



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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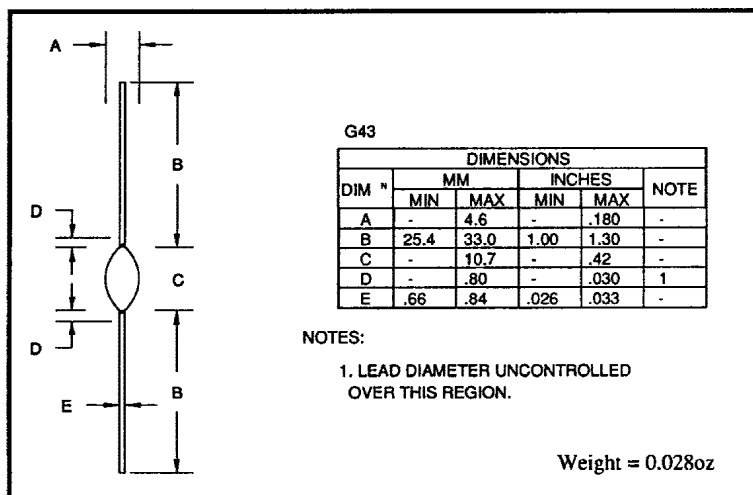
TEL:805-498-2111 FAX:805-498-3804 WEB:<http://www.semtech.com>**AXIAL LEADED HERMETICALLY SEALED HIGH
VOLTAGE FAST RECTIFIER DIODE****QUICK REFERENCE
DATA**

- Low reverse recovery time
- High thermal shock resistance
- Hermetically sealed with Metoxilite metal oxide
- Low switching losses
- Soft, non-snap off, recovery characteristics

- $V_R = 7.5 - 10kV$
- $I_F = 290mA$
- $t_{rr} = 300nS$
- $I_R = 1\mu A$

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

	Symbol	SM75F	SM100F	Unit
Working reverse voltage	V_{RWM}	7500	10000	V
Repetitive reverse voltage	V_{RRM}	7500	10000	V
Average forward current (@ 55°C in oil)	$I_{F(AV)}$	← 0.29 →		A
Repetitive surge current (@ 55°C)	I_{FRM}	← 1.00 →		A
Non-repetitive surge current ($t_p = 8.3mS$, @ V_R & T_{jmax})	I_{FSM}	← 14.0 →		A
Storage temperature range	T_{STG}	← -65 to +175 →		°C
Operating temperature range	T_{OP}	← -65 to +175 →		°C

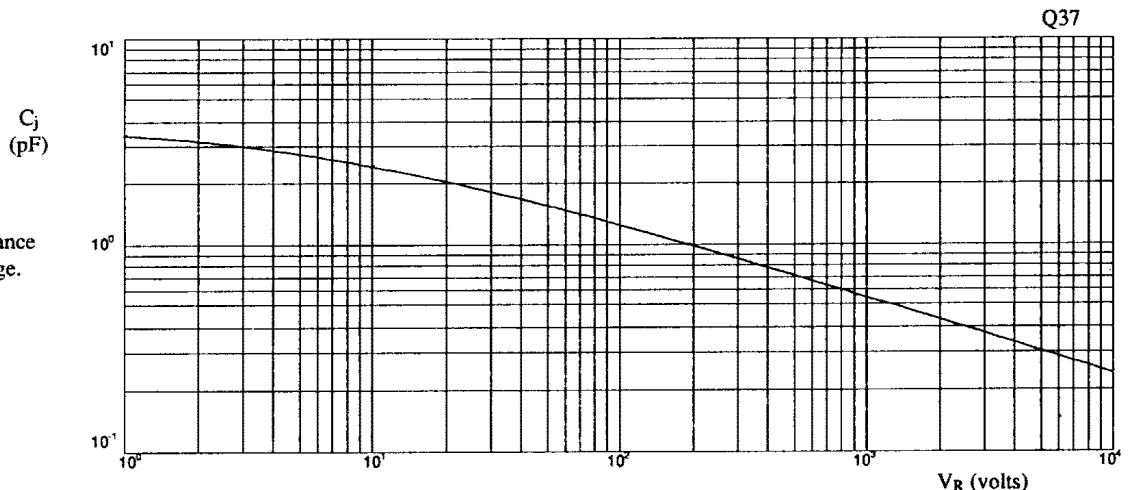
MECHANICAL

January 7, 1998

CHARACTERISTICS (@ 25°C unless otherwise specified)

	Symbol	SM75F , SM100F	Unit
Average forward current max. (pcb mounted; $T_A = 55^\circ\text{C}$) for sine wave	$I_{F(AV)}$	← 0.11 →	A
for square wave ($d = 0.5$)	$I_{F(AV)}$	← 0.12 →	A
Average forward current max. (unstirred oil at 55°C) for sine wave	$I_{F(AV)}$	← 0.27 →	A
for square wave	$I_{F(AV)}$	← 0.29 →	A
I^2t for fusing ($t = 8.3\text{ms}$) max.	I^2t	← 0.81 →	A^2S
Forward voltage drop max. @ $I_F = 100\text{mA}$, $T_j = 25^\circ\text{C}$	V_F	← 12.0 →	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	← 20 →	μA
Reverse recovery time max. 50mA I_F to 100mA I_R . Recover to 25mA I_{RR}	t_{rr}	← 300 →	nS
Junction capacitance typ. @ $V_R = 5\text{V}$, $f = 1\text{MHz}$	C_j	← 3.0 →	pF
Thermal resistance - junction to oil Stirred oil	$R_{\theta JO}$	← 20 →	$^\circ\text{C/W}$
Unstirred oil	$R_{\theta JO}$	← 28 →	$^\circ\text{C/W}$
Thermal resistance - junction to amb. on 0.06" thick pcb. 1oz copper.	$R_{\theta JA}$	← 91 →	$^\circ\text{C/W}$

Fig 1 Junction capacitance
against reverse voltage.



January 7, 1998

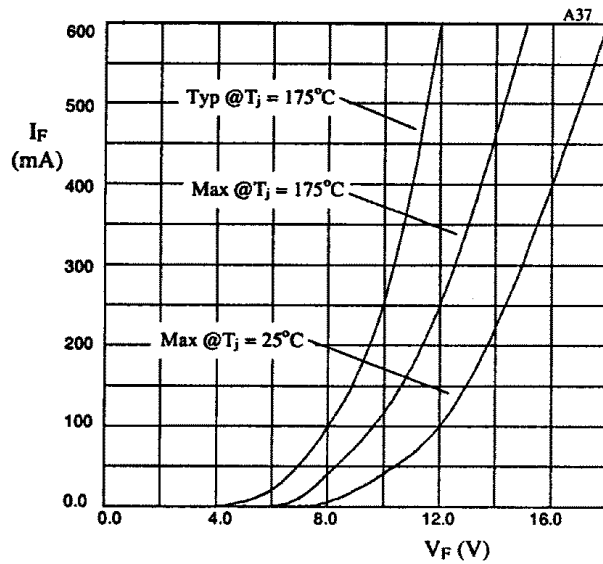


Fig 2. Forward voltage drop as a function of forward current.

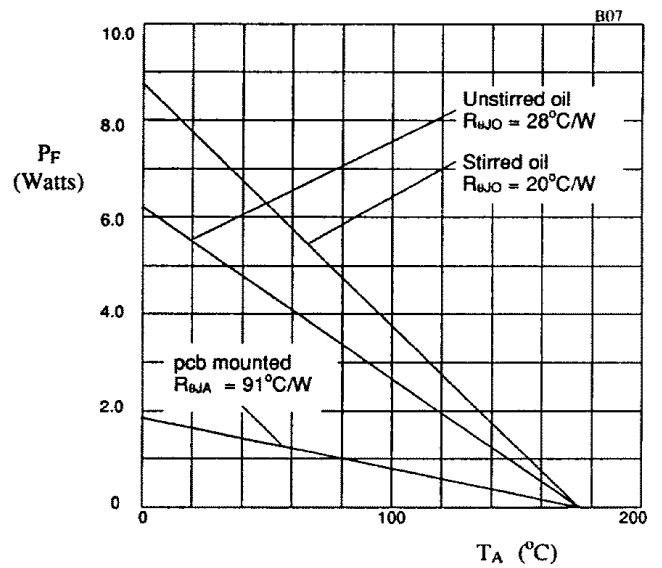


Fig 3. Power derating in air and oil.

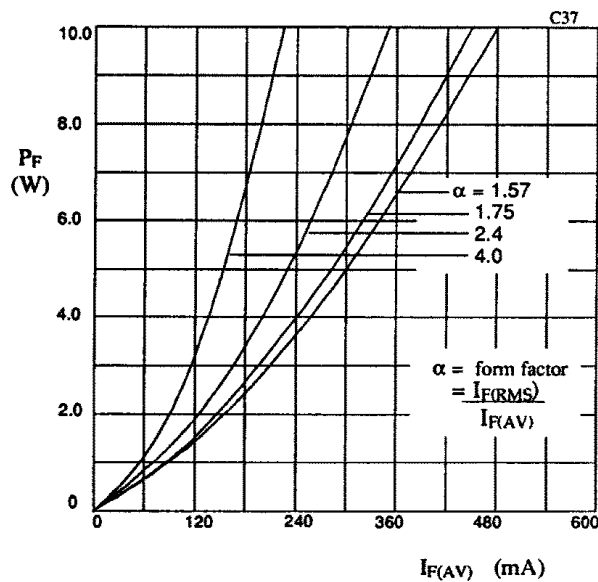


Fig 4. Forward power dissipation as a function of forward current, for sinusoidal operation.

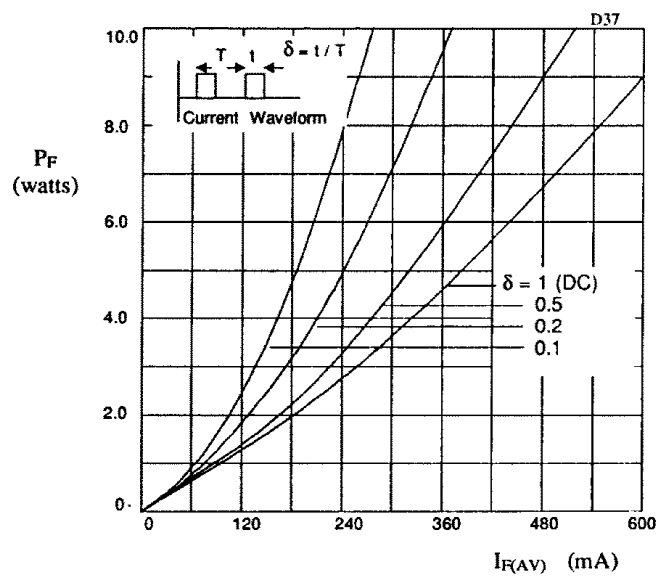


Fig 5. Forward power dissipation as a function of forward current, for square wave operation.