

RECTIFIER ASSEMBLIES

802, 803 SERIES

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

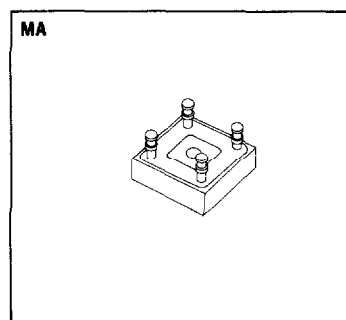
Peak Inverse Voltage	50 to 150V
Maximum Average D.C. Output Current	See Electrical Specifications
Non-Repetitive Sinusoidal Surge (8.3ms)	See Electrical Specifications
Operating and Storage Temperature Range, T_C	-65°C to +150°C
Thermal Resistance Junction to Ambient, 802 Series	20°C/W
803 Series	25°C/W
Junction to Case, 802 Series	2.0°C/W
803 Series	4.0°C/W

MECHANICAL SPECIFICATIONS

803 SERIES

	ins.	mm.
A	.735-.755	18.67-19.18
B	.570 MAX.	14.48 MAX.
C	.250 MAX.	5.74-6.25
D	.735-.755	18.67-19.18
E	.139-.149 DIA.	3.30-3.81

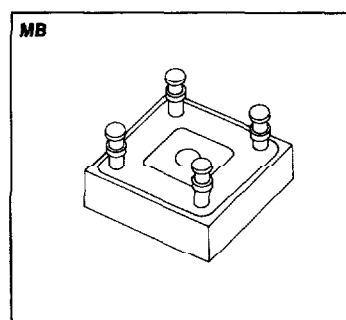
Typical Weight — 0.35 ounces
10 grams



802 SERIES

	ins.	mm.
A	.056-.066	1.42-1.68
B	.052-.072	1.32-1.83
C	1.115-1.135	28.32-28.83
D	.552-.572	14.02-14.53
E	.552-.572	14.02-14.53
F	.180-.200 DIA.	4.57-5.08 DIA.
G	.490-.510	12.45-12.96
H	.750 MAX.	19.05 MAX.
J	.302-.322	7.67-8.18
K	1.115-1.135	28.32-28.83

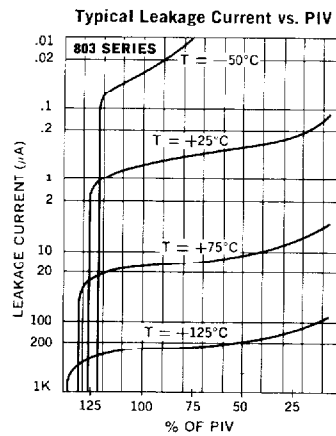
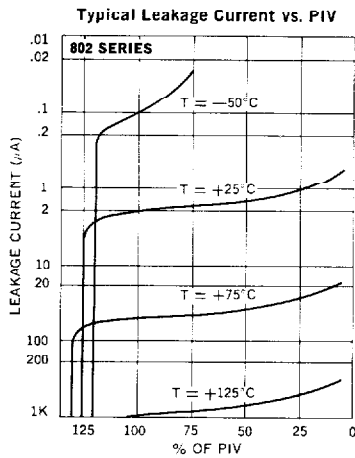
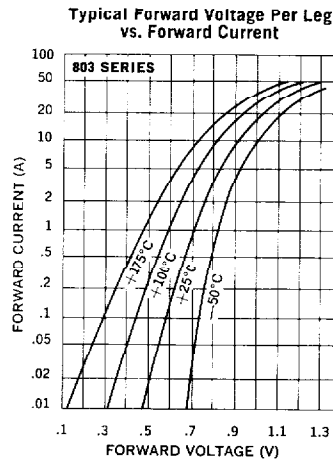
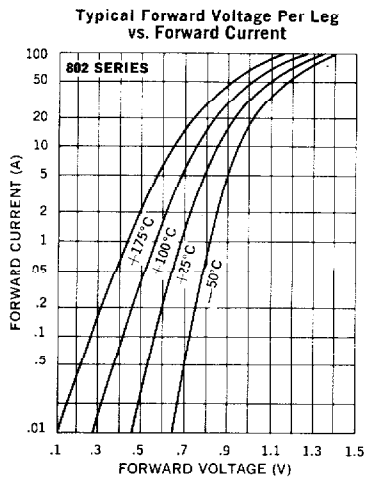
Typical Weight — 0.70 ounces
20 grams



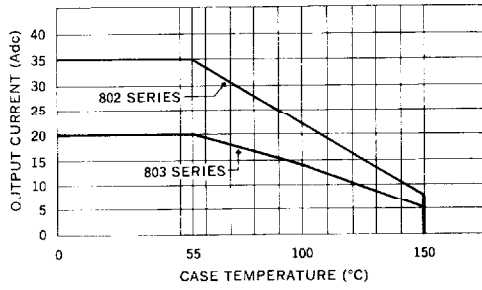
Microsemi Corp.
Watertown
The diode experts

Electrical Specifications (at 25°C unless noted)						Maximum Ratings			
Type	PIV Per Leg Volts	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°C	
			T _A = 25°C μA	T _A = 100°C μA		T _C = 55°C Amps	T _C = 100°C Amps		
ESP Recovery 802-1 802-2 802-3 802-4	50	.95V @ 10A	20	1000	50	35	22.5	250	
	100								
	125								
	150								
ESP Recovery 803-1 803-2 803-3 803-4	50	.95V @ 6A	10	300	50	20	16	125	
	100								
	125								
	150								

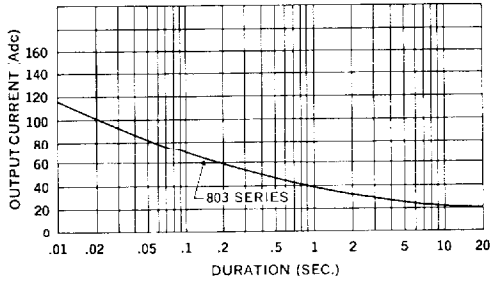
*Measured in a reverse recovery circuit switching from 1A forward to 1A reverse current recovering to 0.5A.



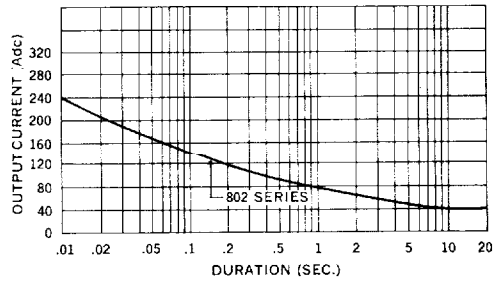
Current Derating Curve



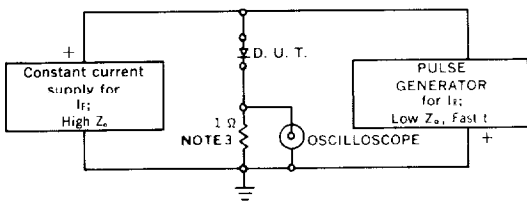
Forward Surge Current vs. Duration



Forward Surge Current vs. Duration



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

