

SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

SCHEDULE 13G

UNDER THE SECURITIES EXCHANGE ACT OF 1934
(Amendment No.)*

MONOLITHIC POWER SYSTEMS INC.

(Name of Issuer)

COMMON STOCK

(Title of Class of Securities)

609839105

(CUSIP Number)

December 31, 2009

(Date of Event Which Requires Filing of this Statement)

Check the appropriate box to designate the Rule pursuant to which this Schedule is filed:

- Rule 13d – 1(b)
- Rule 13d – 1(c)
- Rule 13d – 1(d)

* The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter disclosures provided in a prior cover page.

The information required on the remainder of this page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the *Notes*.)

1 NAMES OF REPORTING PERSONS
I.R.S. IDENTIFICATION NO. OF ABOVE PERSONS (ENTITIES ONLY):

Columbia Wanger Asset Management, L.P. 04-3519872

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (See Instructions) (a)

(b)

3 SEC USE ONLY

4 CITIZENSHIP OR PLACE OF ORGANIZATION

Delaware

5 SOLE VOTING POWER

1,904,500

6 SHARED VOTING POWER

0

7 SOLE DISPOSITIVE POWER

1,906,700

8 SHARED DISPOSITIVE POWER

0

NUMBER OF
SHARES
BENEFICIALLY
OWNED BY
EACH
REPORTING
PERSON WITH

9

AGGREGATE AMOUNT
BENEFICIALLY OWNED
BY EACH REPORTING
PERSON

1,906,700

10

CHECK IF THE
AGGREGATE AMOUNT
IN ROW (9) EXCLUDES
CERTAIN SHARES (See
Instructions)

11

PERCENT OF CLASS
REPRESENTED BY
AMOUNT IN ROW (9)

5.5%

12 TYPE OF REPORTING PERSON (See Instructions)

IA

Item 1(a). Name of Issuer:

Monolithic Power Systems Inc.

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

6409 Guadalupe Mines Road
San Jose, CA 95120

Item 2(a). Name of Person Filing:

Columbia Wanger Asset Management, L.P.

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

227 West Monroe Street, Suite 3000, Chicago, IL 60606.

Item 2(c). Citizenship:

Delaware

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

Common Stock

Item 2(e). CUSIP Number:

609839105

**Item 3. If This Statement is Filed Pursuant to Rule 13d-1(b), or 13d-2(b) or (c),
Check Whether the Person Filing is a:**

- (a) Broker or dealer registered under Section 15 of the Exchange Act.
- (b) Bank as defined in Section 3(a)(6) of the Exchange Act.
- (c) Insurance company as defined in Section 3(a)(19) of the Exchange Act.
- (d) Investment company registered under Section 8 of the Investment Company Act.
- (e) An investment adviser in accordance with Rule 13d-1(b)(1)(ii)(E).
- (f) An employee benefit plan or endowment fund in accordance with Rule 13d-1(b)(1)(ii)(F).
- (g) A parent holding company or control person in accordance with Rule 13d-1(b)(1)(ii)(G).
- (h) A savings association as defined in Section 3(b) of the Federal Deposit Insurance Act.
- (i) A church plan that is excluded from the definition of an investment company under Section 3(c)(14) of the Investment Company Act.
- (j) Group, in accordance with Rule 13d-1(b)(1)(ii)(J).

If this statement is filed pursuant to Rule 13d-1(c), check this box.

Item 4. Ownership:

With respect to the beneficial ownership of the reporting person, see Items 5 through 11 of the cover pages to this Schedule 13G, which are incorporated herein by reference.

Item 5. Ownership of 5 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 .

Item 6. Ownership or 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 or Control Person:

Not Applicable.

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

Not Applicable.

Item 9. Notice of Dissolution of Group:

Not Applicable.

Item 10. Certification:

By signing below each of the undersigned certifies that, to the best of such undersigned's knowledge and belief, the securities referred to above were acquired and are held in the ordinary course of business and were not acquired and are not for the purpose of or with the effect of changing or influencing the control of the issuer of the securities and were not acquired and are not held in connection with or as a participant in any transaction having that purpose or effect.

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.

Dated: January 27, 2010

Columbia Wanger Asset Management, L.P.

By: /s/ Bruce H. Lauer

Bruce H. Lauer
Senior Vice President and Secretary,
WAM Acquisition GP, Inc., General Partner