

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
ANALOG DEVICES GLOBAL UNLIMITED COMPANY	01/13/2020
RECEIVING PARTY DATA	
Name:	ANALOG DEVICES INTERNATIONAL UNLIMITED COMPANY
Street Address:	BAY F1 RAHEEN INDUSTRIAL ESTATE
City:	LIMERICK, CO. LIMERICK
State/Country:	IRELAND
PROPERTY NUMBERS Total: 1	
Property Type	Number
Application Number:	15439822
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SIGNATURE:	/Diana Johnson/
DATE SIGNED:	11/19/2020
Total Attachments: 171	
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CONFIRMATORY ASSIGNMENT

WHEREAS, Analog Devices Global Unlimited Company, an unlimited company in liquidation, organized and existing under and by virtue of the laws of Ireland, and having an office and place of business at Bay F1 Raheen Industrial Estate, Limerick (hereinafter "Assignor"), is the owner of assets identified in Appendix A (hereinafter collectively "Patent Properties"), including all inventions and other subject matter described in the Patent Properties;

AND WHEREAS, Analog Devices International Unlimited Company, an entity organized and existing under and by virtue of the laws of Ireland, and having an office and place of business at Bay F1 Raheen Industrial Estate, Limerick (hereinafter "Assignee"), is desirous of acquiring the entire right, title and interest in and to said Patent Properties, including all inventions and other subject matter described therein, and any patent to be obtained in relation therefor;

AND WHEREAS, the Assignor and the Assignee have agreed that by virtue of the ASSIGNMENT OF RIGHTS dated November 5, 2018 (the "effective date"), Assignor transferred Assignor's entire right, title, and interest in all intellectual property, including said Patent Properties, as of the effective date of such ASSIGNMENT OF RIGHTS;

NOW, THEREFORE, to all whom it may concern, be it known that for good and valuable consideration, the receipt and sufficiency whereof is hereby acknowledged, the Assignor has assigned, conveyed, and transferred said intellectual property to Assignee and hereby does:

ASSIGN, CONVEY AND TRANSFER to the Assignee the Assignor's entire right, title, and interest for the United States and all foreign countries and jurisdictions in and to:

the whole of said intellectual property including the right to apply for and obtain patents or other forms of protection with respect to said intellectual property;

said Patent Properties, including all original and reissued patents which have been or shall be issued in the United States and all foreign countries and jurisdictions based in whole or in part on any of said Patent Properties;

all divisional, continuing (including continuation-in-part), substitute, renewal, reissue, and all other applications for a patent or patents which have been or shall be filed in the United States (including all provisional and non-provisional applications), and in all foreign countries and

jurisdictions, based in whole or in part on any of said Patent Properties (including any application for a utility model or an innovation patent application);

the right to claim priority to said Patent Properties in relation to subject matter based in whole or in part on said Patent Properties and any of the foregoing including the right to file foreign applications under the provisions of any convention or treaty;

and the right to all causes of action, remedies, and other enforcement rights related to said Patent Properties, including without limitation the right to sue for past, present, or future infringement, misappropriation, or violation of any and all rights related to said Patent Properties and any of the foregoing, including the right to obtain and collect damages and/or royalties due for past, present, or future infringement;

AUTHORIZES AND REQUESTS the issuing authority to issue any and all United States and foreign patents granted on said Patent Properties to the Assignee;

AUTHORIZES AND REQUESTS that any attorney associated with U.S. Patent and Trademark Office (USPTO) Customer No. 165378 may (directly or through his/her designee) delete, insert, or alter any information related to said Patent Properties or any of the foregoing, after execution of this Assignment;

WARRANTS AND COVENANTS that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been or shall be made to others by the Assignor, and that the full right to convey the same as herein expressed is possessed by the Assignor;

COVENANTS, that when requested and without compensation, but at the expense of the Assignee, in order to carry out in good faith the intent and purpose of this Assignment, the Assignor shall (1) secure cooperation from all present and former employees and/or inventors contributing or having contributed to the Patent Properties; (2) execute all provisional, non-provisional, divisional, continuing (including continuation-in-part), substitute, renewal, reissue, and all other patent applications for the Patent Properties; (3) execute all rightful oaths, declarations, assignments, powers of attorney and other papers for the Patent Properties; (4) communicate to the Assignee all facts known to the Assignor relating to the Patent Properties and the history thereof; (5) cooperate with the Assignee in any interference, reexamination, review proceeding,

reissue, opposition, dispute, or litigation involving any of the applications or patents for the Patent Properties; and (6) take such further actions as the Assignee shall reasonably consider necessary or desirable for vesting title to said Patent Properties in the Assignee, or for securing, maintaining and enforcing proper patent protection for the Patent Properties; and

COVENANTS, that should any provision of this agreement be held unenforceable by an authority of competent jurisdiction, such a ruling shall not affect the validity and enforceability of the remaining provisions.

THIS AGREEMENT IS TO BE BINDING on the assigns, representatives, and successors of the Assignor, and is to extend to the benefit of the successors, assigns, and nominees of the Assignee.

AGREED to by Assignor as of the Date of the Signature Below:

Assignor: Analog Devices Global Unlimited Company

Signature: Michael Corrigan
Printed Name: Michael Corrigan

Title: Liquidator

Date: 23 / 12 / 19

ACCEPTED by Assignee as of the Date of the Signature Below:

Assignee: Analog Devices International Unlimited Company

Signature: Claire Rollor
Printed Name: Claire Rollor

Title: Assistant IP Counsel

Date: January 13, 2020

Appendix A – Asset List

Patent Ref.	Country or Region	Filed Date	Application Number	Application Description	Patent/Design Type	Publication Number	Patent Number
ACQ0351CA	Canada	12/1/2005	CA 2528799	System and method for power line communications	Non-Provisional	CA2528799	CA2528799
ACQ0352CA	Canada	3/16/2005	CA 2500699	Powerline Communication system	Non-Provisional	CA2500699	CA2500699
ACQ0351CN	China	3/16/2005	200680016887	Is used for power line communication system and method for	Non Provisional	101176270	
ACQ0352CN	China	3/16/2006	201110076537.2	Is used for power line communication system and method for	Non Provisional	102497219	ZL201110076537.2
ACQ169CN01	China	8/29/2014	CN20141432667	Closed loop control system, and an amplifier in combination with such a closed loop control system	Non-Provisional	CN104423409	ZL201410432667.9
ACQ263CN01	China	9/29/2015	CN20151638910	For preventing ripple of the input/output terminal	Non-Provisional	CN105470241	ZL201510638910.7
ACQ264CN01	China	9/29/2015	CN20151638866	Apparatus and methods for biasing radio frequency switches	Non-Provisional	CN105490670	
ACQ279CN01	China	7/18/2018	CN201821135370.6	CURRENT MEASUREMENT	Non-Provisional	CN209086326U	ZL201821135370.6
ACQ2811CN	China	11/8/2013	CN201380058364	Voltage measurement	Non-Provisional	CN104871012	ZL201380058364.9
ACQ281CN02	China	11/8/2013	CN20181356733	Voltage measurement	Non-Provisional	CN108802462	
ACQ2821CN	China	5/30/2014	CN201480030949.4	Electric signal measuring	Non-Provisional	CN105247376	ZL201480030949.4
ACQ2822CN	China	5/30/2014	CN20181953719	Electric signal measurement	Non-Provisional	CN109239435	

Patent Ref.	Country or Region	Filed Date	Application Number	Application Description	Patent/Design Type	Publication Number	Patent Number
ACQ2831CN	China	8/22/2014	CN201480055220.2	Power Conversion Apparatus	Non-Provisional	CN105659486A	ZL201480055220.2
ACQ377CN01	China	1/26/2016	CN201480042136.7	NETWORK ELEMENTS, INTEGRATED CIRCUIT AND METHOD OF DETERMINING CONNECTIVITY FROM ANTENNA ELEMENTS TO TRANSCEIVER LINE-UPS	Non-Provisional	CN105474562A	ZL201480042136.7
ACQ378CN01	China	8/15/2014	CN2014870818	Active antenna system and test method	Non-Provisional	CN105850062	ZL201480070818.9
ACQ379CN01	China	8/15/2014	CN2014845218	Generate a plurality of fan-shaped beam of the communication unit integrated circuit and method for	Non-Provisional	CN105519008	
ACQ380CN01	China	8/15/2014	CN2014845216	The communication unit and method of antenna array calibration	Non-Provisional	CN105940552	ZL201480045216.8
ACQ3811CN	China	4/8/2015	CN2015818974	Determine the active antenna system and method for intermodulation distortion performance	Non-Provisional	CN106164685	ZL201580018974.5
ACQ392CN01	China	8/1/2017	CN2017848069	The data isolation device of electrical isolation with improved common mode transient state refusal	Non-Provisional	CN109565480	
ACQ39301CN	China	5/5/2017	CN20171309935	Bus driver / line driver	Non-Provisional	CN107346969	

Patent Ref.	Country or Region	Filed Date	Application Number	Application Description	Patent/Design Type	Publication Number	Patent Number
ACQ395CN01	China	3/22/2017	CN20171173777	Combined isolator and power switch	Non-Provisional	CN107222190	
ACQ406CN01	China	11/14/2017	CN201721512488U	Wireless sensor device	Non-Provisional	CN208158901	ZL201721512488.1
APD40221CN	China	3/6/2014	CN2014180010	Amplifier, a residue amplifier, and an adc including a residue amplifier	Non-Provisional	CN104038228	104038228
APD44221CN	China	11/14/2013	CN20131565968	String dac charge boost system and method	Non-Provisional	CN103812507	ZL201310565968.4
APD44441CN	China	1/22/2014	CN2014128848	Continuous time input stage	Non-Provisional	CN103944574	ZL201410028848.5
APD44451CN	China	12/13/2013	CN20131682959	String dac leakage current cancellation	Non-Provisional	CN103873057	ZL201310682959.3
APD44541CN	China	9/3/2013	CN2013846490	Analog to digital converter including a pre-charge circuit	Non-Provisional	CN104641561	ZL201380046490.2
APD44651CN	China	6/26/2013	CN201310257625.1	DIGITAL SWITCHED MODE VOLTAGE REGULATOR	Non-Provisional	CN103516216A	ZL201310257625.1
APD44701CN	China	1/10/2014	CN2014804330	Narrow voltage range multi-level output pulse modulated amplifier with one-bit hysteresis quantizer	Non-Provisional	CN105027432	ZL201480004330.6
APD44811CN	China	4/3/2015	CN20151155725	Apparatus and methods for smoothly managing audio discontinuity	Non-Provisional	CN104980844	

Patent Ref.	Country or Region	Filed Date	Application Number	Application Description	Patent/Design Type	Publication Number	Patent Number
APD45301CN	China	2/8/2013	CN2013808847	Method and apparatus for separating reference current from input signal in sigma-delta converter	Non-Provisional	CN104106217	ZL201380008847.8
APD45471CN	China	4/30/2013	CN2013823451	Segmented digital-to-analog converter having weighted current sources	Non-Provisional	CN104272596	ZL201380023451.0
APD45541CN	China	7/11/2014	CN20141328492	Improved digital pre-distortion system in transmitter	Non-Provisional	CN104283829	ZL201410328492.7
APD4554CN02	China	7/11/2014	CN201910052931.9	DIGITAL PRE-DISTORTION SYSTEMS IN TRANSMITTERS	Non-Provisional	CN110071697A	
APD45561CN	China	3/13/2014	CN2014192503	Lack sampling digital pre-distortion structure	Non-Provisional	CN104052413	ZL201410092503.6
APD45571CN	China	3/14/2014	CN2014195277	Baseband digital pre-distortion architecture	Non-Provisional	CN104052414	104052414
APD45711CN	China	3/10/2015	CN20151103240	Digital-to-analog converter with correction for parasitic routing resistance	Non-Provisional	CN104917531	ZL201510103240.9
APD45851CN	China	8/13/2013	CN201310350494	Semiconductor circuit and methodology for in-system scan testing	Non-Provisional	CN103592593	
APD45961CN	China	2/19/2014	CN201410055198.3	VOLTAGE GENERATOR, SWITCH AND DATA CONVERTER CIRCUITS	Non-Provisional	CN103997344	ZL201410055198.3

Patent Ref.	Country or Region	Filed Date	Application Number	Application Description	Patent/Design Type	Publication Number	Patent Number
APD46121CN	China	9/4/2013	CN20131396059	Magnetic core and its forming method and it comprises the magnetic core in integrated circuit substrate transformer and inductor	Non-Provisional	CN103681633	ZL201310396059.2
APD46162CN	China	10/29/2014	CN20141591544	Wafer scale thermoelectric energy harvester	Non-Provisional	CN104576677	ZL201410591544.X
APD46191CN	China	6/26/2014	CN201410293256.6	Moving coil type micro loudspeaker module	Non-Provisional	CN104254044	ZL201410293256.6
APD46331CN	China	10/23/2013	CN20131503908	Processor architecture and method for simplifying programmable single instruction, multiple data within a register	Non-Provisional	CN103777924	ZL201310503908.X
APD46351CN	China	12/9/2014	CN201410745900.9	Temperature is stable circuitry	Non-Provisional	CN104734644A	ZL201410745900.9
APD46371CN	China	3/14/2014	CN2014194170	Dc bias estimation of a radio frequency mixer	Non-Provisional	CN104052699	ZL201410094170.0
APD46521CN	China	9/27/2013	CN2013850171	Locking and unlocking of contactless gesture-based user interface of device having contactless gesture detection system	Non-Provisional	CN104781758	
APD46541CN	China	3/12/2014	CN2014188658	All digital transmission noises are proofread and correct	Non-Provisional	CN104052521	104052521

Patent Ref.	Country or Region	Filed Date	Application Number	Application Description	Patent/Design Type	Publication Number	Patent Number
APD46563CN	China	8/23/2013	CN20131371605	For fast channel switching system the input current of the cancellation method	Non-Provisional	CN103701463	ZL201310371605.7
APD46581CN	China	8/15/2014	CN20141403538	Microprocessor integrated configuration controller for configurable math hardware accelerators	Non-Provisional	CN104375972	ZL201410403538.7
APD46591CN	China	3/7/2014	CN201410081236.2	Microphone circuit assembly and system with speech recognition	Non-Provisional	CN104038864A	ZL201410081236.2
APD46601CN	China	4/16/2014	CN20141151469	Vector matrix product accelerator for microprocessor integration	Non-Provisional	CN104238993	ZL201410451469.5
APD46801CN	China	3/7/2014	CN2014182056	System and method for processor wake-up based on sensor data	Non-Provisional	CN104035743	ZL201410082056.6
APD47091CN	China	2/26/2014	CN201410065381.1	For loudspeaker vibration film offset method and detector	Non-Provisional	CN104010263A	ZL201410065381.1
APD47221CN	China	10/17/2013	CN20131487400	Prediction counter	Non-Provisional	CN103777922	ZL201310487400.5
APD47231CN	China	10/23/2013	CN20131502511	Dma vector buffer	Non-Provisional	CN103777923	ZL201310502511.9
APD47261CN	China	10/23/2013	CN20131501553	Vector of the processor memory interconnection network system structure for	Non-Provisional	CN103778100	ZL201310501553.0
APD47331CN	China	1/9/2015	CN2015110007	Amplifying system	Non-Provisional	CN104779958	ZL201510010007.6

Patent Ref.	Country or Region	Filed Date	Application Number	Application Description	Patent/Design Type	Publication Number	Patent Number
APD47371CN	China	8/20/2014	CN20141409553	Power amplification system, device and method	Non-Provisional	CN104426488	ZL201410409553.2
APD4746CN01	China	11/1/2013	2013105333748.3	SYSTEM AND METHOD TO REDUCE DATA HANDLING ON LITHIUM ION BATTERY MONITORS	Non-Provisional	CN103809490A	ZL2013105333748.3
APD47501CN	China	3/10/2014	CN2014184194	Digitally programmed capacitance multiplication with one charge pump	Non-Provisional	CN104052470	ZL201410084194.8
APD47561CN	China	2/26/2016	CN20161105879	Voltage controlled current path, a voltage clamp, and an electronic component including a voltage clamp	Non-Provisional	CN106155174	ZL201610105879.5
APD4765CN01	China	4/11/2016	CN20161219147	The power-efficient chopping scheme of offset error correction in mems gyroscope	Non-Provisional	CN106248069	ZL201610219147.9
APD47661CN	China	3/14/2014	CN2014194037	For carrying out at direct conversion receiver the circuit framework that i/q does not mate alleviation	Non-Provisional	CN104065611	ZL201410094037.5
APD47681CN	China	7/25/2014	CN201410357377.2	MULTI-LEVEL OUTPUT CASCODE POWER STAGE	Non-Provisional	CN104348435A	ZL201410357377.2

Patent Ref.	Country or Region	Filed Date	Application Number	Application Description	Patent/Design Type	Publication Number	Patent Number
APD47711CN	China	10/9/2014	CN20141526230	Digital-to-analog converter and method of operating the digital-to-analog converter	Non-Provisional	CN104579350	ZL201410526230.1
APD47791CN	China	1/20/2015	CN2015126174	Charge pump stage and charge pump	Non-Provisional	CN104795990	ZL201510026174.X
APD47821CN	China	3/14/2014	CN2014814625	Multiple string digital to analog converter	Non-Provisional	CN105210298	
APD47971CN	China	9/26/2014	CN20141502553	Class hd power amplifier	Non-Provisional	CN104518743	ZL201410502553.7
APD48001CN	China	7/24/2014	CN20141353772	Pulse width modulated power regulator with loop stabilizer	Non-Provisional	CN104348453	ZL201410353772.3
APD48051CN	China	3/14/2014	CN2014195115	In the presence of the memory of the alias condition and process method of circulating	Non-Provisional	CN104050025	ZL201410095115.3
APD48111CN	China	3/13/2014	CN2014192521	Transmit-receiver leakage cancellation	Non-Provisional	CN104052522	ZL201410092521.4
APD48121CN	China	12/10/2014	CN20141752026	Proportional to absolute temperature circuit	Non-Provisional	CN104714593	ZL201410752026.1
APD48131CN	China	3/6/2014	CN2014180008	Insulating structure, method of forming the insulating structure, and chip scale isolator including the insulating structure	Non-Provisional	CN104037172	ZL201410080008.3
APD48171CN	China	7/23/2014	CN201410351896.8	Method of detecting enclosure leakage of enclosure mounted loudspeakers	Non-Provisional	CN104349262	ZL201410351896.8

Patent Ref.	Country or Region	Filed Date	Application Number	Application Description	Patent/Design Type	Publication Number	Patent Number
APD48172CN	China	7/23/2014	CN201410351109.X	METHOD OF CONTROLLING SOUND REPRODUCTION OF ENCLOSURE MOUNTED LOUDSPEAKERS	Non-Provisional	CN104349254A	ZL201410351109.X
APD4821CN01	China	2/6/2015	CN2015162364	The layout of compound circuit element	Non-Provisional	CN104835815	ZL201510062364.7
APD48281CN	China	4/18/2014	CN20141156285	Common mode voltage multiplexer	Non-Provisional	CN104238400	ZL201410156285.8
APD48331CN	China	5/5/2015	CN20151221871	Voltage reference circuit	Non-Provisional	CN105094196	ZL201510221871.0
APD4835CN01	China	3/14/2014	CN2014194032	System, method and recording medium for analog to digital converter calibration	Non-Provisional	CN104052477	ZL201410094032.2
APD48371CN	China	12/16/2014	CN20141779691	Analog switches and methods for controlling analog switches	Non-Provisional	CN104716939	ZL201410779691.X
APD48381CN	China	5/16/2014	CN20141206744	Dual-tub junction-isolated voltage clamp devices and methods of forming the same	Non-Provisional	CN104167414	ZL201410206744.9
APD48401CN	China	2/13/2015	CN2015178549	Low power proportional to absolute temperature current and voltage generator	Non-Provisional	CN104850167	ZL201510078549.7
APD48431CN	China	7/30/2014	CN20141367891	Mems switch equipment and manufacturing method	Non-Provisional	CN104347320	ZL201410367891.4

Patent Ref.	Country or Region	Filed Date	Application Number	Application Description	Patent/Design Type	Publication Number	Patent Number
APD48441CN	China	3/14/2014	CN2014195239	Continuous-time oversampling pipeline analog-to-digital converter	Non-Provisional	CN104052482	ZL201410095239.1
APD48611CN	China	7/11/2014	CN20141328473	Semiconductor device, and a method of improving breakdown voltage of a semiconductor device	Non-Provisional	CN104282745	ZL201410328473.4
APD48731CN	China	8/1/2014	CN20141375495	Anti-ringing technique for switching power stage	Non-Provisional	CN104348341	ZL201410375495.6
APD48741CN	China	9/12/2014	CN20141464741	System and method of improving stability of continuous-time delta-sigma modulators	Non-Provisional	CN104579345	ZL201410464741.5
APD48751CN	China	7/17/2014	CN20141341363	Is used for delta sigma adc $\Gamma\zeta\alpha$ integrated circuit and generating a digital control signal the invention claims a method for	Non-Provisional	CN104300987	ZL201410341363.1
APD4875CN02	China	7/17/2014	CN20181151064	Used for programmable thomas seeger delta analog to digital converter the digital tuning engine	Non-Provisional	CN108199717	

Patent Ref.	Country or Region	Filed Date	Application Number	Application Description	Patent/Design Type	Publication Number	Patent Number
APD4876CN01	China	9/5/2014	CN20141453627	Device and method for assessing the performance of the system in control ring	Non-Provisional	CN104426537	ZL201410453627.2
APD48771CN	China	6/24/2014	CN20141285925	Magnetic field direction sensor	Non-Provisional	CN104251979	ZL201410285925.5
APD48781CN	China	5/20/2014	CN20141211744	Electric signal conversion	Non-Provisional	CN104218950	ZL201410211744.8
APD48841CN	China	11/7/2014	CN2014861014	Object detection systems and correlation technique based on support vector machines	Non-Provisional	CN105706144	ZL201480061014.2
APD48901CN	China	9/12/2014	CN20141465061	Integrator output swing reduction	Non-Provisional	CN104639172	
APD48981CN	China	12/16/2014	CN20141777866	Silicon substrate suitable for use with an rf component, and an rf component formed on such a silicon substrate	Non-Provisional	CN104715975	
APD48991CN	China	12/10/2014	CN201410751979.6	A phase corrector used for laser trimming, an integrated circuit and a method thereof	Non-Provisional	CN104701293	ZL201410751979.6
APD49131CN	China	9/3/2014	CN20141444645	Linear and dc-accurate frontend dac and input structure	Non-Provisional	CN104426546	ZL201410444645.4
APD49141CN	China	10/11/2014	CN20141533057	Method and apparatus for reducing capacitor induced isi in dacs	Non-Provisional	CN104579341	ZL201410533057.8

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APD49221CN	China	10/21/2014	CN20141560196	Stress shield for integrated circuit package	Non-Provisional	CN104617054	ZL201410560196.X
APD49231CN	China	2/16/2015	CN2015183323	Apparatus and methods for improving common mode rejection ratio	Non-Provisional	CN104852697	ZL201510083323.6
APD49251CN	China	8/26/2014	201410425757.5	Facial detection	Non Provisional	104424480	ZL201410425757.5
APD4932CN01	China	3/23/2015	CN20151125881	The device and method of auto-zeroed amplifiers	Non-Provisional	CN104953967	ZL201510125881.4
APD49351CN	China	7/18/2014	CN20141342768	Adaptive element shuffler	Non-Provisional	CN104298464	ZL201410342768.7
APD49441CN	China	9/23/2014	CN20141490387	Apparatus and methods for synchronizing phase-locked loops	Non-Provisional	CN104467834	ZL201410490387.3
APD4962CN01	China	9/5/2014	CN20141449904	Multi-stage noise shaping analog-digital converter	Non-Provisional	CN104579344	
APD49641CN	China	4/24/2015	CN20151197325	With the inner part of the conducting channel of the mems switch	Non-Provisional	CN105023811	ZL201510197325.8
APD49651CN	China	10/15/2015	CN20151664775	Multichannel analog-to-digital converter	Non-Provisional	CN105790766	
APD49691CN	China	11/20/2014	CN20141669653	Low-cost capacitive sensing decoder	Non-Provisional	CN104680103	ZL201410669653.9
APD49721CN	China	2/16/2015	CN2015183334	Mems device with constant capacitance	Non-Provisional	CN104851753	ZL201510083334.4
APD49741CN	China	10/17/2014	CN20141551107	Multi-layer error correcting coding	Non-Provisional	CN104579553	ZL201410551107.5
APD49851CN	China	4/24/2015	CN20151198260	Mems switch	Non-Provisional	CN105047484	ZL201510198260.9

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APD49871CN	China	2/4/2015	CN2015156966	Improvement of the analog-digital converter and the operation of an analog to digital converter method for	Non-Provisional	CN104821827	ZL201510056966.1
APD49921CN	China	2/6/2015	CN2015163612	Echo cancel method and assembly for electroacoustic communications equipment	Non-Provisional	CN104837092	ZL201510063612.X
APD4993CN01	China	10/24/2014	CN20141573687	System and method of clock generation in high speed serial communication	Non-Provisional	CN104572562	ZL201410573687.8
APD5008CN01	China	11/9/2015	CN20151755301	delta-sigma modulator of dynamic adjustment loop filter coefficient is used for trsansconductor network	Non-Provisional	CN105591653	ZL201510755301.X
APD5012CN01	China	9/25/2015	CN20151621704	The method of sampling rate converter, analog-digital converter and converting data streams	Non-Provisional	CN105471433	ZL201510621704.5
APD50161CN	China	1/15/2015	201580005033.8	CAPACITIVE SENSING PROBE MOTION CONTROL SYSTEM	Non Provisional	CN105917199A	
APD50171CN	China	3/18/2015	CN20151118038	The system and method for clock and data recovery	Non-Provisional	CN104935332	ZL201510118038.3

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APD50172CN	China	5/21/2015	CN20151261118	The device and method of modular signal acquisition and detection	Non-Provisional	CN105099442	ZL201510261118.4
APD5022CN01	China	11/1/2017	CN201711055385	Analog multiplexer	Non-Provisional	CN108011624	
APD50261CN	China	1/29/2015	CN2015144350	Transmitter noise cancellation in a multi transmitter-receiver system	Non-Provisional	CN104821832	ZL201510044350.2
APD50271CN	China	5/8/2015	CN20151231053	Magnetic field energy harvesting device	Non-Provisional	CN105099234	ZL201510231053.9
APD50281CN	China	2/27/2015	CN2015189187	The lc lattice delay line of high-speed adc application	Non-Provisional	CN104883187	ZL201510089187.1
APD50291CN	China	12/19/2014	CN20141797934	Low drift voltage reference	Non-Provisional	CN104731158	ZL201410797934.2
APD50321CN	China	1/8/2016	CN2016110055	From reference digital to analog converter	Non-Provisional	CN105790762	
APD50331CN	China	2/16/2015	CN2015183873	Interruptible store exclusive	Non-Provisional	CN104866443	ZL201510083873.8
APD50351CN	China	4/14/2015	CN20151173564	Pure differential signal based mipi dsi/csi-2 receiver systems	Non-Provisional	CN104980679	ZL201510173564.X
APD5043CN01	China	10/9/2015	201590001033.6	PASSIVE ANALOG SAMPLE AND HOLD IN ANALOG-TO-DIGITAL CONVERTERS	Utility Model	CN208768053U	ZL201590001033.6
APD5043CN01	China	10/9/2015	CN2015901033U	Passive simulation sampling and holding in analog-digital converter	Non-Provisional	CN208768053	ZL201590001033.6

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APD5054CN01	China	8/11/2015	CN20151489690	Embedded overload protection in delta-sigma adc	Non-Provisional	CN105406871	ZL201510489690.6
APD50551CN	China	6/10/2015	CN20151315305	Low intermediate frequency receiver	Non-Provisional	CN105306081	ZL201510315305.6
APD50601CN	China	4/7/2015	CN20151159671	Dominant signal detection method and apparatus	Non-Provisional	CN104980946	ZL201510159671.7
APD50621CN	China	7/16/2015	CN20151419081	Analog to digital converter and a method of calibrating same	Non-Provisional	CN105281766	ZL201510419081.3
APD50741CN	China	2/5/2016	CN2016180941	The apparatus and system of rail-to-rail amplifier	Non-Provisional	CN105871344	ZL201610080941.X
APD50801CN	China	6/15/2015	CN20151329085	Cache way prediction	Non-Provisional	CN105224476	ZL201510329085.2
APD50861CN	China	4/8/2015	CN20151162134	Interference component reduction system	Non-Provisional	CN105024712	ZL201510162134.8
APD50891CN	China	7/7/2016	CN20161532410	Phase-locked loop having a multi-band oscillator and method for calibrating same	Non-Provisional	CN106341122	
APD50921CN	China	4/3/2015	CN20151157734	The estimation of digital analog converter static state mistake mismatch error	Non-Provisional	CN104980154	ZL201510157734.5
APD50971CN	China	9/24/2015	CN20151615803	Overvoltage protection device and method	Non-Provisional	CN105470250	
APD5098CN01	China	9/22/2015	CN20151608451	The minimum duty cycle of active snubber controls	Non-Provisional	CN105471245	ZL201510608451.8

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APD51021CN	China	5/8/2015	CN20151239369	Amplifier input stage and amplifier	Non-Provisional	CN105099379	ZL201510239369.2
APD51031CN	China	10/9/2015	CN201510648185.1	Overheat protector and protection methodology for electrodynamic loudspeakers	Non-Provisional	CN105516874A	
APD51061CN	China	11/2/2015	CN20151730850	Compensate the circuit and method of early effect	Non-Provisional	CN105574228	ZL201510730850.1
APD51131CN	China	8/19/2015	CN20151509718	Apparatus and methods for generating a uniform magnetic field	Non-Provisional	CN105390228	ZL201510509718.8
APD51161CN	China	7/1/2015	CN20151377927	Used in the inductive component of integrated circuit, segment set is formed into the transformer and inductor of circuit	Non-Provisional	CN105244344	ZL201510377927.1
APD51201CN	China	4/3/2015	CN20151165662	The counteracting that digital analog converter error is fed back in multistage delta-sigma adc	Non-Provisional	CN104980155	ZL201510165662.9
APD5124CN01	China	9/29/2015	CN20151629992	High-gain, high rotative speed amplifier	Non-Provisional	CN105490652	ZL201510629992.9
APD5127CN01	China	7/8/2016	CN2016840413	It is used for detecting of video processing	Non-Provisional	CN107851180	
APD51281CN	China	5/23/2016	CN20161343720	Segmented dac	Non-Provisional	CN106209108	
APD51431CN	China	12/11/2015	CN20151918679	The device and method that clock occurs	Non-Provisional	CN105703742	ZL201510918679.7

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APD51521CN	China	1/27/2016	CN2016155391	Method of trimming component and component trimmed by such method	Non-Provisional	CN105819396	
APD5156CN01	China	12/11/2015	CN20151917626	The method for controlling the diaphragm offset of dynamic loudspeaker	Non-Provisional	CN105704624	ZL201510917626.3
APD5162CN01	China	7/22/2016	CN20161584855	The efficient arc-detection of calculating with correlation sampling	Non-Provisional	CN106370985	ZL201610584855.2
APD5164CN01	China	8/4/2016	CN20161632588	The digital analog converter of component is shared with digital charge	Non-Provisional	CN106452445	ZL201610632588.1
APD5165CN01	China	8/25/2017	CN20171741832	And the absolute temperature proportion of reference voltage circuit and voltage reference circuit	Non-Provisional	CN107783584	
APD5167CN01	China	3/25/2016	CN20161177529	Electrical overstress record and/or acquisition	Non-Provisional	CN106024778	ZL201610177529.X
APD5167CN02	China	3/25/2016	CN20191310712	Electrical overstress record and/or acquisition	Non-Provisional	CN109950242	

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APD51681CN	China	8/14/2015	CN20151498401	The wireless charging platform of wave beam forming is used for wireless sensor network	Non-Provisional	CN105375951	ZL201510498401.9
APD5177CN01	China	7/1/2015	CN20151378885	Method of and apparatus for protecting a switch, such as a mems switch, and to a mems switch including such a protection apparatus	Non-Provisional	CN105244195	ZL201510378885.3
APD51801CN	China	9/14/2015	CN20151581674	Methods and structures to generate on/off keyed carrier signals for signal isolators	Non-Provisional	CN105429625	
APD5182CN01	China	9/14/2015	CN20151581650	The demodulation of on & off switch modulated signal in signal isolator system	Non-Provisional	CN105429624	ZL201510581650.4
APD51911CN	China	3/8/2016	CN20161130004	Methods and systems for addressing component mismatch in digital-to-analog converters	Non-Provisional	CN106374922	
APD51921CN	China	8/17/2015	CN20151504184	Receiver for methods of digital predistortion	Non-Provisional	CN105391459	ZL201510504184.X
APD51941CN	China	11/17/2015	CN20151786912	The device and method of double loop power amplifier digital pre-distortion system	Non-Provisional	CN105634414	ZL201510786912.0

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APD51991CN	China	5/13/2016	CN20161319598	Circuits and techniques including cascaded ldo regulation	Non-Provisional	CN106155157	ZL201610319598.X
APD52231CN	China	3/29/2016	CN20161184605	Dc linear voltage regulator comprising a switchable circuit for leakage current suppression	Non-Provisional	CN106020316	
APD5224CN01	China	9/29/2015	CN20151629841	High isolation wideband switch	Non-Provisional	CN105490671	ZL201510629841.3
APD52271CN	China	10/21/2015	CN20151685819	For reducing the device and method of the glitch in digital step attenuator	Non-Provisional	CN105553440	ZL201510685819.0
APD52281CN	China	10/14/2015	CN20151660813	Device and method for controlling the overshoot in digital step attenuator	Non-Provisional	CN105530001	ZL201510660813.8
APD525701CN	China	10/12/2015	CN2015863168	Full duplex radio	Non-Provisional	CN107005266	
APD52591CN	China	7/1/2016	CN20161514583	Digital to analog converter	Non-Provisional	CN106330195	ZL201610514583.9
APD526001CN	China	3/17/2017	CN20171158405	With led current of the modulation of blood oxygen saturation sensor	Non-Provisional	CN107198529	
APD52631CN	China	6/2/2016	CN20161388699	Generating comparator thresholds using rotating ring of resistors	Non-Provisional	CN106253907	
APD52641CN	China	2/19/2016	CN2016193438	Detection sensor error	Non-Provisional	CN105910528	ZL201610093438.8

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APD526701CN	China	10/5/2015	CN2015863332	Control circuit for use with a sensor, and measurement system including such a control circuit	Non-Provisional	CN107003268	
APD527101CN	China	3/14/2016	CN2016810460	Apparatus and methods for overvoltage protection	Non-Provisional	CN107408555	
APD52841CN	China	5/25/2016	CN20161351315	Debug trigger interface for non-debug domain system reset	Non-Provisional	CN106201809	
APD5294CN01	China	3/17/2016	CN20161152668	Method and apparatus for sending noise reduction in receiver	Non-Provisional	CN105991143	ZL201610152668.7
APD52951CN	China	3/24/2016	CN20161171228	Device and method for the common source and common grid amplifier topological structure for millimeter wave power application	Non-Provisional	CN106026952	ZL201610171228.6
APD5299CN01	China	8/31/2016	CN20161791259	Using tuning information with the device and method of the adaptively parameter of dynamic modification rf signal link	Non-Provisional	CN106506026	ZL201610791259.1
APD53001CN	China	5/27/2016	CN20161364080	Serial peripheral interface master device port	Non-Provisional	CN106201934	

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APD53021CN	China	5/20/2016	CN20161341564	Feedback control system and method	Non-Provisional	CN106169898	
APD53081CN	China	6/8/2016	CN20161402339	Systems, circuits and methods for determining a position of a movable object	Non-Provisional	CN106248111	
APD53141CN	China	2/19/2016	CN2016191583	Detection sensor error	Non-Provisional	CN105910637	ZL201610091583.2
APD53171CN	China	1/13/2016	CN2016119351	Highly integrated radio frequency transceiver	Non-Provisional	CN105812015	ZL201610019351.6
APD53271CN	China	6/29/2016	CN20161495911	Vertical magnetism barrier for integrated electronic modules	Non-Provisional	CN106298746	
APD53321CN	China	9/23/2016	CN20161847772	The ir filter structure of small area and low-power consumption	Non-Provisional	CN106559059	ZL201610847772.8
APD5345CN01	China	10/7/2016	CN2016901239U	Electrochemical sensor	Non-Provisional	CN208721609	ZL201690001239.3
APD53461CN	China	5/6/2016	CN201610294710.9	SIGNAL GATE, A SAMPLING NETWORK AND AN ANALOG TO DIGITAL CONVERTER COMPRISING SUCH A SAMPLING NETWORK	Non-Provisional	CN106130554A	
APD5349CN01	China	9/11/2017	CN20171813319	Fast settling capacitive gain amplifier circuit	Non-Provisional	CN107809249	
APD5350CN01	China	12/16/2016	CN201611163539	Comprises a magnetic structure of device system and method for	Non-Provisional	CN106896333	
APD53751CN	China	5/4/2016	CN201610289088.2	apparatus and method for scalable receivers	Non-Provisional		

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APD537701CN	China	2/17/2017	CN2017184817	The communication receiving device to reduce false front sequence detection system and method for	Non-Provisional	CN107094071	
APD538901CN	China	2/27/2017	CN2017813494	Visual vehicle parking occupancy sensor	Non-Provisional	CN108701224	
APD53981CN	China	12/9/2016	CN201611136233	Used for integrated circuit as the integrated circuit a part of the transformer and inductor of the inductance element	Non-Provisional	CN106876111	
APD54041CN	China	11/10/2016	CN201611040520	The combination of fet- bipolar transistor	Non-Provisional	CN106684073	ZL201611040520.0
APD54051CN	China	11/10/2016	CN20161986436	Fet bipolar transistor and combination including the bipolar transistor fet combined switch	Non-Provisional	CN106684084	
APD54111CN	China	11/16/2016	CN201611030160	Biassing switching method and device for	Non-Provisional	CN106712748	
APD54121CN	China	11/10/2016	CN201611039310	Overvoltage protection device and a galvanic isolator in combination with an overvoltage protection device	Non-Provisional	CN106684081	
APD542801CN	China	2/27/2017	CN2017813543	Take sensor	Non-Provisional	CN108885688	
APD5432CN01	China	12/12/2016	CN201611144078	Buck-boost converter scheme control based on inductor current	Non-Provisional	CN107154736	ZL201611144078.6

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APD54361CN	China	11/11/2016	CN20161995575	For integrated circuit thin film resistance device comprises a thin film resistance of the equipment of integrated circuit	Non-Provisional	CN106684078	
APD544001CN	China	1/5/2017	CN2017108747	Low-voltage low-power variable gain amplifier	Non-Provisional	CN106953609	
APD54421CN	China	9/23/2016	CN20161848320	Capacitance measurement	Non-Provisional	CN106556747	
APD5457CN01	China	10/17/2016	CN2016861605	Baseline drift compensation	Non-Provisional	CN108353042	
APD54651CN	China	8/25/2016	CN20161725229	Multiple stage digital to analog converter	Non-Provisional	CN106487387	
APD5474CN01	China	1/25/2017	CN2017155345	Single-ended mixer with reduced loss	Non-Provisional	CN107017847	
APD54781CN	China	1/12/2017	CN2017119458	Integrated ion sensing device and method	Non-Provisional	CN106959330	
APD54801CN	China	10/13/2016	CN20161892232	Ultra-wide bandwidth digital pre-distortion	Non-Provisional	CN106572039	
APD54901CN	China	12/1/2016	CN201611088894	Low-noise trans-conductance amplifier	Non-Provisional	CN106817098	ZL201611088894.X
APD54911CN	China	12/1/2016	CN201611089390	Local oscillator path	Non-Provisional	CN106817143	
APD549501CN	China	2/17/2017	CN2017187706	Method to optimize system power by intelligent SPI design	Non-Provisional	CN107092568	
APD549601CN	China	12/16/2016	CN201611169196	Dither injection for continuous-time mash adcs	Non-Provisional	CN107786208	

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APD54981CN	China	10/25/2016	CN20161937124	Low noise precision input stage for analog-to-digital converters	Non-Provisional	CN107017884	
APD55041CN	China	11/11/2016	CN201611039516	Broadband envelope tracking	Non-Provisional	CN106712723	
APD550701CN	China	3/17/2017	CN20171158429	High frequency signal attenuators	Non-Provisional	CN107204753	
APD550801CN	China	2/23/2017	CN2017197798	Apparatus and methods for high linearity voltage variable attenuators	Non-Provisional	CN107104654	
APD5512CN01	China	1/19/2017	CN2017137060	Blocker detection based automatic gain control	Non-Provisional	CN106982040	
APD551301CN	China	2/28/2017	CN20171109743	Signal dependent subtractive dithering	Non-Provisional	CN107135001	
APD5524CN01	China	11/3/2016	CN201611205091	Hot swap circuit management techniques for power line disturbances and faults	Non-Provisional	CN106655093	ZL201611205091.8
APD5525CN01	China	10/10/2016	CN2016861589	Balancing sense amplifier for ethernet transceiver	Non-Provisional	CN108352856	
APD55321CN	China	12/16/2016	CN201611163552	Is used for continuously inputs the adc process of the adjustable resistance the protection circuit	Non-Provisional	CN106899301	
APD5534CN01	China	9/29/2017	CN20171902170	Device and method for asynchronous clock mapping	Non-Provisional	CN107888313	ZL201710902170.2

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APD55360CN01	China	2/15/2017	CN2017179561	Analog/digital converter with charge rebalanced integrator	Non-Provisional	CN107086868	
APD554201CN	China	6/9/2017	CN20171431339	Buffer with increased headroom	Non-Provisional	CN107493072	
APD554901CN	China	12/16/2016	CN201611168659	Mads adcs of adaptive digital quantization noise elimination filter	Non-Provisional	CN106899302	
APD5550CN01	China	9/22/2017	CN20171862495	Adaptive self-configuring sensor node	Non-Provisional	CN107872346	
APD55641CN	China	10/12/2016	CN20161892072	Digital pre-distortion and the upper inclined and power cable communication	Non-Provisional	CN106572038	
APD556801CN	China	3/3/2017	CN20171123312	Heat exchange in the controller current limiting controlling	Non-Provisional	CN107153439	
APD5569CN01	China	9/21/2017	CN20171855972	Method and apparatus to reduce effect of dielectric absorption in sar adc	Non-Provisional	CN107863961	
APD55711CN	China	11/29/2016	CN201611070365	Electromagnetic flow sensor interface allowing dc coupling	Non-Provisional	CN106813735	
APD557601CN	China	2/2/2017	CN2017808538	Active opening mems switch device	Non-Provisional	CN108604517	

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APD558401CN	China	1/13/2017	CN2017128118	Circuits, systems, and methods for synchronization of sampling and sample rate setting	Non-Provisional	CN107094019	
APD5586CN01	China	2/1/2017	CN2017809141	Circuits, systems, and methods for providing asynchronous sample rate conversion for an oversampling sigma delta analog to digital converter	Non-Provisional	CN108702159	
APD55881CN	China	12/19/2016	CN201611178362	Flash analog-to-digital converter calibrating	Non-Provisional	CN106899303	
APD55891CN	China	12/16/2016	CN201611163546	Frequency domain adc flash memory calibration	Non-Provisional	CN106899296	
APD56031CN	China	3/31/2017	CN20171204461	Tank circuit and frequency hopping for isolators	Non-Provisional	CN107276535	
APD560401CN	China	3/23/2017	CN20171179177	Magnetic field detector	Non-Provisional	CN107229024	
APD560402CN	China	3/23/2017	CN20171178371	Magnetic field detector of the offset compensation	Non-Provisional	CN107229023	
APD561201CN	China	4/28/2017	CN20171290116	Apparatuses for communication systems transceiver interfaces	Non-Provisional	CN107342285	
APD5616CN01	China	3/10/2017	CN2017816481	Configurable hardware platform for measuring or controlling	Non-Provisional	CN108780124	

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APD5629CN01	China	1/11/2017	CN2017806326	Fan for cooling system of air flow sensor	Non-Provisional	CN108474677	
APD5631CN01	China	11/10/2017	CN201711113220	Temperature compensation of the reference voltage circuit	Non-Provisional	CN108073215	
APD5649CN01	China	9/15/2017	CN20171832555	Multiplexer distortion cancellation	Non-Provisional	CN107835017	
APD565701CN	China	5/19/2017	CN20171361426	Wideband digital predistortion	Non-Provisional	CN107404448	
APD566701CN	China	5/19/2017	CN20171360879	Mixed-mode digital predistortion	Non-Provisional	CN107404293	
APD5670CN01	China	12/8/2017	CN201711293659	Space digital pre-distortion	Non-Provisional	CN108183692	
APD5676CN01	China	5/24/2017	CN2017831882	Ethernet magnetism is integrated	Non-Provisional	CN109845119	
APD5677CN01	China	9/19/2017	CN20171843643	Is used for mems switch of the member protection scheme	Non-Provisional	CN107840303	
APD568901CN	China	6/9/2017	CN20171435927	Current sensor and manufacturing electric current sensor method for	Non-Provisional	CN107490715	
APD570201CN	China	2/22/2017	CN2017812626	System and method for configuring a measurement module	Non-Provisional	CN108700860	
APD5715CN01	China	8/29/2017	CN2017861363	Electrochemical sensor and the method for forming electrochemical sensor	Non-Provisional	CN109804241	

Patent Ref.	Country or Region	Filed Date	Application Number	Application Description	Patent/Design Type	Publication Number	Patent Number
APD5725CN01	China	11/22/2017	CN201711169176	With super regulating error integral zhang chi oscillator	Non-Provisional	CN108092646	
APD572701CN	China	8/31/2018	CN201811006588.6	Cluster shuffler in data converters	Non-Provisional	CN109428599A	
APD5736CN01	China	3/29/2018	CN201810267650	A method to compensate for shunt drift in a shunt based current measurement system	Non-Provisional	CN108693399A	
APD5737CN01	China	10/21/2016	CN20161920694	Dielectric stack separating device and form an isolation device a method for	Non-Provisional	CN106611741	
APD5742CN01	China	7/5/2018	CN201810726983.5	MAGNETIC FIELD SENSOR	Non-Provisional	CN109212439A	
APD574901CN	China	2/27/2017	CN20171110228	Signal regulating circuit and comprising the signal adjusting circuit relay of circuit breaker control device	Non-Provisional	CN107332197	
APD5753CN01	China	5/14/2018	CN20181455092	The resynchronisation of sample rate converter	Non-Provisional	CN108880555	
APD5764CN01	China	5/4/2018	CN20181420630	The diagnosis waveform generator of sensor	Non-Provisional	CN108802155	
APD5765CN01	China	10/27/2017	CN201711018452	Low-area, low-power, power-on reset circuit	Non-Provisional	CN108023581	
APD5766CN01	China	5/4/2018	CN20181419450	Improve the sensor bias of noiseproof feature	Non-Provisional	CN108802154	

Patent Ref.	Country or Region	Filed Date	Application Number	Application Description	Patent/Design Type	Publication Number	Patent Number
APD5769CN01	China	12/22/2017	CN201721809688U	Circuit and buffer circuits for high voltage supply node	Non-Provisional	CN208190626	ZL201721809688.3
APD5772CN01	China	10/20/2017	CN20171984830	In electric power system detecting an arcing event a method and it comprises electric arc testing device of electric power system	Non-Provisional	CN107976614	
APD5778CN01	China	12/6/2017	CN201711274886	Charge injection compensation circuit	Non-Provisional	CN108155896	
APD5779CN01	China	11/3/2017	CN201711068467	Method and apparatus to increase dynamic range in delta-sigma adc by using internal feedback across all integrators in loop-filter	Non-Provisional	CN108023596	
APD5785CN01	China	6/8/2017	CN20171424809	Analog-to-digital converters for lidar system	Non-Provisional	CN107968658	
APD5789CN01	China	4/12/2018	CN201810323172	POWER SCALING A CONTINUOUS-TIME DELTA SIGMA MODULATOR	Non-Provisional	CN108696281A	
APD5791CN01	China	4/8/2018	CN201810306137.8	Dual-Output Delta-Sigma ADC for Improved RF Receiver Automatic Gain Control	Non-Provisional	CN108696289A	
APD5792CN01	China	12/12/2017	CN201711323415	Pre-charging circuitry for multiplexer	Non-Provisional	CN108233907	

Patent Ref.	Country or Region	Filed Date	Application Number	Application Description	Patent/Design Type	Publication Number	Patent Number
APD5812CN01	China	10/9/2017	CN20171930619	Is used for phase lock loop on chip of measuring	Non-Provisional	CN107896105	
APD5813CN01	China	10/9/2017	CN20171928088	The phase lock loop of fast establishing saw tooth shape slope land generating	Non-Provisional	CN107896109	
APD5814CN01	China	10/9/2017	CN20171928089	Adjusting phase of a digital phase-locked loop	Non-Provisional	CN107896106	
APD5818CN01	China	1/12/2018	CN2018128538	By common isolator of power transmission and feedback	Non-Provisional	CN108306511	
APD5820CN01	China	8/25/2017	CN2017851930	Antenna array calibration system and method	Non-Provisional	CN109643847	
APD5826CN01	China	3/27/2018	CN20181258151	Is used for long distance of laser radar of high dynamic range the analogue front end is connected with the receiver	Non-Provisional	CN1086663672	
APD58441CN	China	10/27/2016	CN20161957228	For learning comprises electric current mutual inductor an error correction of the current transformer and power measuring device phase error a method and device for	Non-Provisional	CN107505499	

Patent Ref.	Country or Region	Filed Date	Application Number	Application Description	Patent/Design Type	Publication Number	Patent Number
APD58451CN	China	10/27/2016	CN20161957878	The invention claims the transfer function of the uncertainty of the measuring result of device and method for	Non-Provisional	CN107525526	
APD5849CN01	China	11/3/2017	CN201711094939.9	Reference pre-charge technique for SAR ADCs	Non-Provisional	CN108023593A	
APD5854CN01	China	1/31/2018	CN2018192366	Magnetic sensor position measurement with phase compensation	Non-Provisional	CN108375384	
APD585701CN	China	8/23/2017	CN20171726748	Compact integrated device packaging	Non-Provisional	CN107768315	
APD5859CN01	China	5/4/2018	CN20181420201	Digital analog converter (dac) terminal	Non-Provisional	CN108809317	
APD5861CN01	China	12/15/2017	CN201711343320	Voltage variable attenuator, an integrated circuit and a method of attenuation	Non-Provisional	CN108233892	
APD5883CN01	China	11/3/2017	CN201711066860	Sar analog-to-digital converter selective synchronization	Non-Provisional	CN108023592	
APD5887CN01	China	11/3/2017	CN201711066871	Using magnetic sensor multidimensional measuring and relative system method and integrated circuit	Non-Provisional	CN108020150	
APD5891CN01	China	12/28/2017	CN201711451899	Light detector calibrating a time-of-flight optical system	Non-Provisional	CN108267749	

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APD5901CN01	China	6/11/2018	CN20182930518U	Circuit and dc-dc converter	Non-Provisional	CN208924115	ZL201820930518.9
APD5916CN01	China	5/9/2018	CN20181436490	Active antenna calibration	Non-Provisional	CN108880703	
APD5940CN01	China	5/18/2018	CN20181476682	High speed serialization link for video interface	Non-Provisional	CN108965761	
APD597701CN	China	1/11/2018	CN2018133429	Digital to analog conversion in the fault characteristic	Non-Provisional	CN108306643	
APD6003CN01	China	6/14/2018	CN201810612732.4	Pulse Oximeter System with switched mode LED driver and pulse energy compensation	Non-Provisional	CN109077735A	
APD604401CN	China	6/7/2018	CN20181579382	The low-power measurement of skin electrical property	Non-Provisional	CN108992067	
APD6067CN01	China	5/4/2018	CN201810419135.X	Applying AC stimulus without upsetting DC bias	Non-Provisional	CN108872347A	
APD6092CN01	China	5/4/2018	CN201810420072.X	Asymmetric [Multiple string] Multiple Output DAC	Non-Provisional	CN108809316A	
APD6094CN01	China	4/2/2018	CN201810282559.6	ANALOG INPUT CIRCUIT SENSING FOR FAULT DETECTION	Non-Provisional	CN108693464A	
APD6100CN01	China	5/4/2018	CN201810419461	INTERNAL INTEGRATED CIRCUIT RESISTANCE CALIBRATION	Non-Provisional	CN108802495A	

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APD6214CN01	China	6/7/2018	CN20181614404	The difference amplifier of common mode inhibition with adjusting and circuit with improved common mode rejection ratio	Non-Provisional	CN1090004911	
To be assigned	China	5/6/2016	CN20161294710	Signal gate, a sampling network and an analog to digital converter comprising such a sampling network	Non-Provisional	CN305510614	
ACQ0351EP	Europe	3/16/2006	EP20060721671	System and method for power line communications	European Patent	EP1864394	EP1864394
ACQ169EP01	Europe	8/22/2014	EP20140182044	Closed loop control system, and an amplifier in combination with such a closed loop control system	European Patent	EP2852053	EP2852053
ACQ169EP01	Europe	8/22/2014	14182044.9	CLOSED LOOP CONTROL SYSTEM, AND AN AMPLIFIER IN COMBINATION WITH SUCH A CLOSED LOOP CONTROL SYSTEM	Non Provisional	2852053	2852053
ACQ263EP01	Europe	8/20/2015	EP20150181873	Input/output termination for ripple prevention	European Patent	EP3002787	EP3002787

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ACQ264EP01	Europe	10/2/2015	EP20150188132	Apparatus and methods for biasing radio frequency switches	European Patent	EP3002876	EP3002876
ACQ2791EP	Europe	9/12/2012	EP12769151.7	Current Measurement	European Patent	EP2756318	EP2756318
ACQ2792EP	Europe	9/12/2012	EP18172715.7	Current Measurement	European Patent	EP3441775	EP3441775
ACQ2811EP	Europe	11/8/2013	EP13802699.2	Voltage measurement	European Patent	EP2917744	EP2917744
ACQ2821EP	Europe	5/30/2014	EP20140734206	Electrical signal measurement	European Patent	EP3004901	EP3004901
ACQ2831EP	Europe	8/22/2014	EP2014077737	Power conversion apparatus	European Patent	EP3036825	EP3036825
ACQ3721EP	Europe	2/10/2010	EP20100711855	Communication system, apparatus and methods for calibrating an antenna array	European Patent	EP2396851	EP2396851
ACQ3731EP	Europe	6/15/2010	EP20100744539	Wireless network element and method for antenna array control	European Patent	EP2452397	EP2452397
ACQ3741EP	Europe	12/8/2010	EP20100798995	Communication unit, integrated circuit and method of diverse polarisation	European Patent	EP2514034	EP2514034
ACQ3811EP	Europe	4/8/2015	EP20150715240	Active antenna system and methods of determining intermodulation distortion performance	European Patent	EP3129797	EP3129797

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ACQ392EP01	Europe	8/1/2017	EP20170781534	Galvanically isolated data isolator with improved common mode transient rejection	European Patent	EP3497899	EP3497899
APD40091EP	Europe	5/1/2013	13166129.0	Demodulation of attenuated FM modulated audio signals	Non Provisional	2800279	2800279
APD43911EP	Europe	4/24/2013	EP20130165246	Method of and apparatus for demodulating an amplitude modulated signal	European Patent	EP2797225	EP2797225
APD44541EP	Europe	9/3/2013	EP20130836193	Analog to digital converter including a pre-charge circuit	European Patent	EP2893641	EP2893641
APD44701EP	Europe	1/10/2014	EP20140702075	Narrow voltage range multi-level output pulse modulated amplifier with one-bit hysteresis quantizer	European Patent	EP2944025	EP2944025
APD44811EP	Europe	3/30/2015	EP20150161771	Apparatus and methods for smoothly managing audio discontinuity	European Patent	EP2928077	EP2928077
APD4554EP01	Europe	6/30/2014	EP20140175079	Improved digital pre-distortion systems in transmitters	European Patent	EP2824833	EP2824833
APD45561EP	Europe	3/5/2014	EP20140157774.2	UNDER-SAMPLING DIGITAL PRE-DISTORTION ARCHITECTURE	European Patent	EP2779441	EP2779441
APD45571EP	Europe	2/27/2014	EP20140157076	Baseband digital pre-distortion architecture	European Patent	EP2779440	EP2779440

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APD46121EP	Europe	8/22/2013	EP20130181339	A magnetic core for use in an integrated circuit, an integrated circuit including such a magnetic core, a transformer and an inductor fabricated as part of an integrated circuit	European Patent	EP2704163	EP2704163
APD46331EP	Europe	10/9/2013	EP20130187965	Processor architecture and method for simplifying programmable single instruction, multiple data within a register	European Patent	EP2725484	EP2725484
APD46351EP	Europe	11/19/2014	EP20140193854	Temperature stabilized circuitry	European Patent	EP2897168	EP2897168
APD46371EP	Europe	3/6/2014	14158207.2	DC BIAS ESTIMATION OF A RADIO FREQUENCY MIXER	Non Provisional	2779553	2779553
APD46521EP	Europe	9/27/2013	EP20130841859	Locking and unlocking of contactless gesture-based user interface of device having contactless gesture detection system	European Patent	EP2901252	EP2901252
APD46541EP	Europe	2/25/2014	EP20140156668	All digital transmitter noise correction	European Patent	EP2779469	EP2779469
APD46542EP	Europe	2/25/2014	EP20160180887	All digital transmitter noise correction	European Patent	EP3110017	EP3110017

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APD47091EP	Europe	2/25/2014	EP20140156524	Method and detector of loudspeaker diaphragm excursion	European Patent	EP2773132	EP2773132
APD47221EP	Europe	10/9/2013	EP20130187959	Predicate counter	European Patent	EP2725483	EP2725483
APD47231EP	Europe	10/18/2013	EP20130189405	Dma vector buffer	European Patent	EP2725498	EP2725498
APD47261EP	Europe	10/16/2013	EP20130188947	Memory interconnect network architecture for vector processor	European Patent	EP2725485	EP2725485
APD47371EP	Europe	8/13/2014	14180840.2	POWER AMPLIFICATION SYSTEM, DEVICE AND METHOD	Non Provisional	2840710	2840710
APD47661EP	Europe	2/26/2014	EP20140156857	Circuit architecture for i/q mismatch mitigation in direct conversion	European Patent	EP2779435	EP2779435
APD48051EP	Europe	3/10/2014	EP20140158653	Parallelizing loops in the presence of possible memory aliases	European Patent	EP2778907	EP2778907
APD481101EP	Europe	3/6/2014	EP20170165294	Radio frequency transmitter noise cancellation	European Patent	EP3211803	EP3211803
APD48111EP	Europe	3/6/2014	EP20140158027.4	RADIO FREQUENCY TRANSMITTER NOISE CANCELLATION	European Patent	EP2779473	EP2779473
APD48131EP	Europe	2/25/2014	14156529.1	An insulating structure, a method of forming an insulating structure, and a chip scale isolator including such an insulating structure	Non Provisional	2775522	2775522

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APD48171EP	Europe	7/10/2014	EP20140176548	Method of detecting enclosure leakage of enclosure mounted loudspeakers	European Patent	EP2830325	EP2830325
APD4835EP01	Europe	2/26/2014	EP20140156889.9	System, Method and Recording Medium for Analog to Digital Converter Calibration	European Patent	EP2779466	EP2779466
APD48381EP	Europe	5/12/2014	EP20140167969.6	DUAL-TUB JUNCTION-ISOLATED VOLTAGE CLAMP DEVICES FOR PROTECTING LOW VOLTAGE CIRCUITRY CONNECTED BETWEEN HIGH VOLTAGE INTERFACE PINS AND METHODS OF FORMING THE SAME	European Patent	EP2806462	EP2806462
APD48431EP	Europe	7/23/2014	EP20140178181	A mems switch device and method of fabrication	European Patent	EP2833388	EP2833388
APD48441EP	Europe	3/3/2014	EP20140157548	Continuous-time oversampling pipeline analog-to-digital converter	European Patent	EP2779464	EP2779464

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APD48611EP	Europe	6/24/2014	EP20140173773	Semiconductor device with an electric field modification structure, and corresponding integrated circuit, fabrication method and method of increasing breakdown voltage	European Patent	EP2824710	EP2824710
APD48741EP	Europe	10/9/2014	EP20140188357	System and method of improving stability of continuous-time delta-sigma modulators	European Patent	EP2869470	EP2869470
APD48771EP	Europe	6/23/2014	EP20140173535	Magnetic field direction sensor	European Patent	EP2818883	EP2818883
APD48781EP	Europe	5/14/2014	EP20140168345	Electric signal conversion	European Patent	EP2809007	EP2809007
APD48801EP	Europe	10/7/2014	EP20140188003	Junction field effect transistor, and method of manufacture thereof	European Patent	EP28663418	EP28663418
APD48901EP	Europe	10/10/2014	EP20140188443	Integrator output swing reduction in a loop filter for a continuous-time sigma-delta analog-to-digital converter	European Patent	EP2871778	EP2871778
APD48941EP	Europe	12/15/2014	EP20140198066	System and method for measuring respiration with accelerometers	European Patent	EP2974648	EP2974648

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APD48981EP	Europe	12/2/2014	EP20140195923	A silicon substrate suitable for use with an rf component, and an rf component formed on such a silicon substrate	European Patent	EP2884521	EP2884521
APD48991EP	Europe	12/5/2014	EP20140196659	Integrated circuit with phase corrector for laser trimming a component	European Patent	EP2884502	EP2884502
APD49351EP	Europe	7/1/2014	EP20140175320	Adaptive element shuffler	European Patent	EP2827498	EP2827498
APD49621EP	Europe	10/9/2014	EP20140188331	Multi-stage noise shaping analog-to-digital converter	European Patent	EP2863547	EP2863547
APD49651EP	Europe	9/21/2015	EP20150186014	Multichannel analog-to-digital converter	European Patent	EP3043479	EP3043479
APD49691EP	Europe	10/31/2014	EP20140191312	Low-cost capacitive sensing decoder	European Patent	EP2876576	EP2876576
APD498502EP	Europe	4/17/2015	EP20170153100.7	A MEMS Cantilever Switch Device	European Patent	EP3327739	EP3327739
APD49851EP	Europe	4/17/2015	EP20150164102	Improved mems switch	European Patent	EP3054469	EP3054469
APD4993EP01	Europe	10/13/2014	EP20140188712	System and method of clock generation in high speed serial communication	European Patent	EP2866348	EP2866348
APD50171EP	Europe	3/13/2015	EP20150159085	Systems and methods for clock and data recovery	European Patent	EP2924910	EP2924910

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APD50172EP	Europe	5/15/2015	EP20150167825	Apparatus and method for modular signal acquisition and detection	European Patent	EP2947834	EP2947834
APD50261EP	Europe	1/19/2015	EP20150151639	Transmitter noise cancellation in a multi transmitter-receiver system	European Patent	EP2903171	EP2903171
APD50271EP	Europe	5/5/2015	EP20150166428	Magnetic field energy harvesting device	European Patent	EP2942856	EP2942856
APD50281EP	Europe	2/26/2015	EP20150156825	Lc lattice delay line for high-speed adc applications	European Patent	EP2913929	EP2913929
APD50541EP	Europe	8/19/2015	EP20150181607	Embedded overload protection in delta-sigma analog-to-digital converters	European Patent	EP3001569	EP3001569
APD50601EP	Europe	3/27/2015	EP20150161450	Dominant signal detection method and apparatus	European Patent	EP2952916	EP2952916
APD50611EP	Europe	4/18/2016	EP20160165846	Apparatus and method for improving power supply rejection ratio	European Patent	EP3089360	EP3089360
APD50861EP	Europe	3/27/2015	EP20150161411	Unwanted component reduction system	European Patent	EP2930854	EP2930854
APD50921EP	Europe	3/16/2015	EP20150159281	Estimation of digital-to-analog converter static mismatch errors	European Patent	EP2930849	EP2930849
APD50971EP	Europe	9/3/2015	EP20150183728	Overvoltage protection device and method	European Patent	EP3001456	EP3001456

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APD51131EP	Europe	8/10/2015	EP20150180445	Apparatuses and method for generating a uniform magnetic field	European Patent	EP2988101	EP2988101
APD51161EP	Europe	6/29/2015	EP20150174260	An inductive component for use in an integrated circuit, a transformer and an inductor formed as part of an integrated circuit	European Patent	EP2963661	EP2963661
APD51621EP	Europe	7/12/2016	EP20160179102	Computationally efficient arc detector with coherent sampling	European Patent	EP3121610	EP3121610
APD51671EP	Europe	3/15/2016	EP20160160442	Electrical oversteering recording and/or harvesting	European Patent	EP3073594	EP3073594
APD51681EP	Europe	8/3/2015	EP20150179586	Wireless charging platform using beamforming for wireless sensor network	European Patent	EP2985925	EP2985925
APD51801EP	Europe	9/4/2015	EP20150183918	Methods and structures to generate on/off keyed carrier signals for signal isolators	European Patent	EP2996246	EP2996246
APD51911EP	Europe	2/9/2016	EP20160154920	Methods and systems for addressing component mismatch in digital-to-analog converters	European Patent	EP3142255	EP3142255
APD51921EP	Europe	8/14/2015	EP20150181161	Receivers for digital predistortion	European Patent	EP2991221	EP2991221

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APD52241EP	Europe	9/25/2015	EP20150186791	High isolation wideband switch	European Patent	EP3002783	EP3002783
APD52271EP	Europe	10/15/2015	EP20150189983	Apparatus and methods for reducing glitches in digital step attenuators	European Patent	EP3012973	EP3012973
APD52281EP	Europe	10/14/2015	EP20150189791	Apparatus and methods for controlling overshoot in digital step attenuators	European Patent	EP3010147	EP3010147
APD525701EP	Europe	10/12/2015	EP20150778682	Full duplex radio with tx leakage cancellation	European Patent	EP3210307	EP3210307
APD52631EP	Europe	5/19/2016	EP20160170418	Generating comparator thresholds using a rotating ring of resistors	European Patent	EP3101811	EP3101811
APD52941EP	Europe	3/10/2016	EP20160159554	Method of and apparatus for transmit noise reduction at a receiver	European Patent	EP3070852	EP3070852
APD52991EP	Europe	8/19/2016	EP20160185018	Apparatus and methods for using tuning information to adaptively and dynamically modify the parameters of an rf signal chain	European Patent	EP3139506	EP3139506
APD53171EP	Europe	1/6/2016	EP20160150331	Highly integrated radio frequency transceiver	European Patent	EP3046260	EP3046260
APD537701EP	Europe	2/15/2017	EP20170156381	System and method for reducing false preamble detection in a communication receiver	European Patent	EP3208966	EP3208966

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APD54651EP	Europe	7/26/2016	EP20160181190	Multiple stage digital to analog converter	European Patent	EP3136606	EP3136606
APD547401EP	Europe	1/24/2017	EP20170152846	Single-ended mixer with reduced loss	European Patent	EP3200342	EP3200342
APD54801EP	Europe	10/6/2016	EP20160192676	Ultra wide band digital pre-distortion	European Patent	EP3166223	EP3166223
APD54901EP	Europe	11/30/2016	EP20160201492	Low noise transconductance amplifiers	European Patent	EP3176946	EP3176946
APD54911EP	Europe	11/25/2016	EP20160200744	Local oscillator paths	European Patent	EP3176950	EP3176950
APD54961EP	Europe	12/1/2016	EP20160201799	Dither injection for continuous-time mash adcs	European Patent	EP3182600	EP3182600
APD55041EP	Europe	11/10/2016	EP20160198285	Broadband envelope tracking	European Patent	EP3168985	EP3168985
APD550801EP	Europe	2/16/2017	EP20170156537	Apparatus and methods for high linearity voltage variable attenuators	European Patent	EP3211792	EP3211792
APD5534EP01	Europe	9/25/2017	EP20170192905.2	APPARATUS AND METHODS FOR ASYNCHRONOUS CLOCK MAPPING	European Patent	EP3301835	EP3301835
APD55491EP	Europe	12/9/2016	EP20160203106	Adaptive digital quantization noise cancellation filters for mash adcs	European Patent	EP3182599	EP3182599
APD55641EP	Europe	10/11/2016	EP20160193368	Digital predistortion and upitlt and cable communication	European Patent	EP3157168	EP3157168

Patent Ref.	Country or Region	Filed Date	Application Number	Application Description	Patent/Design Type	Publication Number	Patent Number
APD55891EP	Europe	12/2/2016	EP20160201917	Frequency-domain adc flash calibration	European Patent	EP3182594	EP3182594
APD566701EP	Europe	4/27/2017	EP20170168399	Mixed mode digital predistortion	European Patent	EP3247040	EP3247040
APD5670EP01	Europe	12/7/2017	EP20170206014.7	SPATIAL DIGITAL PRE-DISTORTION	European Patent	EP3334052	EP3334052
APD5676EP01	Europe	5/24/2017	EP20170803491	Ethernet magnetics integration	European Patent	EP3465923	EP3465923
APD568901EP	Europe	6/9/2017	EP20170175289	A current sensor and a method of manufacturing a current sensor	European Patent	EP3255440	EP3255440
APD5715EP01	Europe	8/29/2017	EP20170797863.2	AN ELECTROCHEMICAL SENSOR, AND A METHOD OF FORMING AN ELECTROCHEMICAL SENSOR	European Patent	EP3507598	EP3507598
APD57371EP	Europe	10/12/2016	EP20160193510	A dielectric stack, an isolator device and method of forming an isolator device	European Patent	EP3159946	EP3159946
APD574901EP	Europe	2/15/2017	EP20170156272	A signal conditioning circuit and a relay/circuit breaker control apparatus including such a signal conditioning circuit	European Patent	EP3220405	EP3220405

Patent Ref.	Country or Region	Filed Date	Application Number	Application Description	Patent/Design Type	Publication Number	Patent Number
APD5810EP01	Europe	10/13/2017	EP20170817075	Systems and methods for transferring power across an isolation barrier	European Patent	EP3526892	EP3526892
APD5820EP01	Europe	8/25/2017	EP20170761222	Antenna array calibration systems and methods	European Patent	EP3504753	EP3504753
APD5845EP01	Europe	12/21/2016	EP20160828835	Apparatus for and method of providing measurements of uncertainty in respect of a transfer function	European Patent	EP3400451	EP3400451
APD6092EP01	Europe	5/1/2018	EP20180170251.5	Asymmetric [Multiple string] Multiple Output DAC	European Patent	EP3399650	EP3399650
ACQ282FR01	France	5/30/2014	EP14734206.7	Electrical signal measurement	Designated EP	FR3004901	FR3004901
APD4470FR01	France	1/10/2014	FR14702075.4	Narrow voltage range multi-level output pulse modulated amplifier with one-bit hysteresis quantizer	Designated EP	FR2944025	FR2944025
APD4635FR01	France	11/19/2014	FR14193854.8	Temperature stabilized circuitry	Designated EP	FR2897168	FR2897168
APD4654FR02	France	2/25/2014	FR16180887.8	All digital transmitter noise correction	Designated EP	FR3110017	FR3110017
APD4737FR01	France	8/13/2014	14180840.2	POWER AMPLIFICATION SYSTEM, DEVICE AND METHOD	Non Provisional	2840710	2840710

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APD4811FR01	France	3/6/2014	FR17165294.4	RADIO FREQUENCY TRANSMITTER NOISE CANCELLATION	Designated EP	FR2779473	FR2779473
APD4813FR01	France	2/25/2014	14156529.1	An insulating structure, a method of forming an insulating structure, and a chip scale isolator including such an insulating structure	Non Provisional	2775522	2775522
APD4835FR01	France	2/26/2014	FR14156889.9	System, Method and Recording Medium for Analog to Digital Converter Calibration	Designated EP	FR2779466	FR2779466
APD4838FR01	France	5/12/2014	FR14167969.6	DUAL-TUB JUNCTION-ISOLATED VOLTAGE CLAMP DEVICES FOR PROTECTING LOW VOLTAGE CIRCUITRY CONNECTED BETWEEN HIGH VOLTAGE INTERFACE PINS AND METHODS OF FORMING THE SAME	Designated EP	FR2806462	FR2806462
APD4880FR01	France	10/7/2014	FR14188003.9	Junction field effect transistor, and method of manufacture thereof	Designated EP	FR2863418	FR2863418
APD4993FR01	France	10/13/2014	FR14188712.5	System and method of clock generation in high speed serial communication	Designated EP	FR2866348	FR2866348

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APD50171FR	France	3/13/2015	15159085.8	SYSTEMS AND METHODS FOR CLOCK AND DATA RECOVERY	Non Provisional	2924910	2924910
APD5092FR01	France	2/16/2015	15159281.3	Estimation of Digital-to-Analog Converter Static mismatch errors	Non Provisional	2930849	2930849
APD5116FR01	France	6/29/2015	FR15174260.8	An inductive component for use in an integrated circuit, a transformer and an inductor formed as part of an integrated circuit	Designated EP	FR2963661	FR2963661
APD5162FR01	France	7/12/2016	FR16179102.5	Computationally efficient arc detector with coherent sampling	Designated EP	FR3121610	FR3121610
APD5299FR01	France	8/19/2016	FR16185018.5	Apparatus and methods for using tuning information to adaptively and dynamically modify the parameters of an rf signal chain	Designated EP	FR3139506	FR3139506
APD5377FR01	France	2/15/2017	FR17156381.0	System and Method For Reducing False Preamble Detection in a Communication Receiver	Designated EP	FR3208966	FR3208966
APD5474FR01	France	1/24/2017	FR17152846.6	Single-ended mixer with reduced loss	Designated EP	FR3200342	FR3200342
APD55041FR	France	11/10/2016	FR16198285.5	Broadband envelope tracking	Designated EP	FR3168985	FR3168985

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APD5508FR01	France	2/16/2017	FR17156537.7	Apparatus and methods for high linearity voltage variable attenuators	Designated EP	FR3211792	FR3211792
APD5564FR01	France	10/11/2016	FR16193368.4	Digital predistortion and uplink and cable communication	Designated EP	FR3157168	FR3157168
ACQ0351DE	Germany	3/16/2006	DE06721671	SYSTEM UND VERFAHREN ZUR STROMLEITUNGSKOMMUNIKATION	Non-Provisional	DE1864394	DE60 2006 036 862.3
ACQ1631DE	Germany	5/8/2014	DE201410106494	Transconductance switching circuit, and digital - analogous to that of - current transformer, the use of such transconductance switching circuits	Non-Provisional	DE102014106494	
ACQ16901DE	Germany	8/22/2014	DE14182044.9	Geschlossenes Regelkreissystem und ein Verstärker in Kombination mit einem solchen geschlossenen Regelkreissystem	Designated EP	DE2852053	DE60 2014 012 193.4
ACQ282DE01	Germany	5/30/2014	DE14734206.7	Electrical signal measurement	Non-Provisional	DE3004901	DE60 2014 049 466.8
ACQ372DE01	Germany	2/10/2010	DE10711855.6	Communication system, apparatus and methods for calibrating an antenna array	Designated EP	DE2396851	DE60 2010 045 716.8

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ACQ3731DE	Germany	6/15/2010	DE10744539.7	Wireless network element and method for antenna array control	Non-Provisional	DE2452397	DE602010038798.4
ACQ37401DE	Germany	12/8/2010	DE10798995.6	Communication unit, integrated circuit and method of diverse polarisation	Designated EP	DE2514034	DE602010041893.6
ACQ377DE01	Germany		DE11 2014 002 832.0	NETWORK ELEMENTS, INTEGRATED CIRCUIT AND METHOD OF ASSIGNING CHANNELS	Non-Provisional	DE112014002832	
ACQ379DE01	Germany	8/15/2014	DE20141103778T	Communication unit, integrated circuit and method for generating a plurality of sectored beams	Non-Provisional	DE112014003778	
ACQ380DE01	Germany	8/15/2014	DE20141103766T	Communication unit and method for antenna array calibration	Non-Provisional	DE112014003766	
ACQ3811DE	Germany	4/8/2015	DE15715240.6	Active antenna system and methods of determining intermodulation distortion performance	Designated EP	DE3129797	DE60 2015 013 392.7
ACQ406DE01	Germany	11/14/2017	DE201720106905U	Wake up wireless sensor nodes	Non-Provisional	DE202017106905	
APD4009DE01	Germany	5/1/2013	13166129.0	Demodulation of attenuated FM modulated audio signals	Non Provisional	2800279	60 2013 036 349.8

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APD40221DE	Germany	2/25/2014	DE201410102456	A amplifier, a rest amplifier, and an a / d transmitter containing a rest amplifier	Non-Provisional	DE102014102456	
APD4391DE01	Germany	4/24/2013	DE13165246.3	Method of and apparatus for demodulating an amplitude modulated signal	Designated EP	DE2797225	DE60 2013 031 873.5
APD44221DE	Germany	11/14/2013	DE20131018971	Strand digital-to-analog converter fast charge system and method	Non-Provisional	DE102013018971	
APD44441DE	Germany	1/21/2014	DE201410100656	Continuous-time input stage	Non-Provisional	DE102014100656	
APD44451DE	Germany	11/29/2013	DE201310113256	Stranded daw ableitstromaufhebung	Non-Provisional	DE102013113256	
APD4470DE01	Germany	1/10/2014	DE14702075.4	Narrow voltage range multi-level output pulse modulated amplifier with one-bit hysteresis quantizer	Designated EP	DE2944025	DE60 2014 045 698.7
APD45181DE	Germany	3/7/2014	DE201410103076	Spectrum spread mems self-testing and method	Non-Provisional	DE102014103076	
APD45301DE	Germany	2/8/2013	DE20131100937T	Method and apparatus for the separation of the reference current from the input signal in a sigma - delta - converter	Non-Provisional	DE112013000937	

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APD45471DE	Germany	4/30/2013	DE20131102311T	Segmented digital / analog converter with weighted current sources	Non-Provisional	DE112013002311	
APD4556DE01	Germany	3/5/2014	DE14157774.2	UNDER-SAMPLING DIGITAL PRE-DISTORTION ARCHITECTURE	Designated EP	DE2779441	DE60 2014 025 752.6
APD45571DE	Germany	2/27/2014	DE14157076.2	Baseband digital pre-distortion architecture	Designated EP	DE2779440	DE60 2014 007 732.3
APD45711DE	Germany	2/26/2015	DE201510102769	Digital analogue transformer with correction of parasitary routing resistance	Non-Provisional	DE102015102769	
APD45961DE	Germany	2/13/2014	DE201410101844	Voltage generator, switch and data converter circuits	Non-Provisional	DE102014101844	
APD46121DE	Germany	8/22/2013	DE13181339.6	A magnetic core for use in an integrated circuit, an integrated circuit including such a magnetic core, a transformer and an inductor fabricated as part of an integrated circuit	Non-Provisional	DE2704163	DE602013016935. 7
APD46162DE	Germany	10/29/2014	DE201410115694	Thermoelectric energy collectors in a wafer scale	Non-Provisional	DE102014115694	
APD4635DE01	Germany	11/19/2014	DE14193854.8	Temperature stabilized circuitry	Non-Provisional	EP2897168	DE60 2014 042 244.6

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APD4637DE01	Germany	3/6/2014	14158207.2	DC BIAS ESTIMATION OF A RADIO FREQUENCY MIXER	Non-Provisional	2779553	60 2014 024 731.8
APD46411DE	Germany	2/6/2015	DE201510101741	Amplifier with offset compensation	Non-Provisional	DE102015101741	
APD46481DE	Germany	3/7/2014	DE201410103090	An isolated error amplifier for insulated power supplies	Non-Provisional	DE102014103090	
APD4652DE01	Germany	9/27/2013	DE13841859.5	Locking and unlocking of contactless gesture-based user interface of device having contactless gesture detection system	Non-Provisional	DE2901252	DE60 2013 062 338.4
APD46531DE	Germany	11/5/2013	DE201310112163	Object recognition	Non-Provisional	DE102013112163	
APD46541DE	Germany	2/25/2014	DE14156668.7	All digital transmitter noise correction	Non-Provisional	DE2779469	DE60 2014 003 917.0
APD4654DE02	Germany	2/25/2014	DE16180887.8	All digital transmitter noise correction	Non-Provisional	DE3110017	DE60 2014 038 446.3
APD46563DE	Germany	8/22/2013	DE201310109072	For rapid channel switching systems input current suppression scheme	Non-Provisional	DE102013109072	
APD46691DE	Germany	2/25/2014	DE201410102447	Inductor current emulation circuit for a switching converter	Non-Provisional	DE102014102447	
APD470901DE	Germany	2/25/2014	DE14156524.2	Method and detector of loudspeaker diaphragm excursion	Non-Provisional	DE2773132	DE602014010050.3
APD4722DE01	Germany	10/9/2013	20 2013 012 764.3	Predicate counters	Utility Model		20 2013 012 764

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APD4723DE01	Germany	10/18/2013	DE13189405.7	Dma vector buffer	Designated EP	DE2725498	DE60 2013 030 703.2
APD47261DE	Germany	10/16/2013	DE20132012281U	Memory connection network architecture for a vector processor	Non-Provisional	DE202013012281	
APD47331DE	Germany	12/23/2014	DE201410119481	Amplification system	Non-Provisional	DE102014119481	
APD4737DE01	Germany	8/13/2014	14180840.2	POWER AMPLIFICATION SYSTEM, DEVICE AND METHOD	Non-Provisional	2840710	60 2014 043 906.3
APD4746DE01	Germany	10/22/2013	DE201310111632	System and method for reducing the data handling in the case of lithium-ion battery monitors	Non-Provisional	DE102013111632	
APD47561DE	Germany	5/12/2016	DE201610108842	Voltage controlled current path, voltage limiter and electronic component with a voltage limiter	Non-Provisional	DE102016108842	
APD47651DE	Germany	5/20/2016	DE201610109332	Energy-efficient cutting scheme for offset error correction in mems gyroscopes	Non-Provisional	DE102016109332	
APD47661DE	Germany	2/26/2014	DE14156857	Circuit architecture for i/q mismatch mitigation in direct conversion	Designated EP	DE2779435	
APD47711DE	Germany	9/30/2014	DE201410114216	A digital-to-analog converter and a method of operating a digital-to-analog converter	Non-Provisional	DE102014114216	

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APD47791DE	Germany	1/19/2015	DE201510100682	Charge pump stage and charge pump	Non-Provisional	DE102015100682	
APD47792DE	Germany	1/19/2015	DE20152009593U	Charge pump stage and charge pump	Non-Provisional	DE202015009593	
APD47821DE	Germany	3/14/2014	DE20141101378T	More chains digital to analog converter	Non-Provisional	DE112014001378	
APD481101DE	Germany	3/6/2014	DE14158027.4	RADIO FREQUENCY TRANSMITTER NOISE CANCELLATION	Designated EP	DE2779473	DE602014008655.1
APD4811DE01	Germany	3/6/2014	DE17165294.4	Radio frequency transmitter noise cancellation	Designated EP	DE3211803	DE60 2014 052 797.3
APD48121DE	Germany	11/27/2014	DE201410117472	Proportional to absolute temperature circuit	Non-Provisional	DE102014117472	
APD4813DE01	Germany	2/25/2014	14156529.1	An insulating structure, a method of forming an insulating structure, and a chip scale isolator including such an insulating structure	Non Provisional	2775522	60 2014 038 467.6
APD481701DE	Germany	7/10/2014	DE14176548.7	Method of detecting enclosure leakage of enclosure mounted loudspeakers	Non-Provisional	DE2830325	DE602014010064.3
APD48211DE	Germany	2/3/2015	DE201510101549	Arrangement of composite circuit elements and associated manufacturing method	Non-Provisional	DE102015101549	
APD48281DE	Germany	4/14/2014	DE201410105310	Common mode voltage multiplexer	Non-Provisional	DE102014105310	

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APD48311DE	Germany	5/12/2014	DE201410106672	The system, method and a recording medium for the processing of macroblocks	Non-Provisional	DE102014106672	
APD48331DE	Germany	5/6/2015	DE201510107023	A voltage reference circuit	Non-Provisional	DE102015107023	
APD4835DE01	Germany	2/26/2014	DE14156889.9	System, Method and Recording Medium for Analog to Digital Converter Calibration	Designated EP	DE2779466	DE60 2014 052 029.4
APD48371DE	Germany	12/8/2014	DE201410118167	Analog switch and method for controlling analog switches	Non-Provisional	DE102014118167	
APD4838DE01	Germany	5/12/2014	DE14167969.6	DUAL-TUB JUNCTION-ISOLATED VOLTAGE CLAMP DEVICES FOR PROTECTING LOW VOLTAGE CIRCUITRY CONNECTED BETWEEN HIGH VOLTAGE INTERFACE PINS AND METHODS OF FORMING THE SAME	Designated EP	DE2806462	DE60 2014 041 666.7

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APD4838DE01	Germany	5/12/2014	14167969.6	DUAL-TUB JUNCTION-ISOLATED VOLTAGE CLAMP DEVICES FOR PROTECTING LOW VOLTAGE CIRCUITRY CONNECTED BETWEEN HIGH VOLTAGE INTERFACE PINS AND METHODS OF FORMING THE SAME	Non-Provisional	2806462	60 2014 041 666.7
APD48401DE	Germany	1/29/2015	DE201510101319	Absolute-temperature proportional low-power current and voltage generator	Non-Provisional	DE102015101319	
APD48761DE	Germany	8/25/2014	DE201410112124	Device and method for evaluating the performance of a system in a control loop	Non-Provisional	DE102014112124	
APD487801DE	Germany	5/14/2014	DE14168345.8	Electric signal conversion	Designated EP	DE2809007	DE60 2014 007 747.1
APD4880DE01	Germany	10/7/2014	DE14188003.9	Junction field effect transistor, and method of manufacture thereof	Designated EP	DE2863418	
APD48831DE	Germany	7/8/2014	DE201410109525	The system, method and medium for the image object - and contour feature extraction	Non-Provisional	DE102014109525	
APD48841DE	Germany	11/7/2014	DE20141105109T	Support vector machine-based object recognition system and associated method	Non-Provisional	DE112014005109	

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APD4890DE01	Germany	10/10/2014	DE14188443.7	Integrator output swing reduction in a loop filter for a continuous-time sigma-delta analog-to-digital converter	Designated EP	DE2871778	DE60 2014 017 820.0
APD4899DE01	Germany	12/5/2014	DE14196659.8	Integrated circuit with phase corrector for laser trimming a component	Designated EP	DE2884502	DE60 2014 024 361.4
APD49132DE	Germany	8/29/2014	DE201410112428	Linear and dc-accurate front-end dc and input structure	Non-Provisional	DE102014112428	
APD49141DE	Germany	10/7/2014	DE201410114540	Method and device for reducing capacitor-induced isi in dacs	Non-Provisional	DE102014114540	
APD49221DE	Germany	10/17/2014	DE201410115144	Load shield for integrated circuit package	Non-Provisional	DE102014115144	
APD49231DE	Germany	2/9/2015	DE201510101837	Apparatus and method for improving common mode rejection	Non-Provisional	DE102015101837	
APD49251DE	Germany	8/18/2014	DE201410111748	Face detection	Non-Provisional	DE102014111748	
APD49321DE	Germany	3/19/2015	DE201510104132	Device and method for automatically zeroing amplifiers	Non-Provisional	DE102015104132	
APD49351DE	Germany	7/1/2014	DE14175320	Adaptive element shuffler	Designated EP	DE2827498	
APD49441DE	Germany	9/4/2014	DE201410112727	Device and method for synchronizing phase control arcs	Non-Provisional	DE102014112727	

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APD49641DE	Germany	4/23/2015	DE201510106260	Mems switch with internal conductive path	Non-Provisional	DE102015106260	
APD4969DE01	Germany	10/31/2014	14191312.9	LOW-COST CAPACITIVE SENSING DECODER	Non-Provisional	2876576	60 2014 017 830.8
APD49721DE	Germany	2/4/2015	DE201510101566	Mems device with constant capacity	Non-Provisional	DE102015101566	
APD49741DE	Germany	10/10/2014	DE201410114728	Multilayer error correction coding	Non-Provisional	DE102014114728	
APD49871DE	Germany	1/30/2015	DE201510101411	Improved analog-digital converter and method for operating an analog-digital-wandlers	Non-Provisional	DE102015101411	
APD49921DE	Germany	2/6/2015	DE201510101729	Echo error process and echo error arrangement for electric acoustic communication devices	Non-Provisional	DE102015101729	
APD4993DE01	Germany	10/13/2014	DE14188712.5	System and method of clock generation in high speed serial communication	Designated EP	DE2866348	DE60 2014 045 233.7
APD50081DE	Germany	11/5/2015	DE201510118956	Transconductance network delta-sigma modulator for dynamic tuning of loop filter coefficients	Non-Provisional	DE102015118956	

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APD50121DE	Germany	9/25/2015	DE201510116269	Scratch transformer, analog-digital transformer with a screen transformer, and method for converting a data flow from a data rate to another data rate	Non-Provisional	DE102015116269	
APD50161DE	Germany	1/15/2015	DE20151100536T	Motion control system for capacitive detection probe	Non-Provisional	DE112015000536	
APD50171DE	Germany	3/13/2015	15159085.8	SYSTEMS AND METHODS FOR CLOCK AND DATA RECOVERY	Non Provisional	2924910	60 2015 023 041.8
APD50281DE	Germany	5/3/2018	20 2015 009 602.6	LC LATTICE DELAY LINE FOR HIGH-SPEED ADC APPLICATIONS	Utility Model		20 2015 009 602.6
APD50291DE	Germany	12/16/2014	DE201410118763	Low drift voltage reference	Non-Provisional	DE102014118763	
APD50321DE	Germany	12/22/2015	DE201510122635	Self-referenced digital-to-analog converter	Non-Provisional	DE102015122635	
APD50331DE	Germany	2/13/2015	DE201510102135	Interruptible exclusive storage	Non-Provisional	DE102015102135	
APD50511DE	Germany	6/2/2016	DE201610110238	Method and apparatus for synchronizing a slave clock to a master clock	Non-Provisional	DE102016110238	
APD50551DE	Germany	6/9/2015	DE201510109028	Receiver with low intermediate frequency	Non-Provisional	DE102015109028	
APD50621DE	Germany	7/6/2015	DE201510110846	Analog-to-digital converter and method for calibrating the same	Non-Provisional	DE102015110846	

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APD50801DE	Germany	6/10/2015	DE201510109124	Cache way prediction	Non-Provisional	DE102015109124	
APD50891DE	Germany	7/4/2016	DE201610112168	Multi-band oscillator laser random loop and method of calibrating the same	Non-Provisional	DE102016112168	
APD5092DE01	Germany	3/16/2015	15159281.3	Estimation of Digital-to-Analog Converter Static mismatch errors	Non Provisional	2930849	60 2015 029 150.6
APD51021DE	Germany	4/24/2015	DE201510106383	Amplifier input stage and amplifier	Non-Provisional	DE102015106383	
APD51061DE	Germany	10/29/2015	DE201510118467	Circuit and method for compensating early effects	Non-Provisional	DE102015118467	
APD5116DE01	Germany	6/29/2015	DE15174260.8	An inductive component for use in an integrated circuit, a transformer and an inductor formed as part of an integrated circuit	Designated EP	DE2963661	DE60 2015 040 151.4
APD51241DE	Germany	10/1/2015	DE201510116662	Amplifier with high reinforcement and high feeding speed	Non-Provisional	DE102015116662	
APD51281DE	Germany	5/17/2016	DE201610109060	Segmented dac	Non-Provisional	DE102016109060	
APD51431DE	Germany	12/8/2015	DE201510121327	Apparatus and method for clock generation	Non-Provisional	DE102015121327	
APD51521DE	Germany	1/19/2016	DE201610100821	Method for adapting a component and component adapted by means of such a method	Non-Provisional	DE102016100821	

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APD51561DE	Germany	12/10/2015	DE201510121528	Method for controlling the membrane stroke of electrodynamic loudspeakers	Non-Provisional	DE102015121528	
APD5162DE01	Germany	7/12/2016	DE16179102.5	Computationally efficient arc detector with coherent sampling	Designated EP	DE3121610	DE60 2016 022 799.1
APD5168DE01	Germany	8/3/2015	15179586.1	WIRELESS CHARGING PLATFORM USING BEAMFORMING FOR WIRELESS SENSOR NETWORK	Non Provisional	2985925	60 2015 012 151.1
APD51771DE	Germany	6/30/2015	DE201510110467	Method and device for protecting a switch, such as a mems switch. and mems switch with such a protective device	Non-Provisional	DE102015110467	
APD51941DE	Germany	11/17/2015	DE201510119904	Apparatus and method for digital predistortion systems with double loop power amplifiers	Non-Provisional	DE102015119904	
APD52131DE	Germany	9/12/2014	DE201410113162	Method for improved data throughput in a communication system and communication system	Non-Provisional	DE102014113162	
APD52231DE	Germany	3/23/2016	DE201610105485	Linear dc voltage regulator with switchable circuit for leakage suppression	Non-Provisional	DE102016105485	

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APD52591DE	Germany	6/22/2016	DE201610111432	Digital to analog converter	Non-Provisional	DE102016111432	
APD52641DE	Germany	2/19/2016	DE201610102929	Sensor error detection	Non-Provisional	DE102016102929	
APD52841DE	Germany	5/20/2016	DE 10 2016 109 298	Debug trigger interface for non-debug domain system reset	Non-Provisional	DE102016109298A 1	
APD52941DE	Germany	3/11/2016	DE102016104467.9	Method and apparatus for reducing transmitter noise at a receiver	Non-Provisional	DE102016104467	
APD52951DE	Germany	3/21/2016	DE201610105181	Apparatus and method for a cascode amplifier topology for millimeter-wave power application	Non-Provisional	DE102016105181	
APD529901DE	Germany	3/8/2017	DE16185018.5	Apparatus and methods for using tuning information to adaptively and dynamically modify the parameters of an rf signal chain	Designated EP	DE3139506	DE60 2016 007 097.9
APD53001DE	Germany	5/20/2016	DE201610109363	Host port for serial peripheral interfaces	Non-Provisional	DE102016109363	
APD53141DE	Germany	2/19/2016	DE201610102927	Sensor error detection	Non-Provisional	DE102016102927	
APD53321DE	Germany	9/8/2016	DE201610116873	Small-area and low-power iir filter structure	Non-Provisional	DE102016116873	
APD53461DE	Germany	5/2/2016	DE201610108134	Signal gate, sampling network and analog-to-digital converter with such a sampling network	Non-Provisional	DE102016108134	

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APD5349DE01	Germany	9/5/2017	DE201710120420	Fast infusing capacitive gain amplifier circuit	Non-Provisional	DE102017120420	
APD5350DE01	Germany	12/16/2016	DE201610124651	Devices, systems and methods with magnetic structures	Non-Provisional	DE102016124651	
APD5377DE01	Germany	2/15/2017	DE17156381	System and Method For Reducing False Preamble Detection in a Communication Receiver	Designated EP		
APD53981DE	Germany	12/9/2016	DE201610123920	Inductive component for use in an integrated circuit, transformer and inductor formed as part of an integrated circuit	Non-Provisional	DE102016123920	
APD54041DE	Germany	11/9/2016	DE201610121451	Fet-bipolar transistor combination	Non-Provisional	DE102016121451	
APD54121DE	Germany	11/8/2016	DE201610121352	An overvoltage protection device and a galvanic circuit breaker in combination with an overvoltage protection device	Non-Provisional	DE102016121352	
APD542801DE	Germany	2/27/2017	DE20171101044T	Presence detector	Non-Provisional	DE112017001044	
APD54361DE	Germany	11/8/2016	DE201610121353	Thin-layer resistance device for use in an integrated circuit, integrated circuit with thin-layer resistance device	Non-Provisional	DE102016121353	

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APD5474DE01	Germany	1/24/2017	DE17152846.6	Single-ended mixer with reduced loss	Designated EP		
APD54781DE	Germany	1/12/2017	DE201710100496	Integrated ion detection device and method	Non-Provisional	DE102017100496	
APD5490DE01	Germany	11/30/2016	DE16201492	Low noise transconductance amplifiers	Designated EP	DE3176946	DE 60 2016 004 984.8
APD54981DE	Germany	10/10/2016	DE201610119246	Noise-reduced precision input level for analog digital converters	Non-Provisional	DE102016119246	
APD55041DE	Germany	11/10/2016	DE16198285	Broadband envelope tracking	Designated EP	DE3168985	DE 60 2016 006 630.0
APD5508DE01	Germany	2/16/2017	DE17156537.7	Apparatus and methods for high linearity voltage variable attenuators	Designated EP	DE3211792	DE 60 2017 005 252.3
APD551301DE	Germany	2/14/2017	DE201710102860	Signal-dependent subtractive dithering	Non-Provisional	DE102017102860	
APD5525DE01	Germany	10/10/2016	DE11 2016 004 795.9	Transceiver Frontend for Ethernet with Transformerless Balancing Circuit	Non-Provisional	DE112016004795T 5	
APD553601DE	Germany	2/14/2017	DE201710102857	Analog / digital converter with integrator with charge compensation	Non-Provisional	DE102017102857	
APD553701DE	Germany	3/5/2017	DE201710104551	Multiturn sensor arrangement and display	Non-Provisional	DE102017104551	
APD554701DE	Germany	4/27/2017	DE201710109131	Physical isolation between mac and phy ethernet connections	Non-Provisional	DE102017109131	

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APD5564DE01	Germany	10/11/2016	DE16193368	DIGITAL PREDISTORTION AND UPTILT AND CABLE COMMUNICATION	Designated EP	DE3157168	DE60 2016 008 649.2
APD5569DE01	Germany	9/15/2017	DE201710121491	Method and apparatus for reducing the effect of dielectric absorption in a sar adc	Non-Provisional	DE102017121491	
APD55711DE	Germany	11/28/2016	DE201610122914	Interface for an electromagnetic flow sensor with sensor drive circuit	Non-Provisional	DE102016122914	
APD5586DE01	Germany	2/1/2017	DE20171100613T	Circuits, systems and methods for providing asynchronous sample rate conversion for an oversampling sigma-delta analog-to-digital converter	Non-Provisional	DE112017000613	
APD56030DE01	Germany	3/21/2017	DE201710106095	Swing circle and frequency jumping for isolators	Non-Provisional	DE102017106095	
APD560401DE	Germany	3/23/2017	DE201710106322	Magnetic field detector	Non-Provisional	DE102017106322	
APD560402DE	Germany	3/23/2017	DE201710106324	Zero offset compensation for magnetic field detector	Non-Provisional	DE102017106324	
APD561201DE	Germany	4/12/2017	DE201710107906	Devices for communication system transceiver interfaces	Non-Provisional	DE102017107906	
APD5629DE01	Germany	1/11/2017	DE20171100359T	Air flow sensor for fan-cooled systems	Non-Provisional	DE112017000359	

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APD5649DE01	Germany	9/14/2017	DE201710121387	Multiplexer distortion cancellation	Non-Provisional	DE102017121387	
APD5677DE01	Germany	9/18/2017	DE201710121611	Protective measures for mems switch devices	Non-Provisional	DE102017121611	
APD5696DE01	Germany	2/5/2018	DE20181100333T	Noise reduction in a voltage converter	Non-Provisional	DE112018000333	
APD572701DE	Germany	8/29/2018	10 2018 121 046.9	Cluster shuffler in data converters	Non-Provisional	DE10 2018 121 046 A1	
APD5737DE01	Germany	10/18/2016	DE201620105810U	A dielectric stack and an insulator device	Non-Provisional	DE202016105810	
APD5791DE01	Germany	4/6/2018	DE10 2018 108 128.6	Dual-Output Delta-Sigma ADC for Improved RF Receiver Automatic Gain Control	Non-Provisional	DE102018108128A 1	
APD5816DE01	Germany	12/18/2017	DE201710130317	Isolated dc-dc converter	Non-Provisional		
APD5818DE01	Germany	12/21/2017	DE201710131009	Power transfer and feedback through a common isolator	Non-Provisional	DE102017131009	
APD5891DE01	Germany	12/18/2017	DE201710130401	An optical runtime system calibrating light detector	Non-Provisional		
ACQ0351GB	Great Britain	3/16/2006	EP20060721671	SYSTEM AND METHOD FOR POWER LINE COMMUNICATIONS	Non-Provisional	EP1864394	EP1864394
ACQ16901GB	Great Britain	8/22/2014	GB14182044.9	Closed loop control system, and an amplifier in combination with such a closed loop control system	Designated EP	GB2852053	GB2852053

Patent Ref.	Country or Region	Filed Date	Application Number	Application Description	Patent/Design Type	Publication Number	Patent Number
ACQ1691GB	Great Britain	8/29/2013	GB20130015389	Closed loop control system, and an amplifier in combination with such a loop control system	Non-Provisional	GB201315389D	
ACQ2791GB	Great Britain	9/12/2011	GB111564836	Current Measurement	Non-Provisional		
ACQ2792GB	Great Britain	5/4/2012	GB1207905.9	Current Measurement	Non-Provisional		
ACQ2793GB	Great Britain	6/1/2013	GB1309825.6	Current Measurement	Designated PCT		
ACQ2794GB	Great Britain	6/1/2013	GB1309827.2	Improvements in electric connectors	Non-Provisional		
ACQ2801GB	Great Britain	11/24/2011	GB1120295.9	Current Measurement Apparatus	Non-Provisional		
ACQ2821GB	Great Britain	6/1/2013	GB1309823.1	Electrical Signal Measurement	Non-Provisional		
ACQ282GB01	Great Britain	5/30/2014	GB14734206.7	Electrical signal measurement	Non-Provisional	GB3004901	GB3004901
ACQ3732GB	Great Britain	6/15/2010	GB10744539.7	WIRELESS NETWORK ELEMENT AND METHOD FOR ANTENNA ARRAY CONTROL	Non-Provisional	GB2452397	GB2452397
ACQ37401GB	Great Britain	12/8/2010	GB10798995.6	COMMUNICATION UNIT, INTEGRATED CIRCUIT AND METHOD OF DIVERSE POLARISATION	Non-Provisional	GB2514034	GB2514034
ACQ3751GB	Great Britain	8/20/2010	GB1013970	PROCESS AND APPARATUS FOR THE PRODUCTION OF TUBES AND TUBULAR FILMS	Non-Provisional	EP1284321	EP1284321

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ACQ3771GB	Great Britain	6/12/2013	GB20130010435	Communication unit or method for identifying a connectivity relationship between a logical channel and an antenna element of an active antenna system	Non-Provisional	GB2516617	GB2516617
ACQ3791GB	Great Britain	8/16/2013	GB20130014729	Communication unit, integrated circuit and method for generating a plurality of sectored beams	Non-Provisional	GB2517217	GB2517217
ACQ3801GB	Great Britain	8/16/2013	GB20130014730	Communication unit and method of antenna array calibration	Non-Provisional	GB2517218	GB2517218
ACQ3811GB	Great Britain	4/8/2014	GB20140006330	Active antenna system and methods of determining intermodulation distortion performance	Non-Provisional	GB2525173	GB2525173
ACQ381GB02	Great Britain	4/8/2015	GB15715240.6	ACTIVE ANTENNA SYSTEM AND METHODS OF DETERMINING INTERMODULATION DISTORTION PERFORMANCE	Designated EP	GB3129797	GB3129797
ACQ395GB01	Great Britain	3/22/2016	GB20160004796	A combined isolator and power switch	Non-Provisional		

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APD4009GB01	Great Britain	5/1/2013	13166129.0	Demodulation of attenuated FM modulated audio signals	Non-Provisional	2800279	2800279
APD4391GB01	Great Britain	4/24/2013	GB13165246.8	Method of and apparatus for demodulating an amplitude modulated signal	Non-Provisional	GB2797225	GB2797225
APD4470GB01	Great Britain	1/10/2014	GB14702075.4	NARROW VOLTAGE RANGE MULTI-LEVEL OUTPUT PULSE MODULATED AMPLIFIER WITH ONE-BIT HYSTERESIS QUANTIZER	Non-Provisional	GB2944025	GB2944025
APD4556GB01	Great Britain	3/5/2014	GB14157774.2	UNDER-SAMPLING DIGITAL PRE-DISTORTION ARCHITECTURE	Non-Provisional	GB2779441	GB2779441
APD45571GB	Great Britain	2/27/2014	GB14157076.2	BASEBAND DIGITAL PRE-DISTORTION ARCHITECTURE	Designated EP	GB2779440	GB2779440
APD46121GB	Great Britain	8/22/2013	GB13181339.6	A MAGNETIC CORE FOR USE IN AN INTEGRATED CIRCUIT, AN INTEGRATED CIRCUIT INCLUDING SUCH A MAGNETIC CORE, A TRANSFORMER AND AN INDUCTOR FABRICATED AS PART OF AN INTEGRATED CIRCUIT	Non-Provisional	GB2704163	GB2704163
APD4635GB01	Great Britain	11/19/2014	GB14193854.8	Temperature-Stabilized LogAmp	Designated EP	GB2897168	GB2897168

Patent Ref.	Country or Region	Filed Date	Application Number	Application Description	Patent/Design Type	Publication Number	Patent Number
APD4637GB01	Great Britain	3/6/2014	14158207.2	DC BIAS ESTIMATION OF A RADIO FREQUENCY MIXER	Non-Provisional	2779553	2779553
APD4652GB01	Great Britain	9/27/2013	GB13841859.5	LOCKING AND UNLOCKING OF CONTACTLESS GESTURE-BASED USER INTERFACE OF DEVICE HAVING CONTACTLESS GESTURE DETECTION SYSTEM	Non-Provisional	GB2901252	GB2901252
APD46541GB	Great Britain	2/25/2014	GB14156668.7	ALL DIGITAL TRANSMITTER NOISE CORRECTION	Designated EP	GB2779469	GB2779469
APD4654GB02	Great Britain	2/25/2014	GB16180887.8	ALL DIGITAL TRANSMITTER NOISE CORRECTION	Designated EP	GB3110017	GB3110017
APD470901GB	Great Britain	2/25/2014	GB14156524.2	Method and detector of loudspeaker diaphragm excursion	Designated EP	GB2773132	GB2773132
APD4723GB01	Great Britain	10/18/2013	GB13189405.7	Dma vector buffer	Designated EP	GB2725498	GB2725498
APD4737GB01	Great Britain	8/13/2014	14180840.2	POWER AMPLIFICATION SYSTEM, DEVICE AND METHOD	Non-Provisional	2840710	2840710
APD47661GB	Great Britain	2/26/2014	GB14156857	Circuit architecture for I/Q mismatch mitigation in direct conversion	Designated EP	GB2779435	GB2779435
APD481101GB	Great Britain	3/6/2014	GB14158027.4	RADIO FREQUENCY TRANSMITTER NOISE CANCELLATION	Non-Provisional	GB2779473	GB2779473

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APD4811GB01	Great Britain	3/6/2014	GB17165294.4	RADIO FREQUENCY TRANSMITTER NOISE CANCELLATION	Designated EP	GB3211803	GB3211803
APD4813GB01	Great Britain	2/25/2014	14156529.1	An insulating structure, a method of forming an insulating structure, and a chip scale isolator including such an insulating structure	Non Provisional	2775522	2775522
APD481701GB	Great Britain	7/10/2014	GB14176548.7	Method of detecting enclosure leakage of enclosure mounted loudspeakers	Designated EP	GB2830325	GB2830325
APD4835GB01	Great Britain	2/26/2014	GB14156889.9	System, Method and Recording Medium for Analog to Digital Converter Calibration	Designated EP	GB2779466	GB2779466
APD4838GB01	Great Britain	5/12/2014	GB14167969.6	DUAL-TUB JUNCTION-ISOLATED VOLTAGE CLAMP DEVICES FOR PROTECTING LOW VOLTAGE CIRCUITRY CONNECTED BETWEEN HIGH VOLTAGE INTERFACE PINS AND METHODS OF FORMING THE SAME	Designated EP	EP2806462	EP2806462
APD487801GB	Great Britain	5/14/2014	GB14168345.8	Electric signal conversion	Designated EP	GB2809007	GB2809007

Patent Ref.	Country or Region	Filed Date	Application Number	Application Description	Patent/Design Type	Publication Number	Patent Number
APD4880GB01	Great Britain	10/7/2014	GB14188003.9	Junction field effect transistor, and method of manufacture thereof	Non-Provisional	GB2863418	GB2863418
APD4890GB01	Great Britain	10/10/2014	GB14188443.7	Integrator output swing reduction in a loop filter for a continuous-time sigma-delta analog-to-digital converter	Designated EP	GB2871778	GB2871778
APD4899GB01	Great Britain	12/5/2014	GB14196659.8	Integrated circuit with phase corrector for laser trimming a component	Designated EP	GB2884502	GB2884502
APD49351GB	Great Britain	7/1/2014	GB14175320	Adaptive element shuffler	Designated EP	GB2827498	GB2827498
APD4969GB01	Great Britain	10/31/2014	14191312.9	LOW-COST CAPACITIVE SENSING DECODER	Non Provisional	2876576	2876576
APD4993GB01	Great Britain	10/13/2014	GB14188712.5	SYSTEM AND METHOD OF CLOCK GENERATION IN HIGH SPEED SERIAL COMMUNICATION	Designated EP	GB2866348	GB2866348
APD50171GB	Great Britain	3/13/2015	15159085.8	SYSTEMS AND METHODS FOR CLOCK AND DATA RECOVERY	Non Provisional	2924910	2924910
APD50601GB	Great Britain	4/8/2014	GB20140006340	Dominant signal detection method and apparatus	Non-Provisional		
APD50861GB	Great Britain	4/8/2014	GB20140006346.5	Unwanted component reduction system	Non-Provisional		
APD5092GB01	Great Britain	3/16/2015	15159281.3	Estimation of Digital-to-Analog Converter Static mismatch errors	Non Provisional	2930849	2930849

Patent Ref.	Country or Region	Filed Date	Application Number	Application Description	Patent/Design Type	Publication Number	Patent Number
APD5116GB01	Great Britain	6/29/2015	GB15174260.8	AN INDUCTIVE COMPONENT FOR USE IN AN INTEGRATED CIRCUIT, A TRANSFORMER AND AN INDUCTOR FORMED AS PART OF AN INTEGRATED CIRCUIT	Designated EP	GB2963661	GB2963661
APD5162GB01	Great Britain	7/12/2016	GB16179102.5	COMPUTATIONALLY EFFICIENT ARC DETECTOR WITH COHERENT SAMPLING	Designated EP	GB3121610	GB3121610
APD5168GB01	Great Britain	8/3/2015	15179586.1	WIRELESS CHARGING PLATFORM USING BEAMFORMING FOR WIRELESS SENSOR NETWORK	Non Provisional	2985925	2985925
APD52571GB	Great Britain	10/22/2014	GB1418814.8	Full duplex radio	Non-Provisional		
APD52641GB	Great Britain	2/19/2016	GB20160002902	Detecting sensor error	Non-Provisional	GB2538343	GB2538343
APD52841GB	Great Britain	5/18/2016	GB1608710.8	Debug trigger interface for non-debug domain system reset	Non-Provisional	GB2539788A	

Patent Ref.	Country or Region	Filed Date	Application Number	Application Description	Patent/Design Type	Publication Number	Patent Number
APD529901GB	Great Britain	8/19/2016	GB16185018.5	Apparatus and method to use the frequency tuning information from a multi-core band switched voltage controlled oscillator (VCO) to adaptively and dynamically modify the following parameters of an RF signal chain	Designated EP	GB3139506	GB3139506
APD53141GB	Great Britain	2/19/2016	GB20160002899	Detecting sensor error	Non-Provisional	GB2538342	GB2538342
APD5377GB01	Great Britain	2/15/2017	GB17156381	System and Method For Reducing False Preamble Detection in a Communication Receiver	Designated EP	GB3208966	GB3208966
APD54361GB	Great Britain	11/11/2015	GB20150019905	A thin film resistive device for use in an integrated circuit, an integrated circuit including a thin film resistive device	Non-Provisional	GB201519905	
APD5474GB01	Great Britain	1/24/2017	GB17152846.6	Single-ended mixer with reduced loss	Designated EP		
APD5490GB01	Great Britain	11/30/2016	GB16201492	Low noise transconductance amplifiers	Designated EP	GB3176946	GB3176946
APD55041GB	Great Britain	11/10/2016	GB16198285.5	Broadband envelope tracking	Designated EP	GB3168985	GB3168985

Patent Ref.	Country or Region	Filed Date	Application Number	Application Description	Patent/Design Type	Publication Number	Patent Number
APD5508GB01	Great Britain	2/16/2017	GB17156537.7	Apparatus and methods for high linearity voltage variable attenuators	Designated EP	GB3211792	GB3211792
APD5564GB01	Great Britain	10/11/2016	GB16193368.4	DIGITAL PREDISTORTION AND UPTILT AND CABLE COMMUNICATION	Designated EP	GB3157168	GB3157168
APD57721GB	Great Britain	10/21/2016	GB20160017809	A method of detecting arc events in a power system, and a power system including an arc detector	Non-Provisional		
APD6363GB01	Great Britain	11/7/2017	GB20170018403	Current steering digital to analog converter	Non-Provisional	GB2568108	GB2568108
To be assigned (APD5749 family)	Great Britain	2/26/2016	GB20160003385	A signal conditioning circuit and a relay/circuit breaker control apparatus including such a signal conditioning circuit	Non-Provisional	GB201603385	
ACQ282IT01	Italy	5/30/2014	RM14734206.7	Electrical Signal Measurement	Non-Provisional	JP3004901	IT3004901
APD45181IT	Italy	2/24/2014	RM2014A000083	Spread-Spectrum MEMS Self-Test System and Method	Non-Provisional	RM102014902236481	IT102014902236481
APD55041IT	Italy	11/10/2016	RM16198285.5	Broadband envelope tracking	Non-Provisional	RM3168985	IT3168985
ACQ2821JP	Japan	5/30/2014	JP2016516251	Electrical Signal Measurement	Non-Provisional	JP6407978	6407978

Patent Ref.	Country or Region	Filed Date	Application Number	Application Description	Patent/Design Type	Publication Number	Patent Number
APD40091JP	Japan	6/7/2013	JP20130120396	Method and apparatus for demodulating audio signal	Non-Provisional	JP5809197	5809197
APD43911JP	Japan	6/3/2013	JP20130117288	Method and apparatus for demodulating an amplitude modulated signal	Non-Provisional	JP5847762	5847762
APD44811JP	Japan	4/2/2015	JP2015075948	Slimbus click-less volume ramp down	Non-Provisional		
APD45181JP	Japan	3/7/2014	JP20140044971	Spread spectrum mems self-test system and method	Non-Provisional	JP5733673	
APD45561JP	Japan	3/4/2014	JP20140041322	Under-sampling digital pre-distortion architecture	Non-Provisional	JP2014179981	
APD45571JP	Japan	3/13/2014	JP20140049840	Baseband digital predistortion architecture	Non-Provisional	JP6554265	6554265
APD45572JP	Japan	3/13/2014	JP2016216335	BASEBAND DIGITAL PRE-DISTORTION ARCHITECTURE	Non-Provisional		
APD4557JP01	Japan	3/13/2014	JP201980953	BASEBAND DIGITAL PRE-DISTORTION ARCHITECTURE	Non-Provisional		
APD4641JP01	Japan	1/30/2015	JP201516725	AMPLIFIER WITH OFFSET COMPENSATION	Non-Provisional		
APD46541JP	Japan	3/11/2014	JP20140047252	All digital transmitter noise correction	Non-Provisional	JP5777759	5777759

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APD46671JP	Japan	9/20/2013	2013-195576	Window-less H-bridge buck-boost switching converter	Non-Provisional	2014075967	6359255
APD46921JP	Japan	1/24/2014	JP20140011404	Descriptor-based stream processor and related methods for image processing	Non-Provisional	JP5894614	5894614
APD48111JP	Japan	3/12/2014	JP20140048493	Radio frequency transmitter noise cancellation	Non-Provisional	JP5881761	5881761
APD4835JP01	Japan	3/14/2014	JP20140052365	System, method and recording medium for calibration of analog-to-digital converters	Non-Provisional	JP5933610	5933610
APD48781JP	Japan	5/29/2014	JP20140111690	Electrical signal conversion	Non-Provisional	JP5869621	5869621
APD4880JP01	Japan	8/22/2014	JP20140169086	Improved junction field effect transistor and manufacturing method thereof	Non-Provisional	JP6074816	6074816
APD48941JP	Japan	12/16/2014	JP20140253913	System and method for measuring respiration with an accelerometer	Non-Provisional	JP6012697	
APD49851JP	Japan	4/24/2015	JP20150089553	Mems switch	Non-Provisional	JP6245562	6245562
APD5016JP01	Japan	7/27/2016	JP2016548642	CAPACITIVE SENSING PROBE MOTION CONTROL SYSTEM	Non-Provisional	JP6352431	6352431
APD50511JP	Japan	6/6/2016	JP20160112482	Method and apparatus for synchronizing a slave clock to a master clock	Non-Provisional	JP6227714	6227714

Patent Ref.	Country or Region	Filed Date	Application Number	Application Description	Patent/Design Type	Publication Number	Patent Number
APD50601JP	Japan	4/7/2015	JP20150078421	Dominant signal detection method and apparatus	Non-Provisional	JP2015200655	
APD5060JP02	Japan	9/11/2017	JP20170173856	Method and apparatus for dominant signal detection	Non-Provisional	JP6571736	6571736
APD5086JP01	Japan	4/7/2015	JP20150078422	Unnecessary component reduction system	Non-Provisional	JP5998241	5998241
APD50891JP	Japan	7/7/2016	JP20160134968	Phase-locked loop with multi-band oscillator and calibration method thereof	Non-Provisional	JP6286486	6286486
APD52841JP	Japan	5/25/2016	JP2016103930	Debug trigger interface for non-debug domain system reset	Non-Provisional	JP2016224943A	
APD52921JP	Japan	10/21/2016	JP20160207031	Dielectric stack, isolator device, and method of forming isolator device	Non-Provisional	JP6386005	6386005
APD5350JP01	Japan	12/15/2016	JP20160243308	Devices, systems, and methods involving magnetic structures	Non-Provisional	JP2017111148	
APD5350JP02	Japan	12/15/2016	JP2019199980	Device, system and method including magnetic structure	Non-Provisional		
APD5404JP01	Japan	11/8/2016	JP20160217966	Fet-bipolar transistor combination	Non-Provisional	JP6316908	6316908

Patent Ref.	Country or Region	Filed Date	Application Number	Application Description	Patent/Design Type	Publication Number	Patent Number
APD5405JP01	Japan	11/8/2016	JP20160217956	Combination of fet-bipolar transistor and switch with such combination of fie-bipolar transistor	Non-Provisional	JP2017092472	
APD54121JP	Japan	11/8/2016	JP20160217963	Overvoltage protection device and galvanic isolator in combination with overvoltage protection device	Non-Provisional	JP6316907	6316907
APD5465JP01	Japan	8/26/2016	JP20160165312	Multistage digital-analog converter	Non-Provisional	JP6452655	6392289
APD5465JP02	Japan	8/27/2018	JP20180158254	Multiple stage digital to analog converter	Non-Provisional	JP2018201242	
APD54781JP	Japan	1/11/2017	JP2017002591	INTEGRATED ION SENSING APPARATUS AND METHODS	Non-Provisional	JP2017125851	
APD5536JP01	Japan	2/14/2017	JP20170024985	Analog/digital converter having charge rebalancing integrator	Non-Provisional	JP2017147726	
APD5536JP02	Japan	2/14/2017	JP20190136995	Wide Dynamic Range Converter	Non-Provisional		
APD553701JP	Japan	3/7/2017	JP20170042571	Multi-turn sensor array and reading	Non-Provisional	JP6568886	6568886
APD55491JP	Japan	12/16/2016	JP20160244589	Adaptive digital quantization noise cancellation filter for mash adc	Non-Provisional	JP2017118493	

Patent Ref.	Country or Region	Filed Date	Application Number	Application Description	Patent/Design Type	Publication Number	Patent Number
APD5549JP02	Japan	12/16/2016	JP2019078528	Adaptive Digital Noise Cancellation Filter for Multi-Stage Sigma-Delta ADCs	Non-Provisional		
APD5564JP01	Japan	12/28/2016	JP20160255055	Digital predistortion and upward tilt and cable communication	Non-Provisional	JP6585026	6585026
APD55891JP	Japan	12/16/2016	JP20160244303	Frequency domain adc flash calibration	Non-Provisional	JP6339166	6339166
APD5603JP01	Japan	3/24/2017	JP20170058357	Frequency hopping in tank circuits and isolators	Non-Provisional	JP6445069	6445069
APD560401JP	Japan	3/22/2017	JP20170055775	Magnetic field detector	Non-Provisional	JP6430565	6430565
APD560402JP	Japan	3/22/2017	JP20170055776	Offset compensation for magnetic field detectors	Non-Provisional	JP6359710	6359710
APD570201JP	Japan	2/22/2017	JP2018563399	Measurement Driven Integrated Circuit Design Environment and Techniques	Non-Provisional	JP2019507455	
APD5715JP01	Japan	8/29/2017	JP2019532191	AN ELECTROCHEMICAL SENSOR, AND A METHOD OF FORMING AN ELECTROCHEMICAL SENSOR	Non-Provisional		
APD5826JP01	Japan	3/26/2018	JP20180058185	High dynamic range analog front end receiver for long ranging rider	Non-Provisional	JP2018163156	

Patent Ref.	Country or Region	Filed Date	Application Number	Application Description	Patent/Design Type	Publication Number	Patent Number
APD584401JP	Japan	1/20/2017	JP20170008538	Method and apparatus for learning phase error or timing delay within current transducer, and power measurement apparatus including current transducer error correction	Non-Provisional	JP2017223642	
APD58451JP	Japan	1/20/2017	JP20170008537	Apparatus and method for providing measurements of uncertainty in respect of transfer function	Non-Provisional	JP2017223641	
APD6092JP01	Japan	5/7/2018	JP2018089199	Asymmetric [Multiple string] Multiple Output DAC	Non-Provisional	JP2018191291	
ACQ0351PCT	Patent Cooperation Treaty	3/16/2006	PCT/CA2006/000400	System and method for power line communications	Treaty	WO2006096987A1	
ACQ2791PCT	Patent Cooperation Treaty	9/12/2012	PCT/GB2012/052251	Current Measurement	Treaty	WO2013038176	
ACQ2811PCT	Patent Cooperation Treaty	11/8/2013	PCT/GB2013/052947	Voltage measurement	Treaty	WO2014072733A3	
ACQ2821PCT	Patent Cooperation Treaty	5/30/2014	PCT/GB2014/051676	Electrical Signal Measurement	Treaty	WO2014191776A1	
ACQ2831PCT	Patent Cooperation Treaty	8/22/2014	PCT/GB2014/000328	Power Conversion Apparatus	Treaty	WO2015025121A2	

Patent Ref.	Country or Region	Filed Date	Application Number	Application Description	Patent/Design Type	Publication Number	Patent Number
ACQ3771PCT	Patent Cooperation Treaty	6/5/2014	PCT/EP2014/061686	NETWORK ELEMENTS, INTEGRATED CIRCUIT AND METHOD OF ASSIGNING CHANNELS	Treaty	WO2014198624A1	
ACQ379PCT01	Patent Cooperation Treaty	8/15/2014	PCT/EP2014/067480	Communication Unit, Integrated Circuit and Method for Generating a Plurality of Sectored Beams	Treaty	WO2015022421A1	
ACQ3811PCT	Patent Cooperation Treaty	4/8/2015	PCT/EP2015/057598	ACTIVE ANTENNA SYSTEM AND METHODS OF DETERMINING INTERMODULATION DISTORTION PERFORMANCE	Treaty	WO2015155225	
ACQ392PCT01	Patent Cooperation Treaty	8/1/2017	PCT/IB2017/001154	Galvanically isolated data isolator with improved common mode transient rejection	Treaty	WO2018029539	
APD43241PCT	Patent Cooperation Treaty	2/21/2014	PCT/IB2014/000938	Vehicle inertial sensor systems	Treaty	WO2014128569	
APD44541PCT	Patent Cooperation Treaty	9/3/2013	PCT/IB2013/002508	Analog to digital converter including a pre-charge circuit	Treaty	WO2014053911	
APD44701PCT	Patent Cooperation Treaty	1/10/2014	PCT/IB2014/000020	Narrow voltage range multi-level output pulse modulated amplifier with one-bit hysteresis quantizer	Treaty	WO2014108796	

Patent Ref.	Country or Region	Filed Date	Application Number	Application Description	Patent/Design Type	Publication Number	Patent Number
APD45161PCT	Patent Cooperation Treaty	2/4/2014	PCT/IB2014/000104	CONTROL TECHNIQUES FOR MOTOR DRIVEN SYSTEMS UTILIZING BACK-EMF MEASUREMENT TECHNIQUES	Treaty	WO2014122517A2	
APD4530PCT01	Patent Cooperation Treaty	2/8/2013	PCT/IB2013/000726	METHOD AND APPARATUS FOR SEPARATING THE REFERENCE CURRENT FROM THE INPUT SIGNAL IN SIGMA-DELTA CONVERTER	Treaty	WO2013156846	
APD45471PCT	Patent Cooperation Treaty	4/30/2013	PCT/US2013/038806	Segmented digital-to-analog converter having weighted current sources	Treaty	WO2013165976	
APD46521PCT	Patent Cooperation Treaty	9/27/2013	PCT/US2013/062411	Locking and unlocking of contactless gesture-based user interface of device having contactless gesture detection system	Treaty	WO2014052895	
APD47821PCT	Patent Cooperation Treaty	3/14/2014	PCT/EP2014/055155	Multiple string digital to analog converter	Treaty	WO2014140307	
APD48841PCT	Patent Cooperation Treaty	11/7/2014	PCT/US2014/064684	Support vector machine based object detection system and associated method	Treaty	WO2015070098	

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APD4905PCT01	Patent Cooperation Treaty	3/30/2015	PCT/EP2015/056910	A transducer amplification circuit	Treaty	WO2015150334	
APD49941PCT	Patent Cooperation Treaty	5/9/2017	PCT/IB2017/000596	An integrated circuit with on chip variation reduction	Treaty	WO2017195025	
APD499601PCT	Patent Cooperation Treaty	2/21/2017	PCT/EP2017/053920	Susceptance measurement for identifying biochemical sensors	Treaty	WO2017144456	
APD50161PCT	Patent Cooperation Treaty	1/15/2015	PCT/EP2015/050665	Capacitive sensing probe motion control system	Treaty	WO2015113827	
APD50431PCT	Patent Cooperation Treaty	10/9/2015	PCT/EP2015/073406	Passive analog sample and hold in analog-to-digital converters	Treaty	WO2016055613	
APD50631PCT	Patent Cooperation Treaty	6/23/2014	PCT/CN2014/078812	LOW QUIESCENT CURRENT PULL-DOWN CIRCUIT	Treaty	US20150349637 (no PCT publiin)	
APD50981PCT	Patent Cooperation Treaty	9/23/2014	PCT/CN2014/087177	Minimum Duty Cycle Control for Active Snubber in Isolation Power with Synchronous Rectifier	Treaty	WO2014052895A1	
APD51271PCT	Patent Cooperation Treaty	7/8/2016	PCT/EP2016/066327	Video processing for occupancy detection	Treaty	WO2017005916	
APD51711PCT	Patent Cooperation Treaty	7/7/2015	PCT/US2015/039406	Low-complexity voice activity detection	Treaty	WO2016007528	

Patent Ref.	Country or Region	Filed Date	Application Number	Application Description	Patent/Design Type	Publication Number	Patent Number
APD51911PCT	Patent Cooperation Treaty	7/23/2015	PCT/CN2015/084900	METHODS AND SYSTEMS FOR ADDRESSING COMPONENT MISMATCH IN DIGITAL-TO-ANALOG CONVERTERS	Treaty	US9,337,854 (no PCT publn)	
APD52041PCT	Patent Cooperation Treaty	7/14/2016	PCT/CN2015/070426	A Piezoelectric Energy Harvesting System with Frequency Mismatch Tolerance by Novel MPPT	Treaty	US20160204717 (no PCT publn)	
APD52081PCT	Patent Cooperation Treaty	12/17/2015	PCT/CN2015/095031	Converter and Method for Piezoelectric impact energy harvesting	Treaty	US20170149361 (no PCT publn)	
APD5213PCT01	Patent Cooperation Treaty	9/14/2015	PCT/EP2015/070986	Method for an improved throughput of sensor data in a communication system, and corresponding communication system	Treaty	WO2016038225	
APD52571PCT	Patent Cooperation Treaty	10/12/2015	PCT/EP2015/073598	Full duplex radio	Treaty	WO2016062576	
APD52671PCT	Patent Cooperation Treaty	10/5/2015	PCT/IB2015/002097	Control circuit for use with a sensor, and measurement system including such a control circuit	Treaty	WO2016059472	
APD5271PCT01	Patent Cooperation Treaty	3/14/2016	PCT/US2016/022364	Apparatus and methods for overvoltage protection	Treaty	WO2016149211	

Patent Ref.	Country or Region	Filed Date	Application Number	Application Description	Patent/Design Type	Publication Number	Patent Number
APD52911PCT	Patent Cooperation Treaty	9/21/2015	PCT/CN2015/090143	Active divider structure with near constant low IQ	Treaty		
APD5345PCT01	Patent Cooperation Treaty	10/7/2016	PCT/IB2016/001518	An electrochemical sensor, and a method of forming an electrochemical sensor	Treaty	WO2017060769	
APD538901PCT	Patent Cooperation Treaty	2/27/2017	PCT/IB2017/000248	Visual vehicle parking occupancy sensor	Treaty	WO2017149385	
APD542801PCT	Patent Cooperation Treaty	2/27/2017	PCT/IB2017/000250	Parking space occupancy sensor	Treaty	WO2017149386	
APD54321PCT	Patent Cooperation Treaty	3/2/2016	PCT/CN2016/075318	inductor current based mode control in buck-boost converter	Treaty	US20170257031 (no PCT publn)	
APD54351PCT	Patent Cooperation Treaty	1/7/2016	PCT/CN2016/070340	Power node communication for device detection and control	Treaty	US2017/201091 (no PCT publn)	
APD54571PCT	Patent Cooperation Treaty	10/17/2016	PCT/IB2016/001629	Compensation of baseline wander	Treaty	WO2017068423	
APD54761PCT	Patent Cooperation Treaty	12/15/2015	PCT/CN2015/097399	True DC signal coupling and sampling for the electromagnetic flow transmitter	Treaty		
APD5522PCT01	Patent Cooperation Treaty	8/30/2017	PCT/IB2017/001170	Switchable Transformer-based Balun	Treaty	WO2018042247	

Patent Ref.	Country or Region	Filed Date	Application Number	Application Description	Patent/Design Type	Publication Number	Patent Number
APD55251PCT	Patent Cooperation Treaty	10/10/2016	PCT/US2016/056279	Balancing sense amplifier for ethernet transceiver	Treaty	WO2017069963	
APD5526PCT01	Patent Cooperation Treaty	10/18/2016	PCT/IB2016/001602	Jle 15	Treaty	WO2017068418	
APD557601PCT	Patent Cooperation Treaty	2/2/2017	PCT/IB2017/000131	Active opening mems switch device	Treaty	WO2017134518	
APD5586PCT01	Patent Cooperation Treaty	2/1/2017	PCT/EP2017/052141	Circuits, systems, and methods for providing asynchronous sample rate conversion for an oversampling sigma delta analog to digital converter	Treaty	WO2017134097	
APD5606PCT01	Patent Cooperation Treaty	10/28/2016	PCT/US2016/059460	Power inverter control	Treaty	WO2017075448	
APD5616PCT01	Patent Cooperation Treaty	3/10/2017	PCT/IB2017/000353	Configurable hardware platform for measurement or control	Treaty	WO2017153847	
APD5621PCT01	Patent Cooperation Treaty	7/31/2017	PCT/IB2017/001105	Radio frequency isolator	Treaty	WO2018025084	
APD56291PCT	Patent Cooperation Treaty	1/11/2017	PCT/IB2017/000061	Air flow sensor for fan cooled systems	Treaty	WO2017122090	
APD5644PC01	Patent Cooperation Treaty	11/27/2017	PCT/IB2017/001552	Planar processing of suspended microelectromechanical systems (mems) devices	Treaty	WO2018096398	

Patent Ref.	Country or Region	Filed Date	Application Number	Application Description	Patent/Design Type	Publication Number	Patent Number
APD5654PCT01	Patent Cooperation Treaty	7/26/2017	PCT/IB2017/001084	Power regulation system for energy harvesters	Treaty	WO2018020322	
APD5656PCT01	Patent Cooperation Treaty	8/24/2017	PCT/IB2017/001177	METHODS OF MANUFACTURE OF AN INDUCTIVE COMPONENT AND AN INDUCTIVE COMPONENT	Treaty	WO2018037284	
APD5660PCT01	Patent Cooperation Treaty	4/17/2017	PCT/US2017/027988	Wear-out monitor device	Treaty	WO2017184524	
APD5676PCT01	Patent Cooperation Treaty	5/24/2017	PCT/US2017/034202	Ethernet magnetics integration	Treaty	WO2017205478	
APD5696PCT01	Patent Cooperation Treaty	2/5/2018	PCT/CN2017/072959	NOISE REDUCTION IN A VOLTAGE CONVERTER	Treaty	WO2018142227	
APD5696PCT02	Patent Cooperation Treaty	2/5/2018	PCT/IB2018/000196	Noise reduction in a voltage converter	Treaty	WO2018142227	
APD570201PC	Patent Cooperation Treaty	2/22/2017	PCT/US2017/018979	Measurement Driven Integrated Circuit Design Environment and Techniques	Treaty	WO2017147205	
APD5715PCT01	Patent Cooperation Treaty	8/29/2017	PCT/EP2017/071669	An electrochemical sensor, and a method of forming an electrochemical sensor	Treaty	WO2018041834	
APD5758PCT01	Patent Cooperation Treaty	1/18/2018	PCT/IB2018/000298	FAULT SUPPRESSION OR RECOVERY FOR ISOLATED CONVERSION	Treaty	WO2018134688	
APD576201PCT	Patent Cooperation Treaty	6/15/2017	PCT/EP2017/064696	Current sensing in two-dimensional sensor array	Treaty	WO2017216303	

Patent Ref.	Country or Region	Filed Date	Application Number	Application Description	Patent/Design Type	Publication Number	Patent Number
APD5785PCT01	Patent Cooperation Treaty	10/20/2016	PCT/CN2016/102651	ANALOG-TO-DIGITAL CONVERTERS FOR LIDAR SYSTEMS	Treaty	WO20180306908	
APD5797PC01	Patent Cooperation Treaty	11/8/2017	PCT/IB2017/001472	Isolation transformer for increased voltage operations and related methods	Treaty	WO2018087591	
APD5800PCT01	Patent Cooperation Treaty	6/12/2017	PCT/EP2017/064326	Cmos image sensors with reduced power consumption	Treaty	WO2017212075	
APD5810PCT01	Patent Cooperation Treaty	10/13/2017	PCT/IB2017/001412	Systems and methods for transferring power across an isolation barrier	Treaty	WO2018069771	
APD5820PCT01	Patent Cooperation Treaty	8/25/2017	PCT/EP2017/071427	Antenna array calibration systems and methods	Treaty	WO2018037112	
APD5841PCT01	Patent Cooperation Treaty	12/15/2017	PCT/IB2017/001670	Method of providing enhanced range accuracy	Treaty	WO2018115959	
APD584401PCT	Patent Cooperation Treaty	12/21/2016	PCT/IB2016/001992	Method of and apparatus for learning the phase error or timing delays within a current transducer and power measurement apparatus including current transducer error correction	Treaty	WO2017216598	

Patent Ref.	Country or Region	Filed Date	Application Number	Application Description	Patent/Design Type	Publication Number	Patent Number
APD58451PCT	Patent Cooperation Treaty	12/21/2016	PCT/US2016/068089	Apparatus for and method of providing measurements of uncertainty in respect of a transfer function	Treaty	WO2017218042	
APD5858PCT01	Patent Cooperation Treaty	2/16/2018	PCT/EP2018/053935	Eye gaze tracking	Treaty	WO2018149992	
APD5893PCT01	Patent Cooperation Treaty	1/18/2018	PCT/IB2018/000081	Depth sensing with multiple light sources	Treaty	WO2018134678	
APD5914PCT01	Patent Cooperation Treaty	12/28/2017	PCT/US2017/068715	Digital predistortion for multiple power amplifiers	Treaty	WO2018126010	
APD40091KR	Republic of Korea	6/14/2013	KR20130068332	Demodulation of audio signals	Non-Provisional	KR20140130617	
APD43911KR	Republic of Korea	5/16/2013	KR20130055434	Method of and apparatus for demodulating an amplitude modulated signal	Non-Provisional	KR101493503	KR10-1493503
APD4481KR01	Republic of Korea	4/1/2015	KR20150046155	Apparatus and methods for gracefully managing audio discontinuity	Non-Provisional	KR20150115653	
APD45181KR	Republic of Korea	3/10/2014	KR20140027955	Spread-spectrum mems self-test system and method	Non-Provisional	KR101592091	KR10-1592091
APD45561KR	Republic of Korea	3/7/2014	KR20140027215	Under-sampling digital pre-distortion architecture	Non-Provisional	KR101711175	
APD45571KR	Republic of Korea	3/7/2014	KR20140027230	Baseband digital pre-distortion architecture	Non-Provisional	KR101700008	

Patent Ref.	Country or Region	Filed Date	Application Number	Application Description	Patent/Design Type	Publication Number	Patent Number
APD4612KR01	Republic of Korea	8/30/2013	KR20130103936	A magnetic core for use in an integrated circuit, an integrated circuit including such a magnetic core, a transformer and an inductor fabricated as part of an integrated circuit	Non-Provisional	KR101777719	KR10-1777719
APD4641KR01	Republic of Korea	2/6/2015	KR20150018621	Amplifier with offset compensation	Non-Provisional	KR101696349	KR10-1696349
APD46521KR	Republic of Korea	9/27/2013	KR20157007983	Locking and unlocking of contactless gesture-based user interface of device having contactless gesture detection system	Non-Provisional	KR101660660	KR10-1660660
APD46531KR	Republic of Korea	11/8/2013	KR20130135336	Object detection	Non-Provisional	KR101669713	KR10-1669713
APD46541KR	Republic of Korea	3/7/2014	KR20140027190	All digital transmitter noise correction	Non-Provisional	KR101624393	KR10-1624393
APD47221KR	Republic of Korea	10/23/2013	KR20130126826	Predicate counter	Non-Provisional	KR101602020	KR10-1602020
APD47231KR	Republic of Korea	10/22/2013	KR20130126017	Dma vector buffer	Non-Provisional	KR101572204	KR10-1572204
APD48111KR	Republic of Korea	3/7/2014	KR20140027302	Radio frequency transmitter noise cancellation	Non-Provisional	KR20140112413	
APD48112KR	Republic of Korea	6/7/2016	KR20160070518	Radio frequency transmitter noise cancellation	Non-Provisional	KR20160072084	KR10-2021480

Patent Ref.	Country or Region	Filed Date	Application Number	Application Description	Patent/Design Type	Publication Number	Patent Number
APD48311KR	Republic of Korea	4/1/2014	KR20140038639	System, method and recording medium for processing macro blocks	Non-Provisional	KR101631365	KR10-1631365
APD48831KR	Republic of Korea	7/22/2014	10-2014-92649	SYSTEM, METHOD, AND MEDIUM FOR IMAGE OBJECT AND CONTOUR FEATURE EXTRACTION	Non-Provisional		10-1626538
APD49691KR	Republic of Korea	11/18/2014	KR20140160816	Low-cost capacitive sensing decoder	Non-Provisional	KR101661032	
APD49921KR	Republic of Korea	2/5/2015	KR20150018041	Echo cancellation methodology and assembly for electroacoustic communication apparatuses	Non-Provisional	KR101770355	KR10-1770355
APD50261KR	Republic of Korea	1/30/2015	KR20150015220	Transmitter noise cancellation in a multi transmitter-receiver system	Non-Provisional	KR101652624	KR10-1652624
APD50281KR	Republic of Korea	2/25/2015	KR20150026711	Lc lattice delay line for high-speed adc applications	Non-Provisional	KR101647252	KR10-1647252
APD50331KR	Republic of Korea	2/13/2015	KR20150022234	Interruptible store exclusive	Non-Provisional	KR101642646	KR10-1642646
APD5060KR01	Republic of Korea	4/7/2015	KR20150048876	Dominant signal detection method and apparatus	Non-Provisional	KR20150116790	
APD5060KR02	Republic of Korea	3/7/2017	KR20170029124	Dominant signal detection method and apparatus	Non-Provisional	KR20170031117	

Patent Ref.	Country or Region	Filed Date	Application Number	Application Description	Patent/Design Type	Publication Number	Patent Number
APD5060KR03	Republic of Korea	10/15/2018	KR20180122745	DOMINANT SIGNAL DETECTION METHOD AND APPARATUS	Non-Provisional	KR20180116186	
APD5086KR01	Republic of Korea	4/6/2015	KR20150048208	Unwanted component reduction system	Non-Provisional	KR2016081564	KR10-1681564
APD5089KR01	Republic of Korea	6/27/2016	KR20160079949	Phase-locked loop having a multi-band oscillator and method for calibrating same	Non-Provisional	KR2018041169	KR10-1841169
APD4737SE01	Sweden	8/13/2014	14180840.2	POWER AMPLIFICATION SYSTEM, DEVICE AND METHOD	Non Provisional	2840710	2840710
APD5507SE01	Sweden	3/9/2017	SE20170050265	High frequency signal attenuators	Non-Provisional	SE541289	
ACQ263TW01	Taiwan	9/1/2015	TW20150128781	Input / output termination for ripple prevention	Non-Provisional	TWI557870	I557870
APD4530TW01	Taiwan	2/18/2013	TW20130105700	Method and apparatus for separating the reference current from the input signal in sigma-delta converter	Non-Provisional	TWI561014	I561014

Patent Ref.	Country or Region	Filed Date	Application Number	Application Description	Patent/Design Type	Publication Number	Patent Number
APD4612TW01	Taiwan	8/27/2013	TW20130130557	A magnetic core for use in an integrated circuit, an integrated circuit including such a magnetic core, a transformer and an inductor fabricated as part of an integrated circuit	Non-Provisional	TWI579870	I579870
APD4813TW01	Taiwan	2/27/2014	TW20140106869	An insulating structure, a method of forming an insulating structure, and a chip scale isolator including such an insulating structure	Non-Provisional	TWI549222	I549222
APD4843TW01	Taiwan	7/28/2014	TW20140125617	A mems switch device and method of fabrication	Non-Provisional	TWI643231	I643231
APD4861TW01	Taiwan	6/18/2014	TW20140120999	A semiconductor device, and a method of improving breakdown voltage of a semiconductor device	Non-Provisional	TWI533431	I533431
APD49691TW	Taiwan	10/31/2014	TW20140137782	Glucose meter and method for decoding information encoded in a pattern, and consumable glucose test meter strip	Non-Provisional	TWI541729	I541729

Patent Ref.	Country or Region	Filed Date	Application Number	Application Description	Patent/Design Type	Publication Number	Patent Number
APD50081TW	Taiwan	10/27/2015	TW20150135208	Delta-sigma modulator having transconductor network for dynamically tuning loop filter coefficients	Non-Provisional	TWI574502	I574502
APD5152TW01	Taiwan	1/4/2016	TW20160100010	A method of trimming a component and a component trimmed by such a method	Non-Provisional	TWI619206	I619206
APD5167TW01	Taiwan	3/14/2016	TW20160107769	Apparatus for conducting electrical overstress recording and/or harvesting and method of implementing the same	Non-Provisional	TWI619324	I619324
APD5167TW02	Taiwan	3/14/2016	TW20170145962	Apparatus for conducting electrical overstress recording and/or harvesting and method of implementing the same	Non-Provisional	TW201830816	
APD52591TW	Taiwan	7/1/2016	TW20160120917	A digital to analog converter	Non-Provisional	TWI596907	I596907
APD5294TW01	Taiwan	1/22/2016	TW20160102010	Method of and apparatus for transmit noise reduction at a receiver	Non-Provisional	TWI604700	I604700
APD5349TW01	Taiwan	9/8/2017	TW20170130785	Fast settling capacitive gain amplifier circuit	Non-Provisional	TW201836263	I650932

Patent Ref.	Country or Region	Filed Date	Application Number	Application Description	Patent/Design Type	Publication Number	Patent Number
APD5350TW01	Taiwan	12/15/2016	TW20160141506	Devices, systems and methods including magnetic structures	Non-Provisional	TWI639220	1639220
APD5350TW02	Taiwan	12/15/2016	TW20180132264	Devices, systems and methods including magnetic structures	Non-Provisional	TW201901923	
APD5350TW03	Taiwan		Pending	Devices, systems and methods including magnetic structures	Non-Provisional		
APD54651TW	Taiwan	7/15/2016	TW20160122398	Multiple stage digital to analog converter, method of converting a digital input code to an analog equivalent, digital to analog converter circuit	Non-Provisional	TWI643465	1643465
APD5507TW01	Taiwan	3/2/2017	TW20170106811	High frequency signal attenuators	Non-Provisional	TWI631762	1631762
APD55080TW02	Taiwan	2/17/2017	TW20180123852	Radio frequency system having controllable attenuation and voltage variable attenuator for radio frequency signals	Non-Provisional	TWI660577	1660577
APD5508TW01	Taiwan	2/17/2017	TW20170105251	Apparatus and methods for high linearity voltage variable attenuators	Non-Provisional	TWI633750	1633750
APD55241TW	Taiwan	11/3/2016	TW20160135715	Hot swap circuit management techniques for power line disturbances and faults	Non-Provisional	TWI620387	1620387

Patent Ref.	Country or Region	Filed Date	Application Number	Application Description	Patent/Design Type	Publication Number	Patent Number
APD55491TW	Taiwan	12/16/2016	TW20160142169	Adaptive digital quantization noise cancellation filters for mash adcs	Non-Provisional	TWI645679	I645679
APD55891TW	Taiwan	12/14/2016	TW20160141403	Frequency-domain adc flash calibration	Non-Provisional	TWI629871	I629871
APD5612TW01	Taiwan	4/27/2017	TW20170114096	Apparatuses for communication systems transceiver interfaces	Non-Provisional	TWI661655	I661655
APD566002TW	Taiwan	4/19/2017	TW20180108086	Wear-out monitor device	Non-Provisional	TW201824423	
APD5660TW01	Taiwan	4/19/2017	TW20170113115	Integrated circuit device and method of monitoring wear-out of core of the same	Non-Provisional	TWI623991	I623991
APD56671TW	Taiwan	5/5/2017	TW20170114946	Mixed mode digital predistortion	Non-Provisional	TWI639300	I639300
APD576201TW	Taiwan	6/16/2017	TW20170120167	Current sensing in two-dimensional area sensors	Non-Provisional	TW201801478	
APD4652NL01	The Netherlands	9/27/2013	NL13841859.5	LOCKING AND UNLOCKING OF CONTACTLESS GESTURE-BASED USER INTERFACE OF DEVICE HAVING CONTACTLESS GESTURE DETECTION SYSTEM	Non-Provisional	NL2901252	NL2901252

Patent Ref.	Country or Region	Filed Date	Application Number	Application Description	Patent/Design Type	Publication Number	Patent Number
APD49921NL	The Netherlands	2/6/2015	NL20152014251	Echo cancellation methodology and assembly for electroacoustic communication apparatuses.	Non-Provisional	NL2014251	NL2014251
APD5092NL01	The Netherlands	3/16/2015	15159281.3	Estimation of Digital-to-Analog Converter Static mismatch errors	Non Provisional	2930849	2930849
APD55041NL	The Netherlands	11/10/2016	NL16198285.5	Broadband envelope tracking	Non-Provisional	NL3168985	NL3168985
APD6044NL01	The Netherlands	6/7/2018	NL20182021077	Low power measurement of skin electrical properties	Non-Provisional	NL2021077	
	United States	5/1/2017	US15/583257	Current measurement	Non-Provisional	US20170299636	
ACQ0272US	United States	1/20/2009	12/863,227	Signal Conditioner Suppressing an Undesired Signal from a Transducer	Non Provisional	US2011/0051954	
ACQ0351US	United States	3/16/2006	11/376,949	System and method for power line communication	Non Provisional	20060226958	8223880
ACQ0352US	United States	6/13/2012	13495575	SYSTEM AND METHOD FOR POWER LINE COMMUNICATION	Non Provisional		
ACQ0562US	United States	5/5/2014	US14/269979	System and method for removing image noise	Non-Provisional	US9563938	US9563938
ACQ1631US	United States	5/20/2013	61/825,511	TRANSCONDUCTANCE DEVICE WITH LOW NOISE OUTPUT	Provisional		

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ACQ1632US	United States	2/20/2014	US14/185701	Transconductance circuit and a current digital to analog converter using such transconductance circuits	Non-Provisional	US9203350	US9203350
ACQ169US01	United States	8/20/2014	US14/464611	Closed loop control system, and an amplifier in combination with such a closed loop control system	Non-Provisional	US9705465	US9705465
ACQ263US01	United States	9/30/2014	US14/502363	Input/output termination for ripple prevention	Non-Provisional	US9281285	US9281285
ACQ264US01	United States	10/3/2014	US14/506468	Apparatus and methods for biasing radio frequency switches	Non-Provisional	US9374124	US9374124
ACQ2791US	United States	11/8/2011	US61/557369	Current Measurement	Provisional		
ACQ2792US	United States	5/29/2014	US14/290820	Current measurement	Non-Provisional	US9638724	US9638724
ACQ2793US	United States	3/10/2014	US14/203502	Current measurement	Non-Provisional	US9322850	US9322850
ACQ2794US	United States	4/14/2016	US15/099308	Current measurement	Non-Provisional	US9939464	US9939464
ACQ279US05	United States	3/2/2018	US15/910805	Current measurement	Non-Provisional	US20180252748	
ACQ2801US	United States	11/23/2011	US61/563462	Current Measurement Apparatus	Provisional		
ACQ2802US	United States	11/22/2012	US13/684213	Current measurement	Non-Provisional	US9411003	US9411003
ACQ2803US	United States	8/5/2016	US15/229815	Current measurement	Non-Provisional	US9933463	US9933463
ACQ280US04	United States	3/2/2018	US15/910896	Current measurement	Non-Provisional	US20180252750	
ACQ2811US	United States	11/8/2012	US13/672236	Voltage measurement	Non-Provisional	US9151818	US9151818
ACQ2821US	United States	5/30/2014	US14/895868	Electrical signal measurement	Non-Provisional	US9823275	US9823275

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ACQ283US01	United States	8/22/2014	US14/912514	Power conversion apparatus	Non-Provisional	US20160197563	
ACQ283US02	United States	3/16/2018	US15/923381	Power conversion system with energy harvesting	Non-Provisional	US10381948	US10381948
ACQ373US01	United States	6/15/2010	US13/382616	Wireless network element and method for antenna array control	Non-Provisional	US9525204	US9525204
ACQ375US01	United States	11/15/2011	US13/885221	Mimo antenna calibration device, integrated circuit and method for compensating phase mismatch	Non-Provisional	US9628256	US9628256
ACQ377US01	United States	6/5/2014	US14/897602	Network element, integrated circuit and method of determining connectivity from antenna elements to transceiver line-ups	Non-Provisional	US10003413	US10003413
ACQ378US01	United States	8/15/2014	US15/032294	Active antenna system and methods of testing	Non-Provisional	US9692530	US9692530
ACQ379US01	United States	8/15/2014	US14/912057	Communication unit, integrated circuit and method for generating a plurality of sectored beams	Non-Provisional	US10193603	US10193603
ACQ380US01	United States	8/15/2014	US14/912065	Communication unit and method of antenna array calibration	Non-Provisional	US10090940	US10090940

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ACQ381US01	United States	4/8/2015	US15/129746	Active antenna system and methods of determining intermodulation distortion performance	Non-Provisional	US10067171	US10067171
ACQ3921US	United States	8/8/2016	US15/230519	Galvanically isolated data isolator with improved common mode transient rejection	Non-Provisional	US10205442	US10205442
ACQ3931US	United States	5/6/2016	US15/149079	Bus driver / line driver	Non-Provisional	US9871029	US9871029
ACQ3941US	United States	5/25/2016	US15/163838	Chip including over-voltage and surge protection	Non-Provisional	US20170346276	
ACQ395US01	United States	7/21/2016	US15/216498	Combined isolator and power switch	Non-Provisional	US20170279444	
ACQ40302US	United States	4/20/2017	US15/492665	Detecting a presence of a target in a room	Non-Provisional	US20170309038	US8293582
ACQ4031US	United States	4/22/2016	US62/326179	Detecting a Presence of a Target in a Room	Provisional		
ACQ4061US	United States	11/14/2016	US62/421728	RF Passive RF Wake-up	Provisional		
ACQ406US02	United States	11/10/2017	US15/809520	Wake-up wireless sensor nodes	Non-Provisional	US20180139698	US8293582
APD27672US	United States	9/27/2004	10/951,319	Multicarrier Modulation Systems	Non Provisional	20050243938	7,835,454
APD32461US	United States	1/10/2007	60/879,760	Bandwidth Efficient Instruction-Driven Multiplication Engine	Provisional		
APD32462US	United States	1/10/2008	12/008,334	Bandwidth Efficient Instruction-Driven Multiplication Engine	Non Provisional	US-2008-0222226-A1	8,589,469

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APD32463US	United States	10/16/2013	US14/055177	Bandwidth efficient instruction-driven multiplication engine	Non-Provisional	US20140074901	
APD40221US	United States	3/6/2013	US13/787065	Amplifier, a residue amplifier, and an adc including a residue amplifier	Non-Provisional	US9231539	US9231539
APD40401US	United States	11/17/2009	US12/619,825	METHODS AND APPARATUS FOR IMAGE PROCESSING AT PIXEL RATE	Non-Provisional	US8130229	US8130229
APD40403US	United States	5/13/2013	US13/892508	Methods and apparatus for image processing at pixel rate	Non-Provisional	US8766992	US8766992
APD40404US	United States	5/13/2013	US13/892531	Methods and apparatus for image processing at pixel rate	Non-Provisional	US8947446	US8947446
APD40405US	United States	2/2/2015	US14/611735	Methods and apparatus for image processing at pixel rate	Non-Provisional	US20150147005	
APD42081US	United States	7/13/2012	US13/548624	Current controlling circuit for a light-emitting diode driver and producing method therefor	Non-Provisional	US8981667	US8981667
APD42121US	United States	4/20/2011	13/090,996	DC-DC Voltage Converter System With A High-Efficiency Pulse-Skip Operational Mode	Non Provisional	US 2012/0268095 A1	8,587,283

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APD42921US	United States	3/13/2013	US13/799492	Wide output voltage range switching power converter	Non-Provisional	US9041372	US9041372
APD43241US	United States	2/22/2013	US13/774152	Vehicle inertial sensor systems	Non-Provisional	US8712599	US8712599
APD4368US01	United States	1/14/2013	US13/741198	Two-axis vertical mount package assembly	Non-Provisional	US9475694	US9475694
APD44091US	United States	7/20/2012	61/673,941	adiabatic charge transferring in multi-stage charge pump	Provisional		
APD44092US	United States	7/19/2013	US13/945978	Charge transfer apparatus and method	Non-Provisional	US8860500	US8860500
APD44121US	United States	3/11/2013	US13/792835	Ping pong comparator voltage monitoring circuit	Non-Provisional	US8823419	US8823419
APD44201US	United States	6/27/2012	US61/664966	Multi-Channel String DAC Architecture	Provisional		
APD44202US	United States	3/15/2013	US13/841516	Multi-stage string dac	Non-Provisional	US9124296	US9124296
APD44221US	United States	11/14/2012	61/726,431	Dual-string DAC LSB transient boost scheme	Provisional		
APD44222US	United States	3/15/2013	US13/841150	String dac charge boost system and method	Non-Provisional	US8912940	US8912940
APD44441US	United States	1/22/2013	US13/747241	Continuous time input stage	Non-Provisional	US8779958	US8779958
APD44451US	United States	12/14/2012	US61/737458	Dual String DAC leakage current cancellation	Provisional		
APD44452US	United States	3/15/2013	US13/839801	String dac leakage current cancellation	Non-Provisional	US8912939	US8912939

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APD44541US	United States	9/7/2012	61/698,252	A buffered SAR ADC that allows the combined power of the buffer and ADC to scale proportionally with conversion rate.	Provisional		
APD44542US	United States	9/3/2013	US14/016787	Analog to digital converter including a pre-charge circuit	Non-Provisional	US8994564	US8994564
APD44651US	United States	6/27/2012	US13/534753	Digital switched mode voltage regulator	Non-Provisional	US9136760	US9136760
APD44701US	United States	1/10/2013	US13/738450	Narrow voltage range multi-level output pulse modulated amplifier with one-bit hysteresis quantizer	Non-Provisional	US8981844	US8981844
APD4481US01	United States	4/3/2014	US14/244227	Apparatus and methods for gracefully managing audio discontinuity	Non-Provisional	US20150286460	
APD44881US	United States	3/22/2013	US13/848929	Method to improve response speed of rms detectors	Non-Provisional	US8928390	US8928390
APD44901US	United States	3/15/2013	61/800,279	XL-rate Digital Power Core	Provisional		
APD44902US	United States	1/23/2014	US14/162297	Hybrid analog/digital point-of-load controller	Non-Provisional	US8947148	US8947148

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APD44963US	United States	6/20/2016	US15/187398	Control circuit for use with a four terminal sensor, and measurement system including such a control circuit	Non-Provisional	US20170023506	
APD45122US	United States	8/27/2013	US14/010946	Datapath circuit for digital signal processors	Non-Provisional	US9753695	US9753695
APD45161US	United States	2/6/2013	US13/760622	Control techniques for motor driven systems utilizing back-emf measurement techniques	Non-Provisional	US9121753	US9121753
APD45181US	United States	3/11/2013	US13/793574	Spread-spectrum mems self-test system and method	Non-Provisional	US9238580	US9238580
APD45302US	United States	2/1/2013	US13/757455	Method and apparatus for separating the reference current from the input signal in sigma-delta converter	Non-Provisional	US9124290	US9124290
APD4530US01	United States	2/10/2012	US61/597342	Method and Apparatus for separating the reference current from the input signal in a Sigma-Delta Converter	Provisional		
APD45371US	United States	5/3/2012	US61/642204	Band-Gap Stress Relief Using Localised Silicon Trench	Provisional		

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APD4537US02	United States	1/14/2013	US13/740677	Localized strain relief for an integrated circuit	Non-Provisional	US9466666	US9466666
APD4537US03	United States	10/7/2016	US15/288502	Localized strain relief for an integrated circuit	Non-Provisional	US10461151	US10461151
APD45471US	United States	5/4/2012	61/642,657	Segmented Digital-to-Analog Converter	Provisional		
APD45472US	United States	1/23/2013	US13/747892	Segmented digital-to-analog converter having weighted current sources	Non-Provisional	US8941522	US8941522
APD45541US	United States	7/12/2013	US13/940263	Digital pre-distortion systems in transmitters	Non-Provisional	US9608676	US9608676
APD45561US	United States	3/13/2013	US13/798561	Under-sampling digital pre-distortion architecture	Non-Provisional	US9680423	US9680423
APD45571US	United States	3/14/2013	US13/803797	Baseband digital pre-distortion architecture	Non-Provisional	US8995571	US8995571
APD45601US	United States	3/15/2013	US13/839972	Bit error rate timer for a dynamic latch	Non-Provisional	US8860598	US8860598
APD45611US	United States	3/14/2013	US13/830382	Use of a dll to optimize an adc performance	Non-Provisional	US8786483	US8786483
APD45631US	United States	8/29/2012	US61/694381	Chopped oscillator	Provisional		
APD45632US	United States	3/7/2013	US13/789449	Chopped oscillator	Non-Provisional	US9054690	US9054690
APD45701US	United States	1/7/2013	US13/735481	Duty cycle balance module for switch mode power converter	Non-Provisional	US9099932	US9099932
APD45702US	United States	6/12/2015	US14/738351	Duty cycle balance module for switch mode power converter	Non-Provisional	US9287763	US9287763

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APD45711US	United States	3/10/2014	US14/202906	Digital-to-analog converter with correction for parasitic routing resistance	Non-Provisional	US9124282	US9124282
APD45811US	United States	3/14/2013	US13/829257	Flash adc shuffling	Non-Provisional	US8878712	US8878712
APD45821US	United States	3/12/2013	US13/797038	High speed dynamic latch	Non-Provisional	US20140266306	
APD45851US	United States	8/13/2012	US13/584630	Semiconductor circuit and methodology for in-system scan testing	Non-Provisional	US9121892	US9121892
APD45891US	United States	3/1/2013	US13/782223	Negative current protection system for low side switching converter fet	Non-Provisional	US9048734	US9048734
APD45961US	United States	2/19/2013	US13/770064	Voltage generator, switch and data converter circuits	Non-Provisional	US8988259	US8988259
APD4609US01	United States	3/8/2013	US13/791240	Controlling current in a switching regulator	Non-Provisional	US9209688	US9209688
APD4612US01	United States	9/4/2012	61/696,446	Design of Laminated Magnetic Film for Integrated Devices	Provisional		

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APD4612US02	United States	6/26/2013	US13/927459	Magnetic core for use in an integrated circuit, an integrated circuit including such a magnetic core, a transformer and an inductor fabricated as part of an integrated circuit	Non-Provisional	US9484136	US9484136
APD46162US	United States	10/29/2013	14/066,129	WAFER SCALE THERMOELECTRIC ENERGY HARVESTER	Non Provisional	US 2014/0190542 A1	9,620,698
APD46163US	United States	5/9/2014	14/274,590	WAFER SCALE THERMOELECTRIC ENERGY HARVESTER	Non Provisional	US 2014/0246066	9,748,466
APD46191US	United States	6/26/2013	US13/927319	Moving coil miniature loudspeaker module	Non-Provisional	US9084052	US9084052
APD46311US	United States	8/22/2014	US14/465986	Ultra low power programmable supervisory circuit	Non-Provisional	US20160055049	
APD46331US	United States	1/10/2013	US13/738858	Processor architecture and method for simplifying programming single instruction, multiple data within a register	Non-Provisional	US9557993	US9557993
APD4635US01	United States	12/23/2013	US14/139672	Temperature stabilized circuitry	Non-Provisional	US9287831	US9287831
APD4637US01	United States	3/14/2013	US13/828989	Dc bias estimation of a radio frequency mixer	Non-Provisional	US20140269985	

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APD4641US01	United States	2/14/2014	US61/940204	sensor offset cancellation using amplifier	Provisional		
APD4641US02	United States	7/1/2014	US14/321426	Amplifier with offset compensation	Non-Provisional	US9385673	US9385673
APD46481US	United States	3/14/2013	US13/803833	Isolated error amplifier for isolated power supplies	Non-Provisional	US9293997	US9293997
APD46521US	United States	9/27/2012	61/706,714	Locking and Unlocking Mechanism for Optical Gesture Systems in Mobile Platforms	Provisional		
APD46522US	United States	9/25/2013	US14/036861	Locking and unlocking of contactless gesture-based user interface of device having contactless gesture detection system	Non-Provisional	US20140298672	
APD46531US	United States	11/9/2012	US61/724867	RLE based Vehicle Detection	Provisional		
APD46532US	United States	4/9/2013	US61/810047	RLE based Vehicle Detection	Provisional		
APD46533US	United States	5/7/2013	US13/888993	Object detection	Non-Provisional	US9460354	US9460354
APD46534US	United States	12/4/2013	US14/097223	Object detection	Non-Provisional	US9672431	US9672431
APD46541US	United States	3/12/2013	US13/796236	All digital transmitter noise correction	Non-Provisional	US9048900	US9048900

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APD46561US	United States	8/24/2012	61/692,855	INPUT CURRENT CANCELLATION SCHEME IN FAST CHANNEL-SWITCHING MULTIPLEXERS	Provisional		
APD46562US	United States	3/15/2013	61/793,932	Input Current Cancellation Scheme in Fast Channel Switching Multiplexers by means of a Precharge Buffer	Provisional		
APD46563US	United States	8/9/2013	US13/963260	Input current cancellation scheme for fast channel switching systems	Non-Provisional	US9548948	US9548948
APD46581US	United States	8/16/2013	US13/968844	Hardware accelerator configuration by a translation of configuration data	Non-Provisional	US9785444	US9785444
APD4659US01	United States	3/8/2013	US13/789847	Microphone circuit assembly and system with speech recognition	Non-Provisional	US9542933	US9542933
APD4659US02	United States	1/9/2017	US15/401943	Microphone circuit assembly and system with speech recognition	Non-Provisional	US20170194001	
APD46601US	United States	6/11/2013	US13/914731	Vector matrix product accelerator for microprocessor integration	Non-Provisional	US9384168	US9384168

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APD46661US	United States	3/7/2013	US13/789210	Skip mode method and system for a current mode switching converter	Non-Provisional	US8941368	US8941368
APD46671US	United States	3/4/2013	61/772,038	WINDOWLESS BUCK-BOOST CONVERTER	Provisional		
APD46672US	United States	9/21/2012	61/704,195	H-bridge buck-boost converter	Provisional		
APD46673US	United States	4/4/2013	US13/856611	Windowless h-bridge buck-boost switching converter	Non-Provisional	US9041363	US9041363
APD46674US	United States	5/22/2015	US14/719945	Windowless h-bridge buck-boost switching converter	Non-Provisional	US9893623	US9893623
APD46691US	United States	2/25/2013	US13/775820	Inductor current emulation circuit for a switching converter	Non-Provisional	US9065337	US9065337
APD46801US	United States	3/7/2013	US13/788062	System and method for processor wake-up based on sensor data	Non-Provisional	US9349386	US9349386
APD4686US01	United States	3/14/2013	US13/827666	Apparatus and methods for transient compensation of switching power regulators	Non-Provisional	US8928303	US8928303
APD46921US	United States	1/24/2013	US13/749675	Descriptor-based stream processor for image processing and method associated therewith	Non-Provisional	US9241142	US9241142

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APD4703US01	United States	3/8/2013	US13/791210	Apparatus and methods for switching regulator current sensing	Non-Provisional	US8937467	US8937467
APD4704US01	United States	3/8/2013	US13/791234	Apparatus and methods for bidirectional current sensing in a switching regulator	Non-Provisional	US9046905	US9046905
APD47091US	United States	2/27/2013	US13/779314	Method and detector of loudspeaker diaphragm excursion	Non-Provisional	US10219090	US10219090
APD47171US	United States	6/11/2013	US13/914970	Reduced bandwidth digital predistortion	Non-Provisional	US20140362949	
APD47221US	United States	10/23/2012	61/717,541	Predicate counters	Provisional		
APD47222US	United States	8/9/2013	US13/963793	Predicate counter	Non-Provisional	US9342306	US9342306
APD47231US	United States	10/23/2012	61/717,564	Compiler directed DMA Vector Buffer	Provisional		
APD47232US	United States	9/27/2013	US14/040367	Dma vector buffer	Non-Provisional	US9092429	US9092429
APD47261US	United States	10/23/2012	61/717,561	Memory Interconnect Network Architecture for Vector Processor	Provisional		
APD47262US	United States	12/19/2012	13/720,624	MEMORY INTERCONNECT NETWORK ARCHITECTURE FOR VECTOR PROCESSOR	Non Provisional	2014-0115224-A1	9,201,828
APD4730US01	United States	2/25/2013	US13/776545	Microelectronic circuits and integrated circuits including a non-silicon substrate	Non-Provisional	US10283582	US10283582
APD47331US	United States	1/10/2014	US14/152515	Amplifying system	Non-Provisional	US9054660	US9054660

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APD4735US01	United States	5/21/2013	US13/899143	Current sensing of switching power regulators	Non-Provisional	US9791480	US9791480
APD47371US	United States	8/20/2013	US13/971298	Power amplification system, device and method	Non-Provisional	US9071487	US9071487
APD47411US	United States	3/8/2013	US13/790071	Advanced tdm daisy-chain communication systems and devices	Non-Provisional	US20140254431	
APD4745US01	United States	3/13/2013	US61/779278	Compact Voltage Reference	Provisional		
APD4745US02	United States	3/11/2014	US14/205045	Voltage generator, a method of generating a voltage and a power-up reset circuit	Non-Provisional	US9632521	US9632521
APD4746US02	United States	6/18/2013	61/836,215	SYSTEM AND METHOD TO REDUCE DATA HANDLING ON LITHIUM ION BATTERY MONITORS	Provisional		
APD4746US03	United States	9/24/2013	14/034,553	SYSTEM AND METHOD TO REDUCE DATA HANDLING ON LITHIUM ION BATTERY MONITORS	Non Provisional	20140129164	10,365,332
APD4746US04	United States	6/20/2019	16/447,539	SYSTEM AND METHOD TO REDUCE DATA HANDLING ON LITHIUM ION BATTERY MONITORS	Non Provisional	2019/0302191	

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APD47491US	United States	4/23/2013	US13/868459	Transformer-based isolated bi-directional dc-dc power converter, and method and controller for using same	Non-Provisional	US9859803	US9859803
APD4750US01	United States	3/11/2013	US13/793438	Digitally programmed capacitance multiplication with one charge pump	Non-Provisional	US8760201	US8760201
APD4751US01	United States	3/13/2013	US61/780061	Low Power Power-On-Reset	Provisional		
APD4751US02	United States	3/11/2014	US14/204851	Power monitoring circuit, and a power up reset generator	Non-Provisional	US9525407	US9525407
APD47561US	United States	5/15/2015	US14/713538	Voltage controlled current path, a voltage clamp, and an electronic component including a voltage clamp	Non-Provisional	US10110206	US10110206
APD47621US	United States	3/7/2013	US13/788917	Low drop out voltage regulator	Non-Provisional	US9098104	US9098104
APD47651US	United States	6/15/2015	US14/739470	Power-efficient chopping scheme for offset error correction in mems gyroscopes	Non-Provisional	US9419597	US9419597
APD47661US	United States	3/15/2013	US13/844759	Circuit architecture for i/q mismatch mitigation in direct conversion receivers	Non-Provisional	US8948326	US8948326

Patent Ref.	Country or Region	Filed Date	Application Number	Application Description	Patent/Design Type	Publication Number	Patent Number
APD47681US	United States	7/25/2013	US61/858477	MULTI-LEVEL OUTPUT CASCODE POWER STAGE	Provisional		
APD47682US	United States	10/25/2013	US14/063636	Multi-level output cascode power stage	Non-Provisional	US9960760	US9960760
APD47711US	United States	10/9/2013	US14/050081	Digital-to-analog converter and a method of operating a digital-to-analog converter	Non-Provisional	US9136866	US9136866
APD47731US	United States	3/11/2013	US13/793543	Method of improving noise immunity in a signal processing apparatus, and a signal processing apparatus having improved noise immunity	Non-Provisional	US8975953	US8975953
APD47732US	United States	3/9/2015	US14/642224	Method of improving noise immunity in a signal processing apparatus, and a signal processing apparatus having improved noise immunity	Non-Provisional	US9503055	US9503055
APD47752US	United States	8/23/2013	13/974,252	ULTRA-LOW-VOLTAGE STARTUP CIRCUIT AND METHOD FOR NANOPOWER BOOST REGULATOR	Non Provisional		

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APD47753US	United States	10/18/2013	US14/051702	Ultra low-voltage circuit and method for nanopower boost regulator	Non-Provisional	US9673696	US9673696
APD47791US	United States	1/21/2014	US14/160225	Charge pump stage and a charge pump	Non-Provisional	US9431901	US9431901
APD47792US	United States	4/19/2016	US15/132,760	A CHARGE PUMP STAGE AND A CHARGE PUMP	Non-Provisional		
APD47821US	United States	3/15/2013	US61/793777	MULTIPLE STRING DIGITAL TO ANALOG CONVERTER	Provisional		
APD47822US	United States	3/14/2014	US14/214180	Digital to analog converter with an intra-string switching network	Non-Provisional	US9065479	US9065479
APD47823US	United States	3/14/2014	US14/214341	Multiple string digital to analog converter	Non-Provisional	US9100045	US9100045
APD47824US	United States	3/14/2014	US14/214405	Multiple string digital to analog converter comprising a control circuit	Non-Provisional	US9077376	US9077376
APD47851US	United States	3/12/2013	61/778,087	An accurate current limit test method for high power switching regulator	Provisional		
APD47852US	United States	9/17/2013	US14/028792	Method and apparatus for current limit test for high power switching regulator	Non-Provisional	US8887119	US8887119
APD47941US	United States	3/6/2013	US13/787362	Isolator	Non-Provisional	US20140254991	
APD47961US	United States	1/3/2014	US14/147228	Charge pump	Non-Provisional	US9531262	US9531262

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APD47971US	United States	9/27/2013	US14/039208	Class hd power amplifier	Non-Provisional	US9136805	US9136805
APD47981US	United States	3/11/2013	US61/776630	Reverse Current Control for an Isolated Power Supply Having Synchronous Rectifiers	Provisional		
APD47982US	United States	7/22/2013	US13/947820	Reverse current control for an isolated power supply having synchronous rectifiers	Non-Provisional	US9438127	US9438127
APD48001US	United States	7/24/2013	US13/949776	Pulse width modulated power regulator with loop stabilizer	Non-Provisional	US20150028823	
APD48051US	United States	3/15/2013	US61/788471	A method to parallelize loops in the presence of possible memory aliases	Provisional		
APD4805US02	United States	3/7/2014	US14/200788	Parallelizing loops in the presence of possible memory aliases	Non-Provisional	US10241793	US10241793
APD4808US01	United States	5/22/2013	13/900,113	THERMAL MEASUREMENT SYSTEM FOR TESTING ELECTRONIC COMPONENTS	Non Provisional		
APD4811US01	United States	3/13/2013	US13/801130	Radio frequency transmitter noise cancellation	Non-Provisional	US9831898	US9831898
APD4811US02	United States	11/2/2017	US15/801874	Radio frequency transmitter noise cancellation	Non-Provisional	US20180062675	

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APD48121US	United States	12/11/2013	US14/103220	Proportional to absolute temperature circuit	Non-Provisional	US9323275	US9323275
APD48131US	United States	3/7/2013	US13/788410	Insulating structure, a method of forming an insulating structure, and a chip scale isolator including such an insulating structure	Non-Provisional	US9929038	US9929038
APD48171US	United States	7/23/2013	US13/948663	Method of detecting enclosure leakage of enclosure mounted loudspeakers	Non-Provisional	US9258659	US9258659
APD48172US	United States	10/21/2013	US14/059153	Method of controlling sound reproduction of enclosure mounted loudspeakers	Non-Provisional	US9648432	US9648432
APD4821US02	United States	5/6/2014	US14/271044	Layout of composite circuit elements	Non-Provisional	US9299692	US9299692
APD48251US	United States	4/24/2014	US14/260690	Emulated peak current limit scheme for switching regulator	Non-Provisional	US9577509	US9577509
APD48281US	United States	4/18/2013	US61/813252	Common mode voltage multiplexer with circuit to move the common mode	Provisional		
APD48282US	United States	4/4/2014	US14/245125	Common mode voltage multiplexer	Non-Provisional	US9112496	US9112496
APD48311US	United States	5/16/2013	US13/896105	System, method and recording medium for processing macro blocks	Non-Provisional	US20140340422	

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APD48331US	United States	11/22/1972	308,687	High Resolution Monolithic D/A Converter	Non-Provisional		3,842,412
APD48331US	United States	5/7/2014	US14/272061	Voltage reference circuit	Non-Provisional	US9600014	US9600014
APD4833US02	United States	3/20/2017	US15/464056	Voltage reference circuit	Non-Provisional	US20170255221	
APD48341US	United States	11/6/2013	US14/073324	Method of estimating diaphragm excursion of a loudspeaker	Non-Provisional	US9980068	US9980068
APD4835US01	United States	3/15/2013	US61/789939	A method for calibrating offsets in delta-sigma analog-to-digital converters	Provisional		
APD4835US02	United States	6/18/2013	US13/920083	System, method and recording medium for analog to digital converter calibration	Non-Provisional	US8884802	US8884802
APD4835US03	United States	11/10/2014	US14/537532	System, method and recording medium for analog to digital converter calibration	Non-Provisional	US9124292	US9124292
APD48371US	United States	12/17/2013	US14/109249	Analog switches and methods for controlling analog switches	Non-Provisional	US9621156	US9621156

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APD4838US01	United States	5/16/2013	US13/896123	Dual-tub junction-isolated voltage clamp devices for protecting low voltage circuitry connected between high voltage interface pins and methods of forming the same	Non-Provisional	US9147677	US9147677
APD48401US	United States	2/18/2014	US14/182877	Low power proportional to absolute temperature current and voltage generator	Non-Provisional	US9658637	US9658637
APD48421US	United States	7/31/2013	US13/955971	Synchronous rectifier control for a double-ended isolated power converter	Non-Provisional	US9350259	US9350259
APD4843US01	United States	7/31/2013	US13/955866	Mems switch device and method of fabrication	Non-Provisional	US9911563	US9911563
APD48441US	United States	3/15/2013	US61/791011	Continuous-time oversampling pipeline analog-to-digital converter	Provisional		
APD48442US	United States	4/24/2013	US13/869454	Continuous-time oversampling pipeline analog-to-digital converter	Non-Provisional	US8896475	US8896475
APD48443US	United States	10/27/2014	US14/524729	Continuous-time oversampling pipeline analog-to-digital converter	Non-Provisional	US9432045	US9432045

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APD48444US	United States	8/18/2016	US15/240278	Continuous-time analog-to-digital converter	Non-Provisional	US9774344	US9774344
APD4861US01	United States	7/11/2013	US13/939556	Semiconductor device, and a method of improving breakdown voltage of a semiconductor device	Non-Provisional	US9252260	US9252260
APD48731US	United States	8/2/2013	US13/958141	Anti-ringing technique for switching power stage	Non-Provisional	US9444444	US9444444
APD48741US	United States	10/29/2013	US14/065732	System and method of improving stability of continuous-time delta-sigma modulators	Non-Provisional	US9148168	US9148168
APD48751US	United States	7/18/2013	US13/945647	Digital tuning engine for highly programmable delta-sigma analog-to-digital converters	Non-Provisional	US9030342	US9030342
APD48752US	United States	3/13/2015	US14/657919	Digital tuning engine for highly programmable delta-sigma analog-to-digital converters	Non-Provisional	US9209827	US9209827
APD4876US01	United States	9/6/2013	US14/020404	Apparatus and method for evaluating the performance of a system in a control loop	Non-Provisional	US9594100	US9594100
APD4877US01	United States	6/28/2013	US13/931148	Magnetic field direction sensor	Non-Provisional	US9377327	US9377327
APD48781US	United States	5/30/2013	US13/905251	Electric signal conversion	Non-Provisional	US8912936	US8912936

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APD48782US	United States	12/15/2014	US14/571274	Electrical signal conversion with reduced-distance element rotation	Non-Provisional	US9350371	US9350371
APD4880US01	United States	10/16/2013	US14/055738	Junction field effect transistor, and method of manufacture thereof	Non-Provisional	US9202934	US9202934
APD48831US	United States	7/25/2013	US13/951193	System, method, and medium for image object and contour feature extraction	Non-Provisional	US9292763	US9292763
APD48841US	United States	11/8/2013	US14/076,030	SUPPORT VECTOR MACHINE BASED OBJECT DETECTION SYSTEM AND ASSOCIATED METHOD	Non-Provisional	US2015/0131848	US9298988
APD48842US	United States	10/9/2015	14/879,840	SUPPORT VECTOR MACHINE BASED OBJECT DETECTION SYSTEM AND ASSOCIATED METHOD	Non Provisional		
APD48901US	United States	11/6/2013	US14/073396	Integrator output swing reduction	Non-Provisional	US9054731	US9054731
APD48941US	United States	12/18/2013	US61/917790	Respiration measurement with accelerometers	Provisional		
APD48942US	United States	12/18/2014	US14/574667	System and method for measuring respiration with accelerometers	Non-Provisional	US20150164380	

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APD4898US01	United States	12/16/2013	US14/108035	Silicon substrate suitable for use with an rf component, and an rf component formed on such a silicon substrate	Non-Provisional	US20150170911	
APD4899US01	United States	12/10/2013	US14/102132	Phase corrector for laser trimming, an integrated circuit including such a phase corrector, and a method of providing phase correction in an integrated circuit	Non-Provisional	US9478359	US9478359
APD49051US	United States	3/31/2014	US14/231192	Transducer amplification circuit	Non-Provisional	US9479865	US9479865
APD4907US01	United States	2/20/2014	US61/942422	An RF Detector with Multi-Mode Amplifier Protection	Provisional		
APD4907US02	United States	5/20/2014	US14/282484	Power detector with overdrive detection	Non-Provisional	US9379675	US9379675
APD49121US	United States	12/9/2013	US14/100463	Isolated power supply with input voltage monitor	Non-Provisional	US9866136	US9866136
APD49131US	United States	9/3/2013	US61/872945	A linear and DC-accurate frontend DAC and input structure for CT Delta-Sigma Modulators	Provisional		
APD49132US	United States	2/12/2014	US14/179279	Linear and dc-accurate frontend dac and input structure	Non-Provisional	US9065477	US9065477

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APD49141US	United States	10/11/2013	US14/052196	Method and apparatus for reducing capacitor induced ISI in DACs	Non-Provisional	US9065463	US9065463
APD4922US01	United States	11/5/2013	US14/072572	Stress shield for integrated circuit package	Non-Provisional	US9786609	US9786609
APD4922US02	United States	10/5/2017	15/725,595	STRESS SHIELD FOR INTEGRATED CIRCUIT PACKAGE	Non-Provisional		
APD4923US01	United States	2/19/2014	US14/184555	Apparatus and methods for improving common mode rejection ratio	Non-Provisional	US9264002	US9264002
APD49251US	United States	8/29/2013	US14/013122	Facial detection	Non-Provisional	US9177383	US9177383
APD4928US01	United States	12/19/2013	US14/134782	Apparatus and methods for phase-locked loops with temperature compensated calibration voltage	Non-Provisional	US9413366	US9413366
APD4928US02	United States	12/19/2013	US14/134767	Apparatus and methods for frequency lock enhancement of phase-locked loops	Non-Provisional	US9484935	US9484935
APD4932US01	United States	3/24/2014	US14/223650	Apparatus and methods for autozero amplifiers	Non-Provisional	US9294037	US9294037
APD49341US	United States	10/28/2013	US14/064490	Load current readback and average estimation	Non-Provisional	US9219414	US9219414
APD49351US	United States	7/19/2013	US13/946428	Adaptive element shuffler	Non-Provisional	US9525444	US9525444

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APD4944US01	United States	9/24/2013	US14/034,917	APPARATUS AND METHODS FOR SYNCHRONIZING PHASE-LOCKED LOOPS	Non-Provisional	US2015/0084676	US9048847
APD4944US02	United States	6/1/2015	US14/726913	Apparatus and methods for synchronizing phase-locked loops	Non-Provisional	US9503109	US9503109
APD49551US	United States	10/17/2013	US14/055980	Delta-sigma modulator having sensor front-end	Non-Provisional	US9407283	US9407283
APD49621US	United States	10/18/2013	US14/057153	Multi-stage noise shaping analog-to-digital converter	Non-Provisional	US9178529	US9178529
APD49641US	United States	5/15/2014	US14/278362	Mems switch with internal conductive path	Non-Provisional	US9583294	US9583294
APD49651US	United States	1/9/2015	US14/593078	Multichannel analog-to-digital converter	Non-Provisional	US20160204789	US9432035
APD49691US	United States	11/21/2013	US14/086793	Low-cost capacitive sensing decoder	Non-Provisional	US9373007	US9373007
APD49721US	United States	2/18/2014	US14/182839	Mems device with constant capacitance	Non-Provisional	US9659717	US9659717
APD49731US	United States	1/16/2015	US14/598299	Method and apparatus for providing input to a camera serial interface transmitter	Non-Provisional	US9491495	US9491495
APD49741US	United States	10/18/2013	US14/058048	Multi-layer error correcting coding	Non-Provisional	US9183079	US9183079
APD49771US	United States	1/31/2014	US14/169667	Voltage-based fuel gauge on battery capacity	Non-Provisional	US9612288	US9612288

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APD4984US01	United States	2/18/2014	US14/183046	Test method and device	Non-Provisional	US201502333857	
APD49851US	United States	4/25/2014	US14/262188	Mems switch	Non-Provisional	US9748048	US9748048
APD4985US02	United States	7/28/2017	US15/663628	Mems switch	Non-Provisional	US201800333565	
APD49871US	United States	2/5/2014	US14/173407	Analog to digital converter and a method of operating an analog to digital converter	Non-Provisional	US9191023	US9191023
APD49921US	United States	2/7/2014	US14/175480	Echo cancellation methodology and assembly for electroacoustic communication apparatuses	Non-Provisional	US9531433	US9531433
APD4993US01	United States	10/24/2013	US14/062368	System and method of clock generation in high speed serial communication	Non-Provisional	US8854096	US8854096
APD49941US	United States	5/10/2016	US15/150910	Integrated circuit with on chip variation reduction	Non-Provisional	US10454493	US10454493
APD49961US	United States	2/22/2016	US15/050141	Susceptance measurement for identifying biochemical sensors	Non-Provisional	US10386324	US10386324
APD50031US	United States	3/28/2014	US14/229048	Multiple power path management with micro-energy harvesting	Non-Provisional	US9306452	US9306452
APD5004US01	United States	11/20/2013	US14/085443	Method and apparatus for detecting a preamble in a received radio signal	Non-Provisional	US9191189	US9191189

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APD5006US01	United States	5/21/2014	US14/284148	Bipolar transistor	Non-Provisional	US10468484	US10468484
APD50081US	United States	11/10/2014	US14/537836	Delta-sigma modulator having transconductor network for dynamically tuning loop filter coefficients	Non-Provisional	US9590590	US9590590
APD50121US	United States	9/25/2014	US14/496980	Sample rate converter, an analog to digital converter including a sample rate converter and a method of converting a data stream from one data rate to another data rate	Non-Provisional	US9432043	US9432043
APD5014US01	United States	11/8/2013	61/902019	Modulation Scheme for Long Range Transceiver	Provisional		
APD5014US02	United States	3/14/2014	US14/213561	Modulation scheme for communication	Non-Provisional	US20150131705	
APD50161US	United States	1/28/2014	US14/165,971	CAPACITIVE SENSING PROBE MOTION CONTROL SYSTEM	Non-Provisional	US2015/0211915	US9347813
APD5017US01	United States	3/18/2014	US14/218697	Systems and methods for clock and data recovery	Non-Provisional	US9553717	US9553717
APD5017US02	United States	5/22/2014	US14/285415	Apparatus and method for modular signal acquisition and detection	Non-Provisional	US20150341161	US9246669
APD5022US01	United States	11/1/2016	US15/340423	Analog multiplexer	Non-Provisional	US10200041	US10200041

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APD50231US	United States	3/16/2016	US15/072138	Reducing voltage regulator transistor operating temperatures	Non-Provisional	US9791880	US9791880
APD50261US	United States	1/30/2014	US14/168881	Transmitter noise cancellation in a multi transmitter-receiver system	Non-Provisional	US9083582	US9083582
APD50271US	United States	5/9/2014	US14/274587	Magnetic field energy harvesting device	Non-Provisional	US20150326136	
APD50281US	United States	2/28/2014	US14/194107	Lc lattice delay line for high-speed adc applications	Non-Provisional	US9312840	US9312840
APD50291US	United States	12/20/2013	US14/136774	Low drift voltage reference	Non-Provisional	US9448579	US9448579
APD50301US	United States	5/8/2014	US61/990434	Hot Switch Cavity - SF6 Filled Cavity for Control, Hot Switching/lifetime improvement	Provisional		
APD50302US	United States	3/24/2015	US14/667022	Mems switch	Non-Provisional	US20150325393	
APD50321US	United States	1/9/2015	US14/593591	Self-referenced digital to analog converter	Non-Provisional	US9325337	US9325337
APD50331US	United States	2/21/2014	US14/187058	Interruptible store exclusive	Non-Provisional	US9411542	US9411542
APD50351US	United States	4/14/2014	US14/252411	Pure differential signal based mipsi csi-2 receiver systems	Non-Provisional	US9094246	US9094246
APD50431US	United States	10/10/2014	US14/511,613	PASSIVE ANALOG SAMPLE AND HOLD IN ANALOG-TO-DIGITAL CONVERTERS	Non-Provisional		

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APD50441US	United States	10/3/2014	US14/506062	Headset amplification circuit with error voltage suppression	Non-Provisional	US9699542	US9699542
APD50511US	United States	6/5/2015	US14/732253	Method and apparatus for synchronization of slave clock to master clock	Non-Provisional	US9584302	US9584302
APD50541US	United States	9/4/2014	US14/477236	Embedded overload protection in delta-sigma analog-to-digital converters	Non-Provisional	US9912144	US9912144
APD5055US01	United States	6/11/2014	US14/302223	Low intermediate frequency receiver	Non-Provisional	US9391578	US9391578
APD5060US01	United States	10/17/2014	US14/517447	Dominant signal detection method and apparatus	Non-Provisional	US10039020	US10039020
APD5061US01	United States	5/1/2015	US14/702586	Apparatus and method for improving power supply rejection ratio	Non-Provisional	US9401679	US9401679
APD5062US01	United States	7/17/2014	US14/334545	Analog to digital convertor and a method of calibrating same	Non-Provisional	US9160356	US9160356
APD50631US	United States	6/23/2014	US14/311907	Low quiescent current pull-down circuit	Non-Provisional	US9391519	US9391519
APD5066US01	United States	8/4/2015	US14/818126	Apparatus and method for precharging a load	Non-Provisional	US9621120	US9621120
APD50681US	United States	4/22/2014	US14/258634	Broadband microwave variable gain up-convertor	Non-Provisional	US9755602	US9755602

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APD50711US	United States	6/4/2014	US14/296247	Gain boosted differential transconductance amplifier	Non-Provisional	US9350308	US9350308
APD50731US	United States	8/27/2014	US14/469975	Dc-dc switched capacitor voltage converter with series and parallel switched capacitors during discharge	Non-Provisional	US98666110	US98666110
APD5074US01	United States	2/10/2015	US14/618899	Apparatus and system for rail-to-rail amplifier	Non-Provisional	US9564855	US9564855
APD50801US	United States	6/16/2014	US14/306162	Cache way prediction	Non-Provisional	US9460016	US9460016
APD50851US	United States	12/8/2014	US14/563559	Resistor controlled timer circuit with gain ranging	Non-Provisional	US9660628	US9660628
APD5085US02	United States	5/22/2017	US15/601517	Resistor controlled timer circuit with gain ranging	Non-Provisional	US10447255	US10447255
APD5086US01	United States	10/29/2014	US14/527608	Unwanted component reduction system	Non-Provisional	US9667291	US9667291
APD5089US01	United States	7/8/2015	US14/794661	Phase-locked loop having a multi-band oscillator and method for calibrating same	Non-Provisional	US20170012631	
APD50921US	United States	4/7/2014	61/976,224	digitally estimate DAC static mismatch error in CTDSM	Provisional		
APD50922US	United States	6/11/2014	US14/302173	Estimation of digital-to-analog converter static mismatch errors	Non-Provisional	US9203426	US9203426
APD50951US	United States	2/25/2015	US14/631429	Resonance detection and filtering circuitry	Non-Provisional	US9608515	US9608515

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APD5097US01	United States	9/25/2014	US14/496839	Overvoltage protection device and method	Non-Provisional	US9484739	US9484739
APD50981US	United States	10/31/2014	US14/529430	Minimum duty cycle control for active snubber	Non-Provisional	US9680386	US9680386
APD5102US01	United States	5/9/2014	US14/274258	Amplifier input stage and amplifier	Non-Provisional	US9312825	US9312825
APD51031US	United States	10/10/2014	US14/511955	Overheat protector and protection methodology for electrodynamic loudspeakers	Non-Provisional	US9525939	US9525939
APD51041US	United States	7/1/2015	US14/789477	Low power bias current generator and voltage reference	Non-Provisional	US9811107	US9811107
APD51061US	United States	11/3/2014	US14/531541	Circuit and method for compensating for early effects	Non-Provisional	US9600015	US9600015
APD5113US01	United States	8/20/2014	US14/464067	Apparatus and methods for generating a uniform magnetic field	Non-Provisional	US9697940	US9697940
APD51161US	United States	7/2/2014	US14/322321	Inductive component for use in an integrated circuit, a transformer and an inductor formed as part of an integrated circuit	Non-Provisional	US20160005530	
APD51241US	United States	10/2/2014	US14/504540	High gain, high slew rate amplifier	Non-Provisional	US9300257	US9300257

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APD51261US	United States	10/10/2014	62/062,484	Method for Efficient implementation of MOG algorithm in IIR signal flow blocks	Provisional		
APD51262US	United States	12/18/2014	US14/575198	Pipelining and parallelism for implementing a mixture model	Non-Provisional	US20160104072	
APD51271US	United States	7/9/2015	US14/794991	Video processing for human occupancy detection	Non-Provisional	US20170011261	US10372977
APD51281US	United States	5/29/2015	US14/725323	Segmented dac	Non-Provisional	US9300318	US9300318
APD5143US01	United States	12/12/2014	US14/568818	Apparatus and method for clock generation	Non-Provisional	US9749125	US9749125
APD5152US01	United States	1/28/2015	US14/608072	Method of trimming a component and a component trimmed by such a method	Non-Provisional	US9887687	US9887687
APD51561US	United States	12/12/2014	US14/569182	Method of controlling diaphragm excursion of electrodynamic loudspeakers	Non-Provisional	US9813812	US9813812
APD51621US	United States	7/23/2015	US14/807538	Computationally efficient arc detector with coherent sampling	Non-Provisional	US20170025996	US10158324
APD51641US	United States	8/5/2015	US14/819321	Digital-to-analog converter with digital charge sharing components	Non-Provisional	US9455731	US9455731

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APD51651US	United States	8/26/2016	US15/248694	Proportional to absolute temperature reference circuit and a voltage reference circuit	Non-Provisional	US10310539	US10310539
APD5167US01	United States	3/27/2015	US14/671767	Electrical overstress recording and/or harvesting	Non-Provisional	US9871373	US9871373
APD5167US02	United States	11/1/2017	US15/801132	Electrical overstress reporting	Non-Provisional	US20190128939	
APD51681US	United States	8/15/2014	US14/460913	Wireless charging platform using beamforming for wireless sensor network	Non-Provisional	US20160049823	
APD51691US	United States	8/15/2014	US14/461003	Wireless charging platform using environment based beamforming for wireless sensor network	Non-Provisional	US10211662	US10211662
APD5171US01	United States	7/10/2014	US62/022749	Low Power Voice Activity Detection using Formant filtering	Provisional		
APD5171US01	United States	7/10/2014	62/022,749	Low Power Voice Activity Detection using Formant filtering	Provisional		
APD5171US02	United States	7/7/2015	US15/321743	Low-complexity voice activity detection	Non-Provisional	US20170133041	US10360926
APD5171US03	United States	7/17/2019	US16/515018	LOW-COMPLEXITY VOICE ACTIVITY DETECTION	Non-Provisional		

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APD51772US	United States	6/18/2015	US14/743396	Method of and apparatus for protecting a switch, such as a mems switch, and to a mems switch including such a protection apparatus	Non-Provisional	US20160006241	US10033179
APD51773US	United States	7/13/2018	US16/035,538	Portable Information Handling System Detachable Support and Attachment Device	Non-Provisional	US2019/0013668A 1	
APD51801US	United States	9/15/2014	US14/486937	Methods and structures to generate on/off keyed carrier signals for signal isolators	Non-Provisional	US9660848	US9660848
APD51911US	United States	6/11/2015	US14/736513	METHODS AND SYSTEMS FOR ADDRESSING COMPONENT MISMATCH IN DIGITAL-TO-ANALOG CONVERTERS	Non-Provisional		
APD51912US	United States	8/17/2015	US14/828130	Methods and systems for addressing component mismatch in digital-to-analog converters	Non-Provisional	US9337854	US9337854
APD51921US	United States	8/28/2014	US14/472243	Receivers for digital predistortion	Non-Provisional	US9735741	US9735741
APD5194US01	United States	11/24/2014	US14/552306	Apparatus and methods for dual loop power amplifier digital pre-distortion systems	Non-Provisional	US9306506	US9306506

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APD51991US	United States	5/15/2015	US14/713312	Circuits and techniques including cascaded ldo regulation	Non-Provisional	US9665112	US9665112
APD52041US	United States	2/16/2015	US14/623025	Piezoelectric energy harvesting system with frequency mismatch tolerance	Non-Provisional	US10056849	US10056849
APD5207US01	United States	11/19/2014	US62/082023	Plastic Air Cavity module for Optical Sensors	Provisional		
APD5207US02	United States	11/18/2015	US14/945255	Optical sensor module	Non-Provisional	US9590129	US9590129
APD52081US	United States	12/17/2015	US14/972800	Piezoelectric impact energy harvesting	Non-Provisional	US10033304	US10033304
APD52231US	United States	3/30/2015	US14/673137	Dc linear voltage regulator comprising a switchable circuit for leakage current suppression	Non-Provisional	US9513647	US9513647
APD5224US02	United States	9/11/2015	US14/852380	High isolation wideband switch	Non-Provisional	US9893025	US9893025
APD52261US	United States	8/22/2014	US62/040913	Isolated ADC with fast channel and output signalling	Provisional		
APD52262US	United States	8/20/2015	US14/831731	Isolator system supporting multiple adcs via a single isolator channel	Non-Provisional	US9584147	US9584147
APD5227US02	United States	5/21/2015	US14/719241	Apparatus and methods for reducing glitches in digital step attenuators	Non-Provisional	US9548722	US9548722

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APD5228US02	United States	5/28/2015	US14/724731	Apparatus and methods for controlling overshoot in digital step attenuators	Non-Provisional	US9543921	US9543921
APD5230US01	United States	11/12/2014	US14/539593	Transistor	Non-Provisional	US9362356	US9362356
APD52471US	United States	10/13/2015	US14/881684	Method and system for continuous off chip capacitor detection for linear regulators	Non-Provisional	US9778303	US9778303
APD5252US01	United States	10/3/2014	62/059,275	Low Complexity Voice Activity Detection	Provisional		
APD52571US	United States	8/14/2015	US14/826316	Full duplex radio	Non-Provisional	US10097233	US10097233
APD52591US	United States	7/1/2015	US14/789705	Digital to analog converter	Non-Provisional	US9407278	US9407278
APD52601US	United States	3/17/2016	US15/072961	Blood oxygenation sensor with led current modulation	Non-Provisional	US20170265794	
APD52631US	United States	6/3/2015	US14/730095	Generating comparator thresholds using a rotating ring of resistors	Non-Provisional	US9425816	US9425816
APD5264US02	United States	2/19/2016	US15/048712	Detecting sensor error	Non-Provisional	US10267870	US10267870
APD52671US	United States	10/17/2014	US14/517639	Control circuit for use with a sensor, and measurement system including such a control circuit	Non-Provisional	US9859878	US9859878
APD52681US	United States	8/11/2015	US14/823843	Programmable impedance	Non-Provisional	US9583241	US9583241
APD5271US01	United States	3/16/2015	US14/658779	Overvoltage blocking protection device	Non-Provisional	US10181719	US10181719

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APD52841US	United States	5/26/2015	US14/721,152	Debug trigger interface for non-debug domain system reset	Non-Provisional	US2016349326A1	
APD52911US	United States	10/16/2015	US14/885601	Active device divider circuit with adjustable iq	Non-Provisional	US9813056	US9813056
APD52921US	United States	10/23/2015	US14/922037	Isolator and method of forming an isolator	Non-Provisional	US9941565	US9941565
APD5294US02	United States	10/5/2015	US14/874883	Method of and apparatus for transmit noise reduction at a receiver	Non-Provisional	US9912358	US9912358
APD5295US01	United States	3/25/2015	US14/668832	Apparatus and methods for a cascode amplifier topology for millimeter-wave power application	Non-Provisional	US9413309	US9413309
APD52961US	United States	7/21/2015	US14/805135	Thermoelectric devices	Non-Provisional	US20170025594	
APD5299US01	United States	9/3/2015	US14/844447	Apparatus and methods for using tuning information to adaptively and dynamically modify the parameters of an rf signal chain	Non-Provisional	US9467151	US9467151
APD53001US	United States	5/29/2015	US14/726190	Serial peripheral interface host port	Non-Provisional	US20160350240	
APD53011US	United States	11/10/2014	US62/077539	REMOTE EVALUATION TOOL	Provisional		
APD53012US	United States	11/9/2015	US14/935644	Remote evaluation tool	Non-Provisional	US9733306	US9733306
APD53021US	United States	5/21/2015	US62/164873	PWM/Linear bidirectional voice coil motor driver	Provisional		

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APD53022US	United States	4/21/2016	US15/135330	Feedback control system and method	Non-Provisional	US20160344327	US10439539
APD53081US	United States	6/11/2015	US14/737403	Systems, circuits and methods for determining a position of a movable object	Non-Provisional	US20160363462	
APD53171US	United States	1/14/2015	US62/103395	HIGHLY INTEGRATED RADIO FREQUENCY TRANSCIVER	Provisional		
APD53172US	United States	12/18/2015	US14/973725	Highly integrated radio frequency transceiver	Non-Provisional	US9641206	US9641206
APD53173US	United States	3/30/2017	US15/473990	Highly integrated radio frequency transceiver	Non-Provisional	US20170207802	
APD53271US	United States	6/29/2015	US14/754241	Vertical magnetic barrier for integrated electronic module and related methods	Non-Provisional	US9986639	US9986639
APD53321US	United States	9/24/2015	US14/863901	Small area and low power iir filter structure	Non-Provisional	US9985608	US9985608
APD53451US	United States	10/9/2015	US14/879,738	ELECTROCHEMICAL SENSOR, AND A METHOD OF FORMING AN ELECTROCHEMICAL SENSOR	Non-Provisional	US2017/0102355	
APD53461US	United States	5/8/2015	US14/708003	Signal gate, a sampling network and an analog to digital converter comprising such a sampling network	Non-Provisional	US9525409	US9525409

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APD53491US	United States	9/9/2016	US62/385761	Fast Settling Amplifier With Split Output Stage Miller Cap Swapping Technique	Provisional		
APD53492US	United States	5/19/2017	US15/600484	Fast settling capacitive gain amplifier circuit	Non-Provisional	US10044327	US10044327
APD53493US	United States	5/19/2017	US15/600542	Fast settling capacitive gain amplifier circuit	Non-Provisional	US10158334	US10158334
APD5350US01	United States	12/17/2015	US14/973314	Devices, systems and methods including magnetic structures	Non-Provisional	US10145906	US10145906
APD5350US02	United States	11/13/2018	US16/189854	Modules and methods including magnetic sensing structures	Non-Provisional	US10429456	US10429456
APD5350US03	United States	9/9/2019	US16/565201	Devices, systems and methods including magnetic structures	Non-Provisional		
APD53581US	United States	6/16/2015	US62/180527	Invention Disclosure on RC-Lattice Delay in CT MASH & CT PIPE ADCs	Provisional		
APD53582US	United States	6/14/2016	US15/182430	Rc lattice delay	Non-Provisional	US9762221	US9762221
APD53591US	United States	11/12/2015	US14/939267	Energy harvester open-circuit voltage sensing for mppt	Non-Provisional	US9800170	US9800170
APD53671US	United States	9/14/2015	US14/853265	Dual mode gyroscope	Non-Provisional	US20170074656	US10234288
APD5375US01	United States	5/5/2015	US62/157259	Massive MIMO Multi-band Receiver (m^3Rx)	Provisional		
APD5375US02	United States	10/21/2015	US14/919590	Apparatus and methods for scalable receivers	Non-Provisional	US20160329949	

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APD5377US01	United States	2/17/2016	US15/045826	System and method for reducing false preamble detection in a communication receiver	Non-Provisional	US9673962	US9673962
APD5377US02	United States	5/25/2017	US15/605082	System and method for reducing false preamble detection in a communication receiver	Non-Provisional	US10129011	US10129011
APD53881US	United States	8/7/2015	US14/821395	Method of controlling a motor driven system, apparatus for controlling a motor driven system and a motor driven system controlled in accordance with the disclosed method	Non-Provisional	US20170041552	
APD53891US	United States	2/29/2016	US15/056645	Visual vehicle parking occupancy sensor	Non-Provisional	US10008115	US10008115
APD53981US	United States	12/11/2015	US14/967059	Inductive component for use in an integrated circuit, a transformer and an inductor formed as part of an integrated circuit	Non-Provisional	US20170169929	
APD5404US01	United States	11/10/2015	US14/937627	FET - BIPOlar TRANSISTOR COMBINATION	Non-Provisional	US9653455	US9653455

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APD5405US01	United States	11/10/2015	US14/937705	Fet-bipolar transistor combination, and a switch comprising such a fet-bipolar transistor combination	Non-Provisional	US9935628	US9935628
APD5411US01	United States	11/16/2015	US14/942637	Method of and apparatus for biasing switches	Non-Provisional	US9667244	US9667244
APD5412US01	United States	11/10/2015	US14/937771	Overvoltage protection device, and a galvanic isolator in combination with an overvoltage protection device	Non-Provisional	US9698594	US9698594
APD542802US	United States	2/29/2016	US15/056560	Occupancy sensor	Non-Provisional	US10290194	US10290194
APD54321US	United States	3/17/2016	US15/072844	Inductor current based mode control for buck-boost converters	Non-Provisional	US20170257031	
APD5435US01	United States	2/1/2016	US15/012108	Power node communication for device detection and control	Non-Provisional	US10170929	US10170929
APD5436US01	United States	1/18/2016	US15/000006	Thin film resistive device for use in an integrated circuit, an integrated circuit including a thin film resistive device	Non-Provisional	US10101414	US10101414
APD54391US	United States	5/22/2017	US62/509559	A photo-diode emulator circuit for transimpedance amplifier testing	Provisional		

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APD5439US02	United States	3/23/2018	US15/934138	Photo-diode emulator circuit for transimpedance amplifier testing	Non-Provisional	US20180335509	US10481246
APD54401US	United States	1/6/2016	US14/989203	Low-voltage low-power variable gain amplifier	Non-Provisional	US9735738	US9735738
APD54421US	United States	9/25/2015	US14/866036	Capacitance measurement	Non-Provisional	US9939476	US9939476
APD54572US	United States	8/2/2016	US15/226564	Compensation of baseline wander	Non-Provisional	US9906211	US9906211
APD54651US	United States	8/27/2015	US14/838097	Multiple stage digital to analog converter	Non-Provisional	US9444487	US9444487
APD54661US	United States	4/8/2016	US15/095004	Network connectivity for constrained wireless sensor nodes	Non-Provisional	US10212261	US10212261
APD5474US01	United States	1/27/2016	US15/008183	Single-ended mixer with reduced loss	Non-Provisional	US9602055	US9602055
APD54751US	United States	1/8/2016	US62/276704	Programmable input range for Continuous time sigma delta adc	Provisional		
APD54752US	United States	9/26/2016	US15/276561	Configurable input range for continuous-time sigma delta modulators	Non-Provisional	US10224951	US10224951
APD54761US	United States	12/18/2015	US14/974891	Electromagnetic flow sensor interface allowing dc coupling	Non-Provisional	US10386214	US10386214
APD54781US	United States	1/12/2016	US14/993871	Integrated ion sensing apparatus and methods	Non-Provisional	US10288582	US10288582

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APD5479US01	United States	4/13/2016	US15/097983	Mixer with improved linearity	Non-Provisional	US9793856	US9793856
APD54801US	United States	10/13/2015	US62/240706	Ultra Wide Band Sparse DPD	Provisional		
APD54802US	United States	10/12/2016	US15/291898	Ultra wide band digital pre-distortion	Non-Provisional	US10063265	US10063265
APD5482US01	United States	7/31/2017	US15/665010	Current switching circuit	Non-Provisional	US10193507	US10193507
APD5490US01	United States	12/1/2015	US14/956257	Low noise transconductance amplifiers	Non-Provisional	US9755678	US9755678
APD5491US01	United States	12/1/2015	US14/956189	Local oscillator paths	Non-Provisional	US9712113	US9712113
APD54921US	United States	8/8/2016	US15/230637	Systems and methods of monitoring electrodermal activity (eda) using an ac signal and discrete fourier transform (dft) analysis	Non-Provisional	US20180035910	
APD54951US	United States	2/17/2016	US62/296512	Method to optimize system power by intelligent SPI design	Provisional		
APD54952US	United States	6/20/2016	US15/187763	Data communication interface for processing data in low power systems	Non-Provisional	US20170235692	US10482045
APD54961US	United States	12/16/2015	US62/268034	Dither Injection Techniques for CT MASH ADC	Provisional		
APD54962US	United States	11/23/2016	US15/360984	Dither injection for continuous-time mash adcs	Non-Provisional	US9838031	US9838031

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APD54981US	United States	10/26/2015	US62/246488	Low noise precision input stage for A/D converter	Provisional		
APD54982US	United States	12/14/2015	US14/967880	Low noise precision input stage for analog-to-digital converters	Non-Provisional	US9391628	US9391628
APD55041US	United States	11/13/2015	US62/255328	Broadband Envelope Tracking	Provisional		
APD55042US	United States	3/30/2016	US15/085477	Broadband envelope tracking	Non-Provisional	US10250194	US10250194
APD5507US01	United States	3/17/2016	US15/072697	High frequency signal attenuators	Non-Provisional	US9590591	US9590591
APD5508US01	United States	2/23/2016	US15/050875	Apparatus and methods for high linearity voltage variable attenuators	Non-Provisional	US9882549	US9882549
APD5512US01	United States	1/19/2016	US15/000515	Blocker detection based automatic gain control	Non-Provisional	US10027355	US10027355
APD55131US	United States	2/29/2016	US15/056315	Signal dependent subtractive dithering	Non-Provisional	US9503120	US9503120
APD5516US01	United States	4/7/2016	US15/092975	Apparatus and methods for biasing radio frequency switches	Non-Provisional	US9712158	US9712158
APD55221US	United States	8/31/2016	US15/253647	Switchable transformer-based balun	Non-Provisional	US10200009	US10200009
APD55241US	United States	2/1/2016	US15/012574	Hot swap circuit management techniques for power line disturbances and faults	Non-Provisional	US10277220	US10277220

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APD55252US	United States	10/10/2016	US15/289614	Balancing sense amplifier for ethernet transceiver	Non-Provisional	US10069531	US10069531
APD5526US02	United States	10/18/2016	US15/296653	System for power transfer and duplex communication via single isolation device	Non-Provisional	US10389507	US10389507
APD552802US	United States	6/9/2017	US15/618392	Digital to analog converter including logical assistance	Non-Provisional	US9948315	US9948315
APD55281US	United States	6/10/2016	US62/348746	DIGITAL TO ANALOG CONVERTER INCLUDING LOGICAL ASSISTANCE	Provisional		
APD55291US	United States	6/17/2016	US62/351393	DAC output buffer	Provisional		
APD5529US02	United States	6/9/2017	US15/618620	Buffer, and digital to analog converter in combination with a buffer	Non-Provisional	US10027338	US10027338
APD55321US	United States	12/18/2015	US62/269528	Protection circuit of tunable resistor at continuous-time ADC input	Provisional		
APD55322US	United States	11/23/2016	US15/360816	Protection circuits for tunable resistor at continuous-time adc input	Non-Provisional	US9793908	US9793908
APD5534US01	United States	9/29/2016	US15/279976	Apparatus and methods for asynchronous clock mapping	Non-Provisional	US9742549	US9742549

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APD55362US	United States	6/1/2016	US15/169981	Analog/digital converter with charge rebalanced integrator	Non-Provisional	US9806552	US9806552
APD5536US01	United States	2/15/2016	US62/295288	Wide Dynamic Range Converter	Provisional		
APD5537US01	United States	3/8/2016	US15/064544	Multiturn sensor arrangement and readout	Non-Provisional	US20170261345	
APD5542US01	United States	6/9/2016	US15/178217	Buffer with increased headroom	Non-Provisional	US10063199	US10063199
APD55471US	United States	5/4/2016	US15/146616	Physical isolation between mac and phy ethernet connections	Non-Provisional	US20170324251	
APD55491US	United States	12/17/2015	US62/269085	Adaptive Digital Noise Cancellation Filter for Multi-Stage Sigma-Delta ADCs	Provisional		
APD55492US	United States	11/30/2016	US15/365867	Adaptive digital quantization noise cancellation filters for mash adcs	Non-Provisional	US9768793	US9768793
APD55501US	United States	9/23/2016	US15/273940	Adaptive self-configuring sensor node	Non-Provisional	US10157058	US10157058
APD55591US	United States	9/13/2016	US15/264432	Apparatus and methods for a difference amplifier	Non-Provisional	US9917558	US9917558
APD55642US	United States	12/29/2015	US14/982701	Digital predistortion and up tilt and cable communication	Non-Provisional	US9660675	US9660675

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APD55681US	United States	3/4/2016	US15/061251	Current limit control in hot swap controllers	Non-Provisional	US10424939	US10424939
APD55691US	United States	9/21/2016	US15/271697	Method and apparatus to reduce effect of dielectric absorption in sar adc	Non-Provisional	US10256831	US10256831
APD5569US02	United States	1/31/2019	US16/263964	Method and apparatus to reduce effect of dielectric absorption in sar adc	Non-Provisional	US20190173478	
APD55711US	United States	12/18/2015	US14/974744	Electromagnetic flow sensor interface including sensor drive circuit	Non-Provisional	US10352742	US10352742
APD557602US	United States	2/2/2017	US15/422508	Active opening mems switch device	Non-Provisional	US20170225942	
APD55841US	United States	1/15/2016	US62/279282	SNR improvement with reduction of Bandwidth using a Asynchronous Sample Rate Converter	Provisional		
APD55842US	United States	10/27/2016	US15/336414	Circuits, systems, and methods for synchronization of sampling and sample rate setting	Non-Provisional	US9893877	US9893877
APD55851US	United States	9/7/2016	US15/258910	Precision low noise continuous time sigma delta converter	Non-Provisional	US9800262	US9800262

Patent Ref.	Country or Region	Filed Date	Application Number	Application Description	Patent/Design Type	Publication Number	Patent Number
APD5586US01	United States	2/2/2016	US62/290408	Transposed Polynomial in an Decimating Asynchronous Sample Rate Converter for an Oversampling SD ADC	Provisional		
APD55881US	United States	12/18/2015	US62/269810	Panda Flash Calibration	Provisional		
APD55882US	United States	12/23/2015	US62/387343	Panda Flash Calibration	Provisional		
APD55883US	United States	12/5/2016	US15/369175	Flash analog-to-digital converter calibration	Non-Provisional	US9912342	US9912342
APD55891US	United States	12/18/2015	US62/269656	Frequency-Domain ADC Flash Calibration	Provisional		
APD55892US	United States	9/30/2016	US15/282586	Frequency-domain adc flash calibration	Non-Provisional	US10056914	US10056914
APD56031US	United States	3/31/2016	US15/087723	Tank circuit and frequency hopping for isolators	Non-Provisional	US20170288650	US10164614
APD5604US01	United States	3/23/2016	US62/312359	AMR quadrant detector	Provisional		
APD5604US02	United States	3/22/2017	US15/466578	Magnetic field detector	Non-Provisional	US20170276740	
APD5604US03	United States	3/22/2017	US15/466611	Offset compensation for magnetic field detector	Non-Provisional	US20170276514	
APD56051US	United States	6/7/2016	US15/175376	Fast regulator architecture having transistor helper	Non-Provisional	US20170351284	
APD56061US	United States	10/28/2015	US62/247552	Power Inverter Control	Provisional		
APD5612US01	United States	4/29/2016	US15/142453	Apparatuses for communication systems transceiver interfaces	Non-Provisional	US9831233	US9831233
APD5616US02	United States	3/10/2017	US15/456160	Configurable hardware platform for measurement or control	Non-Provisional	US10181853	US10181853

Patent Ref.	Country or Region	Filed Date	Application Number	Application Description	Patent/Design Type	Publication Number	Patent Number
APD56201US	United States	5/10/2016	US15/150833	Dummy signal generation for reducing data dependent noise in digital-to-analog converters	Non-Provisional	US9716508	US9716508
APD5621US01	United States	8/2/2016	US15/226438	Radio frequency isolator	Non-Provisional	US20180040941	
APD56291US	United States	1/13/2016	US62/278107	Flow Sensor	Provisional		
APD56311US	United States	11/10/2016	US15/348420	Temperature compensated reference voltage circuit	Non-Provisional	US9864389	US9864389
APD5637US01	United States	1/9/2017	US15/401522	Operational amplifier	Non-Provisional	US10116268	US10116268
APD56441US	United States	11/28/2016	US15/362296	Planar processing of suspended microelectromechanical systems (mems) devices	Non-Provisional	US20180148318	
APD56491US	United States	9/15/2016	US15/266741	Multiplexer distortion cancellation	Non-Provisional	US10020068	US10020068
APD5654US01	United States	7/29/2016	US15/224071	Power regulation system for energy harvesters	Non-Provisional	US10340700	US10340700
APD56561US	United States	8/26/2016	US15/248775	Methods of manufacture of an inductive component and an inductive component	Non-Provisional	US201800061569	
APD56571US	United States	5/19/2016	US15/159492	Wideband digital predistortion	Non-Provisional	US10224970	US10224970
APD5660US02	United States	10/12/2016	US15/291742	Wear-out monitor device	Non-Provisional	US10338132	US10338132
APD5660US04	United States	4/18/2017	US15/490584	Wear-out monitor device	Non-Provisional	US10365322	US10365322

Patent Ref.	Country or Region	Filed Date	Application Number	Application Description	Patent/Design Type	Publication Number	Patent Number
APD566301US	United States	8/3/2017	US15/668088	Multiple string, multiple output digital to analog converter	Non-Provisional	US10075179	US10075179
APD56651US	United States	3/18/2016	US62/310148	An architecture to scale finite-state machines across integrated circuits using a digital bus	Provisional		
APD5665US02	United States	2/9/2017	US15/428406	Architecture to scale finite-state machines across integrated circuits using a digital bus	Non-Provisional	US10277068	US10277068
APD56671US	United States	5/19/2016	US15/159532	Mixed-mode digital predistortion	Non-Provisional	US10033413	US10033413
APD5667US02	United States	6/29/2018	US16/024303	Mixed-mode digital predistortion	Non-Provisional	US20180309465	
APD56701US	United States	12/8/2016	US15/372723	Spatial digital pre-distortion	Non-Provisional	US10298276	US10298276
APD5676US01	United States	5/25/2016	US15/164,267	Ethernet Magnetics Integration	Non-Provisional	US2017/0346661	
APD56771US	United States	9/19/2016	US15/269086	Protection schemes for mems switch devices	Non-Provisional	US20180083439	
APD56891US	United States	6/10/2016	US15/179249	Current sensor and a method of manufacturing a current sensor	Non-Provisional	US10416195	US10416195
APD56911US	United States	1/25/2017	US15/415055	Optical charging system with integrated sensor and power receiver	Non-Provisional	US10468906	US10468906

Patent Ref.	Country or Region	Filed Date	Application Number	Application Description	Patent/Design Type	Publication Number	Patent Number
APD56921US	United States	10/7/2016	US15/288379	Compound semiconductor based inverter	Non-Provisional	US9806720	US9806720
APD5696US01	United States	2/27/2017	US15/443950	Noise reduction in a voltage converter	Non-Provisional	US10305369	US10305369
APD570202US	United States	2/22/2017	US15/439,822	Measurement Driven Integrated Circuit Design Environment and Techniques	Non-Provisional	US2017/0241804	
APD57021US	United States	2/22/2016	US62/298328	Measurement Driven Integrated Circuit Design Environment and Techniques	Provisional		
APD57151US	United States	8/30/2016	US15/251833	Electrochemical sensor, and a method of forming an electrochemical sensor	Non-Provisional	US20180059044	
APD5715US02	United States	8/29/2017	US16/329664	Electrochemical sensor, and a method of forming an electrochemical sensor	Non-Provisional	US20190195825	
APD57251US	United States	11/22/2016	US15/358782	Relaxation oscillator with overshoot error integration	Non-Provisional	US10461724	US10461724
APD572701US	United States	8/31/2017	US15/692812	Digital-to-analog converter with improved linearity	Non-Provisional	US9941897	US9941897
APD57341US	United States	2/28/2017	US15/445389	Resistor linearization during current and voltage conversion	Non-Provisional	US10211788	US10211788

Patent Ref.	Country or Region	Filed Date	Application Number	Application Description	Patent/Design Type	Publication Number	Patent Number
APD57361US	United States	3/29/2017	US15/472706	Current measurement techniques to compensate for shunt drift	Non-Provisional	US10359449	US10359449
APD57371US	United States	6/10/2016	US15/179741	Dielectric stack, an isolator device and method of forming an isolator device	Non-Provisional	US10204732	US10204732
APD5742US01	United States	6/5/2017	US62/528872	MAGNETIC FIELD SENSOR	Provisional		
APD5742US02	United States	11/2/2017	US15/801831	Magnetic field sensor	Non-Provisional	US20190011287	
APD57491US	United States	2/3/2017	US15/424,487	Signal Conditioning Circuit and Relay/Circuit Breaker Control Apparatus Including Such a Signal Condition Circuit	Non-Provisional	US2017/250043	
APD575301US	United States	5/12/2017	US15/593981	Resynchronization of sample rate converters	Non-Provisional	US10097200	US10097200
APD57581US	United States	1/18/2017	US15/408948	Fault suppression or recovery for isolated conversion	Non-Provisional	US10355602	US10355602
APD576201US	United States	6/14/2017	US15/622607	Current sensing in two-dimensional area sensors	Non-Provisional	US20170366876	
APD57641US	United States	5/4/2017	US15/586942	Diagnostic waveform generator for a sensor	Non-Provisional	US20180321187	
APD5765US01	United States	10/28/2016	US15/337587	Low-area, low-power, power-on reset circuit	Non-Provisional	US10312902	US10312902
APD57661US	United States	5/4/2017	US15/586922	Sensor bias circuit for improved noise performance	Non-Provisional	US20180323750	

Patent Ref.	Country or Region	Filed Date	Application Number	Application Description	Patent/Design Type	Publication Number	Patent Number
APD57691US	United States	12/22/2016	US15/388726	High-voltage unity-gain buffer	Non-Provisional	US20180183436	
APD57721US	United States	1/3/2017	US15/397389	Method of detecting arc events in a power system, and a power system including an arc detector	Non-Provisional	US10374409	US10374409
APD57781US	United States	12/6/2016	US15/370564	Charge injection compensation circuit	Non-Provisional	US10277223	US10277223
APD57791US	United States	11/4/2016	US15/343674	Method and apparatus to increase dynamic range in delta-sigma adc using internal feedback across all integrators in loop-filter	Non-Provisional	US9800260	US9800260
APD5785US01	United States	11/17/2016	US15/353955	Analog-to-digital converters for lidar systems	Non-Provisional	US20180306908	US10436882
APD57891US	United States	4/12/2017	US15/485919	Power scaling a continuous-time delta sigma modulator	Non-Provisional	US10103744	US10103744
APD579101US	United States	4/6/2017	US15/480905	Dual-input analog-to-digital converter for improved receiver gain control	Non-Provisional	US9960785	US9960785
APD579201US	United States	12/12/2016	US15/375906	Pre-charging circuitry for multiplexer	Non-Provisional	US20180167067	

Patent Ref.	Country or Region	Filed Date	Application Number	Application Description	Patent/Design Type	Publication Number	Patent Number
APD57971US	United States	11/9/2016	US15/347724	Magnetic isolators for increased voltage operations and related methods	Non-Provisional	US20180130867	
APD57991US	United States	3/16/2017	US15/460433	Background flash offset calibration in continuous-time delta-sigma adcs	Non-Provisional	US9843337	US9843337
APD5809US01	United States	2/15/2017	US15/433862	Devices and methods for smart sensor application	Non-Provisional	US10466296	US10466296
APD5812US01	United States	10/3/2016	US15/284374	On-chip measurement for phase-locked loop	Non-Provisional	US10295580	US10295580
APD5813US01	United States	10/3/2016	US15/284190	Fast settling sawtooth ramp generation in a phase-locked loop	Non-Provisional	US10340926	US10340926
APD5814US01	United States	10/3/2016	US15/284195	Adjusting phase of a digital phase-locked loop	Non-Provisional	US9893734	US9893734
APD58161US	United States	12/19/2016	US15/383480	Isolated dc-dc converter with an h-bridge circuit	Non-Provisional	US10003267	US10003267
APD58181US	United States	1/13/2017	US15/406014	Power transfer and feedback across a common isolator	Non-Provisional	US20180205319	
APD5820US01	United States	8/26/2016	US62/380328	Phased array antenna calibration methods	Provisional		
APD5820US02	United States	6/1/2017	US15/611289	Antenna array calibration systems and methods	Non-Provisional	US20180062260	

Patent Ref.	Country or Region	Filed Date	Application Number	Application Description	Patent/Design Type	Publication Number	Patent Number
APD5826US01	United States	3/27/2017	US62/477053	ADAPTIVE CLIPPING TECHNIQUE FOR DECREASING PULSE-WIDTH DISTORTION IN SHUNT-FEEDBACK TRANSIMPEDANCE AMPLIFIERS	Provisional		
APD5826US02	United States	9/7/2017	US15/698491	High dynamic range analog front-end receiver for long range lidar	Non-Provisional	US20180275280	US10338224
APD5826US03	United States	6/14/2019	US16/442173	HIGH DYNAMIC RANGE ANALOG FRONT-END RECEIVER FOR LONG RANGE LIDAR	Non-Provisional	US2019/0293799	
APD58411US	United States	12/20/2016	US15/385450	Method of providing enhanced range accuracy	Non-Provisional	US20180172807	
APD58441US	United States	6/14/2016	US15/182094	Method of and apparatus for learning the phase error or timing delays within a current transducer and power measurement apparatus including current transducer error correction	Non-Provisional	US10132846	US10132846

Patent Ref.	Country or Region	Filed Date	Application Number	Application Description	Patent/Design Type	Publication Number	Patent Number
APD58451US	United States	6/17/2016	US15/185603	Apparatus for and method of providing measurements of uncertainty in respect of a transfer function	Non-Provisional	US10459013	US10459013
APD5848US01	United States	8/1/2017	US15/666475	Monolithic phase change heat sink	Non-Provisional	US20190039883	
APD584902US	United States	9/21/2017	US15/711176	Reference precharge techniques for analog-to-digital converters	Non-Provisional	US10122376	US10122376
APD58491US	United States	11/4/2016	US62/417487	Reference pre-charge technique for SAR ADCs	Provisional		
APD5854US01	United States	1/31/2017	US15/420719	Magnetic sensor position measurement with phase compensation	Non-Provisional	US20180216965	
APD5857US01	United States	8/23/2016	US62/378587	COMPACT INTEGRATED DEVICE PACKAGES	Provisional		
APD5857US02	United States	8/21/2017	US15/681904	Compact integrated device packages	Non-Provisional	US20180062071	
APD58581US	United States	2/17/2017	US15/435732	Eye gaze tracking	Non-Provisional	US20180235465	US10485420
APD585901US	United States	5/4/2017	US62/501416	Digital to Analog Converter Termination	Provisional		
APD585902US	United States	4/6/2018	US15/947222	Digital-to-analog converter (dac) termination	Non-Provisional	US10425098	US10425098
APD58601US	United States	12/5/2016	US15/369087	Adaptively controlled duty cycle clock generation circuit	Non-Provisional	US9838029	US9838029

Patent Ref.	Country or Region	Filed Date	Application Number	Application Description	Patent/Design Type	Publication Number	Patent Number
APD5861US01	United States	12/15/2016	US15/380358	Voltage variable attenuator, an integrated circuit and a method of attenuation	Non-Provisional	US10103712	US10103712
APD5879US02	United States	8/31/2017	US15/692695	Reducing reference charge consumption in analog-to-digital converters	Non-Provisional	US9935648	US9935648
APD58831US	United States	11/4/2016	US15/343361	Sar analog-to-digital converter selective synchronization	Non-Provisional	US9806734	US9806734
APD5887US01	United States	11/4/2016	US62/417968	3D position measurement using 3D field or angle sensors	Provisional		
APD5887US02	United States	8/22/2017	US15/682966	Multi-dimensional measurement using magnetic sensors and related systems, methods, and integrated circuits	Non-Provisional	US20180128648	
APD58901US	United States	2/24/2017	US15/442418	Systems and methods for compression of three dimensional depth sensing	Non-Provisional	US20180249143	
APD58911US	United States	12/30/2016	US15/395589	Light detector calibrating a time-of-flight optical system	Non-Provisional	US20180189977	
APD589301US	United States	1/18/2017	US15/409183	Depth sensing with multiple light sources	Non-Provisional	US20180203102	

Patent Ref.	Country or Region	Filed Date	Application Number	Application Description	Patent/Design Type	Publication Number	Patent Number
APD590101US	United States	6/9/2017	US15/618270	Load current detection techniques for discontinuous conduction mode	Non-Provisional	US102224800	US102224800
APD591101US	United States	5/19/2017	US15/600664	Forming an isolation barrier in an isolator	Non-Provisional	US10290532	US10290532
APD591302US	United States	5/19/2017	US15/600678	Forming an isolation barrier in an isolator	Non-Provisional	US10236221	US10236221
APD5916US01	United States	5/9/2017	US15/590903	Active antenna calibration	Non-Provisional	US10128894	US10128894
APD594001US	United States	5/18/2017	US62/508061	A High Speed Serial Link For Video Interfaces	Provisional		
APD5940US02	United States	8/24/2017	US15/685379	High speed serial link for video interfaces	Non-Provisional	US20180338063	
APD597701US	United States	1/11/2017	US62/445209	ATE DAC Glitch measurement solution	Provisional		
APD59770US02	United States	1/5/2018	US15/863313	Glitch characterization in digital-to-analog conversion	Non-Provisional	US10200055	US10200055
APD600301US	United States	6/14/2017	US15/622846	Systems and methods for measuring oxygen in a patient's bloodstream	Non-Provisional	US20180360359	
APD604401US	United States	6/7/2017	US15/616807	Low power measurement of skin electrical properties	Non-Provisional	US20180353100	
APD606701US	United States	5/4/2017	US15/586869	Impedance characteristic circuit for electrochemical sensor	Non-Provisional	US10288674	US10288674

Patent Ref.	Country or Region	Filed Date	Application Number	Application Description	Patent/Design Type	Publication Number	Patent Number
APD607801US	United States	8/11/2017	US15/674985	Jitter reduction techniques when using digital plls with adcs and dacs	Non-Provisional	US10367516	US10367516
APD608901US	United States	3/24/2017	US15/468781	Serial peripheral interface daisy chain mode system and apparatus	Non-Provisional	US20180276157	
APD609201US	United States	5/4/2017	US15/586848	Multiple string, multiple output digital to analog converter	Non-Provisional	US9941894	US9941894
APD609401US	United States	4/1/2017	US62/480376	Circuit and method for detection of open-circuit inputs to resistor divider front-end of an ADC.	Provisional		
APD6094US02	United States	3/27/2018	US15/937363	Adc input circuit sensing for fault detection	Non-Provisional	US20180284178	
APD610001US	United States	5/4/2017	US15/586877	Internal integrated circuit resistance calibration	Non-Provisional	US10429483	US10429483
APD6141US01	United States	4/14/2017	US62/485667	PHASE DETECTORS FOR CLOCK AND DATA RECOVERY	Provisional		
APD6141US02	United States	7/20/2017	US15/655703	Phase detectors for clock and data recovery	Non-Provisional	US10277389	US10277389
APD6154US01	United States	8/29/2017	US15/690009	Apparatus and methods for compensating radio frequency transmitters for local oscillator leakage	Non-Provisional	US10135472	US10135472

Patent Ref.	Country or Region	Filed Date	Application Number	Application Description	Patent/Design Type	Publication Number	Patent Number
APD6201US02	United States	6/1/2018	US15/995130	3-axis magnetic position system for minimally invasive surgical instrument, systems and methods thereof	Non-Provisional	US20180344203	
APD621401US	United States	6/7/2017	US15/616062	Differential amplifier with modified common mode rejection, and to a circuit with an improved common mode rejection ratio	Non-Provisional	US20180358942	

SCHEDULE 1

IP Assignment

ASSIGNMENT OF RIGHTS

This ASSIGNMENT OF RIGHTS (this "Assignment") is made effective as of November 5, 2018 (the "Effective Date") by and between Analog Devices Global Unlimited Company, a private unlimited company incorporated in Ireland and Bermuda tax resident ("AD GLOBAL") and Analog Devices International Unlimited Company, an Irish incorporated private unlimited company ("ADINTL").

WHEREAS, AD GLOBAL owns certain Intellectual Property (as defined below); and

WHEREAS, AD GLOBAL wishes to transfer AD GLOBAL's entire right, title and interest in and to such Intellectual Property to ADINTL.

NOW THEREFORE, in consideration of the mutual agreements and covenants set forth herein and other good and valuable consideration, the receipt and adequacy of which is hereby acknowledged, and intending to be legally bound hereby, the parties agree as follows:

1. Certain Definitions.

(a) "Intellectual Property" means all IP Rights, Know-How, and related intangibles.

(b) "IP Rights" means any patent, copyright, mask work, or utility model, any application or registration for any patent, copyright, mask work or utility model, or any substitution, divisional, continuation, continuation-in-part, reissue, reexamination or extension (including supplementary protection certificate) of any of the foregoing, subsisting anywhere in the world.

(c) "Know-How" means all proprietary information relating to electronic device technology, including trade secrets, technical information and knowledge, including specifications, drawings, technical data and details of manufacturing processes, and all associated data, but excluding IP Rights.

2. For \$1 consideration, AD GLOBAL hereby assigns to ADINTL all of AD GLOBAL's right, title and interest in and to all Intellectual Property owned by AD GLOBAL as of the Effective Date, including the right to seek and obtain damages for any past infringement of the IP Rights and/or any past misappropriation of the Know-How, and including all rights and obligations of AD GLOBAL under any licenses or other encumbrances in force with respect to such Intellectual Property.

3. For clarity, the assignment under Paragraph 2 includes the sole right to file (a) substitutions, divisionals, continuations, continuations-in-part, reissues, reexaminations, extensions (including supplementary protection certificate) of and foreign counterparts to any of the IP Rights and (b) applications and/or registrations for any patent, copyright, mask work, utility model, trademark, and/or any other intellectual and/or industrial property right in respect of any of the Know-How, in each case ((a) and (b)) anywhere in the world (collectively "Related Rights").

4. AD GLOBAL hereby authorizes and requests the United States Commissioner for Patents and any official of any country and/or countries foreign to the United States whose duty it is to issue patents and/or other evidence and/or forms of intellectual and/or industrial property protection on the IP Rights applications and the Related Rights to issue the same to ADINTL, its successors, legal representatives and assigns.

5. AD GLOBAL hereby represents and warrants that it has full right to convey the entire interests herein assigned, and that it has not executed, and will not execute, any agreement in conflict herewith.

6. AD GLOBAL hereby covenants that it will communicate to ADINTL, its successors, legal representatives and assigns, any facts known to AD GLOBAL respecting the Intellectual Property and the

Related Rights, testify in any legal proceeding, sign all lawful papers, make all rightful oaths, and generally do everything requested by ADINTL to aid ADINTL, its successors, legal representatives and assigns, to obtain full legal and beneficial title to, and enforce proper protection for, the Intellectual Property and the Related Rights anywhere in the world.

7. AD GLOBAL hereby agrees that ADINTL is the intended beneficiary of this instrument and may enforce its provisions against AD GLOBAL.

8. This instrument shall be governed by and interpreted in accordance with the laws of the State of Delaware, without regard to any conflict of laws principles that would require the application of the laws of any other jurisdiction; provided, however, that any matter arising under this instrument that relates solely to a patent granted or patent application filed in a jurisdiction shall be governed by the laws of such jurisdiction applicable to such patent or patent application.

9. This instrument may be executed or accepted in any number of counterparts, each of which shall be deemed an original but all of which together shall constitute one and the same instrument.

[Signature page follows]

IN WITNESS WHEREOF, each party has caused this Assignment to be executed in its name by its properly and duly authorized officer or representative as of the date first set forth above:

Analog Devices Global Unlimited Company



Eileen Wynne, Director

Kevin Lanouette, Secretary

Analog Devices International Unlimited Company

Denis Doyle, Director

Leo McHugh, Director/Secretary

[Signature page to Step 8(i)(ii)(6) IP Assignment of Rights]

IN WITNESS WHEREOF, each party has caused this Assignment to be executed in its name by its properly and duly authorized officer or representative as of the date first set forth above:

Analog Devices Global Unlimited Company

Eileen Wynne, Director



Kevin Lanouette, Secretary

Analog Devices International Unlimited Company

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Leo McHugh, Director/Secretary

[Signature page to Step 8(i)(ii)(6) IP Assignment of Rights]

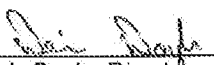
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[Signature page to Step 8(i)(ii)(6) IP Assignment of Rights]

IN WITNESS WHEREOF, each party has caused this Assignment to be executed in its name by its properly and duly authorized officer or representative as of the date first set forth above:

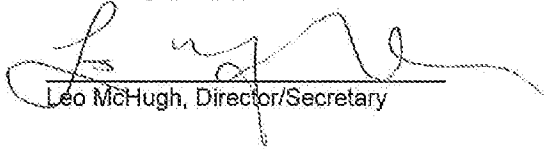
Analog Devices Global Unlimited Company

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Denis Doyle, Director



Leo McHugh, Director/Secretary

[Signature page to Step 8(i)(ii)(6) IP Assignment of Rights]