

January 16, 1998

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

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

QUICK REFERENCE DATA

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

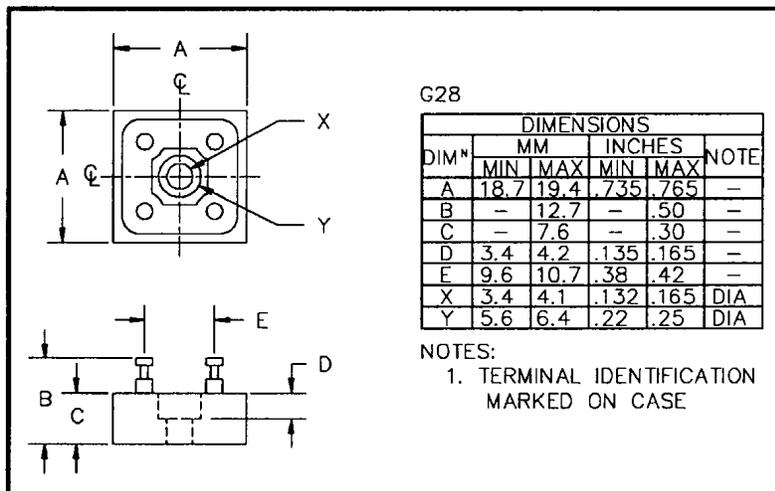
- $V_R = 50V - 150V$
- $I_F = 5A$
- $V_F = 1.2V$
- $t_{rr} = 30nS$

ABSOLUTE MAXIMUM RATINGS

Device Type	Working Reverse Voltage V_{RWM}	Average Rectified Current $I_{F(AV)}$						1 Cycle Surge Current I_{FSM} $t_p = 8.3mS$		Repetitive Surge Current I_{FRM}
		(@ 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	
SCAJ05FF	50									
SCAJ10FF	100	5.0	3.8	2.9	1.5	1.1	0.7	35	24	13
SCAJ15FF	150									

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

MECHANICAL



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ELECTRICAL CHARACTERISTICS

Device Type	Maximum Reverse Leakage Current I_R @ V_{RWM}		Maximum Forward Voltage V_F @ 1.5A/leg	Reverse Recovery Time t_{rr} @ 25°C	Maximum operating & storage temp. range. T_{OP} T_{STG}
	@ 25°C	@ 100°C			
	μA	μA	Volts	nS	°C
SCAJ05FF SCAJ10FF SCAJ15FF	2.0	100	1.2	30	-55 to +150

¹ Measured on discrete devices prior to assembly

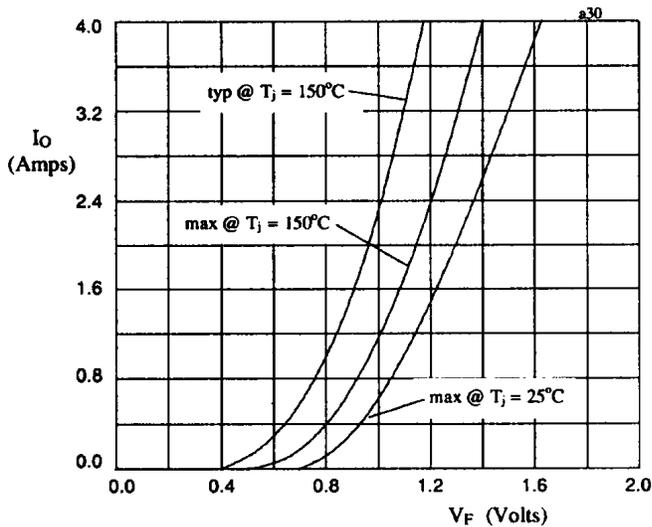


Fig 1. Forward voltage drop against output current per leg.

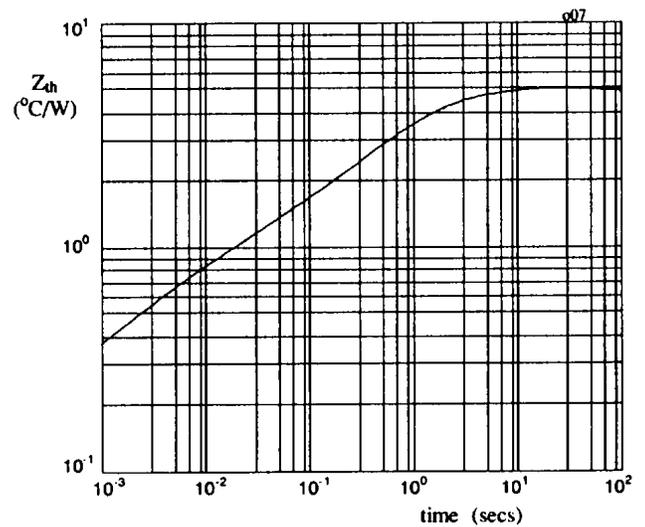


Fig 2. Transient thermal impedance characteristic per leg

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

