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# UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

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## AMENDMENT NO. 6 TO SCHEDULE TO

(Rule 14d-100)

Tender Offer Statement Under Section 14(d)(1) or 13(e)(1)  
of the Securities Exchange Act of 1934

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### **Siliconix incorporated**

(Name of subject company (issuer))

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### **Vishay Intertechnology, Inc. and**

### **Vishay TEMIC Semiconductor Acquisition Holdings Corp.**

(Offerors)

(Names of filing persons (identifying status as  
offeror, issuer or other person))

**Common Stock, Par Value \$0.01 per Share**

(Title of class of securities)

**82707920 3**

(CUSIP numbers of class of securities)

**Richard N. Grubb**

**Vishay Intertechnology, Inc.**

**63 Lincoln Highway**

**Malvern, Pennsylvania 19355-2143**

**(610) 644-1300**

(Name, address and telephone number of persons authorized to receive notices  
and communications on behalf of filing persons)

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#### Copies To:

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63 Lincoln Highway  
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(610) 644-1300**

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Check the box if the filing relates solely to preliminary communications made before the commencement of a tender offer.

Check the appropriate boxes below to designate any transactions to which the statement relates:

- third-party tender offer subject to Rule 14d-1.
- issuer tender offer subject to Rule 13e-4.
- going-private transaction subject to Rule 13e-3.
- amendment to Schedule 13D under Rule 13d-2.

Check the following box if the filing is a final amendment reporting the results of the tender offer:

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This Amendment No. 6 amends and supplements the Tender Offer Statement on Schedule TO filed on April 12, 2005 and amended on April 22, 2005, April 25, 2005, April 27, 2005, May 2, 2005 and May 5, 2005 by Vishay Intertechnology, Inc. ("Vishay") and Vishay TEMIC Semiconductor Acquisition Holdings Corp. ("Vishay TEMIC"), a wholly owned subsidiary of Vishay. The Schedule TO relates to the offer by Vishay TEMIC to exchange shares of Vishay common stock, par value \$0.10 per share, for each outstanding share of common stock, par value \$0.01 per share, of Siliconix incorporated that Vishay and its subsidiaries do not own.

**Item 10. Financial Statements.**

Item 10 of the Schedule TO is hereby amended and supplemented by adding the following:

The financial statements included in Item 1 of Vishay's quarterly report on Form 10-Q for the first fiscal quarter ended April 2, 2005 are hereby incorporated by reference.

The financial statements included in Item 1 of Siliconix incorporated's quarterly report on Form 10-Q for the fiscal quarter ended April 2, 2005 are hereby incorporated by reference.

**Item 11. Other Information.**

Item 11 of the Schedule TO is hereby amended and supplemented by adding the following:

Vishay's quarterly report on Form 10-Q for the fiscal quarter ended April 2, 2005 is hereby incorporated by reference.

Siliconix incorporated's quarterly report on Form 10-Q for the fiscal quarter ended April 2, 2005 is hereby incorporated by reference.

**SIGNATURE**

After due inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

Dated: May 10, 2005

VISHAY INTERTECHNOLOGY, INC

By: /s/ RICHARD N. GRUBB

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Name: Richard N. Grubb  
Title: Executive Vice President, Treasurer and  
Chief Financial Officer

VISHAY TEMIC SEMICONDUCTOR  
ACQUISITION HOLDINGS CORP.

By: /s/ RICHARD N. GRUBB

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Name: Richard N. Grubb  
Title: Vice President and Treasurer

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