

January 16, 1998

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

FAST RECOVERY, LOW CURRENT 1-PHASE FULL WAVE BRIDGE RECTIFIER ASSEMBLIES

- Low forward voltage drop
- Low reverse leakage current
- Aluminum case
- Low thermal impedance
- Fast reverse recovery time

QUICK REFERENCE DATA

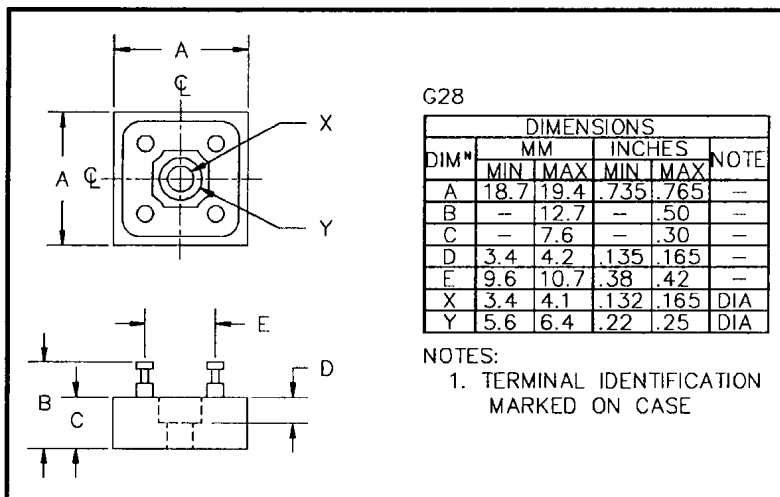
- $V_R = 50V - 600V$
- $I_F = 4.5A$
- $I_R = 2.0\mu A$
- $t_{rr} = 150 - 250nS$

ABSOLUTE MAXIMUM RATINGS

Device Type	Working Reverse Voltage V_{RWM}	Average Rectified Current $I_{F(AV)}$						1 Cycle Surge Current $I_{FSM} t_p = 8.3mS$	
		(@ case temperature)			(@ ambient temperature)			@ 25°C	@ 100°C
		@ 55°C	@ 100°C	@ 125°C	@ 25°C	@ 55°C	@ 100°C		
		Volts	Amps	Amps	Amps	Amps	Amps	Amps	Amps
SCAJ05F	50								
SCAJ1F	100								
SCAJ2F	200	4.5	3.0	2.0	1.5	1.0	0.7	25	15
SCAJ4F	400								
SCAJ6F	600								

$$R_{\theta JC} = 5^{\circ}C/W$$

MECHANICAL



SCAJ4F is available in Europe to DEF STAN 59-61/90/207 release to F and FX levels.

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ELECTRICAL CHARACTERISTICS

Device Type	Maximum Reverse Leakage Current I_R @ V_{RWM}		Maximum Forward Voltage V_F @ 1A/leg	Reverse Recovery Time ¹ t_{rr} @ 25°C	Maximum operating & storage temp. range. T_{OP} T_{STG}
	@ 25°C	@ 100°C			
	µA	µA	Volts	nS	°C
SCAJ05F SCAJ1F SCAJ2F SCAJ4F SCAJ6F	2.0	50	1.2	150 150 150 150 250	-55 to +150

¹ Measured on discrete devices prior to assembly

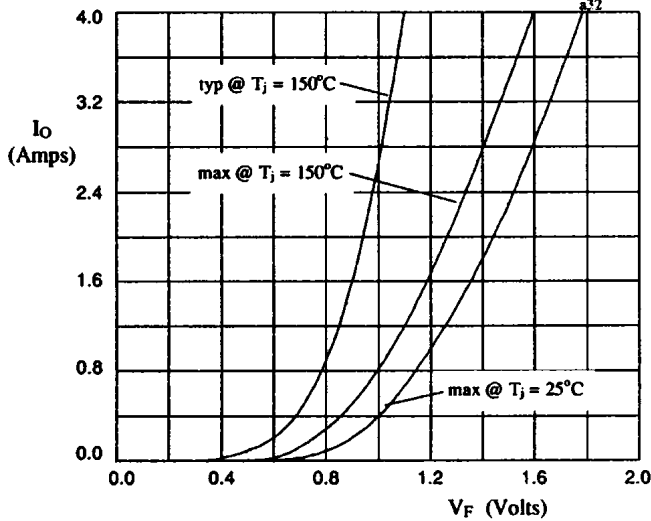


Fig 1. Forward voltage drop against output current per leg.

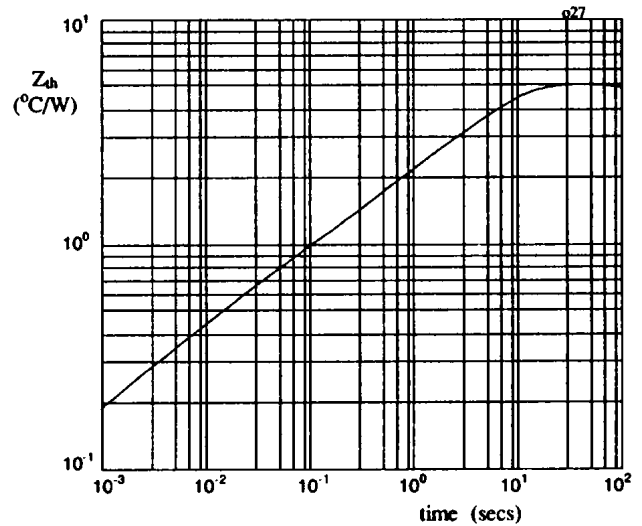
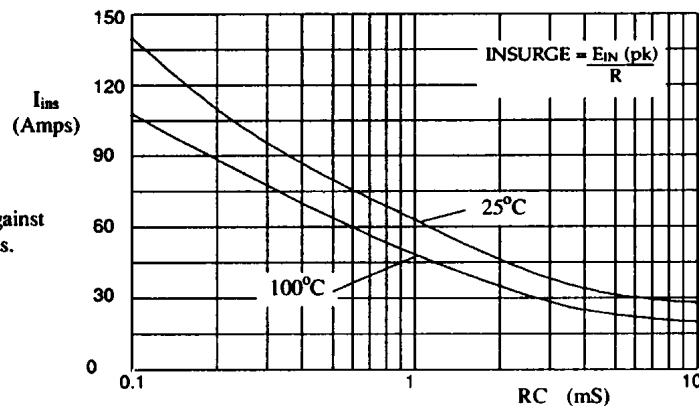


Fig 2. Transient thermal impedance characteristic per leg

Fig 3. Maximum surge current against time constant for capacitive loads.



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