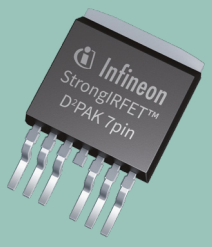


Product brief

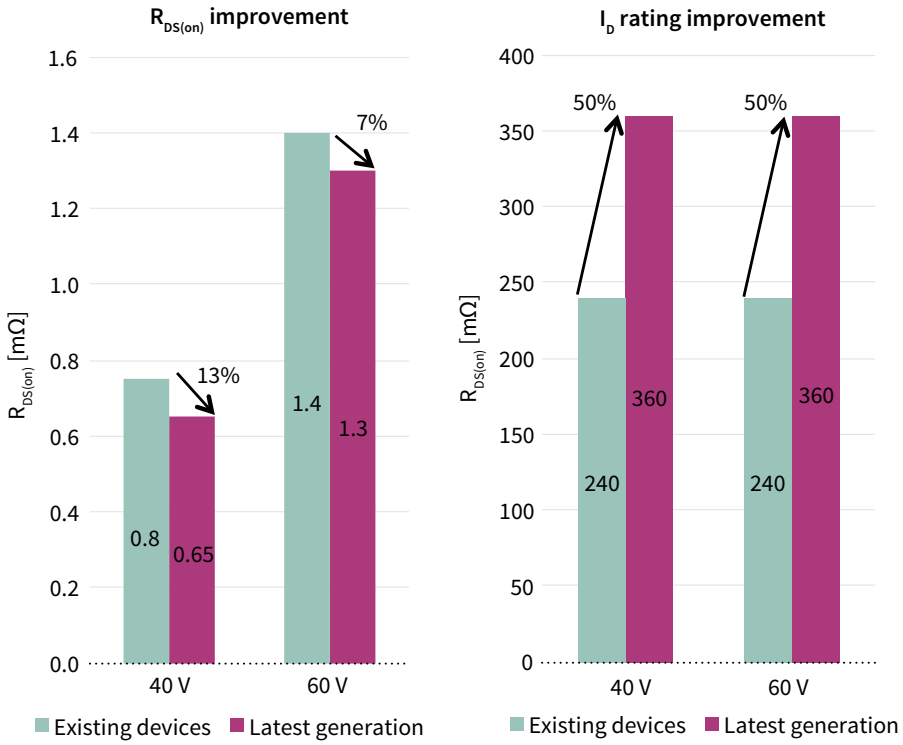
StrongIRFET™ power MOSFET family 40–60 V in D²PAK 7pin+

Benchmark performance technology for battery powered applications

Infineon introduces an extension to their successful StrongIRFET™ power MOSFET family with a range of 40-60 V D²PAK 7pin+ devices targeted at high performance battery powered applications including battery powered tools, battery management systems, and low voltage drives. Both, the 40 V and 60 V devices are available in normal and logic level gate drive to accommodate a variety of MOSFET gate drivers.

The IRF40SC240 (40 V, 0.65 mΩ, 360 A, D²PAK 7pin+) is the latest benchmark product which has been optimized for very low $R_{DS(on)}$ and high current carrying capability making it the ideal solution for 18 V battery powered applications. When compared to previous generation devices, it offers a 13 percent improvement in $R_{DS(on)}$ leading to lower conduction losses plus a 50 percent improvement in current carrying capability all while occupying the same footprint as a standard D²PAK 7pin device. The improved $R_{DS(on)}$ and I_D rating lead to an increased battery run time and higher power density.

$R_{DS(on)}$ and I_D rating comparison to previous generation devices

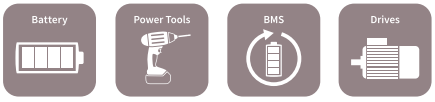


Key features and benefits

- $R_{DS(on)}$ as low as 0.65 mΩ at 40 V
  -13% improvement versus previous generations
- 360 A current carrying capability
  -50% improvement versus previous generations
- Compatible with industry standard D²PAK 7pin footprint
- Product validation according to JEDEC standard
- Optimized for broadest availability from distribution partners

Key application

- Battery powered applications
- Battery powered tools
- Battery management systems
- Low voltage drives

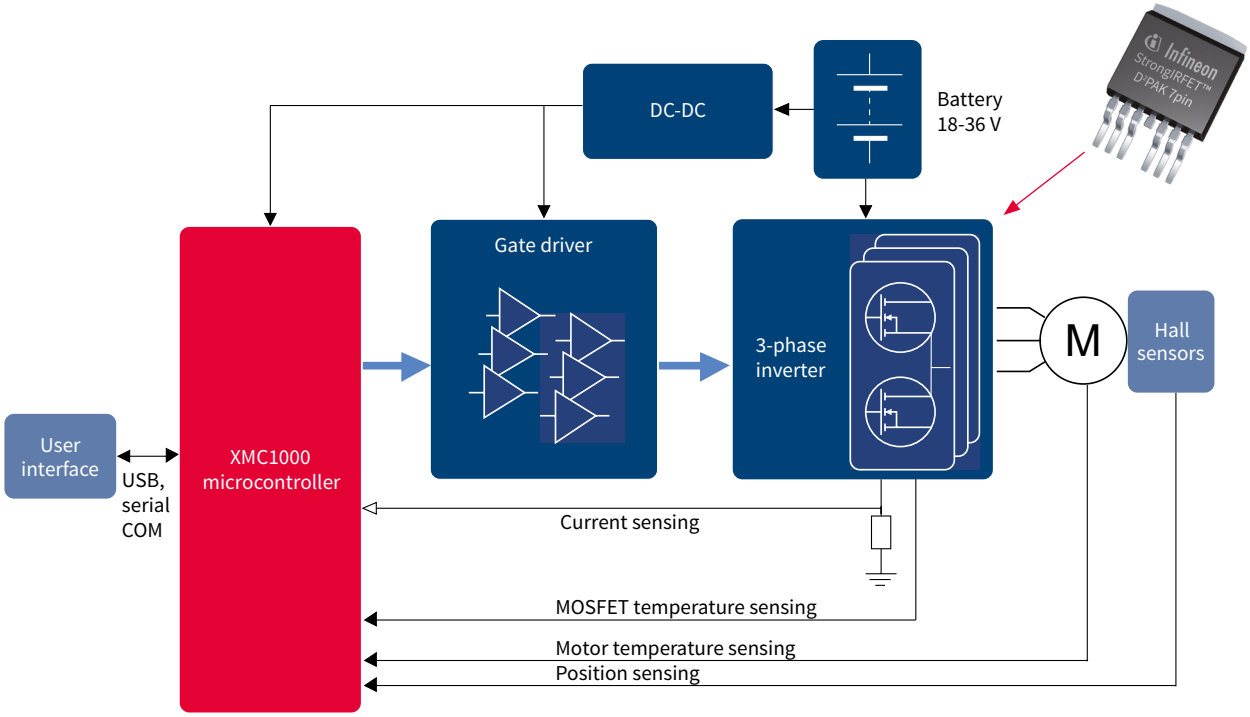


www.infineon.com/strongirfet

StrongIRFET™ power MOSFET family 40–60 V in D²PAK 7pin+

A typical battery powered tool application

The new 40-60 V StrongIRFET™ devices can be used to drive a 3-phase brushless DC motor as shown in the 3-phase inverter block below. There are typically 6 MOSFETs within this stage depending on the power requirements of the motor and the power MOSFET package used.



StrongIRFET™ power MOSFET 40–60 V D²PAK 7pin+ product portfolio

Part number	Voltage [V]	$R_{DS(on)}$ max. @ V_{GS} = 10 V [mΩ]	I_D [A]	Gate drive voltage*
IRF40SC240	40	0.65	360	NL
IRL40SC228	40	0.65	360	LL
IRL40SC209	40	0.80	300	LL
IRF60SC241	60	1.30	360	NL
IRL60SC216	60	1.50	324	LL

*Drive voltage: NL = 10 V, LL = 4.5 V

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Additional information
For further information on technologies, our products, the application of our products, delivery terms and conditions and/or prices, please contact your nearest Infineon Technologies office (www.infineon.com).

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