

POWER DISCRETES

Description

Quick reference data

$$V_R = 200 - 600V$$

$$I_F = 1.25A$$

$$t_{rr} = 30nS$$

$$I_R = 1\mu A$$

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	PFF2	PFF4	PFF6	Units
Working Reverse Voltage	V_{RWM}	200	400	600	V
Repetitive Reverse Voltage	V_{RRM}	200	400	600	V
Average Forward Current @ $55^\circ C$ in free air, 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}	4.25			A
Non-Repetitive Surge Current ($t_p = 8.3mS$ @ V_R & T_{JMAX})	I_{FSM}	22.0			A
Storage Temperature Range	T_{STG}	-65 to +175			$^\circ C$
Operating Temperature Range	T_{OP}	-65 to +175			$^\circ C$

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Electrical Specifications

	Symbol	PFF2	PFF4	PFF6	Units
Average Forward Current max (pcb mounted, $T_A = 55^\circ\text{C}$) for sine wave for square wave	$I_{F(AV)}$ $I_{F(AV)}$		0.7 0.75		A
Average Forward Current max. ($T_L = 55^\circ\text{C}$; $L = 3/8"$) for sine wave for square wave	$I_{F(AV)}$ $I_{F(AV)}$		1.15 1.25		A
I^2t for fusing ($t = 8.3\text{mS}$) max.	I^2t		2.00		A^2S
Forward Voltage Drop max. @ $I_F = 1.0\text{A}$, $T_j = 25^\circ\text{C}$	V_F		2.50		V
Reverse Current max. @ V_{RWM} , $T_j = 25^\circ\text{C}$ @ V_{RWM} , $T_j = 100^\circ\text{C}$	I_R I_R		1.0 10.0		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		30		nS
Junction Capacitance typ. @ $V_R = 5\text{V}$, $f = 1\text{MHz}$	C_j		30		pF

Thermal Characteristics

	Symbol	PFF2, PFF4, PFF6	Units
Thermal Resistance-Junction to Lead Lead length = 0.375" Lead length = 0.0"	$R_{\theta JL}$	47 19	$^\circ\text{C/W}$
Thermal Resistance-Junction to Ambient on 0.06" thick pcb. 1 oz. copper	$R_{\theta JA}$	100	$^\circ\text{C/W}$

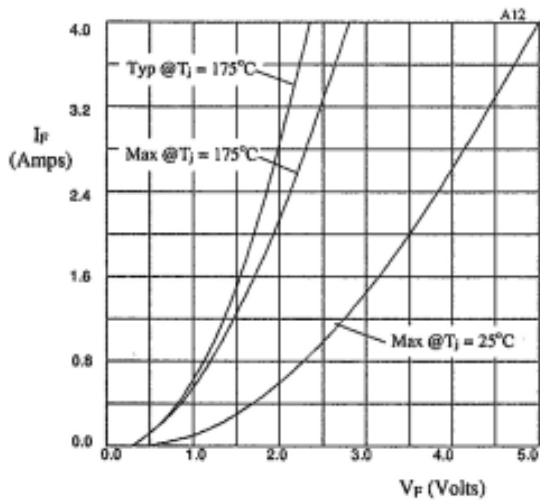
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Maximum Characteristics


Figure 1. Forward voltage drops as a function of forward current.

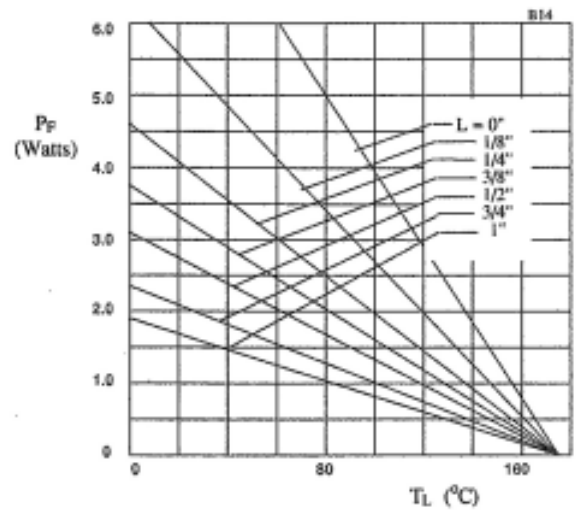


Figure 2. Maximum power versus lead temperature.

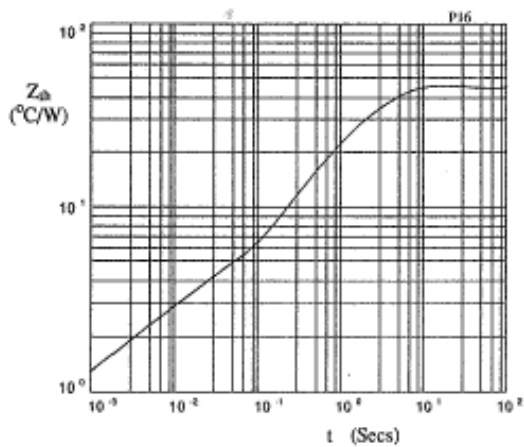


Figure 3. Transient thermal impedance characteristic

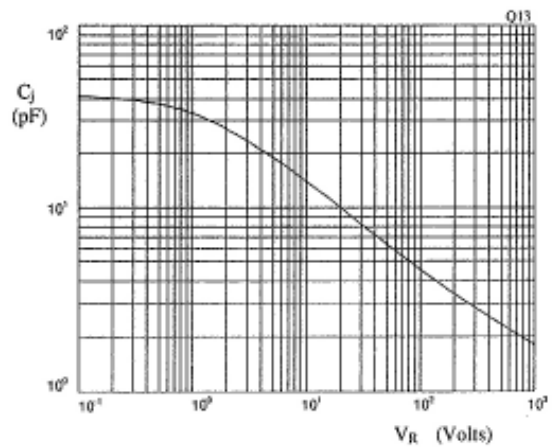


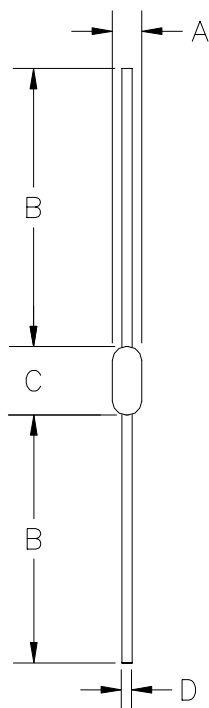
Figure 4. Typical junction capacitance as a function of reverse voltage.

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Ordering Information

Part Number	Description
PFF2, PFF4, PFF6	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	-	1.50	-	3.81	-
B	1.10	-	28.0	-	-
C	-	.180	-	4.57	-
D	-	.032	-	0.81	-

Weight = 0.013oz