RECTIFIER ASSEMBLIES

Doublers and Center Tap, 20 Amp, High Efficiency, ESP

3

FEATURES
- Current Rating: to 20A
- Aluminum Heat Sink Case, Electrically Insulated
- Recovery Time: 50ns
- Surge Ratings of 250A
- PIVs: from 50 to 150V
- Only Fused-in-Glass Diodes Used
- Exceptional High Efficiency

DESCRIPTION
This series of doublers and center tap rectifiers offer the ultimate in high efficiency application. The rectifiers are particularly suited to switching regulator supplies where very fast recovery time and low forward drop are of prime importance.

ABSOLUTE MAXIMUM RATINGS

Peak Inverse Voltage	50 to 150V
Maximum Average D.C. Output Current	
@ $T_C = +55°C$	20A
@ $T_C = +100°C$	14A
Non-Repetitive Sinusoidal Surge (8.3ms)	
@ $T_A = +100°C$	250A
Operating and Storage Temperature Range, T_C	−65°C to +150 C
Thermal Resistance Junction to Ambient	20°C/W
Junction to Case	6.0°C/W

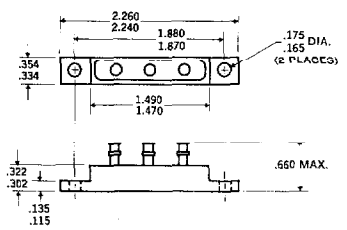
Electrical Specifications (at 25°C unless noted)

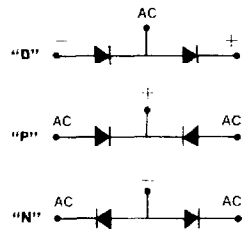
Type		PIV Per Leg	Maximum Forward Voltage Drop Per Leg	Maximum Leakage Current (μA) Per Leg @ PIV T_A = 25°C	Maximum Leakage Current (μA) Per Leg @ PIV T_A = 100°C	Maximum Reverse Recovery Time*
		Volts		μA	μA	ns
ESP Recovery	804-1	50	.95V @ 10A	10	500	50
	804-2	100				
	804-3	125				
	804-4	150				

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

MECHANICAL SPECIFICATIONS

804 SERIES

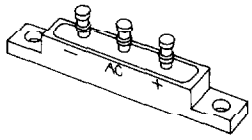




Dimensions in inches.

Typical Weight — 0.35 ounces 10 grams

MF



MARKING

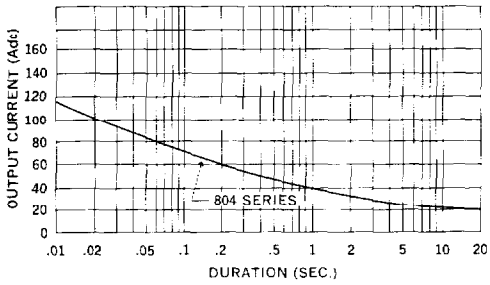
Alternating Current Input	A.C.
Cathode — Positive Output	+
Anode — Negative	—

Part number is printed on the body

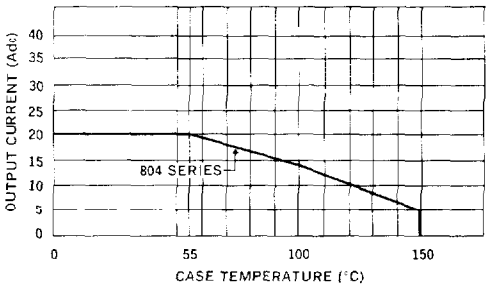
† Add suffix P, N, or D for terminal configuration P, N, or D. For example, for center tap configuration, P, order 804-IP

Microsemi Corp. Watertown
The diode experts

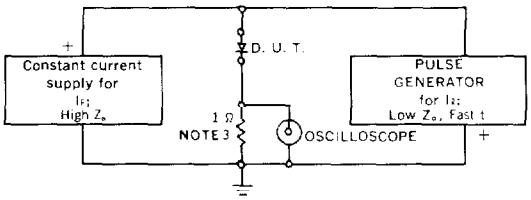
Forward Surge Current vs. Duration



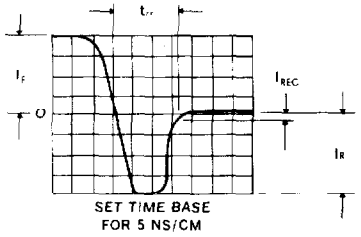
Current Derating Curve



Reverse-Recovery Circuit

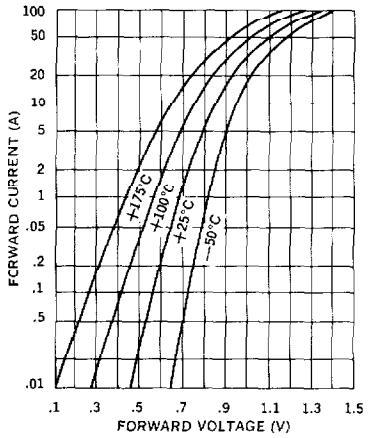


Characteristic Waveform

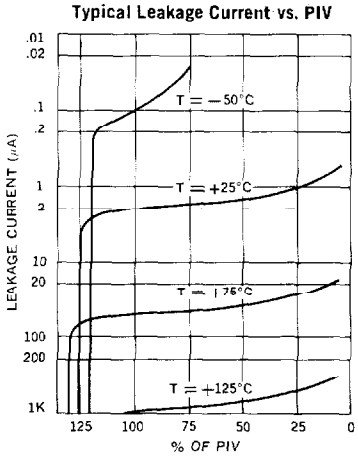


NOTES:
1. Oscilloscope: Rise time ≤ 3ns; input impedance = 50Ω.
2. Pulse Generator: Rise time ≤ 8ns; source impedance 10Ω.
3. Current viewing resistor, non-inductive, coaxial recommended.

Typical Forward Voltage Per Leg vs. Forward Current



Typical Leakage Current vs. PIV



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