

Xiao Deming  
Form 4  
March 17, 2011

**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

OMB  
Number: 3235-0287  
Expires: January 31,  
2005  
Estimated average  
burden hours per  
response... 0.5

(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)  
03/16/2011

\_\_\_\_ Director \_\_\_\_ 10% Owner  
\_\_\_\_X\_\_\_\_ Officer (give title below) \_\_\_\_ Other (specify below)  
Pres. of MPS Asia Operations

SAN JOSE, CA 95120

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

(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<br>Acquired (A) or<br>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: Direct<br>(D) or<br>Indirect (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                       | 03/16/2011                              |                                                             | A                                    |                                                                            | 6,000<br>(1)                                                                                                       | \$ 0                                                                 | 21,573                                                            | I | by Spouse |
| Common<br>Stock                       |                                         |                                                             |                                      |                                                                            |                                                                                                                    |                                                                      | 150,035                                                           | D |           |

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  
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number.**

SEC 1474  
(9-02)

## Edgar Filing: Xiao Deming - Form 4

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

| 1. Title of<br>Derivative<br>Security<br>(Instr. 3) | 2. Conversion<br>or Exercise<br>Price of<br>Derivative<br>Security | 3. Transaction Date<br>(Month/Day/Year) | 3A. Deemed<br>Execution Date, if<br>any<br>(Month/Day/Year) | 4. Transaction<br>Code<br>(Instr. 8) | 5. Number<br>of<br>Derivative<br>Securities<br>Acquired<br>(A) or<br>Disposed<br>of (D)<br>(Instr. 3,<br>4, and 5) | 6. Date Exercisable and<br>Expiration Date<br>(Month/Day/Year) | 7. Title and<br>Amount of<br>Underlying<br>Securities<br>(Instr. 3 and 4) | 8. Price of<br>Derivative<br>Security<br>(Instr. 5) | 9. Nu<br>Deriv<br>Secur<br>Bene<br>Own<br>Follo<br>Repo<br>Trans<br>(Instr |
|-----------------------------------------------------|--------------------------------------------------------------------|-----------------------------------------|-------------------------------------------------------------|--------------------------------------|--------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|---------------------------------------------------------------------------|-----------------------------------------------------|----------------------------------------------------------------------------|
|                                                     |                                                                    |                                         |                                                             | Code                                 | V (A) (D)                                                                                                          | Date<br>Exercisable                                            | Expiration<br>Date                                                        | Title                                               | Amount<br>or<br>Number<br>of<br>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:      03/17/2011  
Deming Xiao

\_\_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) 1/16 of the Restricted Stock Units shall vest quarterly following the Vesting Commencement Date, provided that the Grantee continues to be a Service Provider from the Grant Date through each applicable vesting date.

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

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