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# SEMTECH

## STANDARD RECOVERY 3-PHASE SILICON BRIDGE RECTIFIERS

S3BR05  
 thru  
 S3BR30

January 16, 1998

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

### STANDARD RECOVERY, PCB MOUNTING 3-PHASE FULL WAVE BRIDGE RECTIFIER ASSEMBLIES

- Low forward voltage drop
- Low reverse leakage current
- Subminiature design
- $V_{RWM}$  up to 3000V

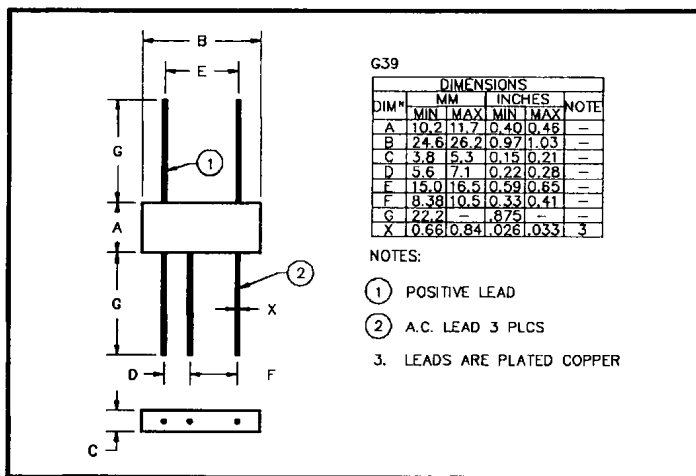
### QUICK REFERENCE DATA

- $V_R = 50V - 3000V$
- $I_F = 0.5 - 2.0A$
- $I_R = 3.0\mu A$
- $t_{rr} = 2.0 - 2.5\mu S$

### ABSOLUTE MAXIMUM RATINGS & CHARACTERISTICS

Device Type	Working Reverse Voltage $V_{RWM}$	Average Rectified Current $I_{F(AV)}$		Reverse Leakage Current $I_R @ V_{RWM}$		Forward Voltage drop / leg @ 25°C $V_F @ 1A$ * @ 250mA	Reverse Recovery Time $t_{rr}$ @ 25°C
		@ 55°C	@ 100°C	@ 25°C	@ 100°C		
	Volts	Amps	Amps	$\mu A$	$\mu A$	Volts	$\mu S$
S3BR05	50	2.0	1.2	3.0	75	1.1	↑ 2.0 ↓
S3BR1	100	2.0	1.2	3.0	75	1.1	
S3BR2	200	2.0	1.2	3.0	75	1.1	
S3BR4	400	2.0	1.2	3.0	75	1.1	
S3BR6	600	2.0	1.2	3.0	75	1.1	
S3BR8	800	2.0	1.2	3.0	75	1.1	
S3BR10	1000	2.0	1.2	3.0	75	1.1	↓ 2.5 ↓
S3BR15	1500	0.5	0.3	3.0	60	* 5.0	
S3BR20	2000	0.5	0.3	3.0	60	* 5.0	
S3BR25	2500	0.5	0.3	3.0	60	* 5.0	
S3BR30	3000	0.5	0.3	3.0	60	* 5.0	

### MECHANICAL



<sup>1</sup> Measured on discrete devices prior to assembly

S3BR10 and S3BR30 are available in Europe to DEF STAN 59-61/90/208 release to F and FX levels.

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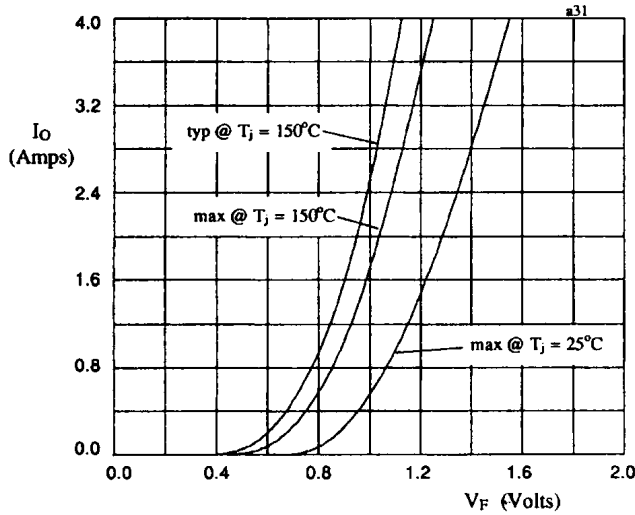


Fig 1. Forward voltage drop against output current per leg for S3BR05 thru S3BR10.

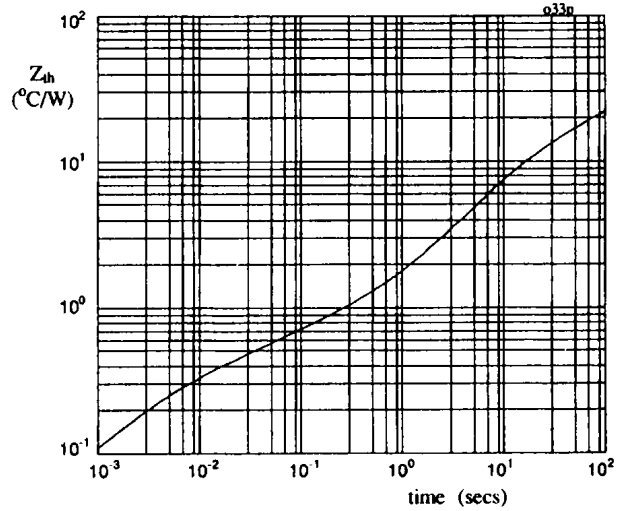


Fig 2. Transient thermal impedance characteristic per leg for S3BR05 thru S3BR10

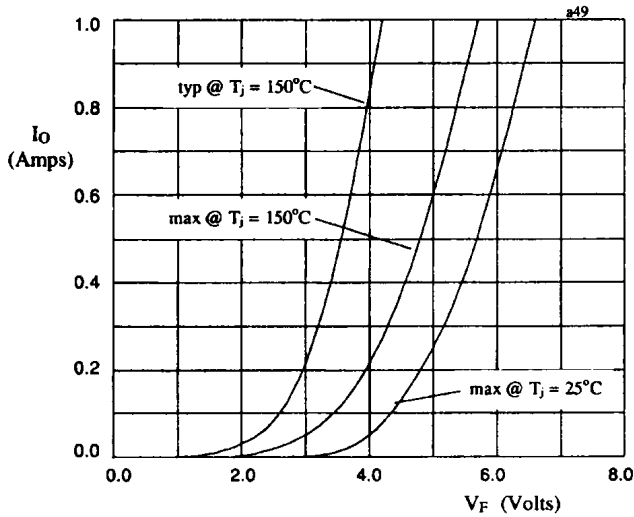


Fig 3. Forward voltage drop against output current per leg for S3BR15 thru S3BR30

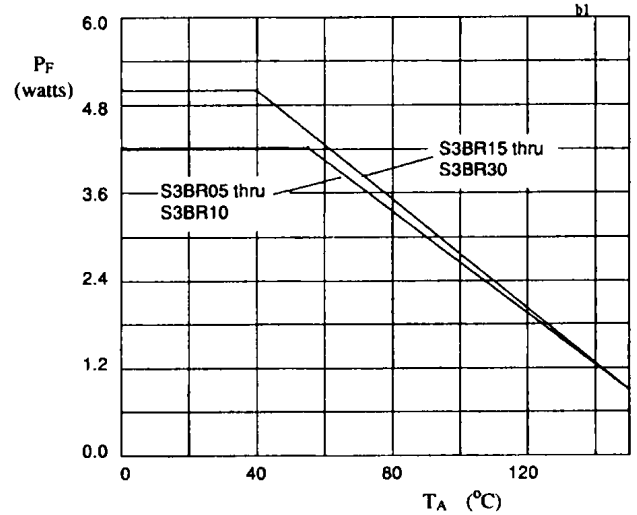


Fig 4. Power derating characteristics when p.c.b mounted