

# ACTM-1013

## Tunnel Diode Detector Modules

### 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)	1 – 2	GHz
Sensitivity (min)	850	mV/mW
Flatness vs. Frequency (max)	0.2	±dB
Typical TSS	-51	dBm
Typical VSWR	1.9:1	Ratio
Nominal Video Capacitance	20	pF

### Notes:

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

Sensitivity is measured into an open circuit load ( $>10k\ \Omega$ ).

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

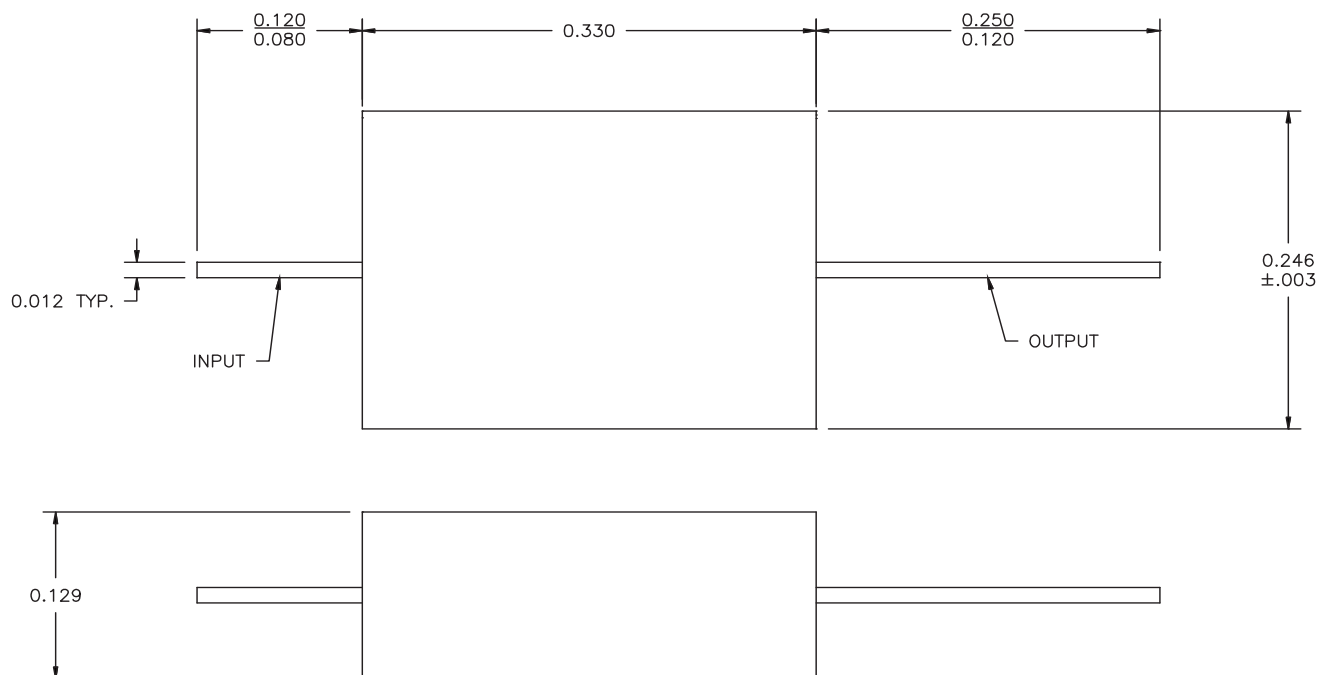
Leak Test per MIL-STD-883, Method 1014

External Visual per MIL-STD-883, Method 2009



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## Outline Drawing:



STANDARD CASE STYLE M12

## Part Number Ordering Information:

- Add desired polarity suffix: "N" for Negative, "P" for Positive (Ex: ACTM-1013N)
- Add desired case style suffix: "M22" (Ex: ACTM-1013NM12)
- Add "-RC" suffix: RoHS-compliant (Ex: ACTM-1013NM12-RC)

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