

January 16, 1998

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

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

### QUICK REFERENCE DATA

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

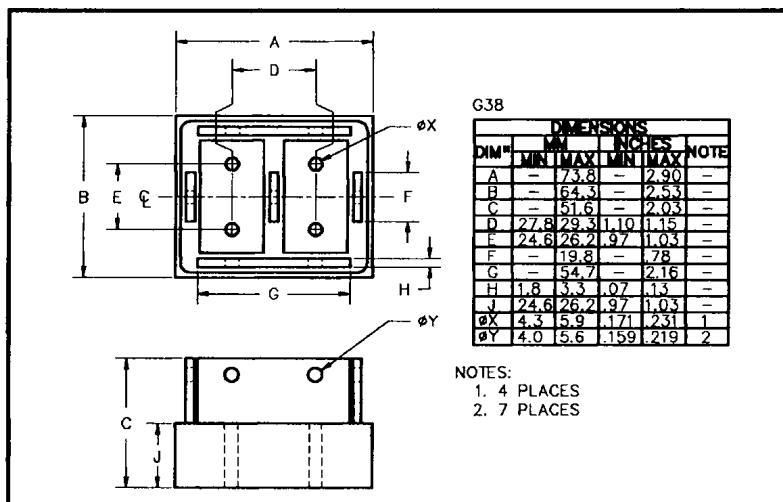
- $V_R = 50V - 150V$
- $I_F = 130A$
- $V_F = 0.97V$
- $t_{rr} = 30nS$

### 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	@ 25°C	@ 100°C
Volts	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	
SC3AS05FF	50								
SC3AS10FF	100	130	80	45	18	12.5	8	900	750
SC3AS15FF	150								

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

### MECHANICAL



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### ELECTRICAL CHARACTERISTICS

Device Type	Maximum Reverse Leakage Current $I_R @ V_{RWM}$		Maximum Forward Voltage $V_F @ 30A/leg @ 25^\circ C$	Maximum Reverse Recovery Time $t_{rr} @ 25^\circ C$	Maximum operating & storage temp range.	
	@ 25°C	@ 100°C			$T_{OP}$	$T_{STG}$
	$\mu A$	mA	Volts	nS	°C	
SC3AS05FF					-55	
SC3AS10FF	180	9.0	0.97	30	to	
SC3AS15FF					+150	

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

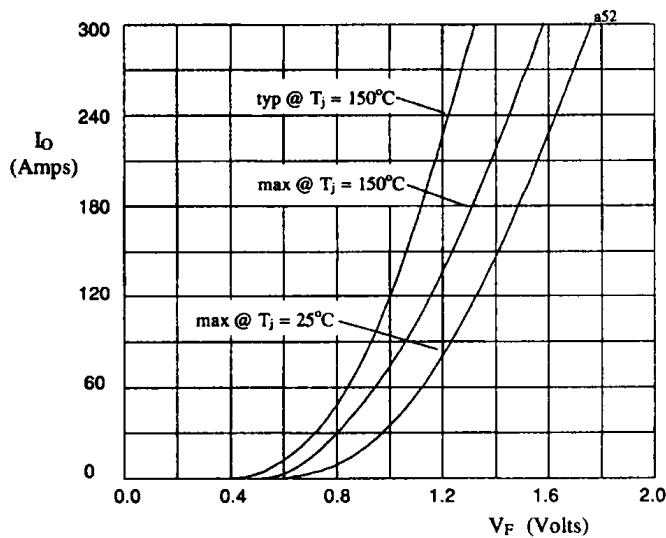


Fig 1. Forward voltage drop against output current per leg

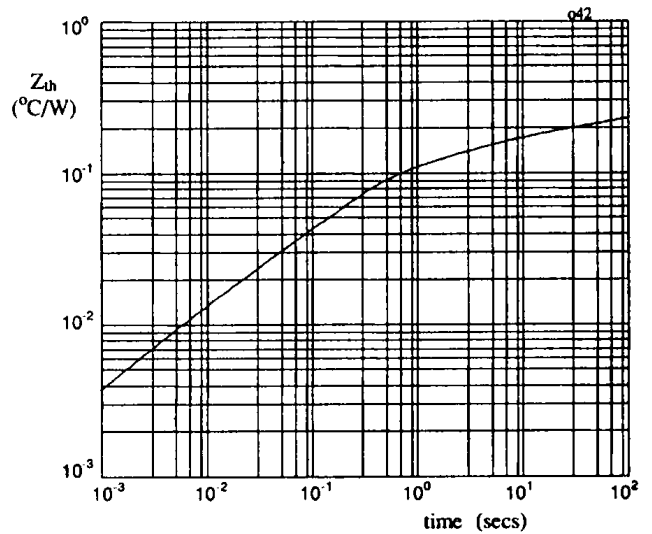


Fig 2. Transient thermal impedance characteristic per leg