

Rao Meera  
Form 4  
March 29, 2010

**FORM 4**

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

OMB APPROVAL

OMB Number: 3235-0287  
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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)  
6409 GUADALUPE MINES ROAD  
(Street)

3. Date of Earliest Transaction (Month/Day/Year)  
08/17/2009

\_\_\_\_ Director  
 Officer (give title below) \_\_\_\_\_ Other (specify below)  
VP of Finance, Corp Controller

SAN JOSE, CA 95120

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 Ownership (Instr. 4)
			Code	V Amount (A) or (D) Price			
Common Stock	08/17/2009		J(1)	1,346 A \$ 11.1435	1,346	D	
Common Stock	02/16/2010		J(1)	814 A \$ 18.411	2,160	D	
Common Stock	03/29/2010		S(2)	2,160 D \$ 22.1805	30,000	D	

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

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SEC 1474 (9-02)

number.

**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 Acquired (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 Securities (Instr. 3 and 4)	8. Price of Derivative Security (Instr. 5)	9. Nu
						Date Exercisable	Expiration Date	Title	Amount or Number of Shares
				Code V (A) (D)					

## Reporting Owners

Reporting Owner Name / Address	Relationships			
	Director	10% Owner	Officer	Other
Rao Meera 6409 GUADALUPE MINES ROAD SAN JOSE, CA 95120			VP of Finance, Corp Controller	

## Signatures

Meera Rao 03/29/2010

\*\*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) Acquired through the Company's qualified ESPP program.
- (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.