



20 V, 30 V and 60 V N-channel MOSFETs in SOT323 and SOT363

A new dimension in power

Leading the way in miniaturization and Trench technology, NXP's innovative μ TrenchMOS portfolio delivers excellent performance from the smallest devices. As consumers demand smaller, efficient and feature-rich communication and entertainment products, these latest additions to our miniature MOSFET family ensure you can always connect.

Key Features

- ▶ Compact, industry-standard package
 - 40% smaller than SOT23
- ▶ Low $R_{DS(on)}$ – typically 500 m Ω
- ▶ Very low $V_{GS(th)}$ – down to 1.8 V
- ▶ Rapid switching

Key benefits

- ▶ Reduced board space requirements
- ▶ Less power dissipated leading to cooler running, more efficient end products
- ▶ Can be driven from 3 V (battery) supplies

Key applications

- ▶ Hand-held and portable devices
- ▶ Mobile communications
- ▶ Computing
- ▶ LCD panels

As the industry-wide trend for smaller, more efficient products continues, NXP Semiconductors is leading the way in PowerMOS solutions. Available as single or dual configured 20 V, 30 V and 60 V μ TrenchMOS devices in the ultracompact SOT323 (SC-70 – single) and SOT363 (SC-88 – dual) packages, NXP further expands miniature power options for systems designers.

Thanks to our advanced Trench technology, these devices boast extremely low on-state resistances, parasitic capacitances and threshold voltage. Consequently, they deliver very efficient and rapid switching, and can be driven directly from a battery without the need for power-hungry charge pumps.

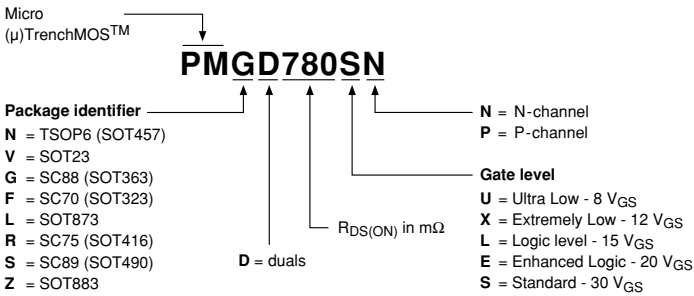
With such high performance and small size, they are ideal for all systems where power and / or space are critical factors. They are particularly suitable for signal, load and low-power conversion applications in portable and handheld devices, computing products and LCD panels.



Product information

Type number		Max. V_{DS} (V)	Typ. $R_{DS(on)}$ (m Ω) @ $V_{GS} =$			
SOT323	SOT363		10 V	4.5 V	2.5 V	1.8 V
PMF280UN	PMGD280UN	20		280	360	460
PMF290XN	PMGD290XN	20		290	460	
PMF370XN	PMGD370XN	30		370	550	
PMF400UN	PMGD400UN	30		400	480	580
	PMGD800LN	30		1800	2900	
PMF780SN	PMGD780SN	60	780	1100		
PMF3800SN		60	2800	3800		

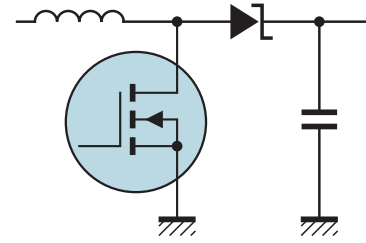
μ TrenchMOS™ part numbering



Typical applications

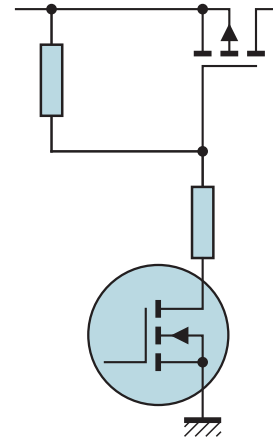
NXP's μ TrenchMOS family is ideal for use in a wide variety of functions and applications. The following diagrams highlight just some of the potential areas, where the benefits offered by this range of miniature MOSFETs provide a new dimension to your design toolkit.

Boost convertor application



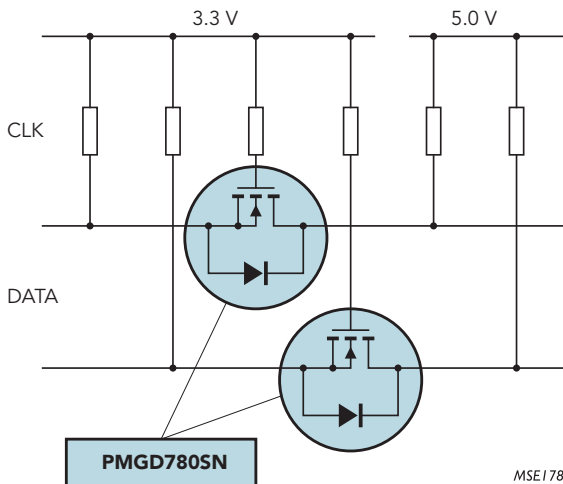
MSE179

Load switching application



MSE180

SMBus level shifting and bus isolation



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