

**FORM 4****UNITED STATES SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

**OMB APPROVAL**

OMB Number: 3235-0287  
 Estimated average burden  
 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* <u>Ueunten Paul</u>  (Last) (First) (Middle) <u>6409 GUADALUPE MINES ROAD</u>  (Street) <u>SAN JOSE CA 95120</u>  (City) (State) (Zip)	2. Issuer Name and Ticker or Trading Symbol <u>MONOLITHIC POWER SYSTEMS INC</u> <u>[ MPWR ]</u>	5. Relationship of Reporting Person(s) to Issuer (Check all applicable)  Director 10% Owner Officer (give title below) Other (specify below) <u>Sr. V.P. Design Engineering</u>
	3. Date of Earliest Transaction (Month/Day/Year) <u>06/18/2012</u>	
4. If Amendment, Date of Original Filed (Month/Day/Year)		

**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 Acquired (A) or Disposed Of (D) (Instr. 3, 4 and 5)			5. Amount of Securities Beneficially Owned Following Reported Transaction(s) (Instr. 3 and 4)	6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	7. Nature of Indirect Beneficial Ownership (Instr. 4)
			Code	V	Amount	(A) or (D)	Price			
Common Stock	06/18/2012		s <sup>(1)</sup>		9,500	D	\$19.3953 <sup>(2)</sup>	131,933	D	
Common Stock								153,556	I	Ueunten Trust I
Common Stock								113,900	I	Ueunten Trust II
Common Stock								26,000	I	Ueunten Trust III
Common Stock								26,000	I	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	3. Transaction Date (Month/Day/Year)	3A. Deemed Execution Date, if any (Month/Day/Year)	4. Transaction Code (Instr. 8)		5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5)	6. Date Exercisable and Expiration Date (Month/Day/Year)		7. Title and Amount of Securities Underlying Derivative Security (Instr. 3 and 4)	8. Price of Derivative Security (Instr. 5)	9. Number of derivative Securities Beneficially Owned Following Reported Transaction(s) (Instr. 4)	10. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	11. Nature of Indirect Beneficial Ownership (Instr. 4)
				Code	V		Date Exercisable	Expiration Date					

**Explanation of Responses:**

1. In accordance with the reporting person's 10b5-1 trading plan.

2. Price is the weighted average selling price of all sales by the reporting person on the transaction date. The range of selling prices was \$19.25 to \$19.45 per share.

By: Saria Tseng For: For: Paul Ueunten 06/26/2012

\*\* Signature of Reporting Person Date

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

\* 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.