

## 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
- Moisture Sensitivity Level 1
- 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
- Typical Thermal Resistance: 3°C/W Junction to Case

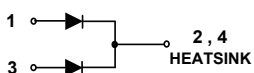
| MCC Part Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|-----------------|----------------|--|---------------------|-----------------------------|
| MURSD1640CTA    | MURSD1640CTA   | 400V                                   | 280V                | 400V                        |

## Electrical Characteristics @ 25°C Unless Otherwise Specified

|  |             |  |  |
|--|-------------|--|--|
| Average Rectified Forward Current                    | $I_{F(AV)}$ | 16A                                    | $T_C = 90^\circ\text{C}$   |
| 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) | $I_F=8\text{A}; T_J=25^\circ\text{C}$<br>$I_F=8\text{A}; T_J=25^\circ\text{C}$<br>$I_F=8\text{A}; T_J=125^\circ\text{C}$ |
| 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                         | $C_J$       | 40pF                                   | Measured at 1.0MHz, $V_R=4.0\text{V}$  |

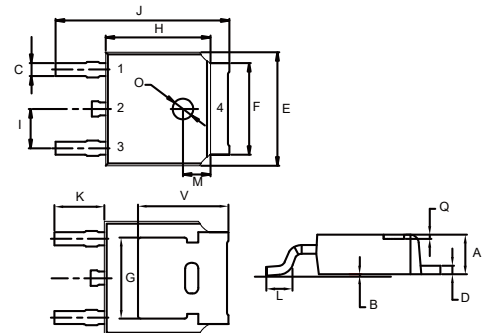
Note:1. High Temperature Solder Exemptions Applied, See EU Directive Annex 7a.

## Internal Structure:



# 16 Amp FRED Rectifiers 400 Volts

## DPAK(TO-252)



| DIM | DIMENSIONS |       |      |       | NOTE |
|-----|------------|-------|------|-------|------|
|     | INCHES     |       | MM   |       |      |
|     | MIN        | MAX   | MIN  | MAX   |      |
| A   | 0.087      | 0.094 | 2.20 | 2.40  |      |
| B   | 0.000      | 0.005 | 0.00 | 0.13  |      |
| C   | 0.026      | 0.034 | 0.66 | 0.86  |      |
| D   | 0.018      | 0.023 | 0.46 | 0.58  |      |
| E   | 0.256      | 0.264 | 6.50 | 6.70  |      |
| F   | 0.201      | 0.215 | 5.10 | 5.46  |      |
| G   | 0.190      |       | 4.83 |       |      |
| H   | 0.236      | 0.244 | 6.00 | 6.20  |      |
| I   | 0.086      | 0.094 | 2.18 | 2.39  |      |
| J   | 0.386      | 0.409 | 9.80 | 10.40 |      |
| K   | 0.114      |       | 2.90 |       |      |
| L   | 0.055      | 0.067 | 1.40 | 1.70  |      |
| M   | 0.063      |       | 1.60 |       |      |
| O   | 0.043      | 0.051 | 1.10 | 1.30  |      |
| Q   | 0.000      | 0.012 | 0.00 | 0.30  |      |
| V   | 0.211      |       | 5.35 |       |      |

## Curve Characteristics

Fig. 1 - Forward Current Derating Curve

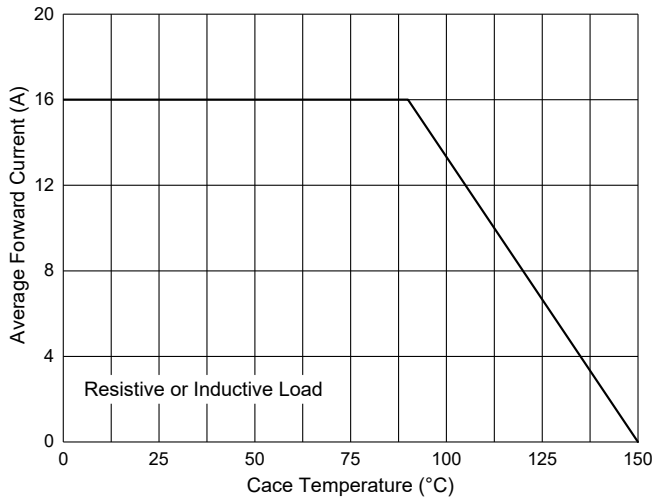


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

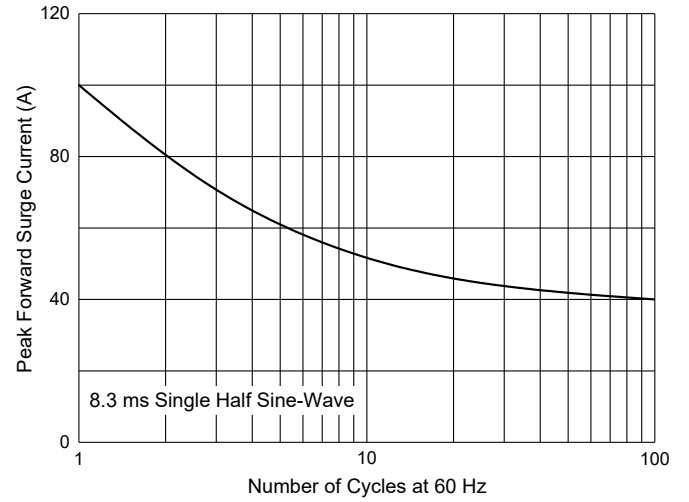


Fig. 3 - Typical Instantaneous Forward Characteristics

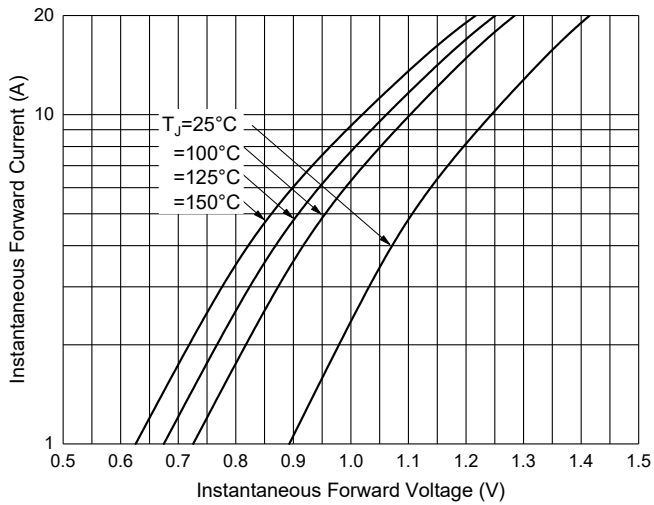
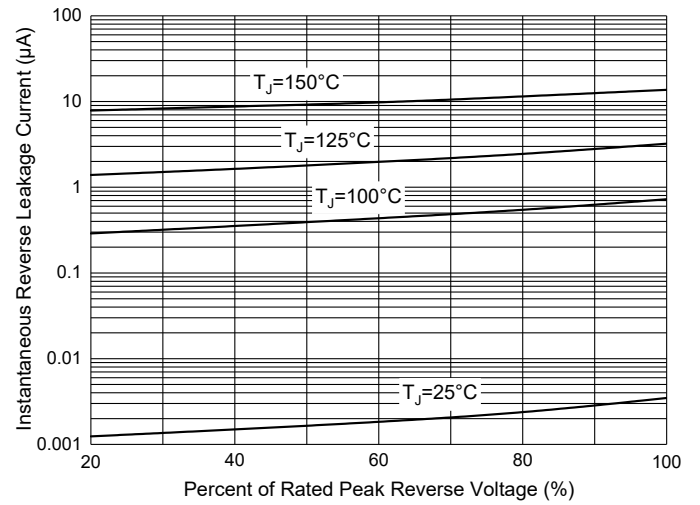


Fig. 4 - Typical Reverse Leakage Characteristics



## Ordering Information

| Device         | Packing                 |
|----------------|-------------------------|
| Part Number-TP | Tape&Reel: 2.5Kpcs/Reel |

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

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