

January 16, 1998

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

### STANDARD RECOVERY, HIGH CURRENT 1-PHASE FULL WAVE BRIDGE RECTIFIER ASSEMBLIES

### QUICK REFERENCE DATA

- Low forward voltage drop
- Low reverse leakage current
- Aluminum case
- Low thermal impedance
- High forward and surge current ratings

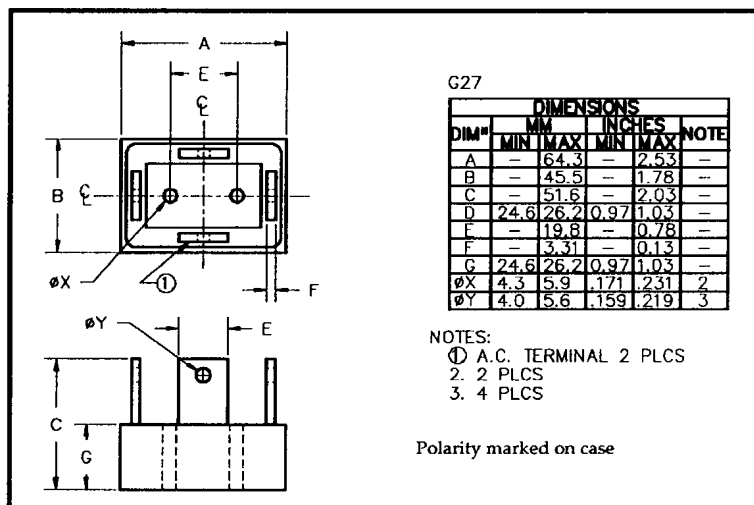
- $V_R = 50V - 600V$
- $I_F = 70A$
- $I_R = 12.0\mu A$
- $I_{FSM} = 750A$

### ABSOLUTE MAXIMUM RATINGS

Device Type	Working Reverse Voltage $V_{RWM}$	Average Rectified Current $I_{F(AV)}$						1 Cycle Surge Current $I_{FSM} t_p = 8.3mS$		Repetitive Surge Current $I_{FRM}$
		(@ 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	
SCAS05	50									
SCAS1	100	70	47	33	18	14	9	750	600	120
SCAS2	200									
SCAS4	400									
SCAS6	600									

$$R_{\theta JC} = 0.4^{\circ}C/W$$

### MECHANICAL



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### ELECTRICAL CHARACTERISTICS

Device Type	Maximum Reverse Leakage Current $I_R @ V_{RWM}$		Maximum Forward Voltage Voltage $V_F @ 18A/leg$	Reverse Recovery Time <sup>1</sup> $t_{rr} @ 25^\circ C$	Maximum operating & storage temp. range. $T_{OP} T_{STG}$
	@ 25°C	@ 100°C			
	$\mu A$	$\mu A$	Volts	$\mu S$	$^\circ C$
SCAS05 SCAS1 SCAS2 SCAS4 SCAS6	12.0	300	1.0	2.0	-55 to +150

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

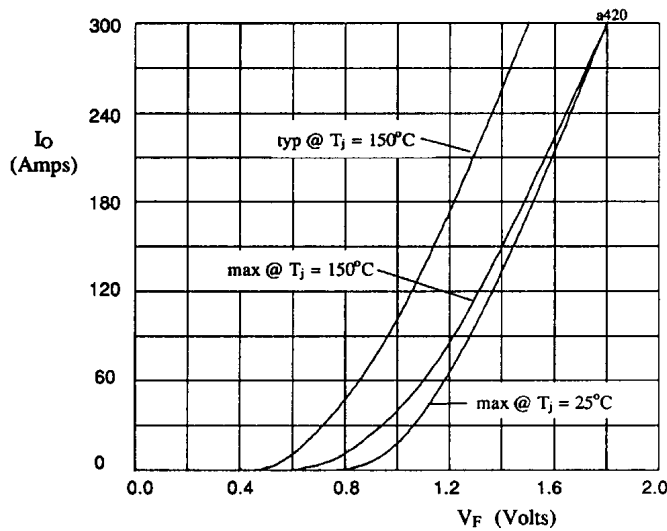


Fig 1. Forward voltage drop against output current per leg.

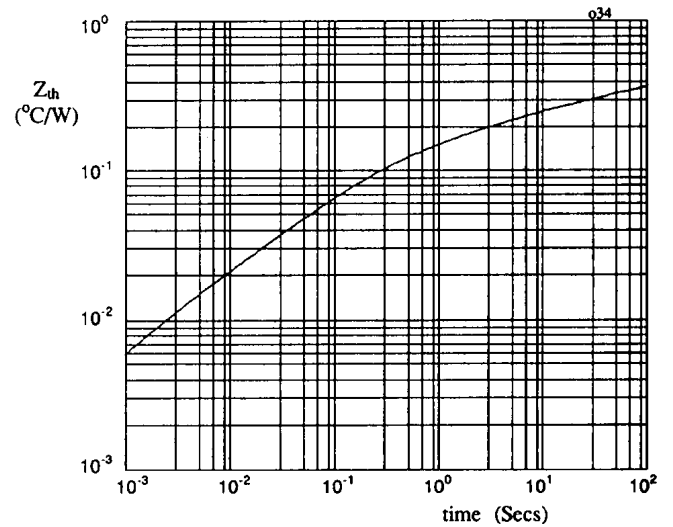


Fig 2. Transient thermal impedance characteristic per leg