KBL005 THRU KBL1 0

4.0A SINGLE-PHASE SILICON BRIDGE RECTIFIERS

Features
- Ideal for printed circuit board
- Surge overload rating-200 amperes peak
- Mounting Position: Any
- Leads: Silver-plated copper
- Plastic material has Underwriters Laboratory Flammability Classification 94V-0

Absolute Maximum Ratings and Characteristics
Rating at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%.

<table>
<thead>
<tr>
<th></th>
<th>KBL005</th>
<th>KBL01</th>
<th>KBL02</th>
<th>KBL04</th>
<th>KBL06</th>
<th>KBL08</th>
<th>KBL10</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>Maximum Recurrent Peak Reverse Voltage</td>
<td>50</td>
<td>100</td>
<td>200</td>
<td>400</td>
<td>600</td>
<td>800</td>
<td>1000</td>
<td>V</td>
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<tr>
<td>Maximum RMS Bridge Input Voltage</td>
<td>35</td>
<td>70</td>
<td>140</td>
<td>280</td>
<td>420</td>
<td>560</td>
<td>700</td>
<td>V</td>
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<tr>
<td>Maximum DC Blocking Voltage*</td>
<td>50</td>
<td>100</td>
<td>200</td>
<td>400</td>
<td>600</td>
<td>800</td>
<td>1000</td>
<td>V</td>
</tr>
<tr>
<td>Maximum Average Forward Rectified Output Current at 50°C T_A (Note 1)</td>
<td>4</td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<td>A</td>
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<tr>
<td>Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load</td>
<td>200</td>
<td></td>
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<td>A</td>
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<tr>
<td>Maximum Forward Voltage Drop per Bridge Element at 3A Peak</td>
<td>1</td>
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<td></td>
<td>V</td>
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<tr>
<td>Maximum DC Reverse Current, at Rated DC Blocking Voltage</td>
<td>10</td>
<td></td>
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<td></td>
<td>uA</td>
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<tr>
<td>Maximum Reverse Current at Rated DC Blocking Voltage and 150°C T_A</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>mA</td>
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<tr>
<td>Operating and Storage Temperature Range T_A</td>
<td>-55 to +150</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>°C</td>
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</table>

Note: (1) Mounting conditions. 0.5" lead length maximum.
RATING AND CHARACTERISTICS CURVES (KBL005 SERIES)

FIG. 1-MAXIMUM FORWARD SURGE CURRENT

PEAK FORWARD SURGE CURRENT (AMPERES)

Tj=25°C

NUMBER OF CYCLES AT 60 Hz

FIG. 2-DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

AVG. FORWARD OUTPUT CURRENT (AMPERES)

MOUNTING ON 4X4 INCH COPPER PC BOARD

AMBIENT TEMPERATURE (°C)

FIG. 3-TYPICAL FORWARD CHARACTERISTICS

INSTANTANEOUS FORWARD CURRENT (MICROAMPERES)

INSTANTANEOUS FORWARD VOLTAGE (VOLTS)

Tj=25°C

FIG. 4-TYPICAL REVERSE CHARACTERISTICS (25°C)

INSTANTANEOUS REVERSE CURRENT (MICROAMPERES)

PERCENT OF RATED PEAK REVERSE VOLTAGE

SEMTECH ELECTRONICS LTD.
(Subsidiary of Semtech International Holdings Limited, a company listed on the Hong Kong Stock Exchange, Stock Code: 724)

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