
FORM 6-K

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

For the month March 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 March 19, 2018, the Registrant and active-semi® Announce the Ramp
to Production of a Motor Driver IC on 200V SOI Technology

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: March 19, 2018

By: /s/ Nati Somekh

Name: Nati Somekh

Title: Corporate Secretary

TowerJazz and active-semi[®] Announce the Ramp to Production of a Motor Driver IC on 200V SOI Technology

MIGDAL HAEMEK, Israel and DALLAS, Texas, March 19, 2018 – [TowerJazz](http://www.towerjazz.com), the global specialty foundry leader, today announced the ramp to production of active-semi[®]'s high-voltage integrated motor controller and driver PAC5232, using TowerJazz's 200V power SOI technology (TS18SOI), addressing the emerging markets of battery-operated power and garden tools. The TS18SOI process offers a superior isolation scheme, enabling integration of multiple circuits, at a smaller footprint while supporting voltages up to 200V.

TowerJazz's 200V SOI platform provides superior performance such as significant die size reduction with deep trench isolation, enabling up to 50% area reduction compared to junction isolation in a standard foundry offering. It also provides very high voltage support exceeding the 80V common junction isolation capabilities, and high immunity to ESD/EMC and latch up which simplifies the design for first time success. The 200V SOI platform offers negative voltages operation down to minus 200V compared to minus 60V in bulk technologies, and in addition, offers low leakage at high temperatures versus junction isolation as well as fast switching capabilities (tens of voltages per nanosecond).

TowerJazz's TS18SOI platform can be used for a broad range of analog and high voltage applications such as motor drivers, home and industrial appliances, battery operated power tools, battery management systems, electric vehicles (EVs), ultra-fast GaN drivers, industrial motor controllers, and many more. This platform is also well-suited to address the automotive high voltage requirements (~100V) for applications such as motor drivers, DC-DC converters, battery management and more.

"We chose TowerJazz's 200V SOI process due to their manufacturing quality and flexibility to define devices needed for our design. Also, by using their process, we could further achieve an optimized smaller footprint and higher efficiency with our PAC[®] solution for the target high voltage battery powered market segment," said David Briggs, Vice President & General Manager, Power Solutions at active-semi[®] International.

"The long term and successful collaboration with active-semi[®] enabled a very quick ramp to production of a new part based on our best-in-class 200V power SOI technology. This high performance and unique technology platform which offers a highly competitive feature set, is extending our offering in the emerging industrial, medical and automotive markets which are in need of very high operating voltages," said Shimon Greenberg, Vice President and General Manager of Power Management & Mixed-Signal/CMOS Business Unit.

About TowerJazz Power Management Technology

The TowerJazz power platform offers high integration capabilities using dense digital libraries with a large portfolio of memories (both OTP and MTP). The technology has best-in-class switching power transistors with low R_{dson} for supporting high efficiency designs for any voltage from 1.8V to 100V. The 200V SOI and 140V Bulk together with additional isolations schemes are available for wide ranging automotive needs with high reliability. TowerJazz offers fast switching devices for smaller BOM size and is extending the technology platform by partnering with leading automotive customers. TowerJazz has qualified all major power management flows in at least two geographically distinct production sites to ensure customers of supply at all times.

About active-semi[®]

Founded in 2004 in Silicon Valley and headquartered in Dallas, Texas, active-semi[®] is a rapidly emerging leader in multi-billion dollar power management and intelligent digital motor drive IC markets. The company's portfolio of analog and mixed signal SoCs provide scalable core platforms used in charging, powering and embedded digital control systems for industrial, commercial and consumer applications. active-semi[®] offers [Power Application Controllers[®]](#) (PAC[®]), [DC-DC](#), and [ActivePMU[™]](#) products that significantly reduce solution size and cost, improve system reliability, and shorten system development cycle-time.

active-semi[®] is a multi-national company with over 170 patents granted and pending. active-semi[®] International Inc. is a Cayman Island corporation backed by leading Venture Capital firms, including, USVP, Tenaya Capital, LG and LDV Partners. More information at www.active-semi.com.

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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