

VOLTAGE RANGE: 20 - 40V

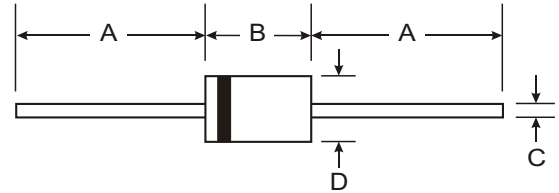
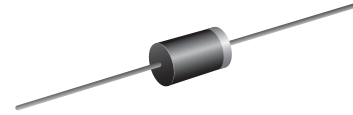
CURRENT: 1.0 A

Features

- Schottky Barrier Chip
- Guard Ring Die Construction for Transient Protection
- Low Power Loss, High Efficiency
- High Surge Capability
- High Current Capability and Low Forward Voltage Drop
- For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Application
- Plastic Material: UL Flammability Classification Rating 94V-0

Mechanical Data

- Case: D O - 4 1 Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 0.34 grams (approx.)
- Mounting Position: Any
- Marking: Type Number



| DO-41 | | |
|----------------------|-------|-------|
| Dim | Min | Max |
| A | 25.40 | — |
| B | 4.06 | 5.21 |
| C | 0.71 | 0.864 |
| D | 2.00 | 2.72 |
| All Dimensions in mm | | |

Maximum Ratings and Electrical Characteristics @ T_A = 25°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

| Characteristic | Symbol | 1N5817 | 1N5818 | 1N5819 | Unit |
|---|-----------------------------------|--------|-------------|--------|------|
| Peak Repetitive Reverse Voltage | V _{RRM} | | | | V |
| Working Peak Reverse Voltage | V _{RWM} | 20 | 30 | 40 | |
| DC Blocking Voltage | V _R | | | | |
| RMS Reverse Voltage | V _{R(RMS)} | 14 | 21 | 28 | V |
| Average Rectified Output Current (Note 1) | I _O | | 1.0 | | A |
| @ T _L = 90°C | | | | | |
| Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | I _{FSM} | | 25 | | A |
| Forward Voltage (Note 2) | V _{FM} | 0.450 | 0.550 | 0.60 | V |
| | | 0.750 | 0.875 | 0.90 | |
| Peak Reverse Leakage Current at Rated DC Blocking Voltage (Note 2) | I _{RM} | | 1.0 | | mA |
| | | | 10 | | |
| Typical Total Capacitance (Note 3) | C _T | | 110 | | pF |
| Typical Thermal Resistance Junction to Lead (Note 4) | R _{θJL} | | 15 | | °C/W |
| Typical Thermal Resistance Junction to Ambient | R _{θJA} | | 50 | | |
| Operating and Storage Temperature Range | T _j , T _{STG} | | -65 to +125 | | °C |

- Notes:
1. Measured at ambient temperature at a distance of 9.5mm from the case.
 2. Short duration test pulse used to minimize self-heating effect.
 3. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
 4. Thermal resistance from junction to lead vertical P.C.B. mounted, 0.375" (9.5mm) lead length with 1.5 x 1.5" (38 x 38mm) copper pads.

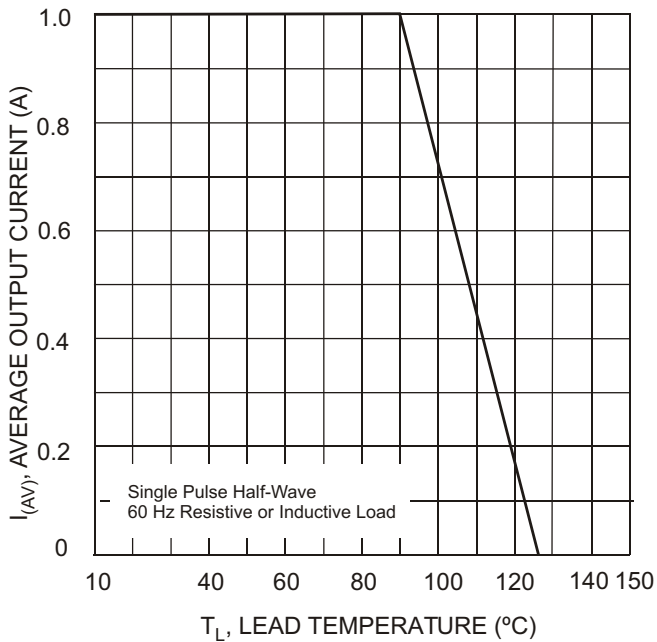


Fig. 1 Forward Current Derating Curve

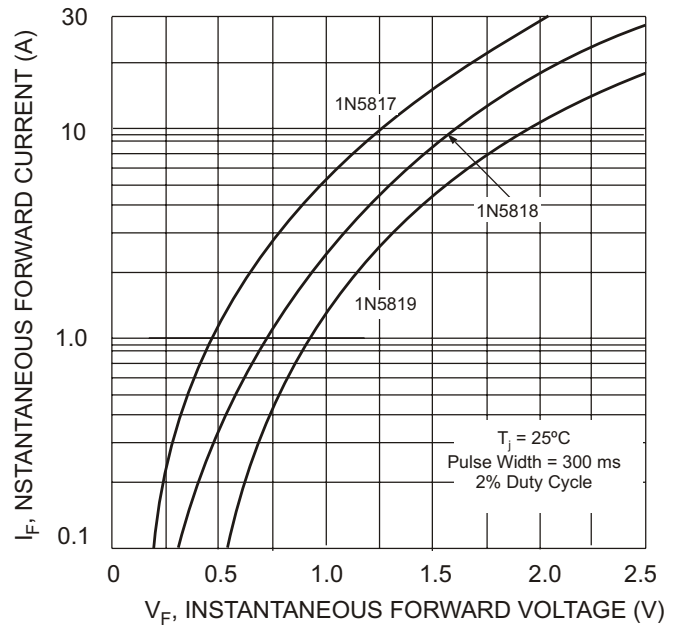


Fig. 2 Typical Forward Characteristics

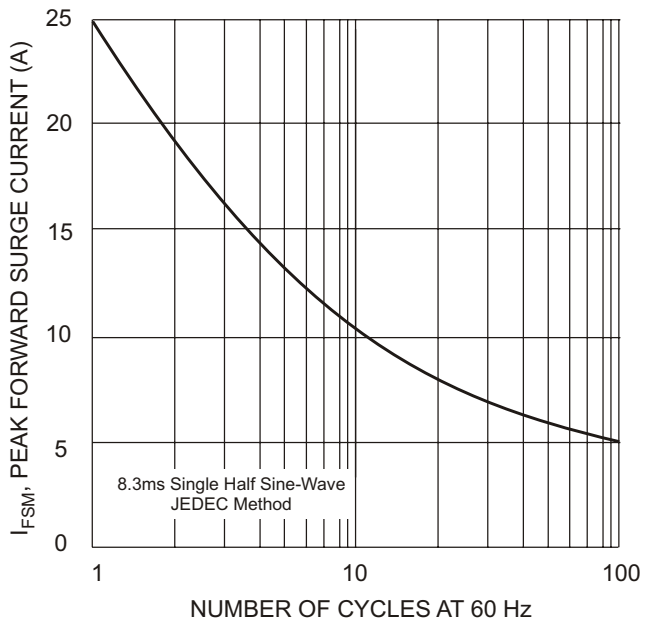


Fig. 3 Maximum Non-Repetitive Peak Fwd Surge Current

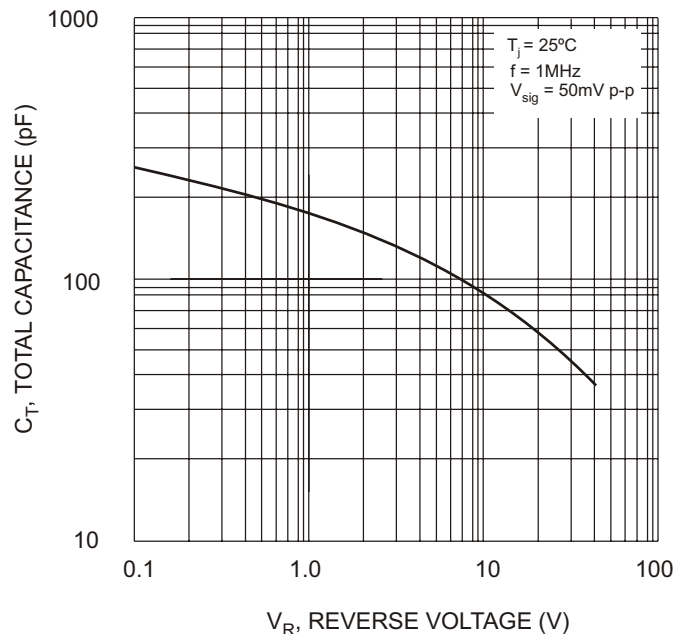


Fig. 4 Typical Total Capacitance