

SEMTECH

**FAST RECOVERY 1-PHASE
SILICON BRIDGE RECTIFIERS**

**SBR05F
thru
SBR25F**

January 16, 1998

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**FAST RECOVERY, PCB MOUNTING, 1-PHASE FULL
WAVE BRIDGE RECTIFIER ASSEMBLIES**

**QUICK REFERENCE
DATA**

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

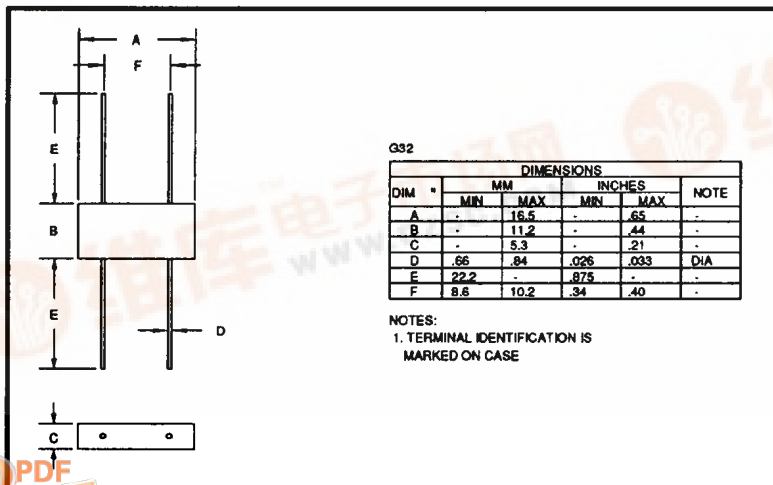
- $V_R = 50V - 2500V$
- $I_F = 0.36 - 1.0A$
- $I_R = 2.0 \mu A$
- $t_{rr} = 150 - 500nS$

ABSOLUTE MAXIMUM RATINGS & CHARACTERISTICS

Device Type	Working Reverse Voltage V_{RWM}	Average Rectified Current $I_F(AV)$		Repetitive Surge Current I_{FRM} @ 25 °C	Reverse Leakage Current I_R @ V_{RWM}		Forward Voltage drop / leg V_F @ 1A * @ 100mA	Reverse Recovery Time t_{rr} @ 25 °C
		@ 55 °C	@ 100 °C		@ 25 °C	@ 100 °C		
		Amps	Amps		μA	μA		
SBR05F	50	1.0	0.65	10	2.0	50	1.2	150
SBR1F	100	1.0	0.65	10	2.0	50	1.2	150
SBR2F	200	1.0	0.65	10	2.0	50	1.2	150
SBR4F	400	1.0	0.65	10	2.0	50	1.2	150
SBR6F	600	1.0	0.65	10	2.0	50	1.2	250
SBR8F	800	1.0	0.65	10	2.0	50	1.5	300
SBR10F	1000	1.0	0.65	10	2.0	50	1.5	500
SBR25F	2500	0.36	0.23	2.5	2.0	50	* 5.0	300

MECHANICAL

¹ Measured on discrete devices prior to assembly



SBR4F is available in Europe to DEF STAN 59-61/90/213 release to F and FX levels.



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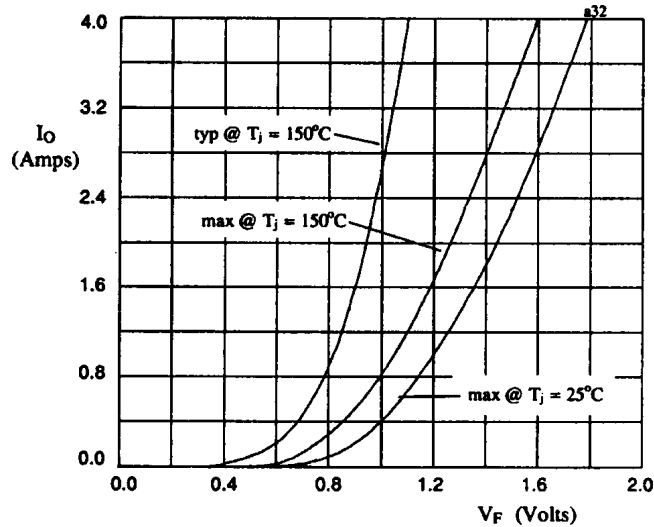


Fig 1. Forward voltage drop against output current per leg for SBR05F thru SBR6F.

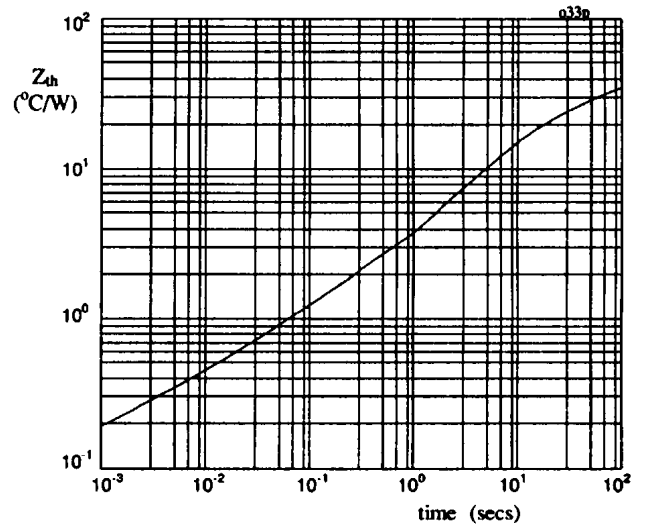


Fig 2. Transient thermal impedance characteristic per leg for SBR05F thru SBR10F

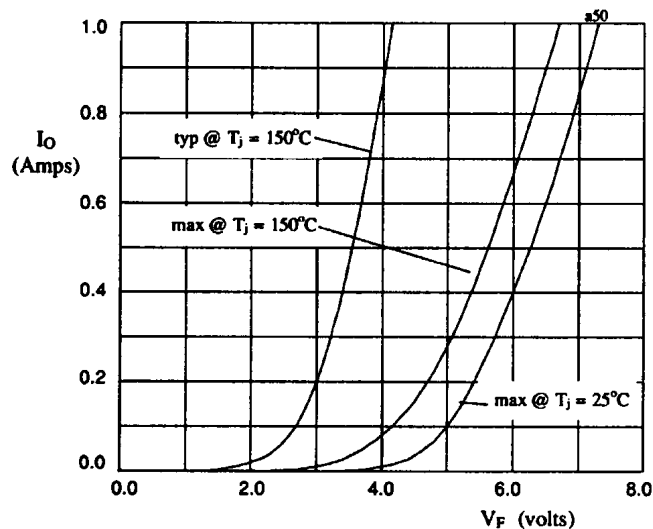


Fig 3. Forward voltage drop against output current per leg for SBR25F

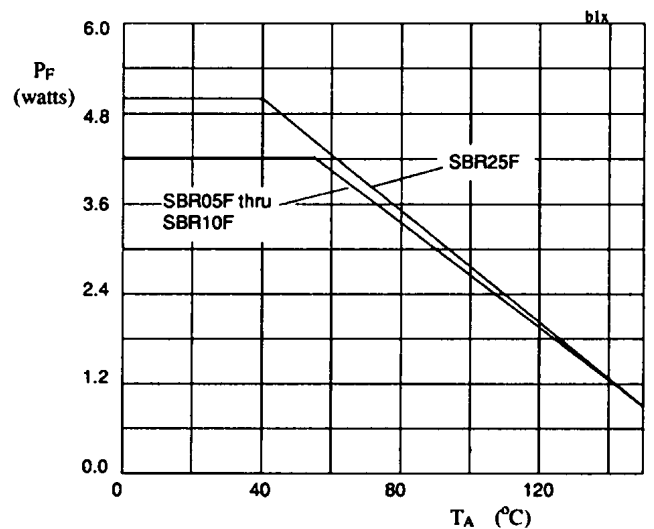


Fig 4. Power derating characteristics when p.c.b mounted