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**SEMTECH**

**FAST RECOVERY 1 PHASE SCAS05F SCAS1F**  
**FULL WAVE BRIDGE RECTIFIERS SCAS2F SCAS4F**

January 16, 1998

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

**FAST RECOVERY, HIGH CURRENT 1-PHASE FULL WAVE BRIDGE RECTIFIER ASSEMBLIES**

**QUICK REFERENCE DATA**

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

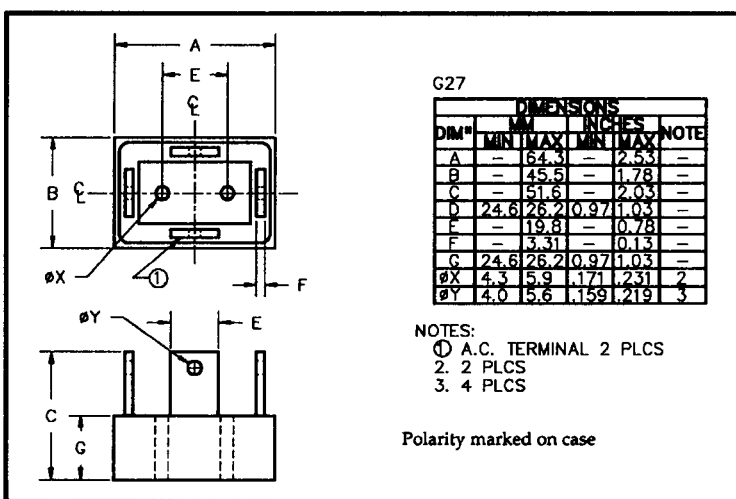
- $V_R = 50V - 400V$
- $I_F = 65A$
- $I_R = 12 \mu A$
- $t_{rr} = 150nS$

**ABSOLUTE MAXIMUM RATINGS**

Device Type	Working Reverse Voltage $V_{RWM}$	Average Rectified Current $I_{F(AV)}$						1 Cycle Surge Current $I_{FSM} t_p = 8.3mS$		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	Amps	Amps	
SCAS05F	50									
SCAS1F	100	65	43	30	16	11.5	7.2	750	480	120
SCAS2F	200									
SCAS4F	400									

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

**MECHANICAL**



January 16, 1998

**ELECTRICAL CHARACTERISTICS**

Device Type	Maximum Reverse Leakage Current $I_R$ @ $V_{RWM}$		Maximum Forward Voltage $V_F$ @ 18A/leg	Reverse Recovery Time <sup>1</sup> $t_{rr}$ @ 25°C	Maximum operating & storage temp. range. $T_{OP}$ $T_{STG}$
	@ 25°C	@ 100°C			
	µA	µA	Volts	nS	°C
SCAS05F SCAS1F SCAS2F SCAS4F	12	300	1.1	150	-55 to +150

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

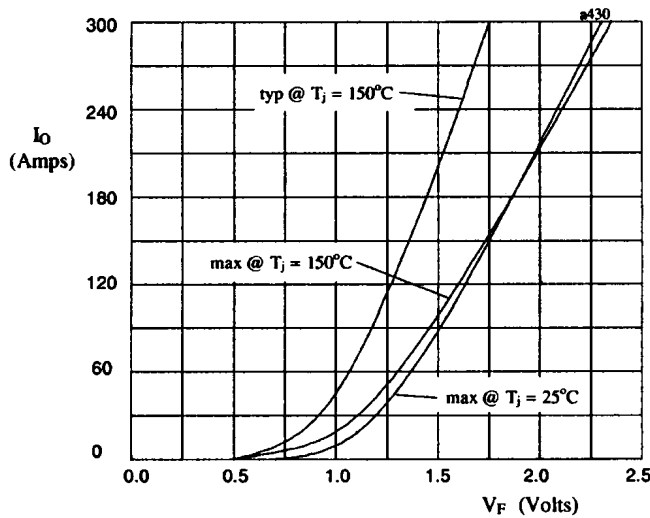


Fig 1. Forward voltage drop against output current per leg.

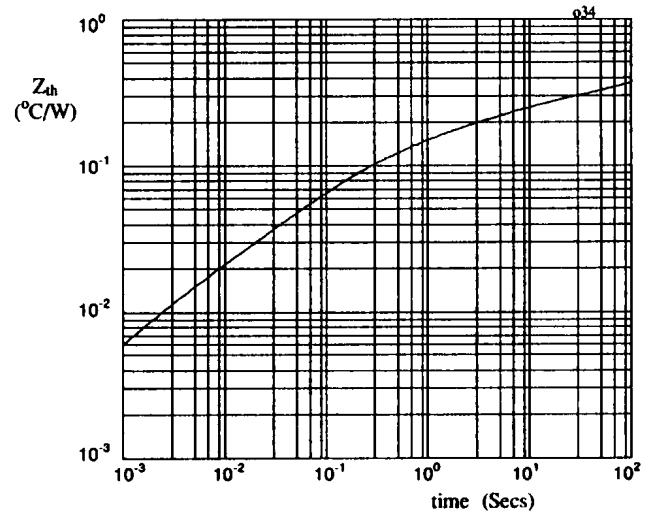


Fig 2. Transient thermal impedance characteristic per leg