

**Features**

- Super Fast Switching For High Efficiency
- Low Reverse Leakage
- High Forward Surge Current Capability
- Epoxy Meets UL 94 V-0 Flammability Rating
- Halogen Free Available Upon Request By Adding Suffix "-HF"
- Lead Free Finish/RoHS Compliant(Note 1) ("P" Suffix Designates Compliant. See Ordering Information)
- Planar Structure Die and Soft Recovery Characteristics

**Maximum Ratings**

- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Typical Thermal Resistance: 1°C/W Junction to Case

| MCC Part Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|-----------------|----------------|--|---------------------|-----------------------------|
| MUR6040PTS      | MUR6040PTS     | 400V                                   | 280V                | 400V                        |

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

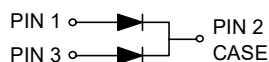
|  |             |  |  |
|--|-------------|--|--|
| Average Rectified Forward Current                    | $I_{F(AV)}$ | 60A                                    | $T_C=75^\circ\text{C}$   |
| Peak Forward Surge Current                           | $I_{FSM}$   | 300A                                   | 8.3ms, Half Sine   |
| Instantaneous Forward Voltage                        | $V_F$       | 1.20V(Typ)<br>1.40V(Max)<br>1.20V(Max) | $I_F=30A, T_J=25^\circ\text{C}$<br>$I_F=30A, T_J=25^\circ\text{C}$<br>$I_F=30A, T_J=150^\circ\text{C}$ |
| Maximum Reverse Current At Rated DC Blocking Voltage | $I_R$       | 5 $\mu\text{A}$<br>200 $\mu\text{A}$   | $T_J=25^\circ\text{C}$<br>$T_J=150^\circ\text{C}$  |
| Typical Junction Capacitance                         | $C_J$       | 295pF                                  | Measured at 1.0MHz, $V_R=4V$   |

**Dynamic Recovery Characteristics @ 25°C Unless Otherwise Specified**

|                         |           |                           |   |  |
|-------------------------|-----------|---------------------------|---|--|
| Reverse Recovery Time   | $t_{rr}$  | 36ns(Typ.)<br>50ns(Max.)  | $I_F=0.5A; I_R=1.0A;$<br>$I_{RR}=0.25A$           | $I_F = 30 A$<br>$di_F/dt = 200 A/\mu s$<br>$V_R = 200 V$ |
|                         |           | 45ns(Typ.)<br>85ns(Typ.)  | $T_J=25^\circ\text{C}$<br>$T_J=125^\circ\text{C}$ |  |
| Peak recovery current   | $I_{RRM}$ | 4.0A(Typ.)<br>9.5A(Typ.)  | $T_J=25^\circ\text{C}$<br>$T_J=125^\circ\text{C}$ |  |
| Reverse recovery charge | $Q_{rr}$  | 95nC(Typ.)<br>410nC(Typ.) | $T_J=25^\circ\text{C}$<br>$T_J=125^\circ\text{C}$ |  |

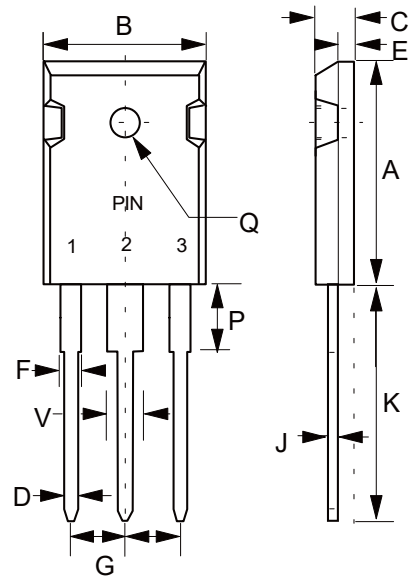
Note: 1. High Temperature Solder Exemptions Applied, See EU Directive Annex 7a.

**Internal Structure**



**6\$ Amp  
Super Fast  
Recovery Rectifier  
4\$\$ Volts**

**TO-247**



**DIMENSIONS**

| DIM | INCHES |       | MM    |       | NOTE   |
|-----|--------|-------|-------|-------|--------|
|     | MIN    | MAX   | MIN   | MAX   |        |
| A   | 0.787  | 0.866 | 20.00 | 22.00 |        |
| B   | 0.598  | 0.638 | 15.20 | 16.20 |        |
| C   | 0.185  | 0.208 | 4.70  | 5.30  |        |
| D   | 0.035  | 0.059 | 0.90  | 1.50  |        |
| E   | 0.059  | 0.094 | 1.50  | 2.40  |        |
| F   | 0.067  | 0.091 | 1.70  | 2.30  |        |
| J   | 0.019  | 0.031 | 0.48  | 0.80  |        |
| K   | 0.748  | 0.833 | 19.00 | 21.15 |        |
| P   | 0.122  | 0.189 | 3.10  | 4.80  |        |
| Q   | 0.118  | 0.150 | 3.00  | 3.80  | $\phi$ |
| V   | 0.106  | 0.134 | 2.70  | 3.40  |        |
| G   | 0.197  | 0.224 | 5.00  | 5.70  |        |

**Curve Characteristics**

Fig. 1 - Forward Current Derating Curve

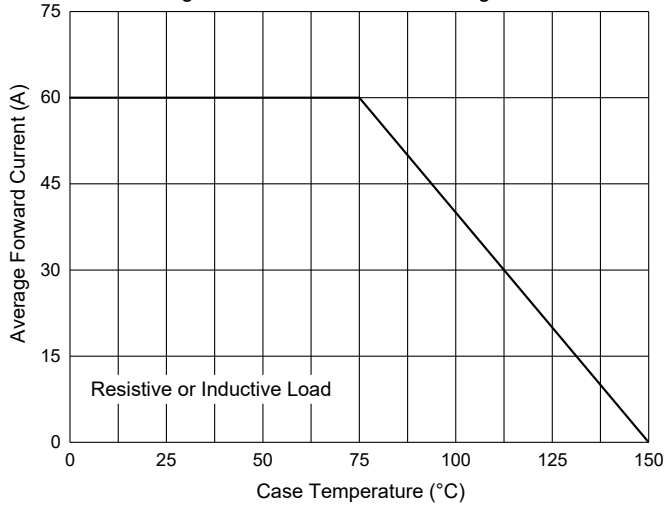


Fig. 2 - Typical Instantaneous Forward Characteristics

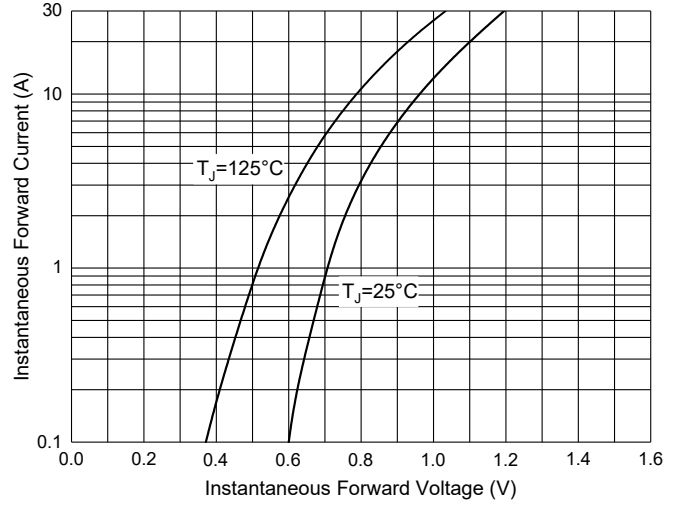
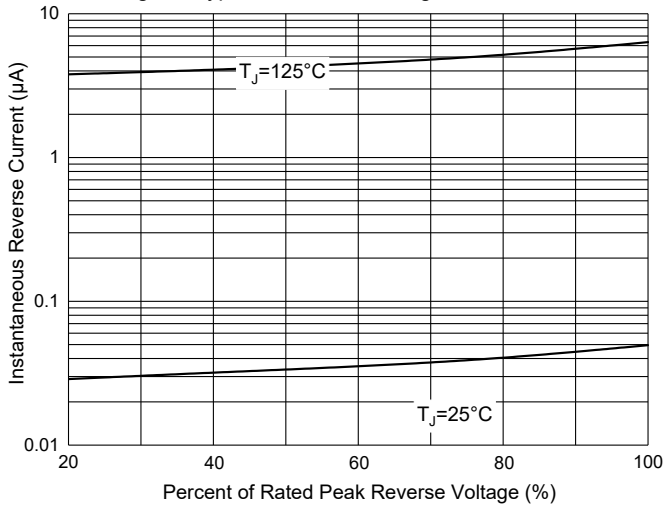


Fig. 3 - Typical Reverse Leakage Characteristics



## Ordering Information

| Device         | Packing                                   |
|----------------|---|
| Part Number-BP | Bulk:30pcs/Tube,360pcs/Box,1.8Kpcs/Carton |

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

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