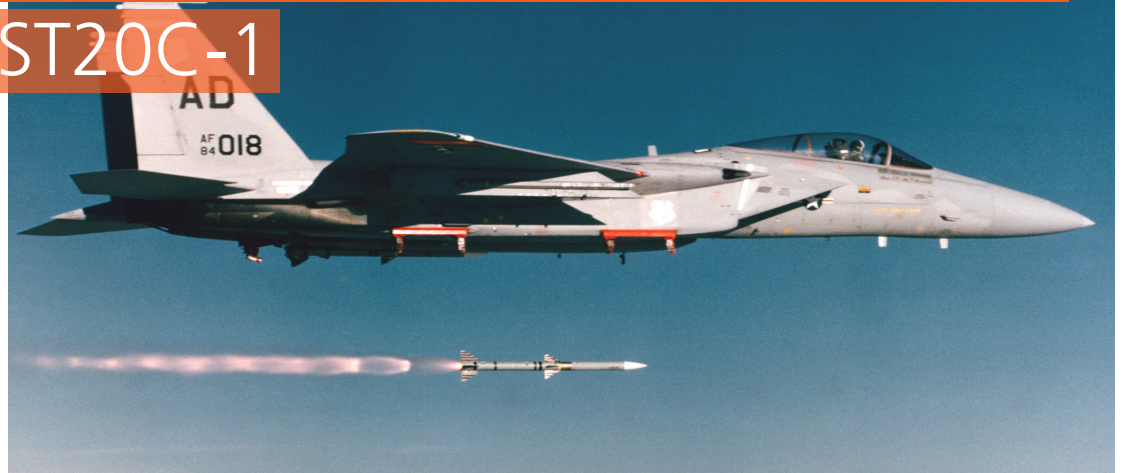


ULTRAMINIATURE C-BAND RADAR TRANSPONDER

MODEL HSST20C-1



SUPPLYING HIGH PERFORMANCE, INNOVATIVE AND SOPHISTICATED RF, MICROWAVE, MILLIMETER WAVE COMPONENTS AND INTEGRATED ASSEMBLIES WORLDWIDE.

DESCRIPTION

The HSST20C-1 Radar Transponder is a 20 Watt, ultraminiature, precision augmentation device used to enhance the capability of C-band radars.

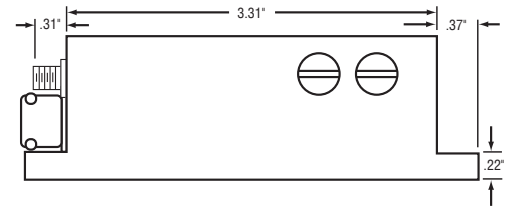
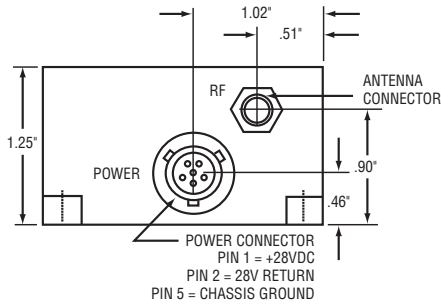
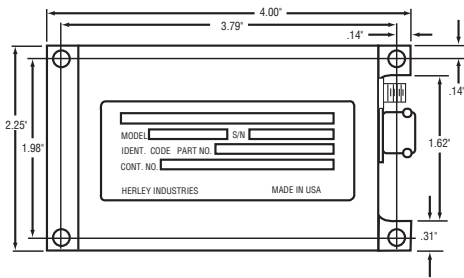
This unit is extremely compact, and desirable for those applications where size, weight, and DC input power are at a premium. It is particularly suitable for small missiles, small targets, and compact UAVs where space and weight need to be minimized without sacrificing performance.

The design of the HSST20C-1 utilizes the latest in modern devices and circuitry. It is all solid-state to provide a reliable product with extremely long operating life.

FEATURES

- 20 Watt minimum peak power output
- All solid-state design – low DC power
- Sensitive detector receiver
- Small, less than 10 cubic inches (155 cubic cms)
- Lightweight, less than 12 ounces (340 grams)
- Available over 5.4 to 5.9 GHz
- Adjustable internal delay
- Reverse polarity power lead protection
- Single and double pulse interrogations
- Adjustable code spacing
- Built-in duplexer for single antenna operation and protection from high antenna reflections





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 32 VDC
- Input Current: 100 mA max
- Quiescent Current: 75 mA max

PHYSICAL

- Size: 1.25 x 2.25 x 4.00 inches (3.2 x 5.7 x 10.16 cms)
- Volume: 9.3 cubic inches (153 cubic cms) nominal displacement
- Weight: 12 ounces (340 gms)
- Antenna Connector: SMA Female
- Power Connector: See options under [Product Numbers](#)

RECEIVER

- Frequency: 5.4 to 5.9 GHz, factory set
- Sensitivity: -40 dBm minimum, 99% reply
- Bandwidth (3dB): 15 ±5 MHz
- Pulse Decoder: Single or double pulse, factory set
- Pulse Width: 0.25 to 1.0 µsecs
- Pulse Coding: 3.0 to 12.0 µsecs, factory set
- Second Pulse Spacing: Accepts ±0.5 µsecs. Rejects ±0.8 µsecs

TRANSMITTER

- Frequency: 5.4 to 5.9 GHz, factory set
- Power Output: 20 Watts minimum
- Output Device: Solid-state
- Frequency Stability: ±5 MHz
- Pulse Width: 0.5 ±0.1 µsec., factory set
- PRF: Up to 2600 pps
- Reply Delay: 1.0 µsec to 6.0 µsec, factory set

ENVIRONMENTAL

- Temperature, Operating: -40°C to +71°C
- Temperature, Storage: -60°C to +95°C
- Altitude: Unlimited
- Humidity: 95%
- V ibration, 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

- *P/N 550008-5* - Standard unit with circular connector - MS27478Y-08D35P (picture shown on page 1)
- *P/N 550008-6* - Extended temperature range unit with EMI gasketed MDM power connector



making a difference

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