
FORM 6-K

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

For the month of September 2011

No. 1

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 x

Form 40-F o

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 o

No x

On September 05, 2011, the registrant announces Samsung Selects TowerJazz's "unrivaled" 700V Power Technology Platform for its Next Generation High Voltage Products.

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: September 05, 2011

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

Samsung Selects TowerJazz's "unrivaled" 700V Power Technology Platform for its Next Generation High Voltage Products

Power Management IC Market Estimated at \$14.6B in 2013 according to iSuppli

MIGDAL HAEMEK, Israel and SEOUL, Korea, September 5, 2011 – TowerJazz, the global specialty foundry leader, and Samsung Electro-Mechanics, today announced they have signed a Memorandum of Understanding (MOU) to develop and volume produce a variety of product families based on TowerJazz's 700V (TS100PM) power management process. Per the agreement, Samsung Electro-Mechanics will collaborate with TowerJazz as its preferred supplier for all of its products that use the 700V power platform, starting with its AC to DC adapters. In turn, TowerJazz will modify its process and develop a true high side 700V platform to meet the specific requirements of Samsung Electro-Mechanics and provide a capacity guarantee. The first products are expected to be in the market in the second half of 2012.

TowerJazz's TS100PM technology provides devices that support high voltage range switching (450V, 700V) and low voltage devices (6.5V to 30V) to facilitate the integration required to drive greener AC to DC solutions. The 700V platform will be developed in close collaboration with Samsung Electro-Mechanics.

"We chose to work with TowerJazz on our next-generation of high voltage products because of their superior 700V technology which is unrivaled by other foundries. We were looking for a true partner who would be committed to our success and provide excellent support and the required manufacturing capacity," said Samsung Vice President Dr. Jae Shin Lee. "TowerJazz is well-known in Korea, especially in the power management market, and we are looking forward to our collaboration on many high volume products."

"Korea is a very important region for technical and manufacturing innovation and we are thrilled to partner with a leading electronic component maker like Samsung who has trust in us to co-develop and bring to market their latest high voltage products," said Dr. Avi Strum, Vice President and General Manager of Specialty Business Unit. "We are pleased with the progress we have made in this region which is home to many highly skilled IC designers and industry leading semiconductor companies, and we appreciate this opportunity to become a strong business partner with Samsung."

This partnership was formalized at an MOU signing ceremony, held in Korea on August 31, 2011 between Samsung Electro-Mechanics Vice President Dr. Jae Shin Lee and TowerJazz Chief Executive Officer, Mr. Russell Ellwanger.

About TowerJazz

Tower Semiconductor Ltd. (NASDAQ: TSEM, TASE: TSEM), the global specialty foundry leader, its fully owned U.S. subsidiary Jazz Semiconductor and its fully owned Japanese subsidiary TowerJazz Japan, LTD, 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 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.

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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