



PFR30V60PT **PFR30V60PT-L**

PFC Device Corporation

30A 60V MOS Schottky Rectifier

Major ratings and characteristics

Characteristics	Values	Units
$I_{F(AV)}$ Rectangular Waveform	15×2	A
V_{RRM}	60	V
$V_F@ 15A, T_J=125^\circ C$	0.48	V, typ.
T_J Operating Junction Temperature	-65 to +150	$^\circ C$

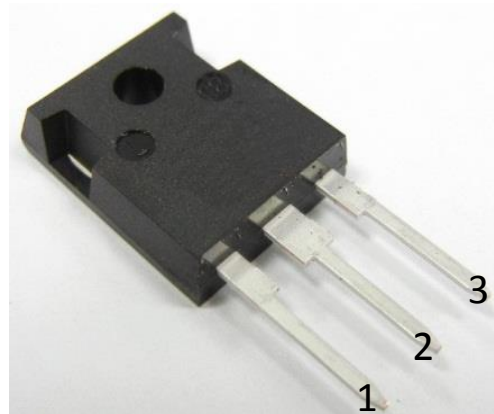
Features

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

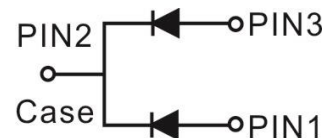
Typical Applications

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

PFR30V60PT



TO-247AB



1. Characteristics

Maximum Ratings Characteristics

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

Parameter	Symbol	Values	Units
DC Blocking Voltage	V_{RM}	60	Volts
Working Peak Reverse Voltage	V_{RWM}		
Peak Repetitive Reverse Voltage	V_{RRM}		
Average Rectified Forward Current Per device	I_o	30	Amps
(Rated VR-20Khz Square Wave) - 50% duty cycle			
Peak Forward Surge Current - 1/2 60hz	I_{FSM}	250	Amps
Peak Repetitive Reverse Surge Current (2uS-1Khz)	I_{RRM}	2	Amps
Typical Thermal Resistance (per leg)	$R\theta_{JC}$	1.5	$^{\circ}\text{C} / \text{W}$
Maximum Rate of Voltage Change (at Rated VR)	dv/dt	10000	V/uS
Operating Junction Temperature	T_J	- 65 to +150	$^{\circ}\text{C}$
Storage Junction Temperature	T_{STG}	- 65 to +150	

Electrical Characteristics - (per leg)

($T_A = 25^{\circ}\text{C}$ 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^*	60 (min.)		V
Instantaneous Forward Voltage	$I_F = 15\text{A}$	$T_J = 25^{\circ}\text{C}$	V_F^*	----	0.56	Volts
		$T_J = 125^{\circ}\text{C}$		0.48	0.50	
Instantaneous Reverse Current	At V_{RM}	$T_J = 25^{\circ}\text{C}$	I_R^*	----	500	μA
		$T_J = 125^{\circ}\text{C}$		----	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)

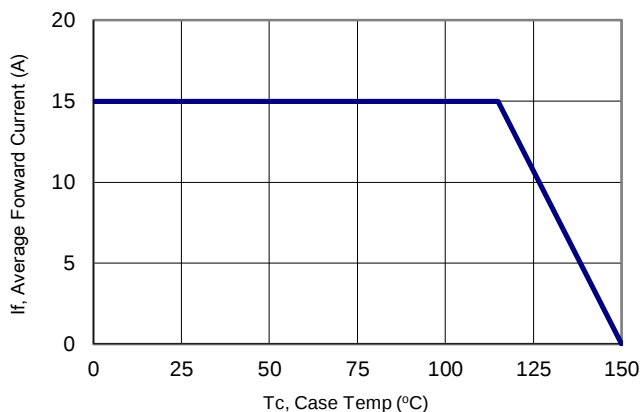


Figure 1: Current Derating, Case

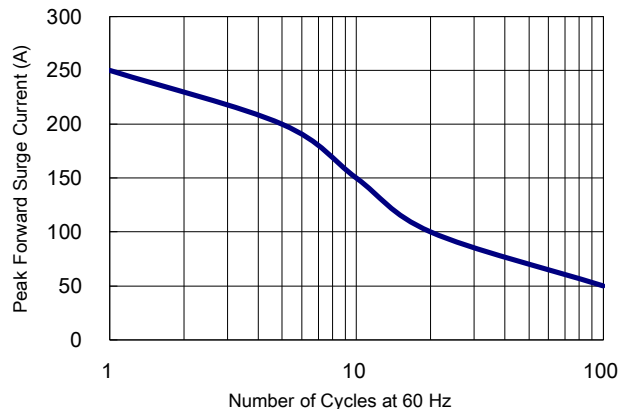


Figure 2: Maximum Repetitive Surge Current

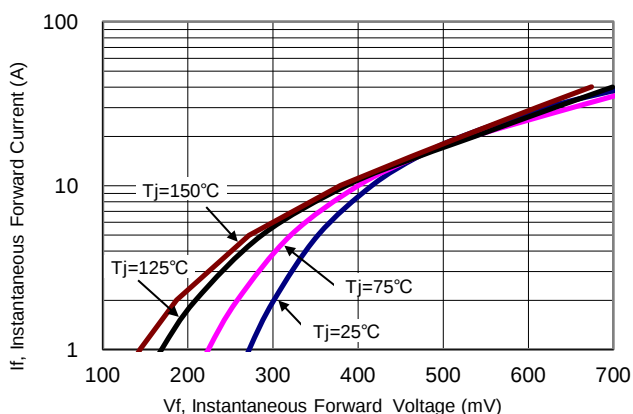


Figure 3: Typical Forward Voltage

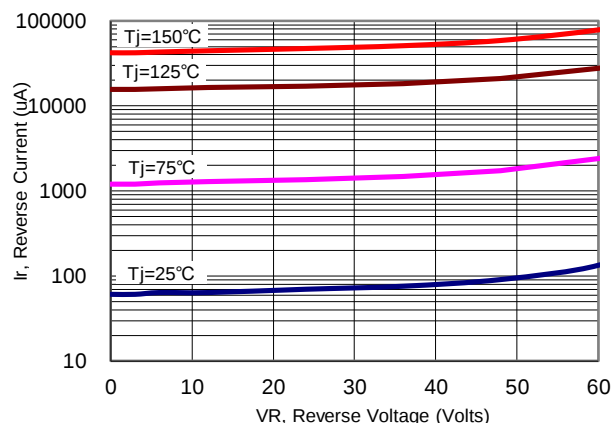


Figure 4: Typical Reverse Current

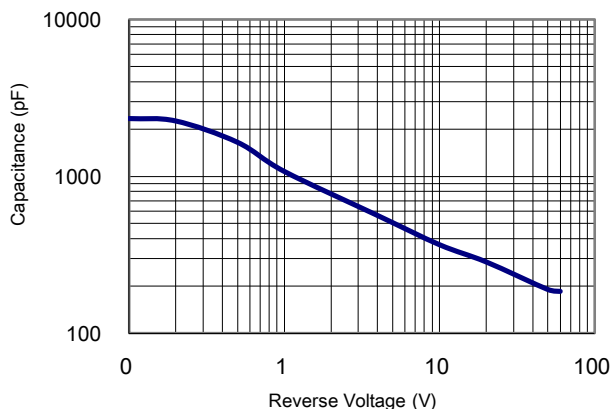


Figure 5: Typical Junction Capacitance



3. Marking information

Top Marking Rule



PFR30V60PT = 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)

4. Package information

Package Outline Dimensions millimeters

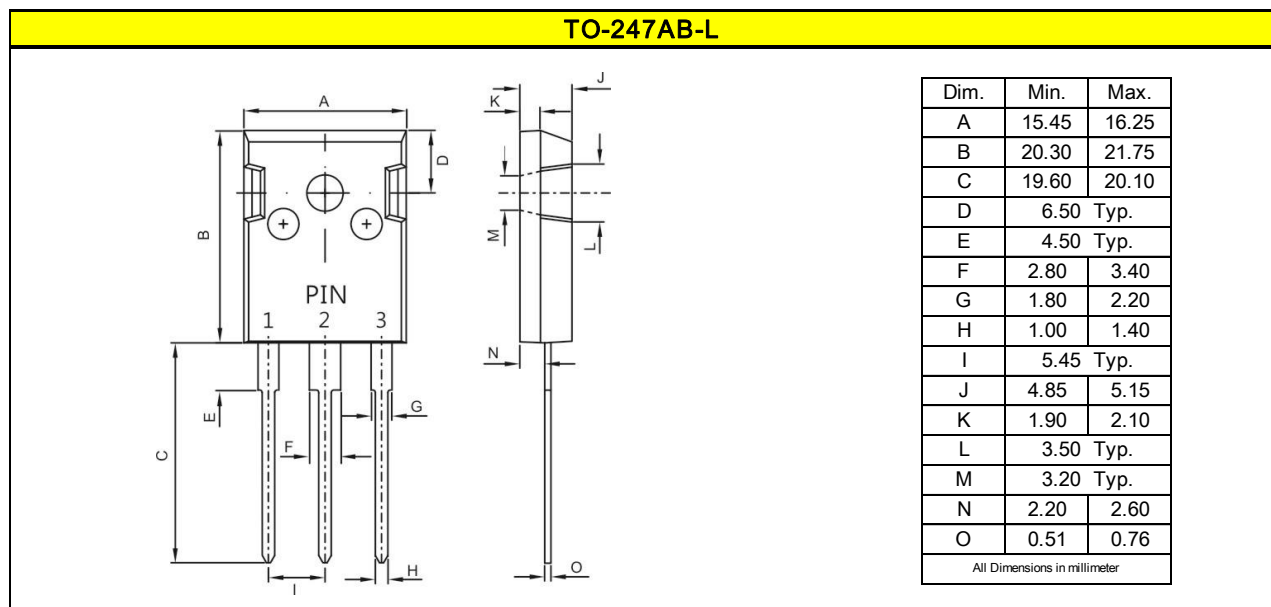
TO-247AB

Technical drawing of a TO-247AB package. It includes a top view showing dimensions A, B, C, D, E, F, G, H, I, J, K, L, M, N, O. The top view also shows a central circular feature with a crosshair and the word 'PIN' below it. The side view shows dimensions J, K, L, M, N, O. The package has three pins labeled 1, 2, and 3.

Dim.	Min.	Max.
A	15.20	16.00
B	19.13	20.87
C	13.00	16.00
D	5.50 Typ.	
E	4.00 Typ.	
F	2.80	3.20
G	1.70	2.30
H	0.88	1.52
I	5.45 Typ.	
J	4.66	5.34
K	1.17	1.37
L	4.00 Typ.	
M	3.60 Typ.	
N	2.20	2.60
O	0.42	0.58

All Dimensions in millimeter





5. Ordering information

Part Number	Package	Delivery mode
PFR30V60PT	TO-247AB	30 pieces / tube
PFR30V60PT-L	TO-247AB-L(long lead)	30 pieces / tube

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

Mechanical

- Molder Plastic: UL Flammability Classification Rating 94V-0
- Device Weight : 0.16 ounces (4.53grams) - TO-247AB
0.197 Ounces (5.6grams) – TO-247AB-L (long lead)
Mounting Torque : 10 in-lbs maximum.



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