

Schottky Zero Bias Detector, 10 MHz to 18.5 GHz, SMA, Negative Video Out, +20 dBm max Pin

The SMD0118 is a zero bias Schottky detector that displays an extremely flat frequency response over a broad frequency range from 10 MHz to 18.5 GHz. The model features negative video output polarity and operates over a wide dynamic range of -30 dBm to +20 dBm input power. No external DC bias source is required. Performance includes 50 ohm matched inputs for excellent VSWR of 1.6:1 typical, high voltage sensitivity for very small signal detection of 400 mV/mW typical, and can withstand maximum input power levels up to +20 dBm CW. Operating temperature range is -54°C to +100°C. The compact and rugged cylindrical package supports an SMA Male input connector and SMA Female output connector and is ideal for use with precision test and measurement, instrumentation, and subsystem assemblies.

Electrical Specifications

Description	Min	Typ	Max	Unit
Frequency Range	10		18.5	GHz
VSWR		1.6:1	1.7:1	
Voltage Sensitivity		400		mV/mW
Flatness		±0.5	±0.6	dB
Input Power			+20	dBm
Video Capacitance		470		pF
Dynamic Range	-30		+20	dBm
Operating Temperature Range	-54		+100	deg C



Features:

- Zero Bias Schottky Diode Detector
- 10 MHz to 18.5 GHz Frequency Range
- Extremely Flat Frequency Response
- Maximum Input Power +20 dBm, Peak Input Power +27 dBm
- Negative Video Output Polarity

Applications:

- Electronic Warfare
- Test & Measurement
- System Monitoring
- AM Noise Measurements
- Military & Space
- Radar
- Pulsed RF Measurements in Ultra Broadband Applications
- Leveling Pulse Signal Sources
- Military Communications Systems

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Mechanical Specifications

Size

Length	1.21 in [30.73 mm]
Width	2.95 in [74.93 mm]
Height	0.4 in [10.16 mm]
Weight	0.0245 lbs [11.11 g]
Connector 1	SMA Male
Connector 2	SMA Female

Environmental Specifications

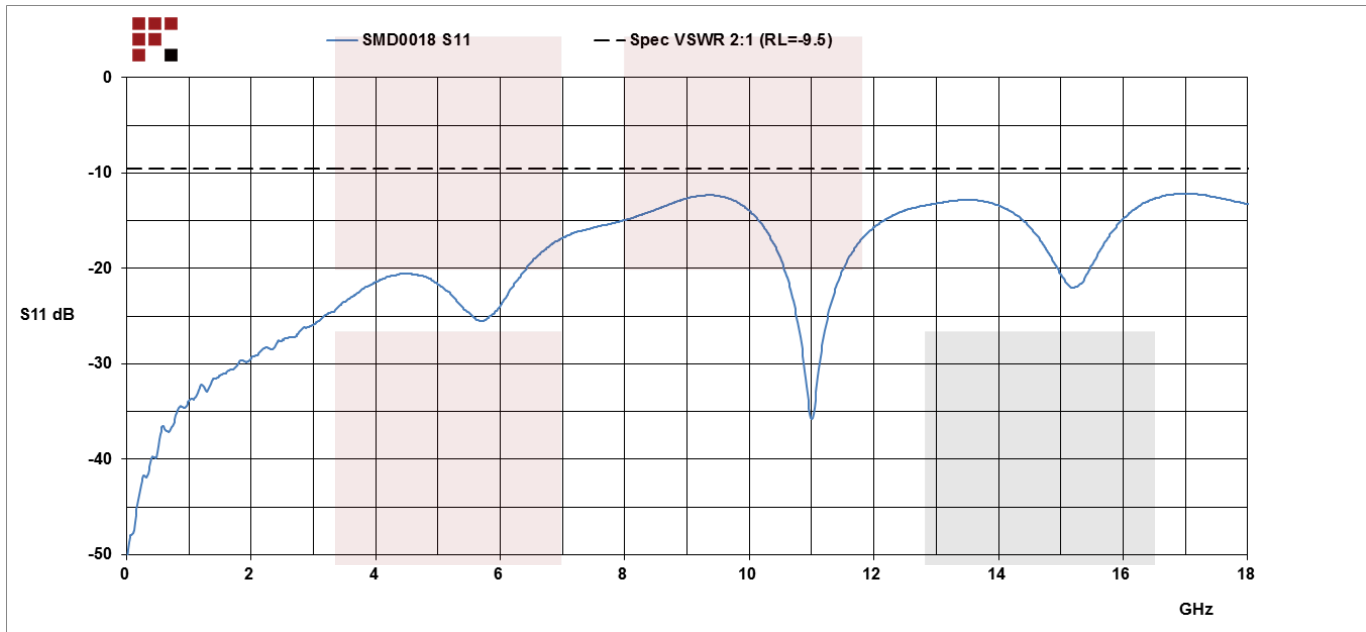
Temperature

Operating Range	-54 to +100 deg C
Storage Range	-65 to +100 deg C

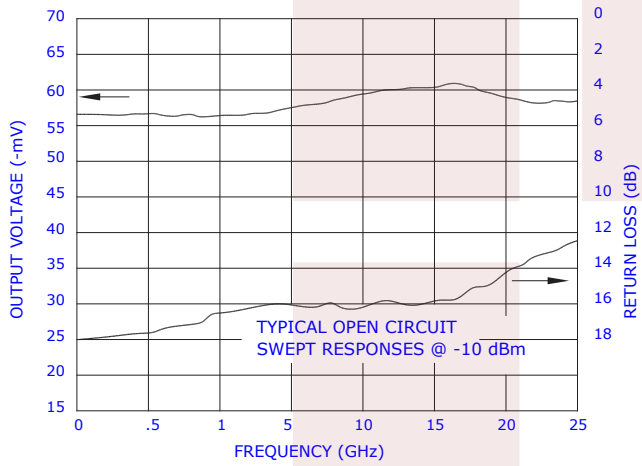
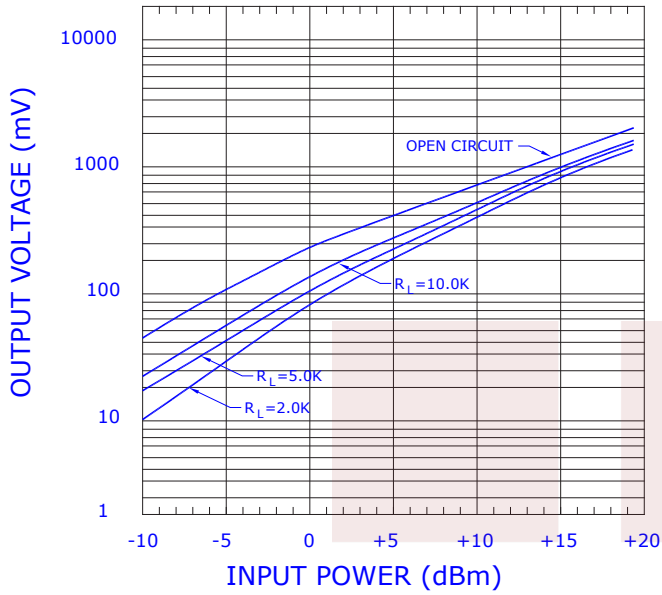
Compliance Certifications (see [product page](#) for current document)

Plotted and Other Data

Notes:



Transfer Curve

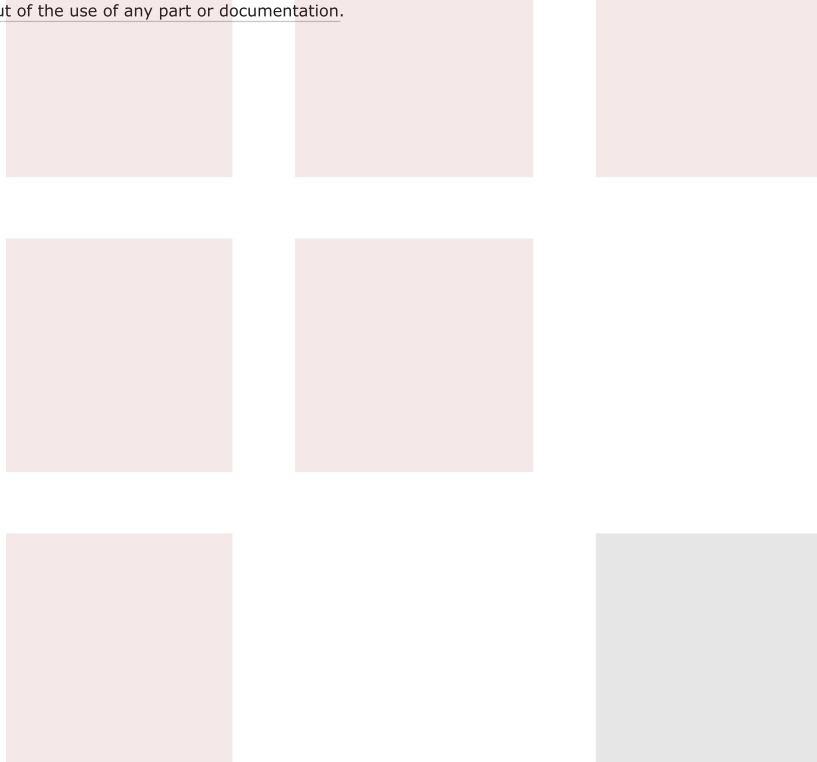


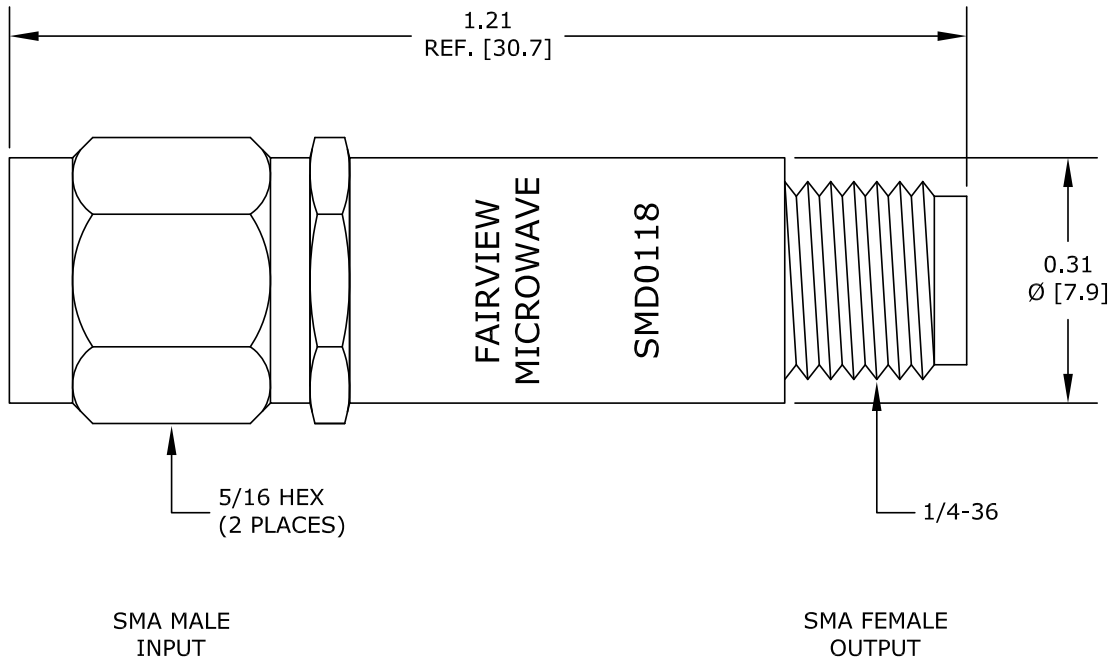
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For additional information on this product, please click the following link: [Schottky Zero Bias Detector, 10 MHz to 18.5 GHz, SMA, Negative Video Out, +20 dBm max Pin SMD0118](#)

URL: <https://www.fairviewmicrowave.com/zero-biased-detector-sma-male-negative-100-mhz-18-ghz-smd0118-p.aspx>

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STANDARD TOLERANCES

.X ±0.2
.XX ±0.1
.XXX ±0.05

*STANDARD TOLERANCES APPLY
ONLY TO DIMENSIONS IN INCHES

FAIRVIEW MICROWAVE INC. ALLEN, TX 75013 WWW.FAIRVIEWMICROWAVE.COM		NOTES: 1. UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE NOMINAL. 2. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE AT ANY TIME. 3. DIMENSIONS ARE IN INCHES [mm].			
TITLE	DWG NO	SMD0118		CAGE CODE	3FKR5
	CAD FILE	091616	SHEET	SCALE	N/A
				SIZE	A
					2233