Application/Control Number: 13/167,659 Art Unit: 2817

DETAILED ACTION

Claim Objections

Claim 8 is objected to because of the following informalities:

Claim 8, lines 8 and 9, replaced ", and further" with -- . --

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of pre-AIA 35 U.S.C.

102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless – (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 8 is rejected under pre-AIA 35 U.S.C. 102(e) as being anticipated by Khlat

et al. (20120293253).

Khlat et al. (Figs. 1 and 2) disclose a power management system comprising: a

charge pump converter (12) can be read as a boost converter operative to receive a first

supply voltage (battery) via line 24 and generate a boosted supply voltage having a

higher voltage than the first supply voltage; and a parallel amplifier circuit (14) can be

read as an envelope amplifier operative to receive an envelope signal (Vramp) and the

boosted supply voltage via line 38 and generate a second supply voltage based on the

envelope signal and the boosted supply voltage, wherein the envelope amplifier is

Application/Control Number: 13/167,659 Art Unit: 2817

operative to further receive the first supply voltage via line 30 and generate the second supply voltage based on the first supply voltage and generate the second supply voltage based on the first supply voltage or the boosted supply voltage.

Allowable Subject Matter

Claims 3-7, 10-15, 17-19, 21-26 are allowed.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khanh V. Nguyen whose telephone number is 571-272-1767. The examiner can normally be reached on 8:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pascal can be reached on 571-272-1769. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Application/Control Number: 13/167,659 Art Unit: 2817

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

> /Khanh Van Nguyen/ Primary Examiner, Art Unit 2817

Notice of References Cited	Application/Control No. 13/167,659	Applicant(s)/Patent Under Reexamination MATHE ET AL.		
Notice of References Cited	Examiner	Art Unit		
	KHANH V. NGUYEN	2817	Page 1 of 1	

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-2012/0293253	11-2012	Khlat et al.	330/127
	В	US-			
	С	US-			
	D	US-			
	Е	US-			
	F	US-			
	G	US-			
	н	US-			
	T	US-			
	J	US-			
	К	US-			
	L	US-			
	М	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	0					
	Р					
	Q					
	R	0				
	S					
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NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
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	w	
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*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).) Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Index of Claims				13 Ex K⊦	plication/ 167659 aminer IANH V NO celled			lo. Non-E	Reexa MATH Art Ur 2817	amina IE ET	tion	tent Unde		
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EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S1	2	("6893101").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2012/11/05 13:41
S2	11	(("20080278136") or ("20100001793") or ("20110095827") or ("6300826") or ("6661217") or ("6792252") or ("7061313") or ("7068984") or ("7368985") or ("7679433") or ("7932780")).PN.	US-PGPUB; USPAT	OR	OFF	2012/11/05 13:45
S3	231	330/136,251,297.ccls. and boost\$4	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/11/05 14:30
54	45	("20020135338" "20030198300" "20050110562" "20060119425" "20070019446" "20070024360" "20080224769" "20090091305" "3600667" "3970953" "4378530" "4502152" "4516080" "5682303" "5905407" "6005377" "6009000" "6043707" "6121761" "6215290" "6281666" "6292378" "6300826" "6346798" "6362607" "6362608" "6449174" "6534962" "6583664" "6642631" "6650096" "6661210" "6674274" "6833760" "6850045" "6894559" "6985039" "7058373" "7071662" "7109689" "7126315" "7135918" "7190150").PN. OR ("7990214").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/11/06 11:02
S5	11	("20020153940" "20040251968"	US-PGPUB; USPAT; USOCR	OR	ON	2012/11/06 12:08
S6	58	("20050110562" "20060119425" "20070019446" "20070024360" "20070126408" "20080030174" "20080224769" "20080237705" "20090091305" "3600667" "3970953" "4378530" "4502152" "4516080" "4378530" "4502152" "4516080" "5682303" "5905407" "5939867" "6009000" "6043707" "6121761" "6215290" "6281666" "6292378" "6300826" "6346798" "6362607"	US-PGPUB; USPAT; USOCR	OR	ON	2012/11/06 12:11

file:///Cl/Users/knguyen7/Documents/e-Red%20Folder/13167659/EASTSearchHistory.13167659_AccessibleVersion.htm[7/22/2013 2:28:27 PM]

EAST Search History Page 167 of 240

		"6362608" "6404175" "6424129" "6449174" "6509722" "6534962" "6583664" "6642631" "6650096" "6661210" "6674274" "6781452" "6825726" "6833760" "6850045" "6992353" "7058373" "7071662" "7091777" "7109689" "7116946" "7126315" "7126317" "7183755" "7183856" "7190150" "7229886" "7499502" "7551688" "7583149" "7602155").PN. OR ("7808313").URPN.				
S7	50	"330"/\$.ccls. and switcher	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/11/09 14:47
S9	590	"330"/\$.ccls. and boost\$4 same switch\$4	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/11/09 15:28
S10	57	"330"/\$.ccls. and boost\$4 same (envelop\$3 with (amplif\$4 or amplification))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/11/12 11:16
S11	3	((("5414614") or ("6055168") or ("6198645")).PN.	USPAT	OR	OFF	2012/11/12 11:39
S12	197	"330"/\$.ccls. and (envelop\$3 adj1 (amplif\$4 or amplification))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/11/12 11:49
S13	6	((("20040208262") or ("20040266366") or ("20080252380") or ("20090167427") or ("5905407") or ("0671646")).PN.	US-PGPUB; USPAT	OR	OFF	2012/11/12 16:12
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S15	36	("4152670" "4446440" "4523152" "4600891" "5329245" "5352986" "5543753").PN. OR ("5905407").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/11/12 18:04
S16	4	("5905407" "6838931" "7116947").PN. OR ("7755431").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/11/12 18:27
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S18	6	("7808323").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2012/11/12 19:11
S19	7	("20080074207" "7449954" "7679433" "7755422").PN. OR ("7808323").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/11/12 19:11
S20	5	("20030146791" "6437641" "6621350" "6975166" "7091777").PN. OR ("8274328").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/11/12 19:43
S21	51	("2210028" "5142240" "5420536" "5442317" "5745526" "5883927" "5886575" "5898342" "5929702" "6028486" "6175372").PN. OR ("6437641").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/11/12 19:44
S22	229	"330"/\$.ccls. and (((step\$4 adj1 up) or boost\$3) with converter)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/11/13 09:33
S23	76	"330"/\$.ccls. and ((DC adj1 DC) adj1 convert\$4) same (envelop\$3 with (amplif\$4 or amplification))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/11/13 12:29
S24	2	("20090160555" "20090215413").PN. OR ("8237499").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/11/13 13:33
S25	11	("20020153940" "20040251968" "20050057308" "6437641" "6492867" "6566944" "6831519" "6985039" "7193470" "7405618" "7420415").PN. OR ("7932780").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/11/13 13:46
S26	86	330/10,136,207A,251,297.ccls. and (envelop\$4 adj1 (amplif\$4 or amplification))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/11/13 20:22
S27	5	("20030146791" "6437641" "6621350" "6975166" "7091777").PN. OR ("8274328").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/11/13 20:32
528	51	("2210028" "5142240" "5420536" "5442317" "5745526" "5883927" "5886575" "5898342" "5929702" "6028486" "6175372").PN. OR ("6437641").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/11/13 20:33

		"20030214355" "20040174212" "20050242875" "3900823" "4320350" "4346349" "5142240" "5287069" "5757229" "5777519" "5786727" "5789984" "5793253" "5929702" "6043707" "6081161" "6112062" "6157253" "6239656" "6268768" "6297696" "6300826" "6362685" "6437641" "6515541" "6566944" "6583664" "6590451" "6617920" "6617929" "6661284" "6677819" "6735419").PN. OR ("7440733").URPN.	USPAT; USOCR			20:36
S30	4	("20090191826" "20090289720" "6583664" "7808323").PN. OR ("8030995").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/11/13 20:51
S31	11	(("8030995") or ("5929776") or ("7932780") or ("2009027860") or ("5905407") or ("6838931") or ("20040208262") or ("7755431") or ("7808323") or ("20090191826") or ("7932780") or ("20110273235") or ("8237499") or ("8030995")).PN.	US-PGPUB; USPAT	OR	OFF	2012/11/17 17:41
S32	3	(("5414614") or ("6055168") or ("6198645")).PN.	US-PGPUB; USPAT	OR	OFF	2012/11/17 18:11
S 34	7	((Dongsu near1 Kim) or (Jinsung or Choi) or (Daehyun near1 Kang) or (Bumman near1 Kim)).in. and (envelope adj1 tracking)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB		ON	2012/11/17 18:15
\$35	11	Wideband with Envelope with Tracking with (Power adj1 Amplifier)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB		ON	2012/11/17 18:16
S 36	121	boost\$4 with (linear\$4 adj1 (amplif\$4 or amplification))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/11/17 18:20
S37	2	("6300826").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2012/11/17 18:55
S38	218	330/10,136,207A,251,297.ccls. and (boost\$4 with (voltage or power))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/04/25 18:48
S40	4	(("20050046474") or ("20050215209")).PN.	US-PGPUB; USPAT;	OR	OFF	2013/05/03 21:34

			USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			
S41	2	("20120326783").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2013/05/03 21:38
S42	18	(("6300826") or ("6792252") or ("7061313") or ("7679433") or ("5905407") or ("8237499") or ("20050215209") or ("20100001793") or ("7932780") or ("7932780") or ("8030995") or ("20050046474") or ("20080278136") or ("6661217") or ("7068984") or ("6838931") or ("7368985") or ("20110095827") or ("7755431")).PN.	US-PGPUB; USPAT	OR	OFF	2013/05/03 21:40
S43	2	("20090160555" "20090215413").PN. OR ("8237499").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/05/03 21:41
S44	228	330/10,136,207A,251,297.ccls. and (boost\$4 with (supply or voltage or power))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/07/15 11:42
S45	17	330/307.ccls. and (boost\$4 with (voltage or power))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/07/15 14:49
S46	1	("7876156").PN. OR ("8461931").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/15 15:18
S49	136	(envelop\$4 with (amplif\$4 or amplification)) same (boost\$4 with (supply or voltage or power))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/07/16 09:33
S50	0	("8493141").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2013/07/16 09:51
S51	2	("20120293253").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT;		OFF	2013/07/16 09:52

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852 1	9	("20040017251" "20040227208" "20050093526" "20060006850" "20060128324" "20060255777" "20070014382" "20070139975" "20070182490" "20070298731" "20080111529" "20080130330" "5781043" "5936357" "6256482" "6348781" "6798177" "7505742").PN. OR ("8089253").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/16 11:12
853 2	2	("20120293253").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2013/07/10 17:36
854 1	23	<pre>("7609114" "20040219891" "20040266366" "20050032499" "20080081572" "20100308654" "5486871" "6043707" "6070181" "7529523" "7646108" "7773691" "20040196095" "20050157778" "20090174466" "20090218995" "20090174466" "20090218995" "20070014382" "20090190699" "6681101" "6995995" "6701141" "5414614" "8008970" "20040124913" "6621808" "6728163" "7058373" "7411316" "7615979" "20110148375" "6617930" "8008970" "20050093630" "20080280577" "20100321127" "5532916" "6141541" "7859336" "5936464" "6256482" "8068622" "6198645" "6617930" "20020071497" "2010235827" "7777459" "20050047180" "6118343" "20050047180" "6118343" "20050047180" "6118343" "20050047180" "6118343" "20050047180" "6148343" "20100167260" "2010017553" "20100167260" "2010017553" "20120133299" "5646621" "8000117" "8164388" "6348780" "7782036" "7805115" "20090190699" "6256482" "6681101" "20110148375" "20120168767" "20120139516" "5420643" "5822318" "5898342" "6559689" "20120170334" "20120176196" "6204731" "8093951" "8174313" "20030137286" "20070259628" "20110018626" "20070259628" "20110018626" "20000181340" 6624712" "20000232622" "2005008093" "20050122171" "20060128324" "20110084760" "496500" "5311309" "7595569" "7627622" "7907010" "8081199" "20050064830" "20080044041" "20100171553"] "20110235827" "8174313" "20030062950" "20050156662" </pre>	US-PGPUB; USPAT	OR	OFF	2013/07/10

"20090097591" "20090289720" "5715526" "5905407" "6658445" "6819938" "6043610" "7609114" "20060178119" "20080252278" "7233130" "6624712" "8164388" "20030017286" "20040267842" "20080242246" "20120236444" "5351087" "5581454" "6300826" "6690652" "7696735" "7777549" "8198941" "7994864" "20030206603" "20060244513" "6995995" "20060181340" "20070014382" "6701141").PN.				
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EAST Search History (Interference)

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S48	147	330/10,136,207A,251,297,307.ccls. and (boost\$4 with (supply or voltage or power)) with (amplif\$4 or amplification)	US- PGPUB; USPAT; UPAD	OR	ON	2013/07/15 14:48

7/22/2013 2:28:16 PM

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	Application/Control No.	Applicant(s)/Patent Under Reexamination
Search Notes	13167659	MATHE ET AL.
	Examiner	Art Unit
	KHANH V NGUYEN	2817

CPC- SEARCHE	D	
Symbol	Date	Examiner

CPC COMBINATIO	ON SETS - SEARCHED	
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED

Class	Subclass	Date	Examiner
330	10,136,207A,251,297	11/5/2012	NKV
UPDATE	ABOVE	4/25/2013	NKV
UPDATE	ABOVE	7/15/2013	NKV

SEARCH NOTES		
Search Notes	Date	Examiner

	INTERFERENCE SEARCH		
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

FILED VIA EFS

Appln. No.: 13/167,659

Applicant: Lennart K. Mathe et al.

Filed: June 23, 2011

- Examiner: Khanh V. Nguyen
- Art Unit: 2817
- Customer No.: 23696
- Confirm. No.: 8529

Docket No.: 101005

Mail Stop Amendment Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

AMENDMENT

Sir:

In response to the Office Action dated July 26, 2013, please amend the above-identified application as follows:

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks/Arguments begin on page 8 of this paper.

Page 175 of 240

Application No.: 13/167,659 Amendment dated October 11, 2013 Reply to Office Action of July 26, 2013

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

2

Listing of Claims:

- 1. (Canceled)
- 2. (Canceled)

3. (Previously Presented) The apparatus of claim 4, wherein the envelope amplifier is operative to generate the second supply voltage based on the boosted supply voltage if the envelope signal exceeds a first threshold, or if the first supply voltage is below a second threshold, or both.

4. (Previously Presented) An apparatus comprising:

a boost converter operative to receive a first supply voltage and generate a boosted supply voltage having a higher voltage than the first supply voltage; and

an envelope amplifier operative to receive an envelope signal and the boosted supply voltage and generate a second supply voltage based on the envelope signal and the boosted supply voltage, wherein the envelope amplifier is operative to further receive the first supply voltage and generate the second supply voltage based on the first supply voltage and generate the second supply voltage based on the first supply voltage or the boosted supply voltage, and further wherein the envelope amplifier comprises

an operational amplifier (op-amp) operative to receive the envelope signal and provide an amplified signal,

a driver operative to receive the amplified signal and provide a first control signal and a second control signal,

a P-channel metal oxide semiconductor (PMOS) transistor having a gate receiving the first control signal, a source receiving the boosted supply voltage or the first supply voltage, and a drain providing the second supply voltage, and

Application No.: 13/167,659 Amendment dated October 11, 2013 Reply to Office Action of July 26, 2013

an N-channel metal oxide semiconductor (NMOS) transistor having a gate receiving the second control signal, a drain providing the second supply voltage, and a source coupled to circuit ground.

3

5. (Original) The apparatus of claim 4, wherein the envelope amplifier further comprises

a second PMOS transistor having a gate receiving a third control signal, a source receiving the boosted supply voltage, and a drain coupled to the source of the PMOS transistor, and

a third PMOS transistor having a gate receiving a fourth control signal, a source receiving the first supply voltage, and a drain coupled to the source of the PMOS transistor.

6. (Previously Presented) The apparatus of claim 4, further comprising:

a power amplifier operative to receive the second supply voltage from the envelope amplifier and to receive and amplify an input radio frequency (RF) signal and provide an output RF signal.

7. (Previously Presented) The apparatus of claim 4, wherein the first supply voltage is a battery voltage for the apparatus.

8. (Canceled)

9. (Canceled)

10. (Previously Presented) An apparatus for wireless communication, comprising:

a power amplifier operative to receive and amplify an input radio frequency (RF) signal and provide an output RF signal; and

a supply generator operative to receive an envelope signal and a first supply voltage, to generate a boosted supply voltage having a higher voltage than the first supply voltage, and to generate a second supply voltage for the power amplifier based on the envelope signal and the boosted supply voltage, wherein the supply generator incorporates an operational amplifier (op-

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amp) operative to receive the envelope signal and provide an amplified signal, a driver operative to receive the amplified signal and provide a first control signal and a second control signal, a Pchannel metal oxide semiconductor (PMOS) transistor having a gate receiving a first control signal, a source receiving the boosted supply voltage or the first supply voltage, and a drain providing the second supply voltage, and an N-channel metal oxide semiconductor (NMOS) transistor having a gate receiving the second control signal, a drain providing the second supply voltage, and a source coupled to circuit ground.

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11. (Original) The apparatus of claim 10, wherein the supply generator is operative to generate the second supply voltage based on the envelope signal and either the boosted supply voltage or the first supply voltage.

12. (Previously Presented) A method of generating supply voltages, comprising:

generating a boosted supply voltage based on a first supply voltage, the boosted supply voltage having a higher voltage than the first supply voltage; and

generating a second supply voltage based on an envelope signal and the boosted supply voltage, wherein the second supply voltage is generated by an envelope amplifier that produces the second supply voltage using an operational amplifier (op-amp) that receives the envelope signal and provides an amplified signal, a driver that receives the amplified signal and provides a first control signal and a second control signal, a P-channel metal oxide semiconductor (PMOS) transistor that receives the first control signal, a source that receives the boosted supply voltage or the first supply voltage, and a drain providing the second supply voltage and an N-channel metal oxide semiconductor (NMOS) transistor that receives the second control signal at a gate and provides a second supply voltage through a drain, and a source for circuit grounding.

13. (Original) The method of claim 12, wherein the generating the second supply voltage comprises generating the second supply voltage based on the envelope signal and either the boosted supply voltage or the first supply voltage.

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14.

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(Previously Presented) An apparatus for generating supply voltages, comprising:

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means for generating a boosted supply voltage based on a first supply voltage, the boosted supply voltage having a higher voltage than the first supply voltage; and

means for generating a second supply voltage based on the envelope signal and the boosted supply voltage, wherein the means for generating the second supply voltage incorporates an envelope amplifier that produces the second supply voltage using an operational amplifier (op-amp) that receives the envelope signal and provides an amplified signal, a driver that receives the amplified signal and provides a first control signal and a second control signal, a P-channel metal oxide semiconductor (PMOS) transistor that receives the first control signal, a source that receives the boosted supply voltage or the first supply voltage, and a drain providing the second supply voltage and an N-channel metal oxide semiconductor (NMOS) transistor that receives the second control signal at a gate and provides a second supply voltage through a drain, and a source for circuit grounding.

15. (Original) The apparatus of claim 14, wherein the means for generating the second supply voltage comprises means for generating the second supply voltage based on an envelope signal and either the boosted supply voltage or the first supply voltage.

16. (Canceled)

17. (Previously Presented) The apparatus of claim 18, further comprising:

a boost converter operative to receive the first supply voltage and provide a boosted supply voltage having a higher voltage than the first supply voltage, wherein the envelope amplifier operates based on the first supply voltage or the boosted supply voltage.

18. (Previously Presented) An apparatus comprising:

a switcher operative to receive a first supply voltage and provide a first supply current; an envelope amplifier operative to receive an envelope signal and provide a second supply current based on the envelope signal; and

a power amplifier operative to receive an envelope signal and provide a second supply current based on the envelope signal; and

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a power amplifier operative to receive a total supply current comprising the first supply current and the second supply current, wherein the switcher comprises

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a current sense amplifier operative to sense the first supply current, or the second supply current, or the total supply current and provide a sensed signal,

a driver operative to receive the sensed signal and provide a first control signal and a second control signal,

a P-channel metal oxide semiconductor (PMOS) transistor having a gate receiving the first control signal, a source receiving the first supply voltage, and a drain providing a switching signal for an inductor providing the first supply current, and

an N-channel metal oxide semiconductor (NMOS) transistor having a gate receiving the second control signal, a drain providing the switching signal, and a source coupled to circuit ground.

19. (Previously Presented) The apparatus of claim 18, wherein the first supply current comprises direct current (DC) and low frequency components, and wherein the second supply current comprises higher frequency components.

20. (Canceled)

21. (Previously Presented) The apparatus of claim 22, wherein the switcher operates based on a first supply voltage, and wherein the offset is determined based on the first supply voltage.

22. (Previously Presented) An apparatus comprising:

an inductor operative to receive a switching signal and provide a supply current; and a switcher operative to sense an input current and generate the switching signal to charge and discharge the inductor to provide the supply current, the switcher adding an offset to the input current to generate a larger supply current via the inductor than without the offset, wherein the switcher comprises

a summer operative to sum the input current and an offset current and provide a summed current,

a current sense amplifier operative to receive the summed current and provide a sensed signal, and

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a driver operative to receive the sensed signal and provide at least one control signal used to generate the switching signal for the inductor.

23. (Original) The apparatus of claim 22, wherein the at least one control signal comprises a first control signal and a second control signal, and wherein the switcher further comprises

a P-channel metal oxide semiconductor (PMOS) transistor having a gate receiving the first control signal, a source receiving a first supply voltage, and a drain providing the switching signal, and

an N-channel metal oxide semiconductor (NMOS) transistor having a gate receiving the second control signal, a drain providing the switching signal, and a source coupled to circuit ground.

24. (Previously Presented) The apparatus of claim 22, further comprising:

an envelope amplifier operative to receive an envelope signal and provide a second supply current based on the envelope signal, wherein a total supply current comprises the supply current from the switcher and the second supply current from the envelope amplifier.

25. (Original) The apparatus of claim 24, further comprising:

a boost converter operative to receive the first supply voltage and provide a boosted supply voltage having a higher voltage than the first supply voltage, wherein the envelope amplifier operates based on the first supply voltage or the boosted supply voltage.

26. (Previously Presented) The apparatus of claim 22, further comprising:

a power amplifier operative to receive the supply current from the inductor and to receive and amplify an input radio frequency (RF) signal and provide an output RF signal. 8

REMARKS/ARGUMENTS

The above identified patent application has been amended and reconsideration and reexamination are hereby requested.

Claims 3-7, 10-15, 17-19, and 21-26 are now pending in the application. Claims 1, 2, 9, 16, and 20 have been previously canceled. Claim 8 has been canceled.

Claim Objections

The Examiner has objected to claim 8 because of an informality. The Applicant has canceled claim 8. As claim 8 has been canceled the Applicant respectfully requests that the above objection be withdrawn.

Claim Rejections - 35 U.S.C. § 102

Claim 8 was rejected under pre-AIA 35 U.S.C. § 102(e) as being anticipated by Khlat et al. (U.S. Patent Publication No. 2012/0293253, hereinafter "Khlat").

Claim 8 has been canceled in this response, and Applicant requests that the rejection be withdrawn.

Claim Objections/Allowable Subject Matter

The Applicant thanks the Examiner for allowing claims 3-7, 10-15, 17-19, and 21-26.

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Docket No.: 101005 Customer No.: 23696

CONCLUSION

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In light of the amendments contained herein, the Applicant submits that the application is in condition for allowance, for which early action is requested.

Please charge any fees or overpayments that may be due with this response to Deposit Account No. 17-0026.

Respectfully submitted,

Dated: 2013-10-15

By: <u>/William Marcus Hooks/</u> William M. Hooks Reg. No. 48,857

QUALCOMM Incorporated Attn: Patent Department 5775 Morehouse Drive San Diego, California 92121-1714 Telephone: (858) 658-4351 Facsimile: (858) 658-3984 Page 183 of 240

Electronic Ack	knowledgement Receipt
EFS ID:	17131951
Application Number:	13167659
International Application Number:	
Confirmation Number:	8529
Title of Invention:	LOW-VOLTAGE POWER-EFFICIENT ENVELOPE TRACKER
First Named Inventor/Applicant Name:	Lennart K. Mathe
Customer Number:	23696
Filer:	William M. Hooks/Sheryl Schoen
Filer Authorized By:	William M. Hooks
Attorney Docket Number:	101005
Receipt Date:	15-OCT-2013
Filing Date:	23-JUN-2011
Time Stamp:	16:09:50
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted wi	th Payment	no			
File Listin	g:				
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Amendment/Req. Reconsideration-After	101005_2013-10-15_AMENDM	107507	no	9
	Non-Final Reject	ENT.pdf	0d285236790df70f2566de08ec47673e81c b9104	110	2
Warnings:			·		
Information:					

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application. Page 185 of 240



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

23696 7590 11/22/2013 QUALCOMM INCORPORATED 5775 MOREHOUSE DR. SAN DIEGO, CA 92121 EXAMINER NGUYEN, KHANH V

ART UNIT PAPER NUMBER
2843

DATE MAILED: 11/22/2013

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/167,659	06/23/2011	Lennart K. Mathe	101005	8529

TITLE OF INVENTION: LOW-VOLTAGE POWER-EFFICIENT ENVELOPE TRACKER

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	\$1780	\$300	\$0	\$2080	02/24/2014

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. <u>PROSECUTION ON THE MERITS IS CLOSED</u>. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN <u>THREE MONTHS</u> FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. <u>THIS</u> <u>STATUTORY PERIOD CANNOT BE EXTENDED</u>. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

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PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE **Commissioner for Patents** P.O. Box 1450 Alexandria, Virginia 22313-1450

or Fax (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fees with extinction. maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

23696 7590 11/22/2013 QUALCOMM INCORPORATED 5775 MOREHOUSE DR. SAN DIEGO, CA 92121

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)	
(Signature)	
(Date)	

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/167.659	06/23/2011	Lennart K. Mathe	101005	8529

TITLE OF INVENTION: LOW-VOLTAGE POWER-EFFICIENT ENVELOPE TRACKER

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	\$1780	\$300	\$0	\$2080	02/24/2014
EXA	MINER	ART UNIT	CLASS-SUBCLASS]		
NGUYEN	, KHANH V	2843	330-251000			
CFR 1.363). Change of corres Address form PTO/S TFee Address' in	dence address or indication spondence address (or Char SB/122) attached. dication (or "Fee Address" -02 or more recent) attache 1.	nge of Correspondence	or agents OR, alternativ (2) the name of a single registered attorney or a	3 registered patent attorn vely, e firm (having as a membu gent) and the names of up rneys or agents. If no nam	er a 2	

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF	ASSIGNEE
-------------	----------

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will	not be printed on the patent): 🖵 Individual 🖵 Corporation or other private group entity 🖵 Government
 4a. The following fee(s) are submitted: Issue Fee Publication Fee (No small entity discount permitted) Advance Order - # of Copies 	 4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above) A check is enclosed. Payment by credit card. Form PTO-2038 is attached. The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number (enclose an extra copy of this form).

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5. Change in Entity Status (from status indicated above)	
Applicant certifying micro entity status. See 37 CFR 1.29	<u>NOTE:</u> Absent a valid certification of Micro Entity Status (see form PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.
Applicant asserting small entity status. See 37 CFR 1.27	<u>NOTE:</u> If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.
Applicant changing to regular undiscounted fee status.	<u>NOTE</u> : Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

 Authorized Signature
 Date

Typed or printed name

Registration No.

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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Page 188		NT AND TRADEMARK OFFICE	UNITED STATES DEPAR United States Patent and Address: COMMISSIONER F P.O. Box 1450 Alexandria, Virginia 223 www.uspto.gov	Trademark Office OR PATENTS
APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/167,659	06/23/2011	Lennart K. Mathe	101005	8529
23696 75	90 11/22/2013		EXAM	IINER
QUALCOMM IN 5775 MOREHOUS	CORPORATED		NGUYEN,	KHANH V
SAN DIEGO, CA			ART UNIT	PAPER NUMBER
			2843	
			DATE MAILED: 11/22/201	3

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)

(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 92 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 92 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

- 1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
- 2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
- 3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
- 4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
- 5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
- 6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
- 7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
- 8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
- 9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Notices of Allowance and Fee(s) Due mailed between October 1, 2013 and December 31, 2013

(Addendum to PTOL-85)

If the "Notice of Allowance and Fee(s) Due" has a mailing date on or after October 1, 2013 and before January 1, 2014, the following information is applicable to this application.

If the issue fee is being timely paid on or after January 1, 2014, the amount due is the issue fee and publication fee in effect January 1, 2014. On January 1, 2014, the issue fees set forth in 37 CFR 1.18 decrease significantly and the publication fee set forth in 37 CFR 1.18(d)(1) decreases to \$0.

If an issue fee or publication fee has been previously paid in this application, applicant is not entitled to a refund of the difference between the amount paid and the amount in effect on January 1, 2014.

	Application No.	Applicant(s)	
	13/167,659	MATHE ET A	AL. AIA (First Inventor to
Notice of Allowability	Examiner KHANH V. NGUYEN	Art Unit 2817	File) Status
			No
The MAILING DATE of this communication appear All claims being allowable, PROSECUTION ON THE MERITS IS (herewith (or previously mailed), a Notice of Allowance (PTOL-85) of NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIC of the Office or upon petition by the applicant. See 37 CFR 1.313	OR REMAINS) CLOSED in this app or other appropriate communication GHTS. This application is subject to	lication. If not will be mailed i	included in due course. THIS
 This communication is responsive to <u>2/22/13</u>. A declaration(s)/affidavit(s) under 37 CFR 1.130(b) was/ 	were filed on		
 An election was made by the applicant in response to a restr requirement and election have been incorporated into this action 		ne interview on	; the restriction
3. The allowed claim(s) is/are <u>3-15,17-19,21-26</u> . As a result of the prosecution Highway program at a participating intellectual please see <u>http://www.uspto.gov/patents/init_events/pph/indepetents/init_events/init</u>	property office for the corresponding	g application. F	For more information,
4. Acknowledgment is made of a claim for foreign priority under	r 35 U.S.C. § 119(a)-(d) or (f).		
Certified copies:			
a) All b) Some *c) None of the:			
1. Certified copies of the priority documents have	been received.		
2. Certified copies of the priority documents have	been received in Application No.		
Copies of the certified copies of the priority doc	uments have been received in this r	national stage a	pplication from the
International Bureau (PCT Rule 17.2(a)).			
* Certified copies not received:			
Interim copies:			
a) All b) Some c) None of the: Interim cop	ies of the priority documents have be	een received.	
Applicant has THREE MONTHS FROM THE "MAILING DATE" of noted below. Failure to timely comply will result in ABANDONM THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.		complying with	the requirements
5. CORRECTED DRAWINGS (as "replacement sheets") must	be submitted.		
including changes required by the attached Examiner's Paper No./Mail Date	Amendment / Comment or in the O	ffice action of	
Identifying indicia such as the application number (see 37 CFR 1. each sheet. Replacement sheet(s) should be labeled as such in th			not the back) of
6. DEPOSIT OF and/or INFORMATION about the deposit of BI attached Examiner's comment regarding REQUIREMENT FO			ne
Attachment(s)			
1. Notice of References Cited (PTO-892)	5. 🗌 Examiner's Amendr		2
 Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date 	6. 🔲 Examiner's Stateme	ent of Reasons	for Allowance
3. Examiner's Comment Regarding Requirement for Deposit of Biological Material	7. 🗌 Other		
4. ☐ Interview Summary (PTO-413), Paper No./Mail Date			
/KHANH V. NGUYEN/ Primary Examiner, Art Unit 2817			

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	Application/Control No.	Applicant(s)/Patent Under Reexamination
Issue Classification	13167659	MATHE ET AL.
	Examiner	Art Unit
	KHANH V NGUYEN	2817

CPC		
Symbol	Туре	Version

CPC Combination Sets									
Symbol		Туре	Set	Ranking	Version				

US ORIGINAL CLASSIFICATION			INTERNATIONAL CLASSIFICATION										
CLASS SUBCLASS					С	LAIMED		N	ON-	CLAIMED			
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NONE	Total Claims Allowed:			
(Assistant Examiner)	(Date)	2	2	
/KHANH V NGUYEN/ Primary Examiner.Art Unit 2817	5/3/13	O.G. Print Claim(s)	O.G. Print Figure	
(Primary Examiner)	(Date)	1	3	

U.S. Patent and Trademark Office

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Issue Classification			Application/Control No. 13167659 Examiner KHANH V NGUYEN						MA [®]	Applicant(s)/Patent Under Reexamination MATHE ET AL. Art Unit 2817				

NONE		Total Claims Allowed:			
(Assistant Examiner)	(Date)	2	2		
/KHANH V NGUYEN/ Primary Examiner Art Unit 2817	5/3/13	O.G. Print Claim(s)	O.G. Print Figure		
(Primary Examiner)	(Date)	1	3		
S. Patent and Trademark Office		Pa	t of Paper No. 2013022		

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	Application/Control No.	Applicant(s)/Patent Under Reexamination
Issue Classification	13167659	MATHE ET AL.
	Examiner	Art Unit
	KHANH V NGUYEN	2817

Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
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NONE	Total Claims Allowed:					
(Assistant Examiner)	(Date)	2	2			
/KHANH V NGUYEN/ Primary Examiner.Art Unit 2817	5/3/13	O.G. Print Claim(s)	O.G. Print Figure			
(Primary Examiner)	(Date)	1	3			
IS Patent and Trademark Office Patent No. 20130						

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EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L5	591	330/10,136,207A,251,297.ccls. and ((switch\$4 or boost\$4) with suppl\$4) and (envelop\$4 or (current with sens\$4))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/11/04 08:27
S1	2	("6893101"). PN .	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2012/11/05 13:41
S2	11	(("20080278136") or ("20100001793") or ("20110095827") or ("6300826") or ("6661217") or ("6792252") or ("7061313") or ("7068984") or ("7368985") or ("7679433") or ("7932780")).PN.	US-PGPUB; USPAT	OR	OFF	2012/11/05 13:45
S3	231	330/136,251,297.ccls. and boost\$4	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/11/05 14:30
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S5	11	("20020153940" "20040251968" "20050057308" "6437641" "6492867" "6566944" "6831519" "6985039" "7193470" "7405618" "7420415").PN. OR ("7932780").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/11/06 12:08
S6	58	("20050110562" "20060119425" "20070019446" "20070024360" "20070126408" "20080030174"	US-PGPUB; USPAT; USOCR	OR	ON	2012/11/06 12:11

file:///Cl/Users/knguyen7/Documents/e-Red%20Folder/13167659/EASTSearchHistory.13167659_AccessibleVersion.htm[11/4/2013 10:37:41 AM]

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S9	590	"330"/\$.ccls. and boost\$4 same switch\$4	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB		ON	2012/11/09 15:28
S10	57	"330"/\$.ccls. and boost\$4 same (envelop\$3 with (amplif\$4 or amplification))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB		ON	2012/11/12 11:16
S11	3	(("5414614") or ("6055168") or ("6198645")).PN.	USPAT	OR	OFF	2012/11/12 11:39
S12	197	"330"/\$.ccls. and (envelop\$3 adj1 (amplif\$4 or amplification))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/11/12 11:49
S13	6	((("20040208262") or ("20040266366") or ("20080252380") or ("20090167427") or ("5905407") or ("0671646")).PN.	US-PGPUB; USPAT	OR	OFF	2012/11/12 16:12
S14	2	("5905407").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2012/11/12 18:01
S15	36	("4152670" "4446440" "4523152" "4600891" "5329245" "5352986" "5543753").PN. OR ("5905407").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/11/12 18:04

S16	4	("5905407" "6838931" "7116947").PN. OR ("7755431").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/11/12 18:27
S17	6	(("20090289720") or ("6300826") or ("6583664")).PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB		OFF	2012/11/12 19:09
S18	6	("7808323").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2012/11/12 19:11
S19	7	("20080074207" "7449954" "7679433" "7755422").PN. OR ("7808323").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/11/12 19:11
S20	5	("20030146791" "6437641" "6621350" "6975166" "7091777").PN. OR ("8274328").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/11/12 19:43
S21	51	("2210028" "5142240" "5420536" "5442317" "5745526" "5883927" "5886575" "5898342" "5929702" "6028486" "6175372").PN. OR ("6437641").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/11/12 19:44
S22	229	"330"/\$.ccls. and (((step\$4 adj1 up) or boost\$3) with converter)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/11/13 09:33
S23	76	"330"/\$.ccls. and ((DC adj1 DC) adj1 convert\$4) same (envelop\$3 with (amplif\$4 or amplification))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/11/13 12:29
S24	2	("20090160555" "20090215413").PN. OR ("8237499").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/11/13 13:33
S25	11	("20020153940" "20040251968" "20050057308" "6437641" "6492867" "6566944" "6831519" "6985039" "7193470" "7405618" "7420415").PN. OR ("7932780").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/11/13 13:46
S26	86	330/10,136,207A,251,297.ccls. and (envelop\$4 adj1 (amplif\$4 or amplification))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/11/13 20:22
S27	5	("20030146791" "6437641" "6621350" "6975166" "7091777").PN. OR ("8274328").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/11/13 20:32

S28	51		US-PGPUB; USPAT; USOCR	OR	ON	2012/11/13 20:33
S29	60	("20020171477" "20020186079" "20030214355" "20040174212" "20050242875" "3900823" "4320350" "4346349" "5142240" "5287069" "5757229" "5777519" "5786727" "5789984" "5793253" "5929702" "6043707" "6081161" "6112062" "6157253" "6239656" "6268768" "6297696" "6300826" "6362685" "6437641" "6515541" "6566944" "6583664" "6590451" "6617920" "6617929" "6661284" "6677819" "6735419").PN. OR ("7440733").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/11/13 20:36
S30	4	("20090191826" "20090289720" "6583664" "7808323").PN. OR ("8030995").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/11/13 20:51
S31	11	(("8030995") or ("5929776") or ("7932780") or ("2009027860") or ("5905407") or ("6838931") or ("20040208262") or ("7755431") or ("7808323") or ("20090191826") or ("7932780") or ("20110273235") or ("8237499") or ("8030995")).PN.	US-PGPUB; USPAT	OR	OFF	2012/11/17 17:41
S32	3	(("5414614") or ("6055168") or ("6198645")).PN.	US-PGPUB; USPAT	OR	OFF	2012/11/17 18:11
S34	7	((Dongsu near1 Kim) or (Jinsung or Choi) or (Daehyun near1 Kang) or (Bumman near1 Kim)).in. and (envelope adj1 tracking)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/11/17 18:15
S35	11	Wideband with Envelope with Tracking with (Power adj1 Amplifier)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/11/17 18:16
S36	121	boost\$4 with (linear\$4 adj1 (amplif\$4 or amplification))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/11/17 18:20
\$37	2	("6300826").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2012/11/17 18:55
S38	218	330/10,136,207A,251,297.ccls. and (boost\$4 with (voltage or power))	US-PGPUB; USPAT; USOCR;	OR	ON	2013/04/25 18:48

			FPRS; EPO; JPO; DERWENT; IBM_TDB			
S40	4	(("20050046474") or ("20050215209")).PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2013/05/03 21:34
S41	2	("20120326783").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2013/05/03 21:38
S42	18	(("6300826") or ("6792252") or ("7061313") or ("7679433") or ("5905407") or ("8237499") or ("20050215209") or ("20100001793") or ("7932780") or ("7932780") or ("8030995") or ("20050046474") or ("20080278136") or ("6661217") or ("7068984") or ("6838931") or ("7368985") or ("20110095827") or ("7755431")).PN.	US-PGPUB; USPAT	OR	OFF	2013/05/03 21:40
S43	2	("20090160555" "20090215413").PN. OR ("8237499").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/05/03 21:41
S44	228	330/10,136,207A,251,297.ccls. and (boost\$4 with (supply or voltage or power))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM TDB	OR	ON	2013/07/15 11:42
S45	17	330/307.ccls. and (boost\$4 with (voltage or power))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/07/15 14:49
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S49	136	(envelop\$4 with (amplif\$4 or amplification)) same (boost\$4 with (supply or voltage or power))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/07/16 09:33
S50	0	("8493141").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2013/07/16 09:51

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S52	19	("20040017251" "20040227208" "20050093526" "20060006850" "20060128324" "20060255777" "20070014382" "20070139975" "20070182490" "20070298731" "20080111529" "20080130330" "5781043" "5936357" "6256482" "6348781" "6798177" "7505742").PN. OR ("8089253").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/16 11:12
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EAST Search History Page 201 of 240

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EAST Search History (Interference)

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L7	161	330/10,136,207A,251,297.ccls. and ((switch\$4 or boost\$4) with suppl\$4) with (envelop\$4 or (current with sens\$4))	US- PGPUB; USPAT; UPAD	OR	ON	2013/11/04 09:53
S39		330/10,136,207A,251,297.ccls. and (boost\$4 with (voltage or power)) same switch\$4	US- PGPUB; USPAT; UPAD	OR	ON	2013/04/26 09:34
S48	147	330/10,136,207A,251,297,307.ccls. and (boost\$4 with (supply or voltage or power)) with (amplif\$4 or amplification)	US- PGPUB; USPAT; UPAD	OR	ON	2013/07/15 14:48

11/4/2013 10:37:36 AM

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	Application/Control No.	Applicant(s)/Patent Under Reexamination
Search Notes	13167659	MATHE ET AL.
	Examiner	Art Unit
	KHANH V NGUYEN	2817

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Symbol	Date	Examiner

CPC COMBINATION SETS	- SEARCHED	
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED						
Class	Subclass	Date	Examiner			
330	10,136,207A,251,297	11/5/2012	NKV			

SEARCH NOT	ES	
Search Notes	Date	Examiner
	SEARCH NOT Search Notes	SEARCH NOTES Search Notes Date

INTERFERENCE SEARCH						
US Subclass / CPC Group	Date	Examiner				

Page 202		AND TRADEMARK OFFICE	UNITED STATES DEPAR United States Patent and Address: COMMISSIONER F P.O. Box 1450 Alexandria, Virginia 223 www.uspto.gov	FOR PATENTS
APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/167,659	06/23/2011	Lennart K. Mathe	101005	8529
	7590 02/13/2014 INCORPORATED		EXAM	INER
5775 MOREHO	DUSE DR.		NGUYEN,	KHANH V
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			2843	
			NOTIFICATION DATE	DELIVERY MODE
			02/13/2014	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

us-docketing@qualcomm.com

	Application No.	Applicant(s))
	13/167,659	MATHE ET /	AL. AIA (First Inventor to
Notice of Allowability	Examiner KHANH V. NGUYEN	Art Unit 2843	File) Status
			No
The MAILING DATE of this communication appendix All claims being allowable, PROSECUTION ON THE MERITS IS (herewith (or previously mailed), a Notice of Allowance (PTOL-85) NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIG of the Office or upon petition by the applicant. See 37 CFR 1.313	OR REMAINS) CLOSED in this ap or other appropriate communicatio GHTS. This application is subject	oplication. If not n will be mailed	included in due course. THIS
 This communication is responsive to <u>2/22/13</u>. A declaration(s)/affidavit(s) under 37 CFR 1.130(b) was/ 	/were filed on		
2. An election was made by the applicant in response to a restrict requirement and election have been incorporated into this ac		the interview on	; the restriction
 The allowed claim(s) is/are <u>3-7,10-15,17-19 and 21-26</u>. As a Patent Prosecution Highway program at a participating interinformation, please see <u>http://www.uspto.gov/patents/init_event</u>	ellectual property office for the corr	esponding appli	cation. For more
4. \Box Acknowledgment is made of a claim for foreign priority unde	r 35 U.S.C. § 119(a)-(d) or (f).		
Certified copies:			
a) All b) Some *c) None of the:			
1. Certified copies of the priority documents have			
2. Certified copies of the priority documents have			application from the
 Copies of the certified copies of the priority doc International Bureau (PCT Rule 17.2(a)). 	cuments have been received in this	a national stage a	application from the
* Certified copies not received:			
Applicant has THREE MONTHS FROM THE "MAILING DATE" of noted below. Failure to timely comply will result in ABANDONM THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.		complying with	the requirements
5. CORRECTED DRAWINGS (as "replacement sheets") must	be submitted.		
including changes required by the attached Examiner's Paper No./Mail Date	Amendment / Comment or in the	Office action of	
Identifying indicia such as the application number (see 37 CFR 1. each sheet. Replacement sheet(s) should be labeled as such in the	he header according to 37 CFR 1.121	(d).	
 DEPOSIT OF and/or INFORMATION about the deposit of Bl attached Examiner's comment regarding REQUIREMENT FO 			he
Attachment(s)			
1. Notice of References Cited (PTO-892)	5. 🔲 Examiner's Amen	dment/Comment	É
2. Information Disclosure Statements (PTO/SB/08),	6. 🗌 Examiner's Stater	nent of Reasons	for Allowance
Paper No./Mail Date 3. Examiner's Comment Regarding Requirement for Deposit of Biological Material	7. 🔲 Other		
4. Interview Summary (PTO-413), Paper No./Mail Date			
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Primary Examiner, Art Unit 2843			
U.S. Patent and Trademark Office	1.		

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	Application/Control No.	Applicant(s)/Patent Under Reexamination
Issue Classification	13167659	MATHE ET AL.
	Examiner	Art Unit
	KHANH V NGUYEN	2817

CPC							
Symbol	- 00077		Туре	Version			

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	Total Claims Allowed:			
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	Application/Control No.	Applicant(s)/Patent Under Reexamination
Issue Classification	13167659	MATHE ET AL.
	Examiner	Art Unit
	KHANH V NGUYEN	2817

	US ORIGINAL CLASSIFICATION									INTERNATION	AL CL	ASS	IFIC	ATI	ON
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	11/04/13	(Date) 20 11/04/13 O.G. Print Claim(s)		

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	Application/Control No.	Applicant(s)/Patent Under Reexamination
Issue Classification	13167659	MATHE ET AL.
	Examiner	Art Unit
	KHANH V NGUYEN	2817

Final	Original	Final	Original	Final	Original	Final	Original								
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NONE	Total Claims Allowed:			
(Assistant Examiner)	(Date)	20		
/KHANH V NGUYEN/ Primary Examiner.Art Unit 2817	11/04/13	O.G. Print Claim(s)	O.G. Print Figure	
(Primary Examiner)	(Date)	1	3	
S. Patent and Trademark Office		Pa	rt of Paper No. 201310	

Page 208 of 240

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE

iii Mail Stop ISSUE FEE Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 (571)-273-2885

or Fax (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications. Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission. CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address) QUALCOMM Incorporated 5775 Morehouse Drive Certificate of Mailing or Transmission I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below. San Diego, CA 92121 Shervl Schoen (Depositor's name) (Signature) /Sheryl Schoen/ (Date) 21 February 2014 APPLICATION NO. FILING DATE FIRST NAMED INVENTOR ATTORNEY DOCKET NO. CONFIRMATION NO. Lennart K. Mathe 13/167.659 06/23/2011 101005 8529 TITLE OF INVENTION: PREV. PAID ISSUE FEE APPLN, TYPE SMALL ENTITY ISSUE FEE DUE PUBLICATION FEE DUE TOTAL FEE(S) DUE DATE DUE nonprovisional NO \$960 \$0 \$0 \$960 02/24/2014 EXAMINER CLASS-SUBCLASS ART UNIT 1. Change of correspondence address or indication of "Fee Address" (37 2. For printing on the patent front page, list CFR 1.363). 1 William M. Hooks (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached. (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is Tree Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required. listed, no name will be printed. 3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type) PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment. (A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY) QUALCOMM Incorporated San Diego, CA Please check the appropriate assignee category or categories (will not be printed on the patent): 🔲 Individual 📾 Corporation or other private group entity 🛄 Government 4a. The following fee(s) are submitted: 4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above) ☑ Issue Fee A check is enclosed. Publication Fee (No small entity discount permitted) Payment by credit card. Form PTO-2038 is attached. The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any Advance Order - # of Copies overpayment, to Deposit Account Number 17-0026 (enclose an extra copy of this form). 5. Change in Entity Status (from status indicated above) □ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2). a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office. Date 2014-02-21 /William Marcus Hooks/ Authorized Signature Typed or printed name William M. Hooks Registration No. 48857 This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

- 1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
- 2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
- 3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
- 4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
- 5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
- 6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
- 7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
- 8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
- 9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

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Application Data Sheet 37 CFR 1.76		Attorney Docket Number	101005				
		Application Number	13/167,659				
Title of Invention	Title of Invention LOW-VOLTAGE POWER-EFFICIENT ENVELOPE TRACKER						
The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFB 1.76							

This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.

Secrecy Order 37 CFR 5.2

Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)

Applicant Information:

Applic	ant 1										
Applic	ant Authority	Inventor	OLega	al Representativ	e under 3	35 U	I.S.C. 11	7	OParty of Ir	nterest under 35 U.S.	.C. 118
Prefix				Middle Name			Fan	nily Name		Suffi	
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Addre	ss 2			••••••		•••••	*****	•••••	*****	*****	******
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Applic		<u></u>	~	·····							~
	ant Authority)Inventor	OLega	al Representativ		35 0	I.S.C. 11		<u>[~</u>	nterest under 35 U.S.	.C. 118
Prefix	Given Name		Middle Name Family Name			Suffi					
	Thomas		O Domenick Marra								
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Mailin	g Address of A	pplicant:									
Addre	ss 1	5775 More	house (Drive							
Addre	ss 2										
City	San Diego			********	s	tate	/Provin	ice	CA	*****	*************
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Page 211 of 240

Approved for use through 09/30/2010. OMB 0651-0032 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number 1		101005					
whhice			K 1.70	Application Number		13/167,659			
Title of In	of Invention LOW-VOLTAGE POWER-EFFICIENT ENVELOPE TRACKER								
Citizens	hip under	37 CFR 1.41(b)	US						
Mailing /	Address	of Applicant:							
Address	1	5775 Morehou	lse Drive						
Address	2								
City	San Di	ego		8	tate/Provin	ice	CA		
Postal C	ode	92121		Count	r y Us				
	Section and Section	t Be Listed - Add			on blocks r	may be		Add	

generated within this form by selecting the Add button.

Correspondence Information:

Enter either Customer For further information	Number or complete the Correspondence in see 37 CFR 1.33(a).	formation section below.
An Address is bei	ng provided for the correspondence Informa	tion of this application.
Customer Number	23696	
Email Address		Add Email Remove Email

Application Information:

Title of the Invention	LOW-VOLTAGE POWER-EFFICIENT ENVELOPE TRACKER					
Attorney Docket Number	101005		Small Entity Status Claimed			
Application Type	Nonprovisional					
Subject Matter	Utility					
Suggested Class (if any)			Sub Class (if any)			
Suggested Technology Co	enter (if any)					
Total Number of Drawing Sheets (if any)		6	Suggested Figure for Publication (if any)	3		

Publication Information:

Request Early Publication (Fee required at time of Request 37 CFR 1.219)

Request Not to Publish. I hereby request that the attached application not be published under 35 U.S.
 C. 122(b) and certify that the invention disclosed in the attached application has not and will not be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

Representative Information:

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32). Enter either Customer Number or complete the Representative Name section below. If both sections are completed the Customer Number will be used for the Representative Information during processing.

Please Select One:	mer Number O US Patent Practitioner	er 🔘 Limited Recogn	nition (37 CFR 11.9)
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Page 212 of 240

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Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	101005			
Application Da	lia Sheet ST GFR 1.70	Application Number	13/167,659			
Title of Invention	f Invention LOW-VOLTAGE POWER-EFFICIENT ENVELOPE TRACKER					
Customer Number	23696					

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, or 365(c) or indicate National Stage entry from a PCT application. Providing this information in the application data sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78(a)(2) or CFR 1.78(a)(4), and need not otherwise be made part of the specification.

Prior Application Status			Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
Additional Domestic Benefit/Na by selecting the Add button.	itional Stage Data may be	generated within this form	

Foreign Priority Information:

		R	emove
Application Number	Country ⁱ	Parent Filing Date (YYYY-MM-DD)	Priority Claimed
			● Yes ○ No

Assignee Information:

	n in the application data sheet doe ssignment recorded in the Office.	s not substitute for compliance w	ith any requirement of part 3 of Title 37				
Assignee 1							
If the Assignee is an (Organization check here.	3					
Organization Name QUALCOMM Incorporated							
Mailing Address Information:							
Address 1 5775 Morehouse Drive							
Address 2							
City	San Diego	State/Province	CA				
Country US		Postal Code	92121				
Phone Number	858-845-4265	Fax Number					
Email Address	us-docketing@quatcomm.c	om					
Additional Assignee I button.	Data may be generated within t	this form by selecting the Ac	ld				

Signature:

A signature of the applicant or representative is required in accordance with 37 CFR 1.33 and 10.18. Please see 37 CFR 1.4(d) for the form of the signature.

PT0/SB/14 (11-08) Approved for use through 09/30/2010. OMB 0651-0032

48857

Page 213 of 240

William M.

Last Name

First Name

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Registration Number

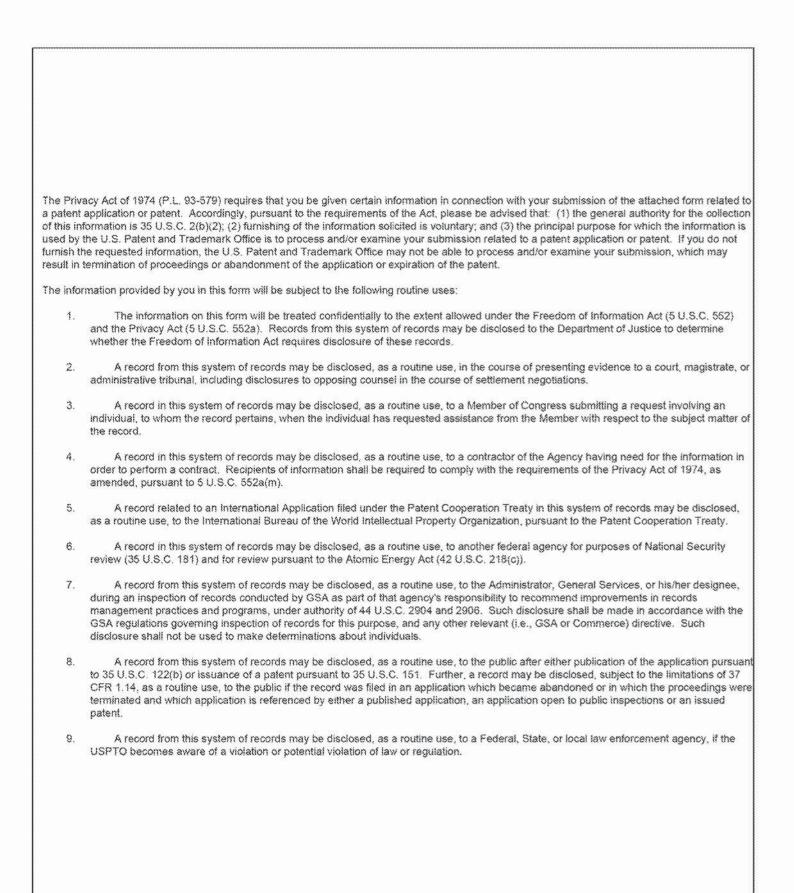
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number				
мррисан		ILA SHEEL ST GFK 1.70	Application Number	13/167,659		
Title of Inve	ntion	LOW-VOLTAGE POWER-EF	FICIENT ENVELOPE TRACKE	R		
Signature	Willie	im Marcus Hooks/		Date (YYYY-MM-DD)	2014-02-18	

Hooks

This collection of information is required by 37 CFR 1.76. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Privacy Act Statement



Electronic Patent Application Fee Transmittal							
Application Number:	13	167659					
Filing Date:	23-	23-Jun-2011					
Title of Invention:	LO	W-VOLTAGE POWEI	R-EFFICIENT EN	IVELOPE TRACKER			
First Named Inventor/Applicant Name:	Lennart K. Mathe						
Filer:	William M. Hooks/Sheryl Schoen						
Attorney Docket Number:	101005						
Filed as Large Entity	0.						
Utility under 35 USC 111(a) Filing Fees							
Description		Fee Code	Quantity	Amount	Sub-Total in USD(\$)		
Basic Filing:							
Pages:							
Claims:							
Miscellaneous-Filing:							
Petition:							
Patent-Appeals-and-Interference:							
Post-Allowance-and-Post-Issuance:							
Utility Appl Issue Fee		1501	1	960	960		
Extension-of-Time:							

Page 216 of 240

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
	Tot	al in USD (\$)	960

Page 217 of 240

Electronic Acl	Electronic Acknowledgement Receipt					
EFS ID:	18271805					
Application Number:	13167659					
International Application Number:						
Confirmation Number:	8529					
Title of Invention:	LOW-VOLTAGE POWER-EFFICIENT ENVELOPE TRACKER					
First Named Inventor/Applicant Name:	Lennart K. Mathe					
Customer Number:	23696					
Filer:	William M. Hooks/Sheryl Schoen					
Filer Authorized By:	William M. Hooks					
Attorney Docket Number:	101005					
Receipt Date:	21-FEB-2014					
Filing Date:	23-JUN-2011					
Time Stamp:	18:14:55					
Application Type:	Utility under 35 USC 111(a)					

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	\$960
RAM confirmation Number	5082
Deposit Account	170026
Authorized User	
The Director of the USPTO is hereby authorized to	charge indicated fees and credit any overpayment as follows:
Charge any Additional Fees required under 37 C	F.R. Section 1.16 (National application filing, search, and examination fees)
Charge any Additional Fees required under 37 C	I.F.R. Section 1.17 (Patent application and reexamination processing fees)

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14	any Additional Fees required under 37 C.	CX			
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File Listing	j:				
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.
1	Issue Fee Payment (PTO-85B)	101005_2014-02-21_ISS_FEE_T	75957	no	2
EA C	uradi na serio sente dente altra uradoj. Sucharistato	L.pdf	0dd3da0502be00be2952e006a78365fdca6 2922b	(24 M.)ST	5444
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Information:					
2	Application Data Sheet	101005_2014-02-21_SADS.pdf	1451705	no	5
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Information:					
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an internation and of the Inte	national application is being filed a nal filing date (see PCT Article 11 a ernational Filing Date (Form PCT/F rity, and the date shown on this Ac	nd MPEP 1810), a Notification RO/105) will be issued in due co	of the International / ourse, subject to pres	Application criptions co	Number

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UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

APPLICATION NO.		ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/167,659		04/15/2014	8698558	101005	8529
23696	7590	03/26/2014			

QUALCOMM INCORPORATED 5775 MOREHOUSE DR. SAN DIEGO, CA 92121

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)

(application filed on or after May 29, 2000)

The Patent Term Adjustment is 38 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Data Management (ODM) at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site http://pair.uspto.gov for additional applicants):

Lennart K. Mathe, San Diego, CA; Thomas Domenick Marra, San Diego, CA; Todd R. Sutton, Del Mar, CA;

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The USA offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to encourage and facilitate business investment. To learn more about why the USA is the best country in the world to develop technology, manufacture products, and grow your business, visit <u>SelectUSA.gov</u>.

I hereby certify that this correspondence is being filed via EFS-Web with the United States Patent and Trademark Office on _______ April 17, 2017

KILPATRICK TOWNSEND & STOCKTON LLP

By: /William H. Gorman/ William H. Gorman

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Lennart K. Mathe et al. Patent No.: 8,698,558 Issued: April 15, 2014 For: LOW-VOLTAGE POWER-EFFICIENT ENVELOPE TRACKER Application No.: 13/167,659 Filed: June 23, 2011 Confirmation No.: 8529 Examiner: Khanh V. Nguyen Art Unit: 2843

REQUEST FOR CERTIFICATE OF CORRECTION UNDER 37 CFR § 1.323

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Commissioner:

Pursuant to 37 CFR § 1.323, Applicant submits a Request for Certificate of Correction correcting errors in the Claims. The desired corrections are set forth on the enclosed form PTO/SB/44, and are described below.

In particular, Applicant submits that the following phrase of issued claim 12 (column 12, lines 57-59 of patent number 8,698,558) was included as the result of copy and paste error of a typographical nature: "a power amplifier operative to receive an envelope signal and provide a second supply current based on the envelope signal; and." During prosecution of the application, the Office submitted that original dependent claim 18 was allowable if original independent claim 16 was re-written to include the subject matter of original dependent claim 18. *See Non-Final Office Action dated November 23, 2012*, pages 4-5. As indicated in the Amendment dated February 22, 2013 (hereinafter "Amendment"), Applicant attempted to incorporate the subject matter of original claims 16 and 18 to place the claims in condition for allowance. *See Amendment*, page 11. When amending original claim 18 to incorporate the subject matter of

original claim 16, Applicant inadvertently repeated the identical language "operative to receive an envelope signal and provide a second supply current based on the envelope signal; and" after the "envelope amplifier" and after the first recitation of the "power amplifier." *See Amendment*, page 6. The resulting claim was issued as claim 12 in patent number 8,698,558.

The repeated recitation of the above-described subject matter after the first recitation of the "power amplifier" was a minor, typographical error. Applicant requests correction of this error by deleting the phrase "a power amplifier operative to receive an envelope signal and provide a second supply current based on the envelope signal; and" from claim 12 at column 12, lines 57-59, of patent number 8,698,558.

Applicant submits that the requested correction does not involve such changes in the patent as would constitute new matter or would require reexamination. For example, the subject matter of corrected claim 12 is fully supported in the original claims as filed (i.e., original claims 16 and 18). Further, the Examiner of record indicated that the combined subject matter of original claims 16 and 18 is allowable, which indicates that reexamination is not required. *See Non-Final Office Action dated November 23, 2012*, pages 4-5.

Pursuant to 37 CFR §1.20(a), a fee of \$100 will be charged via credit card. If additional fees are associated with this Request, the Commissioner is authorized to charge said fee to the undersigned's Deposit Account No. 20-1430.

Respectfully submitted,

/Shelton W. Austin/ Shelton W. Austin Registration No. 60,540

KILPATRICK TOWNSEND & STOCKTON LLP 1100 Peachtree Street, Suite 2800 Atlanta, GA 30309 Tel: 858-350-6100 Fax: 858-350-6111

UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

Page 1 of 1

PATENT NO. : 8,698,558

APPLICATION NO.: 13/167,659

ISSUE DATE : April 15, 2014

INVENTOR(S) : Lennart K. Mathe, Thomas Domenick Marra, and Todd R. Sutton

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 12, Claim 12, Lines 57-59:

Delete "a power amplifier operative to receive an envelope signal and provide a second supply current based on the envelope signal; and"

MAILING ADDRESS OF SENDER (Please do not use Customer Number below):

Kilpatrick Townsend & Stockton LLP 1100 Peachtree Street, Suite 2800 Atlanta, Georgia 30309

This collection of information is required by 37 CFR 1.322, 1.323, and 1.324. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1.0 hour to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Attention Certificate of Corrections Branch, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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Privacy Act Statement

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The information provided by you in this form will be subject to the following routine uses:

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- A record from this system of records may be disclosed, as a routine use, in the course of
 presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to
 opposing counsel in the course of settlement negotiations.
- A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
- 4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
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- A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

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	3.73(b). appoint:					
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OR Pra	actilioner(s) named belo	ow (if more than ten pate	int practitioners are t	o be named, then a	customer number mu	st be used):
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Under the Paperwork Reduction Act of 1995, no persons are required to respond to a	a collection of information unless it displays a valid OMB control num	ber

Applicant/Patent Owner: Qualcomm Incorporated Applicant/Patent No:: § 699,558 Titled: LOW-VOLTAGE POWER-EFFICIENT ENVELOPE TRACKER Qualcomm Incorporated a (name of Assgmee) _a an assignee of the entire right, title, and interest in: ?.	STATEMENT UNDER 37 CFR 3.73(b)	
Application No./Patent No.: 8,698,558 Filed/issue Date: April 15, 2014 Titled: LOW-VOLTAGE POWER-EFFICIENT ENVELOPE TRACKER Qualcomm Incorporated , a corporation (hame of Assigned) , a corporation states that it is: . 1. It the assignee of the entire right, title, and interest in: 2. an assignee of an undivided interest in the entire right, title, and interest in	Applicant/Patent Owner: Qualcomm Incorporated	
Titled: LOW-VOLTAGE POWER-EFFICIENT ENVELOPE TRACKER Quadcomm Incorporated , a corporation (Imme of Assignee) . (Type of Assignee, e.g., corporation, partnenhip, university, government agency, etc. states that it is: . an assignee of the entire right, title, and interest in: 2. an assignee of less than the entire right, title, and interest in	Application No./Patent No.: 8,698,558 Filed/Issue Date: April 1	15, 2014
(Name of Assignee) (Type of Assignee, e.g., corporation, pathenship, university, government agency, etc. states that it is: 1. Image: the assignee of the entire right, title, and interest in the entirety of (a complete assignment from one of the joint inventors was made) 1. Image: the assignee of an undivided interest in the entirety of (a complete assignment from one of the joint inventors was made) 2. Image: the assignee of an undivided interest in the entirety of (a complete assignment from one of the joint inventors was made) 3. Image: the assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel 026944, or for which a copy therefore is attached. 0. Image: the document was recorded in the United States Patent and Trademark Office at Reel, or for which a copy thereof is attached. 2. From:	Titled:	
(Name of Assignee) (Type of Assignee, e.g., corporation, pathenship, university, government agency, etc. states that it is: 1. Image: the assignee of the entire right, title, and interest in the entirety of (a complete assignment from one of the joint inventors was made) 1. Image: the assignee of an undivided interest in the entirety of (a complete assignment from one of the joint inventors was made) 2. Image: the assignee of an undivided interest in the entirety of (a complete assignment from one of the joint inventors was made) 3. Image: the assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel 102644, or for which a copy therefore is attached. 0. Image: the assignment was recorded in the United States Patent and Trademark Office at Reel, or for which a copy thereof is attached. 2. From:	Qualcomm Incorporated , a corporation	
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As required by 37 CFR 3.73(b)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11. [NOTE: A separate copy (<i>i.e.</i> , a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08] The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee. /Shelton W. Austin/ 2017-04-17 Signature Date Shelton W. Austin Attorney, Reg. No.: 60,540 Printed or Typed Name Title	Reel, Frame, or for whic	h a copy thereof is attached.
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/Shelton W. Austin/ 2017-04-17 Signature Date Shelton W. Austin Attorney, Reg. No.: 60,540 Printed or Typed Name Title		
Signature Date Shelton W. Austin Attorney, Reg. No.: 60,540 Printed or Typed Name Title	The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.	
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Printed or Typed Name Title	Signature	Date
	Shelton W. Austin	Attorney, Reg. No.: 60,540
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- 7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
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Electronic Patent Application Fee Transmittal							
Application Number:	13	167659			10 10		
Filing Date:	23-	23-Jun-2011					
Title of Invention:	LOW-VOLTAGE POWER-EFFICIENT ENVELOPE TRACKER						
First Named Inventor/Applicant Name:	Ler	nnart K. Mathe					
Filer:	She	elton Wilkes Austin/	/William Gorma	an			
Attorney Docket Number:	Attorney Docket Number: 101005						
Filed as Large Entity							
Filing Fees for Utility under 35 USC 111(a)							
Description		Fee Code	Quantity	Amount	Sub-Total in USD(\$)		
Basic Filing:							
Pages:							
Claims:							
Miscellaneous-Filing:							
Petition:							
Patent-Appeals-and-Interference:							
Post-Allowance-and-Post-Issuance:							
Certificate of correction		1811	1	100	100		

Page 228 of 240

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension-of-Time:				
Miscellaneous:				
	Tot	al in USD	(\$)	100

Page 229 of 240

Electronic Acknowledgement Receipt			
EFS ID:	28947447		
Application Number:	13167659		
International Application Number:			
Confirmation Number:	8529		
Title of Invention:	LOW-VOLTAGE POWER-EFFICIENT ENVELOPE TRACKER		
First Named Inventor/Applicant Name:	Lennart K. Mathe		
Customer Number:	23696		
Filer:	Shelton Wilkes Austin/William Gorman		
Filer Authorized By:	Shelton Wilkes Austin		
Attorney Docket Number:	101005		
Receipt Date:	17-APR-2017		
Filing Date:	23-JUN-2011		
Time Stamp:	17:34:00		
Application Type:	Utility under 35 USC 111(a)		

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	\$100
RAM confirmation Number	041817INTEFSW17345800
Deposit Account	201430
Authorized User	Jennifer Jacobs

37 CFR 1.17 (Patent application and reexamination processing fees)

Page 230 of 240 37 CFR 1.19 (Document supply fees)

37 CFR 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
		101005_Request_for_Certificat	261636		
1	Request for Certificate of Correction	e_of_Correction_Filed_April_1 7_2017.pdf	05ac413929502102f72c281f59d7a8b64d07 ca0b	no	4
Warnings:				I	
Information:					
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2	Power of Attorney PC		A.pdf 205430a8e8097b37faee4f6652dcd02747a b2a16		1
Warnings:	é		LI	1	
Information:					
			422862		2
3	Assignee showing of ownership per 37 CFR 3.73	101005_Statement_Under_373 b_Filed_April_17_2017.pdf	1d3ddfdd70569e3d9a4960e894a42b3418f cc396	no	
Warnings:			k		
Information:					
			30354		
4	Fee Worksheet (SB06)	fee-info.pdf	85a2acf401cb3785cd071d767232147e9d1 87bb8	no	2
Warnings:			II		
Information:					
		Total Files Size (in bytes)	12	89222	

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

13/167,659 06/23/2011 Lennart K. Mathe 101005 15093 CONFIRMATION N Kilpatrick Townsend & Stockton/Qualcomm POA ACCEPTANCE LETTER Mailstop: IP Docketing - 22 1100 Peachtree Street Suite 2800 Stockton/Qualcomm	UNITED STATES PATENT AND TRADEMARK OFFICE United States Patent and Trad Address: COMMISSIONER FOR PATH PO. Box 1450 Alexandra, Virginia 22313-1450 www.uspit.com			SSIONER FOR PATENTS 450 a, Virginia 22313-1450
15093 CONFIRMATION M 15093 POA ACCEPTANCE LETTER Kilpatrick Townsend & Stockton/Qualcomm Mailstop: IP Docketing - 22 1100 Peachtree Street OC00000090774384* Suite 2800 OC00000090774384*	APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
Kilpatrick Townsend & Stockton/Qualcomm Mailstop: IP Docketing - 22 1100 Peachtree Street Suite 2800		06/23/2011		CONFIRMATION NO. 852
Alianta, GA 30309	Kilpatrick Townsend & Stoc Mailstop: IP Docketing - 22 1100 Peachtree Street			

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 04/17/2017.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at (571) 272-4000 or (571) 272-4200 or 1-888-786-0101.

/mabebe/

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PTO/AIA/122 (08-12) Approved for use through 01/31/2018. OMB 0651-0035 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Dependent Deduction Act of 4005

Under the Paperwork Reduction Act of 1995, no persons are required to	respond to a collection of informatio	n unless it displays a valid OMB control number.
CHANGE OF	Application Number	13/167,659
CORRESPONDENCE ADDRESS	Filing Date	June 23, 2011
Application	First Named Inventor	Lennart K. Mathe
Address to:	Art Unit	2843
Commissioner for Patents P.O. Box 1450	Examiner Name	KHANH V. NGUYEN
Alexandria, VA 22313-1450	Attorney Docket Number	101005
Please change the Correspondence Address for the abo	ove-identified patent applicat	tion to:
The address associated with Customer Number: 15141		α.
OR	1. a. 10	
Firm or Individual Name		
Address	100 C	
City	State	Zip
Country		
Telephone	Email	4 A
This form cannot be used to change the data associated data associated with an existing Customer Number use	with a Customer Number. T Request for Customer Num	o change the ber Data Change" (PTO/SB/124)
I am the:		
Applicant		
Attorney or agent of record. Registration N	Number 58,786	2
Registered practitioner named in the appli		o acts in a representative capacity
under 37 CFR 1.34. See 37 CFR 1.33(a)	(1). Registration Number	
2. A		
^{Signature} /Alvin Fashu-Kanu/	- <u></u>	
Typed or Printed ALVIN FASHU-KANU		
Date May 2, 2017	Telephone 310-201-	
NOTE: This form must be signed in accordnace with 37 CFR 1.33. See 37 CFR Submit multiple forms if more than one signature is required, see below".		
*Total of 2forms are submitted.		
This collection of information is required by 37 CFR 1.33. The information is re	equired to obtain or retain a benefit b	by the public which is to file (and by the USPTO

to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

PTO/AIA/82B(07-12) Approved for use through xx/xx/xxxx. OMB 0651-0035 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

	POWER OF	ATTORN	IEY B)	APPL	ICANT	
l hereby revoke all	previous powers of att	orney given in the	application i	dentified in th	he attached tr	ansmittal letter.
transact all busin in the attached t OR I hereby appoint United States Pa	t Practitioner(s) associate ness in the United States transmittal letter (form PT t Practitioner(s) named b atent and Trademark Off r (form PTO/AIA/82A or e	Palent and Tradem O/AIA/82A or equiva- elow as my/our attor ice connected there	ark Office cor alent): 1 ney(s) or age	5141 nt(s), and to tr	with for the appl	ication referenced
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am the Applicant:	nt Inventor					3
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	erson to Whom the Inv	entor is Under an (Obligation to	Assign		
Assignee or P	Person to Whom the Inv Otherwise Shows Suffici				r 37 CFR 1.46	i(b)(2) was
Assignee or P	Person to Whom the Inv Otherwise Shows Suffici application or is concur	ent Proprietary Inte	erest (e.g., a	petition unde	r 37 CFR 1.46	i(b)(2) was
Assignee or P	Otherwise Shows Suffici application or is concur	ent Proprietary Inte	erest (e.g., a ith this docu	petition unde ment)	r 37 CFR 1.46	i(b)(2) was
Assignee or P Person Who C granted in the	Otherwise Shows Suffici application or is concur PCCBAC	ent Proprietary Inter rently being filed w	erest (e.g., a ith this docu	petition unde ment)	r 37 CFR 1.46	
Assignee or P Person Who C granted in the Signature	Ditherwise Shows Suffici application or Is concur CBACE Raymond B. Hom	ent Proprietary Inte rently being filed w SIGNATURE of Appli	erest (e.g., a ith this docu cant for Paten	petition unde ment) t Date Telephone	n	
Assignee or P Person Who C granted in the Signature Name Title and Company	Application or Is concur Conc	ent Proprietary Inte rently being filed w SIGNATURE of Appli the Counsel and QUA	erest (e.g., a ith this docu cant for Paten LCOMM Inco	petition unde ment) t Date Telephone rporated	19 SEP 2 858-651-3679	2012
Assignee or P Person Who C granted in the Signature Name Title and Company NOTE: Signature - This for	Ditherwise Shows Suffici application or Is concur CBACE Raymond B. Hom	ent Proprietary Inte rently being filed w SIGNATURE of Appli the Counsel and QUA applicant or applicant's	erest (e.g., a ith this docu cant for Paten LCOMM Inco representative	petition unde ment) t Date Telephone rporated in accordance w	19 57 2 858-651-3679 with 37 CFR 1.33.	2012
Assignee or P Person Who C granted in the Signature Name Title and Company NOTE: Signature - This for	Application or Is concur CARACTER Raymond B. Hom Vice President, Pater orm must be signed by the a	ent Proprietary Inte rently being filed w SIGNATURE of Appli ant Counsel and QUA applicant or applicant's ultiple forms for more th	erest (e.g., a ith this docu cant for Paten LCOMM Inco representative	petition unde ment) t Date Telephone rporated in accordance w	19 57 2 858-651-3679 with 37 CFR 1.33.	2012

Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Page 235 of 240

Electronic Acknowledgement Receipt				
EFS ID:	29098046			
Application Number:	13167659			
International Application Number:				
Confirmation Number:	8529			
Title of Invention:	LOW-VOLTAGE POWER-EFFICIENT ENVELOPE TRACKER			
First Named Inventor/Applicant Name:	Lennart K. Mathe			
Customer Number:	15093			
Filer:	Alvin Fashu-Kanu/Gayle Vinson			
Filer Authorized By:	Alvin Fashu-Kanu			
Attorney Docket Number:	101005			
Receipt Date:	02-MAY-2017			
Filing Date:	23-JUN-2011			
Time Stamp:	20:18:53			
Application Type:	Utility under 35 USC 111(a)			

Payment information:

Submitted with Payment		no				
Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)		
1 Power of Attorney 101005_POA_AsFiled_02May2 017.pdf		56396				
	e87e983787ad340e62e3198f4a095af7def8 0d68	no	2			
	Document Description	Document Description File Name Power of Attorney 101005_POA_AsFiled_02May2	Document Description File Name File Size(Bytes)/ Message Digest Power of Attorney 101005_POA_AsFiled_02May2 017.pdf 56396	Document Description File Name File Size(Bytes)/ Message Digest Multi Part /.zip Power of Attorney 101005_POA_AsFiled_02May2 017.pdf 56396 no		

Page 236 of 240

Information:

Total Files Size (in bytes):

56396

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

UNITED STATES PATENT AND TRADEMA		UNITED STA United State: Address: COMMI PO. Box	a, Virginia 22313-1450
APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
13/167,659	06/23/2011	Lennart K. Mathe	101005
			CONFIRMATION NO. 8529
15141		POA ACC	EPTANCE LETTER
Qualcomm Incorporated/Se	eyfarth Shaw LLP		
Alan M. Lenkin			OC000000091174618*
2029 Century Park East, S	uite 3500	*	OC00000091174618*
Los Angeles, CA 90067-30	121		

Date Mailed: 05/08/2017

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 05/02/2017.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at (571) 272-4000 or (571) 272-4200 or 1-888-786-0101.

/zabraha/

UNITED STA	tes Patent and Tradem	UNITED STA United State: Address: COMMI PO. Box	ia, Virginia 22313-1450
APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
13/167,659	06/23/2011	Lennart K. Mathe	101005
			CONFIRMATION NO. 8529
15093		POWER C	F ATTORNEY NOTICE
Kilpatrick Townsend & Stockton/Qualcomm Mailstop: IP Docketing - 22			OC000000091174568*
1100 Peachtree Street Suite 2800 Atlanta, GA 30309			

Date Mailed: 05/08/2017

NOTICE REGARDING CHANGE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 05/02/2017.

• The Power of Attorney to you in this application has been revoked by the assignee who has intervened as provided by 37 CFR 3.71. Future correspondence will be mailed to the new address of record(37 CFR 1.33).

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at (571) 272-4000 or (571) 272-4200 or 1-888-786-0101.

/zabraha/

Page 239 of 240

UNITED STATES PATENT AND TRADEMARK OFFICE



Commissioner for Patents United States Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450 www.uspto.gov

Patent No.8698558Issued Date:15 April, 2014Appl. No:13/167,659Filed.:23 June 2011

PART (A) RESPONSE FOR CERTIFICATES OF CORRECTION

This is a decision on the Certificate of Correction request filed

The request for issuance of Certificate of Correction for the above-identified correction(s) under the provisions of 37 CFR 1.322 and/or 1.323 is hereby:

(Check one)

Approved in Part

Denied

Comments:

PART (B) PETITION UNDER 37 CFR 1.324 OR 37 CFR 1.48

This is a decision on the petition filed to correct inventorship under 37 CFR 1.324.

☐ This is a decision on the request under 37 CFR 1.48, petition filed . In view of the fact that the patent has already issued, the request under 37 CFR 1.48 has been treated as a petition to correct inventorship under 37 CFR 1.324.

The petition is hereby:

Granted

□ Dismissed

Comment:

The patented filed is being forwarded to Certificate of Corrections Branch for issuance of a certificate naming only the actual inventor or inventors.

/ROBERT PASCAL/ Supervisory Patent Examiner, Art Unit 2842 Technology Center 2800 Phone: 571-272-1769

UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

PATENT NO.	: 8,698,558 B2
APPLICATION NO.	: 13/167659
DATED	: April 15, 2014
INVENTOR(S)	: Lennart K. Mathe, Thomas Domenick Marra and Todd R. Sutton

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In the Claims

Column 12, Claim 12, Lines 57-59:

Delete "a power amplifier operative to receive an envelope signal and provide a second supply current based on the envelope signal; and"

Signed and Sealed this Twenty-seventh Day of June, 2017

Page 1 of 1

Doseph Mataf

Joseph Matal Performing the Functions and Duties of the Under Secretary of Commerce for Intellectual Property and Director of the United States Patent and Trademark Office