

# ACTM-1078

## 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)	0.005 – 0.5	GHz
Sensitivity (min)	800	mV/mW
Flatness vs. Frequency (max)	0.2	±dB
Typical TSS	-50	dBm
Typical VSWR	2.2:1	Ratio
Nominal Video Capacitance	1000	pF

### Notes:

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

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

VSWR is measured at or below -20dBm 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:

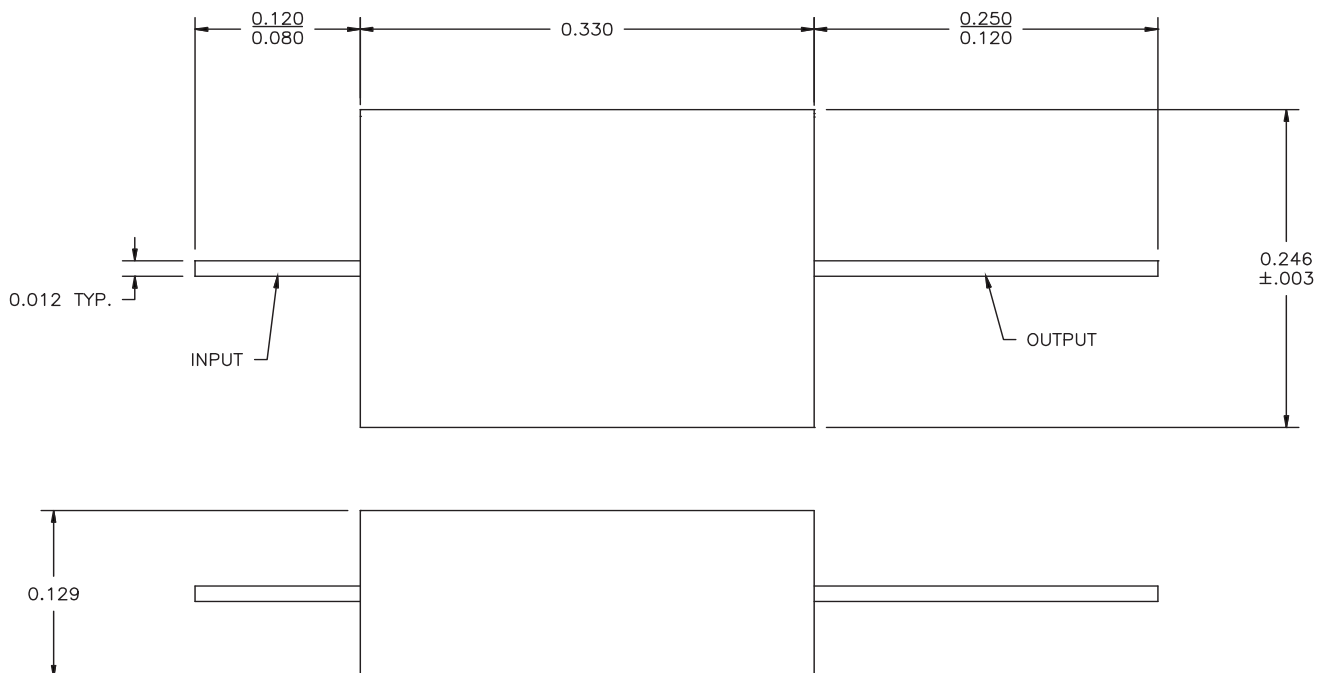
Internal Visual per MIL-STD-883, Method 2017  
 Temperature Cycle: -65°C to +100°C, 10 cycles

### 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



40 Industrial Way East, Eatontown, NJ 07724 [USA]  
 Phone: (732) 460-0212, Fax: (732) 460-0214  
[www.aeroflex.com/acc](http://www.aeroflex.com/acc), email: [acc-sales@eroflex.com](mailto:acc-sales@eroflex.com)



STANDARD CASE STYLE M12

### Part Number Ordering Information:

- Add desired polarity suffix: "N" for Negative, "P" for Positive (Ex: ACTM-1078N)
- Add desired case style suffix: "M22" (Ex: ACTM-1078NM12)
- Add "-RC" suffix: RoHS-compliant (Ex: ACTM-1078NM12-RC)

**Aeroflex Control Components**  
Aeroflex Microelectronic Solutions  
40 Industrial Way East  
Eatontown, NJ 07724 [USA]  
Fax: (732) 460-0214

Sales  
Phone: (732) 460-0212  
ACC-sales@aeroflex.com

[www.aeroflex.com/Microwave](http://www.aeroflex.com/Microwave) [www.aeroflex.com/ACC](http://www.aeroflex.com/ACC)

Aeroflex Control Components reserves the right to make changes to any products and services herein at any time without notice. Consult Aeroflex or an authorized sales representative to verify that the information in this data sheet is current before using this product. Aeroflex does not assume any responsibility or liability arising out of the application or use of any product or service described herein, except as expressly agreed to in writing by Aeroflex; nor does the purchase, lease, or use of a product or service from Aeroflex convey a license under any patent rights, copyrights, trademark rights, or any other of the intellectual rights of Aeroflex or of third parties.

Copyright 2011 Aeroflex Control Components. All rights reserved.

ISO 9001:2008 certified



Our passion for performance is defined by three attributes represented by these three icons: solution-minded, performance-driven and customer-focused.