

# RS5A THRU RS5M

## SSURFACE MOUNT SUPER FAST RECTIFIER

Reverse Voltage - 50 to 1000 Volts Forward Current - 5.0 Ampere

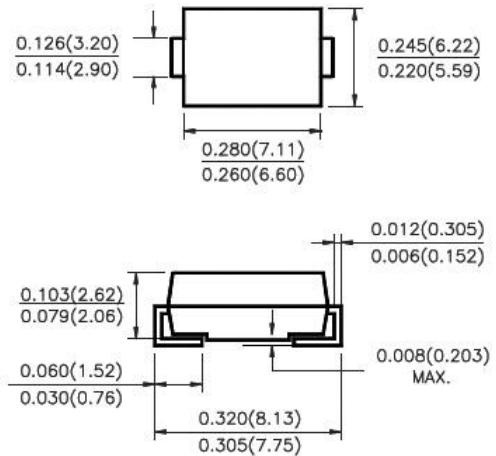
### FEATURES

- ◆ Plastic package has underwrites laboratory flammability
- Classification 94V-0
- ◆ For surface mounted applications
- ◆ Low profile package
- ◆ Built-in strain relief, ideal for automated placement
- ◆ Glass passivated chip junction
- ◆ High temperature soldering guaranteed:  
250°C/10 second at terminals

### 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
- ◆ Weight: 0.007ounce, 0.25 gram

### DO-214AB (SMC)



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	RS5A	RS5B	RS5D	RS5G	RS5J	RS5K	RS5M	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	$I_{F(AV)}$	5.0							Amps
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	150							Amps
Typical Thermal Resistance (Note 1)	$R_{\theta JA}$	47							°C/W
	$R_{\theta JL}$	13							
Operating junction and Storage Temperature Range	$T_J, T_{STG}$	-55 to +150							°C

### ELECTRICAL CHARACTERISTICS

TYPE NUMBER	SYMBOLS	RS2A	RS2B	RS2D	RS2G	RS2J	RS2K	RS2M	UNIT
Maximum Instantaneous Forward Voltage at 5.0A	$V_F$	1.30							Volts
Maximum DC Reverse Current at rated DC Blocking Voltage	$T_A = 25^\circ C$	5.0							uA
	$T_A = 125^\circ C$	50							
Typical Reverse Recovery Time at $I_F = 0.5A, I_R = 1.0A, I_{RR} = 0.25A$	$t_{rr}$	150				250	500	ns	

Note: 1. Thermal resistance from Junction to ambient and from junction to lead mounted on P.C.B. with  $0.3 \times 0.3''$  ( $8.0 \times 8.0$ mm) copper pad areas.

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### RATING AND CHARACTERISTIC CURVES RS5A THRU RS5M

FIG.1—FORWARD CURRENT DERATING CURVE

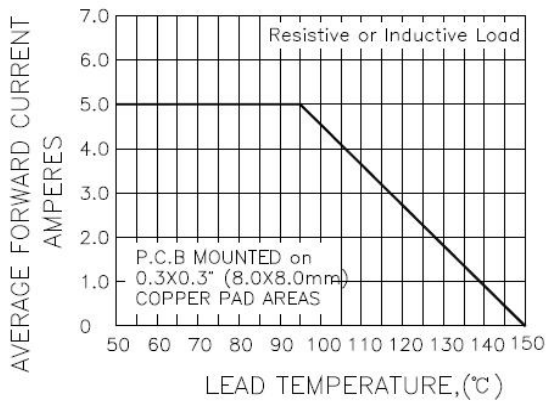


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

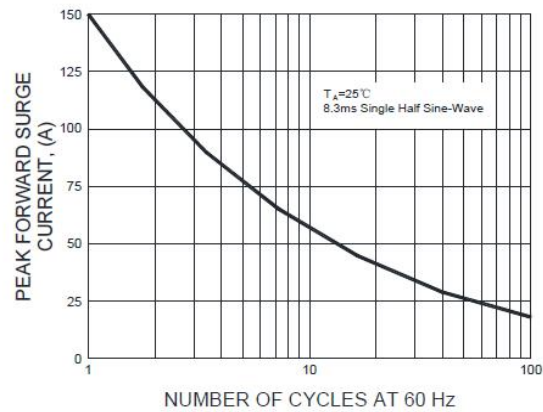


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

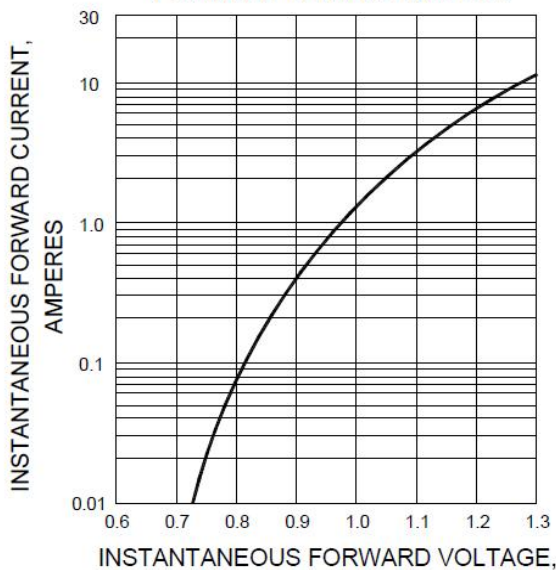


FIG.4-TYPICAL REVERSE CHARACTERISTICS

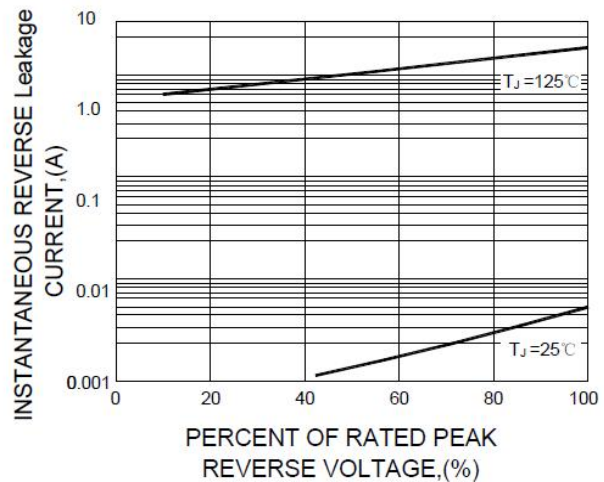


FIG.5—TYPICAL JUNCTION CAPACITANCE

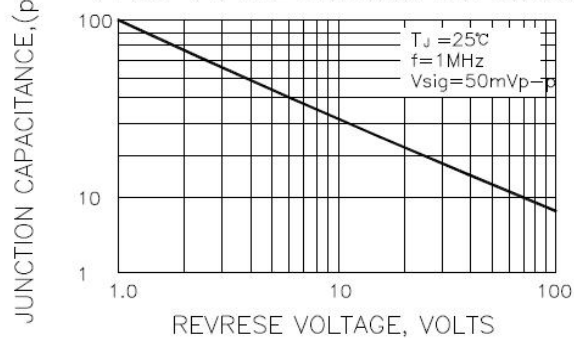
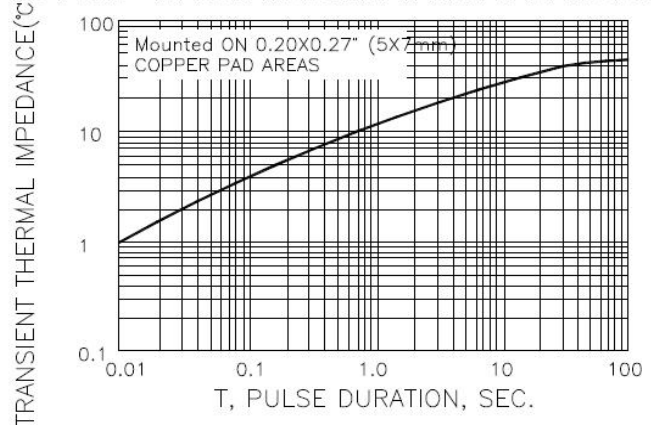


FIG.6—TYPICAL TRANSIENT THERMAL IMPEDANCE



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