



S3A THRU S3M

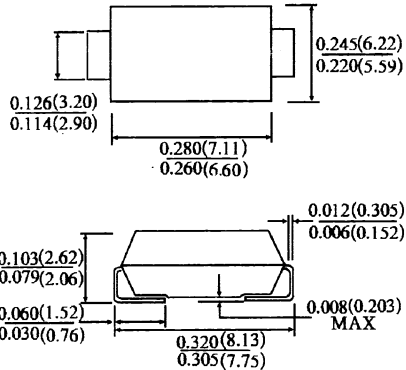
3.0AMPS SURFACE MOUNT RECTIFIERS



VOLTAGE RANGE

50 to 1000 Volts
CURRENT
3.0 Amperes

SMC(DO-214AB)



Dimensions in inches and (millimeters)

FEATURES

- * For surface mounted applications
- * Glass Passivated junction * Low profile package
- * Built-in strain relief, ideal for automated placement
- * Plastic package has Underwrites Laboratory Flammability
- * Classification 94V-0
- * High temperature soldering guaranteed: 250°C/10 seconds, at terminals

MECHANICAL DATA

- * Case: JEDEC SMC (DO-214AB) molded plastic body
- * Terminals: Solder plated, solderable per MIL-STD-750, method 2026
- * Polarity: Color band denotes cathode end
- * Mounting position: Any
- * Weight: 0.007 ounce, 0.25 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave 60Hz, resistive or inductive load. For capacitive load, derate by 20%.

	Symbols	S3A	S3B	S3D	S3G	S3J	S3K	S3M	Units
Maximum Recurrent peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC Blocking voltage	V_{DC}	50	100	200	400	600	800	1000	Volts
Maximum average forward Rectified Current (at $T_L = 75^\circ\text{C}$ (Note 2))	$I_{(AV)}$	3.0							Amps
Peak Forward Surge Current (8.3ms half sine wave superimposed on rated load (JEDEC method) $T_L = 75^\circ\text{C}$)	I_{FSM}	100.0							Amps
Maximum Instantaneous Forward Voltage at 1.0A	V_F	1.15							Volts
Maximum Reverse current at rated DC Blocking Voltage	$T_A = 25^\circ\text{C}$	1.0							μA
	$T_A = 125^\circ\text{C}$								
Typical Thermal Resistance (Note 2)	$R_{\theta JL}$	13.0							$^\circ\text{C}/\text{W}$
	$R_{\theta JA}$	47.0							
Typical reverse recovery time (Note 3)	t_{rr}	2.5							μs
Typical junction capacitance (Note 1)	C_j	60.0							pF
Operating and storage temperature Range	T_J T_{STG}	-55 to +150							$^\circ\text{C}$

- NOTE:** (1) Measured at 1MHz and applied reverse voltage of 4.0V DC.
 (2) Thermal resistance from junction to ambient and from junction to lead mounted on 0.2x0.2" (5.0 x 5.0mm) copper pad areas.
 (3) Reverse recovery test conditions: $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{rr} = 0.25\text{A}$

RATINGS AND CHARACTERISTIC CURVES (S2A THRU S2M)

FIG. 1 – FORWARD CURRENT DERATING CURVE

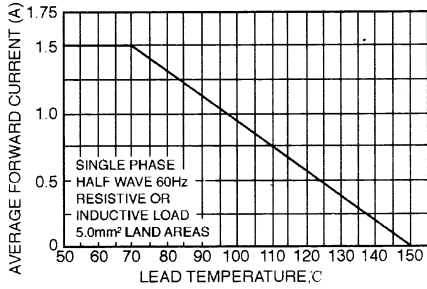


FIG. 2 – MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

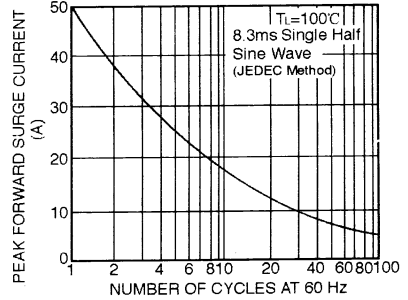


FIG. 3 – TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

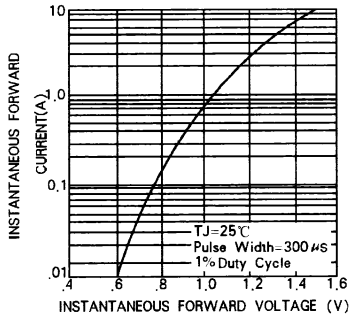


FIG. 5 – TYPICAL REVERSE CHARACTERISTICS

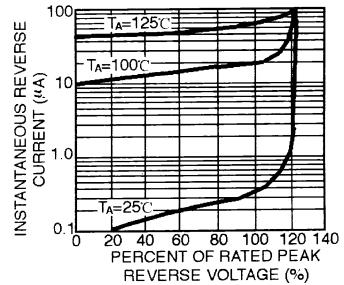


FIG. 4 – TYPICAL JUNCTION CAPACITANCE

