

January 16, 1998

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

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

QUICK REFERENCE DATA

- Low forward voltage drop
- Low reverse leakage current
- Very fast reverse recovery time
- Low thermal impedance
- High surge ratings

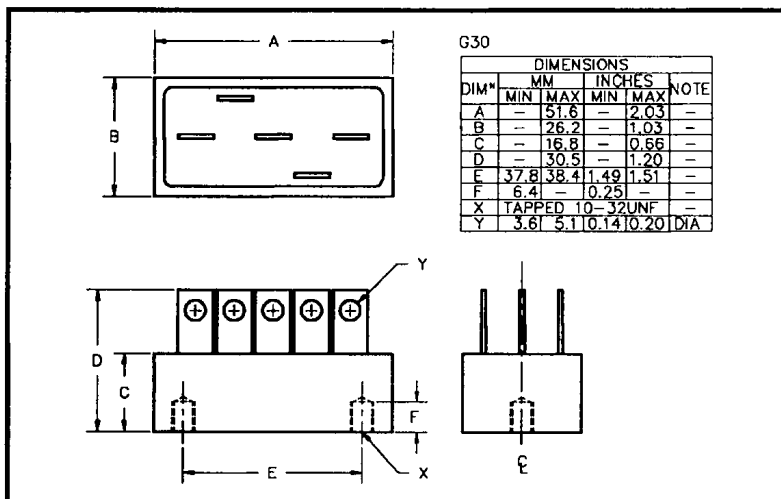
- $V_R = 50V - 150V$
- $I_F = 38A$
- $V_F = 0.97V$
- $t_{rr} = 30nS$

ABSOLUTE MAXIMUM RATINGS

Device Type	Working Reverse Voltage V_{RWM}	Average Rectified Current $I_{F(AV)}$						1 Cycle Surge Current	
		@ case temperature			@ ambient temperature			I_{FSM} @ $t_p = 8.3mS$	
		@ 55°C	@ 100°C	@ 125°C	@ 25°C	@ 55°C	@ 100°C	@ 25°C	@ 100°C
		Volts	Amps	Amps	Amps	Amps	Amps	Amps	Amps
SC3BK05FF	50								
SC3BK10FF	100	38	25	14	13	9.25	5.5	450	360
SC3BK15FF	150								

$R_{\theta JC} = 1.1^{\circ}C/W$

MECHANICAL



January 16, 1998

ELECTRICAL CHARACTERISTICS

Device Type	Maximum Reverse Leakage Current I_R @ V_{RWM}		Maximum Forward Voltage V_F @ 15A/leg	Maximum Reverse Recovery Time ¹ t_{rr} @ 25°C	Maximum operating & storage temp. range	
	@ 25°C	@ 100°C			T_{OP}	T_{STG}
	μA	mA	Volts	ns	°C	
SC3BK05FF	90	4.5	0.97	30	-55 to +150	
SC3BK10FF						
SC3BK15FF						

¹ Measured on discrete devices prior to assembly

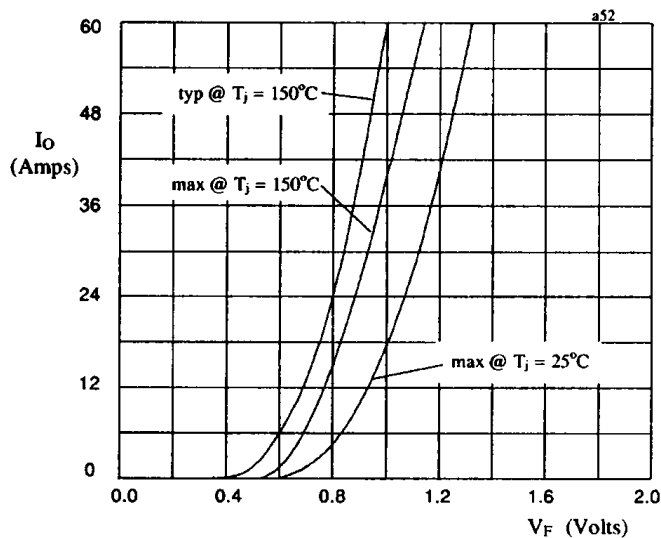


Fig 1. Forward voltage drop against output current per leg

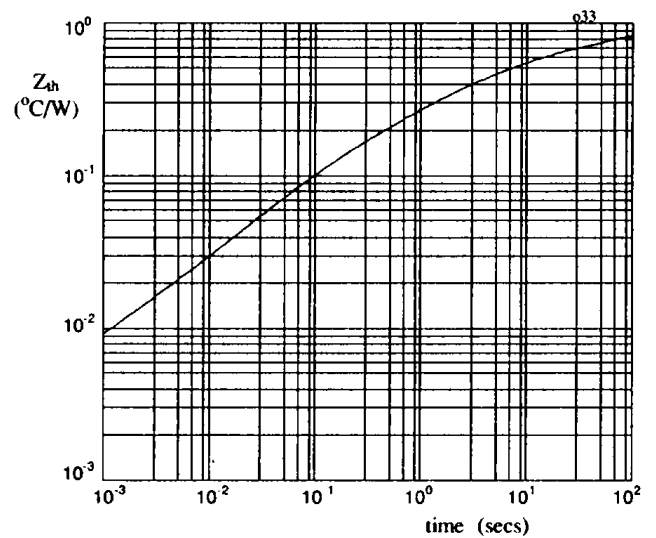


Fig 2. Typical transient thermal impedance characteristic per leg