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HIGH CURRENT, 1-PHASE FULL WAVE BRIDGE ASSEMBLY

SET061203
SET061219
SET061212
SET061204
SET061211

January 16, 1998

HIGH CURRENT, HIGH DENSITY, SINGLE PHASE FULL WAVE BRIDGE RECTIFIER.

- Low thermal impedance
- Small size and low weight
- High current applications
- Isolated for direct heatsink mounting
- High surge ratings

QUICK REFERENCE DATA

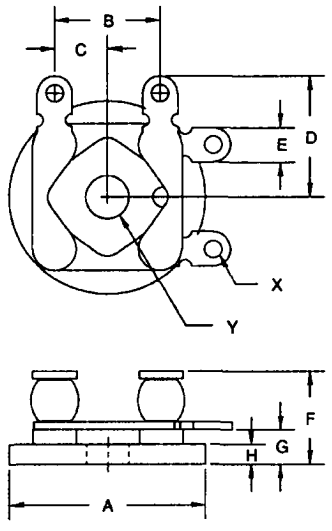
- V_{RWM} = 150V - 1000V
- I_O = 30A
- t_{rr} = 30nS - 2µS
- I_{FSM} ≥ 150A

ABSOLUTE MAXIMUM RATINGS

Device Type	Working Reverse Voltage (V_{RWM})	Average Rectified Current ($I_{F(AV)}$) @ T_{MB}			1 Cycle Surge Current I_{FSM} @ t_p = 8.3mS		Operating & Storage Temperature Range	
		@ 55°C	100°C	125°C	@ 25°C	@ 100°C	(T_{OP})	(T_{STG})
	Volts	Amps	Amps	Amps	Amps	Amps	°C	
SET061203	1000	30	22	16	150	100	-55 to +175	
SET061219	1000	20	16	12	150	80	-55 to +175	
SET061212	600	30	22	16	150	100	-55 to +175	
SET061204	400	30	22	16	150	80	-55 to +175	
SET061211	150	30	20	14	175	175	-55 to +150	

$R_{\theta JMB}$ = 0.75°C/W

MECHANICAL



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DIM	DIMENSIONS MM MIN	MM MAX	INCHES MIN	INCHES MAX	NOTE
A	19.3	20.1	.76	.79	DIA
B	10.4	11.2	.41	.44	-
C	5.0	5.6	.20	.22	-
D	12.1	13.0	.48	.51	-
E	3.3	3.8	.13	.15	-
F	9.3	10.2	.32	.40	-
G	3.3	4.1	.13	.16	-
H	2.0	2.3	.07	.09	-
X	1.7	2.0	.067	.077	DIA
Y	4.2	4.4	.167	.172	DIA

NOTES:
1. TERMINAL MARKING
RED DOT, POSITIVE
BLACK DOT, NEGATIVE
YELLOW DOT, A.C.

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ELECTRICAL CHARACTERISTICS

Device Type	Maximum Leakage Current I_R @ V_{RWM}		Maximum Forward Voltage V_F @ 9A/leg @ 25°C	Maximum Reverse Recovery Time [1] t_{rr} @ 25°C
	T_j = 25 °C	T_j = 100 °C		
	µA	µA	Volts	nS
SET061203	2.0	40	1.2	2000
SET061219	2.0	50	2.2	150
SET061212	2.0	40	1.2	2000
SET061204	2.0	40	1.5	150
SET061211	20.0	1mA	1.1	30

[1] Measured on discrete devices prior to assembly

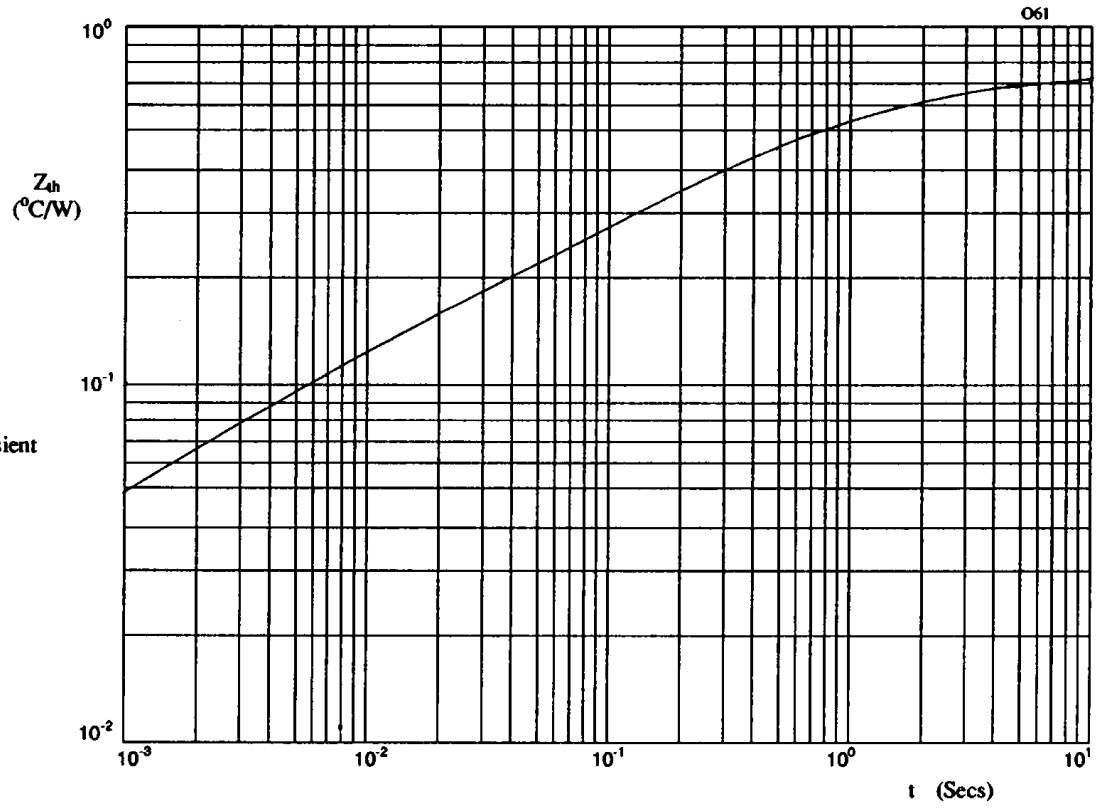

Figure 1. Typical transient thermal impedance characteristic.

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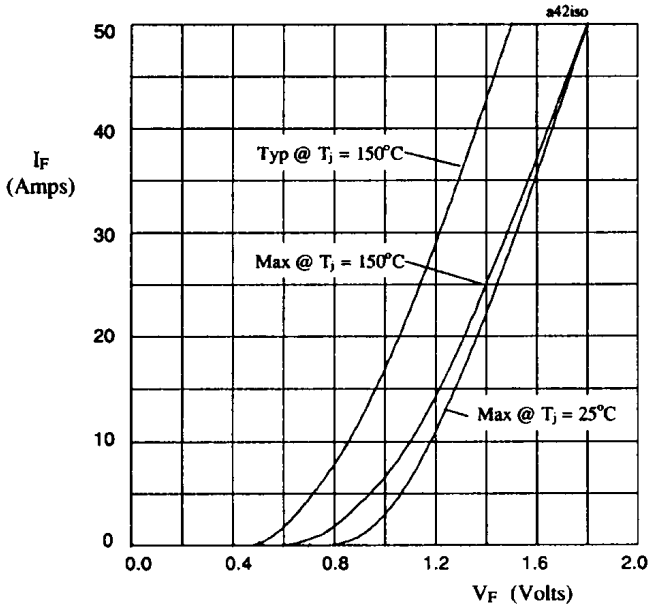

Figure 2. Forward voltage drop per leg as a function of forward current for SET061203 & SET061212.

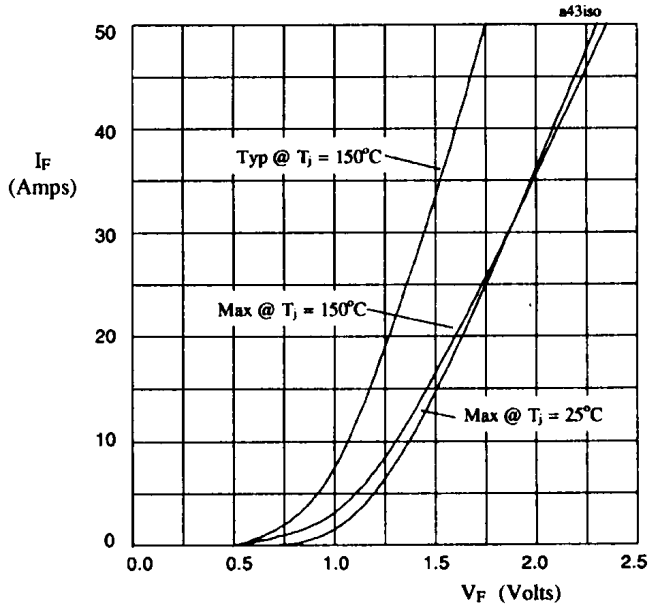

Figure 3. Forward voltage drop per leg as a function of forward current for SET061204.

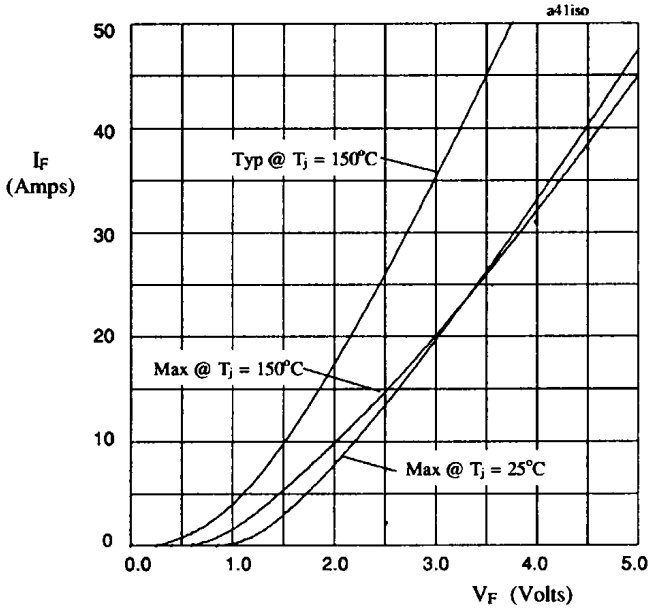

Figure 4. Forward voltage drop per leg as a function of forward current for SET061219.

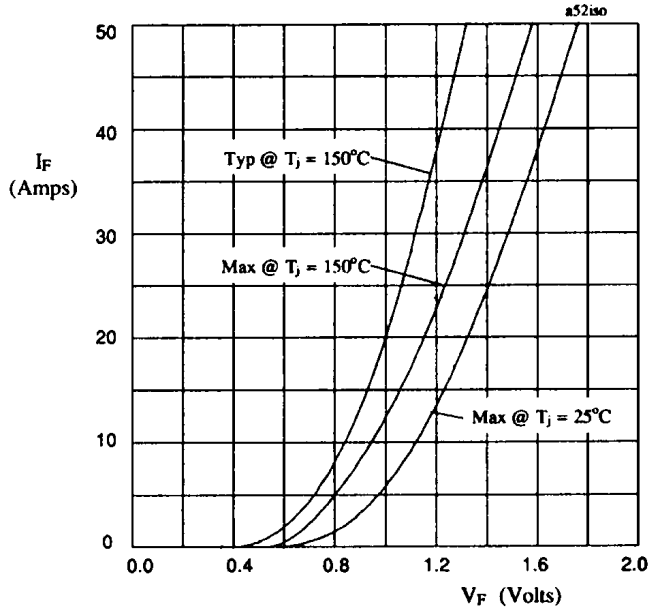

Figure 5. Forward voltage drop per leg as a function of forward current for SET061211.

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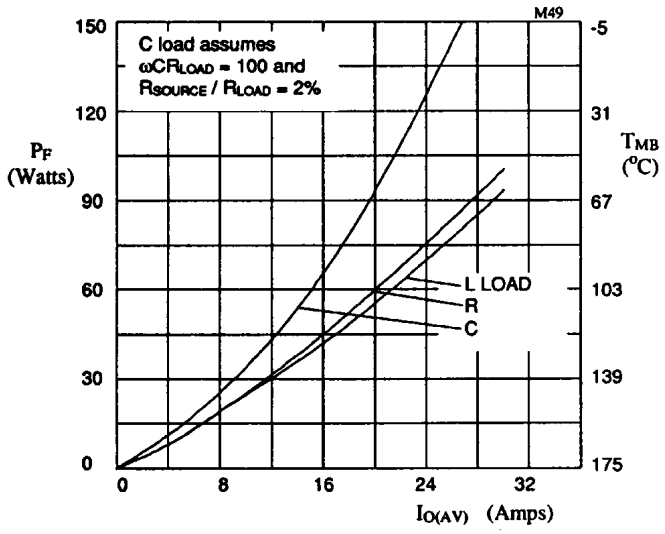

Figure 6. Forward power dissipation and maximum allowable mounting base temperature as a function of output current for sinusoidal operation, for SET061203 and SET061212.

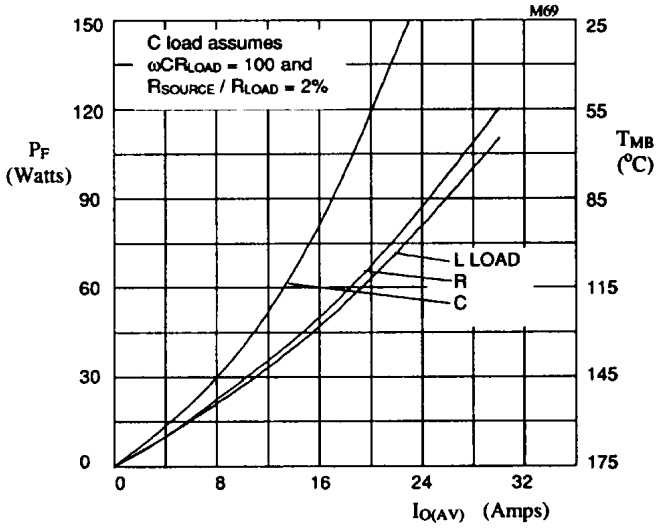

Figure 7. Forward power dissipation and maximum allowable mounting base temperature as a function of output current for sinusoidal operation, for SET061204.

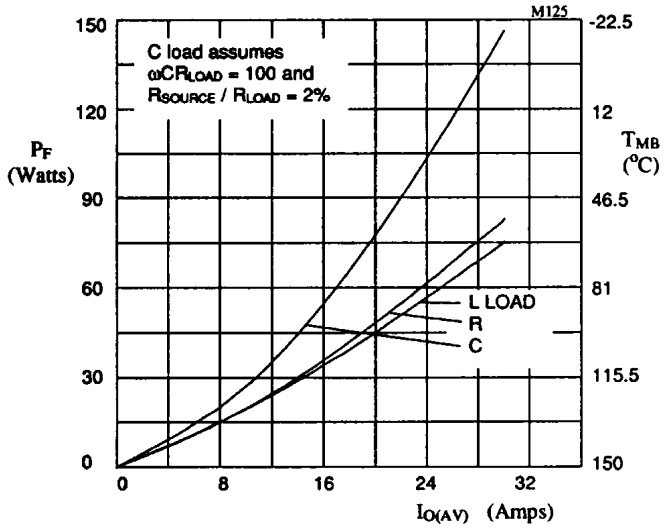

Figure 8. Forward power dissipation and maximum allowable mounting base temperature as a function of output current for sinusoidal operation, for SET061211.