



产品简介

OptiMOS™线性FET

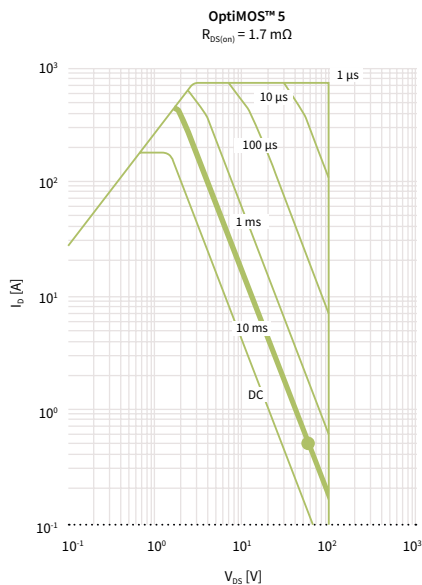
将低 $R_{DS(on)}$ 与宽安全工作区(SOA)相结合

OptiMOS™线性FET是一种变革性方法,利用增强型MOSFET在饱和区域中的工作可避免对导通电阻($R_{DS(on)}$)和线性模式功能进行取舍。它同时具有了沟槽MOSFET一流的 $R_{DS(on)}$ 和经典平面型MOSFET的宽安全工作区的特点。

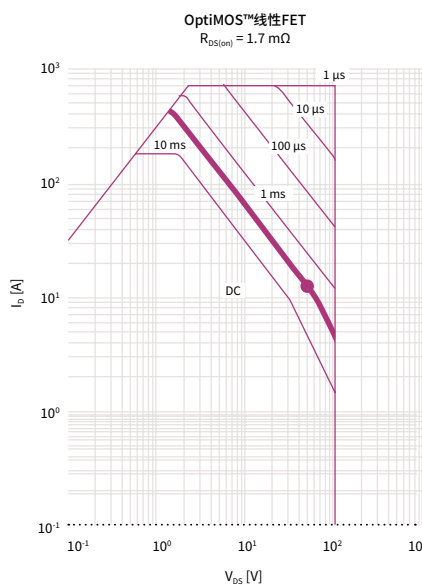
该产品非常适合通常用于通信和电池管理系统的 热插拔和电熔丝应用。OptiMOS™线性FET通过限制高冲击电流 防止损坏负载。

安全工作区(SOA)比较

OptiMOS™ 5 100 V, 1.7 mΩ的功率MOSFET的安全工作区为0.5 A, 在相同 $R_{DS(on)}$ 上的OptiMOS™线性FET版本提供11.5 A的更宽的SOA (安全工作区) (@ 54 V, 10 ms)。



0.5 A in OptiMOS™ 5
@ 54 V, $t_{pulse} = 10\text{ ms}$



11.5 A in OptiMOS™线性FET
@ 54 V, $t_{pulse} = 10\text{ ms}$

主要特性

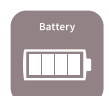
- > 低 $R_{DS(on)}$ 和宽安全工作区(SOA)的结合
- > 较高的最大脉冲电流
- > 较高的连续脉冲电流

主要优势

- > 稳健的线性模式操作
- > 低导通损耗
- > 更高的冲击电流使启动速度更快, 关闭时间更短

应用

- > 通信
- > 电池管理

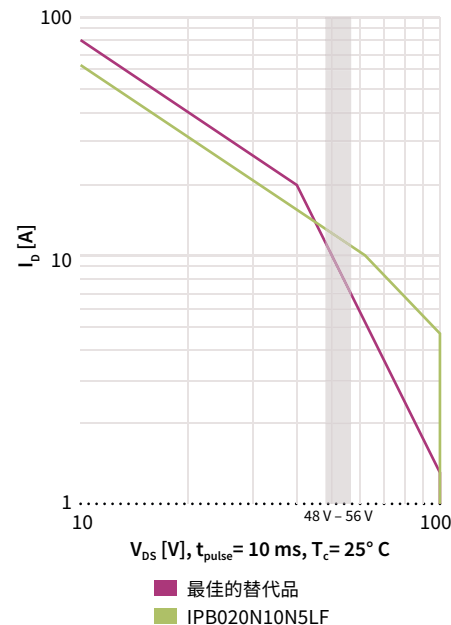
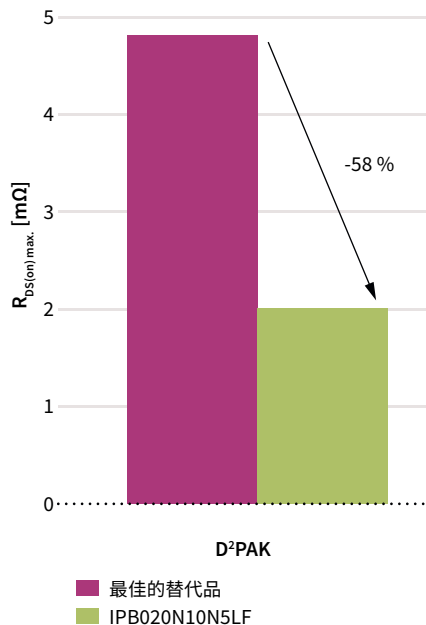


OptiMOS™线性FET

将低 $R_{DS(on)}$ 与宽安全工作区(SOA)相结合

在 $R_{DS(on)}$ 性能上面, OptiMOS™线性FET 100 V 比起最佳替代产品的要降低高达58%。此外,在48V到56V的电压下(通信系统中的典型输出电压范围)测量可以得到更宽的SOA。

OptiMOS™线性FET有三种电压等级可供选择:100 V, 150 V和200 V, 分别都有D²PAK或D²PAK 7pin的封装。



产品系列

电压等级 [V]	封装	产品类型	R _{DS(on)} (max.) @ V _{GS} = 10 V [mΩ]	SOA @ 56 V, 10 ms [A]
100	D ² PAK 7pin	IPB017N10N5LF	1.7	10.2
	D ² PAK	IPB020N10N5LF	2.0	10.2
	D ² PAK	IPB033N10N5LF	3.3	7.0
150	D ² PAK	IPB048N15N5LF	4.8	10.8
	D ² PAK	IPB083N15N5LF	8.3	5.6
200	D ² PAK	IPB110N20N3LF	11.0	8.7

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