

January 16, 1998

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

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

QUICK REFERENCE DATA

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

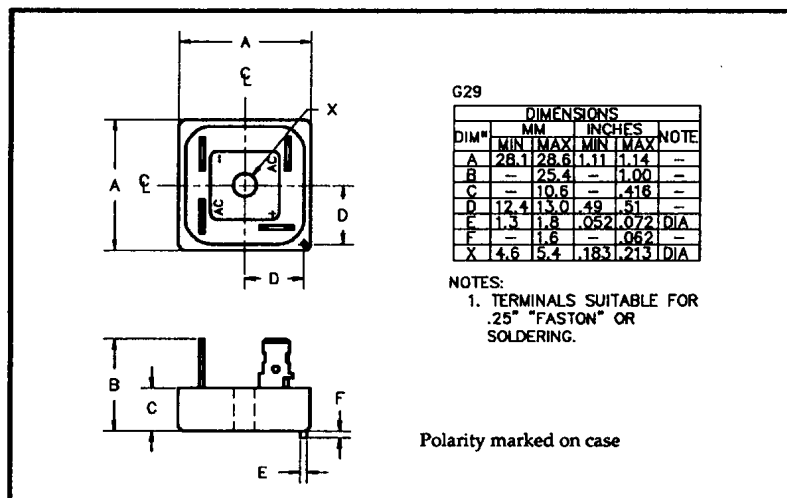
- $V_R = 50V - 150V$
- $I_F = 20A$
- $V_F = 0.97V$
- $t_{rr} = 30nS$

ABSOLUTE MAXIMUM RATINGS

Device Type	Working Reverse Voltage V_{RWM}	Average Rectified Current $I_{F(AV)}$						1 Cycle Surge Current	
		(@ case temperature)			(@ ambient temperature)			$I_{FSM} \ t_p = 8.3mS$	
		@ 55°C	@ 100°C	@ 125°C	@ 25°C	@ 55°C	@ 100°C	@ 25°C	@ 100°C
	Volts	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps
SCBA05FF	50								
SCBA10FF	100	25	18.5	12.8	5	3	1.8	175	120
SCBA15FF	150								

$$R_{\theta JC} = 2.0^{\circ}C/W$$

MECHANICAL



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ELECTRICAL CHARACTERISTICS

Device Type	Maximum Reverse Leakage Current I_R @ V_{RWM}		Maximum Forward Voltage V_F @ 5A/leg	Reverse Recovery Time ¹ t_{rr} @ 25°C	Maximum operating & storage temp. range. T _{OP} T _{STG}
	@ 25°C	@ 100°C			
	μA	mA	Volts	nS	°C
SCBA05FF SCBA10FF SCBA15FF	20	1.0	0.97	30	-55 to +150

¹ Measured on discrete devices prior to assembly

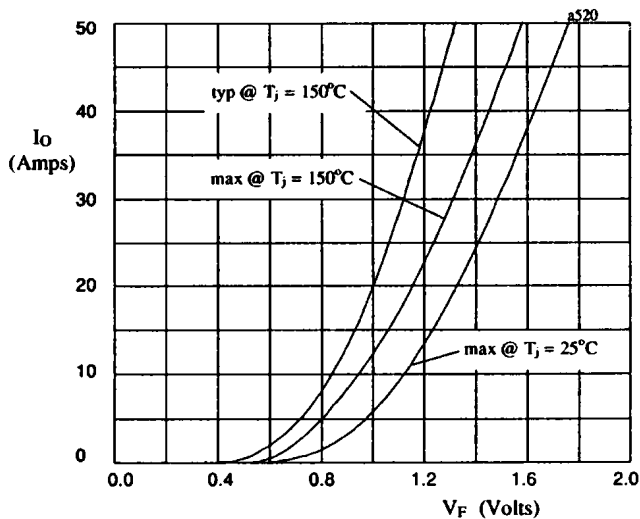


Fig 1. Forward voltage drop against output current per leg.

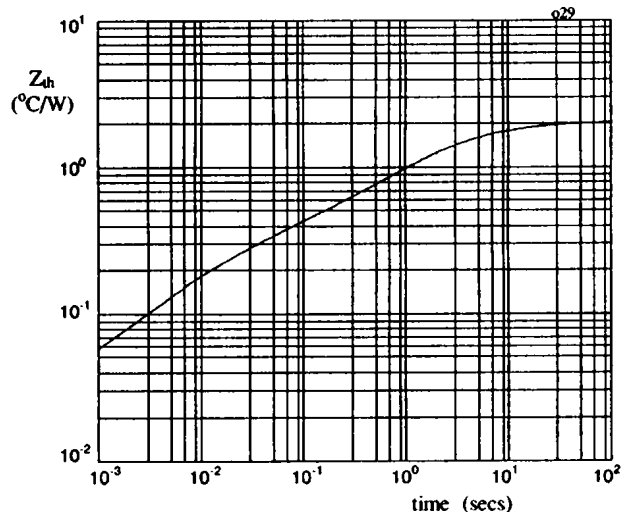


Fig 2. Transient thermal impedance characteristic per leg

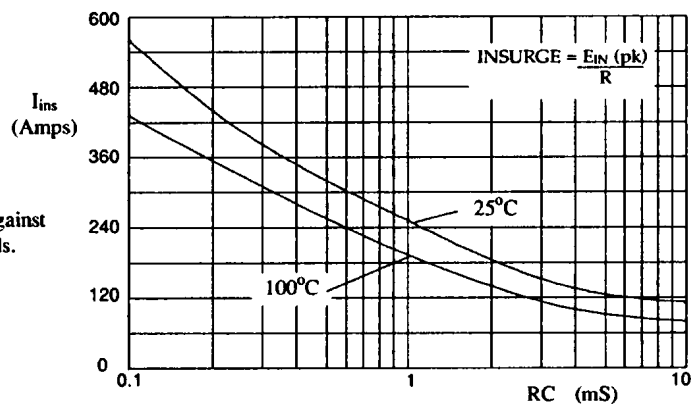


Fig 3. Maximum surge current against time constant for capacitive loads.