

January 16, 1998

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

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

QUICK REFERENCE DATA

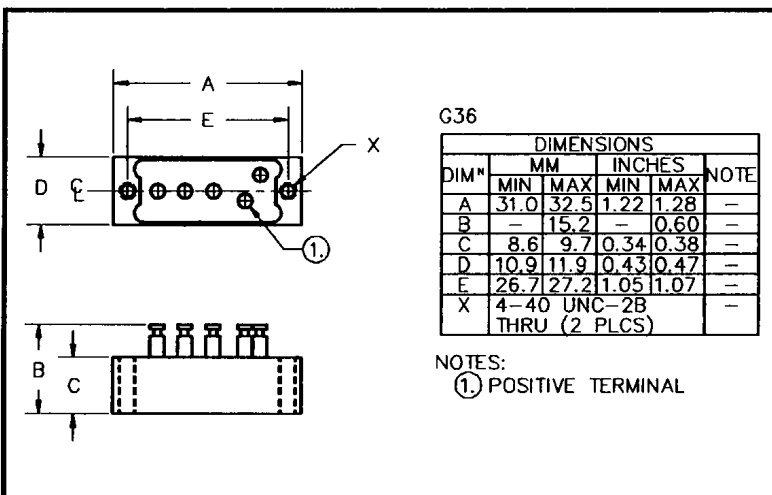
- $V_R = 50V - 600V$
- $I_F = 5.0A$
- $I_R = 3.0 \mu A$
- $t_{rr} = 150 - 250nS$

ABSOLUTE MAXIMUM RATINGS

Device Type	Working Reverse Voltage V_{RWM}	Average Rectified Current $I_{F(AV)}$						1 Cycle Surge Current I_{FSM} @ $t_p = 8.3mS$	
		@ case temperature			@ ambient temperature			@ 25°C	@ 100°C
		@ 55°C	@ 100°C	@ 125°C	@ 25°C	@ 55°C	@ 100°C		
		Volts	Amps	Amps	Amps	Amps	Amps	Amps	Amps
SC3BJ05F	50								
SC3BJ1F	100								
SC3BJ2F	200	5.0	3.5	2.5	1.5	1.0	0.7	25	15
SC3BJ4F	400								
SC3BJ6F	600								

$R_{\theta JC} = 6.0^{\circ}C/W$

MECHANICAL



SC3BJ4F is available in Europe to DEF STAN 59-61/90/208 release to F and FX levels.

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ELECTRICAL CHARACTERISTICS

Device Type	Reverse Leakage Current I_R @ V_{RWM}		Maximum Forward Voltage V_F @ 1A/leg @ 25°C	Maximum Reverse Recovery Time ¹ t_{rr} @ 25°C	Maximum operating & storage temp range.	
	@ 25°C	@ 100°C			T_{OP}	T_{STG}
	μA	μA	Volts	nS	°C	
SC3BJ05F	3.0	75	1.2	150	-55	to
SC3BJ1F				150		
SC3BJ2F				150		
SC3BJ4F				150		
SC3BJ6F				250		

¹ Measured on discrete devices prior to assembly

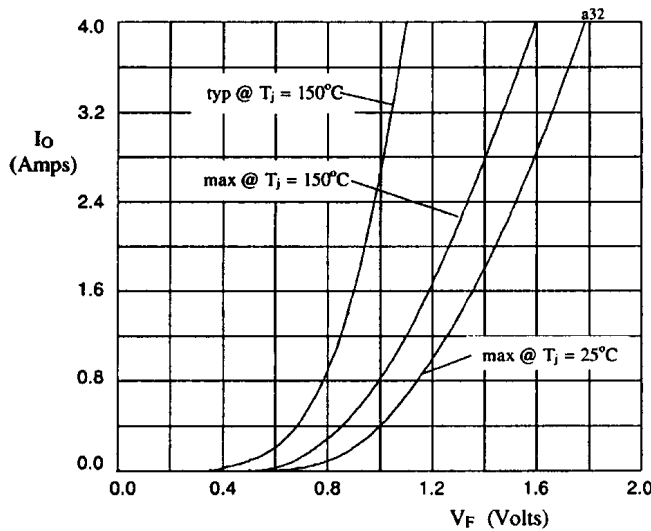


Fig 1. Forward voltage drop against output current per leg

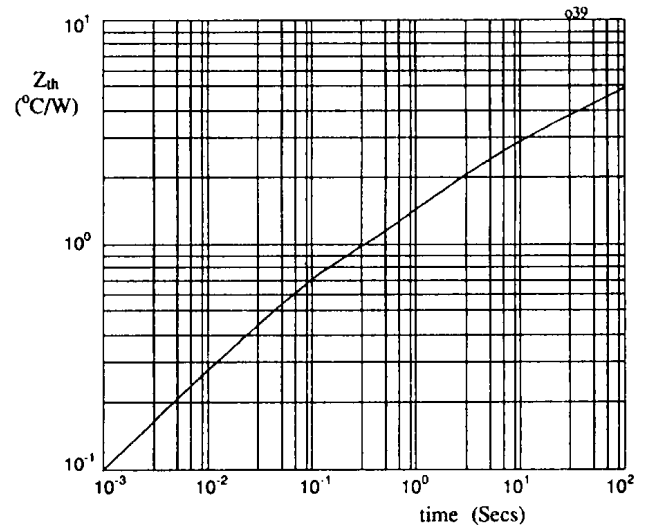


Fig 2. Transient thermal impedance characteristic per leg

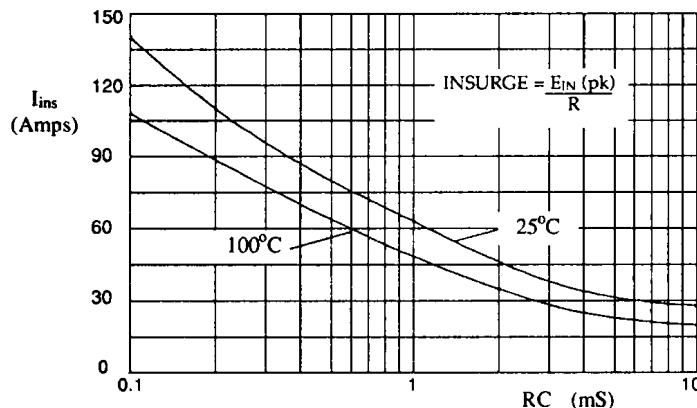


Fig 3. Maximum insurge current against time constant for capacitive loads.