

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

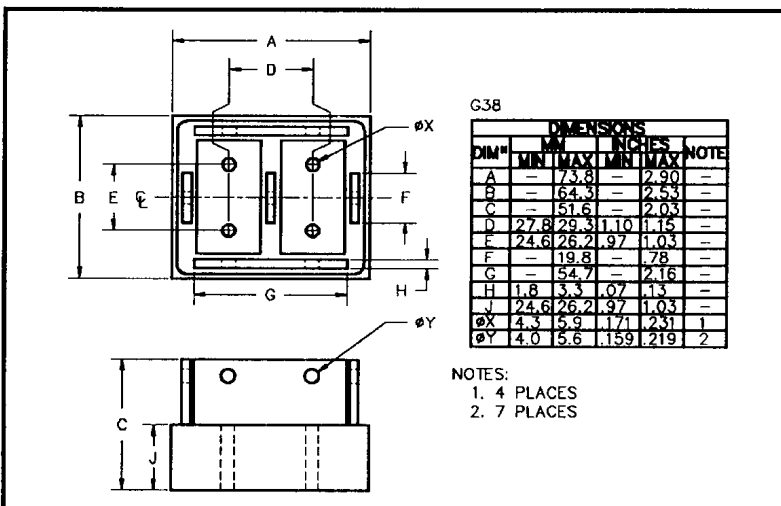
- $V_R = 50V - 400V$
- $I_F = 110A$
- $I_R = 18\mu A$
- $t_{rr} = 150ns$

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	Amps
SC3AS05F	50	110	80	60	16	11.5	7.2	750	480
SC3AS1F	100								
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°C	Maximum Reverse Recovery Time t_{rr} @ 25°C	Maximum operating & storage temp range. T_{OP} T_{STG}
	@ 25°C	@ 100°C			
	μA	μA			
SC3AS05F SC3AS1F SC3AS2F SC3AS4F	18	450	1.1	150	-55 to +150

¹ Measured on discrete devices prior to assembly

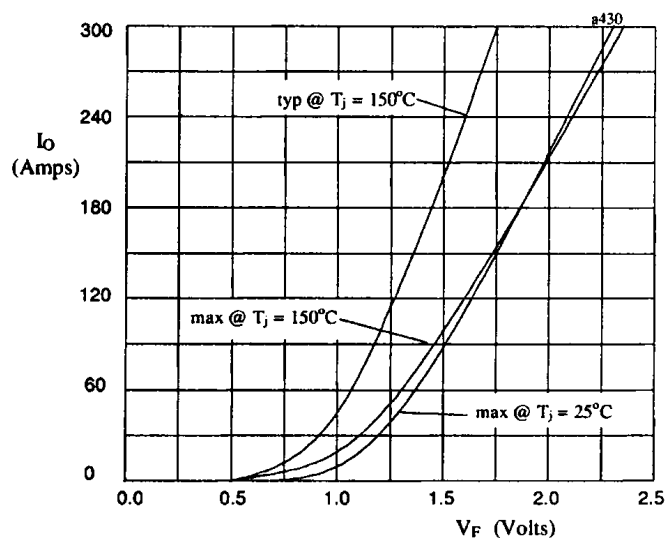


Fig 1. Forward voltage drop against output current per leg

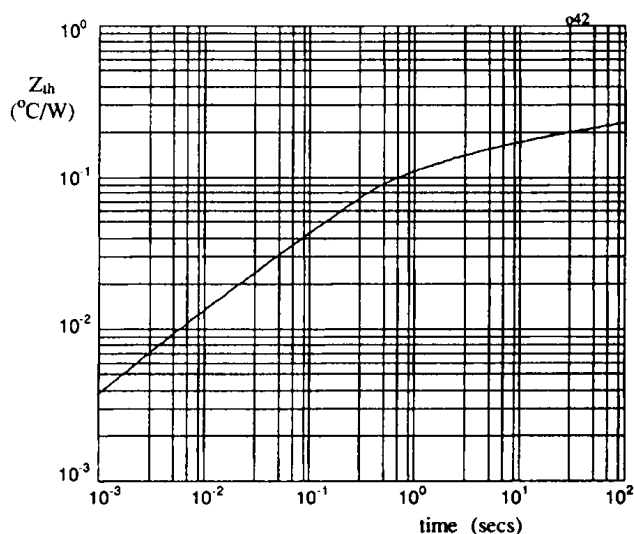


Fig 2. Transient thermal impedance characteristic per leg