Samsung Extends Use of Synopsys' Alt-PSM Technology for Advanced SRAM ICs

PSM Technology Enhances Lithography Resolution and Yield for High-Performance Products

Synopsys, Inc. (NASDAQ: SNPS), a world leader in semiconductor design software, today announced that Samsung has extended its use of Synopsys' phase-shift mask (PSM) technology for production of its high-performance SRAM devices. This key technology, which is part of Synopsys' comprehensive design for manufacturing (DFM) solution, enables Samsung to enhance yield and maximize chip performance through tight critical dimension (CD) control over the lithography process.

At advanced technology nodes, optical distortions and other lithographic effects cause larger features to deform and smaller features to disappear altogether. The resulting variations can significantly decrease performance or lead to yield loss. Synopsys PSM technology enables designers to enhance lithography resolution while simultaneously shrinking the width of device feature sizes, thereby improving chip performance and increasing yield. In addition, designers can also decrease leakage current. As a result, Synopsys PSM technology is being increasingly deployed by high-performance system-on-chip (SoC) manufacturers worldwide.

"We work closely with our customers to develop processes that accelerate high-yield chip production on advanced process nodes," said Anantha Sethuraman, vice president of marketing for DFM, Synopsys. "Synopsys' PSM technology is a proven solution for delivering the lithography resolution required for advanced, high-speed SRAM ICs. Our success with Samsung further validates Synopsys' leadership position in providing a comprehensive DFM solution that accelerates time to entitled yield."

About Synopsys DFM

With its DFM tools, Synopsys is expanding on what is already the industry's most comprehensive design for manufacturing (DFM) solution that spans from RTL to silicon. Synopsys' DFM product family addresses critical manufacturability and yield issues with the following products: IC Compiler physical design solution, PrimeYield LCC, PrimeYield CMP and PrimeYield CAA technologies, Hercules™ physical verification tool, Proteus OPC, PSM Create & Check, CATS® mask data preparation product, SiVL® lithography verification tool, patented PSM technology, and physics-based TCAD suite of simulation products. Synopsys' Manufacturing Yield Management (MYM) solutions extend directly into the fab, providing customers real time access to yield data and the analysis capability needed to reduce random, systematic and parametric defects.

About Synopsys

Synopsys, Inc. is a world leader in electronic design automation (EDA) software for semiconductor design. The company delivers technology-leading semiconductor design and verification platforms and IC manufacturing software products to the global electronics market, enabling the development and production of complex systems-on-chips (SoCs). Synopsys also provides intellectual property and design services to simplify the design process and accelerate time-to-market for its customers. Synopsys is headquartered in Mountain View, California and has offices in more than 60 locations throughout North America, Europe, Japan and Asia. Visit Synopsys online at https://www.synopsys.com/ .

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