



innovations for high performance microelectronics

Press Release

For Immediate Release

AWR and IHP Collaborate to Deliver Complete Design Solution for High-Frequency Wireless IC Design

First IHP Process Design Kit Now Available in Analog Office 2006 RFIC Design Platform

EL SEGUNDO, Calif. — May 15, 2006 — Applied Wave Research, Inc. (AWR[®]) and Innovations for High Performance Microelectronics (IHP), Frankfurt (Oder), Germany, today announced the availability of IHP's high-performance specialty silicon germanium (SiGe) process for AWR's Analog Office 2006 design suite. The delivery of the first AWR-based IHP process design kit (PDK) is part of a long-term partnership between the two companies to deliver complete radio-frequency integrated circuit (RFIC) design solutions for high-frequency applications. Analog Office design software, which is used to design next-generation analog and RFIC wireless and wirelined communications products, helps design engineers significantly shorten IC development cycles, accelerate tape-out to IHP's process, and speed wireless products to market. IHP multiproject wafer (MPW) & prototyping services provide research and innovation for the European technological community.

"Today's designers face a constant challenge to deliver high-performance products in an ever-shrinking time-to-market window," said James Spoto, AWR president and CEO. "This customer-driven collaboration between two important links in the design chain, a leading high-frequency EDA vendor and a European silicon provider, enables our customers to accelerate the design-to-tapeout process, eliminate design spins, and achieve first-time silicon success."

"The partnership with AWR provides high-frequency wireless designers access to specific IHP process technology through validated PDKs in the Analog Office 2006 design environment," said Wolfgang Mehr, director of IHP. "Now our joint customers in the wireless broadband communications market will have seamless access to an integrated design solution built on the AWR open design platform and the high-performance IHP process."

The IHP SG25H1 0.25 µm bipolar complementary metal oxide semiconductor (BiCMOS) process offers high-performance technology with NpN heterojunction bipolar transistors (HBTs) up to fT/fmax= 180/220 GHz. The technology is suited to applications in the higher GHz bands, making it especially useful for the designers of next-generation wireless, broadband, and radar products. The process includes integrated HBTs with cut-off frequencies of up to 220 GHz, RF lateral double diffuse metal oxide semiconductor (LDMOS) devices with breakdown voltages of up to 26 V, including complementary devices. The process also includes a complete set of passive devices, such as resistors, capacitors and inductors.

The Analog Office-based IHP PDK includes a complete set of schematic symbols, simulation models, and fully parameterized layout cells that are characterized to match the IHP process performance. The simulation models are validated with the Synopsys HSPICE simulator and the AWR harmonic balance simulator.

Pricing and Availability

The AWR-based IHP PDK will be available directly from IHP and its design partners in Q2 2006. For information on PDK pricing, availability, and support, contact IHP directly at <u>www.ihp-microelectronics.com</u> or +49 335 5625 647.

About IHP

Innovations for High Performance Microelectronics investigates and develops wireless communication technologies. The company's activities are geared towards strengthening the competitive position of the European and German industry and creating attractive local conditions for high technology. IHP is a European research and innovation center, actively cooperating with industrial and academic partners to make prototypes relevant to industry out of basic ideas. As an institute of the Leibniz Association, the company pursues long-term goals and connects basic research with applied research. IHP is headquartered at Im Technologiepark 25, 15236 Frankfurt (Oder), Germany. For more information, please visit <u>www.ihp-microelectronics.com</u> or call +49 335 5625 0.

About Applied Wave Research, Inc.

Applied Wave Research is a leading supplier of high-frequency electronic design automation (EDA) products for the design of wireless telecommunications equipment, semiconductors, high-speed computers, networking systems, automotive mobility systems, and a variety of other electronics-based products. AWR is a privately-held company and has global development offices, sales offices, training centers, and distribution channels. In September 2005, AWR acquired APLAC Solutions, an emerging leader in simulation and analysis software for analog and radio-frequency (RF) design. APLAC's RF design technology has been used in designing over 30 percent of all mobile phone RF integrated circuits (ICs) worldwide. AWR today has over 700 customers worldwide, including virtually every major high-frequency electronic component and system supplier. The company is headquartered at 1960 East Grand Avenue, Suite 430, El Segundo, California 90245. For more information about AWR and the company's products, please visit www.appwave.com or call 310-726-3000.

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