

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>79 GREAT OAKS BLVD</u> <hr/> (Street) <u>SAN JOSE CA 95119</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>Pres. of MPS Asia Operations</u>
	3. Date of Earliest Transaction (Month/Day/Year) <u>10/28/2016</u>	
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	10/28/2016 ⁽¹⁾		M ⁽¹⁾		14,628 ⁽¹⁾	A	\$0.0	285,845	D	
Common Stock								172	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						Title
Performance Shares	(1)	10/28/2016 ⁽¹⁾		M ⁽¹⁾			14,628 ⁽¹⁾	(1)	(1)	Common Stock	14,628	\$0.0	61,050	D	

Explanation of Responses:

1. 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 October 28, 2016, the Compensation Committee of the Company determined that three of the five share price targets for the first tranche of restricted stock units had been satisfied, which resulted in 14,628 shares being granted, subject to time based vesting described above.

By: Saria Tseng For: Deming Xiao 11/01/2016

** 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.