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# Alpha and Omega Semiconductor Adds Two New Advanced MOSFET Package Options for High-Current Applications

AOS新增两款先进的MOSFET封装方案,助力大电流应用

The state-of-the-art topside cooling (GTPAK™) and gull-wing (GLPAK™) packages meet increased performance and robust environmental demands

新款封装采用先进的顶部散热(GTPAK™)和海鸥脚(GLPAK™)封装技术,可满足更高性能要求,并适应 严苛环境条件。

SUNNYVALE, Calif., March 12, 2025 – Alpha and Omega Semiconductor Limited (AOS) (Nasdaq: AOSL), a designer, developer, and global supplier of a broad range of discrete power devices, wide band gap power devices, power management ICs, and modules, today announced the release of two state-of-the-art surface mounting package options for its industry-leading high power MOSFET portfolio. Designed to meet the robust packaging requirements for the most demanding applications that require increased performance and reliability, the new GTPAK™ and GLPAK™ packages will first be available on AOS' AOGT66909 and AOGL66901 MOSFETs respectively. Combining AOS-proven robust MOSFET technology with advanced packaging know-how, these devices provide low ohmic and high current capabilities, critical to reducing the number of parallel MOSFETs needed in high current designs such as in next-generation e-mobility and industrial applications.

目前,集设计研发、生产和全球销售为一体的著名功率半导体及芯片解决方案供应商 Alpha and Omega Semiconductor Limited(AOS, 纳斯达克代码:AOSL)推出两款先进的表面贴片封装选项,扩展其行业领先的高功率MOSFET产品组合。全新的 GTPAK™和 GLPAK™ 封装旨在满足对高性能和高可靠性有极高要求的应用场景,首批将分别应用于 AOS AOGT66909 和 AOGL66901 MOSFET产品上。结合AOS成熟的MOSFET技术与先进的封装工艺,这些器件具备低导通电阻和高浪涌电流承载能力,对减少高电流应用(如新一代电动交通和工业等)中的并联MOSFET数量至关重要,提高系统效率和可靠性。

The GTPAK offered with the AOGT66909 is a topside cooling package designed with a large exposed pad for more efficient heat transfer. The topside cooling technology transfers most heat to the heat sink mounted on the top exposed pad. This feature allows the GTPAK to offer a more effective thermal dissipation route than going through the PCB board, allowing a lower-cost PCB, such as FR4, to be used.

# GTPAK封装提升散热效率,降低PCB材料成本

AOGT66909采用GTPAK 封装,采用顶部散热片安装,封装表面具有大面积裸露焊盘,其顶部散热技术有效地将大部分热量传递到顶部的散热片,相较于传统通过PCB板底部散热的方式,提供更优越的散热路径,实现更高效的散热性能。这一特性不仅提升了散热性能,还使得一些经济实用的PCB材料,例如FR4等可应用于设计,从而有效降低整体成本。



The GLPAK offered with the AOGL66901 is a gull-wing version of AOS' successful TOLL package. It is designed using AOS' advanced clip technology to achieve a high inrush current rating. The GLPAK with clip technology offers very low package resistance and parasitic inductance, improving EMI performance compared to other package types that employ standard wire bonding.

# GLPAK封装提升高浪涌电流承载能力与EMI性能

AOGL66901采用GLPAK封装,利用AOS先进的夹片技术(Clip Technology)实现了高浪涌电流承载能力。GLPAK 封装的海鸥翼(Gull-Wing)引脚设计增强了焊接点的可靠性。此外,相较于传统的线键合封装类型, GLPAK封装具有极低的封装电阻和寄生电感,改善了EMI性能。

The GTPAK and GLPAK packages feature gull-wing leads, enabling excellent solder joint reliability even for insulated metal substrates (IMS) applications. This gull-wing construction also provides enhanced thermal cycling for IMS boards and other critical applications that must meet higher reliability objectives. AOS MOSFETs in the new GTPAK and GLPAK packages are manufactured in IATF16949-certified facilities and are compatible with automated optical inspection (AOI) manufacturing requirements.

#### GTPAK与GLPAK封装提升焊接可靠性与温度循环性能

GTPAK 和 GLPAK 封装均采用海鸥翼(Gull-Wing)引脚设计,可显著提高焊点可靠性,即使在金属基板PCB(IMS) 应用中也能保持稳固连接。此外,该结构还增强了IMS电路板及其他对可靠性要求极高的关键应用中的温度循环性能,满足严苛的耐用性要求。采用 GTPAK 和 GLPAK 封装的 AOS MOSFET 均在 IATF16949 认证工厂生产,并兼容自动化光学检测(AOI)制造要求,确保高质量和高一致性。

"We are committed to delivering new solutions to help our customers meet or exceed their power performance requirements. By offering our industry-leading MOSFETs in the new robust GTPAK and GLPAK packages, AOS allows designers to select from two state-of-the-art packaging technologies that offer significant performance improvements. Furthermore, the advanced technologies in our AOGT66909 and AOGL66901 MOSFETs will help simplify new designs by reducing the number of devices needed while also providing the necessary higher current capability that makes overall system cost savings possible," said Peter H. Wilson, Marketing Sr. Director of MOSFET product line at AOS.

AOS MOSFET产品线市场资深总监 Peter H. Wilson 表示: "我们始终致力于为客户提供创新型解决方案,帮助客户满足或超越其电源性能需求。基于 GTPAK 和 GLPAK 这两款高可靠性封装中推出业界领先的MOSFET产品,AOS为工程师们提供了两种先进的封装技术选择,以实现显著的性能提升。此外,AOGT66909 和 AOGL66901 MOSFETs 采用的先进技术将通过减少所需器件数量来简化产品设计,同时提供更高的电流承载能力,从而降低整体系统成本"。

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### Technical Highlights技术亮点

Dout Number	Package	V <sub>DS</sub> (V)	V <sub>GS</sub> (±V)	T <sub>J</sub> (°C)	Continuous Drain Current (A)		Pulsed Drain Current (A)	R <sub>DS(ON)</sub> Max
Part Number					@25°C	@100°C	@25°C	(mOhms) @10V
AOGT66909	GTPAK	100	20	175	366	258	1464	1.5
AOGL66901	GLPAK	100	20	175	448	316	1790	1.25

### Pricing and Availability报价与供货

The AOGT66909 and AOGL66901 MOSFETs are immediately available in production quantities with a lead time of 14-16 weeks. The unit prices in 1,000-piece quantities are \$3.6 and \$3.15, respectively.

AOGT66909 和 AOGL66901 MOSFET 现已正式量产,可立即供货,交期为 14-16 周。1000颗起订,AOGT66909 和 AOGL66901单价分别为 \$3.60 和 \$3.15。

# About AOS关于AOS

Alpha and Omega Semiconductor Limited, or AOS, is a designer, developer, and global supplier of a broad range of discrete power devices, wide bandgap power devices, power management ICs, and modules, including a wide portfolio of Power MOSFET, SiC, IGBT, IPM, TVS, HV Gate Drivers, Power IC, and Digital Power products. AOS has developed extensive intellectual property and technical knowledge that encompasses the latest advancements in the power semiconductor industry, which enables us to introduce innovative products to address the increasingly complex power requirements of advanced electronics. AOS differentiates itself by integrating its Discrete and IC semiconductor process technology, product design, and advanced packaging know-how to develop high-performance power management solutions. AOS' portfolio of products targets high-volume applications, including personal computers, graphics cards, datacenters, AI servers, smartphones, consumer and industrial motor controls, TVs, lightings, automotive electronics, and power supply units for various equipment. For more information, please visit www.aosmd.com.

Alpha and Omega Semiconductor Limited(AOS,中文: 万国半导体) 是专注于设计、开发生产与全球销售一体的功率半导体公司,产品包括 Power MOSFET、SiC、IGBT、IPM、TVS、高压驱动器、功率 IC 和数字电源产品等。AOS 积累了丰富的知识产权和技术经验,涵盖了功率半导体行业的最新进展,使我们能够推出创新产品,满足先进电子设备日益复杂的电源需求。AOS 的差异化优势在于通过其先进的分立器件和 IC 半导体工艺制程、产品设计及先进封装技术相结合,开发出高性能的电源管理解决方案。AOS 的产品组合主要面向高需求应用领域,包括便携式计算机、显卡、数据中心、AI 服务器、智能手机、面向消费类和工业类电机控制、电视、照明设备、汽车电子以及各类设备的电源供应。请访问 AOS 官网www.aosmd.com,了解更多产品相关信息。

# Forward-Looking Statements前瞻性陈述

This press release contains forward-looking statements based on current expectations, estimates, forecasts, and projections of future performance based on management's judgment, beliefs, current trends, and anticipated product performance. These forward-looking statements include, without limitation, references to the efficiency and capability of new products and the potential to expand into new markets. Forward-looking statements involve risks and uncertainties that may cause actual results to differ materially from those in forward-looking statements. These factors include but are not limited to, the actual product performance in volume production, the quality and reliability of the product, our ability to achieve design wins, the general business and economic conditions, the state of the semiconductor industry, and other risks as described in the Company's annual report and other filings with the U.S. Securities and Exchange Commission. Although the Company believes that the expectations reflected in the forward-looking statements are reasonable, it cannot guarantee future results, activity level, performance, or achievements. You should not place undue reliance on these forward-looking statements. All information provided in this press release is as of today's date unless otherwise stated, and AOS undertakes no duty to update such information except as required under applicable law.

本新闻稿包含基于当前预期、估计、预测和未来表现的管理层判断、信念、当前趋势和预计产品表现的前瞻性陈述。这些前瞻性陈述包括但不限于,提到新产品的效率和能力以及扩展到新市场的潜力。前瞻性陈述涉及的风险和不确定性可能导致实际结果与前瞻性陈述中的内容存在重大差异。这些因素包括但不限于,产品在量产中的实际表现、产品的质量和可靠性、我们能否赢得设计订单、整体商业和经济状况、半导体行业的状况以及其他在公司年报和向美国证券交易委员会提交的其他文件中描述的风险。尽管公司认为前瞻性陈述中反映的预期是合理的,但无法保证未来的结果、活动水平、表现或成就。您不应过度依赖这些前瞻性陈述。除非另有说明,本新闻稿中提供的所有信息均为截至今天的日期,AOS不承担除法律要求外的更新义务。

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