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**SEMTECH**

**FAST RECOVERY  
3-PHASE FULL WAVE  
BRIDGE RECTIFIERS**

**SC3AS05F SC3AS1F  
SC3AS2F SC3AS4F**

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**

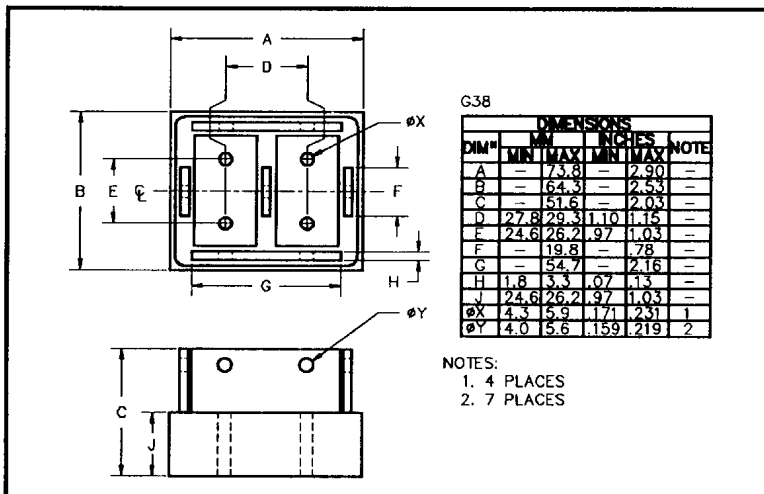
- $V_R = 50V - 400V$
- $I_F = 110A$
- $I_R = 18\mu A$
- $t_{rr} = 150ns$

**ABSOLUTE MAXIMUM RATINGS**

Device Type	Working Reverse Voltage $V_{RWM}$	Average Rectified Current $I_{F(AV)}$						1 Cycle Surge Current	
		@ 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
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.	
	@ 25°C	@ 100°C			$T_{OP}$	$T_{STG}$
	$\mu A$	$\mu A$	Volts	nS	°C	
SC3AS05F SC3AS1F SC3AS2F SC3AS4F	18	450	1.1	150	-55 to +150	

<sup>1</sup> Measured on discrete devices prior to assembly

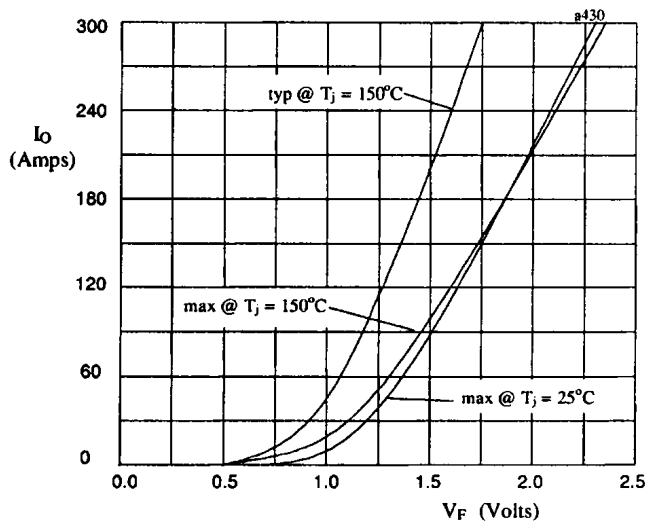


Fig 1. Forward voltage drop against output current per leg

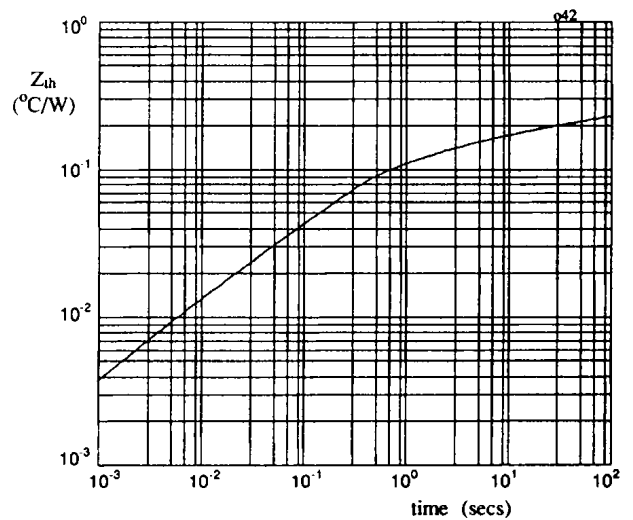


Fig 2. Transient thermal impedance characteristic per leg