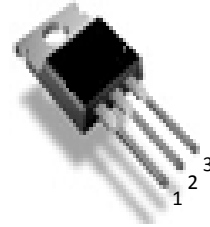




## Major ratings and characteristics

Characteristics	Values	Units
$I_{F(AV)}$ Rectangular Waveform	5 × 2	A
$V_{RRM}$	300	V
$V_F@ 5 A, T_J=125^\circ C$	0.63	V, typ.
$T_J$ Operating Junction Temperature	-65 to +175	$^\circ C$

TO-220AB

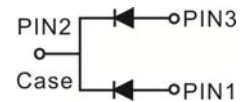


ITO-220AB



## Features

- \* Ultra-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 ultra-low forward voltage drop to maximize efficiency in Power Supply applications

## Mechanical

- \* Case: TO-220AB, ITO-220AB
- \* Molder Plastic: UL Flammability Classification Rating 94V-0
- \* 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	Values	Units
DC Blocking Voltage	$V_{RM}$		
Working Peak Reverse Voltage	$V_{RWM}$	300	Volts
Peak Repetitive Reverse Voltage	$V_{RRM}$		
Average Rectified Forward Current (Rated VR-20Khz Square Wave) - 50% duty cycle	$I_o$	10	Amps
Peak Forward Surge Current - 1/2 60hz	$I_{FSM}$	180	Amps
Peak Repetitive Reverse Surge Current (2uS-1Khz)	$I_{RRM}$	1	Amps
Typical Thermal Resistance (per leg) Package = TO-220AB	$R\theta_{Jc}$	2	$^\circ C / W$
ITO-220AB		4	
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	$T_J$	- 65 to +175	$^\circ C$
Storage Junction Temperature	$T_{STG}$	- 65 to +175	



## Electrical Characteristics - (per leg) ( T<sub>A</sub> = 25°C unless otherwise specified )

Parameter	Test Conditions	Symbol	Typ.	Max.	Units
Instantaneous Forward Voltage	IF = 5 A	V <sub>F</sub> *	T <sub>J</sub> = 25°C	0.89	Volts
			T <sub>J</sub> = 125°C	0.63	
Instantaneous Reverse Current	At V <sub>RM</sub>	IR	T <sub>J</sub> = 25°C	100	uA
			T <sub>J</sub> = 125°C	10	mA

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

## Patings and Characteristics Curves ( T<sub>A</sub> = 25°C unless otherwise specified )

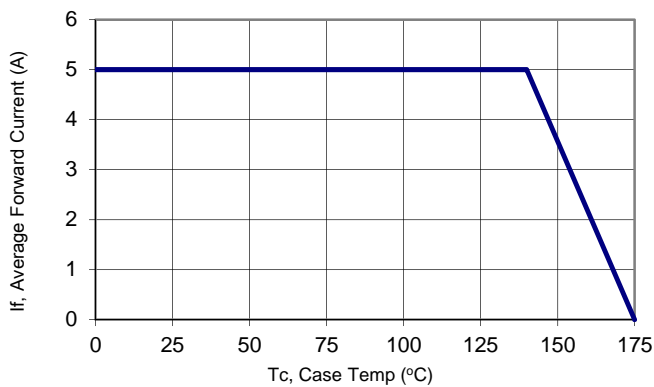


Figure 1: Current Derating, Case

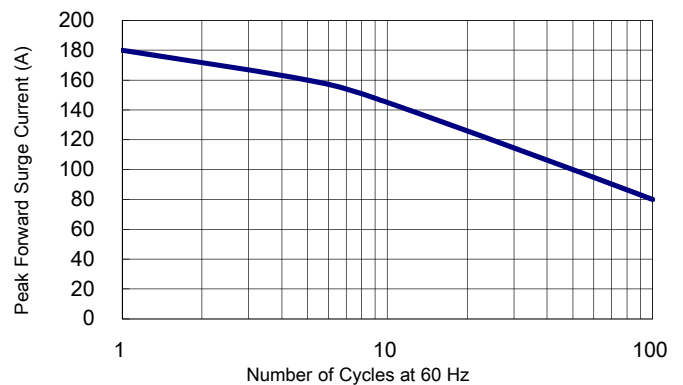


Figure 2: Maximum Repetitive Surge Current

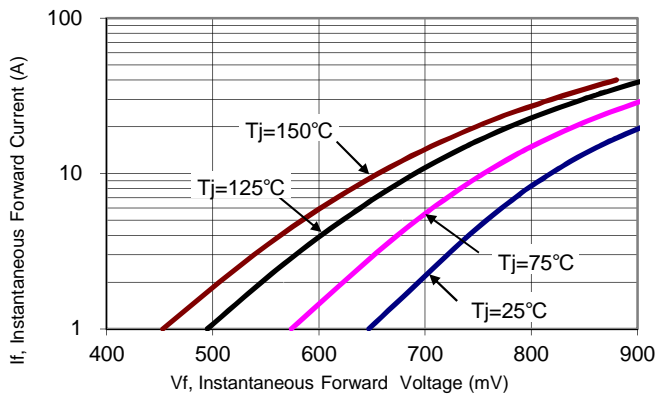


Figure 3: Typical Reverse Current

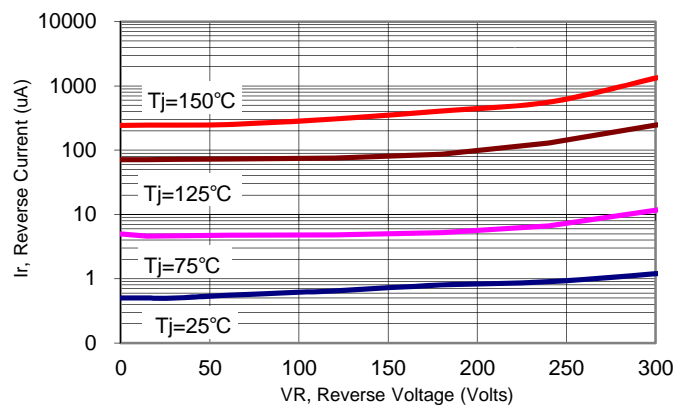


Figure 4: Typical Forward Voltage

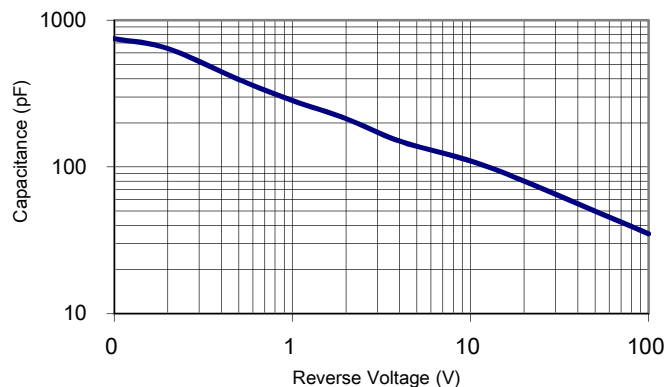
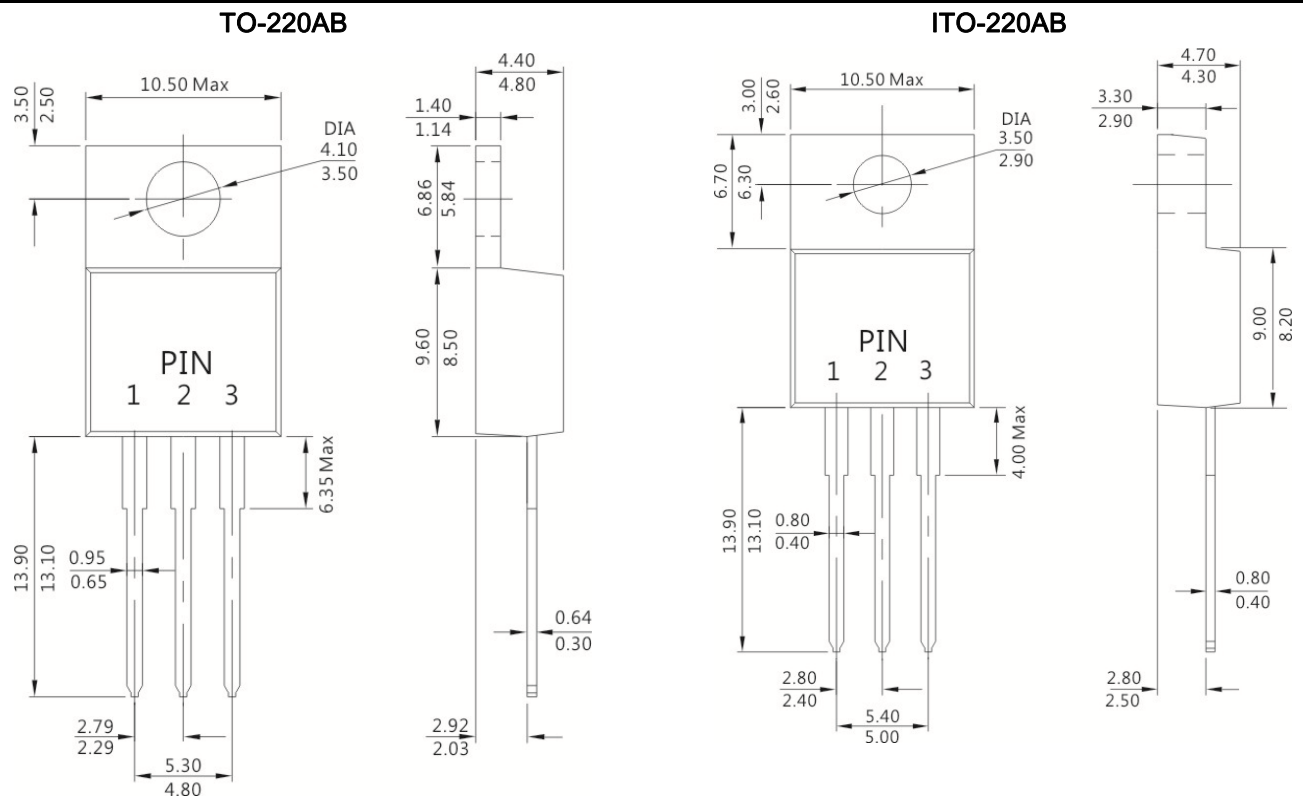


Figure 5: Typical Junction Capacitance



## Package Outline Dimensions millimeters



## Ordering information

Part Number	Package	Delivery mode
PFR10V300CT	TO-220AB	50 pieces / tube
PFR10V300CTF	ITO-220AB	50 pieces / tube

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

## Marking information

PFC PFR  
10V300CT  
YYWW ABH

PFR10V300CT = 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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