



## SMA5817-SMA5819 SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

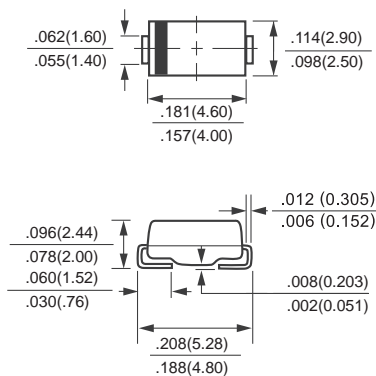
**VOLTAGE RANGE - 20 to 80 Volts CURRENT - 1.0 Ampere**

### 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 SS12	SMA5818 SS13	SMA5819 SS14	SR150 SS15	SR160 SS16	SR170 SS18	UNITS
Maximum Recurrent Peak Reverse Voltage		V <sub>RRM</sub>	20	30	40	50	60	80	Volts
Maximum RMS Bridge Input Voltage		V <sub>RMS</sub>	14	21	28	35	42	56	Volts
Maximum DC Blocking Voltage		V <sub>DC</sub>	20	30	40	50	60	80	Volts
Maximum Average Forward Rectified Current at Derating Lead Temperature		I <sub>O</sub>	1.0						Amps
Peak Forward Surge Current: 8.3 ms single half sine-wave Superimposed on rated load (JEDEC Method)		I <sub>FSM</sub>	30						Amps
Maximum Instantaneous Voltage at 1.0A DC		V <sub>F</sub>	0.55		0.70		0.85		Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	@T <sub>A</sub> = 25°C	I <sub>R</sub>	1.0						mAmps
	@T <sub>A</sub> = 100°C		20						
Typical Junction Capacitance ( Note 1 )		C <sub>J</sub>	110						pF
Typical Thermal Resistance ( Note 2 )		R θ <sub>JA</sub>	88						°C/W
Operating and Storage Temperature Range		T <sub>J</sub> ,T <sub>STG</sub>	-65 to +125 , -65 to +150						°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

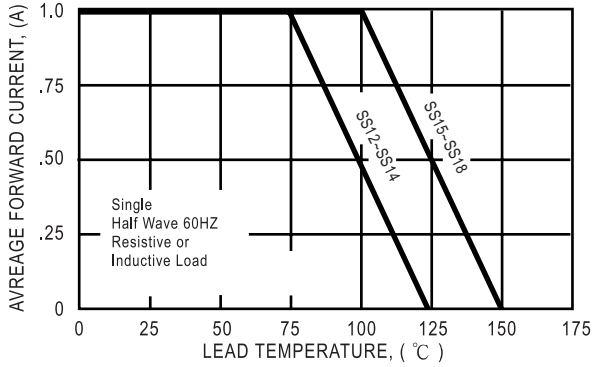


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

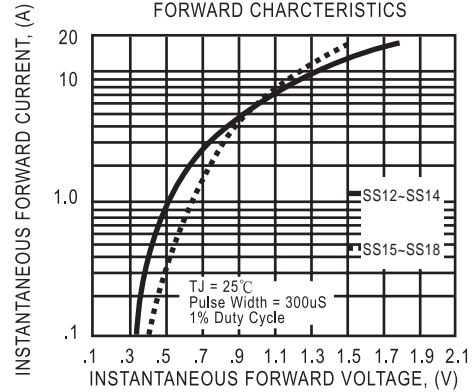


FIG. 3A - TYPICAL REVERSE CHARACTERISTICS

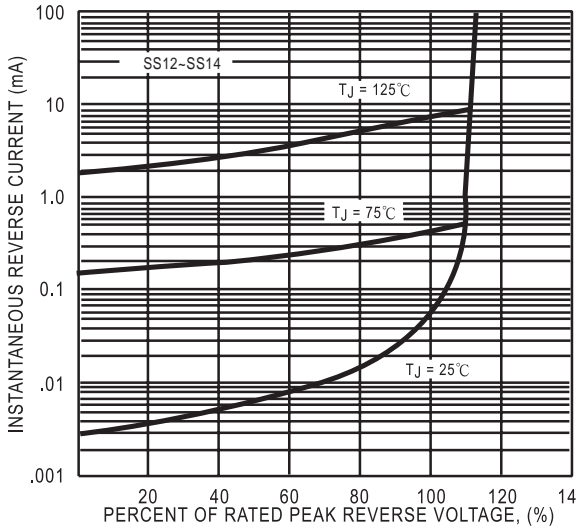


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

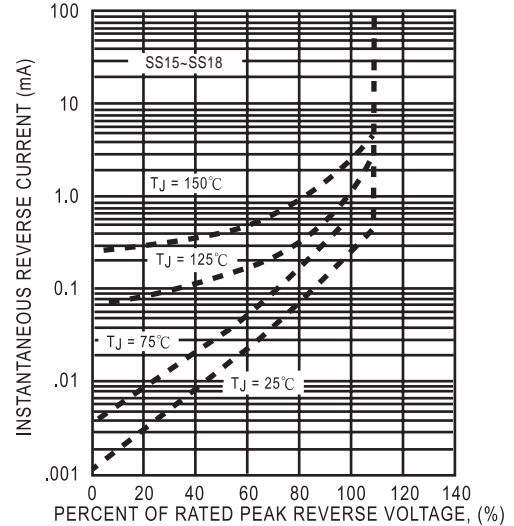


FIG. 4 - TYPICAL JUNCTION CAPACITANCE

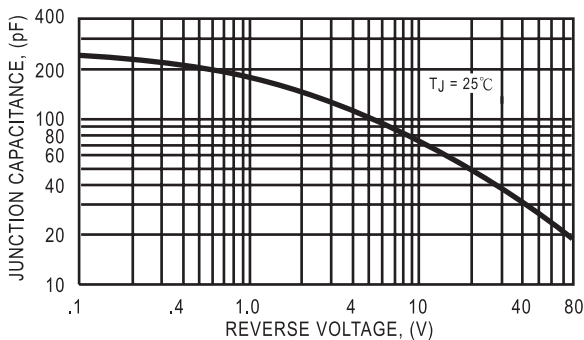


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

