

# RECTIFIER ASSEMBLIES

804 SERIES

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

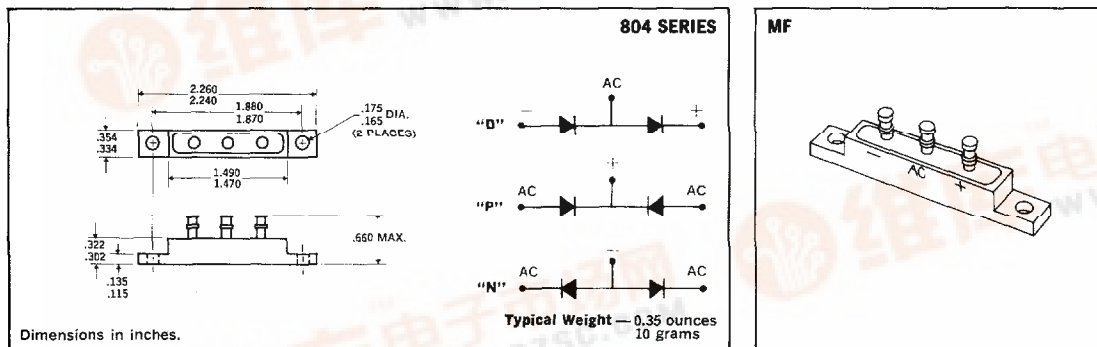
|                                                |                                             |
|------------------------------------------------|---------------------------------------------|
| Peak Inverse Voltage                           | 50 to 150V                                  |
| Maximum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

## Electrical Specifications (at $25^\circ\text{C}$ unless noted)

| Type           | PIV<br>Per<br>Leg | Maximum<br>Forward<br>Voltage Drop<br>Per Leg | Maximum<br>Leakage<br>Current ( $\mu\text{A}$ )<br>Per Leg @ PIV |                           | Maximum<br>Reverse<br>Recovery<br>Time* |
|----------------|-------------------|-----------------------------------------------|------------------------------------------------------------------|---------------------------|-----------------------------------------|
|                |                   |                                               | $T_A = 25^\circ\text{C}$                                         | $T_A = 100^\circ\text{C}$ |                                         |
|                | Volts             |                                               | $\mu\text{A}$                                                    | $\mu\text{A}$             | ns                                      |
| ESP 804-1      | 50                | .95V @ 10A                                    | 10                                                               | 500                       | 50                                      |
| Recovery 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



## MARKING

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

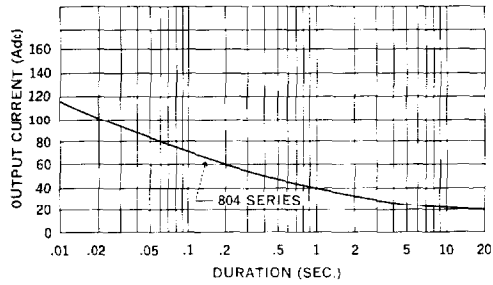
Part number is printed on the body

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

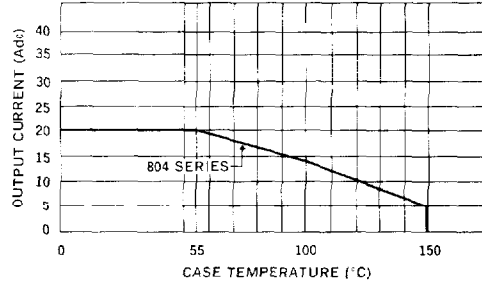
**Microsemi Corp.**  
**Watertown**  
The diode experts

# 查询"804"供应商

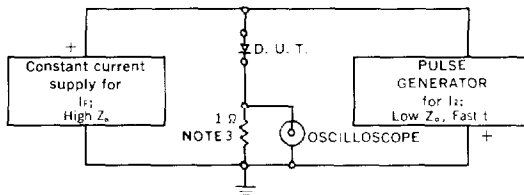
## Forward Surge Current vs. Duration



## Current Derating Curve



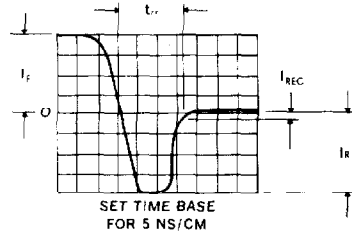
## Reverse-Recovery Circuit



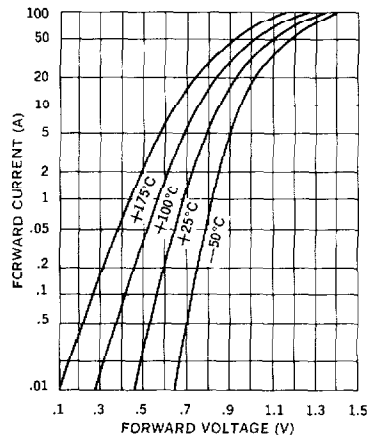
### NOTES:

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

## Characteristic Waveform



## Typical Forward Voltage Per Leg vs. Forward Current



## Typical Leakage Current vs. PIV

