

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

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

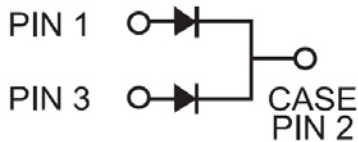
ORDERING INFORMATION

- ✧ Device:
T20100CT
T20100FCT
- ✧ Package: TO-220/TO-220F
- ✧ Marking: As marked
- ✧ Material: RoHS compliant
- ✧ Packing: Plastic tube
- ✧ Quantity per tube: 50pcs

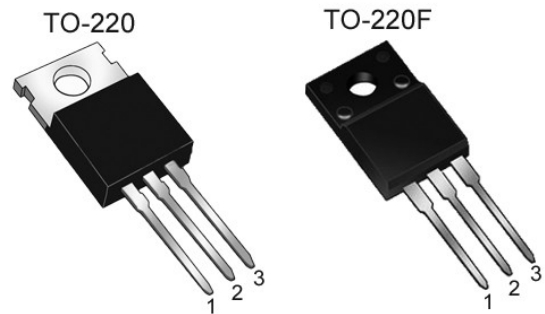
APPLICATIONS

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

PIN CONFIGURATION



PACKAGE OUTLINE



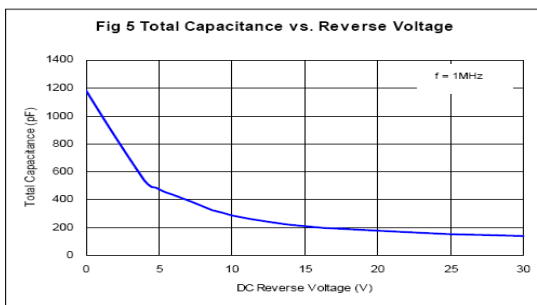
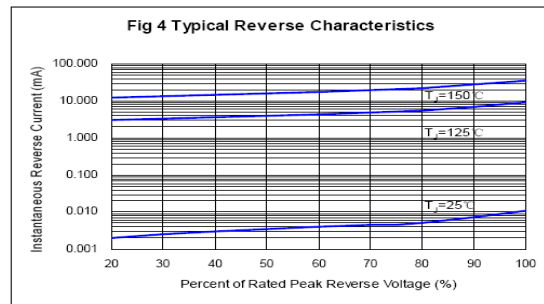
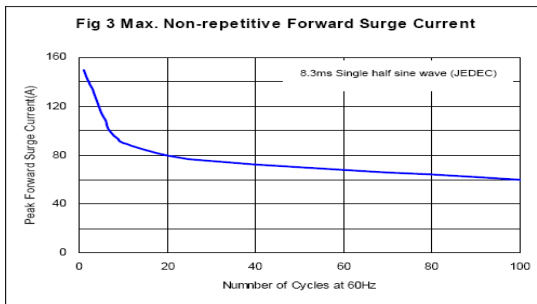
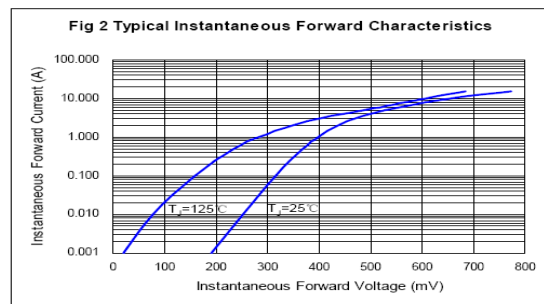
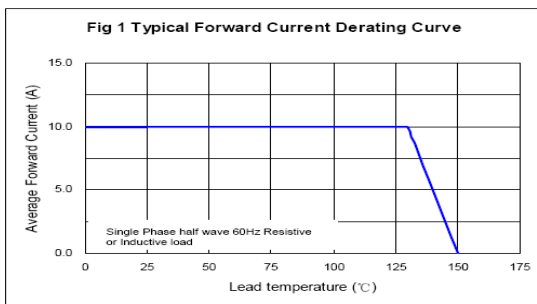
ABSOLUTE MAXIMUM RATING (Tamb=25°C, unless otherwise specified)

| Symbol | Parameter | Value | Units |
|-------------------|---|--------------|-------|
| V_{RRM} | Repetitive Peak Reverse Voltage | 100 | V |
| $I_{F(AV)}$ | Average Forward Current | Total device | 20 |
| | | Per Leg | 10 |
| I_{FSM} | Peak Forward Surge Current, 8.3ms single half sine-wave Per Leg | 150 | A |
| T_J & T_{STG} | Junction and Storage Temperature | -50~+150 | °C |

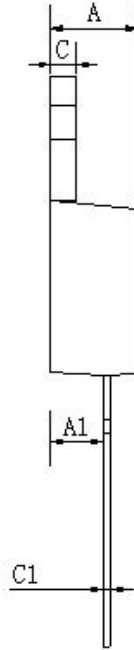
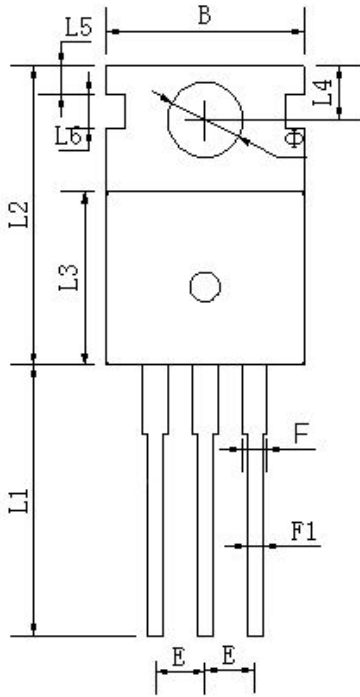
ELECTRICAL CHARACTERISTICS (Tamb=25°C, unless otherwise specified)

| Symbol | Parameter | Test Condition | Min | Typ | Max | Units |
|----------------|------------------------------|--------------------------------|-----|------|------|-------|
| V _F | Forward Voltage | I _F = 5A Ta=25°C | | 0.54 | | V |
| | | I _F = 10A Ta=25°C | | 0.65 | 0.72 | V |
| | | I _F = 5A Ta=125°C | | 0.50 | | V |
| | | I _F = 10A Ta=125°C | | 0.58 | 0.65 | V |
| V _R | Reverse Breakdown Voltage | I _R = 0.5mA | 100 | | | V |
| I _R | Reverse Leakage Current | V _R = 100V Ta=25°C | | | 100 | μA |
| | | V _R = 100V Ta=125°C | | | 25 | mA |
| C _J | Junction Capacitance per Leg | f=1MHz, V _R =4V | | 540 | | pF |

ELECTRICAL CHARACTERISTICS CURVE

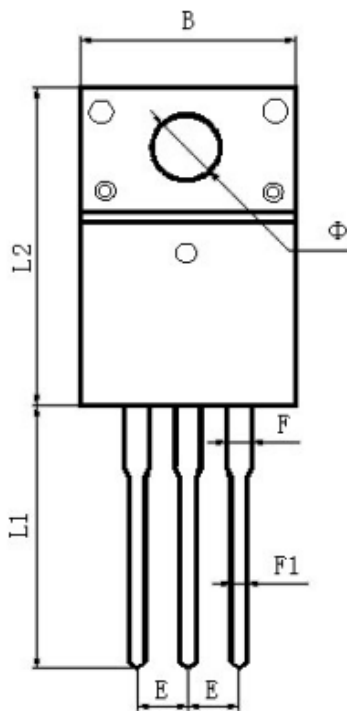


TO-220 PACKAGE OUTLINE DIMENSIONS



| 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 | | | |