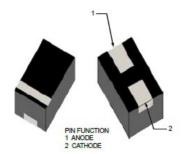
# GaAs Schottky Diode

#### Features

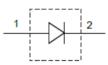
- Small Footprint, only 50 x 30 mils.
- Very Low Parasitic Package Inductance, Series Resistance, and Low Package Capacitance
- RoHS\* Compliant

#### Description

The SMGS11 is a GaAs Schottky diode in a molded plastic DFN package. It is designed for broadband detector and single diode mixer. It is in single configuration. It has a high cutoff frequency and can be used beyond 26.5 GHz.



Case 0503 - Molded Plastic DFN Package



	Parameter	Test Conditions	Units	Min.	Тур.	Max.
	Forward Voltage ( $V_F$ )	I <sub>R</sub> = 1 mA	V	620	—	760
	Total Capacitance ( $C_T$ )	V <sub>R</sub> = 0 V, 1 MHz V = 0 V, >4 GHz	pF	_	0.10 0.08	0.13 0.10
	Series Resistance (R <sub>s</sub> )	I <sub>F</sub> = 5 mA	Ω	—	_	7
	Video Resistance (R <sub>V</sub> )	I <sub>F</sub> = 40 μA	Ω		1250	_
	Tangential Signal Sensitivity (T <sub>SS</sub> )	NF -3 dB, 10 GHz	dBm	—	-57	—
	Voltage Sensitivity (y)	P <sub>IN</sub> = -30 dBm, Video BW = 500 KHz, 10 GHz	mV/mW		8000	_

## Electrical Specifications: T<sub>A</sub> = +25°C

## **Absolute Maximum Ratings**

Parameter	Absolute Maximum		
Input Power	20 dBm		
Reverse Voltage	5 V		
Forward Current	20 mA		
Junction Temperature	+175°C		
Storage Temperature	-65°C to +150°C		
Solder Temperature	+260°C, peak for 5 sec, per JEDEC J-STD-20C		

### **Handling Procedures**

Please observe the following precautions to avoid damage:

#### **Static Sensitivity**

These electronic devices are sensitive to electrostatic discharge (ESD) and can be damaged by static electricity. Proper ESD control techniques should be used when handling these (HBM) Class 0 devices.

\* Restrictions on Hazardous Substances, European Union Directive 2011/65/EU.

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Rev. V1

# SMGS11

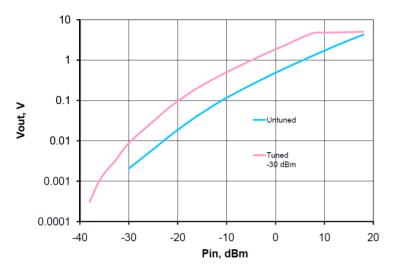


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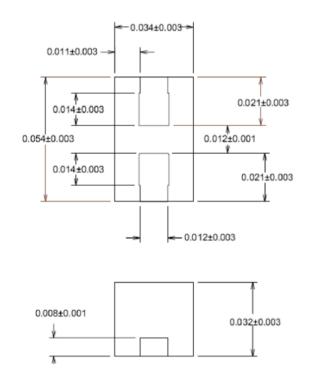
Rev. V1

## Typical Dynamic Transfer Characteristics: $R_L$ = 10 m $\Omega$ , $F_0$ = 10 GHz

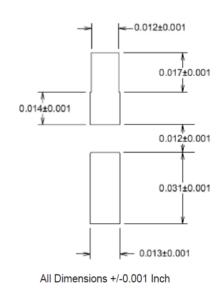
Output Voltage vs. Input Power



## Lead-Free 0503 Plastic DFN Package



**Soldering Footprint** 



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<sup>3</sup> 

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