

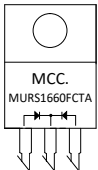
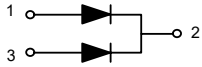
Features

- Halogen Free Available Upon Request By Adding Suffix "-HF"
- Lead Free Finish/RoHS Compliant(Note 1) ("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 @ 25°C (Unless Otherwise Specified)

| Parameter | Symbol | Value | Unit |
|---|-------------|-------|------------------|
| Peak Repetitive Reverse Voltage | V_{RRM} | 600 | V |
| Working Peak Reverse Voltage | V_{RWM} | | |
| DC Blocking Voltage | V_R | | |
| RMS Reverse Voltage | V_{RMS} | 420 | V |
| Average Rectified Forward Current | $I_{F(AV)}$ | 8 | A |
| Per Diode Per Device | | 16 | |
| Non-Repetitive Peak Surge Current @8.3ms Half Sine Wave | I_{FSM} | 100 | A |
| Current Squared Time @ 1ms≤t≤8.3ms | I^2t | 41 | A ² s |

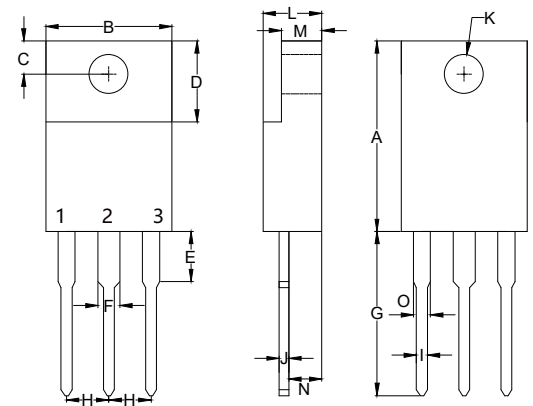
Internal Structure

| Pin | Description | Simplified Outline | Graphic Symbol |
|-----|-------------|---|---|
| 2 | Cathode |  |  |
| 1&3 | Anode | | |
| | | | |

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

16 Amp FRED Rectifiers 600 Volts

ITO-220AB



| DIM | DIMENSIONS | | | | NOTE |
|-----|------------|-------|-------|-------|------|
| | INCHES | | MM | | |
| | MIN | MAX | MIN | MAX | |
| A | 0.567 | 0.642 | 14.40 | 16.30 | |
| B | ----- | 0.421 | ----- | 10.70 | |
| C | 0.085 | 0.128 | 2.15 | 3.25 | |
| D | 0.248 | 0.272 | 6.30 | 6.90 | |
| E | ----- | 0.177 | ----- | 4.50 | |
| F | ----- | 0.071 | ----- | 1.80 | |
| G | 0.500 | 0.539 | 12.70 | 14.20 | |
| H | 0.100 | | 2.55 | | |
| I | ----- | 0.035 | ----- | 0.90 | |
| J | ----- | 0.032 | ----- | 0.80 | |
| K | 0.102 | 0.150 | 2.60 | 3.80 | Φ |
| L | ----- | 0.201 | ----- | 5.10 | |
| M | ----- | 0.140 | ----- | 3.56 | |
| N | 0.083 | 0.126 | 2.10 | 3.20 | |
| O | ----- | 0.071 | ----- | 1.80 | |

Thermal characteristics

| Symbol | Parameter | Conditions | Min | Typ | Max | Unit |
|---------------|--|------------|-----|-----|-----|------|
| T_J | Operating Junction Temperature Range | | -55 | | 175 | °C |
| T_{stg} | Storage Temperature Range | | -55 | | 175 | °C |
| $R_{th(J-C)}$ | Thermal Resistance from Junction to Case | | | 4 | | °C/W |

Electrical Characteristics @ 25°C Unless Otherwise Specified

| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|----------------------|--------|----------------------------------|-----|------|------|------|
| Forward Voltage | V_F | $I_F=8A; T_J=25^\circ C$ | | 1.40 | 1.60 | V |
| | | $I_F=8A; T_J=150^\circ C$ | | 1.20 | 1.30 | |
| Reverse Current | I_R | $V_R=600V; T_J=25^\circ C$ | | | 5 | uA |
| | | $V_R=600V; T_J=150^\circ C$ | | | 200 | |
| Junction Capacitance | C_J | $V_R=4V; f=1MHz; T_J=25^\circ C$ | | 35 | | pF |

Dynamic Recovery Characteristics @ 25°C Unless Otherwise Specified

| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit | |
|-------------------------|-----------|---|-------------------|-----|------|------|--|
| Reverse Recovery Time | t_{rr} | $I_F=0.5A; I_R=1.0A; I_{RR}=0.25A; T_J=25^\circ C$ | | 20 | 35 | ns | |
| | | | $T_J=25^\circ C$ | | 82 | | |
| | | | $T_J=150^\circ C$ | | 125 | | |
| Peak Recovery Current | I_{RRM} | $I_F=8A$ $d_{IF}/d_t=-200A/\mu s$ $V_{RM}=400V$ | $T_J=25^\circ C$ | | 3.45 | A | |
| | | | $T_J=150^\circ C$ | | 6.65 | | |
| Reverse Recovery Charge | Q_{rr} | | $T_J=25^\circ C$ | | 140 | nC | |
| | | | $T_J=150^\circ C$ | | 420 | | |

Curve Characteristics

Fig. 1 - Forward Current Derating Curve

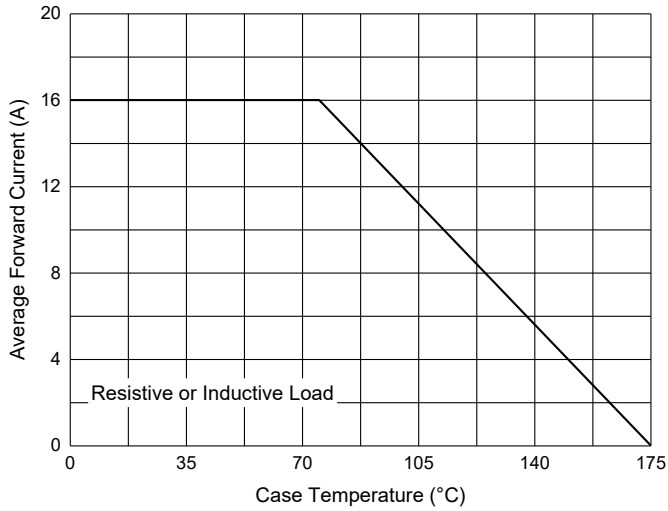


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

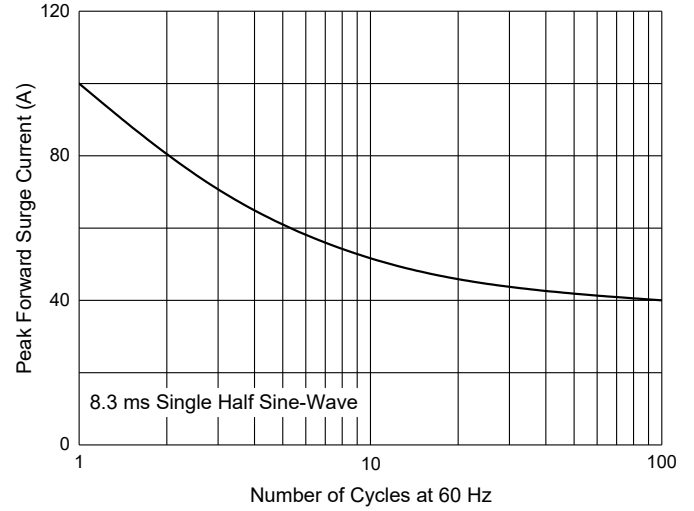


Fig. 3 - Typical Forward Characteristics

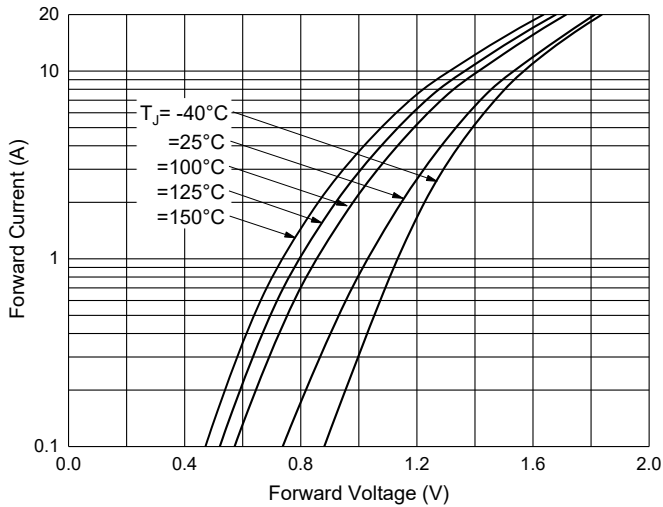


Fig. 4 - Typical Reverse Leakage Characteristics

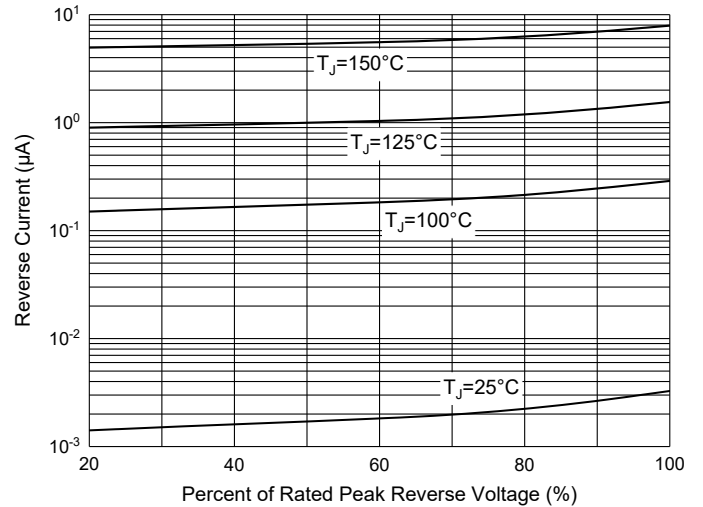


Fig. 5 - Typical Capacitance Characteristics

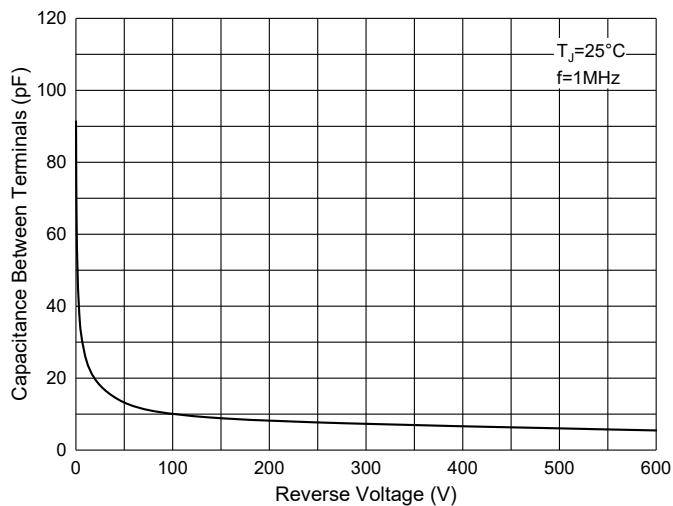
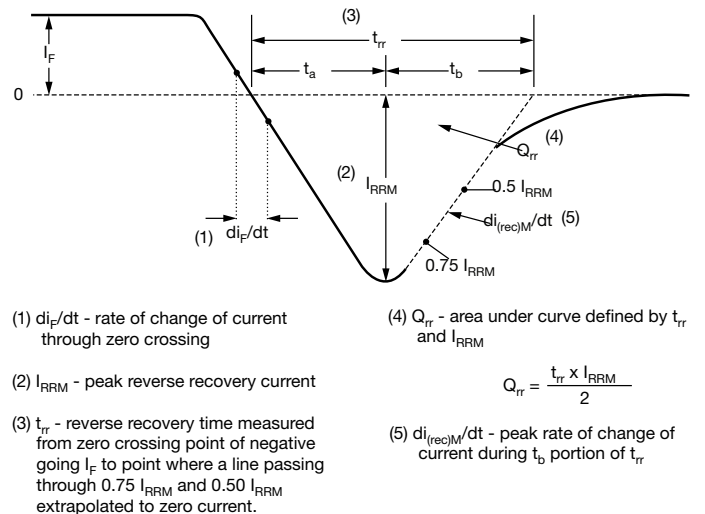


Fig. 6 - Reverse Recovery Waveform and Definitions



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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