



SMA5817-SMA5819 SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

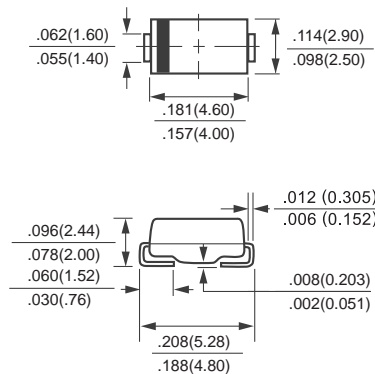
VOLTAGE RANGE - 20 to 80 Volts CURRENT - 1.0 Ampere

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.



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RATINGS AND CHARACTERISTICS

FIG. 1 TYPICAL FORWARD CURRENT DERATING CURVE

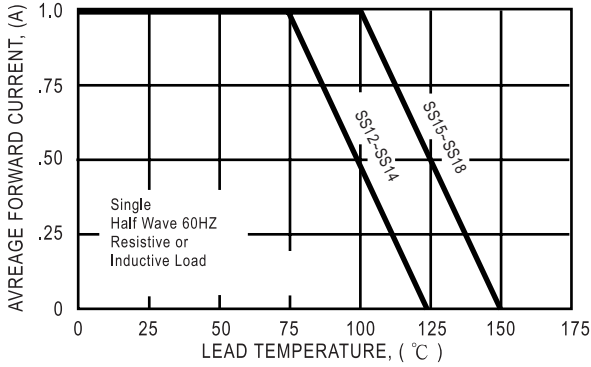


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

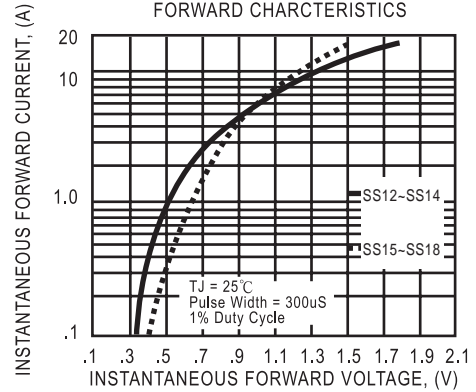


FIG. 3A - TYPICAL REVERSE CHARACTERISTICS

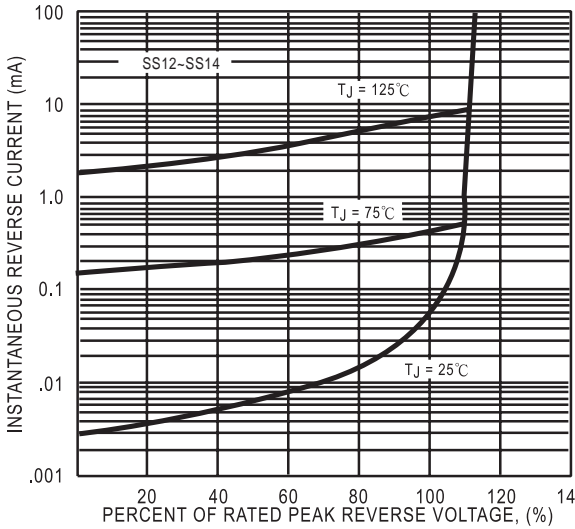


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

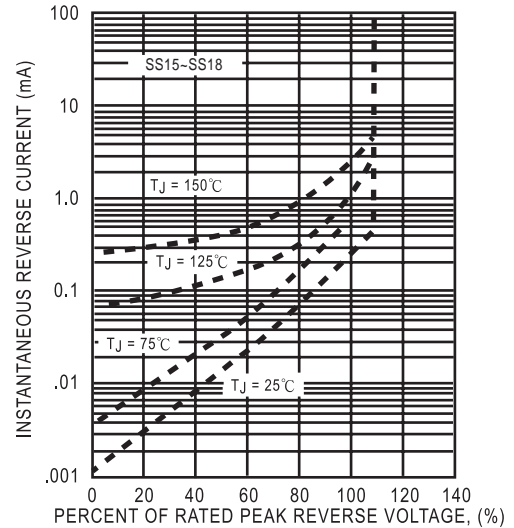


FIG. 4 - TYPICAL JUNCTION CAPACITANCE

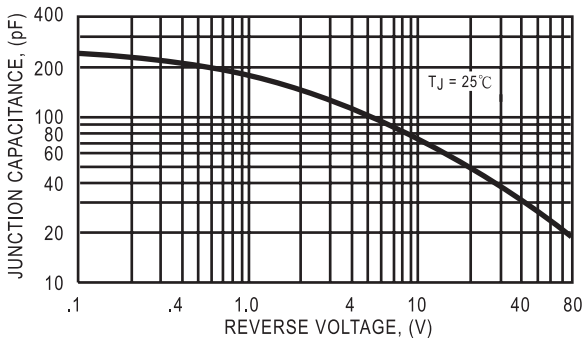


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

