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

- Low forward voltage drop
- Low reverse leakage current
- Aluminum case
- Low thermal impedance
- Fast reverse recovery time

QUICK REFERENCE DATA

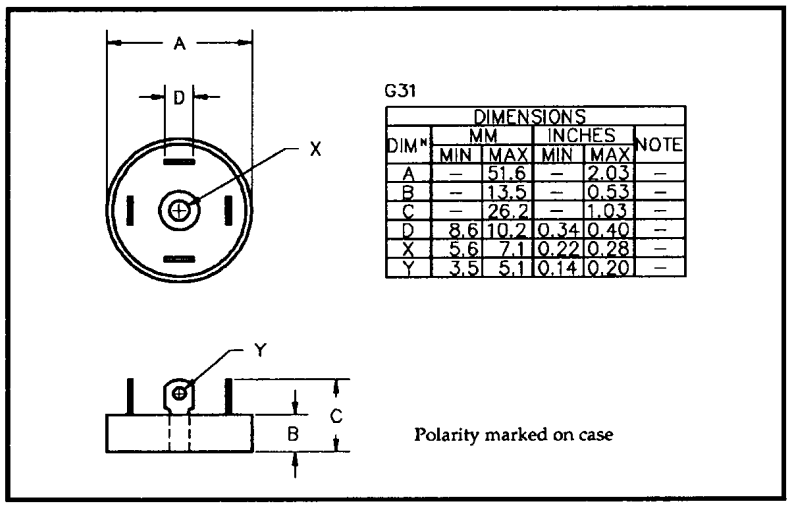
- V_R = 50V - 400V
- I_F = 50A
- I_R = 6.0µA
- t_{rr} = 150nS

ABSOLUTE MAXIMUM RATINGS

Device Type	Working Reverse Voltage V_{RWM}	Average Rectified Current $I_{F(AV)}$ (@ case temperature) @ 55°C	@ 100°C	@ 125°C	(@ ambient temperature) @ 25°C	@ 55°C	@ 100°C	1 Cycle Surge Current I_{FSM} t_p = 8.3mS @ 25°C	@ 100°C
	Volts	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps
SCBAR05F SCBAR1F SCBAR2F SCBAR4F	50 100 200 400	50	31	20	9.0	6.7	4.3	375	240

$R_{\theta JC}$ = 0.7°C/W

MECHANICAL



G31

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 V_F @ 9A/leg	Reverse Recovery Time [1] t_{rr} @ 25°C	Maximum operating & storage temp. range. T_{OP} T_{STG}
	@ 25°C	@ 100°C			
	µA	µA	Volts	nS	°C
SCBAR05F SCBAR1F SCBAR2F SCBAR4F	6.0	150	1.1	150	-55 to +150

[1] Measured on discrete devices prior to assembly

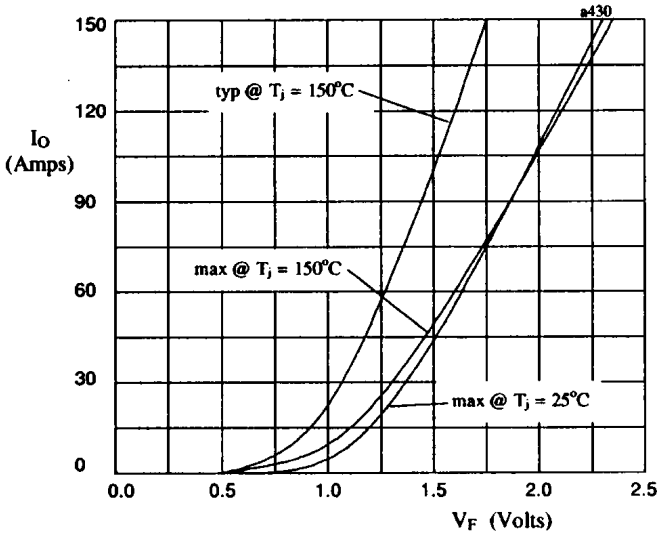

Fig 1. Forward voltage drop against output current per leg.

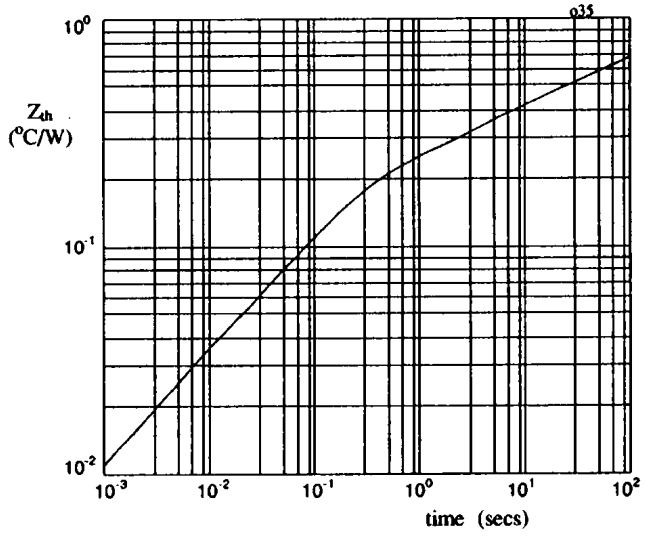

Fig 2. Transient thermal impedance characteristic per leg