505357364 03/05/2019

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
ABHISHEK BANDYOPADHYAY	03/05/2019
DANIEL PETER CANNIFF	03/15/2018
MARIANA TOSHEVA MARKOVA	03/04/2019
EDWARD CHAPIN GUTHRIE	09/19/2018

RECEIVING PARTY DATA

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State/Country:	MASSACHUSETTS	
Postal Code:	02062	

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15914833

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ATTORNEY DOCKET NUMBER:	3867.415US1	
NAME OF SUBMITTER:	DIANA JOHNSON	
SIGNATURE:	/Diana Johnson/	
DATE SIGNED:	03/05/2019	

Total Attachments: 6

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> PATENT REEL: 048499 FRAME: 0521

RECORDATION FORM COVER SHEET PATENTS ONLY

Atty Ref/Docket No.: 3867.415US1 Patent and Trademark Office To the Director of the U.S. Patent and Trademark Office: Please record the attached original documents or copy thereof. 2. Name and address of receiving party(ies): 1. Name of conveying party(ies): Name: Analog Devices, Inc. Abhishek Bandyopadhyay, Daniel Peter Canniff, Mariana Tosheva Markova, Edward Chapin Guthrie Street Address: One Technology Way Additional name(s) of conveying party(ies) attached? City: Norwood State: MA Zip: 02062 Country: United States of America []Yes [X]No Additional name(s) & address(es) attached? []Yes [X]No 3. Nature of conveyance: [X] Assignment [] Merger [] Security Agreement [] Change of Name [] Other Execution Date: March 5, 2019, March 15, 2018, March 4, 2019, September 19, 2018 4. Application number(s) or patent number(s): If this document is being filed together with a new application, the execution date of the application is: A. Patent Application No.(s) B. Patent No.(s) Serial No. 15/914,833 Additional numbers attached? []Yes [X]No 6. Total number of applications and patents involved: 1 5. Name and address of party to whom correspondence concerning document should be mailed: 7. Total fee (37 CFR 3.41):\$ 0.00 Name: James L. Shands [[Enclosed [Authorized to be charged to deposit account 19-Address: 0743 Schwegman Lundberg & Woessner, P.A. P.O. Box 2938 Please charge any additional fees or credit any over payments to our Deposit Account No.: 19-0743 Minneapolis, Minnesota 55402 DO NOT USE THIS SPACE Statement and signature. To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document. March 5, 2019 James L. Shands/Reg. No. 54.439 Date Name of Person Signing Signature Total number of pages including cover sheet: 6

Mail documents to be recorded with required cover sheet information to:

Commissioner of Patents and Trademarks Mail Stop Assignment Recordation Services P.O. Box 1450 Alexandria, VA 22313-1450

> PATENT REEL: 048499 FRAME: 0522

ASSIGNMENT

WHEREAS, I am a named inventor, Abhishek Bandyopadhyay, Daniel Peter Canniff, Mariana Tosheva Markova, Edward Chapin Guthrie, of residence listed below, having invented certain new and useful improvements as described in an application for United States Letters Patent entitled "POWER-EFFICIENT FLASH QUANTIZER FOR DELTA SIGMA CONVERTER," (hereinafter referred to as "Application") and having internal reference number of APD616202US which are described in a patent application filed on April 21, 2017, which application was assigned US application serial number 62/488,592, and which is titled POWER-EFFICIENT FLASH QUANTIZER FOR DELTA SIGMA CONVERTER.

WHEREAS, I hereby authorize and request the attorneys or agents associated with United States Patent and Trademark Office Customer No. 21186 to insert here in parentheses (Ser. No. 15/914,833; Filing Date: March 7, 2018) the filing date and serial number of the Application when known;

WHEREAS, Analog Devices, Inc., (hereinafter referred to as "Assignee"), a Massachusetts Corporation, with an address of One Technology Way, Norwood, MA 02062, desires to acquire my entire right, title and interest in and to any and all inventions and improvements that are disclosed in the Application (hereinafter referred to as "Invention"), including any Letters Patent that may issue thereon;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, I hereby assign and transfer, and hereby agree to assign and transfer, to Assignee, all right, title and interest in and to the Invention and in and to the Application and all patents which may be granted therefrom, and all related applications (e.g., provisional applications, divisional applications, reissues, reexaminations, continuation applications, continuation-in-part applications, extensions thereof, design applications, applications in foreign countries, international applications, national phase applications, and the like). I hereby authorize and request the Commissioner of Patents and Trademarks to issue all patents, for the Invention, or patents resulting therefrom, insofar as my interest is concerned, to Assignee.

I also hereby assign and transfer, and hereby agree to assign and transfer to Assignee, all right, title and interest to the Invention, the Application or any related application throughout the world, including all rights of priority resulting from the filing of the Application or any related application, including but not limited to: the right to file applications and obtain patents, utility models, industrial models and designs for the Invention in Assignee's own name throughout the world, the right to claim priority from the Application or any related application when filing applications and obtaining patents, utility models, industrial models and designs for the Invention throughout the world, and all rights to publish cautionary notices reserving ownership of the Invention and all rights to register the Invention in appropriate registries. I further agree to execute any and all powers of attorney, applications, assignments, declarations, affidavits, and any other papers in connection therewith necessary to perfect such right, title and interest in and to Assignee.

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I will communicate to Assignee any facts known to me respecting any improvements to the Invention; and I will sign all lawful papers, execute all rightful assignments, execute all provisional, divisional, continuation, continuation-in-part, reissue and substitute applications, make lawful oaths and declarations, and generally do everything possible to vest title in and to Assignee and to aid Assignee to obtain and enforce proper protection for the Invention in all countries and jurisdictions throughout the world. I irrevocably appoint Analog Devices, Inc. as my attorney-in-fact to execute on my behalf any documents deemed necessary by Analog Devices, Inc. to obtain and enforce proper protection for the Invention in all countries and jurisdictions throughout the world. I agree to testify and cooperate with Assignee in any judicial proceeding, administrative proceeding, post-grant proceeding, or other proceeding concerning the Invention (including litigation with a third party over any patent issued on the Invention), and Assignee agrees to cover my reasonable costs and expenses (if any).

This Assignment shall be binding on the parties' successors, assigns and legal representatives.

Title of Invention:	POWER-EFFICIENT FLASH QUANTIZER FOR DELTA SIGMA CONVERTER
Full name of inventor:	Abhishek Bandyopadhyay
Inventor's signature:	- Sandygpoolhyory
Date:	3/5/19
Inventor Home Address:	16 Nathaniel Rd. Winchester, MA 01890
Witness's Print Name:	Bin Hus
Witness's signature:	
Witness Home Address:	B Hanlock In Frammskam, MAD170

ATTORNEY DOCKET NO. 3867.415US1(APD616202US)

ASSIGNMENT

Title of Invention:

POWER-EFFICIENT

FLASH

QUANTIZER

FOR DELTA

SIGMA

CONVERTER

Full name of inventor:

Daniel Peter Canniff

Inventor's signature:

Date:

148 Marlborough St Apt 2R

Boston, MA 021161926

BROOKLINE, MADRILL

PC 1115/2018

Witness's Print Name:

Inventor Home Address:

Witness's signature:

Witness Home Address:

Title of Invention:	POWER-EFFICIENT FLASH QUANTIZER FOR DELTA SIGMA CONVERTER
Full name of inventor:	Mariana Tosheva Markova
Inventor's signature:	MealeS
Date:	03/04/2013
Inventor Home Address:	28 Speridaksi Terrace Cambridge, MA 02139
Witness's Print Name:	
Witness's signature;	
Witness Home Address:	

ATTORNEY DOCKET NO. 3867.415US1(APD616202US)

ASSIGNMENT

Title of Invention:

POWER-EFFICIENT

FLASH

QUANTIZER

FOR

DELTA

SIGMA

CONVERTER

Full name of inventor:

Edward Chapin Guthrie

Inventor's signature:

Date:

Inventor Home Address:

4 Monument Sq. Apt 3 Charlestown, MA 02129

Witness's Print Name:

Witness's signature:

Witness Home Address:

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