



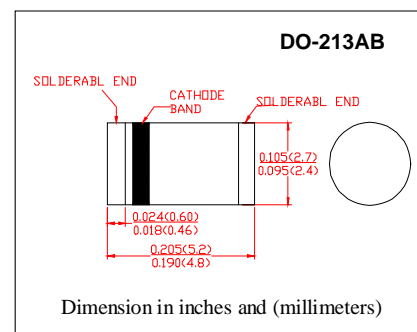
SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

SM5817 - SM5819

VOLTAGE RANGE - 20 to 40 V
CURRENT - 1 A

FEATURES

- Fast switching
- Low forward voltage drop.
- Low power loss , high efficiency
- High surge capability
- High reliability
- High current capability
- Plastic package has underwrites laboratory flammability classification 94v-0
- High temperature soldering guaranteed:
250 °C/10 seconds at terminals .



MECHANICAL DATA

- Case: molded plastic
- Polarity: Color band indicate cathode
- Mounting Position: Any.
- Weight: 0.12 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings 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 | SM5817 | SM5818 | SM5819 | UNITS |
|--|-------------------------|-------------|--------|--------|---------------------------|
| Maximum Repetitive Peak Reverse Voltage | V_{RRM} | 20 | 30 | 40 | Volts |
| Maximum RMS Voltage | V_{RMS} | 14 | 21 | 28 | Volts |
| Maximum DC Blocking Voltage | V_{DC} | 20 | 30 | 40 | Volts |
| Maximum Average Forward Rectified Current, at $T_L=90^\circ\text{C}$ | $I_{(AV)}$ | 1.0 | | | Amp |
| Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | I_{FSM} | 25 | | | Amps |
| Maximum Instantaneous Forward Voltage at 1.0A | V_F | 0.450 | 0.550 | 0.600 | Volts |
| Maximum DC Reverse Current at rated DC blocking voltage at (Note1) | $T_A=25^\circ\text{C}$ | 0.5 | | | mA |
| | $T_A=125^\circ\text{C}$ | 10 | | | |
| Typical Junction Capacitance (Note 2) | C_J | 110 | | | PF |
| Maximum Thermal Resistance | $R_{QJL}(\text{Note3})$ | 30 | | | $^\circ\text{C}/\text{W}$ |
| | $R_{QA}(\text{Note4})$ | 80 | | | |
| Operating and Storage Temperature Range | T_J, T_{STG} | -55 to +125 | | | $^\circ\text{C}$ |

NOTES:

1. Pulse test:300 μs pulse width 1% duty cycle
2. Measured at 1.0MHZ and applied reverse voltage of 4.0 volts DC.
3. Thermal resistance junction to terminal 6.0mm² copper pads to each terminal.
4. Thermal resistance junction to ambient 6.0mm² copper pads to each terminal.



SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

SM5817 - SM5819

VOLTAGE RANGE - 20 to 40 V
CURRENT - 1 A

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

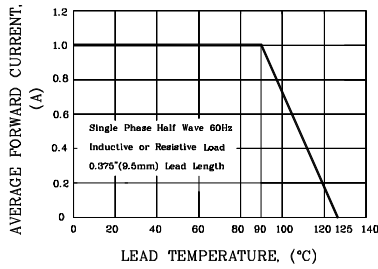


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

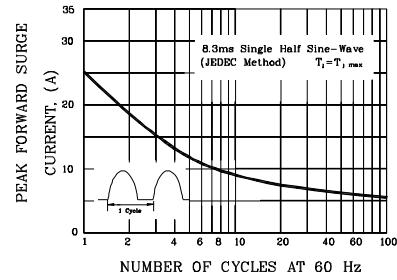


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

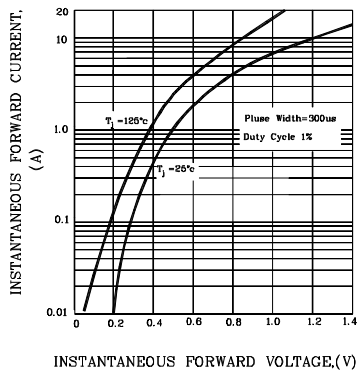


FIG.4-TYPICAL REVERSE CHARACTERISTICS

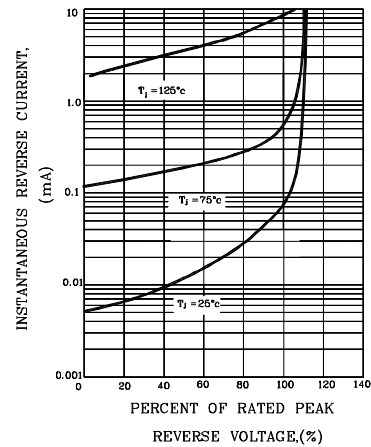


FIG.5-TYPICAL JUNCTION CAPACITANCE

