

## Features

- Lead Free Finish/RoHS Compliant(Note 1) ("P" Suffix Designates Compliant. See Ordering Information)
- Epoxy Meets UL 94 V-0 Flammability Rating
- High Surge Forward Current Capability
- High Frequency Operation
- Halogen Free Available Upon Request By Adding Suffix "-HF"

## Maximum Ratings

- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Typical thermal resistance: 2.0°C/W Junction to Case

| MCC Part Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|-----------------|----------------|----------------------------------------|---------------------|-----------------------------|
| MURS1620CT      | MURS1620CT     | 200V                                   | 140V                | 200V                        |
| MURS1640CT      | MURS1640CT     | 400V                                   | 280V                | 400V                        |
| MURS1660CT      | MURS1660CT     | 600V                                   | 420V                | 600V                        |

## Electrical Characteristics @ 25°C Unless Otherwise Specified

|                                                         |             |                                                           |                                                                                                                         |
|---------------------------------------------------------|-------------|-----------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| Average Forward Current                                 | $I_{F(AV)}$ | 16A                                                       | $T_C=100^\circ\text{C}$                                                                                                 |
| Peak Forward Surge Current                              | $I_{FSM}$   | 125A                                                      | 8.3ms, Half Sine                                                                                                        |
| Maximum Forward Voltage Drop Per Element                | $V_F$       | MURS1620CT: 1.0V<br>MURS1640CT: 1.25V<br>MURS1660CT: 1.6V | $I_F=8\text{A}; T_J=25^\circ\text{C}$<br>$I_F=8\text{A}; T_J=25^\circ\text{C}$<br>$I_F=8\text{A}; T_J=25^\circ\text{C}$ |
| Maximum DC Reverse Current At Rated DC Blocking Voltage | $I_R$       | 10µA<br>100µA                                             | $T_J=25^\circ\text{C};$<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>$I_{rr}=0.25\text{A}$                                                            |

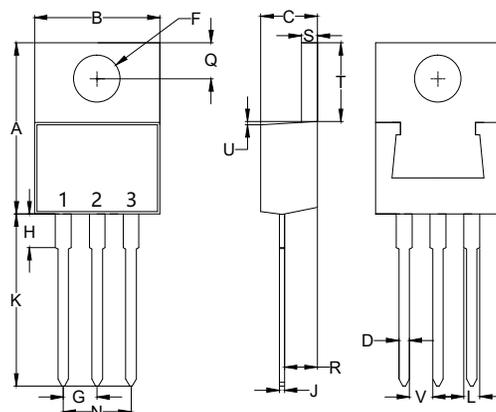
Note :1. High Temperature Solder Exemption Applied, See EU Directive Annex 7a.

### Internal Structure



# 16 Amp Ultra-Fast Recovery Rectifier Diodes 200 to 600 Volts

## TO-220AB



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

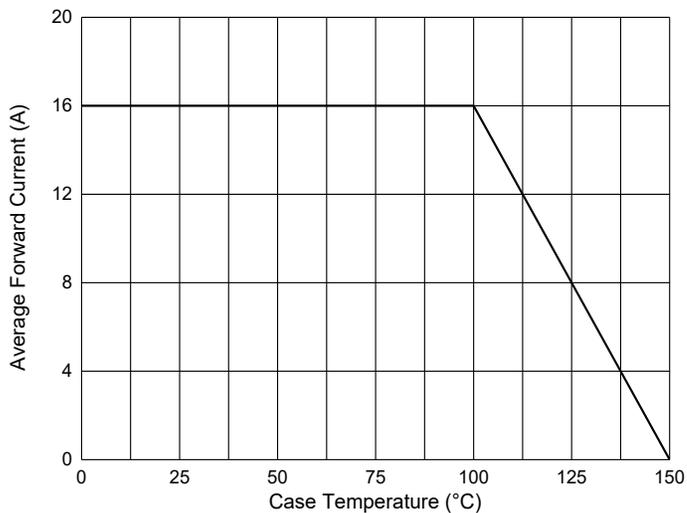


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

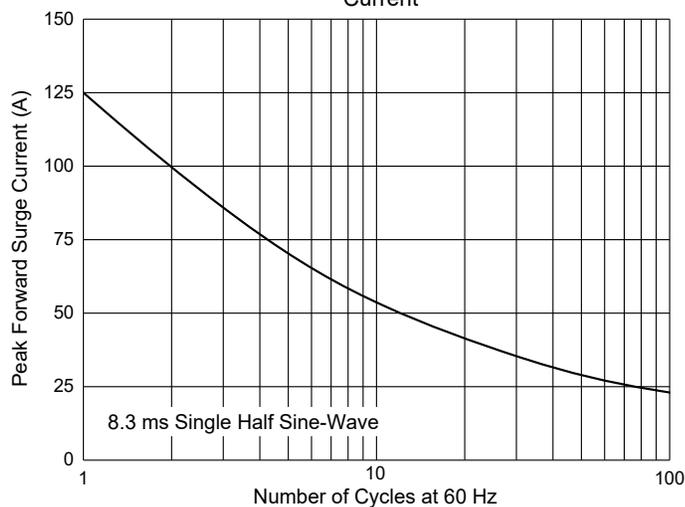


Fig. 3 - Forward Characteristics

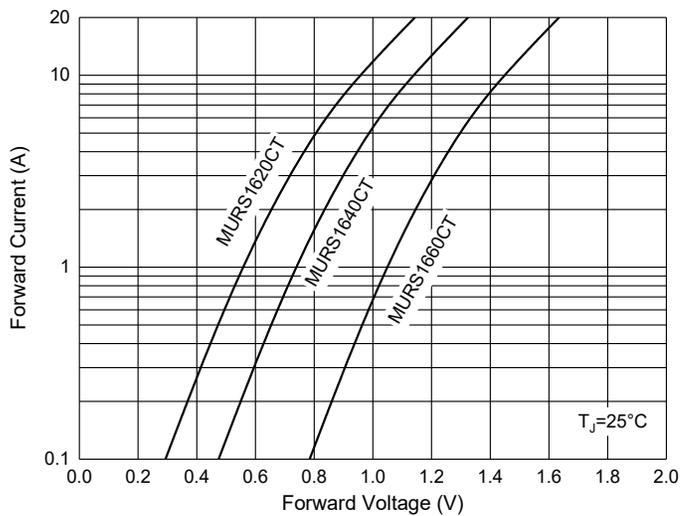
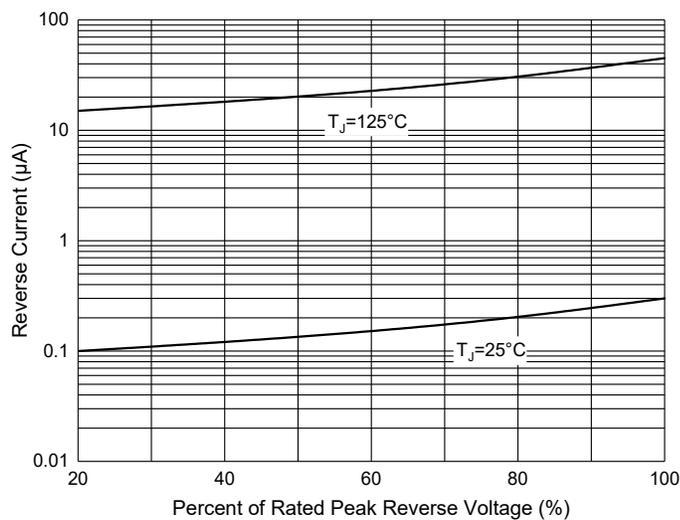


Fig. 4 - Reverse Characteristics



## 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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