

Low Capacitance High Voltage Schottky Diode

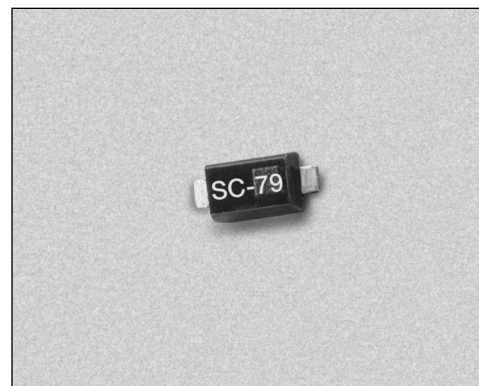

SMS3925-079

Features

- Silicon Schottky Diode for Detector Applications
- Ultra Small SC-79 Package
- Designed for High Volume, Low Cost Applications
- Available in Tape and Reel Packaging

Description

The SMS3925-079 is a 40 V, 0.6 pF RF Schottky diode designed for use as a level detector in wireless handsets and for general purpose switching applications. The SMS3925-079 is packaged in the surface mount miniature SC-79 package and is designated for low cost, high volume applications.



Absolute Maximum Ratings

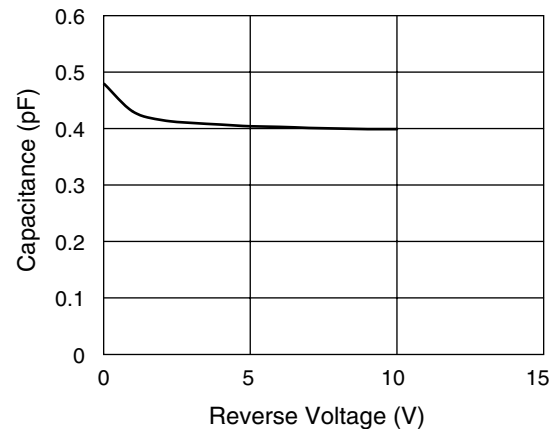
Characteristic	Value
Reverse Voltage (V_R)	40 V
Forward Current - 1 mS Pulse (I_F)	1 A
Forward Current - Steady State (I_F)	50 mA
Power Dissipation (P_D)	250 mW
Storage Temperature (T_{ST})	-65°C to +150°C
Operating Temperature (T_{OP})	-65°C to +150°C
Junction Temperature (T_J)	150°C
Electrostatic Discharge (ESD) - Human Body Model (HBM)	Class 1B

Electrical Specifications at 25°C

Parameter	Condition	Min.	Typ.	Max.	Unit
Reverse Current (I_R)	$V_R = 40$ V			10	μ A
Capacitance (C_T) ¹	$V_R = 0$ V, $F = 1$ MHz		0.48	0.6	pF
Forward Voltage (V_F)	$I_F = 1$ mA	0.57	0.62	0.67	V

1. Capacitance is total capacitance (C_T), junction capacitance (C_J) + package capacitance (C_P).

Typical Performance Data



Total Capacitance vs. Reverse Voltage

SPICE Model Parameters

Parameter	Units	SMS3925
IS	A	1.8E-09
RS	Ω	5.4
N	-	1.7
TT	S	8E-11
CJO	pF	0.36
M	-	0.24
EG	eV	0.69
XTI	-	2
FC	-	0.5
BV	V	58
IBV	A	1.00E-05
VJ	V	0.800

SC-79

