

# **KBPC15, 25, 35/W SERIES**

# 15, 25, 35A HIGH CURRENT BRIDGE RECTIFIER

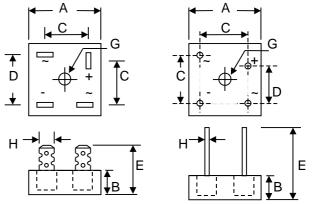
### **Features**

- 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



<u> </u>
KRPC-W

	KB	PC	KBPC-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%.

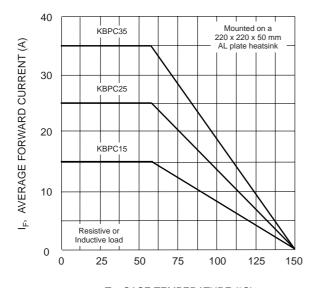
Characteristics	Symbol	-00/W	-01/W	-02/W	-04/W	-06/W	-08/W	-10/W	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	VRRM VRWM VR	50	100	200	400	600	800	1000	V
RMS Reverse Voltage	VR(RMS)	35	70	140	280	420	560	700	٧
Average Rectifier Output Current @T <sub>C</sub> = 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 <sup>2</sup> t Rating for Fusing (t < 8.3ms) (Note 1)  KBPC15 KBPC25 KBPC35	l <sup>2</sup> t				373 373 664				A <sup>2</sup> s

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

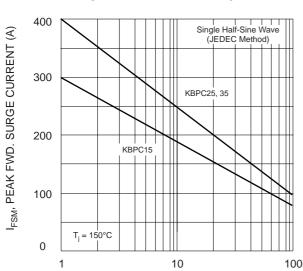
Typical Junction Capacitance (per element (Note 2)	t) Cj	300	pF
Typical Thermal Resistance Junction to Case (per element) (Note 3)	BPC15 BPC25 R θ JC BPC35	6.3 3.8 2.7	K/W
RMS Isolation Voltage from Case to Lead	Viso	2500	V
Operating and Storage Temperature Range	e Tj, Tstg	-65 to +150	°C

### \* Glass passivated forms are available upon request.

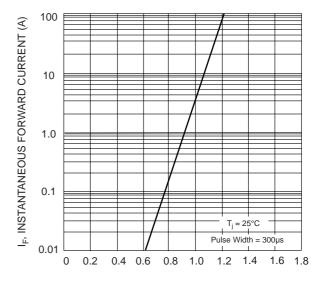
- Note: 1. Measured at non-repetitive, for t > 1ms and < 8.3ms.
  - Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.
     Thermal resistance junction to case mounted on heatsink.



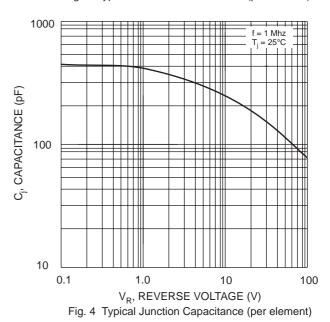
 $T_{\rm C}$ , CASE TEMPERATURE (°C) Fig. 1 Forward. Current Derating Curve



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



V<sub>F</sub>, INSTANTANEOUS FORWARD VOLTAGE (V) Fig. 2 Typical Forward Characteristics (per element)



100 INSTANTANEOUS REVERSE CURRENT (µA) = 125°C 10 1.0 0.1  $T_i = 25^{\circ}C$ 0.01 140 20 80 40 60 100 120 PERCENT OF RATED PEAK REVERSE VOLTAGE (%)

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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