



Applied Materials Advances Dielectric Etch Technology with New eMax System

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Dielectric Etch eMax(TM) Centura(R) Targets Multi-Generation

Critical Etch Applications with New High Productivity Chamber Design

Applied Materials, Inc. (Nasdaq:AMAT), the leading provider of plasma etch technology to the semiconductor industry, announces its new Dielectric Etch eMax(TM) Centura system for etching very advanced chip structures with geometries at 0.13 micron and beyond. The eMax system features medium-density plasma source technology, a completely new chamber design and innovative process chemistry to maximize etching performance and productivity while reducing system operating cost.

"The eMax Centura is a new-generation dielectric etch system that offers customers unprecedented technical capability, cost-efficiency and productivity for meeting the challenges of their sub-0.13 micron designs," said Dr. Gerald Yin, vice president and general manager of Applied Materials' Etch Products Business Group. "We are very pleased with the response we've received to this system. More than a dozen eMax systems have already been shipped to customers and we have multiple additional commitments from chipmakers worldwide as the eMax Centura continues to be selected over competitive systems for leading-edge applications."

The Dielectric Etch eMax Centura system is targeted for the most demanding etch applications, including self-aligned, high aspect ratio and logic contacts, as well as dual damascene and low k dielectric films. The eMax chamber operates in a new process regime that distinguishes it from other medium density plasma systems and enables the precise, high-throughput etching of very small, deep features. The system's unique, tunable, magnetic confinement technology and cost-effective approach to controlling temperature allow the eMax chamber to achieve low particle levels and extended MWBC (mean wafers between clean) intervals, resulting in a significant advantage in system cost-of-ownership.

"The Dielectric Etch eMax Centura system is currently being used by a major semiconductor manufacturer where it has achieved outstanding performance for critical dielectric etches such as contact and self-aligned contact applications -- resulting in a multi-system repeat order," said Dr. Diana Ma, vice president and general manager of Applied Materials' Dielectric Etch Product Division. "Since the eMax system features Applied Materials' production-proven medium density technology, customers have confidence that they can ramp the system into production with a minimum of time and risk -- as well as extend it to their future chip generations."

The eMax chambers are available on Applied Materials' enhanced Etch Centura II multi-chamber platform, which features a dual blade robotic handling system for increased throughput. The eMax Centura II can be configured with up to four process chambers, allowing a significant operational cost advantage over more limited capacity three-chamber systems. eMax chambers also can be added to existing Centura and Centura II platforms.

"The eMax Centura system complements our existing Dielectric Etch IPS(TM) Centura and Dielectric Etch Super e(TM) Centura systems to provide a complete set of the most advanced dielectric etch solutions to the industry," added Dr. Ma. "The IPS system, with its unique capability to perform etch, resist strip and barrier removal in a single chamber, is currently being used in volume production worldwide for etching dual damascene structures in copper-based devices. The Super e system has achieved rapid customer acceptance since its introduction in July 1999, providing outstanding technology, reliability and productivity for cost-sensitive applications."

According to Dataquest, a market research firm, the dielectric etch market totaled \$1.02 billion in 1999, and will grow to over \$2.2 billion by 2002.

Applied Materials, Inc. is a Fortune 500 global growth company and the world's largest supplier of wafer fabrication systems and services to the global semiconductor industry. Applied Materials is traded on the NASDAQ National Market System under the symbol "AMAT." Applied Materials' web site is www.appliedmaterials.com.

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