

## Features

- Halogen Free Available Upon Request By Adding Suffix "-HF"
- Guard Ring Protection
- Low Forward Voltage
- Low Power Loss For High Efficiency
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1
- Lead Free Finish/RoHS Compliant(Note 1)("P" Suffix Designates Compliant. See Ordering Information)

## Maximum Ratings

- Operating Junction Temperature Range: -55°C to +125°C
- Storage Temperature Range: -55°C to +125°C
- Maximum Thermal Resistance: 80°C/W Junction to Ambient

| MCC Part Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|-----------------|----------------|--|---------------------|-----------------------------|
| 1N5817          | 1N5817         | 20V                                    | 14V                 | 20V                         |
| 1N5818          | 1N5818         | 30V                                    | 21V                 | 30V                         |
| 1N5819          | 1N5819         | 40V                                    | 28V                 | 40V                         |

## Electrical Characteristics @ 25°C Unless Otherwise Specified

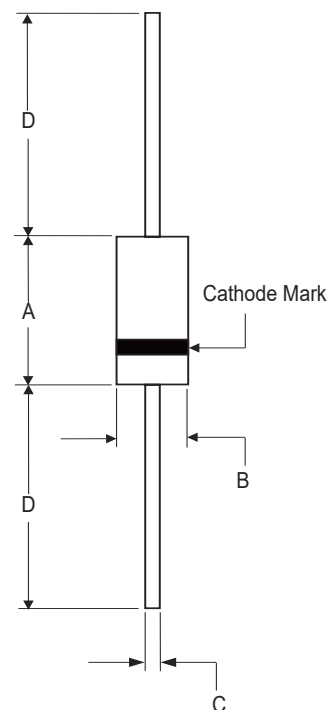
|   |             |                         |   |
|---|-------------|-------------------------|---|
| Average Forward Current                                 | $I_{F(AV)}$ | 1.0A                    | $T_A = 90^\circ\text{C}$                            |
| Peak Forward Surge Current                              | $I_{FSM}$   | 25A                     | 8.3ms, Half Sine                                    |
| Maximum Instantaneous Forward Voltage                   | $V_F$       | 0.45V<br>0.55V<br>0.60V | $I_{FM}=1.0A$ ;<br>$T_J=25^\circ\text{C}^*$         |
| Maximum DC Reverse Current at Rated DC Blocking Voltage | $I_R$       | 0.1mA<br>10mA           | $T_J=25^\circ\text{C}$ ;<br>$T_J=100^\circ\text{C}$ |
| Typical Reverse Recovery Time                           | $t_{rr}$    | 10ns                    | $I_F=0.5A$ , $I_R=1.0A$<br>$I_{RR}=0.25A$           |
| Typical Junction Capacitance                            | $C_J$       | 110pF                   | Measured at 1.0MHz<br>$V_R=4.0V$                    |

\*Pulse test: Pulse width 300  $\mu\text{sec}$ , Duty cycle 2%

Note : 1.High Temperature Solder Exemption Applied, See EU Directive Annex 7a.

# 1.0 Amp Schottky Barrier Rectifier 20 to 40 Volts

## DO-41



| DIM | DIMENSIONS |       |       |       | NOTE   |
|-----|------------|-------|-------|-------|--------|
|     | INCHES     |       | MM    |       |        |
|     | MIN        | MAX   | MIN   | MAX   |        |
| A   | 0.160      | 0.205 | 4.10  | 5.20  |        |
| B   | 0.080      | 0.107 | 2.00  | 2.70  | $\Phi$ |
| C   | 0.028      | 0.035 | 0.71  | 0.90  | $\Phi$ |
| D   | 1.000      | ----- | 25.40 | ----- |        |

**Curve Characteristics**

Fig. 1 - Forward Current Derating Curve

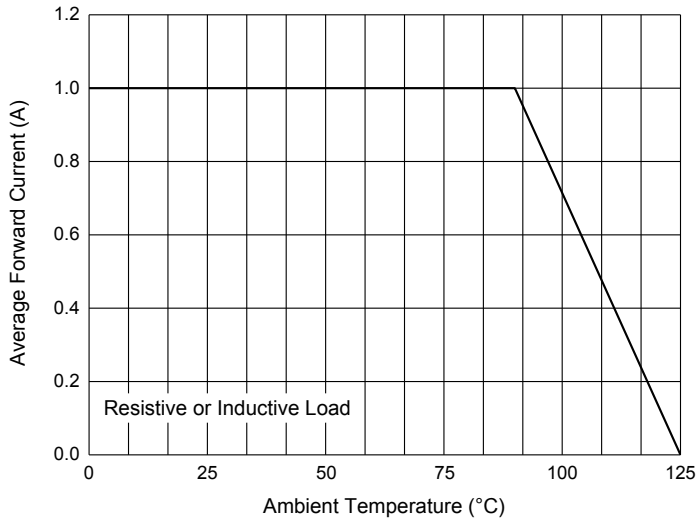


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

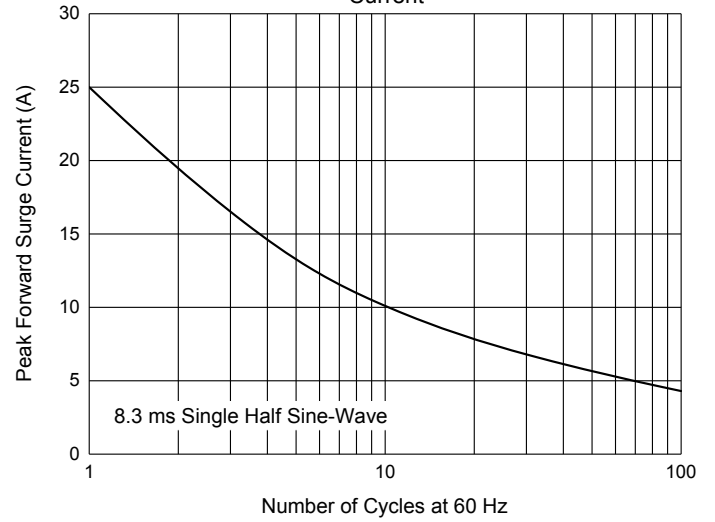


Fig. 3 - Typical Instantaneous Forward Characteristics

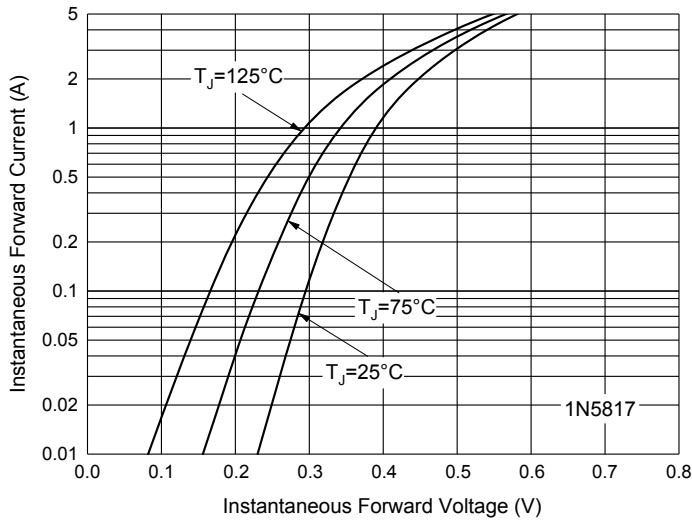


Fig. 4 - Typical Instantaneous Forward Characteristics

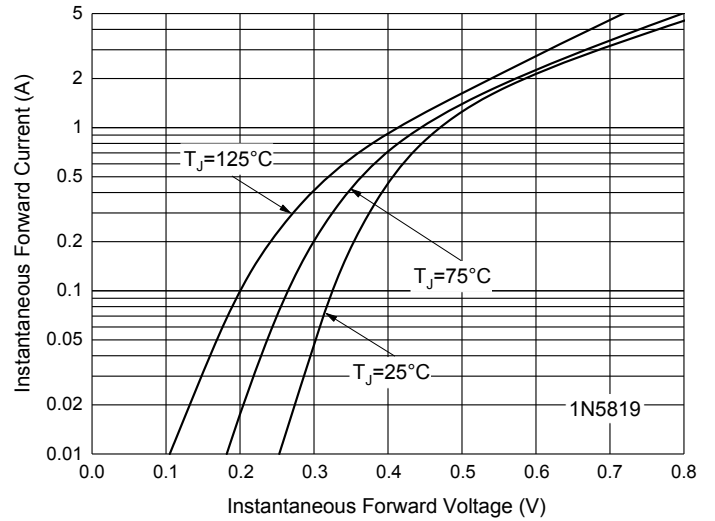


Fig. 5 - Typical Reverse Leakage Characteristics

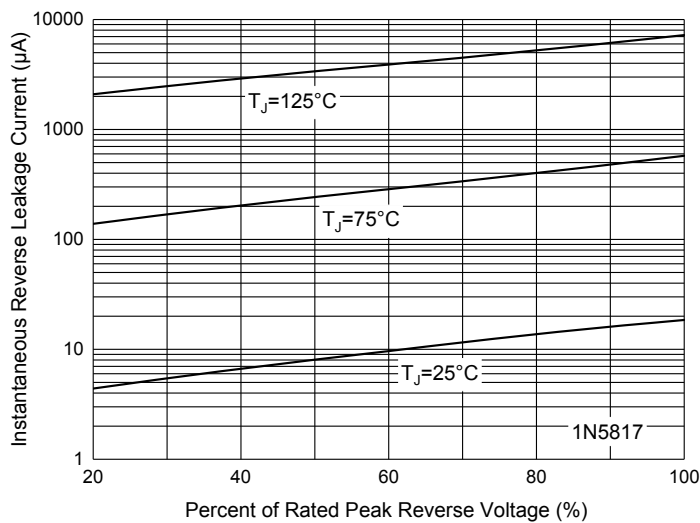
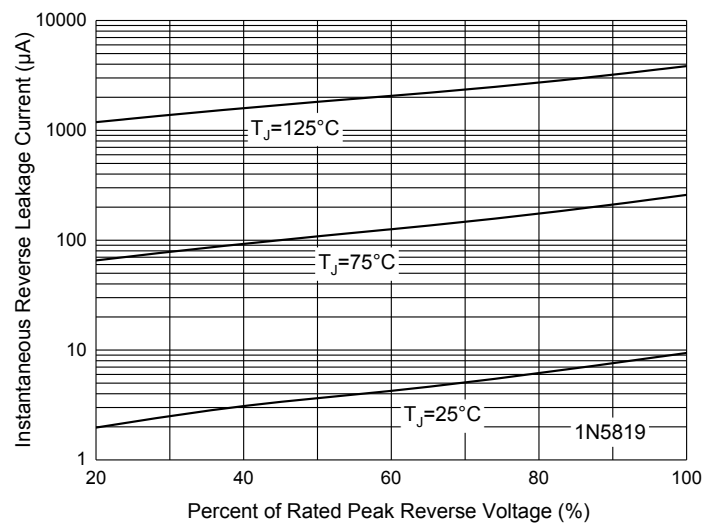


Fig. 6 - Typical Reverse Leakage Characteristics



## Ordering Information

| Device           | Packing                        |
|------------------|--------------------------------|
| (Part Number)-TP | Tape&Reel: 5Kpcs/Reel          |
| (Part Number)-AP | Ammo Packing: 5Kpcs/Ammo Box   |
| (Part Number)-BP | Bulk: 1Kpcs/Box, 50Kpcs/Carton |

Note : Adding "-HF" Suffix For Halogen Free, eg. Part Number-TP-HF

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