



S3A thru S3M

Surface Mount Glass Passivated Rectifiers
Reverse Voltage 50 to 1000 Volts Forward Current 3.0 Amperes

Features

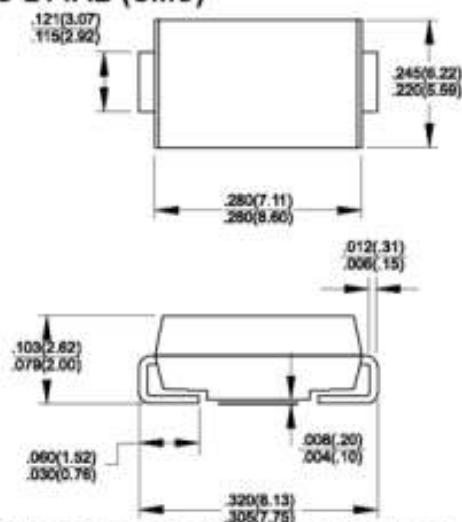
- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ For surface mounted applications
- ◆ Low profile package
- ◆ Built-in strain relief, ideal for automated placement
- ◆ Glass passivated chip junction

Mechanical Data

- ◆ Case: JEDEC DO-214AB (SMC) molded plastic body over glass passivated chip
- ◆ Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- ◆ High temperature soldering: 260°C/10 seconds at terminals
- ◆ Polarity: Color band denotes cathode end
- ◆ Weight: 0.009 ounce, 0.25 gram



DO-214AB (SMC)



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbols	S3A	S3B	S3D	S3G	S3J	S3K	S3M	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS voltage	V_{RES}	35	70	140	280	420	560	700	Volts
Maximum DC blocking voltage	V_{OC}	50	100	200	400	600	800	1000	Volts
Maximum average forward rectified current at $T_A = 103^\circ\text{C}$ (1)	I_{FAV}	3.0							Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) $T_A = 75^\circ\text{C}$	I_{FSM}	100.0							Amps
Maximum instantaneous forward voltage at 2.5A	V_F	1.15							Volts
Maximum DC reverse current at rated DC blocking voltage @ $T_A = 25^\circ\text{C}$ @ $T_A = 125^\circ\text{C}$	I_R	10.0 250							μA
Typical reverse recovery time at $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $t_{rr} = 0.25\text{A}$	t_{rr}	1.0							μs
Typical junction capacitance at 4.0V, 1MHz	C_j	60							pF
Typical thermal resistance (NOTE 1)	R_{JA} R_{JB}	47 13							$^\circ\text{C/W}$
Operating junction temperature range	T_J	-55 to +150							$^\circ\text{C}$
Storage temperature range	T_{STG}	-55 to +150							$^\circ\text{C}$

Notes: 1. Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.3 x 0.3" (8.0 x 8.0mm) copper pad areas

RATINGS AND CHARACTERISTIC CURVES

Fig. 1 - Forward Current Derating Curve

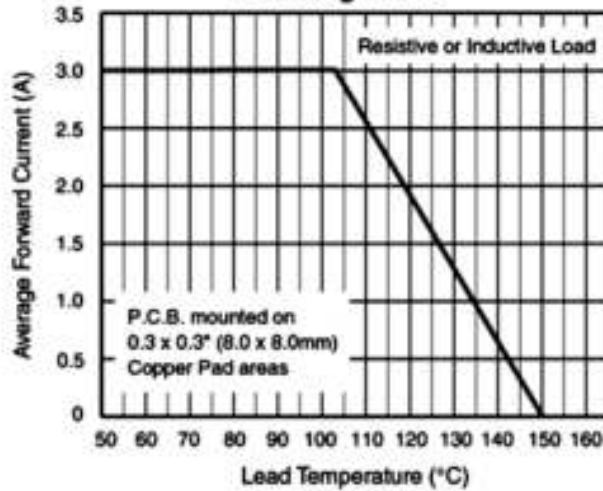


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

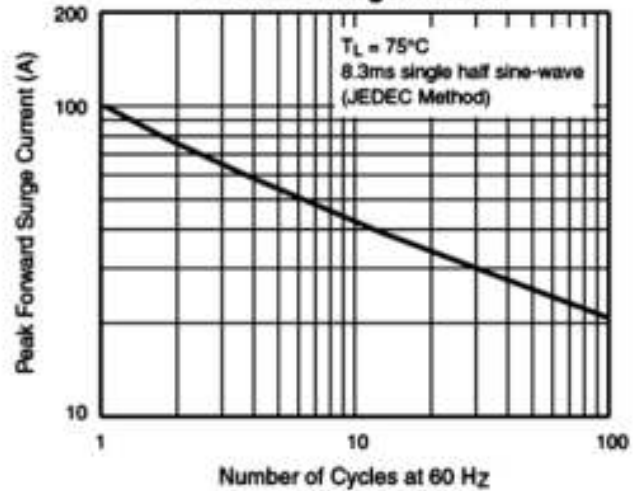


Fig. 3 - Typical Instantaneous Forward Characteristics

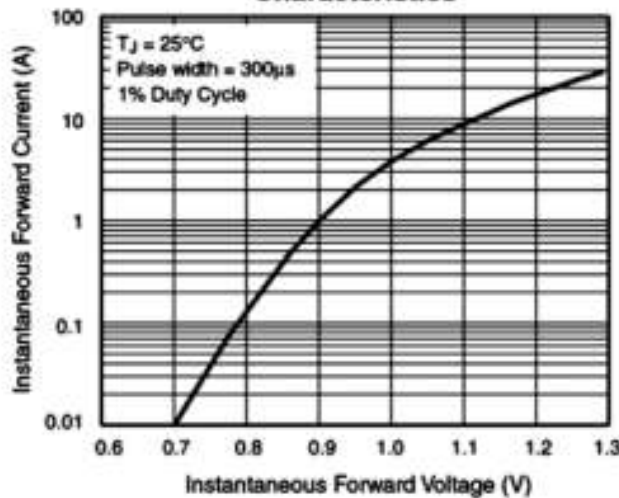


Fig. 4 - Typical Reverse Characteristics

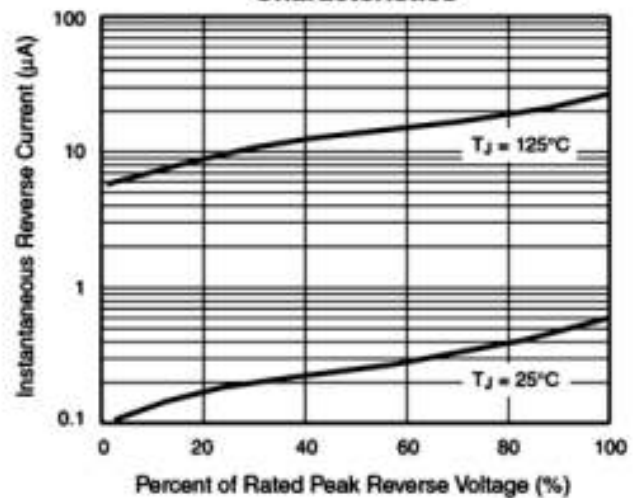


Fig. 5 - Typical Junction Capacitance

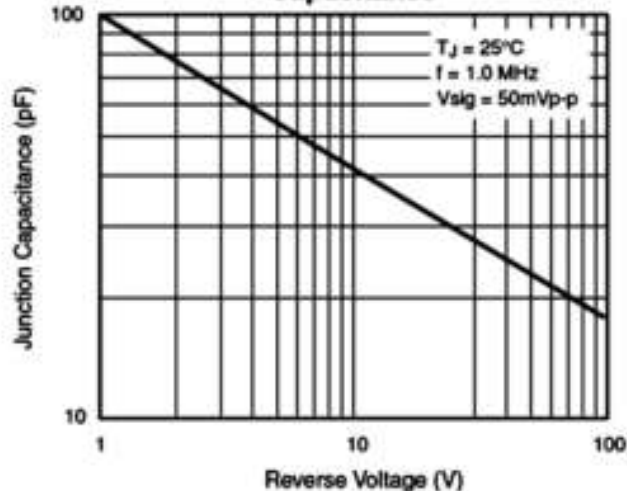


Fig. 6 - Typical Transient Thermal Impedance

