FORM 4

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

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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 an | MC | 2. Issuer Name and Ticker or Trading Symbol MONOLITHIC POWER SYSTEMS INC MPWR | | | | | | | | 5. Relationship of Reporting Person(s) to Issuer (Check all applicable) Director 10% Owner Officer (give title Other (specify | | | | | | | |
|--|----------------|---|---|-------------------------------|---|--------|---|---------------------------|--|---|---|--|--------------------------------------|---|---|--|--|
| (Last) (First) (Middle) 79 GREAT OAKS BLVD | | | | | 3. Date of Earliest Transaction (Month/Day/Year) 08/15/2016 | | | | | | | | X | belo | w) `` | below ral Counsel | ` ' |
| (Street) SAN JOSE CA 951 (City) (State) (Zip) | | | 5119 Cip) | 4. lf | 4. If Amendment, Date of Original Filed (Month/Day/Year) | | | | | | | · . | 6. Indiv Line) X | vidual or Joint/Group Filing (Check Applicable Form filed by One Reporting Person Form filed by More than One Reporting Person | | | |
| | | Tabl | e I - Non-Deriv | vative | Secu | ıritie | es Ad | cquire | ed, D | isposed o | f, or E | Benefic | ially | Own | ed | | |
| 1. Title of S | Security (Inst | 2. Transaction Date (Month/Day/Y | n 2A Ex ear) if | 2A. Deemed Execution Date, | | е, | 3. Transaction Code (Instr. | | 4. Securities Acquired (A) of Disposed Of (D) (Instr. 3, 4 | | | or 5. Am and 5) Secur Bene Owne | | nount of rities ficially | 6. Ownership Form: Direct (D) or Indirect (I) | 7. Nature of Indirect Beneficial Ownership | |
| | | | | | | - | Code | v | Amount | (A) or (D) | Price | | Repo | owing orted saction(s) r. 3 and 4) | (Instr. 4) | (Instr. 4) | |
| Common | Stock | 08/15/201 | 6 | | | | J ⁽¹⁾ | | 20 | A | \$49.3 | 49.3765 | | 74,112 | D | | |
| Common | Stock | 08/22/201 | 6 | | | | S ⁽²⁾ | | 20 | D | \$74 | \$74.86 | | 74,092 | D | | |
| Common | Stock | 08/22/201 | 6 | | | S | | | 5,633 | D | \$75.23 | 5.2534(3) | | 68,459 | 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) 1. Title of Conversion Date (Month/Day/Year) 2. 3. Transaction Date (Month/Day/Year) Transaction Date (Month/Day/Year) | | | 3A. Deemed Execution Date, if any (Month/Day/Year) | Code | ansaction ode (Instr. 1 | | vative urities uired or oosed 0) tr. 3, 4 | Expiration (Month/Days | | | 7. Title and Amount of Securities Underlying Derivative Security (Inst 3 and 4) | | 8. Pr of Deri Secu (Inst | vative irity | 9. Number of derivative Securities Beneficially Owned Following Reported Transaction (Instr. 4) | Ownership Form: Direct (D) or Indirect (I) (Instr. 4) | 11. Nature of Indirect Beneficial Ownership (Instr. 4) |
| | | | | Code | v | (A) | (D) | Date Exer | cisabl | Expiration e Date | Title | Amoun or Numbe of Shares | | | | | |

Explanation of Responses:

- 1. Acquired through the Company's qualified ESPP program.
- 2. In accordance with the reporting person's 10b5-1 trading plan.
- 3. 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 \$74.62 to \$75.575. 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.

08/24/2016 /s/ Saria Tseng

** 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.