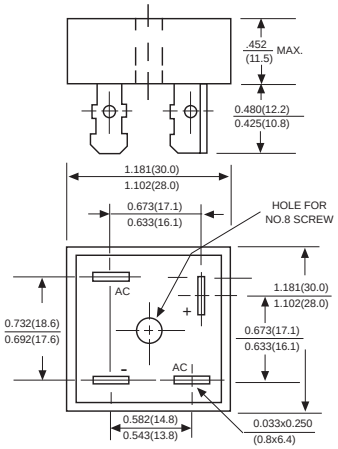
# KBPC40, 50 SERIES

## 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.)
- Marking: Type Number




Dimensions in inches and (millimeters)

## 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 | -01 | -02 | -04 | -06 | -08 | -10 | Unit |
|---|---|---|---|---|---|---|---|---|---|
| Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage | $V_{RRM}$<br>$V_{RWM}$<br>$V_R$ | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| RMS Reverse Voltage | $V_{R(RMS)}$ | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Average Rectifier Output Current KBPC40<br>@$T_C$ = 55°C KBPC50 | $I_O$ | 40<br>50 | | | | | | | A |
| Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave Superimposed on rated load (JEDEC Method) KBPC40<br>KBPC50 | $I_{FSM}$ | 400<br>400 | | | | | | | A |
| Forward Voltage Drop (per element) KBPC40 @$I_F$ = 20A<br>KBPC50 @$I_F$ = 25A | $V_{FM}$ | 1.2 | | | | | | | V |
| Peark Reverse Current @$T_C$ = 25°C<br>At Rated DC Blocking Voltage @$T_C$ = 125°C | $I_{RM}$ | 10<br>1.0 | | | | | | | μA<br>mA |

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## Maximum Ratings and Electrical Characteristics @$T_A$=25°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) KBPC40 KBPC50 | $R_{\theta JC}$ | 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 | °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.

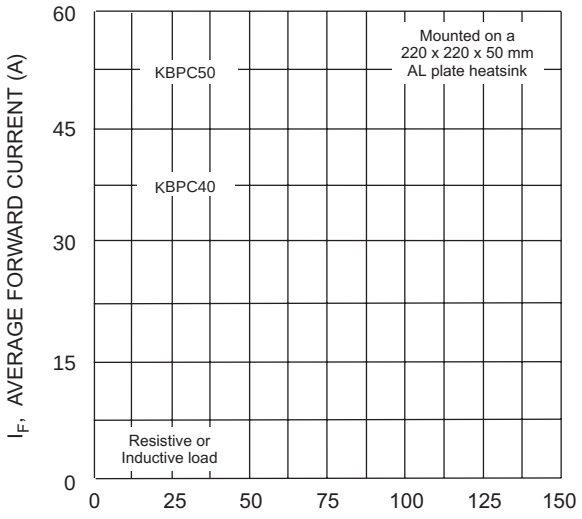


Fig. 1 Forward. Current Derating Curve

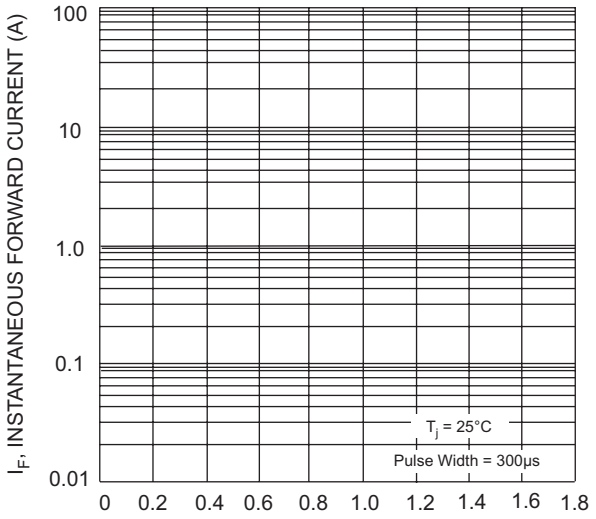


Fig. 2 Typical Forward Characteristics (per element)

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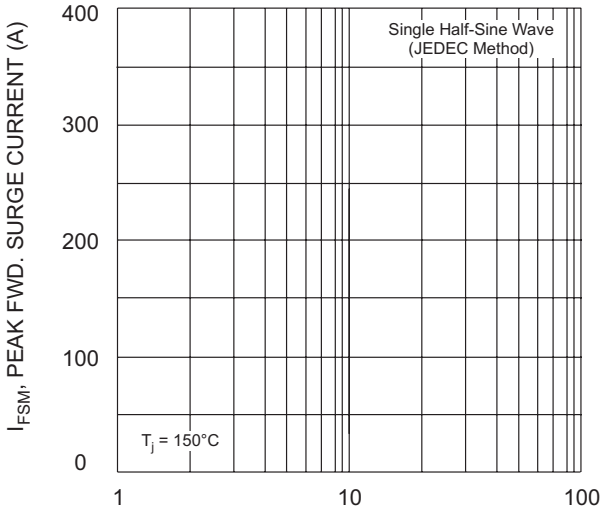


Fig. 3 Max Non-Repetitive Surge Current

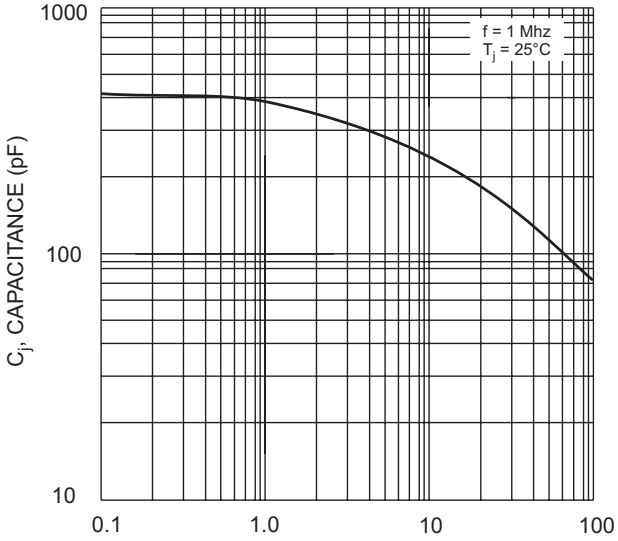


Fig. 4 Typical Junction Capacitance (per element)

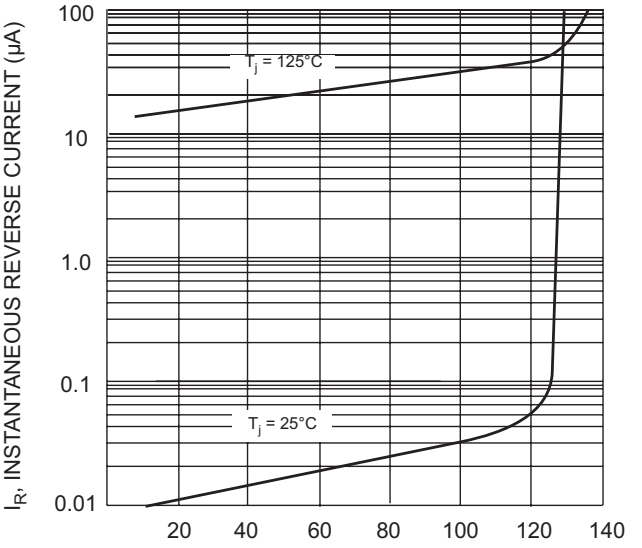


Fig. 5 Typical Reverse Characteristics (per element)