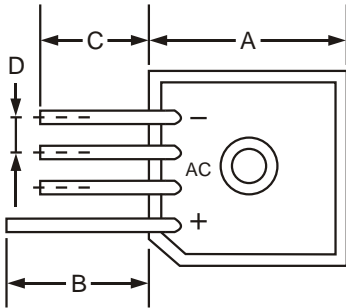


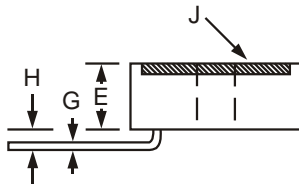
KBPC15005L THRU KBPC1510L

IN - LINE SINGLE - PHASE SILICON BRIDGE RECTIFIER
VOLTAGE - 50 TO 1000 VOLTS CURRENT - 15.0 AMPERES



| KBPC-L | | |
|--------|----------------------------|-------|
| Dim | Min | Max |
| A | 28.45 | 28.70 |
| B | 19.05 | — |
| C | 13.97 | — |
| D | 5.10 | — |
| E | 10.97 | 11.23 |
| G | 1.02 | — |
| H | 3.05 | 3.60 |
| J | Metal heat sink epoxy case | |

All Dimensions in mm



FEATURES

- Surge overload rating - 300 amperes peak
- Integrally molded heat-sink provide very low thermal resistance for maximum heat dissipation.
- Universal 3 way terminals: snap-on, wire wrap-around, or P.C. board mounting.
- Plastic package used has Underwriters Laboratory Flammability Classification 94V-0
- High temperature soldering guaranteed: 260°C/10 seconds at 5lbs. (2.3kg) tension

MECHANICAL DATA

Case: Molded plastic with heatsink integrally mounted in the bridge encapsulation

Terminals: wire lead ϕ 50 mils.

Weight: 0.65 ounce, 18 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified

Sing phase half-wave 60Hz, resistive or inductive load

For capacitive load, derate current by 20%

| | SYMBOL | KBPC 15005L | KBPC 1501L | KBPC 1502L | KBPC 1504L | KBPC 1506L | KBPC 1508L | KBPC 1510L | UNITS |
|---|-----------------------------------|--------------|------------|------------|------------|------------|------------|------------|------------------|
| Maximum Repetitive Peak Reverse Voltage | V _{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | Volts |
| Maximum RMS Voltage | V _{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | Volts |
| Maximum DC Blocking Voltage | V _{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | Volts |
| Maximum Average Forward Rectified Current T _A = 55°C | I _(AV) | 15.0 | | | | | | | Amps |
| Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load | I _{FSM} | 300 | | | | | | | Amps |
| Maximum Instantaneous Forward Voltage Drop Per Bridge Element at 7.5A | V _F | 1.2 | | | | | | | Volts |
| Maximum DC Reverse Current T _A = 25°C at Rated DC Blocking Voltage T _A = 125°C | I _R | 10 500 | | | | | | | μ A |
| Rating for fusing (t < 8.3ms) | I _t ² | 375 | | | | | | | A ² s |
| Typical Junction Capacitance (NOTE 1) | C _J | 300 | | | | | | | pF |
| Typical Thermal Resistance (NOTE 2) | R _{θJC} | 6.3 | | | | | | | °C/W |
| Operating and Storage Temperature Range | T _J , T _{STG} | -55 to + 150 | | | | | | | °C |

NOTES:

1. Measured at 1.0MHz and applied reverse voltage of 4.0 volts
2. Thermal resistance from junction to case per bridge element
3. Bolt down on heatsink with silicon thermal compound between bridge and mounting surface for maximum heat transfer efficiency with #10 screw

KBPC15005L THRU KBPC1510L

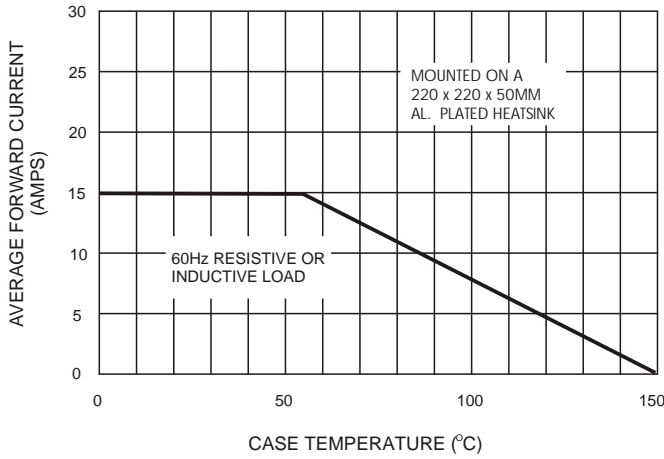


Figure 1. Forward Current Derating Curve

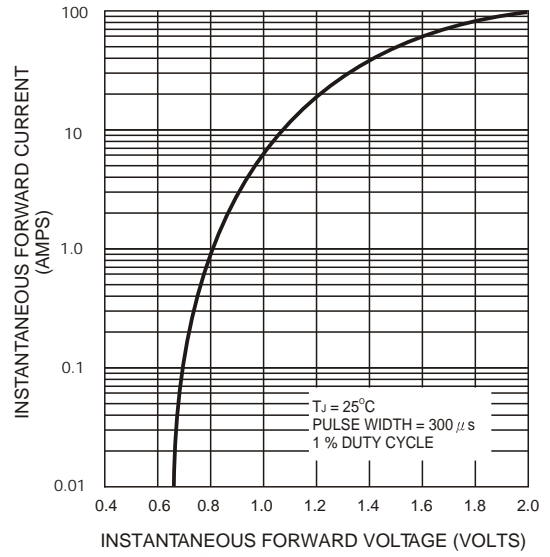


Figure 2. Typical Instantaneous Forward Characteristics Per Bridge Element

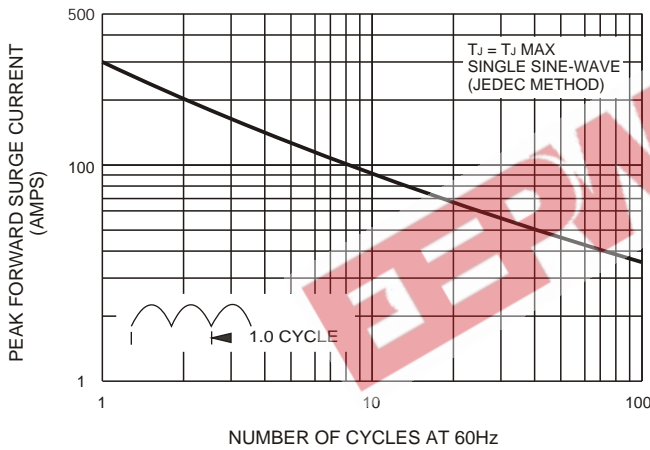


Figure 3. Maximum Non-repetitive Peak Forward Surge Current Per Bridge Element

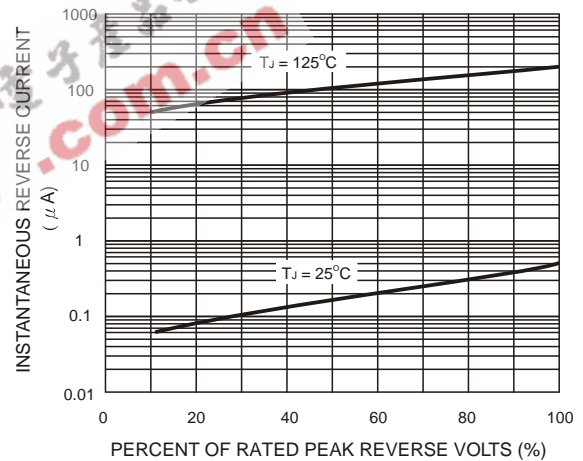


Figure 4. Typical Reverse Leakage Characteristics Per Bridge Element

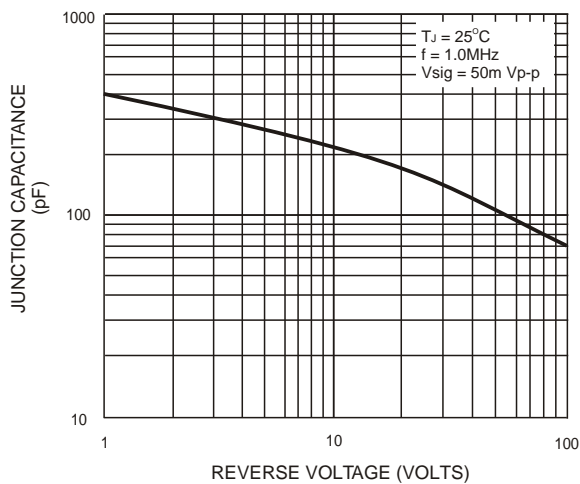


Figure 5. Typical Junction Capacitance Per Bridge Element

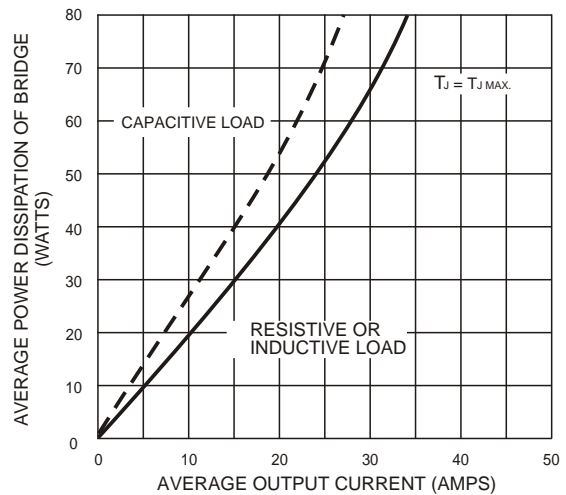


Figure 6. Maximum Power Dissipation