

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) 4040 LAKE WASHINGTON BLVD. NE, SUITE 201 (Street) KIRKLAND WA 98033 (City) (State) (Zip)	2. Issuer Name and Ticker or Trading Symbol <u>MONOLITHIC POWER SYSTEMS INC [MPWR]</u>	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) <u>10/22/2019</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	10/22/2019 ⁽¹⁾		M ⁽¹⁾		23,338 ⁽¹⁾	A	\$0	323,343	D		
Common Stock	10/22/2019 ⁽²⁾		M ⁽²⁾		9,600 ⁽²⁾	A	\$0	332,943	D		
Common Stock								1,101	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)	10/22/2019		M ⁽¹⁾		23,338		(1)	(1)	Common Stock	23,338	\$0	4,876	D	
Restricted Stock Units	(2)	10/22/2019		M ⁽²⁾		9,600		(2)	(2)	Common Stock	9,600	\$0	19,200	D	

Explanation of Responses:

1. On December 31, 2015, the reporting person was granted a target number of 75,678 shares of performance units in four tranches subject to satisfaction of share price targets over the next four years. The vesting of performance units in the second, third and fourth tranches is also subject to the satisfaction of certain operational goals, as determined by the Compensation Committee. All performance units are subject to time based vesting and require service through January 1, 2020 or an earlier change in control. Once vested, one-third of the resulting 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 22, 2019, the Compensation Committee determined one of the operational goals for the fourth tranche of performance units had been satisfied, which resulted in 23,338 units being credited, subject to time based vesting.

2. On October 25, 2018, the reporting person was granted a target number of 9,600 performance units and can earn up to a maximum of 48,000 performance units subject to satisfaction of five stock price targets ranging from \$140 to \$172 over the performance periods from October 25, 2018 to December 31, 2023, as determined by the Compensation Committee of the Company. All performance units are subject to time based vesting and require service through January 1, 2024 or an earlier change in control. Once vested, performance units convert into shares of common stock on a 1-for-1 basis and one-third of the resulting shares have no sales restrictions and are sellable on January 1, 2024, one-third of the shares have sales restrictions until January 1, 2025 and one-third have sales restrictions until January 1, 2026. On October 22, 2019, the third price target had been met and approved by the Compensation Committee, which resulted in 9,600 units being credited, subject to time based vesting above.

/s/ By: Saria Tseng For: Deming Xiao 10/24/2019

** 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.