

OMB APPROVAL	
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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) 79 GREAT OAKS BLVD (Street) SAN JOSE CA 95119 (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 <input checked="" type="checkbox"/> Officer (give title below) Other (specify below) <u>Pres. of MPS Asia Operations</u>
	3. Date of Earliest Transaction (Month/Day/Year) 02/06/2017	
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	02/06/2017		S ⁽¹⁾		5,517	D	\$88.2535	266,873	D	
Common Stock	02/07/2017		A		68,604 ⁽²⁾	A	\$0.0	335,477	D	
Common Stock	02/07/2017 ⁽³⁾		M ⁽³⁾		4,876 ⁽³⁾	A	\$0.0	340,353	D	
Common Stock								2,197	I	by Spouse

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						Amount or Number of Shares
Performance Shares	(3)	02/07/2017 ⁽³⁾		M ⁽³⁾		4,876 ⁽³⁾		(3)	(3)	Common Stock	4,876	\$0.0	56,174	D	

Explanation of Responses:

- The reported sales were to cover taxes upon the vesting of restricted stock units, as required by the Company's equity incentive plans.
- On February 3, 2015, the reporting person was granted a target of 24,213 shares of restricted stock units subject to satisfaction of pre-determined, performance-based vesting criteria. On February 7, 2017, the Company's Board of Directors determined that those performance criteria for the restricted stock units had been satisfied, which resulted in 44,391 additional shares being achieved and granted to the reporting person. Of the restricted stock units that were awarded, 34,302 will vest immediately and 34,302 will vest quarterly in the next two years.
- On December 31, 2015, the reporting person was granted a target of 75,678 shares of restricted stock units in four tranches subject to satisfaction of share price targets over the next four years. The vesting of restricted stock units in the second, third and fourth tranches is also subject to the satisfaction of certain operational goals, as determined by the Compensation Committee of the Company. All restricted stock units are subject to time based vesting. Once vested, one-third of shares have no sales restrictions and are sellable on January 1, 2020, one-third of the shares have sales restrictions until January 1, 2021 and one-third of the shares have sales restrictions until January 1, 2022. On February 7, 2017, the Compensation Committee of the Company determined that one of the five share price targets for the first tranche of restricted stock units had been satisfied, which resulted in 4,876 shares being granted, subject to time based vesting described above.

By: Saria Tseng For: Deming 02/08/2017
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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