

Xiao Deming
Form 4
August 13, 2010

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
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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)
08/12/2010

____ Director ____ 10% Owner
____X____ Officer (give title below) ____ Other (specify below)
Pres. of MPS Asia Operations

(Street)
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 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)		
			Code	V	Amount	(A) or (D)	Price		
Common Stock	08/12/2010		S ⁽¹⁾		1,486	D	\$ 17.3119	102,793	D
Common Stock	08/12/2010		S ⁽¹⁾		248	D	\$ 17.3119	15,586	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
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(9-02)

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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. Nu Deriv Secur Benef Own Follo Repor Trans (Instr
				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 6409 GUADALUPE MINES ROAD SAN JOSE, CA 95120	Pres. of MPS Asia Operations

Signatures

By: Rick Neely For: 08/13/2010
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.

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.