

# ACTP-1504

## Coaxial Tunnel Diode Detector

### Features:

- Contains hermetically sealed modules, internal RF matching, DC return, and RF bypass capacitor.
- The video port is protected from static or transient charges.
- Input impedance matching.
- Models may be chosen for broadband RF performance or for optimized narrow bands



### Specifications:

| Parameter                    | Specification | Units |
|------------------------------|---------------|-------|
| Frequency Range (min)        | 8 – 12        | GHz   |
| Sensitivity (min)            | 700           | mV/mW |
| Flatness vs. Frequency (max) | 0.4           | ±dB   |
| Typical TSS                  | -50           | dBm   |
| Typical VSWR                 | 2.4:1         | Ratio |
| Nominal Video Capacitance    | 9             | pF    |

### Notes:

Maximum input power: +14 dBm (3 dB guardband for +17 dBm possible burnout)

Sensitivity is measured into an open circuit load (>10k ohm).

VSWR is measured at or below -20 dBm input power level.

Video capacitance is used for RF bypass. This value can be changed if required for video response time. Contact the factory for more information.

### Environmental Specifications:

Designed to meet:

MIL-E-5400, MIL-STD-202, MIL-E-16400

Operating Temp: -55°C to +125°C

Storage Temp: -65°C to +150°C

Humidity: MIL-STD-202F, M103, Cond B

Shock: MIL-STD-202F, M213, Cond B

Altitude: MIL-STD-202F, M105, Cond B

Vibration: MIL-STD-202F, M204, Cond B

Thermal Shock: MIL-STD-202F, M107, Cond A

Temperature Cycle: MIL-STD-202F, M105C, Cond D

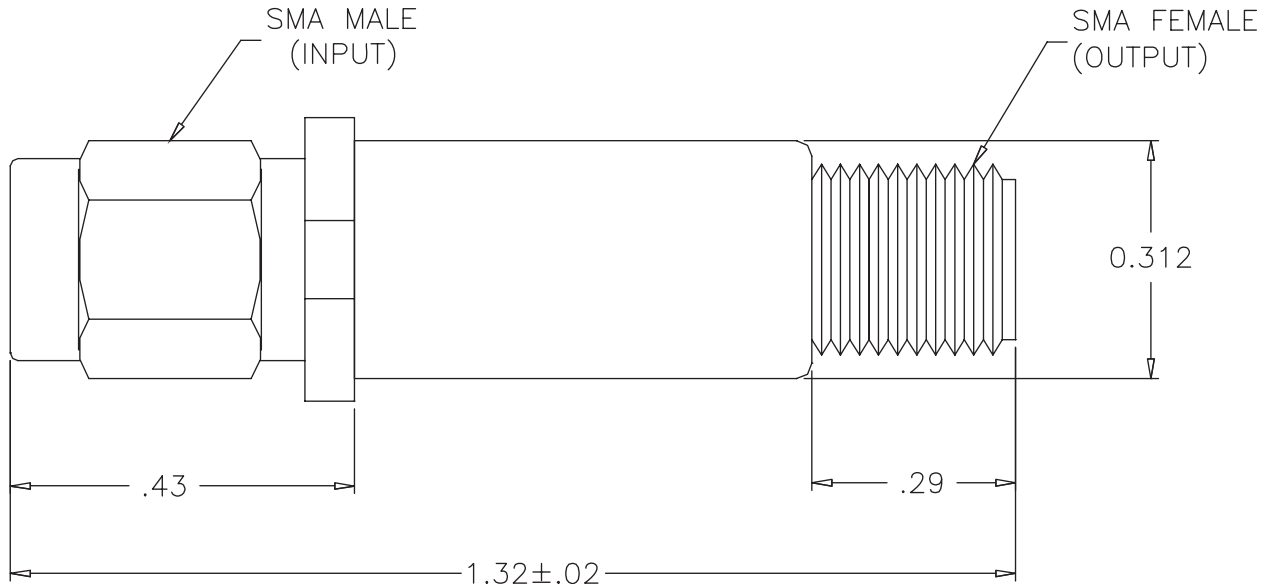
### SCREENING:

Internal Visual per MIL-STD-883, Method 2017  
Temperature Cycle: -65°C to +100°C, 10 cycles

### OPTIONAL HIGH-REL SCREENING (Ref MIL-PRF-38534):

Stabilization Bake per MIL-STD-883, Method 1008  
Temperature Cycle per MIL-STD-883, Method 1010  
Constant Acceleration per MIL-STD-883, Method 2001  
Burn-in per MIL-STD-883, Method 1015  
Leak Test per MIL-STD-883, Method 1014  
External Visual per MIL-STD-883, Method 2009

**Outline Drawing:**



STANDARD CASE STYLE C3  
(Optional Case Styles – C8, C15, C32)

**Part Number Ordering Information:**

- Add desired polarity suffix: "N" for Negative, "P" for Positive (Ex: ACTP-1504N)
- Add desired case style suffix: "C3" (Ex: ACTP-1504NC3)
- Add "R" suffix: Reverse Connector Configuration (Ex: ACTP-1504NC3R) (SMA Female Input/SMA Male Output)
- Add "-RC" suffix: RoHS-compliant (Ex: ACTP-1504NZC3-RC)

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ISO 9001:2008 certified



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