

SEMTECH

FAST RECOVERY 1 PHASE

SCBH05F SCBH1F

FULL WAVE BRIDGE RECTIFIERS

SCBH2F SCBH4F

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

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

QUICK REFERENCE DATA

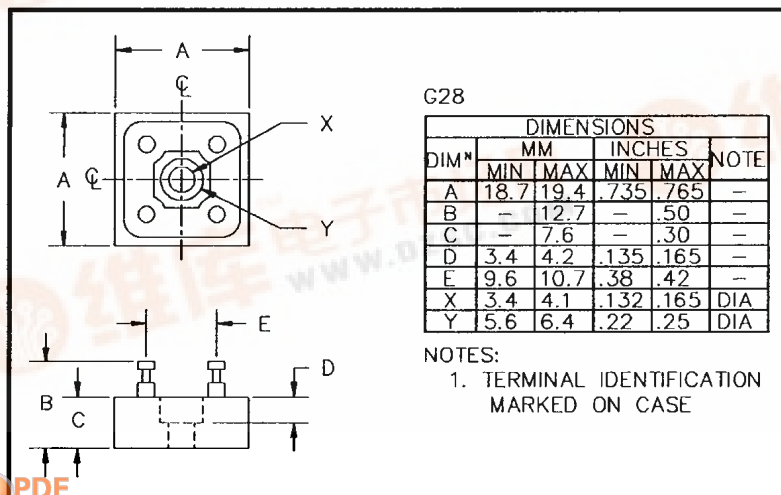
- $V_R = 50V - 400V$
- $I_F = 10A$
- $I_R = 2.0\mu A$
- $t_{rr} = 150ns$

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)					
		@ 55°C	@ 100°C	@ 125°C	@ 25°C	@ 55°C	@ 100°C	@ 25°C	@ 100°C	@ 25°C
	Volts	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps
SCBH05F	50									
SCBH1F	100									
SCBH2F	200	10	7.5	5.5	4.0	3.0	1.7	150	80	25
SCBH4F	400									

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

MECHANICAL



SCBH4F is available in Europe to DEF STAN 59-61/90/207 release to F and FX levels.



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ELECTRICAL CHARACTERISTICS

Device Type	Maximum Reverse Leakage Current I_R @ V_{RWM}		Maximum Forward Voltage V_F @ 3A/leg	Reverse Recovery Time ¹ t_{rr} @ 25°C	Maximum operating & storage temp. range. TOP TSTG
	@ 25°C	@ 100°C			
	μA	μA	Volts	nS	°C
SCBH05F SCBH1F SCBH2F SCBH4F	2.0	40	1.1	150	-55 to +150

¹ Measured on discrete devices prior to assembly

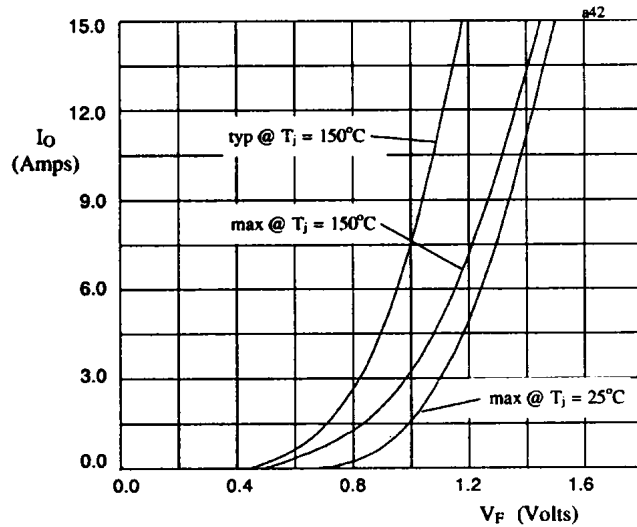


Fig 1. Forward voltage drop against output current per leg.

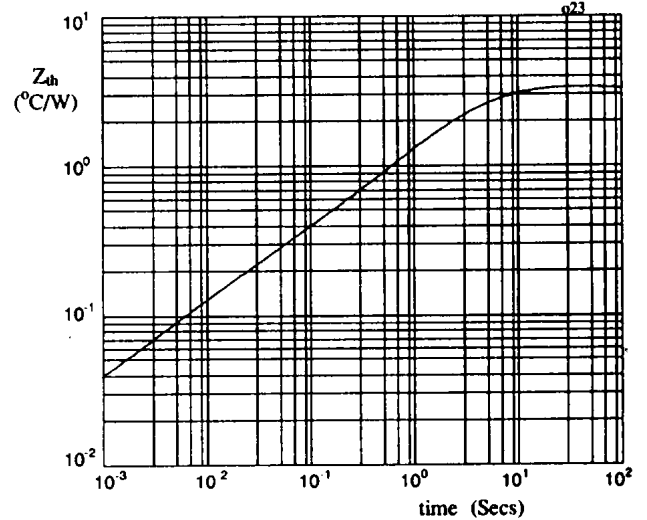


Fig 2. Transient thermal impedance characteristic per leg

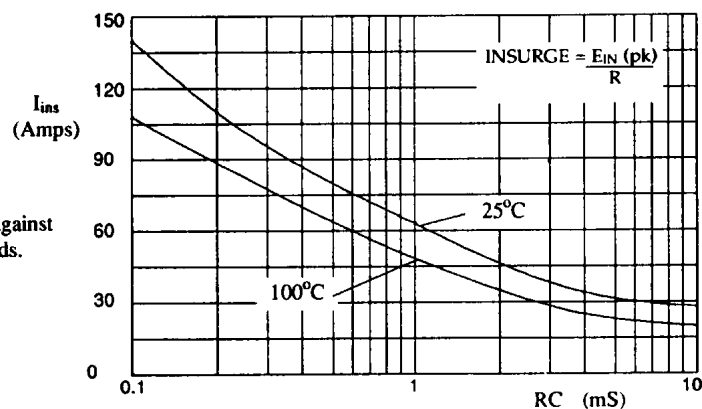


Fig 3. Maximum surge current against time constant for capacitive loads.