



**推动创新：采用顶部散热封装的
POWERTRENCH[®] MOSFET 设计 12 V
电动助力转向**

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概述

汽车行业竞争激烈，节奏飞快，只有快速适应和持续创新才能让企业立于不败之地。在本成功案例中，安森美 (onsemi) 深入理解并解决客户痛点，及时快速向客户交付了适用于其 12 V 电动助力转向系统 (EPS) 的创新解决方案。

客户挑战：

一家潜在客户由于其 MOSFET 供应商在最后关头突然出现问题，紧急求助于我们的销售团队。为了不影响生产进度，客户亟需快速找到合适的 MOSFET 替代解决方案。

我们的方法：

尽管我们当时现成的产品组合中并没有客户所需的特定 MOSFET 封装，但我们仍希望借此机会展示我们对客户需求的重视。销售团队收到需求后发现情况紧急，迅速上报公司，并联系产品线经理详细讨论客户的需求。产品线经理确定了一个潜在的解决方案——将我们性能出色的 [POWERTRENCH T6 MOSFET](#) 与高度创新、高效散热的 [Top Cool](#) 封装相结合。我们各职能部门通力配合、密切协作，迅速响应，及时为客户定制出符合需求的解决方案。我们优先开发样品并进行严格测试，确保产品满足 EPS 等安全关键应用所需的性能和可靠性。

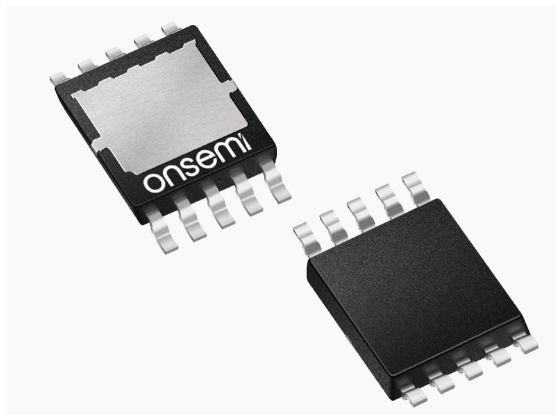


图 1. Power 56 TCPAK

凭借团队协作和以客户为中心的理念，我们取得了显著的成果。

- 我们提供了符合客户 12 V EPS 应用规格的 MOSFET。
- 尽管客户的供应商在最后关头突然出现问题，但在我们快速响应和创新解决方案的帮助下，客户的生产完全没有受到影响。
- 我们提供的创新 MOSFET 设计超出了客户应用的性能要求。
- 我们快速响应客户需求，并以客户需求为己任，及时提供创新解决方案，为我们的长期互信合作奠定了坚实的基础。

这一成功案例完全体现了安森美的核心价值观：客户至上、敏捷创新、团队协作、以质取信。

随着 [POWERTRENCH T6 MOSFET](#) 成功满足客户的 EPS 应用要求，我们继续推动 MOSFET 技术进步，全新推出 [POWERTRENCH T10 MOSFET](#)，可支持 24 V 和 48 V EPS 系统。

汽车 - 电动转向 (EPS)

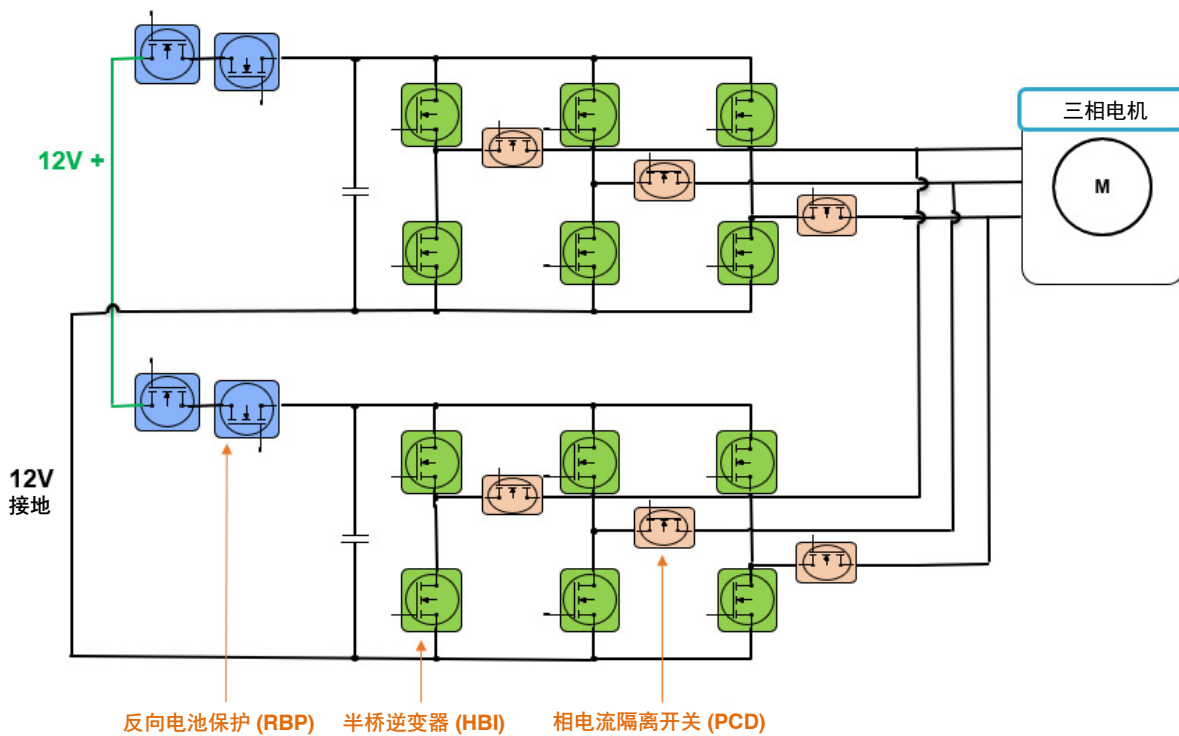


图 2. 电动转向系统 (EPS) 框图

表 1. 12 V EPS 产品建议 - T10 40 V

订购型号	封装	$R_{DS(on)}$	方案
NVMFWS0D9N04XM	SO-8FL	0.96	HBI, PCD
NVMFWS0D7N04XM	SO-8FL	0.7	HBI, PCD
NVMFWS1D3N04XM	SO-8FL	1.3	HBI, PCD
NVMTS0D6N04XM	PWR88	0.6	RBP

表 2. 48 V EPS 产品建议 - T10 80 V

订购型号	封装	$R_{DS(on)}$	方案
NVMFWS1D5N08X	SO-8FL	1.5	HBI
NVMFWS1D9N08X	SO-8FL	1.9	HBI
NVMFWS2D1N08X	SO-8FL	2.1	HBI
NVMFWS2D5N08X	SO-8FL	2.5	HBI
NVMFWS3D0N08X	SO-8FL	3.0	HBI

更多资源：

- [功率分立 MOSFET 的顶部散热封装](#)
- [联系销售](#)

修订历史

修订	变更说明	日期
1	制作了中英双语文档 – 中文版已补充完成	6/4/2025

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