



Product brief

OptiMOS™ PD

The best fit for USB PD and fast charger designs

OptiMOS™ PD is Infineon's new MOSFET portfolio representing the best fit for USB-PD and fast charger designs, supporting short lead times as well as fast quote response times.

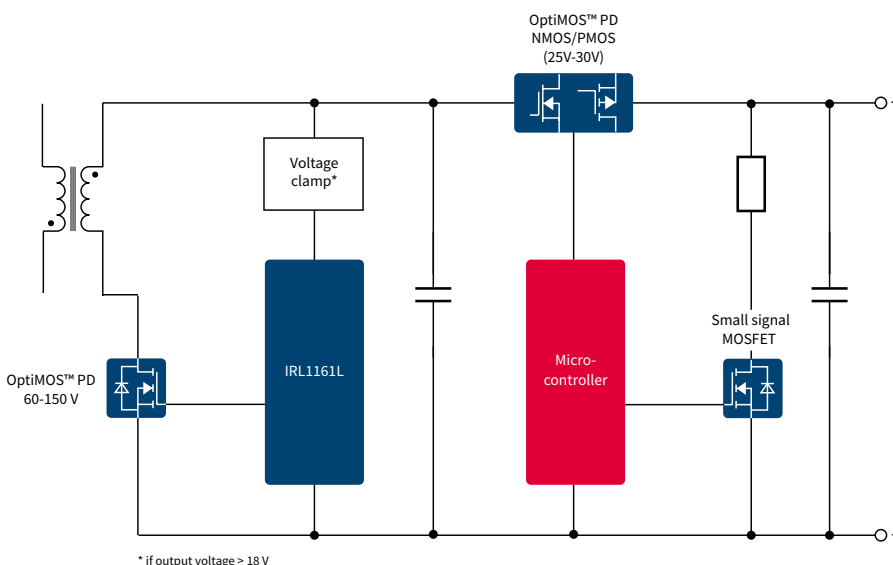
The OptiMOS™ PD family features MOSFETs offering a low on-state resistance ($R_{DS(on)}$), less switching losses as well as low gate, output and reverse recovery charges. The reduction in overall losses results in an excellent price/performance ratio leading to a decrease in total system BOM cost.

Logic level availability enables parts to be fully driven from 4.5 V or directly from microcontrollers resulting in a lower part count in the application. The portfolio ranges from 25 V up to 150 V MOSFETs where 25 V and 30 V products represent the fit as load switch and 60-150 V parts are the optimal choice to function as synchronous rectification FETs in charger and adapter designs.

Infineon's OptiMOS™ PD portfolio is available in 2 small standard packages:

- > PQFN 3.3x3.3
- > SuperS08

Block diagram



Key features

- > Logic level availability
- > Low on-state resistance ($R_{DS(on)}$) without increased charges
- > Low gate, output and reverse recovery charge
- > Excellent thermal behavior

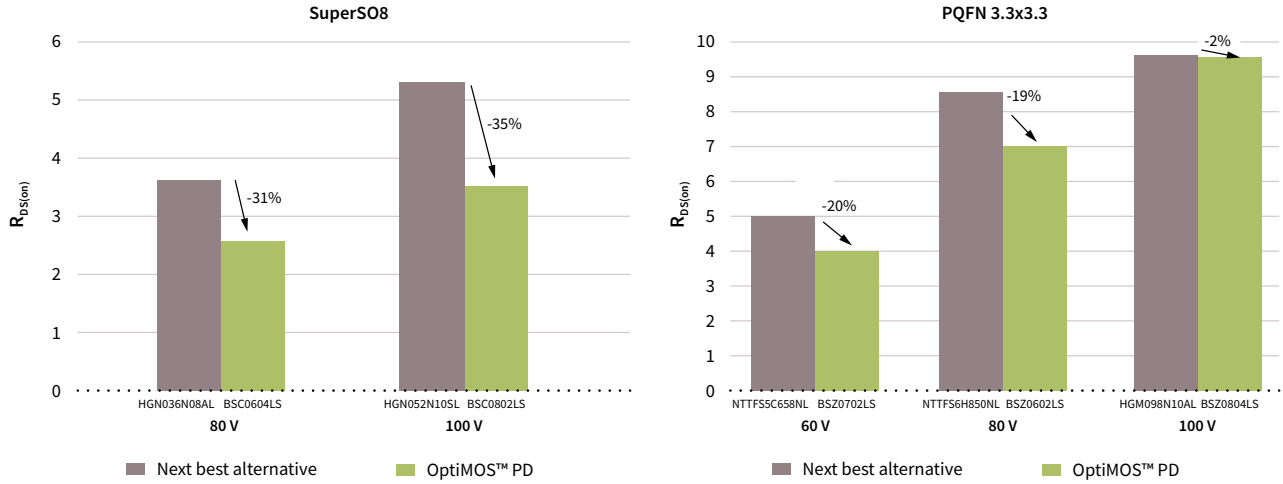
Key benefits

- > Logic level parts can be fully driven from 4.5 V
- > Lower overall losses
- > Lower switching losses
- > Highest efficiency and power density designs
- > Short lead times
- > Fast quote response

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OptiMOS™ PD comparison of $R_{DS(on)}$ in 60 V, 80 V and 100 V



Product portfolio

Package	Voltage class [V]	$R_{DS(on)}$ max. @ $V_{GS} = 10$ V	$R_{DS(on)}$ max. @ $V_{GS} = 4.5$ V	Part number	Application
SuperS08	60	2.7	3.9	BSC0702LS	5 V/5 A, 5 V/6 A
		6.5	9.4	BSC0703LS	5 V/5 A, 27 W USB PD
		9.4	13.5	BSC0704LS	9 V/2 A
	100	3.4	4.8	BSC0802LS	65 W USB PD
		7.0	10.2	BSC0805LS	65 W USB PD
		9.8	12.5	BSC0804LS	45 W USB PD
		14.6	20.8	BSC0803LS	27 W USB PD
	120	8.2	11.0	BSC0302LS	65 W USB PD
		12.0	14.2	BSC0303LS	65 W USB PD
	150	9.3	10.5*	BSC0402NS	65 W USB PD
		11.0	11.5*	BSC0403NS	45 W USB PD
	PQFN 3.3x3.3	25	3.1	3.9	ISZ0501NLS
6.0			8.1	ISZ0901NLS	Load switch
-30		8.6	13.4*	BSZ0905PNS	Load switch
		3.0	3.5	BSZ0909LS	≥ 4 A
30		4.5	5.7	BSZ0910LS	3-5 A
		6.5	9.0	BSZ0911LS	≤ 3 A
		4.0	5.6	BSZ0702LS	5 V/4-5 A, 27 W USB PD
60		6.5	9.4	BSZ0703LS	27 W USB PD
		9.9	14	BSZ0704LS	9 V/2 A
80		7.0	9.4	BSZ0602LS	27 W USB PD
		9.6	13.5	BSZ0804LS	45 W USB PD
100		14.6	20.8	BSZ0803LS	27 W USB PD

*@ $V_{GS} = 6$ V ■ BiC performance for differentiated designs ■ Best choice for a wide range of designs, lead time optimized (<10 weeks)

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