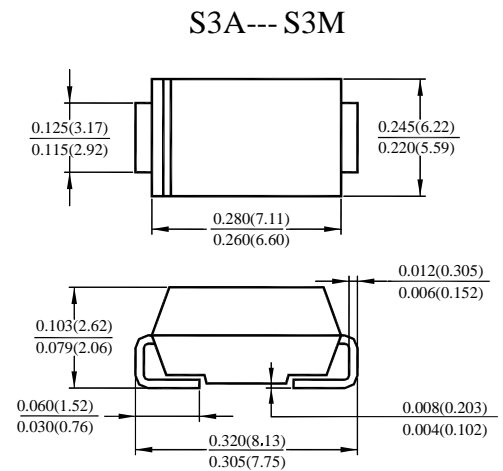


### FEATURES

- For surface mounted application
- 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

### MECHANICAL DATA

- Case: Molded plastic
- Terminals: Pure tin plated, lead free.
- Polarity: Indicated by cathode band
- Packaging: 16mm tape per EIA STD RS-481



Dimensions in inches and (millimeters)  
DO-214AB (SMC)

### 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%.

Type Number	Symbol	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 @ $T_L = 105^\circ C$	$I_{(AV)}$	3.0							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 @ 3.0A	$V_F$	1.15							V
Maximum DC Reverse Current @ $T_A = 25^\circ C$ at Rated DC Blocking Voltage @ $T_A = 125^\circ C$	$I_R$	10.0 250							$\mu A$ $\mu A$
Maximum Reverse Recovery Time ( Note 1 )	$T_{rr}$	2.5							$\mu S$
Typical Junction Capacitance ( Note 2 )	$C_j$	60							pF
Typical Thermal Resistance (Note 3)	$R_{\theta JL}$ $R_{\theta JA}$	13 47							$^\circ C/W$
Operating Temperature Range	$T_J$	-55 to +150							$^\circ C$
Storage Temperature Range	$T_{STG}$	-55 to +150							$^\circ C$

- 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. Measured on P.C. Board with 0.4" x 0.4" (10mm x 10mm) Copper Pad Areas.

S3A---S3M Typical Characteristics

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

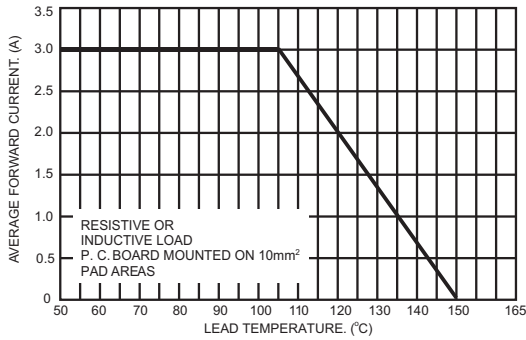


FIG.2- TYPICAL REVERSE CHARACTERISTICS

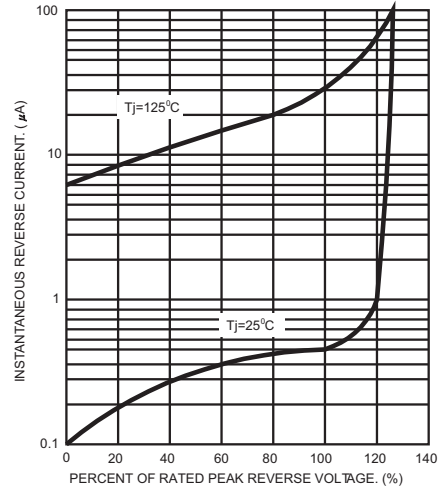


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

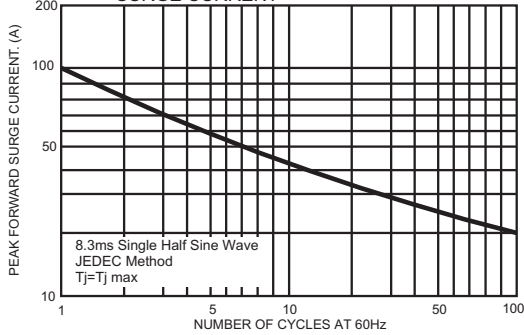


FIG.5- TYPICAL FORWARD CHARACTERISTICS

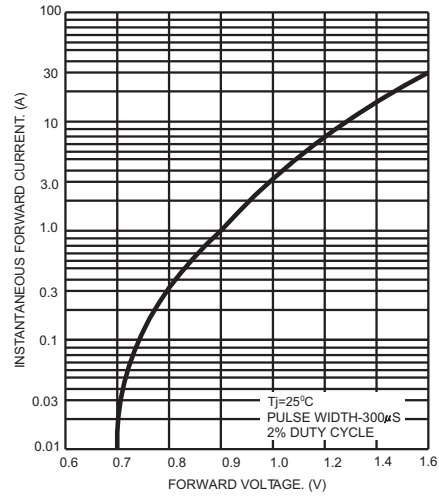


FIG.4- TYPICAL JUNCTION CAPACITANCE

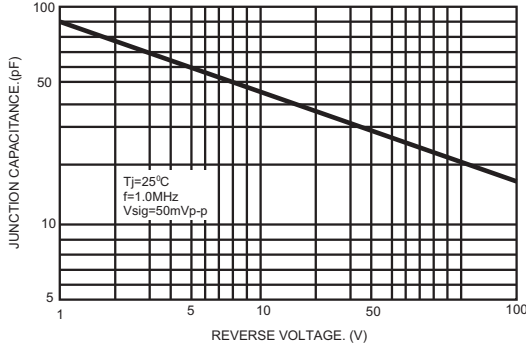


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

