



Product brief

IR MOSFET™ small power family

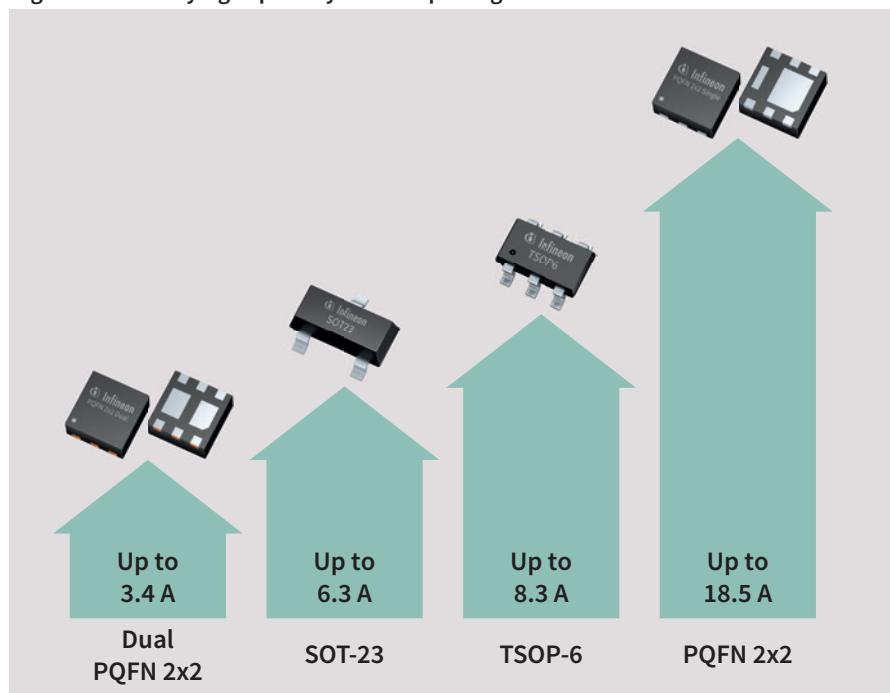
Ideally suited to space-constrained applications

By combining the latest high-performance silicon technology with small and innovative packaging, Infineon's IR MOSFET™ small power family offers designers more flexibility when it comes to making their power MOSFET selection.

For example, the 80 V logic-level IRL80HS120 from the new OptiMOS™ 5 Power Quad Flat No-lead (PQFN) 2 mm × 2 mm portfolio can provide an $R_{DS(on)}$ of 42.0 mΩ maximum and an I_D rating of 12.5 A while occupying only 4 mm² of board space. Compared to an equivalent 3.3 mm × 3.3 mm S308 device, this offers a 63 percent reduction in board space.

In addition, the PQFN 2 mm × 2 mm package family offers some of the smallest dual configurations possible (dual N or dual P) while providing optimal thermal performance (19°C/W) to rival packages nearly three times its size. The entire family, including SOT-23, TSOP-6, and PQFN 2×2, enables designers to maximize board space, save on part count, and ultimately reduce system costs.

High current-carrying capability in small packages



Features

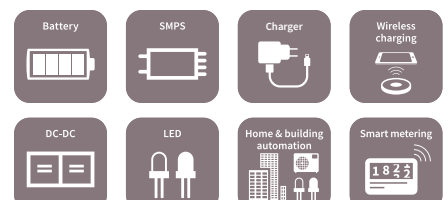
- > Breakdown voltages from -30 V to 100 V
- > $R_{DS(on)}$ as low as 11.7 mΩ at 20 V
- > Single and dual N- and P-channels
- > Industry-standard packages
- > Product validation according to JEDEC standard
- > Optimized for broadest availability from distribution partners

Benefits

- > Space-saving solution when utilizing a smaller package over a larger one, or when using a dual in place of two singles

Applications

- > Battery-powered applications
- > SMPS
- > Charger, adapter
- > Wireless charging
- > DC-DC conversion
- > LED lighting
- > Home and building automation
- > Smart metering



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Config.	Product	V _{DS} [V]	R _{DS(on)} max. at V _{GS} = 4.5 V [mΩ]	R _{DS(on)} max. at V _{GS} = 2.5 V [mΩ]	I _D [A]	V _{GS(th)}	Package	
Single-N	IRLHS6242TRPBF	20	11.7	15.5	12.0	SLL	PQFN 2x2	
	IRLHS6342TRPBF	30	15.5	19.5	12.0			
	IRL60HS118	60	23.5		18.5	LL		
	IRL80HS120	80	42.0		12.5			
	IRL100HS121	100	59.0		11.0			
Dual-N	IRLHS6276TRPBF	20	45.0	62.0	3.4	SLL		
	IRLHS6376TRPBF	30	63.0	82.0	3.4			
Single-N	IRLTS6342TRPBF	30	17.5	22.0	8.3	LL	TSOP-6	
	IRFTS8342TRPBF		19.0	29.0	8.2			
	IRLML6244TRPBF	20	21.0	27.0	6.3		SOT-23	
	IRLML6246TRPBF		46.0	66.0	4.1			
	IRFML8244TRPBF	25	41.0		5.8			
	IRLML6344TRPBF	30	29.0	37.0	5.0			
	IRLML0030TRPBF		40.0		5.3			
	IRLML6346TRPBF		63.0	80.0	3.4			
	IRLML2030TRPBF	30	154.0		2.7			
	IRLML0060TRPBF	60	116.0		2.7			
	IRLML2060TRPBF		640.0		1.2			
	IRLML0100TRPBF	100	235.0		1.6			
Single-P	IRFHS9301TRPBF	-30	65.0		-8.5	LL		PQFN 2x2
	IRLHS2242TRPBF	-20	31.0	53.0	-8.5	SLL		
Dual-P	IRFHS9351TRPBF	-30	290.0		-3.4	LL		
Single-P	IRFTS9342TRPBF		66.0		-5.8			
	IRLML2244TRPBF	-20	54.0	95.0	-4.3			
	IRLML2246TRPBF		135.0	236.0	-2.6			

*V_{GS(th)}: LL = 4.5 V, SLL = 2.5 V

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