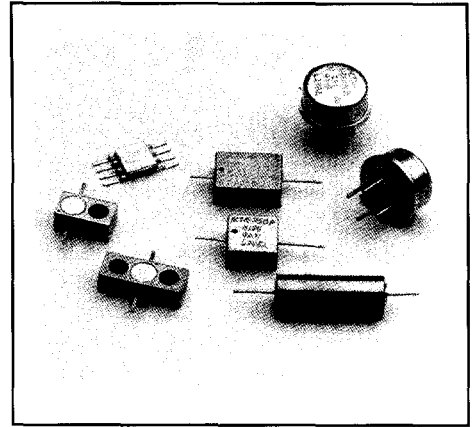


SCHOTTKY DIODE MODULE DETECTORS

High sensitivity and superior electrical and environmental reliability characterize these module detectors. They are hermetically sealed and contain internal RF matching, DC return, and RF bypass capacitor. In addition, the video port can be protected from static or transient voltages. This feature prevents damage due to handling (usually static) or system video transients. Models may be chosen for broadband RF performance or for optimized narrow bands. They may be used in microstrip or stripline applications for power monitor, Broadband ECM receivers, radar equipment, beacon or multichannel receivers, etc.



Each detector model contains:

1. Input Impedance Matching.
2. DC Return
3. RF Bypass Capacitor
4. Detector Diode
5. Video Protection Diode.

FEATURES

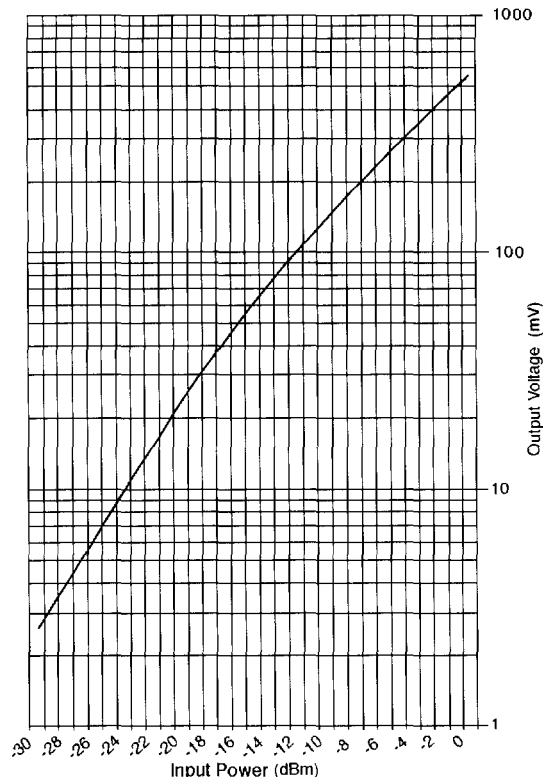
- High Sensitivity
- Static Protection
- Wide Dynamic Range
- Compact Size

APPLICATIONS

- Broadband or Narrowband ECM Receivers
- Missile Guidance Systems
- Power and Signal Monitors
- Input to Low Noise Video Amplifiers
- Doppler Radar and Beacon Receivers.

In addition, matched units may be used in Multichannel Receivers, Amplitude Comparator Systems and Discriminators.

SCHOTTKY DIODE MODULE DETECTOR PERFORMANCE



ACSM-2002NM12 TRANSFER CHARACTERISTIC

SCHOTTKY DIODE MODULE DETECTOR ELECTRICAL SPECIFICATIONS

Model Number	Frequency Range (GHz)	Minimum Sensitivity K (mV/mW)	Typical TSS (dBm)	Flatness (\pm dB)	Typical Output Capacitance (pF)	Standard Case Style	Optional Case Styles
ACSM-2035NM12	0.1-1	2000	-52	0.25	270	M12	M47, TO-8, TO-5
ACSM-2001NM12	0.5-2	2000	-53	0.4	40-80	M12	M47, TO-8, TO-5
ACSM-2066NM12	1-2	2000	-53	0.2	20	M12	M47, TO-8, TO-5, M51, M50
ACSM-2108NM12	0.5-4	2000	-53	0.4	20	M12	M50, M51, M43
ACSM-2038NM12	1-4	2000	-53	0.4	20	M12	M42, M50, M51
ACSM-2002NM12	2-4	2000	-53	0.4	20	M12	M42, M50, M51
ACSM-2075NM12	1-8	2000	-53	0.5	20	M12	M42
ACSM-2014NM12	2-8	2000	-53	0.5	20	M12	M42
ACSM-2003NM12	4-8	2000	-53	0.4	20	M12	M42, M50, M51
ACSM-2007NM12	2-12	2000	-52	0.9	20	M12	
ACSM-2004NM12	8-12	2000	-52	0.5	12	M12	M42
ACSM-2047NM12	1-18	1800	-52	1.0	20	M12	
ACSM-2006NM12	2-18	1800	-52	1.0	12	M12	
ACSM-2015NM12	8-18	1800	-52	0.7	12	M12	
ACSM-2005NM12	12-18	2000	-52	0.6	12	M12	

NOTES:

- Output capacitance may be chosen. Consult factory if a special value is needed.
- TSS is measured using a 2MHz video bandwidth and an amplifier with a 2dB noise figure (NF).
- Model number modification applies to:
 - Output polarity (N= negative, P = positive)
 - Special output RF bypass capacitor value
 - Case style option
 - Zero bias option

Example: ACSM-2006NM129
 N (polarity) M12 (outline) 9 (9.1 pF capacitor)

- Zero bias schottky versions are available for most of the listed biased schottky models, with only minor differences in specifications. The important differences are:
 - The zero bias schottky has an impedance of several thousand Ohms. (Low level power input.)
 - A less sensitive TSS due to the high diode impedance (typical a 3dB reduction).
 - The temperature performance of the zero bias schottky is poor when operating at low input power levels. This difference becomes small at high level (about 0dBm input power).
 The part number of a zero bias version includes a "Z" following the polarity.
 Example: ACSM-2006NZM129
- Video protection is available on most models. This feature helps to prevent damage to the detector diode from incidents occurring at the video port. Transient electromagnetic spikes, static contact, or voltage surges can easily damage a detector diode. A video protection diode will clamp the voltage at a value less than the detector breakdown voltage.
 Note: Inclusion of this protection will cause this output voltage to compress and clamp. This occurs at about +10dBm input to the detector. If operation above +10dBm is required then the output protection should be modified or excluded. Contact the factory for assistance. Adding a suffix "X" at the end of this model number will exclude the video protection feature.
- Bias is required for the sensitivity levels shown. The typical value is 100 microamps. If the detector output is negative the bias is supplied from a positive voltage source through a resistor to the video output port. The return is through the grounded case.