SMGS11

GaAs Schottky Diode

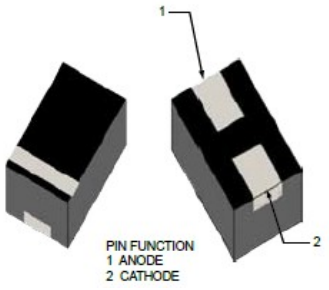
Rev. V1

Features

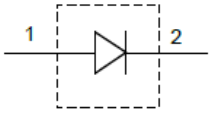
- Small Footprint, only 50 x 30 mils.
- Very Low Parasitic Package Inductance, Series Resistance, and Low Package Capacitance
- RoHS* Compliant

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



Electrical Specifications: T_A = +25°C

Parameter	Test Conditions	Units	Min.	Typ.	Max.
Forward Voltage (V_F)	I_R = 1 mA	V	620	—	760
Total Capacitance (C_T)	V_R = 0 V, 1 MHz V = 0 V, >4 GHz	pF	—	0.10 0.08	0.13 0.10
Series Resistance (R_S)	I_F = 5 mA	Ω	—	—	7
Video Resistance (R_V)	I_F = 40 µA	Ω	—	1250	—
Tangential Signal Sensitivity (T_{SS})	NF -3 dB, 10 GHz	dBm	—	-57	—
Voltage Sensitivity (y)	P_{IN} = -30 dBm, Video BW = 500 KHz, 10 GHz	mV/mW	—	8000	—

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:

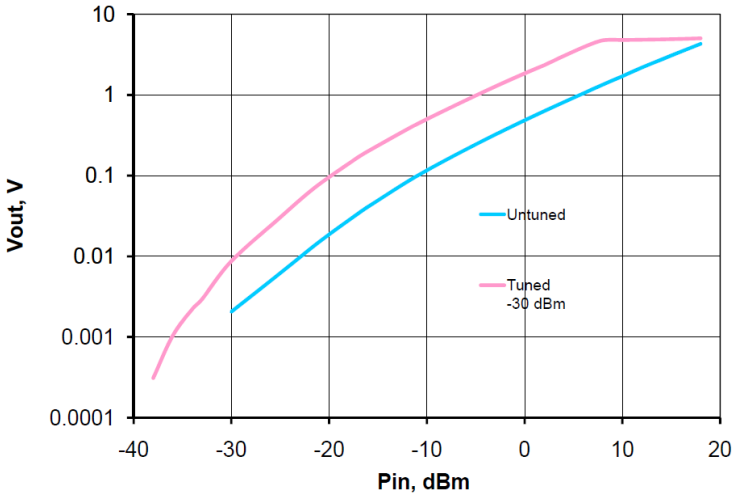
Static Sensitivity

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.

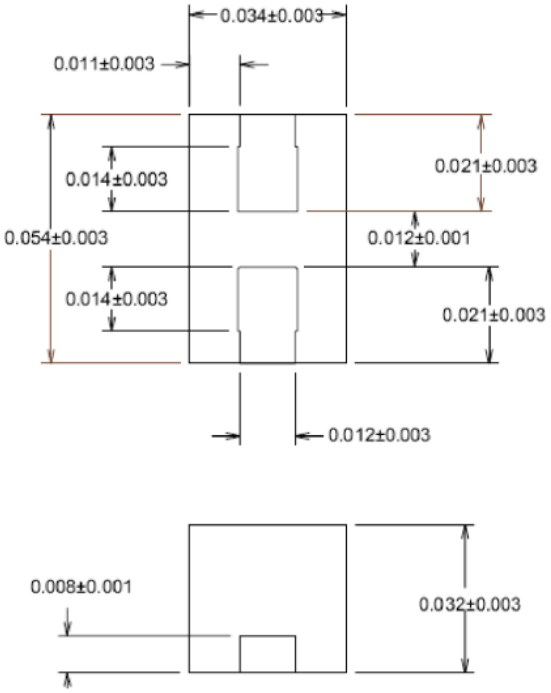
* Restrictions on Hazardous Substances, European Union Directive 2011/65/EU.

Typical Dynamic Transfer Characteristics: R_L = 10 mΩ, F_O = 10 GHz

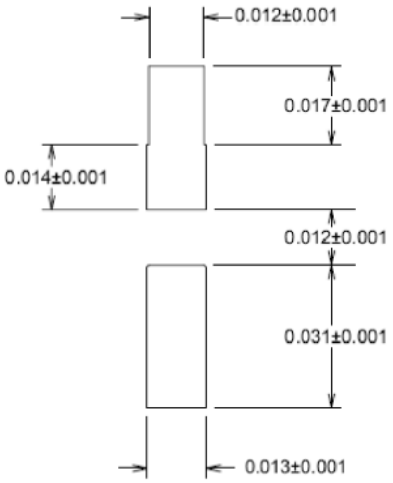
Output Voltage vs. Input Power



Lead-Free 0503 Plastic DFN Package



Soldering Footprint



All Dimensions +/-0.001 Inch