
FORM 6-K

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

For the month May 2018 No. 4

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 May 14, 2018, the Registrant Announces Achieving IATF 16949
Automotive Quality Certification Expanding its High Quality
Automotive Manufacturing Capabilities**

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: May 14, 2018

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

TowerJazz Achieves IATF 16949 Automotive Quality Certification Expanding its High Quality Automotive Manufacturing Capabilities

Presenting its advanced automotive offerings at the AutoSens Conference including CIS, Analog RF and Power Management technologies

MIGDAL HAEMEK, Israel, May 14, 2018 – TowerJazz, the global specialty foundry leader, today announced it has attained the latest Automotive Quality Certification, IATF 16949, the industry’s highest standard of quality system for automotive suppliers. The standard provides guidance and tools for manufacturers to ensure consistency with tight quality requirements, customer satisfaction and continuous improvement. This is achieved by proactive risk mitigation, advanced process and equipment control, and organizational mindset for quality and efficiency.

This new quality certification, together with decades-long automotive experience and a wide-range of analog specialty manufacturing processes at all of its worldwide manufacturing facilities, enable TowerJazz to meet the increasing demand for semiconductor content in the fast-growing automotive market while cementing its strong market presence. The Company is providing full support to its automotive customers, meeting their specific requirements, and working mutually to achieve zero defects and high reliability.

TowerJazz is addressing the analog automotive semiconductor market through best-in-class technology solutions developed through close partnerships and roadmap alignment with market leaders and world-class global customer service. At AutoSens 2018, TowerJazz will showcase its advanced offerings including CMOS image sensors (CIS), analog RF and power management manufacturing technologies addressing ADAS and autonomous driving requirements. TowerJazz has qualified each major process flow in at least two geographically distinct production sites to ensure customers with supply and capacity flexibility at all times.

For additional information on TowerJazz’s automotive offering, please visit: <http://www.towerjazz.com/automotive.html>.

“The new IATF certificate demonstrates our continued commitment to providing a best-in-class environment, ensuring the highest quality and reliability in manufacturing next-generation automotive components,” said Ilan Rabinovich, Worldwide Senior Vice President of Quality & Reliability.

“With the rapid expansion of automotive semiconductor content needed to meet the requirements of ADAS and autonomous cars, TowerJazz is well-prepared to meet automotive customer demands with a broad offering of the highest quality manufacturing technologies. Our extensive collaboration with the leaders in this market is key to creating value for our customers, offering them innovative technologies that best suit their needs,” said Dr. Amol Kalburge, head of the automotive program at TowerJazz.

AutoSens on May 14-17, 2018 in Detroit, USA

TowerJazz will be exhibiting its automotive manufacturing solutions at AutoSens in booth #14. In addition, Dr. Amol Kalburge, head of the automotive program at TowerJazz will be presenting the “Role of Specialty Analog Foundry in Enabling Advanced Driver Assistance Systems (ADAS) and Autonomous Driving” on May 17, 2018 from 9:50am - 10:15am. For more information, visit <https://auto-sens.com/agenda-in-detroit/>.

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.

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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TowerJazz Company Contact: Lauri Julian | +1-949-280-5602 | lauri.julian@towerjazz.com

TowerJazz Investor Relations Contact: Noit Levi | +972-4-604-7066 | noit.levi@towerjazz.com