

**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

**FORM 15**

**CERTIFICATION AND NOTICE OF TERMINATION OF REGISTRATION UNDER SECTION 12(g) OF THE  
SECURITIES EXCHANGE ACT OF 1934 OR SUSPENSION OF DUTY TO FILE REPORTS UNDER SECTIONS 13  
AND 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934.**

Commission File Number **000-30941**

**Axcelis Technologies, Inc.**

(Exact name of registrant as specified in its charter)

**180 Cherry Hill Drive  
Beverly, Massachusetts 01915  
(978) 787-4000**

(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

**Preferred Share Purchase Rights**

(Title of each class of securities covered by this Form)

**Common Stock, par value \$.001**

(Titles of all other classes of securities for which a duty to file reports under section 13(a) or 15(d) remains)

Please place an X in the box(es) to designate the appropriate rule provision(s) relied upon to terminate or suspend the duty to file reports:

Rule 12g-4(a)(1)	<input checked="" type="checkbox"/>
Rule 12g-4(a)(2)	<input type="checkbox"/>
Rule 12h-3(b)(1)(i)	<input type="checkbox"/>
Rule 12h-3(b)(1)(ii)	<input type="checkbox"/>
Rule 15d-6	<input type="checkbox"/>

Approximate number of holders of record as of the certification or notice date: 0

Pursuant to the requirements of the Securities Exchange Act of 1934 Axcelis Technologies, Inc. has caused this certification/notice to be signed on its behalf by the undersigned duly authorized person.

Date: November 8, 2011

AXCELIS TECHNOLOGIES, INC.

By: /s/ Lynnette C. Fallon

Name: Lynnette C. Fallon

Title: Executive Vice President HR/Legal and General Counsel

Instruction: This form is required by Rules 12g-4, 12h-3 and 15d-6 of the General Rules and Regulations under the Securities Exchange Act of 1934. The registrant shall file with the Commission three copies of Form 15, one of which shall be manually signed. It may be signed by an officer of the registrant, by counsel or by any other duly authorized person. The name and title of the person signing the form shall be typed or printed under the signature.

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