

### 10 A Single-Phase Silicon Bridge Rectifier

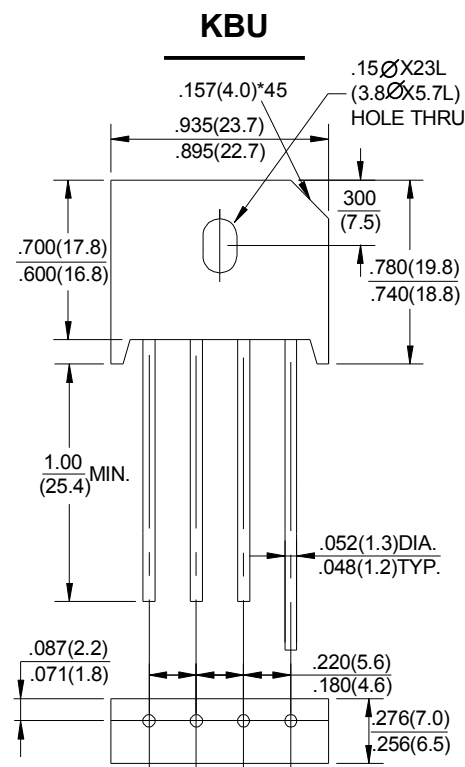
Rectifier Reverse Voltage 50 to 1000V

#### Features

- Ideal for P.C. Board mounting
- High surge current capability
- This series is UL listed under the Recognized Component Index, file number E142814
- The plastic material used carries Underwriters Laboratory flammability recognition 94V-0
- High temperature soldering guaranteed 265°C /10 seconds at 5 lbs (2.3kg) tension

#### Mechanical Data

Case: Molded plastic body  
 Terminals: Plated leads solderable per MIL-STD-202, Method 208  
 Polarity: Polarity symbols molded on body  
 Mounting Position:: Any  
 Mounting Torque: 5 in-lbs max.  
 Weight: 0.3 ounce, 8.0 grams (approx)



Dimensions in inches and (millimeters)

#### Maximum Ratings & Thermal Characteristics

Rating at 25°C ambient temperature unless otherwise specified, Resistive or Inductive load, 60 Hz.  
 For Capacitive load derate current by 20%.

| Parameter                                                                             | Symbol           | KBU 10005    | KBU 1001 | KBU 1002 | KBU 1004 | KBU 1006 | KBU 1008 | KBU 1010 | unit               |
|---------------------------------------------------------------------------------------|------------------|--------------|----------|----------|----------|----------|----------|----------|--------------------|
| Maximum repetitive peak reverse voltage                                               | VRRM             | 50           | 100      | 200      | 400      | 600      | 800      | 1000     | V                  |
| Maximum RMS bridge input voltage                                                      | VRMS             | 35           | 70       | 140      | 280      | 420      | 560      | 700      | V                  |
| Maximum DC blocking voltage                                                           | VDC              | 50           | 100      | 200      | 400      | 600      | 800      | 1000     | V                  |
| Maximum average forward rectified output current at TA=100°C                          | IF(AV)           | 10           |          |          |          |          |          |          | A                  |
| Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method) | IFSM             | 300          |          |          |          |          |          |          | A                  |
| Rating for fusing ( t<8.3ms)                                                          | I <sup>2</sup> t | 300          |          |          |          |          |          |          | A <sup>2</sup> sec |
| Typical thermal resistance per element(1)                                             | ReJA             | 2.7          |          |          |          |          |          |          | °C / W             |
| Operating junction and storage temperature range                                      | TJ, TSTG         | -55 to + 150 |          |          |          |          |          |          | °C                 |

#### Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified. Resistive or Inductive load, 60Hz.  
 For Capacitive load derate by 20 %.

| Parameter                                                                                 | Symbol | KBU 10005 | KBU 1001 | KBU 1002 | KBU 1004 | KBU 1006 | KBU 1008 | KBU 1010 | Unit |
|-------------------------------------------------------------------------------------------|--------|-----------|----------|----------|----------|----------|----------|----------|------|
| Maximum instantaneous forward voltage drop per leg at 10A                                 | VF     | 1.05      |          |          |          |          |          |          | V    |
| Maximum DC reverse current at rated TA =25°C<br>DC blocking voltage per element TA =125°C | IR     | 10<br>500 |          |          |          |          |          |          | μA   |

**Notes:** (1)Thermal resistance from Junction to Ambient on P.C.board mounting.

Rating and Characteristic Curves ( TA=25°C Unless otherwise noted )

Fig. 1 Derating Curve for Output Rectified Current

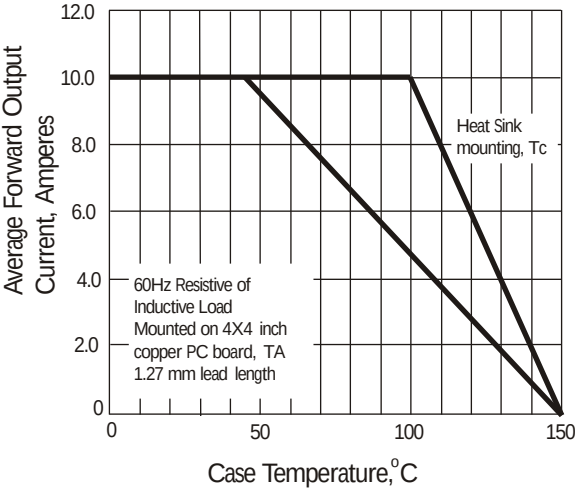


Fig. 2 Maximum Non-repetitive Peak Forward Surge Current

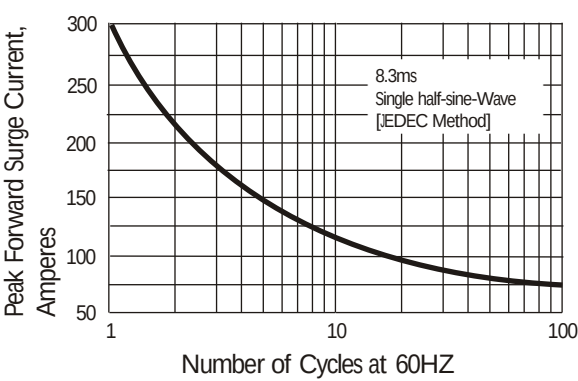


Fig. 3 Typical Instantaneous Forward Characteristics

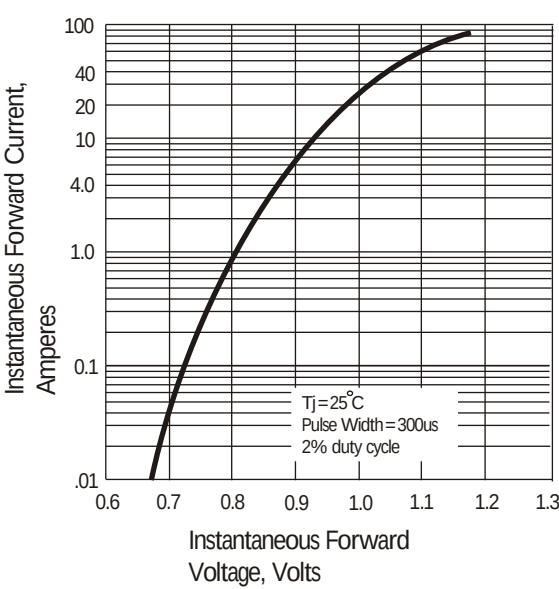


Fig. 4 Typical Reverse Characteristics

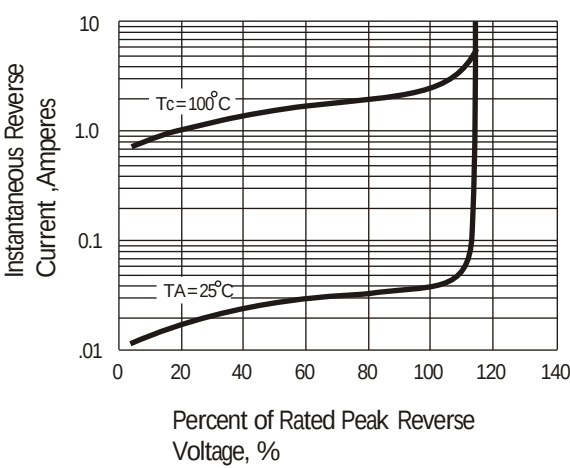


Fig. 5 Typical Junction Capacitance

