

January 9, 1998

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

### HIGH CURRENT, HIGH DENSITY, FAST RECOVERY DOUBLER AND CENTER TAPS

- High power industrial and military applications
- High forward current applications
- Low thermal impedance
- Low forward voltage drop
- High forward surge ratings

### QUICK REFERENCE DATA

- $V_R = 1000V$
- $I_F = 120A$
- $t_{rr} = 150nS$
- $I_{FSM} = 750A$

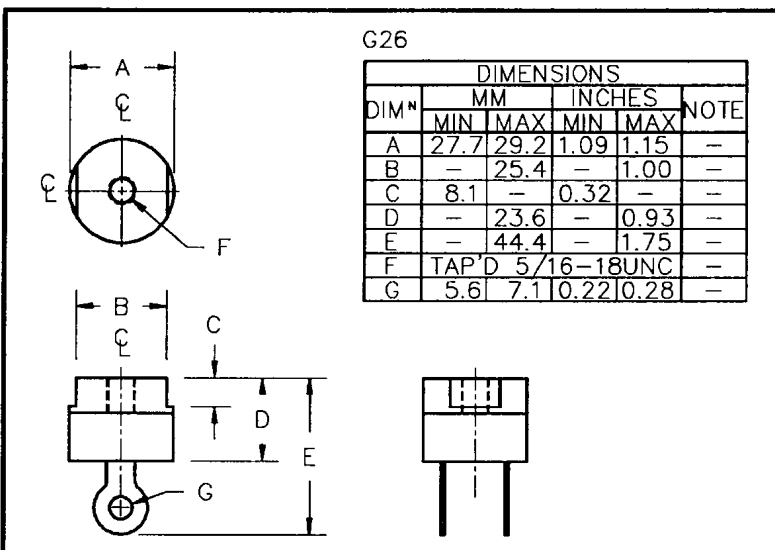
### ABSOLUTE MAXIMUM RATINGS

Device Type	Working Reverse Voltage $V_{RWM}$ Volts	Average Rectified Current			1 Cycle Surge Current $t_p = 8.3ms$	
		@ 25°C	@ 55°C	@ 100°C	@ 25°C	@ 100°C
		Amps	Amps	Amps	Amps	Amps
SCSDF4L	400	60	50	32.5		
SCSNF4L	400	120	100	65	750	600
SCSPF4L	400	120	100	65		

### CHARACTERISTICS

Reverse Current @ $V_{RWM}$		Maximum Forward Voltages $V_F @ 18A @ 25°C$	Maximum Reverse Recovery Time $t_{rr} @ 25°C$
@ 25°C	@ 100°C		
$\mu A$	$\mu A$	Volts	nS
6.0	200	1.1	
6.0	200	1.1	150
6.0	200	1.1	

### MECHANICAL



Operating and Storage temperature range $T_{OP} \& T_{STG}$	Maximum junction - case thermal impedance $R_{\theta JC}$
Volts	$^{\circ}C/W$
-55 to +150	0.5

January 9, 1998

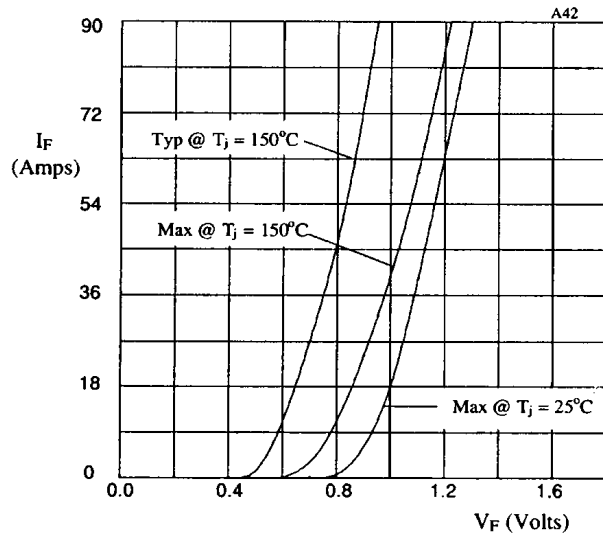


Fig 1. Forward voltage drop per leg as a function of forward current.

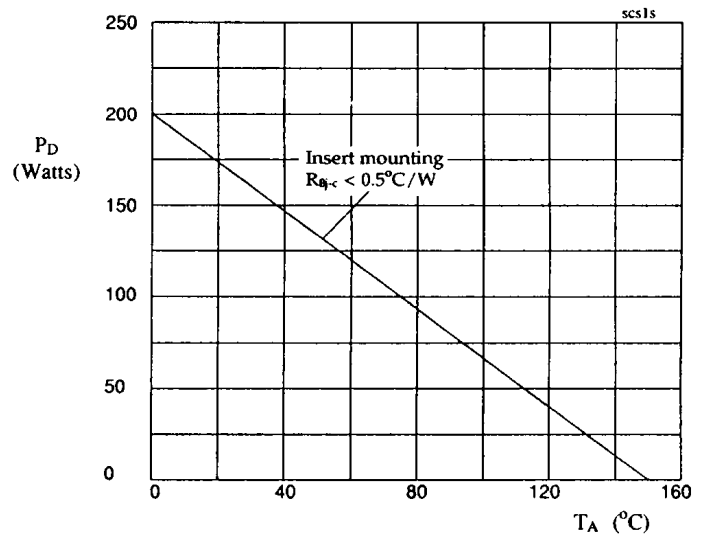


Fig 2. Power dissipation as a function of ambient temperature.

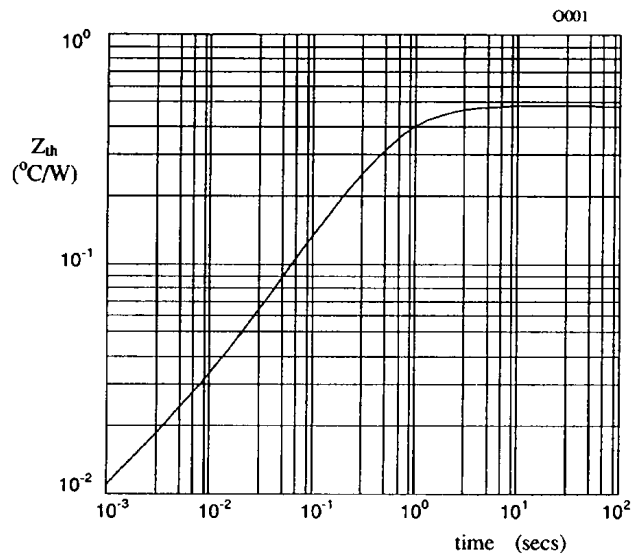


Figure 3. Transient thermal impedance characteristic when insert mounted.

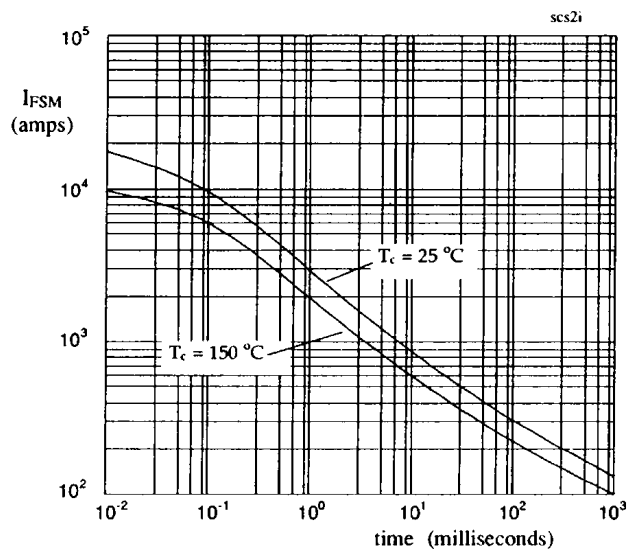


Figure 4. Maximum non-repetitive surge current against pulse width for 25°C and 150°C.