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

- Low forward voltage drop
- Low reverse leakage current
- Aluminium case
- Low thermal impedance
- Insulated electrical connections

QUICK REFERENCE DATA

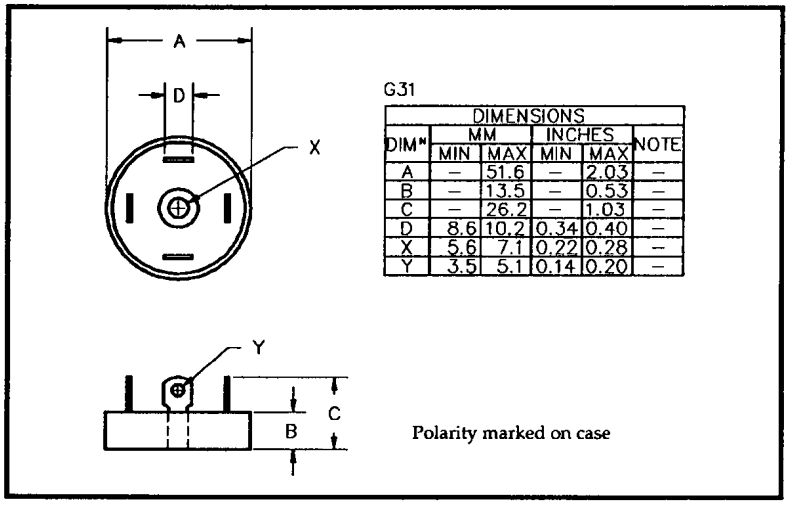
- V_R = 50V - 1000V
- I_F = 53A
- I_R = 6.0 µA
- t_{rr} = 2.0µS

ABSOLUTE MAXIMUM RATINGS

Device Type	Working Reverse Voltage V_{RWM}	Average Rectified Current $I_{F(AV)}$ (@ case temperature)			(@ ambient temperature)			1 Cycle Surge Current 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	Amps
SCBAR05	50								
SCBAR1	100								
SCBAR2	200								
SCBAR4	400	53	35	25	9.5	7.0	4.5	375	250
SCBAR6	600								
SCBAR8	800								
SCBAR10	1000								

$R_{\theta JC}$ = 0.7°C/W

MECHANICAL



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DIM	DIMENSIONS MM MIN	MM MAX	INCHES MIN	INCHES MAX	NOTE
A	–	51.6	–	2.03	–
B	–	13.5	–	0.53	–
C	–	26.2	–	1.03	–
D	8.6	10.2	0.34	0.40	–
X	5.6	7.1	0.22	0.28	–
Y	3.5	5.1	0.14	0.20	–

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ELECTRICAL CHARACTERISTICS

Device Type	Maximum Reverse Leakage Current I_R @ V_{RWM}		Maximum Forward Voltage	Reverse Recovery Time [1]	Maximum operating & storage temp. range.
	@ 25°C	@ 100°C	V_F @ 9A/leg	t_{rr} @ 25°C	T_{OP} T_{STG}
	µA	µA	Volts	µS	°C
SCBAR05 SCBAR1 SCBAR2 SCBAR4 SCBAR6 SCBAR8 SCBAR10	6.0	240	1.0	2.0	-55 to +150

[1] Measured on discrete devices prior to assembly

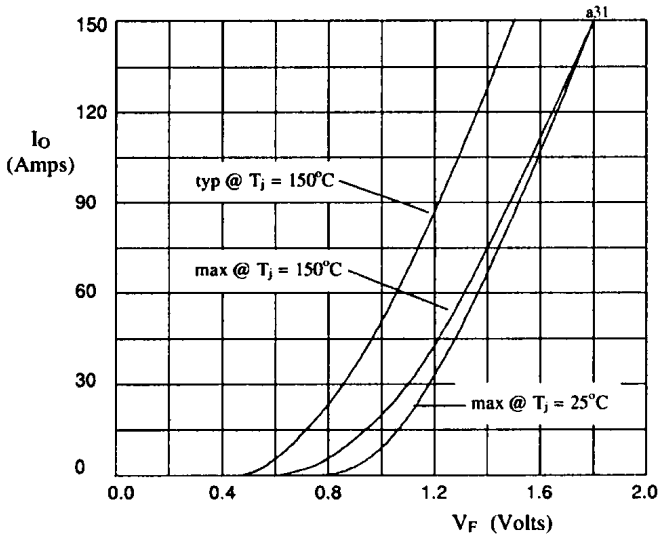

Fig 1. Forward voltage drop against output current per leg.

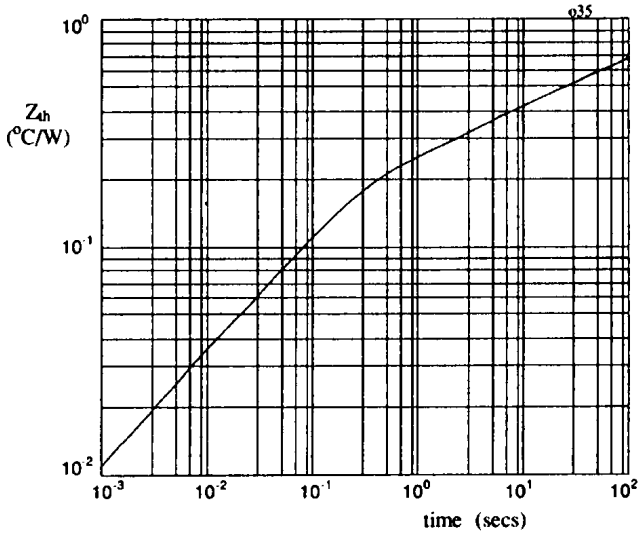

Fig 2. Transient thermal impedance characteristic per leg