

DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

S3A THRU S3M

TECHNICAL SPECIFICATIONS OF SURFACE MOUNT SILICON RECTIFIER VOLTAGE RANGE - 50 to 1000 Volts CURRENT - 3.0 Amperes

FEATURES

- * Ideal for surface mounted applications
- * Low leakage current
- * Glass passivated junction

MECHANICAL DATA

* Case: Molded plastic

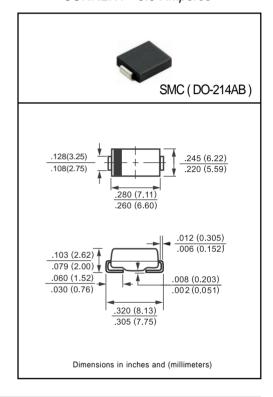
* Epoxy: UL 94V-0 rate flame retardant *Terminals: Solder plated, solderable per MIL-STD-750, Method 2026

* Polarity: As marked

* Mounting position: Any * Weight: 0.24 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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



		SYMBOL	S3A	S3B	S3D	S3G	S3J	S3K	S3M	UNITS
Maximum Recurrent Peak Reverse Voltage		VRRM	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage		VRMS	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage		VDC	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current TA = 75°C		lo	3.0							Amps
Peak Forward Surge Current IFM(surge): 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)		IFSM	100						Amps	
Maximum Forward Voltage at 3.0A DC		VF	1.2						Volts	
Maximum DC Reverse Current at	@TA = 25°C	l _R	5.0							uAmps
Rated DC Blocking Voltage	@Ta = 125°C	IK .	250							
Maximum Reverse Recovery Time (Note 3)		trr	2.5						uSec	
Typical Thermal Resistance (Note 2)		RθJL	10						°C/W	
Typical Junction Capacitance (Note 1)		Cı	60						pF	
Operating and Storage Temperature Range		TJ, TSTG	-65 to + 175							٥C

NOTES: 1. Measured at 1 MHz and applied reverse voltage of 4.0VDC

- 2. Thermal Resistance (Junction to Ambient), 0.4x0.4in² (10X10mm²) copper pads to each terminal.
- 3. Test Conditions: IF=0.5A, IR=1.0A, IRR=0.25A.

RATING AND CHARACTERISTIC CURVES (S3A THRU S3M)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE 3.0 AVERAGE FORWARD CURRENT, (A) 2.5 2.0 1.5 1.0 Single Phase Half Wave 60Hz .5 Resistive or Inductive Load 0 0 25 50 75 100 125 150 175 AMBIENT TEMPERATURE, (°C)

FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS 20 10 INSTANTANEOUS FORWARD CURRENT, (A) 4 2 1.0 .4 TJ = 25°C Pulse Width=300 μ s .1 1% Duty Cycle .04 .02 .01 .6 .8 1.0 1.2 1.4 1.5 INSTANTANEOUS FORWARD VOLTAGE, (V)

