

# Schottky Diode

RoHS  
Compliant



## Features:

- For surface mounted application
- Easy pick and place
- Metal to silicon rectifier, majority carrier conduction
- Low power loss, high efficiency
- High current capability, low  $V_F$
- High surge current capability
- Plastic material
- Epitaxial construction
- High temperature soldering: 260°C/10 seconds at terminals

## Specifications:

### Mechanical Data:

Cases	: Moulded plastic
Terminals	: Pure tin plated, lead free
Polarity	: Indicated by cathode band
Packing	: 12mm tape per EIA STD RS-481
Weight	: 0.093g

## Maximum Ratings and Electrical Characteristics:

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

Parameters	Symbol	SS22	SS23	SS25	SS29	Units
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	20	30	50	90	V
Maximum RMS Voltage	$V_{RMS}$	14	21	35	63	
Maximum DC Blocking Voltage	$V_{DC}$	20	30	50	90	
Maximum Average Forward Rectified Current at $T_L$	$I_{(AV)}$	2				A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$	50				

# Schottky Diode

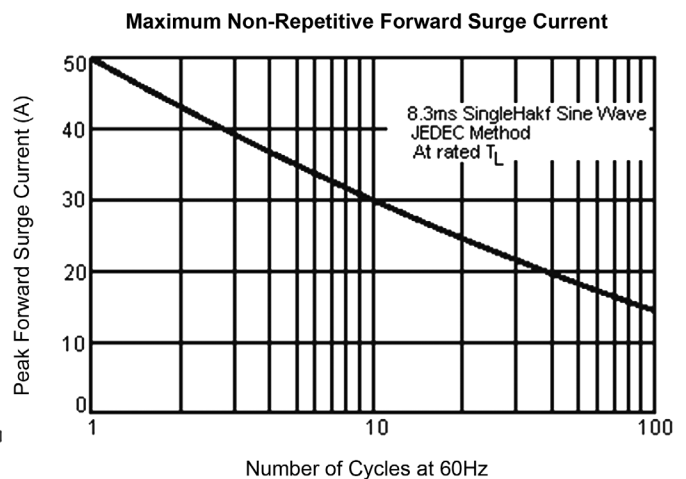
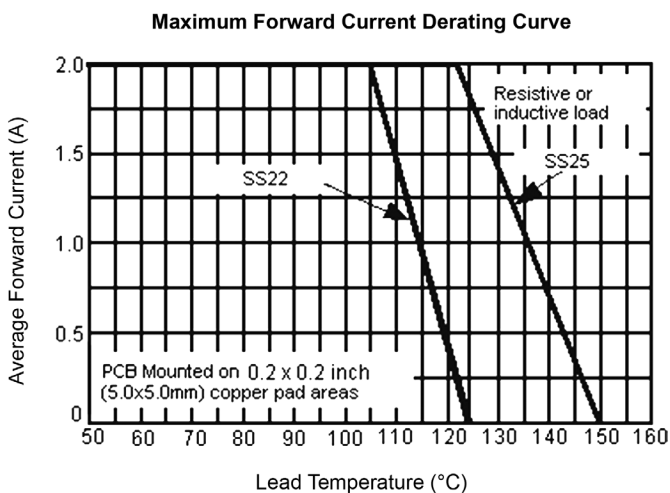


Parameters	Symbol	SS22	SS23	SS25	SS29	Units
Maximum Instantaneous Forward Voltage (Note 1) $I_F = 2A$ at $25^\circ C$ at $100^\circ C$	$V_F$	0.5 0.4		0.7 0.65	0.85 0.7	V
Maximum DC Reverse Current at $T_A = 25^\circ C$ at Rated DC Blocking Voltage at $T_A = 125^\circ C$	$I_R$	0.4			0.1	$\mu A$ $\mu A$
		10		5		
Typical Junction Capacitance (Note 3)	$C_j$	130				pF
Typical Thermal Resistance (Note 2)	$R_{\theta JL}$	17				$^\circ C/W$
	$R_{\theta JA}$	75				
Operating Temperature Range	$T_J$	-65 to +125		-65 to +150		$^\circ C$
Storage Temperature Range	$T_{STG}$	-65 to +150				

**Notes:**

- Pulse Test with  $PW = 300\mu$  seconds, 1% Duty Cycle.
- 2. Measured on PC Board with  $0.4" \times 0.4"$  ( $10mm \times 10mm$ ) Copper Pad Areas.
- 3. Measured at 1MHz and Applied Reverse Voltage of 4V DC.

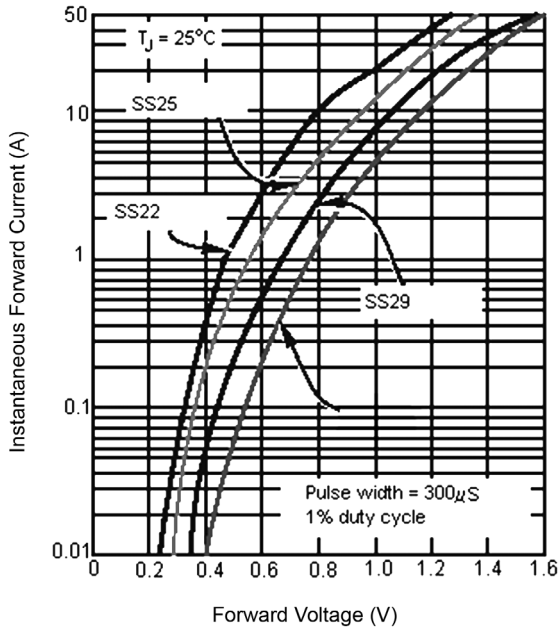
## Ratings and Characteristic Curves



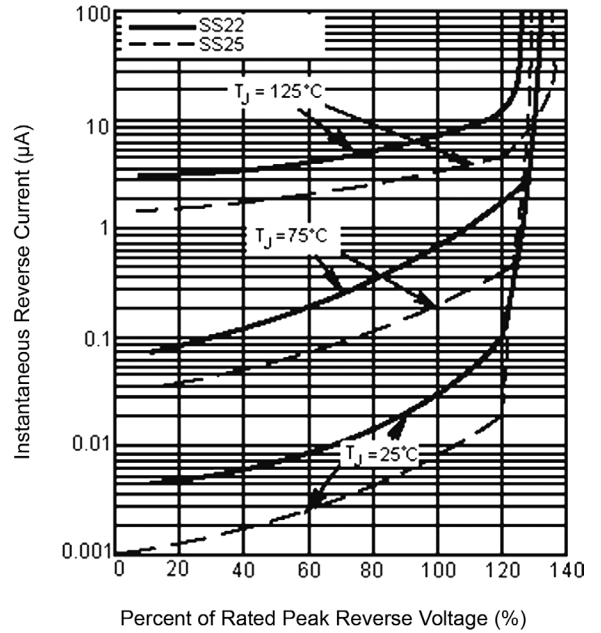
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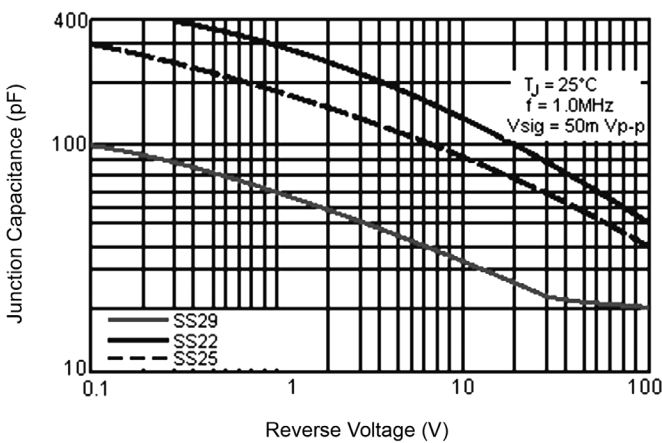
Typical Forward Characteristics



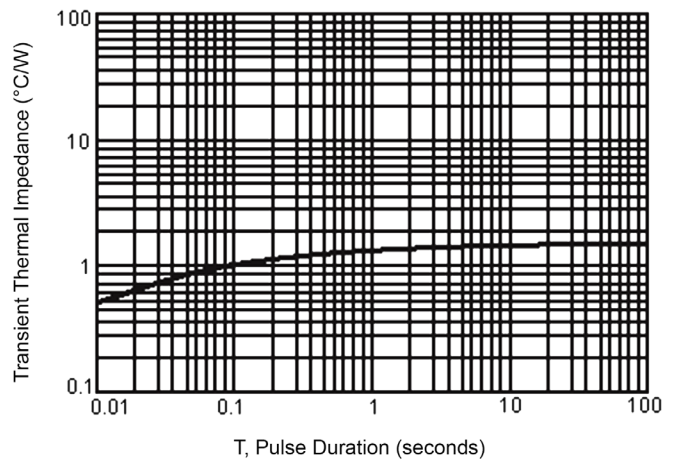
Typical Reverse Characteristics



Typical Junction Capacitance



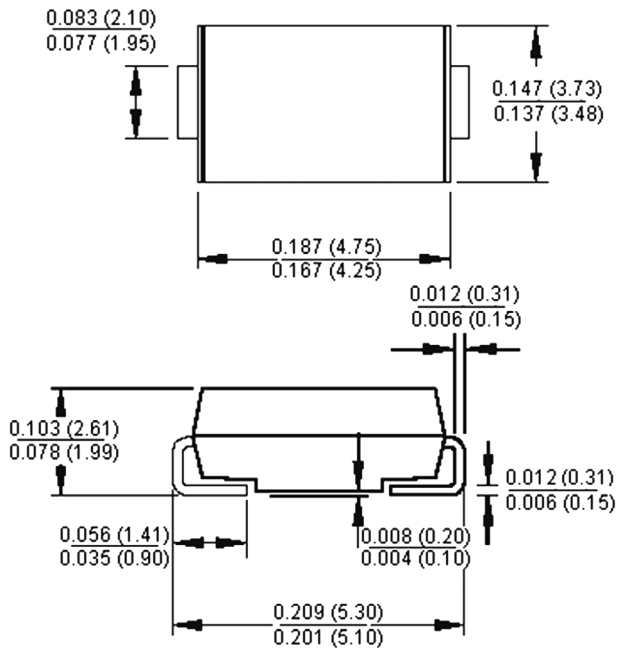
Typical Transient Thermal Characteristics



# Schottky Diode



## SMB/DO-214AA



Dimensions : Inches (Millimetres)

## Part Number Table

Description	Part Number
Diode, Schottky, 2A, 20V	SS22
Diode, Schottky, 2A, 30V	SS23
Diode, Schottky, 2A, 50V	SS25
Diode, Schottky, 2A, 90V	SS29

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