

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

SCHEDULE 13G

Under the Securities Exchange Act of 1934
(Amendment No.)*

SunPower Corporation

(Name of Issuer)

Class A Common

(Title of Class of Securities)

867652109

(CUSIP Number)

Check the following box if a fee is being paid with this statement [].
(A fee is not required only if the filing person: (1) has a previous statement on file reporting beneficial ownership of more than five percent of the class of securities described in Item 1; and (2) has filed no amendment subsequent thereto reporting beneficial ownership of five percent or less of such class.)
(See Rule 13d-7.)

*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 the disclosures provided in a prior cover page.

The information required in the remainder of this cover 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).

Schedule 13G (continued)

CUSIP No. 867652109

1 NAME OF REPORTING PERSON
S.S. OR I.R.S. IDENTIFICATION NO. OF ABOVE PERSON

Baron Capital Group, Inc.

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP*

(a) []
(b) []

3 SEC USE ONLY

4 CITIZENSHIP OR PLACE OF ORGANIZATION

New York

NUMBER OF
SHARES

5

SOLE VOTING POWER

0

BENEFICIALLY
OWNED BY
EACH
REPORTING
PERSON
WITH

6

SHARED VOTING POWER
750,000

7

SOLE DISPOSITIVE POWER
0

8

SHARED DISPOSITIVE POWER
750,000

9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

750,000

10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES*

11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)

8.4%

12 TYPE OF REPORTING PERSON*

HC, CO

*SEE INSTRUCTIONS BEFORE FILLING OUT

Schedule 13G (continued)

CUSIP No. 867652109

1 NAME OF REPORTING PERSON
S.S. OR I.R.S. IDENTIFICATION NO. OF ABOVE PERSON

BAMCO, Inc.

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP*

(a) ☐(b) ☐

3 SEC USE ONLY

4 CITIZENSHIP OR PLACE OF ORGANIZATION

New York

NUMBER OF
SHARES

5

SOLE VOTING POWER
0

BENEFICIALLY

OWNED BY
EACH

6

SHARED VOTING POWER
750,000

REPORTING

PERSON
WITH

7

SOLE DISPOSITIVE POWER
0

8

SHARED DISPOSITIVE POWER
750,000

9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

750,000

10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES*

11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)

8.4%

12 TYPE OF REPORTING PERSON*

IA, CO

*SEE INSTRUCTIONS BEFORE FILLING OUT

Schedule 13G (continued)

CUSIP No. 867652109

1 NAME OF REPORTING PERSON
S.S. OR I.R.S. IDENTIFICATION NO. OF ABOVE PERSON

Baron Small Cap Fund

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP*

(a) ☐(b) ☐

3 SEC USE ONLY

4 CITIZENSHIP OR PLACE OF ORGANIZATION

USA

NUMBER OF 5 SOLE VOTING POWER
SHARES 0

BENEFICIALLY OWNED BY 6 SHARED VOTING POWER
EACH 750,000

REPORTING 7 SOLE DISPOSITIVE POWER
PERSON 0
WITH

8 SHARED DISPOSITIVE POWER
750,000

9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

750,000

10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES*

11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)

8.4%

12 TYPE OF REPORTING PERSON*

IV

*SEE INSTRUCTIONS BEFORE FILLING OUT

Schedule 13G (continued)

CUSIP No. 867652109

1 NAME OF REPORTING PERSON
S.S. OR I.R.S. IDENTIFICATION NO. OF ABOVE PERSON

Ronald Baron

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP*

(a) ☐

(b) ☐

3 SEC USE ONLY

4 CITIZENSHIP OR PLACE OF ORGANIZATION

USA

NUMBER OF
SHARES

5

SOLE VOTING POWER
0

BENEFICIALLY

OWNED BY
EACH

6

SHARED VOTING POWER
750,000

REPORTING
PERSON
WITH

7

SOLE DISPOSITIVE POWER
0

8

SHARED DISPOSITIVE POWER
750,000

9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

750,000

10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES*

11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)

8.4%

12 TYPE OF REPORTING PERSON*

HC, IN

*SEE INSTRUCTIONS BEFORE FILLING OUT

Item 1.

- (a) Name of Issuer:
SunPower Corporation
- (b) Address of Issuer's Principal Executive Offices:
430 Indio Way
Sunnyvale, CA 94085

Item 2.

- (a) Name of Persons Filing:
Baron Capital Group, Inc. ("BCG")
BAMCO, Inc. ("BAMCO")
Baron Small Cap Fund ("BSC")
Ronald Baron
- (b) Address of Principal Business Office:
767 Fifth Avenue
New York, NY 10153
- (c) Citizenship:
BCG and BAMCO are New York corporations. Baron Small Cap Fund is a series of a Massachusetts Business Trust. Ronald Baron is a citizen of the United States.
- (d) Title of Class Securities:
Class A Common
- (e) CUSIP Number:
867652109

Item 3. PERSONS FILING:

BCG and Ronald Baron are:

- (g) Parent holding companies, in accordance with
Section 240.13d-1(b)(ii)(G)

BAMCO is:

- (e) Investment Adviser registered under Section 203 of
the Investment Advisers Act of 1940

BSC is:

- (d) Investment Company registered under Section 8 of the
Investment Company Act.

All persons filing are:

- (h) Group, in accordance with Rule 13d-1(b)(1)(ii)(F)

Item 4. OWNERSHIP[^]

(a) Amount Beneficially Owned as of December 31, 2005:

BCG:	750,000 shares
BAMCO:	750,000 shares
BSC:	750,000 shares
Ronald Baron:	750,000 shares

(b) Percent of Class#:

BCG:	8.4%
BAMCO:	8.4%
BSC:	8.4%
Ronald Baron	8.4%

[^]BCG and Ronald Baron disclaim beneficial ownership of shares held by their controlled entities (or the investment advisory clients thereof) to the extent such shares are held by persons other than BCG and Ronald Baron. BAMCO disclaims beneficial ownership of shares held by its investment advisory clients to the extent such shares are held by persons other than BAMCO and its affiliates.

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

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

BCG:	0
BAMCO:	0
BSC:	0
Ronald Baron:	0

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

BCG:	750,000
BAMCO:	750,000
BSC:	750,000
Ronald Baron:	750,000

(iii) sole power to dispose or to direct the disposition of:*

BCG:	0
BAMCO:	0
BSC:	0
Ronald Baron:	0

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

BCG:	750,000
BAMCO:	750,000
BSC:	750,000
Ronald Baron:	750,000

Item 5. OWNERSHIP OF 5% OR LESS OF A CLASS
Not applicable.

Item 6. OWNERSHIP OF MORE THAN 5% ON BEHALF OF ANOTHER PERSON
The advisory clients of BAMCO have the right to receive or the power to direct the receipt of dividends from, or the proceeds from the sale of, the Issuer's common stock in their accounts. To the best of the Filing Persons' knowledge, no such person has such interest relating to more than 5% of the outstanding class of securities.

Item 7. IDENTIFICATION AND CLASSIFICATION OF THE SUBSIDIARY WHICH ACQUIRED THE SECURITY BEING REPORTED ON BY THE PARENT HOLDING COMPANY

BAMCO is a subsidiary of BCG. BSC is an investment advisory client of BAMCO. Ronald Baron owns a controlling interest in BCG.

Item 8. IDENTIFICATION AND CLASSIFICATION OF MEMBERS OF THE GROUP
See Item 3.

* By virtue of investment advisory agreements with its clients, BAMCO has been given the discretion to dispose or the disposition of the securities in the advisory accounts. All such discretionary agreements, are however, revocable.

Item 9. NOTICE OF DISSOLUTION OF GROUP

Not applicable.

Item 10. Certification

By signing below I certify that, to the best of my knowledge and belief, the securities referred to above were acquired in the ordinary course of business and were not acquired for the purpose of and do not have the effect of changing or influencing the control of the issuer of such securities and were not acquired in connection with or as a participant in any transaction having such purposes 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.

Date: February 14, 2006

Baron Capital Group, Inc. and
BAMCO, Inc.

By:

/s/ Ronald Baron

Ronald Baron, Chairman and CEO

Baron Small Cap Fund

By:

/s/ Ronald Baron

Ronald Baron, President & CEO

Ronald Baron, Individually

By:

/s/ Ronald Baron

Ronald Baron

Joint Filing Agreement

The undersigned each hereby agree that the Schedule 13G dated February 14, 2006, which relates to the class A common stock of SunPower Corporation to be filed jointly on behalf of each of them for the reasons stated therein, and any amendments thereto shall be filed jointly by the undersigned.

Dated: February 14, 2006

Baron Capital Group, Inc. and
BAMCO, Inc.
By:

/s/ Ronald Baron

Ronald Baron, Chairman and CEO

Baron Small Cap Fund
By:

/s/ Ronald Baron

Ronald Baron, President & CEO

Ronald Baron, Individually
By:

/s/ Ronald Baron

Ronald Baron