

RECTIFIER ASSEMBLIES

Single Phase Bridges, 20-35 Amp,
High Efficiency ESP Series

FEATURES

- Current Ratings: to 35A
- Recovery Time: 50ns
- Surge Ratings: to 250A
- PIVs: from 50 to 150V
- Only Fused-in-Glass Diodes Used
- Exceptional High Efficiency
- Aluminum Heat Sink Case, Electrically Insulated

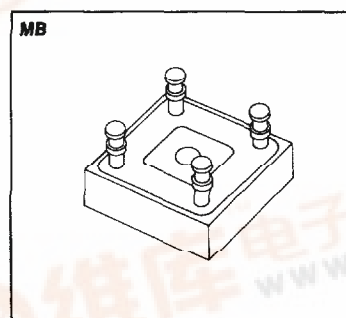
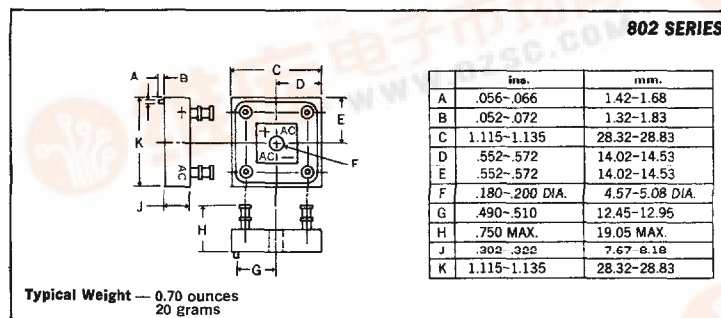
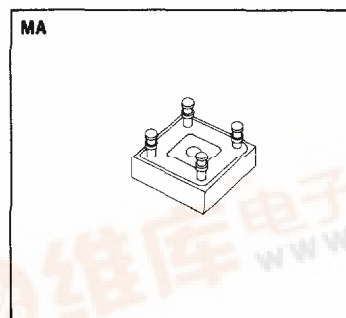
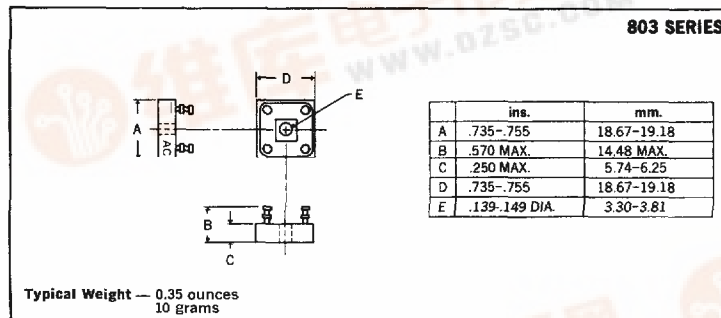
DESCRIPTION

This series of single phase bridges offer the highest efficiency possible for applications where nothing else will do. The series allow operation at full power at very high frequency.

ABSOLUTE MAXIMUM RATINGS

Peak Inverse Voltage	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, 802 Series	20°C/W
803 Series	25°C/W
Junction to Case, 802 Series	2.0°C/W
803 Series	4.0°C/W

MECHANICAL SPECIFICATIONS

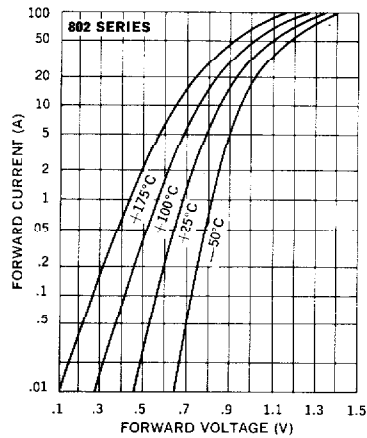


Microsemi Corp.
Watertown
The diode experts

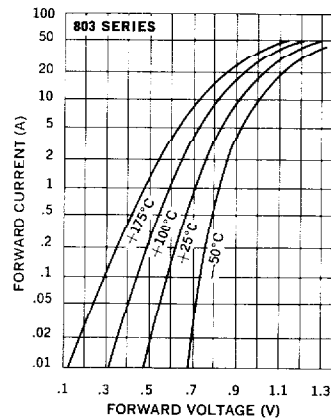
Electrical Specifications (at 25°C unless noted)						Maximum Ratings			
Type	PIV Per Leg	Maximum Forward Voltage Drop Per Leg	Maximum Reverse Leakage Current Per Leg @ PIV		Maximum Reverse Recovery Time*	Maximum Average D.C. Output Current		Non-Repetitive Sinusoidal Surge (8.3ms)	
			T _A = 25°C	T _A = 100°C		T _C = 55°C	T _C = 100°C		T _A = 100°C
	Volts		μA	μA	ns	Amps	Amps	Amps	
ESP Recovery	802-1	50	.95V @ 10A	20	1000	50	35	22.5	250
	802-2	100							
	802-3	125							
	802-4	150							
ESP Recovery	803-1	50	.95V @ 6A	10	300	50	20	16	125
	803-2	100							
	803-3	125							
	803-4	150							

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

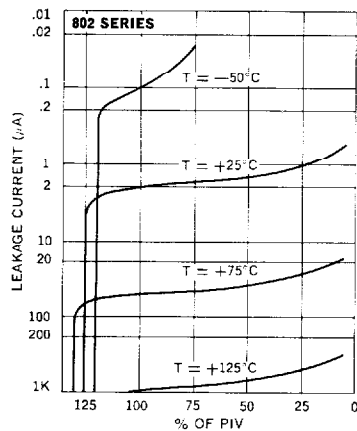
Typical Forward Voltage Per Leg vs. Forward Current



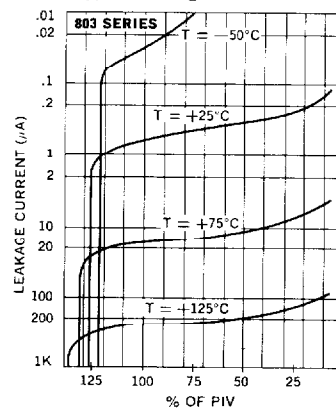
Typical Forward Voltage Per Leg vs. Forward Current

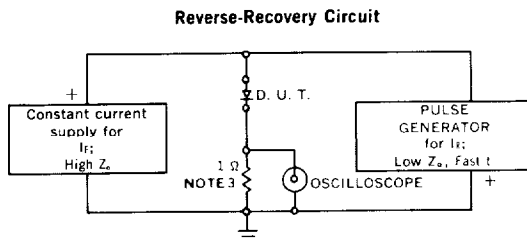
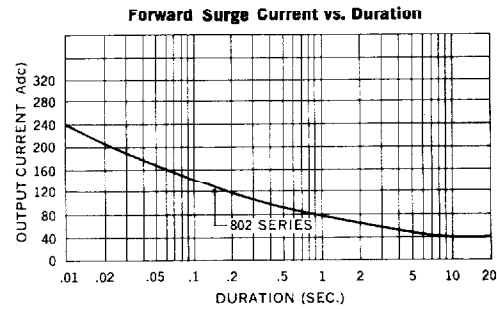
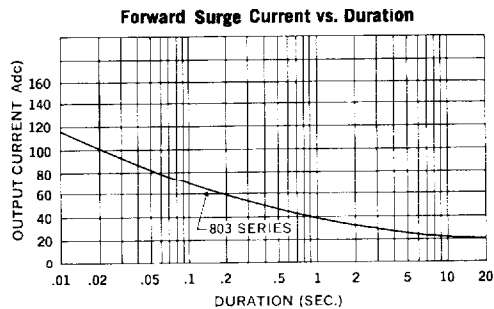
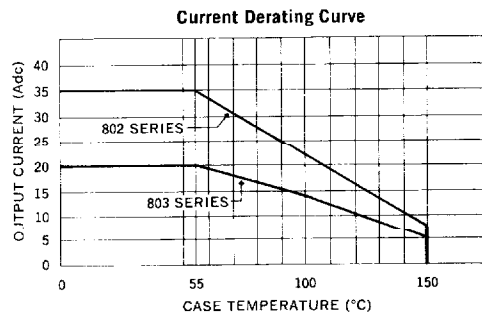


Typical Leakage Current vs. PIV



Typical Leakage Current vs. PIV



**NOTES:**

1. Oscilloscope: Rise time $\leq 3\text{ns}$; input impedance $= 50\Omega$.
2. Pulse Generator: Rise time $\leq 8\text{ns}$; source impedance 10Ω .
3. Current viewing resistor, non-inductive, coaxial recommended.

