Moyer James C
Form 4
September 23, 2009

# 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 *
Moyer James C

(Last) (First) (Middle)

6409 GUADALUPE MINES ROAD

(Street)

SAN JOSE, CA 95120

(City) (State) (Zip)

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

3. Date of Earliest Transaction (Month/Day/Year)
09/23/2009

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

5. Relationship of Reporting Person(s) to Issuer
(Check all applicable)
__X__ Director _____ 10% Owner
__X__ Officer (give title below) _____ Other (specify below)
Chief IC Design Engineer

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

**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 | (A) or (D) | Price | | | |
| Common Stock | 09/23/2009 | | S[(1)] | | 720 | D | $ 24.8469 [(2)] | 495,244 | I | by Moyer FamilyTrust |
| Common Stock | | | | | | | | 890,569 | D | |

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.**

SEC 1474 (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 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 Deriv Secur Bene Owne Follo Repo Trans (Instr |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Code | V | (A) | (D) | Date Exercisable | Expiration Date | Title | Amount or Number of Shares | | |

# Reporting Owners

| Reporting Owner Name / Address | Relationships | | | |
|---|---|---|---|---|
| | Director | 10% Owner | Officer | Other |
| Moyer James C<br>6409 GUADALUPE MINES ROAD<br>SAN JOSE, CA 95120 | X | | Chief IC Design Engineer | |

# Signatures

| | |
|---|---|
| By: Rick Neely For: James Moyer | 09/23/2009 |
| **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)** In accordance with the reporting person's 10b5-1 trading plan.

**(2)** 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 $24.44 to $25.06. 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.

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.