S1A THRU S1M

Surface Mount Glass Passivated Rectifiers

Reverse Voltage - 50 to 1000Volts

Forward Current - 1.0 Amperes

Features

- For surface mounted applications
- Low reverse leakage current
- Low forward voltage drop
- High surge capacity
- Meet UL flammability classification 94V-0
- AEC-Q101 qualified

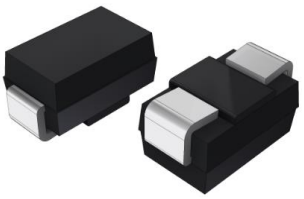
Mechanical Data

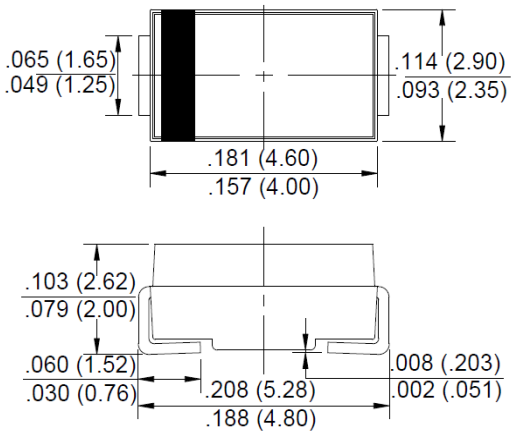
- Case: JEDEC SMA molded plastic
- Polarity: Color band denotes cathode
- Mounting position: Any

Applications

- For use in low voltage, high frequency inverters, polarity protection applications

SMA





Package Outline Dimensions in Inches (Millimeters)

Maximum Ratings and Electrical Characteristics

Rating at 25℃ ambient temperature unless otherwise specified.

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

For capacitive load, derate current by 20%.

Characteristics	Symbol	S1A	S1B	S1D	S1G	S1J	S1K	S1M	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current @T_L=100 ℃	$I_{(AV)}$	1.0							A
Peak Forward Surge Current, 8.3mS Single Half Sine-Wave, Superimposed on Rated Load (JEDEC Method)	I_{FSM}	30							A
I^2t Rating for Fusing (t<8.3mS)	I^2t	3.7							A^2s
Peak Forward Voltage at 1.0A DC (Note1)	V_F	1.1							V
Maximum DC Reverse Current @T_J=25℃	I_R	5.0							uA
at Rated DC Bolcking Voltage @T_J=125℃		100							
Typical Junction Capacitance (Note 2)	C_J	10							pF
Typical Thermal Resistance Junction to Case	$R_{\theta JC}$	30							℃/W
Operating Junction Temperature Range	T_J	-55 to+150							℃
Storage Temperature Range	T_{STG}	-55 to+150							℃

Notes: 1. 300uS pulse width, 2%duty cycle.

2. Measured at 1.0 MHz and applied reverse voltage of 4.0V DC.

3. The typical data above is for reference only .

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Fig. 1 - Forward Current Derating Curve

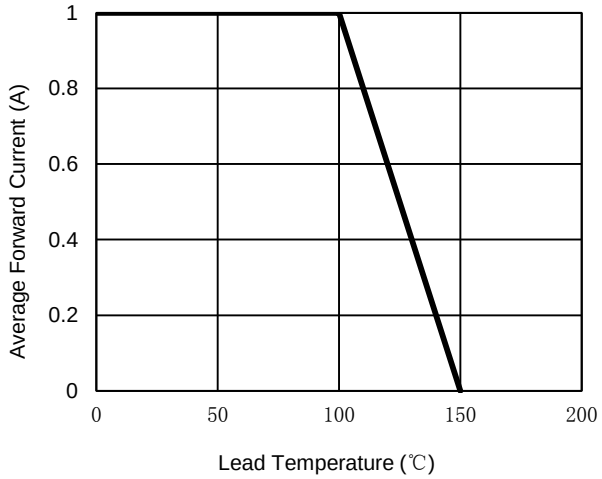


Fig. 2 - Maximum Non-Repetitive Surge Current

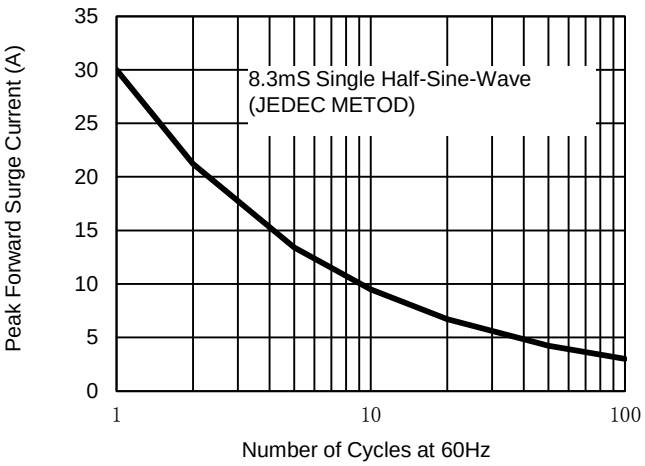


Fig. 3 - Typical Reverse Characteristics

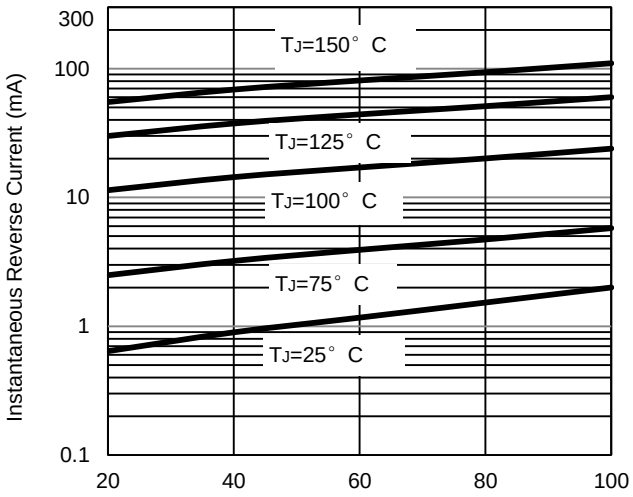


Fig. 4 - Typical Forward Characteristics

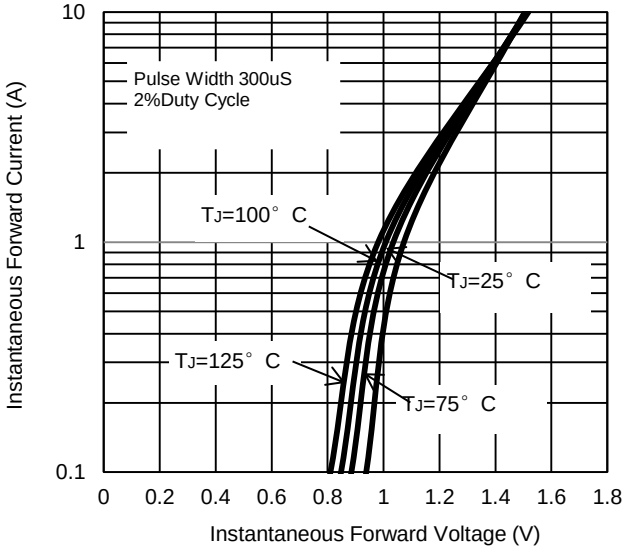
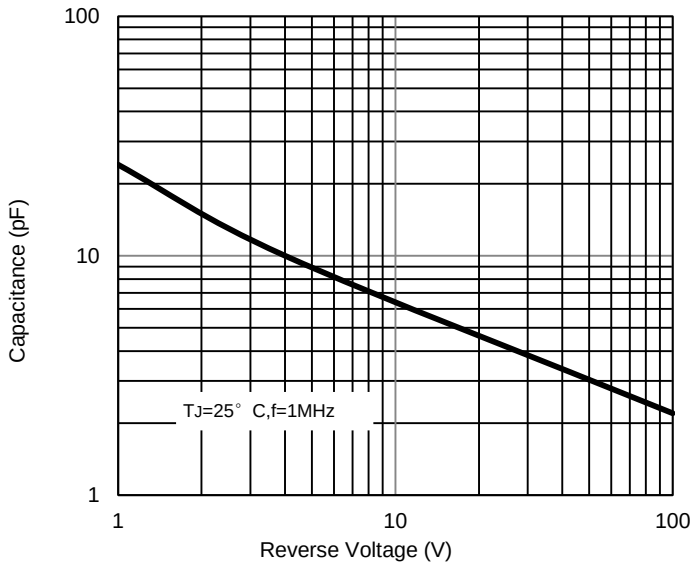


Fig. 5 - Typical Junction Capacitance



The curve above is for reference only.

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