

### FEATURES

- ✧ High current capability, low forward voltage
- ✧ Excellent high temperature stability
- ✧ Low power loss, and high efficiency
- ✧ High forward surge capability
- ✧ For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications.
- ✧ RoHS compliant

### ORDERING INFORMATION

- ✧ Device:  
T1060CT  
T1060FCT
- ✧ Package: TO-220/TO-220F
- ✧ Marking: As marked
- ✧ Material: RoHS compliant
- ✧ Packing: Plastic tube
- ✧ Quantity per tube: 50pcs

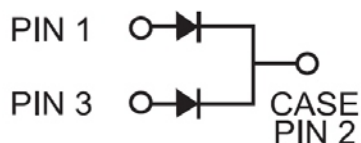
### MACHANICAL DATA

- ✧ Case: TO-220/TO-220F molded plastic package
- ✧ Terminal: Matte tin plated, solderable per MIL-STD-750, Method 2026
- ✧ Molding Compound Flammability Rating: UL94-0
- ✧ High temperature soldering guaranteed:  
260°C/10second
- ✧ Polarity: As marked
- ✧ Mounting position: Any

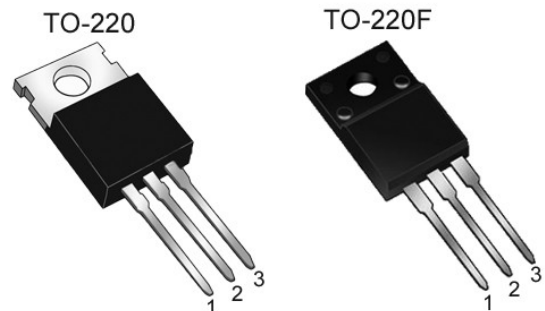
### APPLICATIONS

- ✧ Switching mode power supply applications
- ✧ Portable equipment battery applications
- ✧ High frequency rectification
- ✧ DC/DC converter

### PIN CONFIGURATION



### PACKAGE OUTLINE



### ABSOLUTE MAXIMUM RATING (Tamb=25°C, unless otherwise specified)

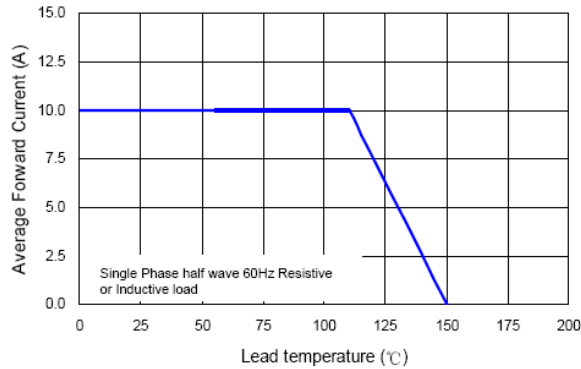
| Symbol            | Parameter                                                          | Value    | Units |
|-------------------|--------------------------------------------------------------------|----------|-------|
| $V_{RRM}$         | Repetitive Peak Reverse Voltage                                    | 60       | V     |
| $I_{F(AV)}$       | Average Forward Current<br>Total device<br>Per Leg                 | 10<br>5  | A     |
| $I_{FSM}$         | Peak Forward Surge Current, 8.3ms single half sine-wave<br>Per Leg | 120      | A     |
| $T_J$ & $T_{STG}$ | Junction and Storage Temperature                                   | -50~+150 | °C    |

### ELECTRICAL CHARACTERISTICS (Tamb=25°C, unless otherwise specified)

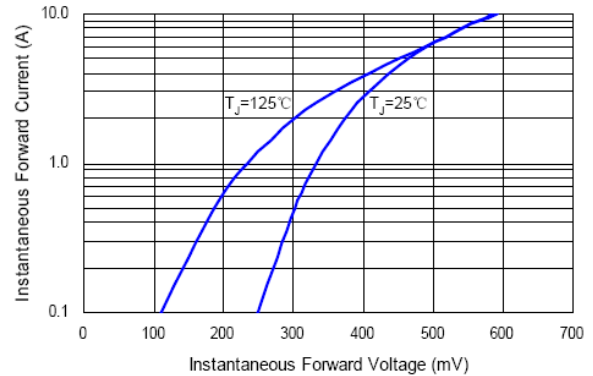
| Symbol | Parameter                    | Test Condition       | Min | Typ  | Max  | Units |
|--------|------------------------------|----------------------|-----|------|------|-------|
| $V_F$  | Forward Voltage              | $I_F = 3A$ Ta=25°C   |     | 0.40 | 0.43 | V     |
|        |                              | $I_F = 5A$ Ta=25°C   |     | 0.46 | 0.50 | V     |
|        |                              | $I_F = 10A$ Ta=25°C  |     | 0.59 | 0.62 | V     |
|        |                              | $I_F = 3A$ Ta=125°C  |     | 0.36 |      | V     |
|        |                              | $I_F = 5A$ Ta=125°C  |     | 0.45 |      | V     |
|        |                              | $I_F = 10A$ Ta=125°C |     | 0.58 |      | V     |
| $V_R$  | Reverse Breakdown Voltage    | $I_R = 0.5mA$        | 60  |      |      | V     |
| $I_R$  | Reverse Leakage Current      | $V_R = 60V$ Ta=25°C  |     |      | 150  | μA    |
|        |                              | $V_R = 60V$ Ta=125°C |     | 20   |      | mA    |
| $C_J$  | Junction Capacitance per Leg | f=1MHz, $V_R=4V$     |     | 270  |      | pF    |

## ELECTRICAL CHARACTERISTICS CURVE

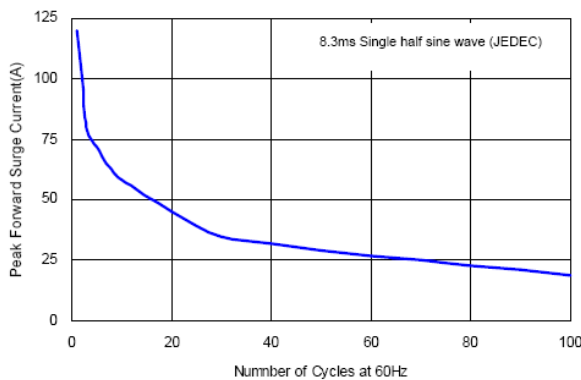
**Fig 1 Typical Forward Current Derating Curve**



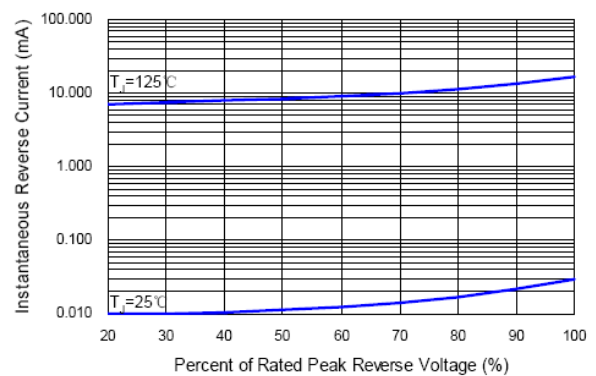
**Fig 2 Typical Instantaneous Forward Characteristics**



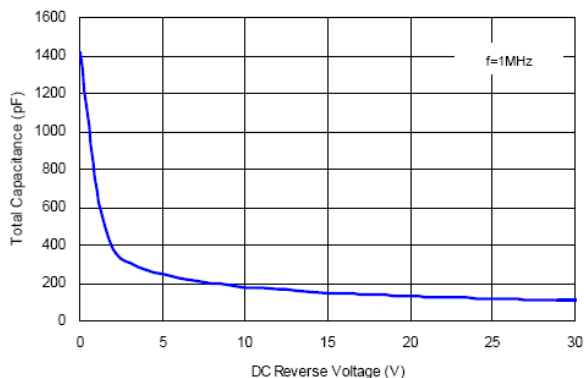
**Fig 3 Max. Non-repetitive Forward Surge Current**



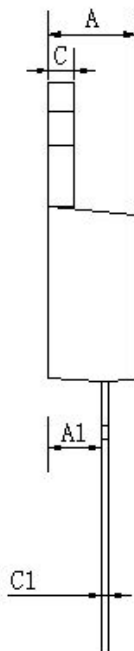
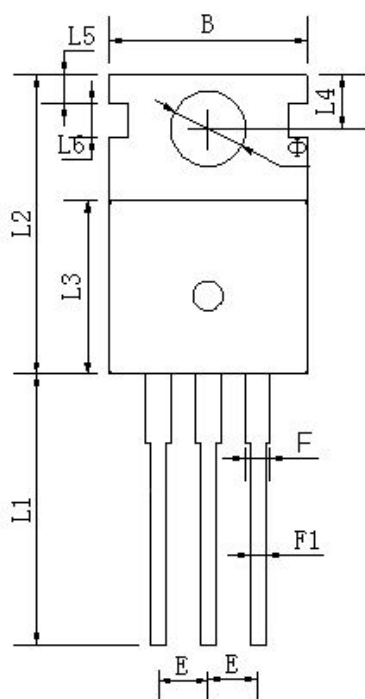
**Fig 4 Typical Reverse Characteristics**



**Fig 5 Total Capacitance vs. Reverse Voltage**

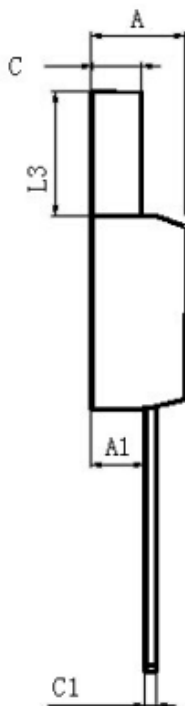
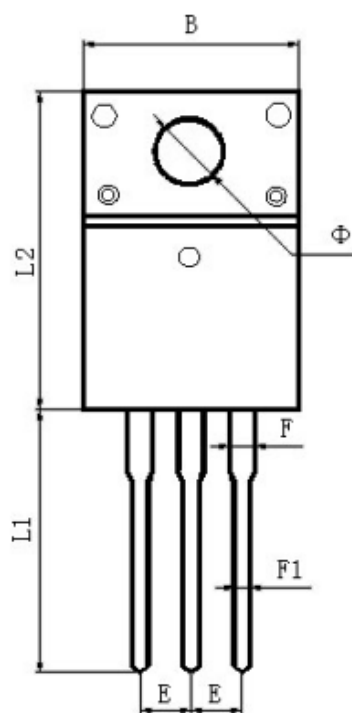


## TO-220 PACKAGE OUTLINE DIMENSIONS



| DIM     | MIN   | NOM   | MAX   |
|---------|-------|-------|-------|
| A       | 4.25  | 4.45  | 4.65  |
| A1      | 2.47  | 2.67  | 2.87  |
| B       | 9.86  | 10.16 | 10.46 |
| C       | 1.22  | 1.27  | 1.37  |
| C1      | 0.33  | 0.38  | 0.48  |
| E       | 2.44  | 2.54  | 2.64  |
| F       | 1.07  | 1.27  | 1.47  |
| F1      | 0.7   | 0.8   | 0.9   |
| L1      | 12.5  | 13.5  | 14.5  |
| L2      | 14.94 | 15.24 | 15.54 |
| L3      | 8.55  | 8.85  | 9.15  |
| L4      | 2.54  | 2.74  | 2.94  |
| L5      | 1.07  | 1.27  | 1.47  |
| L6      | 1.45  | 1.65  | 1.85  |
| Φ       | 3.64  | 3.84  | 4.04  |
| Unit mm |       |       |       |

## TO-220F PACKAGE OUTLINE DIMENSIONS



| DIM     | MIN   | NOM   | MAX   |
|---------|-------|-------|-------|
| A       | 4.50  | 4.70  | 4.90  |
| A1      | 2.56  | 2.76  | 2.96  |
| B       | 9.86  | 10.16 | 10.46 |
| C       | 2.34  | 2.54  | 2.74  |
| C1      | 0.45  | 0.50  | 0.60  |
| E       | 2.34  | 2.54  | 2.74  |
| F       | 1.08  | 1.28  | 1.48  |
| F1      | 0.7   | 0.8   | 0.9   |
| L1      | 11.98 | 12.98 | 13.98 |
| L2      | 15.57 | 15.87 | 16.17 |
| L3      | 6.48  | 6.68  | 6.88  |
| Φ       | 2.98  | 3.18  | 3.38  |
| Unit mm |       |       |       |