

# KBJ4005 THRU KBJ410

## GLASS PASSIVATED SINGLE-PHASE BRIDGE RECTIFIER



康 比 電 子  
HORNBY ELECTRONIC

**REVERSE VOLTAGE:** 50 to 1000 VOLTS

**FORWARD CURRENT:** 4.0 AMPERE

### FEATURES

- Glass passivated chip junction
- Ideal for printed circuit board
- Plastic material has Underwriters Laboratory Flammability Classification 94V-0
- Reliable low cost construction utilizing molded plastic technique

### MECHANICAL DATA

Case: Molded plastic, KBJ

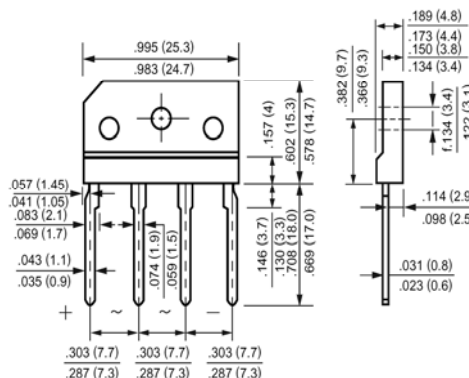
Epoxy: UL 94V-O rate flame retardant

Terminals: Leads solderable per MIL-STD-202, method 208 guaranteed

Mounting position: Any

Weight: 0.16ounce, 4.6gram

KBJ



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, derate current by 20%.

|                                                                                                        | Symbols         | KBJ4005     | KBJ401 | KBJ402 | KBJ404 | KBJ406 | KBJ408 | KBJ410 | Units |
|--------------------------------------------------------------------------------------------------------|-----------------|-------------|--------|--------|--------|--------|--------|--------|-------|
| Maximum Recurrent Peak Reverse Voltage                                                                 | $V_{RRM}$       | 50          | 100    | 200    | 400    | 600    | 800    | 1000   | Volts |
| Maximum RMS Voltage                                                                                    | $V_{RMS}$       | 35          | 70     | 140    | 280    | 420    | 560    | 700    | Volts |
| Maximum DC Blocking Voltage                                                                            | $V_{DC}$        | 50          | 100    | 200    | 400    | 600    | 800    | 1000   | Volts |
| Maximum Average Forward Rectified Current at $T_C=115^\circ\text{C}$                                   | $I_{(AV)}$      | 4.0         |        |        |        |        |        |        | Amp   |
| Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)      | $I_{FSM}$       | 120         |        |        |        |        |        |        | Amp   |
| Maximum Forward Voltage at 2.0A DC and 25°C                                                            | $V_F$           | 1.0         |        |        |        |        |        |        | Volts |
| Maximum Reverse Current at $T_A=25^\circ\text{C}$ at Rated DC Blocking Voltage $T_A=125^\circ\text{C}$ | $I_R$           | 5.0<br>500  |        |        |        |        |        |        | uAmp  |
| Typical Junction Capacitance (Note 1)                                                                  | $C_J$           | 40          |        |        |        |        |        |        | pF    |
| Typical Thermal Resistance (Note 2)                                                                    | $R_{\theta JC}$ | 5.5         |        |        |        |        |        |        | °C/W  |
| Operating and Storage Temperature Range                                                                | $T_J, T_{stg}$  | -55 to +150 |        |        |        |        |        |        | °C    |

### NOTES:

1- Measured at 1 MHz and applied reverse voltage of 4.0 VDC.

2- Thermal Resistance from Junction to Case with Device Mounted on 75mm x 75mm x 1.6mmCu Plate Heatsink.

KB

J4005 THRU KBJ410

GLASS PASSIVATED SINGLE-PHASE BRIDGE RECTIFIER



RATINGS AND CHARACTERISTIC CURVES

FIG.1- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER BRIDGE ELEMENT

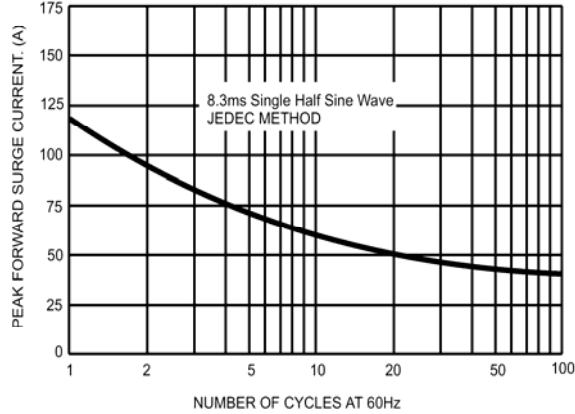


FIG.2- MAXIMUM FORWARD CURRENT DERATING CURVE PER BRIDGE ELEMENT

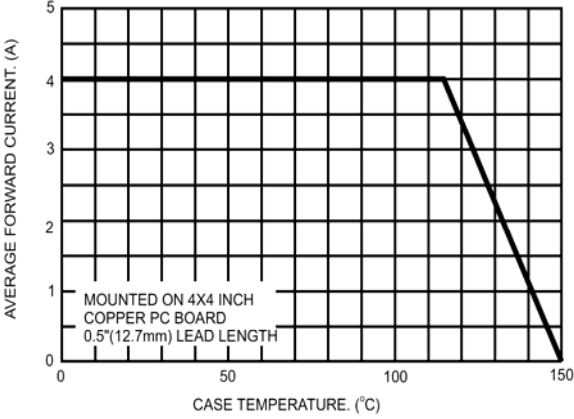


FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER BRIDGE ELEMENT

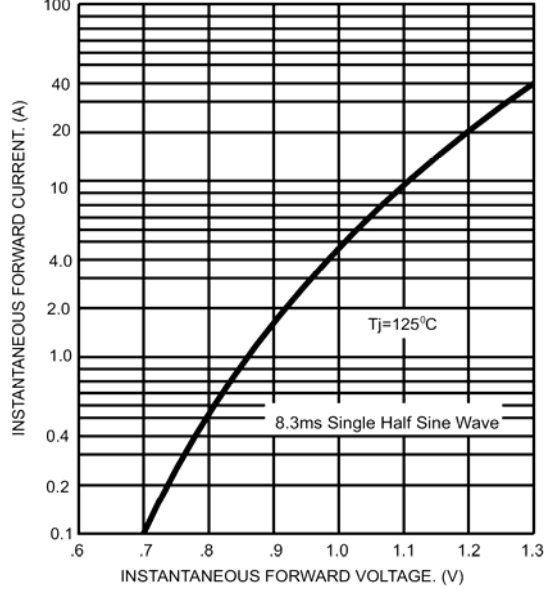


FIG.4- TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT

