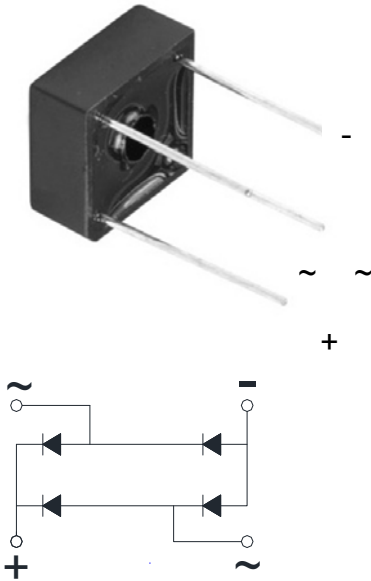


Bridge Rectifiers



Features

- UL recognition, file #E230084
- Suitable for printed circuit board or chassis mount
- Compact construction
- High surge current capability
- Solder dip 275 °C max. 7 s, 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:** KBPC1
- 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 | KBPC1005 | KBPC101 | KBPC102 | KBPC104 | KBPC106 | KBPC108 | KBPC110 |
|---|-----------|------------------|-----------|---------|---------|---------|---------|---------|---------|
| Device marking code | | | KBPC1005 | KBPC101 | KBPC102 | KBPC104 | KBPC106 | KBPC108 | KBPC110 |
| Repetitive Peak Reverse Voltage | VRRM | V | 50 | 100 | 200 | 400 | 600 | 800 | 1000 |
| Average Rectified Output Current @60Hz sine wave, R-load, $T_a=40^\circ\text{C}$ | I_O | A | 2.0 | | | | | | |
| Surge(Non-repetitive)Forward Current @60Hz Half- sine Wave, 1 cycle, $T_a=25^\circ\text{C}$ | IFSM | A | 45 | | | | | | |
| Current Squared Time @1ms \leq t \leq 8.3ms $T_j=25^\circ\text{C}$, Rating of per diode | I^2t | A ² S | 8.5 | | | | | | |
| Storage Temperature | T_{stg} | $^\circ\text{C}$ | -55 ~+150 | | | | | | |
| Junction Temperature | T_j | $^\circ\text{C}$ | -55 ~+150 | | | | | | |

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

| PARAMETER | SYMBOL | UNIT | TEST CONDITIONS | KBPC1005 | KBPC101 | KBPC102 | KBPC104 | KBPC106 | KBPC108 | KBPC110 |
|---|--------|---------------|-----------------|----------|---------|---------|---------|---------|---------|---------|
| Maximum instantaneous forward voltage drop per diode | VFM | V | IFM=1 A | 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 | KBPC1005 | KBPC101 | KBPC102 | KBPC104 | KBPC106 | KBPC108 | KBPC110 |
|--|------------------|--------------------|----------|---------|---------|---------|---------|---------|---------|
| Thermal Resistance Between junction and ambient | $R_{\theta J-A}$ | $^\circ\text{C/W}$ | 35 | | | | | | |



KBPC1005 THRU KBPC110

Ordering Information (Example)

| PREFERED P/N | PACKAGE CODE | UNIT WEIGHT(g) | MINIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|------------------|--------------|-----------------|----------------------|-------------------------|----------------------------|---------------|
| KBPC1005-KBPC110 | A1 | Approximate 2.5 | 200 | 200 | 2000 | Paper Box |

Characteristics (Typical)

FIG1:Io-Ta Curve

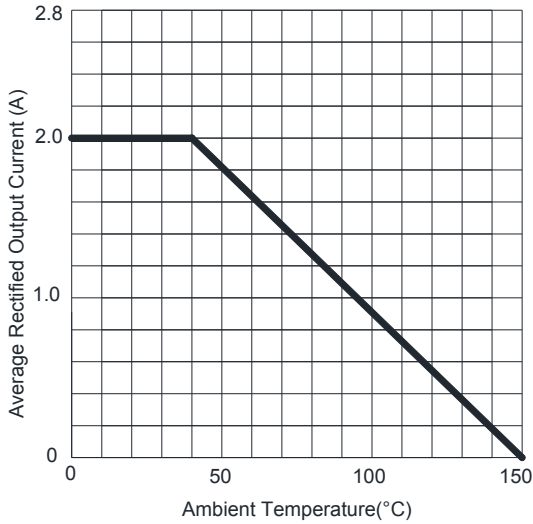


FIG2:Surge Forward Current Capability

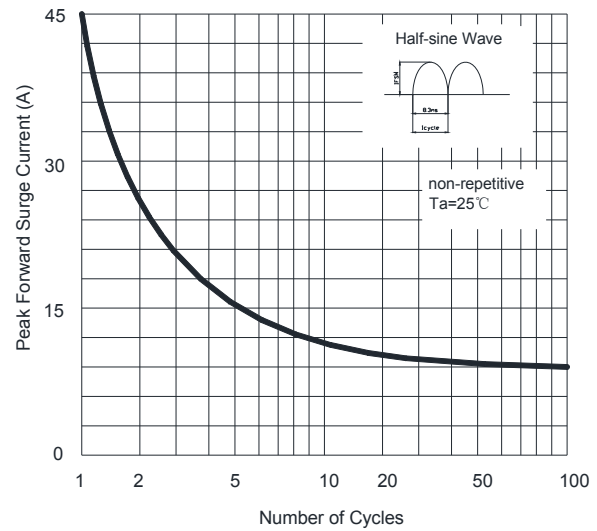


FIG3:Instantaneous Forward Voltage

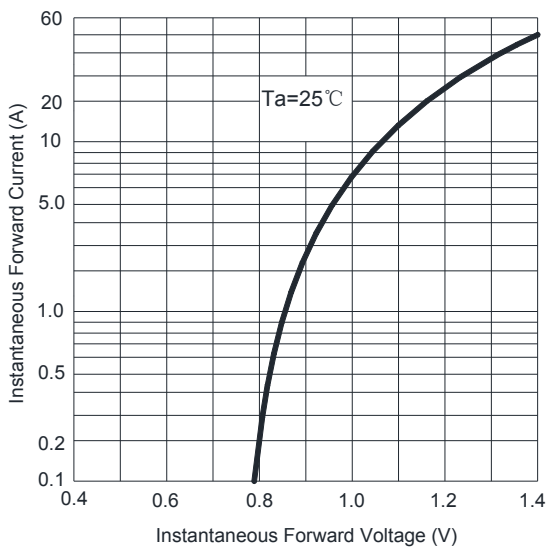
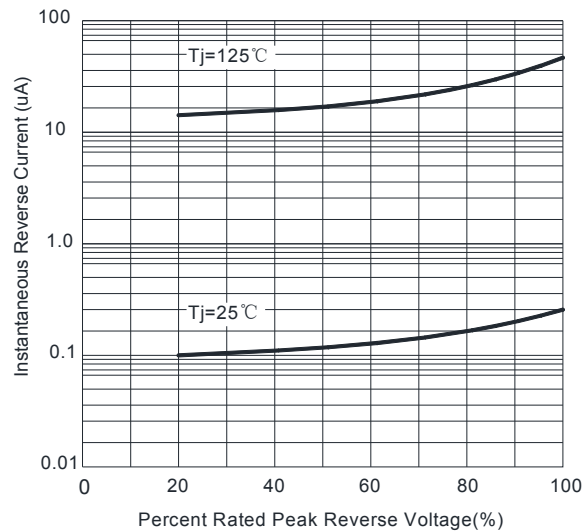


FIG4:Typical Reverse Characteristics

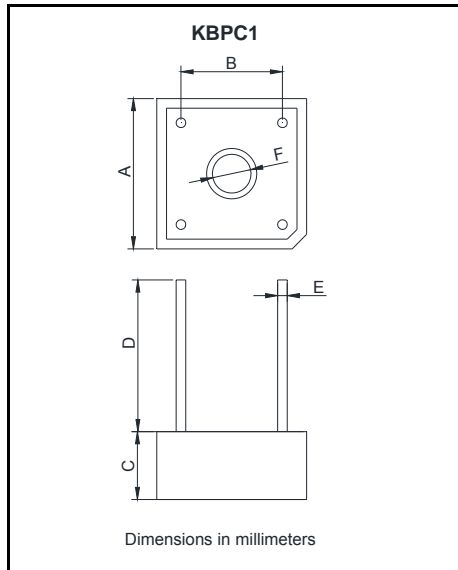


■



KBPC1005 THRU KBPC110

■ Outline Dimensions



| KBPC1 | | |
|-------|------|------|
| Dim | Min | Max |
| A | 14.7 | 15.7 |
| B | 10.3 | 11.3 |
| C | 6.35 | 7.6 |
| D | 15.0 | / |
| E | 0.74 | 0.82 |
| F | 3.8 | 4.2 |



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