

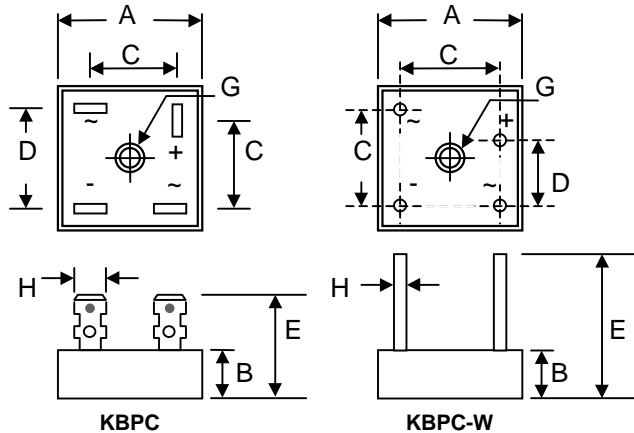
## 25A SINGLE-PHASE BRIDGE RECTIFIER

### 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
-  Recognized File # E157705

### Mechanical Data

- Case: KBPC (Metal Case with Faston Lugs) or KBPC-W (Metal Case with Wire Leads)
- Terminals: Plated Faston Lugs or Wire Leads, Add "W" Suffix to Indicate Wire Leads
- Polarity: As Marked on Case
- Mounting: Through Hole with #10 Screw
- Mounting Torque: 23 cm·kg (20 in·lbs) Max.
- Weight: 30 grams (KBPC); 28 grams (KBPC-W)
- Marking: Type Number
- **Lead Free: For RoHS / Lead Free Version, Add "-LF" Suffix to Part Number, See Page 4**



Dim	KBPC		KBPC-W	
	Min	Max	Min	Max
A	27.94	28.96	27.94	28.96
B	10.97	11.23	10.97	11.23
C	15.50	17.60	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

### 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%.

Characteristic	Symbol	KBPC25										Unit
		00	01	02	04	06	08	10	12	14	16	
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	$V_{RRM}$ $V_{RWV}$ $V_R$	50	100	200	400	600	800	1000	1200	1400	1600	V
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	140	280	420	560	700	840	980	1120	V
Average Rectified Output Current @ $T_A = 60^\circ\text{C}$	$I_O$	25										A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	300										A
Forward Voltage per leg @ $I_F = 12.5\text{A}$	$V_{FM}$	1.2										V
Peak Reverse Current @ $T_C = 25^\circ\text{C}$ At Rated DC Blocking Voltage @ $T_C = 125^\circ\text{C}$	$I_{RM}$	10 1.0										$\mu\text{A}$ mA
$I^2t$ Rating for Fusing ( $t < 8.3\text{ms}$ )	$I^2t$	373										$\text{A}^2\text{s}$
Typical Junction Capacitance (Note 1)	$C_j$	300										pF
Typical Thermal Resistance per leg (Note 2)	$R_{\theta JC}$	2.6										$^\circ\text{C}/\text{W}$
RMS Isolation Voltage from Case to Leads	$V_{ISO}$	2500										V
Operating and Storage Temperature Range	$T_j, T_{STG}$	-65 to +150										$^\circ\text{C}$

Note: 1. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.  
2. Thermal resistance junction to case, mounted on heatsink.



Fig. 1 Forward Current Derating Curve

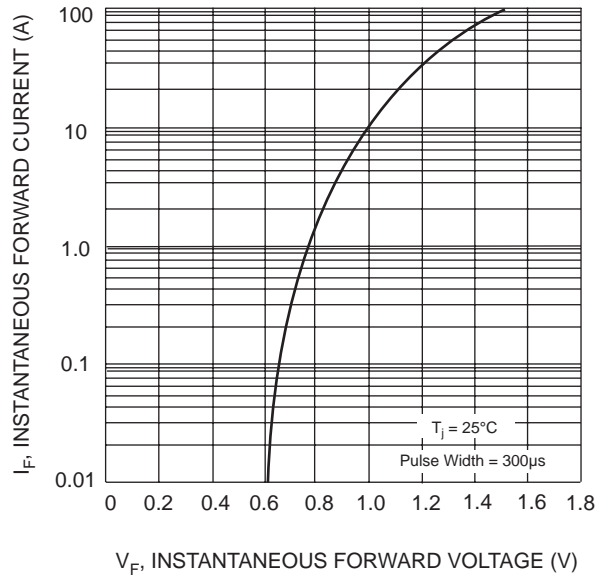


Fig. 2 Typical Forward Characteristics (per element)



Fig. 3 Max Non-Repetitive Surge Current



Fig. 4 Typical Junction Capacitance (per element)

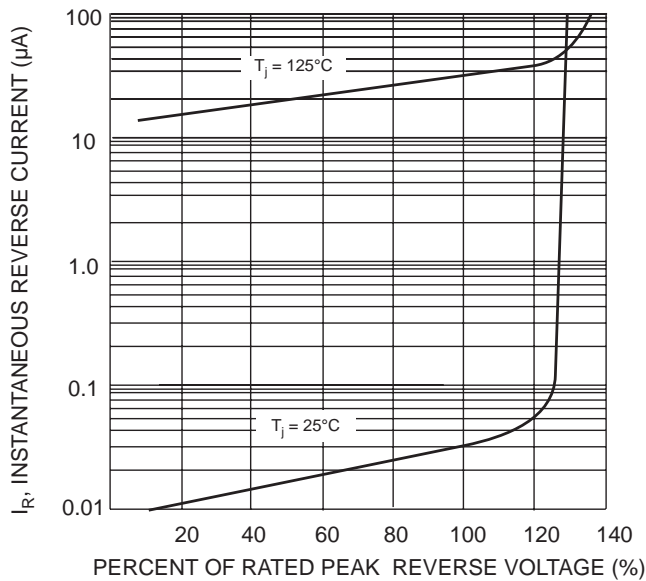
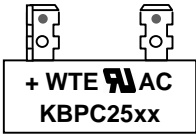
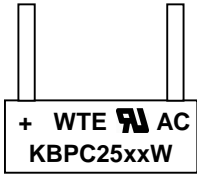


Fig. 5 Typical Reverse Characteristics (per element)

## MARKING INFORMATION

<p><b>KBPC</b></p>  <p>WTE = Manufacturer's Logo          KBPC25xx = Device Number          xx = 00, 01, 02, 04, 06, 08, 10, 12, 14 or 16          Polarity = As Marked on Body</p>	<p><b>KBPC-W</b></p>  <p>WTE = Manufacturer's Logo          KBPC25xxW = Device Number          xx = 00, 01, 02, 04, 06, 08, 10, 12, 14 or 16          Polarity = As Marked on Body</p>
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## PACKAGING INFORMATION

**BULK**

Case Style	Inner Box Size L x W x H (mm)	Quantity (PCS)	Carton Size L x W x H (mm)	Quantity (PCS)	Approx. Gross Weight (KG)
<b>KBPC</b>	195 x 195 x 40	50	405 x 205 x 240	500	17.0
<b>KBPC-W</b>	195 x 195 x 40	50	405 x 205 x 240	500	16.0

**Note:** 1. Paper box, white or brown color.

## ORDERING INFORMATION

Product No.	Package Type	Shipping Quantity
KBPC2500	Square Bridge	50 Units/Box
KBPC2500W	Square Bridge	50 Units/Box
KBPC2501	Square Bridge	50 Units/Box
KBPC2501W	Square Bridge	50 Units/Box
KBPC2502	Square Bridge	50 Units/Box
KBPC2502W	Square Bridge	50 Units/Box
KBPC2504	Square Bridge	50 Units/Box
KBPC2504W	Square Bridge	50 Units/Box
KBPC2506	Square Bridge	50 Units/Box
KBPC2506W	Square Bridge	50 Units/Box
KBPC2508	Square Bridge	50 Units/Box
KBPC2508W	Square Bridge	50 Units/Box
KBPC2510	Square Bridge	50 Units/Box
KBPC2510W	Square Bridge	50 Units/Box
KBPC2512	Square Bridge	50 Units/Box
KBPC2512W	Square Bridge	50 Units/Box
KBPC2514	Square Bridge	50 Units/Box
KBPC2514W	Square Bridge	50 Units/Box
KBPC2516	Square Bridge	50 Units/Box
KBPC2516W	Square Bridge	50 Units/Box

1. Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.
2. To order Lead Free version (with Lead Free finish), add "-LF" suffix to part number above. For example, KBPC2500-LF.

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**WARNING: DO NOT USE IN LIFE SUPPORT EQUIPMENT.** WTE power semiconductor products are not authorized for use as critical components in life support devices or systems without the express written approval.

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