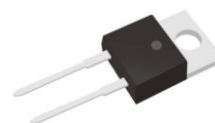
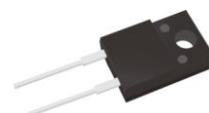


## Features

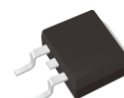
- ◇ Superfast recovery times-epitaxial construction
- ◇ Low forward voltage,High current capability
- ◇ Fast switching for high efficiency
- ◇ Excellent low reverse leakages
- ◇ Excellent high temperature stability
- ◇ Low stored charge majority carrier conduction
- ◇ High forward surge capability
- ◇ Lead free finish ,Rohs and WEEE compliant.



TO-220AC



ITO-220AC



TO-263

## Applications

- ◇ DC to DC converter
- ◇ Switching mode converters and inverters
- ◇ Lighting application
- ◇ Freewheeling application

## Mechanical Data

- ◇ Moisture Sensitivity: MSL Level 1,per J-STD-020
- ◇ Terminals:Matte Tin Finish.  
Solderable per MIL-STD-202 Method 208
- ◇ Case Material: Molded Plastic;  
Molding compound meet UL Flammability ClassificationRating 94V-0
- ◇ Case:JEDEC TO-220AC,ITO-AC,TO-263

## MAXIMUM RATING

Ratings at 25℃ ambient temperature unless otherwise specified.

| PARAMETER                                       | SYMBOL      | VALUE           | UNITS            |
|-------------------------------------------------|-------------|-----------------|------------------|
| Maximum repetitive peak reverse voltage         | $V_{RRM}$   | 600             | V                |
| Maximum RMS voltage                             | $V_{RWS}$   | 420             | V                |
| Maximum DC blocking voltage                     | $V_{DC}$    | 600             | V                |
| Maximum average forward rectified current       | $I_{F(AV)}$ | 15              | A                |
| Peak forward surge current 8.3ms half-sine-wave | $I_{FSM}$   | 225             | A                |
| $I^2t$ Rating for Fusing( $t < 8.3ms$ )         | $I^2t$      | 210             | A <sup>2</sup> s |
| Typical Thermal Resistance                      | TO-220AC    | $R_{\theta JA}$ | 30               |
|                                                 |             | $R_{\theta JC}$ | 2.5              |
|                                                 | ITO-220AC   | $R_{\theta JC}$ | 6.5              |
|                                                 | TO-263      | $R_{\theta JC}$ | 5.0              |
| Typical junction capacitance: VR=4.0v,f=1MHz    | $C_J$       | 100             | pF               |
| Junction temperature                            | $T_J$       | 150             | ℃                |
| Storage temperature range                       | $T_{STG}$   | -55~150         | ℃                |

**ELECTRICAL CHARACTERISTICS**

| PARAMETER                                                | TEST CONDITIONS | SYMBOL          | VALUE |      |      | UNITS |
|----------------------------------------------------------|-----------------|-----------------|-------|------|------|-------|
|                                                          |                 |                 | Min   | Typ  | Max  |       |
| Breakdown voltage per diode(min)                         | IR=0.01mA       | VB <sub>R</sub> | 600   | -    | -    | V     |
| Instantaneous forward voltage                            | IF=15A          | TA= 25°C        | VF    | -    | 1.20 | V     |
|                                                          | per Ige         | TA= 125°C       | VF    | -    | 1.0  | V     |
| Maximum DC reverse current<br>@Rated DC Blocking Voltage | TA= 25°C        | IR              | -     | 0.02 | 10   | μ A   |
|                                                          | TA=125°C        | IR              | -     | 8.0  | 500  | μ A   |
| Reverse Recovery Time<br>(IF=0.5A, IR=1.0A, IRR=0.25A)   | MUR1560         | trr             | -     | 45   | 50   | ns    |
|                                                          | MUR1560B        | trr             | -     | 33   | 50   | ns    |
|                                                          | MUR1560E        | trr             | -     | 33   | 50   | ns    |
|                                                          | MUR1560F        | trr             | -     | 33   | 50   | ns    |

**ORDERING PACK INFORMATION**

| Part No. | Packge    | Pcking     | Box Size<br>L×W×H(mm) | Quatity(pcs/box) | Carton Size<br>L×W×H(mm) | Quatity(pcs/carton) |
|----------|-----------|------------|-----------------------|------------------|--------------------------|---------------------|
| MUR1560  | TO-220AC  | 50pcs/Tube | 558×148×38            | 1000             | 565×225×170              | 5000                |
| MUR1560B | TO-263    | 50pcs/Tube | 558×148×38            | 1000             | 565×225×170              | 5000                |
| MUR1560E | ITO-220AC | 50pcs/Tube | 558×148×38            | 1000             | 565×225×170              | 5000                |
| MUR1560F | ITO-220AB | 50pcs/Tube | 558×148×38            | 1000             | 565×225×170              | 5000                |

### RATING AND CHARACTERISTICS CURVES



FIG-1 TYPICAL FORWARD CHARACTERISTICS

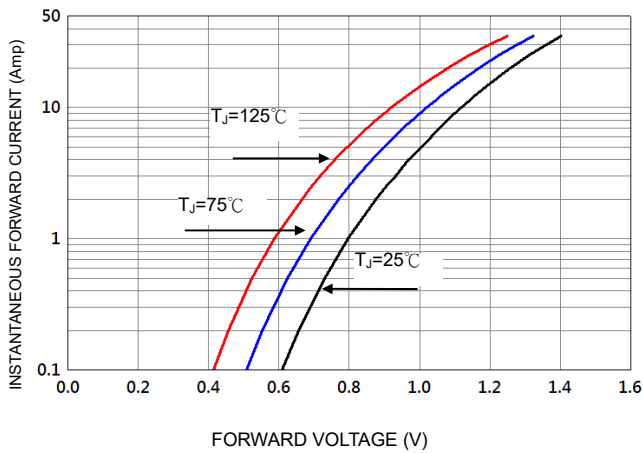


FIG-3 FORWARD CURRENT DERATING CURVE

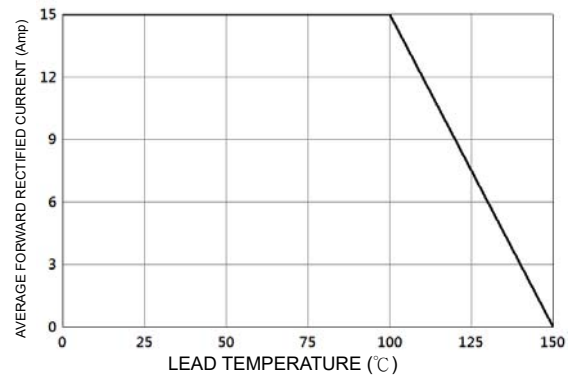


FIG-2 TYPICAL REVERSE CHARACTERISTICS

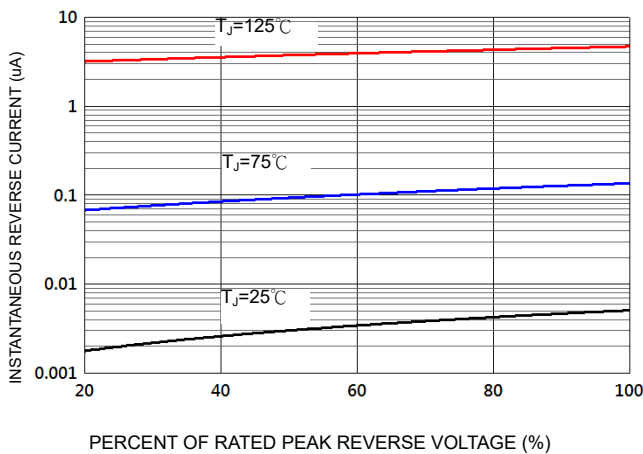


FIG-4 TYPICAL JUNCTION CAPACITANCE

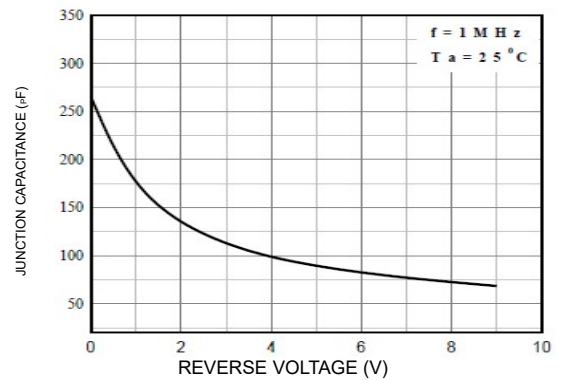
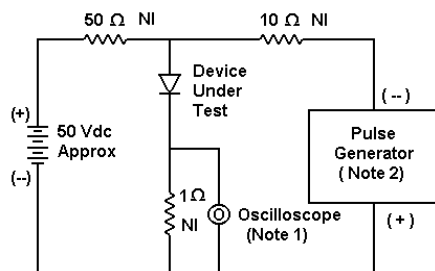
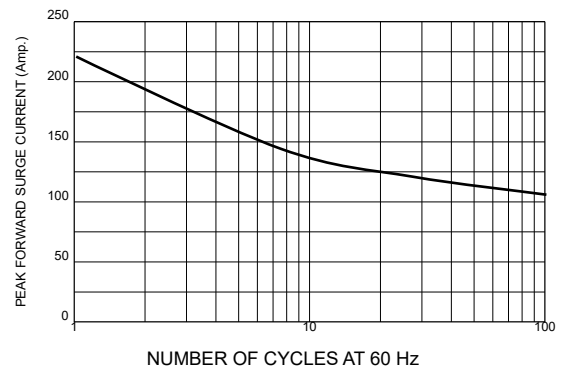
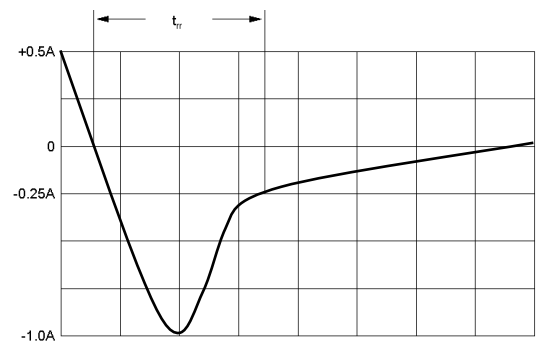


FIG-5 PEAK FORWARD SURGE CURRENT

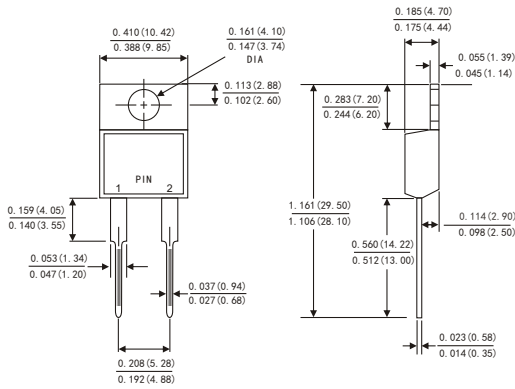
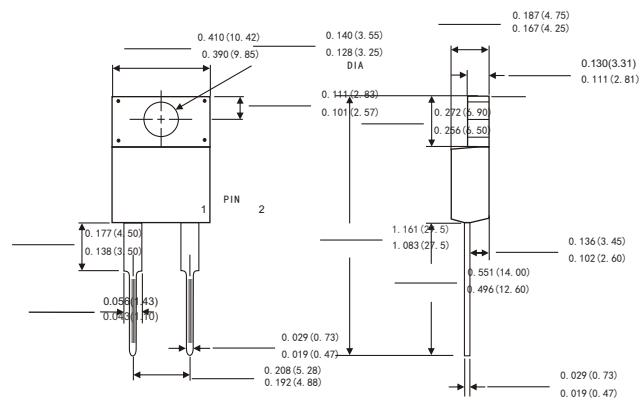


- Notes:
1. Rise Time = 7 ns max. Input Impedance = 1 M $\Omega$ , 22 pF
  2. Rise Time = 10 ns max. Input Impedance = 50  $\Omega$



Set time base for 10/20 ns/cm

FIG-6 Reverse Recovery Time Characteristic and Test Circuit Diagram

**PACKAGE OUTLINE DIMENSIONS**
**TO-220AC**

**ITO-220AC**

**TO-263**
