

Product Brief

IR MOSFET™ 60 V, 80 V and 100 V

New logic level MOSFETs in PQFN 2 x 2

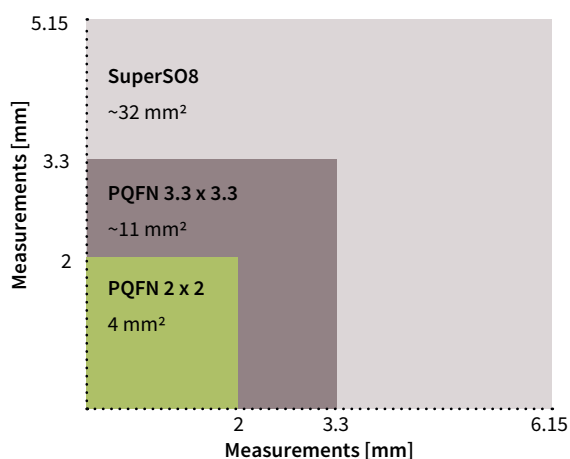
Available in three different voltage classes (60 V, 80 V and 100 V), Infineon's new logic level power MOSFETs are highly suitable for wireless charging, telecom and adapter applications.

The PQFN 2 x 2 package is especially suited for high speed switching and form factor critical applications. It enables higher power density and improved efficiency as well as significant space saving.

The new devices' low gate charge (Q_g) reduces switching losses without compromising conduction losses. The improved figures of merit allow operations at high switching frequencies. Furthermore, the logic level drive provides a low gate threshold voltage ($V_{GS(th)}$) allowing the MOSFETs to be driven at 5 V and directly from microcontrollers.

Despite the low gate charge, the logic level products achieve a lower $R_{DS(on)}$ compared to the next best alternatives.

Size comparison



Key features

- > Lowest FOM ($R_{DS(on)} \times Q_{g/gd}$)
- > Optimized Q_g , C_{oss} , and Q_{rr} for fast switching
- > Logic level compatibility
- > Tiny PQFN 2 x 2 mm package

Key benefits

- > Smallest package footprint
- > Higher power density designs
- > Higher switching frequency
- > Reduced parts count wherever 5 V supplies are available
- > Driven directly from microcontrollers (slow switching)
- > System cost reduction

Target applications

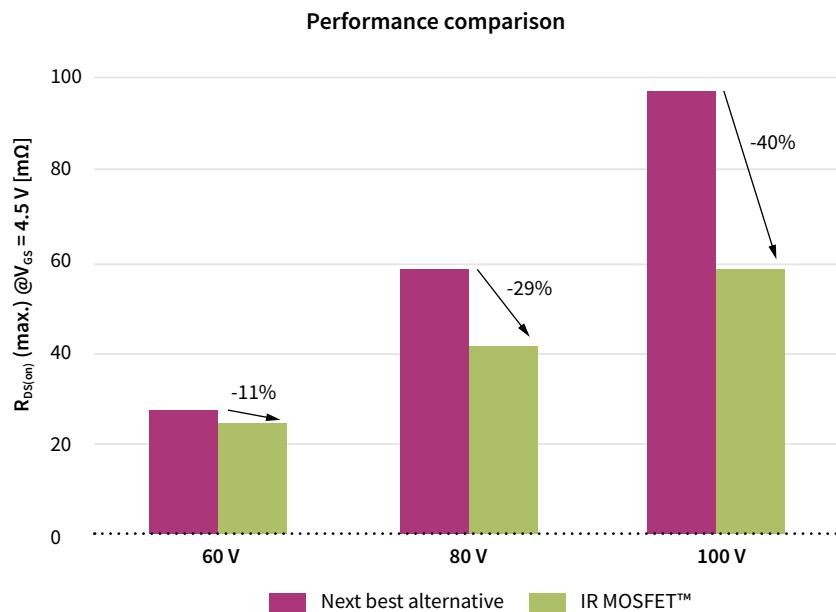
- > Wireless charging
- > Telecom
- > Adapter



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In every of the three voltages classes Infineon's IR MOSFET™ in PQFN 2 x 2 offers a lower on-state resistance ($R_{DS(on)}$) compared to the next best alternative on the market.



Product portfolio

Package	Product	Voltage class [V]	$R_{DS(on)} (max.) @ V_{GS} = 4.5 V [m\Omega]$	$Q_g (typ.) @ V_{GS} = 4.5 V [nC]$	$FOM_g (typ.) @ V_{GS} = 4.5 V [m\Omega \times nC]$
PQFN 2 x 2	IRL60HS118	60	23.5	5.3	97
	IRL80HS120	80	42	4.7	150.4
	IRL100HS121	100	59	3.7	166.5

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