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 ("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 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 plans to file with the SEC a Registration Statement on Form S-4 containing a Proxy Statement of Catalyst Semiconductor and a Prospectus of ON, and each of ON and Catalyst Semiconductor plan to file with the SEC other documents regarding the proposed transaction. The definitive Proxy Statement/Prospectus will be mailed to stockholders of Catalyst Semiconductor. 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 (when available) 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 will be able to obtain free copies of the Registration Statement and the Proxy Statement/Prospectus (when available) 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) 542-1200) or going to Catalyst Semiconductor's corporate website at www.catsemi.com.

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 ON's annual proxy statement filed with the SEC on April 4, 2008, as supplemented a Current Report on Form 8-K filed with the SEC on March 17, 2008. Information regarding Catalyst Semiconductor's directors and executive officers is contained in Catalyst Semiconductor's annual proxy statement filed with the SEC on August 24, 2007. 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 (when available).

Filed below is a letter to ON's customers from Keith Jackson, ON's President and Chief Executive Officer on July 17, 2008 regarding ON's proposed acquisition of Catalyst.

ON Semiconductor Letter to Customers

July 17, 2008

Today ON Semiconductor announced the signing of a definitive merger agreement providing for the acquisition of Catalyst Semiconductor Inc. The transaction is subject to the approval of shareholders of Catalyst Semiconductor as well as customary closing conditions and regulatory approvals. The companies expect the transaction to close in the fourth quarter of 2008. I would like to share with you the vision of a technologically broader and operationally stronger company serving your needs.

The acquisition of Catalyst Semiconductor will add to our analog and mixed-signal product offerings for the telecommunications, networking systems, computing, automotive, industrial and consumer markets. Catalyst Semiconductor's EEPROM technology will strengthen our custom application-specific circuits (ASIC) and power products capabilities expanding our ability to more comprehensively address our customers' needs. With the combination of ON Semiconductor's global footprint, effective channels of distribution, and top-tier customer relationships, we expect to be able to support a broader and deeper penetration of Catalyst's overall product portfolio.

Operationally it will be business as normal for customers. We will communicate any potential changes to you at the earliest possible time, but ask that you continue to do business using your normal contacts and processes for Catalyst Semiconductor products.

We remain committed to providing you with outstanding customer service, advanced technology solutions, industry-leading supply chain management, and world-class quality and manufacturing. We look forward to a long and mutually beneficial relationship.

If you have any questions or concerns, please contact your local sales contact. You may e-mail questions to transitions@onsemi.com.

/s/ Keith Jackson
Keith Jackson
President and CEO
ON Semiconductor