



**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
- \* Low forward voltage drop
- \* High forward surge capability

**MECHANICAL DATA**

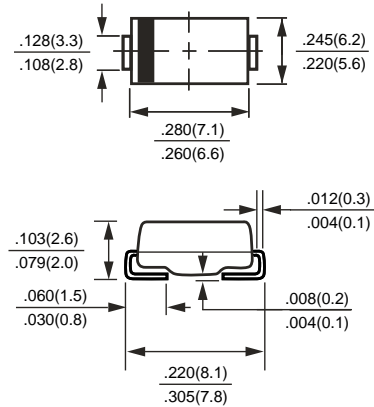
- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- \* Polarity: As marked
- \* Mounting position: Any
- \* Weight: 0.093 gram

**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%.



**SMC(DO-214AB)**



Dimensions in inches and (millimeters)

	SYMBOL	S3A	S3B	S3D	S3G	S3J	S3K	S3M	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current at TA = 100°C	I <sub>O</sub>	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	V <sub>F</sub>	1.1							Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	I <sub>R</sub>	@TA = 25°C						5.0	uAmps
		@TA = 125°C						50	
Typical Thermal Resistance (Note 2)	RθJL	20							°C/W
Typical Junction Capacitance (Note 1)	C <sub>J</sub>	60							pF
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to + 150							°C

NOTES : 1. Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts

2. Thermal Resistance (Junction to Ambient), .0.32x0.32 in<sup>2</sup> (8x8mm<sup>2</sup>) copper pads to each terminal.

# RATING AND CHARACTERISTIC CURVES ( S3A THRU S3M )

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

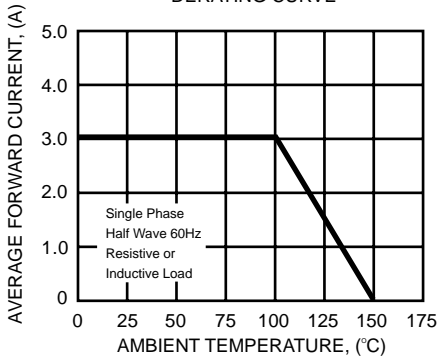


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

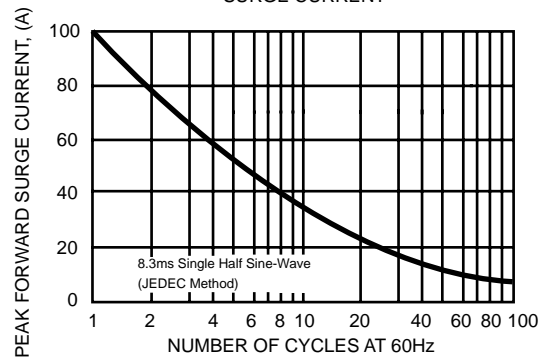


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

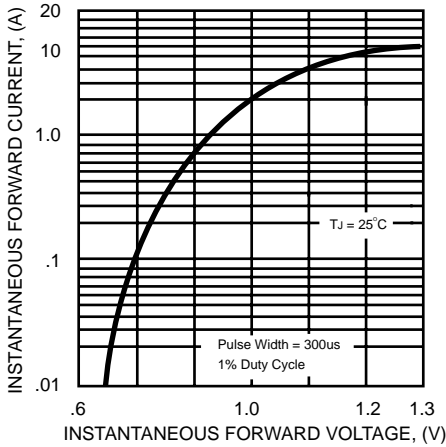


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

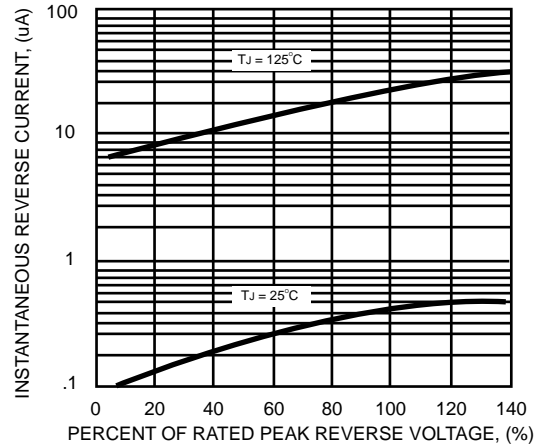
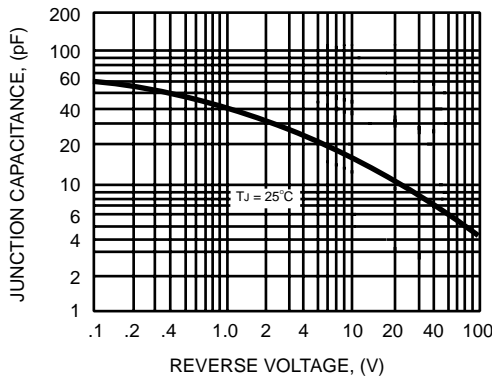


FIG. 5 - TYPICAL JUNCTION CAPACITANCE



DC COMPONENTS CO., LTD.