PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT7854308

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
RENESAS DESIGN US INC. (FORMERLY KNOWN AS DIALOG SEMICONDUCTOR US INC. AS SUCCESSOR-IN-INTEREST TO ADESTO TECHNOLOGIES CORPORATION AND ARTEMIS ACQUISITION, LLC)	02/03/2023

RECEIVING PARTY DATA

Name:	GLOBALFOUNDRIES U.S. INC.
Street Address:	400 STONEBREAK ROAD EXTENSION
City:	MALTA
State/Country:	NEW YORK
Postal Code:	12020

PROPERTY NUMBERS Total: 95

Property Type	Number
Patent Number:	8062694
Patent Number:	7215568
Patent Number:	7561460
Patent Number:	7746683
Patent Number:	7372716
Patent Number:	7483294
Patent Number:	8531863
Patent Number:	7277312
Patent Number:	7327603
Patent Number:	7715226
Patent Number:	8115282
Patent Number:	8420481
Patent Number:	8107273
Patent Number:	8369132
Patent Number:	8625331
Patent Number:	8274842
Patent Number:	8498164
Patent Number:	8331128
Patent Number:	9007814

Property Type	Number
Patent Number:	9373398
Patent Number:	8675396
Patent Number:	8426839
Patent Number:	8437171
Patent Number:	8947907
Patent Number:	8294488
Patent Number:	9159414
Patent Number:	8320148
Patent Number:	8659926
Patent Number:	8829482
Patent Number:	9401472
Patent Number:	8687403
Patent Number:	9343667
Patent Number:	10446747
Patent Number:	9755142
Patent Number:	8947913
Patent Number:	9177639
Patent Number:	9099175
Patent Number:	9721658
Patent Number:	9570166
Patent Number:	8854873
Patent Number:	8895953
Patent Number:	9070877
Patent Number:	8816314
Patent Number:	8847192
Patent Number:	9047948
Patent Number:	8659954
Patent Number:	8995173
Patent Number:	9165648
Patent Number:	9025396
Patent Number:	9305643
Patent Number:	9099633
Patent Number:	8952351
Patent Number:	8730752
Patent Number:	9368198
Patent Number:	8941089
Patent Number:	9165644
Patent Number:	9734902

Property Type	Number
Patent Number:	9053789
Patent Number:	9147464
Patent Number:	9455036
Patent Number:	8912517
Patent Number:	9627441
Patent Number:	8866122
Patent Number:	9007808
Patent Number:	8953362
Patent Number:	9431101
Patent Number:	9373786
Patent Number:	8995167
Patent Number:	9019745
Patent Number:	9208876
Patent Number:	9412945
Patent Number:	9595671
Patent Number:	9252359
Patent Number:	9818939
Patent Number:	9711719
Patent Number:	9361975
Patent Number:	9336868
Patent Number:	9368206
Patent Number:	9099176
Patent Number:	9391270
Patent Number:	10497868
Patent Number:	9613693
Patent Number:	9530495
Patent Number:	9524777
Patent Number:	10191666
Patent Number:	11056646
Patent Number:	10181496
Patent Number:	10777268
Patent Number:	10984861
Patent Number:	11107535
Application Number:	15650719
Application Number:	17510545
Application Number:	17879904
Application Number:	17601778
Patent Number:	11537754

CORRESPONDENCE DATA

Fax Number: (703)848-2981

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.

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NAME OF SUBMITTER:	ANDREW M. CALDERON
SIGNATURE:	/Andrew M. Calderon/
DATE SIGNED:	03/20/2023

Total Attachments: 7
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PATENT ASSIGNMENT AGREEMENT

This PATENT ASSIGNMENT AGREEMENT ("Patent Assignment"), dated as of February 3, 2023, is entered into by: Renesas Design US Inc. (formerly known as Dialog Semiconductor US Inc. as successor-in-interest to Adesto Technologies Corporation and Artemis Acquisition, LLC), a Delaware corporation ("Assignor"), in favor of GlobalFoundries U.S. Inc., a Delaware corporation ("Assignee").

WHEREAS, pursuant to that certain Asset Purchase Agreement, dated as of January 27, 2023, by and between Assignor and Assignee, Assignor wishes to sell and assign to Assignee, among other assets, certain Assigned Patents of Assignor as defined and detailed below, and has agreed to execute and deliver this Patent Assignment;

NOW, THEREFORE, in consideration of the premises and the mutual covenants and agreements contained herein, and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties hereto, intending to be legally bound, hereby agree as follows:

1. Assignment. Assignor hereby irrevocably sells, conveys, transfers and assigns to Assignee, and Assignee hereby accepts, all of Assignor's right, title and interest in and to the following:

(a) the issued patents and patent applications set forth on Schedule A hereto and all related patent applications in all countries, including all issuances, divisions, continuations, continuations-in-part, reissues, extensions, reexaminations and renewals thereof, together with all patents issuing therefrom (the "Assigned Patents");

(b) including specifically, but without limitation, any registrations and applications therefor, any renewals and extensions of the registrations, all rights of priority of Assignor accruing under any of the foregoing provided by applicable law of any jurisdiction, by international treaties and conventions and otherwise throughout the world, now or hereafter in effect, for Assignee's own use and enjoyment, and for the use and enjoyment of Assignee's successors, assigns or other legal representatives, as fully and entirely as the same would have been held and enjoyed by Assignor if this Patent Assignment had not been made;

(c) any and all royalties, income, fees, income, payments and other proceeds now or hereafter due or payable with respect to any and all of the foregoing, including, without limitation, all claims for damages by reason of past, present or future infringement or other unauthorized use of the Assigned Patents, with the right to sue for and collect the same for Assignee's own use and enjoyment and for the use and enjoyment of its successors, assigns or other legal representatives; and

(d) any and all claims and causes of action, with respect to any of the foregoing, whether accruing before, on and/or after the date hereof, including all rights to and claims

for damages, restitution and injunctive and other legal and equitable relief for past, present and future infringement, dilution, misappropriation, violation, misuse, breach or default, with the right but no obligation to sue for such legal and equitable relief and to collect, or otherwise recover, any such damages.

2. Recordation and Further Actions. Assignor hereby authorizes the Commissioner for Patents and any other governmental officials of any country, to record and register this Patent Assignment upon request by Assignee, it successors, assigns and legal representatives, or to such nominees as it may designate. Assignor shall take such steps and actions following the date hereof, and provide to Assignee, Assignee's successors, assigns or other legal representatives, reasonable cooperation and assistance, requested by Assignee and at Assignee's sole expense, including the execution of any documents, files, registrations, or other similar items, to more fully and effectively effectuate the purposes of this Patent Assignment and evidence and perfect Assignee's exclusive ownership of the Assigned Patents and to ensure that the Assigned Patents are properly assigned to Assignee, or any assignee or successor thereto.

3. Counterparts. This Patent Assignment may be executed in counterparts, each of which shall be deemed an original, but all of which together shall be deemed to be one and the same agreement. A signed copy of this Patent Assignment delivered by facsimile, e-mail or other means of electronic transmission shall be deemed to have the same legal effect as delivery of an original signed copy of this Patent Assignment.

4. Successors and Assigns. This Patent Assignment shall be binding upon and shall inure to the benefit of the parties hereto and their respective successors and assigns. This Patent Assignment may not be modified or amended except by an instrument or instruments in writing signed by Assignor and Assignee.

5. Governing Law. This Patent Assignment and any claim, controversy, dispute or cause of action (whether in contract, tort or otherwise) based upon, arising out of or relating to this Patent Assignment and the transactions contemplated hereby shall be governed by, and construed in accordance with, the laws of the United States and the State of Delaware, without giving effect to any choice or conflict of law provision or rule (whether of the State of Delaware or any other jurisdiction).

IN WITNESS WHEREOF, the parties have duly executed and delivered this Patent Assignment as of the date first above written.

ASSIGNOR:

RENESAS DESIGN US INC. (formerly known as Dialog Semiconductor US Inc. as successor-in-interest to Adesto Technologies Corporation and Artemis Acquisition, LLC)

By: DocuSigned by: Davin Lee 088807A054264CF...

Name: Davin Lee
Title: Director and Vice President

Agreed and accepted by:

ASSIGNEE:

GLOBALFOUNDRIES U.S. INC.

By: _____
Name:
Title:

[Signature Page to Patent Assignment Agreement]

IN WITNESS WHEREOF, the parties have duly executed and delivered this Patent Assignment as of the date first above written.

ASSIGNOR:

RENESAS DESIGN US INC. (formerly known as Dialog Semiconductor US Inc. as successor-in-interest to Adesto Technologies Corporation and Artemis Acquisition, LLC)

By: _____

Name:
Title:

Agreed and accepted by:

ASSIGNEE:

GLOBALFOUNDRIES U.S. INC.

By: _____

Name: Kevin J. Soukup
Title: Chief Strategy Officer

[Signature Page to Patent Assignment Agreement]

SCHEDULE A

ASSIGNED PATENTS

Title	Country Name	Case Status	Earliest Priority Date	Base Application Date	Filing Date	Application No	Registration Date	Registration No	Organisation Role: Assignee	Publication Date	Publication No
Memory system and process for controlling a memory component to achieve different kinds of memory characteristics on one and the same memory component	United States of America	Registered	2003-11-28		2003-11-28	10/722576	2008-02-26	US7337282	Adesto Technologies Corporation; Artemis Acquisition LLC	2005-06-02	US20050120186
Method for producing memory having a solid electrolyte material region	United States of America	Registered	2004-06-18	2005-06-16	2010-10-27	12/913565	2011-11-22	US8062694	Adesto Technologies Corporation; Artemis Acquisition LLC	2011-02-17	US20110037014
Resistive memory arrangement	United States of America	Registered	2004-08-30		2005-08-30	11/215443	2007-05-08	US7215568	Adesto Technologies Corporation; Artemis Acquisition LLC	2006-03-09	US20060050547
Resistive memory arrangement	United States of America	Registered	2004-08-30	2005-08-30	2007-03-20	11/688556	2009-07-14	US7561460	Adesto Technologies Corporation; Artemis Acquisition LLC	2007-09-13	US20070211515
NOR and NAND memory arrangement of resistive memory elements	United States of America	Registered	2004-10-20	2005-10-14	2007-04-19	11/737236	2010-06-29	US7746683	Adesto Technologies Corporation; Artemis Acquisition LLC	2007-10-18	US20070242496
CBRAM memory cell arrangement and method for programming CBRAM memory cells	United States of America	Registered	2004-08-23		2005-08-23	11/209424	2008-05-13	US7372716	Adesto Technologies Corporation; Artemis Acquisition LLC	2006-03-23	US20060062043
CBRAM memory cell arrangement and method for programming CBRAM memory cells	Germany	Registered	2004-08-23		2004-08-23	102004040750.9	2008-03-27	102004040750.9	Adesto Technology Corporation		
Read, write, and erase circuit for programmable memory devices	United States of America	Registered	2005-03-11	2006-03-13	2007-08-20	11/841591	2009-01-27	US7483294	Adesto Technologies Corporation	2007-12-06	US20070279976
Method for operating an integrated circuit having a resistivity changing memory cell	United States of America	Registered	2005-05-20		2005-05-20	11/133716	2013-09-10	US8531863	Adesto Technologies Corporation; Artemis Acquisition LLC	2006-11-23	US20060265548
Integrated semiconductor memory with arrangement of nonvolatile memory cells, and method	United States of America	Registered	2005-01-28		2006-01-27	11/341902	2007-10-02	US7277312	Adesto Technologies Corporation; Artemis Acquisition LLC	2006-08-24	US20060187701
Electrical circuit and a method for operating a programmable metallization cell	United States of America	Registered	2005-08-16		2005-08-16	11/204569	2008-02-05	US7327603	Adesto Technologies Corporation; Artemis Acquisition LLC	2007-02-22	US20070041251
Method for operating a programmable metallization cell and electrical circuit	Germany	Registered	2005-08-16	2005-08-16	2005-08-16	602005019726.5	2010-03-03	602005019726.5	Adesto Technology Corporation		
Integrated circuit including circuitry to perform write and erase operations	United States of America	Registered	2005-08-16	2005-08-16	2008-02-05	12/026259	2010-05-11	US7715226	Adesto Technologies Corporation; Artemis Acquisition LLC	2008-05-29	US20080123400
MEMORY CELL DEVICE AND METHOD OF MANUFACTURE	United States of America	Registered	2006-07-25		2006-07-25	11/492305	2012-02-14	US8115282	Adesto Technology Corporation; Artemis Acquisition LLC; Altis Semiconductor (jointly owned)	2008-01-31	US20080023798
Memory cell device and method of manufacture	United States of America	Registered	2006-07-25	2006-07-25	2012-01-10	13/346749	2013-04-16	US8420481	Adesto Technology Corporation; Artemis Acquisition LLC; Altis Semiconductor (jointly owned)	2012-05-03	US20120104341
INTEGRATED CIRCUITS HAVING PROGRAMMABLE METALLIZATION CELLS (PMCs) AND OPERATING METHODS THEREFOR	United States of America	Registered	2008-07-28		2009-07-23	12/508212	2012-01-31	US8107273	Adesto Technologies Corporation		
METHODS OF PROGRAMMING AND ERASING PROGRAMMABLE METALLIZATION CELLS (PMCs)	United States of America	Registered	2008-07-28	2009-07-23	2011-12-23	13/337004	2013-02-05	US8369132	Adesto Technologies Corporation		
METHODS OF PROGRAMMING AND ERASING PROGRAMMABLE METALLIZATION CELLS (PMCs)	United States of America	Registered	2008-07-28	2011-12-23	2012-07-10	13/545792	2014-01-07	US8625331	Adesto Technologies Corporation		
Variable impedance memory device having simultaneous program and erase, and corresponding methods and circuits	United States of America	Registered	2008-09-25		2009-09-25	12/566790	2012-09-25	US8274842	Adesto Technologies Corporation		
VARIABLE IMPEDANCE MEMORY DEVICE BIASING CIRCUITS AND METHODS	United States of America	Registered	2008-09-25	2009-09-25	2012-08-24	13/594756	2013-07-30	US8498164	Adesto Technologies Corporation		
Reconfigurable memory arrays having programmable impedance elements and corresponding methods	United States of America	Registered	2008-12-02		2009-12-02	12/629531	2012-12-11	US8331128	Adesto Technologies Corporation		
APPLICATION OF RELAXATION VOLTAGE PULSES TO PROGRAMMABLE IMPEDANCE ELEMENTS DURING READ OPERATIONS	United States of America	Registered	2008-12-02	2012-12-10	2014-03-05	14/197541	2015-04-14	US9007814	Adesto Technologies Corporation		
PROTOTYPING INTEGRATED CIRCUIT DEVICES WITH PROGRAMMABLE IMPEDANCE ELEMENTS	United States of America	Registered	2008-12-02	2014-03-05	2015-04-14	14/686403	2016-06-21	US9373398	Adesto Technologies Corporation		
INTEGRATED CIRCUIT DEVICES AND SYSTEMS HAVING PROGRAMMABLE IMPEDANCE ELEMENTS WITH DIFFERENT RESPONSE TYPES	United States of America	Registered	2008-12-02	2009-12-02	2012-12-10	13/710329	2014-03-18	US8675396	Adesto Technologies Corporation		
CONDUCTING BRIDGE RANDOM ACCESS MEMORY (CBRAM) DEVICE STRUCTURES AND FABRICATION METHODS	United States of America	Registered	2009-04-24		2010-04-26	12/767552	2013-04-23	US8426839	Adesto Technologies Corporation		
METHODS AND CIRCUITS FOR TEMPERATURE VARYING WRITE OPERATIONS OF PROGRAMAMBLE IMPEDANCE ELEMENTS	United States of America	Registered	2009-12-31		2010-12-29	12/980752	2013-05-07	US8437171	Adesto Technologies Corporation		
CURRENT SOURCE CIRCUITS AND METHODS FOR MASS WRITE AND TESTING OF PROGRAMMABLE IMPEDANCE ELEMENTS	United States of America	Registered	2009-12-31	2010-12-29	2013-04-13	13/862390	2015-02-03	US8947907	Adesto Technologies Corporation		
PROGRAMMABLE IMPEDANCE ELEMENT CIRCUITS AND METHODS	United States of America	Registered	2009-04-24		2010-04-26	12/767732	2012-10-23	US8294488	Adesto Technologies Corporation		
PROGRAMMABLE IMPEDANCE ELEMENT CIRCUITS AND METHODS	United States of America	Registered	2009-04-24	2010-04-26	2012-10-22	13/657568	2015-10-13	US9159414	Adesto Technologies Corporation		
PMC-BASED NON-VOLATILE CAM	United States of America	Registered	2009-06-25		2010-06-07	12/802506	2012-11-27	US8320148	Adesto Technologies Corporation; Artemis Acquisition LLC		
PMC-BASED NON-VOLATILE CAM	United States of America	Registered	2009-06-25	2010-06-07	2012-10-09	13/647534	2014-02-25	US8659926	Adesto Technologies Corporation; Artemis Acquisition LLC		
VARIABLE IMPEDANCE MEMORY DEVICE STRUCTURE AND METHOD OF MANUFACTURE INCLUDING PROGRAMMABLE IMPEDANCE MEMORY CELLS AND METHODS OF FORMING THE SAME	United States of America	Registered	2010-09-23		2011-09-23	13/242854	2014-09-09	US8829482	Adesto Technologies Corporation		
PROGRAMMABLE IMPEDANCE ELEMENTS, METHODS OF FORMING ALL OR PORTIONS OF SUCH ELEMENTS, AND METHODS AND DEVICES THAT INCLUDE SUCH ELEMENTS	United States of America	Registered	2010-09-23		2011-09-23	13/242391	2016-07-26	US9401472	Adesto Technologies Corporation		
CIRCUITS HAVING PROGRAMMABLE IMPEDANCE ELEMENTS	United States of America	Registered	2010-06-10		2011-06-10	13/157713	2014-04-01	US8687403	Adesto Technologies Corporation		
CIRCUITS HAVING PROGRAMMABLE IMPEDANCE ELEMENTS AND VERTICAL ACCESS DEVICES	United States of America	Registered	2010-06-10	2011-06-10	2014-03-31	14/231729	2016-05-17	US9343667	Adesto Technologies Corporation		
METHODS OF OPERATING INTEGRATED CIRCUIT DEVICES HAVING VOLATILE AND NONVOLATILE MEMORY PORTIONS	United States of America	Registered	2010-06-10	2016-05-16	2017-08-31	15/693360	2019-10-15	US10446747	Adesto Technologies Corporation		
METHODS OF MAKING MEMORY DEVICES WITH PROGRAMMABLE IMPEDANCE ELEMENTS AND VERTICALLY FORMED ACCESS DEVICES	United States of America	Registered	2010-06-10	2014-03-31	2016-05-16	15/155301	2017-09-05	US9755142	Adesto Technologies Corporation		
CIRCUITS AND METHODS HAVING PROGRAMMABLE IMPEDANCE ELEMENTS	United States of America	Registered	2010-05-24		2011-05-24	13/114192	2015-02-03	US8947913	Adesto Technologies Corporation		
MEMORY DEVICES AND METHODS HAVING DATA VALUES BASED ON DYNAMIC CHANGE IN MATERIAL PROPERTY	United States of America	Registered	2010-12-09		2011-12-09	13/315652	2015-11-03	US9177639	Adesto Technologies Corporation		
MEMORY DEVICES AND METHODS FOR READ AND WRITE OPERATIONS TO MEMORY ELEMENTS HAVING DYNAMIC CHANGE IN PROPERTY	United States of America	Registered	2011-03-01		2012-02-29	13/408367	2015-08-04	US9099175	Adesto Technologies Corporation		
MEMORY DEVICES AND METHODS FOR STORING SINGLE DATA VALUE IN MULTIPLE PROGRAMMABLE RESISTANCE ELEMENTS	United States of America	Registered	2011-03-01	2012-02-29	2015-07-04	14/791416	2017-08-01	US9721658	Adesto Technologies Corporation		
READ OPERATIONS AND CIRCUITS FOR MEMORY DEVICES HAVING PROGRAMMABLE ELEMENTS, INCLUDING PROGRAMMABLE RESISTANCE ELEMENTS	United States of America	Registered	2011-03-01	2012-02-29	2014-12-16	14/572646	2017-02-14	US9570166	Adesto Technologies Corporation		
MEMORY DEVICES, ARCHITECTURES AND METHODS FOR MEMORY ELEMENTS HAVING DYNAMIC CHANGE IN PROPERTY	United States of America	Registered	2011-05-05		2012-05-04	13/464926	2014-10-07	US8854873	Adesto Technologies Corporation		
PROGRAMMABLE MEMORY ELEMENTS, DEVICES AND METHODS HAVING PHYSICALLY LOCALIZED STRUCTURE	United States of America	Registered	2011-07-15		2012-07-10	13/545958	2014-11-25	US8895953	Adesto Technologies Corporation		
MEMORY ELEMENTS AND METHODS WITH IMPROVED DATA RETENTION AND/OR ENDURANCE	United States of America	Registered	2011-05-05	2012-05-04	2013-08-21	13/972718	2015-06-30	US9070877	Adesto Technologies Corporation	2013-12-26	US20130344649A1
CONTACT STRUCTURE AND METHOD FOR VARIABLE IMPEDANCE MEMORY ELEMENT	United States of America	Registered	2011-05-13		2012-05-12	13/470286	2014-08-26	US8816314	Adesto Technologies Corporation	2012-12-13	US20120313071A1
RESISTIVE SWITCHING DEVICES HAVING ALLOYED ELECTRODES AND METHODS OF FORMATION THEREOF	United States of America	Registered	2011-09-13	2012-07-13	2012-07-25	13/558296	2014-09-30	US8847192	Adesto Technologies Corporation; Artemis Acquisition LLC; Adesto Technologies France SARL	2013-03-14	US20130062587
PROGRAMMABLE WINDOW OF OPERATION FOR CBRAM	United States of America	Registered	2011-09-14		2012-07-13	13/548429	2015-06-02	US9047948	Adesto Technologies Corporation; Artemis Acquisition LLC		
CBRAM/ReRAM WITH IMPROVED PROGRAM AND ERASE ALGORITHMS	United States of America	Registered	2011-09-14		2012-07-13	13/548470	2014-02-25	US8659954	Adesto Technologies Corporation; Artemis Acquisition LLC		
MEMORY CELLS, DEVICES AND METHOD WITH DYNAMIC STORAGE ELEMENTS AND PROGRAMMABLE IMPEDANCE SHADOW ELEMENTS	United States of America	Registered	2011-09-29		2012-09-04	13/603373	2015-03-31	US8995173	Adesto Technologies Corporation		
RESISTIVE MEMORY DEVICES, CIRCUITS AND METHODS HAVING READ CURRENT LIMITING	United States of America	Registered	2011-12-23		2011-12-23	13/336642	2015-10-20	US9165648	Adesto Technologies Corporation		
Pre-conditioning circuits and methods for programmable impedance elements in memory devices	United States of America	Registered	2012-02-08		2013-02-08	13/763461	2015-05-05	US9025396	Adesto Technologies Corporation		
MEMORY DEVICES AND METHODS HAVING ADAPTABLE READ THRESHOLD LEVELS	United States of America	Registered	2012-03-27		2013-03-26	13/851011	2016-04-05	US9305643	Adesto Technologies Corporation	2013-10-03	US20130258753A1
SOLID ELECTROLYTE MEMORY ELEMENTS WITH ELECTRODE INTERFACE FOR IMPROVED PERFORMANCE	United States of America	Registered	2012-03-26		2013-03-25	13/850267	2015-08-04	US9099633	Adesto Technologies Corporation	2013-10-31	US20130285004A1
PROGRAMMABLE IMPEDANCE MEMORY ELEMENTS WITH LATERALLY EXTENDING CELL STRUCTURE	United States of America	Registered	2012-03-27	2012-03-27	2014-07-30	14/447322	2015-02-10	US8952351	Adesto Technologies Corporation		
CIRCUITS AND METHODS FOR PLACING PROGRAMMABLE IMPEDANCE MEMORY ELEMENTS IN HIGH IMPEDANCE STATES	United States of America	Registered	2012-04-02		2012-04-02	13/437906	2014-05-20	US8730752	Adesto Technologies Corporation		
CIRCUITS AND METHODS FOR PLACING PROGRAMMABLE IMPEDANCE MEMORY ELEMENTS IN HIGH IMPEDANCE STATES	United States of America	Registered	2012-04-02	2012-04-02	2014-05-19	14/281830	2016-06-14	US9368198	Adesto Technologies Corporation		
Resistive switching devices and methods of formation thereof	United States of America	Registered	2012-02-22		2013-02-14	13/767800	2015-01-27	US8941089	Adesto Technologies Corporation; Artemis Acquisition LLC	2013-08-22	US20130214234
Resistive Devices and Methods of Operation Thereof	United States of America	Registered	2012-05-11		2012-05-11	13/470030	2015-10-20	US9165644	Adesto Technologies Corporation; Artemis Acquisition LLC; Axon Technologies Corporation (jointly owned)	2013-11-14	US20130301337A1
Resistive Devices and Methods of Operation Thereof	United States of America	Registered	2012-05-11	2012-05-11	2015-09-22	14/861680	2017-08-15	US9734902	Adesto Technologies Corporation; Artemis Acquisition LLC; Axon Technologies Corporation (jointly owned)	2016-01-14	US20160012885A1
Resistive Devices and Methods of Operation Thereof	Korea (South)	Registered	2012-05-11	2013-05-10	2014-12-11	1020147034862	2017-01-13	KR101698023	Adesto Technologies Corporation; Artemis Acquisition LLC; Axon Technologies Corporation (jointly owned)	2017-01-19	KR1020147034862
Resistive Devices and Methods of Operation Thereof	China	Registered	2012-05-11	2013-05-10	2014-09-28	201380017339.6	2017-09-15	ZL201380017339.6	Adesto Technologies Corporation; Artemis Acquisition LLC; Axon Technologies Corporation (jointly owned)	2014-12-17	CN104221090A
Triggered cell annihilation for resistive switching memory devices	United States of America	Registered	2012-04-23		2013-04-10	13/859853	2015-06-09	US9053789	Adesto Technologies Corporation; Artemis Acquisition LLC		
SYSTEM ARCHITECTURE WITH MULTIPLE MEMORY TYPES, INCLUDING PROGRAMMABLE IMPEDANCE MEMORY ELEMENTS	United States of America	Registered	2012-05-15		2013-03-18	13/846539	2015-09-29	US9147464	Adesto Technologies Corporation		
SYSTEM ARCHITECTURES WITH DATA TRANSFER PATHS BETWEEN DIFFERENT MEMORY TYPES	United States of America	Registered	2012-05-15	2013-03-18	2015-09-28	14/868363	2016-09-27	US9455036	Adesto Technologies Corporation		
Resistive Switching Memory	United States of America	Registered	2012-09-24		2012-09-24	13/625518	2014-12-16	US8912517	Adesto Technologies Corporation; Artemis Acquisition LLC	2014-03-27	US20140084232A1
Resistive Switching Memory	Taiwan	Registered	2012-09-24		2013-09-16	102133479	2018-09-11	I635489	Adesto Technologies Corporation	2014-06-16	TW201423744
Resistive Switching Memory	United States of America	Registered	2012-09-24	2012-09-24	2014-11-24	14/552250	2017-04-18	US9627441	Adesto Technologies Corporation; Artemis Acquisition LLC	2015-03-19	US20150076442A1
RESISTIVE SWITCHING MEMORY	China	Registered	2012-09-24		2013-09-23	201310444816.9	2020-06-05	CN103680604	Adesto Technologies Corporation	2014-03-26	CN103680604A
Resistive Switching Devices Having A Buffer Layer and Methods of Formation Thereof	United States of America	Registered	2012-06-14		2012-06-14	13/517653	2014-10-21	US8866122	Adesto Technologies Corporation; Artemis Acquisition LLC		
SAFEGUARDING DATA THROUGH AN SMT PROCESS	United States of America	Registered	2012-09-27		2012-09-27	13/628385	2015-04-14	US9007808	Adesto Technologies Corporation; Artemis Acquisition LLC		
Resistive Devices and Methods of Operation Thereof	United States of America	Registered	2012-05-11		2012-09-11	13/610690	2015-02-10	US8953362	Adesto Technologies Corporation; Artemis Acquisition LLC	2014-01-02	US20140003125
Resistive Devices and Methods of Operation Thereof	United States of America	Registered	2012-05-11	2012-09-11	2015-01-19	14/599654	2016-08-30	US9431101	Adesto Technologies Corporation; Artemis Acquisition LLC	2015-06-11	US20150162079A1
Two Terminal Resistive Access Devices and Methods of Formation Thereof	United States of America	Registered	2013-01-23		2013-01-23	13/748470	2016-06-21	US9373786	Adesto Technologies Corporation; Artemis Acquisition LLC		
Reverse program and erase cycling algorithms	United States of America	Registered	2013-02-01		2013-02-01	13/757275	2015-03-31	US8995167	Adesto Technologies Corporation; Artemis Acquisition LLC		
Verify pulse delay to improve resistance window	United States of America	Registered	2013-01-17		2013-01-17	13/743939	2015-04-28	US9019745	Adesto Technologies Corporation; Artemis Acquisition LLC		
Verify pulse delay to improve resistance window	United States of America	Registered	2013-01-17	2013-01-17	2015-03-20	14/663719	2015-12-08	US9208876	Adesto Technologies Corporation; Artemis Acquisition LLC		
Storage elements, structures and methods having edgeless features for programmable layer(s)	United States of America	Registered	2013-03-14		2013-03-14	13/830315	2016-08-09	US9412945	Adesto Technologies Corporation; Altis Semiconductor (jointly owned)		
METHODS OF FABRICATING STORAGE ELEMENTS AND STRUCTURES HAVING EDGELESS FEATURES FOR PROGRAMMABLE LAYER(S)	United States of America	Registered	2013-03-14	2013-03-14	2016-07-19	15/214224	2017-03-14	US9595671	Adesto Technologies Corporation; Altis Semiconductor (jointly owned)		
Resistive Switching Devices Having a Switching Layer And An Intermediate Electrode Layer and Methods of Formation Thereof	United States of America	Registered	2013-03-03		2013-03-14	13/829941	2016-02-02	US9252359	Adesto Technologies Corporation; Artemis Acquisition LLC	2014-09-04	US20140246641A1
Resistive Switching Devices Having a Switching Layer And An Intermediate Electrode Layer and Methods of Formation Thereof	Japan	Registered	2013-03-03	2014-01-10	2014-01-10	2015560179	2018-11-16	6433439	Adesto Technologies Corporation; Artemis Acquisition LLC	2016-04-25	2016512390A
Resistive Switching Devices Having a Switching Layer And An Intermediate Electrode Layer and Methods of Formation Thereof	United States of America	Registered	2013-03-03	2013-03-14	2016-01-07	14/990550	2017-11-14	US9818939	Adesto Technologies Corporation; Artemis Acquisition LLC	2016-04-28	US20160118585A1
Resistive Switching Devices Having a Switching Layer And An Intermediate Electrode Layer and Methods of Formation Thereof	Taiwan	Registered	2013-03-03		2013-12-30	102148936	2018-03-21	I619242	Adesto Technologies Corporation; Artemis Acquisition LLC	2014-12-01	TW201445718
Resistive Switching Devices Having a Switching Layer And An Intermediate Electrode Layer and Methods of Formation Thereof	China	Registered	2013-03-03	2014-01-10	2015-07-29	201480006500.4	2018-07-24	ZL201480006500.4	Adesto Technologies Corporation; Artemis Acquisition LLC	2015-10-07	CN104969374A
Resistive Switching Devices Having a Switching Layer And An Intermediate Electrode Layer and Methods of Formation Thereof	Japan	Registered	2013-03-03	2014-01-10	2014-01-10	2018208650	2020-05-25	6708722	Adesto Technologies Corporation	2019-03-28	JP2019050403A
NONVOLATILE MEMORY ELEMENTS HAVING CONDUCTIVE STRUCTURES WITH SEMIMETALS AND/OR SEMICONDUCTORS	United States of America	Registered	2013-03-15		2014-03-17	14/217256	2017-07-18	US9711719	Adesto Technologies Corporation	2014-10-09	US20140299832
Nonvolatile memory with semimetal or semiconductors electrodes	Japan	Registered	2013-03-15	2014-03-17	2014-03-17	2016502579	2019-04-26	6517184	Adesto Technologies Corporation		
Nonvolatile Memory Elements Having Conductive Paths Of Semimetals Or Semiconductors	Taiwan	Registered	2014-03-17		2014-03-17	103109892	2018-05-01	I623086	Adesto Technologies Corporation	2015-10-01	TW201537723
NONVOLATILE MEMORY ELEMENTS HAVING CONDUCTIVE STRUCTURES WITH SEMIMETALS AND/OR SEMICONDUCTORS	China	Registered	2013-03-15	2014-03-17	2015-09-15	201480016247.0	2018-12-14	ZL201480016247.0	Adesto Technologies Corporation	2016-04-06	CN105474420A
NONVOLATILE MEMORY ELEMENTS HAVING CONDUCTIVE STRUCTURES WITH SEMIMETALS AND/OR SEMICONDUCTORS	United States of America	Pending	2013-03-15	2014-03-17	2017-07-17	15/650719			Adesto Technologies Corporation	2018-02-01	US20180033960A1
Sensing data in resistive switching memory devices	United States of America	Registered	2013-03-11		2013-03-11	13/793685	2016-06-07	US9361975	Adesto Technologies Corporation; Artemis Acquisition LLC	2014-09-11	US20140254238A1
Sensing data in resistive switching memory devices	Taiwan	Registered	2013-03-11		2014-02-06	103103869	2018-03-01	I616874	Adesto Technologies Corporation; Artemis Acquisition LLC	2015-01-16	TW201503127
Common plate switching reduction in resistive switching memory devices	United States of America	Registered	2013-06-04		2013-06-04	13/909983	2016-05-10	US9336868	Adesto Technologies Corporation; Artemis Acquisition LLC		
Capacitor arrangements using a resistive switching memory cell structure	United States of America	Registered	2014-07-07		2014-07-07	14/325119	2016-06-14	US9368206	Adesto Technologies Corporation; Artemis Acquisition LLC		
Resistive switching memory with diode select	United States of America	Registered	2014-04-18		2014-04-18	14/256123	2015-08-04	US9099176	Adesto Technologies Corporation; Artemis Acquisition LLC		
MEMORY CELLS WITH VERTICALLY INTEGRATED TUNNEL ACCESS DEVICE AND PROGRAMMABLE IMPEDANCE ELEMENT	United States of America	Registered	2014-10-31		2014-10-31	14/530460	2016-07-12	US9391270	Adesto Technologies Corporation		
Memory elements having conductive cap layers and methods therefor	United States of America	Registered	2014-10-07	2015-10-06	2017-04-06	15/480673	2019-12-03	US10497868	Adesto Technologies Corporation	2017-09-28	US20170279045
Memory elements having conductive cap layers and methods therefor	Taiwan	Registered	2014-10-07		2015-09-25	104131763	2020-06-21	TWI696997	Adesto Technologies Corporation	2016-09-16	TW201633309
METHODS FOR SETTING A RESISTANCE OF PROGRAMMABLE RESISTANCE MEMORY CELLS AND DEVICES INCLUDING THE SAME	United States of America	Registered	2015-10-29		2015-10-29	14/927352	2017-04-04	US9613693	Adesto Technologies Corporation		
Resistive switching memory having a resistor, diode, and switch memory cell	United States of America	Registered	2015-08-05		2015-08-05	14/819014	2016-12-27	US9530495	Adesto Technologies Corporation; Artemis Acquisition LLC		
RESISTIVE SWITCHING MEMORY HAVING A RESISTOR, DIODE, AND SWITCH MEMORY CELL	China	Registered	2015-08-05	2016-04-13	2016-04-13	201680041211.7	2021-06-04	CN107836023B	Adesto Technologies Corporation; Artemis Acquisition LLC	2018-03-23	CN107836023A
Dual program state cycling algorithms for resistive switching memory device	United States of America	Registered	2015-06-15		2016-03-16	15/071567	2016-12-20	US9524777	Adesto Technologies Corporation; Artemis Acquisition LLC		
Write parameter switching in a memory device	United States of America	Registered	2015-08-25		2015-10-05	14/875464	2019-01-29	US10191666	Adesto Technologies Corporation; Artemis Acquisition LLC		
Memory Device Having Programmable Impedance Elements With A Common Conductor Formed Below Bit Lines	Taiwan	Registered	2015-07-21		2016-07-14	105122218	2021-05-21	TWI727960	Adesto Technologies Corporation	2017-04-01	TW201712834
MEMORY DEVICE HAVING PROGRAMMABLE IMPEDANCE ELEMENTS WITH A COMMON CONDUCTOR FORMED BELOW BIT LINES	United States of America	Registered	2015-07-21	2016-07-20	2018-01-21	15/746420	2021-07-06	11,056,646	Adesto Technologies Corporation	2018-07-19	US20180205012
PROGRAMMABLE IMPEDANCE MEMORY DEVICE AND RELATED METHODS	United States of America	Registered	2016-04-29		2016-04-29	15/143310	2019-01-15	US10181496	Adesto Technologies Corporation		
STATIC RANDOM ACCESS MEMORIES WITH PROGRAMMABLE IMPEDANCE ELEMENTS AND METHODS AND DEVICES INCLUDING THE SAME	United States of America	Registered	2016-05-13		2018-11-12	16/188224	2020-09-15	US10777268	Adesto Technologies Corporation	2019-11-14	US20190348112A1
Pseudo physically unclonable functions (PUFs) made from RRAM arrays	United States of America	Pending	2018-09-18		2019-09-13	16/571051			Adesto Technologies Corporation		
Devices, systems, and methods for memory-based vetor-matrix multiplication	International Patent-PCT	Pending	2019-05-31		2020-05-28	PCT/US2020/034919			Adesto Technologies Corporation		

Reference Schemes for Resistive Memories/US	United States of America	Registered	2017-07-12		2018-07-10	16/032012	2021-04-20	US10984861	Adesto Technologies Corporation			
Memory device with adaptive noise and voltage suppression during read-while-write operations/US	United States of America	Registered	2019-09-10		2019-09-10	16/566402	2021-08-31	11,107,535	Adesto Technologies Corporation		2021-03-11	20210074365
Low Power Standby mode for non-volatile memories/US	United States of America	Pending	2021-10-26		2021-10-26	17/510,545			Dialog Semiconductor US Inc.			
Low Power Standby mode for non-volatile memories/CN	China	Pending	2021-10-26		2022-01-29	202210111312.4			Dialog Semiconductor US Inc.			
CBRAM bottom electrode structures/US	United States of America	Pending	2021-09-23		2021-09-23	63/247,412			Dialog Semiconductor US Inc.			
CBRAM bottom electrode structures/US	United States of America	Pending	2021-09-23		2022-08-03	17/879,904			Dialog Semiconductor US Inc.			
Devices, systems, and methods for memory-based vetor-matrix multiplication/US	United States of America	Pending	2019-05-31	2020-05-28	2021-10-06	17/601,778			Adesto Technologies Corporation			
Devices, systems, and methods for memory-based vetor-matrix multiplication/CN	China	Pending	2019-05-31	2020-05-28	2020-05-28	202080032880.4			Adesto Technologies Corporation			

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