May 16, 2012 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

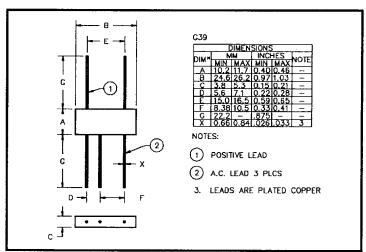
- $V_R = 50V 2500V$
- $I_F = 0.5 2.0A$
- $I_R = 3.0 \mu A$
- $t_{rr} = 150 300 nS$

ABSOLUTE MAXIMUM RATINGS & CHARACTERISTICS

Device Type	Working Reverse Voltage	Average Rectified Current I _{F(AV)}	
	V _{RWM}	@ 55 °C	@ 100 °C
	Volts	Amps	Amps
S3BR05F	50	2.0	1.2
S3BR1F	100	2.0	1.2
S3BR2F	200	2.0	1.2
S3BR4F	400	2.0	1.2
S3BR6F	600	2.0	1.2
S3BR25F	2500	0.5	0.3

Reverse Leakage Current I _R @ V _{RWM}		Forward Voltage drop / leg @ 25°C	Reverse Recovery Time t _{rr}
@ 25 °C	@ 100 ℃	V _F @ 1A * @ 100mA	@ 25°C
μА	μΑ	Volts	nS
3.0	<i>7</i> 5	1.2	150
3.0	<i>7</i> 5	1.2	150
3.0	<i>7</i> 5	1.2	150
3.0	<i>7</i> 5	1.2	150
3.0	<i>7</i> 5	1.2	250
3.0	75	* 5.0	300

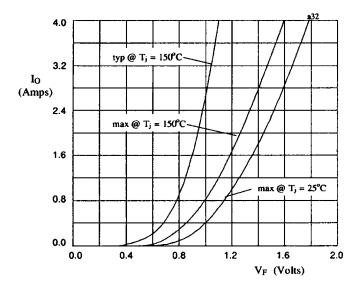
MECHANICAL



Measured on discrete devices prior to assembly

S3BR4F is available in Europe to DEF-STAN 59-61/90/214

May 16, 2012

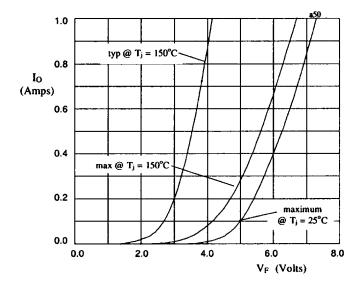


Z_{th} (°C/W) 10¹ 10² 10¹ 10⁰ 10¹ 10² time (secs)

10²

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



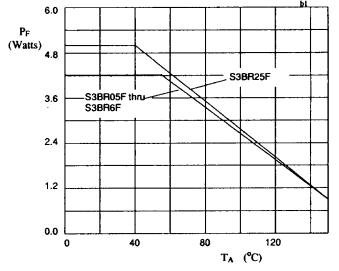


Fig 3. Forward voltage drop against output current per leg for S3BR25F.

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