

New high-performance
Trench 6 MOSFETs in a
TO220 package for power
management applications

Giving you more choice with an extended portfolio of Trench 6 MOSFETs in TO220

We've extended our range of Trench 6 MOSFETs with new devices in the industry-standard TO220 (SOT78) package operating at 60 V and 100 V adding to the portfolio of 30 V, 40 V and 80 V.

By combining Trench 6 silicon with the TO220 package, our new devices provide customers with many performance and reliability advantages.

- ▶ 2.4 m Ω (typical) 60 V in a TO220 package (PSMN3R0-60PS)
- ▶ 4.3 m Ω (typical) 100 V in a TO220 package (PSMN5R6-100PS)
- ▶ Rated to 175 °C
- ▶ Rated for $I_{D(MAX)} = 100$ A
- ▶ Avalanche rated
- ▶ ROHS compliant and halogen-free
- ▶ Low thermal resistance

Our PSMN series of N-channel MOSFETs has been extended to include a range of 60 V and 100 V Trench 6 silicon devices in the TO220 package. The new range offers performance improvements in a wide variety of applications.

Trench 6 silicon technology provides NXP's lowest $R_{DS(ON)}$ performance yet in a TO220 package with 1.4 m Ω typical at $V_{gs} = 10$ V (PSMN1R6-30PL). These parts are ideal for power OR-ing, motor control, DC-DC converters, UPS Uninterruptible Power Supplies and other demanding industrial applications.

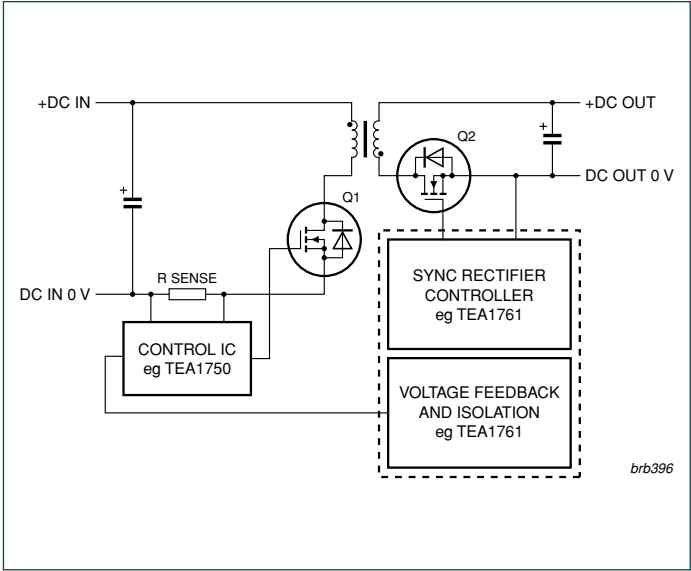
As well as delivering lower $R_{DS(ON)}$ than previous silicon technologies, Trench 6 also offers lower gate-charge (Qg) and low gate resistance (Rg), making the devices suitable for high-efficiency power management applications and higher switching frequencies.

The TO220 package delivers compact power in a through-hole package. It provides superior thermal resistance when mounted to a heat-sink.

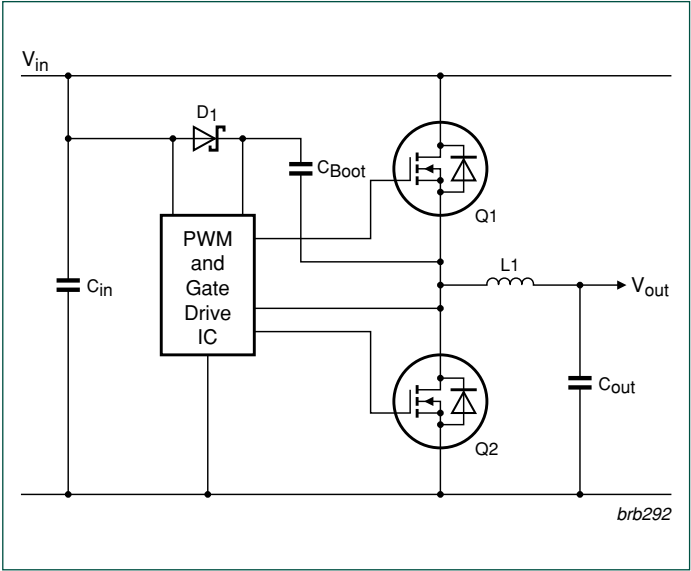


The combination of Trench 6 silicon and TO220 package delivers higher operating efficiencies, lower switching losses, improved current capability and higher power density – essential for today's high performance power management applications.

Notebook Adaptor



Synchronous Buck Regulator



Selector Guide

Type	V _{DS}	R _{DS(ON)} (typ) V _{gs} = 10 V mΩ	R _{DS(ON)} (max) V _{gs} = 10 V mΩ
PSMN1R6-30PL	30	1.4	1.7
PSMN2R0-30PL	30	1.7	2.1
PSMN4R3-30PL	30	3.5	4.3
PSMN2R2-40PS	40	1.8	2.1
PSMN4R5-40PS	40	3.9	4.6
PSMN8R0-40PS	40	6.2	7.6
PSMN3R0-60PS	60	2.4	3
PSMN4R6-60PS	60	3.8	4.6
PSMN7R6-60PS	60	6.8	7.8
PSMN012-80PS	80	9	11
PSMN050-80PS	80	37	46
PSMN4R4-80PS	80	3.3	4.1
PSMN5R0-80PS	80	3.7	4.7
PSMN013-100PS	100	11.8	13.9
PSMN016-100PS	100	13	16
PSMN027-100PS	100	21	27
PSMN034-100PS	100	27	34
PSMN5R6-100PS	100	4.3	5.6
PSMN7R0-100PS	100	5.2	6.8
PSMN9R5-100PS	100	7.6	9.5

Types in **Bold Red** represent new products
Type in **Bold Red Italic Underline** represent products in development

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