

1N5817 thru 1N5819

Schottky Barrier Rectifiers Reverse Voltage 20 to 40V Forward Current 1.0A

Feature & Dimensions

- * Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- * Low power loss, high efficiency
- * For use in low voltage high frequency inverters, free wheeling, and polarity protection applications
- * Guarding for over voltage protection
- * High temperature soldering guaranteed: 260°C/10 seconds at terminals
- * Green epoxy mold compound

Mechanical Data

Case: JEDEC DO-41, molded plastic over glass body

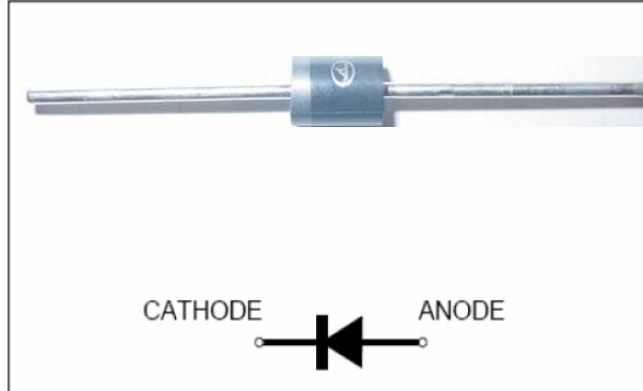
Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026

Polarity: Color band denotes cathode end

Mounting Position: Any

Weight: 0.011 oz., 0.284 g

Handling precaution: None



We declare that the material of product compliance with ROHS requirements

1. Maximum & Thermal Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

| Parameter Symbol | symbol | 1N5817 | 1N5818 | 1N5819 | Unit |
|--|-----------------|-------------|--------|--------|------|
| device marking code | | 1N5817 | 1N5818 | 1N5819 | |
| Maximum repetitive peak reverse voltage | V_{RRM} | 20 | 30 | 40 | V |
| Maximum RMS voltage | V_{RMS} | 14 | 21 | 28 | V |
| Maximum DC blocking voltage | V_{DC} | 20 | 30 | 40 | V |
| Maximum average forward rectified current 0.375" (9.5mm) lead length (See fig. 1) | $I_{F(AV)}$ | 1.0 | | | A |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | I_{FSM} | 25 | | | A |
| Typical thermal resistance (Note 1) | $R_{\theta JA}$ | 50 | | | °C/W |
| Operating junction and storage temperature range | T_J, T_{STG} | -40 to +150 | | | °C |

Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

| Parameter Symbol | symbol | 1N5817 | 1N5818 | 1N5819 | Unit |
|---|--------|-----------|--------|--------|------|
| Maximum instantaneous forward voltage at 1.0A | V_F | 0.45 | 0.55 | | V |
| Maximum DC reverse current $T_A = 25^\circ\text{C}$ at rated DC blocking voltage $T_A = 100^\circ\text{C}$ | I_R | 1.0 10 | | | mA |
| Typical junction capacitance at 4.0V, 1MHz | C_J | 110 | | | PF |

NOTES:

1. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted

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2. Characteristic Curves (TA = 25°C unless otherwise noted)

Fig. 1 - Forward Current Derating Curve

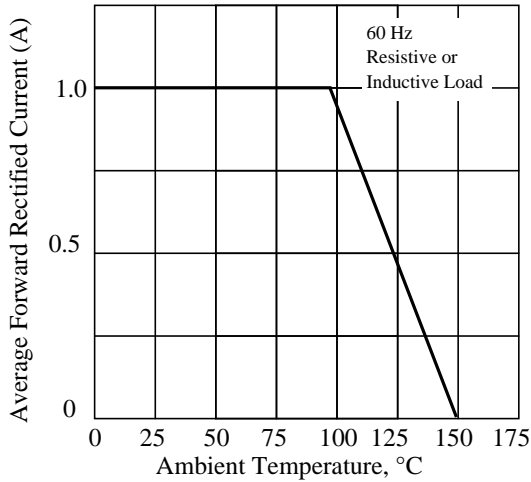


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

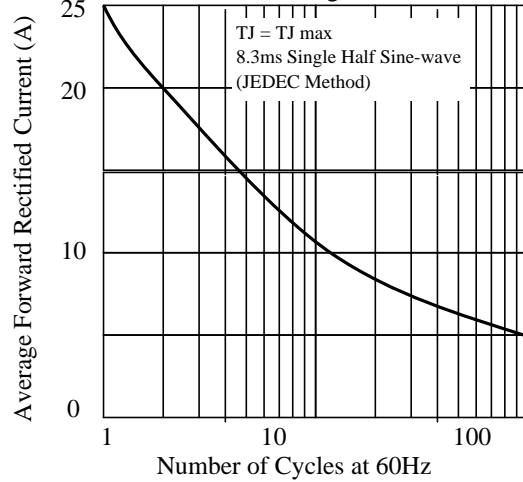


Fig 3 - Typical Instantaneous Forward Characteristics

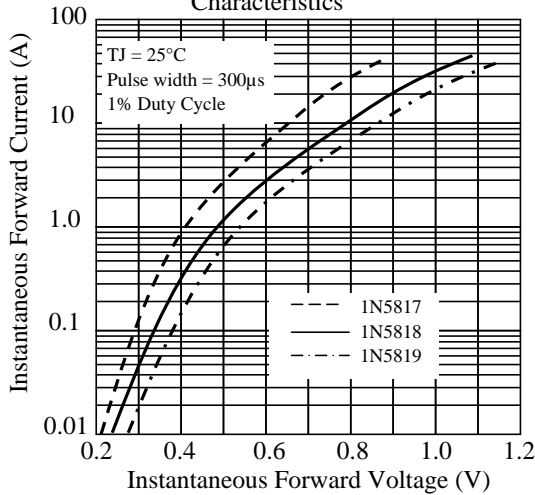


Fig 4 - Typical Reverse Characteristics

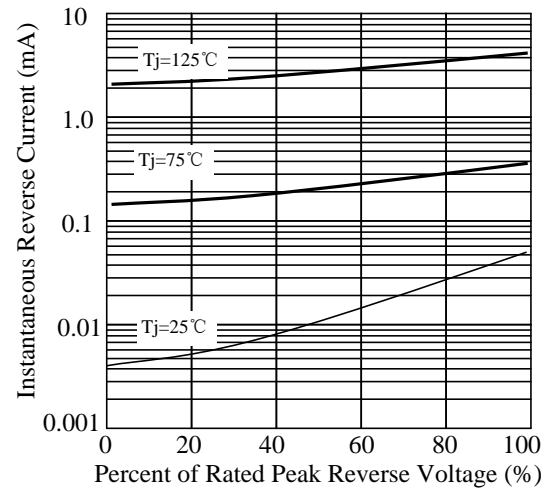


Fig 5 - typical transient thermal impedance

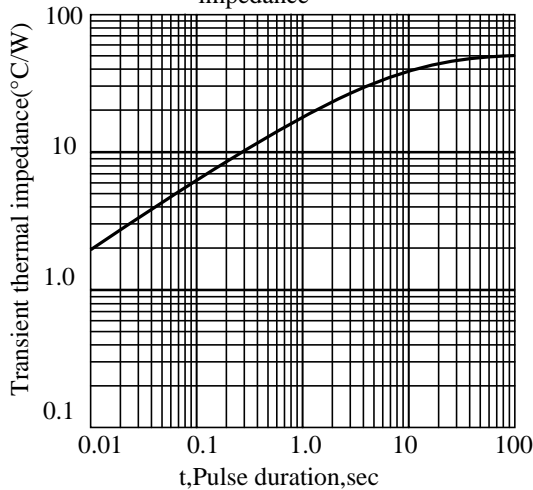
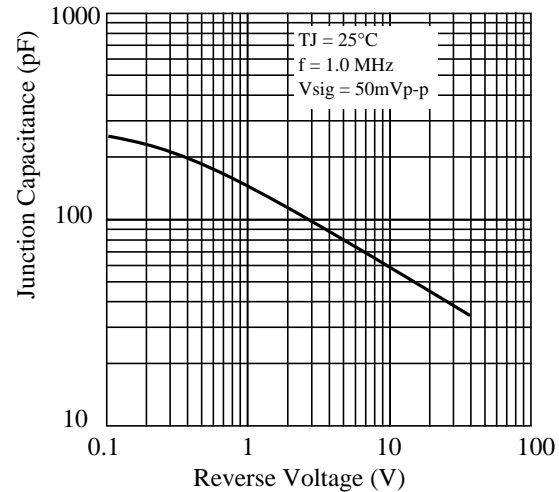
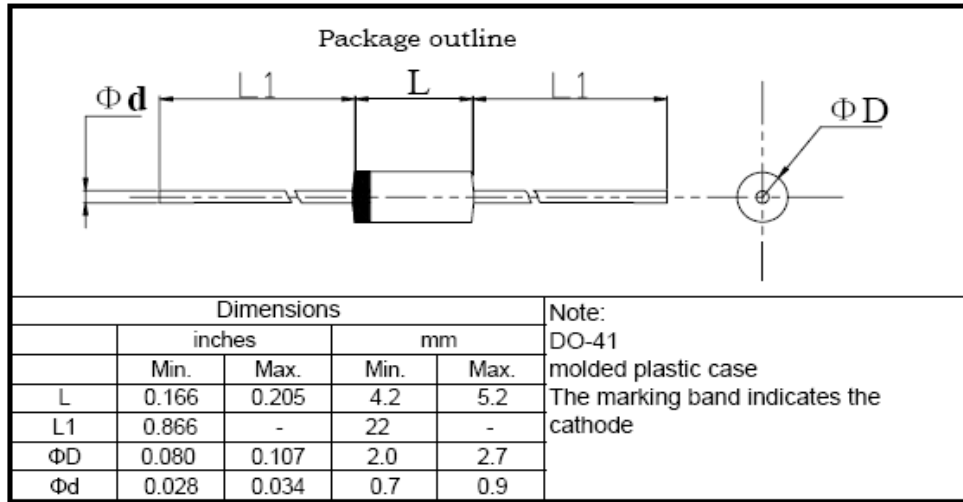


Fig 6 - Typical Junction Capacitance



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3. dimension:



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4. Update Record

| 版次 | 更新记录 | 更新作者 | 更新日期 |
|----|-----------|------|------------|
| 1 | 第一版 | 余波 | 2010.5-26 |
| 2 | 调整结温为150度 | 周杰 | 2010.09.24 |