

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> _____ (Last) (First) (Middle) 6409 GUADALUPE MINES ROAD _____ (Street) SAN JOSE CA 95120 _____ (City) (State) (Zip)	2. Issuer Name and Ticker or Trading Symbol <u>MONOLITHIC POWER SYSTEMS INC</u> [MPWR]	5. Relationship of Reporting Person(s) to Issuer (Check all applicable) Director 10% Owner X Officer (give title below) Other (specify below) <u>Pres. of MPS Asia Operations</u>
	3. Date of Earliest Transaction (Month/Day/Year) 08/10/2011	
4. If Amendment, Date of Original Filed (Month/Day/Year)		

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	08/10/2011		S ⁽¹⁾		1,435	D	\$11.8049	145,547	D	
Common Stock	08/10/2011		S ⁽¹⁾		241	D	\$11.802	21,664	I	by Spouse ⁽²⁾

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					

Explanation of Responses:

- 1. Shares sold to pay tax obligations resulting from the vesting of restricted stock units.
- 2. Represent shares owned by the reporting person's spouse.

By: Meera Rao For: Deming Xiao 08/11/2011

** 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.

LIMITED POWER OF ATTORNEY
FOR MONOLITHIC POWER SYSTEMS
SECTION 16(a) FILINGS

Know all by these presents, that the undersigned, Deming Xiao, hereby constitutes and appoints each of Michael Hsing, Saria Tseng and Meera Rao, signing singly, the undersigned's true and lawful attorney-in-fact to:

- (1) Complete and execute for and on behalf of the undersigned, in the undersigned's capacity as an officer, director and/or stockholder of Monolithic Power Systems, Inc. (the "Company"), Forms ID, 3, 4, and 5 and other forms and all amendments thereto as such attorney-in-fact shall in his or her discretion determine to be required or advisable in accordance with Section 16(a) of the Securities Exchange Act of 1934 and the rules and regulations promulgated thereunder, or any successor laws and regulations, as consequence of the undersigned's ownership, acquisition or disposition of securities of the Company;
- (2) Do and perform any and all acts for and on behalf of the undersigned which may be necessary or desirable to complete and execute any such forms or amendment thereto and timely file such forms with the United States Securities and Exchange Commission (the "SEC") and any stock exchange or similar authority; and
- (3) Take any other action of any type whatsoever which, in the opinion of such attorney-in-fact, may be necessary or desirable in connection with the foregoing authority, it being understood that the documents executed by such attorney-in-fact on behalf of the undersigned pursuant to this Power of Attorney shall be in such form and shall contain such terms and conditions as such attorney-in-fact may approve.

The undersigned hereby grants to each such attorney-in-fact full power and authority to do and perform any and every act and thing whatsoever requisite, necessary, or proper to be done in the exercise of any of the rights and powers herein granted, as fully to all intents and purposes as the undersigned might or could do if personally present, with full power of substitution or revocation, hereby ratifying and confirming all that such attorney-in-fact, or such attorney-in-fact's substitute or substitutes, shall lawfully do or cause to be done by virtue of this Power of Attorney and the rights and powers herein granted. The undersigned acknowledges that the foregoing attorneys-in-fact, in serving in such capacity at the request of the undersigned, are not assuming, nor is the Company assuming, any of the undersigned's responsibilities to comply with Section 16 of the Securities Exchange Act of 1934.

This Power of Attorney shall remain in full force and effect until the undersigned is no longer required to file Forms ID, 3, 4, and 5 with respect to the undersigned's holdings of and transaction in securities of the Company, unless earlier revoked by the undersigned in a signed writing delivered to the Company and the foregoing attorneys-in-fact. This Power of Attorney may be filed with the SEC as a confirming statement of the authority granted herein.

IN WITNESS WHEREOF, the undersigned has caused this Power of Attorney to be executed as of this day of August 11, 2011.

Deming Xiao
Print Name of Reporting Person

/s/Deming Xiao
Signature