

PATENT ASSIGNMENT COVER SHEET

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Stylesheet Version v1.2

EPAS ID: PAT7611413

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
SEMI CONDUCTOR DEVICES-AN ELBIT SYSTEMS-RAFAEL PARTNERSHIP	09/28/2022

RECEIVING PARTY DATA

Name:	SEMICONDUCTOR DEVICES LTD.
Street Address:	0 LESHEM STREET
City:	HAIFA
State/Country:	ISRAEL

PROPERTY NUMBERS Total: 16

Property Type	Number
Patent Number:	8004012
Patent Number:	7795640
Patent Number:	7928473
Patent Number:	8674308
Patent Number:	9194750
Patent Number:	9215386
Patent Number:	7807968
Patent Number:	7807969
Patent Number:	9627563
Patent Number:	10222266
Patent Number:	9613999
Patent Number:	10644061
Patent Number:	10079262
Patent Number:	9761751
Patent Number:	10573675
Application Number:	17284883

CORRESPONDENCE DATA**Fax Number:**

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.

Phone: 8019337360

Email:	stark.eve@dorsey.com
Correspondent Name:	DORSEY & WHITNEY LLP
Address Line 1:	111 SO. MAIN STREET, SUITE 2100
Address Line 4:	SALT LAKE CITY, UTAH 84111

ATTORNEY DOCKET NUMBER:	446373-3
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NAME OF SUBMITTER:	MARCUS S. SIMON
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SIGNATURE:	/Marcus S. Simon, Reg.# 50258/
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DATE SIGNED:	10/26/2022
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Total Attachments: 10

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PATENT ASSIGNMENT

WHEREAS, SEMI CONDUCTOR DEVICES-AN ELBIT SYSTEMS-RAFAEL PARTNERSHIP, an Israeli partnership, having a mailing address at P.O. Box 2250, Haifa 31021, Israel (hereinafter "**Assignor**") is the sole and exclusive owner of the entire right, title and interest in and to certain patents and patent applications identified in Schedule A attached hereto, and in and to the inventions disclosed therein; and

WHEREAS, SEMICONDUCTOR DEVICES LTD., an Israeli corporation, having a mailing address at 0 Leshem Street, Haifa, Israel (hereinafter "**Assignee**") is desirous of acquiring all right, title and interest in and to said patents and patent applications identified in Schedule A hereto, and to the inventions disclosed therein;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, be it known that Assignor has sold, conveyed, assigned and transferred, and does hereby sell, convey, assign, transfer and set over unto Assignee, the entire right, title and interest in and to: (i) the patents and patent applications listed in Schedule A attached hereto and all the inventions disclosed and/or claimed in such patents and patent applications; (ii) any and all inventions and improvements that are disclosed and/or claimed in the patents and applications listed in Schedule A, together with all pending applications and all provisional applications, divisional applications, continuation applications, continued prosecution applications, continuation-in-part applications, PCT international applications, substitute applications, renewal applications, reissue applications, reexaminations, extensions, and all other patent applications that have been or shall be filed in the United States and all foreign countries on any of said inventions or improvements, or claiming priority to or relying on the disclosure of any of the patents or patent applications listed in Schedule A; (iii) all original patents, reissued patents, reexamination certificates, and extensions, that have been or shall be issued in the United States and all foreign countries on said inventions, improvements and/or patent applications; and (iv) all rights of priority resulting from the filing of said patents and/or patent applications ((i) — (iv) collectively, the "**Patents**").

Said sale, conveyance, assignment and transfer includes, without limitation, all rights to enforce, assert and sue for past, present and future infringement of the Patents, and all rights to recover and collect for past, present and future damages related to the Patents, including all rights to injunctive relief, rights to collect royalties, and other remedies of any kind on account of the Patents.

Assignor hereby authorizes and requests the competent authorities to grant and to issue any and all such Patents in the United States and throughout the world to the Assignee and the entire right, title and interest therein, as fully and entirely as the same would have been held and enjoyed by Assignor had this assignment not been made.

Assignor agrees, at any time, upon the request of the Assignee, to execute and to deliver to the Assignee any additional applications for patents for said inventions and discoveries, or any part or parts thereof, and any applications for patents of confirmation, registration and importation

based on any of the Patents issuing on said inventions, discoveries, or applications and divisions, continuations, renewals, revivals, reissues, reexaminations and extensions thereof.

Assignor further agrees at any time to cooperate with Assignee, and to execute and to deliver upon request of the Assignee such additional documents, if any, as are necessary or desirable, in the prosecution of the Patents, and to secure patent protection on said inventions, discoveries and applications throughout all countries of the world, and otherwise to do such acts as are necessary to give full effect to and to perfect the rights of the Assignee under this Assignment, including the execution, delivery and procurement of any and all further documents evidencing this assignment, transfer and sale as may be necessary or desirable.

Assignor hereby covenants that at the time of execution of this assignment, it was the sole and exclusive owner of the entire right, title and interest in and to the Patents, and that no assignment, sale, agreement or encumbrance has been or will be made or entered into which conflicts or would conflict with this assignment.

IN WITNESS WHEREOF, Assignor has caused this Patent Assignment to be signed on its behalf on this 2nd day of September, 2022.

**SEMI CONDUCTOR DEVICES-AN
ELBIT SYSTEMS-RAFAEL
PARTNERSHIP**

By: Tuvy Markovich
(Signature)

TUVY MARKOVICH
(Print or type name)

VP R&D
(Print or type title)

IN WITNESS WHEREOF, Assignee has acknowledged the execution of this Patent Assignment on this 23 day of September, 2022.

SEMICONDUCTOR DEVICES LTD.

By: Tony Markovitch
(Signature)

Tony Markovitch
(Print or type name)

VP R&D
(Print or type title)

SCHEDULE A

PATENT ASSIGNMENT FROM SEMI CONDUCTOR DEVICES-AN ELBIT SYSTEMS-RAFAEL PARTNERSHIP TO SEMICONDUCTOR DEVICES LTD.

Patent or Application No.	Issue Date or Filing Date	Patent Title	WIPO Country Code
174844	May 29, 2011	A UNIPOLAR SEMICONDUCTOR PHOTODETECTOR WITH SUPPRESSED DARK CURRENT AND METHOD FOR PRODUCING THE SAME	IL
PCT/IL2007/000423	March 29, 2007	A UNIPOLAR SEMICONDUCTOR PHOTODETECTOR WITH SUPPRESSED DARK CURRENT AND METHOD FOR PRODUCING THE SAME	WO
8,004,012	August 23, 2011	A UNIPOLAR SEMICONDUCTOR PHOTODETECTOR WITH SUPPRESSED DARK CURRENT AND METHOD FOR PRODUCING THE SAME	US
2002487	October 27, 2010	A UNIPOLAR SEMICONDUCTOR PHOTODETECTOR WITH SUPPRESSED DARK CURRENT AND METHOD FOR PRODUCING THE SAME	EP
2002487	October 27, 2010	A UNIPOLAR SEMICONDUCTOR PHOTODETECTOR WITH SUPPRESSED DARK CURRENT AND METHOD FOR PRODUCING THE SAME	FR
2002487	October 27, 2010	A UNIPOLAR SEMICONDUCTOR PHOTODETECTOR WITH SUPPRESSED DARK CURRENT AND METHOD FOR PRODUCING THE SAME	DE
2002487	October 27, 2010	A UNIPOLAR SEMICONDUCTOR PHOTODETECTOR WITH SUPPRESSED DARK CURRENT AND METHOD FOR PRODUCING THE SAME	GB
156744	May 29, 2011	DEPLETION-LESS PHOTODIODE WITH SUPPRESSED DARK CURRENT AND METHOD FOR PRODUCING THE SAME	IL

Patent or Application No.	Issue Date or Filing Date	Patent Title	WIPO Country Code
PCT/IL2004/000573	June 28, 2004	DEPLETION-LESS PHOTODIODE WITH SUPPRESSED DARK CURRENT AND METHOD FOR PRODUCING THE SAME	WO
7,795,640	September 14, 2010	DEPLETION-LESS PHOTODIODE WITH SUPPRESSED DARK CURRENT AND METHOD FOR PRODUCING THE SAME	US
7,928,473	April 19, 2011	DEPLETION-LESS PHOTODIODE WITH SUPPRESSED DARK CURRENT AND METHOD FOR PRODUCING THE SAME	US
1642345	November 5, 2008	DEPLETION-LESS PHOTODIODE WITH SUPPRESSED DARK CURRENT AND METHOD FOR PRODUCING THE SAME	EP
1642345	November 5, 2008	DEPLETION-LESS PHOTODIODE WITH SUPPRESSED DARK CURRENT AND METHOD FOR PRODUCING THE SAME	FR
1642345	November 5, 2008	DEPLETION-LESS PHOTODIODE WITH SUPPRESSED DARK CURRENT AND METHOD FOR PRODUCING THE SAME	DE
1642345	November 5, 2008	DEPLETION-LESS PHOTODIODE WITH SUPPRESSED DARK CURRENT AND METHOD FOR PRODUCING THE SAME	GB
61/249,320	October 7, 2009	INFRA-RED IMAGER	US
12/897,267	October 4, 2010	INFRA-RED IMAGER	US
9,194,750	November 24, 2015	INFRA-RED IMAGER	US
212289	December 1, 2016	DETECTOR PIXEL SIGNAL READOUT CIRCUIT AND AN IMAGING METHOD THEREOF	IL
9,215,386	December 15, 2015	DETECTOR PIXEL SIGNAL READOUT CIRCUIT AND AN IMAGING METHOD THEREOF	US
1142/MUM/2012	April 9, 2012	DETECTOR PIXEL SIGNAL READOUT CIRCUIT AND AN IMAGING METHOD THEREOF	IN

Patent or Application No.	Issue Date or Filing Date	Patent Title	WIPO Country Code
ZL 201210107446.5	February 16, 2018	DETECTOR PIXEL SIGNAL READOUT CIRCUIT AND AN IMAGING METHOD THEREOF	CN
10-1942103	January 18, 2019	DETECTOR PIXEL SIGNAL READOUT CIRCUIT AND AN IMAGING METHOD THEREOF	KR
2512125	July 4, 2018	DETECTOR PIXEL SIGNAL READOUT CIRCUIT AND AN IMAGING METHOD THEREOF	EP
2512125	July 4, 2018	DETECTOR PIXEL SIGNAL READOUT CIRCUIT AND AN IMAGING METHOD THEREOF	FR
2512125	July 4, 2018	DETECTOR PIXEL SIGNAL READOUT CIRCUIT AND AN IMAGING METHOD THEREOF	DE
2512125	July 4, 2018	DETECTOR PIXEL SIGNAL READOUT CIRCUIT AND AN IMAGING METHOD THEREOF	GB
231731	April 1, 2020	RUGGEDIZED DEWAR UNIT FOR INTEGRATED DEWAR DETECTOR ASSEMBLY	IL
10,222,266	March 5, 2019	RUGGEDIZED DEWAR UNIT FOR INTEGRATED DEWAR DETECTOR ASSEMBLY	US
2 930 484	January 25, 2017	RUGGEDIZED DEWAR UNIT FOR INTEGRATED DEWAR DETECTOR ASSEMBLY	EP
2 930 484	January 25, 2017	RUGGEDIZED DEWAR UNIT FOR INTEGRATED DEWAR DETECTOR ASSEMBLY	FR
2 930 484	January 25, 2017	RUGGEDIZED DEWAR UNIT FOR INTEGRATED DEWAR DETECTOR ASSEMBLY	DE
2 930 484	January 25, 2017	RUGGEDIZED DEWAR UNIT FOR INTEGRATED DEWAR DETECTOR ASSEMBLY	GB
238368	November 30, 2019	PHOTO-DETECTOR DEVICE	IL
3089223	April 13, 2016	PHOTO-DETECTOR DEVICE	EP
9,613,999	April 4, 2017	PHOTO-DETECTOR DEVICE	US
10,079,262	September 18, 2018	PHOTO-DETECTOR DEVICE	US
201624013531	April 19, 2016	PHOTO-DETECTOR DEVICE	IN

Patent or Application No.	Issue Date or Filing Date	Patent Title	WIPO Country Code
10-2016-0103399	August 16, 2016	PHOTO-DETECTOR DEVICE	KR
167641	November 1, 2011	METHOD AND SYSTEM FOR MEASURING AND COMPENSATING FOR THE CASE TEMPERATURE VARIATIONS IN A BOLOMETER BASED SYSTEM	IL
PCT/IL2006/000046	January 12, 2006	METHOD AND SYSTEM FOR MEASURING AND COMPENSATING FOR THE CASE TEMPERATURE VARIATIONS IN A BOLOMETER BASED SYSTEM	WO
135557	October 31, 2008	METHOD AND SYSTEM FOR MEASURING AND COMPENSATING FOR THE CASE TEMPERATURE VARIATIONS IN A BOLOMETER BASED SYSTEM	SG
7,807,968	October 5, 2010	METHOD AND SYSTEM FOR MEASURING AND COMPENSATING FOR THE CASE TEMPERATURE VARIATIONS IN A BOLOMETER BASED SYSTEM	US
10-1229605	January 29, 2013	METHOD AND SYSTEM FOR MEASURING AND COMPENSATING FOR THE CASE TEMPERATURE VARIATIONS IN A BOLOMETER BASED SYSTEM	KR
167637	December 23, 2009	METHOD AND SYSTEM FOR DETERMINING THE RATE OF NON UNIFORMITY OF BOLOMETER BASED SYSTEMS	IL
PCT/IL2006/000048	January 12, 2006	METHOD AND SYSTEM FOR DETERMINING THE RATE OF NON UNIFORMITY OF BOLOMETER BASED SYSTEMS	WO
1872103	April 14, 2010	METHOD AND SYSTEM FOR DETERMINING THE RATE OF NON UNIFORMITY OF BOLOMETER BASED SYSTEMS	EP
1872103	April 14, 2010	METHOD AND SYSTEM FOR DETERMINING THE RATE OF NON UNIFORMITY OF BOLOMETER BASED SYSTEMS	FR

Patent or Application No.	Issue Date or Filing Date	Patent Title	WIPO Country Code
1872103	April 14, 2010	METHOD AND SYSTEM FOR DETERMINING THE RATE OF NON UNIFORMITY OF BOLOMETER BASED SYSTEMS	DE
1872103	April 14, 2010	METHOD AND SYSTEM FOR DETERMINING THE RATE OF NON UNIFORMITY OF BOLOMETER BASED SYSTEMS	GB
135558	October 31, 2008	METHOD AND SYSTEM FOR DETERMINING THE RATE OF NON UNIFORMITY OF BOLOMETER BASED SYSTEMS	SG
7,807,969	October 5, 2010	METHOD AND SYSTEM FOR DETERMINING THE RATE OF NON UNIFORMITY OF BOLOMETER BASED SYSTEMS	US
10-1201663	November 8, 2012	METHOD AND SYSTEM FOR DETERMINING THE RATE OF NON UNIFORMITY OF BOLOMETER BASED SYSTEMS	KR
237707	September 1, 2020	MULTIPLE LASER DIODES EMITTING DEVICE	IL
201624007923	March 7, 2016	MULTIPLE LASER DIODES EMITTING DEVICE	IN
246796	September 1, 2020	A DUAL BAND PHOTO-DETECTOR AND A METHOD THEREOF	IL
10,573,675	February 25, 2020	A DUAL BAND PHOTO-DETECTOR AND A METHOD THEREOF	US
201724022896	June 29, 2017	A DUAL BAND PHOTO-DETECTOR AND A METHOD THEREOF	IN
10-2221682	February 23, 2021	A DUAL BAND PHOTO-DETECTOR AND A METHOD THEREOF	KR
3270423	October 31, 2018	A DUAL BAND PHOTO-DETECTOR AND A METHOD THEREOF	EP
3270423	October 31, 2018	A DUAL BAND PHOTO-DETECTOR AND A METHOD THEREOF	FR

Patent or Application No.	Issue Date or Filing Date	Patent Title	WIPO Country Code
3270423	October 31, 2018	A DUAL BAND PHOTO-DETECTOR AND A METHOD THEREOF	DE
3270423	October 31, 2018	A DUAL BAND PHOTO-DETECTOR AND A METHOD THEREOF	SE
3270423	October 31, 2018	A DUAL BAND PHOTO-DETECTOR AND A METHOD THEREOF	GB
225872	July 1, 2015	SEMICONDUCTOR BARRIER PHOTO-DETECTOR	IL
1293/MUM/2014	April 7, 2014	SEMICONDUCTOR BARRIER PHOTO-DETECTOR	IN
9,627,563	April 18, 2017	SEMICONDUCTOR BARRIER PHOTO-DETECTOR	US
9,761,751	September 12, 2017	SEMICONDUCTOR BARRIER PHOTO-DETECTOR	US
2797122	March 2, 2022	SEMICONDUCTOR BARRIER PHOTO-DETECTOR	EP
2797122	March 2, 2022	SEMICONDUCTOR BARRIER PHOTO-DETECTOR	BE
2797122	March 2, 2022	SEMICONDUCTOR BARRIER PHOTO-DETECTOR	FR
2797122	March 2, 2022	SEMICONDUCTOR BARRIER PHOTO-DETECTOR	DE
2797122	March 2, 2022	SEMICONDUCTOR BARRIER PHOTO-DETECTOR	IT
2797122	March 2, 2022	SEMICONDUCTOR BARRIER PHOTO-DETECTOR	SE
2797122	March 2, 2022	SEMICONDUCTOR BARRIER PHOTO-DETECTOR	TR
2797122	March 2, 2022	SEMICONDUCTOR BARRIER PHOTO-DETECTOR	GB
242952	June 2, 2021	PHOTODETECTOR-ARRAYS AND METHODS OF FABRICATION THEREOF	IL
3176814	June 7, 2017	PHOTODETECTOR-ARRAYS AND METHODS OF FABRICATION THEREOF	EP
10,644,061	May 5, 2020	PHOTODETECTOR-ARRAYS AND METHODS OF FABRICATION THEREOF	US

Patent or Application No.	Issue Date or Filing Date	Patent Title	WIPO Country Code
201624041123	December 1, 2016	PHOTODETECTOR-ARRAYS AND METHODS OF FABRICATION THEREOF	IN
10-2016-0165398	December 6, 2016	PHOTODETECTOR-ARRAYS AND METHODS OF FABRICATION THEREOF	KR
262372	September 1, 2020	A PIXEL READOUT CIRCUIT AND A METHOD FOR IMAGING	IL
PCT/IL2019/051116	October 10, 2019	A PIXEL READOUT CIRCUIT AND A METHOD FOR IMAGING	WO
19872432.0	October 10, 2019	A PIXEL READOUT CIRCUIT AND A METHOD FOR IMAGING	EP
202127017242	October 10, 2019	A PIXEL READOUT CIRCUIT AND A METHOD FOR IMAGING	IN
10-2021-7014767	October 10, 2019	A PIXEL READOUT CIRCUIT AND A METHOD FOR IMAGING	KR
17/284,883	October 10, 2019	A PIXEL READOUT CIRCUIT AND A METHOD FOR IMAGING	US