

January 16, 1998

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

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

### QUICK REFERENCE DATA

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

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

### ABSOLUTE MAXIMUM RATINGS

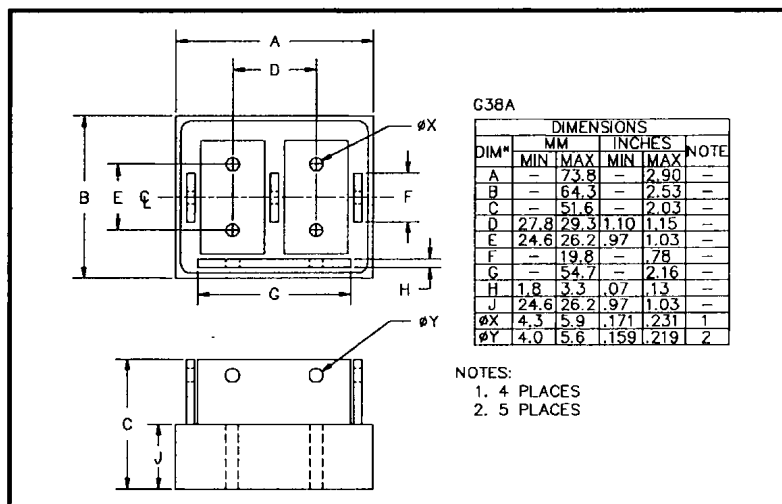
Device Type	Working Reverse Voltage $V_{RWM}$	Average Rectified Current $I_{F(AV)}$						1 Cycle Surge Current $I_{FSM}$ @ $t_p = 8.3ms$	
		@ case temperature			@ ambient temperature			@ 25°C	@ 100°C
		@ 55°C	@ 100°C	@ 125°C	@ 25°C	@ 55°C	@ 100°C	@ 25°C	@ 100°C
Volts	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	
SC3HAS05FF*	50								
SC3HAS10FF*	100	130	80	45	18	12.5	8.0	750	600
SC3HAS15FF*	150								

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

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 $V_F$ @ 30A @ 25°C	Maximum Reverse Recovery Time $t_{rr}$ @ 25°C	Maximum operating & storage temp range.	
	@ 25°C	@ 100°C			$T_{OP}$	$T_{STG}$
	$\mu A$	mA	Volts	$\mu S$	°C	
SC3AS05FF* SC3AS10FF* SC3AS15FF*	60	3.0	0.97	30	-55 to +150	

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

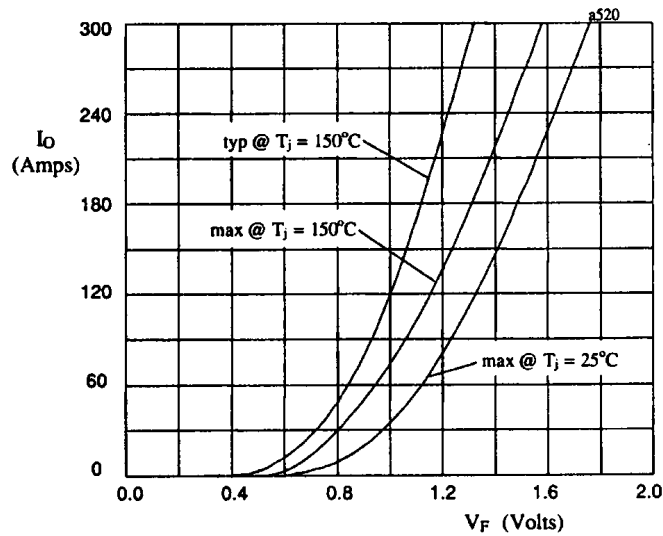


Fig 1. Forward voltage drop against output current per leg

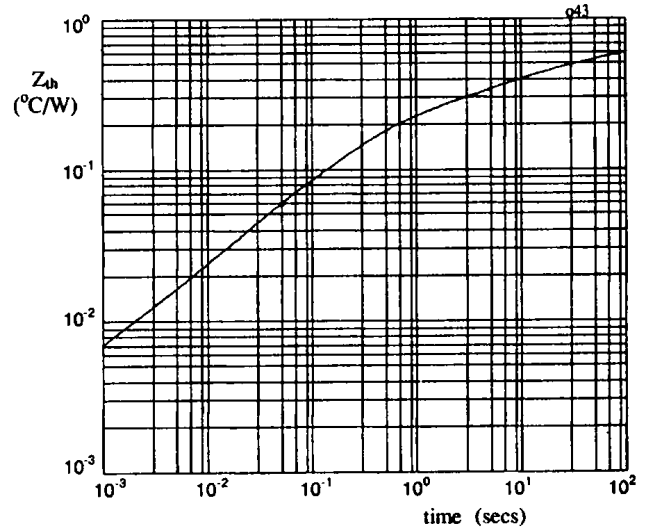


Fig 2. Transient thermal impedance characteristic per leg