

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>			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>Pres. of MPS Asia Operations</u>		
(Last)	(First)	(Middle)	3. Date of Earliest Transaction (Month/Day/Year) <u>02/28/2013</u>			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		
<u>79 GREAT OAKS BLVD</u>			4. If Amendment, Date of Original Filed (Month/Day/Year)					
(Street) <u>SAN JOSE CA 95119</u>								
(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			

**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	(A)	(D)	Date Exercisable	Expiration Date					
Non-Qualified Stock Option (right to buy)	\$10.41	02/28/2013		A		80 <sup>(1)</sup>		12/28/2012	12/07/2014	Common Stock 80	\$10.41	80	D	
Non-Qualified Stock Option (right to buy)	\$10.41	02/28/2013		A		2,127 <sup>(1)</sup>		12/28/2012	12/07/2014	Common Stock 2,127	\$10.41	2,207	D	
Non-Qualified Stock Option (right to buy)	\$11.31	02/28/2013		A		3,294 <sup>(1)</sup>		12/28/2012	10/26/2013	Common Stock 3,294	\$11.31	3,294	D	
Non-Qualified Stock Option (right to buy)	\$14.89	02/28/2013		A		1,103 <sup>(1)</sup>		12/28/2012	02/08/2015	Common Stock 1,103	\$14.89	1,103	D	
Non-Qualified Stock Option (right to buy)	\$15.03	02/28/2013		A		4,235 <sup>(1)</sup>		12/28/2012	10/28/2015	Common Stock 4,235	\$15.03	4,235	D	

**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	(A)	(D)	Date Exercisable	Expiration Date	Title	Amount or Number of Shares				
Non-Qualified Stock Option (right to buy)	\$17.92	02/28/2013		A		1,882 <sup>(1)</sup>		12/28/2012	08/03/2014	Common Stock	1,882	\$17.92	1,882	D	
Non-Qualified Stock Option (right to buy)	\$14.89	02/28/2013		A		141 <sup>(1)</sup>		12/28/2012	10/28/2015	Common Stock	141	\$14.89	141	I	by Spouse
Non-Qualified Stock Option (right to buy)	\$15.03	02/28/2013		A		470 <sup>(1)</sup>		12/28/2012	10/28/2015	Common Stock	470	\$15.03	470	I	by Spouse
Non-Qualified Stock Option (right to buy)	\$17.92	02/28/2013		A		941 <sup>(1)</sup>		12/28/2012	08/03/2014	Common Stock	941	\$17.92	941	I	by Spouse

**Explanation of Responses:**

1. Equitable stock dividend adjustment approved by the Board of Director as a result of dividend Payment to shareholders on December 28, 2012. Stock will vest according to the same vesting schedule as the original grants.

By: Saria Tseng For: Deming 03/04/2013  
Xiao

\*\* 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.

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