

## 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
- 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

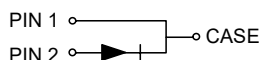
| MCC Part Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|-----------------|----------------|--|---------------------|-----------------------------|
| MURS1020A       | MURS1020A      | 200V                                   | 140V                | 200V                        |

## Electrical Characteristics @ 25°C Unless Otherwise Specified

|  |             |                                       |   |
|--|-------------|---------------------------------------|---|
| Average Rectified Forward Current                    | $I_{F(AV)}$ | 10A                                   | $T_C = 130^\circ\text{C}$   |
| Peak Forward Surge Current                           | $I_{FSM}$   | 120A                                  | 8.3ms, Half Sine  |
| Instantaneous Forward Voltage                        | $V_F$       | 0.92V(Typ)<br>1.0V(Max)<br>0.86V(Max) | $I_F=10\text{A}; T_J=25^\circ\text{C}$<br>$I_F=10\text{A}; T_J=25^\circ\text{C}$<br>$I_F=10\text{A}; T_J=125^\circ\text{C}$ |
| 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                                  | $I_F=0.5\text{A}; I_R=1.0\text{A};$<br>$I_{RR}=0.25\text{A}$  |
| Typical Junction Capacitance                         | $C_J$       | 150pF                                 | Measured at<br>1.0MHz, $V_R=4.0\text{V}$  |

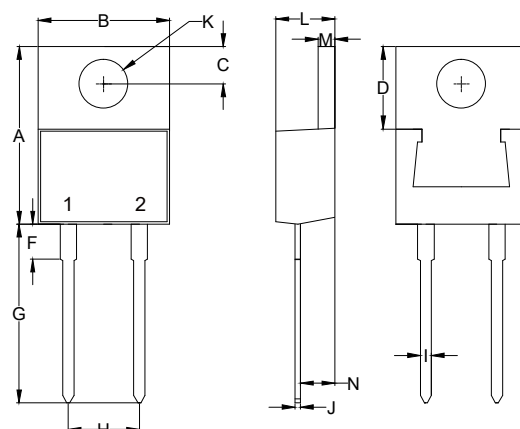
Note :1. High Temperature Solder Exemption Applied, See EU Directive Annex 7a.

## Internal Structure



# 10 Amp FRED Rectifiers 200 Volts

## TO-220AC



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

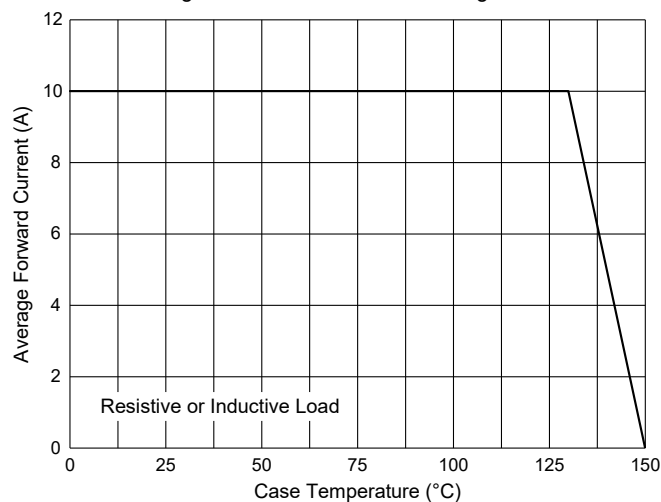


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

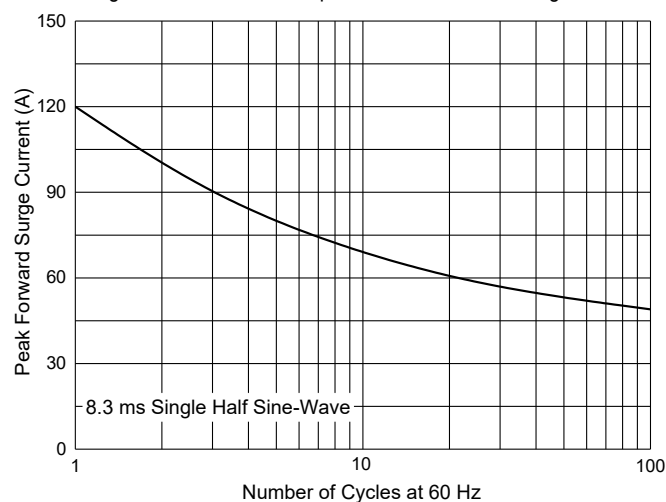


Fig. 3 - Typical Instantaneous Forward Characteristics

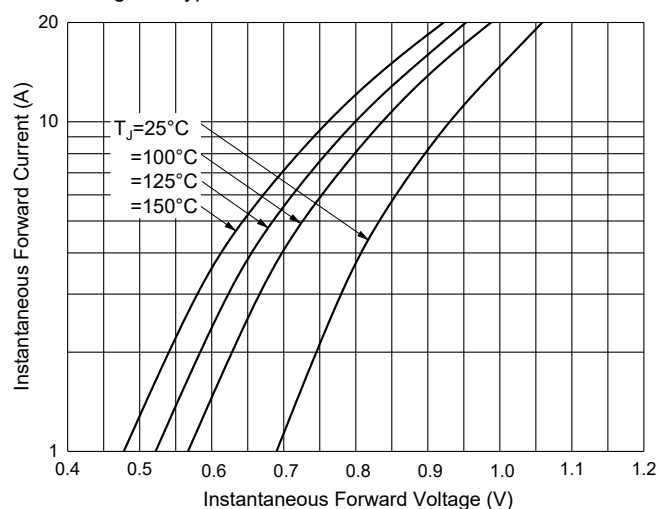
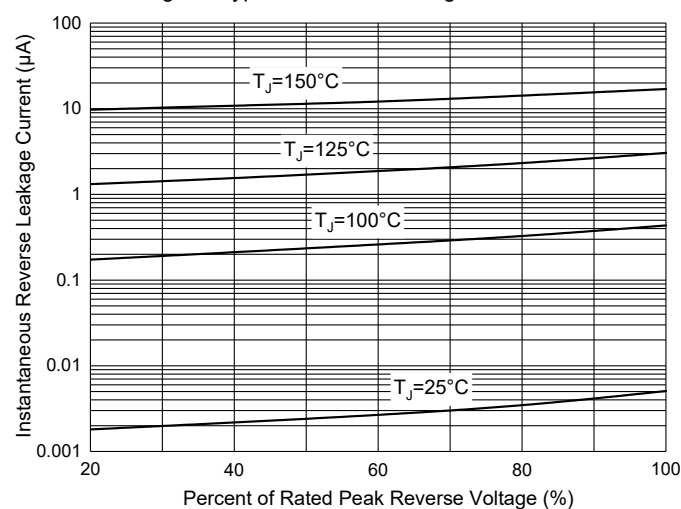


Fig. 4 - Typical Reverse Leakage Characteristics



## Ordering Information

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

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

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