

S3A THRU S3M

SURFACE MOUNT RECTIFIER

VOLTAGE - 50 to 1000 Volts CURRENT - 3.0 Amperes

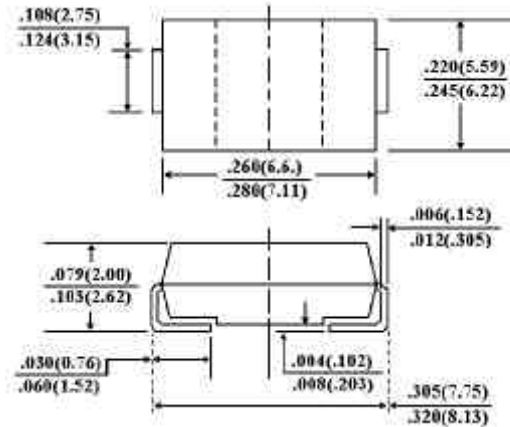
FEATURES

- For surface mounted applications
- Low profile package
- Built-in strain relief
- Easy pick and place
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Glass passivated junction
- High temperature soldering:
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

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%.

	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 $T_L=75$ °C	$I_{(AV)}$	3.0							Amps
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load(JEDEC method)	I_{FSM}	100.0							Amps
Maximum Instantaneous Forward Voltage at 3.0A	V_F	1.20							Volts
Maximum DC Reverse Current $T_A=25$ °C	I_R	5.0							µgA
At Rated DC Blocking Voltage $T_A=125$ °C		250							
Maximum Reverse Recovery Time (Note 1)	T_{RR}	2.5							µgS
Typical Junction capacitance (Note 2)	C_J	53							pF
Typical Thermal Resistance (Note 3)	$R_{\theta KJL}$ $R_{\theta KJA}$	13 47							°C/W
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150							°C

NOTES:

1. Reverse Recovery Test Conditions: $I_F=0.5A$, $I_R=1.0A$, $I_{rr}=0.25A$
2. Measured at 1 MHz and Applied $V_r=4.0$ volts
3. $8.0mm^2$ (.013mm thick) land areas

RATING AND CHARACTERISTIC CURVES

S3A THRU S3M

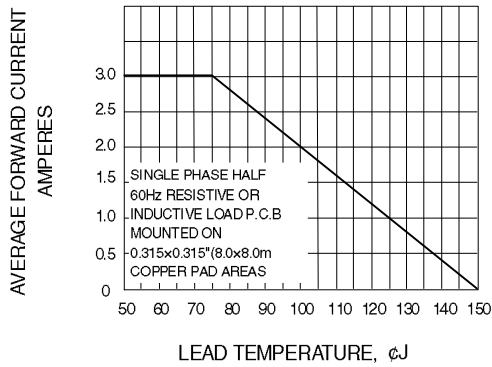


Fig. 1-FORWARD CURRENT DERATING CURVE

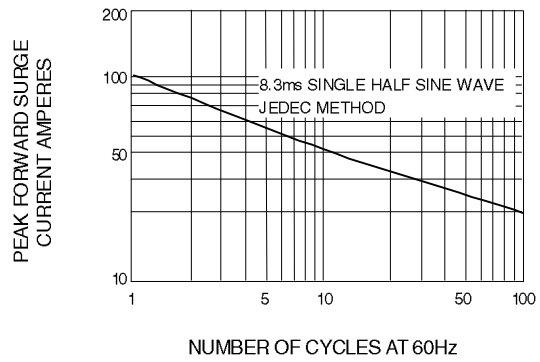


Fig. 2-MAXIMUM NON-REPETITIVE SURGE CURRENT

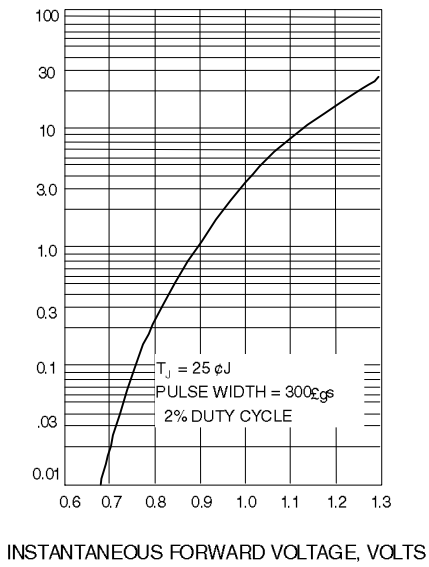


Fig. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

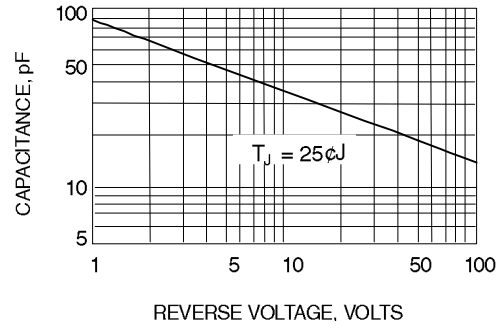


Fig. 4-TYPICAL JUNCTION CHARACTERISTICS

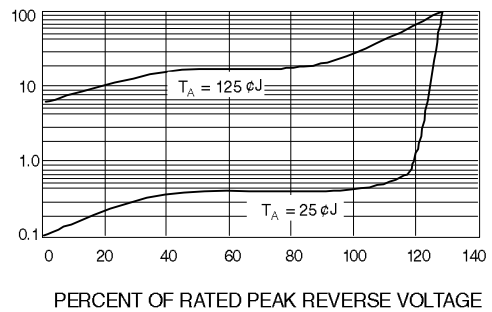


Fig. 5-TYPICAL REVERSE CHARACTERISTICS