Fujitsu Selects Applied Materials` Electroplating System to Build Copper Microprocessor Chips

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SANTA CLARA, Calif.--(BUSINESS WIRE)--May 27, 1999--

Electrochemical Plating (ECP) and Barrier & Seed Systems Are Key
to Accelerating Fujitsu's Transition to Copper (Cu) Devices

Applied Materials, Inc. announced today that Fujitsu, Ltd., a leading manufacturer of semiconductor devices, has ordered an Electra(TM) Cu ECP (ElectroChemical Plating) system to form the copper interconnect circuits in its most advanced microprocessors. The ECP system shipped to Fujitsu in the second calendar quarter of 1999, and will be integrated with Applied Materials' Electra Cu Barrier & Seed system which has been in use at Fujitsu for more than a year.

Naomichi Abe, director of Advanced Process Technology, ULSI Device Development Division of Fujitsu, said, "Copper represents a critical technological transition that must be carefully managed to ensure its successful implementation. Our evaluation of Applied Materials' advanced copper metallization technology, as well as the company's integration experience with all aspects of copper processing, give us the confidence to choose these systems for this leading edge application. Over the years, Applied Materials has proven its ability to fully support our key growth initiatives with very capable technology and comprehensive service."

The Electra ECP system, launched April 8, 1999, features innovations in copper technology that offer unprecedented advantages in high-volume manufacturing. The industry's first closed-loop, in situ electrolyte management system automatically controls the system's low-acid chemistry to provide consistent, uniform plating performance and high system uptime. For maximum productivity, the Electra ECP system's architecture uses multiple twin processing cells and dual wafer handling to achieve throughputs of up to 70 wafers per hour.

"Fujitsu has always been at the forefront of every technical challenge and opportunity, and it was one of our first customers to begin copper development using Applied Materials' Electra Cu Barrier & Seed layer technology," said Robin Cheung, managing director and general manager of the Copper Fill Product Unit at Applied Materials. "We are very pleased to be working with Fujitsu in putting all of our latest copper deposition technology into production."

The Electra Cu Barrier & Seed system, introduced in late 1997, is the industry's market leader in barrier and seed layer deposition for copper designs, with approximately 75 process chambers in use by chipmakers around the world. The system's revolutionary IMP (ion metal plasma) PVD (physical vapor deposition) technology enables the precise deposition of a thin, uniform and robust tantalum or tantalum nitride barrier film followed by a copper seed layer. The barrier layer prevents the diffusion of copper into unwanted areas of the device, while the seed layer "primes" the structure for subsequent copper bulk filling by electrochemical plating.

Applied Materials is the only company that offers products for all of the key process steps required for dual damascene copper interconnect fabrication. Leveraging this range of technolgies, the company also offers the Copper Interconnect Equipment Set Solution(TM) (ESS(TM)). Launched in late 1998, the Copper Interconnect ESS provides customers with the equipment, integrated process technology and guaranteed electrical results for manufacturing dual damascene structures. The Electra Cu ECP system is available as both a stand-alone system and as part of the Copper Interconnect ESS.

Dataquest, a market research firm, estimates that the market for copper deposition equipment, which includes barrier/seed and electroplating systems, will have a compound annual growth rate of 37 percent over the next four years (1999-2003).

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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