

Bridge Rectifiers

Features

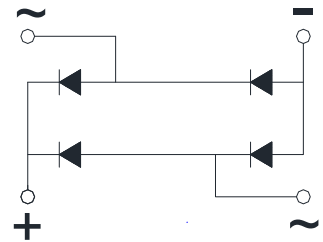
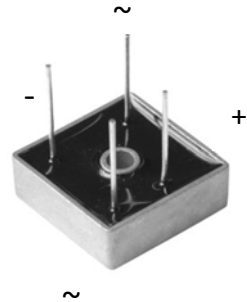
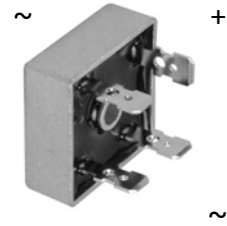
- UL recognition file number E230084
- Low thermal resistance
- High surge current capability
- Universal 3-way terminals: snap-on, wire wrap-around, or PCB mounting
- Solder dip 275 °C max. 7 s, per JESD 22-B106

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. KBPC3510W)



Maximum Ratings (TA=25°C unless otherwise noted)

| Parameter | Symbol | KBPC 35005 | KBPC 3501 | KBPC 3502 | KBPC 3504 | KBPC 3506 | KBPC 3508 | KBPC 3510 | Unit |
|---|------------------|------------|-----------|-----------|-----------|-----------|-----------|-----------|------------------|
| Device marking code | | KBPC 35005 | KBPC 3501 | KBPC 3502 | KBPC 3504 | KBPC 3506 | KBPC 3508 | KBPC 3510 | |
| Repetitive Peak Reverse Voltage | V _{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Average Rectified Output Current @60Hz sine Wave, R-load, With heatsink Tc=55°C | I _O | 35 | | | | | | | A |
| Surge(Non-repetitive)Forward Current @60Hz Half- sine Wave, 1 cycle, Ta=25°C | I _{FSM} | 400 | | | | | | | A |
| Current Squared Time @1ms≤t<8.3ms Tj=25°C, Rating of per diode | I ² t | 660 | | | | | | | A ² S |
| Storage Temperature | T _{stg} | -55 ~+150 | | | | | | | °C |
| Junction Temperature | T _J | -55 ~+150 | | | | | | | °C |
| Dielectric Strength, Terminals to case, AC1minute | V _{dis} | 2.5 | | | | | | | KV |
| Mounting Torque | T _{OR} | 10 | | | | | | | kg-cm |



KBPC35005 (W) thru KBPC3510 (W)

GOOD-ARK Electronics

| Electrical Characteristics (T _A =25°C unless otherwise noted) | | | | | | | | | | | |
|--|------------------|-----------------------------------|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----|----|
| Parameter | Symbol | Test Conditions | KBPC 35005 | KBPC 3501 | KBPC 3502 | KBPC 3504 | KBPC 3506 | KBPC 3508 | KBPC 3510 | Uit | |
| Maximum instantaneous forward voltage drop per diode | V _{FM} | IFM=17.5A | 1.1 | | | | | | | | V |
| Maximum DC reverse current at rated DC blocking voltage per diode | I _{RRM} | V _{RM} =V _{RRM} | 10 | | | | | | | | μA |

| Thermal Characteristics (T _A =25°C unless otherwise noted) | | | | | | | | | | |
|--|-------------------|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----|------|
| Parameter | Symbol | KBPC 35005 | KBPC 3501 | KBPC 3502 | KBPC 3504 | KBPC 3506 | KBPC 3508 | KBPC 3510 | Uit | |
| Thermal Resistance Maximum instantaneous forward voltage drop per diode | R _{θJ-C} | 1.6 | | | | | | | | °C/W |

Ratings and Characteristics Curves

($T_A = 25^\circ\text{C}$ unless otherwise noted)

FIG1: I_o - T_c Curve

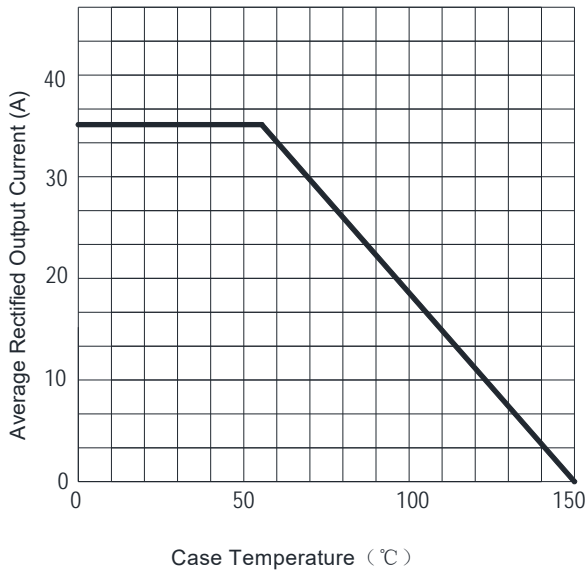


FIG2: Surge Forward Current Capability

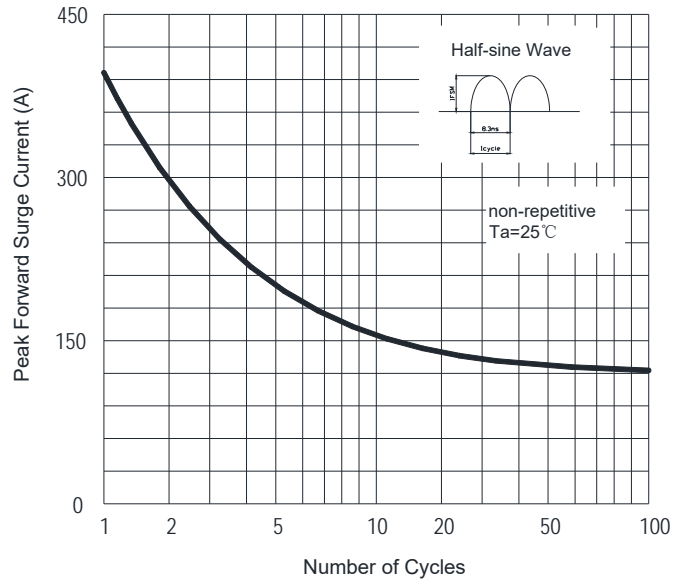


FIG3: Instantaneous Forward Voltage

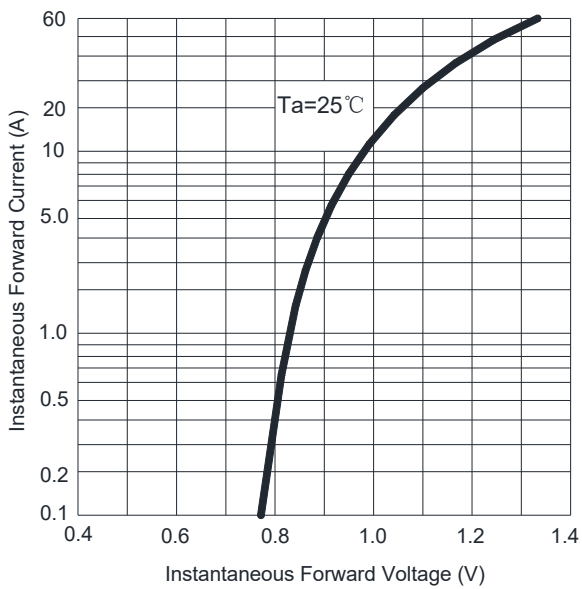
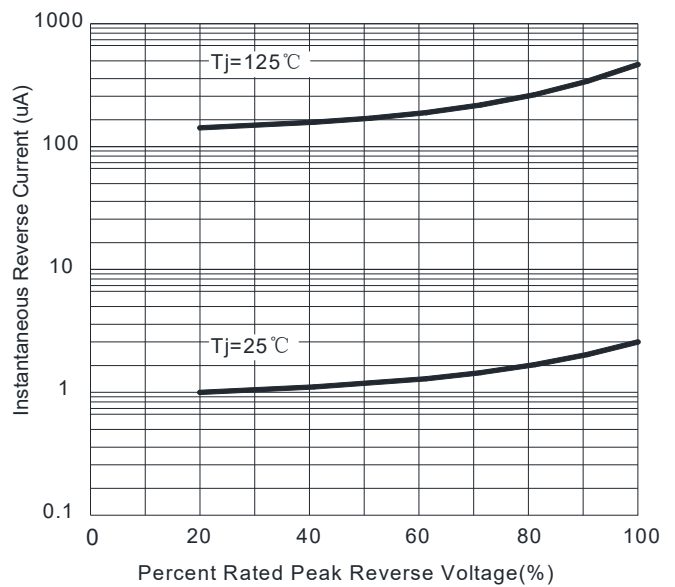
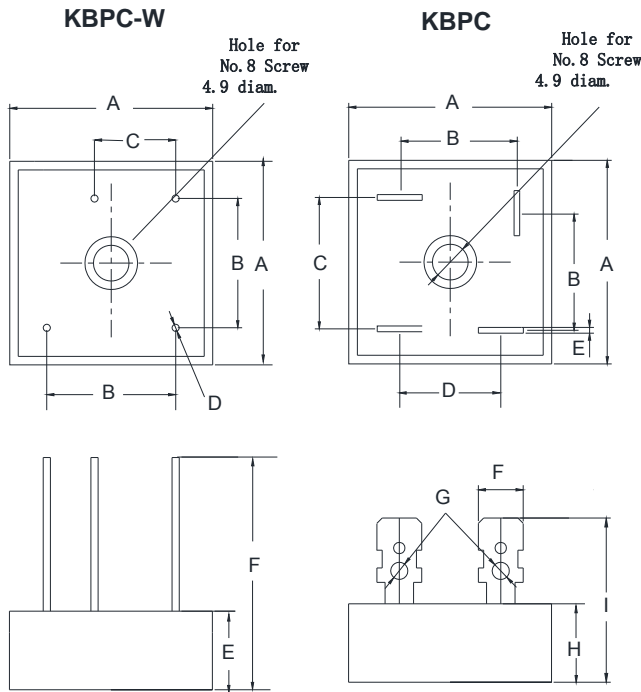


FIG4: Typical Reverse Characteristics



Package Outline Dimensions

in inches (millimeters)



Dimensions in millimeters

| 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 | |

| 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 | |

Revision History

| Document Version | Date of release | Description of changes |
|------------------|-----------------|------------------------|
| Rev.A | 2015.04.28 | First issue |
| | | |
| | | |



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