

January 7, 1998

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

AXIAL LEADED HERMETICALLY SEALED HIGH VOLTAGE FAST RECTIFIER DIODE

QUICK REFERENCE DATA

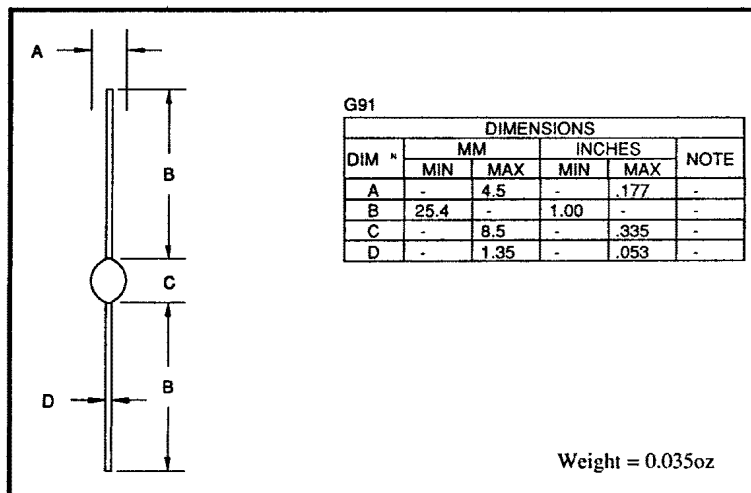
- Low reverse recovery time
- High thermal shock resistance
- Glass passivated for hermetic sealing
- Low switching losses
- Soft, non-snap off, recovery characteristics

- $V_R = 2500V$
- $I_F = 800mA$
- $t_{rr} = 350ns$
- $I_R = 1\mu A$

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

	Symbol	11PF25	Unit
Working reverse voltage	V_{RWM}	2500	V
Repetitive reverse voltage	V_{RRM}	2750	V
Surge reverse voltage	V_{RSM}	3000	V
Average forward current (@ 55°C in oil)	$I_{F(AV)}$	0.80	A
Repetitive surge current (@ 55°C)	I_{FRM}	10	A
Non-repetitive surge current ($t_p = 8.3ms$, @ V_R & T_{jmax})	I_{FSM}	27	A
Storage temperature range	T_{STG}	-65 to +165	°C
Operating temperature range	T_{OP}	-65 to +165	°C

MECHANICAL

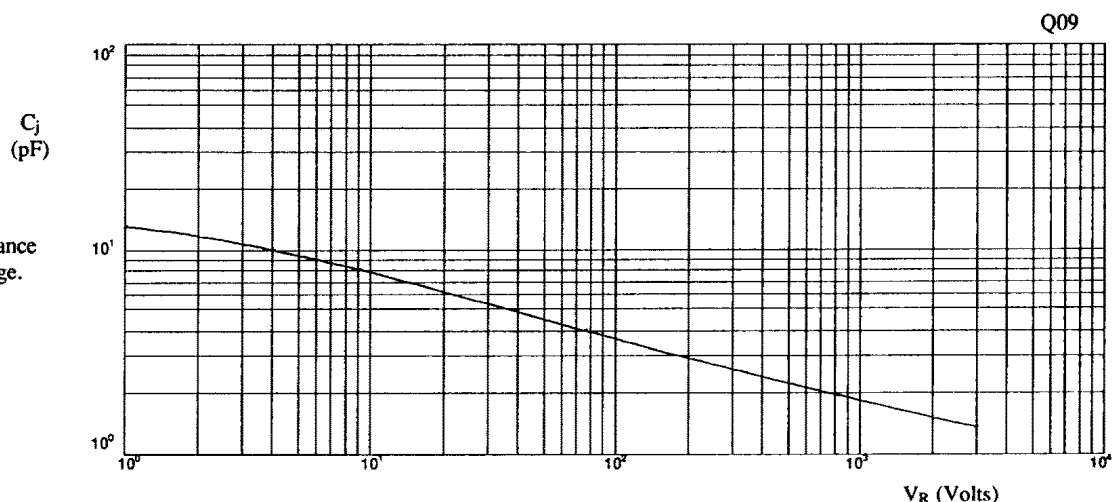


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CHARACTERISTICS (@ 25°C unless otherwise specified)

	Symbol	11PF25	Unit
Average forward current max. (pcb mounted; $T_A = 55^\circ\text{C}$)			
for sine wave	$I_{F(AV)}$	0.32	A
for square wave ($d = 0.5$)	$I_{F(AV)}$	0.34	A
Average forward current max. (unstirred oil at 55°C)			
for sine wave	$I_{F(AV)}$	0.76	A
for square wave	$I_{F(AV)}$	0.80	A
I^2t for fusing ($t = 8.3\text{ms}$) max.	I^2t	3.0	A^2S
Forward voltage drop max. @ $I_F = 2.0\text{A}$, $T_j = 25^\circ\text{C}$	V_F	6.50	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 max. 50mA I_F , 100mA I_R , 25mA I_{RR} .	t_{rr}	350	nS
Junction capacitance typ. @ $V_R = 5\text{V}$, $f = 1\text{MHz}$	C_j	9.5	pF
Thermal resistance - junction to oil			
Stirred oil	$R_{\theta JO}$	19	$^\circ\text{C/W}$
Unstirred oil	$R_{\theta JO}$	25	$^\circ\text{C/W}$
Thermal resistance - junction to amb. on 0.06" thick pcb. 1oz copper.	$R_{\theta JA}$	81	$^\circ\text{C/W}$

Fig 1 Junction capacitance
against reverse voltage.



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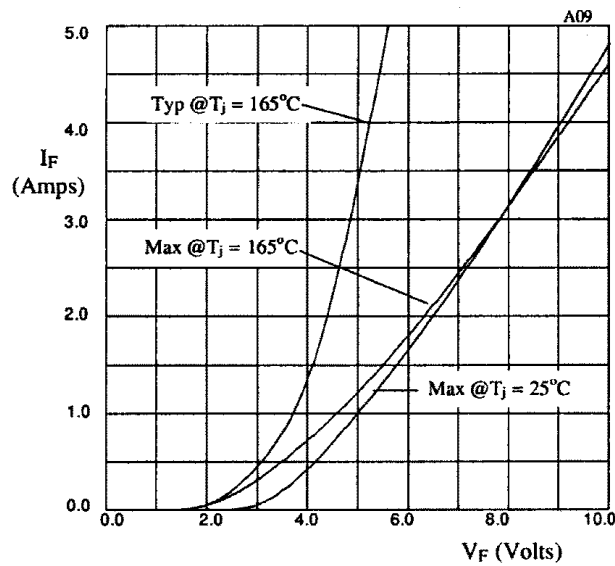


Fig 2. Forward voltage drop as a function of forward current.

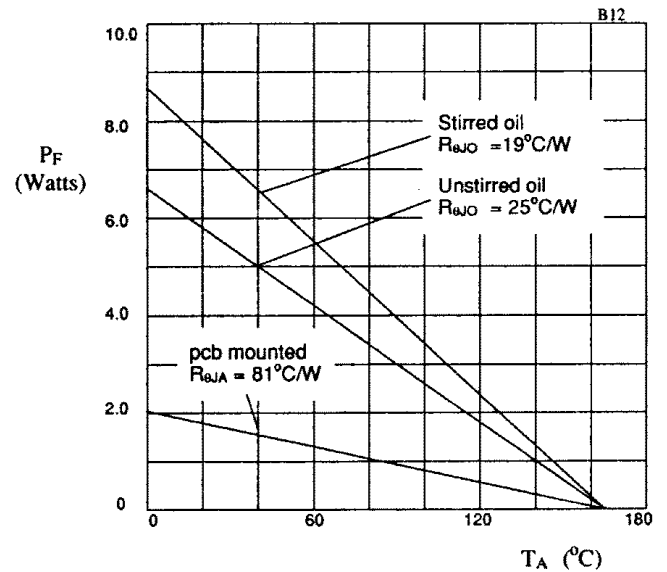


Fig 3. Power derating in air and oil.

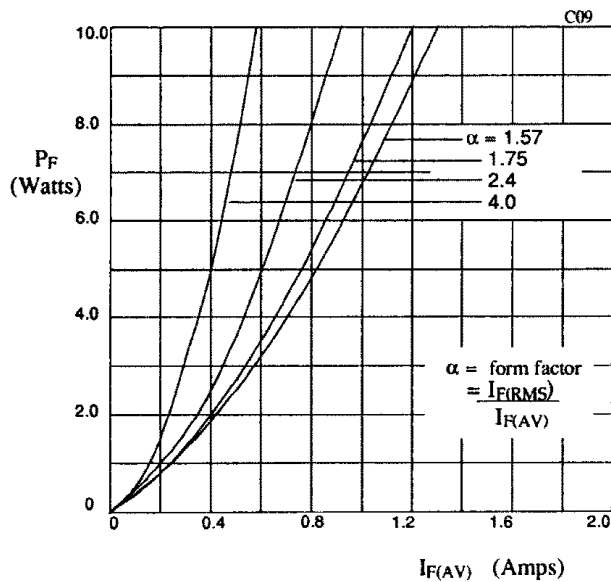


Fig 4. Forward power dissipation as a function of forward current, for sinusoidal operation.

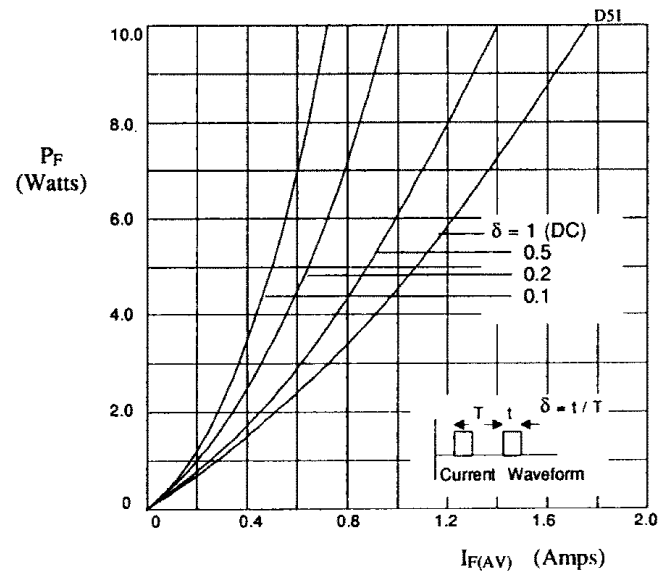


Fig 5. Forward power dissipation as a function of forward current, for square wave operation.