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SiC Process Platform Streamlines Custom Power MOSFET Development

[X-FAB Silicon Foundries](#)' XSICM03 next-generation XbloX platform is said to advance silicon carbide (SiC) process technology for power MOSFETs. According to the vendor, it delivers significantly reduced cell pitch, enabling increased die per wafer and improved on-state resistance without compromising reliability.

XbloX is X-FAB's streamlined business process and technology platform designed to accelerate the development of advanced SiC MOSFET technology. It integrates qualified SiC process development blocks and modules for planar MOSFET production, simplifying the onboarding process and significantly reducing design risks and product development time.

By combining proven process modules with robust design rules, control plans, and FMEAs, XbloX enables faster prototyping, easier design evaluation, and shorter time to market. This approach gives customers a competitive edge, allowing designers to create a diverse product portfolio while achieving production timelines up to nine months faster than traditional development methods, says the vendor.

This platform provides active area design cell size reduction while maintaining robust process controls, as well as leakage and breakdown device performance. The XSICM03 platform with robust design rules allows customers to create SiC planar MOSFETs with a cell pitch that is over 25% smaller than the previous generation. This improvement allows for up to a 30% increase in die per wafer compared to the previous generation.

Leveraging proven process blocks, the platform ensures exceptional gate oxide reliability and device robustness. The enriched PCM library and enhanced design support allow for fast customer tape-out, resulting in faster product development.

"With its streamlined approach, our next-generation process platform addresses the increasing demand for high-performance SiC devices in automotive, industrial, and energy applications. We enable existing and new customers in creating application-optimized product portfolios through accelerated prototyping and design evaluation, significantly reducing time to market," said Rico Tillner, CEO, X-FAB Texas.

The XSICM03 platform is now available. For more information, contact the [company](#).