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**FORM 8-A**

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**SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

**FOR REGISTRATION OF CERTAIN CLASSES OF SECURITIES  
PURSUANT TO SECTION 12(b) OR 12(g) OF THE  
SECURITIES EXCHANGE ACT OF 1934**

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**Monolithic Power Systems, Inc.**

(Exact name of Registrant as specified in its charter)

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**Delaware**  
(State of incorporation or organization)

**77-0466789**  
(IRS Employer I.D. No.)

**983 University Avenue, Building A, Los Gatos, CA 95032**  
(Address of principal executive offices)

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**Securities to be registered pursuant to Section 12(b) of the Act:**  
**None**

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If this form relates to the registration of a class of securities pursuant to Section 12(b) of the Exchange Act and is effective pursuant to General Instruction A. (c), check the following box.

If this form relates to the registration of a class of securities pursuant to Section 12(g) of the Exchange Act and is effective pursuant to General Instruction A. (d), check the following box.

Securities Act registration statement file number to which this form relates (if applicable): 333-117327

Securities to be registered pursuant to Section 12(g) of the Act:

Common Stock, \$0.001 par value per share

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Item 1. Description of Registrant Securities to be Registered

Incorporated by reference to the section entitled "Description of Capital Stock" contained in Registrant's Registration Statement on Form S-1 (File No. 333-117237), as originally filed or subsequently amended (the "S-1 Registration Statement"), which S-1 Registration Statement was originally filed with the Securities and Exchange Commission on July 13, 2004.

Item 2. Exhibits

The following exhibits are filed as a part of this registration statement:

- 2.1<sup>(1)</sup> Amended and Restated Certificate of Incorporation of the Registrant, as currently in effect.
- 2.2<sup>(2)</sup> Amended and Restated Certificate of Incorporation of the Registrant, to be effective upon consummation of the Registrant's initial public offering.
- 2.3<sup>(3)</sup> Bylaws of the Registrant, as currently in effect.
- 2.4<sup>(4)</sup> Amended and Restated Bylaws of the Registrant, to be effective upon consummation of the Registrant's initial public offering.

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- <sup>(1)</sup> Incorporated by reference to Exhibit 3.1 to the S-1 Registration Statement.
  - <sup>(2)</sup> Incorporated by reference to Exhibit 3.2 to the S-1 Registration Statement.
  - <sup>(3)</sup> Incorporated by reference to Exhibit 3.3 to the S-1 Registration Statement.
  - <sup>(4)</sup> Incorporated by reference to Exhibit 3.4 to the S-1 Registration Statement.

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SIGNATURE

Pursuant to the requirements of Section 12 of the Securities Exchange Act of 1934, the Registrant has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereto duly authorized.

Date: November 16, 2004

MONOLITHIC POWER SYSTEMS, INC.

By: /s/ Tim Christoffersen

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Tim Christoffersen  
Chief Financial Officer

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EXHIBIT INDEX

<b>Exhibit Number</b>	<b>Document Description</b>
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2.3 (3)	Registrant's Bylaws of the Registrant, as currently in effect.
2.4 (4)	Registrant's Amended and Restated Bylaws of the Registrant, to be effective upon consummation of the Registrant's initial public offering.
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