

## 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

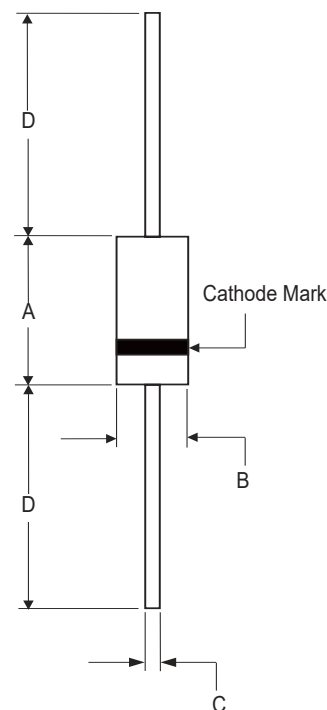
|                                                         |             |                         |                                                     |
|---------------------------------------------------------|-------------|-------------------------|-----------------------------------------------------|
| 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



| DIMENSIONS |        |       |       |       |        |
|------------|--------|-------|-------|-------|--------|
| DIM        | INCHES |       | MM    |       | NOTE   |
|            | 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

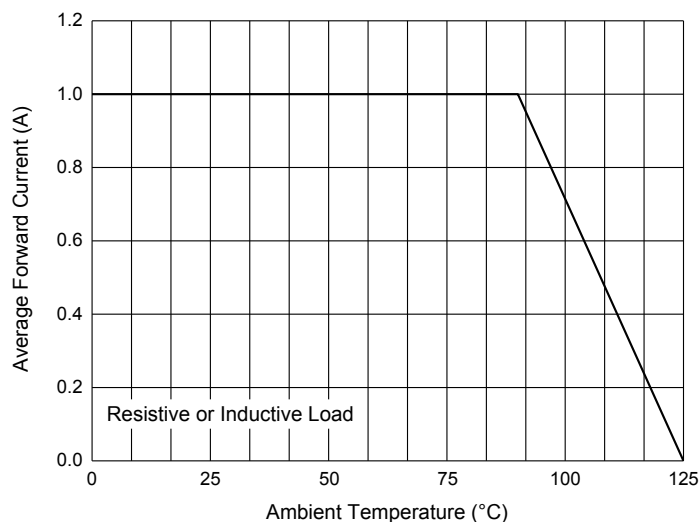


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

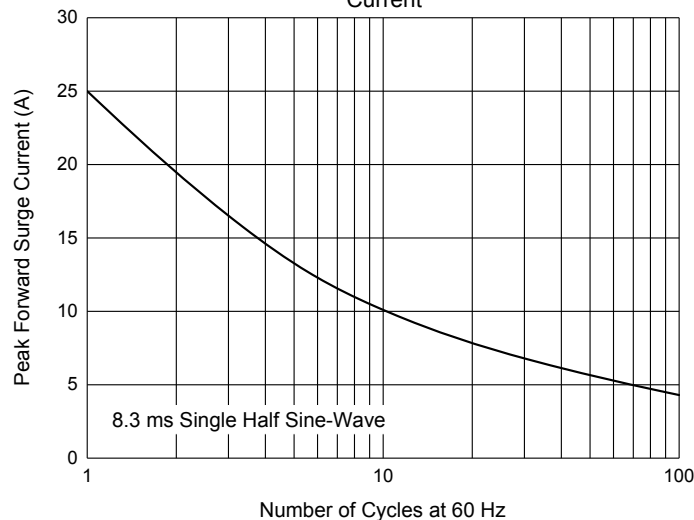


Fig. 3 - Typical Instantaneous Forward Characteristics

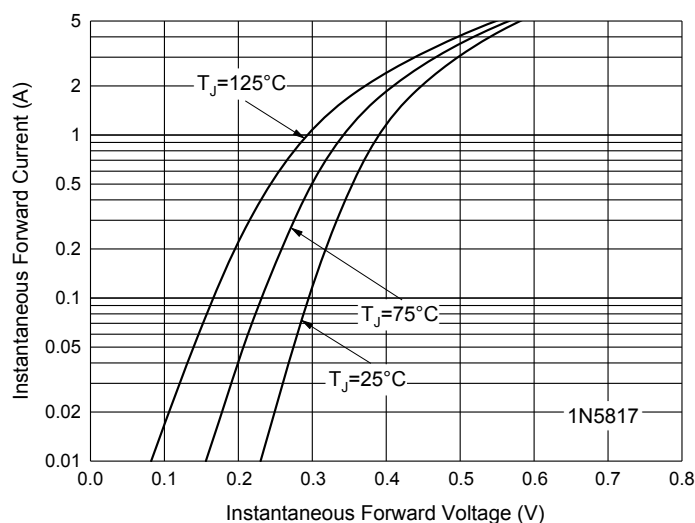


Fig. 4 - Typical Instantaneous Forward Characteristics

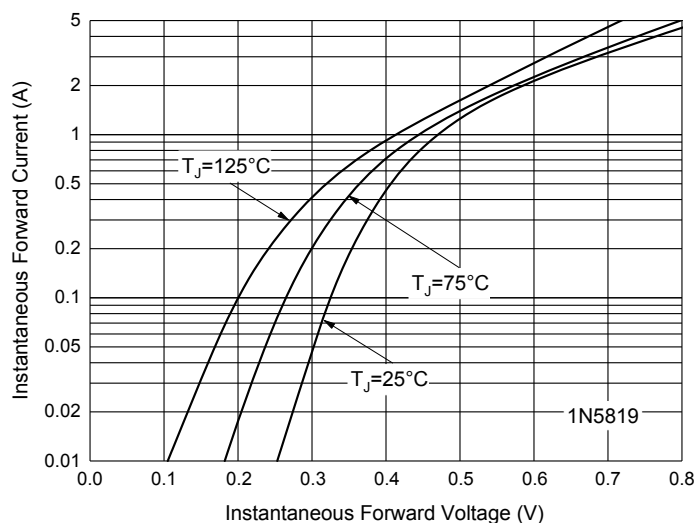


Fig. 5 - Typical Reverse Leakage Characteristics

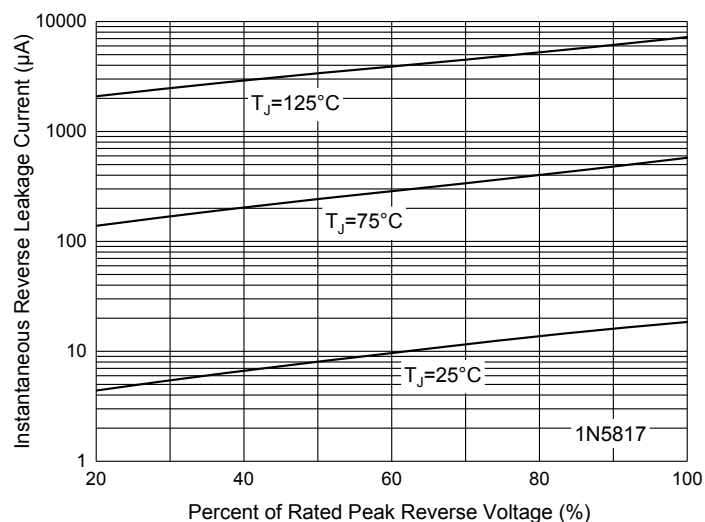
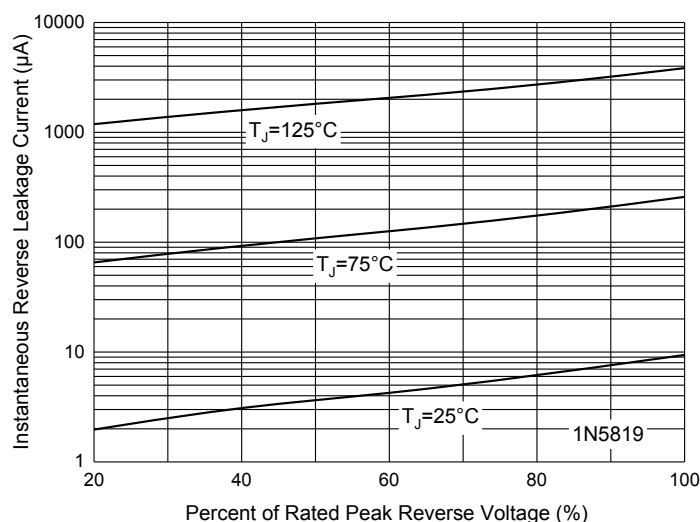


Fig. 6 - Typical Reverse Leakage Characteristics



## Ordering Information

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

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

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### Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: [info@moschip.ru](mailto:info@moschip.ru)

Skype отдела продаж:

moschip.ru

moschip.ru\_4

moschip.ru\_6

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