
FORM 6-K

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

For the month June 2018 No. 3

TOWER SEMICONDUCTOR LTD.

(Translation of registrant's name into English)

Ramat Gavriel Industrial Park
P.O. Box 619, Migdal Haemek, Israel 2310502
(Address of principal executive offices)

Indicate by check mark whether the registrant files or will file annual reports under cover Form 20-F or Form 40-F.

Form 20-F Form 40-F

Indicate by check mark whether the registrant by furnishing the information contained in this Form is also thereby furnishing the information to the Commission pursuant to Rule 12g3-2(b) under the Securities Exchange Act of 1934.

Yes No

On June 27, 2018, the Registrant Announces: RF SOI 65nm Ramp in its
300mm Fab with Best-in-Class Metrics

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

TOWER SEMICONDUCTOR LTD.

Date: June 27, 2018

By: /s/ Nati Somekh

Name: Nati Somekh

Title: Corporate Secretary

TowerJazz Announces RF SOI 65nm Ramp in its 300mm Fab with Best-in-Class Metrics

Secures tens of thousands of wafers per year under long-term partnership with SOITEC, providing guaranteed SOI substrates to support ramp

MIGDAL HAEMEK, Israel and UOZU, Japan, June 27, 2018 – TowerJazz, the global specialty foundry leader, today announced a ramp for its radio frequency silicon-on-insulator (RF SOI) 65nm process in its 300mm Uozu, Japan fab. TowerJazz has signed a contract with long-term partner, SOITEC, a leading semiconductor materials supplier to guarantee a supply of tens of thousands of 300mm SOI silicon wafers, securing wafer prices for the next years and ensuring supply to its customers, despite a very tight SOI wafer market.

With best in class metrics, TowerJazz's 65nm RF SOI process enables the combination of low insertion loss and high power handling RF switches with options for high-performance low-noise amplifiers as well as digital integration. The process can reduce losses in an RF switch improving battery life and boosting data rates in handsets and IoT terminals.

According to Mobile Experts, LLC, a market research firm for mobile communications, the mobile RF front-end market is estimated to reach \$22 billion in 2022 from an estimated \$16 billion in 2018. TowerJazz's breakthrough RF SOI technology continues to support this high-growth market and is well-poised to take advantage of next-generation 5G standards which will boost data rates and provide further content growth opportunities in the coming years.

TowerJazz is also proud to announce its relationship with Maxscend, a provider of RF components and IoT integrated circuits, ramping in this new technology.

"We chose TowerJazz for its advanced technology capabilities and its ability to deliver in high volume while continuously innovating with a strong roadmap. We specifically selected its 300mm 65nm RF SOI platform for our next-generation product line due to its superior performance, enabling low insertion loss and high power handling," said Zhihan Xu, Maxscend Chief Executive Officer.

"We are delighted to see the strong adoption of 300mm RF SOI through this large capacity and supply agreement with TowerJazz to augment our already significant 200mm RF SOI partnership. TowerJazz was the first foundry to ramp our RFeSi technology to high volume production in 200mm and continues as one of the industry leaders in innovation in this exciting RF market with advanced and differentiated offerings," said Paul Boudre, SOITEC Chief Executive Officer.

"We are thrilled about our continued partnership with Maxscend as they bring breakthrough products to market, manufactured using our latest 300mm 65nm RF SOI platform. Also, we are very pleased with our SOITEC partnership to secure tens of thousands of 300mm RF SOI wafers to feed the strong demand in our 300mm Japan factory," said Russell Ellwanger, TowerJazz Chief Executive Officer.

For more information on TowerJazz's 65nm RF SOI technology, please visit: http://www.towerjazz.com/sige-bicmos_rf-cmos.html.

About TowerJazz

Tower Semiconductor Ltd. (NASDAQ: TSEM, TASE: TSEM) and its subsidiaries operate collectively under the brand name TowerJazz, the global specialty foundry leader. TowerJazz manufactures next-generation integrated circuits (ICs) in growing markets such as consumer, industrial, automotive, medical and aerospace and defense. TowerJazz's advanced technology is comprised of a broad range of customizable process platforms such as: SiGe, BiCMOS, mixed-signal/CMOS, RF CMOS, CMOS image sensor, integrated power management (BCD and 700V), and MEMS. TowerJazz also provides world-class design enablement 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. To provide multi-fab sourcing and extended capacity for its customers, TowerJazz operates two manufacturing facilities in Israel (150mm and 200mm), two in the U.S. (200mm) and three facilities in Japan (two 200mm and one 300mm). **For more information, please visit www.towerjazz.com.**

About Soitec

Soitec (Euronext, Tech 40 Paris) is a world leader in designing and manufacturing innovative semiconductor materials. The company uses its unique technologies and semiconductor expertise to serve the electronics market. With more than 3,000 patents worldwide, Soitec's strategy is based on disruptive innovation to answer its customers' needs for high performance, energy efficiency and cost competitiveness. Soitec has manufacturing facilities, R&D centers and offices in Europe, the U.S. and Asia. **For more information, please visit www.soitec.com** and follow us on Twitter: @Soitec_EN

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About Maxscend

Funded by famous venture capital investors, Maxscend Microelectronics Company Limited was incorporated by a group of Silicon Valley returnees in 2012. Maxscend has its headquarter located in WuXi, R&D center located in Zhang Jiang High-tech Park, Shanghai, and branch offices in Shenzhen, Chengdu. The company is dedicated to developing and marketing communication RF components and IoT ICs. Supported by its comprehensive product lines, Maxscend provides its customers with turnkey solutions in these market segments. **For more information, please visit <http://www.maxscend.com/index-en.html>**

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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