

RECTIFIER ASSEMBLIES

Single Phase Bridges, High Voltage
0.125-0.6 Amp, Standard and Fast Recovery

673, 676 SERIES
(1200-5000V)

FEATURES

- Miniature High Voltage Bridges
- Continuous Ratings: to 0.6A
- Surge Ratings: to 15A
- PIV's: from 1200 to 5000V
- Recovery Times: to 500ns
- Controlled Avalanche Characteristics
- Only Fused in Glass Diodes Used

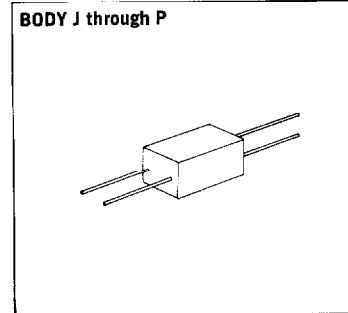
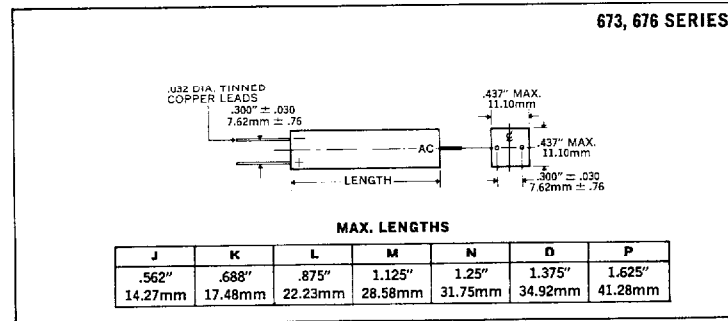
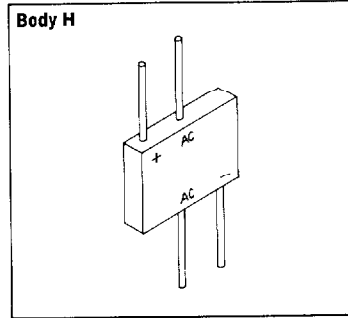
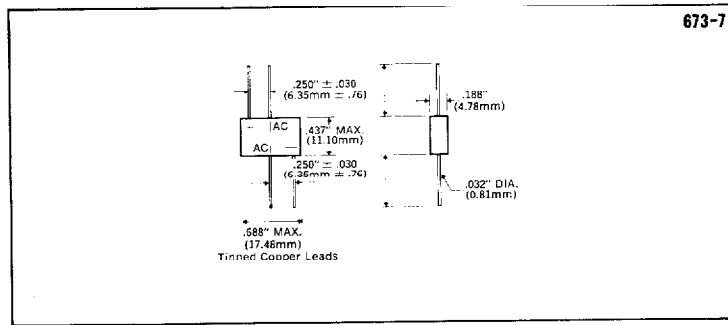
DESCRIPTION

These miniature molded high-voltage single phase bridges are designed for universal application in power supplies. The miniature package is shatterproof and is capable of handling extremes in temperature, vibration and shock. These bridges, therefore are ideally suited for miniaturized, tightly packaged equipment operating in extreme environments.

ABSOLUTE MAXIMUM RATINGS

Peak Inverse Voltage 1200 to 5000V
 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 50°C/W

MECHANICAL SPECIFICATIONS



MARKING

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

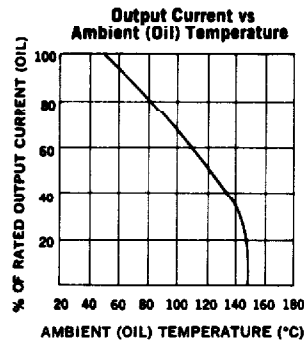
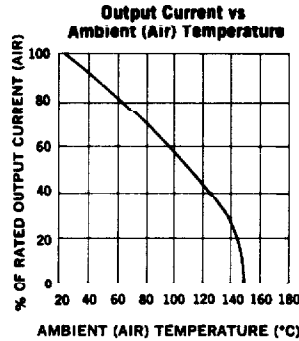
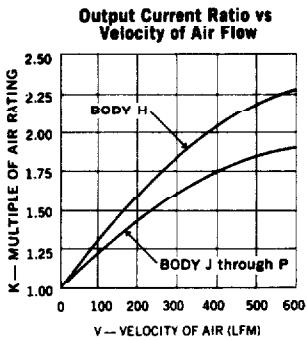
Part number is printed on the body.

Microsemi Corp.
Watertown
The diode experts

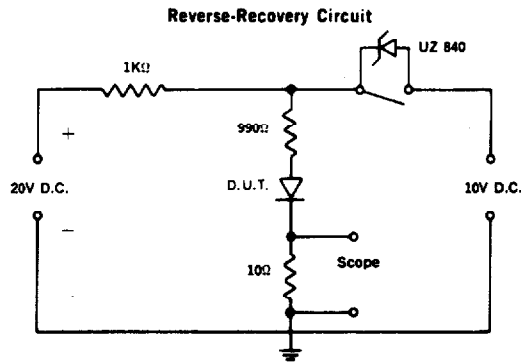
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| Type | Electrical Specifications at 25°C | | | | | Maximum Ratings | | | | |
|-------------------|-----------------------------------|--------------------------------------|-------------------------------|------------------------|--------------------------------|-----------------|-------------------------------------|---------------------------|---|-------|
| | PIV Per Leg | Maximum Forward Voltage Drop Per Leg | Leakage Current Per Leg @ PIV | | Maximum Reverse Recovery Time* | Body Size | Maximum Average D.C. Output Current | | Non-repetitive Sinusoidal Surge (8.3ms) | |
| | | | T _A = 25°C | T _A = 100°C | | | T _A = 25°C Air | T _A = 50°C Oil | | |
| Volts | μA | μA | ns | Amps | Amps | Amps | | | | |
| Standard Recovery | 673-7 | 1200 | 2.2V @ 0.4A | 2 | 100 | H | 0.6 | 1.5 | 15 | |
| | 673-75 | 1800 | 3.3V @ 0.4A | | | | J | 0.5 | | 1.25 |
| | 673-8 | 2400 | 4.4V @ 0.4A | | | | K | 0.4 | | 1.0 |
| | 673-85 | 3000 | 5.5V @ 0.3A | | | | L | 0.3 | | 0.75 |
| | 673-9 | 3600 | 6.6V @ 0.2A | | | | M | 0.2 | | 0.5 |
| | 673-10 | 4200 | 7.7V @ 0.2A | | | | N | 0.18 | | 0.45 |
| | 673-11 | 4800 | 8.8V @ 0.15A | | | | O | 0.16 | | 0.4 |
| 673-12 | 5000 | 9.0V @ 0.15A | O | 0.16 | 0.4 | | | | | |
| Fast Recovery | 676-12 | 1200 | 3.3V @ 0.3A | 5 | 150 | J | 0.4 | 1.0 | 10 | |
| | 676-18 | 1800 | 4.4V @ 0.2A | | | | K | 0.35 | | 0.85 |
| | 676-24 | 2400 | 5.5V @ 0.2A | | | | L | 0.325 | | 0.8 |
| | 676-30 | 3000 | 7.7V @ 0.2A | | | | M | 0.25 | | 0.625 |
| | 676-36 | 3600 | 8.8V @ 0.15A | | | | N | 0.175 | | 0.425 |
| | 676-42 | 4200 | 9.9V @ 0.15A | | | | O | 0.15 | | 0.375 |
| | 676-48 | 4800 | 11V @ 0.15A | | | | P | 0.135 | | 0.325 |
| | 676-50 | 5000 | 11V @ 0.15A | | | | P | 0.125 | | 0.3 |

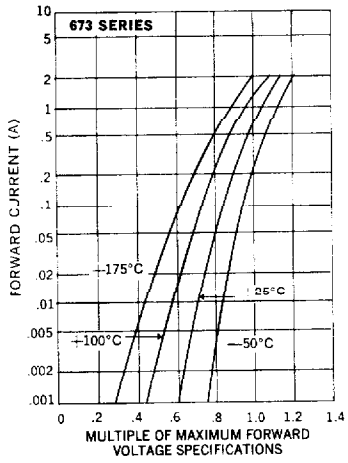
*Measured in a reverse recovery circuit switching from 10mA forward to 10mA reverse current recovering to 5mA.



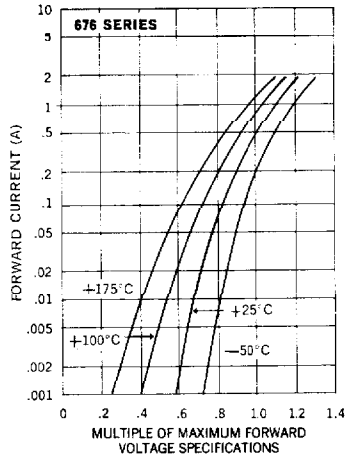
Application example: The rectifier is to be used in a cabinet at 60°C with ambient air moving at 400 LFM. The rating is reduced (Fig. 2) by a factor of 0.81 due to the elevated temperature, but is enhanced by 2.X (Fig. 1) due to the air flow. Hence the DC output current is 0.81 x 2, or 1.6 times the 25°C air rating.



Typical Forward Voltage vs Forward Current



Typical Forward Voltage vs Forward Current



Typical Leakage Current vs. Voltage

