

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 03/05/2015 QUALCOMM INCORPORATED 5775 MOREHOUSE DR. SAN DIEGO, CA 92121

EXAMINER TRAN, KHANH C ART UNIT PAPER NUMBER 2631

DATE MAILED: 03/05/2015

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/590,423	08/21/2012	Aleksandar Modrag Tasic	121973	9482

TITLE OF INVENTION: LOW NOISE AMPLIFIERS FOR CARRIER AGGREGATION

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	\$960	\$0	\$0	\$960	06/05/2015

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. 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 THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. STATUTORY PERIOD CANNOT BE EXTENDED. 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

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.

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 <u>Fax</u> (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

Authorized Signature Typed or printed name

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)			pape	papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.			
QUALCOMM INCORPORATED 5775 MOREHOUSE DR.			I he State addr trans	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 facsimilar transmitted to the USPTO (571) 273-2885, on the date indicated below.			
SAN DIEGO, O	JA 92121					(Depositor's name)	
						(Signature)	
						(Date)	
APPLICATION NO.	FILING DATE		FIRST NAMED INVENTOR		ATTORNEY DOCKET NO.	CONFIRMATION NO.	
13/590,423	08/21/2012		Aleksandar Modrag Tasic		121973	9482	
TITLE OF INVENTIO	N: LOW NOISE AMPLIE	FIERS FOR CARRIER A	GGREGATION				
APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSU	E FEE TOTAL FEE(S) DUE	DATE DUE	
nonprovisional	UNDISCOUNTED	\$960	\$0	\$0	\$960	06/05/2015	
EXA	MINER	ART UNIT	CLASS-SUBCLASS]			
TRAN, I	KHANH C	2631	375-340000	Į			
 Change of correspondence address or indication of "Fee Address" (37 CFR 1.363). Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached. "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON 			2. For printing on the patent front page, list (1) The names of up to 3 registered patent attorneys or agents OR, alternatively, (2) The name of a single firm (having as a member a registered patent attorneys or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. THE PATENT (print or type) e data will appear on the patent. If an assignee is identified below, the document has been filed for DT a substitute for filing an assignment.				
(A) NAME OF ASS			(B) RESIDENCE: (CITY	and STATE OR C			
4a. The following fee(s) are submitted: ☐ Issue Fee ☐ Publication Fee (No small entity discount permitted) ☐ Advance Order - # of Copies			Ab. 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 credits any overpayment, to Deposit Account Number (enclose an extra copy of this form).				
5. Change in Entity Status (from status indicated above) Applicant certifying micro entity status. See 37 CFR 1.29 Applicant asserting small entity status. See 37 CFR 1.27 Applicant changing to regular undiscounted fee status.			fee payment in the micro NOTE: If the application to be a notification of loss	NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment. NOTE: 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. NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status as explicable.			
NOTE: This form must	be signed in accordance v	with 37 CFR 1.31 and 1.3.	3. See 37 CFR 1.4 for signa		and certifications.		
And a deal C				Dete			

Page 2 of 3

Registration No. _



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

DATE MAILED: 03/05/2015

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/590,423	08/21/2012	Aleksandar Modrag Tasic	121973	9482
23696 75	90 03/05/2015	EXAMINER		
	CORPORATED	TRAN, KHANH C		
5775 MOREHOUS SAN DIEGO, CA			ART UNIT	PAPER NUMBER
Shirt Diboo, Chi	72121		2631	

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

(Applications filed on or after May 29, 2000)

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

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.

OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B 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. 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.

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.

	Application No. 13/590,423	Applicant(s) TASIC ET AL.		
Notice of Allowability	Examiner KHANH C. TRAN	Art Unit 2631	AIA (First Inventor to 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 RICO 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 i will be mailed i	included n due course. THIS	
1. A declaration(s)/affidavit(s) under 37 CFR 1.130(b) was/				
2. An election was made by the applicant in response to a restr requirement and election have been incorporated into this ac		e interview on	; the restriction	
3. The allowed claim(s) is/are <u>1-20</u> . As a result of the allowed c Highway program at a participating intellectual property offic http://www.uspto.gov/patents/init_events/pph/index.jsp or ser	e for the corresponding application.	For more inform		
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 3. ☐ Copies of the certified copies of the priority doc International Bureau (PCT Rule 17.2(a)). * Certified copies not received:	been received in Application No		pplication from the	
Applicant has THREE MONTHS FROM THE "MAILING DATE" of noted below. Failure to timely comply will result in ABANDONMITHIS THREE-MONTH PERIOD IS NOT EXTENDABLE.		omplying with t	the requirements	
5. CORRECTED DRAWINGS (as "replacement sheets") must	be submitted.			
including changes required by the attached Examiner's Paper No./Mail Date Identifying indicia such as the application number (see 37 CFR 1.8 each sheet. Replacement sheet(s) should be labeled as such in the	84(c)) should be written on the drawing	gs in the front (r	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) 2. ☑ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date 3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material 4. ☐ Interview Summary (PTO-413), Paper No./Mail Date	5. ☐ Examiner's Amendn6. ☑ Examiner's Stateme7. ☐ Other			
/KHANH C TRAN/ Primary Examiner, Art Unit 2631				

Application/Control Number: 13/590,423 Page 2

Art Unit: 2631

1. The present application is being examined under the pre-AIA first to invent

provisions.

2. The Response After Final Rejection filed 2/25/2015 has been entered. Claims

1-20 are still pending in this Office action.

Response to Arguments

3. Applicant's arguments, see Applicants' Remarks, filed 2/25/2015, with respect

to claims 1, 11-12, 14, 17 and 19 have been fully considered and are persuasive. The

rejection of claims 1, 11-12, 14, 17 and 19 has been withdrawn after *independent*

claims 1, 17 and 19 were amended to include allowable features discussed in the

Applicant-Initiated Interview on February 11, 2015.

Information Disclosure Statement

4. The IDS filed 10/08/2013 has been reconsidered and entered. Some of the

Non-Patent literature entries did not have dates and have been crossed out. Dates

must be provided in order for them to be reconsidered.

Claims invoking 35 USC § 112, 6th paragraph

The following is a quotation of pre-AIA 35 U.S.C. 112, sixth paragraph:

An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

5. Claim limitation "*means for*" has/have been interpreted under 35 U.S.C. 112(f) or pre-AIA 35 U.S.C. 112, sixth paragraph, because it uses/they use a generic placeholder "*means for*" coupled with functional language "*amplifier*" without reciting sufficient structure to achieve the function. Furthermore, the generic placeholder is not preceded by a structural modifier.

Since the claim limitation(s) invokes 35 U.S.C. 112(f) or pre-AIA 35 U.S.C. 112, sixth paragraph, claim(s) **19-20** has/have been interpreted to cover the corresponding structure described in the specification that achieves the claimed function, and equivalents thereof.

A review of the specification shows that the following appears to be the corresponding structure described in the specification for the 35 U.S.C. 112(f) or pre-AIA 35 U.S.C. 112, sixth paragraph limitation:

<u>first means for amplifying</u> as recited in claim 19 corresponds to <u>amplifier</u> <u>stages 650a</u> (see paragraph [0057] and FIG. 6A).

<u>second means for amplifying</u> as recited in claim 19 corresponds to <u>amplifier</u> <u>stages 650b</u> (see paragraph [0057] and FIG. 6A). Art Unit: 2631

means for enabling the first and second means for amplifying in a first
mode to obtain the first and second output RF signals as recited in claim 20
corresponds to the gate of cascode transistor 656a connected to the Vcasc voltage
via switch 658a and the gate of cascode transistor 656b connected to the Vcasc
voltage via switch 658b (see paragraph [0060] and FIG. 6B).

Page 4

means for enabling the first means for amplifying and disabling the second
means for amplifying in a second mode to obtain the first output RF signal but
not the second output RF signal corresponds to the gate of cascode transistor
656a connected to the Vcasc voltage via switch 658a, and the gate of cascode
transistor 656b shorted to circuit ground via switch 658b (see paragraph [0061]
and FIG. 6C).

If applicant wishes to provide further explanation or dispute the examiner's interpretation of the corresponding structure, applicant must identify the corresponding structure with reference to the specification by page and line number, and to the drawing, if any, by reference characters in response to this Office action.

If applicant does not intend to have the claim limitation(s) treated under 35 U.S.C. 112(f) or pre-AIA 35 U.S.C. 112, sixth paragraph, applicant may amend the claim(s) so that it/they will clearly not invoke 35 U.S.C. 112(f) or pre-AIA 35 U.S.C. 112, sixth paragraph, or present a sufficient showing that the claim recites/recite sufficient structure, material, or acts for performing the claimed function to preclude application of 35 U.S.C. 112(f) or pre-AIA 35 U.S.C. 112, sixth paragraph.

For more information, see MPEP § 2173 et seq. and Supplementary Examination Guidelines for Determining Compliance With 35 U.S.C. 112 and for Treatment of Related Issues in Patent Applications, 76 FR 7162, 7167 (Feb. 9, 2011).

Reasons for Allowance

The following is an examiner's statement of reasons for allowance:

6. Claims are allowable over prior art of record because the cited references either singularly or in combination cannot teach or suggest "<u>a first amplifier stage</u> configured to be independently enabled or disabled ..." and "<u>a second amplifier stage</u> configured to be independently enabled or disabled ..." as set forth in the independent claims 1, 17 and 19.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to KHANH C. TRAN whose telephone number is (571)272-

Application/Control Number: 13/590,423 Page 6

Art Unit: 2631

3007. The examiner can normally be reached on Monday - Friday from 08:00 AM -

05:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Shuwang Liu can be reached on 571-272-3036. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

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.

KCT

/KHANH C TRAN/ Primary Examiner, Art Unit 2631