

Fast Recovery Epi Diodes

Reverse Voltage - 400 V

Forward Current - 16 A

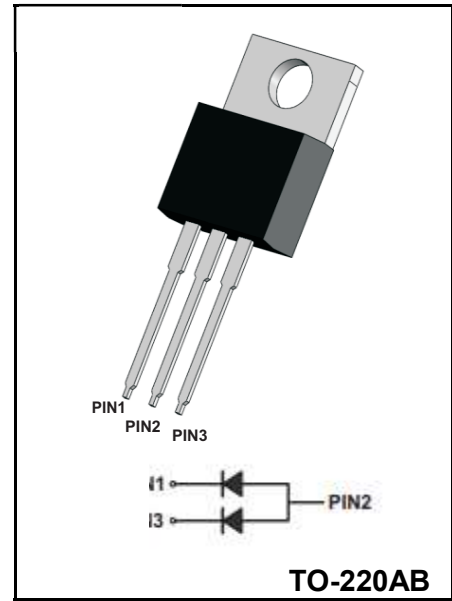


Features

- ◆ 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

Mechanical Data

- ◆ Case: TO-220AB
- ◆ Approx. Weight: 1.9g (0.067oz)
- ◆ Lead free finish, RoHS compliant
- ◆ Case Material: "Green" molding compound, UL flammability classification 94V-0, "Halogen-free".



Maximum Ratings (Per Leg) At Ta=25°C Unless Otherwise Specified

| Parameter | Symbols | Value | Units |
|---|-----------------|------------|-------|
| Maximum Repetitive Peak Reverse Voltage | V_{RRM} | 400 | V |
| Maximum RMS voltage | V_{RMS} | 280 | V |
| Maximum DC Blocking Voltage | V_{DC} | 400 | V |
| Maximum Average Forward Rectified Current @Tc=100 °C | Per Leg | 8 | A |
| | per device | 16 | |
| Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method) | I_{FSM} | 100 | A |
| Instantaneous forward voltage at 8A per leg | V_F | 1.25 | V |
| Maximum instantaneous reverse current at rated DC blocking voltage | I_R | 10 100 | uA |
| Maximum Reverse Recovery Time NOTE 1 | t_{rr} | 35 | nS |
| 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 |

Note1: Reverse recovery test conditions IF=0.5A, IR=1.0A, Irr=0.25A

Ratings and Characteristic Curves

Fig.1 TYPICAL FORWARD CURRENT DERATING CURVE

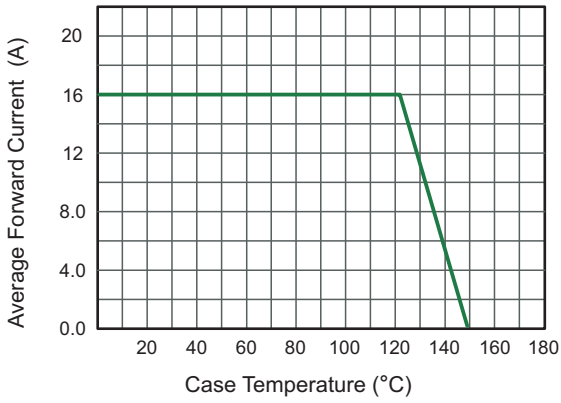


Fig.2 Typical Reverse Characteristics

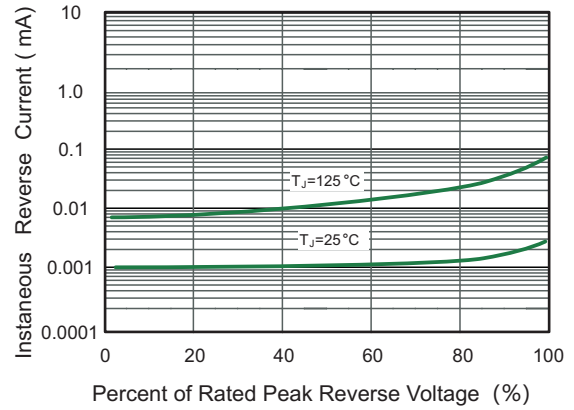


Fig.3 Typical Forward Characteristics

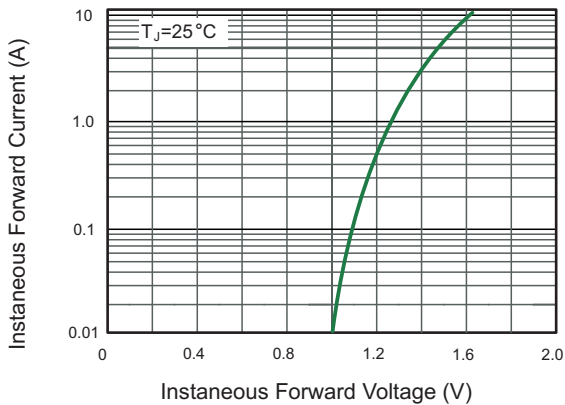
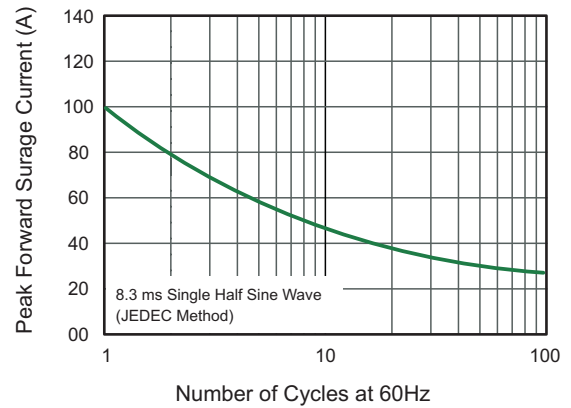
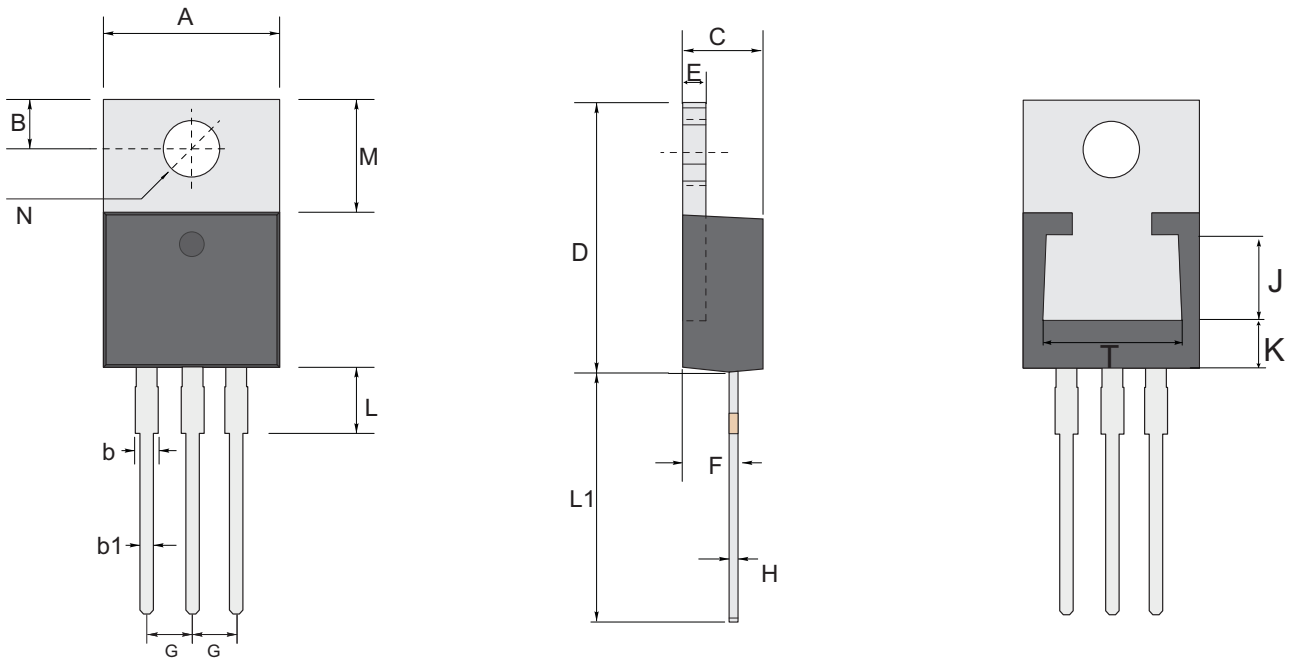


Fig.4 Maximum Non-Repetitive Peak Forward Surge Current



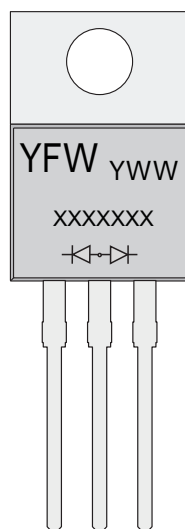
Package Outline Plastic surface mounted package 3 leads



TO-220AB

| UNIT | | A | B | b | b1 | C | D | E | F | G | H | L | L1 | M | N | J | T | K |
|------|-----|-------|------|------|------|------|-------|------|------|-----------------|------|------|-------|----------------|----------------|--------------|--------------|--------------|
| mm | max | 10.45 | 2.94 | 1.77 | 0.94 | 4.76 | 16.0 | 1.40 | 2.80 | 2.54 TYPICAL | 0.64 | 4.2 | 14.79 | 6.6 TYPICAL | 3.8 TYPICAL | 4.65 ref. | 7.70 ref. | 3.22 ref. |
| | typ | 9.94 | 2.74 | 1.27 | 0.81 | 4.53 | 15.09 | 1.27 | 2.69 | | 0.38 | 3.89 | 13.18 | | | | | |
| | min | 9.85 | 2.54 | 1.14 | 0.62 | 4.42 | 14.6 | 1.14 | 2.20 | | 0.35 | 2.8 | 13.08 | | | | | |
| mil | max | 411 | 116 | 70 | 40 | 187 | 630 | 55 | 110 | 100 TYPICAL | 25 | 165 | 582 | 259 TYPICAL | 150 TYPICAL | 1.83 ref. | 303 ref. | 126 ref. |
| | typ | 391 | 107 | 50 | 31 | 178 | 594 | 50 | 105 | | 15 | 153 | 519 | | | | | |
| | min | 388 | 100 | 45 | 24 | 174 | 575 | 45 | 87 | | 14 | 110 | 515 | | | | | |

MARKING DIAGRAM



YWW: Date Code
 Y: Years(0~9)
 WW: Week
 XXXXXXXX: Product name
 (NOTE: The weekly code is based on the actual number of weeks in the calendar year.)