

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**
Washington, D.C. 20549

FORM 10-Q

(Mark One)

QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the quarterly period ended March 31, 2008

or

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from _____ to _____

Commission file number 000-30941

AXCELIS TECHNOLOGIES, INC.

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

34-1818596
(IRS Employer
Identification No.)

108 Cherry Hill Drive
Beverly, Massachusetts 01915
(Address of principal executive offices, including zip code)

(978) 787-4000
(Registrant's telephone number, including area code)

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer

Accelerated filer

Non-accelerated filer

(Do not check if a smaller
reporting company)

Smaller reporting company

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act) Yes No

As of May 9, 2008 there were 102,440,712 shares of the registrant's common stock outstanding.

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PART 1—FINANCIAL INFORMATION

Item 1. Financial Statements.

Axcelis Technologies, Inc.
Consolidated Statements of Operations
(In thousands, except per share amounts)
(Unaudited)

	Three months ended March 31,	
	2008	2007
Revenue		
Product	\$ 69,784	\$ 80,726
Service	13,993	14,741
Royalties, primarily from SEN	1,117	2,059
	<u>84,894</u>	<u>97,526</u>
Cost of revenue		
Product	47,988	47,701
Service	7,690	8,575
	<u>55,678</u>	<u>56,276</u>
Gross profit	29,216	41,250
Operating expenses		
Research and development	16,853	18,228
Sales and marketing	11,905	12,938
General and administrative	9,814	10,476
Amortization of intangible assets	656	656
Restructuring charges	51	—
	<u>39,279</u>	<u>42,298</u>
Loss from operations	(10,063)	(1,048)
Other income (expense)		
Equity income of SEN	1	4,667
Interest income	690	1,454
Interest expense	(1,601)	(1,668)
Other—net	318	(24)
	<u>(592)</u>	<u>4,429</u>
Income (loss) before income taxes	(10,655)	3,381
Income taxes	426	709
Net income (loss)	<u>\$ (11,081)</u>	<u>\$ 2,672</u>
Net income (loss) per share		
Basic	\$ (0.11)	\$ 0.03
Diluted	(0.11)	0.03
Shares used in computing basic and diluted income (loss) per share		
Basic	102,447	101,492
Diluted	102,447	102,421

See accompanying Notes to Consolidated Financial Statements

Axcelis Technologies, Inc.
Consolidated Balance Sheets
(In thousands)
(Unaudited)

	March 31, 2008	December 31, 2007
ASSETS		
Current assets		
Cash and cash equivalents	\$ 68,192	\$ 83,877
Restricted cash	18,300	17,018
Accounts receivable, net	55,093	76,067
Inventories, net		
Prepaid expenses and other current assets	23,492	32,442
Total current assets	351,080	378,682
Property, plant and equipment, net	67,309	68,101
Investment in SEN	148,481	132,911
Goodwill	42,115	42,115
Intangible assets	10,269	10,925
Other assets	35,859	37,195
	\$ 655,113	\$ 669,929
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities		
Accounts payable	\$ 23,521	\$ 27,054
Accrued compensation	12,457	17,003
Warranty	4,513	5,011
Income taxes	763	531
Deferred revenue	21,389	35,827
Other current liabilities	7,907	8,577
Current portion of convertible subordinated debt	80,721	—
Total current liabilities	151,271	94,003
Convertible subordinated debt	—	79,923
Long-term deferred revenue	4,383	4,704
Other long-term liabilities	5,340	5,293
Stockholders' equity		
Preferred stock	—	—
Common stock	103	103
Additional paid-in capital	479,604	478,726
Treasury stock	(1,218)	(1,218)
Accumulated deficit	(12,896)	(1,815)
Accumulated other comprehensive income	28,526	10,210
	494,119	486,006
	\$ 655,113	\$ 669,929

See accompanying Notes to Consolidated Financial Statements

Axcelis Technologies, Inc.
Consolidated Statements of Cash Flows
(In thousands)
(Unaudited)

	Three months ended March 31,	
	2008	2007
Operating activities		
Net income (loss)	\$ (11,081)	\$ 2,672
Adjustments required to reconcile net income to net cash used for operating activities		
Depreciation and amortization	5,008	4,460
Amortization of intangible assets	656	656
Accretion of premium on convertible subordinated debt	798	737
Stock-based compensation expense	941	1,081
Undistributed income of SEN	(1)	(4,667)
Changes in operating assets and liabilities		
Accounts receivable	21,838	(6,346)
Inventories	(13,686)	(13,587)
Other current assets	9,550	(6,624)
Accounts payable and other current liabilities	(10,197)	(29,342)
Deferred revenue	(14,760)	4,490
Income taxes	226	(2,426)
Cash dividend from SEN	—	5,677
Other assets and liabilities	(1,587)	(3,501)
Net cash used for operating activities	(12,295)	(46,720)
Investing activities		
Sales and maturities of marketable securities	—	29,200
Expenditures for property, plant and equipment	(1,212)	(3,649)
Increase in restricted cash	—	(39)
Net cash (used for) provided by investing activities	(1,212)	25,512
Financing activities		
Repayment of convertible subordinated debt	—	(74,217)
Proceeds from the exercise of stock options	20	394
Proceeds from employee stock purchase plan	424	585
Net cash (used for) provided by financing activities	444	(73,238)
Effect of exchange rate changes on cash	(2,622)	(593)
Net increase (decrease) in cash and cash equivalents	(15,685)	(95,039)
Cash and cash equivalents at beginning of period	83,877	140,451
Cash and cash equivalents at end of period	\$ 68,192	\$ 45,412

See accompanying Notes to Consolidated Financial Statements

Notes To Consolidated Financial Statements (Unaudited)

(All tabular amounts in thousands, except per share amounts)

Note 1. Nature of Business and Basis of Presentation

Axcelis Technologies, Inc. ("Axcelis" or the "Company"), is a worldwide producer of ion implantation, dry strip and other processing equipment used in the fabrication of semiconductor chips in the United States, Europe and Asia. In addition, the Company provides extensive aftermarket service and support, including spare parts, equipment upgrades, and maintenance services to the semiconductor industry. The Company owns 50% of the equity of a joint venture with Sumitomo Heavy Industries, Ltd. in Japan. This joint venture, which is known as SEN Corporation, an SHI and Axcelis Company ("SEN"), licenses technology from the Company relating to the manufacture of specified ion implantation products and has exclusive rights to manufacture and sell these products in the territory of Japan. SEN is the leading producer of ion implantation equipment in Japan.

As of March 31, 2008, the Company had approximately \$68.2 million of cash and cash equivalents. During the first quarter of 2008, the Company experienced negative cash flows from operations and anticipates continued cash outflows in the second quarter of 2008. Furthermore, as of March 31, 2008, the Company's New Notes (see Note 8), due January 15, 2009, were reclassified to current liabilities. On April 23, 2008, the Company entered into a revolving credit facility (the "facility") with a bank that provides for borrowings up to the lesser of (A) \$50 million or (B) specified percentages of the amounts of qualifying accounts receivable and inventory (approximately \$28 million on the date of execution). Presently, the Company's 2008 forecast does not anticipate drawing down on the facility. The underlying agreement contains financial covenants that limit the amounts of net loss the Company can incur in the second and third quarters of 2008 and specify that the Company must report net income in the fourth quarter of 2008 and thereafter. The Company's current forecast for the second quarter of 2008 indicates that it will not meet the financial covenant. The Company does expect to achieve compliance in the fourth quarter of 2008. Should the Company not be able to meet these financial covenants, it may not be able to borrow against the facility. The Company is also negotiating a sale-leaseback of the Company's headquarters and manufacturing facility located in Beverly, Massachusetts. However, there can be no assurance that the sale-leaseback transaction will be completed.

The Company expects that existing cash and cash equivalents and expected positive cash flow for the remainder of 2008, based primarily on current expectations of customer ordering patterns, coupled with planned financing events, will be sufficient to satisfy the Company's anticipated cash requirements for the remainder of 2008 and beyond. Should the Company not be able to obtain financing with acceptable terms and/or current estimates for anticipated cash flow in 2008 prove incorrect, the Company's management may seek alternative strategies intended to improve the Company's cash position. These strategies could include initiating further cost reduction efforts, seeking improvements in working capital management such as seeking additional financing, and reducing or delaying capital expenditures.

The accompanying unaudited consolidated financial statements have been prepared in accordance with generally accepted accounting principles for interim financial information and with the instructions to Form 10-Q and Article 10 of Regulation S-X. Accordingly, they do not include all of the information and footnotes required by generally accepted accounting principles for complete financial statements. In the opinion of management all adjustments, which are of a normal recurring nature, considered necessary for a fair presentation have been included. Operating results for the interim periods presented are not necessarily indicative of the results that may be expected for other interim periods or for the year as a whole.

The balance sheet at December 31, 2007 has been derived from the audited financial statements at that date but does not include all of the information and footnotes required by generally accepted accounting principles for complete financial statements. For further information, refer to the consolidated financial statements and footnotes thereto included in Axcelis Technologies, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2007.

Note 2. Stock-Based Compensation

The Company maintains the Axcelis Technologies, Inc. 2000 Stock Plan (the "2000 Plan"), a stock award and incentive plan which permits the issuance of options, restricted stock, restricted stock units and performance awards to selected employees, directors and consultants of the Company. The Company also maintains the Axcelis Technologies, Inc. Employee Stock Purchase Plan (the "ESPP"), an Internal Revenue Code Section 423 plan. The 2000 Plan and the ESPP are more fully described in Note 15 to the consolidated financial statements in our 2007 Annual Report on Form 10-K.

Under SFAS No. 123R, the Company recognized stock-based compensation expense of \$0.9 million and \$1.1 million for the three months ended March 31, 2008 and 2007, respectively. These amounts include the impact of recognizing compensation expense related to restricted stock units, restricted stock, non-qualified stock options and stock offered under the ESPP.

Note 3. Net Income Per Share

SFAS No. 128, "Earnings Per Share," requires two presentations of earnings per share, "basic" and "diluted." Basic earnings per share is computed by dividing income available to common stockholders (the numerator) by the weighted-average number of common shares outstanding (the denominator) for the period. The computation of diluted earnings per share is similar to basic earnings per share, except that the denominator is increased to include the number of additional common shares that would have been outstanding if the potentially dilutive common shares had been issued.

For purposes of computing diluted earnings per share, weighted average common shares outstanding do not include stock options and restricted stock awards with an exercise price inclusive of unrecognized compensation expense which exceeded the average fair market value of the Company's common stock for the period, as the effect would be anti-dilutive. The Company has excluded 0.1 million incremental shares attributable to restricted stock, restricted stock units and outstanding stock options for the three months ended March 31, 2008 as their effect would be anti-dilutive. In addition, 4.0 million and 3.9 million shares of common stock for the assumed conversion of the Company's convertible debt for the three months ended March 31, 2008 and 2007, respectively, computed using the if converted method, were excluded from the computation of diluted earnings per share as the effect of conversion would be anti-dilutive. These stock options, restricted stock awards, and conversions could, however, become dilutive in future periods.

A reconciliation of net income and shares used in computing basic and diluted earnings per share follows:

	Three months ended March 31,	
	2008	2007
	(In thousands, except per share data)	
Income (loss) available to common stockholders	\$ (11,081)	\$ 2,672
Weighted average common shares outstanding used in computing basic net income (loss) per share	102,447	101,492
Incremental shares	—	929
Weighted average common shares outstanding used in computing diluted net income (loss) per share	102,447	102,421
Net income (loss) per share		
Basic	\$ (0.11)	\$ 0.03
Diluted	(0.11)	0.03

Note 4. Comprehensive Income

The components of comprehensive income follow:

	Three months ended March 31,	
	2008	2007
	(in thousands)	
Net income (loss)	\$ (11,081)	\$ 2,672
Other comprehensive income		
Foreign currency translation adjustments	18,316	1,125
Unrealized gain on marketable securities	—	2
Comprehensive income	\$ 7,235	\$ 3,799

Note 5. Inventories

The components of inventories follow:

	March 31, 2008	December 31, 2007
	(in thousands)	
Raw materials	\$ 99,009	\$ 95,289
Work-in-process	53,716	41,018
Finished goods (completed systems)	33,278	32,971
	\$ 186,003	\$ 169,278

Approximately \$89.3 million and \$75.9 million of inventory as of March 31, 2008 and December 31, 2007, respectively, relates to the Optima product family.

Effective January 1, 2008, the Company refined its methodology to more accurately estimate excess inventory amounts on a global basis. Under the previous methodology, the Company would have been required to reserve approximately \$1.1 million in excess amounts.

Note 6. Restructuring Charges

In October 2007, the Company implemented a reduction in force related to planned actions taken by management to control costs and improve the focus of its operations in order to sustain future profitability and conserve cash. This reduction in force is expected to result in a total charge to expense of approximately \$2.9 million related to separation and outplacement costs, of which \$2.5 million was recorded in 2007 and \$0.1 million was recorded in the period ended March 31, 2008. The remaining \$0.3 million will be recorded in the remainder of 2008. A total of \$2.3 million has been paid through March 31, 2008. Substantially all payments related to these actions are expected to be completed in 2008.

Changes in the Company's restructuring liability, which consists primarily of severance and related costs, included in amounts reported as other current liabilities, follows:

	<u>(in thousands)</u>
Balance at December 31, 2007	\$ 916
Restructuring expense	51
Cash payments	<u>(742)</u>
Balance at March 31, 2008	<u>\$ 225</u>

Note 7. Product Warranty

The Company offers a one to three year warranty for all of its products, the terms and conditions of which vary depending upon the product sold. For all systems sold, the Company accrues a liability for the estimated cost of standard warranty at the time of system shipment and defers the portion of systems revenue attributable to the fair value of non-standard warranty. Revenue for non-standard warranty is recognized ratably over the applicable warranty period. Costs for non-standard warranty are expensed as incurred. Factors that affect the Company's warranty liability include the number of installed units, historical and anticipated product failure rates, material usage and service labor costs. The Company periodically assesses the adequacy of its recorded liability and adjusts the amount as necessary.

Changes in the Company's product warranty liability are as follows:

	Three months ended March 31,	
	2008	2007
	(in thousands)	
Balance at December 31	\$ 6,245	\$ 6,472
Warranties issued during the period	858	1,136
Settlements made during the period	(1,689)	(1,447)
Changes in liability for pre-existing warranties during the period	12	(297)
Balance at March 31	\$ 5,426	\$ 5,864
Amount classified as current	\$ 4,513	\$ 4,609
Amount classified as long-term	913	1,255
Balance at March 31	\$ 5,426	\$ 5,864

Note 8. Convertible Subordinated Debt

In January 2002, the Company completed an offering of \$125 million of 4.25% Convertible Subordinated Notes due January 15, 2007 (the "Old Notes").

On May 2, 2006, the Company entered into an exchange and purchase agreement pursuant to which the holder of an aggregate of approximately \$50.8 million of the Old Notes agreed to exchange its Old Notes for \$50.8 million in aggregate principal amount of the Company's newly issued 4.25% Convertible Senior Subordinated Notes due January 15, 2009 (the "New Notes"), plus accrued and unpaid interest on the Old Notes through but excluding May 2, 2006, the closing date of the exchange. In addition, the Company issued an additional \$24.2 million of New Notes, resulting in an aggregate of \$75 million of New Notes outstanding.

The New Notes are unsecured senior indebtedness of the Company and bear interest at the rate of 4.25% per annum. Interest is payable on January 15 and July 15 of each year, commencing July 15, 2006. The New Notes mature on January 15, 2009. At maturity, the Company is required to repay the outstanding principal of the New Notes, plus a maturity premium of 11.125% of such principal, resulting in an effective annual yield to maturity of approximately 8.0%.

The principal amount of the New Notes, together with the accreted portion of the maturity premium, which increases over the term of the notes, as of the conversion date, are convertible at the option of the holder, at any time on or prior to maturity, into shares of the Company's common stock at a conversion price equal to \$20.00 per share, which also was the conversion price of the Old Notes, subject to adjustment in certain circumstances. In addition, debt issuance costs of approximately \$0.2 million related to the New Notes are being amortized to interest expense over the term of the New Notes.

On January 15, 2007, the Company paid \$74.2 million to redeem the remaining Old Notes.

See Note 1 and Note 12 for discussion of liquidity and financing alternatives.

Note 9. Income Taxes

Income tax expense relates principally to operating results of foreign entities in jurisdictions, primarily in Asia, where the company earns taxable income. The Company has significant net operating losses in the United States and certain foreign tax jurisdictions and, as a result, does not pay significant income taxes in those jurisdictions. Accordingly, our effective income tax rate is not meaningful.

Note 10. Significant Customers

In the three months ended March 31, 2008, one customer accounted for approximately 24% of revenue. In the three months ended March 31, 2007, two customers accounted for approximately 19% and 14% of revenue, respectively. For the three months ended March 31, 2008 and 2007, no other customer accounted for more than 10% of revenue.

Note 11. Contingencies

Litigation

The Company is not presently a party to any litigation that it believes might have a material adverse effect on its business operations. The Company is, from time to time, a party to litigation that arises in the normal course of its business operations. Pending matters that arose outside of the ordinary course of business and which had developments since January 1, 2008 are:

Two purported class actions were filed against the Company in connection with proposals made by Sumitomo Heavy Industries, Ltd. in 2008 to acquire the outstanding common stock of the Company. We believe each of these cases is without merit and continue to defend against them vigorously.

- On or about February 11, 2008, Martin Meltzer filed a purported shareholder class action complaint in Massachusetts Superior Court (Civil Action No. 08-0692-E), naming as defendants the Company, its current Directors and a former Director. The complaint alleges that the Company and its Board of Directors breached their fiduciary duties to Axcelis shareholders by failing to properly consider the February 11, 2008 unsolicited offer by Sumitomo Heavy Industries Ltd. to purchase all of the outstanding stock of the Company for \$5.20 per share. The complaint seeks an order from the Court directing the Company and its Board of Directors to "give due consideration to any proposed business combination" to maximize shareholder value, while ensuring that no conflicts of interest exist. The litigation is in a preliminary stage.
- On or about February 28, 2008, Shirley Simon filed a purported shareholder class action complaint in Delaware Chancery Court (Case No. 3582), naming as defendants the Company and its current Directors. The complaint alleges that the Company and its Board of Directors breached their fiduciary duties to Axcelis shareholders by failing to properly consider the February 11, 2008 unsolicited offer by Sumitomo Heavy Industries Ltd. to purchase all of the outstanding stock of the Company for \$5.20 per share, and subsequently rejecting that offer. The complaint seeks an order from the Court directing the Company and its Board of Directors to cooperate with any person or entity, including Sumitomo that proposes a merger, acquisition or other transaction that would maximize shareholder value, while ensuring that no conflicts of interest exist. The complaint also seeks to have the defendants other than the Company, pay damages suffered to the class as a result of their alleged breaches of fiduciary duty. A motion to dismiss and accompanying brief were filed by Axcelis on March 26, 2008. On April 30, 2008, the plaintiffs amended their complaint to cover the proposal made by Sumitomo on March 10, 2008 and other matters relating to the annual meeting of stockholders held on May 1, 2008.

On April 23, 2008, Varian Semiconductor Associates, Inc. filed a complaint in Federal District Court in Massachusetts claiming that Axcelis' "Optima products" infringe a Varian patent that was

re-issued in January 2008. The complaint was served on April 28, 2008. Axcelis deems this lawsuit to be without merit and intends to defend its position to the fullest extent necessary.

Indemnifications

The Company's system sales agreements typically include provisions under which the Company agrees to take certain actions, provide certain remedies and defend its customers against third-party claims of intellectual property infringement under specified conditions and to indemnify customers against any damage and costs awarded in connection with such claims. The Company has not incurred any material costs as a result of such indemnifications and has not accrued any liabilities related to such obligations in the accompanying consolidated financial statements.

Note 12. Subsequent Events

On April 23, 2008, the Company entered into a revolving credit facility (the "Facility") with a bank that provides for borrowings up to the lesser of (A) \$50 million or (B) specified percentages of the amounts of qualifying accounts receivable and inventory (approximately \$28 million at the date of execution). The underlying agreement contains financial covenants which limit the amounts of net loss the Company can incur in the second and third quarters of 2008 and specify that the Company must report net income in the fourth quarter of 2008 and thereafter. The Company's current forecast for the second quarter of 2008 indicates that it will not meet the financial covenant. The Company does expect to achieve compliance in the fourth quarter of 2008. If the Company is not able to meet the financial covenants, it may not be able to borrow against the facility. Axcelis expects to use the credit facility for working capital and for general corporate purposes.

In connection with the credit facility, the Company also entered into a receivables purchase facility with Silicon Valley Bank. Silicon Valley Bank may purchase up to \$20 million of receivables from Axcelis; provided that the total amount outstanding under the receivables purchase facility and credit facility does not exceed \$50 million. The receivables purchase facility is secured by the same collateral as the credit facility. Axcelis expects to use the receivables purchase facility for working capital and for general corporate purposes.

The credit facility matures on April 23, 2010, when all amounts will be due and payable in full. The receivables purchase facility also terminates on April 23, 2010.

See Note 1 for discussion of liquidity.

Note 13. Recent Accounting Pronouncements

In September 2006, the Financial Accounting Standards Board (FASB) issued SFAS No. 157, *Fair Value Measurement*. SFAS No. 157 defines fair value, establishes a framework for measuring fair value in generally accepted accounting principles and establishes a hierarchy that categorizes and prioritizes the sources to be used to estimate fair value. SFAS No. 157 also expands financial statement disclosures about fair value measurements. On February 6, 2008, the FASB issued FASB Staff Position (FSP) 157-b, which delayed the effective date of SFAS No. 157 for one year for all nonfinancial assets and nonfinancial liabilities, except those that are recognized or disclosed at fair value in the financial statements on a recurring basis (at least annually). SFAS No. 157 and FSP 157-b are effective for financial statements issued for fiscal years beginning after November 15, 2007. We have elected a partial deferral of SFAS No. 157 under the provisions of FSP 157-b related to the measurement of fair value used when evaluating goodwill, other intangible assets and other long-lived assets for impairment and valuing asset retirement obligations and liabilities for exit or disposal activities. The impact of partially adopting SFAS No. 157 effective January 1, 2008 was not material to our consolidated financial statements.

In February 2007, the FASB issued SFAS No. 159, *The Fair Value Option for Financial Assets and Financial Liabilities—Including an Amendment of SFAS 115*, which permits but does not require us to measure financial instruments and certain other items at fair value. Unrealized gains and losses on items for which the fair value option has been elected are reported in earnings. This statement is effective for financial statements issued for fiscal years beginning after November 15, 2007. As we have not elected to fair value any of our financial instruments under the provisions of SFAS No. 159, the adoption of this statement will not have any impact to our consolidated financial statements.

In December 2007, the FASB issued SFAS No. 141(R) *Business Combinations*. This statement applies to all transactions or other events in which an entity (the acquirer) obtains control of one or more businesses (the acquiree), including those sometimes referred to as "true mergers" or "mergers of equals" and combinations achieved without the transfer of consideration, for example, by contract alone or through the lapse of minority veto rights. This statement applies to all business entities, including mutual entities that previously used the pooling-of-interests method of accounting for some business combinations. It does not apply to 1) the formation of a joint venture; 2) the acquisition of an asset or a group of assets that does not constitute a business; 3) a combination between entities or businesses under common control; 4) a combination between not-for-profit organizations or the acquisition of a for-profit business by a not-for-profit organization. This statement applies prospectively to business combinations for which the acquisition date is on or after the beginning of the first annual reporting period beginning on or after December 15, 2008. An entity may not apply it before that date. The effective date of this statement is the same as that of the related SFAS No. 160, *Noncontrolling Interests in Consolidated Financial Statements*. The adoption of SFAS No. 141(R) is not expected to have a material impact on the Company's financial position, results of operations or liquidity.

In December 2007, the FASB issued SFAS No. 160, *Noncontrolling Interests in Consolidated Financial Statements, an Amendment to ARB No. 51*. This statement applies to all entities that prepare consolidated financial statements, except not-for-profit organizations, but will affect only those entities that have an outstanding noncontrolling interest in one or more subsidiaries or that deconsolidate a subsidiary. This statement is effective for fiscal years, and interim periods within those fiscal years, beginning on or after December 15, 2008 (that is, January 1, 2009, for entities with calendar year-ends). Earlier adoption is prohibited. The effective date of this statement is the same as that of the related SFAS No. 141(R). The adoption of SFAS No. 160 is not expected to have a material impact on the Company's financial position, results of operations or liquidity.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations.

Certain statements in "Management's Discussion and Analysis of Financial Condition and Results of Operations" are forward-looking statements that involve risks and uncertainties. Words such as may, will, should, would, anticipates, expects, intends, plans, believes, seeks, estimates and similar expressions identify such forward-looking statements. The forward-looking statements contained herein are based on current expectations and entail various risks and uncertainties that could cause actual results to differ materially from those expressed in such forward-looking statements. Factors that might cause such a difference include, among other things, those set forth or referred to under "Liquidity and Capital Resources" and "Risk Factors" and those appearing elsewhere in this Form 10-Q. Readers are cautioned not to place undue reliance on these forward-looking statements, which reflect management's analysis only as of the date hereof. We assume no obligation to update these forward-looking statements to reflect actual results or changes in factors or assumptions affecting forward-looking statements.

Overview

Axcelis Technologies, Inc. ("Axcelis," "we," "us," or "our"), is a producer of ion implantation and dry strip equipment used in the fabrication of semiconductors in the United States, Europe and Asia.

In addition, we provide extensive aftermarket service and support, including spare parts, equipment upgrades, and maintenance services. We own 50% of the equity of a joint venture known as SEN Corporation, an SHI and Axcelis Company, or "SEN," with Sumitomo Heavy Industries, Ltd. ("SHI") in Japan. SEN licenses technology from us relating to the manufacture of specified ion implantation products and has exclusive rights to manufacture and sell these products in the territory of Japan. SEN is the leading producer of ion implantation equipment in Japan.

The semiconductor capital equipment industry is subject to significant cyclical swings in capital spending by semiconductor manufacturers. Capital spending is influenced by demand for semiconductors and the products using them, the utilization rate and capacity of existing semiconductor manufacturing facilities and changes in semiconductor technology, all of which are outside of our control. As a result, our revenues and gross margins, to the extent affected by increases or decreases in volume, could fluctuate from year to year and period to period. The industry experienced a downturn beginning in the second half of 2007, which continued into 2008. Our gross margins are also affected by the introduction of new products. We typically become more efficient in manufacturing products as they mature. Our operating expense base is largely fixed and does not vary significantly with changes in volume. Therefore, we could experience fluctuations in operating results and cash flows depending on our revenues as driven by the level of capital expenditures by semiconductor manufacturers.

The sizable expense of building, upgrading or expanding a semiconductor fabrication facility is increasingly causing semiconductor companies to contract with foundries to manufacture their semiconductors. In addition, consolidation and partnering within the semiconductor manufacturing industry is increasing. We expect these trends to continue to reduce the number of our potential customers. This growing concentration of Axcelis' customers may increase competitive pricing as higher percentages of our total revenues are tied to the buying decisions of a particular customer or a small number of customers.

Beginning in 2004, most customers shifted from multi wafer tools to single wafer tools for high current ion implant applications. Because we did not have a single wafer high current product, we have experienced a significant loss of market share which we have yet to regain. We introduced our single wafer Optima HD (for high current applications) product in 2006 and have begun to gain traction with this tool at a number of customers through evaluation arrangements. During the three months ended March 31, 2008, we recognized approximately \$9.9 million to revenue on sales of the Optima HD.

Our single wafer tool for high energy ion implant applications, the Optima XE, was released in the fourth quarter of 2007. We shipped the first Optima XE in May 2008. We expect the Optima XE to allow us to maintain a leading market share in high energy applications moving forward.

As of March 31, 2008, total amounts included in inventory, evaluation tools (classified as a component of inventory on the balance sheet) and other assets related to our investment in the Optima product line were approximately \$116.8 million. As Optima tools shipped in 2007 continue to convert into revenue in 2008, we expect a reduction in these amounts.

Operating results for the current periods presented are not necessarily indicative of the results that may be expected for subsequent interim periods or for the year as a whole.

Critical Accounting Estimates

Management's discussion and analysis of our financial condition and results of operations are based upon Axcelis' consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States. The preparation of these financial statements requires management to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses, and related disclosure of contingent assets and liabilities. On an on-going basis, we evaluate our estimates, including those related to revenue recognition, income

taxes, intangibles, accounts receivable, inventory and warranty obligations. Management bases its estimates on historical experience and on various other assumptions that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

The critical accounting estimates are those that we believe are the more significant judgments and estimates used in the preparation of our condensed consolidated financial statements. As of March 31, 2008 there have been no material changes to the critical accounting estimates as described in our Management's Discussion and Analysis of Financial Condition and Results of Operations and in the Notes to the consolidated financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2007.

Results of Operations

The following table sets forth our results of operations as a percentage of revenue for the periods indicated:

	Three months ended March 31,	
	2008	2007
Revenue		
Product	82.2%	82.8%
Service	16.5	15.1
Royalties, primarily from SEN	1.3	2.1
	<u>100.0</u>	<u>100.0</u>
Cost of revenue		
Product	56.5	48.9
Service	9.1	8.8
	<u>65.6</u>	<u>57.7</u>
Gross profit	34.4	42.3
Other costs and expenses		
Research and development	19.9	18.7
Sales and marketing	14.0	13.3
General and administrative	11.6	10.7
Amortization of intangible assets	0.8	0.7
Restructuring charges	0.1	—
	<u>46.3</u>	<u>43.4</u>
Loss from operations	(11.9)	(1.1)
Other income (expense)		
Equity income of SEN	0.0	4.8
Interest income	0.8	1.5
Interest expense	(1.9)	(1.7)
Other-net	0.4	—
	<u>0.7</u>	<u>4.6</u>
Income (loss) before income taxes	(12.6)	3.5
Income taxes	0.5	0.8
Net income (loss)	<u>(13.1)%</u>	<u>2.7%</u>

Revenue

Product

Product revenue, which includes systems sales, sales of spare parts and product upgrades was \$69.8 million, or 82.2% of revenue for the three months ended March 31, 2008, compared with \$80.7 million, or 82.8% of revenue for the three months ended March 31, 2007. Product revenue levels in 2007 and 2008 have been impacted by the Company's loss of high current market share. The decline in product revenue in the three month period ended March 31, 2008 is attributable to a weakening semiconductor market and a related decrease in capital spending by semiconductor manufacturers. In addition a decrease in capacity expansion at 200mm manufacturing facilities (a portion of which relates to the overall decline in the semiconductor capital equipment market) has decreased revenue from system sales by \$3.0 million for the three month period ended March 31, 2008.

A portion of the Company's revenue from system sales is deferred until installation and other services related to future deliverables are performed. The total amount of deferred revenue at March 31, 2008 and 2007 was \$25.8 million and \$38.4 million, respectively.

Service

Service revenue, which includes the labor component of maintenance and service contracts and service hours provided by on-site service personnel, was \$14.0 million, or 16.5% of revenue for the three months ended March 31, 2008, compared with \$14.7 million, or 15.1% of revenue, for the three months ended March 31, 2007. The decline in service revenue is a result of lower capacity utilization at customer manufacturing facilities, which affects the need for equipment service.

Ion Implant

The largest portion of the Company's product and service revenues are derived from ion implantation products and services, which typically average from 70% to 80% of total revenues. During the three months ended March 31, 2008, revenue from sales of ion implantation products and service accounted for \$68.8 million, or 81.5% of total revenue, compared with \$74.1 million, or 76.0%, of total revenue in the three months ended March 31, 2007. The remainder of the Company's revenue derives from the sale of products and services relating to dry strip and other processing equipment.

Aftermarket

The Company's product revenues include sales of spare parts and product upgrades as well as complete systems. We refer to the business of selling spare parts and product upgrades, combined with the sale of maintenance labor and service contracts and service hours as the "aftermarket" business. The revenue from our aftermarket business was \$40.6 million for the three month period ended March 31, 2008, compared to \$44.4 million for the corresponding period of the preceding year. Aftermarket revenue generally increases with expansion of the installed base of systems but can fluctuate period to period based on capacity utilization at customers' manufacturing facilities which affects the sale of spare parts and demand for equipment service.

Royalties

Royalty revenue was \$1.1 million, or 1.3% of revenue for the three months ended March 31, 2008, compared with \$2.1 million, or 2.1% of revenue for the three months ended March 31, 2007. Royalties are primarily earned under the terms of our license agreement with SEN. Revenue changes are mainly attributable to fluctuations in SEN sales volume based on demand for equipment by Japanese semiconductor manufacturers and the timing of shipments in Japan.

Gross Profit

Product

Gross profit from product revenue was 31.2% for the three months ended March 31, 2008, compared to 40.9% for the three months ended March 31, 2007. The decrease in gross profit from product revenues is attributable to lower margins on new product revenue recognized in the quarter (approximately 8.4%) along with lower margins and an unfavorable mix of parts and upgrade revenues (approximately 1.3%). Revenue recognized on new products generally carries lower margins than mature products due to higher initial material costs and labor inefficiencies.

Service

Gross profit from service revenue was 45.0% for the three months ended March 31, 2008, compared to 41.8% for the three months ended March 31, 2007. The increase in gross profit for the three month period ended March 31, 2008 is attributable to a higher mix of billable service labor.

Research and Development

Research and development expense was \$16.9 million in the three months ended March 31, 2008, a decrease of \$1.3 million, or 7.1%, compared with \$18.2 million in the three months ended March 31, 2007. The decrease was driven primarily by decreased professional fee expenses (\$1.1 million) and decreased payroll costs (\$0.9 million) partially offset by increased development asset amortization and depreciation costs (\$0.4 million) and development material costs (\$0.2 million). We expect research and development spending to decline slightly throughout 2008 as development costs for new products drop off and are replaced by a lower level of spending for continuous improvement.

Research and development expense was attributable to the following activities through the first quarter of 2008: 41% for new product development, 42% for improvement of existing products, and 17% for product testing.

Sales and Marketing

Sales and Marketing expense was \$11.9 million in the three months ended March 31, 2008, a decrease of \$1.0 million, or 7.8%, compared with \$12.9 million in the three months ended March 31, 2007. The decrease was driven primarily by an anticipated decrease in costs related to evaluation system support for our Optima platform (\$0.4 million), decreased travel costs (\$0.4 million) and lower commissions expense (\$0.2 million).

General and Administrative

General and administrative expense was \$9.8 million in the three months ended March 31, 2008, a decrease of \$0.7 million, or 6.7%, compared with \$10.5 million in the three months ended March 31, 2007. The decrease was driven primarily by lower lease, travel, utilities, sales tax and insurance expense (\$0.2 million), lower payroll related costs (\$0.2 million) and lower stock compensation costs (\$0.1 million).

Other Income (Expense)

No equity income was attributable to SEN for the three months ended March 31, 2008. This is compared to equity income attributable to SEN of \$4.7 million for the three months ended March 31, 2007. Fluctuations in equity income from SEN reflect changes in its sales volume and net income resulting from demand changes in the Japanese semiconductor market, and the timing of shipments in Japan.

Interest income of \$0.7 million for the three months ended March 31, 2008 primarily relates to interest earned on cash, cash equivalents and short-term investments. Interest income decreased by \$0.8 million from the three months ended March 31, 2007 due primarily to lower average cash balances.

Interest expense of \$1.6 million for the three months ended March 31, 2008, a decrease of \$0.1 million from the three months ended March 31, 2007, relates primarily to outstanding convertible senior subordinated notes, which have an effective yield to maturity of 8%.

Income Taxes

Income tax expense was \$0.4 million and \$0.7 million for the three months ended March 31, 2008 and 2007, respectively. Income tax expense relates principally to operating results of foreign entities in jurisdictions, principally in Asia, where we earn taxable income. We have significant net operating loss carryforwards in the United States and certain foreign jurisdictions, principally Europe, and, as a result, we do not currently pay significant income taxes in those jurisdictions and we do not recognize the tax benefit for such losses. Accordingly, our effective income tax rate is not meaningful.

Liquidity and Capital Resources

Cash, cash equivalents, and marketable securities at March 31, 2008 were \$68.2 million, compared with \$83.9 million at December 31, 2007. The \$15.7 million decrease in cash, cash equivalents, and short-term investments is mainly attributable to cash used by operations (\$12.3 million) and capital expenditures (\$1.2 million).

Capital expenditures were \$1.2 million and \$3.6 million for the three months ended March 31, 2008 and 2007, respectively. We have no significant capital projects planned for 2008 and total capital expenditures for 2008 are projected to be less than \$5.0 million. Future capital expenditures beyond 2008 will depend on a number of factors, including the timing and rate of expansion of our business.

We have net operating loss and tax credit carryforwards the tax effect of which aggregate \$86.7 million at December 31, 2007. These carryforwards, which expire principally between 2021 and 2027, are available to reduce future income tax liabilities in the United States and certain foreign jurisdictions.

In 2006, Axcelis and SHI agreed upon an annual dividend relating to SEN's fiscal year ended March 31, 2006. The two shareholders instructed SEN to dividend 40% of SEN's net earnings for that year. On January 31, 2007, Axcelis received a payment of approximately \$5.7 million representing its 50% share of the dividend. In 2007 the Company entered into an agreement with SHI pursuant to which SEN will be instructed to dividend 40% of its net income annually. On July 31, 2007 the Company received a dividend of \$6.7 million for SEN's fiscal year ended March 31, 2007. The Company expects to receive a dividend of approximately \$2 million in July 2008 for SEN's fiscal year ended March 31, 2008.

As discussed in Note 8 to the consolidated financial statements accompanying this Form 10-Q, on May 2, 2006, we entered into an exchange and purchase agreement pursuant to which the holder of an aggregate of approximately \$50.8 million of our existing 4.25% Convertible Subordinated Notes due January 15, 2007 (the "Old Notes"), agreed to exchange its Old Notes for \$50.8 million in aggregate principal amount of our newly issued 4.25% Convertible Senior Subordinated Notes due January 15, 2009 (the "New Notes"), plus accrued and unpaid interest on the Old Notes through but excluding May 2, 2006, the closing date of the exchange. At maturity, the Company is required to repay the outstanding principal of the New Notes, plus a maturity premium of 11.125% of such principal, resulting in an effective annual yield to maturity of approximately 8.0%. In addition, we issued an additional \$24.2 million of New Notes, resulting in an aggregate of \$75 million of New Notes

outstanding. We repaid the remaining \$74.2 million of outstanding Old Notes in January 2007. Depending on cash flows for the remainder of 2008, the Company may look for alternatives to refinance the New Notes when they become payable in January 2009.

Axcelis' liquidity is affected by many factors. Some of these factors are based on normal operations of the business, including acceptance of the Optima product line, and others relate to the uncertainties of global economies and the semiconductor equipment industry. As of March 31, 2008, the Company had approximately \$68.2 million of cash and cash equivalents. During the first quarter of 2008, the Company experienced negative cash flows from operations and anticipates continued cash outflows in the second quarter of 2008. Furthermore, as of March 31, 2008, the Company's New Notes (see Note 8), due January 15, 2009, were reclassified to current liabilities. On April 23, 2008, the Company entered into a revolving credit facility (the "facility") with a bank that provides for borrowings up to the lesser of (A) \$50 million or (B) specified percentages of the amounts of qualifying accounts receivable and inventory (approximately \$28 million on the date of execution). Presently, the Company's 2008 forecast does not anticipate drawing down on the facility. The underlying agreement contains financial covenants that limit the amounts of net loss the Company can incur in the second and third quarters of 2008 and specify that the Company must report net income in the fourth quarter of 2008 and thereafter. The Company's current forecast for the second quarter of 2008 indicates that it will not meet the financial covenant. The Company does expect to achieve compliance in the fourth quarter of 2008. Should the Company not be able to meet these financial covenants, it may not be able to borrow against the facility. The Company is also negotiating a sale-leaseback of the Company's headquarters and manufacturing facility located in Beverly, Massachusetts. However, there can be no assurance that the sale-leaseback transaction will be completed.

The Company expects that existing cash and cash equivalents and expected positive cash flow for the remainder of 2008, based primarily on current expectations of customer ordering patterns, coupled with planned financing events, will be sufficient to satisfy the Company's anticipated cash requirements for the remainder of 2008 and beyond. Should the Company not be able to obtain financing with acceptable terms and/or current estimates for anticipated cash flow in 2008 prove incorrect, the Company's management may seek alternative strategies intended to improve the Company's cash position. These strategies could include initiating further cost reduction efforts, seeking improvements in working capital management such as seeking additional financing, and reducing or delaying capital expenditures.

We have outstanding standby letters of credit, bank guarantees and surety bonds in the amount of \$24.4 million to support certain operating lease obligations, workers' compensation insurance, and certain value added tax claims in Europe. At March 31, 2008, \$18.3 million of cash was pledged as collateral for certain outstanding standby letters of credit and bank guarantees, and is reflected as restricted cash on the consolidated balance sheet. We also have foreign exchange contracts used to hedge amounts receivable from SEN (\$1.3 million at March 31, 2008).

Outlook

Our performance is directly related to semiconductor manufacturers' levels of capital expenditures to open new fabrication facilities and expand existing ones, our successful introduction of new products (such as the Optima HD), as well as operational improvements we have implemented over the past several years. The level of capital expenditures by these manufacturers depends upon the current and anticipated market demand for semiconductors and the products utilizing them, the available manufacturing capacity in manufacturers' fabrication facilities, and the ability of manufacturers to increase productivity in existing facilities without incurring additional capital expenditures. However, we expect continued market weakness during the balance of 2008.

On May 7, 2008, we announced that Axcelis' revenues for the second quarter of 2008 are forecast in the range of \$75 million to \$90 million. We expect results of operations will be a loss per share of approximately \$0.11 to \$0.15.

It is difficult to predict our customers' capital spending plans because they can change very quickly. At our current sales level, each sale, or failure to make a sale, could have a material effect on our results of operations in a particular quarter.

Item 3. Quantitative and Qualitative Disclosures about Market Risk.

As of March 31, 2008, there have been no material changes to the quantitative and qualitative information about market risk disclosed in Item 7A to our Annual Report on Form 10-K for the year ended December 31, 2007.

Item 4. Controls and Procedures.

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our principal executive officer and principal financial officer, has evaluated the effectiveness of our disclosure controls and procedures (as defined in Rule 13a -15(e) under the Securities Exchange Act of 1934, as amended (the "Exchange Act")) as of the end of the period covered by this quarterly report (the "Evaluation Date"). Based on this evaluation, our principal executive officer and principal financial officer concluded that, as of the Evaluation Date, these disclosure controls and procedures are effective.

Changes in Internal Control over Financial Reporting

There was no change in our internal control over financial reporting (as defined in Rule 13a -15(f) under the Exchange Act) identified in connection with the evaluation of our internal control that occurred during our first quarter of 2008 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II—OTHER INFORMATION

Item 1. Legal Proceedings.

The Company is not presently a party to any litigation that it believes might have a material adverse effect on its business operations. The Company is, from time to time, a party to litigation that arises in the normal course of its business operations. Pending matters that arose outside of the ordinary course of business and which had developments since January 1, 2008 are:

Two purported class actions were filed against the Company in connection with proposals made by Sumitomo Heavy Industries, Ltd. in 2008 to acquire the outstanding common stock of the Company. We believe each of these cases is without merit and continue to defend against them vigorously.

- On or about February 11, 2008, Martin Meltzer filed a purported shareholder class action complaint in Massachusetts Superior Court (Civil Action No. 08-0692-E), naming as defendants the Company, its current Directors and a former Director. The complaint alleges that the Company and its Board of Directors breached their fiduciary duties to Axcelis shareholders by failing to properly consider the February 11, 2008 unsolicited offer by Sumitomo Heavy Industries Ltd. to purchase all of the outstanding stock of the Company for \$5.20 per share. The complaint seeks an order from the Court directing the Company and its Board of Directors to "give due consideration to any proposed business combination" to maximize shareholder value, while ensuring that no conflicts of interest exist. The litigation is in a preliminary stage.
- On or about February 28, 2008, Shirley Simon filed a purported shareholder class action complaint in Delaware Chancery Court (Case No. 3582), naming as defendants the Company and its current Directors. The complaint alleges that the Company and its Board of Directors breached their fiduciary duties to Axcelis shareholders by failing to properly consider the February 11, 2008 unsolicited offer by Sumitomo Heavy Industries Ltd. to purchase all of the outstanding stock of the Company for \$5.20 per share, and subsequently rejecting that offer. The complaint seeks an order from the Court directing the Company and its Board of Directors to cooperate with any person or entity, including Sumitomo that proposes a merger, acquisition or other transaction that would maximize shareholder value, while ensuring that no conflicts of interest exist. The complaint also seeks to have the defendants other than the Company, pay damages suffered to the class as a result of their alleged breaches of fiduciary duty. A motion to dismiss and accompanying brief were filed by Axcelis on March 26, 2008. On April 30, 2008, the plaintiffs amended their complaint to cover the proposal made by Sumitomo on March 10, 2008 and other matters relating to the annual meeting of stockholders held on May 1, 2008.

On April 23, 2008, Varian Semiconductor Associates, Inc. filed a complaint in Federal District Court in Massachusetts claiming that Axcelis' "Optima products" infringe a Varian patent that was re-issued in January 2008. The complaint was served on April 28, 2008. Axcelis deems this lawsuit to be without merit and intends to defend its position to the fullest extent necessary.

Item 1A. Risk Factors.

As of March 31, 2008, there have been no material changes to the risk factors disclosed in Item 1A to our annual report on Form 10-K for the year ended December 31, 2007.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds.

None.

Item 3. Defaults Upon Senior Securities.

None.

Item 4. Submission of Matters to a Vote of Security Holders.

None.

Item 5. Other Information.

None.

Item 6. Exhibits.

Exhibits are numbered in accordance with the Exhibit Table of Item 601 of Regulation S-K:

Exhibit No	Description
3.1	Amended and Restated Certificate of Incorporation of the Company. Incorporated by reference to Exhibit 3.1 of the Company's Registration Statement on Form S-1 (Registration No. 333-36330).
3.2	Bylaws of the Company, as amended as of August 8, 2007. Incorporated by reference to Exhibit 3.2 of the Company's Form 10-Q for the quarter ended June 30, 2007, filed with the Commission on August 9, 2007.
3.3	Certificate of Designation of Series A Participating Preferred Stock, filed with the Secretary of State of Delaware on July 5, 2000. Incorporated by reference to Exhibit 3.3 of the Company's Form 10-K for the year ended December 31, 2000, filed with the Commission on March 30, 2001.
10.1	Loan and Security Agreement dated as of April 23, 2008 between Axcelis Technologies, Inc. and Silicon Valley Bank. Filed herewith.
31.1	Certification of the Principal Executive Officer under Exchange Act Rule 13a-14(a)/15d-14(a) (Section 302 of the Sarbanes-Oxley Act), dated May 12, 2008. Filed herewith.
31.2	Certification of the Principal Financial Officer under Exchange Act Rule 13a-14(a)/15d-14(a) (Section 302 of the Sarbanes-Oxley Act), dated May 12, 2008. Filed herewith.
32.1	Certification of the Principal Executive Officer pursuant to Section 1350 of Chapter 63 of title 18 of the United States Code (Section 906 of the Sarbanes-Oxley Act), dated May 12, 2008. Filed herewith.
32.2	Certification of the Principal Financial Officer pursuant to Section 1350 of Chapter 63 of title 18 of the United States Code (Section 906 of the Sarbanes-Oxley Act), dated May 12, 2008. Filed herewith.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) 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.

AXCELIS TECHNOLOGIES, INC.

DATED: May 12, 2008

/s/ STEPHEN G. BASSETT

By: Stephen G. Bassett
Executive Vice President and Chief Financial Officer
Duly Authorized Officer and Principal Financial Officer

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[PART 1—FINANCIAL INFORMATION](#)

[Axcelis Technologies, Inc. Consolidated Statements of Operations \(In thousands, except per share amounts\) \(Unaudited\)](#)

[Axcelis Technologies, Inc. Consolidated Balance Sheets \(In thousands\) \(Unaudited\)](#)

[Axcelis Technologies, Inc. Consolidated Statements of Cash Flows \(In thousands\) \(Unaudited\)](#)

[Axcelis Technologies, Inc. Notes To Consolidated Financial Statements \(Unaudited\) \(All tabular amounts in thousands, except per share amounts\)](#)

[PART II—OTHER INFORMATION](#)

[SIGNATURES](#)

LOAN AND SECURITY AGREEMENT

THIS LOAN AND SECURITY AGREEMENT (this “**Agreement**”) dated as of the Effective Date between **SILICON VALLEY BANK**, a California corporation, with its principal place of business at 3003 Tasman Drive, Santa Clara, California 95054 and with a loan production office located at One Newton Executive Park, Suite 200, 2221 Washington Street, Newton, Massachusetts 02462 (“**Bank**”), and **AXCELIS TECHNOLOGIES, INC.** and **AXCELIS TECHNOLOGIES CCS CORPORATION**, each a Delaware corporation with offices located at 108 Cherry Hill Drive, Beverly, Massachusetts 01915 (individually and collectively, jointly and severally “**Borrower**”), provides the terms on which Bank shall lend to Borrower and Borrower shall repay Bank. The parties agree as follows:

1 ACCOUNTING AND OTHER TERMS

Accounting terms not defined in this Agreement shall be construed following GAAP. Calculations and determinations must be made following GAAP. Capitalized terms not otherwise defined in this Agreement shall have the meanings set forth in Section 13. All other terms contained in this Agreement, unless otherwise indicated, shall have the meaning provided by the Code to the extent such terms are defined therein.

2 LOAN AND TERMS OF PAYMENT

2.1 Promise to Pay. Borrower hereby unconditionally promises to pay Bank the outstanding principal amount of all Credit Extensions and accrued and unpaid interest thereon as and when due in accordance with this Agreement.

2.1.1 **Revolving Advances.**

(a) Availability. Subject to the terms and conditions of this Agreement and to deduction of Reserves, Bank shall make Advances not exceeding the Availability Amount. Amounts borrowed hereunder may be repaid and, prior to the Revolving Line Maturity Date, reborrowed, subject to the applicable terms and conditions precedent herein.

(b) Termination; Repayment. The Revolving Line terminates on the Revolving Line Maturity Date, when the principal amount of all Advances, the unpaid interest thereon, and all other Obligations relating to the Revolving Line shall be immediately due and payable.

2.1.2 **Letters of Credit Sublimit.**

(a) As part of the Revolving Line, Bank shall issue or have issued Letters of Credit for Borrower’s account. Such aggregate amounts utilized hereunder shall at all times reduce the amount otherwise available for Advances under the Revolving Line. The face amount of outstanding Letters of Credit (including drawn but unreimbursed Letters of Credit and any Letter of Credit Reserve) may not exceed Ten Million Dollars (\$10,000,000.00) minus the aggregate amount of all Credit Extensions outstanding from time to time under Sections 2.1.3 and 2.1.4 hereof. If, on the Revolving Line Maturity Date, there are any outstanding Letters of Credit, then on such date Borrower shall provide to Bank cash collateral in an amount equal to 105% of the face amount of all such Letters of Credit plus all interest, fees, and costs due or to become due in connection therewith (as estimated by Bank in its good faith business judgment), to secure all of the Obligations relating to said Letters of Credit. All Letters of Credit shall be in form and substance acceptable to Bank in its sole discretion and shall be subject to the terms and conditions of Bank’s standard Application and Letter of Credit Agreement (the “**Letter of Credit Application**”). Borrower agrees to execute any further documentation in connection with the Letters of Credit as Bank may reasonably request. Borrower further agrees to be bound by the regulations and interpretations of the issuer of any Letters of Credit guaranteed by Bank and opened for Borrower’s account or by Bank’s interpretations of any Letter of Credit issued by Bank for Borrower’s account, and Borrower understands and agrees except in the case of gross negligence or willful misconduct by Bank that Bank shall not be liable for any error, negligence, or

mistake, whether of omission or commission, in following Borrower’s instructions or those contained in the Letters of Credit or any modifications, amendments, or supplements thereto.

(b) The obligation of Borrower to immediately reimburse Bank for drawings made under Letters of Credit shall be absolute, unconditional, and irrevocable, and shall be performed strictly in accordance with the terms of this Agreement, such Letters of Credit, and the Letter of Credit Application.

(c) Borrower may request that Bank issue a Letter of Credit payable in a Foreign Currency. If a demand for payment is made under any such Letter of Credit, Bank shall treat such demand as an Advance to Borrower of the equivalent of the amount thereof (plus fees and charges in connection therewith such as wire, cable, SWIFT or similar charges) in Dollars at the then-prevailing rate of exchange in San Francisco, California, for sales of the Foreign Currency for transfer to the country issuing such Foreign Currency.

(d) To guard against fluctuations in currency exchange rates, upon the issuance of any Letter of Credit payable in a Foreign Currency, Bank shall create a reserve (the “**Letter of Credit Reserve**”) under the Revolving Line in an amount equal to ten percent (10%) of the face amount of such Letter of Credit. The amount of the Letter of Credit Reserve may be adjusted by Bank from time to time to account for fluctuations in the exchange rate. The availability of funds under the Revolving Line shall be reduced by the amount of such Letter of Credit Reserve for as long as such Letter of Credit remains outstanding.

2.1.3 Foreign Exchange Sublimit. As part of the Revolving Line, Borrower may enter into foreign exchange contracts with Bank under which Borrower commits to purchase from or sell to Bank a specific amount of Foreign Currency (each, a “**FX Forward Contract**”) on a specified date (the “**Settlement Date**”). FX Forward Contracts shall have a Settlement Date of at least one (1) FX Business Day after the contract date and shall be subject to a reserve of ten percent (10%) of each outstanding FX Forward Contract in a maximum aggregate amount equal to One Million Dollars (\$1,000,000.00) (the “**FX Reserve**”). The aggregate amount of FX Forward Contracts at any one time shall not exceed ten (10) times the amount of the FX Reserve minus the aggregate amount of all Credit Extensions outstanding from time to time under Sections 2.1.2 and 2.1.4 hereof. Any amounts needed to fully reimburse Bank will be treated as Advances under the Revolving Line and will accrue interest at the interest rate applicable to Advances.

2.1.4 Cash Management Services Sublimit. Borrower may use up to Ten Million Dollars (\$10,000,000.00) of the Revolving Line minus the aggregate amount of all Credit Extensions outstanding from time to time under Sections 2.1.2 and 2.1.3 hereof, for Bank's cash management services which may include merchant services, direct deposit of payroll, business credit card, and check cashing services identified in Bank's various cash management services agreements (collectively, the "**Cash Management Services**"). Any amounts Bank pays on behalf of Borrower for any Cash Management Services and not immediately reimbursed will be treated as Advances under the Revolving Line and will accrue interest at the interest rate applicable to Advances.

2.2 Overadvances. If, at any time, (i) the sum of (a) the outstanding principal amount of any Advances (including any amounts used for Cash Management Services), plus (b) the face amount of any outstanding Letters of Credit (including drawn but unreimbursed Letters of Credit and any Letter of Credit Reserve), plus (c) the aggregate amount of any outstanding FX Forward Contract exceeds (ii) the lesser of either the Revolving Line or the Borrowing Base (the amount by which (i) exceeds (ii) being an "**Overadvance**"), Borrower shall immediately pay to Bank in cash such Overadvance. Without limiting Borrower's obligation to repay Bank any amount of the Overadvance, Borrower agrees to pay Bank interest on the outstanding amount of any Overadvance, on demand, at the Default Rate.

2.3 Payment of Interest on the Credit Extensions.

(a) Interest Rate; Advances. Each Advance shall bear interest on the outstanding principal amount thereof from the date when made, continued or converted until paid in full at a rate per annum equal to either (i) the Prime Rate plus the Prime Rate Margin (as such term is defined in the LIBOR Supplement) or (ii) the LIBOR Rate plus the LIBOR Rate Margin (as such term is defined in the LIBOR Supplement). On and after the expiration of any Interest Period (as such term is defined in the LIBOR Supplement) applicable to any LIBOR Advance outstanding on the date of occurrence of an Event of Default or acceleration of the Obligations, the Effective Amount of such LIBOR Advance shall, during the continuance of such Event of Default or after acceleration, bear

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interest at a rate per annum equal to aggregate of the Prime Rate plus the Prime Rate Margin plus the Default Rate. Pursuant to the terms hereof, interest on each Advance shall be paid in arrears on each Interest Payment Date (as such term is defined in the LIBOR Supplement). Interest shall also be paid on the date of any prepayment of any Advance pursuant to the Loan Agreement for the portion of any Advance so prepaid and upon payment (including prepayment) in full thereof. All accrued but unpaid interest on the Advances shall be due and payable on the Revolving Line Maturity Date.

(b) Default Rate. Immediately upon the occurrence and during the continuance of an Event of Default, Obligations shall bear interest at a rate per annum which is three and one-half of one percent (3.50%) above the rate that is otherwise applicable thereto (the "**Default Rate**"). Payment or acceptance of the increased interest rate provided in this Section 2.3(b) is not a permitted alternative to timely payment and shall not constitute a waiver of any Event of Default or otherwise prejudice or limit any rights or remedies of Bank.

(c) Prime Rate Advances. Each change in the interest rate of the Prime Rate Advances based on changes in the Prime Rate shall be effective on the effective date of such change and to the extent of such change. Bank shall use its best efforts to give Borrower prompt notice of any such change in the Prime Rate; provided, however, that any failure by Bank to provide Borrower with notice hereunder shall not affect Bank's right to make changes in the interest rate of the Prime Rate Advances based on changes in the Prime Rate.

(d) LIBOR Advances. The interest rate applicable to each LIBOR Advance shall be determined in accordance with Section 5.1 of the LIBOR Supplement. Subject to Sections 5 and 6 of the LIBOR Supplement, such rate shall apply during the entire Interest Period applicable to such LIBOR Advance, and interest calculated thereon shall be payable on the Interest Payment Date applicable to such LIBOR Advance.

(e) Computation of Interest. Interest on the Credit Extensions and all fees payable hereunder shall be computed on the basis of a 360-day year and the actual number of days elapsed in the period during which such interest accrues. In computing interest on any Credit Extension, the date of the making of such Credit Extension shall be included and the date of payment shall be excluded; provided, however, that if any Credit Extension is repaid on the same day on which it is made, such day shall be included in computing interest on such Credit Extension.

(f) Debit of Accounts. Bank may debit any of Borrower's deposit accounts, including the Designated Deposit Account, for principal and interest payments or any other amounts Borrower owes Bank when due. These debits shall not constitute a set-off. The provisions of the previous sentence shall not apply to deposit accounts designated as, and exclusively used for, payroll, payroll taxes and other employee wage and benefit payments to or for the benefit of Borrower's employees.

(g) Payments. Payments of principal and/or interest received after 12:00 noon Eastern time are considered received at the opening of business on the next Business Day. When a payment is due on a day that is not a Business Day, the payment is due the next Business Day and additional fees or interest, as applicable, shall continue to accrue..

2.4 Fees. Borrower shall pay to Bank:

(a) Commitment Fee. A fully earned, non refundable commitment fee of \$500,000.00 (receipt of which Bank hereby acknowledges); and

(b) Letter of Credit Fees. Bank's customary fees and expenses for the issuance, modification or renewal of Letters of Credit, including, without limitation, its customary fees upon the issuance, each anniversary of the issuance, modification and the renewal of such Letter of Credit by Bank; and

(c) Termination Fee. In accordance with the terms of Section 12.1, a termination fee; and

(d) Unused Revolving Line Facility Fee. A fee (the "**Unused Revolving Line Facility Fee**"), payable monthly, in arrears, on a calendar year basis, in an amount per annum equal to the Unused Line Fee Percentage of the average unused portion of the Total Commitment, as reasonably determined by Bank. The unused portion of the Total Commitment, for the purposes of this calculation, shall include amounts reserved under the Cash Management

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or suspension or termination of Bank's obligation to make loans and advances hereunder; and

(e) **Bank Expenses.** All Bank Expenses (including reasonable attorneys' fees and expenses, plus expenses, for documentation and negotiation of this Agreement) incurred through and after the Effective Date, when due.

3 **CONDITIONS OF LOANS**

3.1 Conditions Precedent to Initial Credit Extension. Bank's obligation to make the initial Credit Extension is subject to the condition precedent that Borrower shall consent to or have delivered, in form and substance satisfactory to Bank, such documents, and completion of such other matters, as Bank may reasonably deem necessary or appropriate, including, without limitation:

(a) duly executed original signatures to the Loan Documents to which it is a party;

(b) its Operating Documents and a good standing certificate of Borrower certified by the Secretary of State of the State of Delaware as of a date no earlier than thirty (30) days prior to the Effective Date;

(c) completed Borrowing Resolutions for Borrower;

(d) either (i) an Acknowledgement/Ratification duly executed by the Trustee under the Indenture in favor of Bank confirming that the Obligations constitute "Designated Senior Indebtedness" as defined in the Indenture or (ii) evidence that Borrower's indebtedness under the Convertible Senior Subordinated Notes has been or, upon the application of the proceeds of the initial Credit Extension to be made hereunder will be, satisfied in full and that the Indenture has been terminated; provided that, in order to satisfy this subsection 3.1(d) by compliance with clause (ii) hereof then, after giving effect to such initial Credit Extension (x) no Default or Event of Default shall then exist and (y) Borrower shall have provided evidence satisfactory to Bank that it shall remain in pro forma compliance with the financial covenants set forth in Section 6.9 at all times during the ninety (90) day period following the date of the initial Credit Extension;

(e) a payoff letter or some other evidence of the termination of that certain Revolving Credit Agreement, dated as of October 3, 2003, by and among Axcelis Technologies, Inc. the financial institutions party thereto and ABN Amro Bank, N.V., as agent;

(f) evidence that (i) the Liens securing Indebtedness owed by Borrower to ABN Amro Bank, N.V., as agent and The Equitable-Crow Braker Center Austin Company have been or will be terminated and (ii) the documents and/or filings evidencing the perfection of such Liens, including without limitation any financing statements and/or control agreements, have or will, concurrently with the initial Credit Extension, be terminated.

(g) certified copies, dated as of a recent date, of financing statement searches, as Bank shall request, accompanied by written evidence (including any UCC termination statements) that the Liens indicated in any such financing statements either constitute Permitted Liens or have been or, in connection with the initial Credit Extension, will be terminated or released;

(h) the Perfection Certificates executed by Borrower and each Guarantor;

(i) a landlords' consent executed by the landlords of Borrower's 33 Cherry Hill Drive, Beverly, Massachusetts and 54 Cherry Hill Drive, Beverly, Massachusetts locations in favor of Bank;

(j) a legal opinion of Borrower's counsel dated as of the Effective Date together with the duly executed original signatures thereto;

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(k) the duly executed original signatures to each Guaranty, each Guarantor Security Agreement, the Pledge Agreements, and the Negative Pledge, together with the completed Borrowing Resolutions for Guarantor;

(l) evidence satisfactory to Bank that the insurance policies required by Section 6.7 hereof are in full force and effect, together with appropriate evidence showing loss payable and/or additional insured clauses or endorsements in favor of Bank; and

(m) payment of the fees and Bank Expenses then due as specified in Section 2.4 hereof.

3.2 Conditions Precedent to all Credit Extensions. Bank's obligations to make each Credit Extension, including the initial Credit Extension, is subject to the following:

(a) except as otherwise provided in Section 3 of the LIBOR Supplement, (i) for Advances, timely receipt of a completed and executed Notice of Borrowing and, (ii) for any other Credit Extension, timely receipt of a completed and executed Transaction Report; and

(b) the representations and warranties in Section 5 shall be true, accurate and complete in all material respects on the date of the Transaction Report and Notice of Borrowing and on the Funding Date of each Credit Extension; provided, however, that such materiality qualifier shall not be applicable to any representations and warranties that already are qualified or modified by materiality in the text thereof; and provided, further that those representations and warranties expressly referring to a specific date shall be true, accurate and complete in all material respects as of such date, and no Default or Event of Default shall have occurred and be continuing or result from the Credit Extension. Each Credit Extension is Borrower's representation and warranty on that date that the representations and warranties in Section 5 remain true, accurate and complete in all material respects; provided, however, that such materiality qualifier shall not be applicable to any representations and warranties that already are qualified or modified by materiality in the text thereof; and provided, further that those representations and warranties expressly referring to a specific date shall be true, accurate and complete in all material respects as of such date; and

(c) as determined in Bank's reasonable business judgment, there has not been a Material Adverse Change.

3.3 Covenant to Deliver. Borrower agrees to deliver to Bank each item required to be delivered to Bank under this Agreement as a condition to any Credit Extension. Borrower expressly agrees that a Credit Extension made prior to the receipt by Bank of any such item shall not constitute a waiver by Bank of Borrower's obligation to deliver such item, and any such Credit Extension in the absence of a required item shall be made in Bank's sole discretion.

3.4 Procedures for Borrowing. In addition to and supplemental of the requirements set forth in Section 3 of the LIBOR Supplement, subject to the prior satisfaction of all other applicable conditions to the making of an Advance set forth in this Agreement, to obtain an Advance (other than Advances under Sections 2.1.2 or 2.1.4), Borrower shall notify Bank (which notice shall be irrevocable) by electronic mail, facsimile, or telephone by 12:00 p.m. Pacific time on the Funding Date of the Advance. Together with such notification, Borrower must promptly deliver to Bank by electronic mail or facsimile a completed Transaction Report executed by a Responsible Officer or his or her designee. Bank shall credit Advances to the Designated Deposit Account. Bank may make Advances under this Agreement based on instructions from a Responsible Officer or his or her designee or without instructions if the Advances are necessary to meet Obligations which have become due. Bank may rely on any telephone notice given by a person whom Bank believes is a Responsible Officer or designee.

4 CREATION OF SECURITY INTEREST

4.1 Grant of Security Interest. Borrower hereby grants Bank, to secure the payment and performance in full of all of the Obligations, a continuing security interest in, and pledges to Bank, the Collateral, wherever located, whether now owned or hereafter acquired or arising, and all proceeds and products thereof. Borrower represents, warrants, and covenants that the security interest granted herein is and shall at all times continue to be a first priority perfected security interest in the Collateral (subject only to Permitted Liens that may have superior priority to Bank's Lien under this Agreement). If Borrower shall acquire a commercial tort claim,

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Borrower shall promptly notify Bank in a writing signed by Borrower of the general details thereof and upon request of Bank grant to Bank in such writing a security interest therein and in the proceeds thereof, all upon the terms of this Agreement, with such writing to be in form and substance reasonably satisfactory to Bank.

Bank's lien and security interest in the Collateral shall continue until Borrower fully satisfies its Obligations in cash. Upon payment in full in cash of the Obligations (except for contingent indemnification obligations for which no claim has been made) and at such time as Bank's obligation to make Credit Extensions has terminated, Bank shall, at Borrower's sole cost and expense, release its Liens in the Collateral and all rights therein shall revert to Borrower.

4.2 Authorization to File Financing Statements. Borrower hereby authorizes Bank to file financing statements, without notice to Borrower, with all appropriate jurisdictions to perfect or protect Bank's interest or rights hereunder.

5 REPRESENTATIONS AND WARRANTIES

Borrower represents and warrants as follows:

5.1 Due Organization, Authorization, Power and Authority. Borrower and each of its Domestic Subsidiaries is validly existing and in good standing as a Registered Organization in its jurisdiction of formation and is qualified and licensed to do business and is in good standing in any jurisdiction in which the conduct of its business or its ownership of property requires that it be qualified except where the failure to do so could not reasonably be expected to have a material adverse effect on Borrower's business. In connection with this Agreement, Borrower has delivered to Bank completed certificates each signed by Borrower and Guarantor, respectively, entitled "Perfection Certificate". Borrower represents and warrants to Bank that (a) Borrower's exact legal name is that indicated on the Perfection Certificate and on the signature page hereof; (b) Borrower is an organization of the type and is organized in the jurisdiction set forth in the Perfection Certificate; (c) the Perfection Certificate accurately sets forth Borrower's organizational identification number or accurately states that Borrower has none; (d) the Perfection Certificate accurately sets forth Borrower's place of business, or, if more than one, its chief executive office as well as Borrower's mailing address (if different than its chief executive office); (e) Borrower (and each of its predecessors) has not, in the past five (5) years, changed its jurisdiction of formation, organizational structure or type, or any organizational number assigned by its jurisdiction; and (f) all other information set forth on the Perfection Certificate pertaining to Borrower and each of its Subsidiaries is accurate and complete (it being understood and agreed that Borrower may from time to time update certain information in the Perfection Certificate after the Effective Date to the extent permitted by one or more specific provisions in this Agreement). If Borrower is not now a Registered Organization but later becomes one, Borrower shall promptly notify Bank of such occurrence and provide Bank with Borrower's organizational identification number.

The execution, delivery and performance by Borrower of the Loan Documents to which it is a party have been duly authorized, and do not (i) conflict with any of Borrower's organizational documents, (ii) contravene, conflict with, constitute a default under or violate any material Requirement of Law, (iii) contravene, conflict or violate any applicable order, writ, judgment, injunction, decree, determination or award of any Governmental Authority by which Borrower or any its Subsidiaries or any of their property or assets may be bound or affected, (iv) require any action by, filing, registration, or qualification with, or Governmental Approval from, any Governmental Authority (except such Governmental Approvals which have already been obtained and are in full force and effect or (v) constitute an event of default under any material agreement by which Borrower is bound. Borrower is not in default under any agreement to which it is a party or by which it is bound in which the default could reasonably be expected to have a material adverse effect on Borrower's business.

5.2 Collateral. Borrower has good title to, has rights in, and the power to transfer each item of the Collateral upon which it purports to grant a Lien hereunder, free and clear of any and all Liens except Permitted Liens. Borrower has no deposit accounts other than the deposit accounts with Bank, the deposit accounts, if any, described in the Perfection Certificate delivered to Bank in connection herewith, or of which Borrower has given Bank notice and taken such actions as are necessary to give Bank a perfected security interest therein. The Accounts are bona fide, existing obligations of the Account Debtors.

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The Collateral is not in the possession of any third party bailee (such as a warehouse) except as otherwise provided in the Perfection Certificate. None of the components of the Collateral shall be maintained at locations other than as provided in the Perfection Certificate or as permitted pursuant to Section 7.2. Borrower shall at all times during the term of this Agreement maintain at least two-thirds of its Inventory (based upon the fair market value of all Inventory) at Borrower's 108 Cherry Hill Drive, Beverly, Massachusetts location and at other locations of the Borrower for which Bank has received a landlord's waiver in form and substance reasonably satisfactory to Bank.

All Inventory is in all material respects of good and marketable quality, free from material defects.

Axcelis Technologies, Inc. is the sole owner of the intellectual property set forth on the Perfection Certificate, except for non-exclusive licenses granted to its customers in the ordinary course of business. Each patent is presumed valid and enforceable and no part of the intellectual property has been judged

invalid or unenforceable, in whole or in part, and to the best of Borrower's knowledge, no claim has been made that any part of the intellectual property violates the rights of any third party.

Except as noted on the Perfection Certificate, Borrower is not a party to, nor is bound by, any material license or other agreement with respect to which Borrower is the licensee (a) that prohibits or otherwise restricts Borrower from granting a security interest in Borrower's interest in such license or agreement or any other property, or (b) for which a default under or termination of could interfere with the Bank's right to sell any Collateral. Borrower shall provide written notice to Bank within thirty (30) days of entering or becoming bound by any such license or agreement (other than over-the-counter software that is commercially available to the public). Borrower shall take such steps as Bank requests to obtain the consent of, or waiver by, any person whose consent or waiver is necessary for (x) all such licenses or agreements to be deemed "Collateral" and for Bank to have a security interest in it that might otherwise be restricted or prohibited by law or by the terms of any such license or agreement, whether now existing or entered into in the future, and (y) Bank to have the ability in the event of a liquidation of any Collateral to dispose of such Collateral in accordance with Bank's rights and remedies under this Agreement and the other Loan Documents.

5.3 Accounts Receivable; Inventory.

(a) For each Account with respect to which Advances are requested, on the date each Advance is requested and made, such Account shall be an Eligible Account.

(b) All statements made and all unpaid balances appearing in all invoices, instruments and other documents evidencing the Eligible Accounts are and shall be true and correct and all such invoices, instruments and other documents, and all of Borrower's Books are genuine and in all respects what they purport to be. Whether or not an Event of Default has occurred and is continuing, Bank may notify any Account Debtor owing Borrower money of Bank's security interest in such funds. All sales and other transactions underlying or giving rise to each Eligible Account shall comply in all material respects with all applicable laws and governmental rules and regulations. Borrower has no knowledge of any actual or imminent Insolvency Proceeding of any Account Debtor whose accounts are Eligible Accounts in any Transaction Report. To the best of Borrower's knowledge, all signatures and endorsements on all documents, instruments, and agreements relating to all Eligible Accounts are genuine, and all such documents, instruments and agreements are legally enforceable in accordance with their terms.

(c) For any item of Inventory consisting of Eligible Inventory in any Transaction Report, such Inventory (i) consists either of raw materials, or of finished goods, in good, new, and salable condition, which is not perishable, returned, consigned, obsolete, not sellable, damaged, or defective, and is not comprised of demonstrative or custom inventory, works in progress, packaging or shipping materials, or supplies; (ii) meets all applicable governmental standards; (iii) has been manufactured in compliance with the Fair Labor Standards Act; (iv) is not subject to any Liens, except the first priority Liens granted or in favor of Bank under this Agreement or any of the other Loan Documents or Permitted Liens; and (v) is located at Borrower's 108 Cherry Hill Drive, Beverly, Massachusetts location owned by Borrower or, provided that Bank has received landlord's waivers in form and substance reasonably satisfactory to Bank, at Borrower's 33 Cherry Hill Drive, Beverly, Massachusetts and 54 Cherry Hill Drive, Beverly, Massachusetts locations. In addition, in the event the Sale and Leaseback Transaction occurs, Borrower shall concurrently therewith furnish Bank the waiver and agreement required by Section 7.1 which

shall include, inter alia, a landlord's waiver reasonably satisfactory to Bank with respect to Borrower's 108 Cherry Hill Drive, Beverly, Massachusetts location.

5.4 **Litigation.** As of the Effective Date, except as disclosed to Bank in writing, there are no actions or proceedings pending or, to the knowledge of the Responsible Officers, threatened in writing by or against Borrower or any of its Subsidiaries involving more than One Million Dollars (\$1,000,000) or that would reasonably be expected to have a material adverse effect on Borrower's business.

5.5 **No Material Deviation in Financial Statements.** All consolidated financial statements for Borrower and any of its Subsidiaries delivered to Bank fairly present in all material respects Borrower's consolidated financial condition and Borrower's consolidated results of operations. There has not been any material deterioration in Borrower's consolidated financial condition since the date of the most recent financial statements submitted to Bank.

5.6 **Solvency.** The fair salable value of Borrower's assets (including goodwill minus disposition costs) exceeds the fair value of its liabilities; Borrower is not left with unreasonably small capital after the transactions in this Agreement; and Borrower is able to pay its debts (including trade debts) as they mature.

5.7 **Regulatory Compliance.** Borrower is not an "investment company" or a company "controlled" by an "investment company" under the Investment Company Act of 1940, as amended. Borrower is not engaged as one of its important activities in extending credit for margin stock (under Regulations X, T and U of the Federal Reserve Board of Governors). Borrower has complied in all material respects with the Federal Fair Labor Standards Act. Neither Borrower nor any of its Subsidiaries is a "holding company" or an "affiliate" of a "holding company" or a "subsidiary company" of a "holding company" as each term is defined and used in the Public Utility Holding Company Act of 2005. Borrower has not violated any laws, ordinances or rules, the violation of which could reasonably be expected to have a material adverse effect on its business. None of Borrower's or any of its Subsidiaries' properties or assets has been used by Borrower or any Subsidiary or, to the best of Borrower's knowledge, by previous Persons, in disposing, producing, storing, treating, or transporting any hazardous substance other than legally. Borrower and each of its Subsidiaries have obtained all consents, approvals and authorizations of, made all declarations or filings with, and given all notices to, all Government Authorities that are necessary to continue their respective businesses as currently conducted except where the failure to make such declarations, notices or filings could not reasonably be expected to have a material adverse effect on Borrower's business.

5.8 **Subsidiaries; Investments.** Borrower does not own any stock, partnership interest or other equity securities except for Permitted Investments.

5.9 **Tax Returns and Payments; Pension Contributions.** Borrower and its Subsidiaries has timely filed all required tax returns and reports, and has timely paid all foreign, federal, state and local taxes, assessments, deposits and contributions owed by Borrower or such Subsidiary. Borrower may defer payment of any contested taxes, provided that Borrower (a) in good faith contests its obligation to pay the taxes by appropriate proceedings promptly and diligently instituted and conducted, (b) notifies Bank in writing of the commencement of, and any material development in, the proceedings, and (c) posts bonds or takes any other steps required to prevent the governmental authority levying such contested taxes from obtaining a Lien upon any of the Collateral that is other than a "Permitted Lien". Borrower is unaware of any claims or adjustments proposed for any of Borrower's prior tax years which could result in additional taxes becoming due and payable by Borrower. Borrower has paid all amounts necessary to fund all present pension, profit sharing and deferred compensation plans in accordance with their terms, and Borrower has not withdrawn from participation in, and has not permitted partial or complete termination of, or

permitted the occurrence of any other event with respect to, any such plan which could reasonably be expected to result in any liability of Borrower, including any liability to the Pension Benefit Guaranty Corporation or its successors or any other governmental agency.

5.10 Use of Proceeds. Borrower shall use the proceeds of the Credit Extensions solely as working capital and to fund its general business requirements and not for personal, family, household or agricultural purposes.

5.11 Full Disclosure. No written representation, warranty or other statement of Borrower in any certificate or written statement given to Bank, as of the date such representation, warranty, or other statement was

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made, taken together with all such written certificates and written statements given to Bank, contains any untrue statement of a material fact or omits to state a material fact necessary to make the statements contained in the certificates or statements not misleading (it being recognized by Bank that the projections and forecasts provided by Borrower in good faith and based upon reasonable assumptions are not viewed as facts and that actual results during the period or periods covered by such projections and forecasts may differ from the projected or forecasted results).

5.12 Designation of Obligations as Designated Senior Indebtedness. All Obligations, including all principal, interest (including all interest accruing after the commencement of any bankruptcy or similar proceeding, whether or not a claim for post-petition interest is allowable as a claim in any such proceeding), and all fees, costs, expenses and other amounts accrued or due under this Agreement and otherwise shall at all times constitute "Designated Senior Indebtedness" under the terms of the Indenture and any similar agreement.

5.13 Specific Representation Regarding Matrix Integrated Systems Acquisition Corporation. The sole assets of Matrix Integrated Systems Acquisition Corporation, a wholly-owned Subsidiary of Axcelis Technologies, Inc., consist of (a) tangible assets having an aggregate fair market value of not more than \$50,000.00, (b) goodwill and (c) intellectual property which is immaterial to the business of the Borrower and/or its Subsidiaries.

6 AFFIRMATIVE COVENANTS

Borrower shall do all of the following:

6.1 Government Compliance.

(a) Subject to Sections 7.2 and 7.3, maintain its and all its Subsidiaries' legal existence and good standing in their respective jurisdictions of formation and maintain qualification in each jurisdiction in which the failure to so qualify would reasonably be expected to have a material adverse effect on Borrower's business. Borrower shall comply, and have each Subsidiary comply, with all laws, ordinances and regulations to which it is subject, noncompliance with which could have a material adverse effect on Borrower's business.

(b) Obtain all of the Governmental Approvals necessary for the performance by Borrower of its obligations under the Loan Documents to which it is a party and the grant of a security interest to Bank in all of its property. Borrower shall promptly provide copies of any such obtained Governmental Approvals to Bank.

6.2 Financial Statements, Reports, Certificates.

(a) Borrower shall provide Bank with the following:

(i) upon each request for a Credit Extension and, in all events, within thirty (30) days after the end of each month a Transaction Report (and any schedules related thereto including, but not limited to, a schedule of any litigation of the type described in Section 5.4 which may arise or be threatened from and after the Effective Date);

(ii) within thirty (30) days after the end of each month, (A) monthly accounts receivable agings, aged by invoice date, (B) monthly accounts payable agings, aged by invoice date, and outstanding or held check registers, if any, (C) monthly reconciliations of accounts receivable agings (aged by invoice date), transaction reports and general ledger, and (D) monthly inventory reports for Inventory valued on a first-in, first-out basis at the lower of cost or market (in accordance with GAAP), Inventory backlog reports, or such other inventory reports as are requested by Bank in its good faith business judgment;

(iii) within forty-five (45) days after the end of each fiscal quarter of Borrower, a Compliance Certificate signed by a Responsible Officer, certifying that as of the end of such quarter, Borrower was in full compliance with all of the terms and conditions of this Agreement, and setting forth calculations showing compliance with the financial covenants set forth in this Agreement and such other information as Bank shall reasonably request, including, without limitation, a statement that at the end of such quarter there were no held checks;

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(iv) as soon as available, and in any event within forty-five (45) days after the end of each fiscal quarter of Borrower, quarterly unaudited financial statements, prepared on a consolidated and consolidating (in a manner reasonably satisfactory to Bank) basis;

(v) within sixty (60) days after the end of each fiscal year of Borrower, (A) annual operating budgets (including income statements, balance sheets and cash flow statements, by quarter) for the then current fiscal year of Borrower, and (B) annual financial projections for the then current fiscal year (on a quarterly basis) as approved by Borrower's board of directors, together with any related business forecasts used in the preparation of such annual financial projections, all prepared on a consolidated and consolidating (in a manner reasonably satisfactory to Bank) basis; and

(vi) as soon as available, and in any event within one hundred twenty (120) days following the end of Borrower's fiscal year, annual financial statements prepared on a consolidated and consolidating (in a manner reasonably satisfactory to Bank) basis, certified by, and

with an unqualified opinion of, independent certified public accountants acceptable to Bank.

(b) within ten (10) days after filing, all reports on Form 10-K, 10-Q and 8-K filed with the Securities and Exchange Commission or a link thereto on Borrower's or another website on the Internet.

(c) Prompt written notice of (i) any material change in the composition of the intellectual property or (ii) Borrower's knowledge of an event that materially adversely affects the value of the intellectual property.

6.3 Accounts Receivable.

(a) Schedules and Documents Relating to Accounts. Borrower shall deliver to Bank Transaction Reports, as provided in Section 6.2, on Bank's standard forms; provided, however, that Borrower's failure to execute and deliver the same shall not affect or limit Bank's Lien and other rights in all of Borrower's Accounts, nor shall Bank's failure to advance or lend against a specific Account affect or limit Bank's Lien and other rights therein. If requested by Bank, Borrower shall furnish Bank with copies (or, at Bank's request, originals) of all contracts, orders, invoices, and other similar documents, and all shipping instructions, delivery receipts, bills of lading, and other evidence of delivery, for any goods the sale or disposition of which gave rise to such Accounts. In addition, Borrower shall deliver to Bank, on its request, the originals of all instruments, chattel paper, security agreements, guarantees and other documents and property evidencing or securing any Accounts, in the same form as received, with all necessary indorsements, and copies of all credit memos.

(b) Disputes. Borrower shall promptly notify Bank of all disputes or claims relating to material Accounts. Borrower may forgive (completely or partially), compromise, or settle any Account for less than payment in full, or agree to do any of the foregoing so long as (i) Borrower does so in good faith, in a commercially reasonable manner, in the ordinary course of business, in arm's-length transactions, and reports the same to Bank in the regular reports provided to Bank; (ii) no Default or Event of Default has occurred and is continuing; and (iii) after taking into account all such discounts, settlements and forgiveness, the total outstanding Advances will not exceed the lesser of the Revolving Line or the Borrowing Base.

(c) Collection of Accounts. Borrower shall have the right to collect all Accounts, unless and until a Default or an Event of Default has occurred and is continuing. Whether or not an Event of Default has occurred and is continuing, Borrower shall hold all payments on, and proceeds of, Accounts in trust for Bank, and Borrower shall immediately deliver all such payments and proceeds to Bank in their original form, duly endorsed, to be applied to the Obligations pursuant to the terms of Section 9.4 hereof. All proceeds of Accounts shall be deposited by Borrower into a lockbox account, or such other "blocked account" as Bank may specify, pursuant to a blocked account agreement in such form as Bank may specify; provided, however, in the event (i) Borrower maintains or exceeds \$50,000,000 in (A) Borrower's unrestricted cash plus Cash Equivalents on deposit at Bank plus (B) unused availability under the Revolving Line, as determined by Bank with reference to the Availability Amount and (ii) no Default or Event of Default has occurred and is continuing, then all payments on, and proceeds of, Accounts shall be transferred by Bank to an operating account of Borrower maintained at Bank.

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(d) Returns. Provided no Event of Default has occurred and is continuing, if any Account Debtor returns any Inventory to Borrower, Borrower shall promptly (i) determine the reason for such return, (ii) issue a credit memorandum to the Account Debtor in the appropriate amount, and (iii) provide a copy of such credit memorandum to Bank, upon request from Bank. In the event any attempted return occurs after the occurrence and during the continuance of any Event of Default, Borrower shall hold the returned Inventory in trust for Bank, and immediately notify Bank of the return of the Inventory.

(e) Verification. Bank may, from time to time, verify directly with the respective Account Debtors the validity, amount and other matters relating to the Accounts, either in the name of Borrower or Bank or such other name as Bank may choose.

(f) No Liability. Bank shall not be responsible or liable for any shortage or discrepancy in, damage to, or loss or destruction of, any goods, the sale or other disposition of which gives rise to an Account, or for any error, act, omission, or delay of any kind occurring in the settlement, failure to settle, collection or failure to collect any Account, or for settling any Account in good faith for less than the full amount thereof, nor shall Bank be deemed to be responsible for any of Borrower's obligations under any contract or agreement giving rise to an Account. Nothing herein shall, however, relieve Bank from liability for its own gross negligence or willful misconduct.

6.4 Remittance of Proceeds. Except as otherwise provided in Section 6.3(c), deliver, in kind, all proceeds arising from the disposition of any Collateral to Bank in the original form in which received by Borrower not later than the following Business Day after receipt by Borrower, to be applied to the Obligations pursuant to the terms of Section 9.4 hereof; provided that, if no Default or Event of Default has occurred and is continuing, Borrower shall not be obligated to remit to Bank the proceeds of the sale of worn out or obsolete Equipment disposed of by Borrower in good faith in an arm's length transaction for an aggregate purchase price of One Hundred Thousand Dollars (\$100,000.00) or less (for all such transactions in any fiscal year). Borrower agrees that it will not commingle proceeds of Collateral with any of Borrower's other funds or property, but will hold such proceeds separate and apart from such other funds and property and in an express trust for Bank. Nothing in this Section 6.4 limits the restrictions on disposition of Collateral set forth elsewhere in this Agreement.

6.5 Taxes; Pensions. Timely file, and require each of its Subsidiaries to timely file, all required tax returns and reports and timely pay, and require each of its Subsidiaries to timely file, all foreign, federal, state and local taxes, assessments, deposits and contributions owed by Borrower and each of its Subsidiaries, except for deferred payment of any taxes contested pursuant to the terms of Section 5.9 hereof, and shall deliver to Bank, on demand, appropriate certificates attesting to such payments, and pay all amounts necessary to fund all present pension, profit sharing and deferred compensation plans in accordance with their terms.

6.6 Access to Collateral; Books and Records. Upon reasonable notice (provided no notice is required if an Event of Default has occurred and is continuing), Bank, or its agents, shall have the right, with such frequency as Bank shall determine necessary in its sole discretion, to inspect the Collateral and the right to audit and copy Borrower's Books. The foregoing inspections and audits shall be at Borrower's expense, and the charge therefor shall be \$750 per person per day (or such higher amount as shall represent Bank's then-current standard charge for the same), plus reasonable out-of-pocket expenses; provided, however, that Bank shall conduct no more than two (2) such audit(s) per fiscal year at Borrower's expense in the event no Event of Default has occurred and is continuing. In the event Borrower and Bank schedule an audit more than ten (10) days in advance, and Borrower cancels or seeks to reschedule the audit with less than ten (10) days written notice to Bank, then (without limiting any of Bank's rights or remedies), Borrower shall pay Bank a fee of \$1,000 plus any out-of-pocket expenses incurred by Bank to compensate Bank for the anticipated costs and expenses of the cancellation or rescheduling.

6.7 Insurance. Keep its business and the Collateral insured for risks and in amounts standard for companies in Borrower's industry and location and as Bank may reasonably request. Insurance policies shall be in a form, with companies, and in amounts that are satisfactory to Bank. All property policies shall have a loss payable endorsement showing Bank as loss payee and waive subrogation against Bank, and all liability policies shall show, or have endorsements showing, Bank as an additional insured. All policies (or the loss payable and additional insured endorsements) shall provide that the insurer shall

policy shall, at Bank's option, be payable to Bank on account of the Obligations. Notwithstanding the foregoing, (a)(x) so long as no Event of Default has occurred and is continuing, Borrower shall have the option of applying the proceeds of any casualty policy up to One Hundred Thousand Dollars (\$100,000.00) with respect to any loss, but not exceeding Two Hundred Fifty Thousand Dollars (\$250,000.00) in the aggregate for all losses under all casualty policies in any one year, toward the replacement or repair of destroyed or damaged property; provided that any such replaced or repaired property (i) shall be of equal or like value as the replaced or repaired Collateral and (ii) shall be deemed Collateral in which Bank has been granted a first priority security interest, and (b) after the occurrence and during the continuance of an Event of Default, all proceeds payable under such casualty policy shall, at the option of Bank, be payable to Bank on account of the Obligations. If Borrower fails to obtain insurance as required under this Section 6.7 or to pay any amount or furnish any required proof of payment to third persons and Bank, Bank may make all or part of such payment or obtain such insurance policies required in this Section 6.7, and take any action under the policies Bank deems prudent.

6.8 Operating Accounts.

(a) Maintain (i) not less than 60% of the dollar value of all Unrestricted Cash of Borrower and its Subsidiaries with banks or financial institutions located within the United States; and (ii) Borrower's and its Domestic Subsidiaries' primary operating accounts, disbursement accounts, and other deposit accounts and securities accounts with Bank and Bank's Affiliates, which accounts shall represent at least 51% of the dollar value of all of Borrower's and its Subsidiaries' operating and other deposit accounts and securities accounts at all banks or financial institutions.

(b) Provide Bank five (5) days prior written notice before establishing any Collateral Account within the United States at or with any bank or financial institution other than Bank or Bank's Affiliates. For each Collateral Account located within the United States that Borrower at any time maintains, Borrower shall cause the applicable bank or financial institution (other than Bank) at or with which any such Collateral Account is maintained to execute and deliver a Control Agreement or other appropriate instrument with respect to such Collateral Account to perfect Bank's Lien in such Collateral Account in accordance with the terms hereunder. The provisions of the previous sentence shall not apply to deposit accounts exclusively used for payroll, payroll taxes and other employee wage and benefit payments to or for the benefit of Borrower's employees and identified to Bank by Borrower as such, or to the Borrower's pledged time deposit maintained with ABN Amro Bank to secure the letters of credit issued in connection with value added tax recovery initiatives of Axcelis Technologies GmbH, or to those Collateral Accounts identified on Schedule 6.8(b) hereto, provided that the amounts on deposit in such Collateral Accounts shall not exceed the maximum amounts indicated on Schedule 6.8(b).

(c) Notwithstanding (i) the requirement in Section 6.8(a) that all of Borrower's and its Domestic Subsidiaries' primary operating accounts, disbursement accounts, and other deposit accounts and securities accounts be maintained with Bank and Bank's Affiliates; or (ii) the requirement in Section 6.8(b) that Borrower shall cause any bank or financial institution (other than Bank) at or with which any Collateral Account is maintained to execute and deliver a Control Agreement or other appropriate instrument with respect to such Collateral Account to perfect Bank's Lien in such Collateral Account; Bank agrees that Borrower shall have ninety (90) days from the Effective Date (or such longer period as Bank may agree to in writing) to close all of Borrower's and its Domestic Subsidiaries' primary operating accounts, disbursement accounts, and other deposit accounts and securities accounts located with banks or financial institutions other than Bank and Bank's Affiliates; provided, however, that with respect to Account No. 5800355702 maintained with LaSalle Bank (the "**Existing Lockbox Account**"), Borrower shall cause such account to be closed within 120 days from the Effective Date (or such longer period as Bank may agree to in writing) provided that, at all times prior to such closure, Borrower shall cause all deposits in the Existing Lockbox Account to be swept on a daily basis and deposited into a lockbox account, or such other "blocked account", maintained with Bank; provided further, that at all times from and after the Effective Date, Borrower shall maintain sufficient deposits with Bank and Bank's Affiliates to comply with the minimum dollar value requirements set forth in clauses (i) and (ii) of Section 6.8(a).

6.9 Financial Covenants.

(a) Liquidity. (i) At all times until Borrower furnishes Bank with evidence satisfactory to Bank that Borrower, on a consolidated basis, has achieved Net Income of at least \$1.00 for two consecutive fiscal quarters, Borrower shall maintain the greater of (A) \$50,000,000 or (B) two times (2x) the amount of all outstanding Credit

Extensions (including all amounts outstanding under the Receivables Purchase Facility), of (x) unrestricted cash and Cash Equivalents at Bank plus (y) unused availability under the Revolving Line, as determined by Bank with reference to the Availability Amount set forth herein; and (ii) at all times thereafter, Borrower shall maintain at least \$40,000,000 of (A) unrestricted cash and Cash Equivalents at Bank plus (B) unused availability under the Revolving Line, as determined by Bank with reference to the Availability Amount set forth herein; provided that, in no event shall the minimum liquidity covenant be reduced to \$40,000,000 until after such time as the Convertible Senior Subordinated Notes have been satisfied in full and the Indenture has been terminated.

(b) Maximum Losses. As of the last day of each applicable fiscal quarter, on a consolidated basis, Borrower shall not suffer any loss in excess of: (i) \$17,500,000 for the fiscal quarter ended March 31, 2008; (ii) \$7,500,000 for the fiscal quarter ended June 30, 2008; and (iii) \$2,500,000 for the fiscal quarter ended September 30, 2008.

(c) Profitability. As of the last day of each applicable fiscal quarter, on a consolidated basis, Borrower shall maintain a minimum positive Net Income of \$1 for each fiscal quarter following the fiscal quarter ended September 30, 2008.

6.10 Protection and Registration of Intellectual Property Rights. Borrower shall: (a) protect, defend and maintain the validity and enforceability of its material intellectual property; (b) promptly advise Bank in writing of material infringements of its intellectual property; and (c) not allow any intellectual property material to Borrower's business to be abandoned, forfeited or dedicated to the public without Bank's written consent. If Borrower (i) obtains any patent, registered trademark or servicemark, registered copyright, registered mask work, or any pending application for any of the foregoing, whether as owner, licensee or otherwise, or (ii) applies for any patent or the registration of any trademark or servicemark, then Borrower shall provide written notice thereof to Bank on a quarterly basis upon the delivery of the Compliance Certificate for such period, and shall execute such intellectual property security agreements and other documents and take such other actions as Bank shall request in its good faith business judgment to perfect and maintain a first priority

perfected security interest in favor of Bank in such property. If Borrower decides to register any copyrights or mask works in the United States Copyright Office, Borrower shall: (x) provide Bank with at least fifteen (15) days prior written notice of Borrower's intent to register such copyrights or mask works together with a copy of the application it intends to file with the United States Copyright Office (excluding exhibits thereto); (y) execute an intellectual property security agreement and such other documents and take such other actions as Bank may request in its good faith business judgment to perfect and maintain a first priority perfected security interest in favor of Bank in the copyrights or mask works intended to be registered with the United States Copyright Office; and (z) record such intellectual property security agreement with the United States Copyright Office contemporaneously with filing the copyright or mask work application(s) with the United States Copyright Office. Upon Bank's request, Borrower shall promptly provide to Bank copies of all applications that it files for patents or for the registration of trademarks, servicemarks, copyrights or mask works, together with evidence of the recording of the intellectual property security agreement necessary for Bank to perfect and maintain a first priority perfected security interest in such property.

6.11 Litigation Cooperation. From the date hereof and continuing through the termination of this Agreement, make available to Bank, without expense to Bank, Borrower and its officers, employees and agents and Borrower's books and records, to the extent that Bank may deem them reasonably necessary to prosecute or defend any third-party suit or proceeding instituted by or against Bank with respect to any Collateral or relating to Borrower.

6.12 Further Assurances. Execute any further instruments and take further action as Bank reasonably requests to perfect or continue Bank's Lien in the Collateral or to effect the purposes of this Agreement. Deliver to Bank, within five (5) days after the same are sent or received, copies of all correspondence, reports, documents and other filings with any Governmental Authority regarding compliance with or maintenance of Governmental Approvals or Requirements of Law or that could reasonably be expected to have a material effect on any of the Governmental Approvals or otherwise on the operations of Borrower or any of its Subsidiaries.

6.13 Designated Senior Indebtedness. Borrower shall designate all principal of, interest (including all interest accruing after the commencement of any bankruptcy or similar proceeding, whether or not a claim for post-petition interest is allowable as a claim in any such proceeding), and all fees, costs, expenses and other amounts accrued or due under this Agreement as "Designated Senior Indebtedness", or such similar term, in any future

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Subordinated Debt incurred by Borrower after the date hereof, if such Subordinated Debt contains such term or similar term and if the effect of such designation is to grant to Bank the same or similar rights as granted to Bank as a holder of "Designated Senior Indebtedness" under the Indenture and any similar agreement.

7 NEGATIVE COVENANTS

Borrower shall not do any of the following without Bank's prior written consent:

7.1 Dispositions. Convey, sell, lease, transfer or otherwise dispose of (collectively, "**Transfer**"), or permit any of its Subsidiaries to Transfer, all or any part of its business or property, except for Transfers (a) of Inventory in the ordinary course of business; (b) of worn-out or obsolete Equipment; (c) in connection with Permitted Liens and Permitted Investments; (d) of non-exclusive licenses for the use of the property of Borrower or its Subsidiaries in the ordinary course of business; and (e) in the event no Default or Event of Default has occurred and is continuing, the Sale Leaseback Transaction, provided that (i) not less than seventy-five percent (75%) of the proceeds of the Sale Leaseback Transaction shall be maintained at Bank at all times, provided, however, subject to the terms of Section 7.9, such proceeds may be used to retire Borrower's indebtedness under the Convertible Senior Subordinated Notes and (ii) Borrower shall have received a waiver and agreement from the buyer/lessor under the Sale Leaseback Transaction in form and substance annexed hereto as Exhibit 7.1. Concurrently with the consummation of the Sale Leaseback Transaction in accordance with the forgoing, Bank shall provide a discharge of the Negative Pledge.

7.2 Changes in Business, Management, Ownership, Control, or Business Locations. (a) Engage in or permit any of its Subsidiaries to engage in any business other than the businesses currently engaged in by Borrower and such Subsidiary, as applicable, or reasonably related thereto; (b) liquidate or dissolve, other than the dissolution of the Subsidiaries identified on Schedule 7.2 attached hereto; or (c) have a material change in executive management (provided that Borrower shall have ninety (90) days to retain a replacement reasonably acceptable to Bank) or permit or suffer any Change in Control. Borrower shall not, without at least thirty (30) days prior written notice to Bank: (1) add any new offices or business locations, including warehouses (unless such new offices or business locations contain less than One Million Dollars (\$1,000,000.00) in Borrower's assets or property or Borrower obtains a landlord agreement or bailee agreement in form and substance reasonably satisfactory to Bank), (2) change its jurisdiction of organization, (3) change its organizational structure or type, (4) change its legal name, or (5) change any organizational number (if any) assigned by its jurisdiction of organization.

7.3 Mergers or Acquisitions. Merge or consolidate, or permit any of its Subsidiaries to merge or consolidate, with any other Person, or acquire, or permit any of its Subsidiaries to acquire, all or substantially all of the capital stock or property of another Person. A Subsidiary (other than a Domestic Subsidiary) may merge or consolidate into another Subsidiary or into Borrower and a Domestic Subsidiary may merge into another Domestic Subsidiary or into Borrower.

7.4 Indebtedness. Create, incur, assume, or be liable for any Indebtedness, or permit any Subsidiary to do so, other than Permitted Indebtedness.

7.5 Encumbrance. Create, incur, allow, or suffer any Lien on any of its property, or assign or convey any right to receive income, including the sale of any Accounts, or permit any of its Subsidiaries to do so, except for Permitted Liens, permit any Collateral not to be subject to the first priority security interest granted herein, or enter into any agreement, document, instrument or other arrangement (except with or in favor of Bank) with any Person which directly or indirectly prohibits or has the effect of prohibiting Borrower or any Subsidiary from assigning, mortgaging, pledging, granting a security interest in or upon, or encumbering any of Borrower's or any Subsidiary's intellectual property, except as is otherwise permitted in Section 7.1 hereof and the definition of "Permitted Lien" herein.

7.6 Maintenance of Collateral Accounts. Maintain any Collateral Account except pursuant to the terms of Section 6.8.(b) hereof.

7.7 Distributions; Investments. (a) Pay any dividends or make any distribution or payment or redeem, retire or purchase any capital stock provided that (i) Borrower may convert any of its convertible securities into other securities pursuant to the terms of such convertible securities or otherwise in exchange thereof, and

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(ii) Borrower may pay dividends solely in common stock; or (b) directly or indirectly make any Investment other than Permitted Investments, or permit any of its Subsidiaries to do so.

7.8 Transactions with Affiliates. Directly or indirectly enter into or permit to exist any material transaction with any Affiliate of Borrower, except for transactions that are in the ordinary course of Borrower's business, upon fair and reasonable terms that are no less favorable to Borrower than would be obtained in an arm's length transaction with a non-affiliated Person.

7.9 Subordinated Debt. (a) Make or permit any payment on any Subordinated Debt, except under the terms of the subordination, intercreditor, or other similar agreement to which such Subordinated Debt is subject; provided, however, Borrower acknowledges and agrees that no payments will be made on account of the Convertible Senior Subordinated Notes in the event any Default or Event of Default then exists or would occur after giving effect to any such payment having been made, or (b) amend any provision in any document relating to the Subordinated Debt which would increase the amount thereof or adversely affect the subordination thereof to Obligations owed to Bank.

7.10 Compliance. Become an "investment company" or a company controlled by an "investment company", under the Investment Company Act of 1940, as amended, or undertake as one of its important activities extending credit to purchase or carry margin stock (as defined in Regulation U of the Board of Governors of the Federal Reserve System), or use the proceeds of any Credit Extension for that purpose; fail to meet the minimum funding requirements of ERISA, permit a Reportable Event or Prohibited Transaction, as defined in ERISA, to occur; fail to comply with the Federal Fair Labor Standards Act or violate any other law or regulation, if the violation could reasonably be expected to have a material adverse effect on Borrower's business, or permit any of its Subsidiaries to do so; withdraw or permit any Subsidiary to withdraw from participation in, permit partial or complete termination of, or permit the occurrence of any other event with respect to, any present pension, profit sharing and deferred compensation plan which could reasonably be expected to result in any liability of Borrower, including any liability to the Pension Benefit Guaranty Corporation or its successors or any other governmental agency.

8 EVENTS OF DEFAULT

Any one of the following shall constitute an event of default (an "Event of Default") under this Agreement:

8.1 Payment Default. Borrower fails to (a) make any payment of principal or interest on any Credit Extension on its due date, or (b) pay any other Obligations within three (3) Business Days after such Obligations are due and payable (which three (3) day grace period shall not apply to payments due on the Revolving Line Maturity Date). During the cure period, the failure to cure the payment default is not an Event of Default (but no Credit Extension will be made during the cure period);

8.2 Covenant Default.

(a) Borrower fails or neglects to perform any obligation in Sections 6.2, 6.4, 6.7, 6.8, 6.9, 6.12 or violates any covenant in Section 7; or

(b) Borrower fails or neglects to perform, keep, or observe any other term, provision, condition, covenant or agreement contained in this Agreement or any Loan Documents, and as to any default (other than those specified in this Section 8) under such other term, provision, condition, covenant or agreement that can be cured, has failed to cure the default within ten (10) days after the occurrence thereof; provided, however, that if the default cannot by its nature be cured within the ten (10) day period or cannot after diligent attempts by Borrower be cured within such ten (10) day period, and such default is likely to be cured within a reasonable time, then Borrower shall have an additional period (which shall not in any case exceed thirty (30) days) to attempt to cure such default, and within such reasonable time period the failure to cure the default shall not be deemed an Event of Default (but no Credit Extensions shall be made during such cure period). Grace periods provided under this section shall not apply, among other things, to financial covenants or any other covenants set forth in subsection (a) above;

8.3 Material Adverse Change. A Material Adverse Change occurs;

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8.4 Attachment; Levy; Restraint on Business. (a) (i) The service of process seeking to attach, by trustee or similar process, any funds of Borrower or of any entity under control of Borrower (including a Subsidiary) on deposit with Bank or any Bank Affiliate, or (ii) a notice of lien, levy, or assessment is filed against any of Borrower's assets by any government agency, and the same under subclauses (i) and (ii) hereof are not, within ten (10) days after the occurrence thereof, discharged or stayed (whether through the posting of a bond or otherwise); provided, however, no Credit Extensions shall be made during any ten (10) day cure period; and (b) (i) any material portion of Borrower's assets is attached, seized, levied on, or comes into possession of a trustee or receiver, or (ii) any court order enjoins, restrains, or prevents Borrower from conducting any material part of its business;

8.5 Insolvency. (a) Borrower is unable to pay its debts (including trade debts) as they become due or otherwise becomes insolvent; (b) Borrower begins an Insolvency Proceeding; or (c) an Insolvency Proceeding is begun against Borrower and not dismissed or stayed within forty-five (45) days (but no Credit Extensions shall be made while of any of the conditions described in clause (a) exist and/or until any Insolvency Proceeding is dismissed);

8.6 Other Agreements. There is a default in any agreement to which Borrower or any Guarantor is a party with a third party or parties resulting in a right by such third party or parties, whether or not exercised, to accelerate the maturity of any Indebtedness in an amount in excess of Five Hundred Thousand Dollars (\$500,000.00) or that could have a material adverse effect on Borrower's or any Guarantor's business.

8.7 Judgments. One or more judgments, orders, or decrees for the payment of money in an amount, individually or in the aggregate, of at least Five Hundred Thousand Dollars (\$500,000.00) (not covered by independent third-party insurance as to which liability has been accepted by such insurance carrier) shall be rendered against Borrower and shall remain unsatisfied, unvacated, or unstayed for a period of ten (10) days after the entry thereof (provided that no Credit Extensions will be made prior to the satisfaction, vacation, or stay of such judgment, order, or decree);

8.8 Misrepresentations. Borrower or any Person acting for Borrower makes any representation, warranty, or other statement now or later in this Agreement, any Loan Document or in any writing delivered to Bank or to induce Bank to enter this Agreement or any Loan Document, and such representation, warranty, or other statement is incorrect in any material respect when made;

8.9 Subordinated Debt. A default or breach occurs under any agreement between Borrower and any creditor of Borrower that signed a subordination, intercreditor, or other similar agreement with Bank, or any creditor that has signed such an agreement with Bank breaches any terms of such

agreement;

8.10 Guaranty; Guarantor Defaults. (a) Any Guaranty of any Obligations terminates or ceases for any reason to be in full force and effect; (b) any Guarantor does not perform any obligation or covenant under any Guaranty of the Obligations; (c) any circumstance described in Sections 8.3, 8.4, 8.5, 8.7, or 8.8. occurs with respect to any Guarantor; (d) the liquidation, winding up, or termination of existence of any Guarantor; (e) the occurrence of any “Event of Default” under (and as defined in) any Guarantor Security Agreement; or (f) the occurrence of any “Event of Default” under (and as defined in) any Pledge Agreement executed and delivered by any Guarantor; or

8.11 Governmental Approvals. Any Governmental Approval shall have been (a) revoked, rescinded, suspended, modified in an adverse manner or not renewed in the ordinary course for a full term or (b) subject to any decision by a Governmental Authority that designates a hearing with respect to any applications for renewal of any of such Governmental Approval or that could result in the Governmental Authority taking any of the actions described in clause (a) above, and such decision or such revocation, rescission, suspension, modification or non-renewal (i) has, or could reasonably be expected to have, a Material Adverse Change, or (ii) adversely affects the legal qualifications of Borrower or any of its Subsidiaries to hold such Governmental Approval in any applicable jurisdiction and such revocation, rescission, suspension, modification or non-renewal could reasonably be expected to affect the status of or legal qualifications of Borrower or any of its Subsidiaries to hold any Governmental Approval in any other jurisdiction.

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9 BANK’S RIGHTS AND REMEDIES

9.1 Rights and Remedies. While an Event of Default occurs and continues Bank may, without notice or demand, do any or all of the following:

(a) declare all Obligations immediately due and payable (but if an Event of Default described in Section 8.5 occurs all Obligations are immediately due and payable without any action by Bank);

(b) stop advancing money or extending credit for Borrower’s benefit under this Agreement or under any other agreement between Borrower and Bank;

(c) demand that Borrower (i) deposits cash with Bank in an amount equal to the aggregate amount of any Letters of Credit remaining undrawn, as collateral security for the repayment of any future drawings under such Letters of Credit, and Borrower shall forthwith deposit and pay such amounts, and (ii) pay in advance all Letter of Credit fees scheduled to be paid or payable over the remaining term of any Letters of Credit;

(d) terminate any FX Forward Contracts;

(e) settle or adjust disputes and claims directly with Account Debtors for amounts on terms and in any order that Bank considers advisable, notify any Person owing Borrower money of Bank’s security interest in such funds, and verify the amount of such account;

(f) make any payments and do any acts it considers necessary or reasonable to protect the Collateral and/or its security interest in the Collateral. Borrower shall assemble the Collateral if Bank requests and make it available as Bank designates. Bank may enter premises where the Collateral is located, take and maintain possession of any part of the Collateral, and pay, purchase, contest, or compromise any Lien which appears to be prior or superior to its security interest and pay all expenses incurred. Borrower grants Bank a license to enter and occupy any of its premises, without charge, to exercise any of Bank’s rights or remedies;

(g) apply to the Obligations any (i) balances and deposits of Borrower it holds, or (ii) any amount held by Bank owing to or for the credit or the account of Borrower;

(h) ship, reclaim, recover, store, finish, maintain, repair, prepare for sale, advertise for sale, and sell the Collateral. Bank is hereby granted a non-exclusive, royalty-free license or other right to use, without charge, Borrower’s labels, patents, copyrights, mask works, rights of use of any name, trade secrets, trade names, trademarks, service marks, and advertising matter, or any similar property as it pertains to the Collateral, in completing production of, advertising for sale, and selling any Collateral and, in connection with Bank’s exercise of its rights under this Section, Borrower’s rights under all licenses and all franchise agreements inure to Bank’s benefit;

(i) place a “hold” on any account maintained with Bank and/or deliver a notice of exclusive control, any entitlement order, or other directions or instructions pursuant to any Control Agreement or similar agreements providing control of any Collateral;

(j) demand and receive possession of Borrower’s Books; and

(k) exercise all rights and remedies available to Bank under the Loan Documents or at law or equity, including all remedies provided under the Code (including disposal of the Collateral pursuant to the terms thereof).

9.2 Power of Attorney. Borrower hereby irrevocably appoints Bank as its lawful attorney-in-fact, exercisable upon the occurrence and during the continuance of an Event of Default, to: (a) endorse Borrower’s name on any checks or other forms of payment or security; (b) sign Borrower’s name on any invoice or bill of lading for any Account or drafts against Account Debtors; (c) settle and adjust disputes and claims about the Accounts directly with Account Debtors, for amounts and on terms Bank determines reasonable; (d) make, settle, and adjust all claims under Borrower’s insurance policies; (e) pay, contest or settle any Lien, charge, encumbrance, security interest, and adverse claim in or to the Collateral, or any judgment based thereon, or otherwise take any action to terminate or discharge the same; and (f) transfer the Collateral into the name of Bank or a third party as the Code permits. Borrower hereby appoints Bank as its lawful attorney-in-fact to sign Borrower’s name on any documents necessary to perfect or continue the perfection of Bank’s security interest in the Collateral regardless of whether an

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Event of Default has occurred until all Obligations have been satisfied in full (except for contingent indemnification obligations for which no claim has been made) and Bank is under no further obligation to make Credit Extensions hereunder. Bank’s foregoing appointment as Borrower’s attorney in fact, and all of

Bank's rights and powers, coupled with an interest, are irrevocable until all Obligations have been fully repaid and performed and Bank's obligation to provide Credit Extensions terminates.

9.3 Protective Payments. If Borrower fails to obtain the insurance called for by Section 6.7 or fails to pay any premium thereon or fails to pay any other amount which Borrower is obligated to pay under this Agreement or any other Loan Document, Bank may obtain such insurance or make such payment, and all amounts so paid by Bank are Bank Expenses and immediately due and payable, bearing interest at the then highest applicable rate, and secured by the Collateral. Bank will make reasonable efforts to provide Borrower with notice of Bank obtaining such insurance at the time it is obtained or within a reasonable time thereafter. No payments by Bank are deemed an agreement to make similar payments in the future or Bank's waiver of any Event of Default.

9.4 Application of Payments and Proceeds. Borrower shall have no right to specify the order or the accounts to which Bank shall allocate or apply any payments required to be made by Borrower to Bank or otherwise received by Bank under this Agreement when any such allocation or application is not specified elsewhere in this Agreement. If an Event of Default has occurred and is continuing, Bank may apply any funds in its possession, whether from Borrower account balances, payments, proceeds realized as the result of any collection of Accounts or other disposition of the Collateral, or otherwise, to the Obligations in such order as Bank shall determine in its sole discretion. Any surplus shall be paid to Borrower by credit to the Designated Deposit Account or to other Persons legally entitled thereto; Borrower shall remain liable to Bank for any deficiency. If Bank, in its good faith business judgment, directly or indirectly enters into a deferred payment or other credit transaction with any purchaser at any sale of Collateral, Bank shall have the option, exercisable at any time, of either reducing the Obligations by the principal amount of the purchase price or deferring the reduction of the Obligations until the actual receipt by Bank of cash therefor.

9.5 Bank's Liability for Collateral. So long as Bank complies with reasonable banking practices regarding the safekeeping of the Collateral in the possession or under the control of Bank, Bank shall not be liable or responsible for: (a) the safekeeping of the Collateral; (b) any loss or damage to the Collateral; (c) any diminution in the value of the Collateral; or (d) any act or default of any carrier, warehouseman, bailee, or other Person. Borrower bears all risk of loss, damage or destruction of the Collateral.

9.6 No Waiver; Remedies Cumulative. Bank's failure, at any time or times, to require strict performance by Borrower of any provision of this Agreement or any other Loan Document shall not waive, affect, or diminish any right of Bank thereafter to demand strict performance and compliance herewith or therewith. No waiver hereunder shall be effective unless signed by Bank and then is only effective for the specific instance and purpose for which it is given. Bank's rights and remedies under this Agreement and the other Loan Documents are cumulative. Bank has all rights and remedies provided under the Code, by law, or in equity. Bank's exercise of one right or remedy is not an election, and Bank's waiver of any Event of Default is not a continuing waiver. Bank's delay in exercising any remedy is not a waiver, election, or acquiescence.

9.7 Demand Waiver. Borrower waives demand, notice of default or dishonor, notice of payment and nonpayment, notice of any default, nonpayment at maturity, release, compromise, settlement, extension, or renewal of accounts, documents, instruments, chattel paper, and guarantees held by Bank on which Borrower is liable.

10 NOTICES

All notices, consents, requests, approvals, demands, or other communication by any party to this Agreement or any other Loan Document must be in writing and shall be deemed to have been validly served, given, or delivered: (a) upon the earlier of actual receipt and three (3) Business Days after deposit in the U.S. mail, first class, registered or certified mail return receipt requested, with proper postage prepaid; (b) upon transmission, when sent by electronic mail or facsimile transmission; (c) one (1) Business Day after deposit with a reputable overnight courier with all charges prepaid; or (d) when delivered, if hand-delivered by messenger, all of which shall be addressed to the party to be notified and sent to the address, facsimile number, or email address indicated below. Bank or Borrower may change its mailing or electronic mail address or facsimile number by giving the other party written notice thereof in accordance with the terms of this Section 10.

If to Borrower:	Axcelis Technologies, Inc. 108 Cherry Hill Drive Beverly, Massachusetts 01915 Attn: Stephen G. Bassett, Chief Financial Officer and Executive Vice President Fax: 978-787-4090 Email: Stephen.bassett@axcelis.com
If to Borrower:	Axcelis Technologies, Inc. 108 Cherry Hill Drive Beverly, Massachusetts 01915 Attn: Lynnette C. Fallon, Executive Vice President HR/Legal, General Counsel and Secretary Fax: 978-787-4090 Email: lynnette.fallon@axcelis.com
With a copy to:	Edward Angell Palmer and Dodge LLP 111 Huntington Avenue Boston, Massachusetts 02199 Attn: James I. Rubens, Esquire Fax: 888-325-9130 Email: jrubens@eapdlaw.com
If to Bank:	Silicon Valley Bank One Newton Executive Park, Suite 200 2221 Washington Street Newton, Massachusetts 02462 Attn: Michael Tramack Fax: 617.969.5478 Email: mtramack@svbank.com

with a copy to: Riemer & Braunstein LLP
Three Center Plaza
Boston, Massachusetts 02108
Attn: Charles W. Stavros, Esquire
Fax: 617.880.3456
Email: CStavros@riemerlaw.com

11 CHOICE OF LAW, VENUE, JURY TRIAL WAIVER AND JUDICIAL REFERENCE

Massachusetts law governs the Loan Documents without regard to principles of conflicts of law. Borrower and Bank each submit to the exclusive jurisdiction of the State and Federal courts in Massachusetts; provided, however, that nothing in this Agreement shall be deemed to operate to preclude Bank from bringing suit or taking other legal action in any other jurisdiction to realize on the Collateral or any other security for the Obligations, or to enforce a judgment or other court order in favor of Bank. Borrower expressly submits and consents in advance to such jurisdiction in any action or suit commenced in any such court, and Borrower hereby waives any objection that it may have based upon lack of personal jurisdiction, improper venue, or forum non conveniens and hereby consents to the granting of such legal or equitable relief as is deemed appropriate by such court. Borrower hereby waives personal service of the summons, complaints, and other process issued in such action or suit and agrees that service of such summons, complaints, and other process may be made by registered or certified mail addressed to Borrower at the address set forth in Section 10 of this Agreement and that service so made shall be deemed completed upon the earlier to occur of Borrower's actual receipt thereof or three (3) days after deposit in the U.S. mails, proper postage prepaid.

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TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, BORROWER AND BANK EACH WAIVE THEIR RIGHT TO A JURY TRIAL OF ANY CLAIM OR CAUSE OF ACTION ARISING OUT OF OR BASED UPON THIS AGREEMENT, THE LOAN DOCUMENTS OR ANY CONTEMPLATED TRANSACTION, INCLUDING CONTRACT, TORT, BREACH OF DUTY AND ALL OTHER CLAIMS. THIS WAIVER IS A MATERIAL INDUCEMENT FOR BOTH PARTIES TO ENTER INTO THIS AGREEMENT. EACH PARTY HAS REVIEWED THIS WAIVER WITH ITS COUNSEL.

12 GENERAL PROVISIONS

12.1 Termination Prior to Revolving Line Maturity Date. This Agreement may be terminated prior to the Revolving Line Maturity Date by Borrower, effective three (3) Business Days after written notice of termination is given to Bank; provided that the Receivables Purchase Facility shall automatically, without further action, terminate upon the termination of this Agreement. Notwithstanding any such termination, Bank's lien and security interest in the Collateral shall continue until Borrower fully satisfies its Obligations in cash (except for contingent indemnification obligations for which no claim has been made). If such termination is at Borrower's election (regardless of whether any Default or Event of Default then exists) or at Bank's election due to the occurrence and continuance of an Event of Default, Borrower shall pay to Bank, in addition to the payment of any other expenses or fees then-owing, a termination fee in an amount equal to (i) two percent (2%) of the Total Commitment if such termination occurs on or prior to the first anniversary of the Effective Date, and (ii) one percent (1%) of the Total Commitment if such termination occurs after the first anniversary of the Effective Date but prior to the second anniversary of the Effective Date.

12.2 Right of Set-Off. Borrower hereby grants to Bank a Lien and a right of setoff as security for all Obligations to Bank, whether now existing or hereafter arising upon and against all deposits, credits, collateral and property, now or hereafter in the possession, custody, safekeeping or control of Bank or any entity under the control of Bank (including a subsidiary of Bank) or in transit to any of them. At any time after the occurrence and during the continuance of an Event of Default, without demand or notice, Bank may setoff the same or any part thereof and apply the same to any liability or Obligation of Borrower even though unmatured and regardless of the adequacy of any other collateral securing the Obligations. **ANY AND ALL RIGHTS TO REQUIRE BANK TO EXERCISE ITS RIGHTS OR REMEDIES WITH RESPECT TO ANY OTHER COLLATERAL WHICH SECURES THE OBLIGATIONS, PRIOR TO EXERCISING ITS RIGHT OF SETOFF WITH RESPECT TO SUCH DEPOSITS, CREDITS OR OTHER PROPERTY OF BORROWER, ARE HEREBY KNOWINGLY, VOLUNTARILY AND IRREVOCABLY WAIVED.**

12.3 Successors and Assigns. This Agreement binds and is for the benefit of the successors and permitted assigns of each party. Borrower may not assign this Agreement or any rights or obligations under it without Bank's prior written consent (which may be granted or withheld in Bank's discretion). Bank has the right, without the consent of or notice to Borrower, to sell, transfer, negotiate, or grant participation in all or any part of, or any interest in, Bank's obligations, rights, and benefits under this Agreement and the other Loan Documents; provided, however, that prior to the occurrence of an Event of Default, any such assignment or participation may only be made to an Eligible Assignee.

12.4 Indemnification. Borrower agrees to indemnify, defend and hold Bank and its directors, officers, employees, agents, attorneys, or any other Person affiliated with or representing Bank (each, an "**Indemnified Person**") harmless against: (a) all obligations, demands, claims, and liabilities (collectively, "**Claims**") asserted by any other party in connection with the transactions contemplated by the Loan Documents; and (b) all losses or Bank Expenses incurred, or paid by such Indemnified Person from, following, or arising from transactions between Bank and Borrower (including reasonable attorneys' fees and expenses), except for Claims and/or losses directly caused by such Indemnified Person's gross negligence or willful misconduct.

12.5 Time of Essence. Time is of the essence for the performance of all Obligations in this Agreement.

12.6 Severability of Provisions. Each provision of this Agreement is severable from every other provision in determining the enforceability of any provision.

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12.7 Correction of Loan Documents. Bank may correct patent errors and fill in any blanks in this Agreement and the other Loan Documents consistent with the agreement of the parties.

12.8 Amendments in Writing; Integration. All amendments to this Agreement must be in writing and signed by both Bank and Borrower. This Agreement and the Loan Documents represent the entire agreement about this subject matter and supersede prior negotiations or agreements. All prior

agreements, understandings, representations, warranties, and negotiations between the parties about the subject matter of this Agreement and the Loan Documents merge into this Agreement and the Loan Documents.

12.9 Counterparts. This Agreement may be executed in any number of counterparts and by different parties on separate counterparts, each of which, when executed and delivered, are an original, and all taken together, constitute one Agreement.

12.10 Survival. All covenants, representations and warranties made in this Agreement continue in full force until this Agreement has terminated pursuant to its terms and all Obligations (other than inchoate indemnity obligations and any other obligations which, by their terms, are to survive the termination of this Agreement) have been satisfied. The obligation of Borrower in Section 12.2 to indemnify Bank shall survive until the statute of limitations with respect to such claim or cause of action shall have run.

12.11 Confidentiality. In handling any confidential information, Bank shall exercise the same degree of care that it exercises for its own proprietary information, but disclosure of information may be made: (a) to Bank's Subsidiaries or Affiliates; (b) to prospective transferees or purchasers of any interest in the Credit Extensions (provided, however, Bank shall use commercially reasonable efforts to obtain such prospective transferee's or purchaser's agreement to the terms of this provision); (c) as required by law, regulation, subpoena, or other order; (d) to Bank's regulators or as otherwise required in connection with Bank's examination or audit; (e) as Bank considers appropriate in exercising remedies under the Loan Documents; and (f) to third-party service providers of Bank so long as such service providers have executed a confidentiality agreement with Bank with terms no less restrictive than those contained herein. Confidential information does not include information that either: (i) is in the public domain or in Bank's possession when disclosed to Bank, or becomes part of the public domain after disclosure to Bank; or (ii) is disclosed to Bank by a third party, if Bank does not know that the third party is prohibited from disclosing the information.

Bank may use confidential information for any purpose, including, without limitation, for the development of client databases, reporting purposes, and market analysis, so long as Bank does not disclose Borrower's identity or the identity of any person associated with Borrower unless otherwise expressly permitted by this Agreement. The provisions of the immediately preceding sentence shall survive the termination of this Agreement.

13 DEFINITIONS

13.1 Definitions. As used in this Agreement, the following terms have the following meanings:

"Account" is any "account" as defined in the Code with such additions to such term as may hereafter be made, and includes, without limitation, all accounts receivable and other sums owing to Borrower.

"Account Debtor" is any "account debtor" as defined in the Code with such additions to such term as may hereafter be made.

"Advance" or **"Advances"** means an advance (or advances) under the Revolving Line.

"Affiliate" of any Person is a Person that owns or controls directly or indirectly the Person, any Person that controls or is controlled by or is under common control with the Person, and each of that Person's senior executive officers, directors, partners and, for any Person that is a limited liability company, that Person's managers and members. For avoidance of doubt, Borrower and Bank agree that SEN Corporation, an SHI and Axcelis Company, is not an Affiliate hereunder.

"Agreement" is defined in the preamble hereof.

"Availability Amount" is (a) the lesser of (i) the Revolving Line or (ii) the amount available under the Borrowing Base minus (b) the amount of all outstanding Letters of Credit (including drawn but unreimbursed Letters of Credit) plus an amount equal to the Letter of Credit Reserve, minus (c) the FX Reserve, minus (d) any amounts used for Cash Management Services, and minus (e) the outstanding principal balance of any Advances.

"Bank" is defined in the preamble hereof.

"Bank Expenses" are all audit fees and expenses, costs, and expenses (including reasonable attorneys' fees and expenses) for preparing, amending, negotiating, administering, defending and enforcing the Loan Documents (including, without limitation, those incurred in connection with appeals or Insolvency Proceedings) or otherwise incurred with respect to Borrower.

"Bankruptcy-Related Defaults" is defined in Section 9.1.

"Borrower" is defined in the preamble hereof

"Borrower's Books" are all Borrower's books and records including ledgers, federal and state tax returns, records regarding Borrower's assets or liabilities, the Collateral, business operations or financial condition, and all computer programs or storage or any equipment containing such information.

"Borrowing Base" is, without duplication, the sum of the following: (a) 80% of Eligible Accounts, plus (b) 80% of Eligible Foreign L/C Accounts, plus (c) 65% of Eligible Foreign Accounts, plus (d) the lesser of 25% of the value of Borrower's Eligible Inventory (valued at the lower of cost or wholesale fair market value) or \$5,000,000, but in no event shall amounts advanced against Eligible Inventory exceed 25% of the aggregate Credit Extensions, all as determined by Bank from Borrower's most recent Transaction Report; provided, however, that Bank may, following any Collateral inspection or audit conducted by or on behalf of Bank, decrease the foregoing percentages and amount in its good faith business judgment based on events, conditions, contingencies, or risks which, as reasonably determined by Bank after consultation with Borrower, may adversely affect Collateral.

"Borrowing Resolutions" are, with respect to any Person, those resolutions adopted by such Person's Board of Directors (or other applicable governing body) and delivered by such Person to Bank approving the Loan Documents to which such Person is a party and the transactions contemplated thereby, together with a certificate executed by its secretary on behalf of such Person certifying that (a) such Person has the authority to execute, deliver, and perform its obligations under each of the Loan Documents to which it is a party, (b) that attached to such certificate is a true, correct, and complete copy of the resolutions then in full force and effect authorizing and ratifying the execution, delivery, and performance by such Person of the Loan Documents to which it is a party, (c) the name(s) of the Person(s) authorized to execute the Loan Documents on behalf of such Person, together with a sample of the true signature(s) of such

Person(s), and (d) that Bank may conclusively rely on such certificate unless and until such Person shall have delivered to Bank a further certificate canceling or amending such prior certificate.

“**Business Day**” is any day other than a Saturday, Sunday or other day on which banking institutions in the Commonwealth of Massachusetts are authorized or required by law or other governmental action to close, except that if any determination of a “Business Day” shall relate to a LIBOR Advance, the term “Business Day” shall also mean a day on which dealings are carried on in the London interbank market, and if any determination of a “Business Day” shall relate to an FX Forward Contract, the term “Business Day” shall mean a day on which dealings are carried on in the country of settlement of the foreign (i.e., non-Dollar) currency. is any day that is not a Saturday, Sunday or a day on which Bank is closed.

“**Cash Equivalents**” means (a) marketable direct obligations issued or unconditionally guaranteed by the United States or any agency or any State thereof having maturities of not more than one (1) year from the date of acquisition; (b) commercial paper maturing no more than one (1) year after its creation and having the highest rating from either Standard & Poor’s Ratings Group or Moody’s Investors Service, Inc.; (c) Bank’s certificates of deposit issued maturing no more than one (1) year after issue.

“**Cash Management Services**” is defined in Section 2.1.4.

“**Change in Control**” means any event, transaction, or occurrence as a result of which (a) any “person” (as such term is defined in Sections 3(a)(9) and 13(d)(3) of the Securities Exchange Act of 1934, as amended (the “**Exchange Act**”), other than a trustee or other fiduciary holding securities under an employee benefit plan of Borrower, is or becomes a beneficial owner (within the meaning Rule 13d-3 promulgated under the Exchange Act), directly or indirectly, of securities of Borrower, representing twenty-five percent (25%) or more of the combined voting power of Borrower’s then outstanding securities; or (b) during any period of twelve consecutive calendar months, individuals who at the beginning of such period constituted the Board of Directors of Borrower (together with any new directors whose election by the Board of Directors of Borrower was approved by a vote of at least two-thirds of the directors then still in office who either were directors at the beginning of such period or whose election or nomination for election was previously so approved) cease for any reason other than death or disability to constitute a majority of the directors then in office.

“**Code**” is the Uniform Commercial Code, as the same may, from time to time, be enacted and in effect in the Commonwealth of Massachusetts; provided, that, to the extent that the Code is used to define any term herein or in any Loan Document and such term is defined differently in different Articles or Divisions of the Code, the definition of such term contained in Article or Division 9 shall govern; provided further, that in the event that, by reason of mandatory provisions of law, any or all of the attachment, perfection, or priority of, or remedies with respect to, Bank’s Lien on any Collateral is governed by the Uniform Commercial Code in effect in a jurisdiction other than the Commonwealth of Massachusetts, the term “**Code**” shall mean the Uniform Commercial Code as enacted and in effect in such other jurisdiction solely for purposes on the provisions thereof relating to such attachment, perfection, priority, or remedies and for purposes of definitions relating to such provisions.

“**Collateral**” is any and all properties, rights and assets of Borrower described on Exhibit A.

“**Collateral Account**” is any Deposit Account, Securities Account, or Commodity Account.

“**Commodity Account**” is any “commodity account” as defined in the Code with such additions to such term as may hereafter be made.

“**Compliance Certificate**” is that certain certificate in the form attached hereto as Exhibit B.

“**Contingent Obligation**” is, for any Person, any direct or indirect liability, contingent or not, of that Person for (a) any indebtedness, lease, dividend, letter of credit or other obligation of another such Person as an obligation directly or indirectly guaranteed, endorsed, co-made, discounted or sold with recourse by that Person, or for which that Person is directly or indirectly liable; (b) any obligations for undrawn letters of credit for the account of that Person; and (c) all obligations from any interest rate, currency or commodity swap agreement, interest rate cap or collar agreement, or other agreement or arrangement designated to protect a Person against fluctuation in interest rates, currency exchange rates or commodity prices; but “Contingent Obligation” does not include endorsements in the ordinary course of business. The amount of a Contingent Obligation is the stated or determined amount of the primary obligation for which the Contingent Obligation is made or, if not determinable, the maximum reasonably anticipated liability for it determined by the Person in good faith; but the amount may not exceed the maximum of the obligations under any guarantee or other support arrangement.

“**Control Agreement**” is any control agreement entered into among the depository institution at which Borrower maintains a Deposit Account or the securities intermediary or commodity intermediary at which Borrower maintains a Securities Account or a Commodity Account, Borrower, and Bank pursuant to which Bank obtains control (within the meaning of the Code) over such Deposit Account, Securities Account, or Commodity Account.

“**Convertible Senior Subordinated Notes**” are the 4.25% Senior Subordinated Notes due 2009 issued under the Indenture in the approximate amount of \$75,000,000 as of the Effective Date.

“**Credit Extension**” is any Advance, Letter of Credit, FX Forward Contract, amount utilized for Cash Management Services, or any other extension of credit by Bank for Borrower’s benefit.

“**Default**” means any event which with notice or passage of time or both, would constitute an Event of Default.

“**Default Rate**” is defined in Section 2.3(b).

“**Deposit Account**” is any “deposit account” as defined in the Code with such additions to such term as may hereafter be made.

“**Designated Deposit Account**” is Borrower’s deposit account, account number 330609227, maintained with Bank.

“**Dollars,**” “**dollars**” and “**\$**” each mean lawful money of the United States.

“**Domestic Subsidiary**” means a Subsidiary organized under the laws of the United States or any state or territory thereof or the District of Columbia.

“**Effective Date**” is the date Bank executes this Agreement as indicated on the signature page hereof.

“**Eligible Accounts**” means Accounts which arise in the ordinary course of Borrower’s business that meet all Borrower’s representations and warranties in Section 5.3. Bank reserves the right at any time after the Effective Date to adjust any of the criteria set forth below and to establish new criteria in its good faith business judgment. Without limiting the fact that the determination of which Accounts are eligible for borrowing is a matter of Bank’s good faith judgment, the following (“**Minimum Eligibility Requirements**”) are the minimum requirements for an Account to be an Eligible Account and, unless Bank agrees otherwise in writing, Eligible Accounts shall not include:

- (a) Accounts that the Account Debtor has not paid within ninety (90) days of invoice date regardless of invoice payment period terms;
 - (b) Accounts owing from an Account Debtor, fifty percent (50%) or more of whose Accounts have not been paid within ninety (90) days of invoice date;
 - (c) Accounts billed in the United States and owing from an Account Debtor which does not have its principal place of business in the United States or Canada;
 - (d) Accounts billed and payable outside of the United States;
 - (e) Accounts owing from an Account Debtor to the extent that Borrower is indebted or obligated in any manner to the Account Debtor (as creditor, lessor, supplier or otherwise - sometimes called “contra” accounts, accounts payable, customer deposits or credit accounts), with the exception of customary credits, adjustments and/or discounts given to an Account Debtor by Borrower in the ordinary course of its business;
 - (f) Accounts for which the Account Debtor is Borrower’s Affiliate (or a company in which Borrower or its Affiliates have greater than a 20% ownership interest, including, without limitation, SEN Corporation, an SHI and Axcelis Company), officer, employee, or agent;
 - (g) Accounts with credit balances over ninety (90) days from invoice date;
 - (h) Accounts owing from an Account Debtor, including Affiliates, whose total obligations to Borrower exceed twenty-five (25%) of all Accounts, for the amounts that exceed that percentage, unless Bank, on a case-by-case basis and in its sole discretion, otherwise approves any such Account;
 - (i) Accounts owing from an Account Debtor which is a United States government entity or any department, agency, or instrumentality thereof unless Borrower has assigned its payment rights to Bank and the assignment has been acknowledged under the Federal Assignment of Claims Act of 1940, as amended;
 - (j) Accounts for demonstration or promotional equipment, or in which goods are consigned, or sold on a “sale guaranteed”, “sale or return”, “sale on approval”, or other terms if Account Debtor’s payment may be conditional;
-
- (k) Accounts for which an Account Debtor has not been invoiced or where goods or services have not yet been rendered to the Account Debtor (sometimes called memo billings or pre-billings);
 - (l) Accounts subject to contractual arrangements between Borrower and an Account Debtor where payments shall be scheduled or due according to completion or fulfillment requirements and where the Account Debtor has a right of offset for damages suffered as a result of Borrower’s failure to perform in accordance with the contract (sometimes called contracts accounts receivable, progress billings, milestone billings, or fulfillment contracts);
 - (m) Accounts owing from an Account Debtor the amount of which may be subject to withholding based on the Account Debtor’s satisfaction of Borrower’s complete performance (but only to the extent of that portion of the amount withheld which exceeds ten percent (10%) of the Account; sometimes called retainage billings);
 - (n) Accounts subject to trust provisions, subrogation rights of a bonding company, or a statutory trust;
 - (o) Accounts owing from an Account Debtor that have been invoiced for goods that have not been shipped to the Account Debtor unless Bank, Borrower, and the Account Debtor have entered into an agreement acceptable to Bank in its sole discretion wherein the Account Debtor acknowledges that (i) it has title to and has ownership of the goods wherever located, (ii) a bona fide sale of the goods has occurred, and (iii) it owes payment for such goods in accordance with invoices from Borrower (sometimes called “bill and hold” accounts);
 - (p) [Intentionally omitted]
 - (q) Accounts for which the Account Debtor has not been invoiced;
 - (r) Accounts that represent non-trade receivables or that are derived by means other than in the ordinary course of Borrower’s business;
 - (s) Accounts for which Borrower has permitted Account Debtor’s payment to extend beyond 90 days;
 - (t) Accounts subject to chargebacks or others payment deductions taken by an Account Debtor (but only to the extent the chargeback is determined invalid and subsequently collected by Borrower);
 - (u) Accounts in which the Account Debtor disputes liability or makes any claim (but only up to the disputed or claimed amount), or if the Account Debtor is subject to an Insolvency Proceeding, or becomes insolvent, or goes out of business; and
 - (v) Accounts for which Bank in its good faith business judgment determines collection to be doubtful or otherwise ineligible.

“**Eligible Assignee**” shall mean any commercial bank, insurance company, investment or mutual fund or other entity that is an “accredited investor” (as defined in Regulation D under the Securities Act) and which extends credit or buys loans as one of its businesses; provided that any direct competitor of the Borrower shall not be an Eligible Assignee.

“**Eligible Foreign Accounts**” are Accounts for which the Account Debtor does not have its principal place of business in the United States and do not satisfy the criteria of clauses (c) and (d) of the definition of Eligible Accounts, but which are otherwise Eligible Accounts but do not constitute Eligible Foreign L/C Accounts, and which Bank has, on a case-by-case basis in its sole discretion, approved in writing.

“**Eligible Foreign L/C Accounts**” are Accounts for which the Account Debtor does not have its principal place of business in the United States and do not satisfy the criteria of clauses (c) and (d) of the definition of Eligible Accounts, but which are otherwise Eligible Accounts, and which Accounts are supported by letter(s) of credit acceptable to Bank, as determined on a case-by-case basis in its sole discretion.

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“**Eligible Inventory**” means Inventory that meets all of Borrower’s representations and warranties in Section 5.3 and is otherwise acceptable to Bank in all respects.

“**Equipment**” is all “equipment” as defined in the Code with such additions to such term as may hereafter be made, and includes without limitation all machinery, fixtures, goods, vehicles (including motor vehicles and trailers), and any interest in any of the foregoing.

“**ERISA**” is the Employee Retirement Income Security Act of 1974, and its regulations.

“**Event of Default**” is defined in Section 8.

“**Foreign Currency**” means lawful money of a country other than the United States.

“**Foreign Subsidiary**” means any Subsidiary which is not a Domestic Subsidiary.

“**Funding Date**” is any date on which a Credit Extension is made to or on account of Borrower which shall be a Business Day.

“**FX Business Day**” is any day when (a) Bank’s Foreign Exchange Department is conducting its normal business and (b) the Foreign Currency being purchased or sold by Borrower is available to Bank from the entity from which Bank shall buy or sell such Foreign Currency.

“**FX Forward Contract**” is defined in Section 2.1.3.

“**FX Reserve**” is defined in Section 2.1.3.

“**GAAP**” is generally accepted accounting principles set forth in the opinions and pronouncements of the Accounting Principles Board of the American Institute of Certified Public Accountants and statements and pronouncements of the Financial Accounting Standards Board or in such other statements by such other Person as may be approved by a significant segment of the accounting profession, which are applicable to the circumstances as of the date of determination.

“**General Intangibles**” is all “general intangibles” as defined in the Code in effect on the date hereof with such additions to such term as may hereafter be made, and includes without limitation, all copyright rights, copyright applications, copyright registrations and like protections in each work of authorship and derivative work, whether published or unpublished, any patents, trademarks, service marks and, to the extent permitted under applicable law, any applications therefor, whether registered or not, any trade secret rights, including any rights to unpatented inventions, payment intangibles, royalties, contract rights, goodwill, franchise agreements, purchase orders, customer lists, route lists, telephone numbers, domain names, claims, income and other tax refunds, security and other deposits, options to purchase or sell real or personal property, rights in all litigation presently or hereafter pending (whether in contract, tort or otherwise), insurance policies (including without limitation key man, property damage, and business interruption insurance), payments of insurance and rights to payment of any kind.

“**Governmental Approval**” is any consent, authorization, approval, order, license, franchise, permit, certificate, accreditation, registration, filing or notice, of, issued by, from or to, or other act by or in respect of, any Governmental Authority.

“**Governmental Authority**” is any nation or government, any state or other political subdivision thereof, any agency, authority, instrumentality, regulatory body, court, central bank or other entity exercising executive, legislative, judicial, taxing, regulatory or administrative functions of or pertaining to government, any securities exchange and any self-regulatory organization.

“**Guarantor**” is any present or future guarantor of the Obligations, including all present or future Domestic Subsidiaries (with the exception of Matrix Integrated Systems Acquisition Corporation).

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“**Guarantor Security Agreement(s)**” is each Security Agreement executed and delivered by a Guarantor to Bank to secure the Guaranty of such Guarantor.

“**Guaranty(ies)**” is any guaranty of the Obligations executed and delivered by a Guarantor to Bank.

“**Indebtedness**” is (a) indebtedness for borrowed money or the deferred price of property or services, such as reimbursement and other obligations for surety bonds and letters of credit, (b) obligations evidenced by notes, bonds, debentures or similar instruments, (c) capital lease obligations, and (d) Contingent Obligations.

“**Indemnified Person**” is defined in Section 12.3.

“**Indenture**” is that certain Indenture dated as of May 2, 2006 entered into between Axcelis Technologies, Inc. and U.S. Bank National Association, as Trustee, as supplemented from time to time.

“**Insolvency Proceeding**” is any proceeding by or against any Person under the United States Bankruptcy Code, or any other bankruptcy or insolvency law, including assignments for the benefit of creditors, compositions, extensions generally with its creditors, or proceedings seeking reorganization, arrangement, or other relief.

“**Inventory**” is all “inventory” as defined in the Code in effect on the date hereof with such additions to such term as may hereafter be made, and includes without limitation all merchandise, raw materials, parts, supplies, packing and shipping materials, work in process and finished products, including without limitation such inventory as is temporarily out of Borrower’s custody or possession or in transit and including any returned goods and any documents of title representing any of the above.

“**Investment**” is any beneficial ownership interest in any Person (including stock, partnership interest or other securities), and any loan, advance or capital contribution to any Person.

“**IP Agreement**” is that certain Intellectual Property Security Agreement executed and delivered by Borrower and Guarantors to Bank of even date herewith.

“**Letter of Credit**” means a standby letter of credit issued by Bank or another institution based upon an application, guarantee, indemnity or similar agreement on the part of Bank as set forth in Section 2.1.2.

“**Letter of Credit Application**” is defined in Section 2.1.2(a).

“**Letter of Credit Reserve**” has the meaning set forth in Section 2.1.2(d).

“**LIBOR Supplement**” means the LIBOR Supplement attached hereto as Exhibit D and specifically incorporated by reference herein.

“**Lien**” is a claim, mortgage, deed of trust, levy, charge, pledge, security interest or other encumbrance of any kind, whether voluntarily incurred or arising by operation of law or otherwise against any property.

“**Loan Documents**” are, collectively, this Agreement, the Perfection Certificate, the IP Agreement, the Pledge Agreements, the Negative Pledge, the Guarantor Security Agreements, each Guaranty, any note, or notes executed by Borrower or any Guarantor, and any other present or future agreement executed or delivered by Borrower or any Guarantor and/or for the benefit of Bank in connection with this Agreement, all as amended, restated, or otherwise modified.

“**Material Adverse Change**” is (a) a material impairment in the perfection or priority of Bank’s Lien in the Collateral or in the value of such Collateral; (b) a material adverse change in the business, operations, or condition (financial or otherwise) of Borrower, taken as a whole; or (c) a material impairment of the prospect of repayment of any portion of the Obligations.

“**Negative Pledge**” is that certain Negative Pledge Agreement executed and delivered by Borrower and Guarantors to Bank of even date herewith.

“**Net Income**” means, as calculated on a consolidated basis for Borrower and its Subsidiaries for any period as at any date of determination, the net profit (or loss), after provision for taxes, of Borrower and its Domestic Subsidiaries for such period taken as a single accounting period.

“**Obligations**” are Borrower’s obligation to pay when due any debts, principal, interest, Bank Expenses and other amounts Borrower owes Bank now or later, whether under this Agreement, the Loan Documents, the Receivables Purchase Facility or otherwise, including, without limitation, all obligations relating to letters of credit (including reimbursement obligations for drawn and undrawn letters of credit), cash management services, and foreign exchange contracts, if any, and including interest accruing after Insolvency Proceedings begin and debts, liabilities, or obligations of Borrower assigned to Bank, and the performance of Borrower’s duties under the Loan Documents.

“**Operating Documents**” are, for any Person, such Person’s formation documents, as certified with the Secretary of State of such Person’s state of formation on a date that is no earlier than 30 days prior to the Effective Date, and, (a) if such Person is a corporation, its bylaws in current form, (b) if such Person is a limited liability company, its limited liability company agreement (or similar agreement), and (c) if such Person is a partnership, its partnership agreement (or similar agreement), each of the foregoing with all current amendments or modifications thereto.

“**Overadvance**” is defined in Section 2.2.

“**Perfection Certificate**” is defined in Section 5.1.

“**Permitted Indebtedness**” is:

- (a) Borrower’s Indebtedness to Bank under this Agreement and the other Loan Documents;
- (b) Indebtedness existing on the Effective Date and shown on the Perfection Certificate;
- (c) Subordinated Debt;
- (d) unsecured Indebtedness to trade creditors incurred in the ordinary course of business;
- (e) unsecured Indebtedness with respect to surety bonds, letters of credit and/or and similar instruments in connection with value added tax recovery initiatives of Axcelis Technologies GmbH incurred in the ordinary course of business;

(f) Indebtedness owing from (i) one Borrower to another Borrower; (ii) any Borrower to any Subsidiary; and (iii) any Subsidiary to any Borrower, provided that, in each case, such Indebtedness is incurred in the ordinary course of business of such Borrower or Subsidiary and pursuant to an arms-length transaction; and

(g) extensions, refinancings, modifications, amendments and restatements of any items of Permitted Indebtedness (a) through (d) above, provided that the principal amount thereof is not increased or the terms thereof are not modified to impose more burdensome terms upon Borrower or its Subsidiary, as the case may be.

“Permitted Investments” are:

- (a) Investments shown on the Perfection Certificate and existing on the Effective Date;
- (b) Cash Equivalents;
- (c) Investments consisting of the endorsement of negotiable instruments for deposit or collection or similar transactions in the ordinary course of Borrower;
- (d) Investments consisting of deposit accounts maintained with Bank and subject to Bank’s first priority Lien;

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- (e) Investments of Subsidiaries in or to Borrower or any Guarantor and Investments of one Borrower in or to another Borrower;
- (f) Investments consisting of (i) travel advances and employee relocation loans and other employee loans and advances in the ordinary course of business, and (ii) loans to employees, officers or directors relating to the purchase of equity securities of Borrower or its Subsidiaries pursuant to employee stock purchase plans or agreements approved by Borrower’s Board of Directors (or other applicable governing body);
- (g) Investments (including debt obligations) received in connection with the bankruptcy or reorganization of customers or suppliers and in settlement of delinquent obligations of, and other disputes with, customers or suppliers arising in the ordinary course of business;
- (h) Investments consisting of notes receivable of, or prepaid royalties and other credit extensions, to customers and suppliers who are not Affiliates, in the ordinary course of business; provided that this paragraph (h) shall not apply to Investments of Borrower in any Subsidiary; and
- (i) Money market funds that (i) comply with the criteria set forth in Rule 2a-7 under the Investment Company Act of 1940, (ii) are rated AAA by S&P and Aaa by Moody’s and (iii) have portfolio assets of at least \$500,000,000.00;
- (j) Other equity and debt investments that are consistent with the investment policy of the Borrower dated as of March 2003, a copy of which has been delivered to Bank;
- (k) Investments of Borrower and its Subsidiaries consisting of deposit accounts held with foreign financial institutions; provided, that the aggregate dollar value of all such deposit accounts does not exceed 40% of the dollar value of all Unrestricted Cash of Borrower and its Subsidiaries; and
- (l) Investments of Borrower in Subsidiaries not to exceed \$1,000,000.00 in the aggregate.

“Permitted Liens” are:

- (a) Liens existing on the Effective Date and shown on the Perfection Certificate or arising under this Agreement and the other Loan Documents;
- (b) Liens for taxes, fees, assessments or other government charges or levies, either not delinquent or being contested in good faith and for which Borrower maintains adequate reserves on its Books, provided that no notice of any such Lien has been filed or recorded under the Internal Revenue Code of 1986, as amended, and the Treasury Regulations adopted thereunder;
- (c) purchase money Liens (i) on Equipment acquired or held by Borrower incurred for financing the acquisition of the Equipment securing no more than \$1,000,000 in the aggregate amount outstanding, or (ii) existing on Equipment when acquired, if the Lien is confined to the property and improvements and the proceeds of the Equipment;
- (d) Liens incurred in the extension, renewal or refinancing of the indebtedness secured by Liens described in (a) through (c), but any extension, renewal or replacement Lien must be limited to the property encumbered by the existing Lien and the principal amount of the indebtedness may not increase;
- (e) leases or subleases of real property granted in the ordinary course of business, and leases, subleases, non-exclusive licenses or sublicenses of property (other than real property or intellectual property) granted in the ordinary course of Borrower’s business, if such leases, subleases, licenses and sublicenses do not prohibit granting Bank a security interest;
- (f) non-exclusive license of intellectual property granted to third parties in the ordinary course of business; and

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- (g) Liens arising from attachments or judgments, orders, or decrees in circumstances not constituting an Event of Default under Sections 8.4 and 8.7.

“Person” is any individual, sole proprietorship, partnership, limited liability company, joint venture, company, trust, unincorporated organization, association, corporation, institution, public benefit corporation, firm, joint stock company, estate, entity or government agency.

“**Pledge Agreement(s)**” those certain Pledge Agreements executed and delivered by Borrower and Fusion Technology International, Inc. in favor of Bank.

“**Prime Rate**” is the greater of (i) five and one-half percent (5.50%) and (ii) Bank’s most recently announced “prime rate,” even if it is not Bank’s lowest rate.

“**Receivables Purchase Facility**” is that certain Non-Recourse Receivables Purchase Agreement of even date herewith among Borrower (as Seller) and Bank (as Buyer), as amended, modified, restated or replaced from time to time.

“**Registered Organization**” is any “registered organization” as defined in the Code with such additions to such term as may hereafter be made

“**Requirement of Law**” is as to any Person, the organizational or governing documents of such Person, and any law (statutory or common), treaty, rule or regulation or determination of an arbitrator or a court or other Governmental Authority, in each case applicable to or binding upon such Person or any of its property or to which such Person or any of its property is subject.

“**Reserves**” means, as of any date of determination, upon notice to and after consultation with Borrower, such amounts as Bank may reasonably from time to time establish and revise in its good faith business judgment, reducing the amount of Advances and other financial accommodations which would otherwise be available to Borrower to reflect events, conditions, contingencies or risks which, as determined by Bank in its good faith business judgment, do or may adversely affect in any material way (i) the assets, business or prospects of Borrower or any Guarantor, or (ii) the security interests and other rights of Bank in the Collateral (including the enforceability, perfection and priority thereof).

“**Responsible Officer**” is any of the Chief Executive Officer, President, Chief Financial Officer and Controller of Borrower.

“**Revolving Line**” is the Total Commitment minus the then aggregate outstanding loans, advances and other extensions of credit made by Bank under the Receivables Purchase Facility.

“**Revolving Line Maturity Date**” is April 23, 2010.

“**Sale Leaseback Transaction**” is a sale and leaseback transaction (excluding any Equipment) relating to Borrower’s corporate headquarters and manufacturing facility located at 108 Cherry Hill Drive, Beverly, Massachusetts, pursuant to an arms-length transaction.

“**Securities Account**” is any “securities account” as defined in the Code with such additions to such term as may hereafter be made.

“**Settlement Date**” is defined in Section 2.1.3.

“**Subordinated Debt**” is (i) the Convertible Senior Subordinated Notes and (ii) indebtedness incurred by Borrower subordinated to all of Borrower’s now or hereafter indebtedness to Bank (pursuant to a subordination, intercreditor, or other similar agreement in form and substance satisfactory to Bank entered into between Bank and the other creditor), on terms acceptable to Bank.

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“**Subsidiary**” means, with respect to any Person, any Person of which more than 50.0% of the voting stock or other equity interests (in the case of Persons other than corporations) is owned or controlled directly or indirectly by such Person or one or more of Affiliates of such Person. For the avoidance of doubt, Borrower and Bank agree that SEN Corporation, an SHI and Axcelis Company is not a Subsidiary.

“**Total Commitment**” is Fifty Million Dollars (\$50,000,000.00).

“**Transaction Report**” is that certain report of transactions and schedule of collections in the form attached hereto as Exhibit C.

“**Transfer**” is defined in Section 7.1.

“**Unused Line Fee Percentage**” is (i) at such times as Borrower’s unrestricted cash plus Cash Equivalents at Bank are equal to or less than Fifty Million (\$50,000,000), 0.95% and (ii) at such times as Borrower’s unrestricted cash plus Cash Equivalents at Bank are greater than Fifty Million (\$50,000,000), 0.70%.

“**Unused Revolving Line Facility Fee**” is defined in Section 2.4(c).

[Signature page follows.]

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IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed as a sealed instrument under the laws of the Commonwealth of Massachusetts as of the Effective Date.

BORROWER:

AXCELIS TECHNOLOGIES, INC.

By /s/ Stephen G. Bassett

Name: Stephen G. Bassett

Title: Chief Financial Officer and Executive Vice President

AXCELIS TECHNOLOGIES CCS CORPORATION

By /s/ Stephen G. Bassett

Name: Stephen G. Bassett

Title: Chief Financial Officer and Executive Vice President

BANK:

SILICON VALLEY BANK

By /s/ Michael Tramack

Name: Michael Tramack

Title: Senior Vice President

Effective Date: April 23, 2008

EXHIBIT A – COLLATERAL DESCRIPTION

The Collateral consists of all of Borrower’s right, title and interest in and to the following personal property:

All goods, Accounts, Equipment, Inventory, contract rights or rights to payment of money, leases, license agreements, franchise agreements, General Intangibles, commercial tort claims, documents, instruments (including any promissory notes), chattel paper (whether tangible or electronic), cash, deposit accounts, letters of credit rights (whether or not the letter of credit is evidenced by a writing), securities, and all other investment property, supporting obligations, and financial assets, whether now owned or hereafter acquired, wherever located; and

all Borrower’s Books relating to the foregoing, and any and all claims, rights and interests in any of the above and all substitutions for, additions, attachments, accessories, accessions and improvements to and replacements, products, proceeds and insurance proceeds of any or all of the foregoing.

Notwithstanding the foregoing, the “Collateral” does not include (i) more than 66% of the presently existing and hereafter arising issued and outstanding shares of capital stock owned by Borrower of any Foreign Subsidiary which shares entitle the holder thereof to vote for directors or any other matter and (ii) any of Borrower’s rights, title and interest in SEN Corporation, an SHI and Axcelis Company.

EXHIBIT B - COMPLIANCE CERTIFICATE

TO: SILICON VALLEY BANK

Date:

FROM: Axcelis Technologies, Inc. and Axcelis Technologies CCS Corporation

The undersigned authorized officer of Axcelis Technologies, Inc. and Axcelis Technologies CCS Corporation (“Borrower”) certifies that under the terms and conditions of the Loan and Security Agreement between, inter alia, Borrower and Bank (the “Agreement”), (1) Borrower is in complete compliance for the period ending with all required covenants except as noted below, (2) there are no Events of Default, (3) all representations and warranties in the Agreement are true and correct in all material respects on this date except as noted below; provided, however, that such materiality qualifier shall not be applicable to any representations and warranties that already are qualified or modified by materiality in the text thereof; and provided, further that those representations and warranties expressly referring to a specific date shall be true, accurate and complete in all material respects as of such date, (4) Borrower, and each of its Domestic Subsidiaries, has timely filed all required tax returns and reports, and Borrower has timely paid all foreign, federal, state and local taxes, assessments, deposits and contributions owed by Borrower except as otherwise permitted pursuant to the terms of Section 5.9 of the Agreement, and (5) no Liens have been levied or claims made against Borrower or any of its Domestic Subsidiaries relating to unpaid employee payroll or benefits of which Borrower has not previously provided written notification to Bank. Attached are the required documents supporting the certification. The undersigned certifies that these are prepared in accordance with GAAP consistently applied from one period to the next except as explained in an accompanying letter or footnotes. The undersigned acknowledges that no borrowings may be requested at any time or date of determination that Borrower is not in compliance with any of the terms of the Agreement, and that compliance is determined not just at the date this certificate is delivered. Capitalized terms used but not otherwise defined herein shall have the meanings given them in the Agreement.

Please indicate compliance status by circling Yes/No under “Complies” column.

<u>Reporting Covenant</u>	<u>Required</u>	<u>Complies</u>
Quarterly financial statements with Compliance Certificate	Quarterly within 45 days	Yes No
Annual financial statement (CPA Audited) + CC	FYE within 120 days	Yes No
10-Q, 10-K and 8-K	Within 10 days after filing with SEC	Yes No
Transaction Report, A/R & A/P Agings, Inventory reports	Monthly within 30 days	Yes No

The following Intellectual Property was registered (or a registration application submitted) after the Effective Date (if no registrations, state “None”)

<u>Financial Covenant</u>	<u>Required</u>	<u>Actual</u>	<u>Complies</u>
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Maintain, tested on a quarterly (unless otherwise indicated) basis:

Liquidity, at all times	≥ \$	million	\$	Yes	No
Profitability, as of the last day of each quarter	\$		\$	Yes	No
Maximum Losses, as of the last day of each quarter	\$		\$	Yes	No

The following financial covenant analysis and information set forth in Schedule 1 attached hereto are true and accurate as of the date of this Certificate.

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Schedule 2 attached hereto sets forth all applications for any patent or the registration of any trademark or servicemark made by Borrower since the date of the last Compliance Certificate delivered to Bank.

The following are the exceptions with respect to the certification above: (If no exceptions exist, state "No exceptions to note.")

AXCELIS TECHNOLOGIES, INC.

BANK USE ONLY

By: _____
Name: _____
Title: _____

Received by: _____
Date: _____ AUTHORIZED SIGNER

AXCELIS TECHNOLOGIES CCS CORPORATION

Verified: _____
Date: _____ AUTHORIZED SIGNER

By: _____
Name: _____
Title: _____

Compliance Status: Yes No

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Schedule 1 to Compliance Certificate

Financial Covenants of Borrower

In the event of a conflict between this Schedule and the Loan Agreement, the terms of the Loan Agreement shall govern.

Dated:

I. Liquidity (Section 6.9(a))

Required: \$

Actual:

- A. Unrestricted cash and Cash Equivalents \$
- B. Unused availability under the Revolving Line, as determined by Bank with reference to the Availability Amount \$
- C. Liquidity (line A plus line B) \$

Is line C equal to or greater than required amount [\$50 million] or [\$40 million]?

_____ No, not in compliance Yes, in compliance

II. Maximum Losses (Section 6.9(b))

Required: \$

Actual:

- A. Aggregate value of Borrower losses \$

Is line A less than or equal to \$?

_____ No, not in compliance Yes, in compliance

III. **Profitability** (Section 6.9(c))

Required: \$

Actual:

A. Net Income

\$

Is line A equal to or greater than \$?

No, not in compliance

Yes, in compliance

Schedule 2 to Compliance Certificate

Additional Patents and Trademarks

[Borrower to provide]

EXHIBIT C – TRANSACTION REPORT

[TO BE PROVIDED BY LENDING OFFICER]

EXHIBIT D

LIBOR SUPPLEMENT TO AGREEMENT

This LIBOR Supplement to Agreement (the “**LIBOR Supplement**”) is a supplement to the Loan and Security Agreement (the “**Loan Agreement**”) dated as of April 23, 2008 between **SILICON VALLEY BANK (“Bank”)** and **AXCELIS TECHNOLOGIES, INC. and AXCELIS TECHNOLOGIES CCS CORPORATION**, each a Delaware corporation with offices located at 108 Cherry Hill Drive, Beverly, Massachusetts 01915 (individually and collectively, jointly and severally “**Borrower**”), and forms a part of and is incorporated into the Loan Agreement. Notwithstanding any other provision of the Loan Agreement to the contrary, the following provisions shall govern with respect to LIBOR Advances as to the matters covered:

1 **DEFINITIONS.**

“**Additional Costs**” is defined in Section 6(b) of this LIBOR Supplement.

“**Continuation Date**” means any date on which Borrower elects to continue a LIBOR Advance into another Interest Period.

“**Conversion Date**” means any date on which Borrower elects to convert a Prime Rate Advance to a LIBOR Advance or a LIBOR Advance to a Prime Rate Advance.

“**Effective Amount**” means with respect to any Advances on any date, the aggregate outstanding principal amount thereof after giving effect to any borrowing and prepayments or repayments thereof occurring on such date.

“**Interest Payment Date**” means (a) with respect to any LIBOR Advance, the last day of each Interest Period applicable to such LIBOR Advance and the last day of each month, and (b) with respect to Prime Rate Advances, the first (1st) day of each month (or, if the first day of the month does not fall on a Business Day, then on the first Business Day following such date), and each date a Prime Rate Advance is converted into a LIBOR Advance to the extent of the amount converted to a LIBOR Advance.

“**Interest Period**” means, as to any LIBOR Advance, the period commencing on the date of such LIBOR Advance, or on the conversion/continuation date on which the LIBOR Advance is converted into or continued as a LIBOR Advance, and ending on the date that is one (1), two (2) or three (3) months thereafter, in each case as Borrower may elect in the applicable Notice of Borrowing or Notice of Conversion/Continuation; *provided, however*, that (a) no Interest Period with respect to any LIBOR Advance shall end later than the Revolving Line Maturity Date, (b) the last day of an Interest Period shall be determined in accordance with the practices of the LIBOR interbank market as from time to time in effect, (c) if any Interest Period would otherwise end on a day that is not a Business Day, that Interest Period shall be extended to the following Business Day unless, in the case of a LIBOR Advance, the result of such extension would be to carry such Interest Period into another calendar month, in which event such Interest Period shall end on the preceding Business Day, (d) any Interest Period pertaining to a LIBOR Advance that begins on the last Business Day of a calendar month (or on a day for which there is no numerically corresponding day in the calendar month at the end of such Interest Period) shall end on the last Business Day of the calendar month at the end of such Interest Period, and (e) interest shall accrue from and include the first Business Day of an Interest Period but exclude the last Business Day of such Interest Period.

“**Interest Rate Determination Date**” means each date for calculating the LIBOR for purposes of determining the interest rate in respect of an Interest Period. The Interest Rate Determination Date shall be the second Business Day prior to the first day of the related Interest Period for a LIBOR Advance.

“LIBOR” means, for any Interest Rate Determination Date with respect to an Interest Period for any Advance to be made, continued as or converted into a LIBOR Advance, the rate of interest per annum determined by Bank to be the per annum rate of interest at which deposits in United States Dollars are offered to Bank in the London interbank market (rounded upward, if necessary, to the nearest 1/10,000th of one percent (0.0001%)) in which Bank customarily participates at 11:00 a.m. (local time in such interbank market) two (2) Business Days prior to the first day of such Interest Period for a period approximately equal to such Interest Period and in an amount approximately equal to the amount of such Advance.

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“LIBOR Advance” means an Advance that bears interest based at the LIBOR Rate.

“LIBOR Rate” means, for each Interest Period in respect of LIBOR Advances comprising part of the same Advances, an interest rate *per annum* (rounded upward, if necessary, to the nearest 1/10,000th of one percent (0.0001%)) equal to the greater of (i) two and three-quarters of one percent (2.75%) and (ii) LIBOR for such Interest Period *divided by one (1) minus* the Reserve Requirement for such Interest Period.

“LIBOR Rate Margin” is (i) at such times as Borrower’s unrestricted cash plus Cash Equivalents at Bank are equal to or less than Fifty Million (\$50,000,000), three and three-quarters of one percent (3.75%) and (ii) at such times as Borrower’s unrestricted Cash plus Cash Equivalents at Bank are greater than Fifty Million (\$50,000,000), three and one-quarter of one percent (3.25%).

“Notice of Borrowing” means a notice given by Borrower to Bank in accordance with Section 3.2(a), substantially in the form of Schedule I, with appropriate insertions.

“Notice of Conversion/Continuation” means a notice given by Borrower to Bank in accordance with Section 3.5(b), substantially in the form of Schedule II, with appropriate insertions.

“Parent” is defined in Section 6(c) of this LIBOR Supplement.

“Prime Rate Advance” means an Advance that bears interest based at the Prime Rate.

“Prime Rate Margin” is (i) at such times as Borrower’s unrestricted Cash plus Cash Equivalents at Bank are equal to or less than Fifty Million (\$50,000,000), one percent (1.00%) and (ii) at such times as Borrower’s unrestricted Cash plus Cash Equivalents at Bank are greater than Fifty Million (\$50,000,000), one-half of one percent (0.50%).

“Regulatory Change” means, with respect to Bank, any change on or after the Effective Date of the Loan Agreement in United States federal, state, or foreign laws or regulations, including Regulation D, or the adoption or making on or after such date of any interpretations, directives, or requests applying to a class of lenders including Bank, of or under any United States federal or state, or any foreign laws or regulations (whether or not having the force of law) by any court or governmental or monetary authority charged with the interpretation or administration thereof.

“Reserve Requirement” means, for any Interest Period, the average maximum rate at which reserves (including any marginal, supplemental, or emergency reserves) are required to be maintained during such Interest Period under Regulation D against “Eurocurrency liabilities” (as such term is used in Regulation D) by member banks of the Federal Reserve System. Without limiting the effect of the foregoing, the Reserve Requirement shall reflect any other reserves required to be maintained by Bank by reason of any Regulatory Change against (a) any category of liabilities which includes deposits by reference to which the LIBOR Rate is to be determined as provided in the definition of LIBOR or (b) any category of extensions of credit or other assets which include Advances.

2 GENERAL PROVISIONS RELATING TO THE ADVANCES.

Each Advance shall, at Borrower’s option in accordance with the terms of the Loan Agreement, be either in the form of a Prime Rate Advance or a LIBOR Advance; provided that in no event shall Borrower maintain at any time LIBOR Advances having more than three (3) different Interest Periods. Borrower shall pay interest accrued on the Advances at the rates and in the manner set forth in Section 2.3(a).

3 PROCEDURES FOR BORROWING.

3.1 Subject to the prior satisfaction of all other applicable conditions to the making of an Advance set forth in the Loan Agreement, each Advance shall be made upon Borrower’s irrevocable written notice delivered to Bank in the form of a Notice of Borrowing, each executed by a Responsible Officer of Borrower or his or her designee or without instructions if the Advances are necessary to meet Obligations which have become due. Bank may rely on any telephone notice given by a person whom Bank believes is a Responsible Officer or designee. Borrower will indemnify Bank for any loss Bank suffers due to such reliance. Such Notice of Borrowing must be received by Bank prior to 12:00 p.m. Eastern time, (i) at least three (3) Business Days prior to the requested Funding

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Date, in the case of LIBOR Advances, and (ii) on the requested Funding Date, in the case of Prime Rate Advances, specifying:

3.1.1 the amount of the Advance;

3.1.2 the requested Funding Date;

3.1.3 whether the Advance is to be comprised of LIBOR Advances or Prime Rate Advances; and

3.1.4 the duration of the Interest Period applicable to any such LIBOR Advances included in such notice; *provided* that if the Notice of Borrowing shall fail to specify the duration of the Interest Period for any Advance comprised of LIBOR Advances, such Interest Period shall be one (1) month.

3.2 The proceeds of all such Advances will then be made available to Borrower on the Funding Date by Bank by transfer to the Designated Deposit Account and, subsequently, by wire transfer to such other account as Borrower may instruct in the Notice of Borrowing. No Advances shall be deemed made to Borrower, and no interest shall accrue on any such Advance, until the related funds have been deposited in the Designated Deposit Account.

4 CONVERSION AND CONTINUATION ELECTIONS.

4.1 So long as (i) no Event of Default or Default exists; (ii) Borrower shall not have sent any notice of termination of the Loan Agreement; and (iii) Borrower shall have complied with such customary procedures as Bank has established from time to time for Borrower's requests for LIBOR Advances, Borrower may, upon irrevocable written notice to Bank:

4.1.1 elect to convert on any Business Day, Prime Rate Advances into LIBOR Advances;

4.1.2 elect to continue on any Interest Payment Date any LIBOR Advances maturing on such Interest Payment Date; or

4.1.3 elect to convert on any Interest Payment Date any LIBOR Advances maturing on such Interest Payment Date into Prime Rate Advances.

4.2 Borrower shall deliver a Notice of Conversion/Continuation to be received by Bank prior to 12:00 p.m. Pacific time (i) at least three (3) Business Days in advance of the Conversion Date or Continuation Date, if any Advances are to be converted into or continued as LIBOR Advances; and (ii) on the Conversion Date, if any Advances are to be converted into Prime Rate Advances, in each case specifying the:

4.2.1 proposed Conversion Date or Continuation Date;

4.2.2 aggregate amount of the Advances to be converted or continued;

4.2.3 nature of the proposed conversion or continuation; and

4.2.4 duration of the requested Interest Period.

4.3 If upon the expiration of any Interest Period applicable to any LIBOR Advances, Borrower shall have timely failed to select a new Interest Period to be applicable to such LIBOR Advances, Borrower shall be deemed to have elected to convert such LIBOR Advances into Prime Rate Advances.

4.4 Any LIBOR Advances shall, at Bank's option, convert into Prime Rate Advances in the event that (i) an Event of Default or Default shall exist, or (ii) the aggregate principal amount of the Prime Rate Advances which have been previously converted to LIBOR Advances, or the aggregate principal amount of existing LIBOR Advances continued, as the case may be, at the beginning of an Interest Period shall at any time during such Interest Period exceed the Revolving Line. Borrower agrees to pay Bank, upon demand by Bank (or Bank may, at

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its option, charge the Designated Deposit Account or any other account Borrower maintains with Bank) any amounts required to compensate Bank for any loss (including loss of anticipated profits), cost, or expense incurred by Bank, as a result of the conversion of LIBOR Advances to Prime Rate Advances pursuant to any of the foregoing.

4.5 Notwithstanding anything to the contrary contained herein, Bank shall not be required to purchase United States Dollar deposits in the London interbank market or other applicable LIBOR market to fund any LIBOR Advances, but the provisions hereof shall be deemed to apply as if Bank had purchased such deposits to fund the LIBOR Advances.

5 SPECIAL PROVISIONS GOVERNING LIBOR ADVANCES.

5.1 Determination of Applicable Interest Rate. As soon as practicable on each Interest Rate Determination Date, Bank shall determine (which determination shall, absent manifest error in calculation, be final, conclusive and binding upon all parties) the interest rate that shall apply to the LIBOR Advances for which an interest rate is then being determined for the applicable Interest Period and shall promptly give notice thereof (in writing or by telephone confirmed in writing) to Borrower.

5.2 Inability to Determine Applicable Interest Rate. In the event that Bank shall have determined (which determination shall be final and conclusive and binding upon all parties hereto), on any Interest Rate Determination Date with respect to any LIBOR Advance, that by reason of circumstances affecting the London interbank market adequate and fair means do not exist for ascertaining the interest rate applicable to such Advance on the basis provided for in the definition of LIBOR, Bank shall on such date give notice (by facsimile or by telephone confirmed in writing) to Borrower of such determination, whereupon (i) no Advances may be made as, or converted to, LIBOR Advances until such time as Bank notifies Borrower that the circumstances giving rise to such notice no longer exist, and (ii) any Notice of Borrowing or Notice of Conversion/Continuation given by Borrower with respect to Advances in respect of which such determination was made shall be deemed to be rescinded by Borrower.

5.3 Compensation for Breakage or Non-Commencement of Interest Periods. Borrower shall compensate Bank, upon written request by Bank (which request shall set forth the manner and method of computing such compensation), for all reasonable losses, expenses and liabilities, if any (including any interest paid by Bank to lenders of funds borrowed by it to make or carry its LIBOR Advances and any loss, expense or liability incurred by Bank in connection with the liquidation or re-employment of such funds) such that Bank may incur: (i) if for any reason (other than a default by Bank or due to any failure of Bank to fund LIBOR Advances due to impracticability or illegality under Sections 6(d) and 6(e) of this LIBOR Supplement) a borrowing or a conversion to or continuation of any LIBOR Advance does not occur on a date specified in a Notice of Borrowing or a Notice of Conversion/Continuation, as the case may be, or (ii) if any principal payment or any conversion of any of its LIBOR Advances occurs on a date prior to the last day of an Interest Period applicable to that Advance.

5.4 Assumptions Concerning Funding of LIBOR Advances. Calculation of all amounts payable to Bank under this Section 5 and under Section 3 of this LIBOR Supplement shall be made as though Bank had actually funded each of its relevant LIBOR Advances through the purchase of a Eurodollar deposit bearing interest at the rate obtained pursuant to the definition of LIBOR Rate in an amount equal to the amount of such LIBOR Advance and

having a maturity comparable to the relevant Interest Period; *provided, however*, that Bank may fund each of its LIBOR Advances in any manner it sees fit and the foregoing assumptions shall be utilized only for the purposes of calculating amounts payable under this Section 5 and under Section 3 of this LIBOR Supplement.

5.5 LIBOR Advances After Default. After the occurrence and during the continuance of an Event of Default, (i) Borrower may not elect to have an Advance be made or continued as, or converted to, a LIBOR Advance after the expiration of any Interest Period then in effect for such Advance and (ii) subject to the provisions of Section 5(c), any Notice of Conversion/Continuation given by Borrower with respect to a requested conversion/continuation that has not yet occurred shall be deemed to be rescinded by Borrower and be deemed a request to convert or continue Advances referred to therein as Prime Rate Advances.

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6 ADDITIONAL REQUIREMENTS/PROVISIONS REGARDING LIBOR ADVANCES.

6.1 If for any reason (including voluntary or mandatory prepayment or acceleration), Bank receives all or part of the principal amount of a LIBOR Advance prior to the last day of the Interest Period for such Advance, Borrower shall immediately notify Borrower's account officer at Bank and, on demand by Bank, pay Bank the amount (if any) by which (i) the additional interest which would have been payable on the amount so received had it not been received until the last day of such Interest Period exceeds (ii) the interest which would have been recoverable by Bank by placing the amount so received on deposit in the certificate of deposit markets, the offshore currency markets, or United States Treasury investment products, as the case may be, for a period starting on the date on which it was so received and ending on the last day of such Interest Period at the interest rate determined by Bank in its reasonable discretion. Bank's determination as to such amount shall be conclusive absent manifest error.

6.2 Borrower shall pay Bank, upon demand by Bank, from time to time such amounts as Bank may determine to be necessary to compensate it for any costs incurred by Bank that Bank determines are attributable to its making or maintaining of any amount receivable by Bank hereunder in respect of any Advances relating thereto (such increases in costs and reductions in amounts receivable being herein called "**Additional Costs**"), in each case resulting from any Regulatory Change which:

6.2.1 changes the basis of taxation of any amounts payable to Bank under the Loan Agreement in respect of any Advances (other than changes which affect taxes measured by or imposed on the overall net income of Bank by the jurisdiction in which Bank has its principal office);

6.2.2 imposes or modifies any reserve, special deposit or similar requirements relating to any extensions of credit or other assets of, or any deposits with, or other liabilities of Bank (including any Advances or any deposits referred to in the definition of LIBOR); or

6.2.3 imposes any other condition affecting the Loan Agreement (or any of such extensions of credit or liabilities).

Bank will notify Borrower of any event occurring after the Effective Date which will entitle Bank to compensation pursuant to this Section 6 as promptly as practicable after it obtains knowledge thereof and determines to request such compensation. Bank will furnish Borrower with a statement setting forth the basis and amount of each request by Bank for compensation under this Section 6. Determinations and allocations by Bank for purposes of this Section 6 of the effect of any Regulatory Change on its costs of maintaining its obligations to make Advances, of making or maintaining Advances, or on amounts receivable by it in respect of Advances, and of the additional amounts required to compensate Bank in respect of any Additional Costs, shall be conclusive absent manifest error.

6.3 If Bank shall determine that the adoption or implementation of any applicable law, rule, regulation, or treaty regarding capital adequacy, or any change therein, or any change in the interpretation or administration thereof by any governmental authority, central bank, or comparable agency charged with the interpretation or administration thereof, or compliance by Bank (or its applicable lending office) with any respect or directive regarding capital adequacy (whether or not having the force of law) of any such authority, central bank, or comparable agency, has or would have the effect of reducing the rate of return on capital of Bank or any person or entity controlling Bank (a "**Parent**") as a consequence of its obligations hereunder to a level below that which Bank (or its Parent) could have achieved but for such adoption, change, or compliance (taking into consideration policies with respect to capital adequacy) by an amount deemed by Bank to be material, then from time to time, within fifteen (15) days after demand by Bank, Borrower shall pay to Bank such additional amount or amounts as will compensate Bank for such reduction. A statement of Bank claiming compensation under this Section 6(c) and setting forth the additional amount or amounts to be paid to it hereunder shall be conclusive absent manifest error.

6.4 If, at any time, Bank, in its sole and absolute discretion, determines that (i) the amount of LIBOR Advances for periods equal to the corresponding Interest Periods are not available to Bank in the offshore currency interbank markets, or (ii) LIBOR does not accurately reflect the cost to Bank of lending the LIBOR Advances, then Bank shall promptly give notice thereof to Borrower. Upon the giving of such notice, Bank's obligation to make the LIBOR Advances shall terminate; *provided, however*, Advances shall not terminate if Bank and Borrower agree in writing to a different interest rate applicable to LIBOR Advances.

6.5 If it shall become unlawful for Bank to continue to fund or maintain any LIBOR Advances, or to perform its obligations hereunder, upon demand by Bank, Borrower shall prepay the Advances in

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full with accrued interest thereon and all other amounts payable by Borrower hereunder (including, without limitation, any amount payable in connection with such prepayment pursuant to Section 6(a) of this LIBOR Supplement). Notwithstanding the foregoing, to the extent a determination by Bank as described above relates to a LIBOR Advance then being requested by Borrower pursuant to a Notice of Borrowing or a Notice of Conversion/Continuation, Borrower shall have the option, subject to the provisions of Section 5(c) of this LIBOR Supplement, to (i) rescind such Notice of Borrowing or Notice of Conversion/Continuation by giving notice (by facsimile or by telephone confirmed in writing) to Bank of such rescission on the date on which Bank gives notice of its determination as described above, or (ii) modify such Notice of Borrowing or Notice of Conversion/Continuation to obtain a Prime Rate Advance or to have outstanding Advances converted into or continued as Prime Rate Advances by giving notice (by facsimile or by telephone confirmed in writing) to Bank of such modification on the date on which Bank gives notice of its determination as described above.

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SCHEDULE I

FORM OF NOTICE OF BORROWING

AXCELIS TECHNOLOGIES, INC. and AXCELIS TECHNOLOGIES CCS CORPORATION

Date:

TO: SILICON VALLEY BANK
3003 Tasman Drive
Santa Clara, CA 95054
Attention: Corporate Services Department

RE: Loan and Security Agreement dated as of April 23, 2008 (as amended, modified, supplemented or restated from time to time, the "**Loan Agreement**"), by and among Axcelis Technologies, Inc. and Axcelis Technologies CCS Corporation (individually and collectively, jointly and severally "**Borrower**"), and Silicon Valley Bank (the "**Bank**")

Ladies and Gentlemen:

The undersigned refers to the Loan Agreement, the terms defined therein and used herein as so defined, and hereby gives you notice irrevocably, pursuant to Section 3 of the LIBOR Supplement to the Loan Agreement, of the borrowing of an Advance.

1. The Funding Date, which shall be a Business Day, of the requested borrowing is _____.
2. The aggregate amount of the requested borrowing is \$ _____.
3. The requested Advance shall consist of \$ _____ of Prime Rate Advances and \$ _____ of LIBOR Advances.
4. The duration of the Interest Period for the LIBOR Advances included in the requested Advance shall be _____ month(s).

The undersigned hereby certifies that the following statements are true on the date hereof, and will be true on the date of the proposed Advance before and after giving effect thereto, and to the application of the proceeds therefrom, as applicable:

- (a) all representations and warranties of Borrower contained in the Loan Agreement are true, accurate and complete in all material respects as of the date hereof;
- (b) no Default or Event of Default has occurred and is continuing, or would result from such proposed Advance; and
- (c) the requested Advance will not cause the aggregate principal amount of the outstanding Advances to exceed, as of the designated Funding Date, (a) the Revolving Line, minus (b) the amount of all outstanding Letters of Credit (including drawn but unreimbursed Letters of Credit) plus an amount equal to the Letter of Credit Reserves, minus (c) the FX Reserve, and minus (d) the outstanding principal balance of any Advances (including any amounts used for Cash Management Services).

[Signature page follows.]

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BORROWER:

[AXCELIS ENTITY]

By: _____
Name: _____
Title: _____

For internal Bank use only

LIBOR Pricing Date	LIBOR	LIBOR Variance	Maturity Date
			%

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SCHEDULE II

FORM OF NOTICE OF CONVERSION/CONTINUATION

AXCELIS TECHNOLOGIES, INC. and AXCELIS TECHNOLOGIES CCS CORPORATION

TO: SILICON VALLEY BANK
3003 Tasman Drive
Santa Clara, CA 95054
Attention:

RE: Loan and Security Agreement dated as of April 23, 2008 (as amended, modified, supplemented or restated from time to time, the "**Loan Agreement**"), by and among Axcelis Technologies, Inc. and Axcelis Technologies CCS Corporation (individually and collectively, jointly and severally "**Borrower**"), and Silicon Valley Bank (the "**Bank**")

Ladies and Gentlemen:

The undersigned refers to the Loan Agreement, the terms defined therein being used herein as therein defined, and hereby gives you notice irrevocably, pursuant to Section 4 of the LIBOR Supplement to the Loan Agreement, of the [conversion] [continuation] of the Advances specified herein, that:

1. The date of the [conversion] [continuation] is _____, 20__.
2. The aggregate amount of the proposed Advances to be [converted] is \$ _____ or [continued] is \$ _____.
3. The Advances are to be [converted into] [continued as] [LIBOR] [Prime Rate] Advances.
4. The duration of the Interest Period for the LIBOR Advances included in the [conversion] [continuation] shall be _____ month(s).

The undersigned, on behalf of Borrower, hereby certifies that the following statements are true on the date hereof, and will be true on the date of the proposed [conversion] [continuation], before and after giving effect thereto and to the application of the proceeds therefrom:

- (a) no Default or Event of Default has occurred and is continuing, or would result from such proposed [conversion] [continuation].

[Signature page follows.]

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BORROWER:

[AXCELIS ENTITY]

By: _____
Name: _____
Title: _____

For internal Bank use only

LIBOR Pricing Date	LIBOR	LIBOR Variance	Maturity Date
		%	

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Schedule 6.8(b)

Institution Name	Account Number (if applicable) / Maximum Amount
Beverly National Bank	2-8000171-20; Amount not to exceed \$30,000
US Bank	793841000 (Trust account used solely for payments made in connection with the Convertible Senior Subordinated Notes Due 2009)
Merrill Lynch	171 08U80; Amount (value) not to exceed \$15,000
United States Patent and Trademark Office	Amount not to exceed \$85,000 (used solely for the payment of various fees to USPTO)

Schedule 7.2

1. Matrix Integrated Systems Acquisition Corporation (California corporation)
2. Matrix Europe, N.V. (Belgium)
3. Axcelis Technologies, B.V. (Netherlands)

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CERTIFICATION
of the Principal Executive Officer
Pursuant to Rule 13a-14(a)/15d-14(a) (implementing Section 302 of the Sarbanes-Oxley Act)

I, Mary G. Puma, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Axcelis Technologies, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the company as of, and for, the periods presented in this report;
4. The company's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the company and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the company, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the company's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the company's internal control over financial reporting that occurred during the company's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the company's internal control over financial reporting; and
5. The company's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the company's auditors and the audit committee of the company's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the company's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: May 12, 2008

/s/ MARY G. PUMA

Mary G. Puma,
Chairman, Chief Executive Officer and President

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[Exhibit 31.1](#)

[CERTIFICATION of the Principal Executive Officer Pursuant to Rule 13a-14\(a\)/15d-14\(a\) \(implementing Section 302 of the Sarbanes-Oxley Act\)](#)

**CERTIFICATION
of the Principal Financial Officer
Pursuant to Rule 13a-14(a)/15d-14(a) (implementing Section 302 of the Sarbanes-Oxley Act)**

I, Stephen G. Bassett, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Axcelis Technologies, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the company as of, and for, the periods presented in this report;
4. The company's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the company and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the company, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the company's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the company's internal control over financial reporting that occurred during the company's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the company's internal control over financial reporting; and
5. The company's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the company's auditors and the audit committee of the company's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the company's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: May 12, 2008

/s/ STEPHEN G. BASSETT

Stephen G. Bassett,
Executive Vice President and Chief Financial Officer

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[Exhibit 31.2](#)

AXCELIS TECHNOLOGIES, INC.
Certification of the Principal Executive Officer
Pursuant to Section 1350 of Chapter 63 of title 18 of the United States Code

The undersigned Chief Executive Officer of Axcelis Technologies, Inc., a Delaware corporation, hereby certifies, for the purposes of Section 1350 of Chapter 63 of title 18 of the United States Code (as implemented by Section 906 of the Sarbanes-Oxley Act of 2002) as follows:

This Form 10-Q quarterly report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m or 78o(d)) and the information contained herein fairly presents, in all material respects, the financial condition and results of operations of the Company.

IN WITNESS WHEREOF, the undersigned has executed this Certification as of May 12, 2008.

/s/ MARY G. PUMA

Mary G. Puma
*Chairman, Chief Executive Officer and President of Axcelis
Technologies, Inc.*

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[EXHIBIT 32.1](#)

AXCELIS TECHNOLOGIES, INC.
Certification of the Principal Financial Officer
Pursuant to Section 1350 of Chapter 63 of title 18 of the United States Code

The undersigned Chief Financial Officer of Axcelis Technologies, Inc., a Delaware corporation, hereby certifies, for the purposes of Section 1350 of Chapter 63 of title 18 of the United States Code (as implemented by Section 906 of the Sarbanes-Oxley Act of 2002) as follows:

This Form 10-Q quarterly report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m or 78o(d)) and the information contained herein fairly presents, in all material respects, the financial condition and results of operations of the Company.

IN WITNESS WHEREOF, the undersigned has executed this Certification as of May 12, 2008.

/s/ STEPHEN G. BASSETT

Stephen G. Bassett
*Executive Vice President and Chief Financial Officer of
Axcelis Technologies, Inc.*

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[EXHIBIT 32.2](#)