



PFR20V300CT
PFR20V300CTF
PFR20V300CTB

the following features are made possible in a single device:

Major ratings and characteristics

Characteristics	Values	Units
$I_{F(AV)}$ Rectangular Waveform	20	A
V_{RRM}	300	V
$V_F@10A, T_j=125^\circ C$	0.71	V, typ
$T_j(\text{operating/storage})$	-65 to 175	$^\circ C$





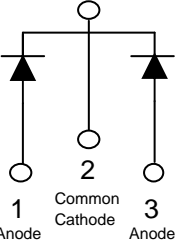
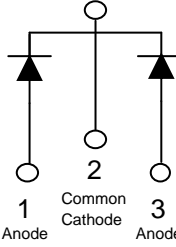
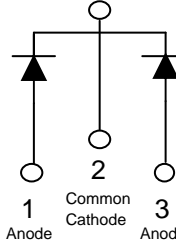
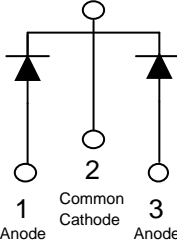
Device optimized for ultra-low forward voltage drop to maximize efficiency in Power Supply applications

ELECTRICAL:

- * Ultra-Low Forward Voltage Drop
- * Reliable High Temperature Operation
- * Softest, fast switching capability
- * 175 $^\circ C$ Operating Junction Temperature
- * Lead Free Finish, RoHS Compliant

MECHANICAL:

- * Molded Plastic TO-220AB and TO-263 and ITO-220 packages

Case Styles			
PFR20V300CT	PFR20V300CTF	Not Available	PFR20V300CTB
			
			
TO-220AB	ITO-220AB	TO-262	TO-263



Maximum Ratings and Electrical Characteristics

(at 25°C unless otherwise specified)

	SYMBOL			UNITS
DC Blocking Voltage Working Peak Reverse Voltage Peak Repetitive Reverse Voltage	V_{RM} V_{RWM} V_{RRM}	300		Volts
Average Rectified Forward Current (Rated V_R -20Khz Square Wave) - 50% duty cycle	I_o	20		Amps
Peak Forward Surge Current - 1/2 60hz	I_{FSM}	180		Amps
Instantaneous Forward Voltage (per leg) $I_F = 10A; T_J = 25^\circ C$ $I_F = 10A; T_J = 125^\circ C$	V_F^*	Typ --- ---	Max 0.89 0.74	Volts
Maximum Instantaneous Reverse Current at Rated V_{RM} $T_J = 25^\circ C$ $T_J = 125^\circ C$	I_R	Typ --- ---	Max 0.2 30	mA mA
Maximum Rate of Voltage Change (at Rated V_R)	dv/dt	10,000		V/uS
Maximum Thermal Resistance JC (per leg) Package = TO-220AB, TO-263 Package = ITO-220	$R_{\theta_{JC}}$	2 4	$^\circ C/W$	
Isolation voltage (ITO-220 only)	V_{AC}	1500		V
Operating Junction Temperature	T_J	-65 to +175		$^\circ C$
Storage Junction Temperature	T_{STG}	-65 to +175		$^\circ C$

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



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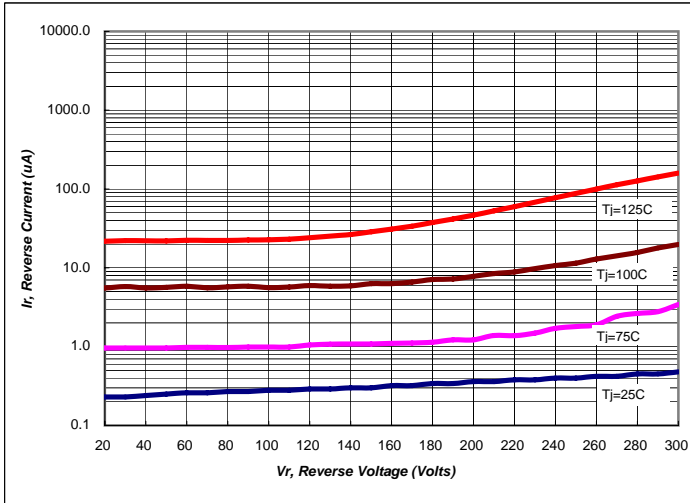


Figure 1: Typical Reverse Current

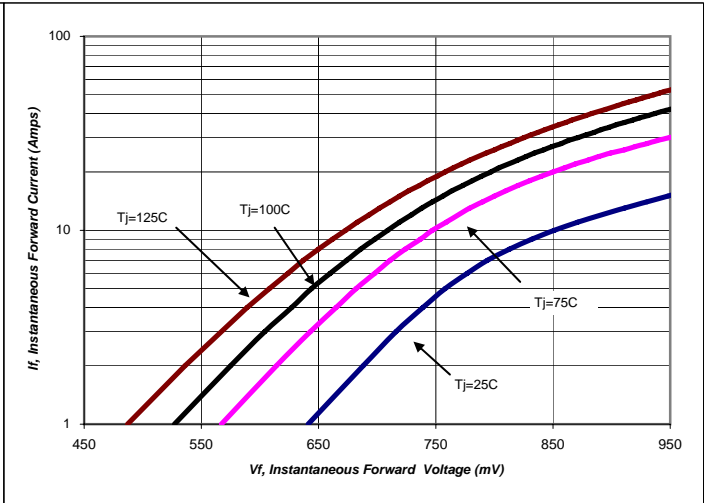


Figure 2: Typical Forward Voltage

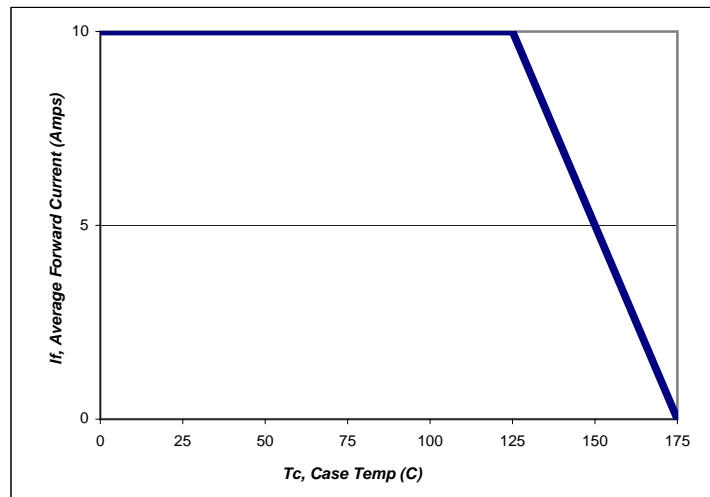


Figure 3: Current Derating, Case (per leg)



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Ordering information

Part Number	Case	Packaging
PFR20V300CT	TO-220	50 pieces / tube
PFR20V300CTH	TO-220	50 pieces / tube
PFR20V300CTF	ITO-220	50 pieces / tube
PFR20V300CTFH	ITO-220	50 pieces / tube
PFR20V300CTB	TO-263	50 pieces / tube
PFR20V300CTBH	TO-263	50 pieces / tube

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

Marking information

PFC PFR
20V300CT
YYWW ABH

PFR20V300CT = 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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