



**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**

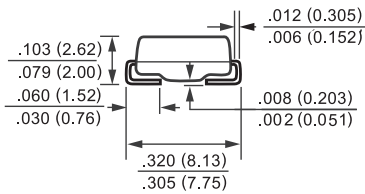
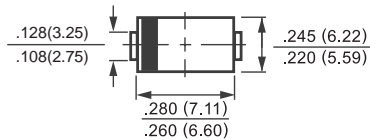
- \* Ideal for surface mounted applications
- \* Low leakage current
- \* Glass passivated junction

**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



SMC (DO-214AB)



Dimensions in inches and (millimeters)

**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	Io	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 Rated DC Blocking Voltage	IR	@ TA = 25°C							uAmps
		@ TA = 125°C							
Maximum Reverse Recovery Time (Note 3)	trr	2.5							uSec
Typical Thermal Resistance (Note 2)	RθJL	10							°C/W
Typical Junction Capacitance (Note 1)	Cj	60							pF
Operating and Storage Temperature Range	Tj, TSTG	-65 to + 175							°C

NOTES : 1. Measured at 1 MHz and applied reverse voltage of 4.0VDC  
 2. Thermal Resistance (Junction to Ambient), 0.4x0.4in<sup>2</sup> (10X10mm<sup>2</sup>) 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

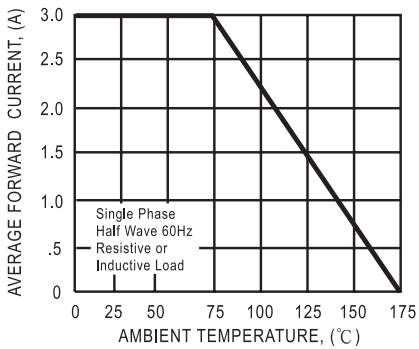


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

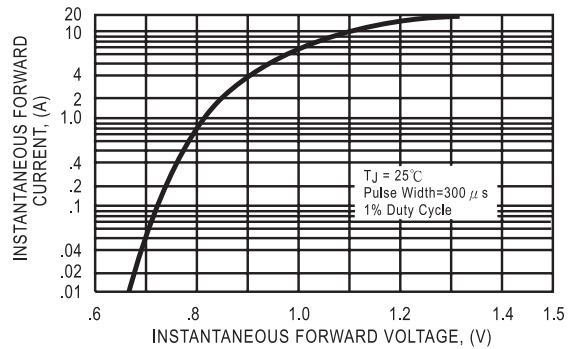


FIG. 3 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

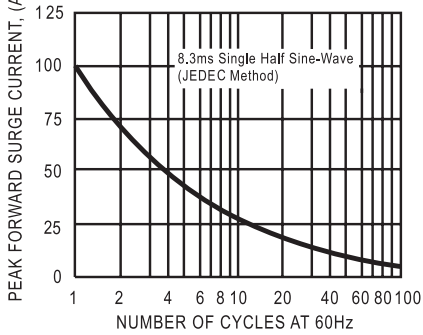


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

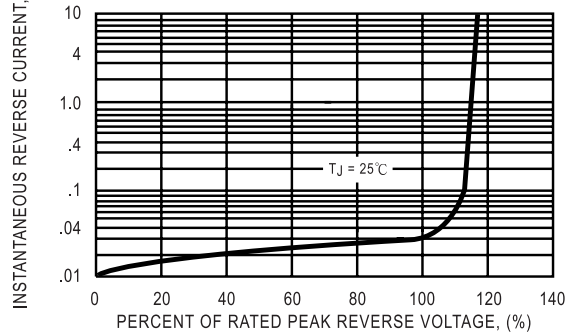


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

