

### Features

- Halogen Free Available Upon Request By Adding Suffix "-HF"
- Lead Free Finish/RoHS Compliant (Note1) ("P" Suffix Designates Compliant. See Ordering Information)
- Epoxy Meets UL 94 V-0 Flammability Rating
- Low Switching Losses and High Efficiency
- Low Reverse Leakage
- Ultrafast Recovery Time
- 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
- Maximum Thermal Resistance: 2°C/W Junction to Case

| MCC Part Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|-----------------|----------------|--|---------------------|-----------------------------|
| MURS840A        | MURS840A       | 400V                                   | 280V                | 400V                        |

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

|  |             |  |   |
|--|-------------|--|---|
| Average Rectified Forward Current                    | $I_{F(AV)}$ | 8.0A                                   | $T_C = 130^\circ\text{C}$   |
| Peak Forward Surge Current                           | $I_{FSM}$   | 100A                                   | 8.3ms, Half Sine  |
| Instantaneous Forward Voltage                        | $V_F$       | 1.19V(Typ)<br>1.25V(Max)<br>1.10V(Max) | $I_F=8A; T_J=25^\circ\text{C}$<br>$I_F=8A; T_J=25^\circ\text{C}$<br>$I_F=8A; T_J=125^\circ\text{C}$ |
| Maximum Reverse Current At Rated DC Blocking Voltage | $I_R$       | 5 $\mu\text{A}$<br>50 $\mu\text{A}$    | $T_J=25^\circ\text{C};$<br>$T_J=125^\circ\text{C}$  |
| Maximum Reverse Recovery Time                        | $t_{rr}$    | 35ns                                   | $I_F=0.5A; I_R=1.0A;$<br>$I_{RR}=0.25A$   |
| Typical Junction Capacitance                         | $C_J$       | 40pF                                   | Measured at 1.0MHz, $V_R=4.0V$  |

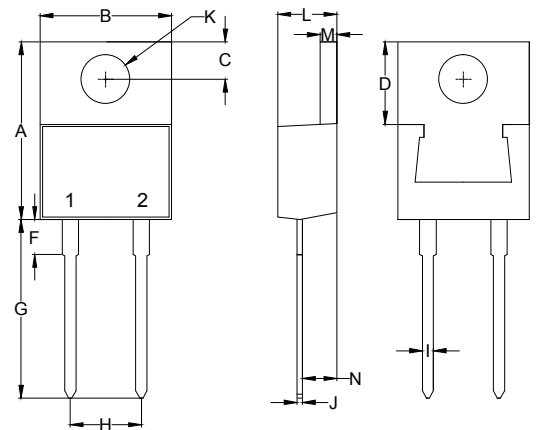
Note :1. High Temperature Solder Exemption Applied, See EU Directive Annex 7a.

### Internal Structure



# 8 Amp FRED Rectifiers 400 Volts

## TO-220AC



| DIM | DIMENSIONS |       |       |       | NOTE |
|-----|------------|-------|-------|-------|------|
|     | INCHES     |       | MM    |       |      |
|     | MIN        | MAX   | MIN   | MAX   |      |
| A   | 0.560      | 0.625 | 14.22 | 15.88 |      |
| B   | 0.380      | 0.420 | 9.65  | 10.67 |      |
| C   | 0.100      | 0.135 | 2.54  | 3.43  |      |
| D   | 0.230      | 0.270 | 5.84  | 6.86  |      |
| F   | ----       | 0.250 | ----  | 6.35  |      |
| G   | 0.500      | 0.580 | 12.70 | 14.73 |      |
| H   | 0.190      | 0.210 | 4.83  | 5.33  |      |
| I   | 0.020      | 0.045 | 0.51  | 1.14  |      |
| J   | 0.012      | 0.025 | 0.30  | 0.64  |      |
| K   | 0.139      | 0.161 | 3.53  | 4.09  | Φ    |
| L   | 0.140      | 0.190 | 3.56  | 4.83  |      |
| M   | 0.045      | 0.055 | 1.14  | 1.40  |      |
| N   | 0.080      | 0.115 | 2.03  | 2.92  |      |

**Curve Characteristics**

Fig. 1 - Forward Current Derating Curve

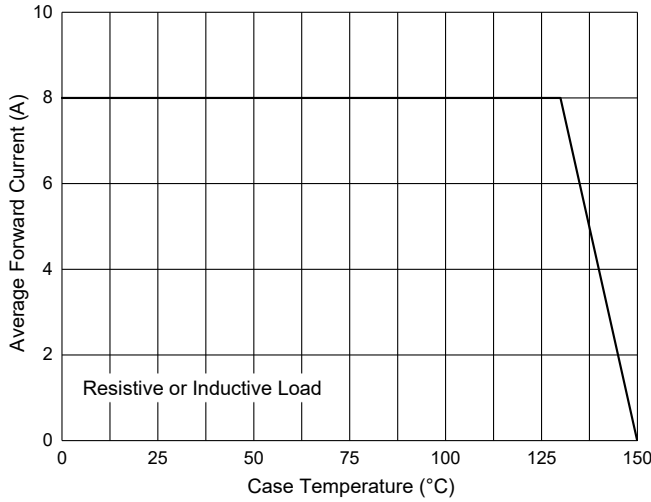


Fig. 3 - Maximum Non-Repetitive Peak Forward Surge Current

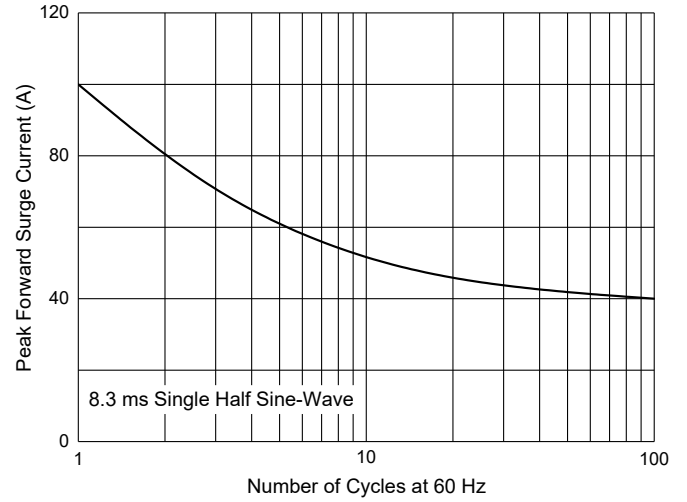


Fig. 3 - Typical Instantaneous Forward Characteristics

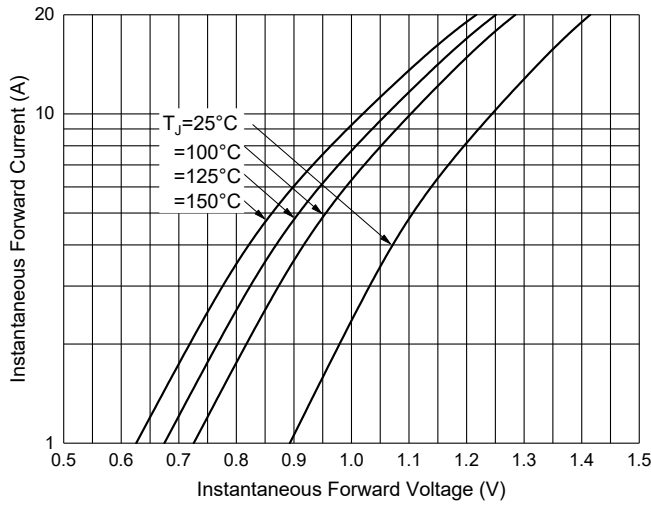
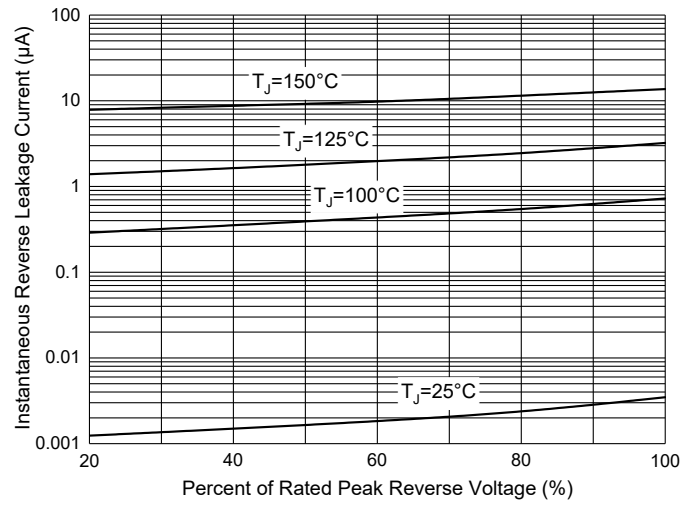


Fig. 4 - Typical Reverse Leakage Characteristics



## Ordering Information

| Device         | Packing                                |
|----------------|--|
| Part Number-BP | Bulk:50pcs/Tube,1Kpcs/Box,5Kpcs/Carton |

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

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