

TOWER SEMICONDUCTOR LTD  
Form 6-K  
June 20, 2012

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FORM 6-K

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

For the month of June 2012

No. 04

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  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

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On June 20, 2012, the registrant announces TowerJazz Announces AEC-Q100 Automotive Qualification for its Industry Leading 0.18um BCD Process.

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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: June 20, 2012

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

TowerJazz Announces AEC-Q100 Automotive Qualification for its Industry Leading 0.18um BCD Process

Enables market expansion in Korea for automotive and power management applications

Automotive semiconductor market worldwide estimated to grow from \$30.8B in 2012 to \$46.9B in 2015

MIGDAL HAEMEK, Israel and SEOUL, Korea, June 20, 2012 – TowerJazz, the global specialty foundry leader, today announced its industry leading 0.18-micron Bipolar-CMOS-DMOS (BCD) process has been qualified to meet the certification requirements of the AEC-Q100 standard as defined by the Automotive Electronics Council (AEC). AEC-Q100 is a system standard that defines critical stress tests conducted for the purpose of qualifying an integrated circuit (IC) for automotive applications. TowerJazz attained AEC-Q100 qualification in cooperation with a Korean customer who serves as a supplier for a giant Korean automotive manufacturer.

This accomplishment further builds awareness of the strength of TowerJazz’s power management offering and enables expansion of its market reach into Korea, focusing on the manufacturing of automotive ICs. The worldwide automotive semiconductor market is estimated to grow from \$30.8 Billion in 2012 to \$46.9 Billion in 2015 according to a forecast from PricewaterhouseCoopers.

“Our initiative to certify our power management processes for automotive products demonstrates our continued commitment to serve our customers in all application markets that they serve. This latest milestone for TowerJazz is a formal recognition that our process platforms meet the rigorous quality and reliability standards required for automotive qualification,” said TowerJazz CEO, Russell Ellwanger. “We look forward to highlighting this capability and several other new and expanded process offerings at our Technical Global Symposium to be held in Korea on June 21st.”

“We are pleased to announce our certification to promote our manufacturing capabilities for new automotive customers in Korea. Furthermore, considering the direction of the Korean government and automotive manufacturers to localize the automotive semiconductor market, the AEC-Q100 qualification will enable us to serve the Korean automotive giants directly and indirectly through local Korean fabless companies. In addition, it will bring more business opportunities to TowerJazz especially for power management ICs including motor drive, LED drive, battery management and many others,” said Michael Song, TowerJazz Korea Country Manager. “We are very excited to make strides toward our goal of becoming a preferred foundry for Korean automotive IC designers.”

#### TowerJazz Technical Global Symposium (TGS) Korea

TowerJazz will host a Technical Global Symposium (TGS) in Seoul, Korea at the Grand Intercontinental Hotel on June 21, 2012. The sessions will highlight a variety of TowerJazz’s technology offerings, including specialty CMOS processes with geometries ranging from 1.0 to 0.13-micron, including power management (BCD), SiGe, BiCMOS, mixed-signal & RF CMOS, CMOS image sensor (CIS), and MEMS capabilities as well as digital CMOS. In addition, TowerJazz’s sophisticated set of design kits, accurate models and comprehensive analog IP portfolio will also be presented during the sessions. For more information or to register for the event, please visit: <http://towerjazz.com/tgs/index.jsp>.

#### About TowerJazz

Tower Semiconductor Ltd. (NASDAQ: TSEM, TASE: TSEM), its fully owned U.S. subsidiary Jazz Semiconductor Ltd., and its fully owned Japanese subsidiary

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 fabless 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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#### Asia-Pacific Company/Media Contact:

Shoko Saimiya | 81-795-23-6609 | [saimiya@towerjazz.com](mailto:saimiya@towerjazz.com)

#### TowerJazz Investor Relations Contact

Noit Levi | 972 4 604 7066 | [noit.levi@towerjazz.com](mailto:noit.levi@towerjazz.com)

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