

# KBPC15, 25, 35P/W SERIES

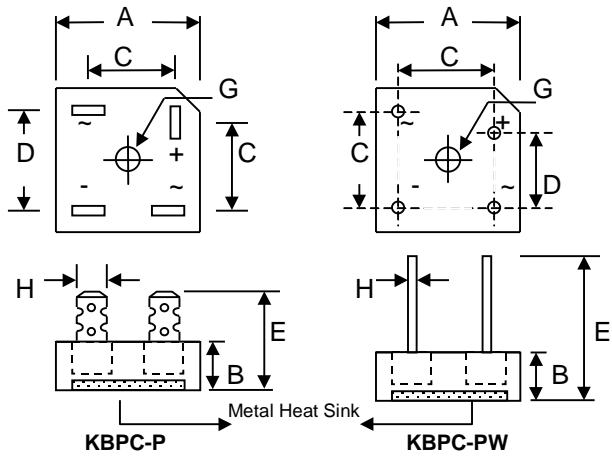
## 15, 25, 35A HIGH CURRENT BRIDGE RECTIFIER

### Features

- Diffused Junction
- Low Reverse Leakage Current
- Low Power Loss, High Efficiency
- Electrically Isolated Epoxy Case for Maximum Heat Dissipation
- Case to Terminal Isolation Voltage 2500V
- UL Recognized File # E157705

### Mechanical Data

- Case: Epoxy Case with Heat Sink Internally Mounted in the Bridge Encapsulation
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Symbols Marked on Case
- Mounting: Through Hole for #10 Screw
- Weight: KBPC-P 24 grams (approx.)  
KBPC-PW 21 grams (approx.)
- Marking: Type Number



| Dim                 | KBPC-P                            |       | KBPC-PW     |       |
|---------------------|-----------------------------------|-------|-------------|-------|
|                     | Min                               | Max   | Min         | Max   |
| A                   | 28.40                             | 28.70 | 28.40       | 28.70 |
| B                   | 10.97                             | 11.23 | 10.97       | 11.23 |
| C                   | 15.70                             | 16.70 | 17.10       | 19.10 |
| D                   | 17.50                             | 18.50 | 10.90       | 11.90 |
| E                   | 22.86                             | 25.40 | 30.50       | —     |
| G                   | Hole for #10 screw, 5.08Ø Nominal |       |             |       |
| H                   | 6.35 Typical                      |       | 0.97Ø 1.07Ø |       |
| All Dimension in mm |                                   |       |             |       |

"W" Suffix Designates Wire Leads  
No Suffix Designates Faston Terminals

\*All Models are Available on B(Height)=7.9mm Max. Epoxy Case

### Maximum Ratings and Electrical Characteristics @ $T_A=25^\circ\text{C}$ unless otherwise specified

Single Phase, half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

| Characteristics  | Symbol       | -00P/W | -01P/W | -02P/W | -04P/W            | -06P/W | -08P/W | -10P/W | Unit                 |
|--|--------------|--------|--------|--------|-------------------|--------|--------|--------|----------------------|
| Peak Repetitive Reverse Voltage  | $V_{RRM}$    | 50     | 100    | 200    | 400               | 600    | 800    | 1000   | V                    |
| Working Peak Reverse Voltage   | $V_{RWM}$    |        |        |        |                   |        |        |        |                      |
| DC Blocking Voltage  | $V_R$        |        |        |        |                   |        |        |        |                      |
| RMS Reverse Voltage  | $V_{R(RMS)}$ | 35     | 70     | 140    | 280               | 420    | 560    | 700    | V                    |
| Average Rectifier Output Current<br>@ $T_C = 60^\circ\text{C}$   | $I_O$        |        |        |        | 15<br>25<br>35    |        |        |        | A                    |
| Non-Repetitive Peak Forward Surge<br>Current 8.3ms single half sine-wave<br>Superimposed on rated load<br>(JEDEC Method) | $I_{FSM}$    |        |        |        | 300<br>300<br>400 |        |        |        | A                    |
| Forward Voltage Drop<br>(per element)  | $V_{FM}$     |        |        |        | 1.1               |        |        |        | V                    |
| Peak Reverse Current<br>At Rated DC Blocking Voltage   | $I_{RM}$     |        |        |        | 10<br>0.5         |        |        |        | $\mu\text{A}$<br>mA  |
| $I^2t$ Rating for Fusing (t < 8.3ms)<br>(Note 1)   | $I^2t$       |        |        |        | 373<br>373<br>664 |        |        |        | $\text{A}^2\text{s}$ |

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**Maximum Ratings and Electrical Characteristics** @ $T_A=25^{\circ}\text{C}$  unless otherwise specified

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|   |                            |                 |                   |                    |
|---|----------------------------|-----------------|-------------------|--------------------|
| Typical Junction Capacitance<br>(per element) (Note 2)                | KBPC15<br>KBPC25<br>KBPC35 | $C_j$           | 200<br>300<br>400 | pF                 |
| Typical Thermal Resistance Junction<br>to Case (per element) (Note 3) | KBPC15<br>KBPC25<br>KBPC35 | $R_{\theta JC}$ | 6.3<br>3.8<br>3.8 | K/W                |
| RMS Isolation Voltage from Case to Lead                               |                            | Viso            | 2500              | V                  |
| Operating and Storage Temperature Range                               |                            | $T_j, T_{STG}$  | -65 to +125       | $^{\circ}\text{C}$ |

- Note: 1. Measured at non-repetitive, for  $t > 1\text{ms}$  and  $< 8.3\text{ms}$ .  
2. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.  
3. Thermal resistance junction to case mounted on heatsink.

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Fig. 1 Forward Current Derating Curve



Fig. 2 Typical Forward Characteristics (per element)

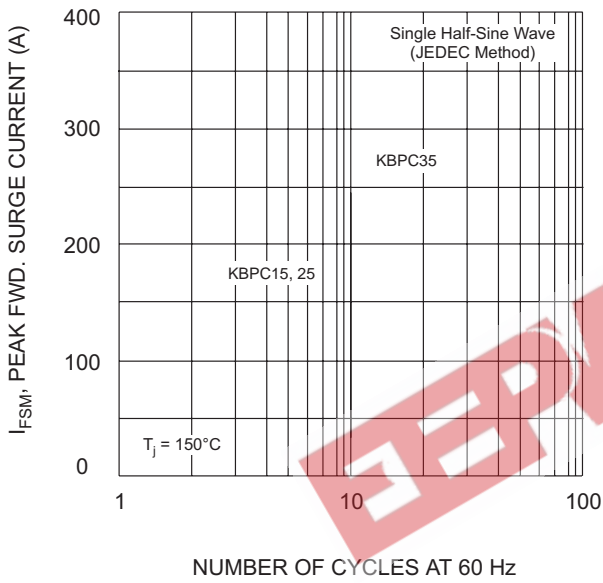


Fig. 3 Max Non-Repetitive Surge Current

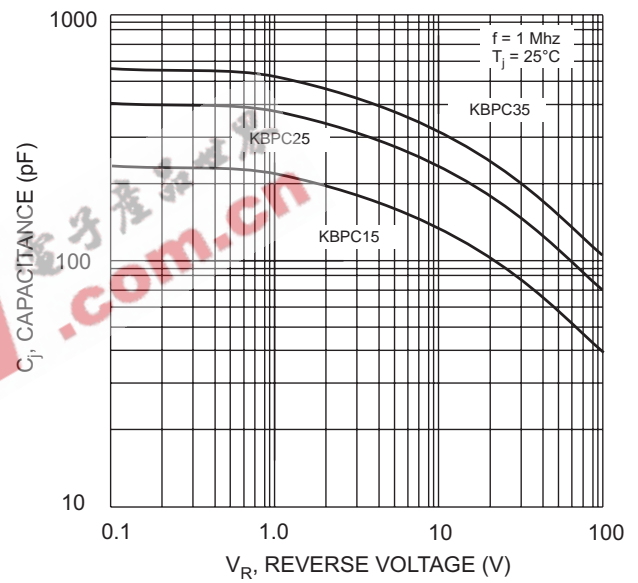


Fig. 4 Typical Junction Capacitance (per element)

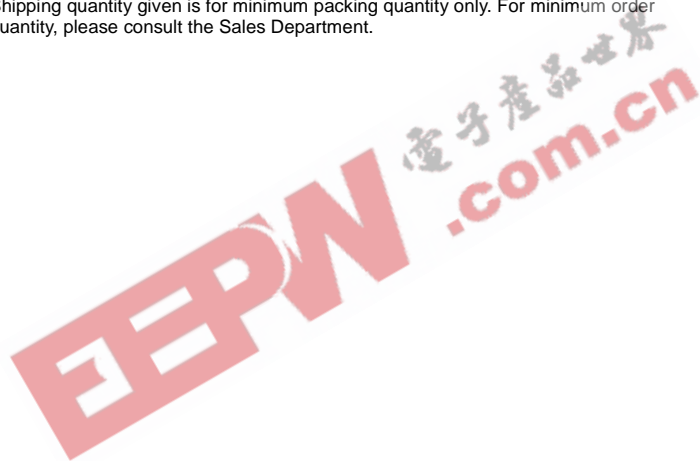


Fig. 5 Typical Reverse Characteristics (per element)

## ORDERING INFORMATION

| Product No. | Package Type  | Shipping Quantity |
|-------------|---------------|-------------------|
| KBPCxx00P   | Square Bridge | 50 Units/Box      |
| KBPCxx00PW  | Square Bridge | 50 Units/Box      |
| KBPCxx01P   | Square Bridge | 50 Units/Box      |
| KBPCxx01PW  | Square Bridge | 50 Units/Box      |
| KBPCxx02P   | Square Bridge | 50 Units/Box      |
| KBPCxx02PW  | Square Bridge | 50 Units/Box      |
| KBPCxx04P   | Square Bridge | 50 Units/Box      |
| KBPCxx04PW  | Square Bridge | 50 Units/Box      |
| KBPCxx06P   | Square Bridge | 50 Units/Box      |
| KBPCxx06PW  | Square Bridge | 50 Units/Box      |
| KBPCxx08P   | Square Bridge | 50 Units/Box      |
| KBPCxx08PW  | Square Bridge | 50 Units/Box      |
| KBPCxx10P   | Square Bridge | 50 Units/Box      |
| KBPCxx10PW  | Square Bridge | 50 Units/Box      |

Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.



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