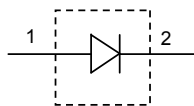
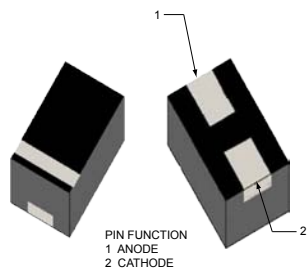


SMS202

Silicon Schottky Diodes



(0503)
Molded Plastic DFN Package

Description

The SMS202 is a silicon Schottky diode in a molded plastic DFN package. It is designed for a broadband zero bias detector. It can be used up to 18 GHz and power detection up to 10 dBm.

Features

- Small footprint, only 50 X 30 mils.
- Simplest broadband detector as no dc bias required.
- Very low barrier height, good sensitivity, -54 dBm typical. Also low flick noise.
- Very low parasitic package inductance and low package capacitance.
- Cost effective choice for high volume production.

Maximum Ratings

RATING	LIMITS	UNITS
V_R	1.0	V
I_F	20	mA
P_{DISS}	100 de-rated to zero at 150°C	mW
T_J	+175	°C
T_{STG}	-65 to +150	°C
T_{SOLDER}	+260 °C per JEDEC J-STD-20C.	
ESD	Class 0 (Human Body Model)	

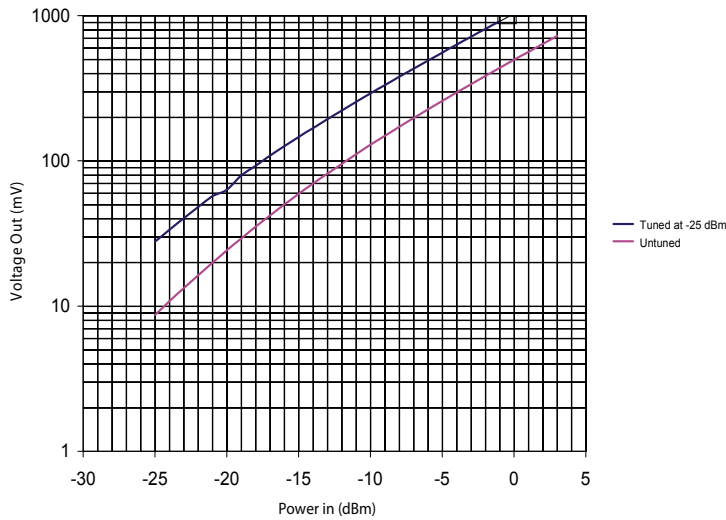
Electrical Specifications, $T_c = +25\text{ }^\circ\text{C}$

SYMBOL	TEST CONDITIONS			MIN	TYPICAL	MAX	UNITS
V_{BR}	$I_R = 100\text{ }\mu\text{A}$			1.0	-	-	V
V_F	$I_F = 100\text{ }\mu\text{A}$			60	80	120	mV
C_T	$V = 0\text{ V}$	F = 1 MHz		-	0.17	0.20	pF
Rv	Zero Bias			2000	4000	8000	Ω
Tss	NF -3 dB	F = 10 GHz			-54		dBm
γ	PIN = -30 dBm	Video BW = 500 KHz	F = 10 GHz		8000		mV/mW

Typical RF Performance at $T_A = 25\text{ }^\circ\text{C}$, $Z_o = 50\ \Omega$, Small Signal

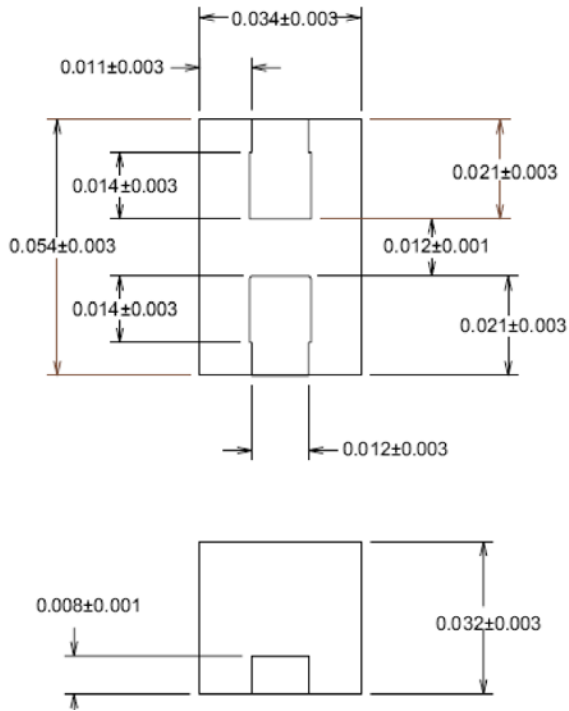
Typical Dynamic Transfer Characteristics

($R_L = 10\ \text{M}\Omega$, $F_o = 10\ \text{GHz}$)

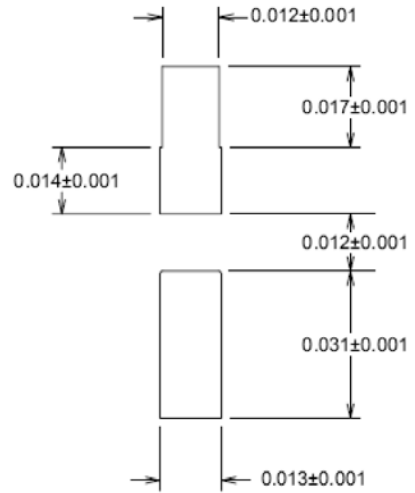


Package Outline (0503)

0503

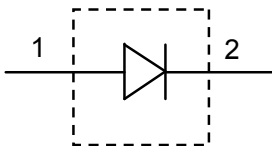


PCB Layout



SOLDERING FOOTPRINT

Electrical Schematic



Aeroflex / Metelics Inc.

Aeroflex Microelectronic Solutions
975 Stewart Drive
Sunnyvale, CA 94085
TEL: 408-737-8181

54 Grenier Field Road
Londonderry, NH 03053
TEL: 603-641-3800

ISO 9001:2008

Sales

888-641-SEMI (7364)
metelics-sales@aeroflex.com

www.aeroflex.com/Microwave www.aeroflex.com/Metelics

Aeroflex / Metelics, Inc. reserves the right to make changes to any products and services herein at any time without notice. Consult Aeroflex or an authorized sales representative to verify that the information in this data sheet is current before using this product. Aeroflex does not assume any responsibility or liability arising out of the application or use of any product or service described herein, except as expressly agreed to in writing by Aeroflex; nor does the purchase, lease, or use of a product or service from Aeroflex convey a license under any patent rights, copyrights, trademark rights, or any other of the intellectual rights of Aeroflex or of third parties.

Copyright 2009 Aeroflex / Metelics. All rights reserved.



Our passion for performance is defined by three attributes represented by these three icons: solution-minded, performance-driven and customer-focused.