

January 16, 1998

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

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

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

QUICK REFERENCE DATA

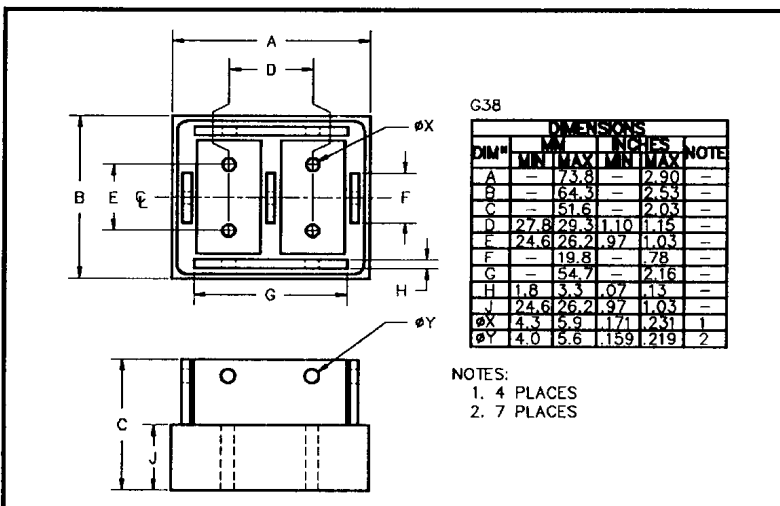
- $V_R = 50V - 400V$
- $I_F = 110A$
- $I_R = 18\mu A$
- $t_{rr} = 150ns$

ABSOLUTE MAXIMUM RATINGS

Device Type	Working Reverse Voltage V_{RWM}	Average Rectified Current $I_{F(AV)}$						1 Cycle Surge Current I_{FSM} @ $t_p = 8.3mS$	
		@ 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
SC3AS05F	50								
SC3AS1F	100	110	80	60	16	11.5	7.2	750	480
SC3AS2F	200								
SC3AS4F	400								

$R_{\theta JC} = 0.3^{\circ}C/W$

MECHANICAL



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ELECTRICAL CHARACTERISTICS

Device Type	Reverse Leakage Current $I_R @ V_{RWM}$		Maximum Forward Voltage / leg $V_F @ 18A @ 25^\circ C$	Maximum Reverse Recovery Time $t_{rr} @ 25^\circ C$	Maximum operating & storage temp range.	
	@ 25°C	@ 100°C			T_{OP}	T_{STG}
	μA	μA	Volts	nS	°C	
SC3AS05F SC3AS1F SC3AS2F SC3AS4F	18	450	1.1	150	-55 to +150	

¹ Measured on discrete devices prior to assembly

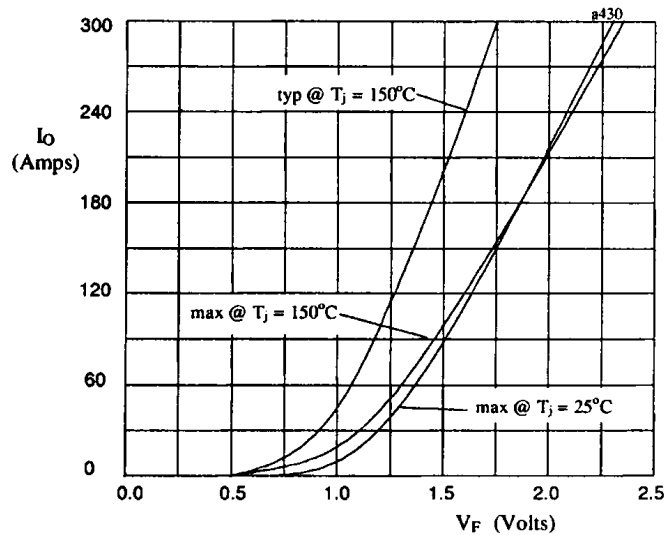


Fig 1. Forward voltage drop against output current per leg

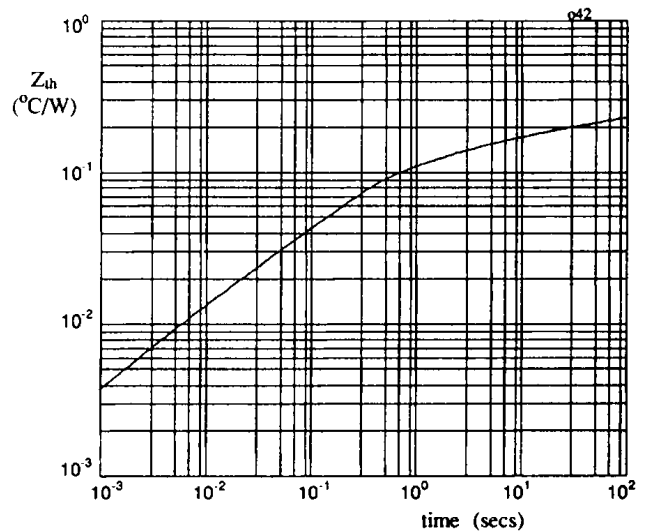


Fig 2. Transient thermal impedance characteristic per leg