

Xiao Deming
Form 4
February 27, 2007

FORM 4 UNITED STATES SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

OMB APPROVAL

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

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP OF SECURITIES

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934, Section 17(a) of the Public Utility Holding Company Act of 1935 or Section 30(h) of the Investment Company Act of 1940

(Print or Type Responses)

1. Name and Address of Reporting Person *
Xiao Deming

2. Issuer Name and Ticker or Trading Symbol
MONOLITHIC POWER SYSTEMS INC [MPWR]

5. Relationship of Reporting Person(s) to Issuer
(Check all applicable)

(Last) (First) (Middle)
6409 GUADALUPE MINES ROAD
(Street)

3. Date of Earliest Transaction (Month/Day/Year)
02/26/2007

____ Director _____ 10% Owner
 Officer (give title below) _____ Other (specify below)
VP, Operations

SAN JOSE, CA 95120

4. If Amendment, Date Original Filed(Month/Day/Year)

6. Individual or Joint/Group Filing(Check Applicable Line)
 Form filed by One Reporting Person
 Form filed by More than One Reporting Person

(City) (State) (Zip)

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) |
|---------------------------------|--------------------------------------|--|--------------------------------|---|---|--|---|
| | | | | (A) or (D) | Price | | |
| Common Stock | 02/26/2007 | | M | | \$ 1.2 | D | |
| | | | | V | | | |
| Common Stock | 02/26/2007 | | S | | \$ 13.45 | D | |
| | | | | | (1) | | |
| Common Stock | 02/26/2007 | | M | | \$ 1.2 | D | |
| | | | | | | | |
| Common Stock | 02/26/2007 | | S | | \$ 13.45 | D | |
| | | | | | (1) | | |
| | | | | | | I | By Parent |
| | | | | | 86,333 | | |

Common
Stock

Common
Stock

2,568

I

by Spouse
(2)

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

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(9-02)

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 Underlying Securities (Instr. 3 and 4) | Amount or Number of Shares |
|--|--|--------------------------------------|--|--------------------------------|---|--|---|----------------------------|
| Incentive Stock Option (right to buy) | \$ 1.2 | 02/26/2007 | | M | 8,334 | 10/16/2003 ⁽³⁾ 10/15/2012 | Common Stock | 8,334 |
| Incentive Stock Option (right to buy) | \$ 1.2 | 02/26/2007 | | M | 11,666 | 09/10/2004 10/15/2012 | Common Stock | 11,666 |

Reporting Owners

| Reporting Owner Name / Address | Relationships | | | |
|--|---------------|-----------|-------------------|-------|
| | Director | 10% Owner | Officer | Other |
| Xiao Deming 6409 GUADALUPE MINES ROAD SAN JOSE, CA 95120 | | | VP, Operations | |

Signatures

Deming Xiao

02/27/2007

__Signature of
Reporting Person

Date

Explanation of Responses:

- * 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).
- (1) Average price per share
 - (2) Represent shares owned by the reporting person's spouse.
 - (3) 18,334 of the shares subject to the option are vested on 11/16/04; the remaining shares vest at a rate of 1,666.67 shares per month over 23 months.

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

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