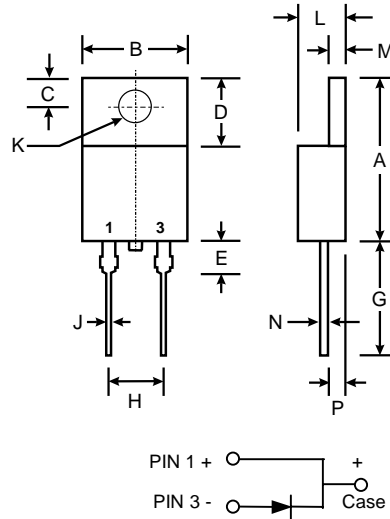


#### Features

- Glass Passivated Die Construction
- Super-Fast Switching
- Low Forward Voltage Drop
- Low Reverse Leakage Current
- High Surge Current Capability
- Plastic Material has UL Flammability Classification 94V-0

#### Mechanical Data

- Case: TO-220AC, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: See Diagram
- Weight: 2.24 grams (approx.)
- Mounting Position: Any
- **Lead Free: For RoHS / Lead Free Version**



| TO-220AC             |                    |                    |
|----------------------|--------------------|--------------------|
| Dim                  | Min                | Max                |
| A                    | 14.22              | 15.88              |
| B                    | 9.57               | 10.57              |
| C                    | 2.54               | 3.43               |
| D                    | 5.80               | 6.80               |
| E                    | —                  | 6.35               |
| G                    | 12.70              | 14.73              |
| H                    | 4.88               | 5.28               |
| J                    | 0.51               | 1.14               |
| K                    | 3.53 $\varnothing$ | 4.14 $\varnothing$ |
| L                    | 3.56               | 4.83               |
| M                    | 1.07               | 1.47               |
| N                    | 0.30               | 0.64               |
| P                    | 2.03               | 2.92               |
| All Dimensions in mm |                    |                    |

#### Maximum Ratings and Electrical Characteristics @ $T_A=25^\circ\text{C}$ unless otherwise specified

Single Phase, half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

| Characteristic  | Symbol         | MUR 1510    | MUR 1520 | MUR 1530 | MUR 1540 | MUR 1550 | MUR 1560 | Unit             |
|---|----------------|-------------|----------|----------|----------|----------|----------|------------------|
| Peak Repetitive Reverse Voltage   | $V_{RRM}$      |             |          |          |          |          |          |                  |
| Working Peak Reverse Voltage  | $V_{RWM}$      | 100         | 200      | 300      | 400      | 500      | 600      | V                |
| DC Blocking Voltage   | $V_R$          |             |          |          |          |          |          |                  |
| RMS Reverse Voltage   | $V_{R(RMS)}$   | 70          | 140      | 210      | 280      | 350      | 420      | V                |
| Average Rectified Output Current @ $T_C = 105^\circ\text{C}$  | $I_o$          | 15.0        |          |          |          |          |          | A                |
| Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method) | $I_{FSM}$      | 150         |          |          |          |          |          | A                |
| Forward Voltage @ $I_f = 10.0\text{A}$  | $V_{FM}$       | 1.0         |          | 1.3      |          | 1.7      |          | V                |
| Peak Reverse Current @ $T_A = 25^\circ\text{C}$   | $I_{RM}$       | 10          |          |          |          |          |          | $\mu\text{A}$    |
| At Rated DC Blocking Voltage @ $T_A = 100^\circ\text{C}$  |                | 400         |          |          |          |          |          |                  |
| Reverse Recovery Time (Note 1)  | $t_{rr}$       | 35          |          |          |          |          |          | nS               |
| Typical Junction Capacitance (Note 2)   | $C_j$          | 200         |          |          |          |          |          | pF               |
| Operating and Storage Temperature Range   | $T_j, T_{STG}$ | -55 to +150 |          |          |          |          |          | $^\circ\text{C}$ |

Note: 1. Measured with  $I_F = 0.5\text{A}$ ,  $I_R = 1.0\text{A}$ ,  $I_{RR} = 0.25\text{A}$ .  
2. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.

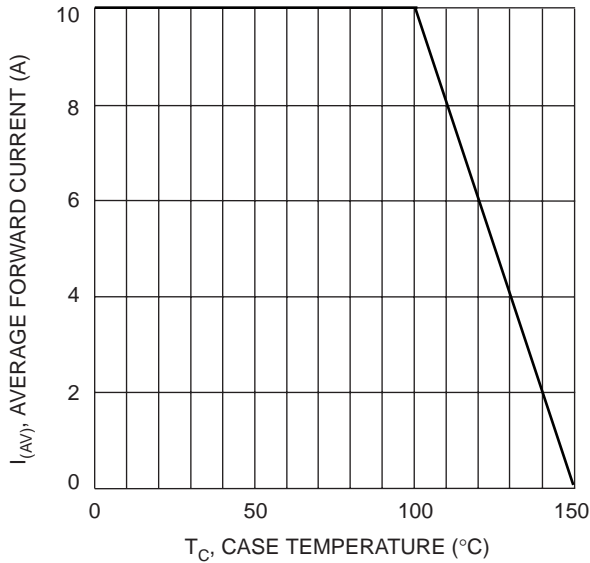


Fig. 1 Forward Current Derating Curve

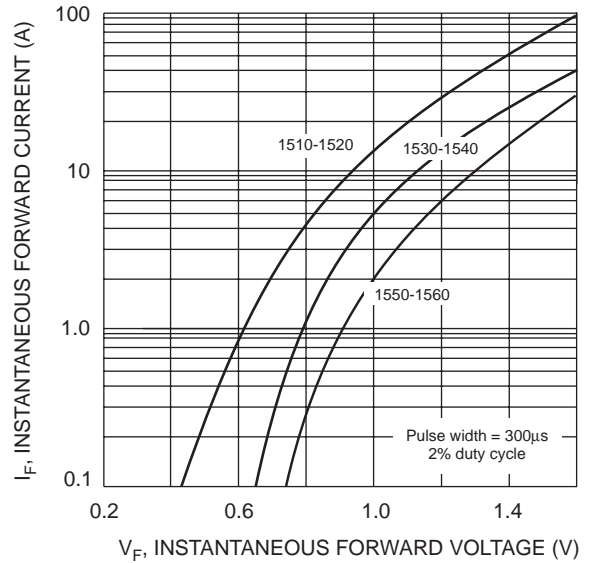


Fig. 2 Typical Forward Characteristics

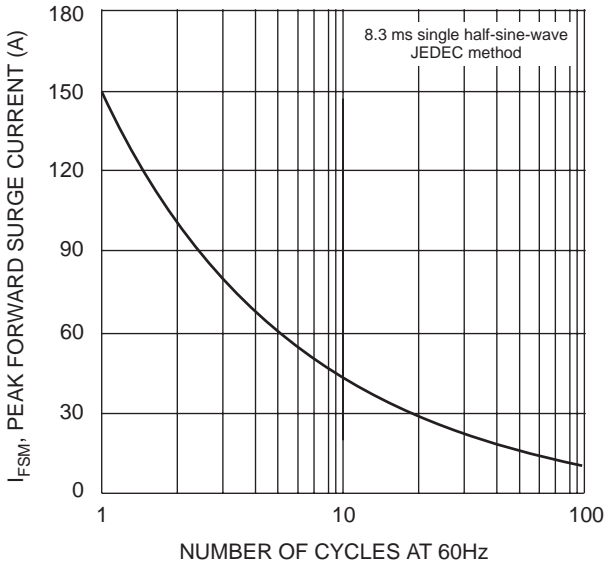


Fig. 3 Max Non-Repetitive Surge Current

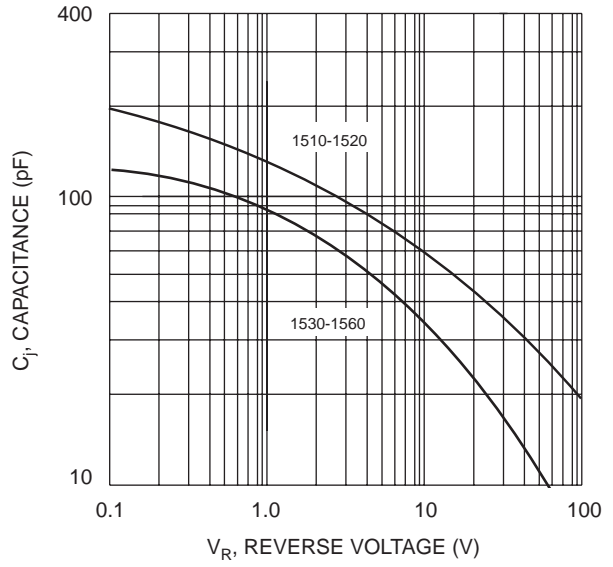


Fig. 4 Typical Junction Capacitance