

Rao Meera  
Form 4  
August 10, 2012

**FORM 4**

**UNITED STATES SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549**

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 OF SECURITIES**

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934, Section 17(a) of the Public Utility Holding Company Act of 1935 or Section 30(h) of the Investment Company Act of 1940

(Print or Type Responses)

1. Name and Address of Reporting Person \*  
Rao Meera

2. Issuer Name and Ticker or Trading Symbol  
MONOLITHIC POWER SYSTEMS INC [MPWR]

5. Relationship of Reporting Person(s) to Issuer

(Check all applicable)

(Last) (First) (Middle)  
79 GREAT OAKS BLVD  
(Street)

3. Date of Earliest Transaction (Month/Day/Year)  
08/09/2012

\_\_\_\_ Director  
 Officer (give title below)  
\_\_\_\_ 10% Owner  
\_\_\_\_ Other (specify below)  
CFO

SAN JOSE, CA 95119

4. If Amendment, Date Original Filed(Month/Day/Year)

6. Individual or Joint/Group Filing(Check Applicable Line)  
 Form filed by One Reporting Person  
 Form filed by More than One Reporting Person

(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                                                                                        | (D)                                                      | Price                                                 |
| Common Stock                    | 08/09/2012                           |                                                    | S <sup>(1)</sup>               |                                                                   | 1,024                                                                                         | D                                                        | \$ 20.46                                              |
| Common Stock                    | 08/09/2012                           |                                                    | M <sup>(2)</sup>               |                                                                   | 1,500                                                                                         | A                                                        | \$ 13.53                                              |
| Common Stock                    | 08/09/2012                           |                                                    | S <sup>(2)</sup>               |                                                                   | 1,500                                                                                         | D                                                        | \$ 21                                                 |
| Common Stock                    | 08/10/2012                           |                                                    | S <sup>(1)</sup>               |                                                                   | 702                                                                                           | D                                                        | \$ 20.7343                                            |
|                                 |                                      |                                                    |                                |                                                                   |                                                                                               |                                                          | 96,867                                                |
|                                 |                                      |                                                    |                                |                                                                   |                                                                                               |                                                          | 98,367                                                |
|                                 |                                      |                                                    |                                |                                                                   |                                                                                               |                                                          | 96,867                                                |
|                                 |                                      |                                                    |                                |                                                                   |                                                                                               |                                                          | 96,165                                                |

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

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 control number.

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(9-02)

**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 (A) or Disposed of (D) (Instr. 3, 4, and 5) | 6. Date Exercisable and Expiration Date (Month/Day/Year) | 7. Title and Amount of Underlying Security (Instr. 3 and 4) | 8. Amount or Number of Shares |
|--------------------------------------------|--------------------------------------------------------|--------------------------------------|----------------------------------------------------|--------------------------------|--------------------------------------------------------------------------------|----------------------------------------------------------|-------------------------------------------------------------|-------------------------------|
| Non-Qualified Stock Option (right to buy)  | \$ 13.53                                               | 08/09/2012                           |                                                    | M                              | 1,500<br>(2)                                                                   | 01/05/2010 01/05/2016                                    | Common Stock                                                | 1,500                         |

## Reporting Owners

| Reporting Owner Name / Address                        | Relationships |           |         |       |
|-------------------------------------------------------|---------------|-----------|---------|-------|
|                                                       | Director      | 10% Owner | Officer | Other |
| Rao Meera<br>79 GREAT OAKS BLVD<br>SAN JOSE, CA 95119 |               |           | CFO     |       |

## Signatures

Meera Rao 08/10/2012  
 \*\*Signature of Reporting Person Date

## Explanation of Responses:

- \* 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).
- (1) Shares sold to pay tax obligations resulting from the vesting of restricted stock units.
- (2) In accordance with the reporting person's 10b5-1 trading plan.

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, see Instruction 6 for procedure. Potential persons who are to respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB number.