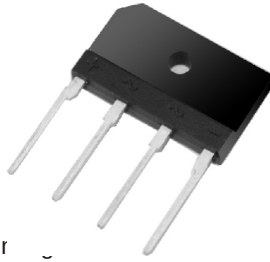




# **KBJ25005 thru KBJ2510** **25.0 A Single-Phase Silicon Bridge Rectifier**

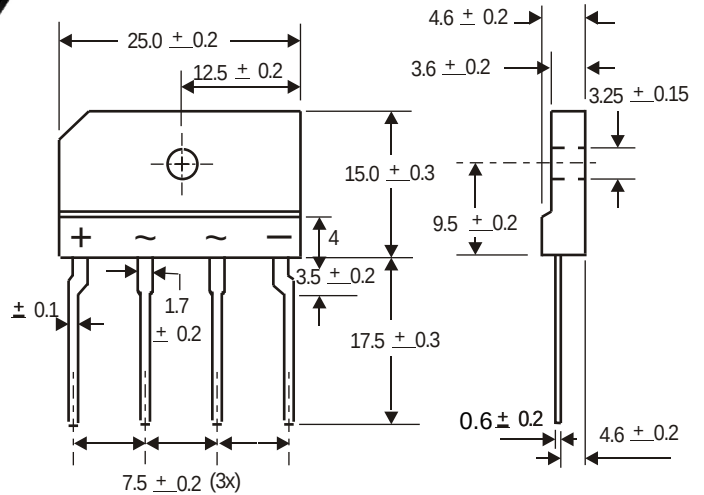


## **Features**

- Ideal for printed circuit board mount
- The plastic material used carries Underwriters Laboratory flammability recognition 94V-0
- Built-in printed circuit board stand-offs
- High case dielectric strength
- High temperature soldering guaranteed 260°C/5 seconds at 5 lbs (2.3kg) tension

## **Mechanical Data**

Case: Reliable low cost construction utilizing molded plastic technique  
 Terminals: Plated leads solderable per MIL-STD-202, Method 208  
 Mounting Position: Any



## **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           | KBJ 25005    | KBJ 2501 | KBJ 2502 | KBJ 2504 | KBJ 2506 | KBJ 2508 | KBJ 2510 | 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 TC=100°C (with heatsink)          | IF(AV)           | 25.0         |          |          |          |          |          |          | A                  |
| Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method) | IFSM             | 350          |          |          |          |          |          |          | A                  |
| Rating for fusing ( t<8.3ms)                                                          | I <sup>2</sup> t | 508          |          |          |          |          |          |          | A <sup>2</sup> sec |
| 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 | KBJ 25005 | KBJ 2501 | KBJ 2502 | KBJ 2504 | KBJ 2506 | KBJ 2508 | KBJ 2510 | Unit |
|-------------------------------------------------------------------------------------------|--------|-----------|----------|----------|----------|----------|----------|----------|------|
| Maximum instantaneous forward voltage drop per leg at 12.5A                               | VF     | 1.1       |          |          |          |          |          |          | V    |
| Maximum DC reverse current at rated TA =25°C<br>DC blocking voltage per element TA =125°C | IR     | 10<br>500 |          |          |          |          |          |          | μA   |

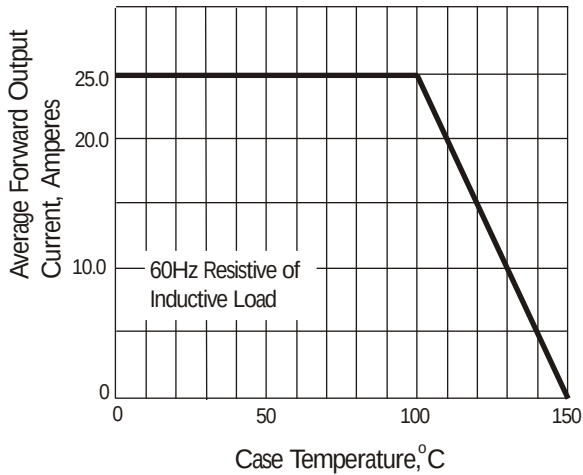
**Notes:** (1) Thermal resistance from Junction to Ambient on P.C.board mounting.



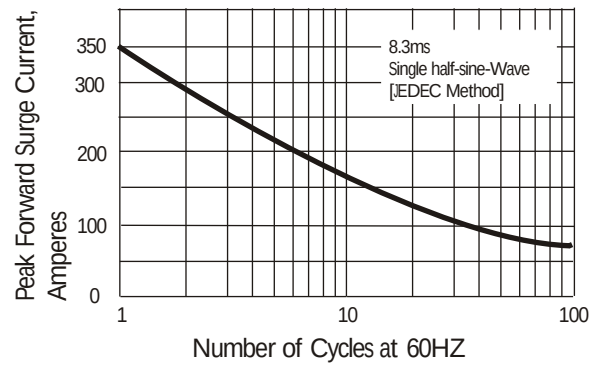
# **KBJ25005 thru KBJ2510** **25.0 A Single-Phase Silicon Bridge Rectifier**

## **Rating and Characteristic Curves ( $T_A = 25^{\circ}\text{C}$ Unless otherwise noted )** **KBJ25005 thru KBJ2510**

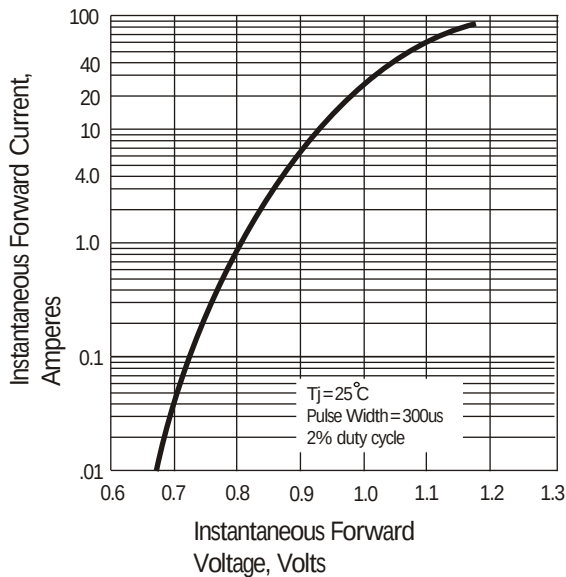
**Fig. 1 Derating Curve for Output Rectified Current**



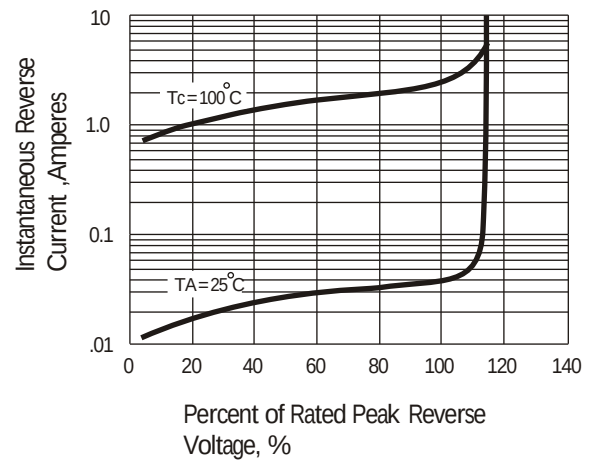
**Fig. 2 Maximum Non-repetitive Peak Forward Surge Current**



**Fig. 3 Typical Instantaneous Forward Characteristics**



**Fig. 4 Typical Reverse Characteristics**



**Fig. 5 Typical Junction Capacitance**

