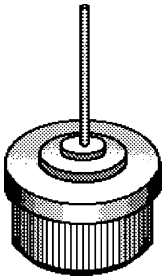
Semiconductor

Data Sheet

25 Amp Press Fit SILICON AUTOMOTIVE RECTIFIERS

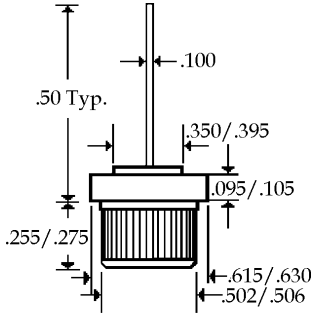
PFR2501 . . . 2510 Series

Description



Mechanical Dimensions

PFRXXXX = +
PFRXXXXA = -



(Dimensions in inches)

Features

- **LOW COST**
- **HIGH SURGE CAPABILITY**
- **DIFFUSED JUNCTION**
- **LOW LEAKAGE CURRENT**
- **HIGH TEMPERATURE CAPABILITY**
- **MEETS UL SPECIFICATION 94V-0**

	PFR2501 . . . 2510 Series							**Units**
Maximum Ratings	**PFR2501**	**PFR2502**	**PFR2503**	**PFR2504**	**PFR2506**	**PFR2508**	**PFR2510**	
Peak Repetitive Reverse Voltage...V_{RRM}	100	200	300	400	600	800	1000	Volts
RMS Reverse Voltage...$V_{R(rms)}$	70	140	210	280	420	560	700	Volts
DC Blocking Voltage...V_{DC}	100	200	300	400	600	800	1000	Volts
Average Forward Rectified Current...$I_{F(av)}$ T_A = 55°C *(Note 3)*	..... 25							Amps
Non-Repetitive Peak Forward Surge Current...I_{FSM} @ Rated Current & Temp	..... 400							Amps
Operating & Storage Temperature Range...T_J, T_{STRG}	..... -50 to 175							°C
Electrical Characteristics								
Maximum Forward Voltage @ 25A...V_F	..... 1.05							Volts
Maximum DC Reverse Current...I_R 25°C	..... 10							µAmps
@ Rated DC Blocking Voltage, 150°C	..... 250							µAmps
Typical Junction Capacitance...C_J *(Note 1)*	< ..... 200 .....>			< ..... 300 ..... >				pF
Typical Thermal Resistance...$R_{\theta JA}$ *(Note 2)*	..... 0.8							°C/W
Typical Reverse Recovery Time...t_{RR}	..... 3.0							µs

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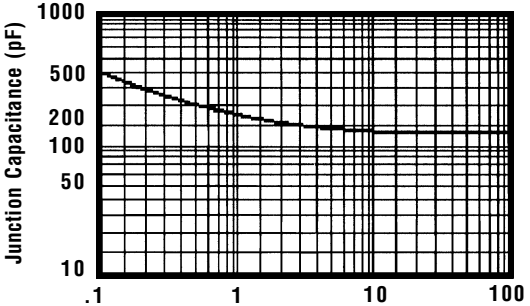
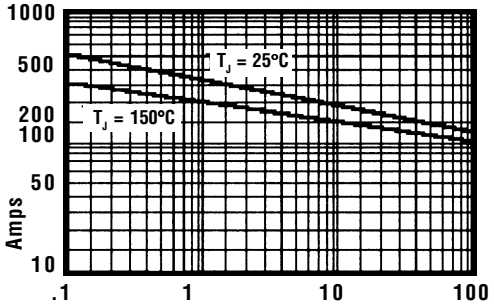
Typical Junction Capacitance

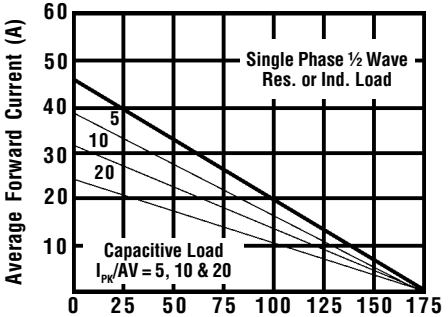


T_J = 25°C F = 1 MHz V_{SIG} = 50 Vpp

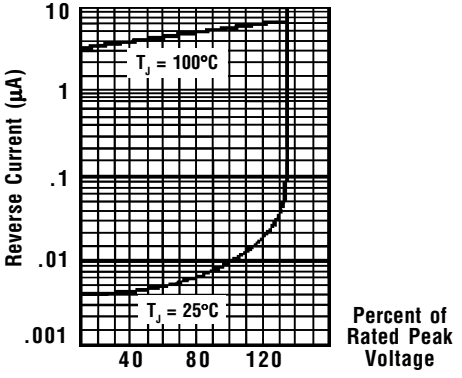
Non-Repetitive Peak Forward Surge Current



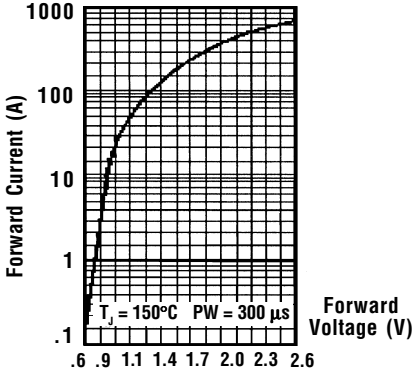
Forward Current Derating Curve



Typical Reverse Characteristics



Typical Instantaneous Forward Characteristics



Ratings at 25 Deg. C ambient temperature unless otherwise specified.

Single Phase Half Wave, 60 Hz Resistive or Inductive Load.

For Capacitive Load, Derate Current by 20%.

NOTES: 1. Measured @ 1 MHz and applied reverse voltage of 4.0V.
2. Thermal Resistance Junction to Ambient, Jedec Method.
3. When Mounted to heat sink, from body.