

POWER DISCRETES
Description

Quick reference data

$$V_R = 800 - 1000V$$

$$I_F = 3.0A$$

$$t_{rr} = 75nS$$

$$I_R = 2\mu A$$

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	2PFF8	2PFF0	Units
Working Reverse Voltage	V_{RWM}	800	1000	V
Average Forward Current @ $55^\circ C$, lead length 0.375"	$I_{F(AV)}$	3.0		A
Repetitive Surge Current @ $55^\circ C$ in free air, lead length 0.375"	I_{FRM}	9.0		A
Non-Repetitive Surge Current ($t_p = 8.3mS$ @ V_R & T_{JMAX})	I_{FSM}	45.0		A
Storage Temperature Range	T_{STG}	-55 to +175		$^\circ C$

POWER DISCRETES

Electrical Specifications

	Symbol	2PFF8	2PFF0	Units
Average Forward Current max (pcb mounted; $T_A = 55^\circ\text{C}$)	$I_{F(AV)}$	1.0		A
Average Forward Current max ($T_L = 55^\circ\text{C}$; $L = 3/8"$)	$I_{F(AV)}$	3.0		A
I^2t for fusing ($t = 8.3\text{mS}$) max	I^2t	8.4		A^2S
Forward Voltage Drop max. @ $I_F = 3.0\text{A}$, $T_j = 25^\circ\text{C}$	V_F	1.7		V
Reverse Current max. @ V_{RWM} , $T_j = 25^\circ\text{C}$ @ V_{RWM} , $T_j = 100^\circ\text{C}$	I_R I_R	2 50		μA
Reverse Recovery Time max. $0.5\text{A } I_F$ to $1.0\text{A } I_{RM}$ recovers to $0.25\text{A } I_{RM(REC)}$	t_{rr}	75		nS
Junction Capacitance typ. @ $V_R = 5\text{V}$, $f = 1\text{MHz}$	C_j	40		pF

Thermal Characteristics

	Symbol	2PFF8, 2PFF0	Units
Thermal Resistance-Junction to Lead Lead length = $0.375"$	$R_{\theta JL}$	26	$^\circ\text{C/W}$

Typical Characteristics

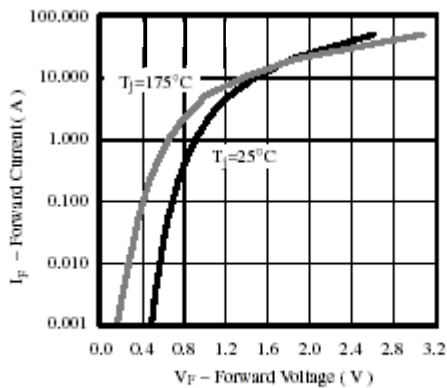


Figure 1. Max. Forward Current vs. Forward Voltage

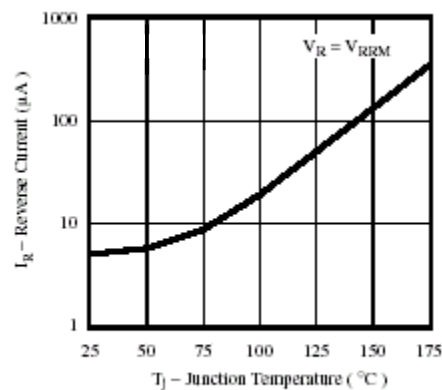


Figure 2. Max. Reverse Current vs. Junction Temperature

POWER DISCRETES

Typical Characteristics (Cont.)

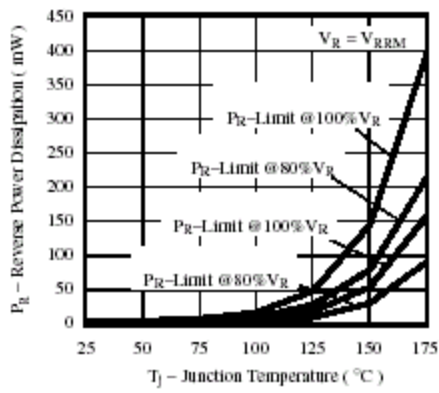


Figure 3. Max. Reverse Power Dissipation vs. Junction Temperature

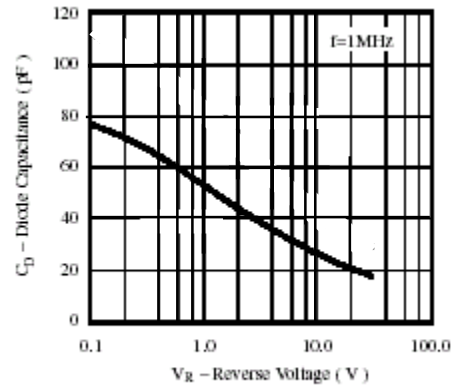


Figure 4. Diode Capacitance vs. Reverse Voltage

POWER DISCRETES

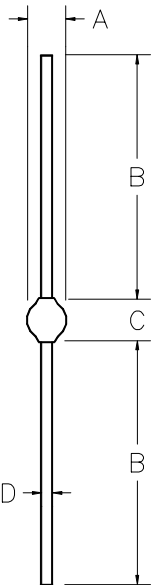
Ordering Information

Part Number	Description
2PFF8 2PFF0	Axial leaded hermetically sealed ⁽¹⁾

Note:

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

Outline Drawing



Dimensions					
DIM ^N	Inches		Millimeters		Note
	MIN	MAX	MIN	MAX	
A	-	.177	-	4.50	-
B	1.02	-	26	-	-
C	-	.197	-	5.00	-
D	-	.053	-	1.35	-

Weight = 0.035oz

Contact Information

Semtech Corporation
 Power Discretes Products Division
 200 Flynn Road, Camarillo, CA 93012
 Phone: (805)498-2111 FAX (805)498-3804