

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

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934
or Section 30(h) of the Investment Company Act of 1940

1. Name and Address of Reporting Person* <u>Xiao Deming</u> <hr/> (Last) (First) (Middle) <u>983 UNIVERSITY AVENUE, BUILDING A</u> <hr/> (Street) <u>LOS GATOS CA 95032</u> <hr/> (City) (State) (Zip)			2. Issuer Name and Ticker or Trading Symbol <u>MONOLITHIC POWER SYSTEMS INC</u> <u>[MPWR]</u>			5. Relationship of Reporting Person(s) to Issuer (Check all applicable) Director 10% Owner <input checked="" type="checkbox"/> Officer (give title below) Other (specify below) <u>VP, Operations</u>		
			3. Date of Earliest Transaction (Month/Day/Year) <u>04/26/2005</u>					
			4. If Amendment, Date of Original Filed (Month/Day/Year)			6. Individual or Joint/Group Filing (Check Applicable Line) <input checked="" type="checkbox"/> Form filed by One Reporting Person Form filed by More than One Reporting Person		

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	08/15/2006		J ⁽¹⁾	V	1,728	A	\$7.463	24,228	D	
Common Stock	08/15/2006		J ⁽¹⁾	V	1,173	A	\$7.463	1,173	I	by Spouse ⁽²⁾
Common Stock								86,333	I	By Parent

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 Securities Underlying Derivative Security (Instr. 3 and 4)	8. Price of Derivative Security (Instr. 5)	9. Number of derivative Securities Beneficially Owned Following Reported Transaction(s) (Instr. 4)	10. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	11. Nature of Indirect Beneficial Ownership (Instr. 4)
				Code	V		Date Exercisable	Expiration Date					
Incentive Stock Option (right to buy)	\$8.05	04/26/2005		A		41,329	03/28/2006 ⁽³⁾	04/26/2015	Common Stock 41,329	\$8.05	41,329	I	by Spouse ⁽⁴⁾
Incentive Stock Option (right to buy)	\$16	01/17/2006		A		4,688	01/17/2008 ⁽⁵⁾	01/17/2016	Common Stock 4,688	\$16	4,688	I	by Spouse ⁽⁴⁾
Non-Qualified Stock Option (right to buy)	\$8.05	04/26/2005		A		23,671	03/28/2005 ⁽³⁾	04/26/2015	Common Stock 23,671	\$8.05	23,671	I	by Spouse ⁽⁴⁾
Non-Qualified Stock Option (right to buy)	\$16	01/17/2006		A		10,312	01/17/2008 ⁽⁵⁾	01/17/2016	Common Stock 10,312	\$16	10,312	I	by Spouse ⁽⁴⁾

Explanation of Responses:

1. Acquired through the company's qualified ESPP program.
2. Represent shares owned by the reporting person's spouse.

3. On April 26, 2005, 65,000 shares of options were granted. 25% of the shares vest on March 28, 2006 and the balance vests monthly over 36 months. Because of the \$100,000 ISO vesting limitation, this grant was split 41,329 shares ISO and 23,671 shares NSO.

4. Represents options owned by the reporting person's spouse.

5. On January 17, 2006, 15,000 shares of options were granted. 50% of the shares vest on January 17, 2008 and the balance vests quarterly over 24 months. Because of the \$100,000 ISO vesting limitation, this grant was split 4,688 shares ISO and 10,312 shares NSO.

Deming Xiao

08/17/2006

** Signature of Reporting Person Date

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

* 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).

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

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 Number.