

January 16, 1998

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

FAST RECOVERY, LOW CURRENT 3-PHASE FULL WAVE BRIDGE RECTIFIER ASSEMBLIES

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

QUICK REFERENCE DATA

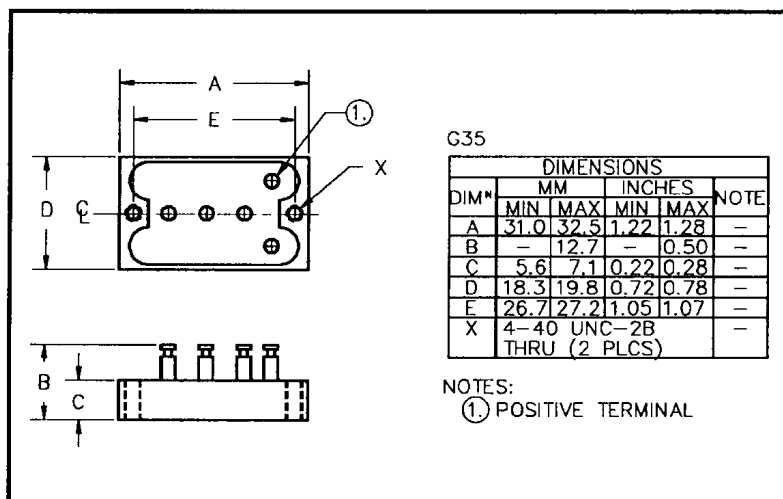
- $V_R = 50V - 400V$
- $I_F = 9.0A$
- $I_R = 3.0 \mu A$
- $t_{rr} = 150nS$

ABSOLUTE MAXIMUM RATINGS

Device Type	Working Reverse Voltage V_{RWM}	Average Rectified Current $I_{F(AV)}$						1 Cycle Surge Current	
		@ 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
SC3BH05F	50								
SC3BH1F	100								
SC3BH2F	200	9.0	6.3	4.5	3.0	2.2	1.2	150	100
SC3BH4F	400								

$$R_{\theta JC} = 4.5^{\circ}C/W$$

MECHANICAL



SC3BH4F is available in Europe to DEF STAN 59-61/90/208 release to F and FX levels.

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ELECTRICAL CHARACTERISTICS

Device Type	Maximum Reverse Leakage Current I_R @ V_{RWM}		Maximum Forward Voltage V_F @ 3A/leg @ 25°C	Maximum Reverse Recovery Time t_{rr} @ 25°C	Maximum operating & storage temp range. T_{OP} T_{STG}
	@ 25°C	@ 100°C			
	μA	μA			
SC3BH05F	3.0	60	1.1	150	-55 to +150
SC3BH1F				150	
SC3BH2F				150	
SC3BH4F				150	

¹ Measured on discrete devices prior to assembly

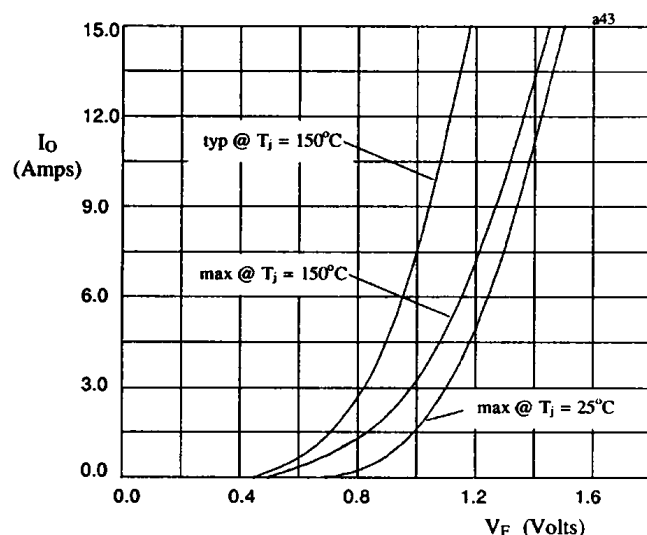


Fig 1. Forward voltage drop against output current per leg

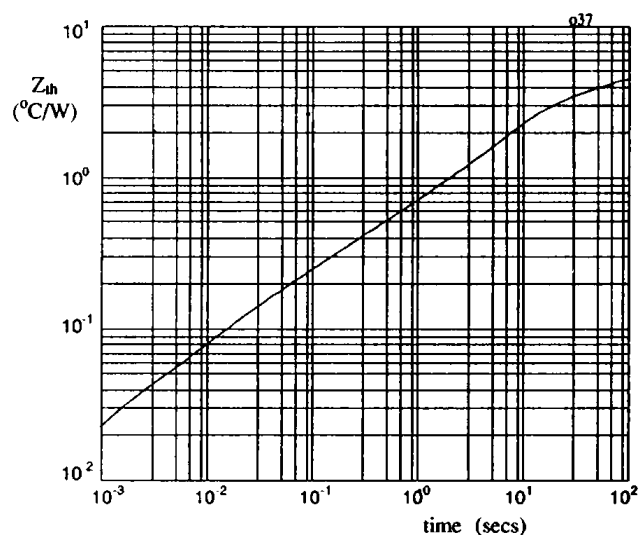


Fig 2. Transient thermal impedance characteristic per leg

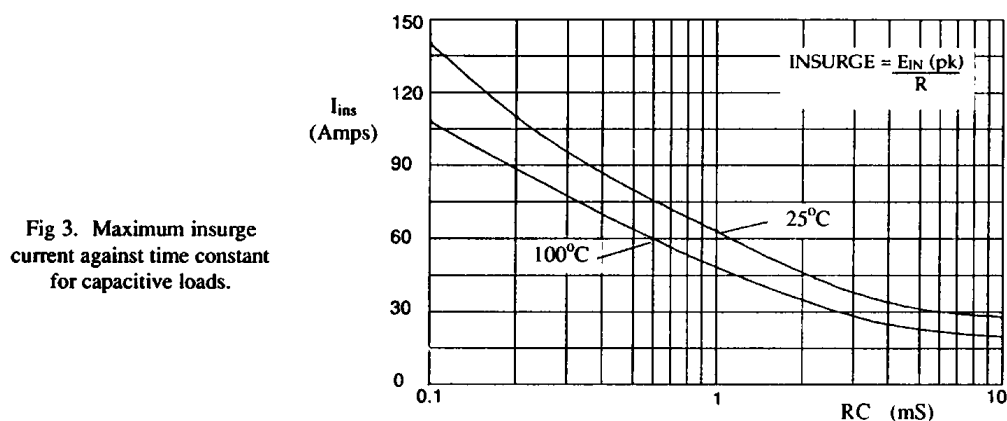


Fig 3. Maximum surge current against time constant for capacitive loads.