

SCHOTTKY BARRIER RECTIFIER

VOLTAGE RANGE 20 to 40 Volts CURRENT 1.0 Ampere

FEATURES

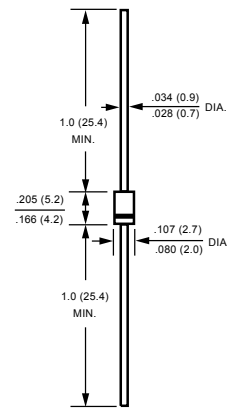
- * Low power loss, high efficiency
- * Low leakage
- * Low forward voltage
- * High current capability
- * High speed switching
- * High surge capability
- * High reliability

MECHANICAL DATA

- * Case: Molded plastic
- * Epoxy: Device has UL flammability classification 94V-0
- * Lead: MIL-STD-202E method 208C guaranteed
- * Mounting position: Any
- * Weight: 0.33 gram



DO-41



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%.

MAXIMUM RATINGS (@ TA=25 °C unless otherwise noted)

| RATINGS | SYMBOL | 1N5817 | 1N5818 | 1N5819 | UNITS |
|--|------------------|--------------|--------|--------|-------|
| Maximum Recurrent 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 .375" (9.5mm) lead length at T _L =90°C | I _O | 1.0 | | | Amps |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | I _{FSM} | 25 | | | Amps |
| Typical Thermal Resistance (Note 3) | R _{θJA} | 50 | | | °C/W |
| | R _{θJL} | 15 | | | |
| Typical Junction Capacitance (Note 1) | C _J | 110 | | | pF |
| Operating Temperature Range | T _J | 150 | | | °C |
| Storage Temperature Range | T _{STG} | -55 to + 150 | | | °C |

ELECTRICAL CHARACTERISTICS(@TA=25 °C unless otherwise noted)

| CHARACTERISTICS | SYMBOL | 1N5817 | 1N5818 | 1N5819 | UNITS |
|---|-------------------------|--------|--------|--------|-------|
| Maximum Instantaneous Forward Voltage at 1.0A DC | V _F | .45 | .55 | .60 | Volts |
| Maximum Instantaneous Forward Voltage at 3.1A DC | V _F | .75 | 0.875 | 0.90 | Volts |
| Maximum Average Reverse Current at Rated DC Blocking Voltage | @T _A = 25°C | 0.2 | | | mAmps |
| | @T _A = 100°C | 10 | | | mAmps |

- NOTES : 1. Measured at 1 MHz and applied reverse voltage of 4.0 volts.
2. "Fully ROHS compliant", "100% Sn plating (Pb-free)".
3. Thermal Resistance : At 9.5mm lead lengths, PCB mounted.

RATING AND CHARACTERISTICS CURVES (1N5817 THRU 1N5819)

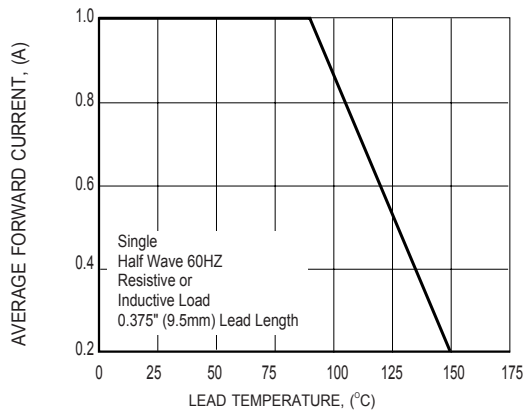


FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

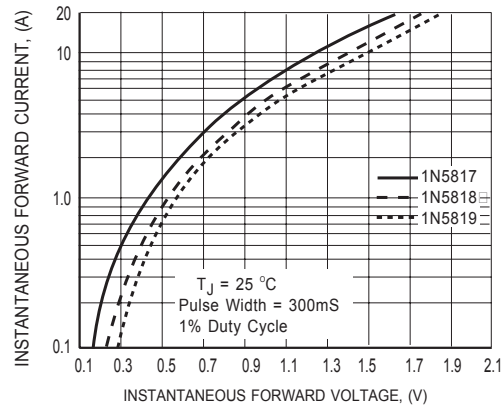


FIG.2 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

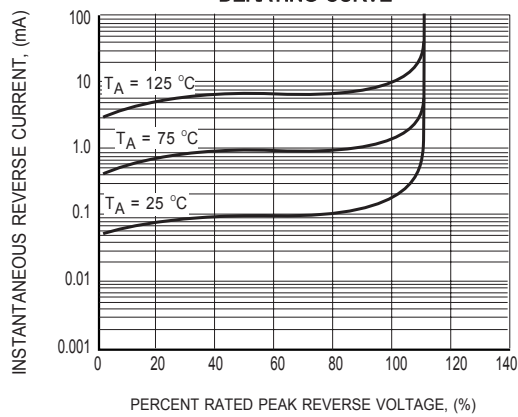


FIG.3 TYPICAL REVERSE CHARACTERISTICS

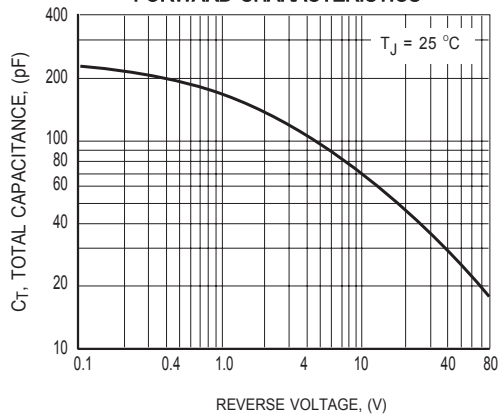


FIG.4 TYPICAL JUNCTION CAPACITANCE

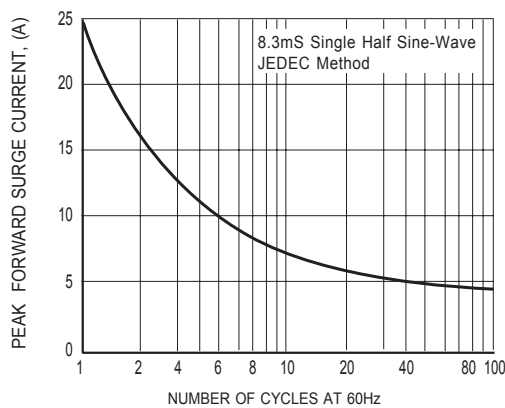


FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

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