



Major ratings and characteristics

Characteristics	Values	Units
$I_{F(AV)}$ Rectangular Waveform	40	A
V_{RRM}	45	V
$V_F@20A, T_J=125^\circ C$	0.48	V, typ
T_J (operating/storage)	-65 to 150	$^\circ C$

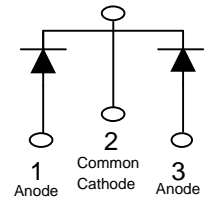
Device optimized for ultra low forward voltage drop to maximize efficiency in Power Supply applications

MECHANICAL:

* Molded Plastic TO-247 package

ELECTRICAL:

- * Low Forward Voltage Drop
- * Reliable High Temperature Operation
- * Softest, fast switching capability
- * 150 $^\circ C$ Operating Junction Temperature
- * Lead Free Finish, RoHS Compliant



Maximum Ratings and Electrical Characteristics

(at 25 $^\circ C$ unless otherwise specified)

	SYMBOL			UNITS
DC Blocking Voltage	V_{RM}			Volts
Working Peak Reverse Voltage	V_{RWM}	45		
Peak Repetitive Reverse Voltage	V_{RRM}			
Average Rectified Forward Current (Rated V_R -20Khz Square Wave) - 50% duty cycle	I_O	40		Amps
Peak Forward Surge Current - 1/2 60hz	I_{FSM}	250		Amps
Peak Repetitive Reverse Surge Current (2uS-1Khz)	I_{RRM}	2		Amps
Instantaneous Forward Voltage (per leg) $I_F = 20A; T_J = 25^\circ C$ $I_F = 20A; T_J = 125^\circ C$	V_{F^*}		Max 0.52 0.49	Volts
Maximum Instantaneous Reverse Current at Rated V_{RM} $T_J = 25^\circ C$ $T_J = 125^\circ C$	I_R		Max 0.5 100	mA
Maximum Rate of Voltage Change (at Rated V_R)	dv/dt	10,000		V/uS
Maximum Thermal Resistance JC (per leg) Package = TO-247	$R_{\theta_{JC}}$	2		$^\circ C/W$
Operating Junction Temperature	T_J	-65 to +150		$^\circ C$
Storage Junction Temperature	T_{STG}	-65 to +150		$^\circ C$

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

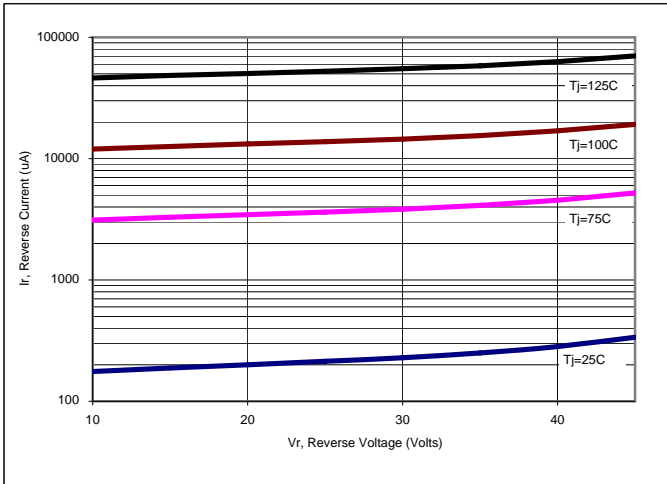


Figure 1: Typical Reverse Current

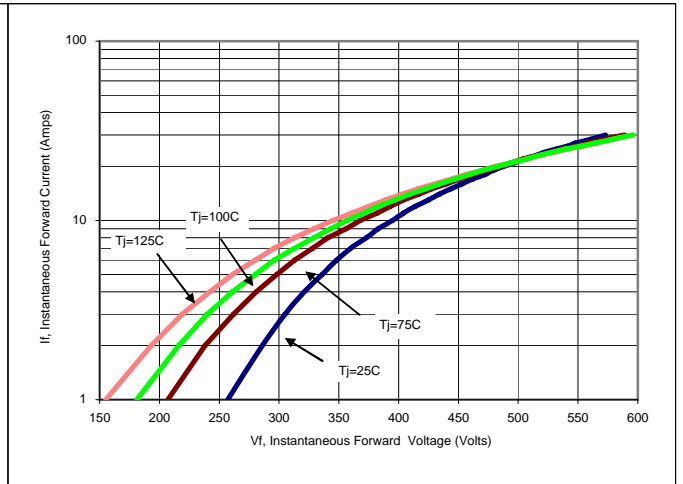


Figure 2: Typical Forward Voltage

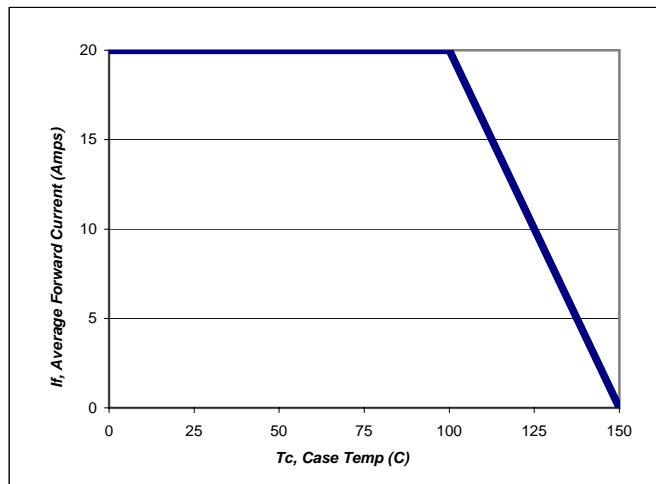


Figure 3: Current Derating, Case (per leg)



Ordering information

<i>Part Number</i>	<i>Case</i>	<i>Packaging</i>
PFR40L45PT	TO-247	30 pieces / tube
PFR40L45PTH	TO-247	30 pieces / tube

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

Marking information

PFC PFR
40L45PT
YYWW ABH

PFR40L45PT = 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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