

产品简介

双DPAK (DDPAK)封装

适用于高功率应用的创新型顶部散热SMD解决方案

英飞凌推出的首款顶部散热表面贴装器件(SMD)封装,可满足PC电源、太阳能、服务器和电信等高功率SMPS应用的需求。现有高压技术600 V CoolMOS™ G7超级结 (SJ) MOS-FET和CoolSiC™肖特基二极管650 V G6的优势与顶部散热的创新理念相结合,为高电流硬开关拓扑结构(如PFC)提供系统解决方案,为LLC拓扑结构提供高端高效解决方案。

顶部散热一览

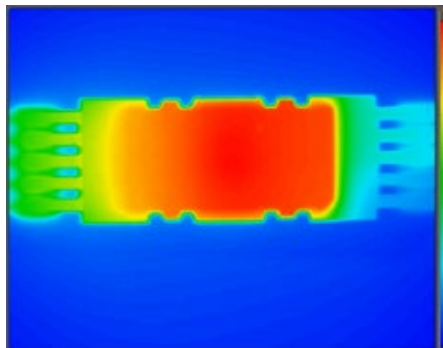
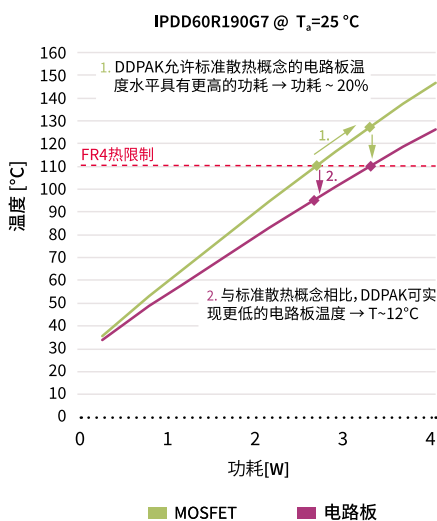
基于SMD的SMPS设计支持快速开关,并有助于减少与长引脚封装(例如常见的TO-220封装)相关的寄生电感。在当今基于SMD的设计中,输出功率受PCB材料的热限制限制,因为热量必须通过电路板散发。得益于DDPAK的顶部散热概念,可实现电路板和半导体的热解耦,实现更高的功率密度或更长的系统寿命。

~功耗高约20%

基于DDPAK的SMD解决方案可在标准散热概念的电路板温度水平上实现高出20%的输出功率,从而在给定的外形尺寸下实现更高的功率密度。

~大约低12°C的电路板温度

基于DDPAK的SMD解决方案允许在标准散热概念的输出功率水平上以大约低12°C的电路板温度驱动应用,从而延长系统寿命。



主要特性

CoolMOS™ C7 Gold (G7) SJ MOSFET

- > 具有一流的FOM $R_{DS(on)} \times E_{oss}$
- > 和 $R_{DS(on)} \times Q_g$

CoolSiC™肖特基二极管G6

- > 提供一流的VF和FOM $Q_c \times V_F$ – 提高的dv/dt稳健性
- > 便捷有效地匹配CoolMOS™ 7 SJ MOSFET系列

DDPAK封装

- > 创新的顶部散热理念
- > 内置第4引脚开尔文源配置和低寄生源电感
- > >> 2.000周期的TCOB能力,符合MSL1标准,完全无铅

主要优势

CoolMOS™ C7 Gold (G7) SJ MOSFET 和CoolSiC™肖特基二极管G6

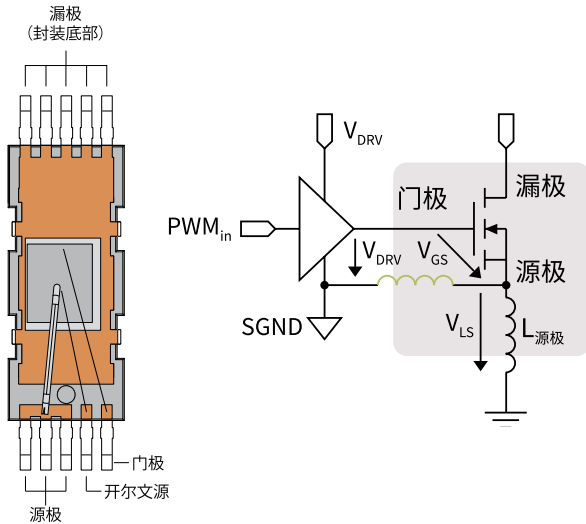
- > 实现最高的能源效率
- DDPAK封装
- > 电路板和半导体的热解耦能够克服PCB的热限制
- > 减少寄生源电感,提高效率 and 易用性
- > 实现更高的功率密度解决方案
- > 超出最高质量标准

双DPAK (DDPAK)封装

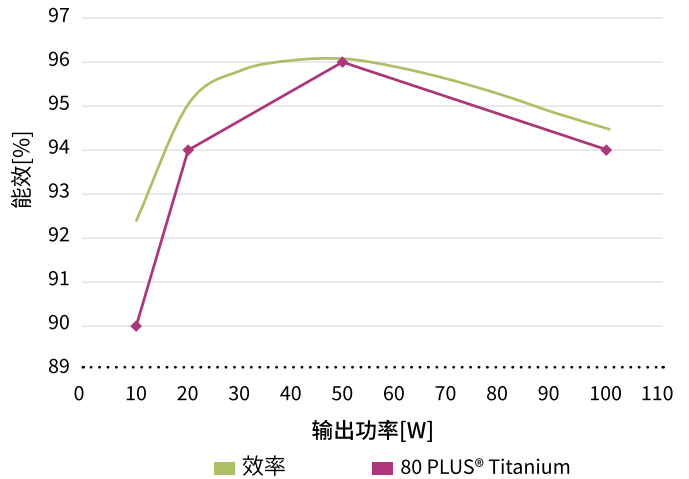
适用于高功率应用的创新型顶部散热SMD解决方案

DDPAK提供内置第4引脚开尔文源配置和非常低的寄生源电感。独立的“源感”引脚为驱动器提供不受干扰的信号，因此提高了易用性水平。此第4引脚功能与英飞凌最新的SJ MOSFET和CoolSiC™肖特基二极管技术相结合，可确保最高的效率水平，并允许客户达到80 PLUS® Titanium标准。

第4引脚开尔文源能力



1600 W服务器PSU板在230 V_{AC}时的效率测量



除了效率，还有质量和总拥有成本是高功率市场的重要参数。DDPAK可经受超过2,000个TCOB周期（板上热循环），并且超出了行业质量要求，确保了稳健可靠的SMPS设计。此外，DDPAK封装可通过更快的组装时间转向SMD，从而降低生产成本。

将600 V CoolMOS™ G7与英飞凌具有真正差分输入(1EDN TDI)的单通道低侧栅极驱动器系列相结合，实现了针对高功率设计优化的系统解决方案。有关更多信息，请访问www.infineon.com/TDI



R _{DS(on)} max. [mΩ]	CoolMOS™ G7 SJ MOSFET		I _F [A]	CoolSiC™肖特基二极管G6	
	产品销售名称	可订购的部件编号(OPN)		产品销售名称	可订购的部件编号(OPN)
190	IPDD60R190G7	IPDD60R190G7XTMA1	4	IDDD04G65C6	IDDD04G65C6XTMA1
150	IPDD60R150G7	IPDD60R150G7XTMA1	6	IDDD06G65C6	IDDD06G65C6XTMA1
125	IPDD60R125G7	IPDD60R125G7XTMA1	8	IDDD08G65C6	IDDD08G65C6XTMA1
102	IPDD60R102G7	IPDD60R102G7XTMA1	10	IDDD10G65C6	IDDD10G65C6XTMA1
80	IPDD60R080G7	IPDD60R080G7XTMA1	12	IDDD12G65C6	IDDD12G65C6XTMA1
50	IPDD60R050G7	IPDD60R050G7XTMA1	16	IDDD16G65C6	IDDD16G65C6XTMA1
			20	IDDD20G65C6	IDDD20G65C6XTMA1

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