

OMB APPROVAL	
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STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See Instruction 1(b).

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934 or Section 30(h) of the Investment Company Act of 1940

1. Name and Address of Reporting Person* <u>SIMS LARRY W</u> (Last) (First) (Middle) <u>ON SEMICONDUCTOR (M/D A700)</u> <u>5005 EAST MCDOWELL ROAD</u> (Street) <u>PHOENIX AZ 85008</u> (City) (State) (Zip)	2. Issuer Name and Ticker or Trading Symbol <u>ON SEMICONDUCTOR CORP [ONNN]</u>	5. Relationship of Reporting Person(s) to Issuer (Check all applicable) Director 10% Owner <input checked="" type="checkbox"/> Officer (give title below) Other (specify below) <u>Senior Vice President</u>
	3. Date of Earliest Transaction (Month/Day/Year) <u>02/10/2005</u>	
	4. If Amendment, Date of Original Filed (Month/Day/Year)	

Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned

1. Title of Security (Instr. 3)	2. Transaction Date (Month/Day/Year)	2A. Deemed Execution Date, if any (Month/Day/Year)	3. Transaction Code (Instr. 8)		4. Securities Acquired (A) or Disposed Of (D) (Instr. 3, 4 and 5)			5. Amount of Securities Beneficially Owned Following Reported Transaction(s) (Instr. 3 and 4)	6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	7. Nature of Indirect Beneficial Ownership (Instr. 4)
			Code	V	Amount	(A) or (D)	Price			

Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)

1. Title of Derivative Security (Instr. 3)	2. Conversion or Exercise Price of Derivative Security	3. Transaction Date (Month/Day/Year)	3A. Deemed Execution Date, if any (Month/Day/Year)	4. Transaction Code (Instr. 8)		5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5)		6. Date Exercisable and Expiration Date (Month/Day/Year)		7. Title and Amount of Securities Underlying Derivative Security (Instr. 3 and 4)	8. Price of Derivative Security (Instr. 5)	9. Number of derivative Securities Beneficially Owned Following Reported Transaction(s) (Instr. 4)	10. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	11. Nature of Indirect Beneficial Ownership (Instr. 4)
				Code	V	(A)	(D)	Date Exercisable	Expiration Date					
Stock Options (Right to Buy)	\$4.4	02/10/2005		A		100,000		02/10/2006 ⁽¹⁾	02/10/2015	Common Stock	\$0	100,000	D	

Explanation of Responses:

1. Granted effective 2-10-05 under the Issuer's 2000 Stock Incentive Plan. This is a performance based stock option grant. The stock option will vest 25% on each of the first through fourth anniversaries of the grant date, subject to continued employment with the Issuer, and other terms and conditions of the plan and the related stock option agreement, however, the unvested portion of the option would accelerate and become fully exercisable upon the Reporting Person meeting individual performance measurements specified within his related performance based stock option agreement. The exercise price is the closing price on the grant date.

Remarks:

Judith A. Boyle is signing on behalf of the Reporting Person pursuant to a Power of Attorney attached hereto as an exhibit.

Larry W. Sims by Judith A. Boyle as Attorney-in-Fact 02/14/2005

** Signature of Reporting Person Date

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

* If the form is filed by more than one reporting person, see Instruction 4 (b)(v).

** Intentional misstatements or omissions of facts constitute Federal Criminal Violations See 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, see Instruction 6 for procedure.

Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB Number.

POWER OF ATTORNEY
(Larry W. Sims)

I hereby appoint Keith D. Jackson, George H. Cave and Judith A. Boyle, and each of them, attorney-in-fact for me, each with full power of substitution, to prepare, execute and deliver on my behalf reports required to be filed by me pursuant to Section 16 of the Securities Exchange Act of 1934, as amended ("Section 16"), and Rule 144 and Rule 145 under the Securities Act of 1933 (singly or collectively (?Rule 144?)). Among other things, each attorney-in-fact is authorized to file original reports (either electronically or otherwise), signed by me or on my behalf, on Forms 3, 4 and 5, and Form 144 with the Securities and Exchange Commission, and to provide any necessary copies of such signed forms to The NASDAQ Stock Market and ON Semiconductor Corporation as required by the rules under Section 16 and Rule 144 as in effect from time to time.

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nbsp; This power of attorney is effective from the date hereof until April 15, 2005, unless earlier revoked or terminated.

/s/ Larry W. Sims
Larry W. Sims

Dated: April 19, 2004

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