FORM 4

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

| OMB APPROVAL | | | | | | | | |
|----------------------------|-----------|--|--|--|--|--|--|--|
| | | | | | | | | |
| OMB Number: | 3235-0287 | | | | | | | |
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| Estimated average burden | | | | | | | | |
| Estillated average builden | | | | | | | | |
| hours per response: | 0.5 | | | | | | | |
| nours 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 ar | MO | 2. Issuer Name and Ticker or Trading Symbol MONOLITHIC POWER SYSTEMS INC [MPWR] | | | | | | | | | | 5. Relationship of Re (Check all applicable) Director X Officer (give | | | orting Person(s) to Issuer 10% Owner tle Other (speci | | | | | | | |
|---|---|---|-----------------|-------------------------------|--------|---|-----------|-------------------|-------------------|---------------|--|--|-----------------------------------|-------------|---|--|--|----|---|---|--|--|
| (Last) (First) (Middle) 79 GREAT OAKS BLVD | | | | | | 3. Date of Earliest Transaction (Month/Day/Year) 02/07/2013 | | | | | | | | | | below) Sr. V.P.of Sales ar | | | below | ') | | |
| (Street) SAN JOS | DSE CA 95119 | | | | | 4. If Amendment, Date of Original Filed (Month/Day/Year) | | | | | | | | | Individual or Joint/Group Filing (Check App Line) X Form filed by One Reporting Person Form filed by More than One Reporting | | | | | son | | |
| (City) | (St | ate) (2 | Zip) | | | | | | | | | | | | | Person | | | | | | |
| 1. Title of S | Security (Ins | | e I - I | Non-Deriv | | 2A. D | eemed | 3. | | | 4. Securit | ies A | cquire | ed (A) | or | 5. Amo | ount of | | | 7. Nature of | | |
| | | | | Date (Month/Day | /Year) | Year) Execution Date, if any (Month/Day/Year) | | Co | nsacti de (Ins | | Disposed Of (D) (Instr. 3 and 5) | | | | 4 | Benefi Owned | Securities Beneficially Owned Following | | Form: Direct (D) or Indirect (I) (Instr. 4) | Indirect Beneficial Ownership (Instr. 4) | | |
| | | | | | | de | v | Amount (A) or (D) | | Pric | Reported Transaction(s) (Instr. 3 and 4) | | ted action(s) | | | | | | | | | |
| Common | Stock | | | 02/07/20 | 013 | | | A | (1) | | 151 | | A | \$0 | 0.0 | 10 | 6,001 | | D | | | |
| Common Stock | | | | 02/11/2013 | | | | S | (2) | | 58 D | | \$2 | 24.6 105,94 | | 5,943 | D | | | | | |
| Common Stock | | | 02/11/2013 | | | | S | (2) | | 1,207 | | D | \$24.6 | | 104,736 | | | D | | | | |
| Common | Stock | | | | | | | | | | | | | | | 44 | 4,004 | | I | by Family Trust | | |
| Common Stock | | | | | | | | | | | | | | | 14 | 4,371 | | I | byC Sciammas 04 TRST | | | |
| Common Stock | | | | | | | | | | | | | | | | 14 | 4,371 | | I | byM Sciammas 04 Trst | | |
| | | Та | ble II | l - Derivati (e.g., pu | | | | • | • | • | sed of, onvertib | | | | • | wned | | | ' | | | |
| 1. Title of Derivative Security (Instr. 3) | 2. Conversion or Exercise Price of Derivative Security | 3. Transaction Date (Month/Day/Year) | Execu if any | 3A. Deemed Execution Date, | | ction Instr. | 5. Number | | | xerci n Da | isable and | | | d f | 8. F of Dei Sec | 8. Price of Derivative Security (Instr. 5) | 9. Number derivative Securities Beneficially Owned Following Reported Transaction (Instr. 4) | ly | 10. Ownership Form: Direct (D) or Indirect (I) (Instr. 4) | Beneficial Ownership | | |
| | | | | | Code | v | (A) (D | Dat) Exe | te ercisab | | Expiration Date | Title | Amor or Numl of Share | | | | | | | | | |

Explanation of Responses:

- 1. Equitable stock dividend adjustment approved by the Board of Director as a result of dividend Payment to shareholders on December 28, 2012. Stock dividends will release according to the same vesting schedule as the original grants.
- 2. Shares sold to pay tax obligations resulting from the release of restricted stock units.

By: Meera Mao For: Maurice <u>Sciammas</u>

02/11/2013

** 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.