

# ***KBPC150X SERIES***

**HIGH CURRENT SINGLE-PHASE SILICON BRIDGE RECTIFIER**

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# KBPC15005(W) THRU KBPC1510(W)

## HIGH CURRENT SINGLE-PHASE SILICON BRIDGE RECTIFIER



康比電子  
HORNBY ELECTRONIC

**REVERSE VOLTAGE:** 50 to 1000 VOLTS  
**FORWARD CURRENT:** 15.0 AMPERE

### FEATURES

- Electrically Isolated Metal Case for Maximum Heat Dissipation
- Surge Overload Ratings to 300 Amperes
- Low power loss, high efficiency
- Low reverse leakage current
- Case to terminal isolation voltage 2500V
- UL Recognized File # E-216968

### MECHANICAL DATA

Case: Metal or molded plastic with heatsink integrally mounted in the bridge encapsulation

Suffix letter "P" added to indicate plastic

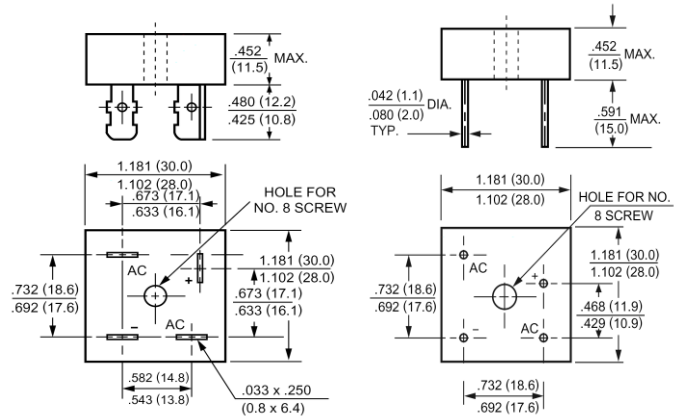
Terminals: Either plated 0.25" (6.35mm) Fasten lugs or plated copper leads 0.040" (1.02mm) diameter.

Suffix letter "W" added to indicate leads

Mounting position: Any

Weight: 1.0ounce, 30.0gram

### KBPC(W)



Dimensions in inches and (millimeters)

### Maximum Ratings and Electrical Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

	Symbols	KBPC15005	KBPC1501	KBPC1502	KBPC1504	KBPC1506	KBPC1508	KBPC1510	Units
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current at $T_C=55$	$I_{(AV)}$	15.0							Amp
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	300							Amp
Maximum Forward Voltage at 7.5A DC and 25 °C	$V_F$	1.1							Volts
Maximum Reverse Current at $T_A=25$ at Rated DC Blocking Voltage $T_A=125$	$I_R$	10.0 1000							uAmp
Typical Junction Capacitance (Note 1)	$C_J$	300							pF
Typical Thermal Resistance (Note 2)	$R_{\theta JC}$	2.3							/W
Operating and Storage Temperature Range	$T_J, T_{stg}$	-55 to +150							

### NOTES:

- 1- Measured at 1 MHz and applied reverse voltage of 4.0 VDC.
- 2- Thermal resistance from junction to case per leg

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### RATINGS AND CHARACTERISTIC CURVES

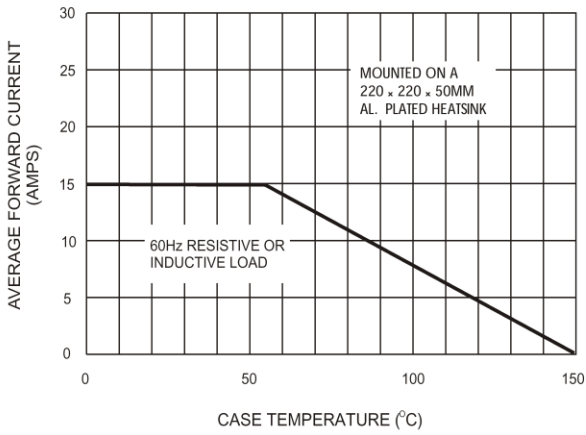


Figure 1. Forward Current Derating Curve

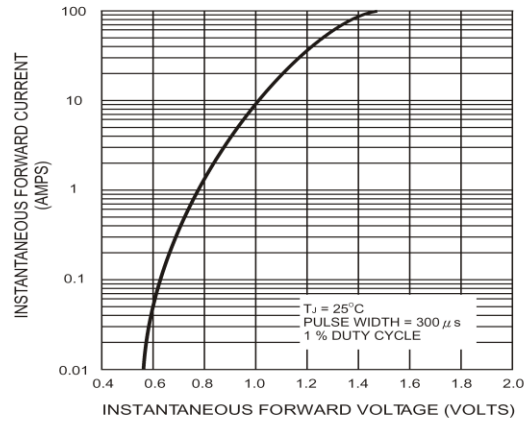


Figure 2. Typical Instantaneous Forward Characteristics Per Bridge Element

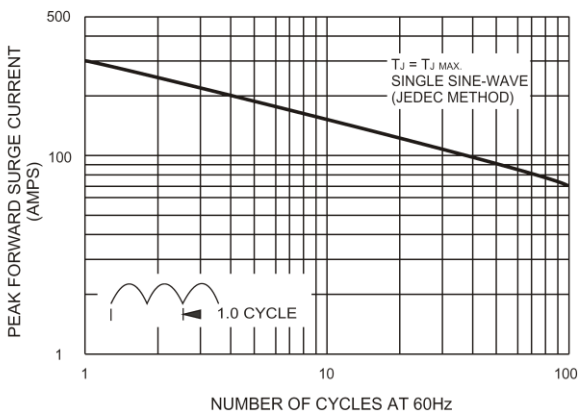


Figure 3. Maximum Non-repetitive Peak Forward Surge Current Per Bridge Element

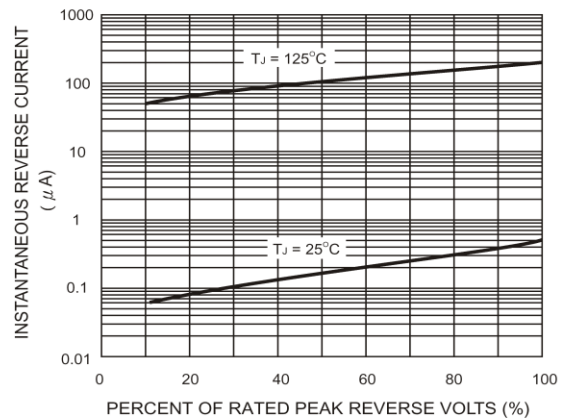


Figure 4. Typical Reverse Leakage Characteristics Per Bridge Element

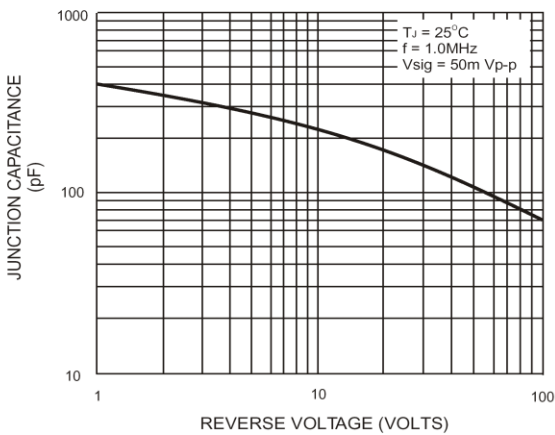


Figure 5. Typical Junction Capacitance Per Bridge Element

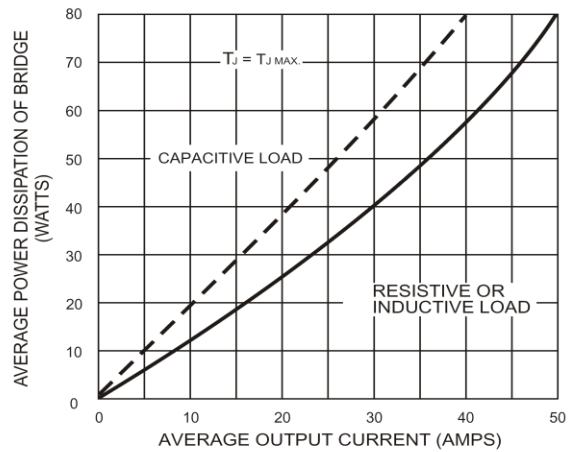


Figure 6. Maximum Power Dissipation