ENERGY EFFICIENT circuit design could have these days crucial significance for the success of a product.

Since decades bridge rectifier is the state of the art for circuit for all DC Power supply. A bridge rectifier makes use of four diodes in a bridge arrangement to achieve full-wave rectification. The energy efficiency of a rectifier is determined by the forward voltage drop and the switching speed of the diodes.

Rectifiers built by Schottky have such a very low forward voltage drop and switching speeds that approach zero time. This makes them ideal for energy efficient output stages of switching power supplies.

The full bridge rectifier is coming in the tiny SOT143.

<table>
<thead>
<tr>
<th>Type</th>
<th>Product</th>
<th>Package</th>
<th>Configuration</th>
<th>VR (V) max</th>
<th>VRrms (V) max</th>
<th>IF (mA) max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schottky bridge rectifier</td>
<td>BAS3007A-RPP</td>
<td>SOT143</td>
<td>Full Bridge</td>
<td>30</td>
<td>21</td>
<td>900</td>
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<td></td>
<td>BAS4002A-RPP</td>
<td>SOT143</td>
<td>Full Bridge</td>
<td>40</td>
<td>28</td>
<td>200</td>
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<tr>
<td></td>
<td>BAT240A</td>
<td>SOT23</td>
<td>Half Bridge</td>
<td>240</td>
<td>170</td>
<td>400</td>
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<tr>
<td>PN diode bridge rectifier</td>
<td>BGX50A</td>
<td>SOT143</td>
<td>Full Bridge</td>
<td>70</td>
<td>50</td>
<td>140</td>
</tr>
</tbody>
</table>

Key Features:
- Schottky Diode rectifier with fast switching speed and low voltage drop for high energy efficiency rectifiers
- Very small systems
- Full bridge and Half bridge combinations available
- Suitable also for advanced reverse polarity protection

Target Applications:
- Rectifier for LED illumination
- Energy saving Lamps
- Mobil Battery charger (Mobil-Phones, Digital-Cameras, PDAs)
- Toys

www.infineon.com/schottkydiodes

Small Signal Discretes
Save space by replacing four diodes by a single pack full bridge rectifier

**Application Example BAT240A**

Energy efficient bridge rectification for 110V / 60Hz power lines

**PIN Configuration in SOT143**

**Warnings**

Due to technical requirements, components may contain dangerous substances. For information on the types in question, please contact the nearest Infineon Technologies Office. Infineon Technologies components may be used in life-support devices or systems only with the express written approval of Infineon Technologies, if a failure of such components can reasonably be expected to cause the failure of that life-support device or system or to affect the safety or effectiveness of that device or system. Life support devices or systems are intended to be implanted in the human body or to support and/or maintain and sustain and/or protect human life. If they fail, it is reasonable to assume that the health of the user or other persons may be endangered.