Filed by ON Semiconductor Corporation Pursuant to Rule 425 under the Securities Act of 1933 and deemed filed pursuant to Rule 14a-12 of the Securities Exchange Act of 1934 Subject Company: Catalyst Semiconductor, Inc.

This document contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These forward-looking statements include, but are not limited to, statements related to the benefits of the proposed transaction between ON Semiconductor Corporation ("ON") and Catalyst Semiconductor, Inc. ("Catalyst Semiconductor") and the future financial performance of ON. These forward-looking statements are based on information available to ON and Catalyst Semiconductor as of the date of this release and current expectations, forecasts and assumptions and involve a number of risks and uncertainties that could cause actual results to differ materially from those anticipated by these forward-looking statements. Such risks and uncertainties include a variety of factors, some of which are beyond ON's or Catalyst Semiconductor's control. In particular, such risks and uncertainties include difficulties encountered in integrating merged businesses; the risk that the transaction does not close, including the risk that the requisite stockholder and regulatory approvals may not be obtained; the variable demand and the aggressive pricing environment for semiconductor products; dependence on each company's ability to successfully manufacture in increasing volumes on a cost-effective basis and with acceptable quality for its current products; the adverse impact of competitive product announcements; revenues and operating performance; changes in overall economic conditions; the cyclical nature of the semiconductor industry; changes in demand for our products; changes in inventories at customers and distributors; technological and product development risks; availability of raw materials; competitors' actions; pricing and gross margin pressures; loss of key customers; order cancellations or reduced bookings; changes in manufacturing yields; control of costs and expenses; significant litigation; risks associated with acquisitions and dispositions; risks associated with leverage and restrictive covenants in debt agreements; risks associated with international operations; the threat or occurrence of international armed conflict and terrorist activities both in the United States and internationally; risks and costs associated with increased and new regulation of corporate governance and disclosure standards (including pursuant to Section 404 of the Sarbanes-Oxley Act of 2002); and risks involving environmental or other governmental regulation. Information concerning additional factors that could cause results to differ materially from those projected in the forward-looking statements is contained in ON's Annual Report on Form 10-K as filed with the Securities and Exchange Commission (the "SEC") on February 12, 2008, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and other of ON's SEC filings, and Catalyst Semiconductor's Annual Report on Form 10-K as filed with the SEC on July 3, 2008, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and other of Catalyst Semiconductor SEC filings. These forward-looking statements should not be relied upon as representing ON's or Catalyst Semiconductor's views as of any subsequent date and neither undertake any obligation to update forward-looking statements to reflect events or circumstances after the date they were made.

This communication is being made in respect of the proposed transaction involving ON and Catalyst Semiconductor. In connection with the proposed transaction, ON has filed with the SEC a Registration Statement on Form S-4 (File No. 333-153164) containing a proxy statement/prospectus and each of ON and Catalyst Semiconductor have filed with the SEC other documents regarding the proposed transaction. The definitive proxy statement/ prospectus will be mailed to stockholders of Catalyst Semiconductor on or about September 11, 2008. INVESTORS AND SECURITY HOLDERS ARE URGED TO READ THE PROXY STATEMENT/PROSPECTUS AND OTHER DOCUMENTS FILED WITH THE SEC CAREFULLY IN THEIR ENTIRETY WHEN THEY BECOME AVAILABLE BECAUSE THEY WILL CONTAIN IMPORTANT INFORMATION ABOUT THE PROPOSED TRANSACTION.

Investors and security holders will be able to obtain free copies of the registration statement and the proxy statement/prospectus and other documents filed with the SEC by ON and Catalyst Semiconductor through the web site maintained by the SEC at www.sec.gov. In addition, investors and security holders may obtain free copies of the Registration Statement and the proxy statement/prospectus and other documents filed with the SEC from ON by directing a request to ON Semiconductor Corporation, 5005 East McDowell Road, Phoenix, AZ, 85008, Attention: Investor Relations (telephone: (602) 244-3437) or going to ON's corporate website at www.onsemi.com, or from Catalyst Semiconductor by directing a request to Catalyst Semiconductor, Inc., 2975 Stender Way, Santa Clara, CA 95054, Attention: Investor Relations (telephone: (408) 542-1000) or going to Catalyst Semiconductor's corporate website at www.catsemi.com. Catalyst Semiconductor stockholders needing assistance with voting may also contact Catalyst Semiconductor's proxy advisor, MacKenzie Partners, Inc., at (212) 929-5500 (Collect) or (800) 322-2885 (Toll-Free).

ON and Catalyst Semiconductor, and their respective directors and executive officers, may be deemed to be participants in the solicitation of proxies in respect of the proposed transaction. Information regarding ON's directors and executive officers is contained in its annual proxy statement filed with the SEC on April 4, 2008. Information regarding Catalyst Semiconductor's directors and executive officers is contained in Catalyst Semiconductor's Form 10-K/A filed with the SEC on August 14, 2008. Additional information regarding the interests of such potential participants will be included in the proxy statement/prospectus and the other relevant documents filed with the SEC.

Filed below is an electronic communication sent by Keith Jackson, ON's President and Chief Executive Officer, to Catalyst's customers on September 5, 2008 regarding ON's proposed acquisition of Catalyst.



Keith Jackson President and Chief Executive Officer

September 4, 2008

TO: Catalyst Customers

SUBJECT: Catalyst Semiconductor and ON Semiconductor Pending Merger Message to Catalyst Customers from ON's President and CEO Keith Jackson

As the President and CEO of ON Semiconductor, it is my privilege to inform you that we are making fast progress on all fronts aimed at closing the acquisition of Catalyst Semiconductor. Catalyst will bring a healthy EEPROM business and growing analog/mixed-signal product lines to complement ON Semiconductor's ASIC and power product offerings, addressing our mutual goal to more comprehensively address your future technology requirements.

It is ON Semiconductor's intent to nurture Catalyst's already strong business base and provide the resources to grow it even more quickly. I want to assure you that, after the acquisition is completed, we have no plans to take any integration steps that could impede this growth or hamper our support of your business, product and support needs.

Our most important focus will be to make the merger seamless from your perspective, enabling you to continue conducting business easily and efficiently for both Catalyst and ON Semiconductor-brand products. Our objective is "minimum change for maximum customer support and growth."

To this end, we plan to retain the Catalyst brand for all E²PROM products under the ON Semiconductor Corporation umbrella and Catalyst will operate as a business group within ON Semiconductor. This means Catalyst part numbers would remain unchanged and we would not expect to EOL (end-of-life) any Catalyst products as a result of the acquisition. Additionally, all supply-chain activities (including quotes, POs, credit terms, order fulfillment, shipping, invoicing and payment) for Catalyst products would remain unchanged for now. In essence, we are planning for "business as usual."

As a fabless company, we plan to have Catalyst continue manufacturing at its existing outsourced foundries. Be assured that any potential future front-end or back-end manufacturing changes would be implemented with a standard transition process and detailed communications to provide sufficient time to qualify new foundries and vendors as necessary.

Upon completion of the pending merger, your new ON Semiconductor Account Management team will contact you to answer any questions and address any issues you may have.

On behalf of the entire ON Semiconductor team, I would like to thank you for your continuing business and look forward to providing you with the products, service and support you expect from a world-class semiconductor supplier.

Sincerely,

Keith Jackson President and CEO ON Semiconductor