

Xiao Deming  
Form 4  
February 17, 2012

**FORM 4**

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

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

**OMB APPROVAL**

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(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

3. Date of Earliest Transaction  
(Month/Day/Year)  
02/17/2012

\_\_\_\_ Director \_\_\_\_ 10% Owner  
\_\_\_\_X\_\_\_\_ Officer (give title below) \_\_\_\_ Other (specify below)

Pres. of MPS Asia Operations

(Street)

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

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

SAN JOSE, CA 95120

(City) (State) (Zip)

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

| 1. Title of<br>Security<br>(Instr. 3) | 2. Transaction Date<br>(Month/Day/Year) | 2A. Deemed<br>Execution Date, if<br>any<br>(Month/Day/Year) | 3. Transaction<br>Code<br>(Instr. 8) | 4. Securities Acquired (A)<br>or Disposed of (D)<br>(Instr. 3, 4 and 5) | 5. Amount of<br>Securities<br>Beneficially<br>Owned<br>Following<br>Reported<br>Transaction(s)<br>(Instr. 3 and 4) | 6. Ownership<br>Form:<br>Direct (D)<br>or Indirect<br>(I)<br>(Instr. 4) | 7. Nature of<br>Indirect<br>Beneficial<br>Ownership<br>(Instr. 4) |
|---------------------------------------|-----------------------------------------|-------------------------------------------------------------|--------------------------------------|-------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|-------------------------------------------------------------------|
|                                       |                                         |                                                             | Code                                 | V                                                                       | Amount<br>(A)<br>or<br>(D)                                                                                         | Price                                                                   |                                                                   |
| Common<br>Stock                       | 02/15/2012                              |                                                             | J                                    | V                                                                       | 1,995<br>(1)                                                                                                       | \$<br>10.6505                                                           | 174,171 D                                                         |
| Common<br>Stock                       | 02/17/2012                              |                                                             | S                                    |                                                                         | 300 D                                                                                                              | \$ 18.255                                                               | 173,871 D                                                         |
| Common<br>Stock                       | 02/17/2012                              |                                                             | S                                    |                                                                         | 1,160 D                                                                                                            | \$<br>18.2543                                                           | 172,711 D                                                         |
| Common<br>Stock                       | 02/17/2012                              |                                                             | S                                    |                                                                         | 4,900 D                                                                                                            | \$<br>18.2662                                                           | 167,811 D                                                         |
| Common<br>Stock                       | 02/17/2012                              |                                                             | S                                    |                                                                         | 100 D                                                                                                              | \$ 18.3                                                                 | 167,711 D                                                         |

# Edgar Filing: Xiao Deming - Form 4

Common Stock 21,502 I by Spouse

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

**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 control number.** SEC 1474 (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) | 8. Price of Derivative Security (Instr. 5) | 9. Number of Derivative Securities Beneficially Owned Following Reported Transaction (Instr. 3) |
|--------------------------------------------|--------------------------------------------------------|--------------------------------------|----------------------------------------------------|--------------------------------|-----------------------------------------------------------------------------------------|----------------------------------------------------------|---------------------------------------------------------------|--------------------------------------------|-------------------------------------------------------------------------------------------------|
|                                            |                                                        |                                      |                                                    | Code                           | V (A) (D)                                                                               | Date Exercisable                                         | Expiration Date                                               | Title                                      | Amount or Number of Shares                                                                      |

## Reporting Owners

| Reporting Owner Name / Address                                 | Relationships                      |
|----------------------------------------------------------------|------------------------------------|
|                                                                | Director 10% Owner Officer Other   |
| Xiao Deming<br>6409 GUADALUPE MINES ROAD<br>SAN JOSE, CA 95120 | Pres. of MPS<br>Asia<br>Operations |

## Signatures

By: Saria Tseng For: Deming Xiao 02/17/2012

\_\_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) Acquired through the Company's qualified ESPP program.

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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