



TowerJazz and TPSCo Announce Breakthrough RF Technology for Next-Generation 4G LTE Enabled Smartphones and IoT Applications

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Begin sampling best-in-class sub-90fs Ron-Coff RF switch technology from TPSCo's 300mm factory

RF front-end component market forecast to grow to \$16B in 2018

MIGDAL HAEMEK, Israel, and UOZU, Japan, Sept. 2, 2015 (GLOBE NEWSWIRE) -- TowerJazz, the global specialty foundry leader and TowerJazz Panasonic Semiconductor Co. (TPSCo), the leading analog foundry in Japan, today announced breakthrough RF technology for next-generation 4G LTE smartphones and IoT devices. Through a collaborative effort, TowerJazz and its majority owned subsidiary, TPSCo, have developed a new 300mm RF SOI process that can reduce losses in an RF switch by as much as 30% relative to current technology, improving battery life and boosting data rates. The technology achieves a record Ron-Coff figure of merit of sub-90fs and is now being sampled to a lead customer.

"This best in the world achievement is a strong reflection of our company's strategy and pristine execution of the TPSCo endeavor combining outstanding deep digital technology with TowerJazz's advanced RF expertise," said Russell Ellwanger, TowerJazz CEO. "Such achievements are one of the foundations for long term customer partnerships and future roadmap alignments."

"We are very pleased with the device figures of merit and the customer excitement around our newly developed process. This process combines best in class 0.18um TowerJazz RF SOI technology with TPSCo's advanced 45nm process capabilities to create a silicon-based device with breakthrough performance. To our knowledge, this is the lowest Ron X Coff demonstrated in RF SOI devices with robust power handling capability," commented Guy Eristoff, CEO of TPSCo.

The Ron X Coff product is a key figure of merit for RF switching that measures the ability to pass signals with low power losses important in improving battery life and data rates in next generation smartphones. TPSCo's ability to print 45nm dimensions also enables the integration of an increasing number of RF features in a small footprint on a single, RF-friendly, SOI die.

"Just a few years ago, a sub-100fs Ron-Coff figure of merit for an SOI switch technology was considered unthinkable. But no longer. SOI continues to remain the most ideally suited technology for meeting the demands of 4G/LTE-A and beyond: the lowest power (insertion) loss, almost perfect isolation and the most stringent linearity, and all at a competitive cost," said Len Jelinek, Director and Chief Analyst, Semiconductor Manufacturing, IHS Technology.

Mobile Experts LLC, a market research firm for mobile communications, forecasts the RF front- end component market size to reach \$10.8 billion in 2015, rising rapidly to over \$16 billion in 2018. This explosive market growth is powered by rapid growth in worldwide 4G-LTE enabled Smartphone shipments and IoT devices along with increasing RF component dollar content per mobile terminal due to rapid proliferation of frequency bands (40+) and increasing adoption of Carrier Aggregation (3+) and MIMO (up to 64 X 8).

"We are already in high volume production with our industry leading SOI technologies in our Newport Beach (USA) and Migdal Haemek (Israel) fabs. Opening up the 300mm Uozu fab in Japan now also gives us additional scale and the supply flexibility needed to capitalize on RF component market growth," said Dr. Marco Racanelli, SVP/GM of RF/High Performance Analog and Power Business Groups at TowerJazz.

About TowerJazz

[Tower Semiconductor Ltd.](#) (NASDAQ: TSEM, TASE: TSEM) and its fully owned U.S. subsidiary Jazz Semiconductor, Inc. operate collectively under the brand name TowerJazz, the global specialty foundry leader. TowerJazz manufactures integrated circuits, offering a broad range of customizable process technologies including: SiGe, BiCMOS, mixed-signal/CMOS, RF CMOS, CMOS image sensor, integrated power management (BCD and 700V), and MEMS. TowerJazz also provides a world-class design enablement platform for a quick and accurate design cycle as well as Transfer Optimization and development Process Services (TOPS) to IDMs and fabless companies that need to expand capacity. For more information, please visit www.towerjazz.com.

To provide multi-fab sourcing and extended capacity for its customers, TowerJazz operates two manufacturing facilities in Israel (150mm and 200mm), one in the U.S. (200mm) and three additional facilities in Japan (two 200mm and one 300mm) through **TowerJazz Panasonic Semiconductor Co. (TPSCo)**, established with Panasonic Corporation of which TowerJazz has the majority holding. Through TPSCo, TowerJazz provides leading edge 45nm CMOS, 65nm RF CMOS and 65nm 1.12um pixel technologies, including the most advanced image sensor technologies. For more information, please visit www.tpsemico.com.

About TowerJazz Panasonic Semiconductor Co.

[TowerJazz Panasonic Semiconductor Co., Ltd.](#) (TPSCo) was established by Panasonic Corporation (NASDAQ ADS: PCRFY, TYO: 6752), 51% of which was acquired by Tower Semiconductor Ltd. (NASDAQ: TSEM, TASE: TSEM) and 49% of which is now held by Panasonic Semiconductor Solutions Co., Ltd. TPSCo has three manufacturing facilities in Hokuriku, Japan which have been producing large scale integrated circuits for over 30 years. Areas of process technology focus include: high dynamic range image sensors (CIS and CCD), integrated power devices (BCD, SOI, and LDMOS) and high frequency silicon RFCMOS. With over 120 qualified silicon process flows on 200mm and 300mm wafers from super micron to 45nm as well as internal back end processing, assembly and test services, TPSCo provides both IDMs and fabless companies with unparalleled

semiconductor manufacturing quality and technology, including in-house turnkey services. For more information, please visit <https://www.tpsemico.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 TowerJazz'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.

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