FORM 4

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

| OMB APPROVAL | | | | | | | | |
|--------------------------|-----------|--|--|--|--|--|--|--|
| OMB Number: | 3235-0287 | | | | | | | |
| Estimated average burden | | | | | | | | |
| hours per response: | 0.5 | | | | | | | |

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* SMITH- PILKINGTON KAREN A (Last) (First) (Middle) | | | | | | 2. Issuer Name and Ticker or Trading Symbol MONOLITHIC POWER SYSTEMS INC [MPWR] 3. Date of Earliest Transaction (Month/Day/Year) | | | | | | | | Relationship of Report (Check all applicable) X Director Officer (give title below) | | 10 Ot | to Issuer % Owner ner (specify ow) | |
|--|--|-----------------------|------|----|---------------|---|-----|-------|---|-------|--|---|--|--|--|--|---|--|
| /9 GREAT OAKS BLVD | | | | | - | 02/24/2014 4. If Amendment, Date of Original Filed (Month/Day/Year) | | | | | | | | Individual or Joint/Group Filing (Check Applicable Line) X Form filed by One Reporting Person Form filed by More than One Reporting Person | | | | |
| (City) | (Si | | Zip) | | <u> </u> | _ | | | | | | | | | | | | |
| 1. Title of Security (Instr. 3) 2. Transaction Date (Month/Day/Year | | | | | n 2 ear) i | 2A. Deemed Execution Date, | | | 3. Transaction Code (Instr. 8) | | 4. Securities Acquired (A) of Disposed Of (D) (Instr. 3, 4 | | ed (A) or | 5. A Sed Bei Ow | ned mount of urities eficially ned | 6. Ownersh Form: Dire (D) or Indirect (I) (Instr. 4) | | |
| | | | | | | | | | Code | v | Amount | (A) or (D) | Price | Tra | Reported Transaction(s) (Instr. 3 and 4) | | | |
| Common Stock 02/24/2014 | | | | | | | | | M | | 1,411 | A | \$16. | 2 | 19,693 | D | | |
| Common Stock 02/24/2014 | | | | .4 | | | S | | 1,411 | D | \$35.02 | 54(1) | 18,282 | 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 | cise (Month/Day/Year) | | | | actio (Inst | | | s | | ate | 7. Title and Amount of Securities Underlying Derivative Security (Instr. 3 and 4) | | 8. Price of Derivativ Security (Instr. 5) | 9. Number derivative Securities Beneficially Owned Following Reported Transactior (Instr. 4) | Owners Form: Direct (I or Indir (I) (Instr | Beneficial Ownership ect (Instr. 4) | |
| | | | | | Code | v | (A) | (D) | Date Exerci | sable | Expiration Date | Title | Amount or Number of Shares | | | | | |
| Non- Qualified Stock Option (right to buy) | \$16.2 | 02/24/2014 | | | М | | | 1,411 | 12/28/ | 2012 | 05/24/2014 | Common Stock | 1,411 | \$0.0 | 0 | D | | |

Explanation of Responses:

1. The price is the weighted average sale price for the transactions reported on this line. The prices for the transactions reported on this line range from \$35.00 to \$35.0572. The reporting person undertakes to provide, upon request by the staff of the Securities and Exchange Commission, the issuer, or a security holder of the issuer, full information regarding the number of shares sold at each separate price.

By: Saria Tseng For: Karen Smith Bogart 02/2

02/25/2014

** 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.