



KBU6005 THRU KBU610

Reverse Voltage - 50 to 1000 Volts Forward Current - 6.0 Amperes

SILICON BRIDGE RECTIFIERS

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, 0.375" (9.5mm) lead length,
5 lbs. (2.3kg) tension

Mechanical Data

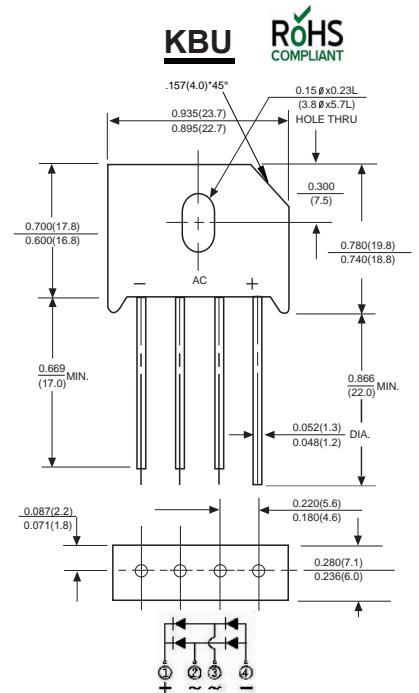
Case : JEDEC KBU Molded plastic body

Terminals : Solder plated, solderable per MIL-STD-750, Method 2026

Polarity : Polarity symbol marking on body

Mounting Position : Any

Weight : 0.27ounce , 7.59grams



Dimensions in inches and (millimeters)

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%.

| Parameter | SYMBOLS | MDD KBU6005 | MDD KBU601 | MDD KBU602 | MDD KBU604 | MDD KBU606 | MDD KBU608 | MDD KBU610 | UNITS |
|--|-----------------|-------------|------------|------------|------------|------------|------------|------------|---------------------------|
| Marking Code | | | | | | | | | |
| Maximum repetitive peak reverse voltage | V_{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum RMS voltage | V_{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Maximum DC blocking voltage | V_{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum average forward output rectified current at $T_A=100^\circ\text{C}$ | $I_{(AV)}$ | 6.0 | | | | | | | A |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | I_{FSM} | 250 | | | | | | | A |
| Maximum instantaneous forward voltage drop per bridge element at 6.0A | V_F | 1.1 | | | | | | | V |
| Maximum DC reverse current $T_A=25^\circ\text{C}$ | I_R | 10 | | | | | | | μA |
| at rated DC blocking voltage $T_A=125^\circ\text{C}$ | | 1.0 | | | | | | | mA |
| Typical Junction Capacitance | C_J | 200 | | | | | | | pF |
| Typical Thermal Resistance (Note 1) | $R_{\theta JA}$ | 2.7 | | | | | | | $^\circ\text{C}/\text{W}$ |
| Operating junction temperature range | T_J | -55 to +150 | | | | | | | $^\circ\text{C}$ |
| storage temperature range | T_{STG} | -55 to +150 | | | | | | | $^\circ\text{C}$ |

NOTES:

1. Thermal resistance from Junction to Ambient on P.C. board mounting.



Ratings And Characteristic Curves

Fig. 1 Derating Curve for Output Rectified Current

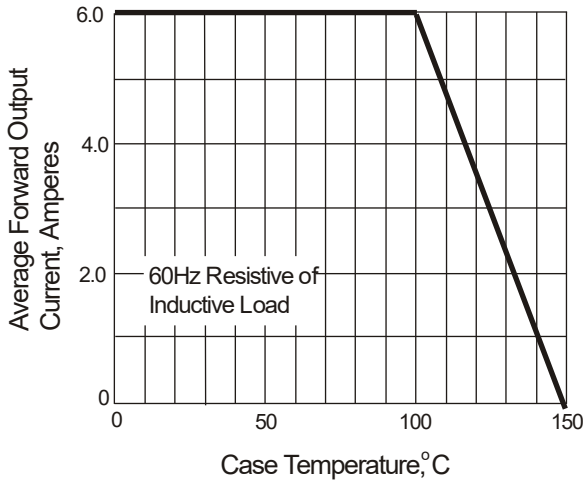


Fig. 2 Maximum Non-repetitive Peak Forward Surge Current

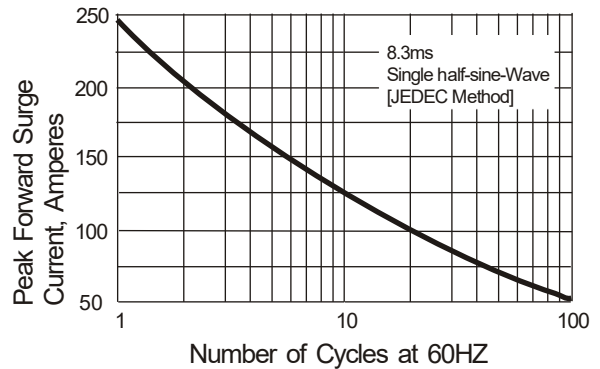


Fig. 3 Typical Instantaneous Forward Characteristics

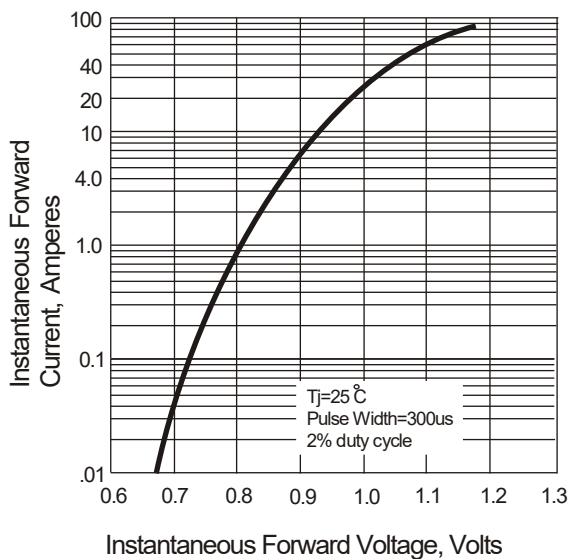


Fig. 4 Typical Reverse Characteristics

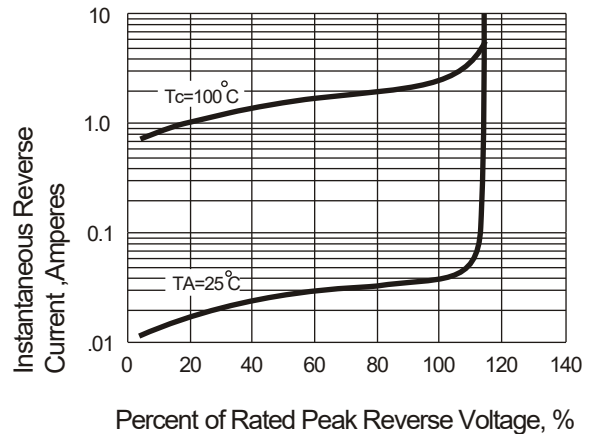
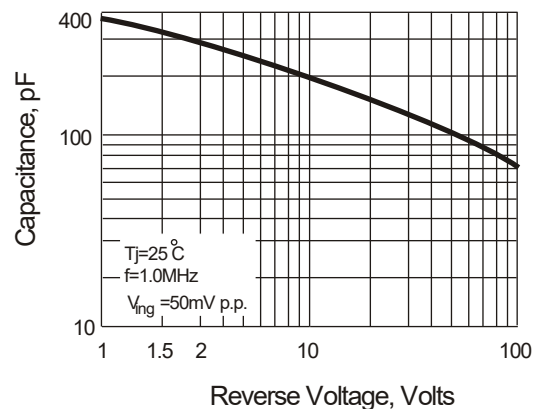


Fig. 5 Typical Junction Capacitance



The curve above is for reference only.