



# MUR560

## Superfast Recovery Rectifiers

### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0. Flame Retardant Epoxy Molding Compound.
- Low power loss, high efficiency.
- Low forward voltage, high current capability.
- High surge capability
- Ultra fast recovery time, high voltage.
- Lead free in comply with EU RoHS.

### MECHANICAL DATA

- Case: ITO/TO-220AC molded plastic
- Terminals: solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: As marked.
- Mounting Position: Any

### ITO-220AC



### TO-220AC



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load.  
For capacitive load, derate current by 20%

| PARAMETER                                                                                          | SYMBOL          | MUR560      | UNITS           |
|----------------------------------------------------------------------------------------------------|-----------------|-------------|-----------------|
| Maximum Recurrent Peak Reverse Voltage                                                             | $V_{RRM}$       | 600         | V               |
| Maximum RMS Voltage                                                                                | $V_{RMS}$       | 420         | V               |
| Maximum DC Blocking Voltage                                                                        | $V_{DC}$        | 600         | V               |
| Maximum Average Forward Rectified Current at $T_C=100^{\circ}C$                                    | $I_{F(AV)}$     | 5           | A               |
| Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load (JEDEC method) | $I_{FSM}$       | 150         | A               |
| Maximum Forward Voltage at 5A                                                                      | $V_F$           | 1.7         | V               |
| Maximum DC Reverse Current at Rated DC Blocking Voltage $T_J=25^{\circ}C$<br>$T_J=125^{\circ}C$    | $I_R$           | 10<br>500   | $\mu A$         |
| Maximum Thermal Resistance (Note 2)                                                                | $R_{\theta JC}$ | 5           | $^{\circ}C / W$ |
| Typical Junction Capacitance                                                                       | $C_J$           | 50          | pF              |
| Maximum Reverse Recovery Time (Note 1)                                                             | $t_{rr}$        | 35          | ns              |
| Operating Junction and Storage Temperature Range                                                   | $T_J, T_{STG}$  | -55 to +150 | $^{\circ}C$     |

#### NOTES:

1. Reverse Recovery Test Conditions:  $I_F=0.5A$ ,  $I_R=1A$ ,  $I_{rr}=0.25A$ .
2. Thermal resistance from Junction to ambient and from junction to lead 0.375" (9.5mm) P.C.B mounted

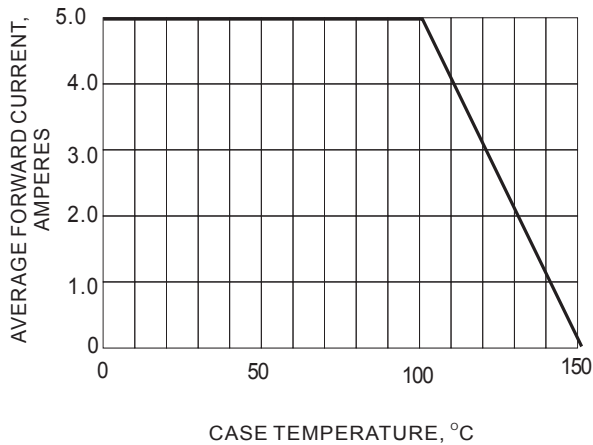


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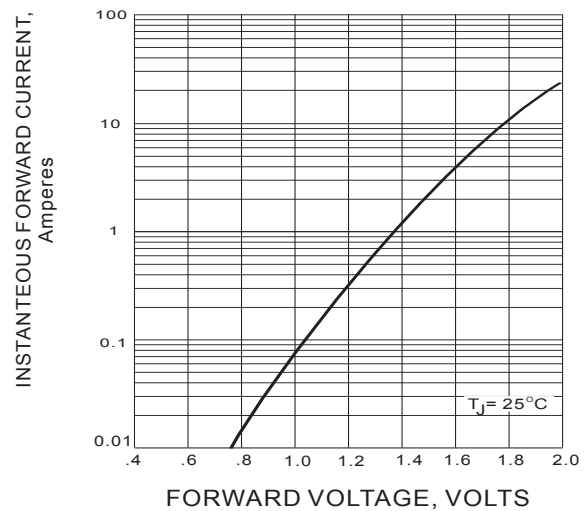
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**Characteristic Curves** ( $T_A=25^\circ\text{C}$  unless otherwise noted)

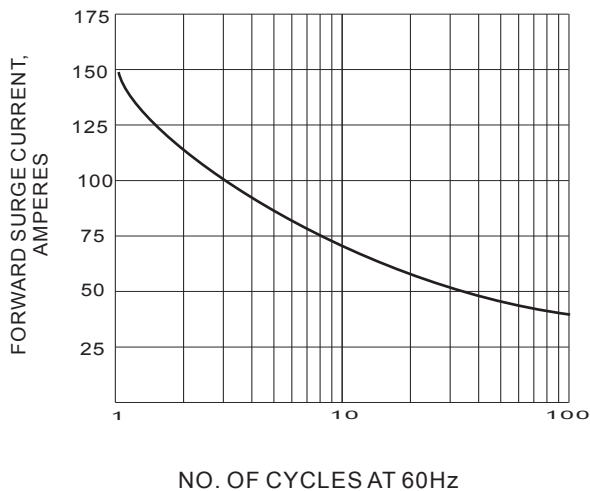
**Fig.1 FORWARD CURRENT DERATING CURVE**



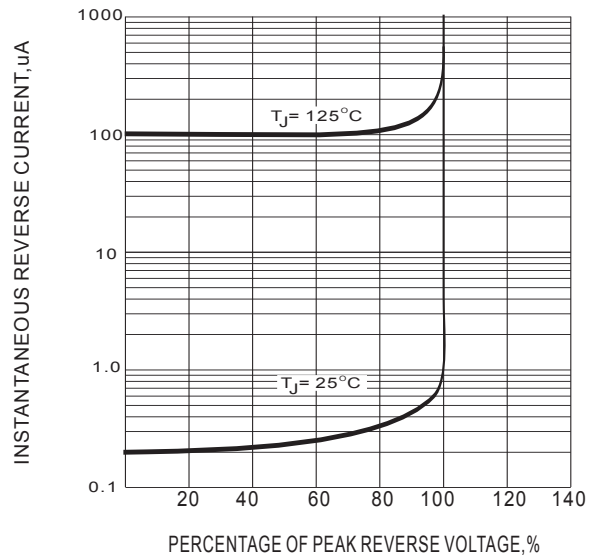
**Fig.2 FORWARD CHARACTERISTICS**



**Fig.3 PEAK FORWARD SURGE CURRENT**



**Fig.4 TYPICAL REVERSE CHARACTERISTICS**



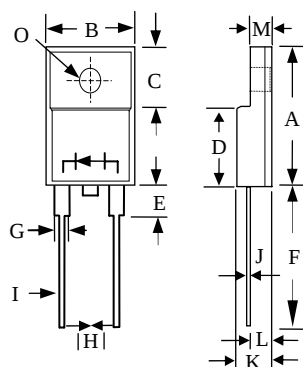


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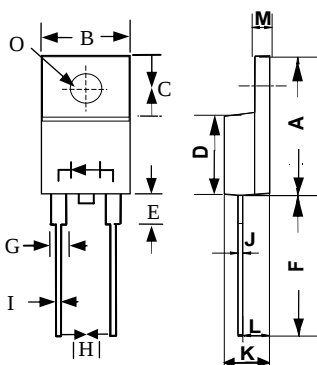
### PACKAGE OUTLINE

#### ITO-220AC



| ITO-220AC                    |       |       |
|------------------------------|-------|-------|
| DIM.                         | MIN.  | MAX.  |
| A                            | 14.90 | 15.90 |
| B                            | 9.90  | 10.40 |
| C                            | 6.45  | 6.95  |
| D                            | 8.05  | 8.85  |
| E                            | 2.90  | 3.90  |
| F                            | 12.8  | —     |
| G                            | 1.10  | 1.4   |
| H                            | 4.95  | 5.05  |
| I                            | 0.45  | 0.95  |
| J                            | 0.40  | 0.65  |
| K                            | 4.35  | 4.80  |
| L                            | 2.45  | 2.85  |
| M                            | 2.50  | 2.85  |
| O                            | ∅3.00 | ∅3.50 |
| All Dimensions in millimeter |       |       |

#### TO-220AC



| TO-220AB                     |       |       |
|------------------------------|-------|-------|
| DIM.                         | MIN.  | MAX.  |
| A                            | 14.50 | 15.50 |
| B                            | 9.90  | 10.40 |
| C                            | 6.05  | 6.65  |
| D                            | 8.05  | 8.85  |
| E                            | 2.90  | 3.90  |
| F                            | 12.80 | —     |
| G                            | 1.10  | 1.40  |
| H                            | 4.95  | 5.05  |
| I                            | 0.45  | 0.95  |
| J                            | 0.40  | 0.65  |
| K                            | 4.35  | 4.75  |
| L                            | 2.45  | 2.85  |
| M                            | 1.15  | 1.45  |
| O                            | ∅3.55 | ∅3.85 |
| All Dimensions in millimeter |       |       |