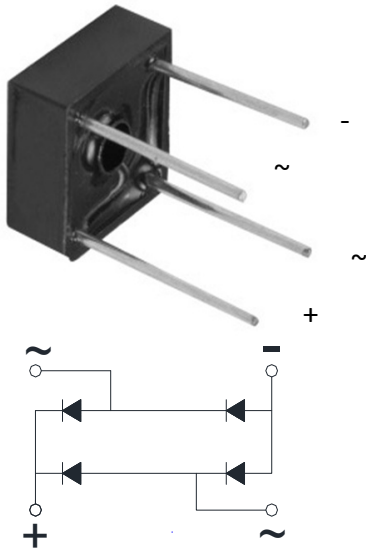




KBPC6005 THRU KBPC610

Bridge Rectifiers



Features

- UL recognition, file #E230084
- Suitable for printed circuit board or chassis mounting
- Compact construction
- High surge current capability
- Solder dip 275 °C max. 7s, per JESD 22-B106

Typical Applications

The KBPC series of single phase rectifier bridge consists of four silicon junctions connected as a full bridge. These devices are intended for general use in industrial and consumer equipment.

Mechanical Data

- **Package:** KBPC6
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** As marked on body

■ Maximum Ratings ($T_a=25^\circ\text{C}$ Unless otherwise specified)

| PARAMETER | SYMBOL | UNIT | KBPC6005 | KBPC601 | KBPC602 | KBPC604 | KBPC606 | KBPC608 | KBPC610 |
|---|------------------|------------------|-----------|---------|---------|---------|---------|---------|---------|
| Device marking code | | | KBPC6005 | KBPC601 | KBPC602 | KBPC604 | KBPC606 | KBPC608 | KBPC610 |
| Repetitive Peak Reverse Voltage | VRRM | V | 50 | 100 | 200 | 400 | 600 | 800 | 1000 |
| Average Rectified Output Current @60Hz sine wave, R-load, $T_a=40^\circ\text{C}$ | IO | A | 6.0 | | | | | | |
| Surge(Non-repetitive)Forward Current @60HZ Half- sine Wave, 1 cycle, $T_a=25^\circ\text{C}$ | IFSM | A | 150 | | | | | | |
| Current Squared Time @1ms≤t<8.3ms $T_j=25^\circ\text{C}$, Rating of per diode | I ² t | A ² S | 93 | | | | | | |
| Storage Temperature | Tstg | °C | -55 ~+150 | | | | | | |
| Junction Temperature | Tj | °C | -55 ~+150 | | | | | | |

■ Electrical Characteristics ($T_a=25^\circ\text{C}$ Unless otherwise specified)

| PARAMETER | SYMBOL | UNIT | TEST CONDITIONS | KBPC6 005 | KBPC6 01 | KBPC6 02 | KBPC6 04 | KBPC6 06 | KBPC6 08 | KBPC6 10 |
|---|--------|------|-----------------|-----------|----------|----------|----------|----------|----------|----------|
| Maximum instantaneous forward voltage drop per diode | VFM | V | IFM=3A | 1.1 | | | | | | |
| Maximum DC reverse current at rated DC blocking voltage per diode | IRRM | μA | VRM=VRRM | 10 | | | | | | |

■ Thermal Characteristics ($T_a=25^\circ\text{C}$ Unless otherwise specified)

| PARAMETER | SYMBOL | UNIT | KBPC6005 | KBPC601 | KBPC602 | KBPC604 | KBPC606 | KBPC608 | KBPC610 |
|---|--------|------|----------|---------|---------|---------|---------|---------|---------|
| Thermal Resistance Between junction and ambient | RθJ-A | °C/W | 9 | | | | | | |



KBPC6005 THRU KBPC610

Ordering Information (Example)

| PREFERRED P/N | PACKAGE CODE | UNIT WEIGHT(g) | MINIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|------------------|--------------|-----------------|----------------------|-------------------------|----------------------------|---------------|
| KBPC6005-KBPC610 | A1 | Approximate 3.1 | 200 | 200 | 2000 | Paper Box |

Characteristics (Typical)

FIG1:Io-Ta Curve

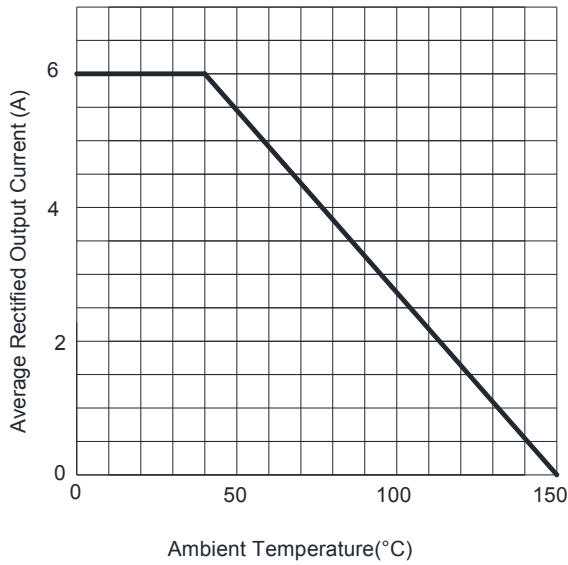


FIG2:Surge Forward Current Capability

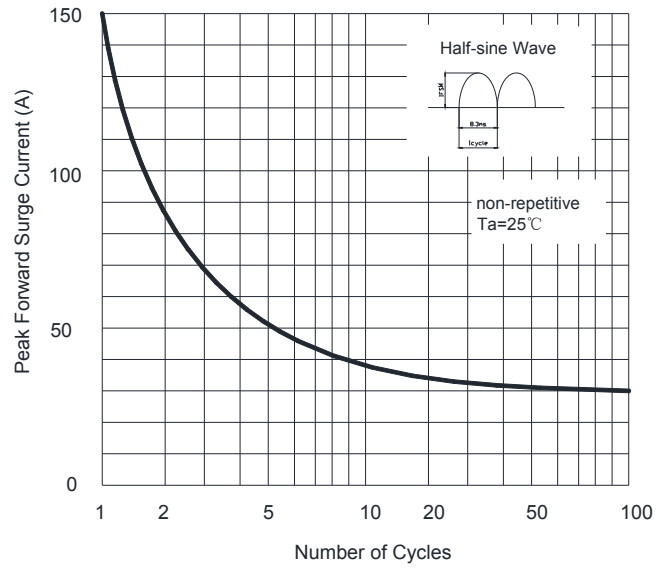


FIG3:Instantaneous Forward Voltage

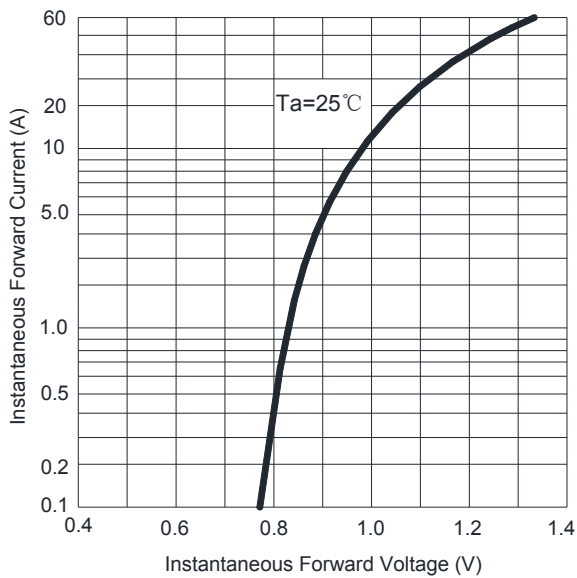
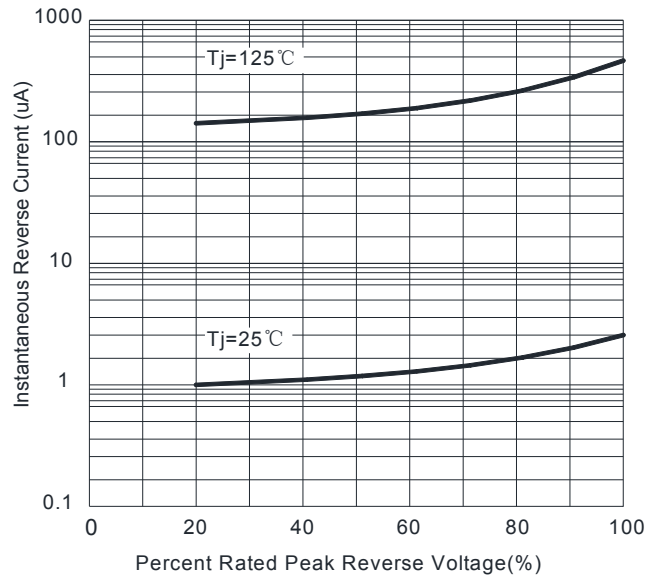


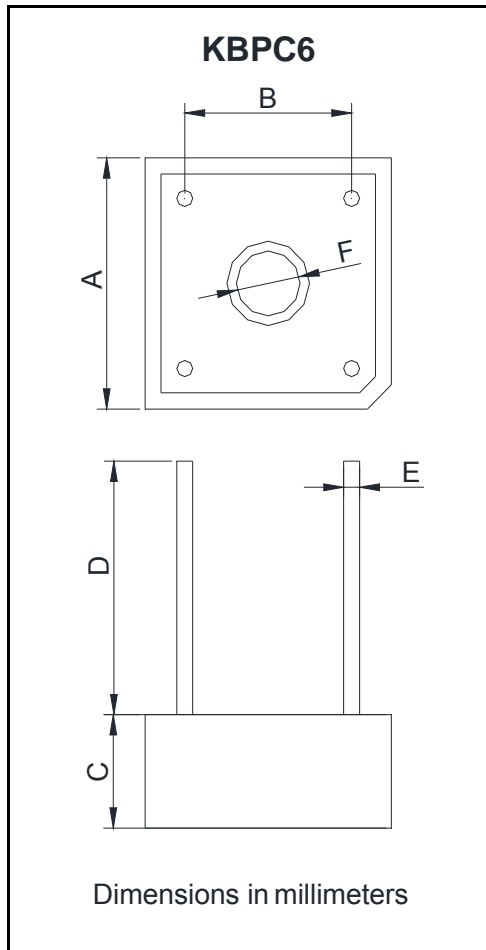
FIG4:Typical Reverse Characteristics





KBPC6005 THRU KBPC610

■ Outline Dimensions



| KBPC6 | | |
|-------|------|------|
| Dim | Min | Max |
| A | 14.7 | 15.7 |
| B | 10.3 | 11.3 |
| C | 6.35 | 7.6 |
| D | 15.0 | / |
| E | 0.95 | 1.05 |
| F | 3.8 | 4.2 |



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