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|---|----------------|
|  | <b>E502650</b> |
|---|----------------|

## Features

- Halogen Free. "Green" Device (Note 1)
- Glass Passivated Chip Junction
- High Surge Forward Current Capability
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant (Note 2) ("P" Suffix Designates RoHS Compliant. See Ordering Information)

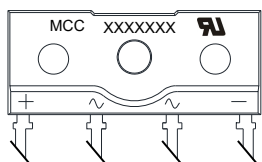
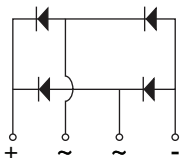
## Maximum Ratings @ 25°C (Unless Otherwise Specified)

| Parameter  | Symbol             | Value     |          |          |          |          |          |          | Unit             |
|--|--------------------|-----------|----------|----------|----------|----------|----------|----------|------------------|
|  |                    | KBJA 8005 | KBJA 801 | KBJA 802 | KBJA 804 | KBJA 806 | KBJA 808 | KBJA 810 |                  |
| Peak Repetitive Reverse Voltage                          | V <sub>RRM</sub>   | 50        | 100      | 200      | 400      | 600      | 800      | 1000     | V                |
| Working Peak Reverse Voltage                             | V <sub>RWM</sub>   |           |          |          |          |          |          |          |                  |
| DC Blocking Voltage                                      | V <sub>R</sub>     |           |          |          |          |          |          |          |                  |
| RMS Reverse Voltage                                      | V <sub>RMS</sub>   | 35        | 70       | 140      | 280      | 420      | 560      | 700      | V                |
| Average Rectified Forward Current @ T <sub>C</sub> =95°C | I <sub>F(AV)</sub> | 8         |          |          |          |          |          |          | A                |
| Non-Repetitive Peak Surge Current @ 8.3ms Half Sine Wave | I <sub>FSM</sub>   | 150       |          |          |          |          |          |          | A                |
| Non-Repetitive Peak Surge Current @ 1ms Square Wave      |                    | 300       |          |          |          |          |          |          |                  |
| I <sup>2</sup> t Rating for Fusing @1ms≤t≤8.3ms          | I <sup>2</sup> t   | 93        |          |          |          |          |          |          | A <sup>2</sup> s |
| Dielectric strength @Terminals to Case, AC 1 Minute      | V <sub>dis</sub>   | 2         |          |          |          |          |          |          | KV               |

## Marking Code

| Part Number | Marking Code |
|-------------|--------------|
| KBJA8005    | KBJA8005     |
| KBJA801     | KBJA801      |
| KBJA802     | KBJA802      |
| KBJA804     | KBJA804      |
| KBJA806     | KBJA806      |
| KBJA808     | KBJA808      |
| KBJA810     | KBJA810      |

## Internal Structure

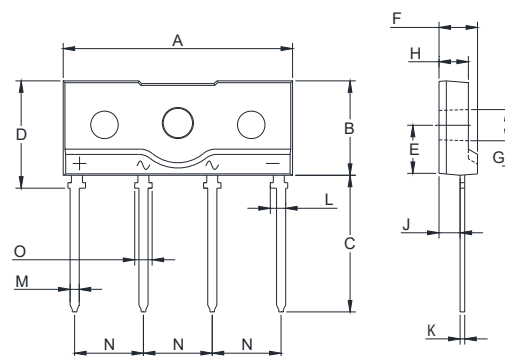
| Simplified Outline   | Graphic Symbol  |
|--|---|
|  <p>XXXXXXX:<br/>Marking Code</p> |  |

Note:

1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
2. High temperature solder exemption applied, see EU directive annex 7a.

# 8 Amp Bridge Rectifier 50 to 1000 Volts

JB



| DIMENSIONS |        |       |       |       |      |
|------------|--------|-------|-------|-------|------|
| DIM        | INCHES |       | MM    |       | NOTE |
|            | MIN    | MAX   | MIN   | MAX   |      |
| A          | 0.972  | 0.996 | 24.70 | 25.30 |      |
| B          | 0.394  | 0.417 | 10.00 | 10.60 |      |
| C          | 0.575  | 0.598 | 14.60 | 15.20 |      |
| D          | 0.449  | 0.472 | 11.40 | 12.00 |      |
| E          | 0.213  | 0.236 | 5.40  | 6.00  |      |
| F          | 0.154  | 0.177 | 3.90  | 4.50  |      |
| G          | 0.122  | 0.134 | 3.10  | 3.40  |      |
| H          | 0.114  | 0.138 | 2.90  | 3.90  |      |
| J          | 0.079  | 0.102 | 2.00  | 2.60  |      |
| K          | 0.012  | 0.024 | 0.40  | 0.60  |      |
| L          | -      | 0.069 | -     | 1.75  |      |
| M          | 0.035  | 0.043 | 0.90  | 1.10  |      |
| N          | 0.287  | 0.303 | 7.30  | 7.70  |      |
| O          | 0.083  | 0.091 | 2.10  | 2.30  |      |

## Thermal characteristics

| Symbol        | Parameter                                   | Conditions       | Min | Typ | Max | Unit |
|---------------|---|------------------|-----|-----|-----|------|
| $T_J$         | Operating Junction Temperature Range        |                  | -55 |     | 150 | °C   |
| $T_{stg}$     | Storage Temperature Range                   |                  | -55 |     | 150 | °C   |
| $R_{th(J-C)}$ | Thermal Resistance from Junction to Case    | Note 1           |     | 2.8 |     | °C/W |
| $R_{th(J-A)}$ | Thermal Resistance from Junction to Ambient | Without Heatsink |     | 28  |     | °C/W |

Note:

1.Device mounted on 75mm x 45mm x 5.5mm Aluminum Plate Heatsink.

## Mechanical Data

Recommended Mounting Torque: 0.5 N•m

## Electrical Characteristics @ 25°C Unless Otherwise Specified(Per Diode)

| Parameter            | Symbol | Test Conditions   | Min | Typ | Max      | Unit |
|----------------------|--------|---|-----|-----|----------|------|
| Forward Voltage      | $V_F$  | $I_F=4A; T_J=25^{\circ}C$   |     |     | 1.0      | V    |
| Reverse Current      | $I_R$  | at Rated $V_R; T_J=25^{\circ}C$<br>at Rated $V_R; T_J=125^{\circ}C$ |     |     | 5<br>100 | uA   |
| Junction Capacitance | $C_J$  | $V_R=4V; f=1MHz; T_J=25^{\circ}C$                                   |     | 50  |          | pF   |

## Curve Characteristics

Fig. 1 - Forward Current Derating Curve

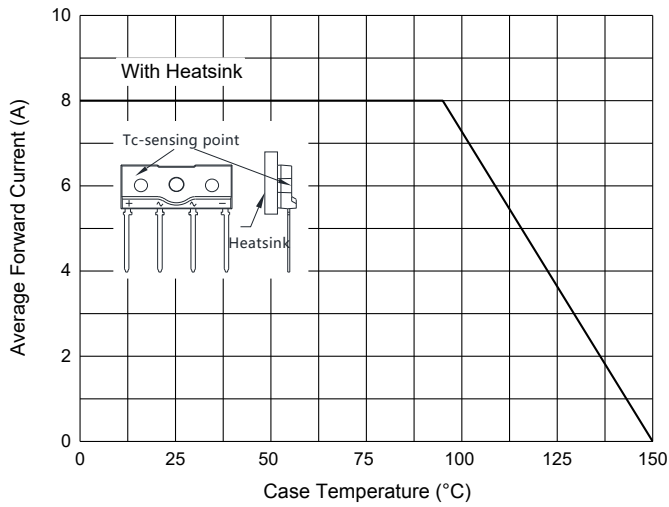


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

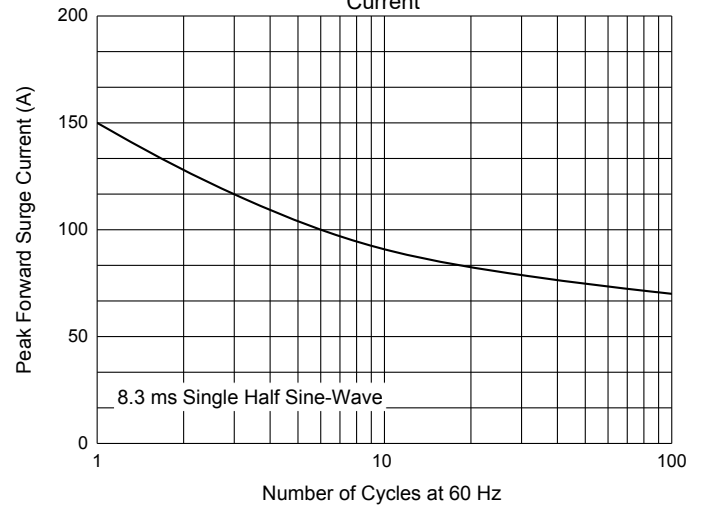


Fig. 3 - Typical Forward Characteristics

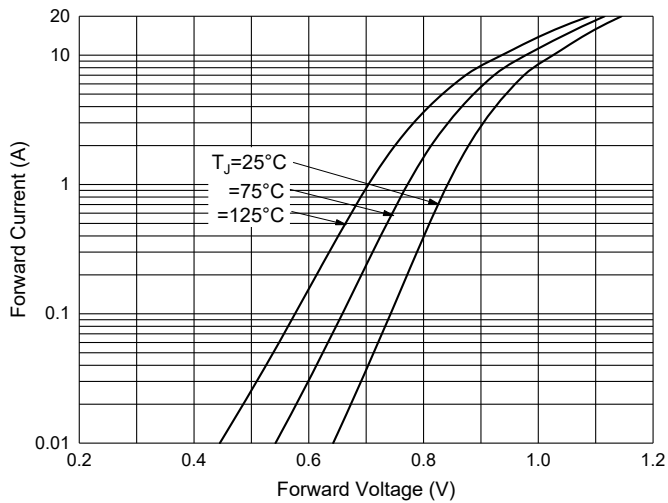


Fig. 4 - Typical Reverse Leakage Characteristics

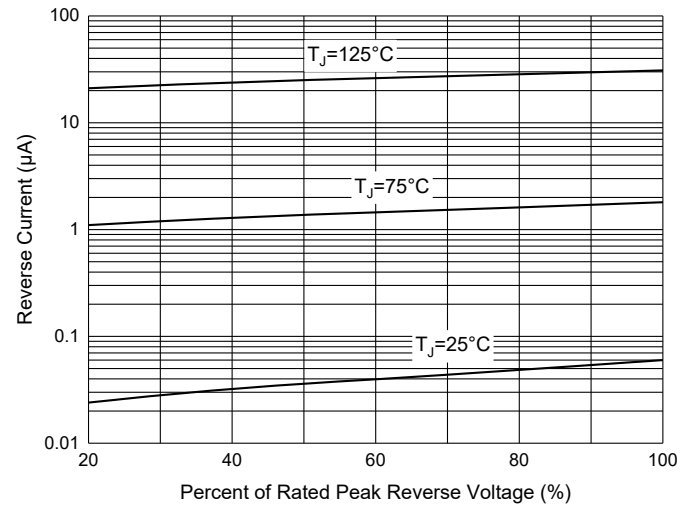
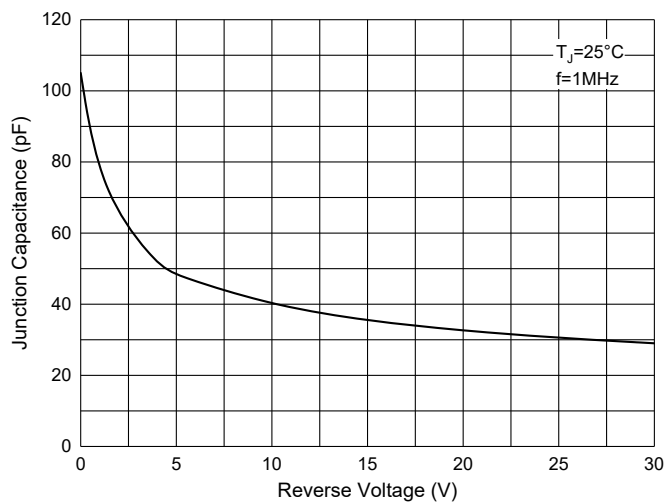


Fig. 5 - Typical Capacitance Characteristics



## Ordering Information

| Device         | Packing                                   |
|----------------|---|
| Part Number-BP | Bulk:20pcs/Tube,900pcs/Box,1800pcs/Carton |

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