### FORM 4

# UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

OMB APPROVAL
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hours per response: 0.5

Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See Instruction 1(b).

## STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934 or Section 30(h) of the Investment Company Act of 1940

1. Name and Address of Reporting Person <sup>®</sup> Ueunten Paul			2. Issuer Name and Ticker or Trading Symbol <u>MONOLITHIC POWER SYSTEMS INC</u> [MPWR]		ationship of Reporting Pers all applicable) Director	10% Owner
(Last) (First) (Middle) 79 GREAT OAKS BLVD		(Middle)	3. Date of Earliest Transaction (Month/Day/Year) 08/02/2012	X	Officer (give title below) Sr. V.P. Design Eng	Other (specify below) neering
(Street) SAN JOSE (City)	CA (State)	95119 (Zip)	4. If Amendment, Date of Original Filed (Month/Day/Year)	6. Indi Line) X	vidual or Joint/Group Filing Form filed by One Repo Form filed by More than Person	rting Person

#### Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned

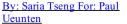
1. Title of Security (Instr. 3)	2. Transaction Date (Month/Day/Year)	2A. Deemed Execution Date, if any (Month/Day/Year)	3. Transaction Code (Instr. 8)		4. Securities Disposed Of and 5)			5. Amount of Securities Beneficially Owned	6. Ownership Form: Direct (D) or Indirect (I)	7. Nature of Indirect Beneficial Ownership
			Code	v	Amount	(A) or (D)	Price	Following Reported Transaction(s) (Instr. 3 and 4)	(Instr. 4)	(Instr. 4)
Common Stock	08/02/2012		<b>S</b> <sup>(1)</sup>		947	D	\$19	130,986	D	
Common Stock								153,556	I	Ueunten Trust I
Common Stock								113,900	I	Ueunten Trust II
Common Stock								26,000	Ι	Ueunten Trust III
Common Stock								26,000	Ι	Ueunten Trust IV

### Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)

1. Title of Derivative Security (Instr. 3)	2. Conversion or Exercise Price of Derivative Security	 3A. Deemed Execution Date, if any (Month/Day/Year)	4. Transact Code (In 8)		of Deriv Secu Acqu (A) of Dispo of (D) (Instr	Derivative (Month/Day/Year) Securities Acquired (A) or		Amour Securi Under Deriva	nt of ties ying tive ty (Instr.	of	9. Number of derivative Securities Beneficially Owned Following Reported Transaction(s) (Instr. 4)	Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	Beneficial Ownership	
			Code	v	(A)	(D)	Date Exercisable	Expiration Date	Title	Amount or Number of Shares				

Explanation of Responses:

1. Shares sold to pay tax obligations resulting from the vesting of restricted stock units.



08/03/2012

\*\* Signature of Reporting Person Date

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

 $^{\ast}$  If the form is filed by more than one reporting person, see Instruction 4 (b)(v).

\*\* Intentional misstatements or omissions of facts constitute Federal Criminal Violations See 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, see Instruction 6 for procedure.

Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB Number.