

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 +175°C
- Storage Temperature Range: -55°C to +175°C
- Maximum Thermal Resistance: 2°C/W Junction to Case

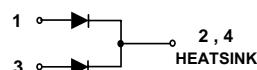
| MCC Part Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|-----------------|----------------|--|---------------------|-----------------------------|
| MURS1020CTA | MURS1020CTA | 200V | 140V | 200V |

Electrical Characteristics @ 25°C Unless Otherwise Specified

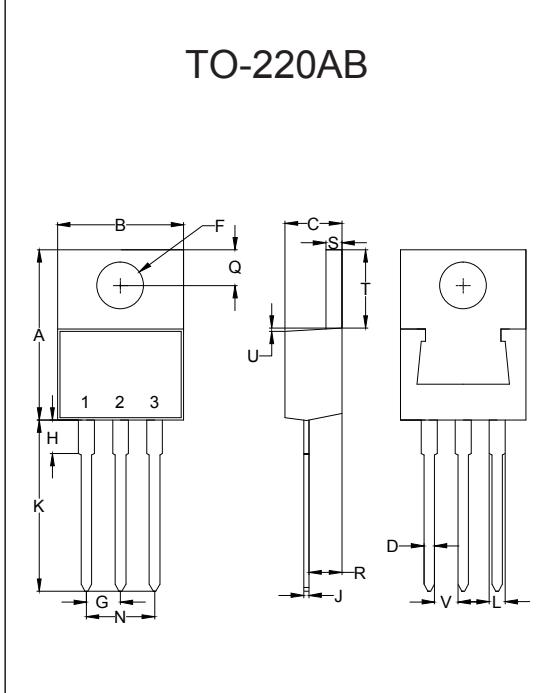
| | | | |
|--|-------------|--------------------------------------|---|
| Average Rectified Forward Current | $I_{F(AV)}$ | 10A | $T_C=155^\circ C$ |
| Peak Forward Surge Current | I_{FSM} | 70A | 8.3ms, Half Sine |
| Instantaneous Forward Voltage | V_F | 0.9V(Typ) 1.0V(Max) 0.85V(Max) | $I_F=5A; T_J=25^\circ C$ $I_F=5A; T_J=25^\circ C$ $I_F=5A; T_J=150^\circ C$ |
| Maximum Reverse Current At Rated DC Blocking Voltage | I_R | 5uA 50uA | $T_J=25^\circ C;$ $T_J=150^\circ C$ |
| Typical Junction Capacitance | C_J | 40pF | Measured at 1.0MHz, $V_R=4.0V$ |
| Reverse Recovery Time | t_{rr} | 25ns(Typ.) 35ns(Max.) | $I_F=0.5A; I_R=1.0A;$ $I_{RR}=0.25A$ |
| | | 17ns(Typ.) 29ns(Typ.) | $T_J=25^\circ C$ $T_J=125^\circ C$ |
| Peak recovery current | I_{RRM} | 3.1A(Typ.) 5.4A(Typ.) | $T_J=25^\circ C$ $T_J=125^\circ C$ |
| Reverse recovery charge | Q_{rr} | 30nC(Typ.) 80nC(Typ.) | $T_J=25^\circ C$ $T_J=125^\circ C$ |

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

Internal Structure



10 Amp FRED Rectifiers 200 Volts



| DIM | INCHES | | MM | | NOTE |
|-----|--------|-------|-------|-------|------|
| | MIN | MAX | MIN | MAX | |
| A | 0.560 | 0.625 | 14.22 | 15.88 | |
| B | 0.380 | 0.429 | 9.65 | 10.90 | |
| C | 0.140 | 0.201 | 3.56 | 5.10 | |
| D | 0.020 | 0.045 | 0.51 | 1.14 | |
| F | 0.131 | 0.170 | 3.34 | 4.31 | Φ |
| G | 0.079 | 0.121 | 2.01 | 3.07 | |
| H | ----- | 0.250 | ----- | 6.35 | |
| J | 0.011 | 0.025 | 0.28 | 0.64 | |
| K | 0.500 | 0.580 | 12.70 | 14.73 | |
| L | 0.045 | 0.060 | 1.14 | 1.52 | |
| N | 0.158 | 0.242 | 4.02 | 6.14 | |
| Q | 0.087 | 0.135 | 2.22 | 3.43 | |
| R | 0.080 | 0.126 | 2.04 | 3.19 | |
| S | 0.045 | 0.055 | 1.14 | 1.39 | |
| T | 0.230 | 0.270 | 5.84 | 6.86 | |
| U | ----- | 0.050 | ----- | 1.27 | |
| V | 0.045 | ----- | 1.15 | ----- | |

Curve Characteristics

Fig. 1 - Forward Current Derating Curve

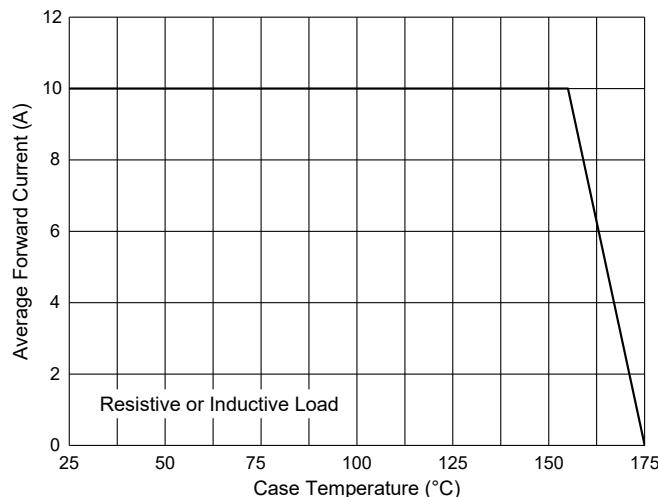


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

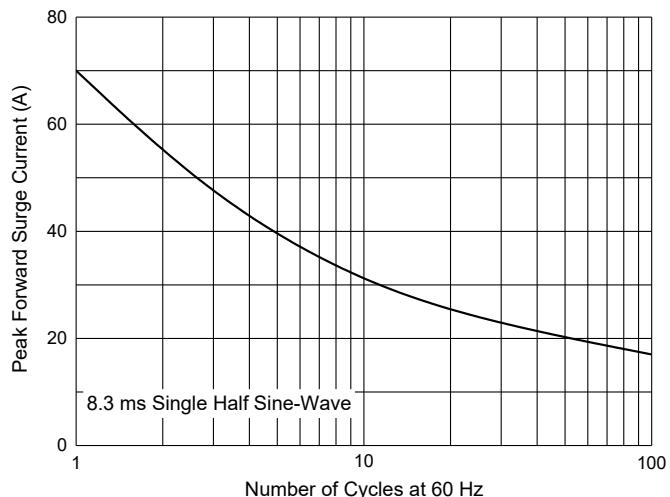


Fig. 3 - Typical Instantaneous Forward Characteristics

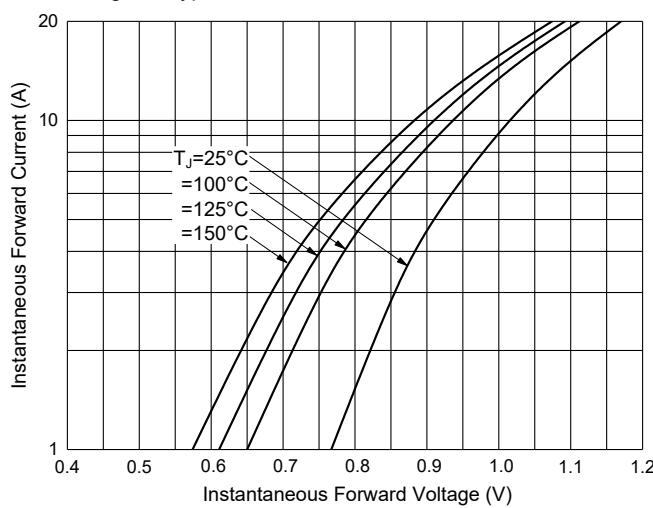
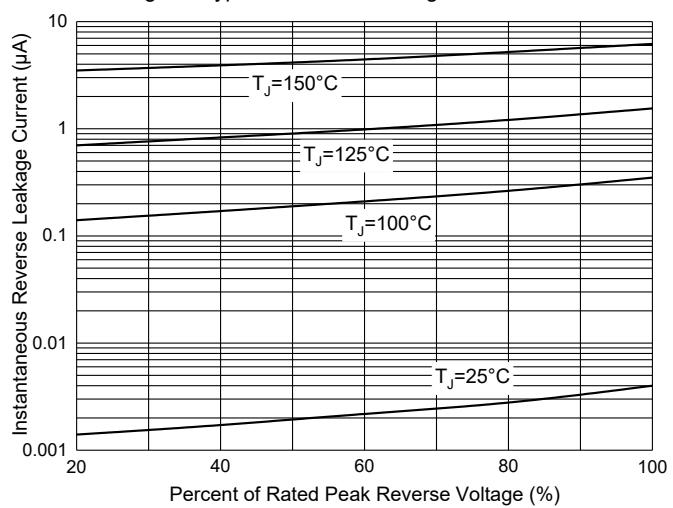


Fig. 4 - Typical Reverse Leakage Characteristics



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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