

January 16, 1998

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

STANDARD RECOVERY, MEDIUM CURRENT 3-PHASE FULL WAVE BRIDGE RECTIFIER ASSEMBLIES

QUICK REFERENCE DATA

- Low forward voltage drop
- Low reverse leakage current
- Aluminum case
- Low thermal impedance
- Insulated electrical connections

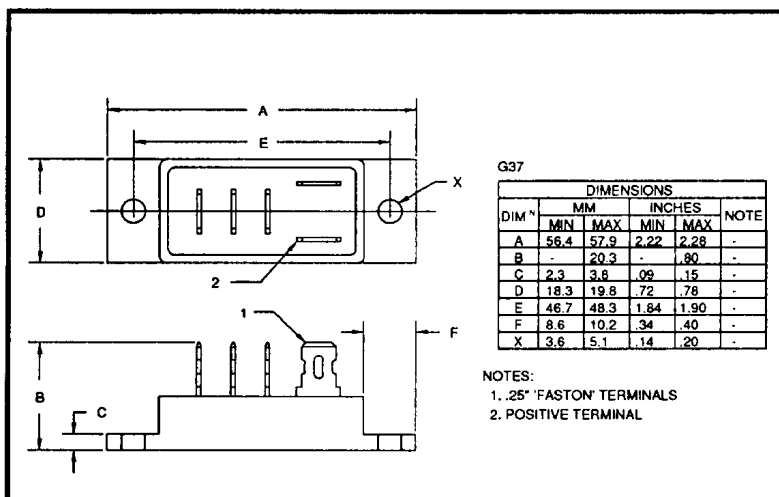
- $V_R = 50V - 600V$
- $I_F = 18A$
- $I_R = 3.0 \mu A$
- $t_{rr} = 2.0\mu s$

ABSOLUTE MAXIMUM RATINGS

Device Type	Working Reverse Voltage V_{RWM}	Average Rectified Current $I_{F(AV)}$						1 Cycle Surge Current $I_{FSM} @ t_p = 8.3ms$	
		@ case temperature			@ ambient temperature			@ 25°C	@ 100°C
		@ 55°C	@ 100°C	@ 125°C	@ 25°C	@ 55°C	@ 100°C		
	Volts	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps
SC3BA05	50								
SC3BA1	100								
SC3BA2	200	18	12.4	9.0	6.0	5.0	3.0	150	100
SC3BA4	400								
SC3BA6	600								

$$R_{\theta JC} = 2.5^{\circ}C/W$$

MECHANICAL



SC3BA6 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	Reverse Leakage Current $I_R @ V_{RWM}$		Maximum Forward Voltage $V_F @ 3A/leg @ 25^\circ C$	Maximum Reverse Recovery Time $t_{rr} @ 25^\circ C$	Maximum operating & storage temp range. $T_{OP} \quad T_{STG}$
	@ $25^\circ C$	@ $100^\circ C$			
	μA	μA	Volts	μS	$^\circ C$
SC3BA05 SC3BA1 SC3BA2 SC3BA4 SC3BA6	3.0	60	1.0	2.0	- 55 to +150

¹ Measured on discrete devices prior to assembly

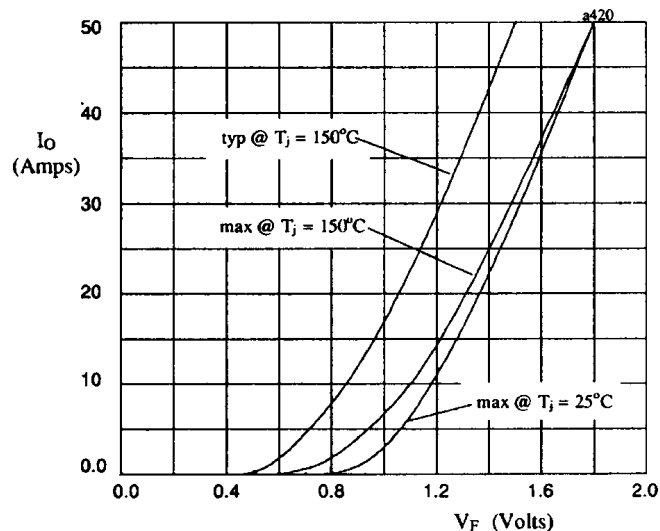


Fig 1. Forward voltage drop against output current per leg

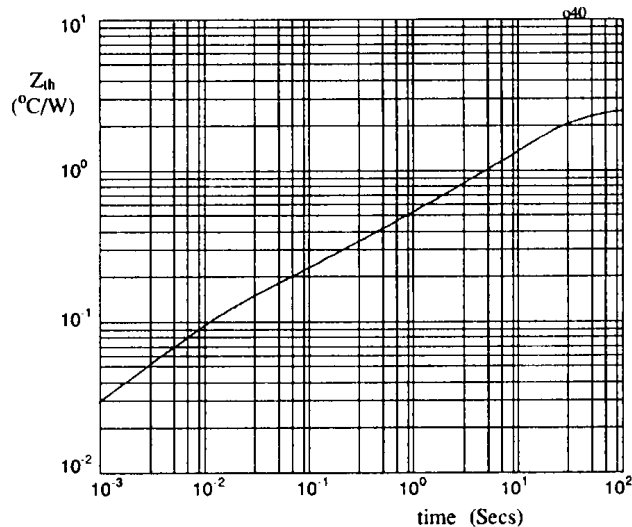
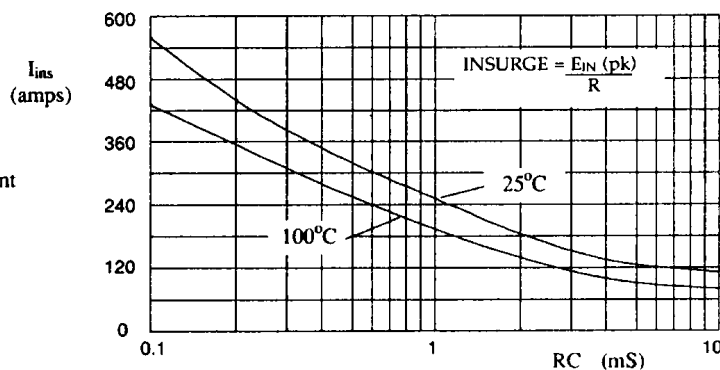


Fig 2. Transient thermal impedance characteristic per leg

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



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