

January 16, 1998

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

QUICK REFERENCE DATA

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

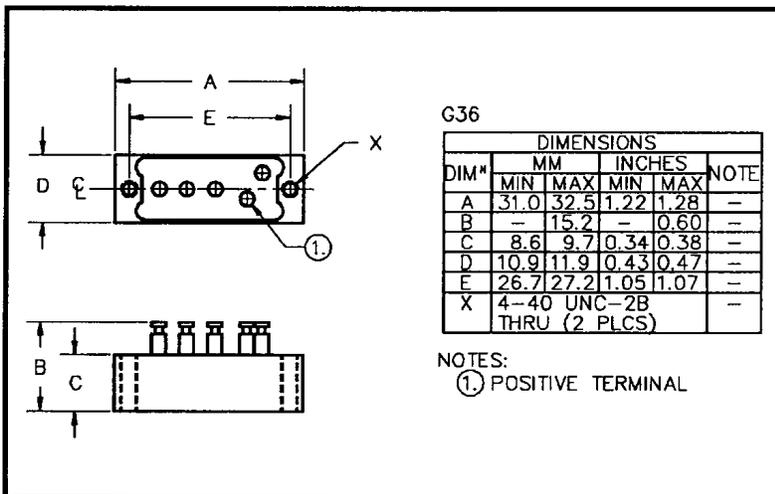
- $V_R = 50V - 150V$
- $I_F = 5.0A$
- $V_F = 1.2V$
- $t_{rr} = 30nS$

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
SC3BJ05FF	50								
SC3BJ10FF	100	5.0	3.1	1.8	1.5	1.1	0.7	35	24
SC3BJ15FF	150								

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

MECHANICAL



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ELECTRICAL CHARACTERISTICS

Device Type	Maximum Reverse Leakage Current $I_R @ V_{RWM}$		Maximum Forward Voltage / leg $V_F @ 1.5A @ 25^\circ C$	Maximum Reverse Recovery Time $t_{rr} @ 25^\circ C$	Maximum operating & storage temp range.	
	@ 25°C	@ 100°C			T_{OP}	T_{STG}
	μA	μA	Volts	nS	°C	
SC3BJ05FF					- 55	
SC3BJ10FF	3.0	150	1.2	30	to	
SC3BJ15FF					+150	

¹ Measured on discrete devices prior to assembly

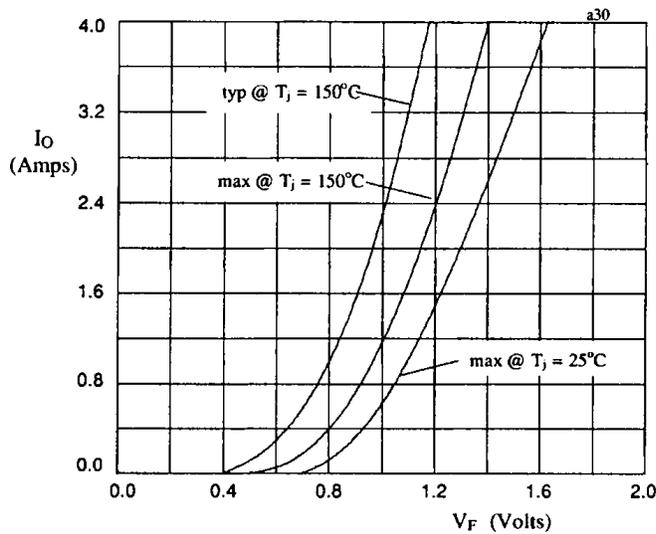


Fig 1. Forward voltage drop against output current per leg

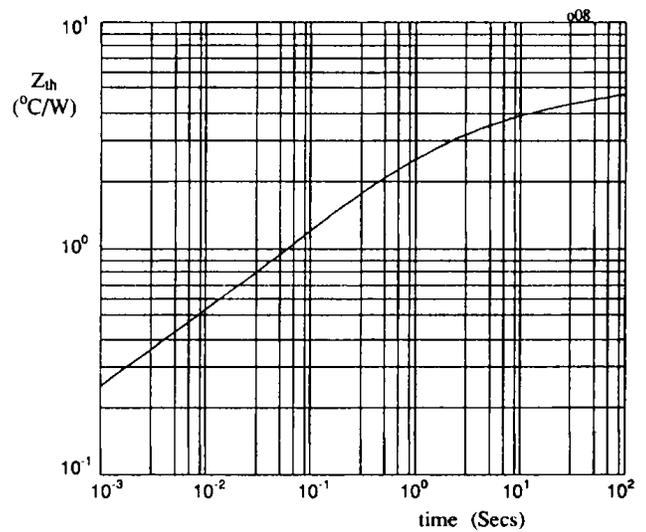


Fig 2. Transient thermal impedance characteristic per leg

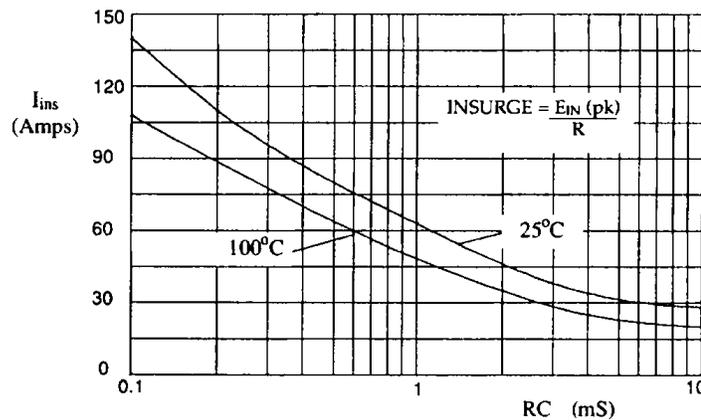


Fig 3. Maximum insurge current against time constant for capacitive loads.