

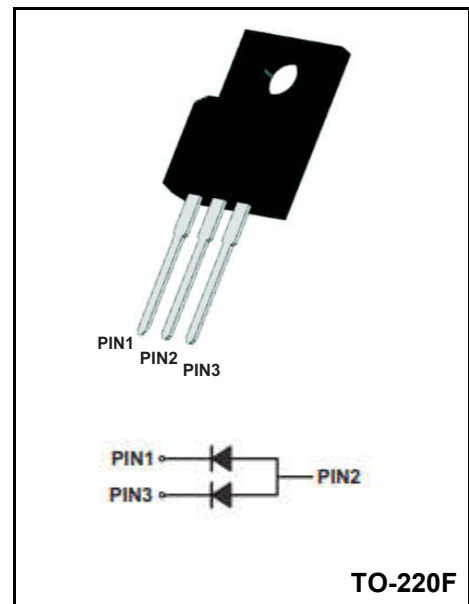
**Fast Recovery Epi Diodes**

**Reverse Voltage - 200 V**

**Forward Current - 30 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-220F-3L
- ◆ Approx. Weight: 1.7g ( 0.063oz)
- ◆ Lead free finish, RoHS compliant
- ◆ Case Material: "Green" molding compound, UL flammability classification 94V-0, "Halogen-free".

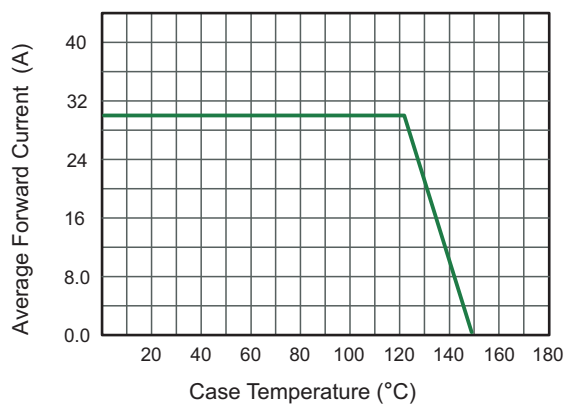
**Maximum Ratings (Per Leg) At Ta=25°C Unless Otherwise Specified**

| Parameter                                                                                               |                     | Symbols         | Value      | Units |
|---------------------------------------------------------------------------------------------------------|---------------------|-----------------|------------|-------|
| Maximum Repetitive Peak Reverse Voltage                                                                 |                     | $V_{RRM}$       | 200        | V     |
| Maximum RMS voltage                                                                                     |                     | $V_{RMS}$       | 140        | V     |
| Maximum DC Blocking Voltage                                                                             |                     | $V_{DC}$        | 200        | V     |
| Maximum Average Forward Rectified Current<br>@Tc=100°C                                                  | Per Leg             | $I_{F(AV)}$     | 15         | A     |
|                                                                                                         | per device          |                 | 30         |       |
| Peak Forward Surge Current, 8.3ms<br>Single Half Sine-wave Superimposed<br>on Rated Load (JEDEC method) |                     | $I_{FSM}$       | 300        | A     |
| Instantaneous forward voltage at 15A                                                                    | per leg             | $V_F$           | 1.0        | V     |
| Maximum instantaneous reverse<br>current at rated<br>DC blocking voltage                                | Ta=25°C<br>Ta=125°C | $I_R$           | 10<br>500  | uA    |
| Maximum Reverse Recovery Time NOTE 1                                                                    |                     | $t_{rr}$        | 35         | nS    |
| Maximum Thermal Resistance<br>Junction To Case                                                          |                     | $R_{\theta JC}$ | 4          | °C/W  |
| Operation Junction Temperature and<br>Storage Temperature                                               |                     | $T_J, T_{STG}$  | -55 ~ +150 | °C    |

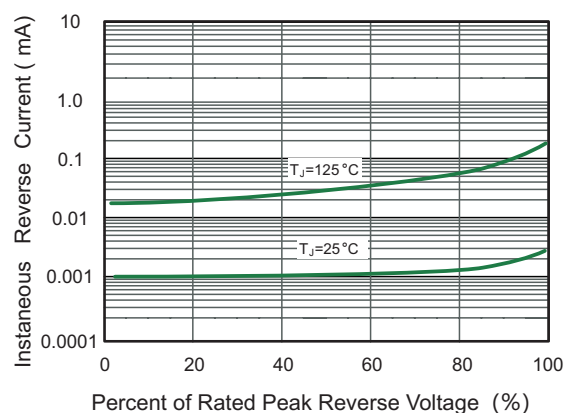
**Note1: Reverse recovery test conditions IF=0.5A, IR=1.0A, Irr=0.25A**

**Ratings and Characteristic Curves**

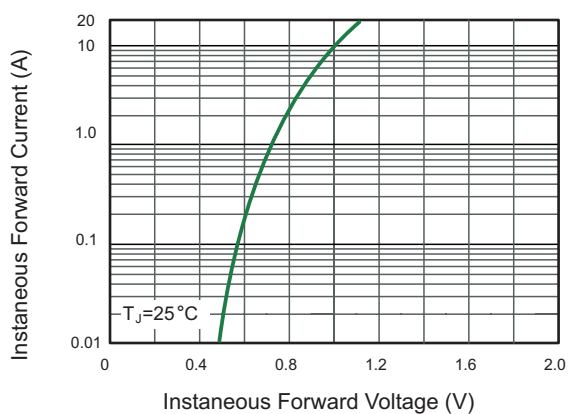
**Fig.1 TYPICAL FORWARD CURRENT DERATING CURVE**



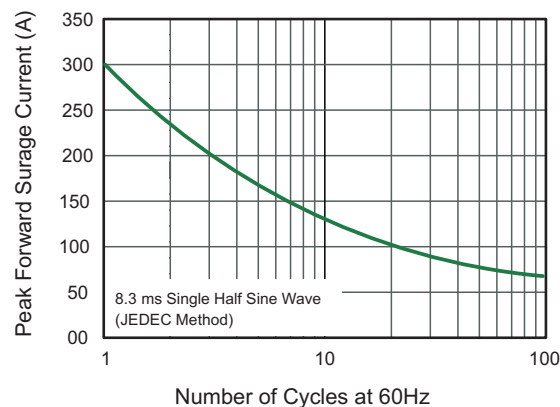
**Fig.2 Typical Reverse Characteristics**



**Fig.3 Typical Forward Characteristics**

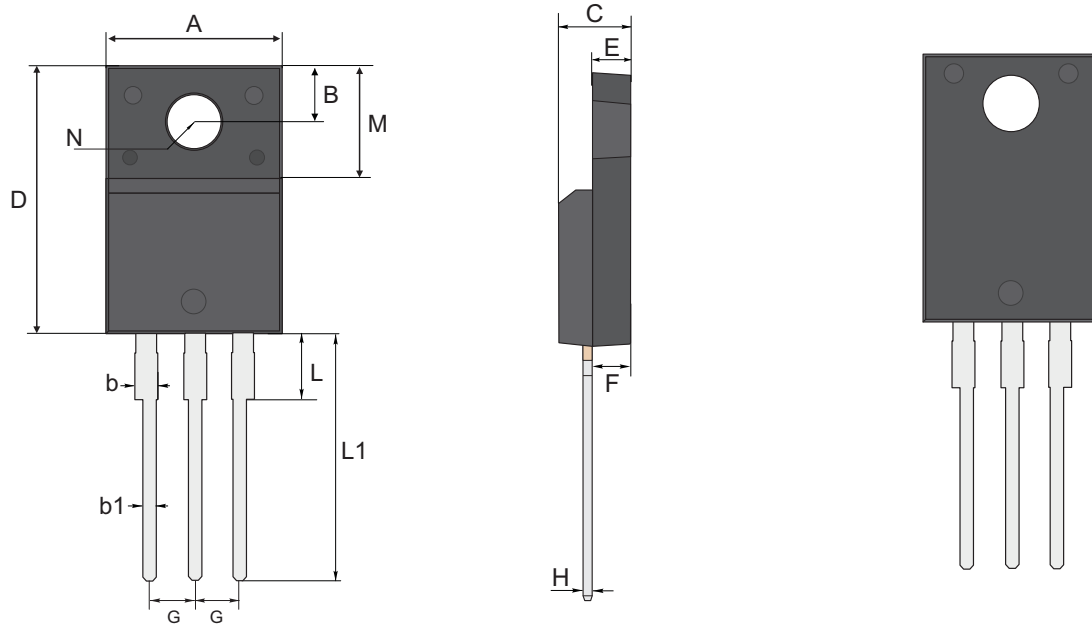


**Fig.4 Maximum Non-Repetitive Peak Forward Surge Current**



**Package Outline**

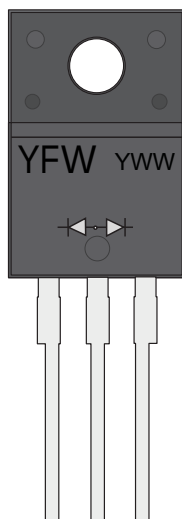
Plastic Through hole package; 3 leads



TO-220F

| UNIT |     | A     | B    | b    | b1  | C   | D     | E    | F    | G    | H    | L    | L1   | M    | N               |
|------|-----|-------|------|------|-----|-----|-------|------|------|------|------|------|------|------|-----------------|
| mm   | max | 10.28 | 3.37 | 1.34 | 0.9 | 4.9 | 16.07 | 2.74 | 2.74 | 2.64 | 0.60 | 2.85 | 13.7 | 6.88 | 3.18<br>TYPICAL |
|      | typ | 10.18 | 3.27 | 1.24 | 0.8 | 4.7 | 15.87 | 2.54 | 2.54 | 2.54 | 0.50 | 2.65 | 13.5 | 6.68 |                 |
|      | min | 10.08 | 3.17 | 1.14 | 0.7 | 4.5 | 15.67 | 2.34 | 2.34 | 2.44 | 0.40 | 2.45 | 13.3 | 6.48 |                 |
| mil  | max | 405   | 133  | 53   | 35  | 193 | 630   | 108  | 108  | 104  | 27   | 112  | 539  | 271  | 125<br>TYPICAL  |
|      | typ | 401   | 129  | 49   | 31  | 185 | 590   | 100  | 100  | 100  | 20   | 104  | 531  | 267  |                 |
|      | min | 397   | 125  | 45   | 28  | 177 | 580   | 92   | 92   | 96   | 16   | 96   | 524  | 255  |                 |

**MARKING DIAGRAM**



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