### GBJ/KBJ6A/8A/10A SERIES

**SINGLE PHASE 6.0/8.0/10.0 AMPS. GLASS PASSIVATED BRIDGE RECTIFIERS**

**FEATURES**
- UL Recognized File #230084
- Rating to 1000V PRV
- Ideal for printed circuit board
- Low forward voltage drop, high current capability
- Reliable low cost construction utilizing molded plastic technique results in inexpensive product
- The plastic material has UL flammability classification 94V-0

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Rating at 25°C ambient temperature unless otherwise specified.
- Sing phase, half wave, 50Hz, resistive or inductive load.
- For capacitive load, derate current by 20%

<table>
<thead>
<tr>
<th>Type Number</th>
<th>Voltage Range</th>
<th>Current</th>
</tr>
</thead>
<tbody>
<tr>
<td>GBJ/KBJ6A</td>
<td>50 to 1000 Volts</td>
<td>6.0/8.0/10.0 Amperes</td>
</tr>
<tr>
<td>GBJ/KBJ8A</td>
<td>50 to 1000 Volts</td>
<td>6.0/8.0/10.0 Amperes</td>
</tr>
<tr>
<td>GBJ/KBJ10A</td>
<td>50 to 1000 Volts</td>
<td>6.0/8.0/10.0 Amperes</td>
</tr>
</tbody>
</table>

**Dimensions in inches and (millimeters)**

**NOTES:**
1. Measured at 1.0MHz and applied reverse voltage of 4.0 V DC.
2. GBJ/KBJ6005 Thru GBJ/KBJ610: Device mounted on 75mm x 75mm x 1.6mm Cu Plate Heatsink.
3. GBJ/KBJ8005 Thru GBJ/KBJ810: Device mounted on 100mm x 100mm x 1.6mm Cu Plate Heatsink.
4. GBJ/KBJ10005 Thru GBJ/KBJ1010: Device mounted on 150mm x 150mm x 1.6mm Cu Plate Heatsink.

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**KBJ6**

- Voltage Range: 50 to 1000 Volts
- Current: 6.0/8.0/10.0 Amperes

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**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Rating at 25°C ambient temperature unless otherwise specified.
- Sing phase, half wave, 50Hz, resistive or inductive load.
- For capacitive load, derate current by 20%

**Type Number**

<table>
<thead>
<tr>
<th>Type Number</th>
<th>Maximum Repetitive Peak Reverse Voltage</th>
<th>Maximum RMS Voltage</th>
<th>Maximum DC Blocking Voltage</th>
<th>Maximum Average Forward (with heatsink Note 2)</th>
<th>Peak Forward Surge Current (8.3ms single half sine-wave super imposed on rated load)</th>
<th>Maximum Instantaneous Forward Voltage Drop Per leg @ 3.0A/4.0A/5.0A</th>
<th>Maximum DC Reverse Current at Rated DC Blocking Voltage</th>
<th>Junction Capacitance per Leg (Note 1)</th>
<th>Typical Thermal Resistance (Note 2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>GBJ/KBJ6A</td>
<td>VRRM 50</td>
<td>VRMS 35</td>
<td>VDC 50</td>
<td>IF(70°C) 6.0/8.0/10.0</td>
<td>IFSM 170</td>
<td>VF 1.0/1.0/1.05</td>
<td>IR 5.0</td>
<td>CJ 55</td>
<td>RJC 1.8/1.6/1.4</td>
</tr>
<tr>
<td>GBJ/KBJ8A</td>
<td>VRRM 100</td>
<td>VRMS 70</td>
<td>VDC 100</td>
<td>IF(70°C) 2.8/2.9/3.0</td>
<td>IFSM 170</td>
<td>VF 1.0/1.0/1.05</td>
<td>IR 5.0</td>
<td>CJ 55</td>
<td>RJC 1.8/1.6/1.4</td>
</tr>
<tr>
<td>GBJ/KBJ10A</td>
<td>VRRM 200</td>
<td>VRMS 140</td>
<td>VDC 200</td>
<td>IF(70°C) 2.8/2.9/3.0</td>
<td>IFSM 170</td>
<td>VF 1.0/1.0/1.05</td>
<td>IR 5.0</td>
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**NOTES:**
1. Measured at 1.0MHz and applied reverse voltage of 4.0 V DC.
RATING AND CHARACTERISTIC CURVES
GBJ/KBJ6A/8A/10A SERIES

FIG.1-1 - FORWARD CURRENT DERATING CURVE
CASE TEMPERATURE, °C
AVERAGE FORWARD CURRENT, AMPERES
0.0 1.0 2.0 3.0 4.0 5.0 6.0
0 20 40 60 80 100 120 140
SINGLE PHASE HALF WAVE 60Hz RESISTIVE OR INDUCTIVE LOAD
WITH HEATSINK
WITHOUT HEATSINK

FIG.2-MAXIMUM NON-REPETITIVE SURGE CURRENT
PEAK FORWARD SURGE CURRENT, AMPERES
0 20 40 60 80 100 120 140 160 180
NUMBER OF CYCLES AT 60Hz
1 2 5 10 20 50 100
Single Half-Sine-Wave (JEDEC Method)

FIG.3 - TYPICAL FORWARD CHARACTERISTICS
REVERSE VOLTAGE, VOLTS
CAPACITANCE, (nF)
0 1.0 10 100
1.0 4.0 10.0 100
TJ=25°C, f=1MHz
TJ=100°C
TJ=125°C
TJ=50°C

FIG.4 - TYPICAL FORWARD CHARACTERISTICS
INSTANTANEOUS FORWARD CURRENT, (A)
0.01 0.1 1.0 10
INSTANTANEOUS FORWARD VOLTAGE, VOLTS
0 0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8
TJ=25°C
PULSE WIDTH 300µs

FIG.5 - TYPICAL REVERSE CHARACTERISTICS
PERCENT OF RATED PEAK REVERSE VOLTAGE, (%)
INSTANTANEOUS FORWARD CURRENT, (µA)
0 0.1 1.0 10 100 1000
0 20 40 60 80 100
TJ=25°C
TJ=60°C
TJ=80°C
TJ=100°C
TJ=125°C

Note: Specification is subject to change without further notice. For more details and updates, please visit our website.