

**FORM 4**

**UNITED STATES SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

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* <b>SMITH-PILKINGTON KAREN A</b>			2. Issuer Name and Ticker or Trading Symbol <b>MONOLITHIC POWER SYSTEMS INC</b> [ <b>MPWR</b> ]			5. Relationship of Reporting Person(s) to Issuer (Check all applicable) <input checked="" type="checkbox"/> Director 10% Owner Officer (give title below) Other (specify below)		
(Last)	(First)	(Middle)	3. Date of Earliest Transaction (Month/Day/Year) <b>08/07/2013</b>			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		
79 GREAT OAKS BLVD			4. If Amendment, Date of Original Filed (Month/Day/Year)					
(Street) <b>SAN JOSE CA 95119</b>								
(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			
Common Stock	08/07/2013		M <sup>(1)</sup>		30,000	A	\$16.2 <sup>(2)</sup>	44,789	D	
Common Stock	08/07/2013		S <sup>(1)</sup>		30,000	D	\$27	14,789	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)				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)	\$16.97 <sup>(2)</sup>	08/07/2013		M <sup>(1)</sup>				30,000	05/24/2008	05/24/2014	Common Stock	30,000	\$0.0	0	D	

**Explanation of Responses:**

- In accordance with the reporting person's 10b5-1 trading plan.
- On December 11, 2012, the Company's Board declared a special cash dividend of \$1.00 per common share, which was paid on December 28, 2012 to all shareholders of record as of the close of business on December 21, 2012. The Board approved a modification whereby each outstanding option as of December 28, 2012 was increased by a ratio of 1.0471 with a corresponding reduction in the exercise price.

By: Saria Tseng For: Karen Bogart 08/09/2013

\*\* 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.