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SEMTECH

SUPERFAST RECOVERY 1 PHASE FULL WAVE BRIDGE RECTIFIERS

SCBH05FF
SCBH10FF
SCBH15FF

January 16, 1998

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

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

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

QUICK REFERENCE DATA

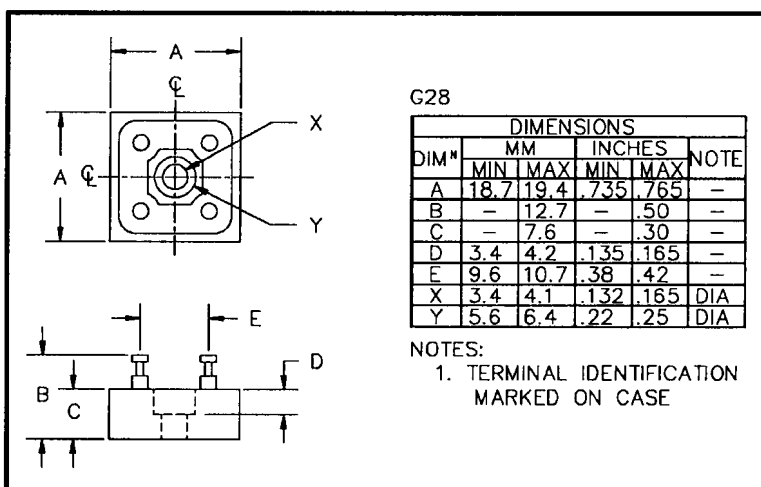
- $V_R = 50V - 150V$
- $I_F = 12A$
- $V_F = 0.97V$
- $t_{rr} = 30nS$

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	
SCBH05FF	50									
SCBH10FF	100	12	9	7.5	5	3.8	2	175	120	24
SCBH15FF	150									

$$R_{\theta JC} = 3.3^{\circ}C/W$$

MECHANICAL



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ELECTRICAL CHARACTERISTICS

Device Type	Maximum Reverse Leakage Current $I_R @ V_{RWM}$		Maximum Forward Voltage $V_F @ 5A/leg$	Reverse Recovery Time ¹ $t_{rr} @ 25^\circ C$	Maximum operating & storage temp. range.	
	@ 25°C	@ 100°C			T_{OP}	T_{STG}
	µA	mA	Volts	nS	°C	
SCBH05FF SCBH10FF SCBH15FF	20	1.0	0.97	30	- 55 to +150	

¹ Measured on discrete devices prior to assembly

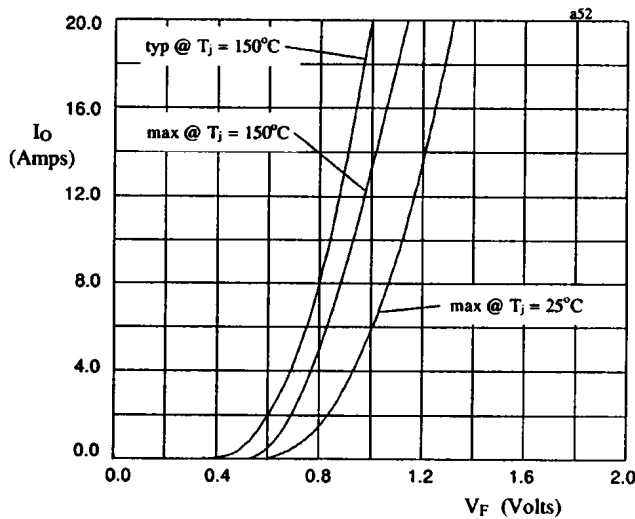


Fig 1. Forward voltage drop against output current per leg.

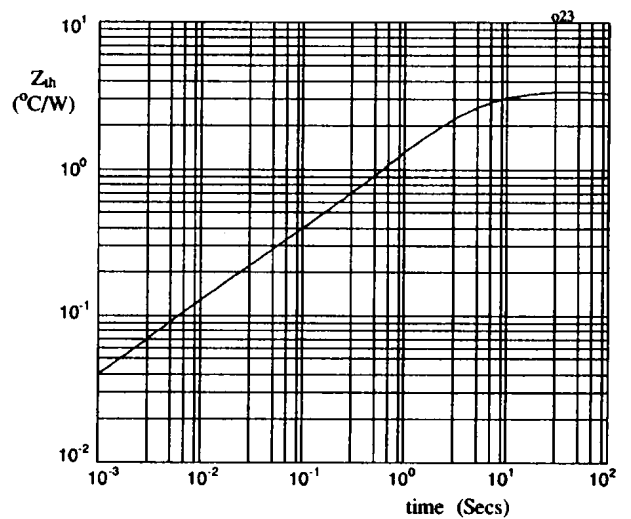


Fig 2. Transient impedance characteristic per leg

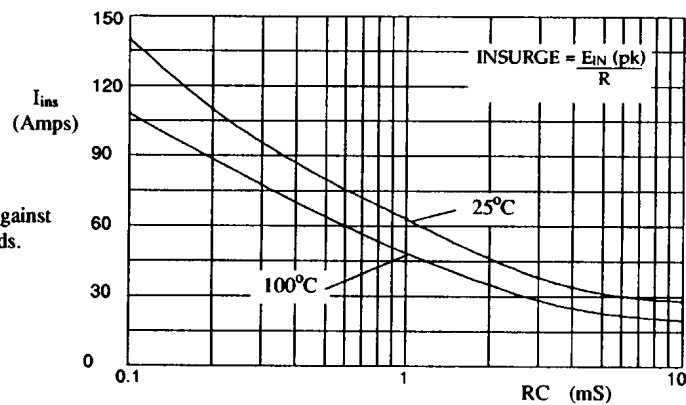


Fig 3. Maximum insurge current against time constant for capacitive loads.