Registration No. 333-__

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 Number)

983 University Avenue, Building A Los Gatos, CA 95032 (Address, including zip code, of Registrant's principal executive offices)

MONOLITHIC POWER SYSTEMS, INC. 1998 STOCK PLAN MONOLITHIC POWER SYSTEMS, INC. 2004 EQUITY INCENTIVE PLAN MONOLITHIC POWER SYSTEMS, INC. 2004 EMPLOYEE STOCK PURCHASE PLAN (Full title of the plan)

Michael Hsing President and Chief Executive Officer 983 University Avenue, Building A Los Gatos, California 95032 (408) 357-6600 (Name, address, including zip code, 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 Each Class of Securities to be Registered	Amount to be Registered (1)	Proposed Maximum Offering Price Per Share	Proposed Maximum Aggregate Offering Price	Amount of Registration Fee
Common Stock \$0.001 par value per share, to be issued pursuant to the				
1998 Stock Plan and 2004 Equity Incentive Plan	10,114,200 shares	\$4.28 to \$9.255(2)	\$54,187,757	\$6,865.59
Common Stock \$0.001 par value per share, to be issued pursuant to the				
2004 Employee Stock Purchase Plan	200,000 shares	\$7.867(3)	\$1,573,400	\$199.35
Total Registration Fee				\$7,064.94

(1) Plus such indeterminable number of additional shares as may be issued as a result of an adjustment in the shares in the event of a stock split, stock dividend or similar capital adjustment, as required by the Plans.

(2) Estimated in accordance with Rules 457(h) and 457(c) under the Securities Act of 1933, as amended, (the "Securities Act") solely for the purpose of calculating the registration fee. The price per share and aggregate offering price are based upon (a) with respect to the 7,923,450 shares subject to outstanding options under the Registrant's 1998 Stock Plan, the weighted average exercise price of \$4.28 for such outstanding options or (b) with respect to the 2,190,750 shares available for future grant under the 2004 Stock Plan, the average of the high and low prices per share of the Common Stock as reported on The Nasdaq National Market on November 23, 2004, or \$9.255.

(3) Estimated in accordance with Rules 457(h) and 457(c) under the Securities Act solely for the purpose of calculating the registration fee. The price per share and aggregate offering price are based upon 85% of the average of the high and low prices per share of the Common Stock as reported on The Nasdaq National Market on November 23, 2004, or \$7.867. Pursuant to the Employee Stock Purchase Plan, the purchase price is 85% of the lower of the fair market value of the Registrant's Common Stock at the beginning of an offering period or at the end of a purchase period.

PART II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of Documents by Reference.

The following documents filed or to be filed by the Registrant with the Securities and Exchange Commission (the "Commission") and are incorporated herein by reference:

(a) The Registrant's prospectus filed with the Commission pursuant to Rule 424(b) on November 18, 2004; and

(b) The description of the Registrant's Common Stock contained in the Registrant's Registration Statement on Form 8-A, Registration No. 000-51026, filed on November 16, 2004 and any amendment or report filed for the purpose of updating such description.

All documents subsequently filed by the Registrant pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act of 1934 (the "Exchange Act"), prior to the filing of a post-effective amendment to this registration statement which indicates that all of the shares of Common Stock offered have been sold or which 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; except as to any portion of any future annual or quarterly report to stockholders or document that is not deemed filed under such provisions. 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 which also is or is deemed to be incorporated by reference herein modifies or supersedes such statement. Any such statement so modified or superseded, to constitute a part of this registration statement.

Item 4. Description of Securities.

Not applicable.

Item 5. Interests of Named Experts and Counsel.

As of November 30, 2004, persons and entities affiliated with Wilson Sonsini Goodrich & Rosati, P.C. beneficially owned the right to purchase 33,718 shares of our common stock.

Item 6. Indemnification of Directors and Officers.

Section 145 of the General Corporation Law of the State of Delaware ("Section 145"), as the same exists or may hereafter be amended (the "General Corporation Law") provides that a Delaware corporation may indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of such corporation) by reason of the fact that such person is or was a director, officer, employee or agent of such corporation, or is or was serving at the request of such corporation as a director, officer, employee or agent of another corporation or enterprise. The indemnity may include expenses (including attorney's fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with such action, suit or proceeding, provided such person acted in good faith and in a manner he reasonably believed to be in or not opposed to the corporation's best interests and, with respect to any criminal action or proceeding, had no reasonable cause to believe that his conduct was illegal.

Section 145 further authorizes a corporation to purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation or enterprise, against any liability asserted against such person and incurred by such person in any such capacity, arising out of such person's status as such, whether or not the corporation would otherwise have the power to indemnify such person against such liability under Section 145.

Registrant's Amended and Restated Certificate of Incorporation contains certain provisions permitted under the Delaware General Corporation Law relating to the liability of directors. These provisions eliminate a director's personal liability for monetary damages resulting from a breach of fiduciary duty as a director.

Registrant's Bylaws provide that Registrant shall indemnify and hold harmless, to the fullest extent, its directors and officers (and may indemnify its employees and other agents) involved in any action, lawsuit or proceeding by reason of the fact that he or she is or was a director or officer (or employee or agent). The Registrant's Bylaws also permit Registrant to secure insurance on behalf of any officer, director, employee or other agent for any liability arising out of his or her actions in such capacity, regardless of whether Registrant would have the power to indemnify him or her against such liability under the General Corporation law of Delaware.

Registrant's directors and officers are covered by insurance maintained by Registrant against specified liabilities for actions taken in their capacities as such, including liabilities under the Securities Act of 1933, as amended (the "Securities Act"). In addition, the Registrant has entered into agreements with its directors and officers providing indemnification of such directors and officers by the Registrant to the fullest extent permitted by law, subject to certain limited exceptions.

Item 7. Exemption from Registration Claimed.

Not Applicable.

Item 8.	8. Exhibits.	
Exhibit Number	Document Description	
4.1(1)	Amended and Restated Certificate of Incorporation.	
4.2(2)	Amended and Restated Bylaws.	
4.3(3)	1998 Stock Plan and form of option agreement.	
4.4(4)	2004 Equity Incentive Plan and form of option agreement.	
4.5(5)	2004 Employee Stock Purchase Plan and form of subscription agreement.	
5.1	Opinion of Wilson Sonsini Goodrich & Rosati, Professional Corporation.	
23.1	Consent of Deloitte & Touche LLP.	
23.2	Consent of Wilson Sonsini Goodrich & Rosati (included in Exhibit 5.1).	
24.1	Power of Attorney. Reference is made to page II-5.	
	(1) Incorporated by reference from Exhibit 3.2 of Amendment 4 to the Registrant's Registration Statement on Form S-1, No. 333-117327, filed with the Commission on November 15, 2004.	
	(2) Incorporated by reference from Exhibit 3.4 of Amendment 4 to the Registrant's Registration Statement on Form S-1, No. 333-117327, filed with the Commission on November 15, 2004.	

- (3) Incorporated by reference from Exhibit 10.1 of the Registrant's Registration Statement on Form S-1, No. 333-117327, filed with the Commission on July 13, 2004.
- (4) 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.
- (5) 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.

The undersigned Registrant hereby undertakes:

- (a) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:
 - (i) To include any prospectus required by Section 10(a)(3) of the Securities Act;

(ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent posteffective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement; and

(iii) 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;

Provided, however, that paragraphs (a)(1)(i) and (a)(1)(ii) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in periodic reports filed by the Registrant pursuant to Section 13 or Section 15(d) of the Exchange Act that are incorporated by reference in this registration statement.

(b) 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.

(c) 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.

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.

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 Securities and Exchange 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.

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 December 1, 2004.

MONOLITHIC POWER SYSTEMS, INC.

/s/ Michael Hsing
Michael Hsing
President and Chief Executive Officer

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Michael Hsing and Tim Christoffersen, 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.

Pursuant to the requirements of the Securities Act of 1933, as amended, this registration statement has been signed by the following persons in the capacities and on the date indicated.

Signature	Title	Date
/s/ Michael Hsing	President, Chief Executive Officer and Director (principal executive officer)	December 1, 2004
Michael Hsing	Director (principal excentive officer)	
/s/ Tim Christoffersen	Chief Financial Officer and Secretary (principal financial and accounting officer)	
Tim Christoffersen	(principal manetal and accounting officer)	
/s/ Herbert Chang	Director	December 1, 2004
Herbert Chang		
/s/ Alan Earhart	Director	December 1, 2004
Alan Earhart		
/s/ Jim Jones	Director	December 1, 2004
Jim Jones		
/s/ Jim Moyer	Director	December 1, 2004
Jim Moyer		
/s/ Umesh Padval	Director	December 1, 2004
Umesh Padval		

EXHIBIT INDEX

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[WSGR Letterhead]

December 1, 2004

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 December 1, 2004 (the "Registration Statement"), in connection with the registration under the Securities Act of 1933, as amended, of an aggregate of 10,314,200 shares of Common Stock, par value \$0.001 per share (the "Shares"), outstanding or reserved for issuance pursuant to the 1998 Stock Plan, 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 the Shares reserved for issuance will be, when issued and sold in the manner referred to in the Plans, legally and validly issued, fully paid and nonassessable and that the Shares that are outstanding have been validly issued, fully paid and are 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 and any subsequent amendment thereto.

Very truly yours,

WILSON SONSINI GOODRICH & ROSATI Professional Corporation

/s/ Wilson Sonsini Goodrich & Rosati

CONSENT OF DELOITTE & TOUCHE LLP, REGISTERED INDEPENDENT PUBLIC ACCOUNTANTS

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 31, 2004 (August 19, 2004 as to Note 16 and November 10, 2004 as to Note 11; which report expresses an unqualified opinion and includes an explanatory paragraph relating to lawsuits related to alleged patent infringement and alleged misappropriation of trade secrets) with respect to the consolidated financial statements of Monolithic Power Systems, Inc., appearing in the prospectus dated November 18, 2004 of Monolithic Power Systems, Inc. filed pursuant to Rule 424(b) (Registration Statement No. 333-117327).

/s/ Deloitte & Touche LLP

San Jose, California November 30, 2004