



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

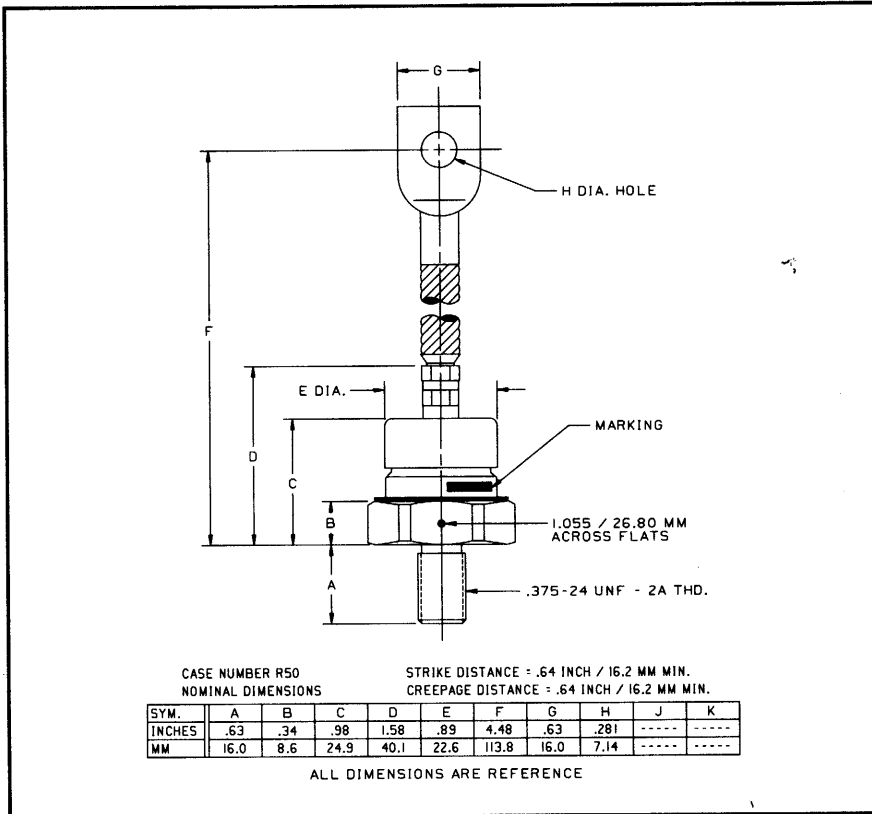
Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



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
 100-150 Amperes Average
 1600 Volts



R500/R501 (Outline Drawing)



R500/R501 General Purpose Rectifier
 100-150 Amperes Average, 1600 Volts

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} (μ sec) | Code | Circuit | Code | Case | Code |
| R500 (Standard Polarity) | 400 | 04 | 100 | 10 | 7 (Typ.) | X | JEDEC | X | DO-8 | WA |
| | 600 | 06 | 150 | 15 | | | | | | |
| | 800 | 08 | | | | | | | | |
| | 1000 | 10 | | | | | | | | |
| R501 (Reverse Polarity) | 1200 | 12 | | | | | | | | |
| | 1400 | 14 | | | | | | | | |
| | 1600 | 16 | | | | | | | | |

Example: Type R500 rated at 150A average with $V_{RRM} = 1600V$, and standard flexible lead, order as:

| Type | Voltage | Current | Time | Circuit | Leads |
|---------|---------|---------|------|---------|-------|
| R 5 0 0 | 1 6 | 1 5 | X | X | W A |

Features:

- Standard and Reverse Polarities with Color Coded Ceramic Seals
- Flag Lead and Stud Top Terminals Available
- High Surge Current Ratings
- Special Electrical Selection for Parallel and Series Operation
- Compression Bonded Encapsulation

Applications:

- Electromechanical Refining
- Metal Reduction
- General Industrial Rectification



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Absolute Maximum Ratings

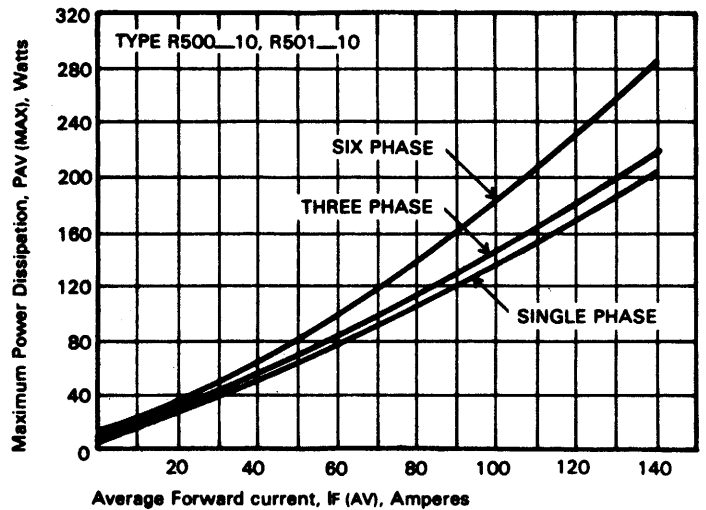
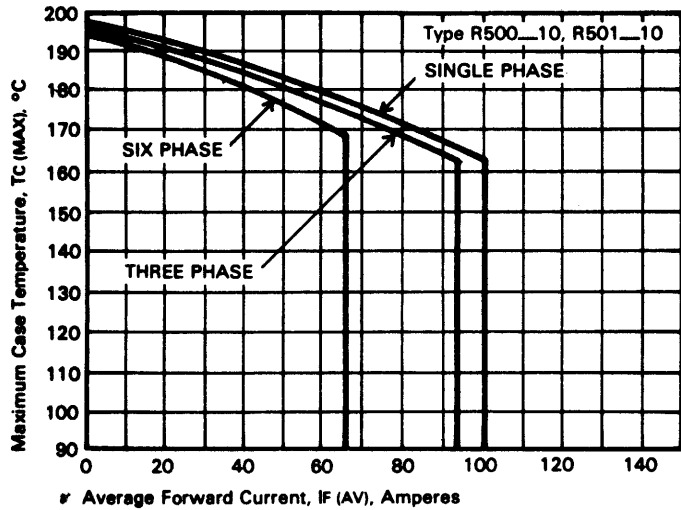
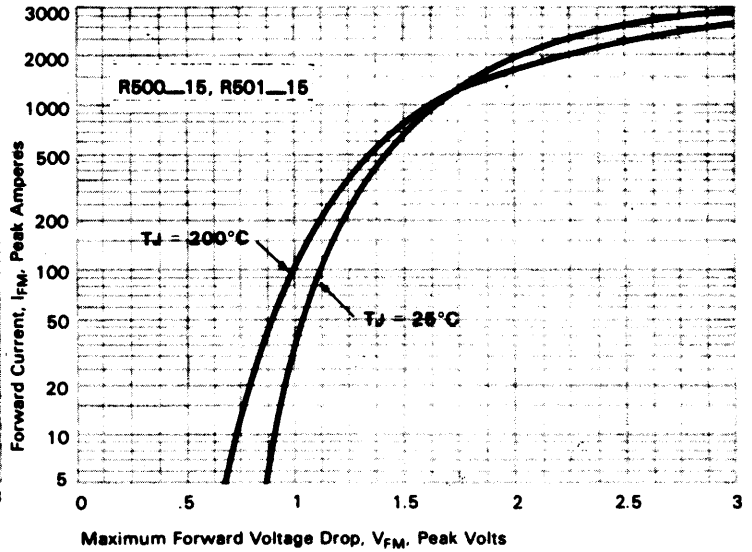
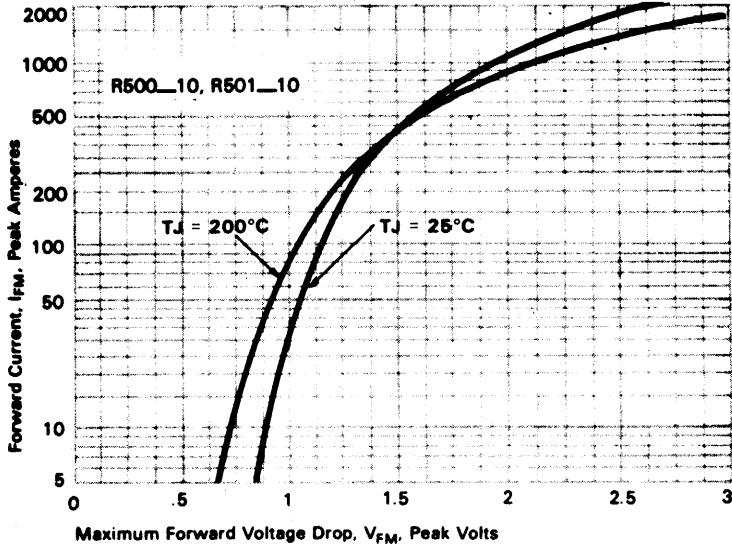
| Characteristics | Symbol | R500_ _10, | R500_ _15, | Units |
|---|--------------|-------------|-------------|----------|
| | | R501_ _10 | R501_ _15 | |
| RMS Forward Current | $I_{F(rms)}$ | 160 | 236 | Amperes |
| Average Forward Current | $I_{F(av)}$ | 100 | 150 | Amperes |
| One-half Cycle Surge Current | I_{FSM} | 2300 | 3000 | Amperes |
| 3 Cycle Surge Current | I_{FSM} | 1875 | 2375 | Amperes |
| 10 Cycle Surge Current | I_{FSM} | 1350 | 1750 | Amperes |
| I^2t (for Fusing), Times = 8.3 milliseconds | I^2t | 22000 | 37500 | A^2sec |
| Storage Temperature | T_{stg} | -65 to +200 | -65 to +200 | °C |
| Operating Temperature | T_j | -65 to +200 | -65 to +200 | °C |
| Mounting Torque (Lubricated) | | 120 | 120 | in-lb |

Electrical and Thermal Characteristics

| Characteristics | Symbol | Test Conditions | R500_ _10, | R500_ _15, | Units |
|---|-------------------|--|------------|------------|-----------|
| | | | R501_ _10 | R501_ _15 | |
| Current - Conducting State Maximums | | | | | |
| Forward Voltage Drop | V_{FM} | $T_j = 25^\circ C, I_{FM} = 470A$ | 1.55 | 1.40 | Volts |
| Voltage - Blocking State Maximums | | | | | |
| Repetitive Peak Reverse Voltage (Rated Limit) | V_{RRM} | | 1600 | 1600 | Volts |
| Non-rep. Trans. Peak Rev. Voltage (Rated Limit) | V_{RSM} | $t_p \leq 5.0msec$ | 1700 | 1700 | Volts |
| Reverse Leakage Current | I_{RRM} | T_j at max., $V_{RRM} = \text{Rated}$ | 30 | 30 | mA |
| Switching | | | | | |
| Typical Reverse Recovery Time | t_{rr} | $I_{FM} = 314A, t_p = 40\mu sec,$ $di_F/dt = 25A/\mu sec, T_C = 25^\circ C$ | 7 | 7 | μsec |
| Thermal | | | | | |
| Maximum Resistance, Junction to Case | $R_{\theta(j-c)}$ | | 0.28 | 0.28 | °C/Watt |
| Maximum Resistance, Case to Sink (Lubricated) | $R_{\theta(c-s)}$ | | 0.20 | 0.20 | °C/Watt |

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