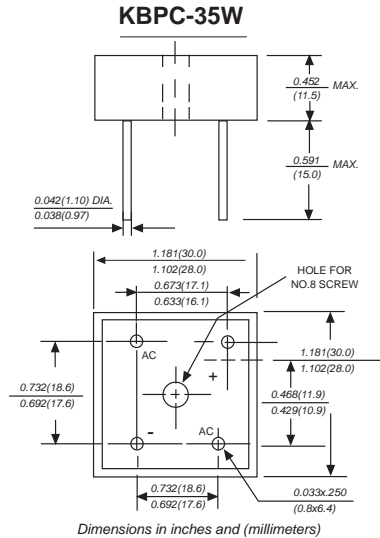


SILICON BRIDGE RECTIFIERS

Reverse Voltage - 50 to 1000 Volts Forward Current - 50.0 Amperes



FEATURES

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ Ideal for printed circuit boards
- ◆ Low reverse leakage
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed: 260°C/10 seconds, at 5 lbs. (2.3kg) tension

MECHANICAL DATA

Case: Metal case

Terminals: Lead 0.040" (1.02mm) diameter.

Polarity: Polarity symbols marked on case

Mounting: Thru hole for #8 screw, 20in.-lbs. torque max.

Weight: 0.93 ounce, 26.4 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase half-wave 60Hz, resistive or inductive load, for current capacitive load current derate by 20%.

| Catalog Number | SYMBOLS | KBPC 50005W | KBPC 5001W | KBPC 5002W | KBPC 5004W | KBPC 5006W | KBPC 5008W | KBPC 5010W | 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 output rectified current at $T_C=50^\circ\text{C}$ (Note 1,2) | $I_{(AV)}$ | 50 | | | | | | | Amps |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | I_{FSM} | 400.0 | | | | | | | Amps |
| Rating for Fusing($t<8.3\text{ms}$) | I^2t | 664 | | | | | | | A^2s |
| Maximum instantaneous forward voltage drop per bridge element at 25A | V_F | 1.1 | | | | | | | Volts |
| Maximum DC reverse current at rated DC blocking voltage $T_A=25^\circ\text{C}$ $T_A=100^\circ\text{C}$ | I_R | 10 | | | | | | | μA |
| | | 1.0 | | | | | | | mA |
| Isolation voltage from case to leads | V_{ISO} | 2500 | | | | | | | V_{AC} |
| Typical Thermal Resistance (Note 2) | $R_{\theta JA}$ | 2.0 | | | | | | | $^\circ\text{C}/\text{W}$ |
| Operating junction temperature range | T_J | -65 to +150 | | | | | | | $^\circ\text{C}$ |
| storage temperature range | T_{STG} | -65 to +150 | | | | | | | $^\circ\text{C}$ |

NOTES:

1. Unit mounted on 9" x 3.5" x 4.6" thick (23cmx9cmx11.8cm) Al. plate.

2. Bolt down on heat-sink with silicone thermal compound between bridge and mounting surface for maximum heat transfer efficiency with #8 screw.

RATINGS AND CHARACTERISTIC CURVES KBPC50005W THRU KBPC5010W

Fig. 1 Derating Curve for Output Rectified Current

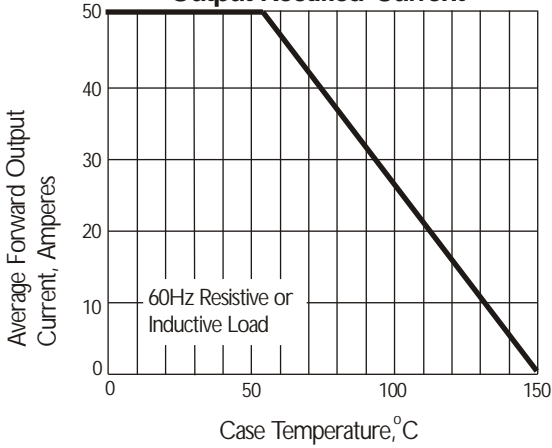


Fig. 2 Maximum Non-repetitive Peak Forward Surge Current

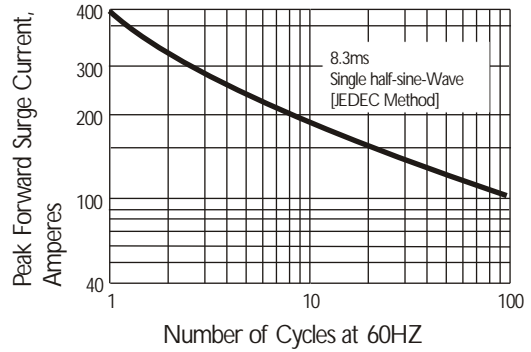


Fig. 3 Typical Instantaneous Forward Characteristics

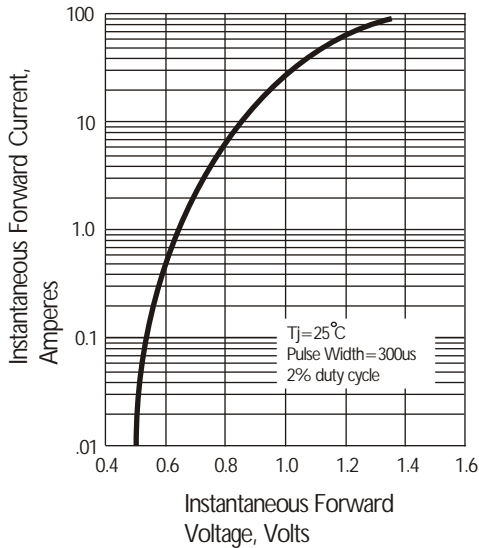
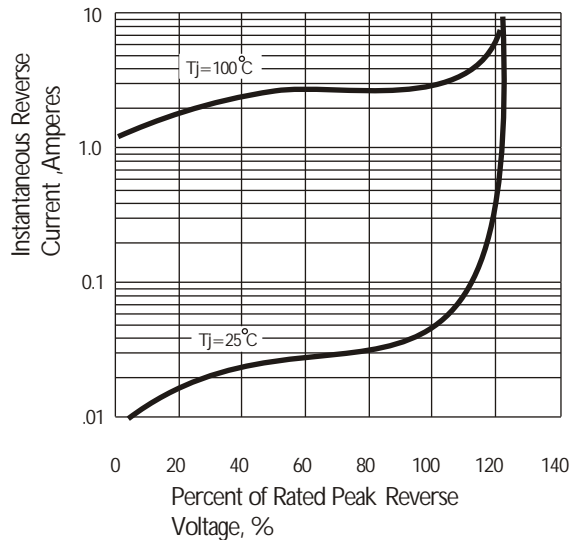


Fig. 4 Typical Reverse Characteristics at Tj=25°C



The cruve graph is for reference only, can't be the basis for judgment()!