

January 16, 1998

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

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

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

QUICK REFERENCE DATA

- $V_R = 50V - 400V$
- $I_F = 110A$
- $I_R = 6 \mu A$
- $t_{rr} = 150nS$

ABSOLUTE MAXIMUM RATINGS

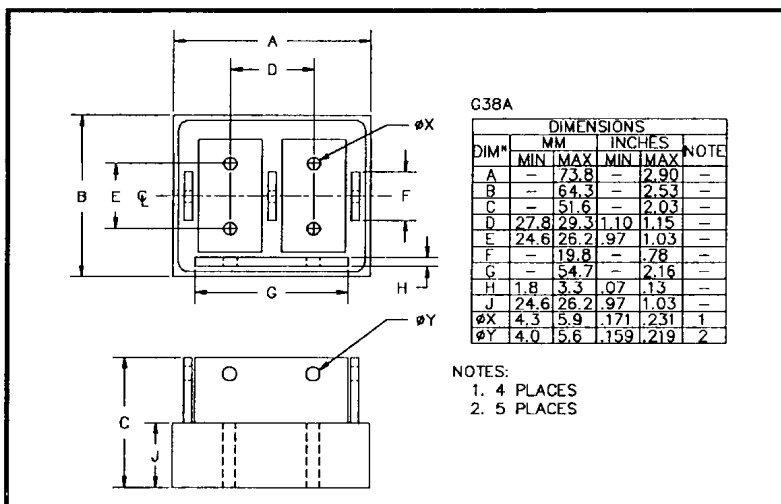
Device Type	Working Reverse Voltage V_{RWM}	Average Rectified Current $I_{F(AV)}$						1 Cycle Surge Current	
		@ case temperature			@ ambient temperature			I_{FSM} @ $t_p = 8.3mS$	
		@ 55°C	@ 100°C	@ 125°C	@ 25°C	@ 55°C	@ 100°C	@ 25°C	@ 100°C
		Volts	Amps	Amps	Amps	Amps	Amps	Amps	Amps
SC3HAS05F*	50	110	80	58	16	11.5	7.0	750	600
SC3HAS1F*	100								
SC3HAS2F*	200								
SC3HAS4F*	400								

$R_{\theta JC} = 0.6^\circ C/W$

Add suffix for desired circuit arrangement.

N = Common Anode, P = Common Cathode

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.	
	@ 25°C	@ 100°C			T_{OP}	T_{STG}
	μA	μA	Volts	nS	°C	
SC3HAS05F* SC3HAS1F* SC3HAS2F* SC3HAS4F*	6.0	120	1.1	150	-55 to +150	

¹ Measured on discrete devices prior to assembly

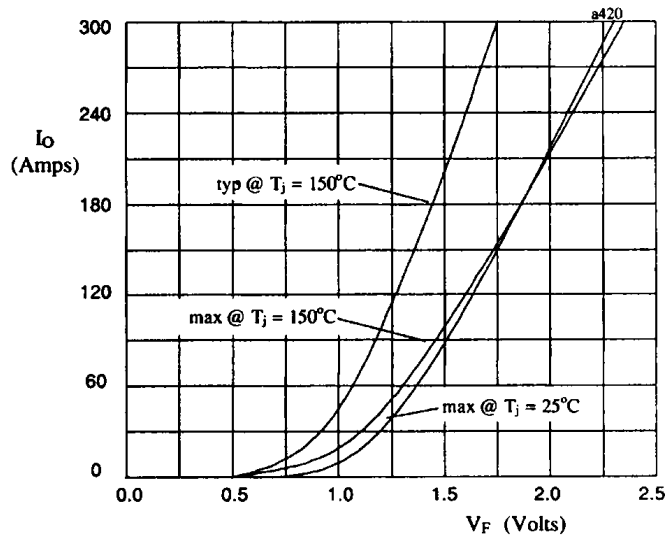


Fig 1. Forward voltage drop against output current per leg

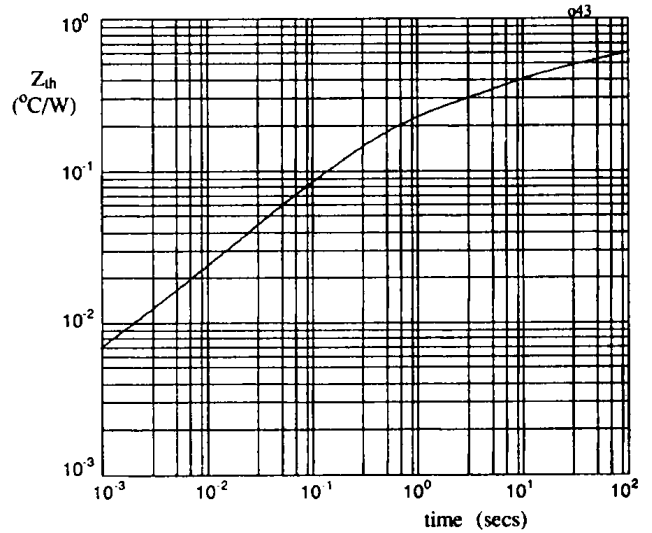


Fig 2. Transient thermal impedance characteristic per leg