NEWS ANNOUNCEMENT   *FOR IMMEDIATE RELEASE*

TowerJazz and Agilent Technologies Expand High Speed and High Power SiGe Design Kit Offering for Agilent's Advanced Design System Software

NEWPORT BEACH, Calif., January 12, 2011 – TowerJazz (NASDAQ: TSEM, TASE: TSEM), the global specialty foundry leader, announced the availability of additional SiGe process design kits (PDKs) for TowerJazz's 0.18 µm SiGe process platform. The design kits target high-frequency products for optical networks, automotive radar and 60GHz WiFi, as well as high-power front-end-modules for wireless handsets. The PDKs were developed for use with Agilent Technologies' Advanced Design System (ADS) 2009U1 software. Both TowerJazz and Agilent will be showcasing the new PDKs at Radio Wireless Week (RWW), in booths #15 and #13 respectively on January 17-18, 2011 in Phoenix, AZ.

The ADS PDKs from TowerJazz and Agilent Technologies' EEsof EDA organization include ADS design kits for SBC18HA/HXL/H2 (high-speed SiGe technology with cutoff frequency as high as 200GHz) and a power amplifier design library (PADL) with characterized power cells for use in wireless front-end-module applications for cell phone and WiFi devices. The objective is to help customers get new products to market faster by providing an accurate and productive work environment for SiGe Monolithic microwave integrated circuit (MMIC) and power amplifier (PA) design solutions.

As an example, the PADL reduces design spins through availability of fully silicon verified power cells ready for use in addition to a custom power cell design flow that encompasses Agilent's ADS software. This, combined with TowerJazz's rich library of high quality passive devices including thick-metal inductors and high density MIM capacitors, enables complete PA design. The PADL delivers a full PA design flow from schematic to layout including device models characterized over DC, temperature, small signal, and large signal load pull measurements. In addition, the PADL contains silicon verified power cells with P1dB (compression point) of 20 through 33dBm (equivalent to 2W). Full simulation test benches are available in ADS and silicon load pull data for cellular and PCS bands are provided.

As another example, TowerJazz SBC18HA/HXL and H2 PDKs are used with Agilent's ADS to enable RF designers to design first-in-class ICs that meet the demands of high-speed optical and high frequency wireless markets such as automotive collision avoidance, backhaul wireless, phased-array radar and aerospace, commercial and military markets. They support a complete ADS front-to-back design flow with embedded Jazz Inductor Toolbox (JIT) and CNEX netlist definitions for layout-versus-schematic (LVS) support.

"Our ongoing work with TowerJazz is in direct response to demand from our mutual customers for a fast, efficient and low-cost RFIC design flow," said Mark Pierpoint, vice president and general manager of Agilent's EEsof EDA Organization. "With the new SiGe PDKs in ADS 2009U1, customers will now be able to design high-performance ICs operating at 60 GHz and higher using the full breadth of capability ADS provides."

"The new Agilent ADS SiGe PDKs allow customers familiar with the ADS environment for GaAs-based high-frequency and power-amplifier design to smoothly transition (to SiGe) and benefit from the features the ADS environment affords them today," said Marco Racanelli, Senior VP and GM, RF and High Performance Analog Business Group and Aerospace & Defense Business Group at TowerJazz. "This will result in faster design cycles, consistent results and possibly higher yields for our mutual customers."

About Agilent EEsof EDA Software
Advanced Design System is the leading electronic design automation software for RF, microwave, and signal integrity applications. ADS pioneers the most innovative and commercially successful technologies, such as X-parameters* and 3D EM simulators, used by leading companies in wireless communications and networking as well as the aerospace and defense industries. For WiMAX™, LTE, multi-gigabit per second data links, radar and satellite applications, ADS provides full, standards-based design and verification with Wireless Libraries and circuit-system-EM co-simulation in an integrated platform. For more information about Agilent ADS, visit www.agilent.com/find/eesof-ads.

About Agilent Technologies
Agilent Technologies Inc. (NYSE: A) is the world's premier measurement company and a technology leader in chemical analysis, life sciences, electronics and communications. The company's 18,500 employees serve customers in more than 100 countries. Agilent had net revenues of $5.4 billion in fiscal 2010. Information about Agilent is available at www.agilent.com.

About TowerJazz
Tower Semiconductor Ltd. (NASDAQ: TSEM, TASE: TSEM), the global specialty foundry leader and its fully owned U.S. subsidiary Jazz Semiconductor, operate collectively under the brand name TowerJazz, manufacturing integrated circuits with geometries ranging from 1.0 to 0.13-micron. TowerJazz provides industry leading design enablement tools to allow complex designs to be achieved quickly and more accurately and offers a broad range of customizable process technologies including SiGe, BiCMOS, Mixed-Signal and RFCMOS, CMOS Image Sensor, Power Management (BCD), and Non-Volatile Memory (NVM) as well as MEMS capabilities. To provide world-class customer service, TowerJazz maintains two manufacturing facilities in Israel and one in the U.S. with additional capacity available in China through manufacturing partnerships. For more information, please visit www.towerjazz.com.

Safe Harbor Regarding Forward-Looking Statements
This press release includes forward-looking statements, which are subject to risks and uncertainties. Actual results may vary from those projected or implied by such forward-looking statements. A complete discussion of risks and uncertainties that may affect the accuracy of forward-looking statements included in this press release or which may otherwise affect Tower and/or Jazz's business is included under the heading "Risk Factors" in Tower's most recent filings on Forms 20-F, F-3, F-4 and 6-K, as were filed with the Securities and Exchange Commission (the "SEC") and the Israel Securities Authority and Jazz's most recent filings on Forms 10-K and 10-Q, as were filed with the SEC, respectively. Tower and Jazz do not intend to update, and expressly disclaim any obligation to update, the information contained in this release.

*X-parameters is a registered trademark of Agilent Technologies. The X-parameter format and underlying equations are open and documented. For more information, visit www.agilent.com/find/eesof-x-parameters-info.

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