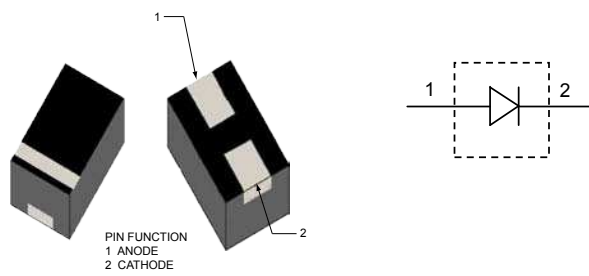


SMS201

Silicon Schottky Diodes



PIN FUNCTION
1 ANODE
2 CATHODE



(0503)
Molded Plastic DFN Package

Description

The SMS201 is a silicon Schottky diode in a molded plastic DFN package. It is designed for a broadband zero bias detector. It has a high cutoff frequency and can be used beyond 26.5 GHz for 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.

Maximum Ratings

RATING	LIMITS	UNITS
V_R	1.0	V
I_F	20)	mA
P_{DISS}	100 de-rated to zero at 175°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)	

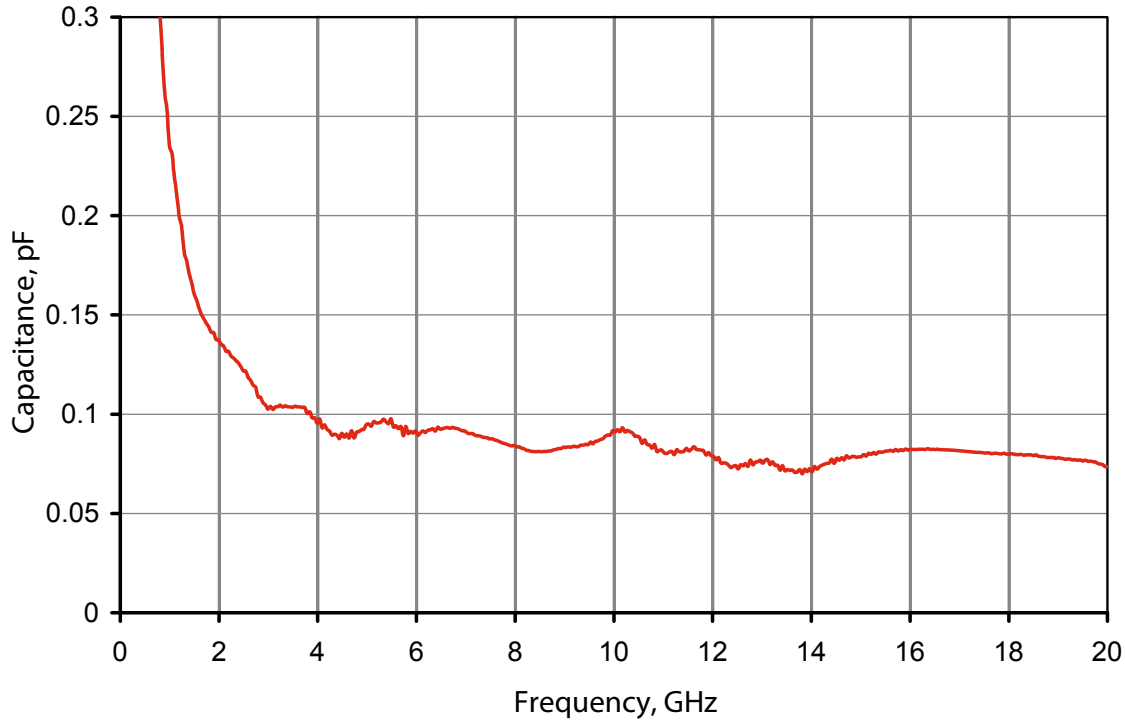
Electrical Specifications, $T_c = +25\text{ }^\circ\text{C}$

SYMBOL	TEST CONDITIONS	MIN	TYPICAL	MAX	UNITS
V_{BR}	$I_R = 100\text{ }\mu\text{A}$	1	-	-	V
V_F	$I_F = 100\text{ }\mu\text{A}$	60	80	120	mV
C_T	$V = 0\text{ V}$ $F = >6\text{ or }8\text{ GHz}$	-	0.08	0.1	pF
R_v	$I_F = 50\text{ mA}$	2000	4000	8000	Ω
T_{ss}	NF -3 dB $F = 10\text{ GHz}$		-54		dBm
y	PIN = -30 dBm Video BW = 500 KHz $F = 10\text{ GHz}$		8000		mV/mW



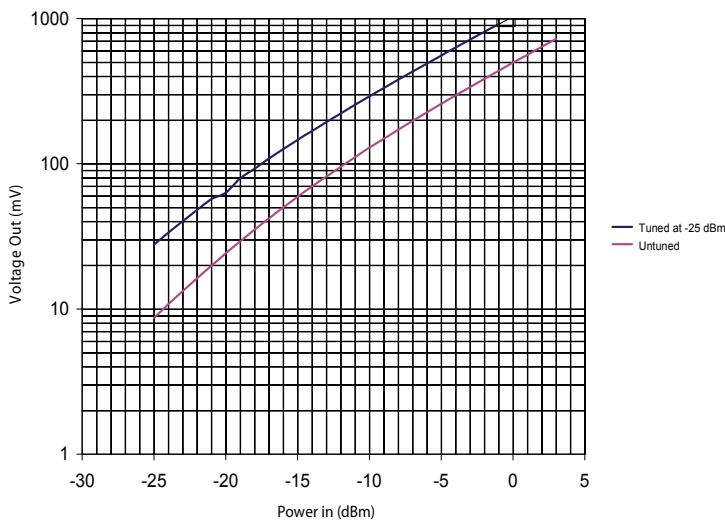
Typical RF Performance at $T_A = 25\text{ }^\circ\text{C}$, $Z_o = 50\ \Omega$, Small Signal

Capacitance as a function of frequency



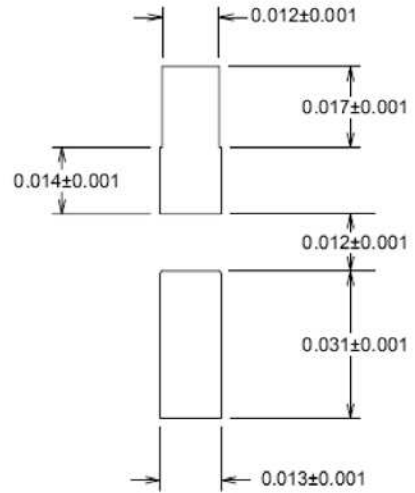
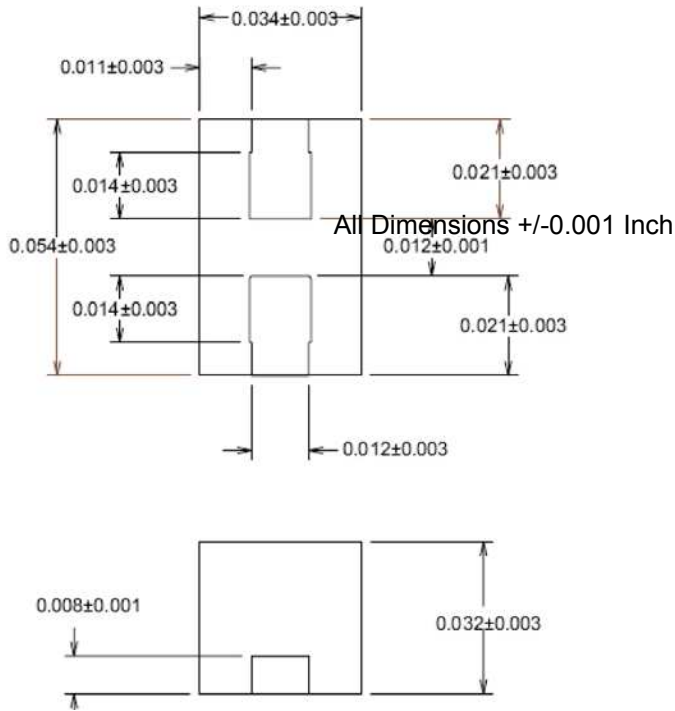
Typical Dynamic Transfer Characteristics

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



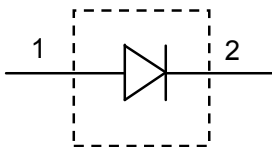
Package Outline

0503



SOLDERING FOOTPRINT

Electrical Schematic



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