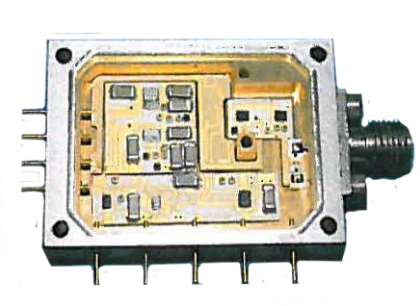
MODEL O-DET-2116 – MW RF BIT MODULE

TECHNICAL FEATURE

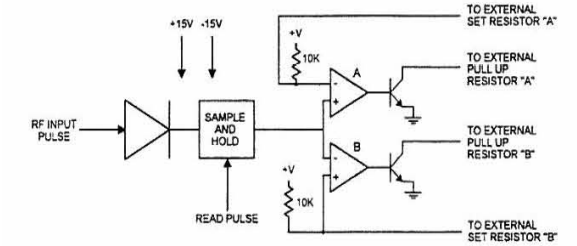
FEATURES

- Adjustable Thresholds
- Dual Output (minimum and maximum)
- High-reliability Hermetic Construction



PERFORMANCE

Frequency Range .....9.4 to 10.0 GHz
Pulse Rise Time .....10 ns max
Input Pulse INidth ..... 8.5 to 120 us
Maximum Input Power ..... >+10 dBm
Input Duty Cycle .....0.1 to 3.5%
Trip Setting Range .....-10 to-15 dBm min.
Linear Range ..... -15 to +6 dBm
Flatness (-15 to +6 dBm) ..... +/-0.75 dB max
Sample and Hold Control .....TTL High
Recovery Time .....1 us typ
Input VSWR ..... 2.5:1 max
Input Power ..... +/-15 VDC
RF Input .....SMA Female
DC, Output, and Settings ..... DC solder pins
Operating Temperature Range .....-40 to +95°C
Screened to meet high reliability military requirements



FUNCTIONAL SCHEMATIC

DESCRIPTION

The O-DET-2116 RF BIT Module provides several integrated functions for detection and measurement of RF levels. The unit consists of an internal temperature compensated RF detector. This rectifies the RF signal and produces a dc level from the input signal. The diode output feeds a sample and hold circuit, which allows the unit to capture and hold a narrow RF pulse, consistent with a radar signal. The sampled output feeds two threshold detectors, which can be set for minimum and maximum levels.

Applications of this detector include level detection and VSWR protection for amplifiers and other sensitive circuits. Combining two of these units with a dual directional coupler can be used as a VSWR threshold trigger so that an amplifier is not damaged by excess reverse power. Alternate configurations can be built to specific requirements.

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