



## New Trench 6 MOSFETs in a Power-SO8 package

# 25 V to 100 V MOSFETs in Power-SO8

We've extended our range of Trench 6 MOSFETs with new devices at 60 V and 100 V in the LPAK (SOT669) package.

NXP leads the way with its range of Trench 6 MOSFETs in LPAK (Loss Free PAcKage). By combining Trench 6 silicon with the high performance LPAK package, our new devices provide customers with numerous performance and reliability advantages.

- ▶ 3.6 m $\Omega$  (typical) 60 V in a Power-SO8 footprint (PSMN5R5-60YS)
- ▶ 10.0 m $\Omega$  (typical) 100 V in a Power-SO8 footprint (PSMN012-100YS)
- ▶ World's first <1 m $\Omega$  <sup>(1)</sup> 25 V MOSFET in a Power-SO8 footprint for switching applications
- ▶ The only Power-SO8 devices rated to 175 °C
- ▶ The only Power-SO8 package automotive rated to AEC - Q101
- ▶ The LPAK is rated for  $I_{D(MAX)}$  up to 100 A
- ▶ Fully compatible with visual inspection machines (unlike many Power-SO8 alternatives which require X-ray inspection)
- ▶ Avalanche rated
- ▶ ROHS compliant and halogen-free

<sup>(1)</sup> PSMN1R2-25YL has  $R_{DS(ON)}$  (typ) = 0.9 m $\Omega$  and  $R_{DS(ON)}$  (max) = 1.2 m $\Omega$  at  $V_{gs}$  = 10 V

Trench 6 silicon technology provides NXP's lowest  $R_{DS(ON)}$  performance yet. These latest devices are ideal for a wide range of demanding applications including power OR-ing, motor control and high-efficiency synchronous buck-regulators.

As well as delivering lower  $R_{DS(ON)}$  than previous silicon technologies, Trench 6 also offers lower gate-charge (Qg) and low gate resistance (Rg), making the devices suitable for high-efficiency power management applications with switching frequencies up to 1 MHz.

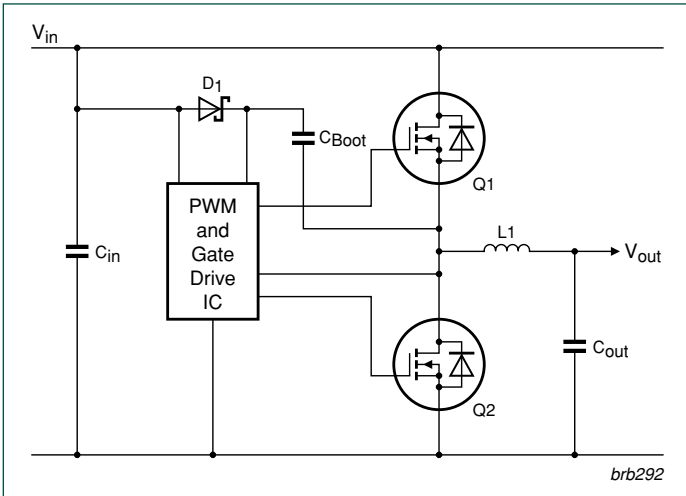
NXP's LPAK delivers compact power in a surface mount package. It provides superior electrical and thermal resistance as well as low package inductance, while maintaining the widely accepted SO8 PCB footprint.

Suitable for 'automated optical inspection' and 'manual inspection', LPAK is better than many other Power-SO8 alternatives which require costly X-ray inspection.

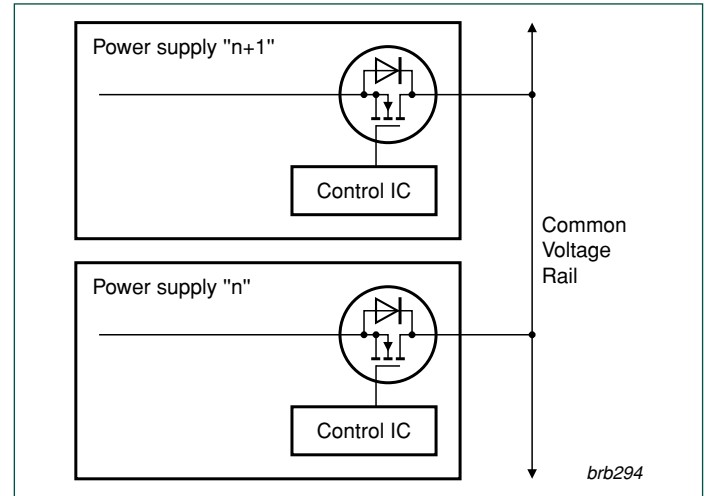
The combination of Trench 6 silicon and LPAK package delivers higher operating efficiencies, improved current characteristics, higher power density and improved PCB thermal performance – essential for today's high performance power management applications.



## Synchronous Buck Regulator



## OR-ing



## Selector Guide

Type	$V_{DS}$	$R_{DS(ON)}$ (typ) $V_{gs} = 10\text{ V}$ m $\Omega$	$R_{DS(ON)}$ (max) $V_{gs} = 10\text{ V}$ m $\Omega$
PSMN1R2-25YL	25	0.9	1.2
PSMN1R5-25YL	25	1.1	1.5
PSMN1R3-30YL	30	1.04	1.3
PSMN1R7-30YL	30	1.29	1.7
PSMN2R0-30YL	30	1.6	2
PSMN2R5-30YL	30	1.8	2.4
PSMN3R0-30YL	30	2.19	3
PSMN3R5-30YL	30	2.4	3.5
PSMN4R0-30YL	30	2.72	4
PSMN5R0-30YL	30	3.63	5
PSMN6R0-30YL	30	4.26	6
PSMN7R0-30YL	30	4.92	7
PSMN9R0-30YL	30	6.16	8
PSMN2R6-40YS	40	2	2.8
PSMN4R0-40YS	40	3.2	4.2
PSMN8R3-40YS	40	6.6	8.6
<b>PSMN012-60YS</b>	60	8	11.1
<b>PSMN5R5-60YS</b>	60	3.6	5.2
<b>PSMN8R5-60YS</b>	60	5.6	8
PSMN013-80YS	80	9.7	12.9
PSMN026-80YS	80	20	27.5
PSMN8R2-80YS	80	5.8	8.5
<b>PSMN012-100YS</b>	100	10	12.8
<b>PSMN020-100YS</b>	100	15	20.5

Types in **Bold Red** represent new products

[www.nxp.com/mosfets](http://www.nxp.com/mosfets)