January 16, 1998

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

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

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

QUICK REFERENCE DATA

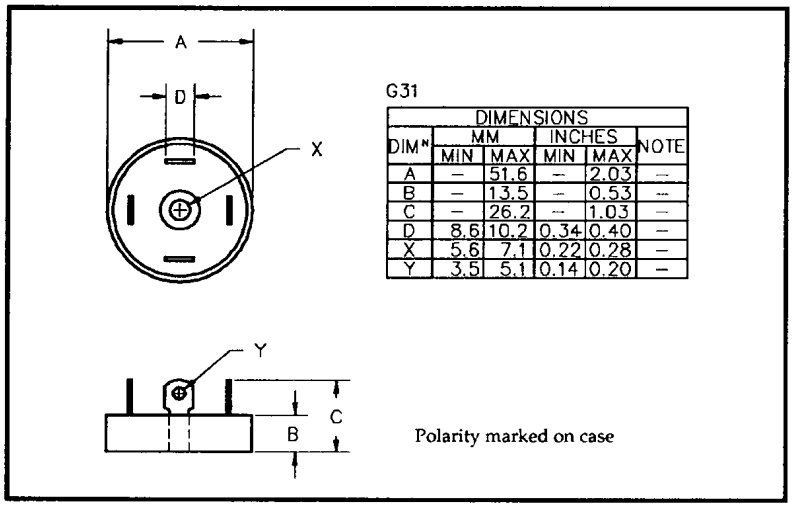
- V_R = 50V - 150V
- I_F = 55A
- V_F = 0.97V
- t_{rr} = 30nS

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
SCBAR05FF SCBAR10FF SCBAR15FF	50 100 150	55	37	22	9.0	6.75	4.3	450	375

$R_{\theta JC}$ = 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	Reverse Recovery Time [1]	Maximum operating & storage temp. range.
	@ 25°C	@ 100°C	V_F @ 15A/leg	t_{rr} @ 25°C	T_{OP} T_{STG}
	µA	mA	Volts	nS	°C
SCBAR05FF SCBAR10FF SCBAR15FF	60	3.0	0.97	30	- 55 to +150

[1] Measured on discrete devices prior to assembly

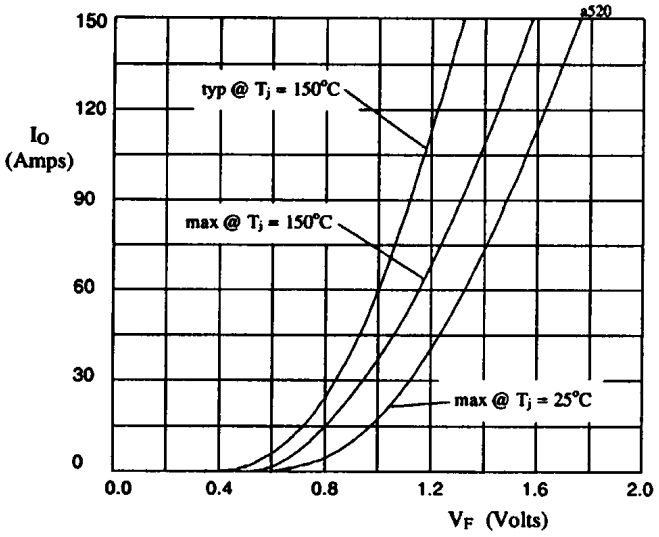


Fig 1. Forward voltage drop against output current per leg.

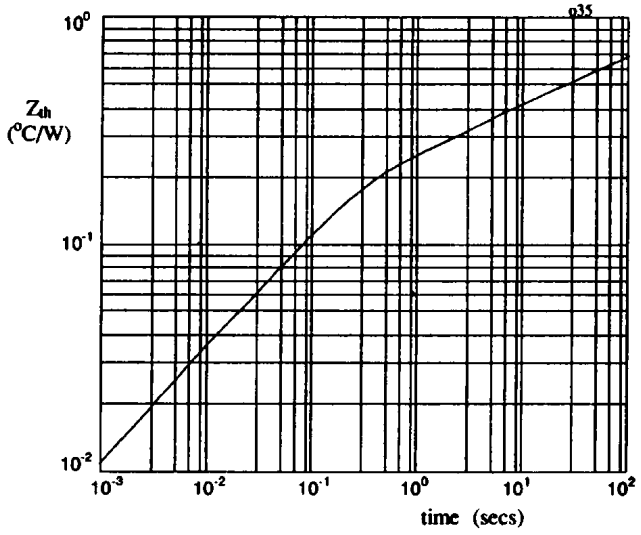


Fig 2. Transient thermal impedance characteristic per leg

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