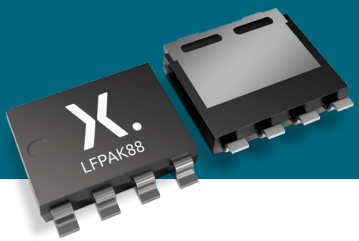
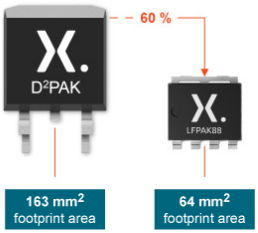


LFPAK88

Driving power-density to the next level

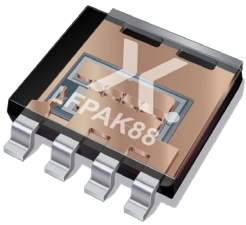
Providing a true alternative to D²PAK, Nexperia's LFPAK88 delivers industry leading power density in a truly innovative 8mm x 8mm footprint. Delivering 2x higher continuous current rating, ultimate thermal performance and reliability, and up to 60% space efficiency, making LFPAK88 the MOSFET of choice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

Space saving footprint

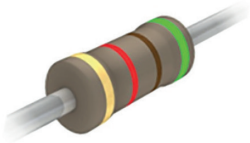


D²PAK Vs LFPAK88

- 60% footprint reduction
- 65% height reduction
- 86% overall space reduction



Ultra Low On-Resistance

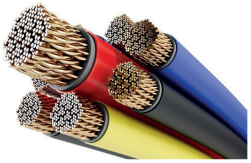


- Latest low voltage superjunction technology
- 0.5 mΩ @ 40 V
- Copper clip technology gives low electrical and thermal resistance
- Low $R_{DS(on)}$ without compromising SOA capability

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

nexperia

EFFICIENCY WINS.

AEC-Q101 LFPAK88 Portfolio

Type number	V_{DS} max (V)	$R_{DS(on)}$ max @ 10 V (mΩ)	I_D max @ 25˚C (A)	$R_{th(j-mb)}$ typ (K/W)
BUK7S0R5-40H	40	0.55	500	0.35
BUK7S0R7-40H	40	0.7	425	0.35
BUK7S1R0-40H	40	1.0	325	0.35
BUK7S1R2-40H	40	1.2	300	0.45
BUK7S1R5-40H	40	1.5	260	0.54
BUK7S2R0-40H	40	2	190	0.72
BUK7S2R5-40H	40	2.51	140	0.97

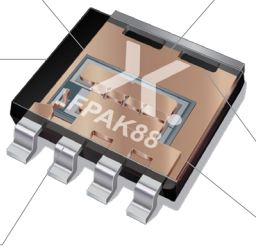
Industrial LFPAK88 Portfolio

Type number	V_{DS} max (V)	$R_{DS(on)}$ max @ 10 V (mΩ)	I_D max @ 25˚C (A)	$R_{th(j-mb)}$ typ (K/W)
PSMNR55-40SSH	40	0.55	500	0.35
PSMNR70-40SSH	40	0.7	425	0.35
PSMNR90-50SLH	50	0.9	410	0.35
PSMN1R0-40SSH	40	1.0	325	0.35
PSMN1R2-55SLH	55	1.03	330	0.35

Compact footprint
- D²PAK replacement
- Low profile

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

High performance sillicon
- 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

Date of release:
March 2022