Why Package Strategy is Important

- Global Power Diode Demand is increasing
- Capacity of new CFP packages is increasing to support demand
- Capacity of previous-generation (SMx) packages is not increasing
- Carrying-over SMx designs could lead to future supply issues
- The industry is moving to new CFP packages

CFP Portfolio

- Available in CFP3, CFP5, CFP15B, CFP2-HP, CFP3-HP
- For Recovery Rectifiers and Planar & Trench Schottkys
- For Rectifiers from 1A - 20A forward current (IF)
- Continuous package & portfolio innovation in CFP
- Secure supply in high volumes

CFP Package Features (vs. SMx):

- Smaller Size and Height, yet more powerful
- Improved Reliability due to the Clip Bond
- High Temperature: 175 C qualified
- AEC-Q101 qualified (2x AEC-Q101 reliability)
- Free from delamination
- Board Level Reliability compliant
- Reduced package resistance for better electrical performance
- Solid copper clip for high power dissipation
- Reduced package inductance - Better switching & Less parasitics
- Lead shapes are optimized for Optical Inspection (AOI)
- CFP can replace previous-generation SMx packaged parts

Clip-bond Flat Power (CFP) - Package Strategy

Providing a true alternative to previous-generation SMx packages, our Clip-bond Flat Power (CFP) packages meet the challenging demands of efficient and space-saving designs. Ideal for automotive, industrial, consumer, and computing applications.
## Power Schottky rectifiers - clip-bond packages

### Types in bold represent new products

<table>
<thead>
<tr>
<th>Package</th>
<th>CFP15 (SOT1289)</th>
<th>CFP15B (SOT1289B)</th>
<th>CFP5 (SOD128)</th>
<th>CFP3 (SOD123W)</th>
<th>CFP3-HP (SOD123HP)</th>
<th>CFP2-HP (SOD233HP)</th>
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1. Trench Schottky technology
Recovery rectifiers

Types in **bold** represent new products.

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<th>Package</th>
<th>Size (mm)</th>
<th>$P_{\text{tot}}$ (mW)</th>
<th>$R_{\text{th(j-sp)}}$ (K/W)</th>
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<tr>
<td>CFP2-HP (SOD323HP)</td>
<td>2.2 x 1.3 x 0.68</td>
<td>1200</td>
<td>6 K/W</td>
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<tr>
<td>CFP3-HP (SOD123HP)</td>
<td>2.8 x 1.8 x 0.9</td>
<td>1150</td>
<td>6 K/W</td>
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<tr>
<td>CFP3 (SOD123W)</td>
<td>2.6 x 1.7 x 1.0</td>
<td>1200</td>
<td>18 K/W</td>
</tr>
<tr>
<td>CFP5 (SOD128)</td>
<td>3.8 x 2.5 x 1.0</td>
<td>2150</td>
<td>12 K/W</td>
</tr>
<tr>
<td>CFP15B (SOT1289B)</td>
<td>5.8 x 4.3 x 0.78</td>
<td>2150</td>
<td>3 K/W</td>
</tr>
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*Body size (l x w x h)
Recommended package replacements

**20 - 200 V**

- **SMC**
- **SMC**
- **SMA**
- **CFP5**
- **CFP2-HP (CFP3)**
- **CFP3-HP**
- **CFP15B**
- **CFP15B**
- **CFP15B**
- **SMB**
- **DPAK**

**CFP2-HP and CFP3-HP**
Clip-bonded packages featuring an exposed heatsink for improved thermal connection to the PCB.

**CFP15B**
Improved version of CFP15 featuring lead ends which are optimized for AOI.

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