

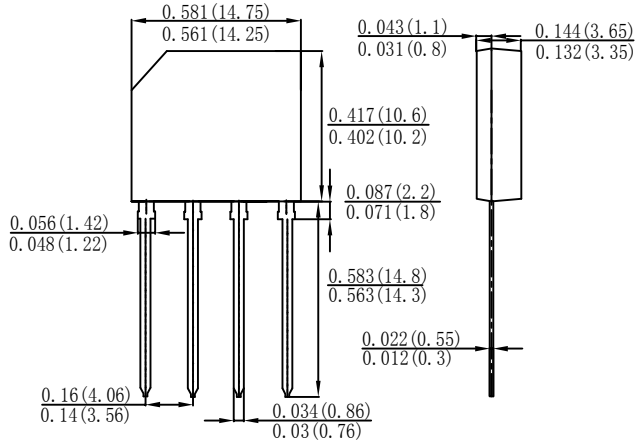


# KBP3005K THRU KBP310K

## SILICON BRIDGE RECTIFIERS

Reverse Voltage - 50 to 1000 Volts Forward Current - 3.0 Amperes

### KBP-K



Dimensions in inches and (millimeters)

### FEATURES

- ◆ Glass passivated die construction
- ◆ Low forward voltage drop
- ◆ High current capability
- ◆ High surge current capability
- ◆ Plastic material-UL flammability 94V-0

### MECHANICAL DATA

**Case:** KBP-K Molded plastic body  
**Terminals:** Plated leads solderable per MIL-STD-202, Method 208  
**Polarity:** As marked on case  
**Mounting Position:** Any  
**Marking :** Type number

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.  
 Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

| TWGMC Catalog Number  | SYMBOLS         | KBP 3005K               | KBP 301K | KBP 302K | KBP 304K | KBP 307K | KBP 308K | KBP 310K | 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 $T_A=50^\circ\text{C}$ (Note 1)                 | $I_{(AV)}$      | 3.0                     |          |          |          |          |          |          | Amps    |
| Peak forward surge current<br>8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | $I_{FSM}$       | 60.0                    |          |          |          |          |          |          | Amps    |
| Forward voltage per element @ $I_F=3.0A$  | $V_F$           | 1.1                     |          |          |          |          |          |          | Volts   |
| Maximum DC reverse current<br>at rated DC blocking voltage  | $I_R$           | $T_A=25^\circ\text{C}$  |          |          |          |          |          |          | $\mu A$ |
|   |                 | $T_A=125^\circ\text{C}$ |          |          |          |          |          |          | mA      |
| Typical Thermal Resistance per leg(Note 2)  | $R_{\theta JA}$ | 30                      |          |          |          |          |          |          | °C/W    |
|   | $R_{\theta JL}$ | 11                      |          |          |          |          |          |          |         |
| Operating junction temperature range  | $T_J, T_{STG}$  | -55 to +150             |          |          |          |          |          |          | °C      |

Note:1. Mounted on glass epoxy PC board with 1.3mm<sup>2</sup> solder pad.  
 2. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C..

# RATINGS AND CHARACTERISTIC CURVES KBP3005K THRU KBP310K

Fig. 1 Forward Current Derating Curve

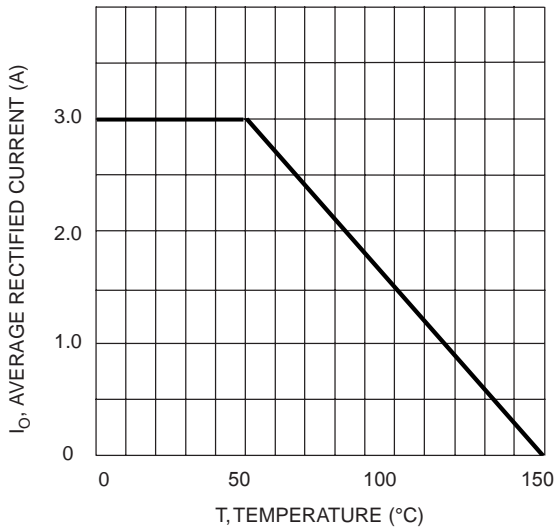


Fig. 2 Typical Fwd Characteristics

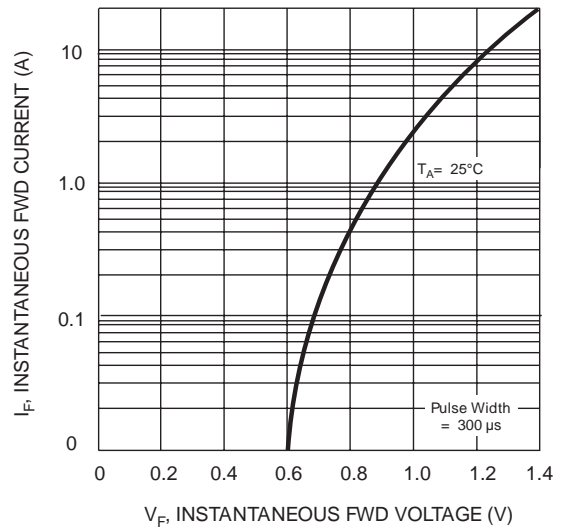


Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

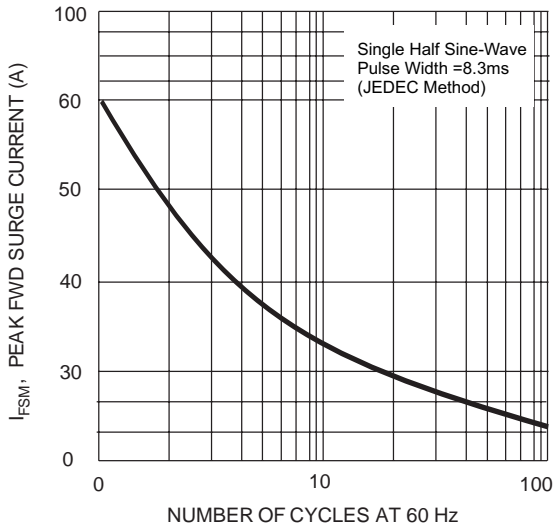
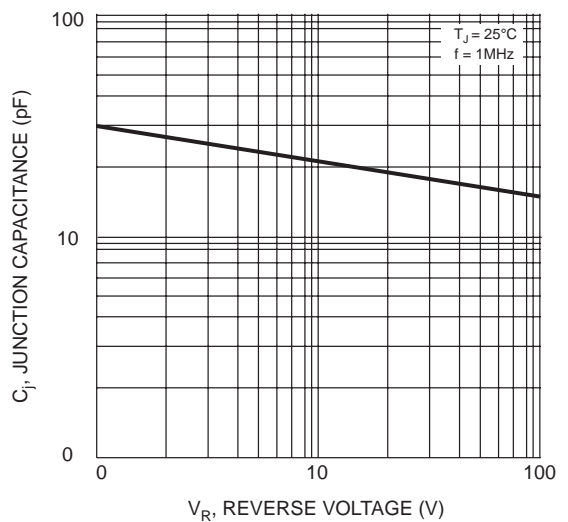


Fig. 4 Typical Junction Capacitance



The cruve graph is for reference only, can't be the basis for judgment(曲线图仅供参考)!