

## Fast Recovery Epi Diodes

### Features

### TO-220AC

- ◆ High frequency operation.  
High surge forward current capability
- ◆ High purity, high temperature epoxy encapsulation for  
enhanced mechanical strength and moisture resistance
- ◆ Guard ring for enhanced ruggedness and long term reliability
- ◆ Solder dip 275 °C max. 7s, per JESD 22-B106



### Maximum Ratings And Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

| Parameter                                                                                                                   | Symbols         | MUR820CT   | MUR840CT | MUR860CT | Units |
|-----------------------------------------------------------------------------------------------------------------------------|-----------------|------------|----------|----------|-------|
| Maximum Recurrent Peak Reverse Voltage                                                                                      | $V_{RRM}$       | 200        | 400      | 600      | V     |
| Maximum RMS voltage                                                                                                         | $V_{RMS}$       | 140        | 280      | 420      | V     |
| Maximum DC blocking Voltage                                                                                                 | $V_{DC}$        | 200        | 400      | 600      | V     |
| Maximum Average Forward Rectified Current                                                                                   | $I_{F(AV)}$     | 8          |          |          | A     |
| Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)                           | $I_{FSM}$       | 100        |          |          | A     |
| Instantaneous forward voltage at 8 A                                                                                        | $V_F$           | 1.0        | 1.3      | 1.6      | V     |
| Maximum Reverse Recovery Time <sup>(1)</sup>                                                                                | $t_{rr}$        | 35         |          |          | ns    |
| Maximum instantaneous reverse current at rated DC blocking voltage<br>$T_j=25^{\circ}\text{C}$<br>$T_j=125^{\circ}\text{C}$ | $I_R$           | 10<br>500  |          |          | uA    |
| Maximum Thermal Resistance Junction To Case                                                                                 | $R_{\theta JC}$ | 4          |          |          | °C/W  |
| Operation Junction Temperature and Storage Temperature                                                                      | $T_j, T_{stg}$  | -55 ~ +150 |          |          | °C    |

NOTE 1:  $I_F=0.5A, I_R=1A, I_{rr}=0.25A$

## Ratings And Characteristic Curves

Fig.1 Typical Forward Current Derating Curve

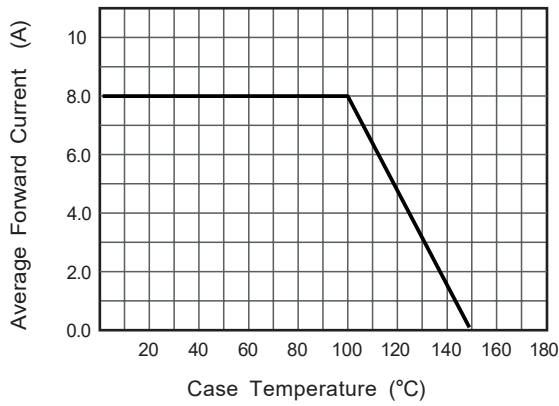


Fig.2 Typical Reverse Characteristics

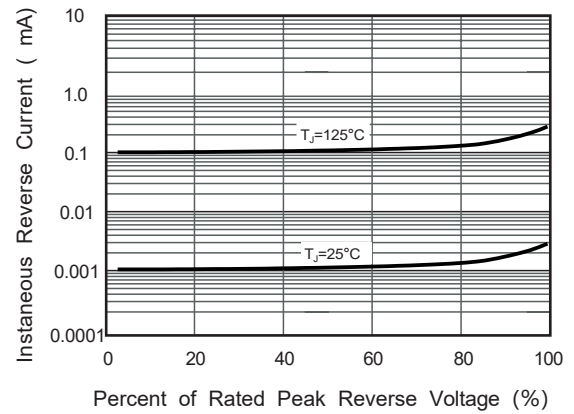


Fig.3 Typical Forward Characteristic

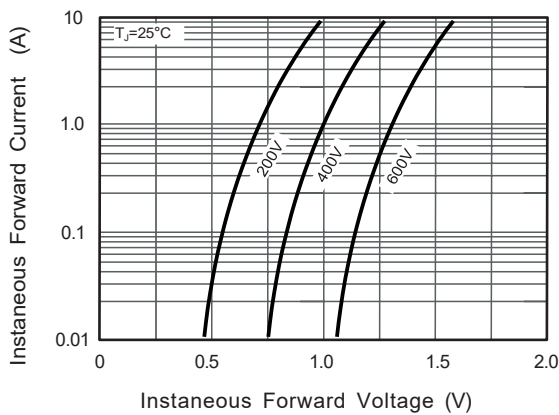
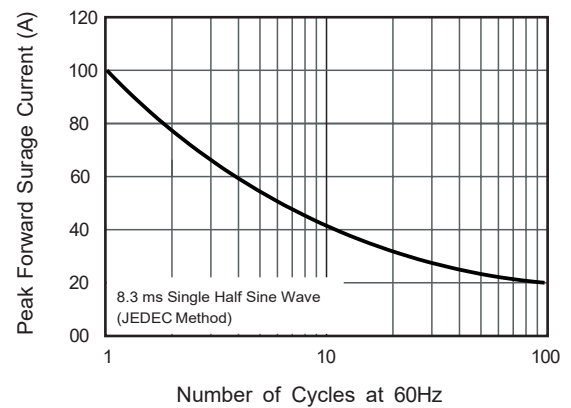


Fig.4 Maximum Non-Repetitive Peak Forward Surge Current



The curve above is for reference only.