

# FORM 6-K

## SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

For the month of April 2009 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  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 April 07, 2009, the registrant announced Korean customer Cesign selects Jazz Semiconductor BCD process for innovative Class-D amplifier. Attached please find the press release.

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: April 07, 2009

By: /s/ Nati Somekh Gilboa

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Nati Somekh Gilboa  
Corporate Secretary



### KOREAN CUSTOMER CESIGN SELECTS JAZZ SEMICONDUCTOR'S BCD PROCESS FOR INNOVATIVE CLASS-D AMPLIFIER

*Class-D Audio Market Growing by over 50%, Estimated at nearly \$600 Million in 2008*

NEWPORT BEACH, Calif., and SEOUL, South Korea, April 7, 2009 – Tower Semiconductor, Ltd. (NASDAQ: TSEM, TASE: TSEM), and its fully owned U.S. subsidiary Jazz Semiconductor, Inc., today announced that Cesign, a Korean-based fabless analog semiconductor company, has selected Jazz's leading-edge power management technology, a 0.25-micron Bipolar-CMOS-DMOS process (BCD25) to develop and manufacture its innovative Class-D amplifier targeted for the consumer electronics market. According to Research in China, the Class-D Audio market is growing at a rate of above fifty percent. In 2008, its market size was estimated at nearly \$600 million. Cesign chose Jazz's BCD25 process to achieve the best cost and die size due to its industry first Scalable Rdson Technology.

Jazz's BCD25 process technology offers the first scalable Rdson versus breakdown voltage design kit technology enabling optimized area for every transistor. BCD25 provides significant cost reductions by allowing designers of power devices to achieve a significant shrink in device area size. In addition, the BCD25 process offers advanced CMOS, a combination of bipolar NPN and PNP devices, as well as high voltage LDMOS FETs that take advantage of 0.25-micron rules to reduce on-resistance and size of power cells used in complex power management chips.

Cesign's current Class-D amplifier chip (CPA series) offers a unique PWM (pulse width modulation) called XCM (Cross Coupled Modulation). An ultimate total THD+N (harmonic distortion plus noise) result (THD+N < 0.01%) is accomplished with XCM technology which delivers precise audio sound with high power compared to other Class-D amplifier manufacturers. Target applications for Cesign's Class-D amplifier include cellular phones, smart phones, Bluetooth headsets, portable audio, FPTV, LCD monitor and docking station for music player.

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"We chose Jazz as our foundry supplier for their fully scalable options, excellent support and design kits, and leading-edge power management technology," said Kim JeongPyo, CEO of Cesign. "We are especially impressed by their design kit and its unique scalable Rdsn capability which creates the smallest die size possible. In addition, we chose Jazz for their excellent local Korean sales and technical support."

"Our 0.25-micron BCD process is targeted for custom designs including driver ICs, battery and portable power management, power control for PC products, and Class-D audio amplifiers for both fixed and low-power mobile applications. Our innovative Scalable Rdsn Technology embedded in our full design kit, along with our modeling support, enables customers like Cesign to optimize performance and cost for their products while greatly reducing design cycle times," said Dr. Marco Racanelli, Senior VP and General Manager, RF and High Performance Analog Business Group, Jazz Semiconductor.

#### **About Cesign, Inc.**

Cesign, founded in 2006 and located in close proximity to Seoul, South Korea, specializes in analog audio-related devices, including analog class-D audio amplifiers, power stage and audio codec products. Based on fundamental analog technology, Cesign also offers power management products and customer specific analog IPs. The company is focused on designing and developing value-added analog products, providing best-in-class technology and cost advantages over competitive solutions. For more information, visit [www.cesign.co.kr](http://www.cesign.co.kr).

#### **About Tower Semiconductor, Ltd. and Jazz Semiconductor, Inc.**

Tower Semiconductor Ltd. (NASDAQ: TSEM, TASE: TSEM) is a pure-play independent specialty wafer foundry and its fully owned U.S. subsidiary Jazz Semiconductor, Inc., is a leader in Analog-Intensive Mixed-Signal (AIMS) foundry solutions. Tower and Jazz manufacture integrated circuits with geometries ranging from 1.0 to 0.13-micron and provide complementary technical services and design support. In addition to digital CMOS process technology, Tower offers advanced mixed-signal and RF CMOS, Power Management, CMOS image-sensor, non-volatile memory technologies and Flash MTP and OTP solutions. Jazz's comprehensive process portfolio of modular AIMS technologies includes RFCMOS, Analog CMOS, Silicon and SiGe BiCMOS, SiGe C-BiCMOS, Power CMOS and High Voltage CMOS. To provide world-class customer service, Tower maintains two manufacturing facilities in Israel; Jazz maintains a fab in the U.S. and additional manufacturing capacity is available in China through partnerships with ASMC and HHNEC. For more information, please visit [www.towersemi.com](http://www.towersemi.com) and [www.jazzsemi.com](http://www.jazzsemi.com).

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#### **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's and 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. 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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