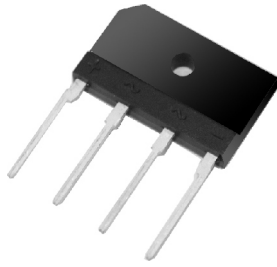


# KBJ4005 thru KBJ410

## 4.0 A Single-Phase Silicon Bridge Rectifier Rectifier Reverse Voltage 50 to 1000V

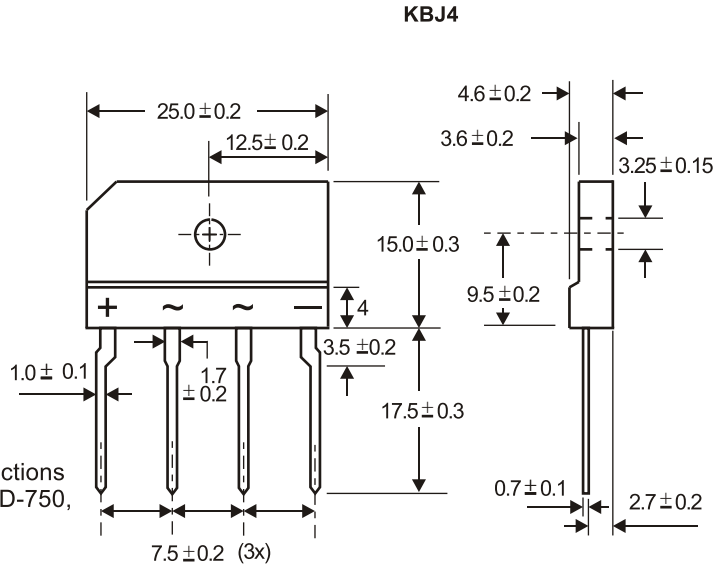


### Features

- This series is UL listed under the Recognized Component Index, file number E142814
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- High case dielectric strength of 1500VRMS  
Ideal for printed circuit boards
- High surge current capability

### Mechanical Data

Case : Moulded plastic body over passivated junctions  
 Terminals : Plated leads solderable per MIL-STD-750, Method 2026  
 Polarity : Polarity symbols molded on body  
 Mounting Position : Any(3)  
 Mounting Torque : 5 in-lbs max.  
 Weight : 0.15 ounce, 4.0 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	KBJ 4005	KBJ 401	KBJ 402	KBJ 404	KBJ 406	KBJ 408	KBJ 410	Unit
Maximum repetitive peak reverse voltage	VRRM	50	100	200	400	600	800	1000	V
Maximum RMS 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 Tc = 100°C	IF(AV)	4.0							A
Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method)	IFSM	120							A
Rating for fusing ( t<8.3ms)	I <sup>2</sup> t	60							A <sup>2</sup> sec
Maximum thermal resistance (Note 1)	RthJC	5.5							°C / W
Operating junction and storage temperature range	TJ, TSTG	-55 to + 150							°C

### Electrical Characteristics

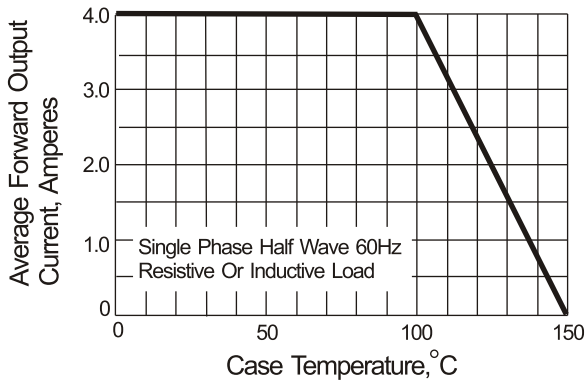
Rating at 25°C ambient temperature unless otherwise specified. Resistive or Inductive load, 60Hz.  
 For Capacitive load derate by 20 %.

Parameter	Symbol	KBJ 4005	KBJ 401	KBJ 402	KBJ 404	KBJ 406	KBJ 408	KBJ 410	Unit
Maximum instantaneous forward voltage drop per leg at 2.0A	VF	1.0							V
Maximum DC reverse current at rated DC blocking voltage per leg TA = 25°C TA = 125°C	IR	10 250							μA

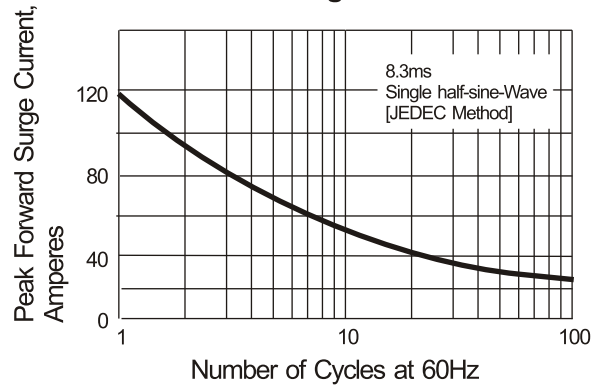
**Notes:** (1) Device mounted on 75mm x 75mm x 1.6mm Cu Plate Heatsink.  
 (2) Recommended mounting position is to bolt down on heat sink with silicone thermal compound for maximum heat transfer with #6 screw.

# Rating and Characteristic Curves ( $T_A=25^{\circ}\text{C}$ Unless otherwise noted ) KBJ4005 thru KBJ410

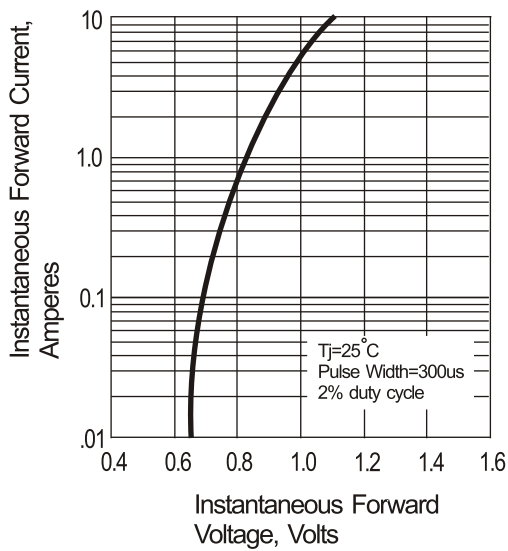
**Fig. 1 Derating Curve for Output Rectified Current**



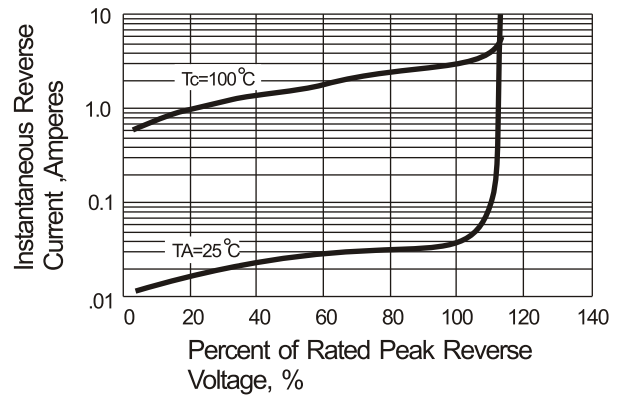
**Fig. 2 Maximum Non-repetitive Peak Forward Surge Current**



**Fig. 3 Typical Instantaneous Forward Characteristics**



**Fig. 4 Typical Reverse Characteristics at  $T_J=25^{\circ}\text{C}$**



**Fig. 5 Typical Junction Capacitance**

