



# SMA5817-SMA5819 SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

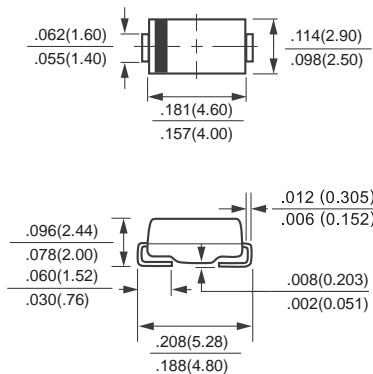
**VOLTAGE RANGE - 20 to 80 Volts CURRENT - 1.0 Ampere**

## MECHANICAL DATA

- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Terminals: Solder plated solderable per MIL-STD-750, Method 2026
- \* Polarity: As marked
- \* Mounting position: Any
- \* Weight: 0.064 gram

## FEATURES

- \* Ideal for surface mounted applications
- \* Low leakage current
- \* Glass passivated junction



SMA (DO-214AC)



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%.

PARAMETER	SYMBOL	SMA5817	SMA5818	SMA5819	SR150	SR160	SR170	UNITS
		SS12	SS13	SS14	SS15	SS16	SS18	
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	20	30	40	50	60	80	Volts
Maximum RMS Bridge Input Voltage	$V_{RMS}$	14	21	28	35	42	56	Volts
Maximum DC Blocking Voltage	$V_{DC}$	20	30	40	50	60	80	Volts
Maximum Average Forward Rectified Current at Derating Lead Temperature	$I_O$	1.0						Amps
Peak Forward Surge Current: 8.3 ms single half sine-wave Superimposed on rated load (JEDEC Method)	$I_{FSM}$	30						Amps
Maximum Instantaneous Voltage at 1.0A DC	$V_F$	0.55		0.70		0.85		Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	@ $T_A = 25^\circ C$	1.0						mAmps
	@ $T_A = 100^\circ C$	20						
Typical Junction Capacitance ( Note 1 )	$C_J$	110						pF
Typical Thermal Resistance ( Note 2 )	$R_{\theta JA}$	88						$^\circ C/W$
Operating and Storage Temperature Range	$T_J, T_{STG}$	-65 to +125 , -65 to +150						$^\circ C$

Notes: 1. Measured at 1 MHz and applied reverse voltage of 4.0volts.  
2. Thermal Resistance from Junction to Ambient,  $0.2 \times 0.2 \times (5.0 \times 5.0 \text{mm}^2)$  copper pad area.



# SMA5817-SMA5819

## RATINGS AND CHARACTERISTICS

FIG. 1 TYPICAL FORWARD CURRENT DERATING CURVE

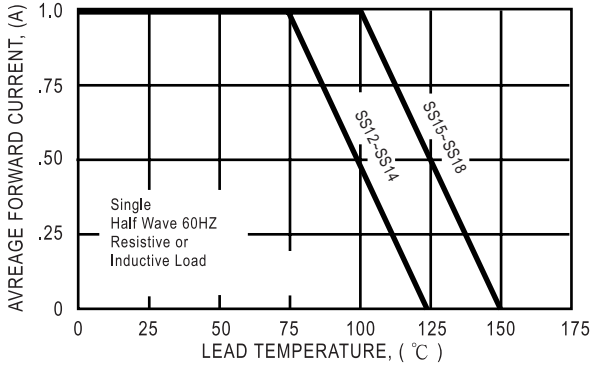


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

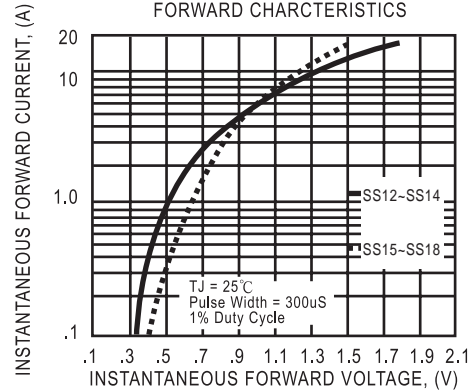


FIG. 3A - TYPICAL REVERSE CHARACTERISTICS

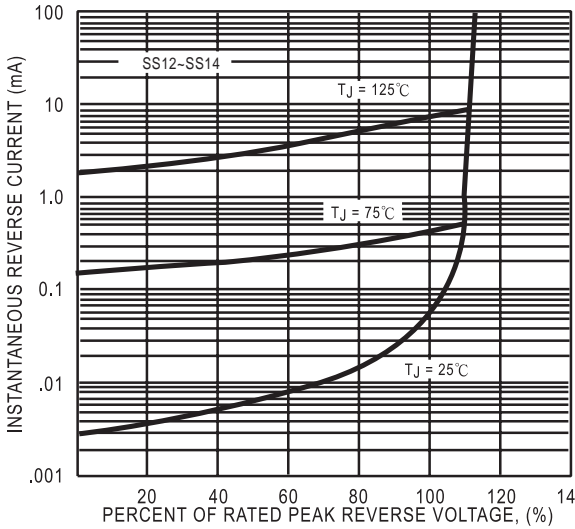


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

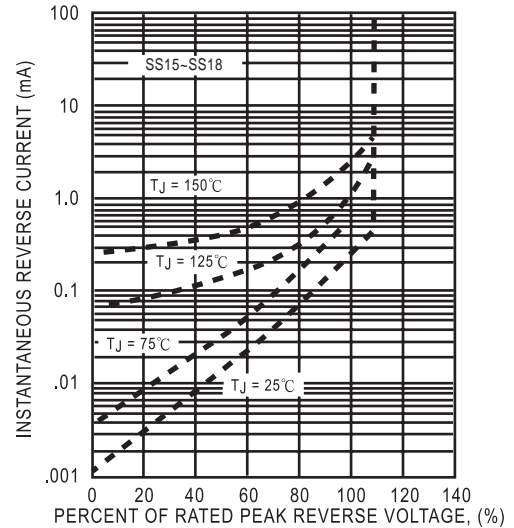


FIG. 4 - TYPICAL JUNCTION CAPACITANCE

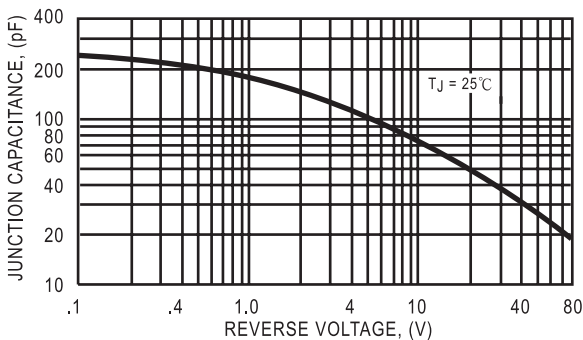


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

