FLIGHT TERMINATION RECEIVER/DECODER

MODEL HFTR120-1

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

DESCRIPTION

The HFTR120-1 Flight Termination Receiver/Decoder is a three (3) channel unit designed for missile and target applications. This unit is compact, and desirable for usage where size and weight are important considerations. The HFTR120-1 is a single-conversion receiver, with phase-locked loop tone decoders and advanced phase lock loop local oscillator. It is designed to the requirements of both RCC313-94 and 319-92 documents.

The design of the HFTR120-1 employs the latest in devices, circuitry, and modern production processes to provide a reliable product with extremely long operating life. This unit is intended for programs and applications with stringent environmental, EMI, and reliability requirements.

FEATURES

- Covers full 406 to 450 MHz band
- 3 Decoder Channels
- All solid-state design
- Over 2 Amp, output current capability through command relay output
- High sensitivity receiver
- Small, less than 6.8 cubic inches (17.3 cubic cms)

FEATURES

- Lightweight, less than 7 ounces (200 grms)
- No RF/IF tuning elements
- Standard range safety logic
- Reverse polarity power lead protection
- Power and output lead ground isolation
- -40°C to +85°C operation standard

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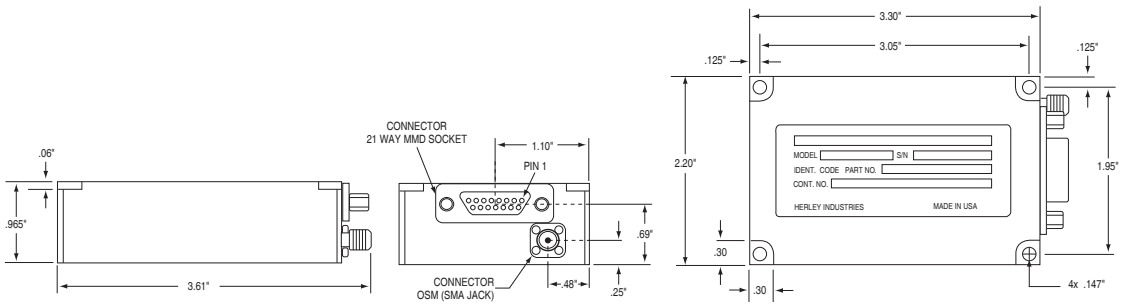

PIN	FUNCTION	PIN	FUNCTION
1	26.5V DC. P	12	0V DC RTN
2	CHAS. GND	13	N/C
3	N/C	14	FIRE BU1 RTN
4	FIRE BU1 SIG	15	CHAS. GND
5	FIRE BU2 SIG	16	FIRE BU2 RTN
6	N/C	17	N/C
7	CHAS. GND	18	ARM MON
8	SIG STR MON	19	SIG STR MON RTN
9	TONE A	20	FIRE MON
10	TONE C	21	0V TONE RTN
11	TONE B		

ELECTRICAL

- Frequency Range: 406 to 450 MHz
- Impedance: 50 ohms nominal
- VSWR: Less than 2:1
- Reverse Polarity Protection: Built-in
- Voltage Transient Protection: Internal power supply stabilizes transients to the normal operating voltages
- Input Voltage: +22 to +36 VDC
- Quiescent Current: 130 mA typical, 200 mA maximum
- Input Current (Commanded): 150 mA
- Output Current: 2 Amps per output
- Output Leakage Current: 50 microAmps maximum
- Failsafe: Loss of tone, carrier, and low voltage standard

PHYSICAL

- Size: 3.3 x 2.2 x 0.965 inches (8.4 x 5.9 x 2.5 cms), less connectors
- Volume: 6.8 cubic inches (17.3 cubic cms)
- Weight: 7 ounces (200 grms) maximum
- Antenna Connector: RF input (J1) SMA
- Power, Output, Monitor Connector: 21 way MMD socket

ENVIRONMENTAL

- Vibration Sine: 15 g's peak
- Vibration Random: 0.2 g^2/Hz (20 g's rms)
- Temperature, Operating: -40°C to +85°C
- Temperature, Storage: -62°C to +95°C
- Shock: 100 g's, 11 msecs, half-sine
- Altitude: Unlimited
- Humidity: 95%
- Acceleration: 100 g's
- RFI/EMI: Meets MIL-STD-461B for antenna, power and signal leads for category A1a receivers. Tests, CE03, RE02, RS03, CS02, CS03, CS04 and CS05

RECEIVER

- Design: Single conversion super-heterodyne
- Sensitivity: 1 µV (-107 dBm)
- Frequency Band: 406 to 450 MHz
- Frequency Tuning: Synthesized local oscillator settable in .2 MHz steps
- Frequency Stability: 0.0025%
- Tuning Accuracy: 0.005%
- Dynamic Range: -107 dBm to +13 dBm
- Operating Bandwidth: ±45 kHz minimum
- IF Bandwidth: 3 dB @ ±90 kHz minimum
- Selectivity: 60 dB @ ±180 kHz maximum
- Image Rejection: Greater than 60 dB
- Response Time: 15 msec. nominal, 25 msec maximum
- Capture Ratio: Less than 0.8
- AM Rejection: 100%
- Frequency Deviation: ±30 kHz per tone, nominal
- Telemetry Outputs: Signal strength, Channel 1, Channel 2, Channel 3, ARM - MON 2.25V into 10Kohm load; FIRE - MON (Safe) 5.7V into 10Kohm load
- Command Output: 1 relay output: Safe Mode = closed, Fire Mode = open

DECODER

- Number of Channels: 3
- Simultaneous Usable Tones: 3
- Tone Channel Bandwidth: ±1% minimum at 2 dB
- Adjacent Channel Rejection: Greater than 40 dB
- Decoder Threshold Deviation: ±11 kHz, nominal

OPTIONS

- Select loss of tone time out in seconds when ordered
- Functional temperature to 95°C

PRODUCT NUMBERS

- *P/N 570004-XXX* - Reorders Only
- *P/N 570009-XXX* - New Orders

Ultra ELECTRONICS

making a difference

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