



Applied Materials Speeds Next-Generation Chips with Advanced BLOk II Low k Technology

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SANTA CLARA, Calif.--(BUSINESS WIRE)--June 4, 2007--Applied Materials, Inc., the leading supplier of low k dielectric technology, today announced the Applied Producer(R) BLOk(TM) II PECVD, a new system that delivers advanced barrier low k technology required for creating faster, more power-efficient logic chips at the 45nm node and beyond. Used in conjunction with ultralow k dielectrics, such as Applied's Black Diamond(R) films, the BLOk II barrier film speeds signal transmission by reducing the effective k-value of the interconnect dielectric stack by up to 10%. A critical in situ pre-clean treatment, enabled by the Producer system's single wafer architecture, provides robust adhesion performance and high device reliability, with 30% higher electromigration resistance than competing barrier technologies.

"Applied Materials is clearly at the forefront of innovation with materials that enable continued interconnect scaling," said Dr. Farhad Moghadam, senior vice president and general manager of Applied Materials' Thin Films Group. "Key to optimal interconnect performance, however, is film integration -- the ability to control the copper-low k interface to ensure final reliability and yield after packaging. Our unique Producer BLOk system provides a novel interface engineering process -- featuring a patented in situ copper oxide removal step -- that enables good film adhesion and high electrical reliability. No other system available today can match this exceptional interface performance."

The integrated performance of BLOk II and Black Diamond films was validated at Applied's Maydan Technology Center (MTC) where these stacks were successfully etched, optimized for selectivity, etch rate, and undercut using the Applied Centura(R) Enabler(R) etch system. This advanced learning will allow customers to more rapidly and successfully integrate BLOk II technology into their next generation low k film stack.

Applied's BLOk II film is currently being used at multiple customer sites worldwide for 32nm development, providing superior ultrathin film barrier properties with a significantly lower dielectric constant. Applied has more than 250 BLOk chambers in production that can be upgraded to BLOk II technology for a smooth generational extension using a proven manufacturing process. For more information on the Applied Producer BLOk II system visit www.appliedmaterials.com/products/producer_blok_pecvd_4.html.

Applied Materials, Inc. (Nasdaq:AMAT) is the global leader in Nanomanufacturing Technology(TM) solutions with a broad portfolio of innovative equipment, service and software products for the fabrication of semiconductor chips, flat panels, solar photovoltaic cells, flexible electronics and energy efficient glass. At Applied Materials, we apply Nanomanufacturing Technology to improve the way people live. Learn more at www.appliedmaterials.com.

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