

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

**Amendment No. 2 to
Form S-4
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933**

ON SEMICONDUCTOR CORPORATION

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

3674
(Primary Standard
Industrial Classification Code Number)

36-3840979
(I.R.S. Employer
Identification Number)

5005 E. McDowell Road
Phoenix, Arizona 85008
(602) 244-6600

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

George H. Cave, Esq.
Senior Vice President, General Counsel and Secretary
ON Semiconductor Corporation
5005 E. McDowell Road
Phoenix, Arizona 85008
(602) 244-6600

(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:

Steven D. Pidgeon, Esq.
Diane Holt Frankle, Esq.
David P. Lewis, Esq.
DLA Piper US LLP
2415 East Camelback Road, Suite 700 Phoenix,
Arizona 85016
(480) 606-5100

Darlene Gerry, Esq.
Senior Vice President, General Counsel and
Secretary
AMIS Holdings, Inc.
2300 Buckskin Road
Pocatello, Idaho 83201
(208) 233-4690

William M. Kelly, Esq.
Mischa Travers, Esq.
Davis Polk & Wardwell
1600 El Camino Real
Menlo Park, California 94025
(650) 752-2000

Approximate date of commencement of proposed sale of the securities to the public: As soon as practicable after this registration statement becomes effective and all other conditions to the proposed merger described herein have been satisfied or waived.

If the securities being registered on this Form are being offered in connection with the formation of a holding company and there is compliance with General Instruction G, check the following box.

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

Title of Each Class of Securities to be Registered	Amount to be Registered	Proposed Maximum Offering Price Per Share	Proposed Maximum Aggregate Offering Price	Amount of Registration Fee
Common Stock, par value \$0.01 per share	113,293,704(1)	N/A	\$951,667,114(2)	\$37,401(3)

- (1) The number of shares of common stock of the registrant being registered is based upon (x) an estimate of the maximum number of shares of common stock, par value \$0.01 per share, of AMIS Holdings, Inc. ("AMI") presently outstanding or issuable or expected to be issued in connection with the merger of a wholly-owned subsidiary of the registrant with AMI multiplied by (y) the exchange ratio of 1.15 shares of common stock, par value \$0.01 per share, of the registrant, for each such share of common stock of AMI.
- (2) Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(f) under the Securities Act of 1933, as amended. The proposed maximum aggregate offering price for the common stock is the product of (x) \$8.40, the average of the high and low sales prices of AMI common stock, as quoted on The Nasdaq Stock Market, on January 9, 2008, and (y) 98,516,264, the estimated maximum number of shares of AMI common stock that may be exchanged for the shares of common stock of the registrant being registered.
- (3) Previously paid.

The registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment which specifically states that this registration statement shall thereafter become effective in accordance with section 8(a) of the Securities Act of 1933 or until the registration statement shall become effective on such date as the Commission, acting pursuant to said section 8(a), may determine.

EXPLANATORY NOTE

This Amendment No. 2 to this Registration Statement is being filed for the sole purpose of filing certain exhibits to the Registration Statement. This Amendment No. 2 does not modify the Joint Proxy Statement/Prospectus included within this Registration Statement; accordingly, the Joint Proxy Statement/Prospectus has not been included herein.

PART II
INFORMATION NOT REQUIRED IN PROSPECTUS

Item 20. Indemnification of Directors and Officers.

Section 145 of the DGCL permits each Delaware business corporation to indemnify its directors, officers, employees and agents against liability for each such person's acts taken in his or her capacity as a director, officer, employee or agent of the corporation if such actions were taken in good faith and in a manner which he or she reasonably believed to be in or not opposed to the best interests of the corporation, and with respect to any criminal action, if he or she had no reasonable cause to believe his or her conduct was unlawful. ON's amended and restated certificate of incorporation provides that we, to the full extent permitted by law, shall indemnify any of ON's past and present directors, officers, employees or any person that is or was serving at ON's request as a director, officer or employee of another enterprise if they were or are a party to, or are threatened to be made a party to, any threatened, pending or complete action, suit or proceeding. The indemnification provided therein includes expenses (including attorneys' fees), judgments, fines and amounts paid in settlement and may be paid by us in advance of the final disposition of such action, suit or proceeding. In addition, ON's amended and restated certificate of incorporation provides that ON may, to the full extent permitted by law, indemnify any other person for any such expenses as to actions in their official capacity or actions in another capacity while holding such office.

As permitted by Section 102(b)(7) of the DGCL, ON's amended and restated certificate of incorporation provides that no director shall be liable to us for monetary damages for breach of fiduciary duty as a director, except for liability:

- (i) for any breach of the director's duty of loyalty;
- (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law;
- (iii) for the unlawful payment of dividends on or redemption of ON's capital stock; or
- (iv) for any transaction from which the director derived an improper personal benefit.

ON has obtained policies insuring ON and its directors and officers against certain liabilities, including liabilities under the Securities Act.

Item 21. Exhibits and Financial Statement Schedules

(a) Exhibits

<u>Exhibit Number</u>	<u>Exhibit Description</u>
2.1*	Agreement and Plan of Merger and Reorganization, dated as of December 13, 2007, by and among ON Semiconductor Corporation, Orange Acquisition Corporation, and AMIS Holdings, Inc. (included as <i>Annex A</i> to the joint proxy statement/prospectus forming part of this registration statement and incorporated herein by reference).
3.1	Amended and Restated Certificate of Incorporation of ON Semiconductor Corporation, as further amended through May 30, 2006 (incorporated by reference from Exhibit 3.1(a) to ON Semiconductor Corporation's Second Quarter Form 10-Q filed with the Securities and Exchange Commission on July 28, 2006).
3.2	Form of Amendment to Amended and Restated Certificate of Incorporation of ON Semiconductor Corporation (included as <i>Annex G</i> to the joint proxy statement/prospectus forming part of this registration statement and incorporated herein by reference).

<u>Exhibit Number</u>	<u>Exhibit Description</u>
3.3	Amended and Restated Bylaws of ON Semiconductor Corporation (incorporated by reference from Exhibit 3.1 to ON Semiconductor Corporation's Form 8-K filed with the Securities and Exchange Commission on November 19, 2007).
3.4	Certificate of Incorporation of Orange Acquisition Corporation (included as <i>Annex D</i> to the joint proxy statement/prospectus forming part of this registration statement and incorporated herein by reference).
4.1	Specimen of share certificate of Common Stock, par value \$0.01, ON Semiconductor Corporation (incorporated by reference from Exhibit 4.1 to ON Semiconductor Corporation's Form 10-K filed with the Securities and Exchange Commission on March 10, 2004).
5.1***	Opinion of DLA Piper US LLP regarding legality of securities being registered.
8.1**	Opinion of DLA Piper US LLP regarding certain U.S. income tax aspects of the merger.
8.2**	Opinion of Davis Polk & Wardwell regarding certain U.S. income tax aspects of the merger.
10.1	Form of Voting Agreement, dated December 13, 2007, by and among ON Semiconductor Corporation, AMIS Holdings, Inc. and certain ON Semiconductor Corporation stockholders (included as <i>Annex B</i> to the joint proxy statement/prospectus forming part of this registration statement and incorporated herein by reference).
10.2	Form of Voting Agreement, dated December 13, 2007, by and among ON Semiconductor Corporation, AMIS Holdings, Inc. and executive officers, directors, and certain other stockholders of AMIS Holdings, Inc., other than Christine King (included as <i>Annex C</i> to the joint proxy statement/prospectus forming part of this registration statement and incorporated herein by reference).
10.3	Voting Agreement for Christine King, dated December 13, 2007, by and among ON Semiconductor Corporation, AMIS Holdings, Inc. and Christine King (incorporated by reference from Exhibit 10.1 to ON Semiconductor Corporation's Form 8-K filed with the Securities and Exchange Commission on December 13, 2007).
23.1**	Consent of PricewaterhouseCoopers LLP.
23.2**	Consent of Ernst & Young LLP, Independent Registered Public Accounting Firm.
23.3***	Consent of DLA Piper US LLP (included as part of Exhibit 5.1).
23.4**	Consent of DLA Piper US LLP (included as part of Exhibit 8.1).
23.5**	Consent of Davis Polk & Wardwell (included as part of Exhibit 8.2).
24.1***	Powers of Attorney for ON Semiconductor Corporation.
99.1***	Form of Proxy for ON Semiconductor Corporation.
99.2***	Form of Proxy for AMIS Holdings, Inc.
99.3	Opinion of Credit Suisse Securities (USA) LLC (included as <i>Annex E</i> to the joint proxy statement/prospectus forming part of this registration statement and incorporated herein by reference).
99.4	Opinion of Goldman, Sachs & Co. (included as <i>Annex F</i> to the joint proxy statement/prospectus forming part of this registration statement and incorporated herein by reference).
99.5***	Consent of Credit Suisse Securities (USA) LLC.
99.6**	Consent of Goldman, Sachs & Co.

* Certain schedules have been omitted and ON agrees to furnish supplementally to the Securities and Exchange Commission a copy of any omitted schedules upon request.

** Filed herewith.

*** Previously filed.

Item 22. Undertakings

(A) The undersigned registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;

(ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement;

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement.

(2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial, bona fide offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(B) The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the registrant's annual report pursuant to Sections 13(a) or 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(C) Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

(D) The undersigned registrant hereby undertakes to respond to requests for information that is incorporated by reference in the prospectus pursuant to Item 4, 10(b), 11, or 13 of this form, within one business day of receipt of such request, and to send the incorporated documents by first class mail or other equally prompt means. This includes information contained in documents filed subsequent to the effective date of the registration statement through the date of responding to the request.

(E) The undersigned registrant hereby undertakes to supply by means of a post-effective amendment all information concerning a transaction, and the company being acquired involved therein, that was not the subject of and included in the registration statement when it became effective.

SIGNATURES

Pursuant to the requirements of the Securities Act, the registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Phoenix, State of Arizona, on the 8th day of February, 2008.

ON SEMICONDUCTOR CORPORATION

By: /s/ KEITH D. JACKSON
Keith D. Jackson
Title: **President and Chief Executive Officer**

Pursuant to the requirements of the Securities Act of 1933, as amended, this registration statement has been signed by the following persons in the capacities and on the dates indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ KEITH D. JACKSON</u> Keith D. Jackson	President, Chief Executive Officer, and Director (Principal Executive Officer)	February 8, 2008
<u>/s/ DONALD A. COLVIN</u> Donald A. Colvin	Executive Vice President, Chief Financial Officer, and Treasurer (Principal Financial and Principal Accounting Officer)	February 8, 2008
<u>*</u> J. Daniel McCranie	Chairman of the Board of Directors	February 8, 2008
<u>*</u> Curtis J. Crawford	Director	February 8, 2008
<u>*</u> Emmanuel T. Hernandez	Director	February 8, 2008
<u>*</u> Phil D. Hester	Director	February 8, 2008
<u>*</u> John W. Marren	Director	February 8, 2008
<u>*</u> Robert H. Smith	Director	February 8, 2008

*By: /s/ DONALD A. COLVIN
Name: **Donald A. Colvin**
Title: **Attorney-in-fact**

EXHIBIT INDEX

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* Certain schedules have been omitted and ON agrees to furnish supplementally to the Securities and Exchange Commission a copy of any omitted schedules upon request.

** Filed herewith.

*** Previously filed.



DLA Piper US LLP
2000 University Avenue
East Palo Alto, California 94303-2214
www.dlapiper.com

T 650.833.2000
F 650.833.2001

February 8, 2008

ON Semiconductor Corp.
5005 East McDowell Road
Phoenix, AZ 85008

Ladies and Gentlemen:

This opinion is being delivered to you in accordance with the requirements of Item 601(b)(8) of Regulation S-K under the Securities Act of 1933, as amended, in connection with the filing of a registration statement on Form S-4 of a Proxy Statement/Prospectus (the "Registration Statement") pursuant to the Agreement and Plan of Merger and Reorganization entered into as of December 13, 2007 (the "Merger Agreement") by and among ON Semiconductor Corporation, a Delaware corporation ("ON Semiconductor"), Orange Acquisition Corporation, Inc., a Delaware corporation ("Merger Sub") and a wholly owned, direct subsidiary of ON Semiconductor, and AMIS Holdings, Inc., a Delaware corporation ("AMIS Holdings"). Pursuant to the Merger Agreement, Merger Sub will merge with and into AMIS Holdings (the "Merger").

Unless otherwise defined, capitalized terms referred to herein have the meanings set forth in the Merger Agreement. All section references, unless otherwise indicated, are to the Internal Revenue Code of 1986, as amended (the "Code").

We have acted as legal counsel to ON Semiconductor in connection with the preparation and execution of the Merger Agreement. As such, and for the purpose of rendering this opinion, we have examined and are relying upon (without any independent investigation or review thereof) the truth and accuracy, at all relevant times, of the statements, covenants, representations and warranties contained in the following documents (including all schedules and exhibits thereto): (1) the Merger Agreement; (2) representations and warranties made to us by ON Semiconductor, Merger Sub and AMIS Holdings in certain tax representation letters (the "Tax Representation Letters"); (3) the facts, statements, descriptions and representations set forth in the Registration Statement; and (4) such other instruments and documents related to the formation, organization and operation of ON Semiconductor and AMIS Holdings or to the consummation of the Merger and the transactions contemplated thereby as we have deemed necessary or appropriate.

In connection with rendering this opinion, we have assumed or obtained representations (and are relying thereon, without any independent investigation or review thereof) that:

1. Original documents (including signatures) are authentic, documents submitted to counsel as copies conform to the original documents, and there has been (or will be by the Effective Time of the Merger) due execution and delivery of all documents where due execution and delivery are prerequisites to the effectiveness of such documents;



ON Semiconductor Corp.
February 8, 2008
Page Two

2. All statements, covenants, representations and warranties in the Merger Agreement, in the Tax Representation Letters and in other documents related to ON Semiconductor, Merger Sub and AMIS Holdings and relied upon to support this opinion are, in each case, true and accurate. Any such representation or statement made "to the knowledge of" or otherwise similarly qualified is correct without such qualification and all such statements and representations, whether or not qualified, will remain true through the Effective Time of the Merger. In addition, as to all matters in which a person or entity making such a representation has represented that such person or entity either is not a party to, does not have, or is not aware of any plan, intention, understanding or agreement to take an action, there is in fact no plan, intention, understanding or agreement and such action will not be taken;

3. The Merger will be consummated pursuant to the Merger Agreement and will be effective under the laws of the state of Delaware;

4. ON Semiconductor and AMIS Holdings will report the Merger on their respective U.S. federal income tax returns in a manner consistent with the qualification of the Merger as a reorganization within the meaning of Section 368(a) of the Code; and

5. Representations made by ON Semiconductor, Merger Subsidiary and AMIS Holdings in the Tax Representation Letters will be true and accurate and there will not be any occurrence or change since the date of the Tax Representation Letters, which change could have caused any of the declarations and representations contained in those letters to be untrue, incorrect or incomplete in any respect at any time since that date.

Based upon the foregoing, and subject to the limitations, qualifications and assumptions set forth herein, we are of the opinion that (i) the consummation of the Merger will qualify as a reorganization within the meaning of Section 368(a) of the Code and (ii) the material U.S. federal income tax consequences of the Merger to holders of AMIS Holdings common stock will be as set forth in the Registration Statement under the heading "Material U.S. Federal Income Tax Consequences." We express no opinion as to any federal, state or local, foreign or other tax consequences, other than as set forth herein or in the Registration Statement under the heading "Material U.S. Federal Income Tax Consequences."

This opinion addresses only the matters described above. No opinion is expressed as to any other matter, including any other tax consequences of the Merger or any other transaction (including any transaction undertaken in connection with the Merger) under any foreign, federal, state or local tax law.

No opinion is expressed as to any transaction, other than the Merger as described in the Merger Agreement, or to any transaction whatsoever, including the Merger, if any of the transactions described in the Merger Agreement are not consummated in accordance with the terms of such Merger Agreement and without waiver or breach of any material provision thereof or if any of the representations, warranties, statements and assumptions upon which we relied are not true and accurate at all relevant times. In the event any one of the statements, covenants, representations, warranties or assumptions upon which we have relied to issue this opinion is incorrect, our opinion might be adversely affected and may not be relied upon.



ON Semiconductor Corp.
February 8, 2008
Page Three

This opinion represents and is based upon our best judgment regarding the application of federal income tax laws arising under the Code, existing judicial decisions, administrative regulations and published rulings and procedures. Our opinion is not binding upon the Internal Revenue Service or the courts, and the Internal Revenue Service is not precluded from successfully asserting a contrary position. Furthermore, no assurance can be given that future legislative, judicial or administrative changes, on either a prospective or retroactive basis, would not adversely affect the accuracy of the conclusions stated herein. Nevertheless, we undertake no responsibility to advise you of any new developments in the application or interpretation of the U.S. federal income tax laws.

This opinion has been delivered to you only for the purpose stated. It is intended for the benefit of ON Semiconductor and the stockholders of AMIS Holdings and may not be relied upon for any other purpose or by any other person or entity. We hereby consent, however, to the use of this opinion as an exhibit to the Registration Statement and further consent to the use of our name wherever appearing in the Registration Statement, including the Proxy Statement/Prospectus constituting a part thereof, and any amendments thereto.

Very truly yours,

/s/ DLA Piper US LLP

DLA Piper US LLP

[LETTERHEAD OF DAVIS POLK & WARDWELL]

February 8, 2008

Re: **Registration Statement on Form S-4**

AMIS Holdings, Inc.
2300 Buckskin Road
Pocatello Idaho 83201

Ladies and Gentlemen:

We have acted as counsel for AMIS Holdings, Inc. (the "**Company**"), a Delaware corporation, in connection with (i) the Merger, as defined and described in the Agreement and Plan of Merger and Reorganization dated as of December 13, 2007 (the "**Merger Agreement**") among ON Semiconductor Corporation, Inc. ("**Parent**"), a Delaware corporation, Orange Acquisition Corporation, Inc. ("**Merger Sub**"), a Delaware corporation and a newly-formed, wholly-owned subsidiary of Parent, and the Company and (ii) the preparation and filing of the related Registration Statement on Form S-4 (the "**Registration Statement**"), which includes the Joint Proxy Statement/Prospectus (the "**Joint Proxy Statement/Prospectus**"), filed with the Securities and Exchange Commission (the "**Commission**"). Unless otherwise indicated, each capitalized term used herein has the meaning ascribed to it in the Merger Agreement.

In connection with this opinion, we have examined the Merger Agreement, the Registration Statement, the representation letters of Parent (together with Merger Subsidiary) and the Company delivered to us for purposes of this opinion (the "**Representation Letters**") and such other documents as we have deemed necessary or appropriate in order to enable us to render our opinion. In such examination, we have assumed the genuineness of all signatures, the legal capacity of natural persons, the authenticity of all documents submitted to us as originals, the conformity to original documents of all documents submitted to us as duplicates or certified or conformed copies, and the authenticity of the originals of such latter documents. We have not, however, undertaken any independent investigation of any factual matter set forth in any of the foregoing.

For purposes of this opinion, we have assumed, with your permission, (i) that the Merger will be consummated in the manner described in Merger Agreement and the Joint Proxy Statement/Prospectus, (ii) the statements concerning the Merger set forth in the Merger Agreement and the Joint Proxy Statement/Prospectus are true, complete and correct and will remain true, complete and correct at all times up to and including the Effective Time, (iii) that

the representations set forth in the Representations Letters are true, complete and correct, and will remain true, complete and correct at all times up to and including the Effective Time, and (iv) any representations made in the Merger Agreement or the Representation Letters “to the knowledge of”, or based on the belief of Parent, Merger Subsidiary or the Company or similarly qualified are true, complete and correct and will remain true, complete and correct at all times up to and including the Effective Time, in each case without such qualification. We have also assumed that the parties have complied with and, if applicable, will continue to comply with, the obligations, covenants, and agreements contained in the Merger Agreement.

Based upon the foregoing, and subject to the limitations, qualifications and assumptions set forth herein, it is our opinion that (i) the consummation of the Merger will qualify as a reorganization within the meaning of Section 368(a) of the Internal Revenue Code of 1986, as amended (the “Code”), and (ii) the material federal income tax consequences of the Merger to holders of the Company’s common stock will be as described in the Registration Statement under the caption “Material U.S. Federal Income Tax Consequences,” subject to the qualifications and limitations set forth therein.

Our opinion is based on the Code, the Treasury Regulations thereunder, and administrative and judicial interpretations thereof, all as in effect on the date hereof. No assurance can be given that any of the foregoing authorities will not be modified, revoked, supplemented or overruled, with possibly retroactive effect. Our opinion is limited to the matters expressly stated herein and no opinion is implied or may be inferred beyond the matters expressly stated herein.

This opinion is furnished to you solely for use in connection with the Registration Statement. We hereby consent to the filing of this opinion as an exhibit to the Registration Statement and to the references to our firm name in the Joint Proxy Statement/Prospectus in connection with the references to this opinion and the material U.S. federal income tax consequences of the Merger. In giving such consent, we do not thereby admit that we are in the category of persons whose consent is required under Section 7 of the Securities Act of 1933, as amended, or the rules and regulations of the Commission thereunder.

Very truly yours,

/s/ Davis Polk & Wardwell

Davis Polk & Wardwell

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in this Registration Statement on Form S-4 (No. 333-148630) of our report dated February 23, 2007 relating to the financial statements, financial statement schedule, management's assessment of the effectiveness of internal control over financial reporting and the effectiveness of internal control over financial reporting, which appears in ON Semiconductor Corporation's Annual Report on Form 10-K for the year ended December 31, 2006. We also consent to the reference to us under the heading "Experts" in such Registration Statement.

/s/ PricewaterhouseCoopers LLP
Phoenix, AZ
February 7, 2008

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the reference to our firm under the caption "Experts" in Amendment No. 2 of this Registration Statement (Form S-4 No. 333-148630) and related joint proxy statement/prospectus and to the incorporation by reference herein of our reports dated February 27, 2007, with respect to the consolidated financial statements of AMIS Holdings, Inc., AMIS Holdings, Inc. management's assessment of the effectiveness of internal control over financial reporting, and the effectiveness of internal control over financial reporting of AMIS Holdings, Inc., included in AMIS Holdings, Inc.'s Annual Report (Form 10-K) for the year ended December 31, 2006, filed with the Securities and Exchange Commission.

/s/ ERNST & YOUNG LLP

San Jose, CA
February 7, 2008

February 8, 2008

Board of Directors
AMIS Holdings, Inc.
2300 Buckskin Road
Pocatello, ID 83201

Re: Amendment No. 2 to Registration Statement on Form S-4, of ON Semiconductor Corporation (“ON Semi”)
(File No. 333-148630) Relating to the Common Stock of ON Semi, filed February 8, 2008

Ladies and Gentlemen:

Reference is made to our opinion letter, dated December 13, 2007, with respect to the fairness from a financial point of view to the holders of the outstanding shares of common stock, par value \$0.01 per share (the “Shares”), of AMIS Holdings, Inc. (the “Company”) of the exchange ratio of 1.15 shares of common stock, par value \$0.01 per share, of ON Semiconductor Corporation (“ON Semi”) to be received for each Share pursuant to the Agreement and Plan of Merger and Reorganization, dated as of December 13, 2007, by and among ON Semi, Orange Acquisition Corporation, a wholly owned subsidiary of ON Semi, and the Company.

The foregoing opinion letter is provided for the information and assistance of the Board of Directors of the Company in connection with its consideration of the transaction contemplated therein and is not to be used, circulated, quoted or otherwise referred to for any other purpose, nor is it to be filed with, included in or referred to in whole or in part in any registration statement, proxy statement or any other document, except in accordance with our prior written consent. We understand that the Company has determined to include our opinion in the above-referenced Registration Statement, as amended.

In that regard, we hereby consent to the reference to our opinion under the captions “Summary—AMI’s Reasons for the Merger,” “—Opinion of the Parties’ Financial Advisers—AMI Financial Adviser,” “Risk Factors—The opinions obtained by ON and AMI from their respective financial advisors do not and will not reflect changes in circumstances subsequent to the date of the merger,” “The Merger—Background of the Merger,” “—The AMI Board of Directors Recommendation and Reasons for the Merger” and “—Opinion of Financial Adviser to AMI Board of Directors” and to the inclusion of the foregoing opinion in the Joint Proxy Statement/Prospectus included in the above-mentioned Registration Statement, as amended. Notwithstanding the foregoing, it is understood that our consent is being delivered solely in connection with the filing of the above-mentioned version of the Registration Statement and that our opinion is not to be used, circulated, quoted or otherwise referred to, for any other purpose, nor is it to be filed with, included in or referred to in whole or in part in any registration statement (including any subsequent amendments to the above-mentioned Registration Statement), proxy statement or any other document, except in accordance with our prior written consent. In giving such consent, we do not thereby admit that we come within the category of persons whose consent is required under Section 7 of the Securities Act of 1933 or the rules and regulations of the Securities and Exchange Commission thereunder.

Very truly yours,

/s/ GOLDMAN SACHS & CO.

(Goldman, Sachs & Co.)

February 8, 2008

VIA EDGAR AND FACSIMILE

Mr. Russell Mancuso
Branch Chief
Division of Corporation Finance
U.S. Securities and Exchange Commission
Mail Stop 6010
100 F Street, NE
Washington, DC 20549

Re: **ON Semiconductor Corporation**
Registration Statement on Form S-4
File No. 333-148630

Dear Mr. Mancuso:

Pursuant to Rule 461 under the Securities Act of 1933, as amended, ON Semiconductor Corporation (the "Registrant") hereby requests acceleration of the effectiveness of the above-referenced Registration Statement on Form S-4, as amended by Amendment No. 1 and Amendment No. 2 thereto, so that it will become effective at 5 p.m., Eastern time on February 8, 2008 or as soon thereafter as is practicable.

The Registrant hereby acknowledges the following: (i) should the Securities and Exchange Commission (the "Commission") or the staff of the Commission (the "Staff"), acting pursuant to delegated authority, declare the filing effective, it does not foreclose the Commission from taking any action with respect to the filing; (ii) the action of the Commission or the Staff, acting pursuant to delegated authority, in declaring the filing effective, does not relieve the Registrant from its full responsibility for the adequacy and accuracy of the disclosure in the filing; and (iii) the Registrant may not assert staff comments and the declaration of effectiveness as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

Very truly yours,

ON Semiconductor Corporation

By: /s/ George H. Cave
George H. Cave
Senior Vice President, General Counsel and Secretary

cc: Steven D. Pidgeon, Esq., DLA Piper US LLP
Darlene Gerry, Esq., AMIS Holdings, Inc.
William M. Kelly, Esq., Davis Polk & Wardwell
Mischa Travers, Esq., Davis Polk & Wardwell