



PFC Device Corporation

**PFR32L400CT**  
**PFR32L400CTF**  
**PFR32L400CTI**  
**PFR32L400CTB**

## 32A 400V MOS Schottky Rectifier

### Major ratings and characteristics

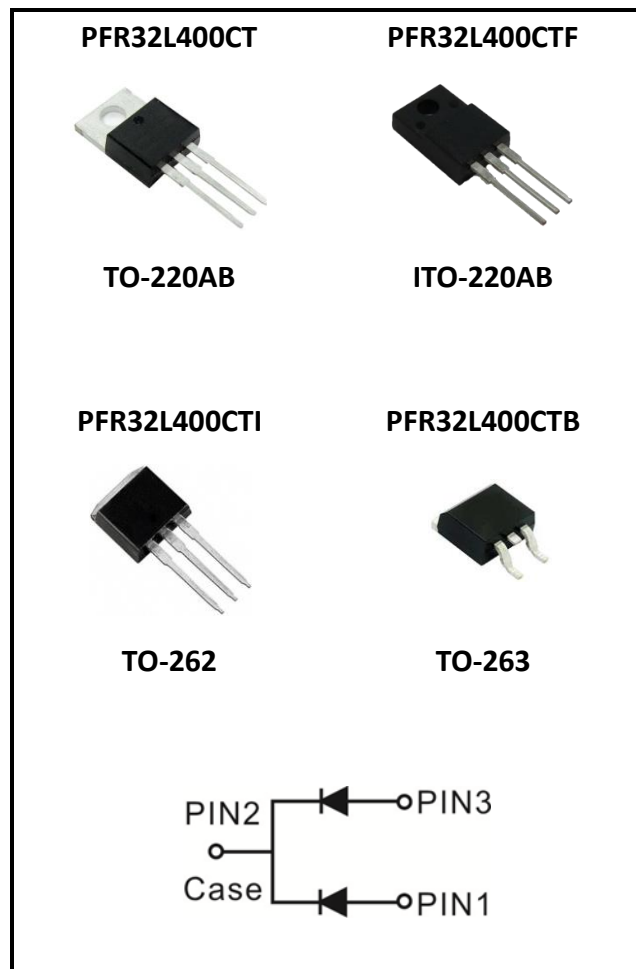
Characteristics	Values	Units
$I_{F(AV)}$ Rectangular Waveform	16 x 2	A
$V_{RRM}$	400	V
$V_F@ 16A, T_j=125^\circ C$	0.77	V, typ.
$T_j$ Operating Junction Temperature	-55 to +175	$^\circ C$

### Features

- Low Forward Voltage Drop
- Reliable High Temperature Operation
- Softest, fast switching capability
- 175 $^\circ C$  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	$V_{RM}$	400	Volts
Working Peak Reverse Voltage	$V_{RWM}$		
Peak Repetitive Reverse Voltage	$V_{RRM}$		
Average Rectified Forward Current Per device	$I_o$	32	Amps
(Rated VR-20Khz Square Wave) - 50% duty cycle			
Peak Forward Surge Current - 1/2 60hz	$I_{FSM}$	350	Amps
Peak Repetitive Reverse Surge Current (2uS-1Khz)	$I_{RRM}$	0.5	Amps
Typical Thermal Resistance	$R\theta_{JC}$	2	$^\circ\text{C} / \text{W}$
Package = TO-220AB		4	
Package = ITO-220AB		2.5	
Package = TO-262		3	
Package = TO-263			
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	$T_J$	- 55 to +175	$^\circ\text{C}$
Storage Junction Temperature	$T_{STG}$	- 55 to +175	

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

Parameter	Test Conditions		Symbol	Typ.	Max.	Units
Breakdown Voltage	$I_R = 0.5\text{mA}$	$T_J = 25^\circ\text{C}$	$V_B^*$	400 (min.)		V
Instantaneous Forward Voltage	$I_F = 10\text{ A}$	$T_J = 25^\circ\text{C}$	$V_F^*$	0.84	-----	Volts
	$I_F = 16\text{ A}$			0.90	0.94	
	$I_F = 32\text{ A}$			1.00	-----	
	$I_F = 10\text{ A}$	$T_J = 125^\circ\text{C}$		0.71	-----	
	$I_F = 16\text{ A}$			0.77	0.81	
	$I_F = 32\text{ A}$			0.90	-----	
Instantaneous Reverse Current	At $V_{RM}$	$T_J = 25^\circ\text{C}$	$I_R^*$	-----	10	$\mu\text{A}$
		$T_J = 125^\circ\text{C}$		-----	2	$\text{mA}$

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



2. Characteristics Curves

Ratings and Characteristics Curves

( TA = 25°C unless otherwise specified )

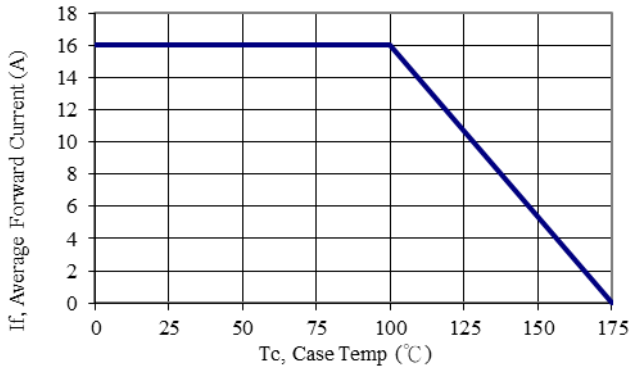


Figure 1: Current Derating, Case

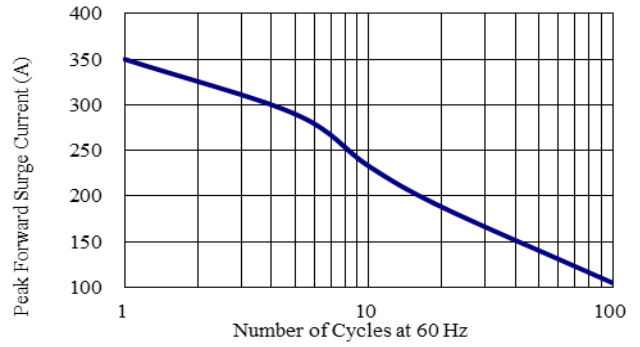


Figure 2: Maximum Repetitive Surge Current

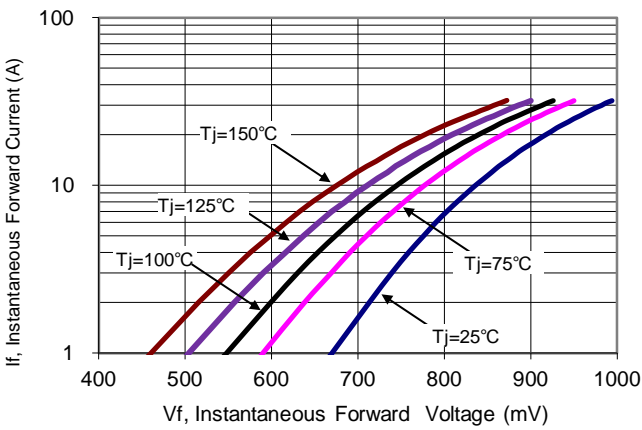


Figure 3: Typical Forward Voltage

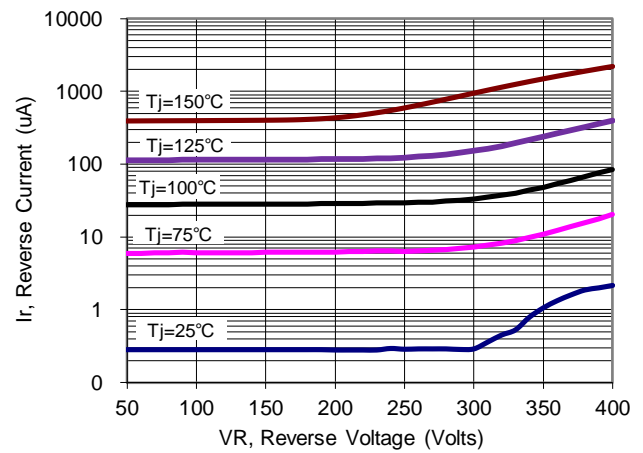


Figure 4: Typical Reverse Current

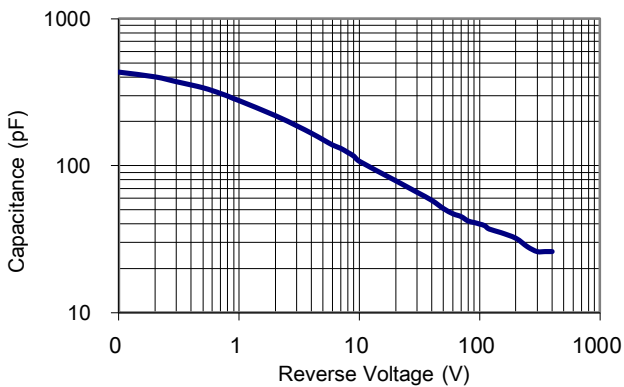


Figure 5: Typical Junction Capacitance



**Marking information**

**Top Marking Rule**

**PFC PFR  
32L400CT  
YYWW ABSH**

PFR32L400CT = 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 PFR  
32L400CTF  
YYWW ABSH**

PFR32L400CTF = 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 PFR  
32L400CTI  
YYWW ABSH**

PFR32L400CTI = 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)

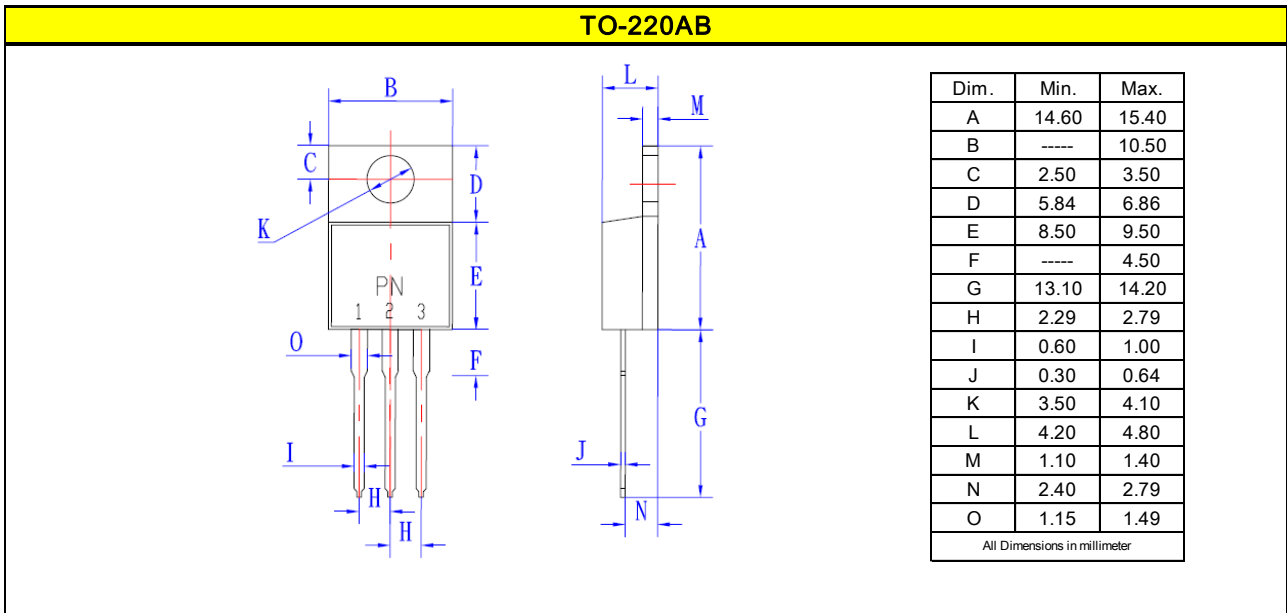
**PFC PFR  
32L400CTB  
YYWW ABSH**

PFR32L400CTB = 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)



3. Package information

Package Outline Dimensions millimeters



Package Outline Dimensions millimeters



#### 4. Ordering information

Part Number	Package	Delivery mode
PFR32L400CT	TO-220AB	50 pieces / tube
PFR32L400CTF	ITO-220AB	50 pieces / tube
PFR32L400CTI	TO-262	50 pieces / tube
PFR32L400CTB	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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