# KBPC25005(W) THRU KBPC2510(W)

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

GROWCHILD ELECTRONICS™

***REVERSE VOLTAGE:*** **50 to 1000 VOLTS**

***FORWARD CURRENT:*** **25.0 AMPERE**

http://www.njzrg.com

## *FEATURES*

· Electrically Isolated Metal Case for Maximum Heat Dissipation

· Surge Overload Ratings to 300 Amperes

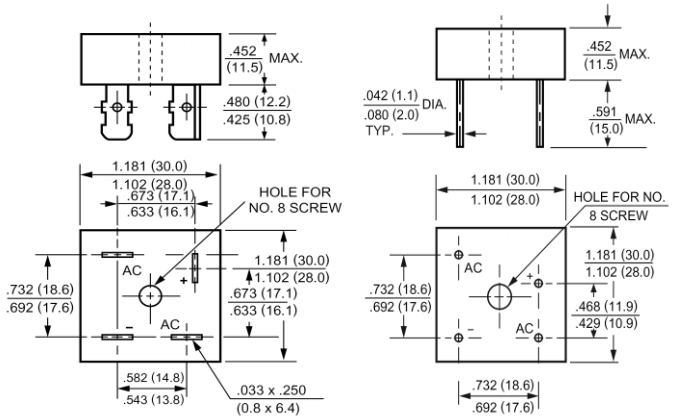
· Low power loss,high efficiency

· Low reverse leakage current

· Case to terminal isolation voltage 2500V

· UL Recognized File # E-216968

**KBPC(W)**




**Dimensions in inches and (millimeters)**

## *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

## *Maximum Ratings and Electrical Characteristics*

Ratings at 25℃ ambient temperature unless otherwise specified.

Single phase, half wave, 60$H_Z$, resistive or inductive load.

For capacitive load, derate current by 20%.

| | Symbols | *KBPC25005* | *KBPC2501* | *KBPC2502* | *KBPC2504* | *KBPC2506* | *KBPC2508* | *KBPC2510* | 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℃** | $I_{(AV)}$ | 25.0 | | | | | | | **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 12.5A DC and 25℃** | $V_F$ | 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)** | $R_{\theta JC}$ | 1.9 | | | | | | | **℃/W** |
| **Operating and Storage Temperature Range** | $T_J$, Tstg | -55 to +150 | | | | | | | **℃** |

**NOTES:**

1- Measured at 1 M$H_Z$ 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*

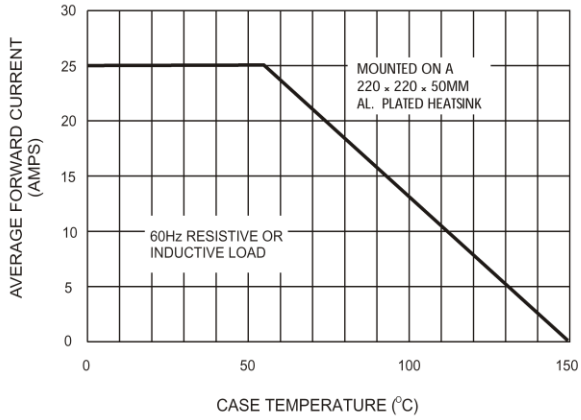


Figure 1. Forward Current Derating Curve

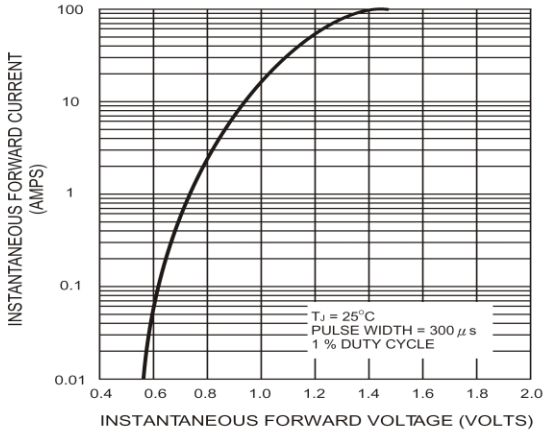


Figure 2. Typical Instantaneous Forward Characteristics Per Bridge Element

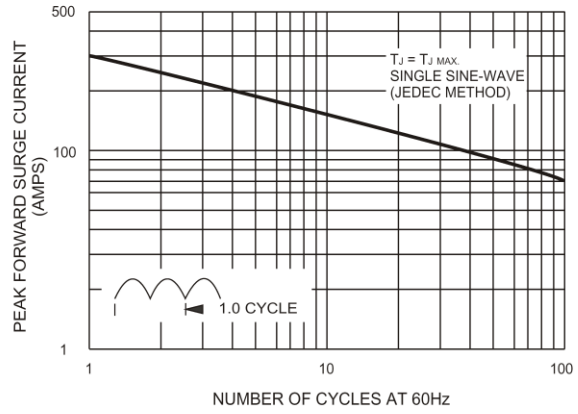


Figure 3. Maximum Non-repetitive Peak Forward Surge Current Per Bridge Element

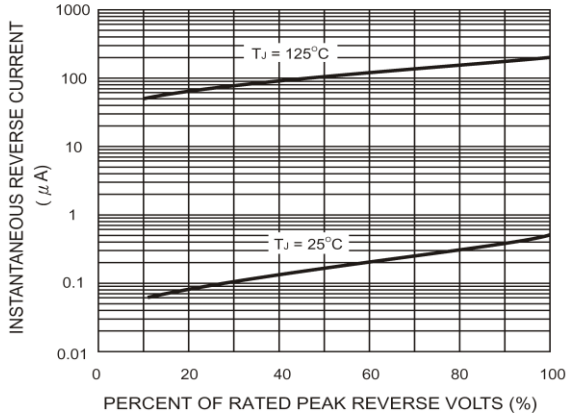


Figure 4. Typical Reverse Leakage Characteristics Per Bridge Element

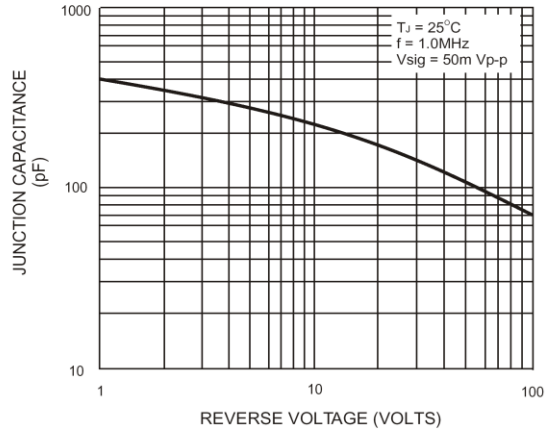


Figure 5. Typical Junction Capacitance Per Bridge Element

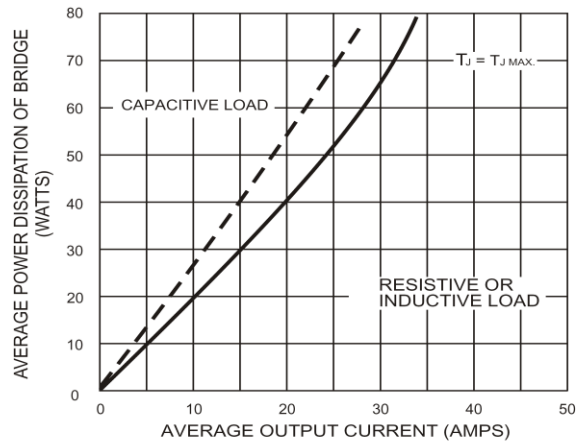


Figure 6. Maximum Power Dissipation