
FORM 6-K

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

For the month of February 2010 No. 6

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 E

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 E

No S

On February 18, 2010, the registrant announces that TowerJazz Named 2009 Supplier of the Year by Skyworks Solutions.

This Form 6-K is being incorporated by reference into all effective registration statements filed by us under the Securities Act of 1933.

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: February 18, 2010

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

TowerJazz Named 2009 Supplier of the Year by Skyworks Solutions

Also awarded Best Supplier for External Foundry second year in a row

MIGDAL HAEMEK, Israel, and NEWPORT BEACH, Calif., February 18, 2010 – TowerJazz, the global specialty foundry leader, today announced it has received the 2009 Supplier of the Year Award from Skyworks Solutions, Inc., an innovator of high reliability analog and mixed-signal semiconductors enabling a broad range of end markets. The award was granted to TowerJazz based on superior quality, cycle time, flexibility, customer service, and cost improvements. In addition, for the second year in a row, TowerJazz received the Best Supplier Award for External Foundry for excellent quality, performance and solid alignment with Skyworks' supply chain requirements.

Skyworks, a TowerJazz customer since 2002, utilizes a broad set of the foundry's specialty process offerings including mixed-signal CMOS, RFCMOS, BiCMOS and SiGe BiCMOS, to develop a wide range of Skyworks' products such as transmit/receive modules, power amplifier controllers, switch controllers, linear devices, and wireless LAN solutions.

"We applaud TowerJazz on its continued dedication to meeting our supply chain requirements and providing quality technology and design enablement services," said Bruce J. Freyman, Vice President, Worldwide Operations for Skyworks. "TowerJazz was recognized as our best overall supplier because it excelled in various areas. Throughout the difficult downturn and rapid rebound in 2009, TowerJazz delivered strong support in meeting our demands to deliver high quality, leading-edge devices to our customers quickly."

"These supplier excellence awards from Skyworks demonstrate our commitment to achieve customer-centric values across our entire customer base. We quickly address needs and deliver the best possible quality and service," said Chuck Fox, Senior Vice President, Worldwide Sales and Corporate Marketing, TowerJazz. "Our entire team works very hard to achieve high supplier scores and we will continue to focus on meeting Skyworks' increasing growth, agility and flexibility expectations."

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.

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