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

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

QUICK REFERENCE DATA

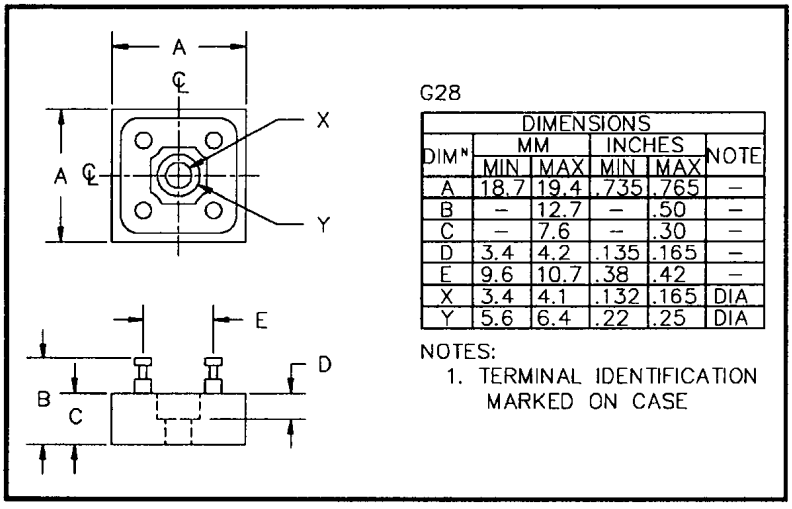
- V_R = 50V - 150V
- I_F = 5A
- V_F = 1.2V
- t_{rr} = 30nS

ABSOLUTE MAXIMUM RATINGS

Device Type	Working Reverse Voltage V_{RWM}	Average Rectified Current $I_{F(AV)}$ (@ case temperature)			(@ ambient temperature)			1 Cycle Surge Current I_{FSM} t_p = 8.3mS		Repetitive Surge Current I_{FRM}
		@ 55°C	@ 100°C	@ 125°C	@ 25°C	@ 55°C	@ 100°C	@ 25°C	@ 100°C	@ 25 °C
	Volts	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps
SCAJ05FF SCAJ10FF SCAJ15FF	50 100 150	5.0	3.8	2.9	1.5	1.1	0.7	35	24	13

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

MECHANICAL



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DIM"	DIMENSIONS MM MIN	MM MAX	INCHES MIN	INCHES MAX	NOTE
A	18.7	19.4	.735	.765	–
B	–	12.7	–	.50	–
C	–	7.6	–	.30	–
D	3.4	4.2	.135	.165	–
E	9.6	10.7	.38	.42	–
X	3.4	4.1	.132	.165	DIA
Y	5.6	6.4	.22	.25	DIA

NOTES:
1. TERMINAL IDENTIFICATION MARKED ON CASE

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ELECTRICAL CHARACTERISTICS

Device Type	Maximum Reverse Leakage Current I_R @ V_{RWM}		Maximum Forward Voltage	Reverse Recovery Time [1]	Maximum operating & storage temp. range.
	@ 25°C	@ 100°C	V_F @ 1.5A/leg	t_{rr} @ 25°C	T_{OP} T_{STG}
	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

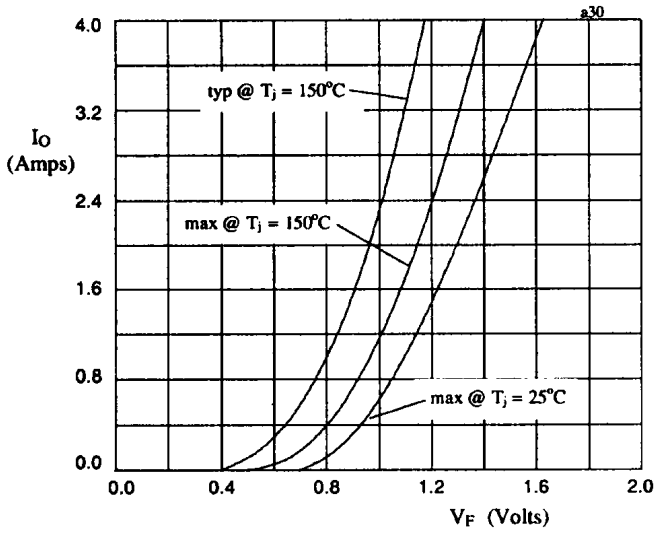

Fig 1. Forward voltage drop against output current per leg.

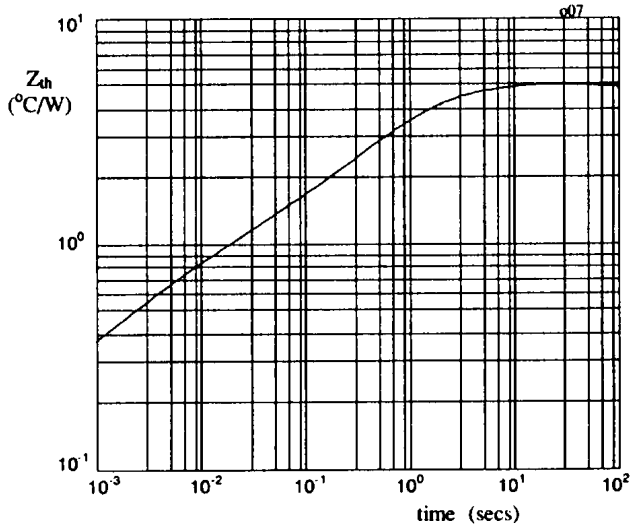

Fig 2. Transient thermal impedance characteristic per leg

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