



Press Release

X-FAB XbloX Accelerates Time-to-Market for Scalable, High-Performance SiC MOSFET Solutions

Improved on-state resistance enables 30% area reduction

Tessenderlo-Ham, Belgium – December 4, 2025

Through its XbloX platform, leading analog/mixed-signal and specialty foundry [X-FAB](#) is offering easy access to a standardized yet flexible set of SiC process technologies that accelerate the development of advanced power devices. From rapid prototyping to full production, the modular and fully scalable XbloX platform helps SiC device developers to expedite engineering assessments and technology release, with production starts achieved up to nine months faster than traditional methods.

Many next-generation SiC power MOSFETs are currently up for design and development in sectors that include automotive, industrial, energy, and datacenter, making now the ideal time for fabless developers to engage with a foundry that can shorten time-to-market.

The standardized and unique module configuration of the XbloX WBG discrete foundry model imparts two major benefits for those designing or refining advanced SiC devices. Firstly, X-FAB takes on process development activities with the introduction of an innovative Process Installation Kit (PIK), where design and implant recipes provide the key differentiators. Secondly, the use of XbloX ensures wafer manufacturing at X-FAB becomes a highly scalable activity in line with application requirements, differing considerably from the less scalable production provided by a traditional foundry model for customer-specific SiC technologies.

By taking advantage of the PIK and process blocks already developed at X-FAB, it becomes possible to reduce process development resources accordingly. Customers benefit from expedited onboarding, far fewer design risks, and significantly faster development time. The planning phase, for example, is up to six times shorter than that required by conventional approaches. Those taking advantage of XbloX gain a distinct competitive edge, with design engineers able to create a diverse



product portfolio while achieving production timelines up to nine months faster than conventional development pathways.

"Thanks to a PIK, qualified SiC process development modules, and an automated onboarding process, customers need do little more than access our global hotline for support on block selection and deployment," explains Brian Throneberry, Business Director SiC Foundry at X-FAB.

"We have robust rules in place to help guide design, mask tooling, engagement, and so on. Once the selection is finalized, XbloX automatically generates the process flow, which subsequently integrates quality systems, business functions, and commercial aspects for the customer. It's a highly expedited way of providing customers with the flexibility required to build custom SiC MOSFET technologies at an accelerated rate."

Scalable and streamlined, XbloX delivers simplified SiC process integration into CMOS-modeled process specifications, CMOS-modeled design rules, control plans, and FMEAs. Customers using the platform will also benefit from any forthcoming X-FAB developments, such as new process modules.

The new, third generation XbloX platform (XSICM03) is highly market-competitive, significantly advancing SiC process technology. Ideal for the smallest form factor planar SiC MOSFETs, XSICM03 delivers considerably reduced cell pitch, enabling up to 30% more dies per wafer due to its improved on-state resistance.

Join the free webinar

SiC device developers can discover more by registering for X-FAB's exclusive XbloX technical webinar. This expert online session will provide a more in-depth look at the platform's capabilities. It will set out how XbloX supports rapid prototyping and scalable production, outlining the strategic advantages of collaborating with X-FAB and its deep SiC process expertise, robust quality systems, and industry-leading certifications. Two sessions are available: 10 December 2025 at 4 p.m. CET (EMEA & Americas); and 12 December 2025 at 8 a.m. CST (Asia Pacific). Register [here](#).

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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, Photonics, silicon carbide (SiC) and gallium nitride (GaN), 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, visit www.xfab.com

Glossary

CMOS	Complementary Metal-Oxide-Semiconductor
FMEA	Failure Mode and Effects Analysis
IP	Intellectual Property
MOSFET	Metal-oxide-semiconductor field effect transistors
SiC	Silicon Carbide
WBG	Wide Band Gap

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