

### SILICON BRIDGE RECTIFIERS

VOLTAGE RANGE: 50 --- 1000 V  
CURRENT: 6.0 A

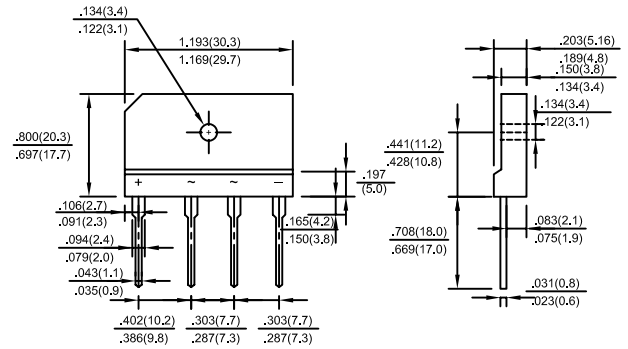
#### FEATURES

- ◇ Rating to 1000V PRV
- ◇ Surge overload rating to 150 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
- ◇ Glass passivated chip junctions

#### MECHANICAL DATA

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

#### KBJ



#### 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%.

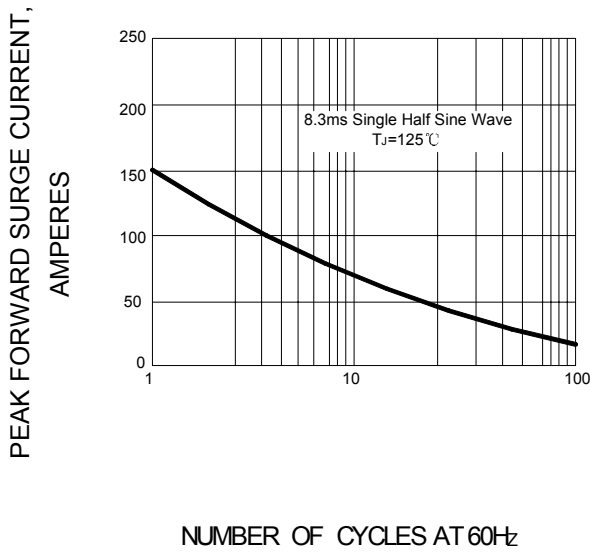
|  |                 | KBJ<br>6A      | KBJ<br>6B | KBJ<br>6D | KBJ<br>6G | KBJ<br>6J | KBJ<br>6K | KBJ<br>6M | UNITS                     |
|--|-----------------|----------------|-----------|-----------|-----------|-----------|-----------|-----------|---------------------------|
| Maximum recurrent peak 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 @ $T_A=110^\circ\text{C}$  | $I_{F(AV)}$     | 6.0            |           |           |           |           |           |           | A                         |
| Peak forward surge current<br>8.3ms single half-sine-wave<br>superimposed on rated load                    | $I_{FSM}$       | 150.0          |           |           |           |           |           |           | A                         |
| Maximum instantaneous forward voltage<br>at 3.0 A  | $V_F$           | 1.0            |           |           |           |           |           |           | V                         |
| Maximum reverse current @ $T_A=25^\circ\text{C}$<br>at rated DC blocking voltage @ $T_A=100^\circ\text{C}$ | $I_R$           | 10.0<br>1.0    |           |           |           |           |           |           | $\mu\text{A}$<br>mA       |
| Typical junction capacitance per element   | $C_J$           | 55             |           |           |           |           |           |           | pF                        |
| Typical thermal resistance   | $R_{\theta JC}$ | 1.8            |           |           |           |           |           |           | $^\circ\text{C}/\text{W}$ |
| 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

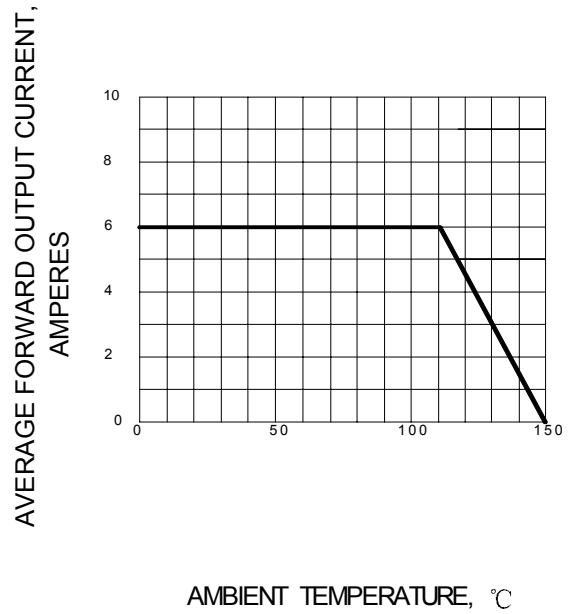
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2. Device mounted on 300mm X 300mm X 1.6mm cu Plate heatsink.

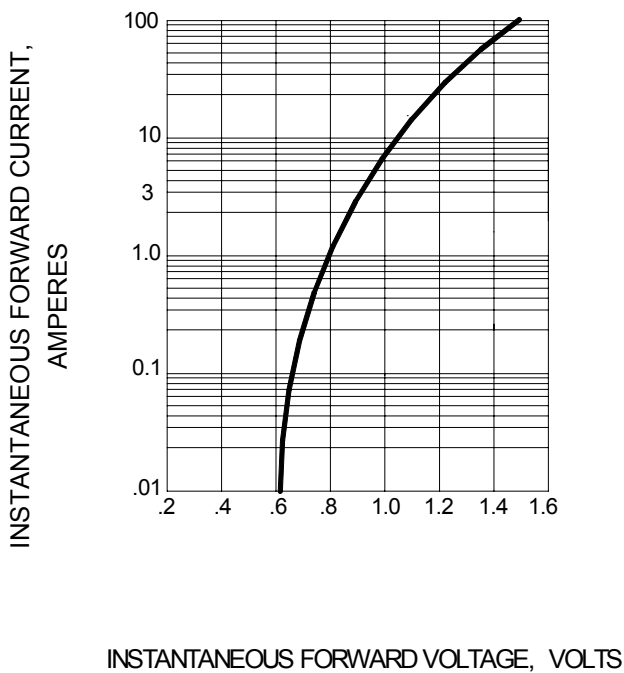
**FIG.1 – PEAK FORWARD SURGE CURRENT**



**FIG.2 – FORWARD DERATING CURVE**



**FIG.3 – TYPICAL FORWARD CHARACTERISTIC**



**FIG.4 – TYPICAL JUNCTION CAPACITANCE**

