



PFC Device Corporation

**PFR10V60CT**  
**PFR10V60CTF**  
**PFR10V60CTI**  
**PFR10V60CTB**

## 10A 60V MOS Schottky Rectifier

### Major ratings and characteristics

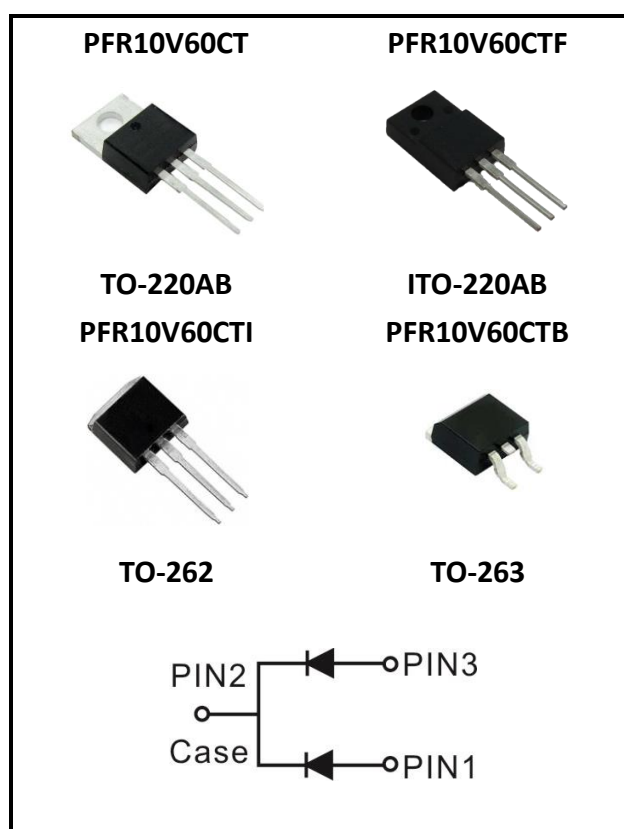
Characteristics	Values	Units
$I_{F(AV)}$ Rectangular Waveform	5 × 2	A
$V_{RRM}$	60	V
$V_F$ @ 5A , $T_j=125^{\circ}C$	0.4	V, typ.
$T_j$ Operating Junction Temperature	-65 to +150	$^{\circ}C$

### Features

- Ultra-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



## Characteristics

*PFR10V60*

## 1. Characteristics

### Maximum Ratings Characteristics

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

Parameter	Symbol	Values	Units		
DC Blocking Voltage	V <sub>RM</sub>	60	Volts		
Working Peak Reverse Voltage	V <sub>RWM</sub>				
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>				
Average Rectified Forward Current Per device	I <sub>o</sub>	10	Amps		
(Rated VR-20Khz Square Wave) - 50% duty cycle					
Peak Forward Surge Current - 1/2 60hz	I <sub>FSM</sub>	180	Amps		
Peak Repetitive Reverse Surge Current (2uS-1Khz)	I <sub>RRM</sub>	2	Amps		
Typical Thermal Resistance (per leg) Package = TO-220AB Package = ITO-220AB Package =TO-262 Package =TO-263	Rθ <sub>JC</sub>	2 4 2.5 3	°C / W		
Isolation voltage (ITO-220 only)		V <sub>AC</sub>		1500	V
Maximum Rate of Voltage Change ( at Rated V <sub>R</sub> )		dv/dt		10000	V/uS
Operating Junction Temperature		T <sub>J</sub>		- 65 to +150	°C
Storage Junction Temperature	T <sub>STG</sub>	- 65 to +150			

### Electrical Characteristics - (per leg)

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

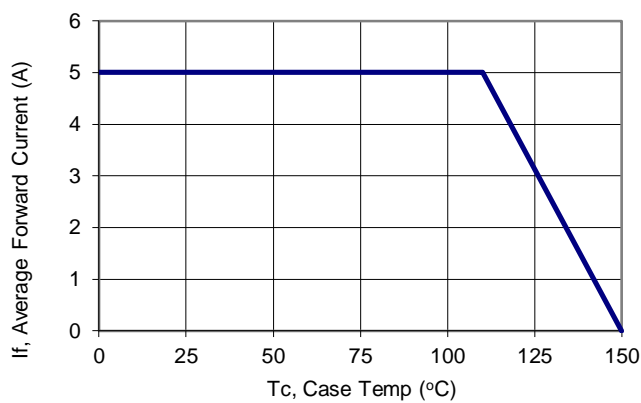
Parameter	Test Conditions		Symbol	Typ.	Max.	Units
Instantaneous Forward Voltage	IF = 5 A	T <sub>J</sub> = 25 °C	VF*	----	0.48	Volts
		T <sub>J</sub> = 125 °C		0.4	0.42	
Instantaneous Reverse Current	At V <sub>RM</sub>	T <sub>J</sub> = 25 °C	IR*	----	500	uA
		T <sub>J</sub> = 125 °C		----	100	mA

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

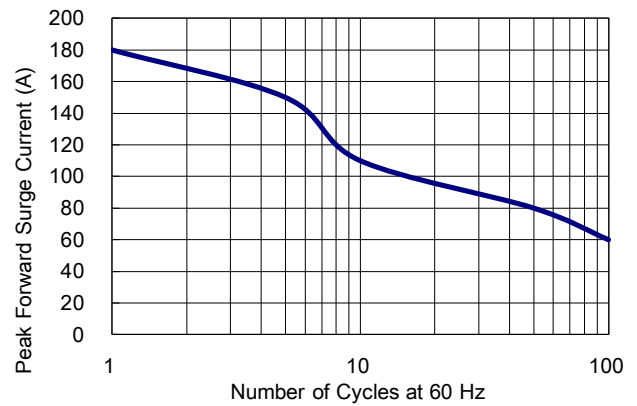
## 2. Characteristics Curves

### Ratings and Characteristics Curves

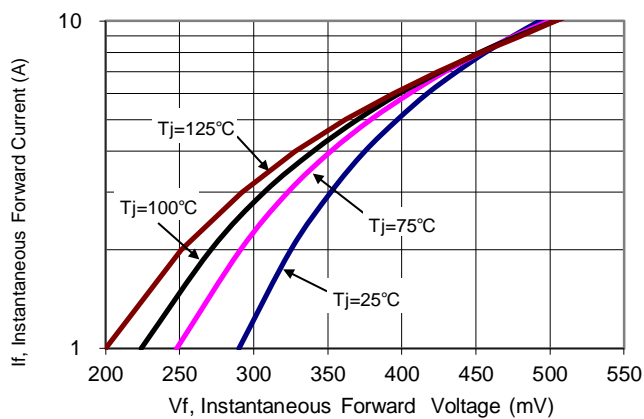
(  $T_A = 25^{\circ}\text{C}$  unless otherwise specified )



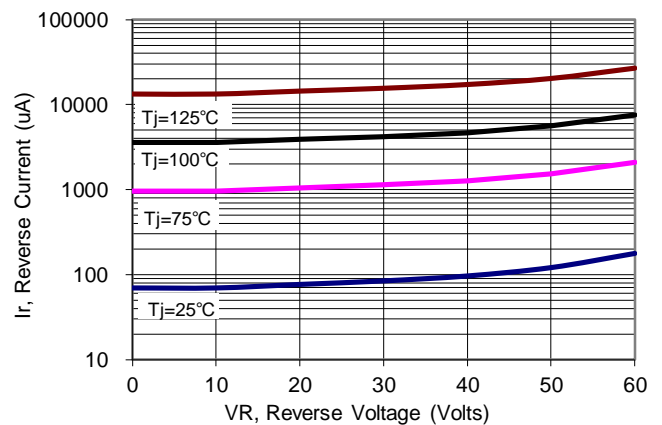
**Figure 1: Current Derating, Case**



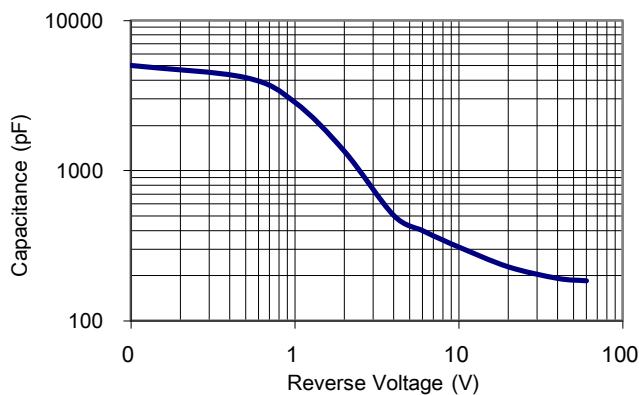
**Figure 2: Maximum Repetitive Surge Current**



**Figure 3: Typical Forward Voltage**



**Figure 4: Typical Reverse Current**



**Figure 5: Typical Junction Capacitance**

### 3. Marking information

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#### Top Marking Rule

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**PFC   PFR**  
**10V60CT**  
**YYWW   ABSH**

PFR10V60CT = 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**  
**10V60CTF**  
**YYWW   ABSH**

PFR10V60CTF = 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**  
**10V60CTI**  
**YYWW   ABSH**

PFR10V60CTI = 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**  
**10V60CTB**  
**YYWW   ABSH**

PFR10V60CTB = 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)

## 5. Ordering information

Part Number	Package	Delivery mode
PFR10V60CT	TO-220AB	50 pieces / tube
PFR10V60CTF	ITO-220AB	50 pieces / tube
PFR10V60CTI	TO-262	50 pieces / tube
PFR10V60CTB	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.