

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

**FORM S-8  
REGISTRATION STATEMENT**  
*Under*  
**THE SECURITIES ACT OF 1933**

**MONOLITHIC POWER SYSTEMS, INC.**

(Exact name of registrant as specified in its charter)

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

**77-0466789**  
(I.R.S. Employer  
Identification No.)

**983 University Avenue, Building A**  
**Los Gatos, CA 95032**  
(Address of Principal Executive Offices)

**MONOLITHIC POWER SYSTEMS, INC. 2004 EQUITY INCENTIVE PLAN**  
**MONOLITHIC POWER SYSTEMS, INC. 2004 EMPLOYEE STOCK PURCHASE PLAN**  
(Full title of the plan)

**Michael R. Hsing**  
**President and Chief Executive Officer**  
**983 University Avenue, Building A**  
**Los Gatos, California 95032**  
**(408) 357-6600**  
(Name, address, and telephone number, including area code, of agent for service)

*Copy to:*

**Steven E. Bochner, Esq.**  
**Wilson Sonsini Goodrich & Rosati**  
**Professional Corporation**  
**650 Page Mill Road**  
**Palo Alto, CA 94304**  
**(650) 493-9300**

**CALCULATION OF REGISTRATION FEE**

Title of securities to be registered	Amount to be registered (1)	Proposed maximum offering price per share (2)	Proposed maximum aggregate offering price	Amount of registration fee (3)
Common Stock \$0.001 par value per share, to be issued pursuant to the 2004 Equity Incentive Plan	2,844,813 shares	\$14.30	\$40,680,825.90	\$4,352.85
Common Stock \$0.001 par value per share, to be issued pursuant to the 2004 Employee Stock Purchase Plan	1,137,925 shares	\$14.30	\$16,272,327.50	\$1,741.14
<b>Total Registration Fee</b>				<b>\$6,093.99</b>

- (1) This Registration Statement shall also cover any additional shares of Registrant's Common Stock that become issuable under the Monolithic Power Systems, Inc. 2004 Equity Incentive Plan and the Monolithic Power Systems, Inc. 2004 Employee Stock Purchase Plan by reason of any stock dividend, stock split, recapitalization or any other similar transaction effected without the Registrant's receipt of consideration that results in an increase in the number of the Registrant's outstanding shares of Common Stock.

- (2) Computed in accordance with Rules 457(c) and (h) under the Securities Act of 1933, as amended (the "Securities Act"), solely for the purpose of calculating the registration fee on the basis of the average of the high and low prices of the Registrant's Common Stock as reported on the Nasdaq National Market on March 8, 2006 which amount was \$14.30 per share.
  - (3) Amount of the Registration Fee was calculated pursuant to Section 6(b) of the Securities Act of 1933, as amended, and was determined by multiplying the aggregate offering amount by 0.000107.
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## Registration of Additional Securities

### Pursuant to General Instruction E

This Registration Statement registers additional shares of Monolithic Power Systems, Inc. (the "Registrant") common stock to be issued pursuant to the Registrant's 2004 Equity Incentive Plan and the Registrant's 2004 Employee Stock Purchase Plan. Accordingly, the contents of the previous Registration Statement on Form S-8 (File No. 333-120886) filed by the Registrant with the Securities and Exchange Commission ("SEC") on December 1, 2004 (the "Previous Form S-8"), including periodic reports that were filed after the Previous Form S-8 to maintain current information about the Registrant, are incorporated by reference into this Registration Statement pursuant to General Instruction E of Form S-8. The reports that the Registrant has most recently filed with the SEC are listed below:

- (a) The Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2004, filed with the Commission on March 31, 2005, as amended by Amendment No. 1 to the Registrant's Annual Report on Form 10-K/A for the fiscal year ended December 31, 2004, filed with the Commission on March 9, 2006;
- (b)(1) The Registrant's Quarterly Report on Form 10-Q for the fiscal quarter ended March 31, 2005, filed with the Commission on May 13, 2005, as amended by Amendment No. 1 to the Registrant's Quarterly Report on Form 10-Q/A for the fiscal quarter ended March 31, 2005, filed with the Commission on March 10, 2006;
- (b)(2) The Registrant's Quarterly Report on Form 10-Q for the fiscal quarter ended June 30, 2005, filed with the Commission on August 15, 2005, as amended by Amendment No. 1 to the Registrant's Quarterly Report on Form 10-Q/A for the fiscal quarter ended June 30, 2005, filed with the Commission on March 10, 2006;
- (b)(3) The Registrant's Quarterly Report on Form 10-Q for the fiscal quarter ended September 30, 2005, filed with the Commission on March 13, 2006;
- (b)(4) The Registrant's Current Report on Form 8-K filed with the Commission on January 31, 2005;
- (b)(5) The Registrant's Current Report on Form 8-K filed with the Commission on February 3, 2005;
- (b)(6) The Registrant's Current Report on Form 8-K filed with the Commission on March 31, 2005;
- (b)(7) The Registrant's Current Report on Form 8-K filed with the Commission on April 28, 2005;
- (b)(8) The Registrant's Current Report on Form 8-K filed with the Commission on August 3, 2005;
- (b)(9) The Registrant's Current Report on Form 8-K filed with the Commission on September 1, 2005;

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- (b)(10) The Registrant's Current Report on Form 8-K filed with the Commission on September 9, 2005;
  - (b)(11) The Registrant's Current Report on Form 8-K filed with the Commission on September 16, 2005;
  - (b)(12) The Registrant's Current Report on Form 8-K filed with the Commission on October 5, 2005;
  - (b)(13) The Registrant's Current Report on Form 8-K filed with the Commission on October 26, 2005;
  - (b)(14) The Registrant's Current Report on Form 8-K filed with the Commission on November 25, 2005;
  - (b)(15) The Registrant's Current Report on Form 8-K filed with the Commission on January 6, 2006;
  - (b)(16) The Registrant's Current Report on Form 8-K filed with the Commission on January 9, 2006;
  - (b)(17) The Registrant's Current Report on Form 8-K filed with the Commission on January 12, 2006;
  - (b)(18) The Registrant's Current Report on Form 8-K filed with the Commission on March 13, 2006;
  - (c)(1) The description of the Registrant's Common Stock contained in its registration statement on Form 8-A, filed with the Commission on or about November 16, 2004, and any subsequent amendment and restatement or report filed with the Commission for the purposes of updating such description; and

All documents subsequently filed by the Registrant pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), prior to the filing of a post-effective amendment to the Registration Statement that indicates that all of the shares of Common Stock offered have been sold or that deregisters all of such shares then remaining unsold, shall be deemed to be incorporated by reference in this Registration Statement and to be a part hereof from the date of the filing of such documents. For the purposes of this Registration Statement, any statement contained in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded to the extent that a statement contained herein or in any other subsequently filed document that also is or is deemed to be incorporated by reference herein modifies or supersedes such statement. Any such statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this Registration Statement.

**PART II**  
**INFORMATION REQUIRED IN REGISTRATION STATEMENT**

**Item 8. Exhibits.**

The following exhibits are filed as part of this Registration Statement:

<u>Exhibit No.</u>	<u>Description</u>
4.4(1)	2004 Equity Incentive Plan and form of option agreement.
4.5(2)	2004 Employee Stock Purchase Plan and form of subscription agreement.
5.1	Opinion of Wilson Sonsini Goodrich & Rosati, Professional Corporation.
23.1	Consent of Wilson Sonsini Goodrich & Rosati, Professional Corporation (included in Exhibit 5.1).
23.2	Consent of Independent Registered Public Accounting Firm – Deloitte & Touche LLP.
24.1	Power of attorney (included in signature page to this Registration Statement).

- (1) Incorporated by reference from Exhibit 10.2 of the Registrant's Registration Statement on Form S-1, No. 333-117327, filed with the Commission on July 13, 2004.
- (2) Incorporated by reference from Exhibit 10.3 of Amendment 4 to the Registrant's Registration Statement on Form S-1, No. 333-117327, filed with the Commission on November 15, 2004.

**Item 9. Undertakings.**

(a) The undersigned Registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this Registration Statement to include any material information with respect to the plan of distribution not previously disclosed in the Registration Statement or any material change to such information in the Registration Statement;

(2) That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof; and

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(4) That, for the purpose of determining liability under the Securities Act to any purchaser: each prospectus filed pursuant to Rule 424(b) as part of a registration statement relating to an offering, other than registration statements relying on Rule 430B or other than prospectuses filed in reliance on Rule 430A, shall be deemed to be part of and included in the registration statement as of the date it is first used after effectiveness; provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such first use, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such date of first use.

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(5) That, for the purpose of determining liability of the Registrant under the Securities Act to any purchaser in the initial distribution of the securities: the Registrant undertakes that in a primary offering of securities of the Registrant pursuant to this Registration Statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the Registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

- (i) any preliminary prospectus or prospectus of the Registrant relating to the offering required to be filed pursuant to Rule 424;
- (ii) any free writing prospectus relating to the offering prepared by or on behalf of the Registrant or used or referred to by the Registrant;
- (iii) the portion of any other free writing prospectus relating to the offering containing material information about the Registrant or its securities provided by or on behalf of the Registrant; and
- (iv) any other communication that is an offer in the offering made by the Registrant to the purchaser.

(b) The undersigned Registrant hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the Registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Exchange Act) that is incorporated by reference in the Registration Statement shall be deemed to be a new Registration Statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(c) Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Registrant pursuant to the foregoing provisions, or otherwise, the Registrant has been advised that in the opinion of the Commission, such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act, and will be governed by the final adjudication of such issue.

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**SIGNATURES**

Pursuant to the requirements of the Securities Act of 1933, as amended, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Los Gatos, State of California, on March 14, 2006.

MONOLITHIC POWER SYSTEMS, INC.

By: /s/ Michael R. Hsing  
Michael R. Hsing  
President and Chief Executive Officer

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**POWER OF ATTORNEY**

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Michael R. Hsing and Rick Neely, and each of them individually, his attorney-in-fact, with the power of substitution, for him in any and all capacities, to sign any and all amendments to this Registration Statement (including post-effective statements), and all post-effective amendments thereto, and to file the same, with exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorney-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that such attorney-in-fact, or his substitute, may lawfully do or cause to be done by virtue hereof. This Power of Attorney may be signed in several counterparts.

IN WITNESS WHEREOF, each of the undersigned has executed this Power of Attorney as of the date indicated.

Pursuant to the requirements of the Securities Act of 1933, this registration statement on Form S-8 has been signed by the following persons in the capacities and on the dates indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ MICHAEL R. HSING</u> Michael R. Hsing	President, Chief Executive Officer and Director (principal executive officer)	March 14, 2006
<u>/s/ RICK NEELY</u> Rick Neely	Chief Financial Officer (principal financial and accounting officer)	March 14, 2006
<u>/s/ HERBERT CHANG</u> Herbert Chang	Director	March 14, 2006
<u>/s/ JIM C. MOYER</u> Jim C. Moyer	Director	March 14, 2006
<u>/s/ ALAN EARHART</u> Alan Earhart	Director	March 14, 2006
<u>/s/ JIM JONES</u> Jim Jones	Director	March 14, 2006
<u>/s/ UMESH PADVAL</u> Umesh Padval	Director	March 14, 2006



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## EXHIBIT INDEX

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March 14, 2006

Monolithic Power Systems, Inc.  
983 University Avenue, Building A  
Los Gatos, California 95032

**Re: Registration Statement on Form S-8**

Ladies and Gentlemen:

We have examined the Registration Statement on Form S-8 to be filed by you with the Securities and Exchange Commission on or about March 14, 2006 (the "Registration Statement"), in connection with the registration under the Securities Act of 1933, as amended, of an aggregate of 3,982,738 shares of Common Stock, par value \$0.001 per share (the "Shares"), reserved for issuance pursuant to the 2004 Equity Incentive Plan and the 2004 Employee Stock Purchase Plan (together, the "Plans"). As your legal counsel, we have examined the proceedings taken and are familiar with the proceedings proposed to be taken by you in connection with the sale and issuance of the Shares under the Plans.

It is our opinion that, when issued and sold in the manner described in the Plans, the Shares will be duly authorized, legally and validly issued, fully paid and nonassessable.

We consent to the use of this opinion as an exhibit to the Registration Statement, and further consent to the use of our name wherever appearing in the Registration Statement, including any prospectus constituting a part thereof, and any amendments thereto. In giving such consent, we do not consider that we are "experts" within the meaning of such term as used in the Securities Act, or the rules and regulations of the Securities and Exchange Commission issued thereunder, with respect to any part of the Registration Statement, including this opinion as an exhibit or otherwise.

Very truly yours,

/s/ WILSON SONSINI GOODRICH & ROSATI  
Professional Corporation

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in this Registration Statement of Monolithic Power Systems, Inc. on Form S-8 of our report dated March 30, 2005 (March 6, 2006 as to Note 18) (which report expresses an unqualified opinion and includes explanatory paragraphs relating to lawsuits related to alleged patent infringement and alleged misappropriation of trade secrets and to the restatements described in Note 18) relating to the consolidated financial statements of Monolithic Power Systems, Inc., appearing in the annual report on Form 10-K/A of Monolithic Power Systems, Inc. for the year ended December 31, 2004.

/s/ Deloitte & Touche LLP

San Jose, California

March 14, 2006