

POWER DISCRETES

Description

Quick reference data

$$V_R = 1000V$$

$$I_F = 1.25A$$

$$t_{rr} = 100nS$$

$$I_R = 1\mu A$$

Features

- ◆ Very low reverse recovery time
- ◆ Glass passivated for hermetic sealing
- ◆ Low switching losses
- ◆ Soft, non-snap off, recovery characteristics
- ◆ Avalanche capability

Absolute Maximum Ratings

Electrical specifications @ $T_A = 25^\circ C$ unless otherwise specified.

	Symbol	PFR0	Units
Working Reverse Voltage	V_{RWM}	1000	V
Surge Reverse Voltage	V_{RSM}	1100	V
Average Forward Current @ $55^\circ C$, lead length 0.375"	$I_{F(AV)}$	1.25	A
Repetitive Surge Current @ $55^\circ C$ in free air, lead length 0.375"	I_{FRM}	11	A
Non-Repetitive Surge Current ($t_p = 8.3mS$ @ V_R & T_{JMAX})	I_{FSM}	30	A
Storage Temperature Range	T_{STG}	-55 to +175	$^\circ C$

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Electrical Specifications

	Symbol	PFR0	Units
Average Forward Current max (pcb mounted; $T_A = 55^\circ\text{C}$) for sine wave for square wave ($d = 0.5$)	$I_{F(AV)}$ $I_{F(AV)}$	0.85 0.90	A
Average Forward Current max ($T_L = 55^\circ\text{C}$; $L = 3/8"$)	$I_{F(AV)}$	1.25	A
Forward Voltage Drop max. @ $I_F = 1.0\text{A}$, $T_j = 25^\circ\text{C}$	V_F	1.5	V
Reverse Current typ. @ V_{RWM} , $T_j = 25^\circ\text{C}$ @ V_{RWM} , $T_j = 100^\circ\text{C}$	I_R I_R	1 20	μA
Reverse Recovery Time max. $0.5\text{A } I_F$ to $1.0\text{A } I_{RM}$ recovers to $0.25\text{A } I_{RM(REC)}$	trr	100	nS
Junction Capacitance typ. @ $V_R = 5\text{V}$, $f = 1\text{MHz}$	C_j	22	pF

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Thermal Characteristics

	Symbol	PFR0	Units
Thermal Resistance-Junction to Lead Lead length = 0.375"	$R_{\theta JL}$	47	$^\circ\text{C/W}$

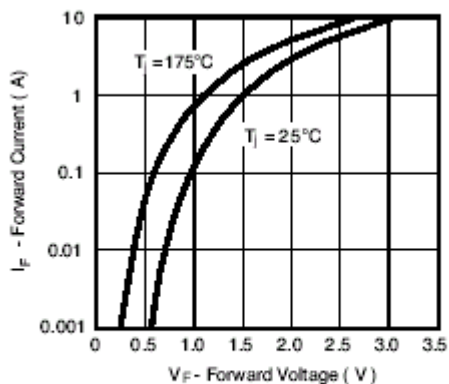
Maximum Characteristics


Figure 1. Forward Current vs. Forward Voltage

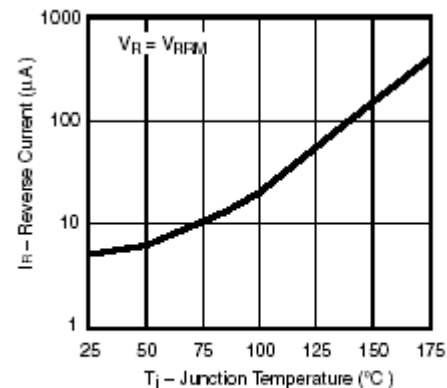


Figure 2. Reverse Current vs. Junction Temperature

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Maximum Characteristics (Cont.)

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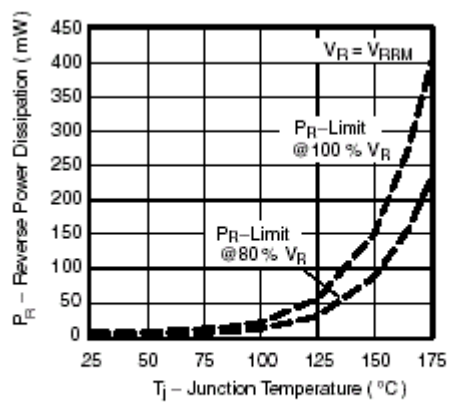


Figure 3. Max. Reverse Power Dissipation vs. Junction Temperature

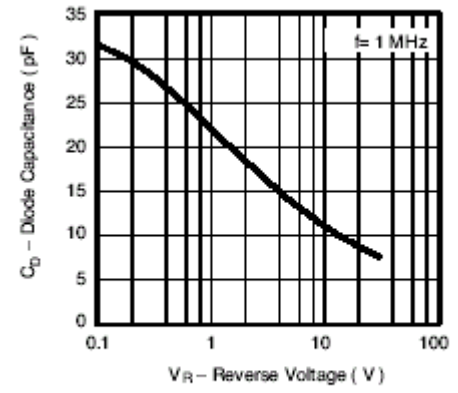


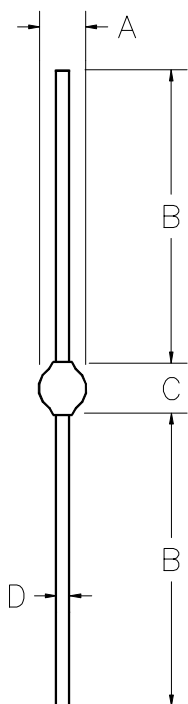
Figure 4. Diode Capacitance vs. Reverse Voltage

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Ordering Information

Part Number	Description
PFR0	Axial leaded hermetically sealed ⁽¹⁾

Note:

(1) Available in bulk and tape and reel packaging. Please consult factory for quantities.

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Outline Drawing


Dimensions					
DIM ^N	Inches		Millimeters		Note
	MIN	MAX	MIN	MAX	
A	-	.150	-	3.81	-
B	1.02	-	26	-	-
C	-	.180	-	4.57	-
D	-	.032	-	0.82	-

Weight = 0.013oz