



Press Release

X-FAB Launches Next-Generation Silicon Carbide process platform for Power MOSFET Designs

Streamlined SiC processes for faster custom MOSFET development

Tessenderlo, Belgium – December 17, 2024

X-FAB Silicon Foundries SE, the leading analog/mixed-signal and specialty foundry, has launched XSICM03, its next-generation XbloX platform, advancing Silicon Carbide (SiC) process technology for power MOSFETs, delivering 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.

This next generation 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.



Rico Tillner, CEO, X-FAB Texas explains: "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."

The next generation platform XSICM03 is now available for early access.

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Glossary

FMEA - Failure mode and effects analysis

MOSFET - Metal-oxide-semiconductor field effect transistors

PCM – Parametric control monitor

SiC – Silicon Carbide

About X-FAB

X-FAB is a global foundry group providing a comprehensive set of specialty technologies and design IP to enable its customers to develop world-leading semiconductor products that are manufactured at X-FAB's six wafer fabs located in Malaysia, Germany, France, and the United States. With its expertise in analog/mixed-signal technologies, microsystems/MEMS and silicon carbide (SiC), X-FAB is the development and manufacturing partner for its customers, primarily serving the automotive, industrial and medical end markets. X-FAB has approximately 4,500 employees and has been listed on Euronext Paris since April 2017 (XFAB). For more information, please visit www.xfab.com.

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