

KBPC15, 25, 35/W SERIES

15, 25, 35A HIGH CURRENT BRIDGE RECTIFIER

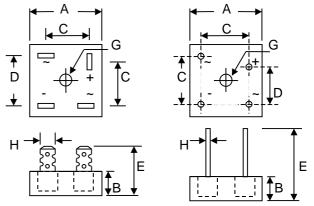
Features

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

Mechanical Data

- Case: Metal Case with Electrically Isolated Epoxy
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Symbols Marked on Case
- Mounting: Through Hole for #10 Screw
- Weight: KBPC 31.6 grams (approx.)
 - KBPC-W 28.5 grams (approx.)
- Marking: Type Number

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



| KBPC | KBPC-W |
|------|--------|

| | KBPC | | KBP | C-W |
|-------------------------------------|--------------|-------|-------|-------|
| Dim | Min | Max | Min | Max |
| Α | 28.40 | 28.70 | 28.40 | 28.70 |
| В | 10.97 | 11.23 | 10.97 | 11.23 |
| С | 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 | | | | |
| Н | 6.35 Typical | | 0.97Ø | 1.07Ø |
| All Dimension in mm | | | | |

Maximum Ratings and Electrical Characteristics @TA=25°C unless otherwise specified

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

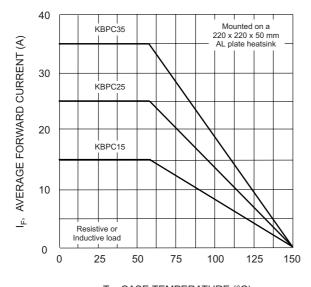
| Characteristics | Symbol | -00/W | -01/W | -02/W | -04/W | -06/W | -08/W | -10/W | Unit |
|---|--------------------|-------|-------|-------|-------------------|-------|-------|-------|------------------|
| Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage | VRRM VRWM VR | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| RMS Reverse Voltage | VR(RMS) | 35 | 70 | 140 | 280 | 420 | 560 | 700 | ٧ |
| Average Rectifier Output Current @T _C = 60°C KBPC35 | lo | | | | 15 25 35 | | | | A |
| Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave Superimposed on rated load (JEDEC Method) KBPC15 KBPC25 KBPC35 | IFSM | | | | 300 400 400 | | | | А |
| Forward Voltage Drop (per element) $ \begin{array}{ll} \text{KBPC15 @I_F = 7.5A} \\ \text{KBPC25 @I_F = 12.5A} \\ \text{KBPC35 @I_F = 17.5A} \\ \end{array} $ | VFM | | | | 1.2 | | | | ٧ |
| Peark Reverse Current $@T_C = 25^{\circ}C$ At Rated DC Blocking Voltage $@T_C = 125^{\circ}C$ | İRM | | | | 10 1.0 | | | | μA mA |
| l ² t Rating for Fusing (t < 8.3ms) (Note 1) KBPC15 KBPC25 KBPC35 | l ² t | | | | 373 373 664 | | | | A ² s |

$\textbf{Maximum Ratings and Electrical Characteristics} \ @\textbf{T}_A = 25 ^{\circ} \textbf{C} \ \, \text{unless otherwise specified}$

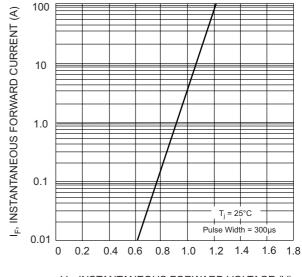
| Typical Junction Capacitance (per element (Note 2) | t) Cj | 300 | pF |
|--|--------------------------------|-------------------|-----|
| Typical Thermal Resistance Junction to Case (per element) (Note 3) | BPC15 BPC25 R θ JC BPC35 | 6.3 3.8 2.7 | K/W |
| RMS Isolation Voltage from Case to Lead | Viso | 2500 | V |
| Operating and Storage Temperature Range | e Tj, Tstg | -65 to +150 | °C |

* Glass passivated forms are available upon request.

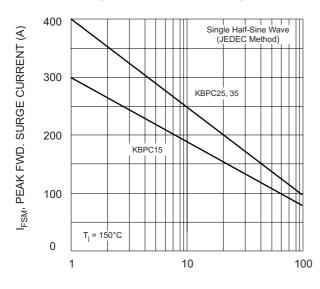
- Note: 1. Measured at non-repetitive, for t > 1ms and < 8.3ms.
 - Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.
 Thermal resistance junction to case mounted on heatsink.



 $T_{\rm C}$, CASE TEMPERATURE (°C) Fig. 1 Forward. Current Derating Curve



 ${\rm V_F}$, INSTANTANEOUS FORWARD VOLTAGE (V) Fig. 2 Typical Forward Characteristics (per element)



NUMBER OF CYCLES AT 60 Hz Fig. 3 Max Non-Repetitive Surge Current

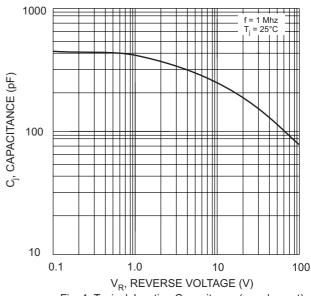


Fig. 4 Typical Junction Capacitance (per element)

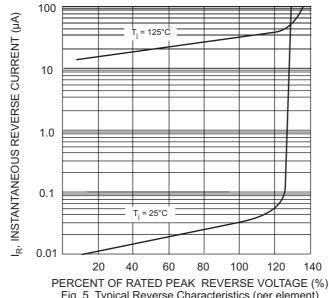


Fig. 5 Typical Reverse Characteristics (per element)

ORDERING INFORMATION

| Product No. | Package Type | Shipping Quantity |
|-------------|---------------|-------------------|
| KBPCxx00 | Square Bridge | 50 Units/Box |
| KBPCxx00W | Square Bridge | 50 Units/Box |
| KBPCxx01 | Square Bridge | 50 Units/Box |
| KBPCxx01W | Square Bridge | 50 Units/Box |
| KBPCxx02 | Square Bridge | 50 Units/Box |
| KBPCxx02W | Square Bridge | 50 Units/Box |
| KBPCxx04 | Square Bridge | 50 Units/Box |
| KBPCxx04W | Square Bridge | 50 Units/Box |
| KBPCxx06 | Square Bridge | 50 Units/Box |
| KBPCxx06W | Square Bridge | 50 Units/Box |
| KBPCxx08 | Square Bridge | 50 Units/Box |
| KBPCxx08W | Square Bridge | 50 Units/Box |
| KBPCxx10 | Square Bridge | 50 Units/Box |
| KBPCxx10W | 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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