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**SEMTECH**

**FAST RECOVERY 1 PHASE SCBK05F SCBK1F**  
**FULL WAVE BRIDGE RECTIFIERS SCBK2F SCBK4F**

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**

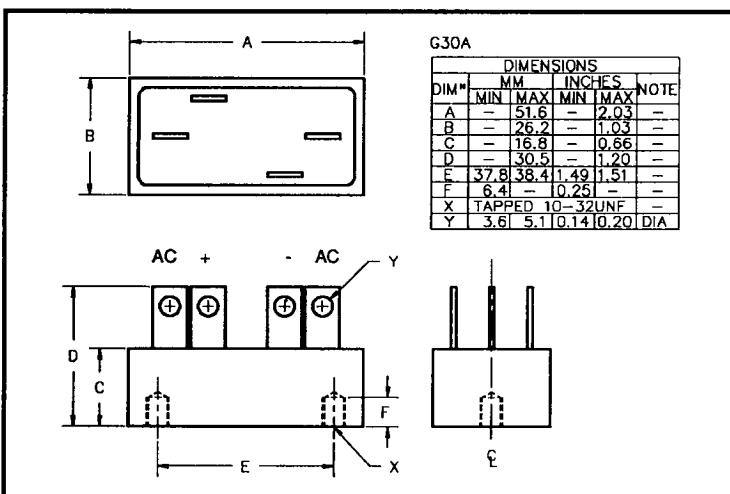
- $V_R = 50V - 400V$
- $I_F = 32A$
- $I_R = 8.0\mu A$
- $t_{rr} = 150nS$

**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)			@ 25°C	@ 100°C	
		@ 55°C	@ 100°C	@ 125°C	@ 25°C	@ 55°C	@ 100°C			@ 25°C
Volts	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	
SCBK05F	50									
SCBK1F	100	32	20	16	11	8.5	5.0	500	320	80
SCBK2F	200									
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 <sup>1</sup> $t_{rr} @ 25^\circ C$	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

<sup>1</sup> Measured on discrete devices prior to assembly

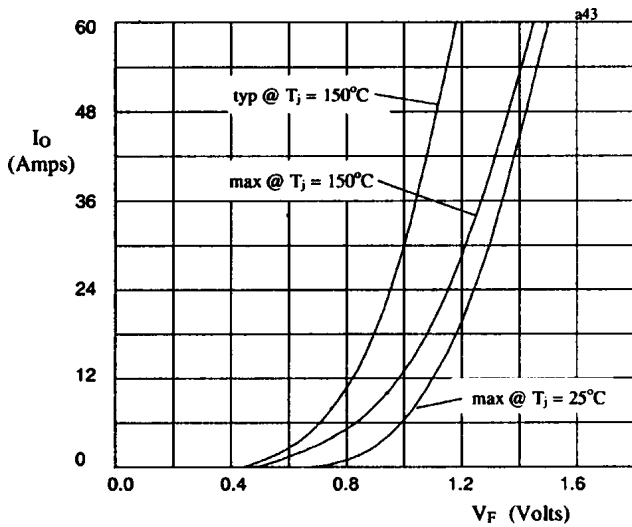


Fig 1. Forward voltage drop against output current per leg.

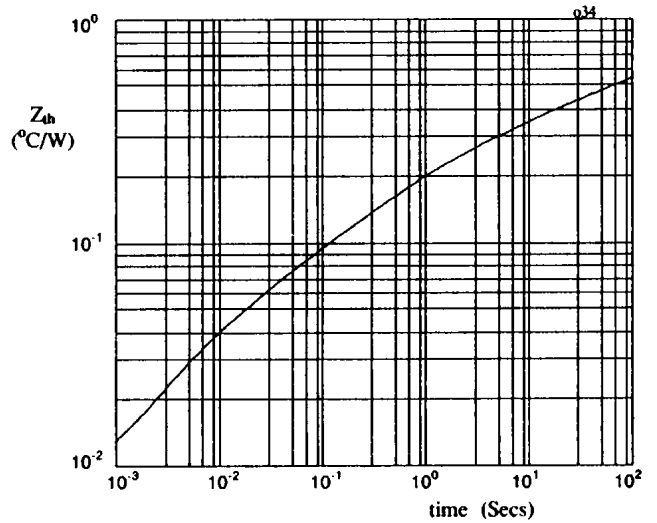


Fig 2. Transient thermal impedance characteristic per leg