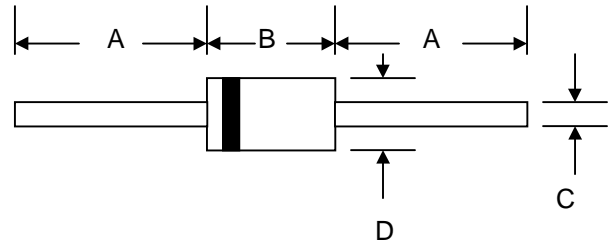


### Features

- Schottky Barrier Chip
- Guard Ring Die Construction for Transient Protection
- High Current Capability
- Low Power Loss, High Efficiency
- High Surge Current Capability
- For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Applications



### Mechanical Data

- Case: 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                    | 25.4 | —     |
| B                    | 4.06 | 5.21  |
| C                    | 0.71 | 0.864 |
| D                    | 2.00 | 2.72  |
| All Dimensions in mm |      |       |

### Maximum Ratings and Electrical Characteristics @ $T_A=25^\circ\text{C}$ 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) @ $T_L = 90^\circ\text{C}$  | $I_O$           | 1.0            |                |              | A                |
| Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method) | $I_{FSM}$       | 25             |                |              | A                |
| Forward Voltage @ $I_F = 1.0\text{A}$<br>@ $I_F = 3.0\text{A}$  | $V_{FM}$        | 0.450<br>0.750 | 0.550<br>0.875 | 0.60<br>0.90 | V                |
| Peak Reverse Current At Rated DC Blocking Voltage @ $T_A = 25^\circ\text{C}$<br>@ $T_A = 100^\circ\text{C}$     | $I_{RM}$        | 1.0<br>10      |                |              | mA               |
| Typical Junction Capacitance (Note 2)   | $C_j$           | 110            |                |              | pF               |
| Typical Thermal Resistance Junction to Lead (Note 1)  | $R_{\theta JL}$ | 60             |                |              | K/W              |
| Operating and Storage Temperature Range   | $T_j, T_{STG}$  | -65 to +150    |                |              | $^\circ\text{C}$ |

Note: 1. Valid provided that leads are kept at ambient temperature at a distance of 9.5mm from the case.  
 2. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.

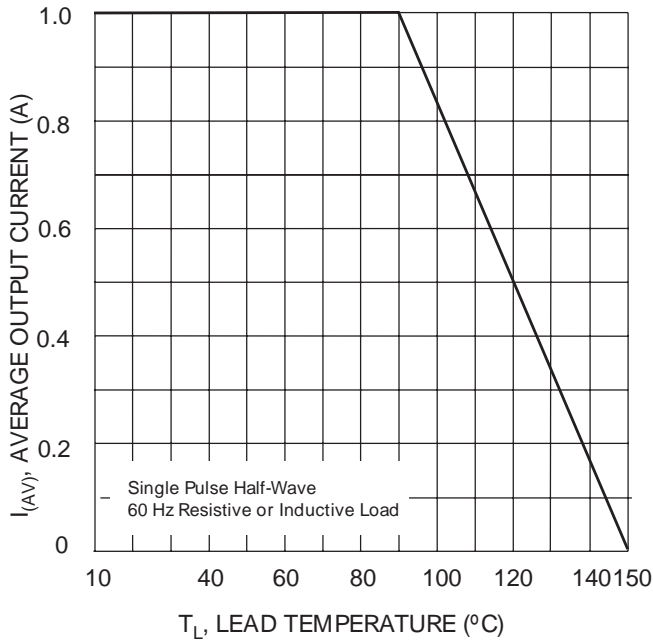


Fig. 1 Forward Current Derating Curve

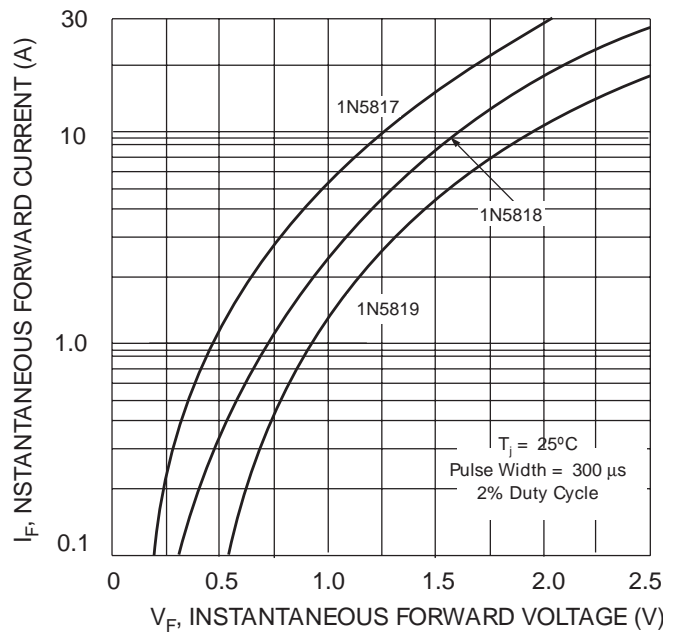


Fig. 2 Typical Forward Characteristics

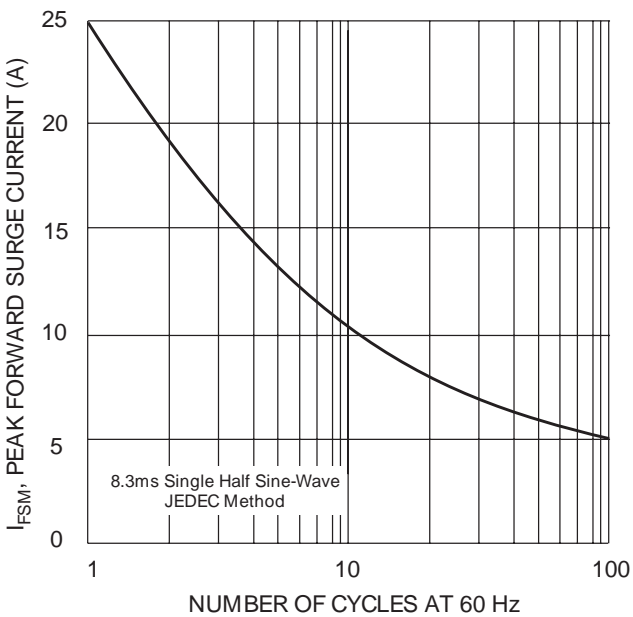


Fig. 3 Maximum Non-Repetitive Peak Fwd Surge Current

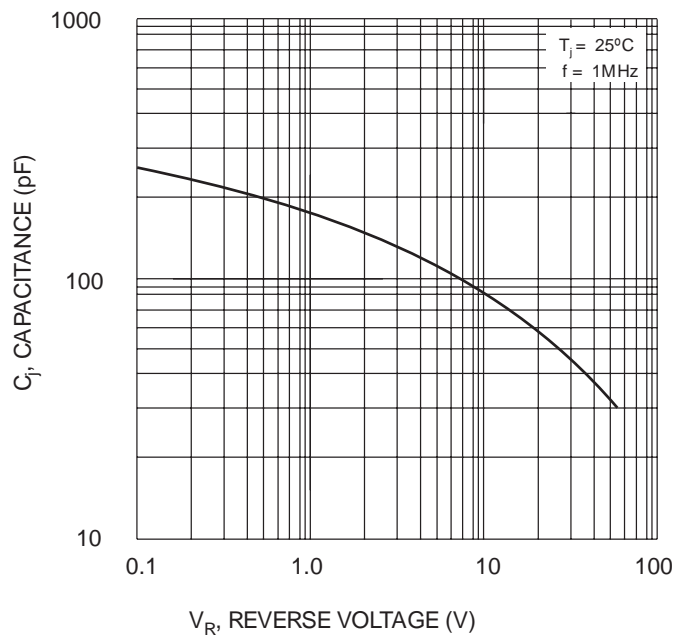


Fig. 4 Typical Junction Capacitance

## ORDERING INFORMATION

| Product No.♦     | Package Type | Shipping Quantity |
|------------------|--------------|-------------------|
| 1N5817-T3        | DO-41        | 5000/Tape & Reel  |
| <b>1N5817-TB</b> | DO-41        | 5000/Tape & Box   |
| 1N5817           | DO-41        | 1000 Units/Box    |
| 1N5818-T3        | DO-41        | 5000/Tape & Reel  |
| <b>1N5818-TB</b> | DO-41        | 5000/Tape & Box   |
| 1N5818           | DO-41        | 1000 Units/Box    |
| 1N5819-T3        | DO-41        | 5000/Tape & Reel  |
| <b>1N5819-TB</b> | DO-41        | 5000/Tape & Box   |
| 1N5819           | DO-41        | 1000 Units/Box    |

Products listed in **bold** are WTE **Preferred** devices.

♦T3 suffix refers to a 13" reel. TB suffix refers to Ammo Pack.

Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.

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**WARNING:** DO NOT USE IN LIFE SUPPORT EQUIPMENT. WTE power semiconductor products are not authorized for use as critical components in life support devices or systems without the express written approval.

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