

January 29, 1998

TEL:805-498-2111 FAX:805-498-3804 WEB:<http://www.semtech.com>**QUICK REFERENCE
DATA**

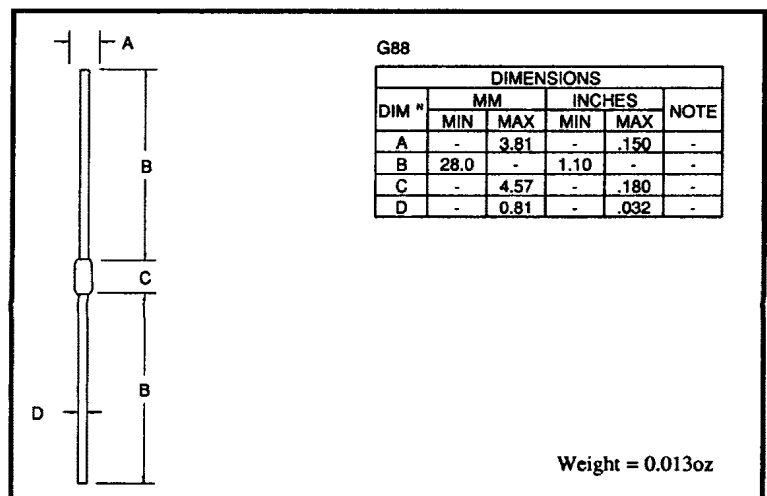
- $V_R = 600 - 1000V$
- $I_F = 2.0A$
- $t_{rr} = 2.5\mu s$
- $I_R = 1.0\mu A$

**AXIAL LEADED HERMETICALLY SEALED
STANDARD RECOVERY RECTIFIER DIODE**

- Avalanche capability
- High thermal shock resistance
- Glass passivated for hermetic sealing
- Low reverse leakage currents
- Low forward voltage drop

ABSOLUTE MAXIMUM RATINGS (@ 25°C unless otherwise specified)

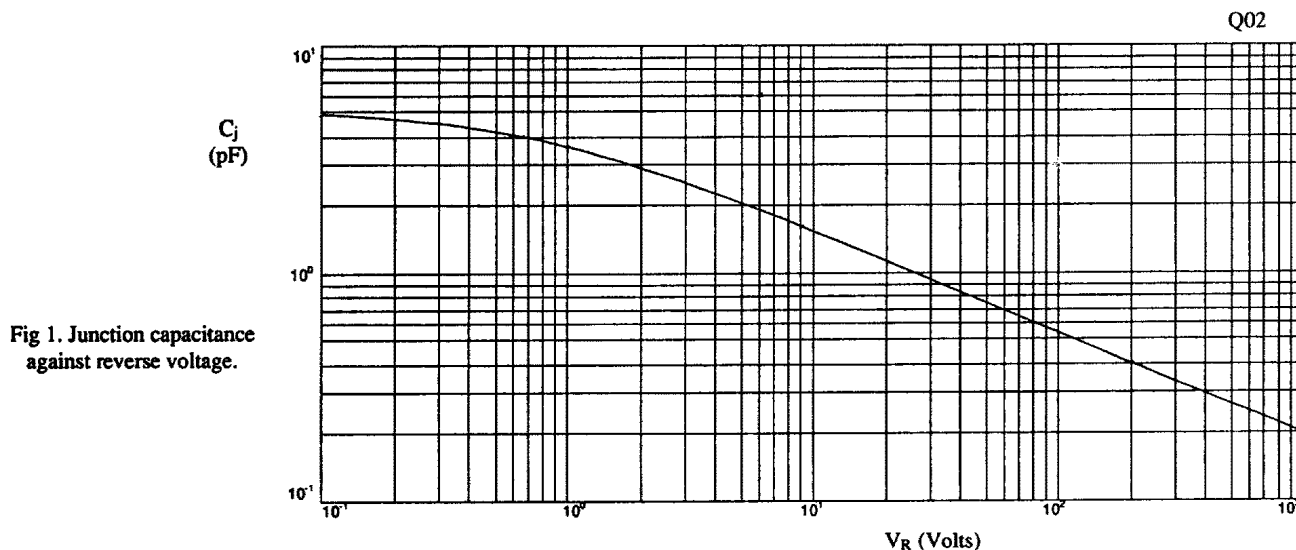
	Symbol	PM6	PM8	PM0	Unit
Working reverse voltage	V_{RWM}	600	800	1000	V
Repetitive reverse voltage	V_{RRM}	600	800	1000	V
Surge reverse voltage	V_{RSM}	650	900	1100	V
Average forward current (@ 55°C, lead length 0.375")	I_F	← 2.0 →			A
Repetitive surge current (@ 55°C in free air, lead length 0.375")	I_{FRM}	← 12.0 →			A
Non-repetitive surge current ($t_p = 8.3ms$, @ V_R & T_{jmax})	I_{FSM}	← 50 →			A
Storage temperature range	T_{stg}	← -65 to +175 →			°C
Operating temperature range	T_{oper}	← -65 to +175 →			°C

MECHANICAL

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CHARACTERISTICS (@ 25°C unless otherwise specified)

	Symbol	PM6	PM8	PM0	Unit
Average forward current for sine wave - max. pcb mounted; $T_A = 55^\circ\text{C}$ - max. $L = 3/8"$; $T_L = 55^\circ\text{C}$	$I_{F(AV)}$ $I_{F(AV)}$	← 1.1 → ← 2.0 →			A A
I^2t for fusing ($t = 8.3\text{ms}$) max.	I^2t	← 12.0 →			A^2S
Forward voltage drop max. @ $I_F = 1.00\text{A}$, $T_j = 25^\circ\text{C}$	V_F	← 1.0 →			V
Reverse current max. @ V_{RWM} , $T_j = 25^\circ\text{C}$	I_R	← 1.0 →			μA
@ V_{RWM} , $T_j = 100^\circ\text{C}$	I_R	← 10 →			μA
Reverse recovery time typ. 0.5A I_F to 1.0A I_R . Recovers to 0.25A I_{RR} .	t_{rr}	← 2.5 →			μS
Junction capacitance typ. @ $V_R = 5\text{V}$, $f = 1\text{MHz}$	C_j	← 20 →			pF
Thermal resistance - junction to lead Lead length = 0.375"	$R_{\theta JL}$	← 47 →			$^\circ\text{C/W}$
Lead length = 0"	$R_{\theta JL}$	← 19 →			$^\circ\text{C/W}$
Thermal resistance - junction to amb. on 0.06" thick pcb. 1oz copper.	$R_{\theta JA}$	← 100 →			$^\circ\text{C/W}$



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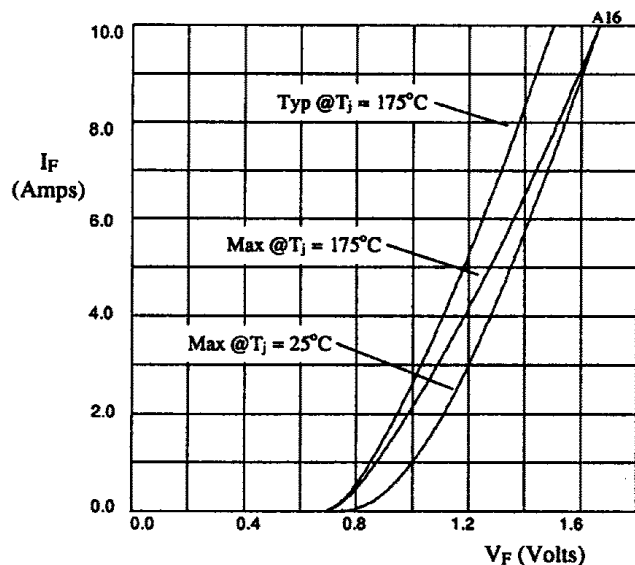


Fig 2. Forward voltage drop as a function of forward current.

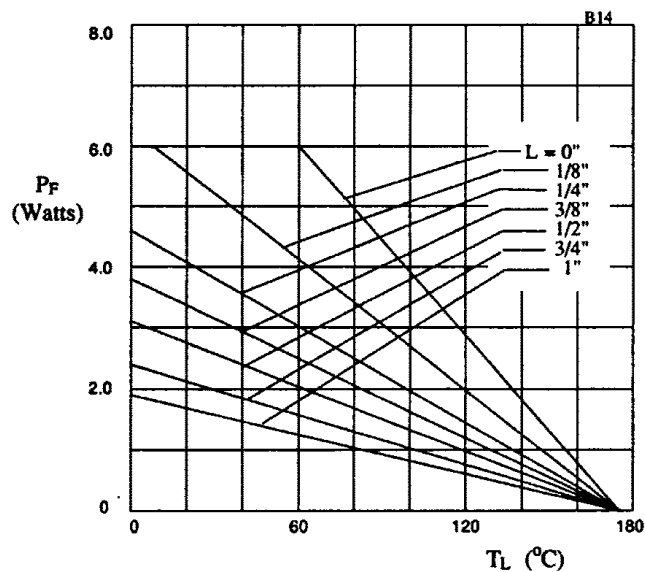


Fig 3. Maximum power versus lead temperature.

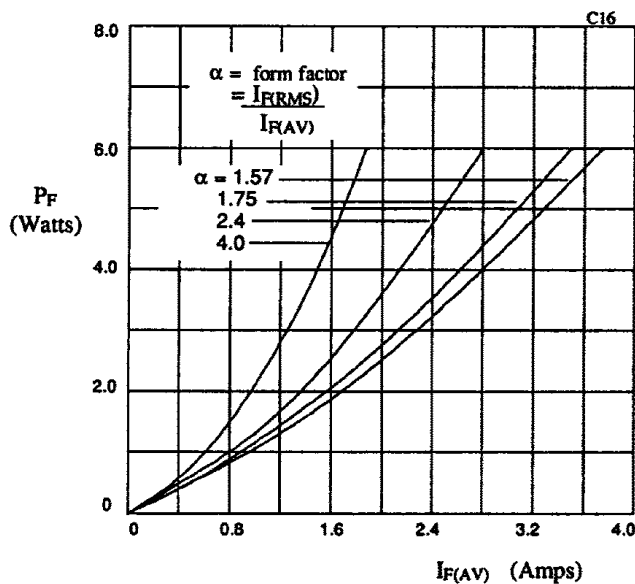


Fig 4. Forward power dissipation as a function of forward current, for sinusoidal operation.

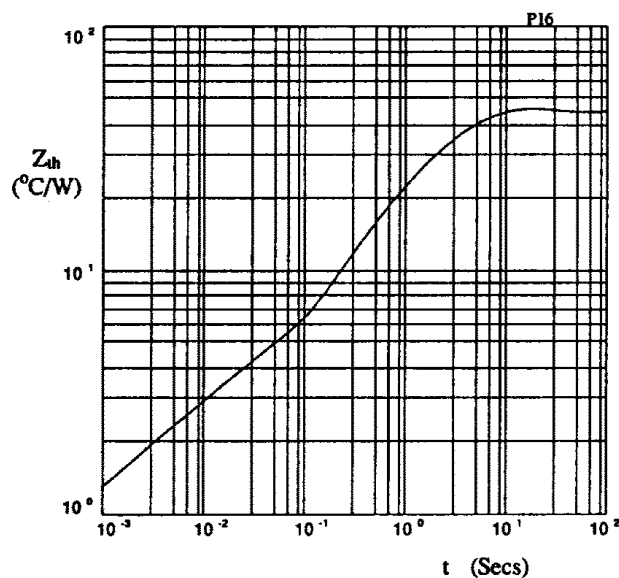


Fig 5. Transient thermal impedance characteristic.