

RECTIFIER ASSEMBLIES

Three Phase Bridges, 20-40 Amp,
High Efficiency, ESP

800, 801 SERIES

3

FEATURES

- Current Ratings: to 40A
- Recovery Time: 50ns
- Surge Ratings: to 250A
- PIVs: from 50 to 150V
- Only Fused-in-Glass Diodes Used
- Exceptionally High Efficiency
- Aluminum Heat Sink Case, Electrically Insulated

DESCRIPTION

This series of three phase bridges offers the highest efficiency possible for applications where nothing else will do. The series allows operation at full power at high frequencies.

ABSOLUTE MAXIMUM RATINGS

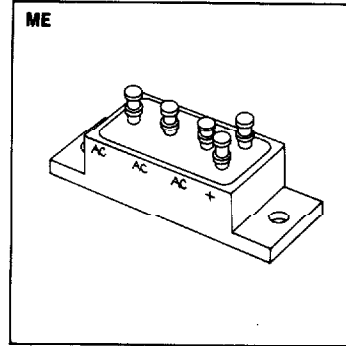
| | |
|---|-------------------------------|
| Peak Inverse Voltages | 50 to 150V |
| Maximum Average D.C. Output Current | See Electrical Specifications |
| Non-Repetitive Sinusoidal Surge (8.3ms) | See Electrical Specifications |
| Operating and Storage Temperature Range, T _C | -65°C to +150°C |
| Thermal Resistance Junction to Ambient, All Series | 20°C/W |
| Junction to Case, 800 Series | 1.5°C/W |
| Junction to Case, 801 Series | 3.0°C/W |

MECHANICAL SPECIFICATIONS

800, 801 SERIES

| | ins. | mm. |
|---|----------------|----------------|
| A | .740-.760 | 18.80-19.30 |
| B | 2.240-2.260 | 56.90-57.40 |
| C | .365-.385 | 9.27-9.78 |
| D | .164-.174 DIA. | 4.17-4.42 DIA. |
| E | .370-.390 | 9.40-9.91 |
| F | .486-.506 | 12.34-12.85 |
| G | .115-.135 | 2.92-3.43 |
| H | 1.870-1.880 | 47.50-47.75 |
| J | .820 MAX. | 20.83 MAX. |

Typical Weight — 1.0 ounce
30 grams



MARKING

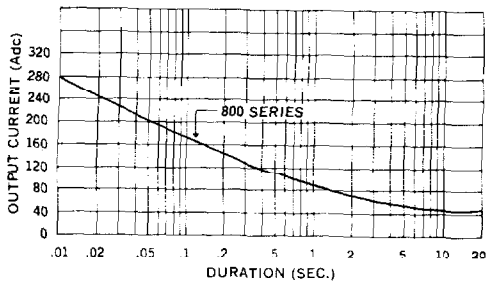
| | |
|---------------------------|------|
| Alternating Current Input | A.C. |
| Cathode — Positive Output | + |
| Anode — Negative | - |

Part number is printed on the body.

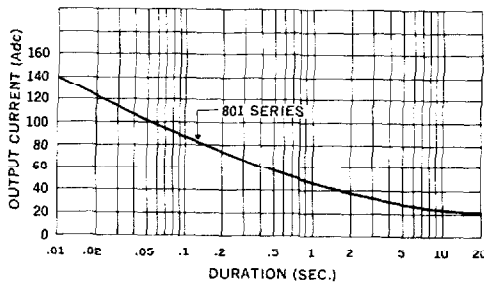
| Electrical Specifications (at 25°C unless noted) | | | | | | Maximum Ratings | | | |
|--|-------------|--------------------------------------|---|------------------------|--------------------------------|-------------------------------------|------------------------|---|-----|
| Type | PIV Per Leg | 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 = 25°C | T _A = 100°C | | T _C = 55°C | T _C = 100°C | | |
| | Volts | | μA | μA | ns | Amps | Amps | Amps | |
| ESP Recovery | 800-1 | 50 | .95V @ 10A | 20 | 1000 | 50 | 40 | 25 | 250 |
| | 800-2 | 100 | | | | | | | |
| | 800-3 | 125 | | | | | | | |
| | 800-4 | 150 | | | | | | | |
| ESP Recovery | 801-1 | 50 | .95V @ 6A | 10 | 300 | 50 | 20 | 16 | 125 |
| | 801-2 | 100 | | | | | | | |
| | 801-3 | 125 | | | | | | | |
| | 801-4 | 150 | | | | | | | |

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

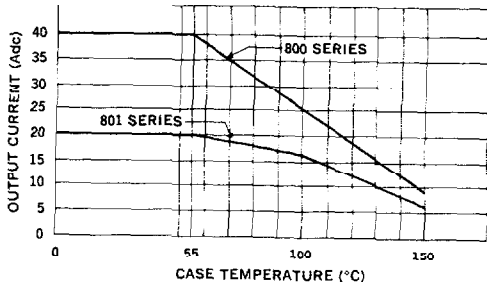
Forward Surge Current vs. Duration



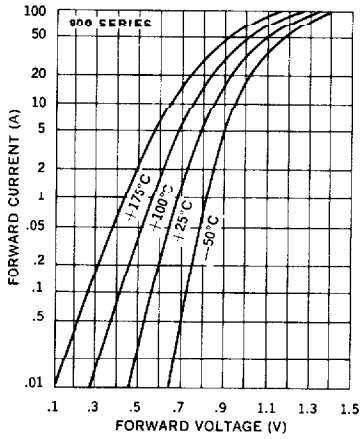
Forward Surge Current vs. Duration



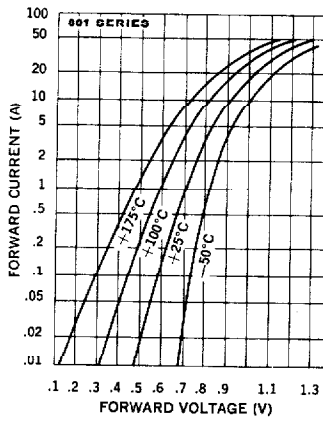
Current Derating Curve



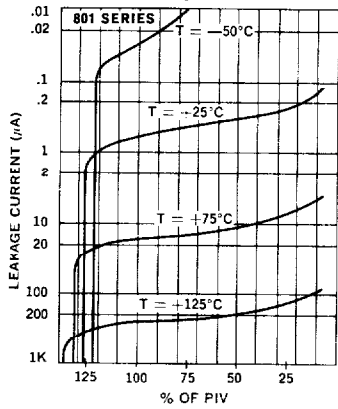
Typical Forward Voltage Per Leg vs. Forward Current



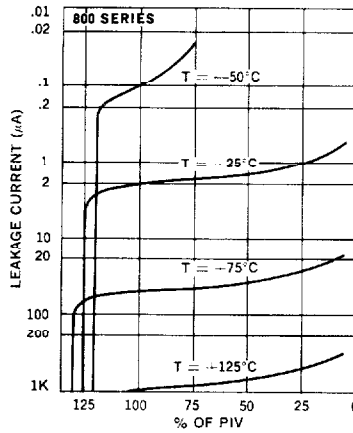
Typical Forward Voltage Per Leg vs. Forward Current



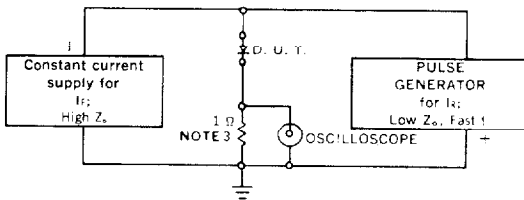
Typical Leakage Current vs. PIV



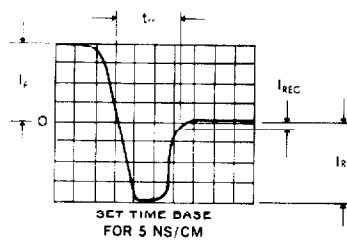
Typical Leakage Current vs. PIV



Reverse-Recovery Circuit



Characteristic Waveform



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