RECTIFIER ASSEMBLIES

Three Phase Bridges, 20-40 Amp, High Efficiency, ESP

FEATURES

- Current Ratings: to 40A
- Recovery Time: 50ns
- Surge Ratings: to 250A
- PIVs: from 50 to 150V
- Only Fused-in-Glass Diodes Used
- Exceptionally High Efficiency
- Aluminum Heat Sink Case, Electrically Insulated

DESCRIPTION

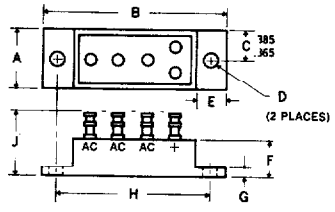
This series of three phase bridges offers the highest efficiency possible for applications where nothing else will do. The series allows operation at full power at high frequencies.

ABSOLUTE MAXIMUM RATINGS

Peak Inverse Voltages	50 to 150V
Maximum Average D.C. Output Current	See Electrical Specifications
Non-Repetitive Sinusoidal Surge (8.3ms)	See Electrical Specifications
Operating and Storage Temperature Range, T_C	−65°C to +150°C
Thermal Resistance Junction to Ambient, All Series	20°C/W
Junction to Case, 800 Series	1.5°C/W
Junction to Case, 801 Series	3.0°C/W

MECHANICAL SPECIFICATIONS

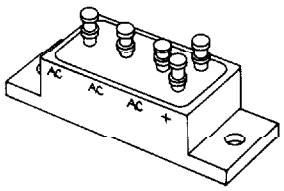
800, 801 SERIES



	ins.	mm.
A	.740-.760	18.80-19.30
B	2.240-2.260	56.90-57.40
C	.365-.385	9.27-9.78
D	.164-.174 DIA.	4.17-4.42 DIA.
E	.370-.390	9.40-9.91
F	.486-.506	12.34-12.85
G	.115-.135	2.92-3.43
H	1.870-1.880	47.50-47.75
J	.820 MAX.	20.83 MAX.

Typical Weight — 1.0 ounce
30 grams

ME



MARKING

Alternating Current Input	A.C.
Cathode — Positive Output	+
Anode — Negative	−

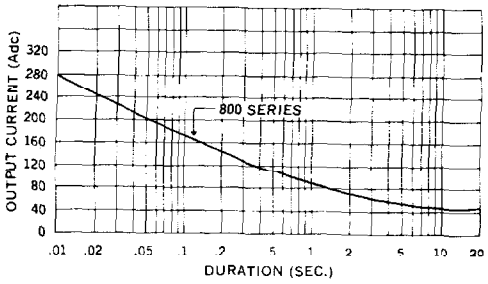
Part number is printed on the body.

Microsemi Corp.
Watertown
The diode experts

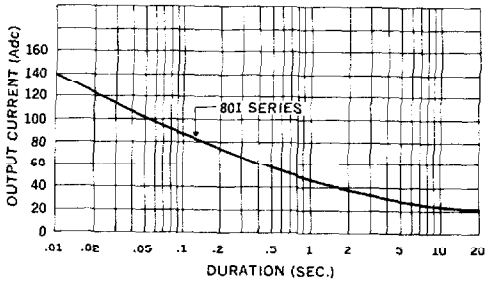
Electrical Specifications (at 25°C unless noted)							Maximum Ratings		
Type		PIV Per Leg	Maximum Forward Voltage Drop Per Leg	Maximum Reverse Leakage Current Per Leg @ PIV		Maximum Reverse Recovery Time*	Maximum Average D.C. Output Current		Non-Repetitive Sinusoidal Surge (8.3ms)
				$T_A = 25°C$	$T_A = 100°C$		$T_C = 55°C$	$T_C = 100°C$	$T_A = 100°C$
		Volts		μA	μA	ns	Amps	Amps	Amps
ESP Recovery	800-1	50	.95V @ 10A	20	1000	50	40	25	250
	800-2	100							
	800-3	125							
	800-4	150							
ESP Recovery	801-1	50	.95V @ 6A	10	300	50	20	16	125
	801-2	100							
	801-3	125							
	801-4	150							

*Measured in a reverse recovery circuit switching from 1A forward to 1A reverse current recovering to 0.5A.

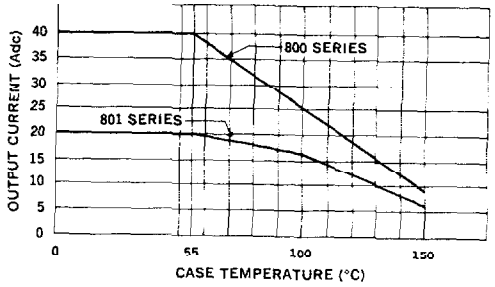
Forward Surge Current vs. Duration



Forward Surge Current vs. Duration



Current Derating Curve



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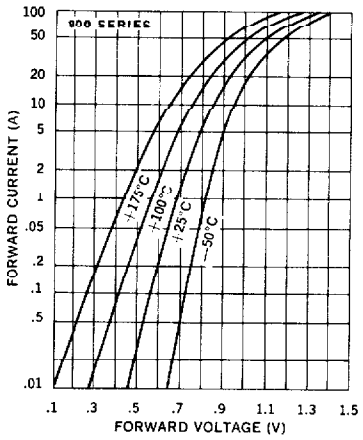
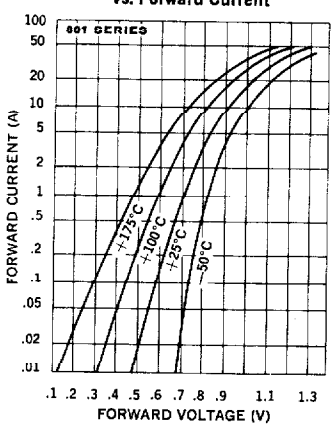
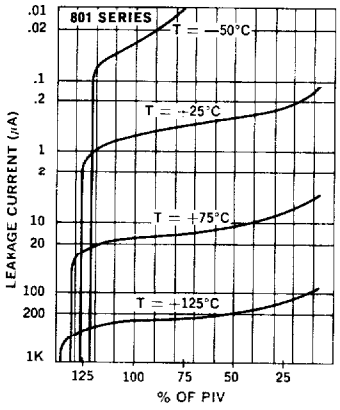
Typical Forward Voltage Per Leg vs. Forward Current



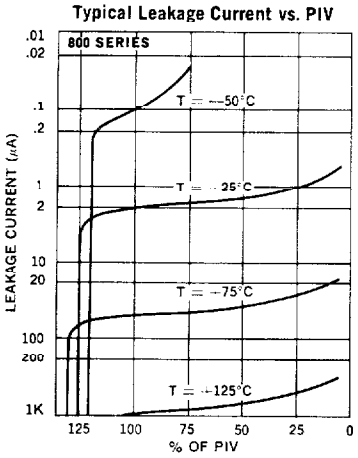
Typical Forward Voltage Per Leg vs. Forward Current



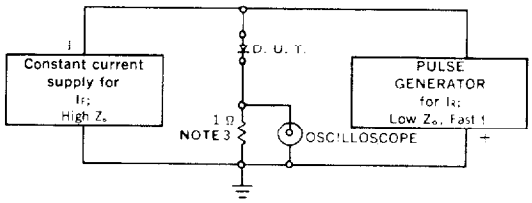
Typical Leakage Current vs. PIV



Typical Leakage Current vs. PIV

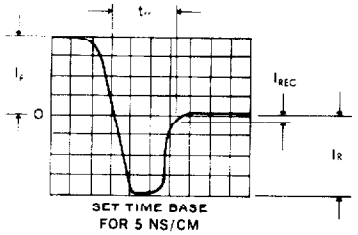


Reverse-Recovery Circuit



NOTES:
1. Oscilloscope: Rise time ≤ 3ns; input impedance = 50Ω.
2. Pulse Generator: Rise time ≤ 8ns; source impedance 10Ω.
3. Current viewing resistor, non-inductive, coaxial recommended.

Characteristic Waveform



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