

# RS3A THRU RS3M

## SURFACE MOUNT ULTRA FAST RECTIFIER

Reverse Voltage - 50 to 1000 Volts    Forward Current - 3.0 Ampere

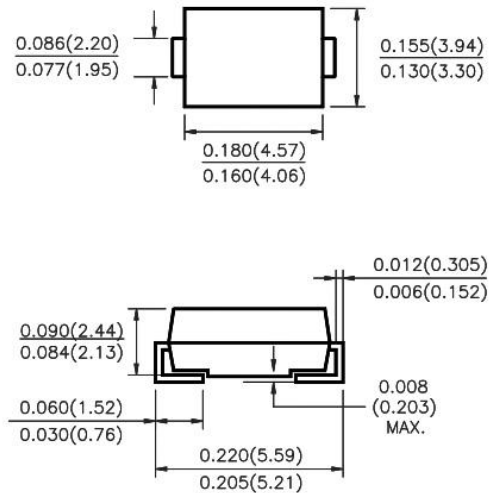
### FEATURES

- ◆ The plastic package carries Underwriters Laboratory
- ◆ Flammability Classification 94V-0
- ◆ Low profile surface mount package
- ◆ Built in strain relief
- ◆ Fast switching speed for high efficiency
- ◆ Glass passivated chip junction
- ◆ High temperature soldering guaranteed:  
250°C/10 seconds

### Mechanical Data

- ◆ Case: JEDED DO-214AA molded plastic over glass passivated chip
- ◆ Terminals: Solder plated, solderable per MIL-STD-750, method 2026
- ◆ Polarity: Color band denotes cathode end

### DO-214AA (SMB)



Dimensions in inches and (millimeters)

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 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	RS3A	RS3B	RS3D	RS3G	RS3J	RS3K	RS3M	UNIT
Maximum Repetitive 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 $T_L=90^\circ\text{C}$	$I_{(AV)}$	3.0							Amps
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) $T_L=90^\circ\text{C}$	$I_{FSM}$	100							Amps
Typical Thermal Resistance (Note 1)	$R_{\theta JA}$	55							°C/W
	$R_{\theta JL}$	18							
Operating junction and Storage Temperature Range	$T_J, T_{STG}$	-55 to +150							°C

### ELECTRICAL CHARACTERISTICS

	SYMBOLS	RS3A	RS3B	RS3D	RS3G	RS3J	RS3K	RS3M	UNIT
Maximum Instantaneous Forward Voltage at 1.5A	$V_F$	1.30							Volts
Maximum DC Reverse Current at rated DC Blocking Voltage	$T_A = 25^\circ\text{C}$	5.0							uA
	$T_A = 125^\circ\text{C}$	50							
Typical Reverse Recovery Time at $I_F=0.5\text{A}, I_R=1.0\text{A}, I_{RR}=0.25\text{A}$	$t_{rr}$	150				250	500	ns	

Note: 1. Thermal resistance from Junction to ambient and from junction to lead mounted on P.C.B. with  $0.27 \times 0.27''$  ( $7.0 \times 7.0\text{mm}$ ) copper pad areas.

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### RATING AND CHARACTERISTIC CURVES US3A THRU US3M

FIG.1-FORWARD CURRENT DERATING CURVE

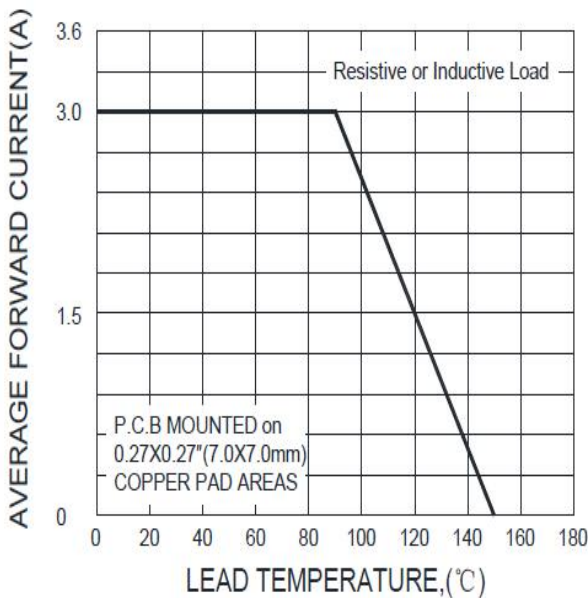


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

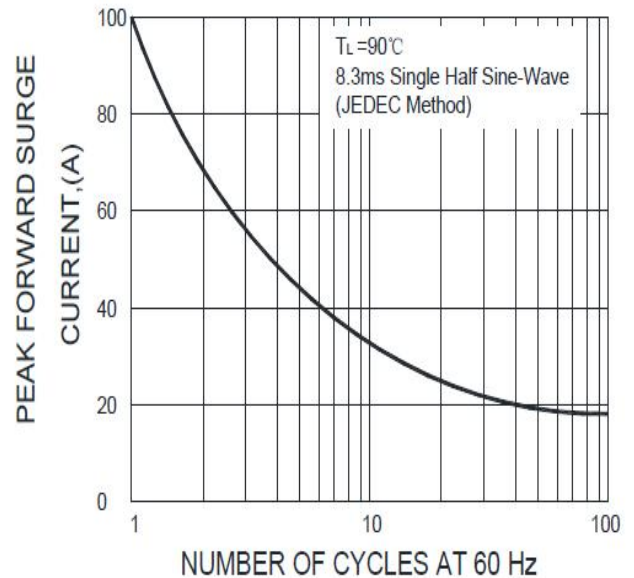


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

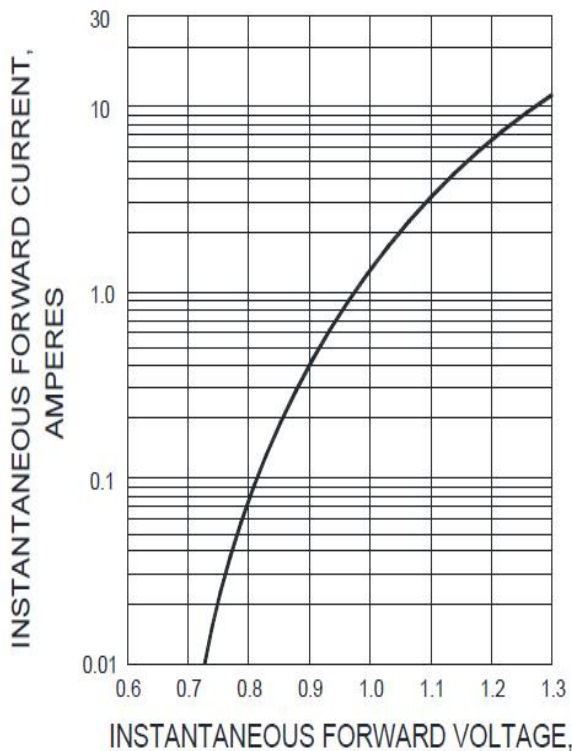
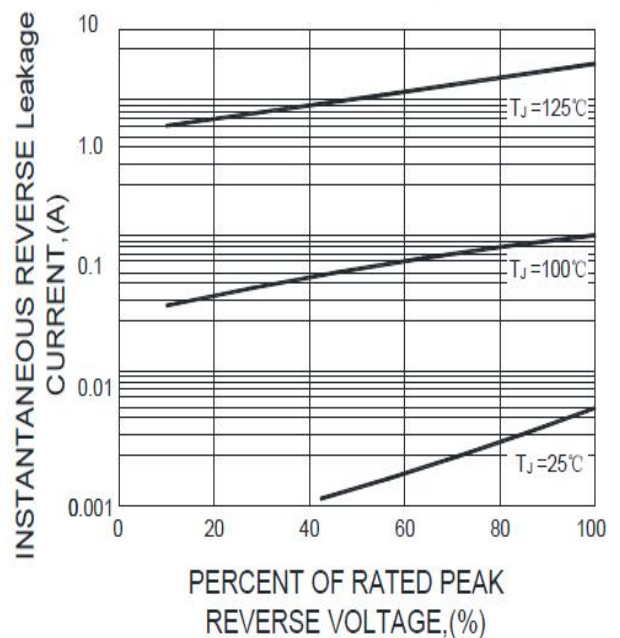


FIG.4-TYPICAL REVERSE CHARACTERISTICS



Note: Specifications are subject to change without notice. For more detail and update, please visit our website.