### **AXCELIS TECHNOLOGIES INC**

# Form SC 13G

### February 07, 2014

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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
SCHEDULE 13G
Under the Securities Exchange Act of 1934
(Amendment No. _____) *
Axcelis Technologies, Inc.
(Name of Issuer)
Common
(Title of Class of Securities)
054540109
(CUSIP Number)
December 31, 2013
(Date of Event Which Requires Filing of this Statement)
Check the appropriate box to designate the rule pursuant to
which this Schedule is filed:
[X]
     Rule 13d-1(b)
[ ] Rule 13d-1(c)
      Rule 13d-1(d)
[ ]
*The remainder of this cover page shall be filled out for a
reporting person's initial filing on this form with respect to
the subject class of securities, and for any subsequent
amendment containing information which would alter the
disclosures provided in a prior cover page.
The information required in the remainder of this cover page
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shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

CUSIP No. 054540109

- Names of Reporting Persons. I.R.S. Identification Nos. of above persons (entities only). Donald Smith & Co., Inc. 13-2807845
- Check the Appropriate Box if a Member of a Group (See Instructions)
  - (a)
  - (b) [X]

_					
3. SEC	Use Only				
		• • • • • • • • • • • • • • • • • • • •			
	_	Place of Organization			
A D	elaware Corp	oration			
Number of	5 Solo Va	oting Power 7,645,353 shares			
Shares	J. 501e vc	reling rower 7,043,333 Shares			
Beneficially	6.	Shared Voting Power 0			
Owned by	•	Shared voting rower			
Each Reporting	7.	Sole Dispositive Power 10,849,200 shares			
Person With		1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1			
		8. Shared Dispositive Power 0			
		_			
	Beneficially 0,849,200 sh	Owned by Each Reporting Person mares			
10. Check if th Shares (See Instruc	22 2	Amount in Row (9) Excludes Certain			
11 5	G1 D				
		sented by Amount in Row (9)9.90%			
12. Type of Rep	orting Perso	on (See Instructions) IA			
1. Names of Re	porting Pers	sons.			
		above persons (entities			
only).					
Donald Smith V	alue Fund, I	J.P.			
27-	0229715				
· · · · · · · · · · · · · · · · · · ·	ppropriate E	Box if a Member of a Group (See			
Instructions)					
(a)					
(b) [X]					
3. SEC	Use Only				
J. 3EC	use only				
4. Cit	izenshin or	Place of Organization			
	elaware Corp				
11 5	014410 001	.01401011			
Number of	5. Sole Vo	oting Power 287,600 shares			
Shares					
Beneficially	6.	Shared Voting Power 0			
Owned by					
Each Reporting	7.	Sole Dispositive Power 10,849,200 shares			
Person With					
		8. Shared Dispositive Power 0			
		Owned by Each Reporting Person			
1	0,849,200 sh	nares			
10 Chook if th	o Aggragata	Amount in Pow (0) Evaluados Contain			
10. Check if th Shares (See Instruc		Amount in Row (9) Excludes Certain			

11. 12.		of Class Reporti	_		_		w (9)	9.90% PN	
I.R.S. I	Identifi	f Report. cation N	os. of a	ibove pe			S		
Doi	nald Smi	th Long/ 27-1481		quities	Fund, 1	L.P.			
2. Instruct		he Appro	priate E	Box if a	a Membe:	r of a G	roup	(See	
	(a) (b) [X	]							
		SEC Use		• • • • •					
	4.	Citizen A Delaw				nization			
Number of	of	5.	Sole Vo	ting Po	ower	36,647	share	S	
Benefic:	_		6.	Shared	d Votin	g Power		0	
Each Rep	porting		7.	Sole I	Disposit	cive Pow	er 10	,849,200	shares
				8.	Share	ed Dispo	sitiv	e Power	0
9.Aggre	gate Amo	unt Bene 10,84	ficially 9,200 sh		by Eacl	n Report	ing P	erson	
		f the Ago		Amount	in Row	(9) Exc.	ludes	Certain	
11. 12.		of Class Reporti					w (9)	9.90% PN	
only).		f Report. cation No	-		ersons	(entitie:	S		
2. Instruct		he Appro	priate E	Box if a	a Membe:	r of a G	roup	(See	
	(a) (b) [X	]							
	3.	SEC Use	Only						
	4.	Citizen	ship or	Place o	of Orgai	nization			

A Delaware Corporation

Number of	5.	Sole Vot	ting Powe	er 2	21,800 s	hares	
Shares							
Beneficially		6.	Shared V	Voting	Power	0	
Owned by							
Each Reporting		7.	Sole Dis	spositi	ve Powe	r 10,849,200	) shares
Person With							
			8.	Shared	l Dispos	itive Power	0

- 9.Aggregate Amount Beneficially Owned by Each Reporting Person 10,849,200 shares
- 10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions)
- 11. Percent of Class Represented by Amount in Row (9)9.90% 12. Type of Reporting Person (See Instructions) IN

- (a) Name of Issuer: Axcelis Technologies, Inc.
- (b) Address of Issuer's Principal Executive Offices
  108 Cherry Hill Drive
  Beverly, MA 01915

Item 2.

- (a) Name of Person Filing: Donald Smith & Co., Inc.
- (b) Address of Principal Business Office: 152 West 57th Street New York, NY 10019
- (c) Citizenship: A Delaware Corporation
- (d) Title of Class of Securities: Common
- (e) CUSIP Number: 054540109

Item 3. This statement is filed pursuant to Section 240.13d-1(b), and the person filing is an investment advisor registered in accordance with Section 240.13d-1(b)(1)(ii)(E);

#### Item 4. Ownership.

Provide the following information regarding the aggregate number and percentage of the class of securities of the issuer identified in Item 1.

- (a) Amount beneficially owned: 10,849,200
- (b) Percent of class: 9.90%
- (c) Number of shares as to which the person has:
- (i) SOLE POWER TO VOTE: 7,991,400
- (ii) SHARED POWER TO VOTE: SEE ITEM 6 OF COVER PAGE
- (iii) SOLE POWER TO DISPOSE: 10,849,200
- (iv) SHARED POWER TO DISPOSE:

Item 5. Ownership of Five Percent or Less is  $\begin{tabular}{ll} NOT & APPLICABLE \end{tabular}$ 

Item 6. Ownership of More than Five Percent on Behalf of Another Person:
1. Donald Smith & Co., Inc. does not serve as custodian of
the assets of any of its clients; accordingly, in each
instance only the client or the client?s custodian or
trustee bank has the right to receive dividends paid
with respect to, and proceeds from the sale of, such
securities.

The ultimate power to direct the receipt of dividends paid with respect to, and the proceeds from the sale of, such securities, is vested in the institutional clients which Donald Smith & Co., Inc. serves as investment advisor. Any and all discretionary authority which has been delegated to Donald Smith & Co., Inc. may be revoked in whole or in part at any time.

To the knowledge of Donald Smith & Co., Inc., with respect to all securities reported in this schedule

owned by advisory clients of Donald Smith & Co., Inc., not more than 5% of the class of such securities is owned by any one client.

- 2. With respect to the remaining securities owned, various persons have the right to receive or the power to direct the receipt of dividends from, or the proceeds from the sale of, the Common Stock of Axcelis Technologies, Inc. No one person?s interest in the Common Stock of Axcelis Technologies, Inc. is more than five percent of the total outstanding Common Stock.
- Item 7. Identification and Classification of the Subsidiary Which Acquired the Security Being Reported on By the Parent Holding Company  ${\tt NOT\ APPLICABLE}$
- Item 8. Identification and Classification of Members of the Group See EXHIBIT  $\ensuremath{\mathtt{A}}$
- Item 9. Notice of Dissolution of Group
   NOT APPLICABLE
- Item 10. Certification

(a)

By signing below I certify that, to the best of my knowledge and belief, the securities referred to above were acquired and are held in the ordinary course of business and were not acquired and are not held for the purpose of or with the effect of changing or influencing the control of the issuer of the securities and were not acquired and are not held in connection with or as a participant in any transaction having that purpose or effect.

#### SIGNATURE

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

February 7, 2014 Date
Donald G. Smith Signature
President Title

SCHEDULE 13G - TO BE INCLUDED IN STATEMENTS

FILED PURSUANT TO RULE 13d-1(b) or 13d-2(b) RULE 13d-1(f)(1) EXHIBIT A:

Donald Smith & Co., Inc. IA
Donald Smith Value Fund, L.P. PN
Donald Smith Long/Short Equities Fund, L.P. PN
Velin Mezinev, IN

SCHEDULE 13G - TO BE INCLUDED IN STATEMENTS

FILED PURSUANT TO RULE 13d-1(b) or 13d-2(b) RULE 13d-1(f)(1) AGREEMENT

The undersigned persons, on February 7, 2014, agree and consent to the joint filing on their behalf of this Schedule 13G in connection with their beneficial ownership of the Common Stock of Axcelis Technologies, Inc. at December 31, 2013.

Donald Smith & Co., Inc.

By /s/ Donald G. Smith
Donald G.Smith
President
Duly authorized by and on behalf of Donald Smith & Co., Inc.

Donald Smith Value Fund, L.P.

By /s/ Donald G. Smith
Donald G.Smith
President
Duly authorized by and on behalf of
Donald Smith Value Fund, L.P

Donald Smith Long/Short Equities Fund, L.P.

By /s/ Donald G. Smith

Donald G.Smith

President

Duly authorized by and on behalf of

Donald Smith Long/Short Equities Fund, L.P

Velin Mezinev

By /s/ Donald G. Smith
Donald G.Smith
President
Duly authorized by and on behalf of Velin Mezinev