Providing a true alternative to D²PAK, Nexperia's LFPAK88 delivers industry leading power density in a truly innovative 8mm x 8mm footprint. Delivering 2x higher continuous current rating, ultimate thermal performance and reliability, and up to 60% space efficiency, making LFPAK88 the MOSFET of choice for the most challenging new designs. Available in both automotive AEC-Q101 and industrial grades.

**Space saving footprint**
- D²PAK Vs LFPAK88
  - 60% footprint reduction
  - 65% height reduction
  - 86% overall space reduction

**Ultra Low On-Resistance**
- Latest low voltage superjunction technology
- 0.5 mΩ @ 40 V
- Copper clip technology gives low electrical and thermal resistance
- Low $R_{\text{DS(on)}}$ without compromising SOA capability

**Reliable & Manufacturable**
- Advanced package design exceeds 2x AEC-Q101
- Recommended for automotive applications such as power steering, ABS braking, DC/DC conversation and LED lighting

**High Current Rating**
- Up to 500 A continuous current rating
- High transient robustness
- 100% avalanche tested (100% tested)
- Best-in-class linear mode (SOA) performance for in-rush & surge protection
### AEC-Q101 LFPAK88 Portfolio

<table>
<thead>
<tr>
<th>Type number</th>
<th>$V_{ds}$ max (V)</th>
<th>$R_{ds(on)}$ max @ 10 V (mΩ)</th>
<th>$I_d$ max @ 25°C (A)</th>
<th>$R_{th(j-mb)}$ typ (K/W)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUK750R5-40H</td>
<td>40</td>
<td>0.55</td>
<td>500</td>
<td>0.35</td>
</tr>
<tr>
<td>BUK750R7-40H</td>
<td>40</td>
<td>0.7</td>
<td>425</td>
<td>0.35</td>
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<tr>
<td>BUK750R9-40H</td>
<td>40</td>
<td>0.9</td>
<td>375</td>
<td>0.35</td>
</tr>
<tr>
<td>BUK751R0-40H</td>
<td>40</td>
<td>1.0</td>
<td>325</td>
<td>0.35</td>
</tr>
<tr>
<td>BUK751R2-40H</td>
<td>40</td>
<td>1.2</td>
<td>300</td>
<td>0.45</td>
</tr>
<tr>
<td>BUK751R5-40H</td>
<td>40</td>
<td>1.5</td>
<td>260</td>
<td>0.54</td>
</tr>
<tr>
<td>BUK752R0-40H</td>
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<td>2</td>
<td>190</td>
<td>0.72</td>
</tr>
<tr>
<td>BUK752R5-40H</td>
<td>40</td>
<td>2.51</td>
<td>140</td>
<td>0.97</td>
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</tbody>
</table>

### Industrial LFPAK88 Portfolio

<table>
<thead>
<tr>
<th>Type number</th>
<th>$V_{ds}$ max (V)</th>
<th>$R_{ds(on)}$ max @ 10 V (mΩ)</th>
<th>$I_d$ max @ 25°C (A)</th>
<th>$R_{th(j-mb)}$ typ (K/W)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSMN055-40SSH</td>
<td>40</td>
<td>0.55</td>
<td>500</td>
<td>0.35</td>
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<tr>
<td>PSMN070-40SSH</td>
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<td>425</td>
<td>0.35</td>
</tr>
<tr>
<td>PSMN090-40SSH</td>
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<td>0.9</td>
<td>375</td>
<td>0.35</td>
</tr>
<tr>
<td>PSMN1R0-40SSH</td>
<td>40</td>
<td>1.0</td>
<td>325</td>
<td>0.35</td>
</tr>
</tbody>
</table>

**Compact footprint**
- D²PAK replacement
- Low profile

**Manufacturability & robustness**
- Flexible leads for temp cycling reliability
- Compatible with SMD soldering and AOI

**High performance silicon**
- 0.5 mΩ Trench 9 / NextPowerS3 40 V
- Improved SOA

**Copper clip**
- Tested high $I_d$ max rating (500 A)
- Low inductance (1 nH)
- Current spreading
- Low $R_{ds(on)}$

**Low thermal resistance**
- Low $R_{th(j-mb)}$ typ (0.35 K/W)

**Qualification**
- AEC-Q101
- 175 °C rating
- MSL1
- Halogen free

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