



PFC Device Corporation

PFR30150CT
PFR30150CTF
PFR30150CTI
PFR30150CTB

30A 150V MOS Schottky Rectifier

Major ratings and characteristics

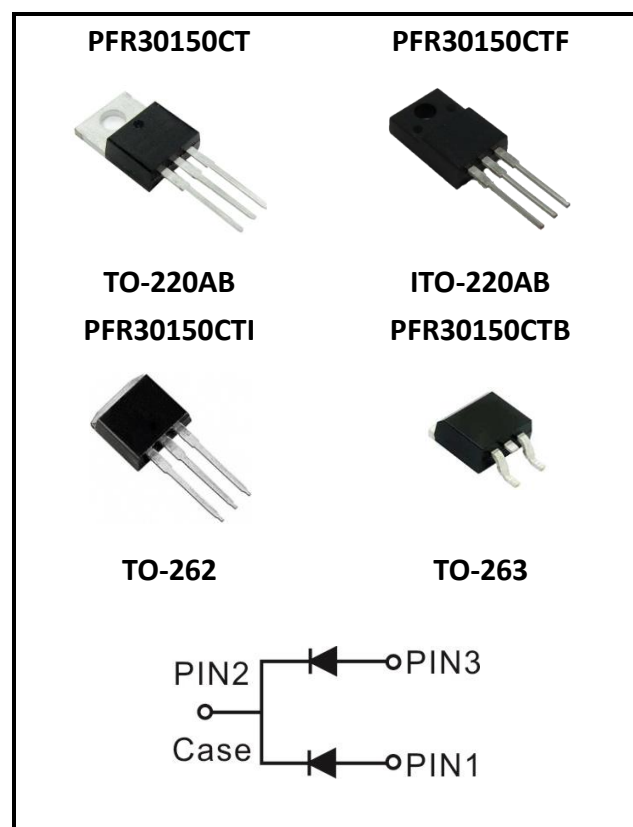
| Characteristics | Values | Units |
|--------------------------------------|-------------|---------|
| $I_{F(AV)}$ Rectangular Waveform | 15 × 2 | A |
| V_{RRM} | 150 | V |
| $V_F@ 15A, T_J=125^\circ C$ | 0.73 | V, typ. |
| T_J Operating Junction Temperature | -65 to +175 | °C |

Features

- Low Forward Voltage Drop
- Reliable High Temperature Operation
- Softest, fast switching capability
- 175°C Operating Junction Temperature
- Lead Free Finish, RoHS Compliant

Typical Applications

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



1. Characteristics

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

| Parameter | Symbol | Values | Units |
|---|----------------|--------------------|-------------------------------|
| DC Blocking Voltage | V_{RM} | 150 | Volts |
| Working Peak Reverse Voltage | V_{RWM} | | |
| Peak Repetitive Reverse Voltage | V_{RRM} | | |
| Average Rectified Forward Current Per device | I_o | 30 | Amps |
| (Rated VR-20Khz Square Wave) - 50% duty cycle | | | |
| Peak Forward Surge Current - 1/2 60hz | I_{FSM} | 180 | Amps |
| Peak Repetitive Reverse Surge Current (2uS-1Khz) | I_{RRM} | 0.5 | Amps |
| Typical Thermal Resistance (per leg) Package = TO-220AB Package = ITO-220AB Package = TO-262 Package = TO-263 | $R\theta_{JC}$ | 2 4 2.5 3 | $^{\circ}\text{C} / \text{W}$ |
| Isolation voltage (ITO-220 only) | | V_{AC} | |
| Maximum Rate of Voltage Change (at Rated V_R) | | dv/dt | |
| Operating Junction Temperature | | T_J | |
| Storage Junction Temperature | T_{STG} | - 65 to +175 | $^{\circ}\text{C}$ |

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

| Parameter | Test Conditions | | Symbol | Typ. | Max. | Units |
|-------------------------------|-----------------|-----------------------------|--------|------|------|---------------|
| Instantaneous Forward Voltage | IF = 15 A | $T_J = 25^{\circ}\text{C}$ | VF* | ---- | 0.89 | Volts |
| | | $T_J = 125^{\circ}\text{C}$ | | 0.73 | 0.79 | |
| Instantaneous Reverse Current | At V_{RM} | $T_J = 25^{\circ}\text{C}$ | IR* | ---- | 100 | μA |
| | | $T_J = 125^{\circ}\text{C}$ | | ---- | 10 | mA |

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



2. Characteristics Curves

Ratings and Characteristics Curves

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

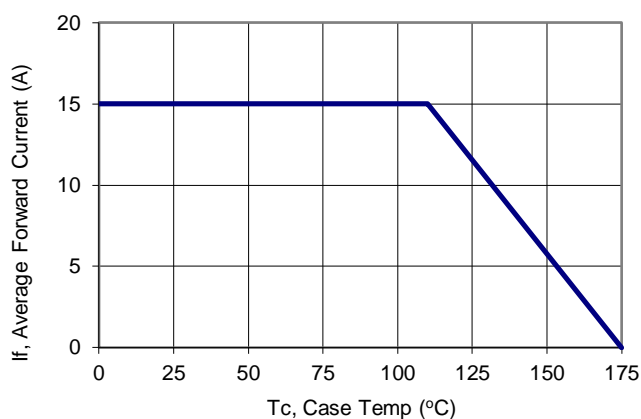


Figure 1: Current Derating, Case

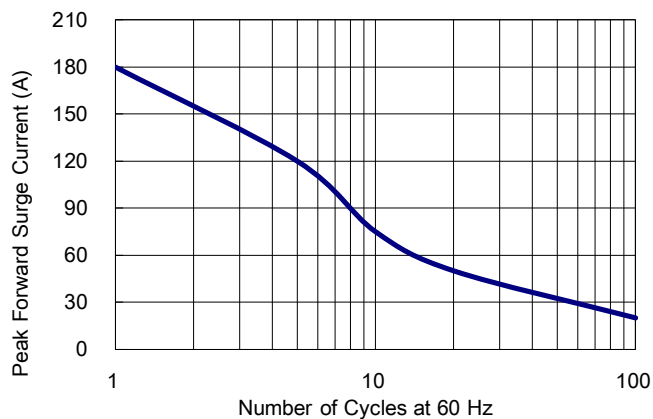


Figure 2: Maximum Repetitive Surge Current

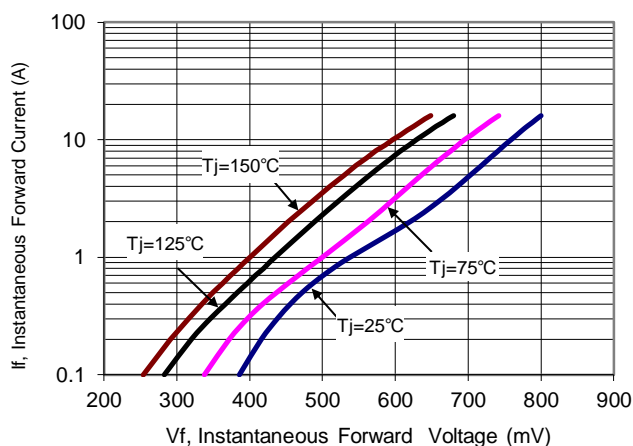


Figure 3: Typical Forward Voltage

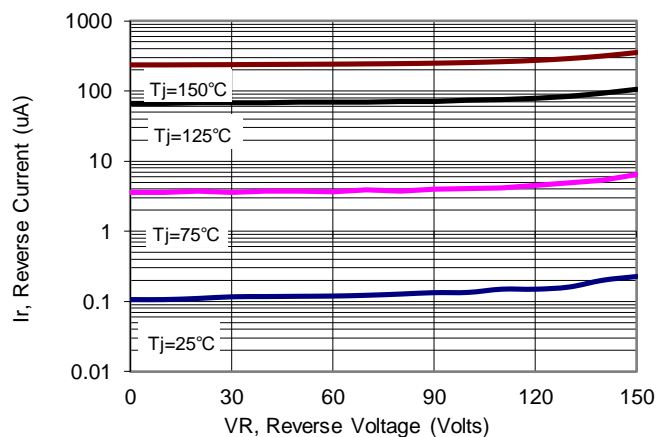


Figure 4: Typical Reverse Current

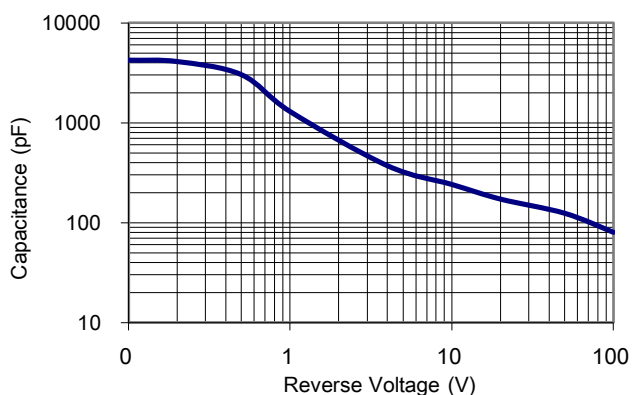


Figure 5: Typical Junction Capacitance



3. Marking information

Top Marking Rule

PFC
PFR30150CT
YYWW AB SH

PFR30150CT = Product Type Marking Code
YYWW = Date Code
YY = Last two digits of year
WW = Week code
AB = Assembly code
S = Series Number
H = Halogen Free (N/A = common molding compound)

PFC
PFR30150CTF
YYWW AB SH

PFR30150CTF = Product Type Marking Code
YYWW = Date Code
YY = Last two digits of year
WW = Week code
AB = Assembly code
S = Series Number
H = Halogen Free (N/A = common molding compound)

PFC
PFR30150CTI
YYWW AB SH

PFR30150CTI = Product Type Marking Code
YYWW = Date Code
YY = Last two digits of year
WW = Week code
AB = Assembly code
S = Series Number
H = Halogen Free (N/A = common molding compound)

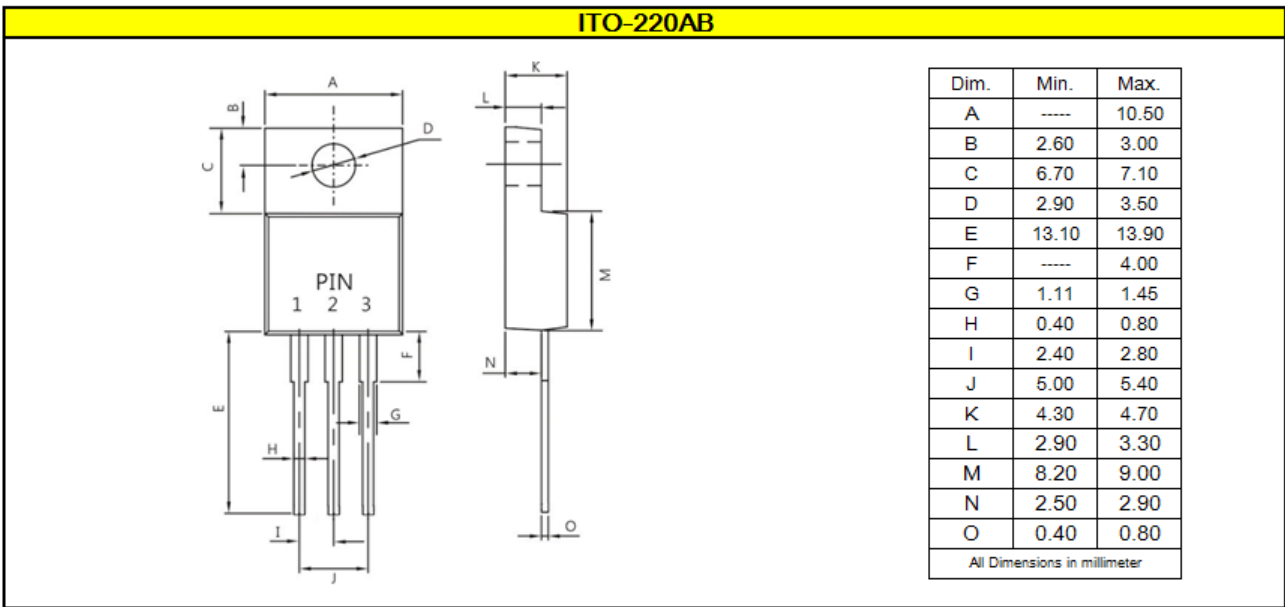
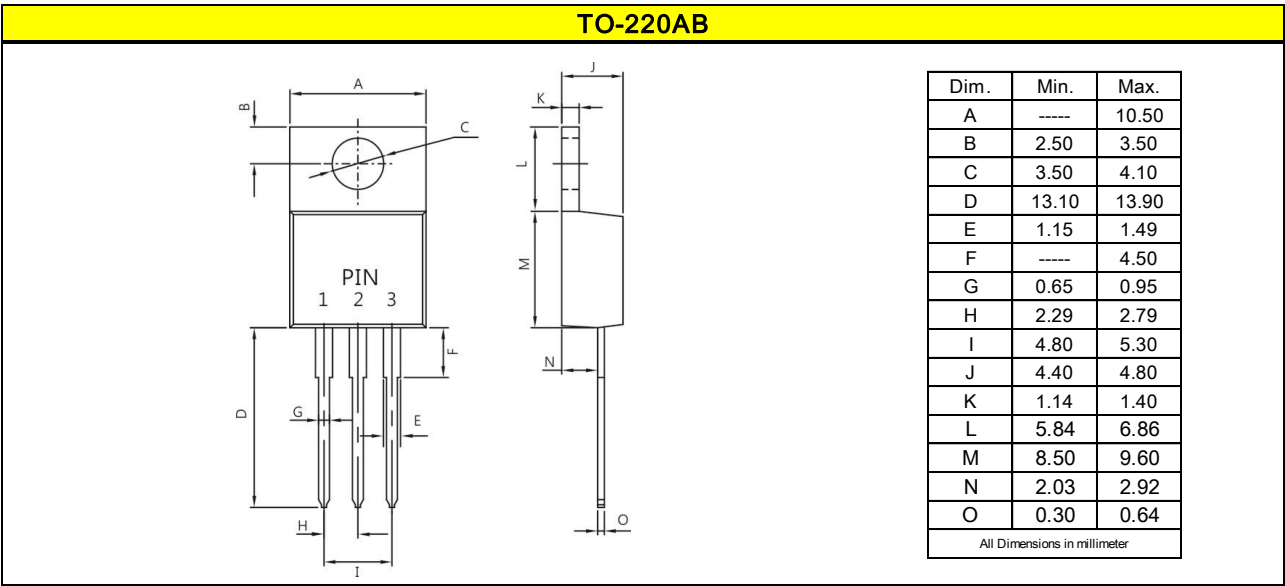
PFC
PFR30150CTB
YYWW AB SH

PFR30150CTB = Product Type Marking Code
YYWW = Date Code
YY = Last two digits of year
WW = Week code
AB = Assembly code
S = Series Number
H = Halogen Free (N/A = common molding compound)



4. Package information

Package Outline Dimensions millimeters



Package Outline Dimensions millimeters



5. Ordering information

| Part Number | Package | Delivery mode |
|-------------|-----------|--------------------------------|
| PFR30150CT | TO-220AB | 50 pieces / tube |
| PFR30150CTF | ITO-220AB | 50 pieces / tube |
| PFR30150CTI | TO-262 | 50 pieces / tube |
| PFR30150CTB | TO-263 | 800 pieces / 13" diameter reel |

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

Mechanical

- Molder Plastic: UL Flammability Classification Rating 94V-0
- Device Weight : 0.07 ounces (1.96grams) - TO-220AB
0.06 ounces (1.74grams) - ITO-220AB
0.05 ounces (1.45 grams) - TO-262
0.04 ounces (1.16 grams) - TO-263
- Mounting Torque : Recommended 4~5 kg-cm.

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