

DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

S1A THRU S1M

TECHNICAL SPECIFICATIONS OF SURFACE MOUNT SILICON RECTIFIER VOLTAGE RANGE - 50 to 1000 Volts CURRENT - 1.0 Ampere

FEATURES

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

MECHANICAL DATA

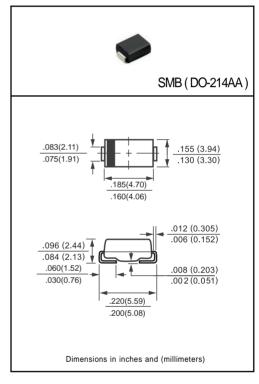
* Case: Molded plastic

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

* Polarity: As marked * Mounting position: Any * Weight: 0.093 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	S1A	S1B	S1D	S1G	S1J	S1K	S1M	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 at TA = 75 °C		lo	1.0							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)		IFSM	30						Amps	
Maximum Instantaneous Forward Voltage at 1.0A DC		VF	1.1						Volts	
Maximum DC Reverse Current	@TA = 25°C	- IR	5.0							uAmps
at Rated DC Blocking Voltage	@Ta = 100°C		100							
Maximum Reverse Recovery Time (Note 3)		trr	2.5						uSec	
Typical Thermaesistance (Note 2)		RθJL	12						°C/W	
Typical Junction Capacitance (Note 1)		CJ	30							pF
Operating and Storage Temperature Range		TJ,TSTG	-65 to + 175							٥C

- NOTES: 1. Measured at 1 MHz and applied reverse voltage of 4.0 volts.
 - 2. Thermal Resistance (Junction to Ambient), 0.2x0.2in² (5X5mm²) copper pads to each terminal.
 - 3. Test Conditions: IF=0.5A, IR=1.0A, IRR=0.25A.

RATING AND CHARACTERISTIC CURVES (S1A THRU S1M)

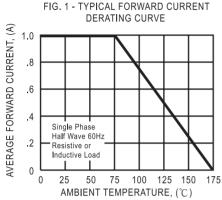


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS 10 INSTANTANEOUS FORWARD CURRENT, (A) 1.0 .1 Pulse Width = 300us 1% Duty Cycle

.01

.6

.8

1.0

INSTANTANEOUS FORWARD VOLTAGE, (V)

1.2

1.4

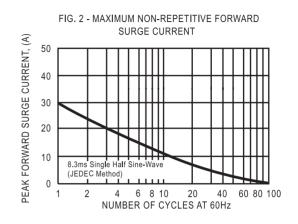


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

