

January 16, 1998

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

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

- Low forward voltage drop
- Low reverse leakage current
- Aluminum case
- Low thermal impedance
- High surge ratings

QUICK REFERENCE DATA

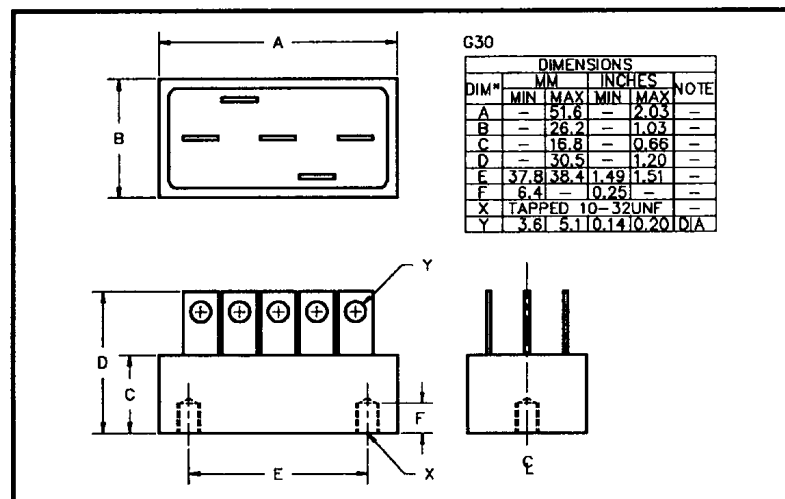
- $V_R = 50V - 600V$
- $I_F = 38A$
- $I_R = 9.0\mu A$
- $I_{FSM} = 375A$

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
SC3BK05	50								
SC3BK1	100								
SC3BK2	200	38	24	17.5	13	10	6.0	375	300
SC3BK4	400								
SC3BK6	600								

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

MECHANICAL



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ELECTRICAL CHARACTERISTICS

Device Type	Reverse Leakage Current $I_R @ V_{RWM}$		Maximum Forward Voltage $V_F @ 9A/leg @ 25^\circ C$	Maximum Reverse Recovery Time $t_{rr} @ 25^\circ C$	Maximum operating & storage temp range. $T_{OP} \quad T_{STG}$	
	@ 25°C	@ 100°C			T_{OP}	T_{STG}
	μA	μA	Volts	μS	$^\circ C$	
SC3BK05						
SC3BK1						-55
SC3BK2	9.0	180	1.0	2.0	to	+150
SC3BK4						
SC3BK6						

¹ Measured on discrete devices prior to assembly

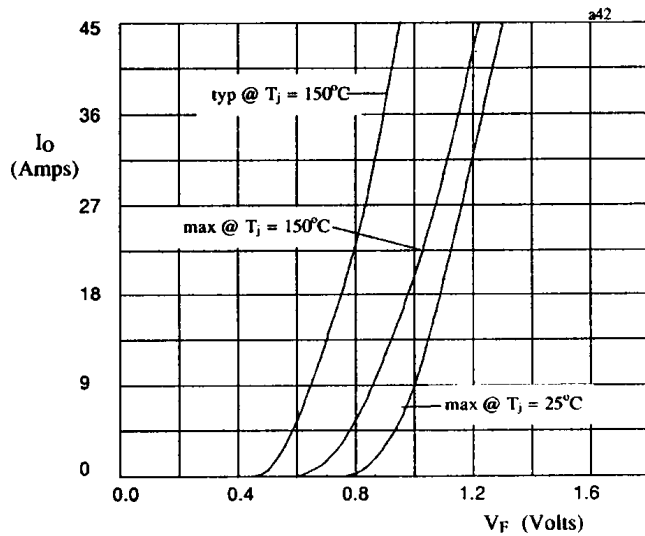


Fig 1. Forward voltage drop against output current per leg

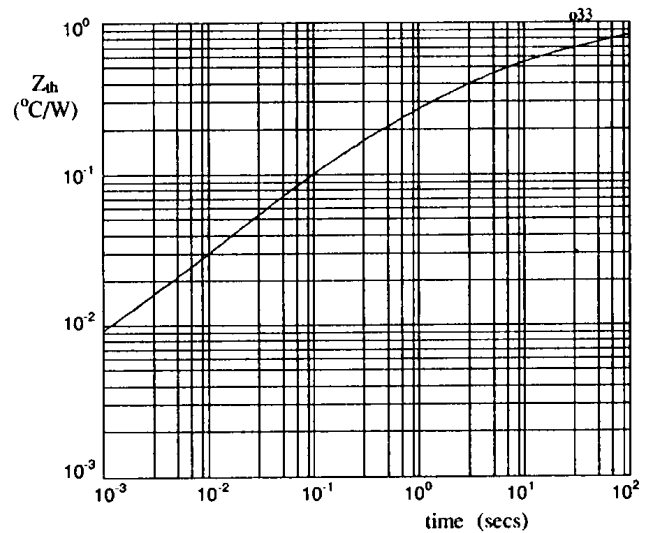


Fig 2. Typical transient thermal impedance characteristic per leg