

# KBJ10A-KBJ10M

Silicon Bridge Rectifiers

**VOLTAGE RANGE: 50 --- 1000 V**

**CURRENT: 10.0 A**



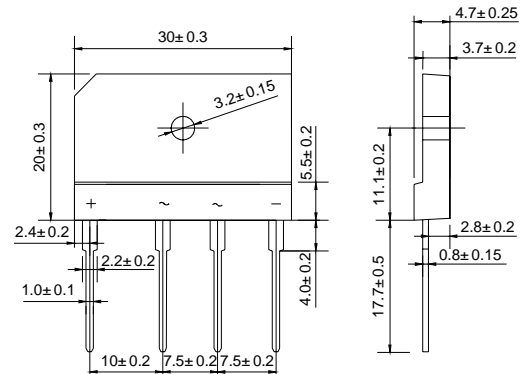
**KBJ**

## Features

- ◇ Rating to 1000V PRV
- ◇ Surge overload rating to 200 Amperes peak
- ◇ Ideal for printed circuit board
- ◇ Reliable low cost construction utilizing molded plastic technique results in inexpensive product
- ◇ Lead solderable per MIL-STD-202 method 208

## Mechanical Data

- ◇ Polarity: Symbols molded on body
- ◇ Weight: 0.23 ounces, 6.6 grams
- ◇ Mounting position: Any



Dimensions in millimeters

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate by 20%.

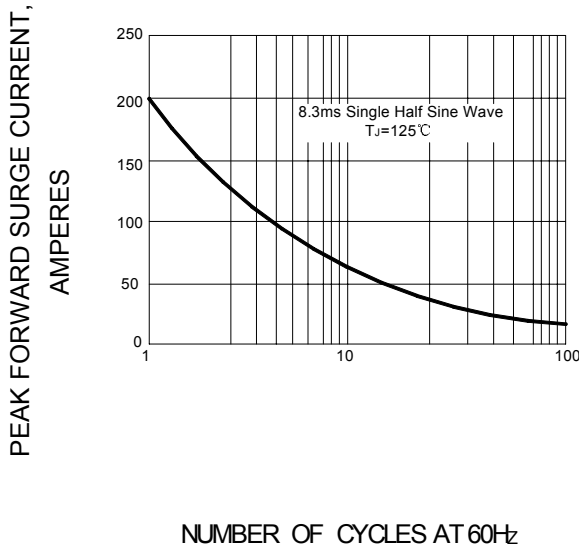
|  |                 | KBJ<br>10A      | KBJ<br>10B | KBJ<br>10D | KBJ<br>10G | KBJ<br>10J | KBJ<br>10K | KBJ<br>10M | UNITS                     |
|--|-----------------|-----------------|------------|------------|------------|------------|------------|------------|---------------------------|
| Maximum recurrent peak reverse voltage   | $V_{RRM}$       | 50              | 100        | 200        | 400        | 600        | 800        | 1000       | V                         |
| Maximum RMS voltage  | $V_{RMS}$       | 35              | 70         | 140        | 280        | 420        | 560        | 700        | V                         |
| Maximum DC blocking voltage  | $V_{DC}$        | 50              | 100        | 200        | 400        | 600        | 800        | 1000       | V                         |
| Maximum average forward<br>Output current @ $T_A=110^\circ\text{C}$  | $I_{F(AV)}$     | 10.0            |            |            |            |            |            |            | A                         |
| Peak forward surge current<br>8.3ms single half-sine-wave<br>superimposed on rated load                    | $I_{FSM}$       | 200.0           |            |            |            |            |            |            | A                         |
| Maximum instantaneous forward voltage<br>at 5.0 A  | $V_F$           | 1.1             |            |            |            |            |            |            | V                         |
| Maximum reverse current @ $T_A=25^\circ\text{C}$<br>at rated DC blocking voltage @ $T_A=100^\circ\text{C}$ | $I_R$           | 5.0<br>0.5      |            |            |            |            |            |            | $\mu\text{A}$<br>mA       |
| Typical junction capacitance per element   | $C_J$           | 55              |            |            |            |            |            |            | pF                        |
| Typical thermal resistance   | $R_{\theta JC}$ | 1.4             |            |            |            |            |            |            | $^\circ\text{C}/\text{W}$ |
| Operating junction temperature range   | $T_J$           | - 55 ---- + 150 |            |            |            |            |            |            | $^\circ\text{C}$          |
| Storage temperature range  | $T_{STG}$       | - 55 ---- + 150 |            |            |            |            |            |            | $^\circ\text{C}$          |

NOTES: 1. Measured at 1.0MHz and applied reverse voltage of 4.0V DC

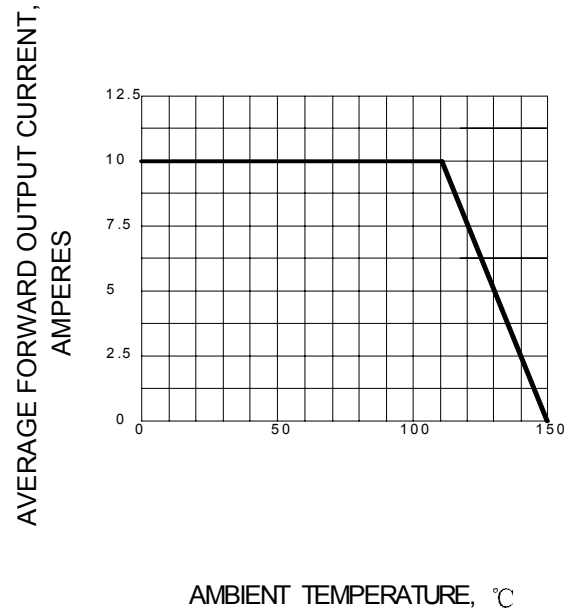
2. Device mounted on 300mm X 300mm X 1.6mm cu Plate heatsink.

## Ratings AND Characteristic Curves

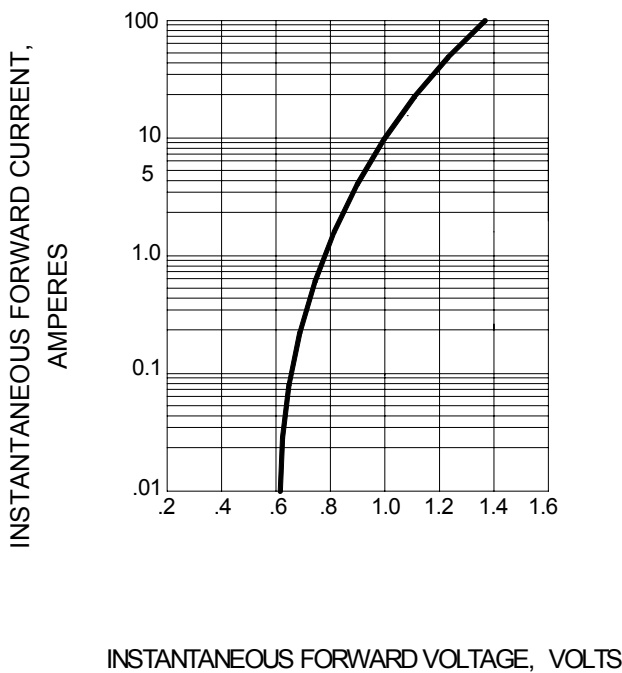
**FIG.1 – PEAK FORWARD SURGE CURRENT**



**FIG.2 – FORWARD DERATING CURVE**



**FIG.3 – TYPICAL FORWARD CHARACTERISTIC**



**FIG.4 – TYPICAL JUNCTION CAPACITANCE**

