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				

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

Notes:

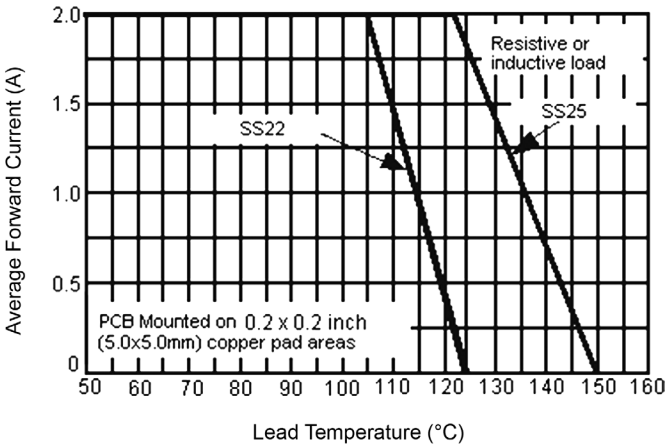
Pulse Test with PW = 300µ seconds, 1% Duty Cycle.

2. Measured on PC Board with 0.4" × 0.4" (10mm × 10mm) Copper Pad Areas.

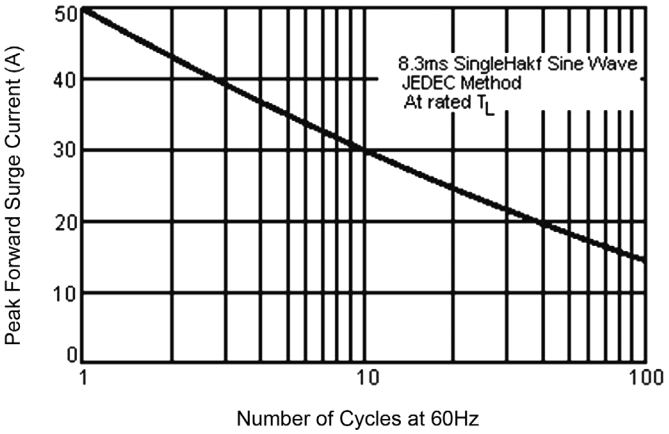
3. Measured at 1MHz and Applied Reverse Voltage of 4V DC.

Ratings and Characteristic Curves

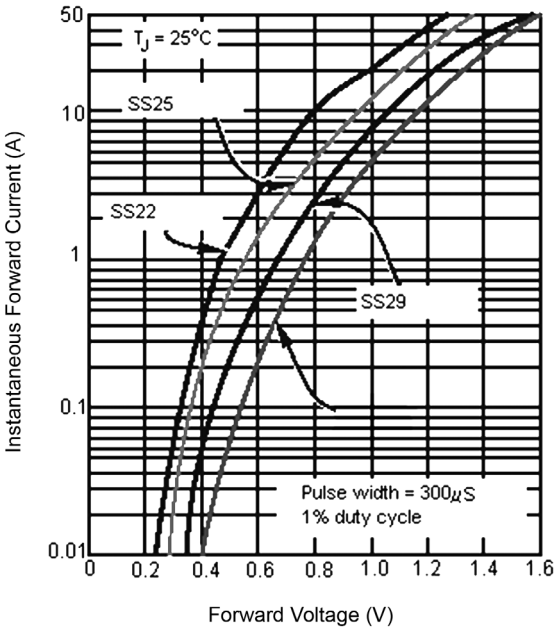
Maximum Forward Current Derating Curve



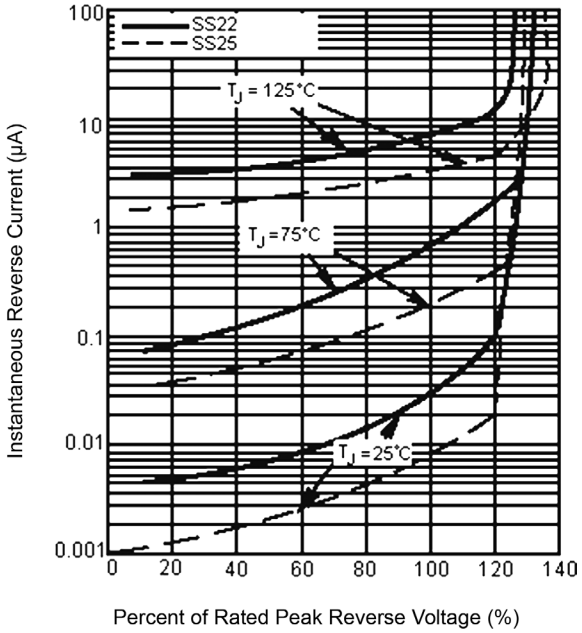
Maximum Non-Repetitive Forward Surge Current



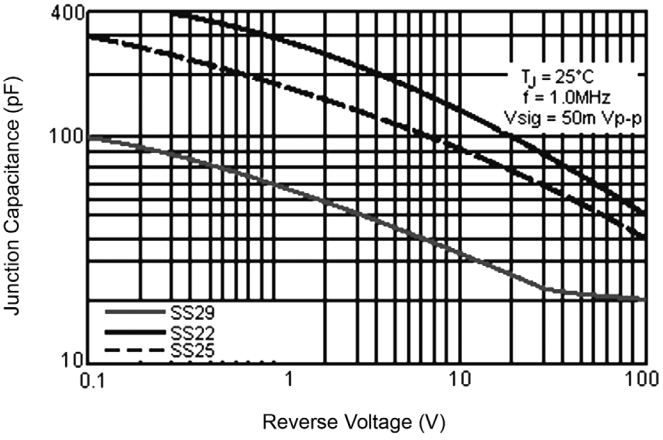
Typical Forward Characteristics



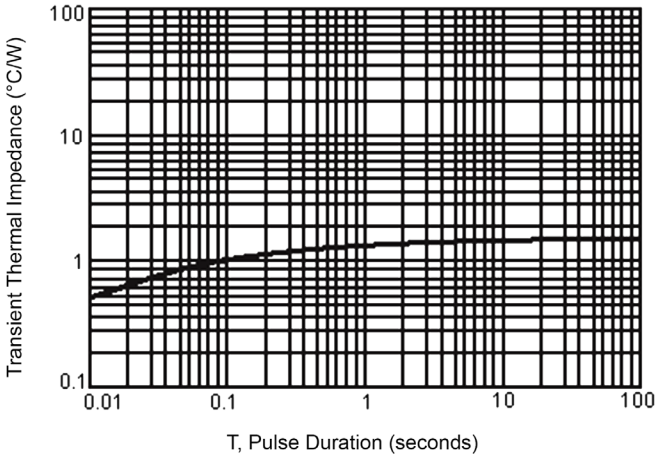
Typical Reverse Characteristics



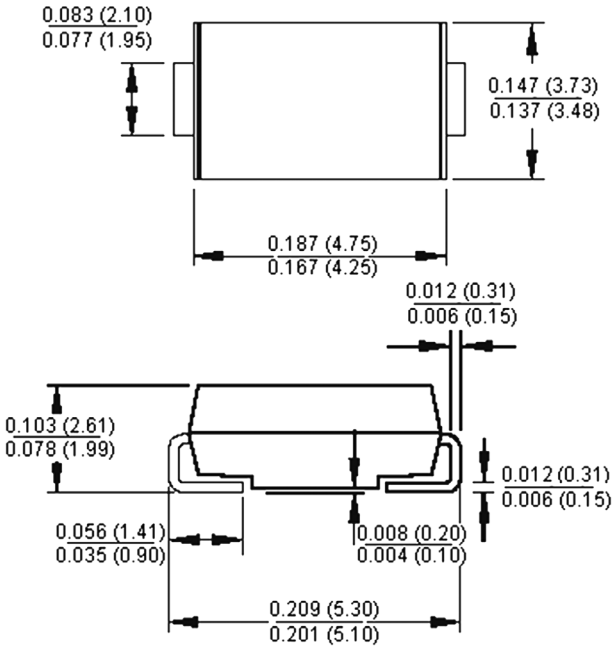
Typical Junction Capacitance



Typical Transient Thermal Characteristics



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