

# RECTIFIER ASSEMBLIES

700, 701 SERIES

3

## Three Phase Bridges, 2.5 Amp, Standard and Fast Recovery

### FEATURES

- Miniature Package
- Recovery Time: to 500ns
- Surge Ratings: to 25A
- PIV: from 100 to 600V
- Controlled Avalanche Characteristics
- Only Fused-in-Glass Diodes Used

### DESCRIPTION

These miniature transfer-molded high-voltage three-phase power bridges are designed for universal application in power supplies. One basic bridge fills current requirements up to 2.5A, with PIV's from 100 to 600 volts and recovery times of standard and 500ns.

### ABSOLUTE MAXIMUM RATINGS

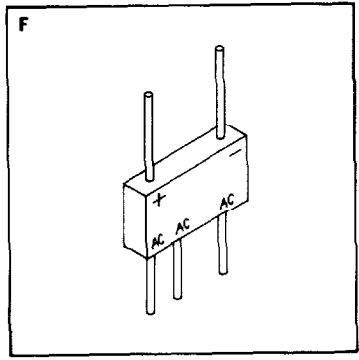
|   |                               |
|---|-------------------------------|
| Peak Inverse Voltage .....                    | 100 to 600V                   |
| Maximum Average D.C. Output Current .....     | See Electrical Specifications |
| Non-Repetitive Sinusoidal Surge (8.3ms) ..... | See Electrical Specifications |
| Operating and Storage Temperature Range ..... | -65°C to +150°C               |
| Thermal Resistance Junction-to-Ambient .....  | 25°C/W                        |

### MECHANICAL SPECIFICATIONS

**700, 701 SERIES**

|   | Ins.       | mm.        |
|---|------------|------------|
| A | .310       | 7.87       |
| B | .621       | 15.77      |
| C | .512 REF.  | 13.0 REF.  |
| D | .460 MAX.  | 11.68 MAX. |
| E | .255       | 6.48       |
| F | 1.030 MAX. | 26.16 MAX. |
| G | .220 MAX.  | 5.59 MAX.  |
| H | .875       | 22.23      |
| J | .028 DIA.  | 0.71 DIA.  |

Typical Weight — 0.12 ounces  
3.5 grams



### MARKING

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

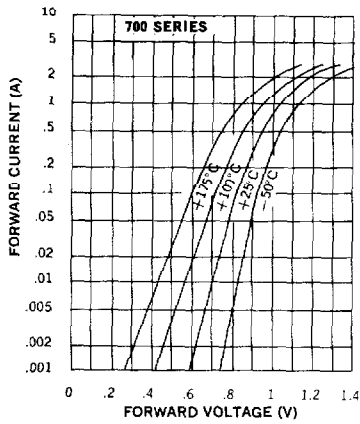
Part number is printed on the body.

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

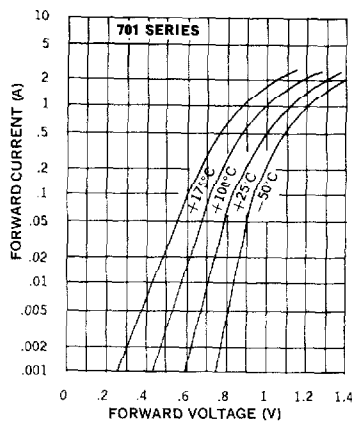
| Electrical Specifications (at 25°C unless noted) |             |                                      |                               |                        | Maximum Ratings                |                                     |   |
|--|-------------|--------------------------------------|-------------------------------|------------------------|--------------------------------|-------------------------------------|---|
| Type   | PIV Per Leg | Maximum Forward Voltage Drop Per Leg | Leakage Current Per Leg @ PIV |                        | Maximum Reverse Recovery Time† | Maximum Average D.C. Output Current | Non-Repetitive Sinusoidal Surge (8.3ms) |
|  |             |                                      | T <sub>A</sub> = 25°C         | T <sub>A</sub> = 100°C |                                | T <sub>A</sub> = 55°C               |   |
|  | Volts       |                                      | µA                            | µA                     | ns                             | Amps                                | Amps                                    |
| Standard Recovery                                | 700-1       | 100                                  | 1.0V @ 0.5A                   | 2                      | 100                            | 2.5                                 | 25                                      |
|  | 700-2       | 200                                  |                               |                        |                                |                                     |   |
|  | 700-3       | 300                                  |                               |                        |                                |                                     |   |
|  | 700-4       | 400                                  |                               |                        |                                |                                     |   |
|  | 700-5       | 500                                  |                               |                        |                                |                                     |   |
|  | 700-6       | 600                                  |                               |                        |                                |                                     |   |
| Fast Recovery                                    | 701-1       | 100                                  | 1.1V @ 0.5A                   | 2                      | 100                            | 2.25                                | 20                                      |
|  | 701-2       | 200                                  |                               |                        |                                |                                     |   |
|  | 701-3       | 300                                  |                               |                        |                                |                                     |   |
|  | 701-4       | 400                                  |                               |                        |                                |                                     |   |
|  | 701-5       | 500                                  |                               |                        |                                |                                     |   |
|  | 701-6       | 600                                  |                               |                        |                                |                                     |   |

†Measured in a reverse recovery circuit switching from 10mA forward to 10mA reverse current recovering to 5mA.

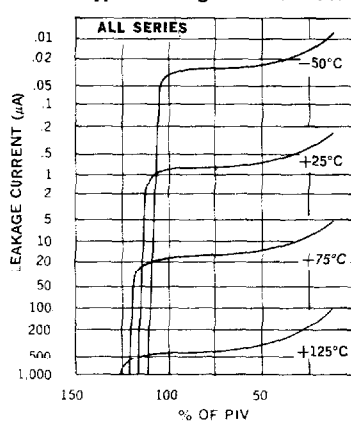
Typical Forward Voltage Per Leg vs. Forward Current



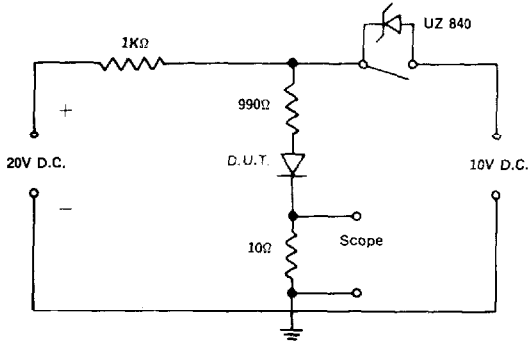
Typical Forward Voltage Per Leg vs. Forward Current



Typical Leakage Current vs. PIV



Reverse Recovery Circuit



Current Derating Curve

