

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

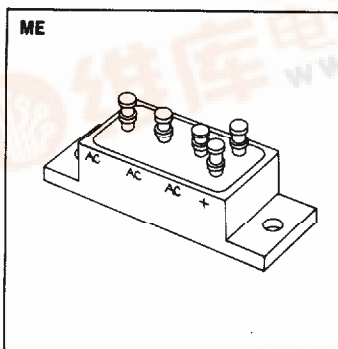
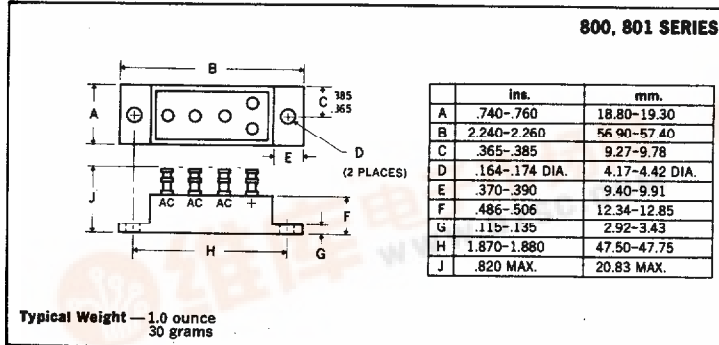
DESCRIPTION

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



MARKING

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

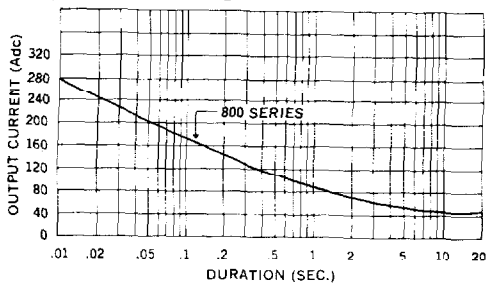
Part number is printed on the body.

Microsemi Corp.
Watertown
The diode experts

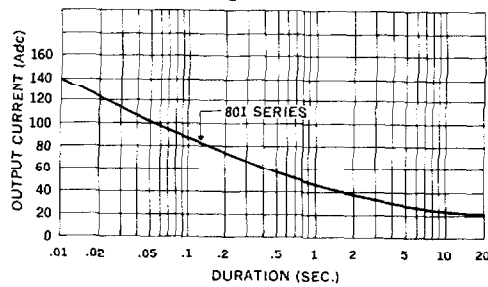
Electrical Specifications (at 25°C unless noted)						Maximum Ratings		
Type	PIV Per Leg	Maximum Forward Voltage Drop Per Leg	Maximum Reverse Leakage Current Per Leg @ PIV		Maximum Reverse Recovery Time*	Maximum Average D.C. Output Current		Non-Repetitive Sinusoidal Surge (8.3ms) $T_A = 100^\circ\text{C}$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

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

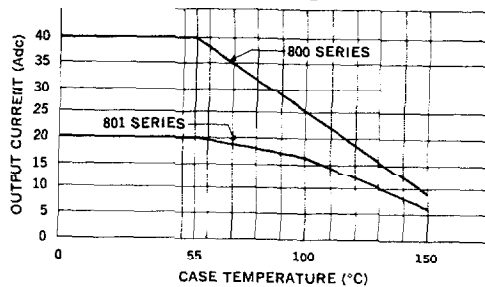
Forward Surge Current vs. Duration



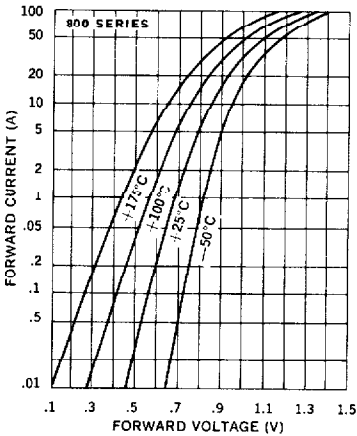
Forward Surge Current vs. Duration



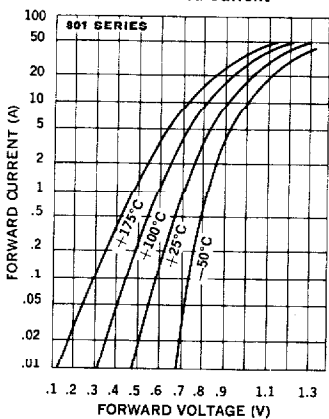
Current Derating Curve



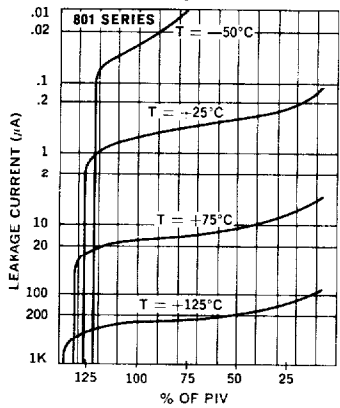
Typical Forward Voltage Per Leg vs. Forward Current



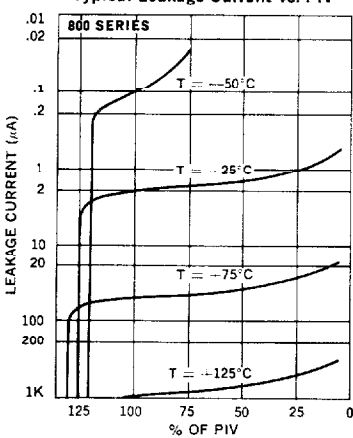
Typical Forward Voltage Per Leg vs. Forward Current



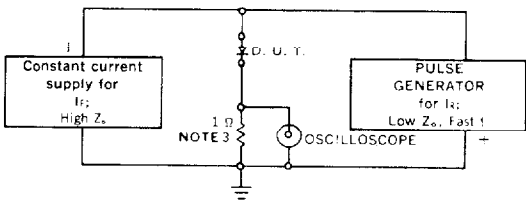
Typical Leakage Current vs. PIV



Typical Leakage Current vs. PIV



Reverse-Recovery Circuit



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

Characteristic Waveform

