

## MUR1505 THRU MUR1560

### Features

- Glass passivated chip
- Superfast switching time for hight efficiency
- Low reverse leakage current
- High surge capacity

### Maximum Ratings

- Operating Temperature: - 55°C to +175°C
- Storage Temperature: - 55°C to +175°C

| Microsemi<br>Catalog<br>Number | Device<br>Marking | Maximum<br>Recurrent<br>Peak<br>Reverse<br>Voltage | Maximum<br>RMS<br>Voltage | Maximum<br>DC<br>Blocking<br>Voltage |
|--------------------------------|-------------------|----------------------------------------------------|---------------------------|--------------------------------------|
| MUR1505                        | MUR1505           | 50V                                                | 35V                       | 50V                                  |
| MUR1510                        | MUR1510           | 100V                                               | 70V                       | 100V                                 |
| MUR1520                        | MUR1520           | 200V                                               | 140V                      | 200V                                 |
| MUR1540                        | MUR1540           | 400V                                               | 280V                      | 400V                                 |
| MUR1560                        | MUR1560           | 600V                                               | 420V                      | 600V                                 |

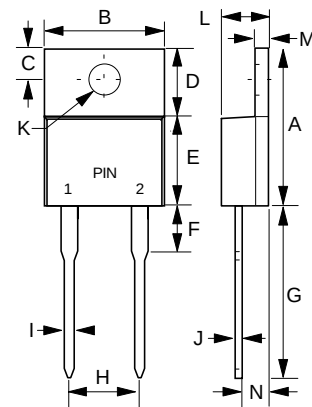
### Electrical Characteristics @ 25°C Unless Otherwise Specified

|                                                                 |             |                |                                                       |
|-----------------------------------------------------------------|-------------|----------------|-------------------------------------------------------|
| Average Forward Current                                         | $I_{F(AV)}$ | 15.0A          | $T_C = 120^\circ\text{C}$                             |
| Peak Forward Surge Current                                      | $I_{FSM}$   | 150A           | 8.3ms, half sine                                      |
| Maximum Forward Voltage Drop Per Element 1505-1520<br>1540-1560 | $V_F$       | 1.25V<br>2.0 V | $I_{FM} = 15A$<br>$T_J = 25^\circ\text{C}$            |
| Maximum DC Reverse Current At Rated DC Blocking Voltage         | $I_R$       | 10uA<br>1000uA | $T_J = 25^\circ\text{C}$<br>$T_J = 100^\circ\text{C}$ |
| Maximum Reverse Recovery Time 1505-1520<br>1540-1560            | $T_{rr}$    | 35ns<br>60ns   | $I_F=0.5A, I_r=1.0A,$<br>$I_{rr}=0.25A$               |
| Typical Junction Capacitance                                    | $C_J$       | 160pF          | Measured at<br>1.0MHz, $V_R=4.0V$                     |

\*Pulse Test: Pulse Width 300μsec, Duty Cycle 2%

## 15 Amp Super Fast Glass Passivated Rectifier 50 to 600 Volts

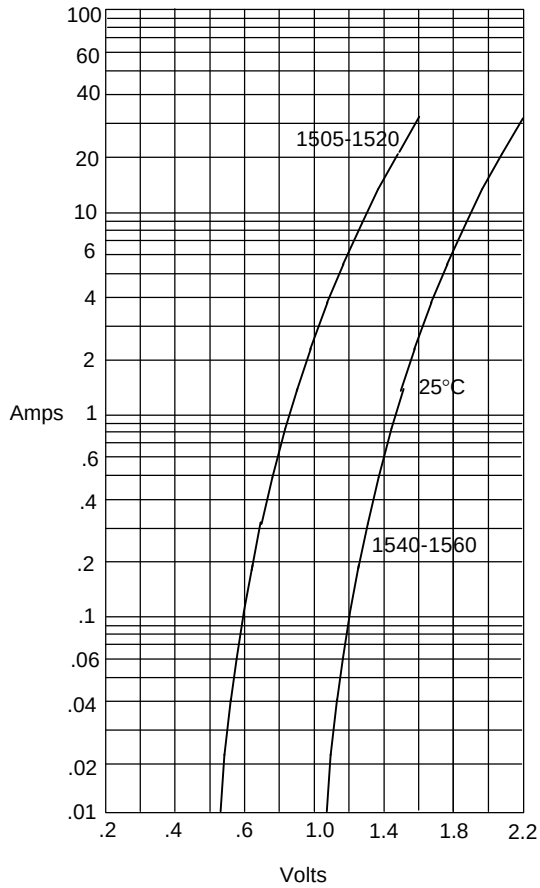
### TO-220AC



| DIM | INCHES |      | MM    |       | NOTE |
|-----|--------|------|-------|-------|------|
|     | MIN    | MAX  | MIN   | MAX   |      |
| A   | .560   | .625 | 14.22 | 15.88 |      |
| B   | .380   | .420 | 9.65  | 10.67 |      |
| C   | .100   | .135 | 2.54  | 3.43  |      |
| D   | .230   | .270 | 5.84  | 6.86  |      |
| E   | .380   | .420 | 9.65  | 10.67 |      |
| F   | -----  | .250 | ----- | 6.35  |      |
| G   | .500   | .580 | 12.70 | 14.73 |      |
| H   | .190   | .210 | 4.83  | 5.33  |      |
| I   | .020   | .045 | 0.51  | 1.14  |      |
| J   | .012   | .025 | 0.30  | 0.64  |      |
| K   | .139   | .161 | 3.53  | 4.09  | Ø    |
| L   | .140   | .190 | 3.56  | 4.83  |      |
| M   | .045   | .055 | 1.14  | 1.40  |      |
| N   | .080   | .115 | 2.03  | 2.92  |      |

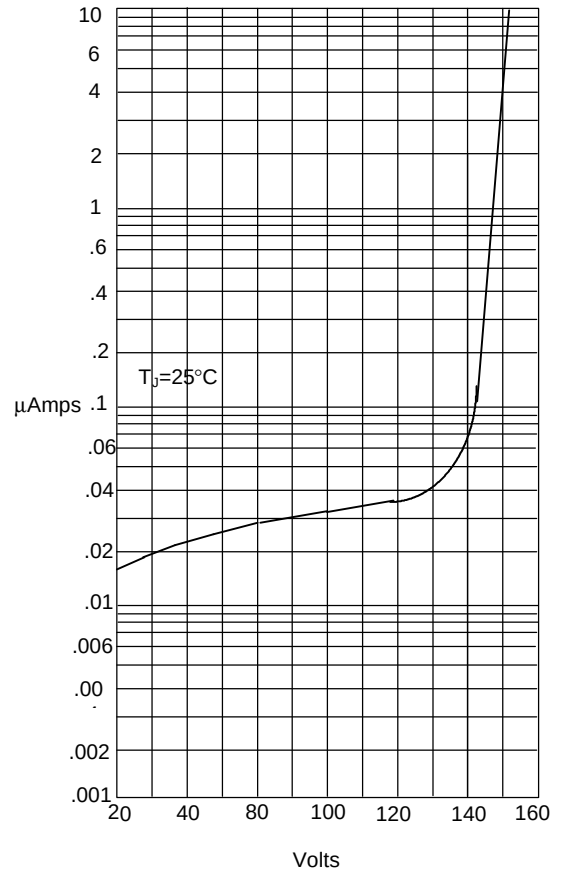
# MUR1505 thru MUR1560

Figure 1  
Typical Forward Characteristics



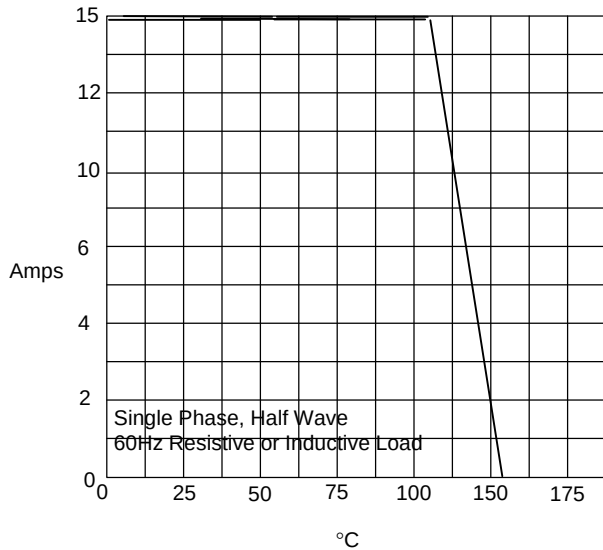
Instantaneous Forward Current - Amperes *versus*  
Instantaneous Forward Voltage - Volts

Figure 2  
Typical Reverse Characteristics



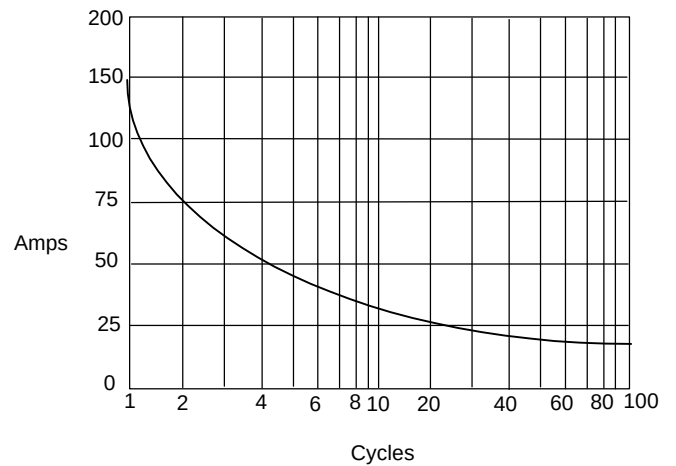
Instantaneous Reverse Leakage Current - MicroAmperes *versus*  
Percent Of Rated Peak Reverse Voltage - Volts

Figure 3  
Forward Derating Curve



Average Forward Rectified Current - Amperes *versus*  
Case Temperature - °C

Figure 4  
Maximum Non-Repetitive Forward Surge Current



Peak Forward Surge Current - Amperes *versus*  
Number Of Cycles At 60Hz - Cycles