

**Features**

- Lead Free Finish/RoHS Compliant(Note 1) ("P" Suffix Designates Compliant. See Ordering Information)
- Guard Ring Protection
- High Surge Current Capability
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1
- For Use In Low Voltage, High Frequency Inverters, Free Wheeling, And Polarity Protection Applications
- Halogen Free Available Upon Request By Adding Suffix "-HF"

**Maximum Ratings**

- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Maximum Thermal Resistance: 3 °C/W Junction to Case

| MCC Part Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|-----------------|----------------|--|---------------------|-----------------------------|
| SR1045          | SR1045         | 45V                                    | 31.5V               | 45V                         |

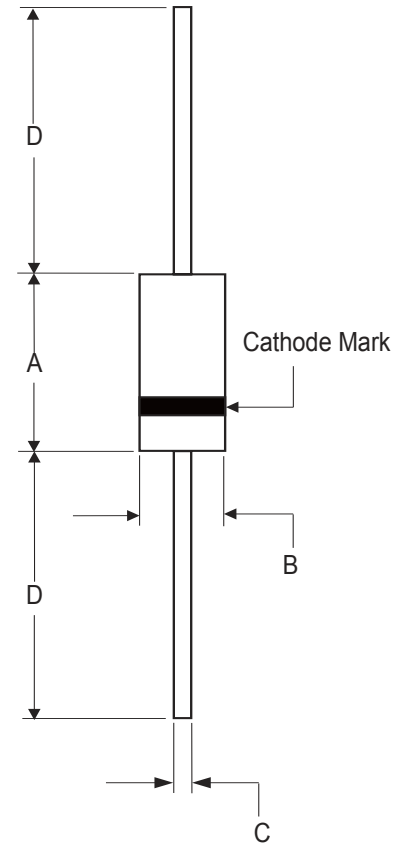
**Electrical Characteristics @ 25°C Unless Otherwise Specified**

|                                  |           |               |   |
|----------------------------------|-----------|---------------|---|
| Average Rectified Output Current | $I_O$     | 10A           | $T_C=95^\circ\text{C}$                            |
| Maximum Surge Current            | $I_{FSM}$ | 275A          | 8.3ms, Half Sine                                  |
| Max Peak Forward Voltage         | $V_{FM}$  | 0.55V         | $I_{FM}=10A$                                      |
| Max Peak Reverse Current         | $I_{RM}$  | 0.1mA<br>20mA | $T_J=25^\circ\text{C}$<br>$T_J=100^\circ\text{C}$ |
| Typical Junction Capacitance     | $C_J$     | 450pF         | $V_R=4.0V, f=1.0\text{MHz}$                       |

Notes: 1. High Temperature Solder Exemption Applied, see EU Directive Annex Notes 7a.

**10 Amp Schottky Barrier Rectifier  
45 Volts**

R-6



| DIM | DIMENSIONS |       |       |       | NOTE |
|-----|------------|-------|-------|-------|------|
|     | INCHES     |       | MM    |       |      |
|     | MIN        | MAX   | MIN   | MAX   |      |
| A   | 0.340      | 0.360 | 8.60  | 9.10  |      |
| B   | 0.340      | 0.360 | 8.60  | 9.10  |      |
| C   | 0.048      | 0.052 | 1.20  | 1.32  |      |
| D   | 1.000      | ----- | 25.40 | ----- |      |

## Curve Characteristics

Fig. 1 - Forward Current Derating Curve

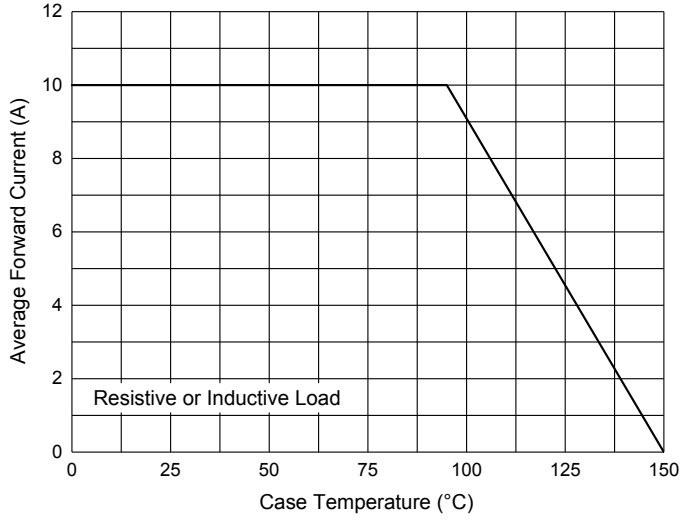


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

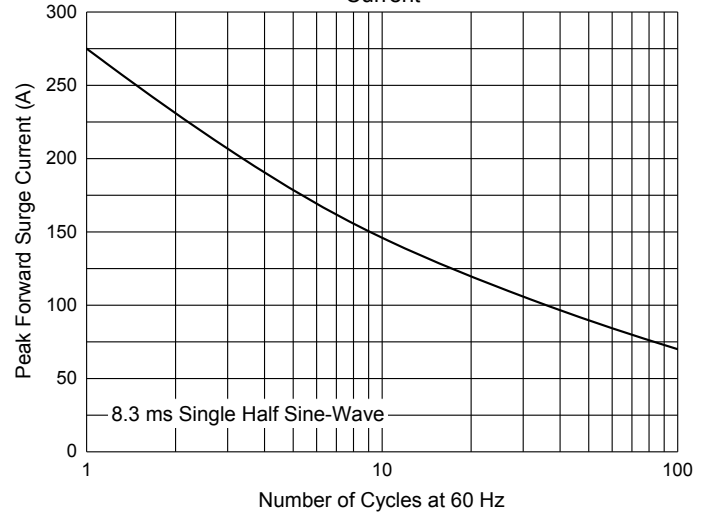


Fig. 3 - Typical Instantaneous Forward Characteristics

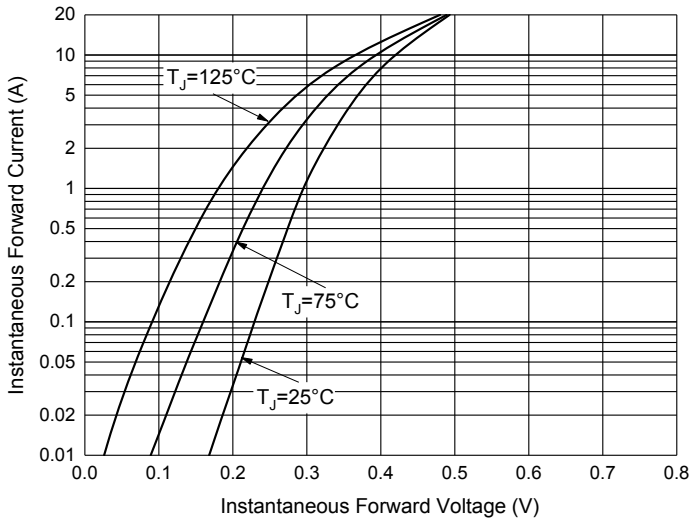
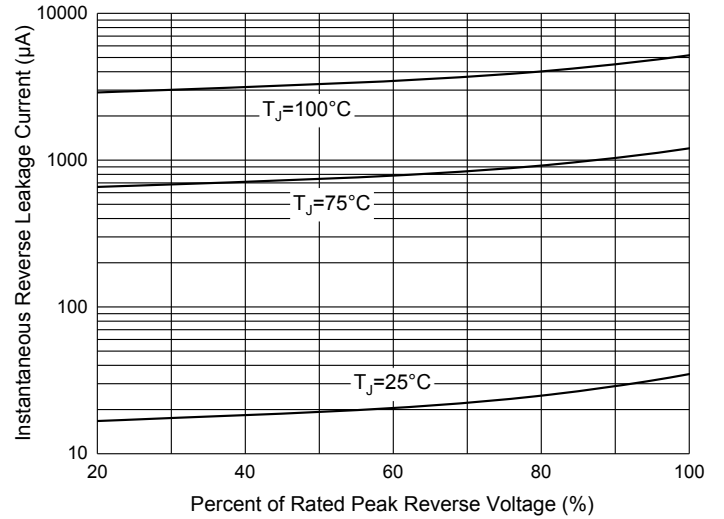


Fig. 4 - Typical Reverse Leakage Characteristics



## Ordering Information

| Device         | Packing                          |
|----------------|----------------------------------|
| Part Number-TP | Tape&Reel: 500pcs/Reel           |
| Part Number-AP | Ammo Packing: 450pcs/Ammo Box    |
| Part Number-BP | Bulk: 200pcs/Box ;4.8Kpcs/Carton |

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

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