Product brief

OptiMOS™ PD power MOSFET

The new switching optimized family for chargers and adapters

OptiMOS™ PD is Infineon's improved MOSFET portfolio in 60 V, 80 V and 100 V representing the best fit for adapters and fast charger designs, supporting short lead times as well as fast quote response times.

The new 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 capability 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 60-100 V MOSFETs, an 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
- SuperSO8

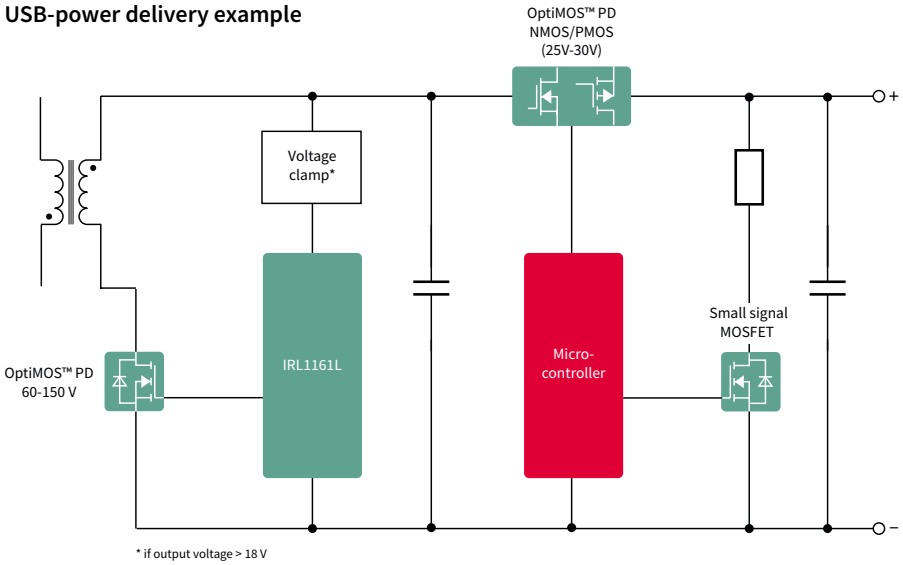
Key features

- Logic level availability
- Low on-state resistance $R_{DS(on)}$ without increased charges
- Low gate, output and reverse recovery charge
- Excellent thermal behavior
- Available in 2 small standard packages

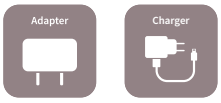
Key benefits

- Parts fully driven from 4.5 V or directly from microcontroller
- Lower overall losses
- Lower switching losses
- Highest efficiency and power density designs
- Short lead times
- Fast quote response

USB-power delivery example



* if output voltage > 18 V



www.Infineon.com/optimos-pd

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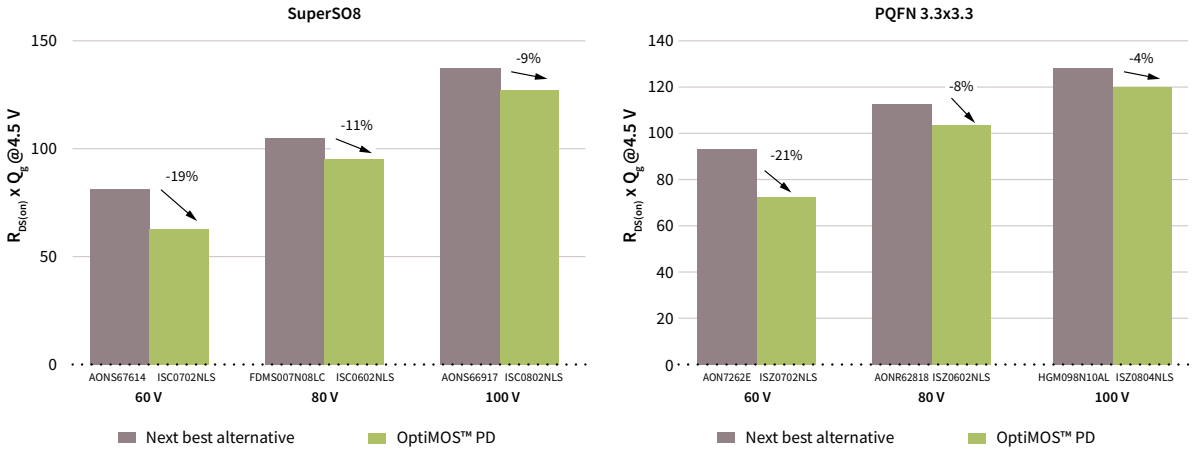
OptiMOS™ PD comparison



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
SuperSO8 	60	2.8	3.5	ISC0702NLS	5V/5A, 5V/6A
		6.9	8.9	ISC0703NLS	5V/5A, 27W USB PD
	80	7.3	9.5	ISC0602NLS	27W USB PD
		8.9	11.3	ISC0603NLS	27W USB PD
	100	4.8	3.6	ISC0802NLS	65W USB PD
		5.4	7.1	ISC0806NLS	65W USB PD
		7.8	10.7	ISC0805NLS	65W USB PD
		10.9	14.9	ISC0804NLS	45W USB PD
		16.9	21.9	ISC0803NLS	27W USB PD
	120	8.2	11.0	BSC0302LS	65W USB PD
		12.0	14.2	BSC0303LS	65W USB PD
	150	9.3	10.5**	BSC0402NS	65W USB PD
		11.0	11.5**	BSC0403NS	45W USB PD
PQFN 3.3x3.3 	-30	8.6	13.4*	BSZ0905PNS	Load switch
	25	3.1	3.9	ISZ0501NLS	Load switch
		6.0	8.1	ISZ0901NLS	Load switch
	30	2.6	3.5	BSZ0909LS	≥ 4A
		4.0	5.7	BSZ0910LS	3-5 A
		6.5	9.0	BSZ0911LS	≤3A
	60	4.5	5.6	ISZ0702NLS	5V/4~5A, 27W USB PD
		7.3	9.2	ISZ0703NLS	27W USB PD
		9.9	14	BSZ0704LS	9V/2A
	80	7.8	9.9	ISZ0602NLS	27W USB PD
	100	11.5	15.5	ISZ0804NLS	45W USB PD
		16.9	21.9	ISZ0803NLS	27W USB PD

BiC performance for differentiated designs Best choice for a wide range of designs, lead time optimized

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