



产品简介

OptiMOS™ PD

高度贴合 USB-PD 和快速充电器的设计需求

OptiMOS™ PD 是英飞凌的新型 MOSFET 产品组合, 高度贴合 USB—PD 和快速充电器的设计需求, 支持较短交货期和快速报价响应时间。

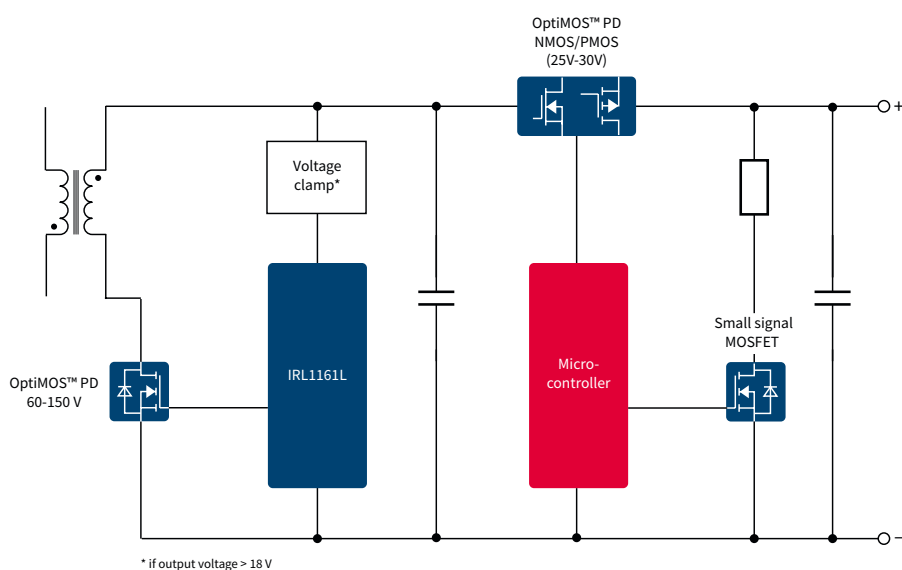
OptiMOS™ PD 系列的 MOSFET 具有低导通电阻 ($R_{DS(on)}$) 和低开关损耗, 以及低栅极、输出和反向恢复电荷。总体损耗的减少造就了出色的性价比, 从而降低了整个系统的 BOM 成本

逻辑电平的可使用性使器件能够以 4.5V 完全驱动或直接以微控制器驱动, 从而减少应用的器件数量。产品组合涵盖范围从 25v 到 150v MOSFETs, 其中 25v 和 30v 产品是负载开关的适用之选, 60-150v 部分产品是充电器和适配器设计中同步整流管的理想选择。

英飞凌 OptiMOS™PD 产品组合配有两个标准小包:

- › PQFN 3.3x3.3
- › SuperSO8

框图



关键特性

- › 逻辑电平可用性
- › 低通态电阻 ($R_{DS(on)}$) 不增加电荷
- › 低栅极、输出和反向恢复电荷
- › 优异的热性能

主要优势

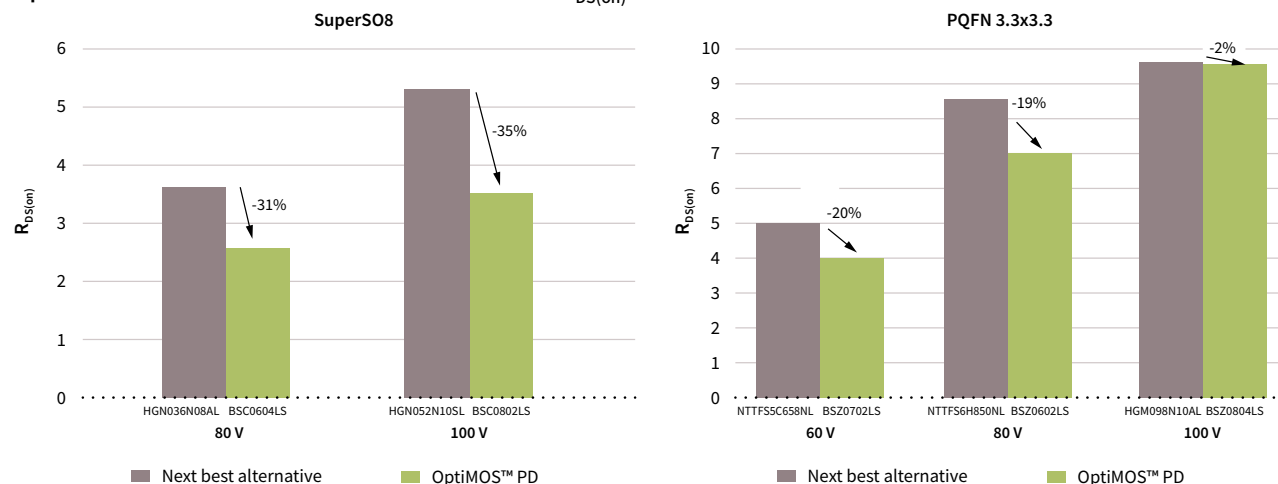
- › 逻辑级部件可从 4.5 V 完全驱动
- › 总体损失低
- › 开关损耗低
- › 高效率 and 功率密度设计
- › 交货期短
- › 报价响应速度快



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OptiMOS™ PD 在 60 V、80 V 和 100 V 电压条件下的 $R_{DS(on)}$ 对比



产品组合

封装	电压等级 [V]	$R_{DS(on)}$ 最大值 @ $V_{GS} = 10\text{ V}$	$R_{DS(on)}$ 最大值 @ $V_{GS} = 4.5\text{ V}$	部件编号	应用
SuperSO8	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	Load switch
		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
	100	9.6	13.5	BSZ0804LS	45 W USB PD
		14.6	20.8	BSZ0803LS	27 W USB PD

*@ $V_{GS} = 6\text{ V}$

■ 差异化设计的同类中较为出色的性能

■ 各类设计的最佳选择, 交货时间已优化 (<10周)

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