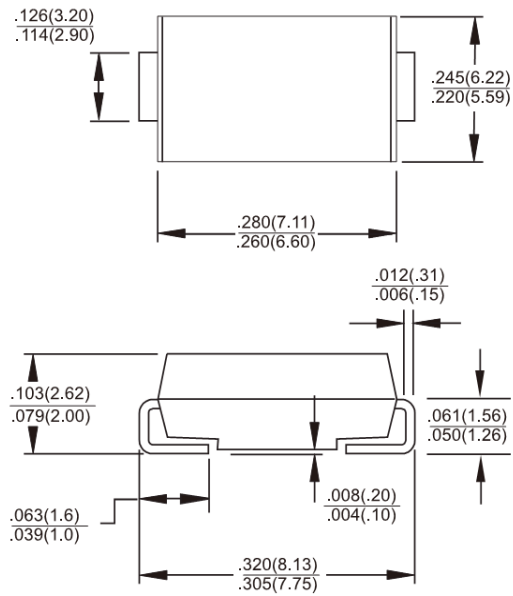



**Features**

- ✧ For surface mounted application
- ✧ Glass passivated chip junction
- ✧ Low forward voltage drop
- ✧ High current capability
- ✧ Easy pick and place
- ✧ High surge current capability
- ✧ Plastic material used carries Underwriters Laboratory Classification 94V-0
- ✧ High temperature soldering: 260 °C /10 seconds at terminals
- ✧ Qualified as per AEC-Q101
- ✧ Green compound with suffix "G" on packing code & prefix "G" on datecode


**Dimensions in inches and (millimeters)**
**Marking Diagram**


- S3X = Specific Device Code
- G = Green Compound
- Y = Year
- M = Work Month

**Mechanical Data**

- ✧ Case: Molded plastic
- ✧ Terminals: Pure tin plated, lead free
- ✧ Polarity: Indicated by cathode band
- ✧ Packing: 16mm tape per EIA STD RS-481
- ✧ Weight: 0.21 grams

**Maximum Ratings and Electrical Characteristics**

Rating 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%

Type Number	Symbol	S3A	S3B	S3D	S3G	S3J	S3K	S3M	Unit
Maximum Repetitive 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 @ $T_L=105^{\circ}C$	$I_{F(AV)}$	3							A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$	100							A
Maximum Instantaneous Forward Voltage (Note 1) @ 3 A	$V_F$	1.15							V
Maximum Reverse Current @ Rated VR $T_A=25^{\circ}C$ $T_A=125^{\circ}C$	$I_R$	10 250							$\mu A$
Maximum Reverse Recovery Time (Note 2)	$T_{rr}$	1.5							$\mu S$
Typical Junction Capacitance (Note 3)	$C_j$	60							pF
Typical Thermal Resistance	$R_{\theta JA}$ $R_{\theta JL}$	47 13							$^{\circ}C/W$
Operating Temperature Range	$T_J$	- 55 to + 150							$^{\circ}C$
Storage Temperature Range	$T_{STG}$	- 55 to + 150							$^{\circ}C$

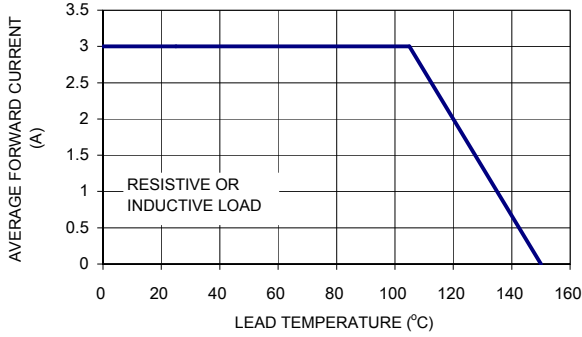
Note 1: Pulse Test with PW=300 usec, 1% Duty Cycle

 Note 2: Reverse Recovery Test Conditions:  $I_F=0.5A$ ,  $I_R=1.0A$ ,  $I_{RR}=0.25A$ 

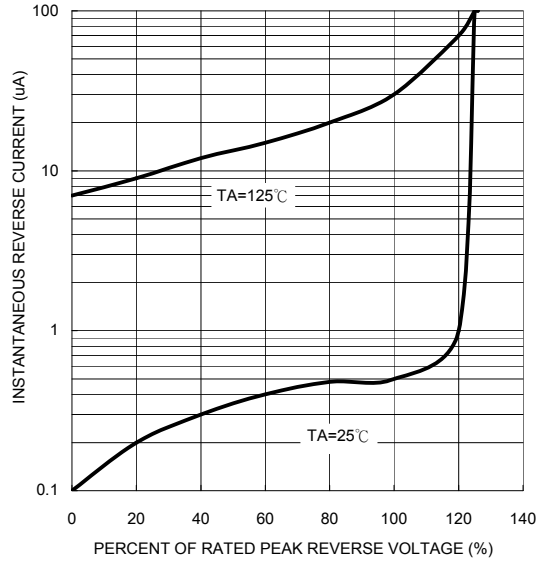
Note 3: Measured at 1 MHz and Applied Reverse Voltage of 4.0V D.C.

**RATINGS AND CHARACTERISTIC CURVES (S3A THRU S3M)**

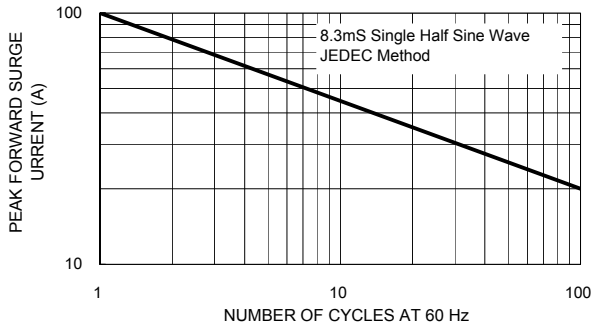
**FIG.1 FORWARD CURRENT DERATING CURVE**



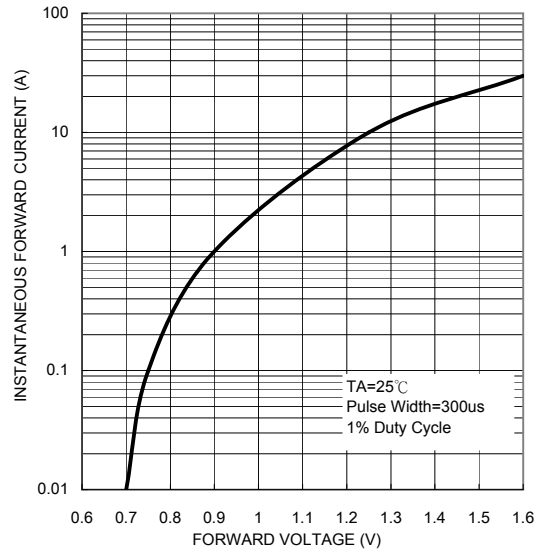
**FIG. 2 TYPICAL REVERSE CHARACTERISTICS**



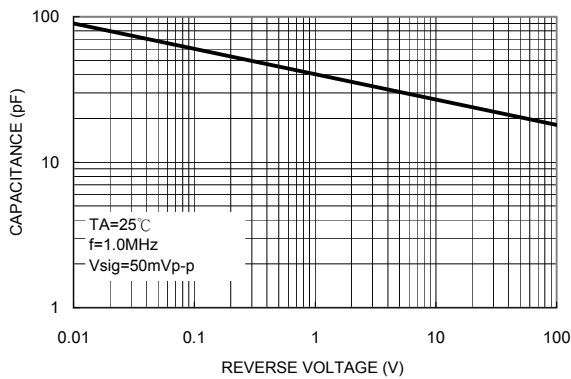
**FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT**



**FIG. 5 TYPICAL FORWARD CHARACTERISTICS**



**FIG. 4 TYPICAL JUNCTION CAPACITANCE**



**FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM**

