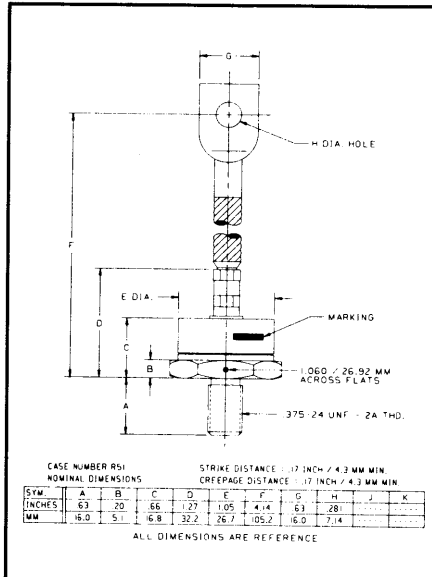
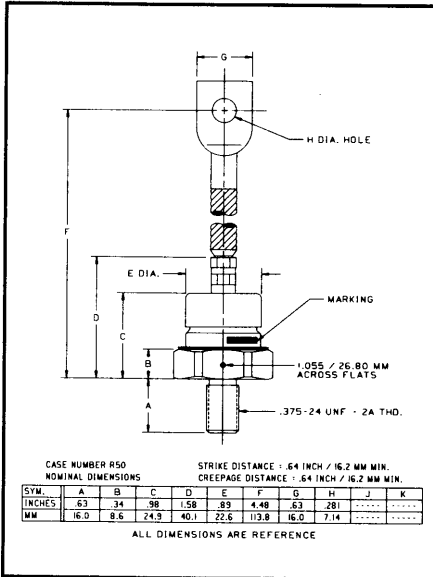


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Powerex, Europe, S.A. 428 Avenue G. Durand, BP107, 72003 Le Mans, France (43) 41.14.14

**General Purpose  
Rectifier**  
100 Amperes Average  
1400 Volts



IN3288A, AR - IN3297A, AR (Outline Drawing)

### Ordering Information:

Select the complete part number you desire from the following table:

| Type    | Voltage  | Current                   |
|---------|--|---------------------------|
|         | V <sub>DRM</sub> & V <sub>RRM</sub><br>(Volts) | I <sub>F(av)</sub><br>(A) |
| IN3288A | 100  | 100                       |
| IN3289A | 200  |                           |
| IN3290A | 300  |                           |
| IN3291A | 400  |                           |
| IN3292A | 500  |                           |
| IN3293A | 600  |                           |
| IN3294A | 800  |                           |
| IN3295A | 1000   |                           |
| IN3296A | 1200   |                           |
| IN3297A | 1400   |                           |

### Features:

- Standard and Reverse Polarities with Color Coded Seals
- High Surge Current Ratings
- Electrical Selection for Parallel and Series Operation
- Compression Bonded Encapsulation

### Applications:

- Welders
- Battery Chargers
- Electrochemical Refining
- Metal Reduction
- General Industrial High Current Rectification

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### Absolute Maximum Ratings

| Characteristics                                     | Symbol       | IN3288A,AR - IN3297A,AR | Units              |
|---|--------------|-------------------------|--------------------|
| RMS Forward Current                                 | $I_{F(rms)}$ | 160                     | Amperes            |
| Average Forward Current                             | $I_{F(av)}$  | 100                     | Amperes            |
| One-half Cycle Surge Current (at 60 Hz, Under Load) | $I_{FSM}$    | 2300                    | Amperes            |
| $i^2t$ (for Fusing) at 60 Hz Half-Wave              | $i^2t$       | 22000                   | A <sup>2</sup> sec |
| Storage Temperature                                 | $T_{stg}$    | -40 to +200             | °C                 |
| Operating Temperature                               | $T_j$        | -40 to +200             | °C                 |
| Mounting Torque (Lubricated)                        |              | 120                     | in-lb              |

### Electrical and Thermal Characteristics

| Characteristics   | Symbol            | IN3288A | IN3289A* | IN3290A | IN3291A* | IN3292A          | IN3293A | IN3294A* | IN3295A* | IN3296A | IN3297A | Units   |
|---|-------------------|---------|----------|---------|----------|------------------|---------|----------|----------|---------|---------|---------|
| <b>Current - Conducting State Maximums, <math>T_j = 200^\circ\text{C}</math></b>                    |                   |         |          |         |          |                  |         |          |          |         |         |         |
| Forward Voltage Drop at 100A Average, $T_C = 130^\circ\text{C}$ , Peak Volts                        | $V_{FM}$          |         |          |         |          | 1.5 (All Types)  |         |          |          |         |         | Volts   |
| <b>Voltage - Blocking State Maximums</b>  |                   |         |          |         |          |                  |         |          |          |         |         |         |
| Repetitive Peak Reverse Voltage   | $V_{RRM}$         | 100     | 200      | 300     | 400      | 500              | 600     | 800      | 1000     | 1200    | 1400    | Volts   |
| Non-rep. Trans. Peak Rev. Voltage   | $V_{RSM}$         | 200     | 300      | 400     | 525      | 650              | 800     | 1050     | 1300     | 1600    | 1800    | Volts   |
| Maximum Allowable DC Blocking Voltage   | $V_R$             | 100     | 200      | 300     | 400      | 500              | 600     | 800      | 1000     | 1200    | 1400    | Volts   |
| Reverse Leakage Current, at Rated $V_{RRM}$ , 100A Average, Single Phase, $T_C = 130^\circ\text{C}$ | $I_{RRM}$         | 24      | 24       | 24      | 24       | 21               | 17      | 13       | 11       | 9       | 7       | mA      |
| <b>Thermal</b>  |                   |         |          |         |          |                  |         |          |          |         |         |         |
| Maximum Resistance, Junction to Case  | $R_{\theta(j-c)}$ |         |          |         |          | 0.40 (All Types) |         |          |          |         |         | °C/Watt |
| Maximum Resistance, Case to Sink (Lubricated)   | $R_{\theta(c-s)}$ |         |          |         |          | 0.15 (All Types) |         |          |          |         |         | °C/Watt |

\*Available as JAN types

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### Electrical Characteristics



Figure 1. Forward Current vs. Forward Voltage.



Figure 2. Maximum allowable surge current at rated load conditions.



Figure 3. Power dissipation vs. Average forward current.



Figure 4. Forward Current vs. Case Temperature.

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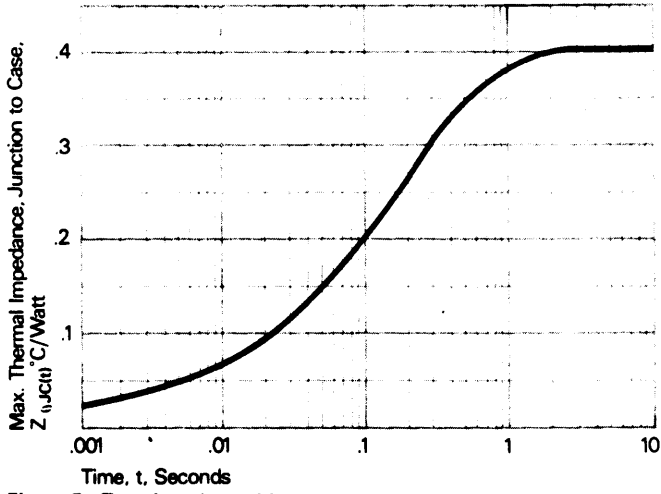


Figure 5. Transient thermal impedance vs. time.