

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT4135209

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
MICRON TECHNOLOGY, INC.	07/08/2009
RECEIVING PARTY DATA	
Name:	APTINA IMAGING CORPORATION
Street Address:	C/O CITICO TRUSTEES (CAYMAN) LIMITED
Internal Address:	REGATTA OFFICE PARK, WEST BAY ROAD
City:	GRAND CAYMAN
State/Country:	CAYMAN ISLANDS
Postal Code:	Y1-1205
PROPERTY NUMBERS Total: 3	
Property Type	Number
Patent Number:	7531379
Patent Number:	7102180
Patent Number:	7525134
CORRESPONDENCE DATA	
Fax Number:	(602)244-3169
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.</i>	
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Email:	patents@onsemi.com
Correspondent Name:	SEMICONDUCTOR COMPONENTS INDUSTRIES, LLC
Address Line 1:	5005 E. MCDOWELL ROAD
Address Line 2:	MAILDROP A700
Address Line 4:	PHOENIX, ARIZONA 85008
ATTORNEY DOCKET NUMBER:	APT2001-1118DIVS
NAME OF SUBMITTER:	SHARRON CASTILLO
SIGNATURE:	/Sharron Castillo/
DATE SIGNED:	11/09/2016
Total Attachments: 8	
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PATENT ASSIGNMENT AGREEMENT

1. Definitions

(a) "Agreement" shall mean this Patent Assignment Agreement.

(b) "Assignee" shall mean **Aptina Imaging Corporation**, a Cayman Islands corporation with offices at c/o Citco Trustees (Cayman) Limited, Regatta Office Park, West Bay Road, Grand Cayman, Y1-1205, Cayman Islands.

(c) "Assignor" shall mean **Micron Technology, Inc.**, a Delaware corporation with offices at 8000 South Federal Way, Boise, ID 83707.

(d) "Assigned Patents" shall mean those patents identified in ATTACHMENT "A" hereto, including, without limitation, all divisions, continuations, continuations-in-part, reissues, reexaminations, and all foreign counterparts thereof, and which may issue thereon or in connection therewith after the Effective Date of this Agreement.

(e) "Assigned Patent Applications" shall mean those filed patent applications identified in ATTACHMENT "B" hereto, including, without limitation, all patents, divisions, continuations, continuations-in-part, reissues, reexaminations, and all foreign counterparts which may issue thereon or in connection therewith after the Effective Date of this Agreement.

(f) "Effective Date" shall mean July 10, 2009.

(g) "Intellectual Property" shall mean any or all of the following and all rights in, arising out of, or associated therewith: (i) patents and utility models and applications therefor and all reissues, divisions, renewals, extensions, provisionals, continuations and continuations-in-part thereof (ii) all inventions, developments and discoveries (whether patentable or not), improvements, trade secrets, proprietary information, know how, technology, software, technical data, and all documentation embodying or evidencing any of the foregoing, (iii) copyrights, copyright registrations and applications therefor, (iv) mask works, mask work registrations and applications therefor, and any equivalent or similar rights in semiconductor masks, layouts, architectures or topology, (v) industrial designs and any registrations and applications therefor, (vi) databases and data collections, (vii) any similar, corresponding or equivalent rights to any of the foregoing anywhere in the world, but excluding any rights in trademarks, service marks, trade names, trade dress, domain names, logos and similar rights, and the goodwill associated therewith, whether registered or unregistered.

(h) "Subsidiary" shall mean any entity which is directly or indirectly more than fifty percent (50%) owned by Assignor, whether such entity exists as of the Effective Date of this Agreement or is hereafter created.

2. Covenants

(a) Subject to the terms and conditions of this Agreement, and subject to the rights of others existing as of the Effective Date of this Agreement if any, Assignor, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, hereby sells, assigns, and transfers to Assignee its entire right, title and interest in and to the Assigned Patents, including all rights to causes of action and remedies related thereto (including the right to sue for past, present or future infringement of rights related to the foregoing and the right to collect damages therefor). Assignor hereby authorizes and requests the Commissioner of Patents of the United States, and any other official of the United States and any country foreign to the United States whose duty it is to issue or record patents, to issue the Assigned Patents to Assignee and to record assignment of the Assigned Patents to Assignee.

(b) Subject to the terms and conditions of this Agreement, and subject to the rights of others existing as of the Effective Date of this Agreement if any, Assignor, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, hereby sells, assigns, and transfers to Assignee its entire right, title and interest in and to the Intellectual Property rights in the Assigned Patent Applications. Assignor hereby authorizes and requests the Commissioner of Patents of the United States, and any other official of the United States and any country foreign to the United States whose duty it is to issue or record patents, to record assignment of the Assigned Patent Applications to Assignee.

3. Further Assurances

At the request of the Assignee and at Assignee's expense, Assignor shall execute and deliver or cause to be delivered, any other instruments of transfer, and shall take or cause to be taken all such other actions as Assignee may reasonably deem necessary or desirable in order to carry out any assignments hereunder or perfect any rights hereunder; provided however, that notwithstanding the foregoing, or anything herein to the contrary, as of the Effective Date, and unless otherwise expressly agreed to by Assignor in a separate written agreement, all responsibilities and obligations related to or in connection with any prosecution and/or other activities involved in perfecting any rights hereunder or otherwise pursuing registration of any rights in relation to any of the Assigned Patents and Assigned Patent Applications shall rest solely with Assignee.

4. License

Assignee hereby grants to Assignor and its Subsidiaries a non-exclusive, non-sublicenseable, royalty-free, fully paid-up, irrevocable, perpetual, world-wide license under the Assigned Patents and Assigned Patent Applications for any and all purposes and applications and to practice any and all methods and processes.

5. Representations and Warranties Disclaimer

ASSIGNOR DISCLAIMS ANY AND ALL REPRESENTATIONS AND WARRANTIES, EXPRESS OR IMPLIED, WHATSOEVER WITH RESPECT TO ANY OF THE ASSIGNED PATENTS AND ASSIGNED PATENT APPLICATIONS. WITHOUT LIMITING THE FOREGOING, ASSIGNOR DOES NOT MAKE ANY REPRESENTATION OR WARRANTY WHATSOEVER WITH RESPECT TO THE UTILITY, VALIDITY OR ENFORCEABILITY OF ANY OF THE ASSIGNED PATENTS OR ASSIGNED PATENT APPLICATIONS. NOR DOES ASSIGNOR MAKE ANY REPRESENTATION OR WARRANTY THAT THE COMMERCIAL EXPLOITATION THEREOF WILL NOT INFRINGE UPON THE RIGHTS OF ANY THIRD PARTY(IES).

6. General

This Agreement shall be effective as of the Effective Date hereof and shall be binding on the respective heirs, assigns, representatives, and successors of Assignor and of Assignee.

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Agreed to by:

REVIEWED
MTI LEGAL

Micron Technology, Inc.

Signed: Dm Dm

SPA

Date: July 8, 2009

Notarization

State of Idaho

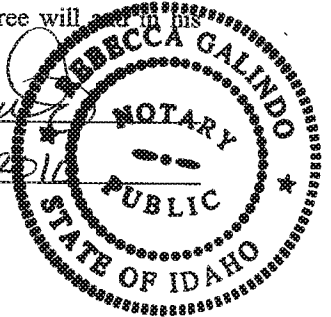
County of Ada

On 7/8/2009, before me, Rebecca Galindo, personally appeared the above-named D. Mark Durcan,
(date) (notary name)

who executed this Assignment in my presence and acknowledged to me that he did so of his own free will and in his authorized capacity for the purposes set forth herein.

Signed: Rebecca Galindo

My commission expires: 6/17/2010



Agreed to by:

Aptina Imaging Corporation

Signed: Thomas L. Law

Date: 7/9/09, 2009

Notarization

State of Idaho

County of Ada

On 7/9/09, before me, Rebecca Galindo, personally appeared the above-named Thomas L. Law,
(date) (notary name)

who executed this Assignment in my presence and acknowledged to me that he did so of his own free will and in his authorized capacity for the purposes set forth herein.

Signed: Rebecca Galindo

My commission expires: 6/17/2010



[Signature page to the Patent Assignment Agreement]

ATTACHMENT "A"

ASSIGNED PATENTS

Patent Number	File Number	Title	Country Name	Issue Date
6307243	1998-0121.00/US	MICROLENS ARRAY WITH IMPROVED FILL FACTOR	United States of America	October 23, 2001
6960796	2001-1118.00/US	CMOS IMAGER PIXEL DESIGNS	United States of America	November 1, 2005
7531379	2001-1118.01/US	METHOD OF FORMING CMOS IMAGER PIXEL DESIGNS	United States of America	May 12, 2009
7102180	2001-1118.02/US	CMOS IMAGER PIXEL DESIGNS	United States of America	September 5, 2006
7525134	2001-1118.03/US	CMOS IMAGER PIXEL DESIGNS	United States of America	April 28, 2009
6969631	2002-0034.00/US	METHOD OF FORMING PHOTODIODE WITH SELF ALIGNED IMPLANTS FOR HIGH QUANTUM EFFICIENCY	United States of America	November 29, 2005
7195947	2002-0034.01/US	PHOTODIODE WITH SELF ALIGNED IMPLANTS FOR HIGH QUANTUM EFFICIENCY AND METHOD OF FORMATION	United States of America	March 27, 2007
7510897	2002-0034.03/US	PHOTODIODE WITH SELF ALIGNED IMPLANTS FOR HIGH QUANTUM EFFICIENCY AND METHOD OF FORMATION	United States of America	March 31, 2009
10-709854	2002-0497.00/KR	METHOD AND APPARATUS FOR REAL TIME IDENTIFICATION AND CORRECTION OF PIXEL DEFECTS FOR IMAGE SENSOR ARRAYS	Republic of Korea	April 13, 2007
108422	2002-0497.00/SG	METHOD AND APPARATUS FOR ON-THE-FLY IDENTIFICATION AND CORRECTION OF PIXEL DEFECTS FOR IMAGE SENSOR ARRAYS	Singapore	November 30, 2006
7202894	2002-0497.00/US	METHOD AND APPARATUS FOR REAL TIME IDENTIFICATION AND CORRECTION OF PIXEL DEFECTS FOR IMAGE SENSOR ARRAYS	United States of America	April 10, 2007

Patent Number	File Number	Title	Country Name	Issue Date
7382407	2002-0611.00/US	HIGH INTRASCENE DYNAMIC RANGE IN NTSC AND PAL IMAGER	United States of America	June 3, 2008
7420233	2002-0951.00/US	AN OPTIMIZED PHOTODIODE PROCESS FOR IMPROVED TRANSFER GATE LEAKAGE	United States of America	September 2, 2008
6908839	2002-0952.00/US	MASKED SPACER ETCHING FOR IMAGERS	United States of America	June 21, 2005
7211848	2002-0952.01/US	MASKED SPACER ETCHING FOR IMAGERS	United States of America	May 1, 2007
7355229	2002-0952.02/US	MASKED SPACER ETCHING FOR IMAGERS	United States of America	April 8, 2008
4157083	2003-1231.00/JP	IMAGE SENSOR WITH ON-CHIP SEMI-COLUMN-PARALLEL PIPELINE ADCS	Japan	July 18, 2008
4161295	AVGO-0033.00/JP	SYSTEM AND METHOD FOR CAPTURING COLOR IMAGES THAT EXTENDS THE DYNAMIC RANGE OF AN IMAGE SENSOR USING FIRST AND SECOND GROUPS OF PIXELS	Japan	August 1, 2008
6924841	AVGO-0033.00/US	SYSTEM AND METHOD FOR CAPTURING COLOR IMAGES THAT EXTENDS THE DYNAMIC RANGE OF AN IMAGE SENSOR USING FIRST AND SECOND GROUPS OF PIXELS	United States of America	August 2, 2005
60218585.8	AVGO-0039.00/DE	METHOD AND APPARATUS FOR IMPROVING IMAGE QUALITY IN DIGITAL CAMERAS	Germany	March 7, 2007
1286553	AVGO-0039.00/EP	METHOD AND APPARATUS FOR IMPROVING IMAGE QUALITY IN DIGITAL CAMERAS	European Patent Office	March 7, 2007
EP 1286553	AVGO-0039.00/GB	METHOD AND APPARATUS FOR IMPROVING IMAGE QUALITY IN DIGITAL CAMERAS	United Kingdom	March 7, 2007
6822657	AVGO-0039.00/US	METHOD AND APPARATUS FOR IMPROVING IMAGE QUALITY IN DIGITAL CAMERAS	United States of America	November 23, 2004
6611288	PBIT-0002.00/US	DEAD PIXEL CORRECTION BY ROW/COLUMN SUBSTITUTION	United States of America	August 26, 2003

ATTACHMENT "B"

ASSIGNED PATENT APPLICATIONS

File Number	Title	Status	Country Name	Application Number	Date Filed
2001-1118.04/US	CMOS IMAGER PIXEL DESIGNS	Pending	United States of America	12/349,968	January 7, 2009
2002-0034.02/US	PHOTODIODE WITH SELF ALIGNED IMPLANTS FOR HIGH QUANTUM EFFICIENCY AND METHOD OF FORMATION	Pending	United States of America	11/636,979	December 12, 2006
2002-0497.00/CN	METHOD AND APPARATUS FOR ON-THE-FLY IDENTIFICATION AND CORRECTION OF PIXEL DEFECTS FOR IMAGE SENSOR ARRAYS	Pending	China	03818753.1	February 4, 2005
2002-0497.00/EP	METHOD AND APPARATUS FOR REAL TIME IDENTIFICATION AND CORRECTION OF PIXEL DEFECTS FOR IMAGE SENSOR ARRAY	Pending	European Patent Office	03736817.2	June 4, 2003
2002-0497.00/JP	METHOD AND APPARATUS FOR REAL TIME IDENTIFICATION AND CORRECTION OF PIXEL DEFECTS FOR IMAGE SENSOR ARRAYS	Pending	Japan	510,229/2004	December 6, 2004
2002-0497.01/US	METHOD AND APPARATUS FOR ON-THE-FLY IDENTIFICATION AND CORRECTION OF PIXEL DEFECTS FOR IMAGE SENSOR ARRAYS	Pending	United States of America	11/598,804	November 14, 2006
2002-0611.01/US	HIGH INTRASCENE DYNAMIC RANGE IN NTSC AND PAL IMAGER	Pending	United States of America	12/081,302	April 14, 2008
2002-0951.01/US	OPTIMIZED PHOTODIODE PROCESS FOR IMPROVED TRANSFER GATE LEAKAGE	Pending	United States of America	11/094,363	March 31, 2005
2003-1231.00/US	IMAGE SENSOR WITH ON-CHIP SEMI-COLUMN-PARALLEL PIPELINE ADCS	Allowed	United States of America	10/957,724	October 5, 2004
2004-0162.00/US	SUPPRESSION OF ROW WISE NOISE IN AN IMAGER	Pending	United States of America	10/834,844	April 30, 2004
2004-1019.00/CN	EFFICIENT CHARGE TRANSFERRING IN CMOS IMAGERS	Pending	China	200680038652.8	August 25, 2006

File Number	Title	Status	Country Name	Application Number	Date Filed
2004-1019.00/EP	EFFICIENT CHARGE TRANSFERRING IN CMOS IMAGERS	Pending	European Patent Office	06802461.1	August 25, 2006
2004-1019.00/JP	EFFICIENT CHARGE TRANSFERRING IN CMOS IMAGERS	Pending	Japan	2008-529159	August 25, 2006
2004-1019.00/KR	EFFICIENT CHARGE TRANSFERRING IN CMOS IMAGERS	Pending	Republic of Korea	10-2008-7007592	August 25, 2006
2004-1019.00/SG	EFFICIENT CHARGE TRANSFERRING IN CMOS IMAGERS	Pending	Singapore	200801548-9	August 25, 2006
2004-1019.00/TW	EFFICIENT CHARGE TRANSFERRING IN 5T CMOS IMAGER	Pending	Taiwan R.O.C.	095131899	August 30, 2006
2004-1019.00/US	EFFICIENT CHARGE TRANSFERRING IN 5T CMOS IMAGER	Pending	United States of America	11/213,815	August 30, 2005
2004-1086.00/CN	PIXEL INDIVIDUAL ANTI-ECLIPSE CIRCUIT AND ITS OPERATION MANNER	Pending	China	PCTUS200623437	June 15, 2006
2004-1086.00/EP	PIXEL INDIVIDUAL ANTI-ECLIPSE CIRCUIT AND ITS OPERATION MANNER	Pending	European Patent Office	06773319.6	June 15, 2006
2004-1086.00/JP	PIXEL INDIVIDUAL ANTI-ECLIPSE CIRCUIT AND ITS OPERATION MANNER	Pending	Japan	173861/2005	June 14, 2005
2004-1086.00/KR	PIXEL INDIVIDUAL ANTI-ECLIPSE CIRCUIT AND ITS OPERATION MANNER	Pending	Republic of Korea	10-2008-7001042	June 15, 2006
2004-1086.00/SG	PIXEL INDIVIDUAL ANTI-ECLIPSE CIRCUIT AND ITS OPERATION MANNER	Pending	Singapore	PCTUS200623437	June 15, 2006
2004-1086.00/TW	PIXEL INDIVIDUAL ANTI-ECLIPSE CIRCUIT AND ITS OPERATION MANNER	Pending	Taiwan R.O.C.	2007-14045	June 14, 2006
2004-1086.00/US	PIXEL INDIVIDUAL ANTI-ECLIPSE CIRCUIT AND ITS OPERATION MANNER	Pending	United States of America	11/179,632	July 13, 2005
2004-1086.01/JP	PIXEL INDIVIDUAL ANTI-ECLIPSE CIRCUIT AND ITS OPERATION MANNER	Pending	Japan	2008-517129	June 14, 2006
2006-0729.00/PC	IMAGING APPARATUS, METHOD, AND SYSTEM HAVING REDUCED DARK CURRENT	Pending	PCT	2008/112489	March 6, 2008

File Number	Title	Status	Country Name	Application Number	Date Filed
2006-0729.00/TW	IMAGING APPARATUS, METHOD, AND SYSTEM HAVING REDUCED DARK CURRENT	Pending	Taiwan R.O.C.	097108231	March 7, 2008
2006-0729.00/US	IMAGING APPARATUS, METHOD, AND SYSTEM HAVING REDUCED DARK CURRENT	Pending	United States of America	11/715,885	March 9, 2007
AVGO-0033.00/EP	SYSTEM AND METHOD FOR CAPTURING COLOR IMAGES THAT EXTENDS THE DYNAMIC RANGE OF AN IMAGE SENSOR USING FIRST AND SECOND GROUPS OF PIXELS	Pending	European Patent Office	02005049.8	March 6, 2002
AVGO-0039.00/JP	METHOD AND APPARATUS FOR IMPROVING IMAGE QUALITY IN DIGITAL CAMERAS	Pending	Japan	2002-213318	July 23, 2002