As filed with the Securities and Exchange Commission on May 9, 2001 Registration No.

SECURITIES AND EXCHANGE COMMISSION WASHINGTON, D.C. 20549 ------FORM S-8 REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933 _____ ADVANCED MICRO DEVICES, INC. (Exact Name of Registrant as Specified in Its Charter) 94-1692300 Delaware (State or Other Jurisdiction of (I.R.S. Employer Identification Number) Incorporation or Organization) _____ One AMD Place Sunnyvale, California 94088-3453 (Address of Principal Executive Offices including Zip Code) _____ ADVANCED MICRO DEVICES, INC. 1996 STOCK INCENTIVE PLAN ADVANCED MICRO DEVICES, INC. 2000 EMPLOYEE STOCK PURCHASE PLAN (Full Title of the Plan) ------Thomas M. McCoy Senior Vice President, General Counsel and Secretary Advanced Micro Devices, Inc. One AMD Place Sunnyvale, California 94088-3453 (408) 732-2400 _____ (Name and Address, Including Zip Code, and Telephone Number, Including Area Code, of Agent for Service) _____ CALCULATION OF REGISTRATION FEE <TABLE> <CAPTION> _____ Title of Securities to Be Registered(1) Title of Securities to Be Registered(2) Title of Securities to Be Registered(<c> <C> <C> <C> <C> <C> 15,000,000 \$30.60 \$459,000,000 <S>

</TABLE>

Common Stock, \$.01 Par Value

(1) In addition, pursuant to Rule 416(c) under the Securities Act of 1933, as amended, this registration statement also covers an indeterminate amount of interests to be offered or sold pursuant to the Advanced Micro Devices, Inc. 2000 Employee Stock Purchase Plan.

shares _ _____

Amount of Registration Fee

<C>

\$459,000,000 \$114,750

(2) This registration statement shall also cover any additional shares of Common Stock which become issuable under the Advanced Micro Devices, Inc. 1996 Stock Incentive Plan or the Advanced Micro Devices, Inc. 2000 Employee Stock Purchase Plan by reason of any stock dividend, stock split, recapitalization or other similar transaction effected without the Registrant's receipt of consideration which results in an increase in the number of outstanding shares of the Registrant's Common Stock.

(3) Estimated solely for the purpose of determining the registration fee, computed in accordance with Rule 457(h) and Rule 457(c) under the Securities Act of 1933, as amended, on the basis of the average of the reported high and low sale prices of the Common Stock, as reported on The New York Stock Exchange on May 7, 2001.

Proposed sale to take place as soon after the effective date of the registration statement as options granted under the Plans are exercised.

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PART I

INFORMATION REQUIRED IN THE SECTION 10(a) PROSPECTUS

The information called for in Part I of Form S-8 is not being filed with or included in this Form S-8 (by incorporation by reference or otherwise) in accordance with the rules and regulations of the SEC.

PART II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

In this registration statement, Advanced Micro Devices, Inc. is sometimes referred to as "we," "us" or "our."

Pursuant to General Instruction ${\tt E}$ of Form S-8, this registration statement is filed solely to register:

- . an additional 8,000,000 shares of our common stock reserved for issuance under our 1996 Stock Incentive Plan, which increase was approved by our Board of Directors on March 10, 2001 and our stockholders on April 26, 2001; and
- . an additional 7,000,000 shares of our common stock reserved for issuance under our 2000 Employee Stock Purchase Plan, which increase was approved by our Board of Directors on March 10, 2001 and our stockholders on April 26, 2001.

Pursuant to General Instruction E of Form S-8, we hereby incorporate by reference the following documents filed with the SEC pursuant to the Securities Exchange Act of 1934, as amended (File No. 001-07882):

- . Our Annual Report on Form 10-K for the fiscal year ended December 31, 2000, including information specifically incorporated by reference into our Form 10-K from our Proxy Statement for our 2001 Annual Meeting of Stockholders, filed with the SEC on March 20, 2001, as amended by our Amendment No. 1 to Annual Report on Form 10-K/A for the fiscal year ended December 31, 2000, filed with the SEC on March 26, 2001 and our Amendment No. 2 to Annual Report on Form 10-K/A for the fiscal year ended December 31, 2000, filed with the SEC on April 16, 2001;
- . Our Current Reports on Form 8-K, filed with the SEC on January 24, 2001, February 8, 2001, April 24, 2001 and May 9, 2001;
- . The description of our common stock, par value \$.01 per share, contained in our registration statement on Form 8-A, filed with the SEC on September 14, 1979, including any subsequently filed amendments and reports updating such description;
- . Our registration statement on Form S-8 (File No. 333-04797),filed with the SEC on May 30, 1996;
- . Our registration statement on Form S-8 (File No. 333-57525),filed with the SEC on June 23, 1998;
- . Our registration statement on Form S-8 (File No. 333-40030),filed with the SEC on June 23, 2000; and
- . All documents we file with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934, as amended, prior to the filing of a post-effective amendment to this registration statement which indicates that all securities offered have been sold or which deregisters all securities then remaining unsold.

Information that we file later with the SEC will automatically update and supersede this information.

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Item 9. Undertakings.
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(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:

(i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;

(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. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement;

(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 with or furnished to the Commission by the registrant pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement.

(2) That, for the purpose of determining any liability under the Securities Act of 1933, 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.

 $(3)\,$ 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.

(b) The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the registrant's annual report pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) 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.

(h) Insofar as indemnification for liabilities arising under the Securities Act of 1933 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 of 1933 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 of 1933 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, 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 Sunnyvale, State of California, on May 9, 2001.

ADVANCED MICRO DEVICES, INC.

By: /s/ Robert J. Rivet

Robert J. Rivet Senior Vice President, Chief Financial Officer

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below does hereby constitute and appoint W. J. Sanders III and Robert J. Rivet, and each of them, with full power of substitution and full power to act without the other, his true and lawful attorney-in-fact and agent to act for him in his name, place and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments) to this registration statement, and to file this registration statement, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-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 order to effectuate the same as fully, to all intents and purposes, as they or he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or any of them, may lawfully do or cause to be done by virtue hereof.

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

<TABLE> <CAPTION>

<caption></caption>	Signature	Title	Date
2001	/S/ W.J. Sanders III	<c> Chairman of the Board and Chief Executive Officer</c>	<c> April 26,</c>
	W.J. Sanders III	(Principal Executive Officer)	
2001	/S/ Robert J. Rivet	Senior Vice President, Chief Financial Officer	April 26,
	Robert J. Rivet	(Principal Financial and Accounting Officer)	
2001	/S/ Friedrich Baur	Director	April 26,
	Friedrich Baur		
2001	/S/ Charles M. Blalack	Director	April 26,
	/S/ Charles M. Blalack		
2001	/S/ R. Gene Brown	Director	April 26,
	R. Gene Brown		
2001	/S/ Robert B. Palmer	Director	April 26,
	Robert B. Palmer		
2001	/S/ Joe L. Roby	Director	April 26,
	Joe L. Roby		
2001	/S/ Hector de J. Ruiz	Director, President and Chief Operating Officer	April 26,
	Hector de J. Ruiz		
2001	/S/ Leonard Silverman	Director	April 26,
	Leonard Silverman		

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EXHIBIT

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 - 5.1 Opinion of Latham & Watkins.
- *10.1 Advanced Micro Devices, Inc. 1996 Stock Incentive Plan.
- *10.2 Advanced Micro Devices, Inc. 2000 Employee Stock Purchase Plan.
- 23.1 Consent of Latham & Watkins (included in Exhibit 5.1).
- 23.2 Consent of Ernst & Young LLP.
- 24.1 Power of Attorney (included in the signature page to this registration statement).

* Incorporated by reference to our Proxy Statement for our 2001 Annual Meeting of Stockholders, filed with the SEC on March 20, 2001 (File No. 001-07882).

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May 9, 2001

Advanced Micro Devices, Inc. One AMD Place P.O. Box 3453 Sunnyvale, California 94088-3453

> Re: Advanced Micro Devices, Inc. 15,000,000 shares of Common Stock, par value \$0.01 per share

In our capacity as your counsel in connection with such registration, we are familiar with the proceedings taken and proposed to be taken by the Company in connection with the authorization, issuance and sale of the Shares. In addition, we have made such legal and factual examinations and inquiries, including an examination of originals and copies certified or otherwise identified to our satisfaction, of such documents, corporate records and instruments as we have deemed necessary or appropriate for purposes of this opinion.

In our examination, we have assumed the genuineness of all signatures, the authenticity of all documents submitted to us as originals, and the conformity to authentic original documents of all documents submitted to us as copies.

We are opining herein as to the effect on the subject transaction only of the General Corporation Law of the State of Delaware, including statutory and reported decisional law thereunder, and we express no opinion with respect to the applicability thereto, or the effect thereon, of any other laws, or as to any matters of municipal law or the laws of any other local agencies within the State of Delaware.

Subject to the foregoing, it is our opinion that the Shares to be issued under the Plans have been duly authorized, and upon the issuance and delivery of the Shares, in the manner

Advanced Micro Devices, Inc. May 9, 2001 Page 2

contemplated by the Plans, and assuming the Company completes all actions and proceedings required on its part to be taken prior to the issuance and delivery of the Shares pursuant to the terms of the Plans, including, without limitation, collection of required payment for the Shares, the Shares will be validly issued, fully paid and nonassessable.

We consent to your filing this opinion as an exhibit to the Registration Statement.

Very truly yours, /s/ Latham & Watkins Latham & Watkins

Consent of Independent Auditors

We consent to the incorporation by reference in the Registration Statement on Form S-8 pertaining to the Advanced Micro Devices, Inc. 1996 Stock Incentive Plan and the Advanced Micro Devices, Inc. 2000 Employee Stock Purchase Plan of our report dated January 9, 2001 with respect to the consolidated financial statements of Advanced Micro Devices, Inc. incorporated by reference in its Annual Report (Form 10-K) for the year ended December 31, 2000, filed with the Securities and Exchange Commission.

We also consent to the incorporation by reference therein of our report dated March 15, 2001 with respect to the financial statement schedule of Advanced Micro Devices, Inc. for the year ended December 31, 2000 included in the Annual Report (Form 10-K) for 2000 filed with the Securities and Exchange Commission.

/s/ Ernst & Young LLP

San Jose, California May 3, 2001