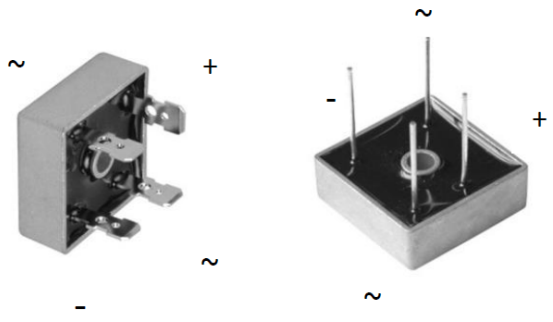
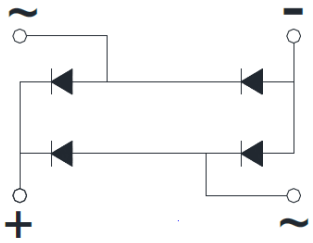
# Bridge Rectifiers




## Features

- Universal 3-way terminals：snap-on,wire wrap-around ,or PCB mounting
- Glass passivated chip junction
- High surge current capability
- Low thermal resistance
- Solder dip 275 °C max. 7 s, per JESD 22-B106

## Typical Applications

General purpose use in AC/DC bridge full wave rectification for power supply, home appliances, office equipment, industrial automation applications.

## Mechanical Data

- **Package**: KBPC、KBPC-W
  Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- **Terminals**: Tin plated leads, solderable per J-STD-002 and JESD22-B102
- Suffix letter “W” added to indicate wire leads(e.g. KBPC5010W).

## ■Maximum Ratings ($T_a$=25℃ Unless otherwise specified）

| PARAMETER | SYMBOL | UNIT | KBPC50005 | KBPC5001 | KBPC5002 | KBPC5004 | KBPC5006 | KBPC5008 | KBPC5010 |
|---|---|---|---|---|---|---|---|---|---|
| Device marking code | | | KBPC50005 | KBPC5001 | KBPC5002 | KBPC5004 | KBPC5006 | KBPC5008 | KBPC5010 |
| Maximum Repetitive Peak Reverse Voltage | $V_{RRM}$ | V | 50 | 100 | 200 | 400 | 600 | 800 | 1000 |
| Maximum RMS Voltage | $V_{RMS}$ | V | 35 | 70 | 140 | 280 | 420 | 560 | 700 |
| Maximum DC blocking Voltage | $V_{DC}$ | V | 50 | 100 | 200 | 400 | 600 | 800 | 1000 |
| Average rectified output current @60Hz sine wave, R-load, $T_C$ =55℃ | $I_O$ | A | 50 | | | | | | |
| Forward Surge Current (Non-repetitive) @8.3ms, Half-sine wave,1 cycle, Tj=25℃ | $I_{FSM}$ | A | 500 | | | | | | |
| Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, Tj=25℃ | | | 1000 | | | | | | |
| Current squared time @1ms≤t≤8.3ms Tj=25℃, Rating of per diode | $I^2t$ | $A^2S$ | 1038 | | | | | | |
| Storage temperature | Tstg | ℃ | -55 ~ +150 | | | | | | |
| Junction temperature | Tj | ℃ | -55 ~ +150 | | | | | | |
| Dielectric strength @ Terminals to case, AC 1 minute | Vdis | KV | 2.5 | | | | | | |
| Mounting torque @Recommend torque：5kg·cm | Tor | kg·cm | 8 | | | | | | |

## ■Electrical Characteristics（$T_a$=25℃ Unless otherwise specified）

| PARAMETER | SYMBOL | UNIT | TEST CONDITIONS | KBPC50005 | KBPC5001 | KBPC5002 | KBPC5004 | KBPC5006 | KBPC5008 | KBPC5010 |
|---|---|---|---|---|---|---|---|---|---|---|
| Maximum instantaneous forward voltage drop per diode | VF | V | $I_{FM}$=25A | 1.1 | | | | | | |
| Maximum DC reverse current at rated DC blocking voltage per diode | $I_R$ | μA | $T_j$=25℃ | 5 | | | | | | |
| | | | $T_j$=125℃ | 100 | | | | | | |
| Typical junction capacitance | Cj | pF | Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C | 152 | | | | | | |

## ■Thermal Characteristics （$T_a$=25℃ Unless otherwise specified）

| PARAMETER | | SYMBOL | UNIT | KBPC50005 | KBPC5001 | KBPC5002 | KBPC5004 | KBPC5006 | KBPC5008 | KBPC5010 |
|---|---|---|---|---|---|---|---|---|---|---|
| Thermal Resistance | Between junction and case, With heatsink | $R_{\theta J-C}$ | ℃/W | 1.3 | | | | | | |

Note: Device mounted on 75mm x 45mm x 5.5mm Aluminum Plate Heatsink.

## ■Ordering Information (Example)

| PREFERED P/N | PACKAGE CODE | UNIT WEIGHT (g) | MINIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|---|---|---|---|---|---|---|
| KBPC50005~KBPC5010 | A1 | Approximate 24.5 | 50 | 50 | 500 | Paper Box |
| KBPC50005W~KBPC5010W | A1 | Approximate 22.5 | 50 | 50 | 500 | Paper Box |

## ■ Characteristics (Typical)

FIG1:Io-Tc Curve

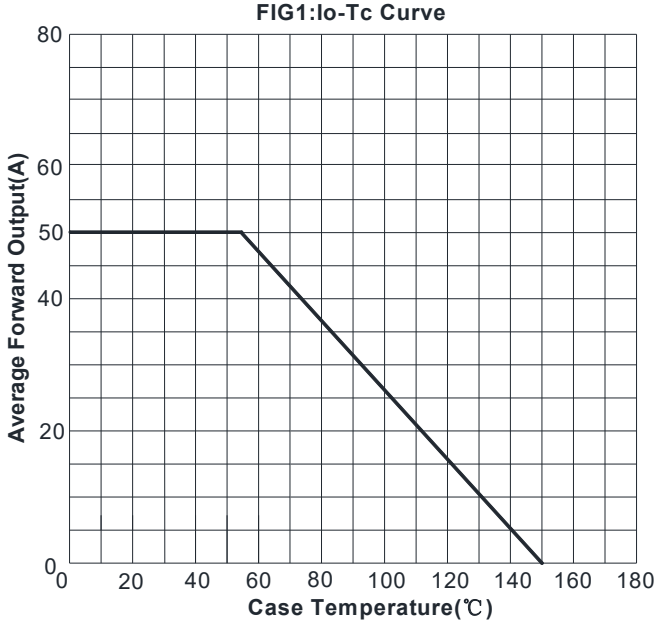



FIG2:Surge Forward Current Capability

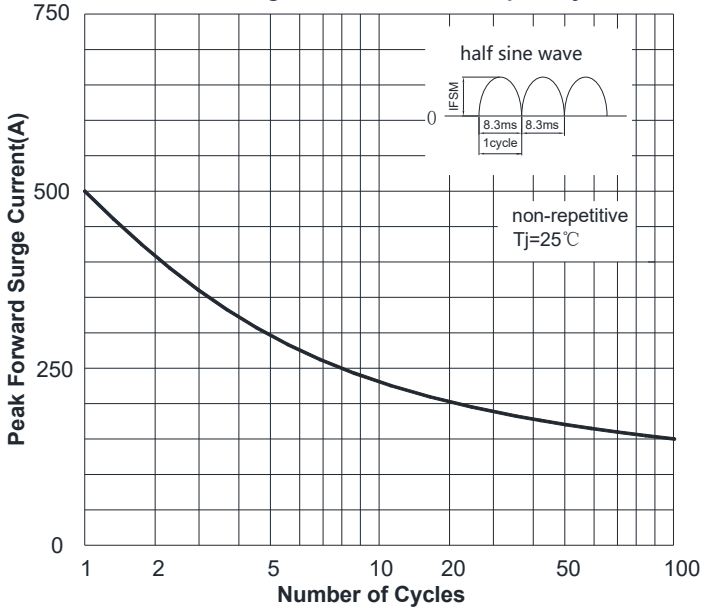


FIG3: Typical Forward Voltage

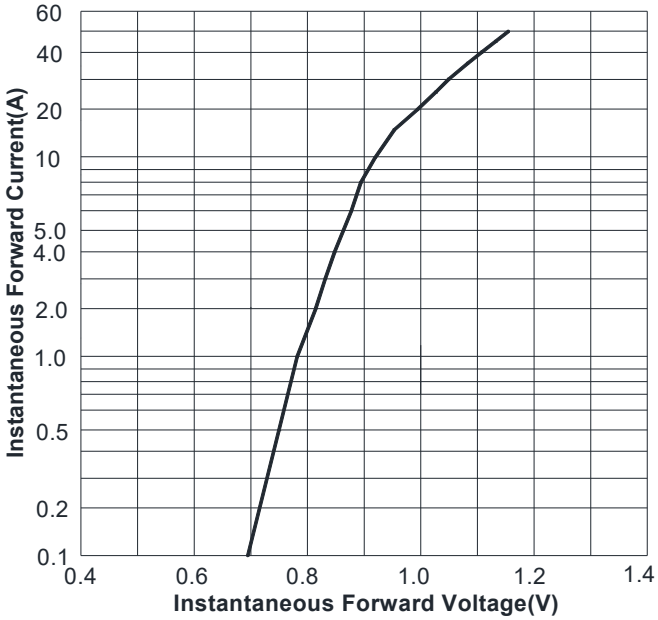
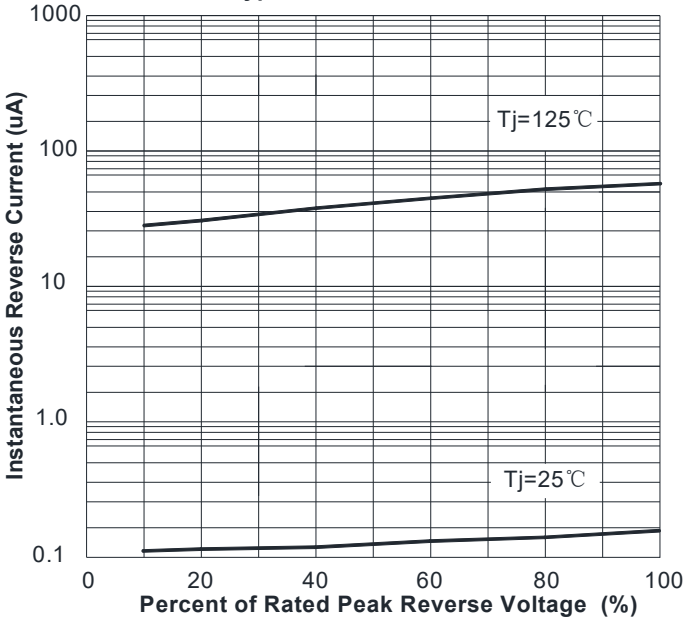
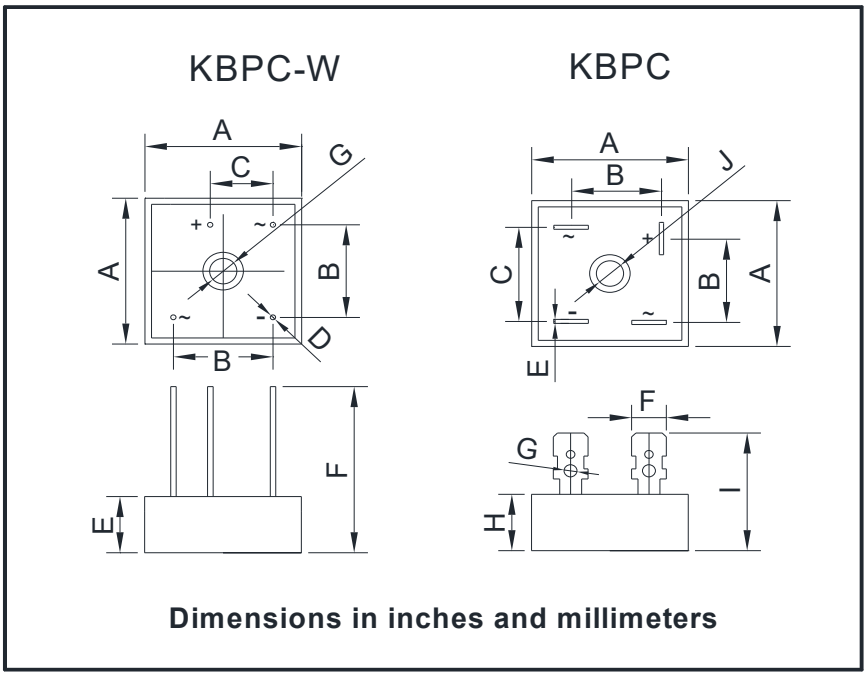



FIG4:Typical Reverse Characteristics




## ■ Outline Dimensions




| KBPC-W | | |
|---|---|---|
| **Dim** | **Min** | **Max** |
| A | 28.2 | 28.8 |
| B | 17.1 | 19.1 |
| C | 10.4 | 12.4 |
| D | 0.95 | 1.05 |
| E | 10.8 | 11.2 |
| F | 30 | / |
| G | 5.0 | 5.5 |

| KBPC | | |
|---|---|---|
| **Dim** | **Min** | **Max** |
| A | 28.2 | 28.8 |
| B | 15.3 | 17.3 |
| C | 17.1 | 19.1 |
| D | 13.2 | 15.2 |
| E | 0.75 | 0.85 |
| F | 6.2 | 6.4 |
| G | 2.3 | 2.5 |
| H | 10.8 | 11.2 |
| I | 19 | / |
| J | 5.0 | 5.5 |

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