February 12, 2007

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 8-K

CURRENT REPORT

Pursuant to Section 13 or 15(d) of

the Securities Exchange Act of 1934

Date of Report (date of earliest event reported): February 12, 2007

MONOLITHIC POWER SYSTEMS, INC.

(Exact name of Registrant as specified in its charter)

Delaware (State or other jurisdiction of

000-51026 (Commission File Number) 77-0466789 (I.R.S. Employer

incorporation or organization)

6409 Guadalupe Mines Road

Identification Number)

San Jose, CA 95120

 $(Address\ of\ principal\ executive\ offices)\ (Zip\ Code)$

(408) 826-0600

(Registrant s telephone number, including area code)

1

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

- " Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- " Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- " Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- " Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Item 2.02 Results of Operations and Financial Condition.

On February 12, 2007, Monolithic Power Systems, Inc., a Delaware corporation, issued a press release and held a conference call regarding its financial results for the quarter and year ended December 31, 2006. A copy of the press release is attached hereto as Exhibit 99.1.

The information under this Item 2.02 of this Current Report on Form 8-K and the exhibit attached hereto are being furnished and shall not be deemed filed for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the 1934 Act), nor shall they be deemed incorporated by reference in any filing with the Securities and Exchange Commission under the 1934 Act or the Securities Act of 1933, as amended, except as shall be expressly set forth by specific reference in such filing.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits.

Exhibit Description

99.1 Press Release issued on February 12, 2007

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, as amended, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Date: February 12, 2007

By: /s/ C. Richard Neely, Jr.

C. Richard Neely, Jr.

Chief Financial Officer

(Principal Financial and Accounting Officer and

Duly Authorized Officer)

Index to Exhibits

Exhibit

DescriptionPress Release issued on February 12, 2007 99.1