

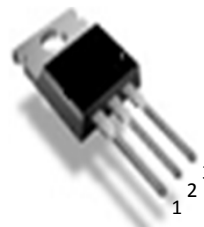


Ultra Low VF = 0.5 V at IF = 5 A

Major ratings and characteristics

| Characteristics | Values | Units |
|--------------------------------------|-------------|-------------|
| $I_{F(AV)}$ Rectangular Waveform | 10 × 2 | A |
| V_{RRM} | 100 | V |
| $V_F@ 5 A$, $T_J=125^{\circ}C$ | 0.50 | V, typ. |
| T_J Operating Junction Temperature | -40 to +150 | $^{\circ}C$ |

TO-220AB



ITO-220AB

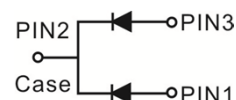


Features

- * Low Forward Voltage Drop
- * Reliable High Temperature Operation
- * Softest, fast switching capability
- * 150 $^{\circ}C$ Operating Junction Temperature
- * Lead Free Finish, RoHS Compliant

Typical Applications

Device optimized for ultra-low forward voltage drop to maximize efficiency in Power Supply applications



Mechanical

- * Molded Plastic Low profile TO-220AB / ITO-220AB
- * Device Weight : 0.07 ounces (1.96grams) - TO-220AB
0.06 ounces (1.74grams) - ITO-220AB
- * Mounting Torque : 10 in-lbs maximum.

Maximum Ratings Characteristics ($T_A = 25^{\circ}C$ unless otherwise specified)

| Parameter | Symbol | | Units |
|--|----------------|--------------|-----------------|
| DC Blocking Voltage | V_{RM} | 100 | Volts |
| Working Peak Reverse Voltage | V_{RWM} | | |
| Peak Repetitive Reverse Voltage | V_{RRM} | | |
| Average Rectified Forward Current (Rated VR-20Khz Square Wave) - 50% duty cycle | I_o | 20 | Amps |
| Peak Forward Surge Current - 1/2 60hz | I_{FSM} | 150 | Amps |
| Peak Repetitive Reverse Surge Current (2uS-1Khz) | I_{RRM} | 1 | Amps |
| Typical Thermal Resistance (per leg) Package = TO-220AB ITO-220AB | $R\theta_{Jc}$ | 2 4 | $^{\circ}C / W$ |
| Isolation voltage (ITO-220 only) | V_{AC} | 1500 | V |
| Maximum Rate of Voltage Change (at Rated V_R) | dv/dt | 10000 | V/uS |
| Operating Junction Temperature | T_J | - 40 to +150 | $^{\circ}C$ |
| Storage Junction Temperature | T_{STG} | - 40 to +150 | |

**Electrical Characteristics - (per leg)** ($T_A = 25^\circ\text{C}$ unless otherwise specified)

| Parameter | Test Conditions | | Symbol | Typ. | Max. | Units |
|-------------------------------|-----------------|------------|--------|-------|-------|-------|
| Instantaneous Forward Voltage | IF = 5 A | TJ = 25°C | VF * | 0.55 | ----- | Volts |
| | IF = 10 A | | | ----- | 0.79 | |
| | IF = 5 A | TJ = 125°C | | 0.50 | ----- | |
| | IF = 10 A | | | ----- | 0.68 | |
| Instantaneous Reverse Current | VR = 70V | TJ = 25°C | IR | 2.0 | ----- | uA |
| | VR = 100V | | | ----- | 200 | |
| | VR = 70V | TJ = 125°C | | 3 | ----- | mA |
| | VR = 100V | | | 4.5 | 22 | |

* Pulse width < 300 uS, Duty cycle < 2%

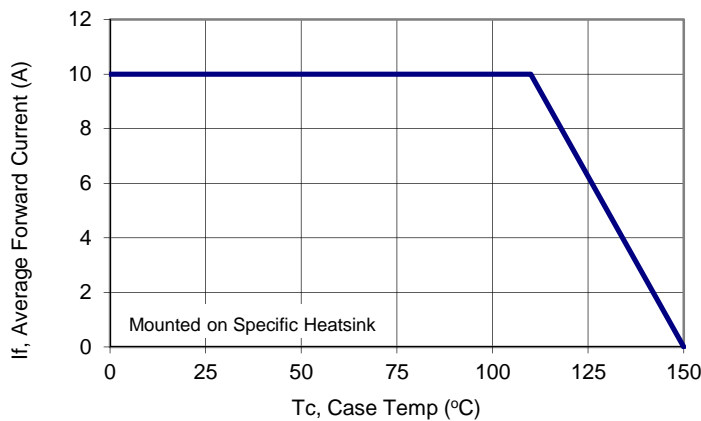
Patings and Characteristics Curves ($T_A = 25^\circ\text{C}$ unless otherwise specified)

Figure 1: Current Derating, Case

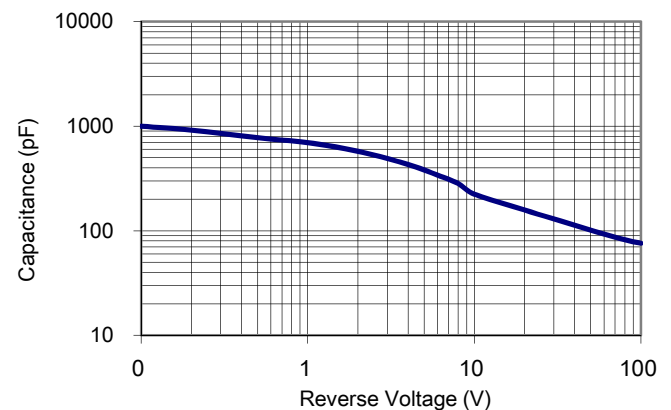


Figure 2: Typical Junction Capacitance

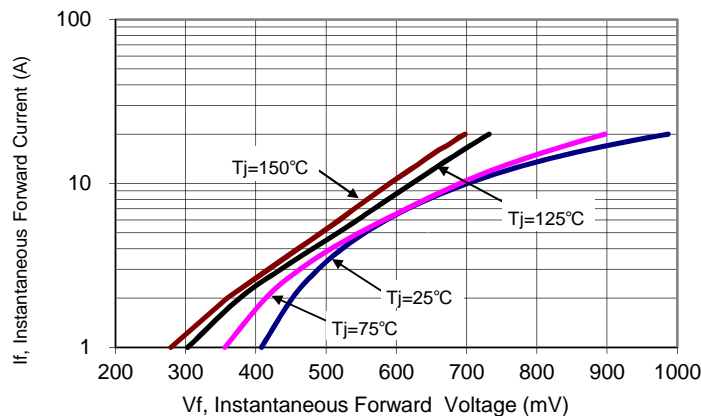


Figure 3: Typical Forward Voltage

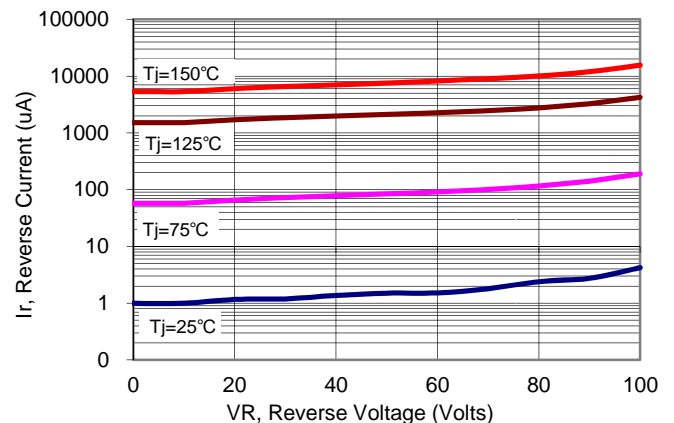
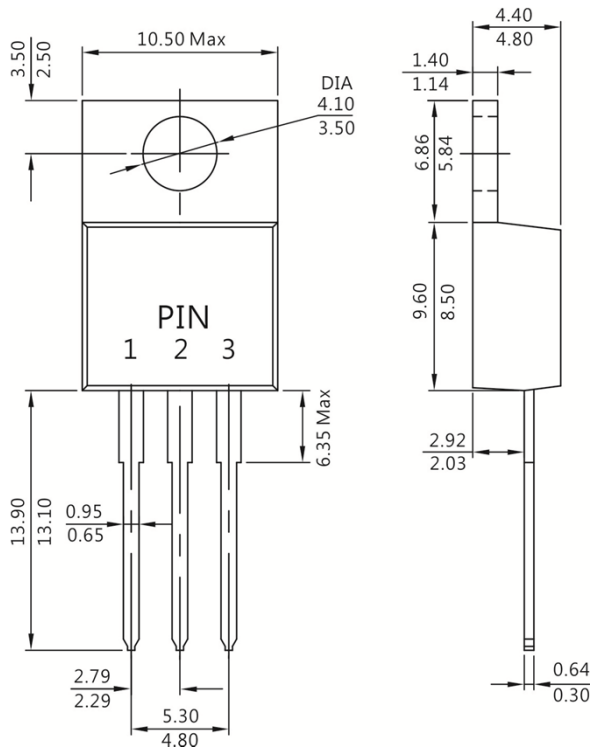


Figure 4: Typical Reverse Current

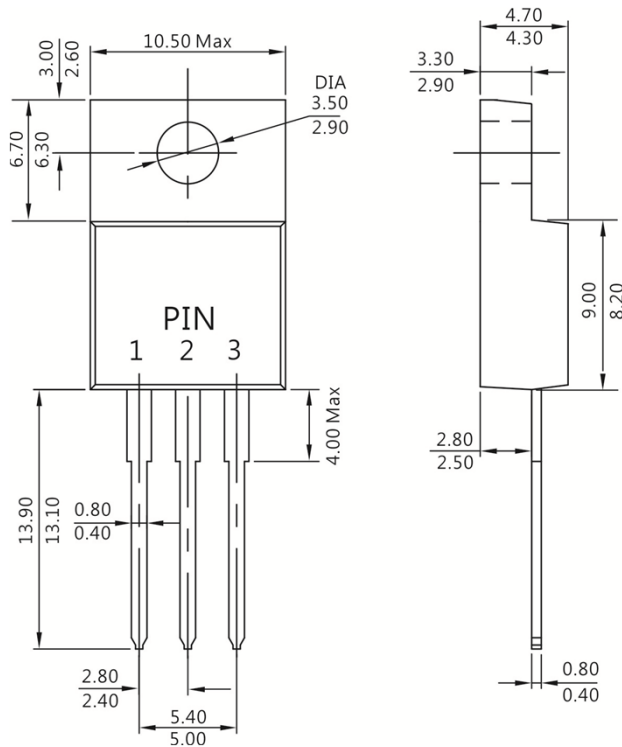


Package Outline Dimensions millimeters

TO-220AB



ITO-220AB



Ordering information

| Part Number | Package | Delivery mode |
|--------------|-----------|------------------|
| PTR20L100CT | TO-220AB | 50 pieces / tube |
| PTR20L100CTF | ITO-220AB | 50 pieces / tube |

Note: For Halogen Free molding compound, add "H" suffix to part number above.

Marking information

PFC PTR
20L100CT
YYWW ABH

PTR20L100CT = Product Type Marking Code

YYWW = Date Code

YY = Last two digits of year

WW = Week code

AB = Assembly code

H = Halogen Free (N/A = common molding compound)

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