

January 16, 1998

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

### FAST RECOVERY, LOW CURRENT 3-PHASE FULL WAVE BRIDGE RECTIFIER ASSEMBLIES

- Low forward voltage drop
- Low reverse leakage current
- Subminiature design
- $V_{RWM}$  up to 2500V
- PCB mounting

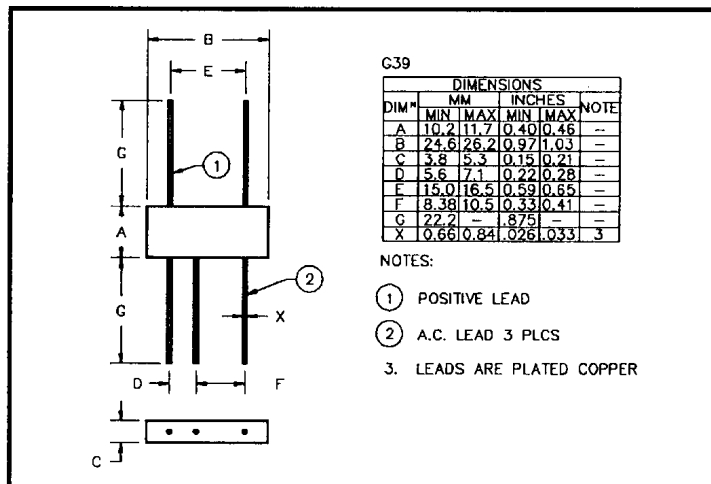
### QUICK REFERENCE DATA

- $V_R = 50V - 2500V$
- $I_F = 0.5 - 2.0A$
- $I_R = 3.0\mu A$
- $t_{rr} = 150 - 300nS$

### 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 $V_F @ 1A$ * @ 100mA	Reverse Recovery Time $t_{rr}$ @ 25°C
		@ 55°C	@ 100°C	@ 25°C	@ 100°C		
	Volts	Amps	Amps	$\mu A$	$\mu A$	Volts	$\mu S$
S3BR05F	50	2.0	1.2	3.0	75	1.2	150
S3BR1F	100	2.0	1.2	3.0	75	1.2	150
S3BR2F	200	2.0	1.2	3.0	75	1.2	150
S3BR4F	400	2.0	1.2	3.0	75	1.2	150
S3BR6F	600	2.0	1.2	3.0	75	1.2	250
S3BR25F	2500	0.5	0.3	3.0	75	* 5.0	300

### MECHANICAL



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

S3BR4F is available in Europe to DEF STAN 59-61/90/208 release to F and FX levels.

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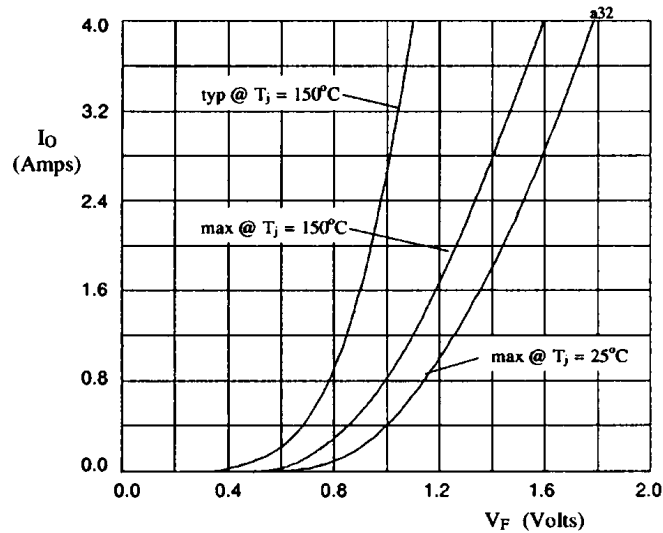


Fig 1. Forward voltage drop against output current per leg for S3BR05F thru S3BR6F.

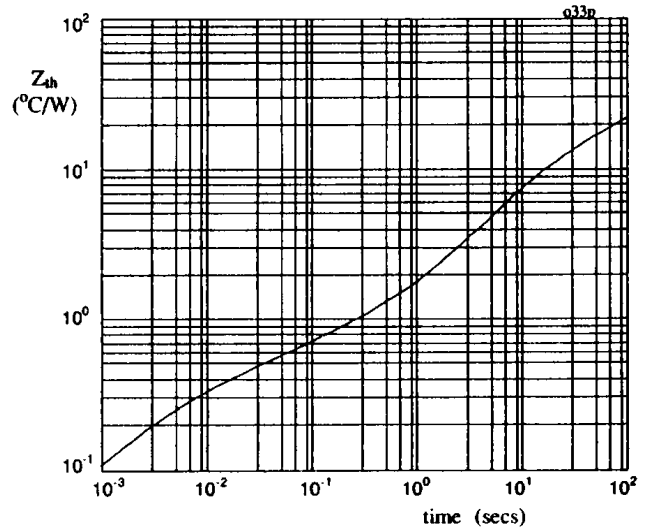


Fig 2. Transient thermal impedance characteristic per leg for S3BR05F thru S3BR6F

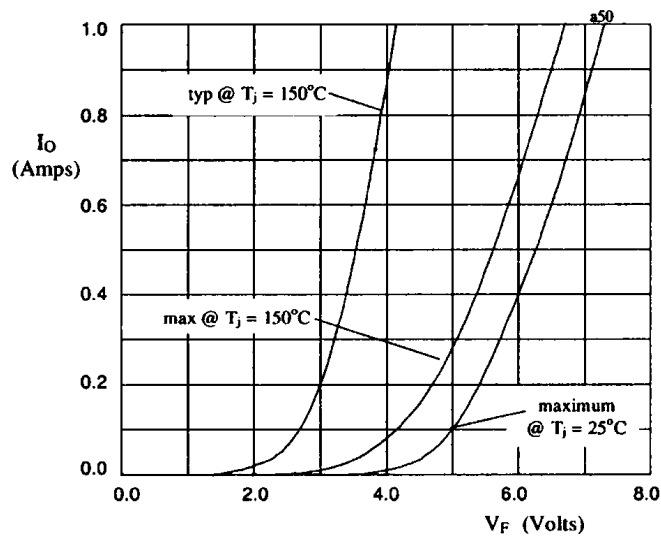


Fig 3. Forward voltage drop against output current per leg for S3BR25F.

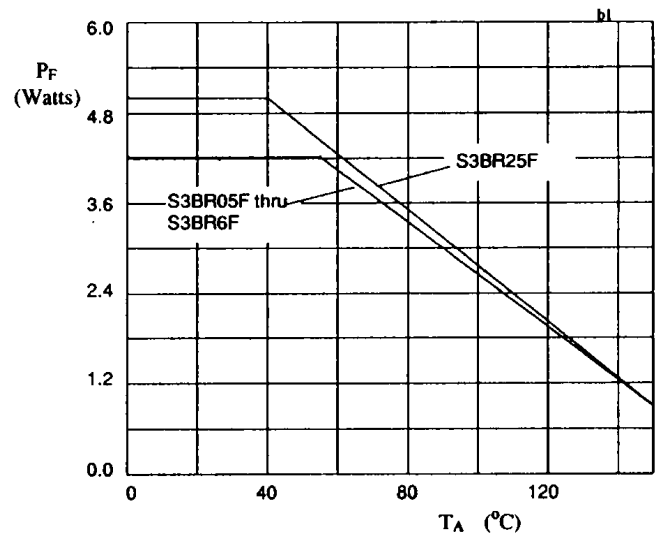


Fig 4. Power derating characteristics when p.c.b mounted