

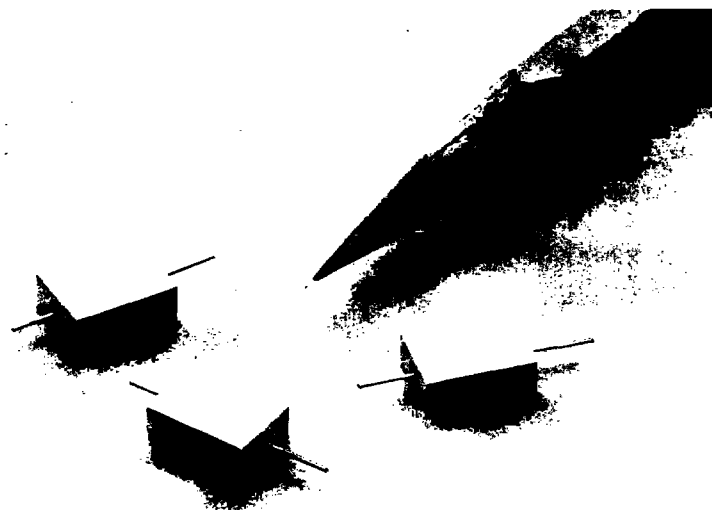
Tunnel Diode Detector Modules

Wide Frequency Coverage in Microstrip or Stripline Circuits

Tunnel diode detector modules from Advanced Control Components are available to meet both narrowband and broadband requirements from 0.5 to 18 GHz. All feature low video resistance and exceptional temperature stability. All are packaged in a hermetically sealed microstrip module for small size, ease of installation, and superior electrical characteristics. And all are full function circuits, including dc returns and rf bypass capacitors.

Applications include: Broadband or narrowband ECM receivers, missile guidance systems, power and signal monitors, input to low-noise video amplifiers, Doppler radar and beacon receivers. Matched units are available for multichannel receivers, amplitude comparator systems and discriminators.

- **Wide Frequency Range**
- **No Bias Required**
- **Low Video Resistance**
- **Exceptional Temperature Stability**
- **Compact Hermetic Package**

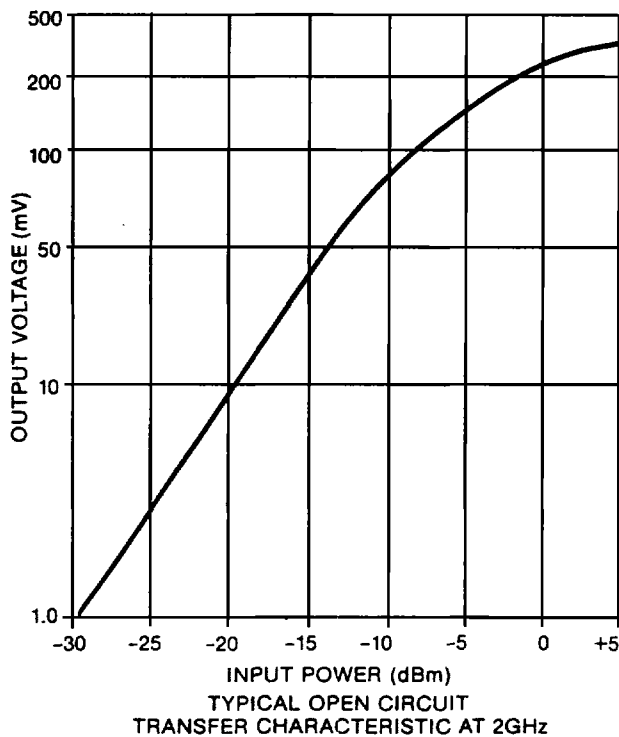
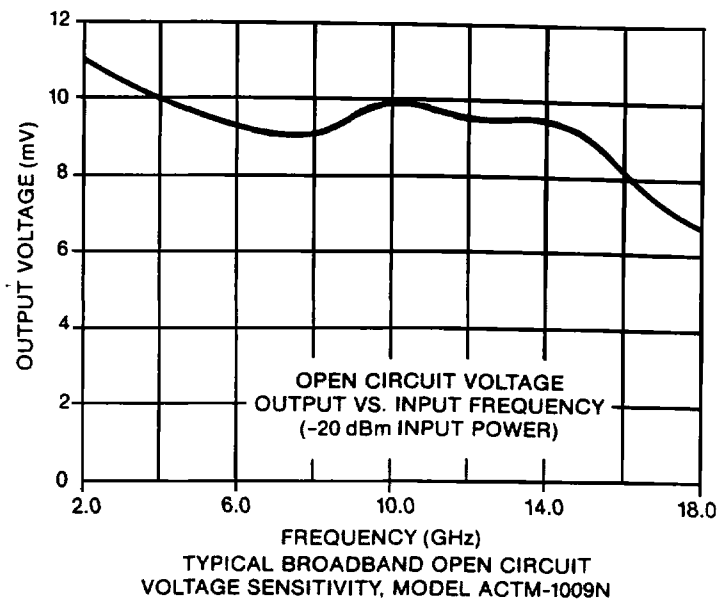
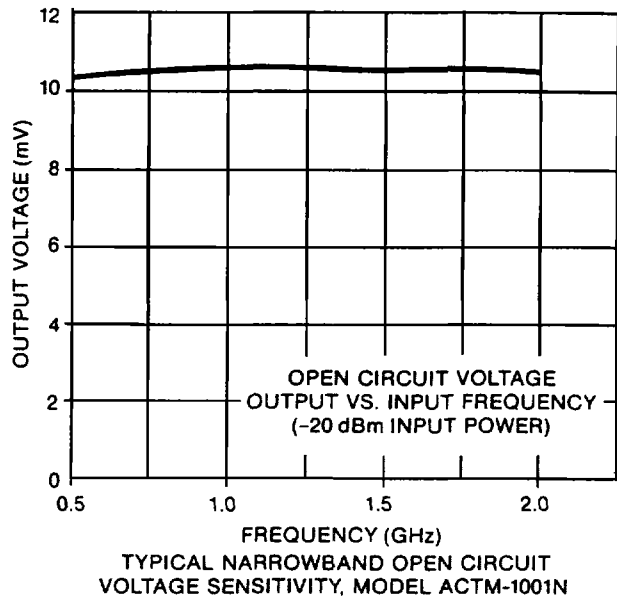


ACCISO28

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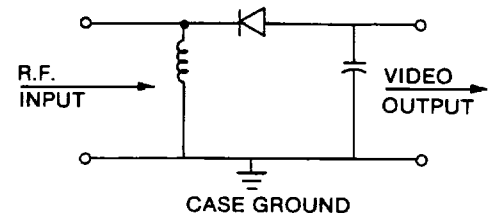
PERFORMANCE DATA



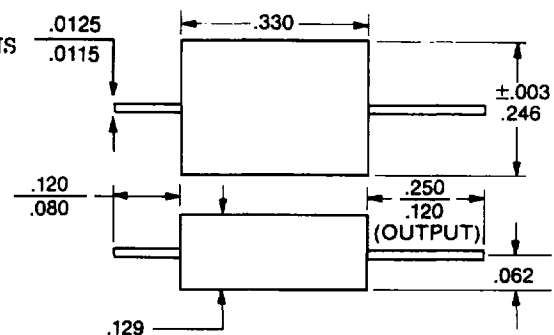
ENVIRONMENTAL CAPABILITIES

Temperature -65° to +100°C
(operating and storage)
Shock 50 g, 11 μ s
Vibration 20 g, 10 to 2000 Hz

SCHEMATIC CIRCUIT DIAGRAM



PACKAGE DIMENSIONS



SPECIFICATIONS

Model (1)	Frequency Range (GHz)	Min. Sensitivity K-Factor(2), (mV/mW)	Nom. Video Capacitance(3) (pF)	Max. VSWR(4)	Typ. Flatness ($\pm$ dB)	Typ. TSS (5) (dB)	Typ. Output Variation vs. Temp (-65 to +100°C) ($\pm$ dB)
ACTM-1001N	0.5-2.0	1000	75	2.2	0.3	-51	0.15
ACTM-1002N	2.0-4.0	900	45	2.2	0.3	-51	0.15
ACTM-1006N	2.0-6.0	800	45	2.5	0.5	-50	0.15
ACTM-1003N	4.0-8.0	800	20	2.5	0.4	-50	0.2
ACTM-1012N	8.0-12.0	750	20	2.5	0.5	-50	0.2
ACTM-1018N	12.0-18.0	700	20	2.6	0.7	-50	0.3
ACTM-1009N	2.0-18.0	700	20	2.8	1.5	-50	0.3

Notes:

- Suffix N denotes standard negative output. Substitute suffix P if positive output is desired.
- Open circuit sensitivity, measured in square law range with minimum video resistance of 10 k Ω .
- Other values available.
- Measured with a video resistance of 100 Ω .
- Standard conditions of 2 MHz video bandwidth, 3 dB N.F.

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