

PATENT ASSIGNMENT COVER SHEET

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 Stylesheet Version v1.2

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	PATENT SECURITY AGREEMENT

CONVEYING PARTY DATA

Name	Execution Date
MICROSEMI SEMICONDUCTOR (U.S.) INC.	11/25/2013

RECEIVING PARTY DATA

Name:	MORGAN STANLEY & CO. LLC
Street Address:	1585 BROADWAY
City:	NEW YORK
State/Country:	NEW YORK
Postal Code:	10036

PROPERTY NUMBERS Total: 249

Property Type	Number
Patent Number:	6005901
Patent Number:	5963159
Patent Number:	6633894
Patent Number:	6058161
Patent Number:	5956386
Patent Number:	6144722
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Patent Number:	6556674
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Patent Number:	5809109
Patent Number:	6768776
Patent Number:	8406414
Patent Number:	5550502
Patent Number:	5583521
Patent Number:	5909151
Application Number:	13027721
Application Number:	12885906
Application Number:	13270829
Application Number:	13418757

**CORRESPONDENCE DATA**

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ATTORNEY DOCKET NUMBER:	391000/1426
NAME OF SUBMITTER:	REBECCA RODAL



/rebecca rodal/

Date:

11/26/2013

**Total Attachments: 19**

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## PATENT SECURITY AGREEMENT

This PATENT SECURITY AGREEMENT, dated as of November 25, 2013 (“Patent Security Agreement”), made by the signatory hereto (“Grantor”), is in favor of MORGAN STANLEY & CO. LLC, as collateral agent (in such capacity, the “Collateral Agent”) for the Secured Parties (in such capacity, the “Assignee”).

### W I T N E S S E T H:

WHEREAS, Grantor is party to a Guarantee and Collateral Agreement dated as of November 2, 2010 (as amended, supplemented or otherwise modified from time to time, the “Guarantee and Collateral Agreement”) in favor of the Assignee and MORGAN STANLEY SENIOR FUNDING, INC., as administrative agent (in such capacity, the “Administrative Agent”) pursuant to which Grantor is required to execute and deliver this Patent Security Agreement (capitalized terms used but not otherwise defined herein shall have the meanings given to them in the Guarantee and Collateral Agreement);

WHEREAS, pursuant to the terms of the Guarantee and Collateral Agreement, Grantor has created in favor of the Collateral Agent a security interest in, and the Collateral Agent has become a secured creditor with respect to, the Patent Collateral (as defined below);

NOW, THEREFORE, in consideration of the premises and to induce the Agents and the Lenders to enter into the Credit Agreement and to induce Lenders to make their respective extensions of credit to the Borrower thereunder and to induce the Qualified Counterparties to enter into the Specified Hedge Agreements and the Specified Cash Management Agreements and provide financial accommodation, Grantor hereby grants to the Collateral Agent, for the benefit of the Secured Parties, a security interest in all of the following property now owned or at any time hereafter acquired by Grantor or in which Grantor now has or at any time in the future may acquire any right, title or interest (collectively, the “Patent Collateral”), as collateral security for the complete payment and performance when due (whether at the stated maturity, by acceleration or otherwise) of all Secured Obligations:

(a) all Patents of Grantor, including, without limitation, the registered and applied-for Patents of Grantor listed on Schedule 1 attached hereto; and

(b) to the extent not covered by clause (a), all Proceeds of any of the foregoing;

provided, that (i) this Patent Security Agreement shall not constitute a grant of a security interest in any property to the extent that and for as long as such grant of a security interest would be prohibited by the terms of the Guarantee and Collateral Agreement; and (ii) the security interest granted hereby (x) shall attach at all times to all proceeds of such property, (y) shall attach to such property immediately and automatically (without need for any further grant or act) at such time as the condition described in clause (i) ceases to exist and (z) to the extent severable shall in any event attach to all rights in respect of such property that are not subject to the applicable condition described in clause (i).

The security interest granted pursuant to this Patent Security Agreement is granted in conjunction with security interest granted to the Assignee pursuant to the Guarantee and Collateral Agreement and Grantor hereby acknowledges and affirms that the rights and remedies of the Assignee with respect to the security interest in the Patents made and granted hereby are more fully set forth in the Guarantee and Collateral Agreement. In the event that any provision of this Patent Security Agreement is deemed to conflict with the Guarantee and Collateral Agreement, the provisions of the Guarantee and Collateral Agreement shall govern.

Grantor hereby authorizes and requests that the Commissioner of Patents and Trademarks record this Patent Security Agreement.

No later than 90 calendar days immediately following the date hereof, Grantor shall:

(a) prepare, use commercially reasonable efforts to obtain the execution of and, if such execution can be obtained, file with the PTO properly executed releases of all Liens in favor of Morgan Stanley & Co. Incorporated pursuant to the Intellectual Property Security Agreement dated August 4, 2000, recorded in the PTO at Reel 011601/Frame 0539 and the Intellectual Property Security Agreement dated September 30, 2002, recorded in the PTO at Reel 013372/Frame 0063; and

(b) promptly provide to the Collateral Agent evidence of all filings (including recordation notices) made pursuant to the foregoing subsection (a).

**THIS PATENT SECURITY AGREEMENT AND THE RIGHTS AND OBLIGATIONS OF THE PARTIES UNDER THIS PATENT SECURITY AGREEMENT SHALL BE GOVERNED BY, AND CONSTRUED AND INTERPRETED IN ACCORDANCE WITH, THE LAW OF THE STATE OF NEW YORK.**

This Patent Security Agreement may be executed by one or more of the parties to this Patent Security Agreement on any number of separate counterparts, and all of said counterparts taken together shall be deemed to constitute one and the same instrument. Delivery of an executed signature page of this Patent Security Agreement by facsimile transmission or electronic transmission (in PDF format) shall be effective as delivery of a manually executed counterpart hereof. A set of the copies of this Patent Security Agreement signed by all the parties shall be lodged with the Borrower, the Administrative Agent and the Collateral Agent.

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IN WITNESS WHEREOF, Grantor has caused this PATENT SECURITY AGREEMENT to be executed and delivered by its duly authorized officer as of the date first above written.

**MICROSEMI SEMICONDUCTOR (U.S.)  
INC.**

By: \_\_\_\_\_

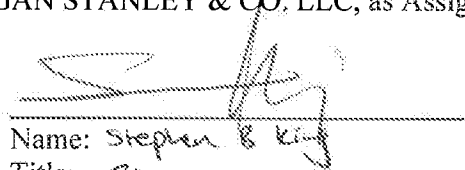
Name: John W. Hohener

Title: Chief Financial Officer and Corporate  
Secretary

Accepted and Agreed:

MORGAN STANLEY & CO, LLC, as Assignee

By:

  
Name: Stephen B King  
Title: ED

## PATENTS

US Patent Registrations and Applications

File #	Patent Title	Country	Date Filed	Serial No.	Patent No.	Grant Date	Owner <sup>1</sup>
S2001	ARRANGEMENT FOR ASYNCHRONOUS DECIMATION USING A FREQUENCY RATIO ESTIMATOR AND METHOD THEREOF	US	2/27/1997	08/807836	6005901	12/21/1999	Legerity, Inc.
S2002	ARRANGEMENT AND METHOD FOR CONTROLLING GAIN OF ANALOG TO DIGITAL CONVERTERS	US	12/5/1997	08/985586	5963159	10/5/1999	Legerity, Inc.
S2003	SIGNAL PROCESSING ARRANGEMENT INCLUDING VARIABLE LENGTH ADAPTIVE FILTER AND METHOD THEREOF	US	5/8/1997	08/853075	6633894	10/14/2003	Legerity, Inc.
S2006	SYSTEM AND METHOD FOR PROGRAMMABLE TELEPHONE SUBSCRIBER LINE TEST	US	6/20/1997	08/879986	6058161	5/2/2000	Legerity, Inc.
S2007	TELEPHONE SUBSCRIBER LINE DIAGNOSTICS SYSTEM AND METHOD	US	6/20/1997	08/880007	5956386	9/21/1999	Legerity, Inc.
S2008	SYSTEM AND METHOD FOR PROGRAMMABLE TELEPHONE SUBSCRIBER LINE TEST IN RING MODE	US	6/20/1997	08/880008	6144722	11/7/2000	Legerity, Inc.
S2009	DEVICE AND METHOD FOR DETERMINING CHARACTERISTICS OF A DIGITAL SUBSCRIBER LINE	US	7/28/2000	09/627680	7006445	2/28/2006	Legerity, Inc.
S2010	PHASE-LOCKED LOOP ARRANGEMENT WITH FAST LOCK MODE	US	6/16/1997	08/876816	6373912	4/16/2002	Legerity, Inc.
S2011	ARRANGEMENT AND METHOD FOR SELECTABLE TIME/FREQUENCY DIVISION MULTIPLEX COMMUNICATION	US	2/27/1998	09/031896	6269086	7/31/2001	Legerity, Inc.
S2013	METHOD AND APPARATUS FOR POWER REGULATION OF DIGITAL DATA TRANSMISSION	US	6/12/1998	09/097031	6226356	5/1/2001	Legerity, Inc.

<sup>1</sup> For all Patents that are held in an entity name other than Microsemi Semiconductor (U.S.) Inc. and expire after January 1, 2014, patent assignment documents were filed with the United States Patent and Trademark Office on November 18, 2013, assigning the ownership of such Patents to Microsemi Semiconductor (U.S.) Inc.

File #	Patent Title	Country	Date Filed	Serial No.	Patent No.	Grant Date	Owner <sup>1</sup>
S2017	ADAPTATION CONTROL ALGORITHM FOR ECHO CANCELLATION USING SIGNAL-VALUE BASED ANALYSIS	US	4/29/1999	09/301848	6426979	7/30/2002	Legerity, Inc.
S2018	SIGNAL DETECTOR WITH MATCHED FILTER COEFFICIENT	US	11/19/1998	09/196258	6556674	4/29/2003	Legerity, Inc.
S2019	METHOD AND APPARATUS FOR DETECTING AND MEASURING FOREIGN VOLTAGES	US	8/4/1998	09/128579	6356624	3/12/2002	Legerity, Inc.
S2021	METHOD AND APPARATUS FOR SCALING MODEM TRANSFER CAPACITY IN A MULTI-CHANNEL COMMUNICATIONS SYSTEM	US	8/27/1998	09/141216	6337877	1/8/2002	Legerity, Inc.
S2022	METHOD AND APPARATUS FOR GENERATING TONES IN A MULTI-TONE MODEM	US	6/29/1998	09/106993	6219377	4/17/2001	Legerity, Inc.
S2023	METHOD AND APPARATUS FOR IMPEDANCE MATCHING	US	3/15/1999	09/268011	6728370	4/27/2004	Legerity, Inc.
S2024	WIRELESS TELEPHONY RING DETECTION METHOD FOR EXTENDED BATTERY LIFE	US	4/13/1998	09/059115	6144840	11/7/2000	Legerity, Inc.
S2024	WIRELESS TELEPHONY RING DETECTION METHOD FOR EXTENDED BATTERY LIFE	US	5/15/2000	09/570644	6311079	10/30/2001	Legerity, Inc.
S2026	METHOD AND APPARATUS FOR DETECTING SIGNAL MISALIGNMENT	US	9/23/1998	09/159028	6046977	4/4/2000	Legerity, Inc.
S2027	CROSS-FRAME DUAL TONE MULTIFREQUENCY DETECTOR	US	9/23/1998	09/159143	6587559	7/1/2003	Legerity, Inc.
S2028	METHOD AND APPARATUS FOR MANAGING DATA TRANSFER AND ACKNOWLEDGEMENTS	US	6/28/1999	09/340578	6545993	4/8/2003	Legerity, Inc.
S2031	METHOD AND APPARATUS FOR ENCRYPTION AND DECRYPTION	US	8/13/1999	09/373934	6778670	8/17/2004	Legerity, Inc.
S2032	METHOD AND APPARATUS FOR PRIORITIZING PACKET DATA TRANSMISSION AND RECEPTION	US	6/28/1999	09/340982	6625128	9/23/2003	Legerity, Inc.
S2033	METHOD AND APPARATUS FOR ACCESSING VARIABLE SIZED BLOCKS OF DATA	US	11/20/1998	09/196537	6560652	5/6/2003	Legerity, Inc.
S2033	METHOD AND APPARATUS FOR ACCESSING VARIABLE SIZED BLOCKS OF DATA	US	9/30/2002	10/261126	8015258	9/6/2011	Zarlink Semiconductor (U.S.) Inc.
S2034	TRANSCEIVER WITH VARIABLE WIDTH CYCLIC PREFIX	US	3/2/1999	09/257674	6535550	3/18/2003	Legerity, Inc.
S2035	METHOD AND APPARATUS FOR INSERTING IDLE SYMBOLS	US	3/2/1999	09/260251	6519280	2/11/2003	Legerity, Inc.
S2041	METHOD AND APPARATUS FOR TRANSMITTING DATA FROM A PLURALITY OF USERS IN A MULTI-TONE MODEM COMMUNICATION SYSTEM	US	7/21/1999	09/357724	6498807	12/24/2002	Legerity, Inc.

File #	Patent Title	Country	Date Filed	Serial No.	Patent No.	Grant Date	Owner <sup>1</sup>
S2042	METHOD AND APPARATUS FOR ALLOCATING TONES TO A PLURALITY OF USERS IN A MULTI-TONE MODEM COMMUNICATIONS SYSTEM	US	7/21/1999	09/359343	6501791	12/31/2002	Legerity, Inc.
S2043	APPARATUS AND METHOD FOR EXAMINING AND STANDARDIZING LINE CONNECTIONS	US	7/28/1999	09/362181	6430266	8/6/2002	Legerity, Inc.
S2044	APPARATUS AND METHOD FOR FACILITATING STANDARDIZED TESTING OF SIGNAL LINES	US	7/28/1999	09/362456	6826155	11/30/2004	Legerity, Inc.
S2045	METHOD AND APPARATUS FOR PRIORITIZING INTERRUPTS IN A COMMUNICATION SYSTEM	US	9/28/1999	09/406936	6553443	4/22/2003	Legerity, Inc.
S2046	An Integrated Silicon Optical Isolator	US	5/19/2008	12/122771	7605010	10/20/2009	Zarlink Semiconductor (U.S.) Inc.
S2047	METHOD AND APPARATUS FOR VERIFYING AND CORRECTING CONNECTIVITY	US	1/5/1999	09/225387	6621831	9/16/2003	Legerity, Inc.
S2048	METHOD FOR CONSERVING POWER IN TRANSCEIVERS	US	2/1/1999	09/243391	6611564	8/26/2003	Legerity, Inc.
S2049	MULTI-TONE TRANSCEIVER FOR MULTIPLE USERS	US	1/22/1999	09/236122	6424674	7/23/2002	Legerity, Inc.
S2051	Method and Apparatus for Frequency Hopping in a Spread Spectrum Digital Cordless Telephone System	US	7/27/1999	09/361893	7042923	5/9/2006	Legerity, Inc.
S2053	SIGNAL DETECTOR WITH AUTOMATIC GAIN CONTROL	US	1/5/1999	09/225978	6580792	6/17/2003	Legerity, Inc.
S2054	SIGNAL DETECTOR WITH DURATION BASED FRAME WIDTH	US	11/19/1998	09/196267	6763106	7/13/2004	Legerity, Inc.
S2055	METHOD AND APPARATUS FOR HANDLING INCOMING CALLS	US	3/5/1999	09/263373	6763092	7/13/2004	Legerity, Inc.
S2057	SIGNAL DETECTOR WITH COEFFICIENT SWAPPING TRANSFORM UNIT	US	1/5/1999	09/225276	6771767	8/3/2004	Legerity, Inc.
S2058	METHOD AND APPARATUS FOR DC FEED CONTROL	US	10/20/1999	09/420713	6671373	12/30/2003	Legerity, Inc.
S2059	METHOD AND APPARATUS FOR ACCESSING VARIABLE SIZED DATA WITH PRIORITIZATION	US	6/28/1999	09/340579	6430661	8/6/2002	Legerity, Inc.
S2060	APPARATUS FOR TRANSMITTING AND RECEIVING SIGNALS	US	6/28/1999	09/340576	6792286	9/14/2004	Legerity, Inc.
S2061	METHOD AND APPARATUS FOR GENERATING COMFORT NOISE	US	9/22/1999	09/401088	6708024	3/16/2004	Legerity, Inc.
S2064	METHOD AND APPARATUS FOR INTRA-BUNDLE SIGNALING	US	7/29/1999	09/363441	6614879	9/2/2003	Legerity, Inc.
S2065	COMMUNICATION DEVICE WITH PRIMITIVE SYNCHRONIZATION SIGNAL	US	1/4/2000	09/477200	6714589	3/30/2004	Legerity, Inc.
S2070	METHOD AND APPARATUS FOR SWITCH HOOK DETECTION	US	4/26/2000	09/558187	6865269	3/8/2005	Legerity, Inc.



File #	Patent Title	Country	Date Filed	Serial No.	Patent No.	Grant Date	Owner <sup>1</sup>
S2072	METHOD AND APPARATUS FOR HANDLING VOICE AND DATA SIGNALS	US	12/29/2000	09/751417	6990191	1/24/2006	Legerity, Inc.
S2073	METHOD AND APPARATUS FOR DC FEED	US	12/29/2000	09/752160	7630490	12/8/2009	Legerity, Inc.
S2075	METHOD AND APPARATUS FOR RINGING	US	12/29/2000	09/752167	7813500	10/12/2010	Legerity, Inc.
S2075	METHOD AND APPARATUS FOR RINGING	US	9/10/2010	12/879968	8369510	2/5/2013	Zarlink Semiconductor (U.S.) Inc.
S2081	CURRENT SENSING ECHO CANCELLATION DEVICE	US	2/6/2002	10/068780	7215764	5/8/2007	Legerity, Inc.
S2084	METHOD AND APPARATUS FOR SENSING CURRENT	US	3/17/2000	09/527768	6778663	8/17/2004	Legerity, Inc.
S2085	Method and Apparatus for Controlling Reset Operations	US	8/21/2000	09/642710	6400195	6/4/2002	Legerity, Inc.
S2086	PROGRAMMABLE MEMORY BASED CONTROL FOR GENERATING OPTIMAL TIMING TO ACCESS SERIAL FLASH DEVICES	US	5/22/2000	09/577402	6714993	3/30/2004	Legerity, Inc.
S2087	METHOD AND APPARATUS FOR DETECTING AN ACTIVATION TONE	US	2/4/2000	09/498435	6661891	12/9/2003	Legerity, Inc.
S2088	METHOD AND APPARATUS FOR DETECTING LINE CARD THRESHOLD	US	12/29/2000	09/753343	7239695	7/3/2007	Legerity, Inc.
S2089	METHOD AND APPARATUS FOR ADAPTIVE DC LEVEL CONTROL	US	12/29/2000	09/751421	7190784	3/13/2007	Legerity, Inc.
S2091	Method and Apparatus for Multi-PHY Communication without an ATM BUS Master	US	4/25/2001	09/844747	7594026	9/22/2009	Legerity, Inc.
S2091	Method and Apparatus for Multi-PHY Communication without an ATM BUS Master	US	8/24/2009	12/546486	7996557	8/9/2011	Zarlink Semiconductor (U.S.) Inc.
S2092	METHOD OF WEAK PULL-UP FOR USE WITH A MICROCONTROLLER IN AN INTEGRATED CIRCUIT	US	10/31/1994	08/332430	5731738	3/24/1998	Legerity, Inc.
S2094	METHOD AND APPARATUS FOR IMPROVING VOLTAGE TO CURRENT SIGNAL CONVERSION	US	2/6/2001	09/778129	6628534	9/30/2003	Legerity, Inc.
S2095	METHOD AND APPARATUS FOR PHANTOM BATTERY FEED	US	3/7/2003	10/384300	6956945	10/18/2005	Legerity, Inc.
S2096	METHOD AND APPARATUS FOR REDUCING FALSE HOOK DETECTION	US	1/11/2001	09/758893	6930751	8/16/2005	Legerity, Inc.
S2097	An Optically Triggered Electro-Static Discharge Protection Circuit	US	3/12/2008	12/046683	7715162	5/11/2010	Zarlink Semiconductor (U.S.) Inc.
S2098	Methods of Counter-Doping Collector Regions in Bipolar Transistors	US	4/2/2008	12/061264	8035196	10/11/2011	Zarlink Semiconductor (U.S.) Inc.
S2099	Trench Capacitor for High Voltage Processes and Method of Manufacturing the Same	US	7/14/2008	12/172532	8269265	9/18/2012	Microsemi Semiconductor (U.S.) Inc.

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S2102	METHOD AND APPARATUS FOR AN ACTIVE IMPEDANCE FEEDBACK	US	3/7/2003	10/384304	7254229	8/7/2007	Legerity, Inc.
S2103	METHOD AND APPARATUS FOR A DIFFERENTIAL FEEDBACK IN AN ACTIVE IMPEDENCE FEEDBACK CIRCUIT	US	3/7/2003	10/384299	7113590	9/26/2006	Legerity, Inc.
S2104	UNBALANCED SLIC WITH BUILT-IN RING CIRCUIT	US	3/7/2003	10/384302	7260210	8/21/2007	Legerity, Inc.
S2105	METHOD AND APPARATUS FOR A SINGLE POWER SUPPLY FOR DUAL POWER MODE	US	3/7/2003	10/384296	7181002	2/20/2007	Legerity, Inc.
S2107	METHODS OF FORMING A P-WELL IN AN INTEGRATED CIRCUIT DEVICE	US	7/27/2004	10/899596	7273776	9/25/2007	Legerity, Inc.
S2108	METHOD AND APPARATUS FOR LONGITUDINAL BALANCE CALIBRATION	US	11/19/2003	10/717365	7453896	11/18/2008	Legerity, Inc.
S2109	MULTI-STAGE EPI PROCESS FOR FORMING SEMICONDUCTOR DEVICES, AND RESULTING DEVICE	US	1/26/2004	10/764777	7141478	11/28/2006	Legerity, Inc.
S2110	DOUBLE TIME-CONSTANT FOR ELECTROSTATIC DISCHARGE CLAMPING	US	12/22/2003	10/745382	6917207	7/12/2005	Legerity, Inc.
S2111	Method and Apparatus for Accessing Memories Having a Time-Variant Response over a PCI Bus by Using Two-Stage DMA Transfers	US	7/13/2001	09/904748	7047328	5/16/2006	Legerity, Inc.
S2112	METHOD AND APPARATUS FOR CONTROLLING ATM STREAMS	US	6/5/2000	09/587722	7239640	7/3/2007	Legerity, Inc.
S2113	OPTICAL ISOLATOR DEVICE, AND METHOD OF MAKING SAME	US	4/5/2004	10/817982	7180098	2/20/2007	Legerity, Inc.
S2113	OPTICAL ISOLATOR DEVICE, AND METHOD OF MAKING SAME	US	1/10/2007	11/621863	7326582	2/5/2008	Legerity, Inc.
S2114	BIPOLAR TRANSISTOR WITH GEOMETRY OPTIMIZED FOR DEVICE PERFORMANCE, AND METHOD OF MAKING SAME	US	7/6/2004	10/885250	7253498	8/7/2007	Legerity, Inc.
S2116	PROTECTION CIRCUIT FOR A SUBSCRIBER LINE INTERFACE CIRCUIT	US	3/12/2008	12/046642	7907381	3/15/2011	Zarlink Semiconductor (U.S.) Inc.
S2117	METHOD AND APPARATUS FOR POWER-MODE CONTROL	US	1/9/2007	11/621426	8090095	1/3/2012	Microsemi Semiconductor (U.S.) Inc.
S2118	Bootstrap Supply for Switched Mode Power Converter	US	8/13/2008	12/190907	8004122	8/23/2011	Zarlink Semiconductor (U.S.) Inc.
S2119	Light Activated Silicon Controlled Switch	US	4/2/2008	12/061085	7821016	10/26/2010	Zarlink Semiconductor (U.S.) Inc.

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S2119	Light Activated Silicon Controlled Switch	US	9/15/2010	12/882640	8012775	9/6/2011	Zarlink Semiconductor (U.S.) Inc.
S2122	METHODS OF FORMING A SHALLOW BASE REGION OF A BIPOLAR TRANSISTOR	US	2/15/2011	13/027721			Zarlink Semiconductor (U.S.) Inc.
S2123	Echo Cancellation Balance Using Noise Generator and Average Power Detection	US	5/28/2008	12/127818	8160240	4/17/2012	Microsemi Semiconductor (U.S.) Inc.
S2142	SELF-CONTAINED SELF-TESTING DATA MODULATOR	US	6/5/1995	08/463683	6122313	9/19/2000	Legerity, Inc.
S2153	LOW VOLTAGE FULLY DIFFERENTIAL OPERATIONAL AMPLIFIER WITH IMPROVED COMMON MODE CIRCUITRY	US	8/21/1997	08/916135	5844442	12/1/1998	Legerity, Inc.
S2155	ANALOG TO DIGITAL CONVERTER WITH MULTI-LEVEL DITHER CURRENT INPUT	US	9/24/1993	08/126545	5416481	5/16/1995	Legerity, Inc.
S2156	FUSE TRIMMING IN PLASTIC PACKAGE DEVICES	US	11/8/1993	08/149191	5384727	1/24/1995	Legerity, Inc.
S2156	FUSE TRIMMING IN PLASTIC PACKAGE DEVICES	US	8/8/1994	08/287214	5412594	5/2/1995	Legerity, Inc.
S2157	METERING SIGNAL LEVEL CONTROL CIRCUIT	US	1/21/1994	08/184564	5452345	9/19/1995	Legerity, Inc.
S2158	METHOD AND APPARATUS FOR PROTECTING CORDLESS TELEPHONE ACCOUNT AUTHENTICATION INFORMATION	US	10/1/1993	08/130636	5384847	1/24/1995	Legerity, Inc.
S2159	LOW DISTORTION OUTPUT STAGE	US	12/14/1993	08/168103	5442309	8/15/1995	Legerity, Inc.
S2160	LOW DISTORTION OPERATIONAL AMPLIFIER	US	11/1/1993	08/146543	5410273	4/25/1995	Legerity, Inc.
S2161	LOW NOISE APPARATUS FOR RECEIVING AN INPUT CURRENT AND PRODUCING AN OUTPUT CURRENT WHICH MIRRORS THE INPUT CURRENT	US	12/16/1993	08/168628	5444363	8/22/1995	Legerity, Inc.
S2162	DIGITAL WAVETABLE AUDIO SYNTHESIZER WITH DELAY-BASED EFFECTS PROCESSING	US	11/2/1994	08/334462	6047073	4/4/2000	Legerity, Inc.
S2163	BURST SYNCHRONIZATION OF TIME DIVISION MULTIPLEXED TRANSCIVER PAIRS	US	5/18/1998	08/914015	5898685	4/27/1999	Legerity, Inc.
S2164	RECEIVER QUALITY MEASUREMENT SYSTEM FOR USE IN DIGITAL CORDLESS TELEPHONES AND LIKE APPARATUS	US	9/20/1995	08/531049	5839061	11/17/1998	Legerity, Inc.
S2165	DUAL-MODE BASEBAND CONTROLLER FOR RADIO-FREQUENCY INTERFACES RELATING TO DIGITAL CORDLESS TELEPHONES	US	2/4/1994	08/192046	5638405	6/10/1997	Legerity, Inc.
S2166	METHOD AND APPARATUS FOR EXTERNAL INTERMEDIATE DATA PROCESSING	US	8/11/1997	08/909383	5946353	8/31/1999	Legerity, Inc.
S2167	METAL PROGRAMMED TRANSISTOR ARRAY	US	3/13/1995	08/402721	5539235	7/23/1996	Legerity, Inc.

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S2168	INPUT/OUTPUT DATA PORT WITH A PARALLEL AND SERIAL INTERFACE	US	2/4/1994	08/191948	5596724	1/21/1997	Legerity, Inc.
S2169	METHOD AND APPARATUS FOR IMPROVED LINK ESTABLISHMENT AND MONITORING IN A COMMUNICATIONS SYSTEM	US	2/4/1994	08/191818	5697062	12/9/1997	Legerity, Inc.
S2170	ANALOG INTEGRATED CIRCUIT	US	6/24/1994	08/264883	5535281	7/9/1996	Legerity, Inc.
S2171	DIGITAL REGENERATIVE COMPARATOR	US	6/27/1994	08/265930	5514987	5/7/1996	Legerity, Inc.
S2172	DIGITAL NOISE SHAPER CIRCUIT	US	11/2/1994	08/333386	5598158	1/28/1997	Legerity, Inc.
S2172	DIGITAL NOISE SHAPER CIRCUIT	US	6/20/1996	08/668,532	6005505	12/21/1999	Legerity, Inc.
S2175	STEREO AUDIO CODEC	US	11/2/1994	08/333467	5589830	12/31/1996	Legerity, Inc.
S2175	STEREO AUDIO CODEC	US	7/17/1996	08/683754	5648778	7/15/1997	Legerity, Inc.
S2179	WAVETABLE AUDIO SYNTHESIZER WITH LEFT OFFSET, RIGHT OFFSET AND EFFECTS VOLUME CONTROL	US	7/6/1999	09/352659	7088835	8/8/2006	Legerity, Inc.
S2180	MONOLITHIC PC AUDIO CIRCUIT WITH ENHANCED DIGITAL WAVETABLE AUDIO SYNTHESIZER	US	11/2/1994	08/333536	5659466	8/19/1997	Legerity, Inc.
S2181	WAVETABLE AUDIO SYNTHESIZER WITH WAVEFORM VOLUME CONTROL FOR ELIMINATING ZIPPER NOISE	US	11/2/1994	08/333562	5742695	4/21/1998	Legerity, Inc.
S2181	WAVETABLE AUDIO SYNTHESIZER WITH WAVEFORM VOLUME CONTROL FOR ELLMINATING ZIPPER NOISE	US	5/28/1997	08/863887	6064743	5/16/2000	Legerity, Inc.
S2182	DIGITAL DECIMATION AND COMPENSATION FILTER SYSTEM	US	11/2/1994	08/333403	5621675	4/15/1997	Legerity, Inc.
S2184	ON-BOARD RING SIGNAL GENERATOR	US	11/15/1994	08/340386	5600713	2/4/1997	Legerity, Inc.
S2185	MULTI-STAGE DIGITAL TO ANALOG CONVERSION CIRCUIT AND METHOD	US	11/2/1994	08/333460	5585802	12/17/1996	Legerity, Inc.
S2186	DIGITAL INTERPOLATION CIRCUIT FOR A DIGITAL-TO-ANALOG CONVERTER CIRCUIT	US	11/2/1994	08/333399	5579004	11/26/1996	Legerity, Inc.
S2188	LOW VOLTAGE LINEAR OUTPUT BUFFER OPERATIONAL AMPLIFIER	US	12/16/1994	08/357953	5477190	12/19/1995	Legerity, Inc.
S2189	INTEGRATED RING DETECTION CIRCUIT AND POWER CROSS DETECTION CIRCUIT WITH PERSISTENCE TIMERS	US	6/7/1995	08/483868	5636273	6/3/1997	Legerity, Inc.
S2190	DC LEVEL CONTROL FOR AN ELECTRONIC TELEPHONE LINE CARD	US	3/3/1995	08/398295	5583934	12/10/1996	Legerity, Inc.
S2191	SIGMA-DELTA MODULATOR HAVING REDUCED DELAY FROM INPUT TO OUTPUT	US	12/9/1994	08/352665	5648779	7/15/1997	Legerity, Inc.
S2195	CURRENT STEERING SEMI-DIGITAL RECONSTRUCTION FILTER	US	2/16/1995	08/389362	5625357	4/29/1997	Legerity, Inc.

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S2195	CURRENT STEERING SEMI-DIGITAL RECONSTRUCTION FILTER	US	9/12/1995	08/526834	5995030	11/30/1999	Legerity, Inc.
S2196	VARIABLE DC FEED CHARACTERISTIC IN A SUBSCRIBER LINE INTERFACE CIRCUIT	US	10/31/1994	08/332512	5619567	4/8/1997	Legerity, Inc.
S2197	SILICON CONTROLLED RECTIFIER WITH REDUCED SUBSTRATE CURRENT	US	12/19/1997	08/994481	5986290	11/16/1999	Legerity, Inc.
S2199	SYSTEM AND METHOD FOR ENHANCED SPEECH QUALITY IN VOICE STORAGE AND RETRIEVAL SYSTEMS	US	3/7/1995	08/399497	5991725	11/23/1999	Legerity, Inc.
S2200	CONVERSION OF COMPRESSED SPEECH CODES BETWEEN ATTENUATED AND UNATTENUATED FORMATS	US	3/3/1995	08/397907	5715309	2/3/1998	Legerity, Inc.
S2201	RING SIGNAL GENERATION IN A SLIC	US	2/28/1997	08/808605	5764755	6/9/1998	Legerity, Inc.
S2202	PROTECTION CIRCUIT FOR TELEPHONE SYSTEMS	US	6/7/1995	08/487999	5638440	6/10/1997	Legerity, Inc.
S2203	IMPLEMENTATION OF A DIGITAL INTERPOLATION FILTER AND METHOD	US	11/14/1995	08/557592	5729483	3/17/1998	Legerity, Inc.
S2204	IMPLEMENTATION AND METHOD FOR A DIGITAL SIGMA-DELTA MODULATOR	US	8/3/1995	08/510139	5581253	12/3/1996	Legerity, Inc.
S2205	IMPLEMENTATION OF A DIGITAL DECIMATION FILTER AND METHOD	US	11/14/1995	08/557511	5751615	5/12/1998	Legerity, Inc.
S2207	ADAPTIVE ECHO CANCELLATION USED WITH ECHO SUPPRESSION TO REDUCE SHORT AND LONG DURATION ECHOES	US	2/17/1995	08/390320	5852661	12/22/1998	Legerity, Inc.
S2210	EXTENDED CHIP SELECT RESET APPARATUS AND METHOD	US	7/20/1995	08/504502	5675271	10/7/1997	Legerity, Inc.
S2211	POWER CROSS DETECTION USING LOOP CURRENT AND VOLTAGE	US	4/10/1996	08/630329	5640451	6/17/1997	Legerity, Inc.
S2212	PARALLEL DECIMATOR METHOD AND APPARATUS	US	9/24/1996	08/710321	5917734	6/29/1999	Legerity, Inc.
S2214	METHOD AND APPARATUS FOR ENTERING A TEST MODE OF AN EXTERNALLY NON-PROGRAMMABLE DEVICE	US	9/24/1996	08/710937	5900739	5/4/1999	Legerity, Inc.
S2215	NON-MODULO POWER OF 2 FREQUENCY DIVIDER	US	10/26/1995	08/548676	5633814	5/27/1997	Legerity, Inc.
S2217	HIGH SWING LOW POWER GENERAL PURPOSE OPERATIONAL AMPLIFIER	US	2/13/1996	08/600843	5805021	9/8/1998	Legerity, Inc.
S2218	HIGH SWING LOW POWER OUTPUT STAGE FOR AN OPERATIONAL AMPLIFIER	US	2/13/1996	08/600841	5739721	4/14/1998	Legerity, Inc.

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S2220	DTMF DETECTOR SYSTEM AND METHOD WHICH PERFORMS IMPROVED TWIST COMPUTATION AND THRESHOLDING	US	1/18/1996	08/588407	5694466	12/2/1997	Legerity, Inc.
S2221	DTMF DETECTOR SYSTEM AND METHOD WHICH PERFORMS FREQUENCY DOMAIN ENERGY CALCULATIONS WITH IMPROVED PERFORMANCE	US	5/24/1996	08/653283	5809133	9/15/1998	Legerity, Inc.
S2222	SYSTEM AND METHOD FOR DUAL TONE MULTIFREQUENCY DETECTION USING VARIABLE FRAME WIDTHS	US	11/29/1995	08/563973	5644634	7/1/1997	Legerity, Inc.
S2223	DTMF DETECTOR SYSTEM AND METHOD WHICH PERFORMS STATIC AND DYNAMIC THRESHOLDING	US	1/11/1996	08/585530	5588053	12/24/1996	Legerity, Inc.
S2224	METHOD OF USING AN AUDIO TRANSMISSION SIGNAL TO TRANSMIT VIDEO DATA	US	8/21/1997	08/915667	6008856	12/28/1999	Legerity, Inc.
S2225	METHOD AND APPARATUS FOR ENCODING OF OUTPUT SYMBOL SIZE	US	8/21/1997	08/915690	6108390	8/22/2000	Legerity, Inc.
S2229	DSP WITH REGISTER FILE AND MULTI-FUNCTION INSTRUCTION SEQUENCER FOR VECTOR PROCESSING BY MACU	US	5/6/1996	08/643342	5732251	3/24/1998	Legerity, Inc.
S2236	COMBINED ANALOG AND DIGITAL COMMUNICATIONS DEVICE	US	8/13/1996	08/696201	5815505	9/29/1998	Legerity, Inc.
S2237	STROBED COMPARATOR FOR A LARGE COMMON MODE RANGE	US	6/21/1996	08/668414	5668486	9/16/1997	Legerity, Inc.
S2239	NARROWBAND DIGITAL CORDLESS TELEPHONE	US	12/6/1996	08/760883	6125139	9/26/2000	Legerity, Inc.
S2240	INTEGRATED CIRCUIT RESET INCORPORATING BATTERY MONITOR AND WATCHDOG TIMER/BATTERY MONITOR WITH SOFTWARE TRIM	US	8/1/1997	08/914017	6307480	10/23/2001	Legerity, Inc.
S2240	INTEGRATED CIRCUIT RESET INCORPORATING BATTERY MONITOR AND WATCHDOG TIMER/BATTERY MONITOR WITH SOFTWARE TRIM	US	7/6/1998	09/110798	6118384	9/12/2000	Legerity, Inc.
S2241	APPARATUS AND METHOD FOR PROTOCOL INTERFACE	US	10/4/1996	08/726268	5978688	11/2/1999	Legerity, Inc.
S2242	DSP ARCHITECTURE FOR A FIR-TYPE FILTER AND METHOD	US	11/14/1995	08/555685	5732004	3/24/1998	Legerity, Inc.
S2242	DSP ARCHITECTURE FOR A FIR-TYPE FILTER AND METHOD	US	8/29/1997	08/919958	6295011	9/25/2001	Legerity, Inc.
S2243	DIGITAL DIRECT CURRENT FEED CONTROL FOR A COMMUNICATION SYSTEM	US	8/21/1996	08/699049	5878133	3/2/1999	Legerity, Inc.

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S2245	THRESHOLD VOLTAGE LEVEL GENERATOR FOR TIME DIVISION DUPLEX COMMUNICATIONS	US	5/14/1997	08/856358	5900749	5/4/1999	Legerity, Inc.
S2246	COMMUNICATIONS DEVICE WITH IMPROVED RING SIGNAL DETECTION	US	12/5/1996	08/760818	5796815	8/18/1998	Legerity, Inc.
S2247	TELEPHONE CALLING PARTY ANNOUNCEMENT SYSTEM AND METHOD	US	9/24/1997	08/936155	6373925	4/16/2002	Legerity, Inc.
S2249	SYSTEM AND METHOD FOR PERFORMING ECHO CANCELLATION IN A COMMUNICATIONS NETWORK EMPLOYING A MIXED MODE LMS ADAPTIVE BALANCE FILTER	US	1/30/1996	08/594018	5887059	3/23/1999	Legerity, Inc.
S2250	APPARATUS AND METHOD FOR AUTOMATED TESTING OF A PROGRAMMABLE ANALOG GAIN STAGE	US	12/16/1996	08/771337	5861774	1/19/1999	Legerity, Inc.
S2252	FIFO AND SYSTEM SYNCHRONIZATION SYSTEM AND METHOD	US	9/4/1997	08/923321	6075831	6/13/2000	Legerity, Inc.
S2254	SYSTEM AND METHOD FOR PERFORMING COMBINED DIGITAL/ANALOG AUTOMATIC GAIN CONTROL FOR IMPROVED CLIPPING SUPPRESSION	US	9/12/1996	08/712773	5841385	11/24/1998	Legerity, Inc.
S2255	SYSTEM AND METHOD FOR PERFORMING AUTOMATIC GAIN CONTROL WITH GAIN SCHEDULING AND ADJUSTMENT AT ZERO CROSSING FOR REDUCING DISTORTION	US	9/12/1996	08/712870	5838269	11/17/1998	Legerity, Inc.
S2257	COMMUNICATIONS DEVICE INCLUDING AN IMPROVED CPE ALERTING SIGNAL (CAS) DETECTION SYSTEM	US	4/20/1998	09/062894	6269160	7/31/2001	Legerity, Inc.
S2260	COMPUTER SYSTEM AND METHOD FOR GENERATING DELAY-BASED AUDIO EFFECTS IN A WAVETABLE MUSIC SYNTHESIZER WHICH STORES WAVETABLE DATA IN SYSTEM MEMORY	US	3/25/1996	08/623850	5809342	9/15/1998	Legerity, Inc.
S2261	Computer System and Method for Performing Wavetable Music Synthesis which Stores Wavetable Data in System Memory Employing a High Priority I/O BUS Request Mechanism for Improved Audio Fidelity	US	3/25/1996	08/622472	5717154	2/10/1998	Legerity, Inc.
S2262	COMPUTER SYSTEM AND METHOD FOR PERFORMING WAVETABLE MUSIC SYNTHESIS WHICH STORES WAVETABLE DATA IN SYSTEM MEMORY WHICH MINIMIZES AUDIO INFIDELITY DUE TO WAVETABLE DATA ACCESS LATENCY	US	3/25/1996	08/622761	5689080	11/18/1997	Legerity, Inc.
S2264	APPARATUS FOR PREVENTING ACCIDENTAL OR INTENTIONAL FUSE BLOWING	US	5/31/1996	08/652640	5731760	3/24/1998	Legerity, Inc.

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S2265	HIGH PERFORMANCE ECHO CANCELLER FOR HIGH SPEED MODEM	US	10/28/1996	08/739009	5790658	8/4/1998	Legerity, Inc.
S2266	SYSTEM AND METHOD FOR PERFORMING SOFTWARE PATCHES IN EMBEDDED SYSTEMS	US	12/5/1996	08/759611	5901225	5/4/1999	Legerity, Inc.
S2267	CIRCUIT FOR SETTING A DEVICE INTO A TEST MODE BY CHANGING A FIRST PORT TO A FIXED CLOCK AND A SECOND PORT TO A NON-FIXED CLOCK	US	7/1/1996	08/675297	5982815	11/9/1999	Legerity, Inc.
S2268	CONFIGURABLE DIGITAL WIRELESS AND WIRED COMMUNICATIONS SYSTEM ARCHITECTURE FOR IMPLEMENTING BASEBAND FUNCTIONALITY	US	9/25/1996	08/719799	5790817	8/4/1998	Legerity, Inc.
S2269	MULTIPOINT ACCESS PROTOCOL UTILIZING A POINT-TO-POINT METHODOLOGY	US	3/19/1997	08/820526	6011781	1/4/2000	Legerity, Inc.
S2272	ELECTRONIC SYSTEM HAVING A MULTISTAGE LOW NOISE OUTPUT BUFFER SYSTEM	US	8/26/1997	08/919126	6037810	3/14/2000	Legerity, Inc.
S2273	MONITORING LINE CONDITIONS IN THE DATA TRANSMISSION MODE	US	5/9/1997	08/853300	6374375	4/16/2002	Legerity, Inc.
S2274	INTERMEDIATE FREQUENCY GAIN STAGE WITH RECTIFIER	US	1/8/1997	08/780691	5893028	4/6/1999	Legerity, Inc.
S2275	DIRECT CURRENT FEED WITH LINE STATUS CHANGE ADAPTATION IN A COMMUNICATION SYSTEM	US	6/6/1997	08/870895	5926544	7/20/1999	Legerity, Inc.
S2276	SILENT POLARITY REVERSAL IN A COMMUNICATION SYSTEM	US	6/6/1997	08/870894	5970099	10/19/1999	Legerity, Inc.
S2277	RING TRIP DETECTION IN A COMMUNICATION SYSTEM	US	6/6/1997	08/870893	6219417	4/17/2001	Legerity, Inc.
S2278	SWITCH HOOK STATUS DETERMINATION IN A COMMUNICATION SYSTEM	US	6/6/1997	08/870892	6178241	1/23/2001	Legerity, Inc.
S2279	DETECTION OF TONAL SIGNALS	US	1/20/1998	09/008967	5970447	10/19/1999	Legerity, Inc.
S2280	SYSTEM AND METHOD FOR BIT INTERLEAVING OF FULL-RATE SPEECH DATA	US	6/12/1997	08/873625	6101465	8/8/2000	Legerity, Inc.
S2280	SYSTEM AND METHOD FOR BIT INTERLEAVING OF FULL-RATE SPEECH DATA	US	5/26/2000	09/580654	6324504	11/27/2001	Legerity, Inc.
S2281	HIGH SPEED ANALOG FLIP-FLOP WITH EMBEDDED LOGIC AND PHASE-LOCKED-LOOP CIRCUIT EMPLOYING THE SAME	US	2/26/1997	08/806289	5818293	10/6/1998	Legerity, Inc.
S2283	INTEGRATED CIRCUIT HAVING A PROGRAMMABLE INPUT/OUTPUT PROCESSOR THAT IS USED FOR INCREASING THE FLEXIBILITY OF COMMUNICATIONS	US	9/4/1998	09/148103	6219824	4/17/2001	Legerity, Inc.
S2288	SYSTEM AND METHOD FOR DETECTING FLOATING NODES WITHIN A SIMULATED INTEGRATED CIRCUIT	US	3/31/2000	09/540191	6285975	9/4/2001	Legerity, Inc.



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S2289	SYSTEM AND METHOD FOR PROVIDING FDD AND TDD MODES OF OPERATION FOR A WIRELESS COMMUNICATIONS DEVICE	US	5/15/1997	08/856541	5987010	11/16/1999	Legerity, Inc.
S2291	COMMUNICATIONS SYSTEM WITH MULTIPLE, SIMULTANEOUS ACCESSES TO A MEMORY	US	12/1/1997	08/980579	5872993	2/16/1999	Legerity, Inc.
S2294	METHOD AND SYSTEM FOR IMPROVED ANALOG SIGNAL DETECTION	US	9/25/1998	09/160484	6665350	12/16/2003	Legerity, Inc.
S2296	Tone Detector with Noise Detection and Dynamic Thresholding for Robust Performance	US	3/22/2004	10/805917	7024357	4/4/2006	Legerity, Inc.
S2296	Tone Detector with Noise Detection and Dynamic Thresholding for Robust Performance	US	9/25/1998	09/160415	6711540	3/23/2004	Legerity, Inc.
S2297	Apparatus and Method to Reduce Power Amplifier Noise Generation in a Multiplexed Communication System	US	12/16/1998	09/212744	6404824	6/11/2002	Legerity, Inc.
S2298	EFFICIENT DYNAMIC ENERGY THRESHOLDING IN MULTIPLE-TONE MULTIPLE FREQUENCY DETECTORS	US	9/25/1998	09/160417	6574334	6/3/2003	Legerity, Inc.
S2299	METHOD AND SYSTEM FOR IMPROVED DETECTION OF ANALOG SIGNALS	US	9/25/1998	09/160485	6370555	4/9/2002	Legerity, Inc.
S2301	System and Method for Identifying and Announcing a Caller and a Callee of an Incoming Telephone Call	US	11/13/1997	08/969780	6385303	5/7/2002	Legerity, Inc.
S2314	METHOD AND SYSTEM TO METER AND CONTROL USAGE OF TELEPHONE SYSTEMS	US	3/17/1999	09/270707	6246756	6/12/2001	Legerity, Inc.
S2320	A COMMUNICATIONS SYSTEM WITH A CONFIGURABLE DATA TRANSFER ARCHITECTURE	US	12/1/1997	08/980578	6012136	1/4/2000	Legerity, Inc.
S2321	CONFIGURING A COMMUNICATIONS SYSTEM WITH A CONFIGURABLE DATA TRANSFER ARCHITECTURE	US	12/1/1997	08/980580	6029239	2/22/2000	Legerity, Inc.
S2324	SELF-ALIGNED DUAL-BASE SEMICONDUCTOR PROCESS AND STRUCTURE INCORPORATING MULTIPLE BIPOLAR DEVICE TYPES	US	5/17/2000	09/573146	6437421	8/20/2002	Legerity, Inc.
S2325	BIPOLAR JUNCTION TRANSISTOR INCORPORATING INTEGRAL FIELD PLATE	US	5/17/2000	09/573149	6445058	9/3/2002	Legerity, Inc.
S2326	LATERAL BIPOLAR JUNCTION TRANSISTOR WITH REDUCED PARASITIC CURRENT LOSS	US	5/3/2000	09/563979	6372595	4/16/2002	Legerity, Inc.
S2355	GRADUAL ON OUTPUT BUFFER CIRCUIT INCLUDING A REVERSE TURN-OFF APPARATUS	US	10/6/1993	08/132548	5424653	6/13/1995	Legerity, Inc.
S2357	CASCADE OPERATIONAL AMPLIFIER WITH MULTIPLE INPUT STAGE	US	7/7/1995	08/499315	5604464	2/18/1997	Legerity, Inc.
S2358	HIGH CONVERSION GAIN CMOS MIXER	US	3/14/1996	08/615734	5768700	6/16/1998	Legerity, Inc.

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S2359	DIFFERENTIAL CMOS CURRENT AMPLIFIER WITH CONTROLLED BANDWIDTH AND COMMON MODE DISTORTION	US	2/6/1996	08/595870	5629641	5/13/1997	Legerity, Inc.
S2360	TRANSISTOR RATIO CONTROLLED CMOS TRANSMISSION LINE EQUALIZER	US	9/3/1996	08/706885	5805031	9/8/1998	Legerity, Inc.
S2362	SIGNAL DETECTION CIRCUIT USING A PLURALITY OF DELAY STAGES WITH EDGE DETECTION LOGIC	US	11/19/1997	08/974672	5942937	8/24/1999	Legerity, Inc.
S2364	DIGITAL COMMUNICATIONS USING SERIALIZED DELAY LINES	US	11/17/1997	08/972227	6031473	2/29/2000	Legerity, Inc.
S2365	CIRCUIT AND METHODOLOGY FOR TRANSFERRING SIGNALS BETWEEN SEMICONDUCTOR DEVICES	US	11/3/1997	08/962667	6192069	2/20/2001	Legerity, Inc.
S2366	CABLE LENGTH ESTIMATION CIRCUIT USING DATA SIGNAL EDGE RATE DETECTION AND ANALOG TO DIGITAL CONVERSION	US	6/10/1997	08/872272	5818378	10/6/1998	Legerity, Inc.
S2369	APPARATUS AND METHOD FOR DECODING DIFFERENTIAL MULTI-LEVEL DATA WITH ADAPTIVE THRESHOLD CONTROL	US	3/25/1998	09/047439	5969646	10/19/1999	Legerity, Inc.
S2371	DIFFERENTIAL ENCODING ARRANGEMENT FOR A DISCRETE MULTI-TONE TRANSMISSION SYSTEM	US	4/7/1999	09/286989	6434188	8/13/2002	Legerity, Inc.
S2372	COLLISION HANDLING SCHEME FOR DISCRETE MULTI-TONE DATA COMMUNICATIONS NETWORK	US	4/7/1999	09/286987	6339599	1/15/2002	Legerity, Inc.
S2373	METHOD AND APPARATUS FOR ACHIEVING FREQUENCY DIVERSITY BY USE OF MULTIPLE IMAGES	US	4/7/1999	09/286992	6456602	9/24/2002	Legerity, Inc.
S2374	METHOD AND APPARATUS FOR FREQUENCY SHIFTING WITH A CLOCK SIGNAL	US	4/7/1999	09/286993	6449262	9/10/2002	Legerity, Inc.
S2377	METHODS AND APPARATUS FOR CHANNEL ADAPTATION IN A DMT BASED SYSTEM	US	4/7/1999	09/286996	6577598	6/10/2003	Legerity, Inc.
S2378	METHOD FOR DETERMINING A DECIMATION PATTERN IN A NETWORK COMMUNICATIONS RECEIVER	US	2/23/2000	09/510775	6651078	11/18/2003	Legerity, Inc.
S2380	METHOD AND APPARATUS FOR MIXING DOWN AND SPECTRUM FOLDING A FREQUENCY DIVERSE MODULATED CARRIER	US	2/2/2000	09/497030	6728325	4/27/2004	Legerity, Inc.
S2387	BATTERY FEED FOR TELEPHONE LINE CARDS	US	12/28/1993	08/174117	5444777	8/22/1995	Legerity, Inc.
S2390	AMPLIFIER CIRCUIT WITH REGENERATIVE BIASING	US	11/19/2001	10/001274	6657496	12/2/2003	Legerity, Inc.
S2391	FREQUENCY DEPENDENT IMPEDANCE SYNTHESIS FOR DSL INTERFACE CIRCUITS	US	12/13/2001	10/017883	6842518	1/11/2005	Legerity, Inc.

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S2392	CAPACITOR CANCELLATION METHOD AND APPARATUS	US	12/13/2001	10/020379	6940969	9/6/2005	Legerity, Inc.
S2393	RETURNING RINGING SIGNALS THROUGH THE TIP AMPLIFIER OF SUBSCRIBER-LINE INTERFACE CIRCUITRY	US	8/22/2003	10/646624	6925178	8/2/2005	Legerity, Inc.
S2394	OVERVOLTAGE PROTECTOR	US	7/24/1995	08/506287	5631797	5/20/1997	Legerity, Inc.
S2395	SELF-MONITORING LINE INTERFACE CIRCUIT	US	8/7/1996	08/693428	5881129	3/9/1999	Legerity, Inc.
S2396	DUAL VOLTAGE, SELF-MONITORING LINE CIRCUIT	US	8/7/1996	08/693426	5854839	12/29/1998	Legerity, Inc.
S2399	TELEPHONE BATTERY FEED CIRCUIT INCLUDING NOISE REDUCTION CIRCUIT	US	9/28/1994	08/314101	5528688	6/18/1996	Legerity, Inc.
S2401	VOLTAGE SENSING CURRENT FOLDBACK SWITCH CIRCUIT	US	9/29/1998	09/162662	6169425	1/2/2001	Legerity, Inc.
S2402	TELEPHONE RINGING SIGNAL DETECTOR	US	5/19/1995	08/445236	5675640	10/7/1997	Legerity, Inc.
S2403	LOW OPERATING POWER, HIGH VOLTAGE RINGING SWITCH CIRCUIT	US	8/22/2000	09/643253	6333664	12/25/2001	Legerity, Inc.
S2405	Method and Apparatus for Metallic Line Testing of a Subscriber Line	US	11/3/2008	12/263628	8259908	9/4/2012	Microsemi Semiconductor (U.S.) Inc.
S2406	Method and Apparatus for Controlling Ringing Voltage	US	8/7/2009	12/537914	8379839	2/19/2013	Microsemi Semiconductor (U.S.) Inc.
S2407	Method and Apparatus for Battery Switching During Ringing	US	8/7/2009	12/537937	8363822	1/29/2013	Microsemi Semiconductor (U.S.) Inc.
S2408	Method and Apparatus for Detecting Ring Trip Precursors	US	8/7/2009	12/537926	8325908	12/4/2012	Microsemi Semiconductor (U.S.) Inc.
S2409	Method and Apparatus for Shared Positive Protection	US	8/31/2009	12/550782	8442213	5/14/2013	Microsemi Semiconductor (U.S.) Inc.
S2410	Overvoltage Protection with Power Sink	US	8/31/2009	12/550816	8406417	3/26/2013	Microsemi Semiconductor (U.S.) Inc.
S2411	INTEGRATED RING SENSOR WITH FAULT DETECTION	US	6/1/1995	08/457668	5809109	9/15/1998	Legerity, Inc.
S2412	Transcoder-CODEC Circuit Arrangement and Method that Supports Voice-Switched Hands-Free Radio Operation	US	3/25/1998	09/047866	6768776	7/27/2004	Legerity, Inc.

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S2413	Method and Apparatus for Dynamically Scheduling Ringing Signals	US	10/9/2009	12/576941	8406414	3/26/2013	Microsemi Semiconductor (U.S.) Inc.
S2414	Shared Protection Scheme for Multiple Variable Batteries	US	9/20/2010	12/885906			Microsemi Semiconductor (U.S.) Inc.
S2415	Communication System in a Package Formed on a Metal Microstructure	US	10/11/2011	13/270829			Microsemi Semiconductor (U.S.) Inc.
S2416	Method and Apparatus for Wideband and Super-Wideband Telephony	US	3/13/2012	13/418757			Microsemi Semiconductor (U.S.) Inc.
S322	Control Circuit and Method for Thin Film Head Write Driver	US	5/23/1995	08/447978	5550502	8/27/1996	Mitel Semiconductor, Inc.
S323	Compact Antenna for Portable Microwave Radio	US	8/11/1995	08/514392	5583521	12/10/1996	Mitel Semiconductor, Inc.
S328	Improved Ring Oscillator Circuit	US	12/19/1996	08/769578	5909151	6/1/1999	Mitel Semiconductor, Inc.