

SCHEDULE 13G

Amendment No. 3  
MONOLITHIC POWER SYSTEMS INC  
Common Stock  
Cusip #609839105

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Item 1: Reporting Person - FMR LLC  
Item 4: Delaware  
Item 5: 0  
Item 6: 0  
Item 7: 1,600,831  
Item 8: 0  
Item 9: 1,600,831  
Item 11: 4.466%  
Item 12: HC

Cusip #609839105  
Item 1: Reporting Person - Edward C. Johnson 3d  
Item 4: United States of America  
Item 5: 0  
Item 6: 0  
Item 7: 1,600,831  
Item 8: 0  
Item 9: 1,600,831  
Item 11: 4.466%  
Item 12: IN

SCHEDULE 13G - TO BE INCLUDED IN  
STATEMENTS  
FILED PURSUANT TO RULE 13d-1(b) or 13d-2(b)

Item 1(a). Name of Issuer:

MONOLITHIC POWER SYSTEMS  
INC

Item 1(b). Name of Issuer's Principal Executive Offices:

983 University Avenue  
Building A  
Los Gatos, CA 95032

Item 2(a). Name of Person Filing:

FMR LLC

Item 2(b). Address or Principal Business Office or, if None,  
Residence:

82 Devonshire Street, Boston,  
Massachusetts 02109

Item 2(c). Citizenship:

Not applicable

Item 2(d). Title of Class of Securities:

Common Stock

Item 2(e). CUSIP Number:

609839105

Item 3. This statement is filed pursuant to Rule 13d-1(b) or 13d-2(b) and the person filing, FMR LLC, is a parent holding company in accordance with Section 240.13d-1(b)(ii)(G). (Note: See Item 7).

Item 4. Ownership

(a) Amount Beneficially Owned: 1,600,831

(b) Percent of Class: 4.466%

(c) Number of shares as to which such person has:

(i) sole power to vote or to direct the vote: 0

(ii) shared power to vote or to direct the vote: 0

(iii) sole power to dispose or to direct the disposition of: 1,600,831

(iv) shared power to dispose or to direct the disposition of: 0

Item 5. Ownership of Five Percent or Less of a Class.

If this statement is being filed to report the fact that as of the date hereof, the reporting person has ceased to be the beneficial owner of more than five percent of the class of securities, check the following (X).

Item 6. Ownership of More than Five Percent on Behalf of Another Person.

Not applicable

Item 7. Identification and Classification of the Subsidiary Which Acquired the Security Being Reported on By the Parent Holding Company.

See attached Exhibit A.

Item 8. Identification and Classification of Members of the Group.

Not applicable. See attached Exhibit A.

Item 9. Notice of Dissolution of Group.

Not applicable.

Item 10. Certification.

Inasmuch as the reporting persons are no longer the beneficial owners of more than five percent of the number of shares outstanding, the reporting persons have no further reporting obligation under Section 13(d) of the Securities and Exchange Commission thereunder, and the reporting persons have no obligation to amend this Statement if any material change occurs in the facts set forth herein.

Signature

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

December 09, 2010  
Date

/s/ Scott C. Goebel

Signature

Scott C. Goebel  
Duly authorized under Power of Attorney  
effective as of June 1, 2008 by and on behalf of FMR LLC  
and its direct and indirect subsidiaries

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Pursuant to the instructions in Item 7 of Schedule 13G, Fidelity Management & Research Company ("Fidelity"), 82 Devonshire Street, Boston, Massachusetts 02109, a wholly-owned subsidiary of FMR LLC and an investment adviser registered under Section 203 of the Investment Advisers Act of 1940, is the beneficial owner of 1,592,831 shares or 4.444% of the Common Stock outstanding of MONOLITHIC POWER SYSTEMS INC ("the Company") as a result of acting as investment adviser to various investment companies registered under Section 8 of the Investment Company Act of 1940.

Edward C. Johnson 3d and FMR LLC, through its control of Fidelity, and the funds each has sole power to dispose of the 1,592,831 shares owned by the Funds.

Members of the family of Edward C. Johnson 3d, Chairman of FMR LLC, are the predominant owners, directly or through trusts, of Series B voting common shares of FMR LLC, representing 49% of the voting power of FMR LLC. The Johnson family group and all other Series B shareholders have entered into a shareholders' voting agreement under which all Series B voting common shares will be voted in accordance with the majority vote of Series B voting common shares. Accordingly, through their ownership of voting common shares and the execution of the shareholders' voting agreement, members of the Johnson family may be deemed, under the Investment Company Act of 1940, to form a controlling group with respect to FMR LLC.

Neither FMR LLC nor Edward C. Johnson 3d, Chairman of FMR LLC, has the sole power to vote or direct the voting of the shares owned directly by the Fidelity Funds, which power resides with the Funds' Boards of Trustees. Fidelity carries out the voting of the shares under written guidelines established by the Funds' Boards of Trustees.

Pyramis Global Advisors Trust Company ("PGATC"), 900 Salem Street, Smithfield, Rhode Island, 02917, an indirect wholly-owned subsidiary of FMR LLC and a bank as defined in Section 3(a)(6) of the Securities Exchange Act of 1934, is the beneficial owner of 8,000 shares or 0.022% of the outstanding Common Stock of the MONOLITHIC POWER SYSTEMS INC as a result of its serving as investment manager of institutional accounts owning such shares.

Edward C. Johnson 3d and FMR LLC, through its control of Pyramis Global Advisors Trust Company, each has sole dispositive power over 8,000 shares and sole power to vote or to direct the voting of 0 shares of Common Stock owned by the institutional accounts managed by PGATC as reported above.

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RULE 13d-1(f)(1) AGREEMENT

The undersigned persons, on December 09, 2010, agree and consent to the joint filing on their behalf of this Schedule

13G in connection with their beneficial ownership of the  
Common Stock of MONOLITHIC POWER SYSTEMS INC  
at November 30, 2010.

FMR LLC

By /s/ Scott C. Goebel  
Scott C. Goebel

Duly authorized under Power of Attorney effective as  
of June 1, 2008, by and on behalf of FMR LLC and its direct  
and indirect subsidiaries

Edward C. Johnson 3d

By /s/ Scott C. Goebel  
Scott C. Goebel

Duly authorized under Power of Attorney effective as  
of June 1, 2008, by and on behalf of Edward C. Johnson 3d

Fidelity Management & Research Company

By /s/ Scott C. Goebel  
Scott C. Goebel

Senior V.P. and General Counsel