January 16, 1998

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

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

- Low forward voltage drop
- Low reverse leakage current
- Aluminum case
- Low thermal impedance
- Insulated electrical connections

QUICK REFERENCE DATA

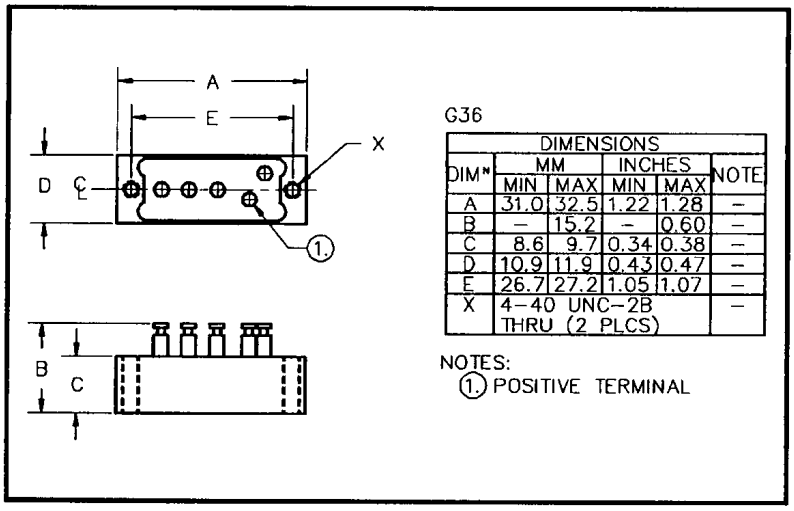
- V_R = 50V - 600V
- I_F = 5A
- I_R = 3.0µA
- t_{rr} = 2.0µS

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				
		@ 55°C	@ 100°C	@ 125°C	@ 25°C	@ 55°C	@ 100°C	@ 25°C	@ 100°C
	Volts	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps
SC3BJ05 SC3BJ1 SC3BJ2 SC3BJ4 SC3BJ6	50 100 200 400 600	5.0	3.0	2.0	2.0	1.5	1.0	50	35

$R_{\theta JC}$ = 6.0°C/W

MECHANICAL



G36

DIM	DIMENSIONS MM MIN	MM MAX	INCHES MIN	INCHES MAX	NOTE
A	31.0	32.5	1.22	1.28	–
B	–	15.2	–	0.60	–
C	8.6	9.7	0.34	0.38	–
D	10.9	11.9	0.43	0.47	–
E	26.7	27.2	1.05	1.07	–
X	4–40 UNC–2B THRU (2 PLCS)				–

NOTES:
(1) POSITIVE TERMINAL

SC3BJ6 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	Maximum 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. T_{OP} T_{STG}
	@ 25°C	@ 100°C			
	µA	µA	Volts	µS	°C
SC3BJ05 SC3BJ1 SC3BJ2 SC3BJ4 SC3BJ6	3.0	75	1.1	2.0	-55 to +150

[1] Measured on discrete devices prior to assembly

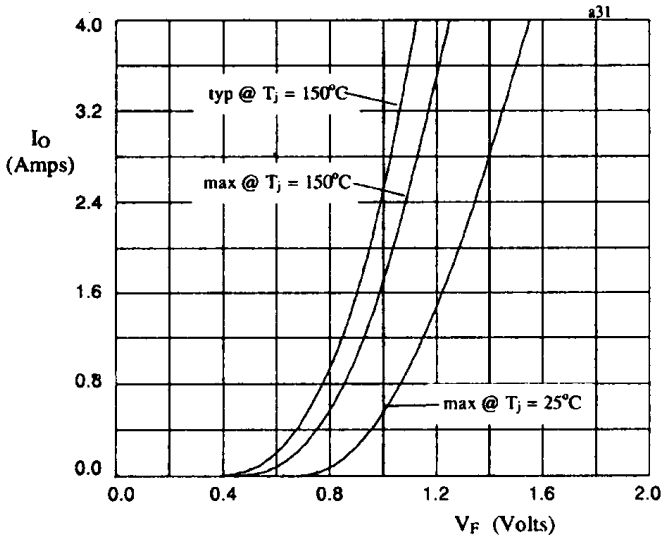

Fig 1. Forward voltage drop against output current per leg

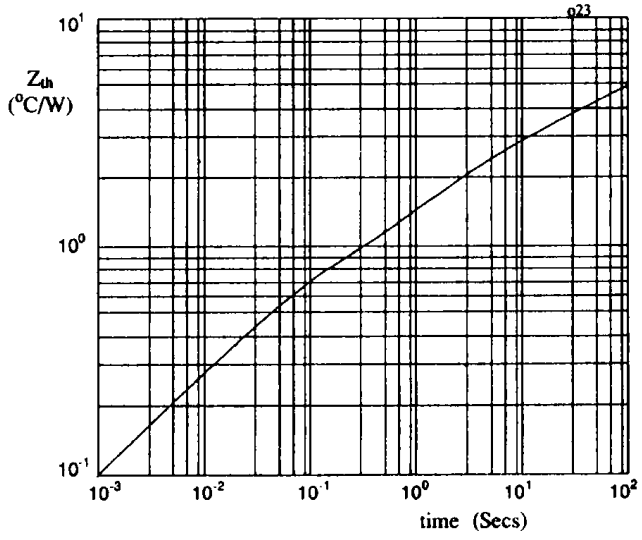

Fig 2. Transient thermal impedance characteristic per leg