

Xiao Deming  
Form 4  
March 20, 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

OMB  
Number: 3235-0287  
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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

3. Date of Earliest Transaction  
(Month/Day/Year)  
03/19/2012

\_\_\_\_ 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<br>(A) 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: Direct<br>(D) or<br>Indirect (I)<br>(Instr. 4) | 7. Nature of<br>Ownership<br>(Instr. 4) |   |           |
|---------------------------------------|-----------------------------------------|-------------------------------------------------------------|--------------------------------------|-------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|-----------------------------------------|---|-----------|
| Common<br>Stock                       | 03/19/2012                              |                                                             | S(1)                                 | 160                                                                     | D                                                                                                                  | \$<br>18.91                                                          | 18,600                                  | I | by Spouse |
| Common<br>Stock                       |                                         |                                                             |                                      |                                                                         |                                                                                                                    |                                                                      | 149,408                                 | 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  
displays a currently valid OMB control  
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: 03/20/2012  
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) Shares sold to pay tax obligations resulting from the vesting of restricted stock units.

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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