

KBPC40, 50/W SERIES

40, 50A HIGH CURRENT BRIDGE RECTIFIER

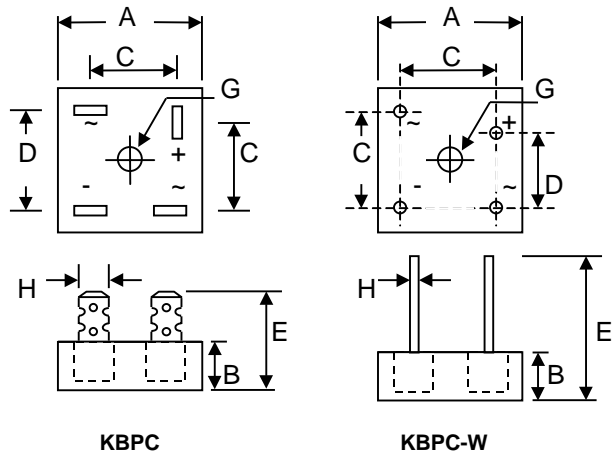
Features

- 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



| Dim | KBPC | | KBPC-W | |
|----------------------------|-----------------------------------|-------|--------|-------|
| | Min | Max | Min | Max |
| A | 28.40 | 28.70 | 28.40 | 28.70 |
| B | 10.97 | 11.23 | 10.97 | 11.23 |
| C | 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 | | | |
| H | 6.35 Typical | | 0.97Ø | 1.07Ø |
| All Dimension in mm | | | | |

Maximum Ratings and Electrical Characteristics @T_A=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 | V _{RRM} | | | | | | | | V |
| Working Peak Reverse Voltage | V _{RWM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | |
| DC Blocking Voltage | V _R | | | | | | | | |
| RMS Reverse Voltage | V _{R(RMS)} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Average Rectifier Output Current @T _C = 55°C | I _O | 40 50 | | | | | | | A |
| Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave Superimposed on rated load (JEDEC Method) | I _{FSM} | 400 400 | | | | | | | A |
| Forward Voltage Drop (per element) KBPC40 @I _F = 20A KBPC50 @I _F = 25A | V _{FM} | 1.2 | | | | | | | V |
| Peak Reverse Current At Rated DC Blocking Voltage | I _{RM} | 10 1.0 | | | | | | | µA mA |

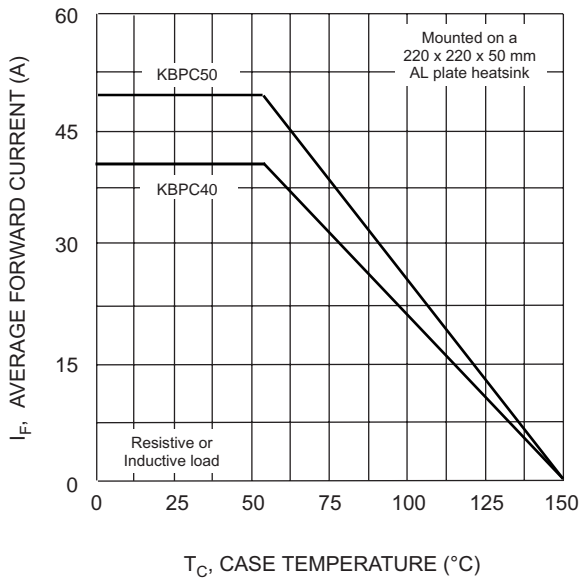
Maximum Ratings and Electrical Characteristics @ $T_A=25^{\circ}\text{C}$ unless otherwise specified

| | | | |
|---|------------------|-------------|--------------------|
| Typical Junction Capacitance (per element) (Note 1) | C_j | 300 | pF |
| Typical Thermal Resistance Junction to Case (per element) (Note 2) | $R_{\theta JC}$ | 1.5 | K/W |
| RMS Isolation Voltage from Case to Lead | V _{ISO} | 2500 | V |
| Operating and Storage Temperature Range | T_j, T_{STG} | -65 to +150 | $^{\circ}\text{C}$ |

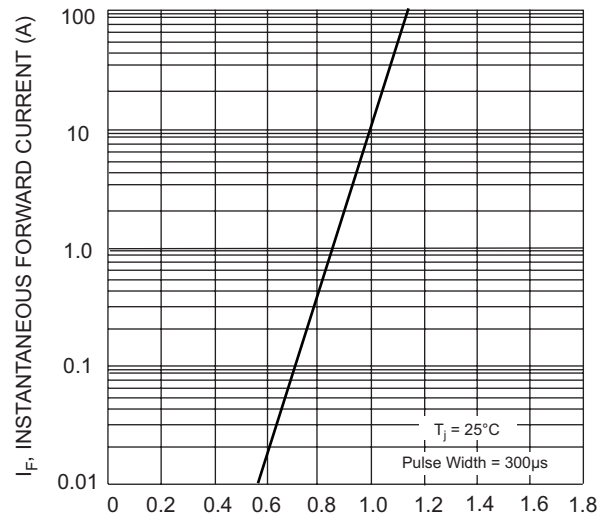
* **Glass passivated forms are available upon request.**

Note: 1. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.

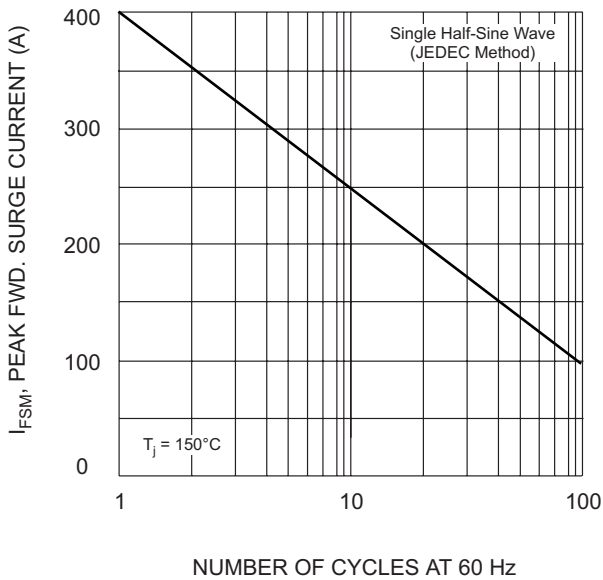
2. Thermal resistance junction to case mounted on heatsink.



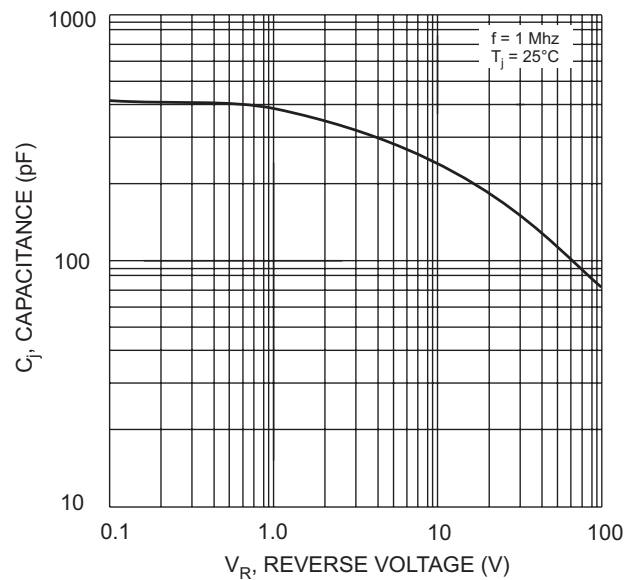
T_C , CASE TEMPERATURE ($^{\circ}C$)
Fig. 1 Forward Current Derating Curve



V_F , INSTANTANEOUS FORWARD VOLTAGE (V)
Fig. 2 Typical Forward Characteristics (per element)



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



V_R , REVERSE VOLTAGE (V)
Fig. 4 Typical Junction Capacitance (per element)



PERCENT OF RATED PEAK REVERSE VOLTAGE (%)
Fig. 5 Typical Reverse Characteristics (per element)