

# S3A THRU S3M

## SURFACE MOUNT GLASS PASSIVATED SILICON RECTIFIER

**REVERSE VOLTAGE:** 50 to 1000 VOLTS

**FORWARD CURRENT:** 3.0 AMPERE

<http://www.njzrg.com>

### FEATURES

- For surface mounted applications
- Low profile package
- Built-in strain relief
- Easy pick and place
- Low forward voltage drop
- Plastic package has Underwriters Laboratory  
Flammability Classification 94V-O
- High temperature soldering : 260°C /10 seconds at terminals

### MECHANICAL DATA

Case: Molded plastic, DO-214AB(SMC)

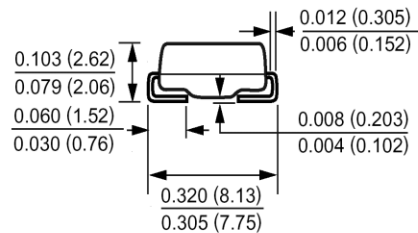
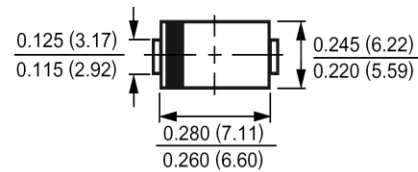
Terminals: Solder plated, solderable per MIL-STD-750,  
method 2026 guaranteed

Polarity: Color band denotes cathode end

Packaging: 16mm tape per EIA STD RS-481

Weight: 0.007 ounce, 0.21 gram

### DO-214AB(SMC)



Dimensions in inches and (millimeters)

### 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 current 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 $T_L=75$	$I_{(AV)}$	3.0							Amp
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	100							Amp
Maximum Forward Voltage at 3.0A	$V_F$	1.15							Volts
Maximum Reverse Current at $T_A=25$ at Rated DC Blocking Voltage $T_A=125$	$I_R$	10.0 250							$\mu$ Amp
Typical Junction Capacitance (Note 1)	$C_J$	53							pF
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$ $R_{\theta JL}$	47 13							/W
Maximum Reverse Recovery Time (Note 3)	$T_{RR}$	2.5							$\mu$ S
Operating Junction Temperature Range	$T_J$	-55 to +150							
Storage Temperature Range	$T_{stg}$	-55 to +150							

### NOTES:

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

2- Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.3 x 0.3" (8.0 x 8.0mm) copper pad areas

3- Reverse Recovery Test Conditions :  $I_F=.5A$  ,  $I_R=1A$  ,  $I_{RR}=.25A$ .

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### RATINGS AND CHARACTERISTIC CURVES

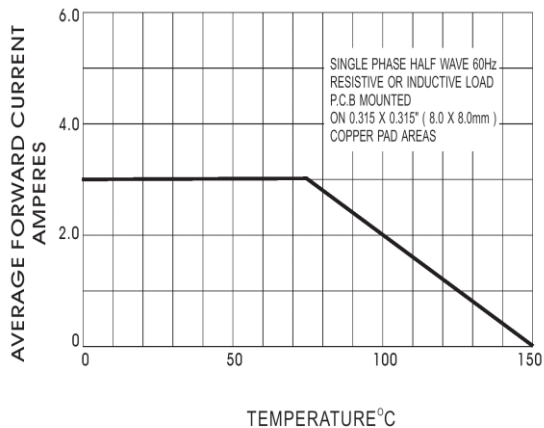


Fig. 1- DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

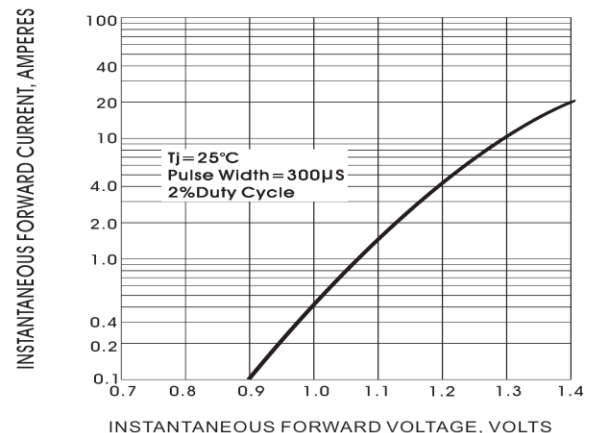


Fig. 2- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER ELEMENT

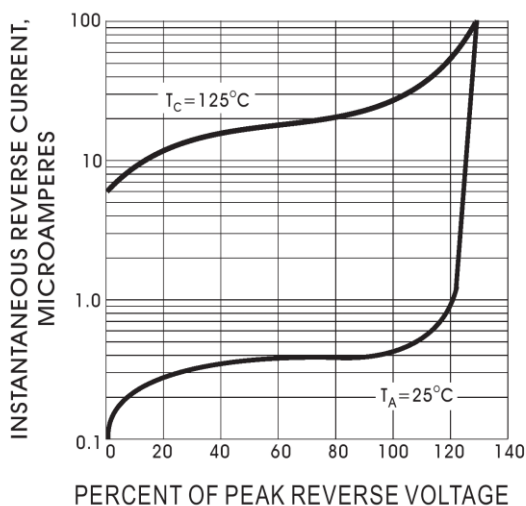


Fig. 3- TYPICAL REAK REVERSE CHARACTERISTICS

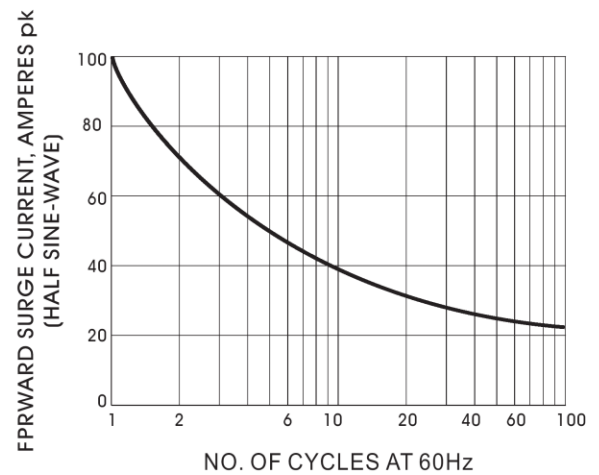


Fig. 4- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

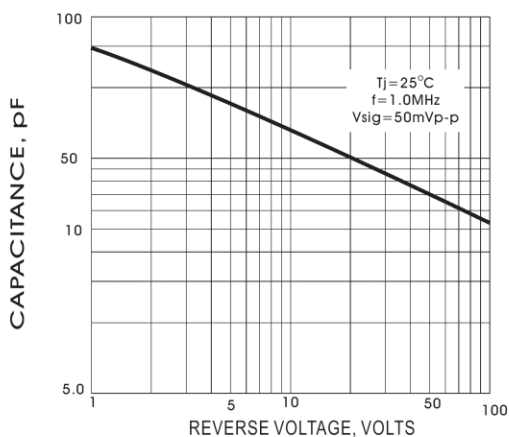


Fig. 5- TYPICAL JUNCTION CAPACITANCE PER ELEMENT