

# EVVOSEMI<sup>®</sup>

THINK CHANGE DO



ESD



TVS



MOS



LDO



Diode



Sensor



DC-DC

## Product Specification

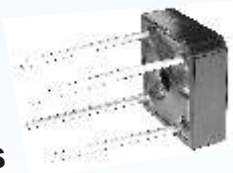
|              |             |                   |
|--------------|-------------|-------------------|
| ▶ Domestic   | Part Number | KBPC1005-KBPC1010 |
| ▶ Overseas   | Part Number | KBPC1005-KBPC1010 |
| ▶ Equivalent | Part Number | KBPC1005-KBPC1010 |

EV is the abbreviation of name EVVO

# KBPC1005 thru KBPC1010

## 10 A Single-Phase Silicon Bridge Rectifier

Rectifier Reverse Voltage 50 to 1000V



### Features

- This series is UL listed under the Recognized Component Index, file number E142814
- High temperature metallurgically bonded internal rectifiers
- Typical  $I_R$  less than  $.1\mu A$
- 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

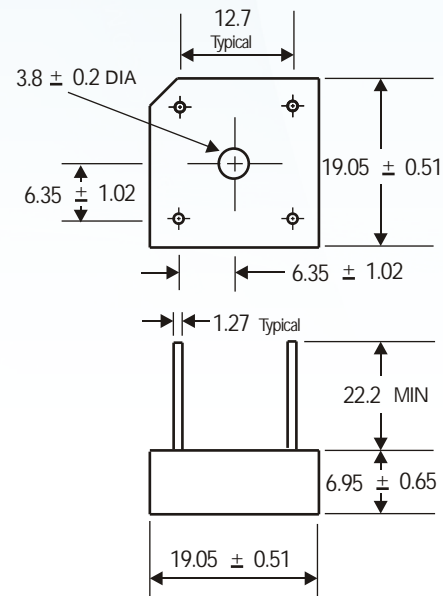
Case: Void-free plastic package

Terminals: Plated leads solderable per MIL-STD-202, Method 208

Mounting: Thru hole for #6 screw

Mounting position: Any

Weight: 0.24 ounce, 6.9 grams (approx)



Dimensions in millimeters (1mm=0.0394")

### 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           | KBPC1005     | KBPC101 | KBPC102 | KBPC104 | KBPC106 | KBPC108 | KBPC1010 | 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<br>Tc = 50 °C (1)                    | IF(AV)           | 10           |         |         |         |         |         |          | A                  |
| Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method) | IFSM             | 150          |         |         |         |         |         |          | A                  |
| Rating for fusing ( t<8.3ms)  | I <sup>2</sup> t | 10           |         |         |         |         |         |          | A <sup>2</sup> sec |
| Typical thermal resistance per element (2)  | ReJA             | 9.4          |         |         |         |         |         |          | °C / W             |
| Typical junction capacitance per element (3)  | Cj               | 55           |         |         |         |         |         |          | pF                 |
| 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 | KBPC1005   | KBPC101 | KBPC102 | KBPC104 | KBPC106 | KBPC108 | KBPC1010 | Unit |
|---|--------|------------|---------|---------|---------|---------|---------|----------|------|
| Maximum instantaneous forward voltage drop per leg at 5.0A                                | VF     | 1.1        |         |         |         |         |         |          | V    |
| Maximum DC reverse current at rated TA =25°C<br>DC blocking voltage per element TA =100°C | IR     | 10<br>1000 |         |         |         |         |         |          | μA   |

**Notes:** (1) Mounted on metal chassis.  
 (2) Non-repetitive, for t>1ms and < 8.3ms.  
 (3) Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

Rating and Characteristic Curves ( TA=25°C Unless otherwise noted )  
KBPC1005 thru KBPC1010

Fig. 1 Derating Curve for Output Rectified Current

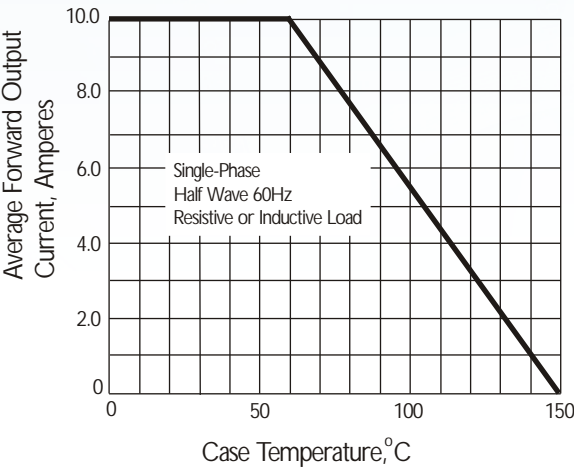


Fig. 2 Maximum Non-repetitive Peak Forward Surge Current

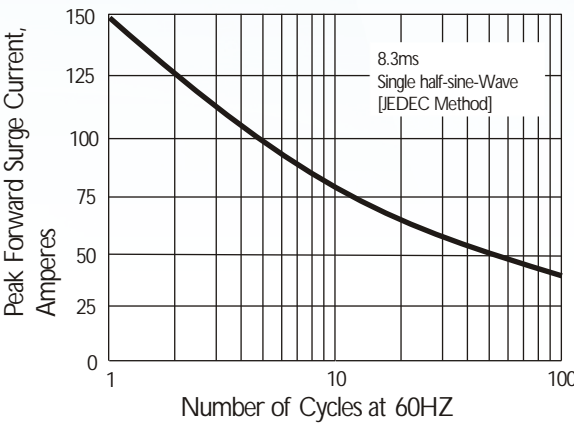


Fig. 3 Typical Instantaneous Forward Characteristics

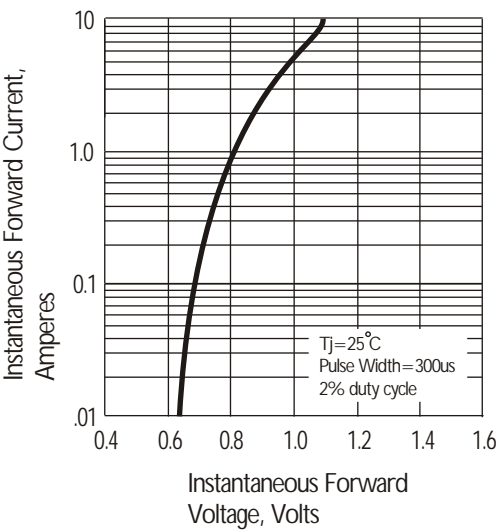
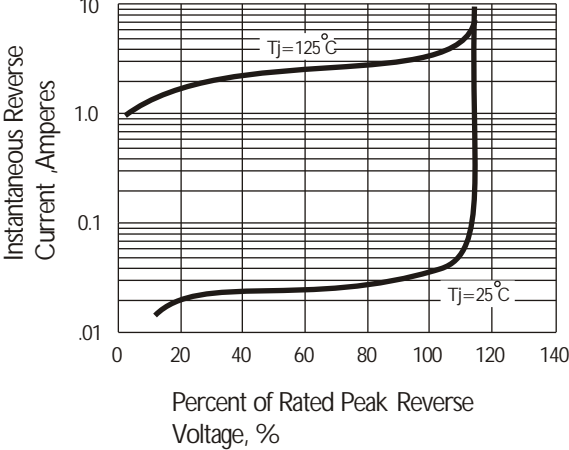


Fig. 4 Typical Reverse Characteristics



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