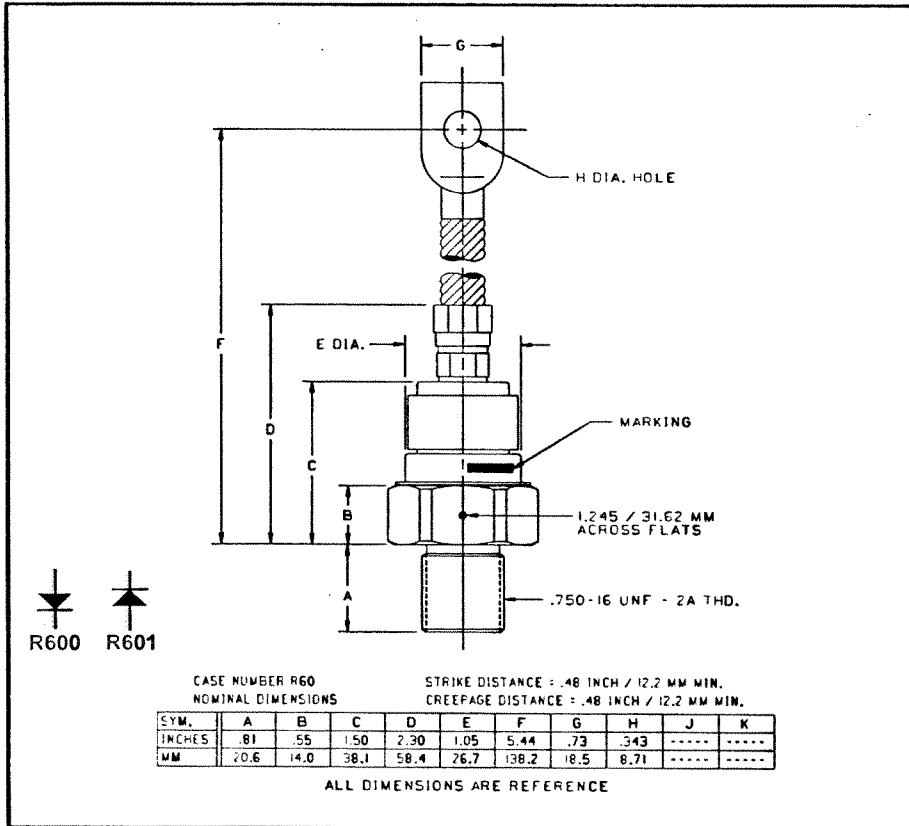
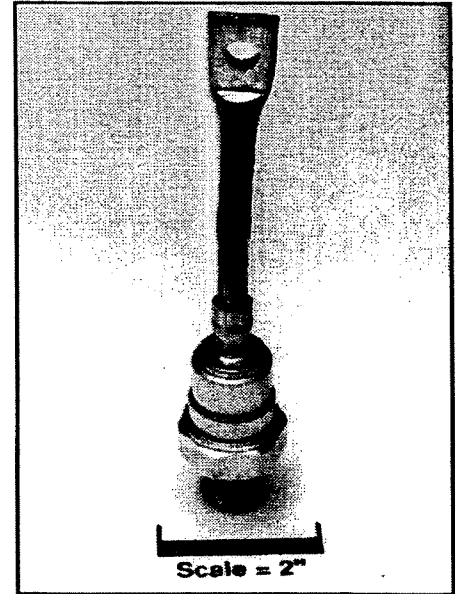


Powerex, Inc., 200 Hillis Street, Youngwood, Pennsylvania 15697-1800 (412) 925-7272
 Powerex, Europe, S.A. 428 Avenue G. Durand, BP107, 72003 Le Mans, France (43) 41.14.14

General Purpose Rectifier
 200-300 Amperes Average
 1400-2600 Volts



R600/R601 (Outline Drawing)



R600/R601
 General Purpose Rectifier
 200-300 Amperes Average,
 1400-2600 Volts

Features:

- Standard and Reverse Polarities
- Flag Lead and Stud Top Terminals Available
- High Surge Current Ratings
- High Rated Blocking Voltages
- Special Electrical Selection for Parallel and Series Operation
- Glazed Ceramic Seal Gives High Voltage Creepage and Strike Paths
- Compression Bonded Encapsulation
- JAN Types Available

Applications:

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

Ordering Information:

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

| Type | Voltage | | Current | | Recovery Time | | Recovery Time Circuit | | Leads | |
|-------------------------|--------------------------|------|------------------------|------|------------------------|------|-----------------------|------|-------|------|
| | V _{RRM} (Volts) | Code | I _{F(av)} (A) | Code | t _{rr} (µsec) | Code | Circuit | Code | Case | Code |
| R600 (Std. Polarity) | 1400 | 14 | 200 | 20 | 13 | X | JEDEC | X | DO-9 | YA |
| | 1600 | 16 | | | | | | | | |
| | 1800 | 18 | 250 | 25 | 11 | X | | | | |
| | 2000 | 20 | | | | | | | | |
| R601 (Rev. Polarity) | 2200 | 22 | 300 | 30 | 9 | X | | | | |
| | 2400 | 24 | | | | | | | | |
| | 2600 | 26 | | | | | | | | |

Example: Type R600 Rated at 300A average with VRRM = 2600V and standard flexible lead, order as:

| Type | Voltage | Current | Time | Circuit | Leads |
|---------|---------|---------|------|---------|-------|
| R 6 0 0 | 2 6 | 3 0 | X | X | Y A |

Revision Date: 02/13/2003

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R600/R601

General Purpose Rectifier

200-300 Amperes Average, 1400-2600 Volts

Absolute Maximum Ratings

| Characteristics | Symbol | R600_20, | R600_25, | R600_30, | Units |
|---|--------------|-------------|----------------|----------------|--------------------|
| | | R601_20 | R601_25 | R601_30 | |
| RMS Forward Current | $I_{F(rms)}$ | 315 | 400 | 470 | Amperes |
| Average Forward Current | $I_{F(av)}$ | 200 | 250 | 300 | Amperes |
| One-half Cycle Surge Current | I_{FSM} | 5500 | 6000 | 6500 | Amperes |
| 3 Cycle Surge Current | I_{FSM} | 4300 | 4700 | 5050 | Amperes |
| 10 Cycle Surge Current | I_{FSM} | 3300 | 3600 | 3900 | Amperes |
| I^2t (for Fusing), Times = 8.3 milliseconds | I^2t | 125000 | 150000 | 175000 | A ² sec |
| Storage Temperature | T_{stg} | -65 to +190 | -65 to +190 | -65 to +190 | °C |
| Operating Temperature | T_j | Up to 1200V | 1200V to 2200V | 2200V to 2800V | °C |
| | | -65 to +190 | -65 to +175 | -65 to +150 | |
| Mounting Torque | | 360 | 360 | 360 | in-lb |

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R600/R601

General Purpose Rectifier

200-300 Amperes Average, 1400-2600 Volts

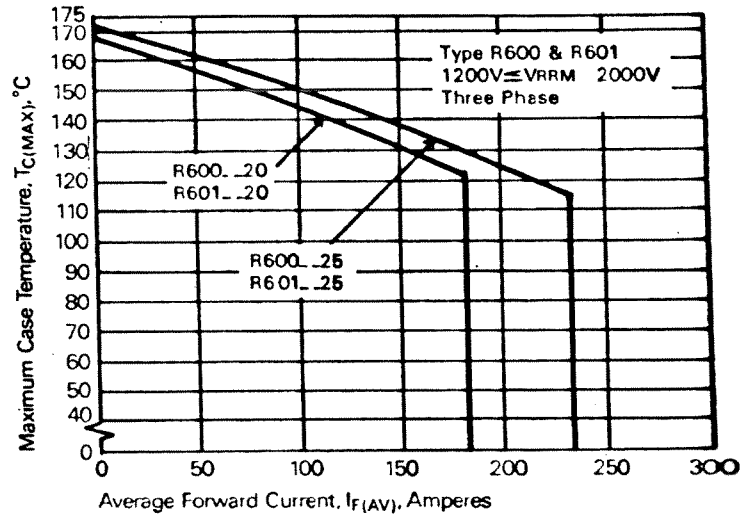
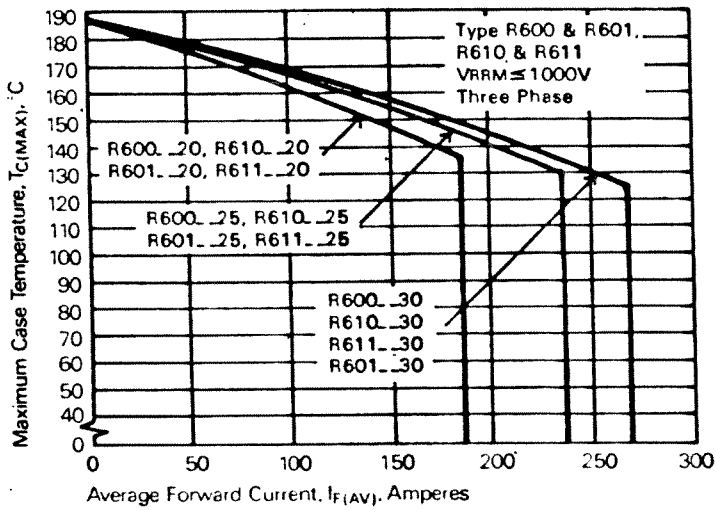
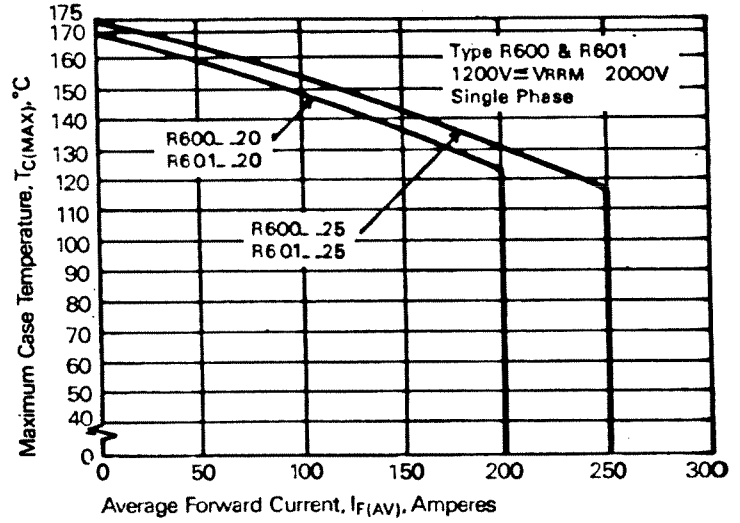
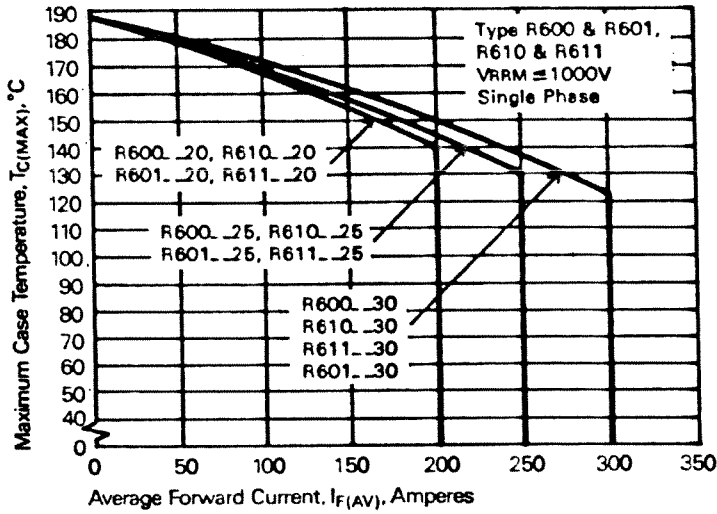
Electrical and Thermal Characteristics

| Characteristics | Symbol | Test Conditions | R600_20, | R600_25, | R600_30, | Units |
|---|-------------------|---|----------|----------|----------|------------------------------|
| | | | R601_20 | R601_25 | R601_30 | |
| Current - Conducting State Maximums | | | | | | |
| Forward Voltage Drop | V_{FM} | $T_j = 25^\circ\text{C}, I_{FM} = 800\text{A}$ | 1.70 | 1.50 | 1.40 | Volts |
| Voltage - Blocking State Maximums | | | | | | |
| Repetitive Peak Reverse Voltage (Rated Limit) | V_{RRM} | | 2600 | 2600 | 2600 | Volts |
| Non-rep. Trans. Peak Rev. Voltage (Rated Limit) | V_{RSM} | $V \leq 5.0\text{msec}$ | 2800 | 2800 | 2800 | μsec |
| Reverse Leakage Current | I_{RRM} | T_j at max., V_{RRM} Rated | 50 | 50 | 50 | mA |
| Switching | | | | | | |
| Typical Reverse Recovery Time | t_{rr} | $I_{FM} = 785\text{A}, t_p = 100\mu\text{sec},$ $di_R/dt = 25\text{A}/\mu\text{sec}, T_C = 25^\circ\text{C}$ | 9 | 11 | 13 | μsec |
| Thermal | | | | | | |
| Maximum Resistance, Case to Sink (Lubricated) | $R_{\theta(c-s)}$ | | 0.10 | 0.10 | 0.10 | $^\circ\text{C}/\text{Watt}$ |

R600/R601

General Purpose Rectifier

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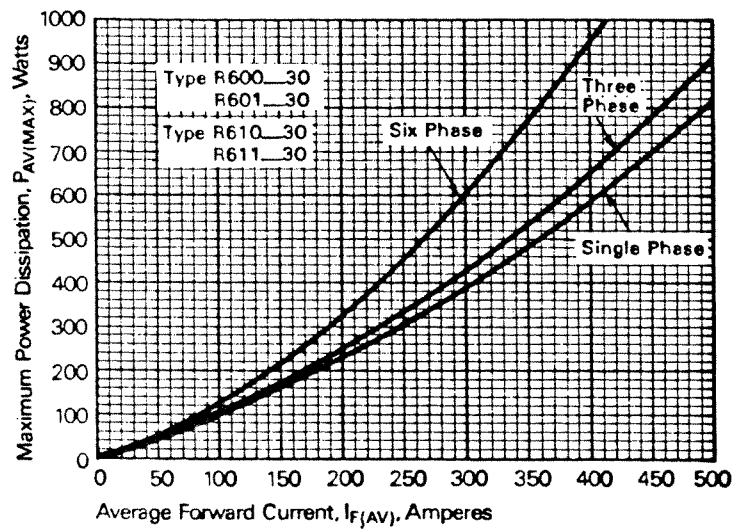
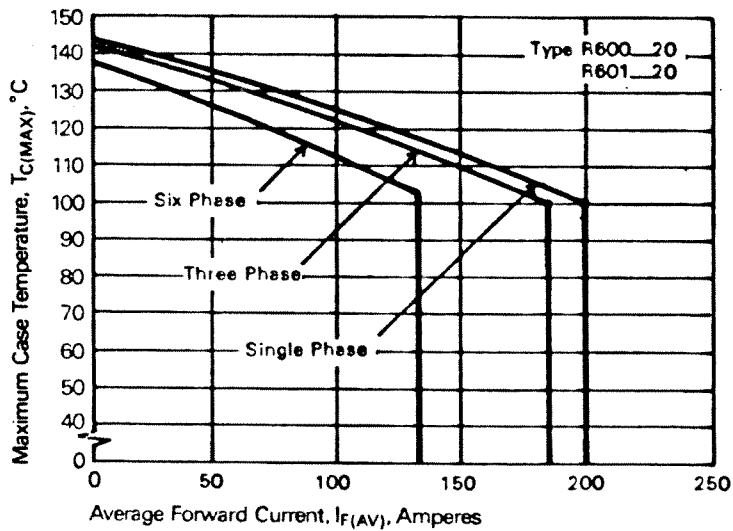
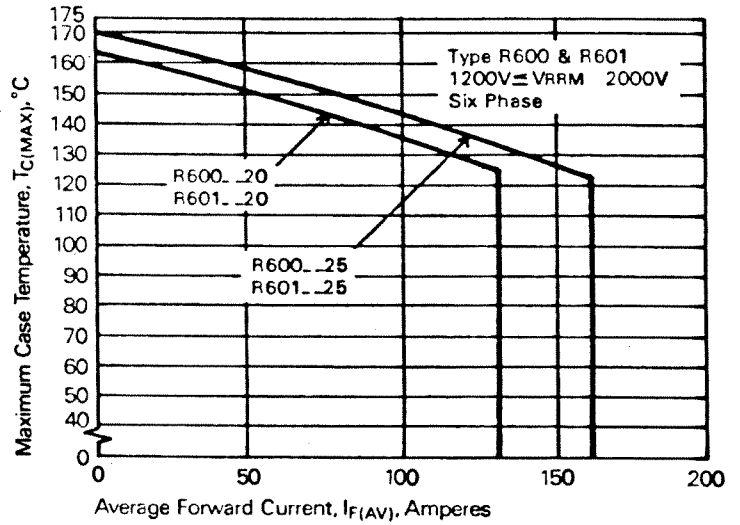
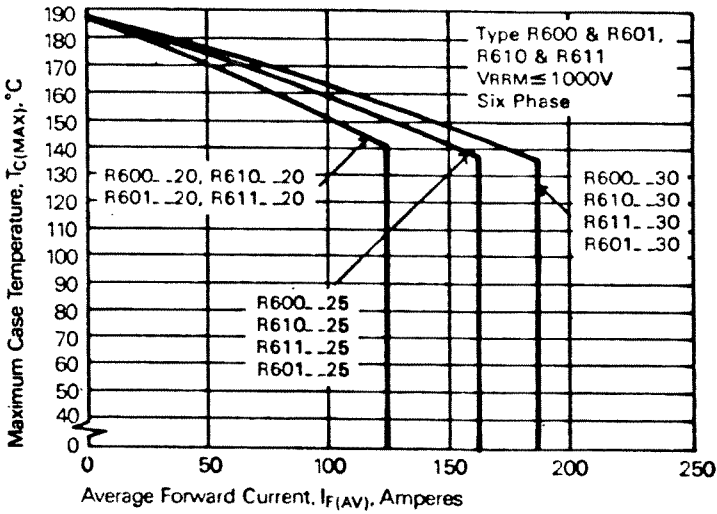


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