

January 16, 1998

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

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

- Low forward voltage drop
- Low reverse leakage current
- Fast reverse recovery time
- Low thermal impedance
- High surge ratings

QUICK REFERENCE DATA

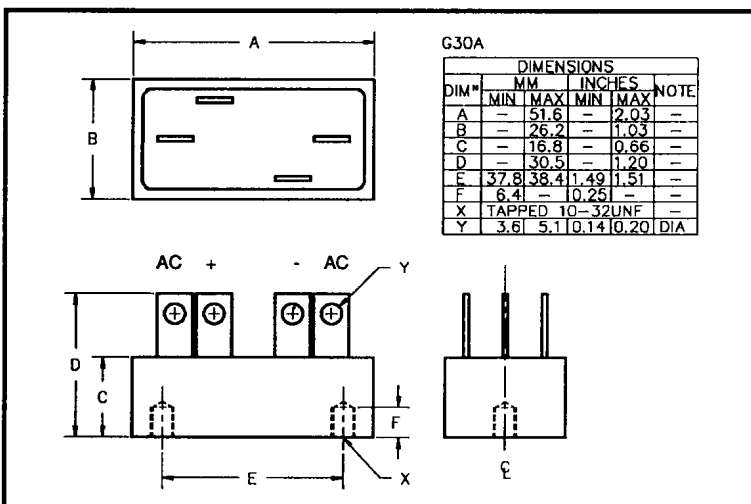
- $V_R = 50V - 400V$
- $I_F = 32A$
- $I_R = 8.0\mu A$
- $t_{rr} = 150ns$

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)					
		@ 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	
SCBK05F	50									
SCBK1F	100									
SCBK2F	200	32	20	16	11	8.5	5.0	500	320	80
SCBK4F	400									

$$R_{\theta JC} = 1.2^{\circ}C/W$$

MECHANICAL



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ELECTRICAL CHARACTERISTICS

Device Type	Maximum Reverse Leakage Current I_R @ V_{RWM}		Maximum Forward Voltage V_F @ 12A/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
SCBK05F SCBK1F SCBK2F SCBK4F	8.0	200	1.1	150	-55 to +150

¹ Measured on discrete devices prior to assembly

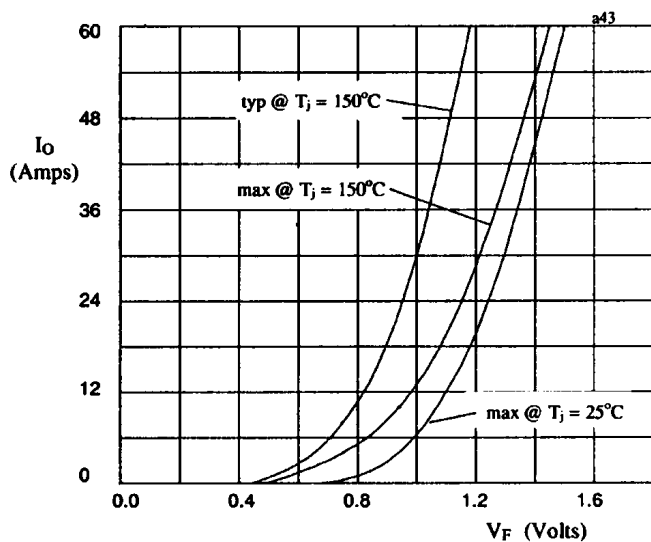


Fig 1. Forward voltage drop against output current per leg.

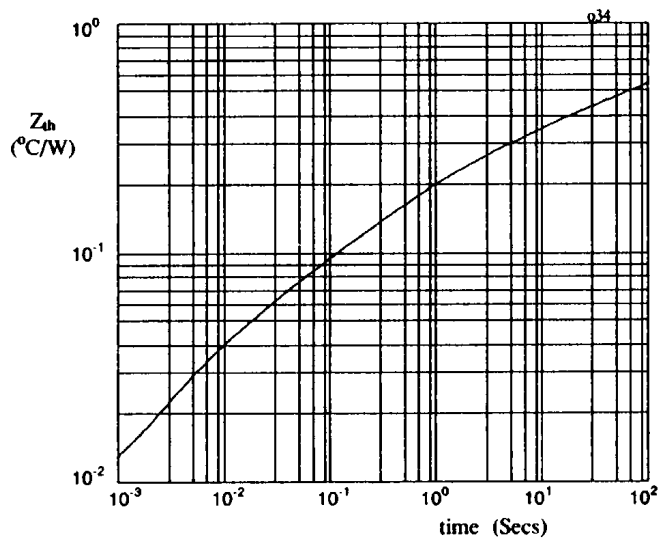


Fig 2. Transient thermal impedance characteristic per leg