



Applied Materials Delivers Key Technology for 45nm Contacts with Endura iLB II System

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SANTA CLARA, Calif.--(BUSINESS WIRE)--July 10, 2006--Applied Materials, Inc. today announced its Applied Endura(R) iLB(TM) II (integrated liner/barrier) system, which combines major advances in PVD(1) titanium (Ti) and preclean technologies to reduce resistance in critical contact structures by up to 40%. The system's new PVD eSIP(1) chamber deposits a Ti layer with excellent uniformity on the wafer, plus 30% greater bottom coverage over that of the previous system. Also key is its Siconi(TM) Preclean chamber, an improved surface preparation technology for yield-critical transistor and contact interfaces that provides precise removal of oxide from the contact bottom with minimal silicon loss.

"The contact structure is a key, speed-critical electrical component in sub-65nm designs and was becoming the next bottleneck in chip performance," said Dr. Farhad Moghadam, senior vice president and general manager of Applied Materials' Thin Films Group. "Applied's Endura iLB system has played a leading role in contact deposition technology for many years. The new iLB II system, with enhanced SIP technology and Siconi Preclean, extends this differentiated technology to meet the shrinking liner/barrier thickness requirements for contacts used in the 45nm technology node and beyond."

The 300mm Applied Endura iLB II system provides a unique, fully integrated combination of preclean, PVD Ti, and CVD TiN for depositing nano-scale films. In addition to enhanced bottom coverage and process symmetry, the new eSIP Ti chamber delivers improved chamber matching and process repeatability. The system's Siconi Preclean, already proven for silicide transistor applications, provides a highly selective, soft, chemical clean process that removes oxide without loss of the thin gate nickel-silicide (NiSi) film. In addition, the CVD TiN barrier layer has been enhanced by using a low-temperature process to improve step coverage while delivering higher throughput.

The majority of advanced chipmakers worldwide have relied on Applied's Endura iLB technology since its introduction in 1998. These systems have contributed significantly to Applied's recent milestone shipment of over 500 Endura 300mm systems to customers. More information on these technologies can be found at www.appliedmaterials.com/products/aluminum_liner_barrier.

Applied Materials, Inc. (Nasdaq:AMAT) is the global leader in nanomanufacturing technology(TM) solutions for the electronics industry with a broad portfolio of innovative equipment, service and software products. At Applied Materials, we apply nanomanufacturing technology to improve the way people live. Learn more at www.appliedmaterials.com.

(1) PVD = physical vapor deposition; eSIP = enhanced self-ionized plasma

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