

# DATA SHEET

## S3A~S3M

### SURFACE MOUNT RECTIFIER

**VOLTAGE- 50-100 Volts CURRENT- 3.0 Ampere**

#### FEATURES

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

#### MECHANICAL DATA

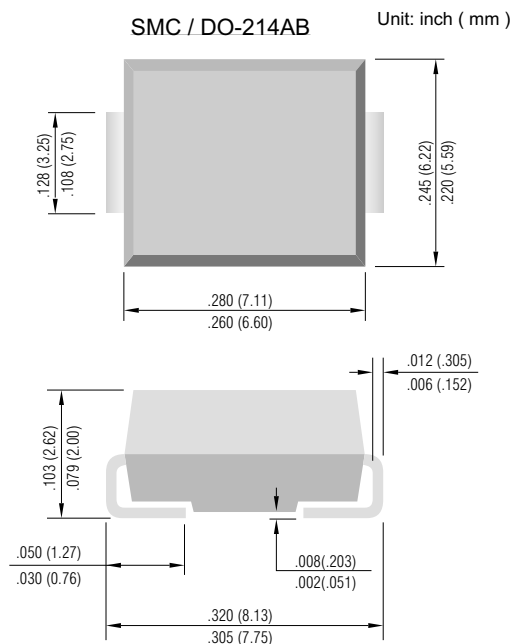
Case: JEDEC DO-214AB molded plastic

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

Polarity: Indicated by cathode band

Standard packaging: 16mm tape (EIA-481)

Weight: 0.007 ounce, 0.21 gram



#### 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	V
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current at $T_L = 75^\circ\text{C}$	$I_{(AV)}$	3.0							A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	100.0							A
Maximum Instantaneous Forward Voltage at 3.0A	$V_F$	1.20							V
Maximum DC Reverse Current (Note 1) $T_A = 25^\circ\text{C}$ at Rated DC Blocking Voltage $T_A = 125^\circ\text{C}$	$I_R$	5.0 250							$\mu\text{A}$ $\mu\text{A}$
Typical Reverse Recovery Time(Note1)	$T_{RR}$	2.5							$\mu\text{S}$
Maximum Thermal Resistance(Note 2)	$R_{\theta JL}$ $R_{\theta JA}$	13.0 47.0							$^\circ\text{C/W}$
Typical Junction Capacitance(Note3)	$C_J$	53.0							pF
Operating and Storage Temperature Range	$T_{STG}$	-55 to +150							$^\circ\text{C}$

#### NOTES:

1.Reverse Recovery Test Conditions: $I_F=0.5\text{A}$ , $I_R=1.0\text{A}$ , $I_{rr}=0.25\text{A}$ .

2.Measured at 1.0 MHZ and applied  $V_r=4.0$  volts.

3.8.0mm<sup>2</sup>(.013mm thick)land areas.

## RATING AND CHARACTERISTIC CURVES

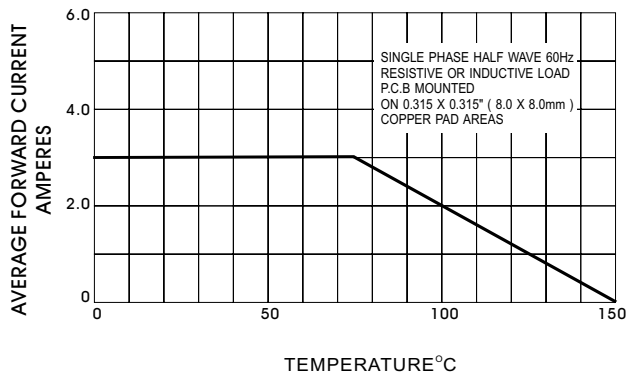


Fig. 1- DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

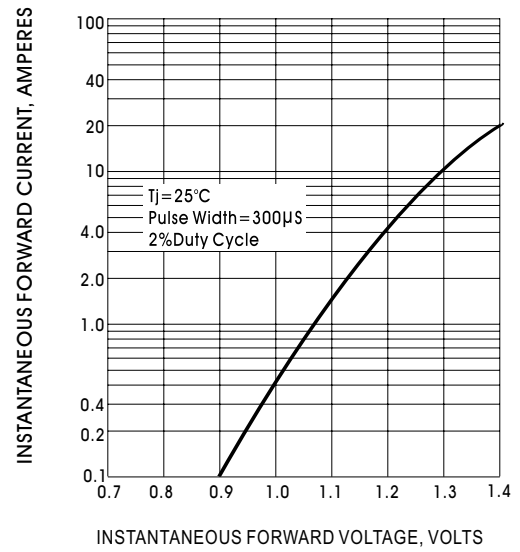


Fig. 2- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER ELEMENT

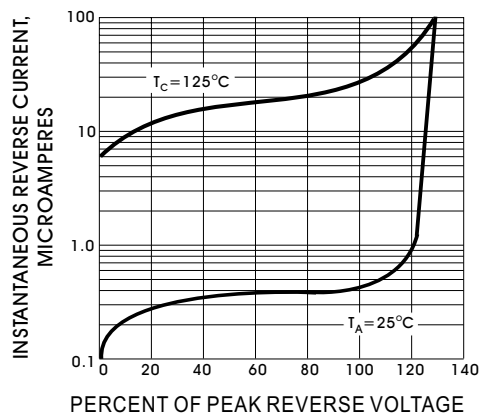


Fig. 3- TYPICAL REAK REVERSE CHARACTERISTICS

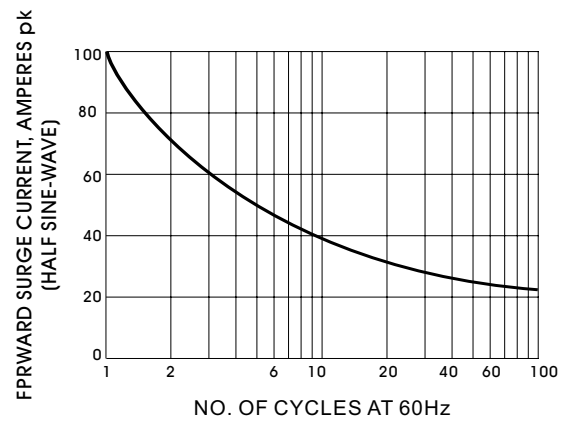


Fig. 4- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

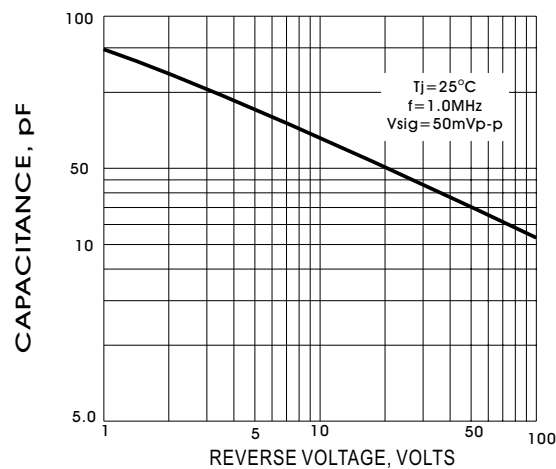


Fig. 5- TYPICAL JUNCTION CAPACITANCE PER ELEMENT