

FORM 6-K

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

For the month of July 2007 No. 2

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 July 11, 2007, the Registrant announced that Tower Semiconductor licenses 20kV HBM ESD protection from Sarnoff, attached hereto is a copy of 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.

Date: July 11, 2007

TOWER SEMICONDUCTOR LTD.

By: /s/ Nati Somekh Gilboa

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Nati Somekh Gilboa  
Corporate Secretary

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TOWER SEMICONDUCTOR LICENSES 20KV HBM ESD PROTECTION  
FROM SARNOFF

GISTEL, BELGIUM and MIGDAL HAEMEK, ISRAEL (July 11, 2007) - Sarnoff Europe ([www.sarnoffeurope.com](http://www.sarnoffeurope.com)) and Tower Semiconductor ([www.towersemi.com](http://www.towersemi.com)) today announced that Tower Semiconductor has licensed Sarnoff Europe's TakeCharge(R) electrostatic discharge (ESD) protection IP portfolio. Tower Semiconductor will use TakeCharge for its customer's analog and mixed-signal applications requiring high-performance low-capacitance ESD protection of up to 20kV HBM.

"Sarnoff's TakeCharge architecture enables pushing technology to its physical limits. It is aimed at providing ultra-high, best-in-class, ESD protection while maintaining small circuit footprint.

Product applications that could benefit the most from this family of ESD solutions include, among other, high-frequency interface ICs, such as Analog Switches, minigates and multigates.

Working closely with Tower Semiconductor, Sarnoff Europe will develop optimized TakeCharge Design Kits (TDK), semi-automated tool sets containing a library of scalable ESD design solutions. These TDK's will be licensed to Tower's customers, enabling the non-ESD-expert to efficiently implement ESD protection, and attain first time success, fast time to market in each of their integrated circuit (IC) designs.

"As a specialty foundry, it is important that we provide our fabless customers with a wide range of robust and efficient high-performance ESD protection solutions for all their logic and mixed-signal applications," said Dani Ashkenazi, General Manager CMOS Product Line at Tower Semiconductor. "Sarnoff Europe has consistently been a reliable and expert ESD protection IP partner to the semiconductor industry, making them the natural choice as our partner for these demanding applications."

"We are pleased that Tower Semiconductor selected Sarnoff Europe to provide a high-quality ESD protection platform," said Koen Verhaege, Executive Director of Sarnoff Europe. "Sarnoff Europe TakeCharge ESD protection solutions are developed with scalability in mind, and thus can meet high-performance requirements, even up to 20kV HBM."

TakeCharge(R) technology is silicon proven in advanced processes down to 65nm CMOS, with 45nm ESD design solutions already in full development, and is widely used by leading IC producers worldwide, including Toshiba, Sony, Fujitsu, Renesas, Matsushita, Epson-Seiko, OKI, NJR, Ricoh, Infineon, ST-Microelectronics, Tower Semiconductor, Altera, PMC-Sierra, ON-Semiconductor, Nanotech Semiconductor, Redmere Technology, AMI Semiconductor, Scintera, and more.

#### ABOUT SARNOFF CORPORATION

Sarnoff Corporation ([www.sarnoff.com](http://www.sarnoff.com)) produces innovations in electronic, video and vision technologies that generate successful new products and services for our government and commercial clients worldwide. Founded in 1942 as RCA Laboratories, Sarnoff makes continuous breakthroughs in ICs, lasers, imaging and sensing devices; biomedical diagnostics; digital TV and video for security, surveillance and entertainment; high-performance networking; and wireless communications. Sarnoff is a subsidiary of SRI International.

#### ABOUT SARNOFF EUROPE

Sarnoff Europe ([www.sarnoffeurope.com](http://www.sarnoffeurope.com)) headquartered in Gistel, Belgium, is a subsidiary company of Sarnoff Corporation. Sarnoff Europe assumes worldwide responsibility for the development and commercialization of Sarnoff's TakeCharge(R) on-chip ESD protection IP.

#### ABOUT TOWER SEMICONDUCTOR

Tower Semiconductor Ltd. (Nasdaq: TSEM, TASE: TSEM) is an independent specialty foundry that delivers customized solutions in a variety of advanced CMOS technologies, including digital CMOS, mixed-signal and RF (radio frequency) CMOS, CMOS image sensors, power management devices, and embedded non-volatile memory solutions. Tower's customer orientation is complemented by its uncompromising attention to quality and service. Its specialized processes and engineering expertise provides highly flexible, customized manufacturing solutions to fulfill the increasing variety of customer needs worldwide. Boasting two world-class manufacturing facilities with standard and specialized process technologies ranging from 1.0- to 0.13-micron, Tower Semiconductor provides exceptional design support and technical services to help customers sustain long-term, reliable product performance, while delivering on-time and on-budget results. More information can be found at <http://www.towersemi.com>.