2.92mm Schottky Diode Zero Bias Detector, 500 MHz to 18 GHz, +20 dBm Max Pin, Positive Video Out, MIL-STD-202, Radial

FMMT6030

Features

- Zero bias Schottky diode detector
- Broadband frequency range: 0.5 GHz to 18.0 GHz
- Positive video output polarity
- Sensitivity: 500 ± 50 mV/mW typical
- Frequency flatness: ±3.5 dB max
- Low VSWR: 2.0:1
- Maximum input power: +20 dBm
- 2.92mm male RF input and 2.92mm female video output connectors
- Operating temperature range: -54 °C to +100 °C
- Environmentally tested to MIL-STD-202 (humidity, shock, vibration, altitude, temperature cycle)

Applications

- RF power and level monitoring
- Broadband test and measurement equipment/Transmitter monitoring and leveling
- Radar and surveillance systems
- Electronic warfare (EW) and ECM receivers
- detector front-ends for receiver chains
- General-purpose RF measurement applications
- Military and aerospace systems

Description

This coaxial packaged Zero Bias Schottky Diode Detector operates over a broadband frequency range of 0.5 GHz to 18.0 GHz and is designed for accurate RF signal detection in CW and broadband measurement applications. The zero-bias Schottky design provides reliable detection without the need for external biasing, making it ideal for compact and simplified system designs. The detector delivers a stable positive polarity video output with a typical sensitivity of 500 ± 50 mV/mW, dependent on input power and frequency. With good frequency flatness and low VSWR, this detector supports consistent performance across a wide frequency band. The rugged 2.92mm-connectorized package is environmentally qualified to MIL-STD-202, ensuring dependable operation in harsh military, aerospace, and laboratory environments. Maximum input power handling is +20 dBm.

Electrical Specifications (@ +25°C)

Description	Minimum	Typical	Maximum	Units
Frequency Range	0.5		18	GHz
VSWR		1.5:1	2:1	
Voltage Sensitivity		500		mV/mW
Flatness			±3.5	dB
Input Power			+20	dBm CW
Video Capacitance		30		pF
Operating Temperature Range	-54		+100	deg C
Output Polarity		Positive		

Electrical Specification Notes:

Mechanical Specifications

Size

Length	1.3 in	[33.02 mm]
Width	0.31 in	[7.87 mm]
Height	0.31 in	[7.87 mm]
Weight	0.03 lbs	[13.61 g]
Connector 1	2.92mm Male	

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Connector 2	2.92mm Female

Configuration

Mechanical Specification Notes:

Environmental Specifications

Temperature

Operating Temperature	-54 to +100 deg C
Storage Temperature	-65 to +125 deg C
Temperature Cycling	MIL-STD-202, Method 107D Cond. A
Humidity	MIL-STD-202, Method 103B Cond. B
Shock	MIL-STD-202, Method 213B Cond. B
Vibration	MIL-STD-202, Method 204D Cond. B
Altitude	MIL-STD-202, Method 105C Cond. B

Environmental Specification Notes:

Compliance Certifications

Plotted and Other Data

Notes:

2.92mm Schottky Diode Zero Bias Detector, 500 MHz to 18 GHz, +20 dBm Max Pin, Positive Video Out, MIL-STD-202, Radial from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Lewisville, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: 2.92mm Schottky Diode Zero Bias Detector, 500 MHz to 18 GHz, +20 dBm Max Pin, Positive Video Out, MIL-STD-202, Radial FMMT6030

URL: https://www.fairviewmicrowave.com/schottky-diode-zero-bias-detector-2.92mm-male-500-mhz-18-ghz-fmmt6030

FMMT6030 CAD Drawing

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