

TOWER SEMICONDUCTOR LTD

Form 6-K

January 23, 2013

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FORM 6-K

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

For the month of January 2013 No. 2

TOWER SEMICONDUCTOR LTD.  
(Translation of registrant's name into English)

Ramat Gavriel Industrial Park  
P.O. Box 619, Migdal Haemek, Israel 23105  
(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  S

Form 40-F  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  F

No  S

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On January 23, 2013, the registrant announces TowerJazz and ON Semiconductor Collaborate to Deliver Advanced Product for High-End Display Panel Market.

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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: January 23, 2013

By: /s/ Nati Somekh  
Name: Nati Somekh  
Title: Corporate Secretary

TowerJazz and ON Semiconductor Collaborate to Deliver Advanced Product for High-End Display Panel Market

Jointly developed programmable PMIC and level shifter; provides wide voltage range, multiple channels, flexible output sequence and high capacitive loads

MIGDAL HAEMEK, Israel, January 23, 2013 – TowerJazz (Nasdaq: TSEM), the global specialty foundry leader today announced a collaboration with ON Semiconductor (Nasdaq: ONNN), an innovator in energy efficient electronics to deliver an advanced programmable PMIC and high voltage level shifter with VCom targeting the high-end display panel market.

This unique part is capable of driving very large loads with different voltage ranges and features a programmable power sequence that allows the product to be applied to various applications. To accommodate display panel market requirements, the part was designed to drive both positive and negative voltages (42V differential) to support essential high voltage product specifications. It is also applicable for the various panel applications in customer markets such as monitors and televisions, both small and large displays.

The collaboration leverages TowerJazz's latest TS35 power management platform for design and manufacturing to create a market leading product which is ramping to volume production. The device will be used for applications such as different sizes of LCD and AMOLED panels. According to a global TV shipment report by NPD DisplaySearch, the overall TV market in 2012 was forecast at 245 million units and several key high value segments of the TV business such as large screen sizes and LED-backlit LCD TVs are expected to continue to grow.

TowerJazz's collaborative efforts created the most cost-effective advanced product making use of the unique features in its TS35PM platform. This process offers a low mask count with the ability to generate one boost up and two step down voltage and two high voltage reference (in this case, negative voltages as well as positive voltages to meet market required performance), and fully scalable HV transistors for area optimization. Along with these features, TowerJazz utilized its world class process design kit (PDK) and design services. TowerJazz's sophisticated PDK which includes scalable devices enabled the team to quickly design and simulate the product ensuring it met the required performance and target die cost. In addition, the high voltage span requirement is designed with a minimum mask count, further reducing the product's cost.

"The long-standing partnership between TowerJazz and ON Semiconductor has produced many successful products for various markets. This unique relationship combines ON Semiconductor's market position and understanding of the system with our intimate knowledge of our power management platform," said Ori Galzur, Vice President of TowerJazz Design Center and Design Enablement. "TowerJazz's design and manufacturing knowledge accelerates development time, allowing faster production ramp. This enables our customers to focus on their system knowledge while we assist by providing design services and save them the learning curve."

"TowerJazz's advanced technology enables ON Semiconductor to define and develop new products increasing our market share with existing and new customers," said Simon Keeton, Vice President and General Manager of ON Semiconductor's Consumer Products Division. "For the advanced display panel market, TowerJazz's power management platform was the natural choice because it enables us to produce the most cost-effective products from die size and mask count aspects while leveraging integration strategies to include Vcom, Gamma, and PMIC/HVLS to meet various customer needs. There is also a benefit derived from designing, manufacturing and the fast production ramp that can be achieved with a single foundry partner."

#### About TowerJazz

Tower Semiconductor Ltd. (NASDAQ: TSEM, TASE: TSEM), its fully owned U.S. subsidiary Jazz Semiconductor Ltd., and its fully owned Japanese subsidiary TowerJazz Japan, Ltd., operate collectively under the brand name TowerJazz, the global specialty foundry leader. TowerJazz manufactures integrated circuits with geometries ranging from 1.0 to 0.13-micron, offering 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 CMOS and MEMS capabilities. TowerJazz also offers a world-class design enablement platform that complements its sophisticated technology and enables a quick and accurate design cycle. In addition, TowerJazz provides (TOPS) Technology Optimization Process Services to IDMs as well as fables companies that need to expand capacity, or progress from an R&D line to a production line. To provide multi-fab sourcing, TowerJazz maintains two manufacturing facilities in Israel, one in the U.S., and one in Japan with additional capacity available in China through manufacturing partnerships. For more information, please visit [www.towerjazz.com](http://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 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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