

KBPC50005(W) THRU KBPC5010(W)

HIGH CURRENT SINGLE-PHASE SILICON BRIDGE RECTIFIER



REVERSE VOLTAGE: 50 to 1000 VOLTS

FORWARD CURRENT: 50.0 AMPERE

FEATURES

- Electrically Isolated Metal Case for Maximum Heat Dissipation
- Surge Overload Ratings to 500 Amperes
- Rating to 1,000V PRV.
- High efficiency
- UL Recognized File # E-216967

MECHANICAL DATA

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

Suffix letter "P" added to indicate plastic

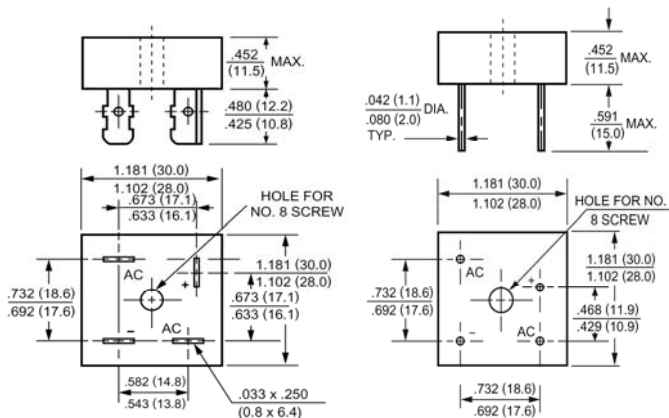
Terminals: Either plated 0.25" (6.35mm) Fasten lugs or plated copper leads 0.040" (1.02mm) diameter.

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	KBPC50005	KBPC5001	KBPC5002	KBPC5004	KBPC5006	KBPC5008	KBPC5010	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 $T_C=55^\circ\text{C}$	$I_{(AV)}$	50.0							Amp
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	400							Amp
Maximum Forward Voltage at 25.0A DC and 25°C	V_F	1.1							Volts
Maximum Reverse Current at $T_A=25^\circ\text{C}$ at Rated DC Blocking Voltage $T_A=125^\circ\text{C}$	I_R	10.0 1000							uAmp
Typical Junction Capacitance (Note 1)	C_J	300							pF
Typical Thermal Resistance (Note 2)	$R_{\theta JC}$	2.6							°C/W
Operating and Storage Temperature Range	T_J, T_{stg}	-55 to +150							°C

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

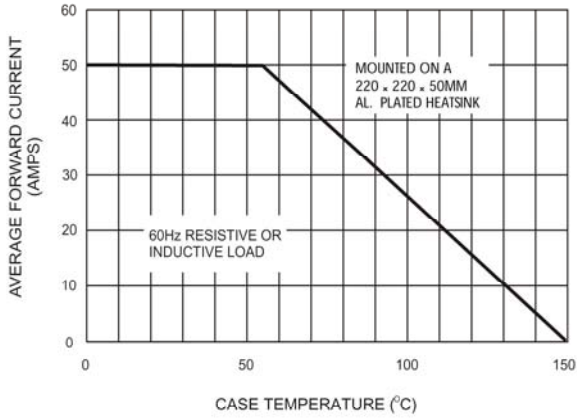


Figure 1. Forward Current Derating Curve

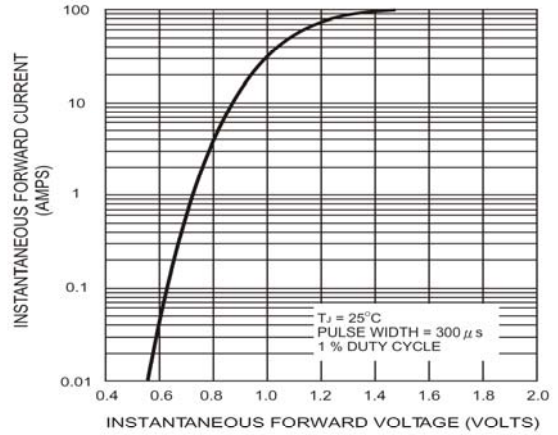


Figure 2. Typical Instantaneous Forward Characteristics Per Bridge Element

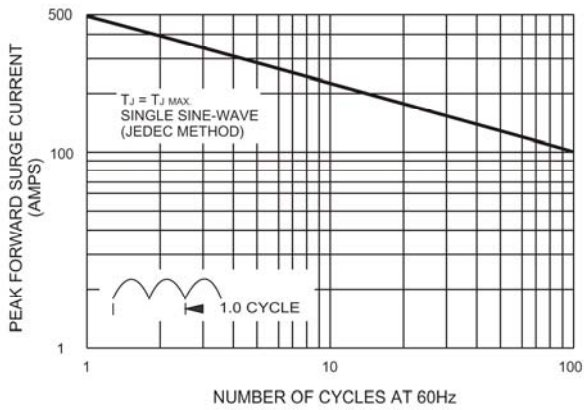


Figure 3. Maximum Non-repetitive Peak Forward Surge Current Per Bridge Element

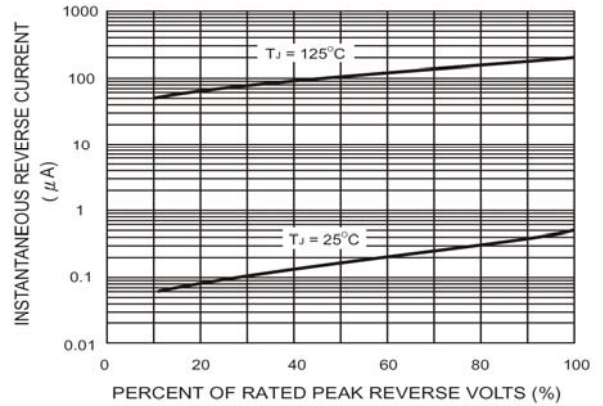


Figure 4. Typical Reverse Leakage Characteristics Per Bridge Element

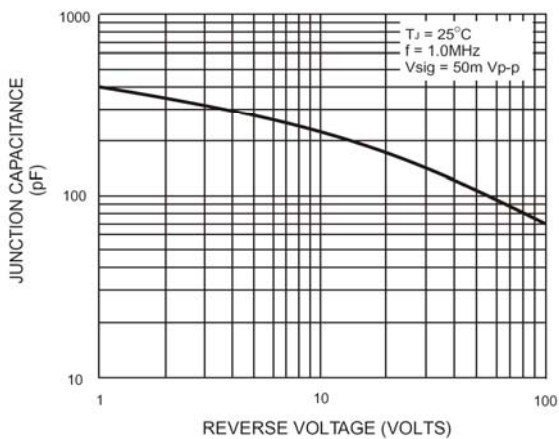


Figure 5. Typical Junction Capacitance Per Bridge Element

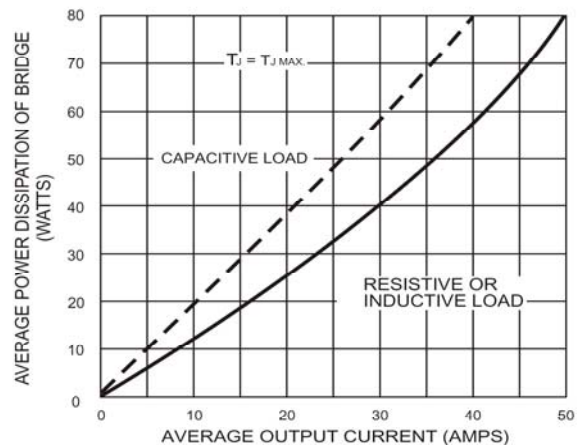


Figure 6. Maximum Power Dissipation