

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT6782925

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
MARVELL TECHNOLOGY CAYMAN I	06/20/2021

RECEIVING PARTY DATA

Name:	CAVIUM INTERNATIONAL
Street Address:	C/O OCORIAN TRUST (CAYMAN) LIMITED,
Internal Address:	WINDWARD 3, REGATTA OFFICE PARK, P.O. BOX 1350
City:	GRAND CAYMAN
State/Country:	CAYMAN ISLANDS
Postal Code:	KY1-1108

PROPERTY NUMBERS Total: 907

Property Type	Number
Patent Number:	6492873
Patent Number:	6507690
Patent Number:	6574392
Patent Number:	6591036
Patent Number:	6618001
Patent Number:	6624255
Patent Number:	6664842
Patent Number:	6689637
Patent Number:	6689664
Patent Number:	6700181
Patent Number:	6703907
Patent Number:	6709925
Patent Number:	6709933
Patent Number:	6716735
Patent Number:	6728410
Patent Number:	6734058
Patent Number:	6743665
Patent Number:	6759287
Patent Number:	6765263

PATENT

Property Type	Number
Patent Number:	6790767
Patent Number:	6798282
Patent Number:	6800553
Patent Number:	6803308
Patent Number:	6806150
Patent Number:	6826496
Patent Number:	6830997
Patent Number:	6833232
Patent Number:	6836185
Patent Number:	6841471
Patent Number:	6859075
Patent Number:	6863548
Patent Number:	6870214
Patent Number:	6917761
Patent Number:	6931443
Patent Number:	6940898
Patent Number:	6944400
Patent Number:	6950486
Patent Number:	6977201
Patent Number:	6977945
Patent Number:	6980021
Patent Number:	7010008
Patent Number:	7020402
Patent Number:	7031383
Patent Number:	7031906
Patent Number:	7035330
Patent Number:	7039104
Patent Number:	7057453
Patent Number:	7061978
Patent Number:	7081775
Patent Number:	7082199
Patent Number:	7085397
Patent Number:	7116684
Patent Number:	7120193
Patent Number:	7130366
Patent Number:	7139271
Patent Number:	7142564
Patent Number:	7145910

Property Type	Number
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Patent Number:	7186641
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Patent Number:	7192869
Patent Number:	7197694
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Patent Number:	7244679
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Patent Number:	7253039
Patent Number:	7259053
Patent Number:	7259074

Property Type	Number
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Patent Number:	7259105
Patent Number:	7262097
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Patent Number:	7273792
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Patent Number:	7348243

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Patent Number:	7361562
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Patent Number:	7459394
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Patent Number:	7489694
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Patent Number:	7502343
Patent Number:	7507625
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Patent Number:	7561617
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Patent Number:	7855407
Patent Number:	7902669
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Patent Number:	7919370
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Patent Number:	7923324
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Patent Number:	7935551
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Patent Number:	7973374
Patent Number:	7977770
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Patent Number:	8009981
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Patent Number:	8030149
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Patent Number:	8044478
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Patent Number:	8048799
Patent Number:	8050318
Patent Number:	8067311
Patent Number:	8071971
Patent Number:	8074188
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Patent Number:	8084317
Patent Number:	8089106
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Patent Number:	8120080
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Patent Number:	8229303
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Patent Number:	8265134
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Patent Number:	8457504
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Patent Number:	8639112
Patent Number:	8731031
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Patent Number:	8831074
Patent Number:	8855176
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Patent Number:	8873974
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Patent Number:	8885766
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Patent Number:	8947281
Patent Number:	8948608
Patent Number:	8964820
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Patent Number:	8983291
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Patent Number:	9252903
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Patent Number:	9323128
Patent Number:	9323712
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Patent Number:	9391711
Patent Number:	9391715
Patent Number:	9397702
Patent Number:	9413493
Patent Number:	9413523
Patent Number:	9423561
Patent Number:	9425903
Patent Number:	9430437
Patent Number:	9432000
Patent Number:	9432123
Patent Number:	9438255
Patent Number:	9438376
Patent Number:	9454059
Patent Number:	9460257
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Patent Number:	9548809
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Patent Number:	9548856
Patent Number:	9548858
Patent Number:	9549232
Patent Number:	9552006
Patent Number:	9553569

Property Type	Number
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Patent Number:	9553672
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Patent Number:	9553742
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Patent Number:	9587992
Patent Number:	9602116
Patent Number:	9608666
Patent Number:	9608799
Patent Number:	9612457
Patent Number:	9621176
Patent Number:	9621273
Patent Number:	9621280
Patent Number:	9621382
Patent Number:	9628055
Patent Number:	9632390
Patent Number:	9634611
Patent Number:	9634760
Patent Number:	9639281
Patent Number:	9641255
Patent Number:	9641313
Patent Number:	9647643
Patent Number:	9647761
Patent Number:	9647799
Patent Number:	9647825
Patent Number:	9651751
Patent Number:	9654221
Patent Number:	9654253
Patent Number:	9654311

Property Type	Number
Patent Number:	9660730
Patent Number:	9660841
Patent Number:	9664854
Patent Number:	9665289
Patent Number:	9671557
Patent Number:	9671580
Patent Number:	9671581
Patent Number:	9673910
Patent Number:	9673972
Patent Number:	9683903
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Patent Number:	9728829
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Patent Number:	9762984
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Property Type	Number
Patent Number:	9787423
Patent Number:	9787431
Patent Number:	9793863
Patent Number:	9806686
Patent Number:	9806722
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Patent Number:	9810928
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Property Type	Number
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Property Type	Number
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Patent Number:	10630414
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Patent Number:	10637501
Patent Number:	10637512
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Patent Number:	10958354
Application Number:	17171801
Application Number:	16828559
Application Number:	17071701
Application Number:	16848597
Application Number:	16928821
Application Number:	16824261
Application Number:	17090482

Property Type	Number
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Property Type	Number
Application Number:	16898358
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Application Number:	17148368
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Application Number:	17168916
Application Number:	10290993
Application Number:	16576639
Application Number:	17088197
Application Number:	16912535
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Application Number:	17127510
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Application Number:	17190867
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Property Type	Number
Application Number:	17191410
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Application Number:	17225789
Application Number:	17109744
Application Number:	16904381
Application Number:	17162884
Application Number:	17166900
Application Number:	16808055
Application Number:	16843751
Application Number:	16951653
Application Number:	17239327
Application Number:	16158153
Application Number:	15962906
Application Number:	17224835

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ATTORNEY DOCKET NUMBER: 5059-50033

NAME OF SUBMITTER: STEPHANIE STEVENS

SIGNATURE: /Stephanie Stevens/

DATE SIGNED: 06/25/2021

Total Attachments: 68

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ASSIGNMENT

WHEREAS, Marvell Technology Cayman I, a corporation organized under the laws of Cayman Islands, and with offices at c/o Ocorian Trust (Cayman) Limited, Windward 3, Regatta Office Park, P.O. Box 1350, Grand Cayman, Cayman Islands, KY1-1108 (hereinafter "**Assignor**"), owns the patents and patent applications listed in Exhibit A attached hereto and incorporated herein by this reference (hereinafter "**Group 1**");

WHEREAS, Cavium International, a corporation organized under the laws of Cayman Islands, and with offices at c/o Ocorian Trust (Cayman) Limited, Windward 3, Regatta Office Park, P.O. Box 1350, Grand Cayman, Cayman Islands, KY1-1108 (hereinafter "**Assignee**"), desires to acquire the Assignor's ownership interest in, to and under the **Group 1**; and

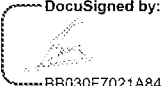
NOW, THEREFORE, for consideration of one dollar (\$1.00) and other good and valuable consideration paid by Assignee to Assignor, the receipt and sufficiency of which hereby is acknowledged, Assignor does hereby sell, assign and transfer to Assignee its entire interest in and to the **Group 1**, including all divisions, continuations, reexaminations, reissues, and foreign counterparts of the applications and patent registrations for the **Group 1** (and the right to claim priority and the right to apply for any of the foregoing); including assignment of any and all provisional applications that are relied upon for priority; all rights to causes of action and remedies related thereto (including, without limitation, the right to sue for past, present or future infringement, misappropriation or violation of rights related to the foregoing); and any and all other rights and interests arising out of, in connection with or in relation to the **Group 1**.

FURTHER, Assignor hereby covenants and agrees to execute and deliver, at the request of Assignee, such further instruments of transfer and assignment and to take any other action as such Assignee may reasonably request to more effectively consummate the assignments contemplated by this Assignment. Specifically, Assignor agrees to, at Assignee's expense, execute, acknowledge and deliver such further documents, instruments, conveyances and assurances and take such further actions as may be reasonably required to register in the name of Assignee the assignment of any of the Patents in **Group 1** in any appropriate governmental agency or registrar.

IN WITNESS WHEREOF, Assignor and Assignee have executed and delivered this Patent Assignment by their duly authorized representatives with an effective time/date of 12:01am PDT on **June 20, 2021**.

ASSIGNOR:

Marvell Technology Cayman I,
a corporation organized under the laws of Cayman Islands

By:  _____
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Name: Andre Slabbert
Title: Director

Accepted by:

ASSIGNEE:

Cavium International,
a corporation organized under the laws of Cayman Islands

By: _____

Name: Carol Feathers
Title: Director

IN WITNESS WHEREOF, Assignor and Assignee have executed and delivered this Patent Assignment by their duly authorized representatives with an effective time/date of 12:01am PDT on **June 20, 2021**.

ASSIGNOR:

Marvell Technology Cayman I,
a corporation organized under the laws of Cayman Islands

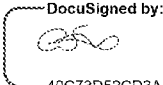
By: _____

Name: Andre Slabbert
Title: Director

Accepted by:

ASSIGNEE:

Cavium International,
a corporation organized under the laws of Cayman Islands

By:  _____
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Name: Carol Feathers
Title: Director

Exhibit A

<u>MP No</u>	<u>Ctry</u>	<u>AppNo</u>	<u>FileDate</u>	<u>PatNo</u>	<u>IssDate</u>	<u>AppTitle</u>
MP9000	US	09/992116	11/5/2001	6492873	12/10/2002	Method Of Distributed Amplifier Design Utilizing Filter Synthesis Techniques
MP9001	US	10/034023	12/28/2001	6664842	12/16/2003	FET Active Load And Current Source
MP9002	US	10/151059	5/17/2002	6836185	12/28/2004	High-Speed Electro-Optical Modulator Drivers And Method
MP9003	US	10/115729	4/3/2002	7321603	1/22/2008	Method And System For Reducing Bit Error Rate In A High Speed Four To One Time Domain Multiplexor
MP9004	US	10/300810	11/19/2002	6700181	3/2/2004	Method And System For Broadband Transition From IC Package To Motherboard
MP9005	US	10/198392	7/16/2002	7057453	6/6/2006	Method And System For Reducing Parasitic Feedback And Parasitic Resonances In High-Gain Transimpedance Amplifiers
MP9006	US	10/228880	8/26/2002	6703907	3/9/2004	Circuit Technique For increasing Effective Inductance Of Differential Transmission Lines
MP9007	US	10/352740	1/27/2003	7551651	6/23/2009	Method And System For Time Domain Multiplexers With Reduced Inter-Symbol Interference
MP9008	US	10/748506	12/29/2003	7010008	3/7/2006	Fast High-Swing Modulator Driver Circuit
MP9009	US	10/335300	12/31/2002	6798282	9/28/2004	Method And System For Transimpedance Amplifiers With High Current Input While Maintaining High Transimpedance Gain And Bandwidth
MP9010	US	10/612371	7/2/2003	6859075	2/22/2005	High-Speed Output Buffer
MP9011	US	10/454844	6/4/2003	6863548	3/8/2005	Method And Apparatus For Improving The Performance Of Edge Launched Adapters
MP9012	US	11/217183	9/1/2005	7245191	7/17/2007	PLL Circuit With Self-Selecting Variable Divide Ratio
MP9013	US	11/039468	1/18/2005	7230476	6/12/2007	Bipolar High Impedance Element
MP9014	US	10/871459	6/18/2004	6980021	12/27/2005	Output Buffer With Time Varying Source Impedance For Driving Capacitively-Terminated Transmission Lines

<u>MP No</u>	<u>Ctry</u>	<u>AppNo</u>	<u>FileDate</u>	<u>PatNo</u>	<u>IssDate</u>	<u>AppTitle</u>
MP9015	US	11/376593	3/14/2006	7479799	1/20/2009	Output Buffer With Switchable Output Impedance
MP9016	US	11/716079	3/8/2007	7408393	8/5/2008	Master-Slave Flip-Flop And Clocking Scheme
MP9019C1	US	14/576008	12/18/2014	9185823	11/10/2015	Hybrid Memory Blade
MP9019C1C1	US	14/878680	10/8/2015	9323712	4/26/2016	Hybrid Memory Blade
MP9019C1C1C1	US	15/073947	3/18/2016	9547610	1/17/2017	Hybrid Memory Blade
MP9019PR	US	61/599835	2/16/2012			Hybrid Memory Blade
MP9020PR	US	61/602494	2/23/2012			iMC And The Memory Appliance
MP9023	US	13/802248	3/13/2013	8824616	9/2/2014	CMOS Interpolator For A Serializer/Deserializer Communication Application
MP9023I1	US	14/452360	8/5/2014	8995600	3/31/2015	CMOS Interpolator For A Serializer/Deserializer Communication Application
MP9023I1D1	US	14/637308	3/3/2015	9203605	12/1/2015	CMOS Interpolator For A Serializer/Deserializer Communication Application
MP9023I1D1I1	US	14/826051	8/13/2015	9641313	5/2/2017	CMOS Interpolator For A Serializer/Deserializer Communication Application
MP9023I1D1I1I1	US	15/464750	3/21/2017	9780797	10/3/2017	CMOS Interpolator For A Serializer/Deserializer Communication Application
MP9023PR	US	61/617896	3/30/2012			CMOS Phase Interpolator
MP9024I1	US	13/802275	3/13/2013	9197324	11/24/2015	Method And System For Transmitter Optimization Of An Optical PAM SERDES Based On Receiver Feedback
MP9024I1C1	US	14/599833	1/19/2015	9467231	10/11/2016	Method And System For Transmitter Optimization Of An Optical PAM SERDES Based On Receiver Feedback
MP9024I1C1C1	US	15/280873	9/29/2016	9948396	4/17/2018	Method And System For Transmitter Optimization Of An Optical PAM SERDES Based On Receiver Feedback
MP9024I1C1C1C1	US	15/917382	3/9/2018	10333622	6/25/2019	Method And System For Transmitter Optimization Of An Optical PAM SERDES Based On Receiver Feedback
MP9024PR	US	61/621920	4/9/2012			Method And System For Transmitter Optimization Of An Optical PAM SERDES Based On Receiver Feedback
MP9025	US	13/802620	3/13/2013	8731031	5/20/2014	Serializer/Deserializer Apparatus With Loopback Configuration And Methods Thereof

<u>MP No</u>	<u>Ctry</u>	<u>AppNo</u>	<u>FileDate</u>	<u>PatNo</u>	<u>IssDate</u>	<u>AppTitle</u>
MP9025C1	US	14/256792	4/18/2014	8855176	10/7/2014	Serializer/Deserializer Apparatus With Loopback Configuration And Methods Thereof
MP9025C1C1	US	14/479121	9/5/2014	8964820	2/24/2015	Serializer/Deserializer Apparatus With Loopback Configuration And Methods Thereof
MP9025PR	US	61/641400	5/2/2012			Serializer/Deserializer (SERDES) Loopback Method
MP9029	US	13/474600	5/17/2012	9018912	4/28/2015	System And Method For Managing Parallel-Connected Battery Cells
MP9029PR	US	61/486926	5/17/2011			System And Method For Managing Parallel-Connected Battery Cells
MP903811	US	13/833415	3/15/2013	8983291	3/17/2015	Optical PAM Modulation With Dual Drive Mach Zehnder Modulators And Low Complexity Electrical Signaling
MP903811C1	US	14/615626	2/6/2015	9485031	11/1/2016	Optical PAM Modulation With Dual Drive Mach Zehnder Modulators And Low Complexity Electrical Signaling
MP903811C1C1	US	15/277014	9/27/2016	9912411	3/6/2018	Optical PAM Modulation With Dual Drive Mach Zehnder Modulators And Low Complexity Electrical Signaling
MP903811C1C1	US	15/873755	1/17/2018	10148361	12/4/2018	Optical PAM Modulation With Dual Drive Mach Zehnder Modulators And Low Complexity Electrical Signaling
MP9038PR	US	61/677175	7/30/2012			Optical PAM Modulation With Dual Drive Mach Zehnder Modulators And Lower Complexity Electrical Signaling
MP9040PR	US	61/699724	9/11/2012			Adaptive ECC For Flash Memory
MP9042	US	13/831076	3/14/2013	8948608	2/3/2015	Direct-Coupled Driver For Mach-Zehnder Optical Modulators
MP9042C1	US	14/583331	12/26/2014	9488896	11/8/2016	Direct-Coupled Driver For Mach-Zehnder Optical Modulators
MP9042C1C1	US	15/284848	10/4/2016	9810928	11/7/2017	Direct-Coupled Driver For Mach-Zehnder Optical Modulators
MP9042PR	US	61/706217	9/27/2012			Direct-Coupled Driver For Mach-Zehnder Optical Modulators

<u>MP No</u>	<u>Ctry</u>	<u>AppNo</u>	<u>FileDate</u>	<u>PatNo</u>	<u>IssDate</u>	<u>AppTitle</u>
MP9043	US	13/791201	3/8/2013	9020346	4/28/2015	Optical Communication Interface Utilizing Coded Pulse Amplitude Modulation
MP9043PR	US	61/714543	10/16/2012			100G PAM Coded Modulation
MP9043WO	PCT	PCT/US2014/021436	3/6/2014			Optical Communication Interface Utilizing Coded Pulse Amplitude Modulation
MP9043WOCN	CN	2014800128836	3/6/2014	ZL2014800128	7/31/2018	Optical Communication Interface Utilizing Coded Pulse Amplitude Modulation
MP9043WODE	DE	1120140012025	9/8/2015			Optical Communication Interface Utilizing Coded Pulse Amplitude Modulation
MP9045	US	13/775041	2/22/2013	8885691	11/11/2014	Voltage Regulator For A Serializer/Deserializer Communication Application
MP9045C1	US	14/508586	10/7/2014	9178563	11/3/2015	Voltage Regulator For A Serializer/Deserializer Communication Application
MP9049	US	13/802219	3/13/2013	9212952	12/15/2015	Voltage And Temperature Sensor For A Serializer/Deserializer Communication Application
MP9049C1	US	14/938137	11/11/2015	9683903	6/20/2017	Voltage And Temperature Sensor For A Serializer/Deserializer Communication Application
MP9049I1	US	14/021955	9/9/2013	9587992	3/7/2017	Voltage And Temperature Sensor For A Serializer/Deserializer Communication Application
MP9049I1C1	US	15/409828	1/19/2017	10458856	10/29/2019	Voltage And Temperature Sensor For A Serializer/Deserializer Communication Application
MP9049I1C1C1	US	16/576639	9/19/2019			Voltage And Temperature Sensor For A Serializer/Deserializer Communication Application
MP9051	US	13/868004	4/22/2013	8897091	11/25/2014	High Speed Digital Termination Circuit
MP9052	US	14/340388	7/24/2014	9264001	2/16/2016	A Self Biased Dual Mode Differential CMOS TIA For 400G Fiber Optic Links
MP9052C1	US	14/987673	1/4/2016	9793863	10/17/2017	A Self Biased Dual Mode Differential CMOS TIA For 400G Fiber Optic Links
MP9052C1C1	US	15/708930	9/19/2017	10270403	4/23/2019	Self Biased Dual Mode Differential CMOS TIA For 400G Fiber Optic Links

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MP9052C1C1C1	US	16/298880	3/11/2019	10840857	11/17/2020	Self Biased Dual Mode Differential CMOS TIA For 400G Fiber Optic Links
MP9052CN	CN	2014104611907	9/11/2014	ZL2014104611	2/15/2019	Differential CMOS TIA For Fiber Optic Links
MP9052PR	US	61/882576	9/25/2013			Self Biased Dual Mode Differential CMOS TIA For 400G Fiber Optic Links
MP9054PR	US	61/842337	7/2/2013			High Speed Electrical Optics Multiple Chip Module
MP9055	US	14/311004	6/20/2014	9547622	1/17/2017	Monolithically integrated System On Chip For Silicon Photonics
MP9055C1	US	15/408280	1/17/2017	9846674	12/19/2017	Monolithically integrated System On Chip For Silicon Photonics
MP9055C1C1	US	15/810641	11/13/2017	10248616	4/2/2019	Monolithically integrated System On Chip For Silicon Photonics
MP9055C1C1C1	US	16/295629	3/7/2019	10417176	9/17/2019	Monolithically integrated System On Chip For Silicon Photonics
MP9055C1C1C1	US	16/844633	4/9/2020	10860525	12/8/2020	Monolithically integrated System On Chip For Silicon Photonics
MP9055C1C1C1	US	17/088197	11/3/2020			Monolithically integrated System On Chip For Silicon Photonics
MP9055C1C1C1	US	16/529473	8/1/2019	10649951	5/12/2020	Monolithically integrated System On Chip For Silicon Photonics
MP9055C1C1I1	US	16/196614	11/20/2018	10733138	8/4/2020	Silicon Photonics Based Module For Storing Cryptocurrency And Executing Peer-To-Peer Transaction
MP9055C1C1I1	US	16/912535	6/25/2020			Silicon Photonics Based Module For Storing Cryptocurrency And Executing Peer-To-Peer Transaction
MP9055C1I1	US	15/730479	10/11/2017	10055375	8/21/2018	Single-Chip Control Module For An Integrated System-On-A-Chip For Silicon Photonics
MP9055C1I1C1	US	16/040817	7/20/2018	10289595	5/14/2019	Single-Chip Control Module For An Integrated System-On-A-Chip For Silicon Photonics
MP9055C1I1C1	US	16/403350	5/3/2019	10409758	9/10/2019	Single-Chip Control Module For An Integrated System-On-A-Chip For Silicon Photonics

<u>MP No</u>	<u>Ctry</u>	<u>AppNo</u>	<u>FileDate</u>	<u>PatNo</u>	<u>IssDate</u>	<u>AppTitle</u>
MP9055C1I2	US	15/730451	10/11/2017	10120825	11/6/2018	Single-Chip Control Module For An Integrated System-On-A Chip For Silicon Photonics
MP9055C1I3	US	15/810556	11/13/2017	10120826	11/6/2018	Single-Chip Control Module For An Integrated System On-A-Chip For Silicon Photonics
MP9055PR	US	61/845325	7/11/2013			Monolithically Integrated System On Chip Module
MP9056	US	14/265185	4/29/2014	9225422	12/29/2015	Integrated Control Module For Communication System On A Chip For Silicon Photonics
MP9056C1	US	14/951344	11/24/2015	9325422	4/26/2016	Integrated Control Module For Communication System On A Chip For Silicon Photonics
MP9056C1C1	US	15/078661	3/23/2016	9391711	7/12/2016	Integrated Control Module For Communication System On A Chip For Silicon Photonics
MP9056C1C1C1	US	15/176612	6/8/2016	9515764	12/6/2016	Integrated Control Module For Communication System On A Chip For Silicon Photonics
MP9056C1C1C1	US	15/341965	11/2/2016	9621273	4/11/2017	Integrated Control Module For Communication System On A Chip For Silicon Photonics
MP9056PR	US	61/845326	7/11/2013			Integrated Control Module For Communication System On A Chip For Silicon Photonics
MP9057	US	14/311033	6/20/2014	9549232	1/17/2017	Configurable Multi-Rate Format For Communication System For Silicon Photonics
MP9057C1	US	15/403529	1/11/2017	9762984	9/12/2017	Configurable Multi-Rate Format For Communication System For Silicon Photonics
MP9057C1C1	US	15/670729	8/7/2017	10187710	1/22/2019	Configurable Multi-Rate Format For Communication System For Silicon Photonics
MP9057PR	US	61/845328	7/11/2013			Configurable Multi-Rate Format For Communication System For Silicon Photonics
MP9058	US	14/316551	6/26/2014	9425903	8/23/2016	Built-In Redundancy Scheme For Communication System On Chip
MP9058C1	US	15/223326	7/29/2016	9621280	4/11/2017	Built-In Redundancy Scheme For Communication System On Chip

<u>MP No</u>	<u>Ctry</u>	<u>AppNo</u>	<u>FileDate</u>	<u>PatNo</u>	<u>IssDate</u>	<u>AppTitle</u>
MP9058PR	US	61/845329	7/11/2013			Built-In Redundancy Coding Scheme For Communication System On Chip
MP9058PR-2	US	14/316,551	6/26/2014	9,425,903	8/23/2016	Built In Redundancy Coding Scheme For Communication System On Chip
MP9059	US	14/310962	6/20/2014	9584884	2/28/2017	Multilane Variable Bias For An Optical Modulator
MP9059C1	US	15/407150	1/16/2017	9743161	8/22/2017	Multilane Variable Bias For An Optical Modulator
MP9059C1C1	US	15/650334	7/14/2017	10779063	9/15/2020	Multilane Variable Bias For An Optical Modulator
MP9059PR	US	61/845332	7/11/2013			Multilane Variable Bias For Optical Modulators
MP9060	US	14/310988	6/20/2014	9548809	1/17/2017	Built-In Self Test For Loopback On Communication System On Chip
MP9060C1	US	15/406230	1/13/2017	9774391	9/26/2017	Built-In Self Test For Loopback On Communication System On Chip
MP9060C1C1	US	15/679008	8/16/2017	9935706	4/3/2018	Built-In Self Test For Loopback On Communication System On Chip
MP9060C1C1C1	US	15/903910	2/23/2018	10014936	7/3/2018	Built-In Self Test For Loopback On Communication System On Chip
MP9060C1C1C1	US	15/975688	5/9/2018	10187143	1/22/2019	Built-In Self Test For Loopback On Communication System On Chip
MP9060PR	US	61/845337	7/11/2013			Built-In Self Test For Loopback On Communication System On Chip
MP9061	US	14/311099	6/20/2014	9313561	4/12/2016	Integrated Driver Redundancy For Silicon Photonics
MP9061C1	US	15/065789	3/9/2016	9553662	1/24/2017	Integrated Driver Redundancy For A Silicon Photonics Device
MP9061C1C1	US	15/390340	12/23/2016	9893803	2/13/2018	Integrated Driver Redundancy For Silicon Photonics Device
MP9061PR	US	61/845339	7/11/2013			Integrated Driver Redundancy For Silicon Photonics
MP9062	US	14/310374	6/20/2014	9006740	4/14/2015	Built-In Self Test For Silicon Photonics Device
MP9062PR	US	61/845341	7/11/2013			Built-In Self Test For Silicon Photonics
MP9063	US	14/323254	7/3/2014	9166704	10/20/2015	Integrated Control For Silicon Photonics

<u>MP No</u>	<u>Ctry</u>	<u>AppNo</u>	<u>FileDate</u>	<u>PatNo</u>	<u>IssDate</u>	<u>AppTitle</u>
MP9063C1	US	14/815824	7/31/2015	9374173	6/21/2016	Integrated Control For Silicon Photonics
MP9063C1C1	US	15/158982	5/19/2016	9479281	10/25/2016	Integrated Control For Silicon Photonics
MP9063C1C1C1	US	15/268239	9/16/2016	9553672	1/24/2017	Integrated Control For Silicon Photonics
MP9063PR	US	61/847523	7/17/2013			Integrated Control For Silicon Photonics
MP9064I1	US	13/952402	7/26/2013	8885766	11/11/2014	Optical Communication Interface Utilizing N-Dimensional Double Square Quadrature Amplitude Modulation
MP9064I1D1	US	14/511087	10/9/2014	9020083	4/28/2015	Optical Communication Interface Utilizing N-Dimensional Double Square Quadrature Amplitude Modulation
MP9064I1D1C1	US	14/667236	3/24/2015	9385812	7/5/2016	Optical Communication Interface Utilizing N-Dimensional Double Square Quadrature Amplitude Modulation
MP9064I1D1C1	US	15/170843	6/1/2016	9729240	8/8/2017	Optical Communication Interface Utilizing N-Dimensional Double Square Quadrature Amplitude Modulation
MP9064I1D1C1	US	15/640032	6/30/2017	10135535	11/20/2018	Optical Communication Interface Utilizing N-Dimensional Double Square Quadrature Amplitude Modulation
MP9064I1D1C1	US	16/163331	10/17/2018	10396896	8/27/2019	Optical Communication Interface Utilizing N-Dimensional Double Square Quadrature Amplitude Modulation
MP9064I1D1C1	US	16/508086	7/10/2019	10944476	3/9/2021	Optical Communication Interface Utilizing N-Dimensional Double Square Quadrature Amplitude Modulation
MP9064I1D1C1	US	17/160999	1/28/2021			Optical Communication Interface Utilizing N-Dimensional Double Square Quadrature Amplitude Modulation
MP9064I1WO	PCT	PCT/US2014/021438	3/6/2014			Optical Communication Interface Utilizing Quadrature Amplitude Modulation

<u>MP No</u>	<u>Ctry</u>	<u>AppNo</u>	<u>FileDate</u>	<u>PatNo</u>	<u>IssDate</u>	<u>AppTitle</u>
MP9064I1WOC	CN	2014800128770	9/7/2015	ZL2014800128	6/30/2017	Optical Communication Interface Utilizing Quadrature Amplitude Modulation
MP9065	US	13/963329	8/9/2013	9430437	8/30/2016	PCIe Lane Aggregation Over A High Speed Link
MP9065C1	US	15/223412	7/29/2016	9846669	12/19/2017	PCIe Lane Aggregation Over A High Speed Link
MP9065C1C1	US	15/812493	11/14/2017	10235318	3/19/2019	PCIe Lane Aggregation Over A High Speed Link
MP9065C1C1C1	US	16/267748	2/5/2019	10572425	2/25/2020	PCIe Lane Aggregation Over A High Speed Link
MP9065C1C1C1	US	16/738984	1/9/2020	10929325	2/23/2021	PCIe Lane Aggregation Over A High Speed Link
MP9066	US	14/086925	11/21/2013	8884801	11/11/2014	High-Speed Analog-To-Digital Conversion System With Flash Assisted Parallel SAR Architecture
MP9066C1	US	14/511074	10/9/2014	9331706	5/3/2016	High-Speed Analog-To-Digital Conversion System With Flash Assisted Parallel SAR Architecture
MP9067	US	15/061994	3/4/2016	9838135	12/5/2017	Differential Electro-Absorption Modulator (EAM) Driver
MP9068PR	US	61/873784	9/4/2013			Integrated Control For Silicon Photonics
MP9069	US	14/226649	3/26/2014	10551641	2/4/2020	Method And System Of A Three-Terminal Driver For Modulator Devices
MP9069CN	CN	2014107292477	12/3/2014	ZL2014107292	12/7/2018	Method And System Of A Three-Terminal Driver For Modulator Devices
MP9069PR	US	61/919570	12/20/2013			Method And System Of A Three-Terminal Driver For Modulator Devices
MP9070	US	14/304635	6/13/2014	9564990	2/7/2017	Pulse Amplitude Modulation (PAM) Data Communication With Forward Error Correction
MP9070C1	US	15/405020	1/12/2017	10009200	6/26/2018	Data Communication Systems With Forward Error Correction
MP9070C1C1	US	15/986085	5/22/2018	10498570	12/3/2019	Data Communication Systems With Forward Error Correction
MP9070C1C1C1	US	16/657274	10/18/2019	10826734	11/3/2020	Data Communication Systems With Forward Error Correction
MP9070PR	US	61/885985	10/2/2013			PAM Data Communication With Forward Error Correction
MP9071	US	14/262621	4/25/2014	9329337	5/3/2016	Silicon Photonics Device And Communication System Therefor

<u>MP No</u>	<u>Ctry</u>	<u>AppNo</u>	<u>FileDate</u>	<u>PatNo</u>	<u>IssDate</u>	<u>AppTitle</u>
MP9071C1	US	15/080476	3/24/2016	9500804	11/22/2016	Silicon Photonics Device And Communication System Therefor
MP9071C1C1	US	15/299731	10/21/2016	9664854	5/30/2017	Silicon Photonics Device And Communication System Therefor
MP9072	US	14/321602	7/1/2014	8901977	12/2/2014	Feedback For Delay Lock Loop
MP9072C1	US	14/519014	10/20/2014	9041445	5/26/2015	Feedback For Delay Lock Loop
MP9075	US	14/179447	2/12/2014	9432123	8/30/2016	Adaptive Mach Zehnder Modulator Linearization
MP9075C1	US	15/223724	7/29/2016	9941970	4/10/2018	Adaptive Mach Zehnder Modulator Linearization
MP9075C1C1	US	15/904840	2/26/2018	10103815	10/16/2018	Adaptive Mach Zehnder Modulator Linearization
MP9075CN	CN	2015100767747	2/12/2015	ZL2015100767	7/27/2018	Adaptive Mach Zehnder Modulator Linearization
MP9076	US	14/625489	2/18/2015	9553670	1/24/2017	Optical Module
MP9076C1	US	15/375031	12/9/2016	9787423	10/10/2017	Optical Module
MP9076C1C1	US	15/694472	9/1/2017	10050736	8/14/2018	Optical Module
MP9076C1C1C1	US	16/034668	7/13/2018	10355804	7/16/2019	Optical Module
MP9076C1C1C1	US	16/431492	6/4/2019	10630414	4/21/2020	Optical Module
MP9076C1C1C1	US	16/813504	3/9/2020	10749622	8/18/2020	Optical Module
MP9076C1C1C1	US	16/926344	7/10/2020	10951343	3/16/2021	Optical Module
MP9076C1C1C1	US	17/168931	2/5/2021			Optical Module
MP9076CN	CN	2015100950352	3/3/2015	ZL2015100950	11/9/2018	Integrated Apparatus For Communication
MP9076DE	DE	1020150023861	2/25/2015			Optical Module
MP9076PR	US	61/947374	3/3/2014			Optical Module
MP9077	US	14/226713	3/26/2014	10036904	7/31/2018	Method And System For Integrated Differential Electro-Absorption Modulator Device
MP9077C1	US	16/025883	7/2/2018			Method And System For Integrated Differential Electro-Absorption Modulator Device
MP9078	US	14/536294	11/7/2014	9325419	4/26/2016	Wavelength Control Of Two-Channel DEMUX/MUX In Silicon Photonics
MP9078C1	US	15/076414	3/21/2016	9548816	1/17/2017	Wavelength Control Of Two-Channel DEMUX/MUX In Silicon Photonics
MP9078C1C1	US	15/405214	1/12/2017	9641255	5/2/2017	Wavelength Control Of Two-Channel DEMUX/MUX In Silicon Photonics
MP9079	US	14/935306	11/6/2015	9356615	5/31/2016	Systems And Methods For Comparator Calibration

<u>MP No</u>	<u>Ctry</u>	<u>AppNo</u>	<u>FileDate</u>	<u>PatNo</u>	<u>IssDate</u>	<u>AppTitle</u>
MP9079C1	US	15/146214	5/4/2016	9548754	1/17/2017	Systems And Methods For Comparator Calibration
MP9079C1C1	US	15/375029	12/9/2016	9722621	8/1/2017	Systems And Methods For Comparator Calibration
MP9081	US	14/597120	1/14/2015	9258155	2/9/2016	PAM Data Communication With Reflection Cancellation
MP9081C1	US	14/985243	12/30/2015	9485058	11/1/2016	PAM Data Communication With Reflection Cancellation
MP9081C1C1	US	15/283614	10/3/2016	9654311	5/16/2017	PAM Data Communication With Reflection Cancellation
MP9081C1C1C1	US	15/483301	4/10/2017	9819521	11/14/2017	PAM Data Communication With Reflection Cancellation
MP9081CN	CN	2016100195102	1/13/2016	ZL2016100195	4/14/2020	PAM Data Communication With Reflection Cancellation
MP9082	US	14/536303	11/7/2014	9647799	5/9/2017	FEC Coding Identification
MP9082C1	US	15/476323	3/31/2017	9992043	6/5/2018	FEC Coding Identification
MP9082C1C1	US	15/968614	5/1/2018	10355886	7/16/2019	FEC Coding Identification
MP9083	US	14/602185	1/21/2015	9484960	11/1/2016	Reconfigurable FEC
MP9083C1	US	15/283024	9/30/2016	10158379	12/18/2018	Reconfigurable FEC
MP9083C1C1	US	16/192659	11/15/2018	10651874	5/12/2020	Reconfigurable FEC
MP9083C1C1C1	US	16/831626	3/26/2020			Reconfigurable FEC
MP9084	US	14/477696	9/4/2014	9160345	10/13/2015	Phase Interpolator
MP9084C1	US	14/872327	10/1/2015	9485086	11/1/2016	Phase Interpolator
MP9084C1C1	US	15/283735	10/3/2016	9673972	6/6/2017	Phase Interpolator
MP9085	US	14/472193	8/28/2014	9454059	9/27/2016	MZM Linear Driver For Silicon Photonics
MP9085H	US	15/247091	8/25/2016	9874800	1/23/2018	MZM Linear Driver For Silicon Photonics Device Characterized As Two-Channel Wavelength Combiner And Locker
MP9086	US	14/745211	6/19/2015	9423561	8/23/2016	Method Of Attaching Fiber Block To Silicon Photonics
MP9087	US	14/569471	12/12/2014	9553689	1/24/2017	Temperature insensitive DEMUX/MUX In Silicon Photonics
MP9087C1	US	15/374967	12/9/2016	9829640	11/28/2017	Temperature insensitive DEMUX/MUX In Silicon Photonics
MP9087CN	CN	2015109262095	12/14/2015	ZL2015109262	10/25/2019	Temperature independent DEMUX/MUX Device And The Method For Making The Same
MP9088	US	14/550842	11/21/2014	9473090	10/18/2016	Trans-Impedance Amplifier With Replica Gain Control
MP9088C1	US	15/269588	9/19/2016	9716480	7/25/2017	Trans-Impedance Amplifier With Replica Gain Control
MP9089	US	14/592743	1/8/2015	9461677	10/4/2016	Local Phase Correction

<u>MP No</u>	<u>Ctry</u>	<u>AppNo</u>	<u>FileDate</u>	<u>PatNo</u>	<u>IssDate</u>	<u>AppTitle</u>
MP9089C1	US	15/285420	10/4/2016	10043756	8/7/2018	Local Phase Correction
MP9090	US	14/622550	2/13/2015	9548726	1/17/2017	Slew-Rate Control And Waveshape Adjusted Drivers For Improving Signal Integrity On Multi-Loads Transmission Line Interconnects
MP9091	US	14/860548	9/21/2015	9553663	1/24/2017	System And Method For Calibration Of An Optical Module
MP9091C1	US	15/407163	1/16/2017	9634760	4/25/2017	System And Method For Calibration Of An Optical Module
MP9092	US	14/815694	7/31/2015	9438255	9/6/2016	High Frequency Delay Lock Loop Systems
MP9092C1	US	15/235290	8/12/2016	9806722	10/31/2017	High Frequency Delay Lock Loop Systems
MP9093	US	14/614257	2/4/2015	9432000	8/30/2016	Low Power Buffer With Gain Boost
MP9093C1	US	15/231449	8/8/2016	9647643	5/9/2017	Low Power Buffer With Gain Boost
MP9093C1C1	US	15/476645	3/31/2017	10110204	10/23/2018	Low Power Buffer With Gain Boost
MP9094	US	14/640903	3/6/2015	9632390	4/25/2017	Balanced Mach-Zehnder Modulator
MP9094C1	US	15/459528	3/15/2017	9846347	12/19/2017	Balanced Mach-Zehnder Modulator
MP9094C1C1	US	15/812551	11/14/2017	10120259	11/6/2018	Balanced Mach-Zehnder Modulator
MP9095	US	14/602164	1/21/2015	9547129	1/17/2017	Fiber Coupler For Silicon Photonics
MP9095C1	US	15/374977	12/9/2016	9823420	11/21/2017	Fiber Coupler For Silicon Photonics
MP9095C1D1	US	15/786156	10/17/2017	9958614	5/1/2018	Fiber Couple For Silicon Photonics
MP9095C1D1C	US	15/928732	3/22/2018	10133004	11/20/2018	Fiber Couple For Silicon Photonics
MP9096	US	14/614253	2/4/2015	9553569	1/24/2017	Low Power Buffer With Dynamic Gain Control
MP9096C1	US	15/375048	12/9/2016	9837998	12/5/2017	Low Power Buffer With Dynamic Gain Control
MP9096C1C1	US	15/800848	11/1/2017	10103717	10/16/2018	Low Power Buffer With Dynamic Gain Control
MP9097	US	14/642647	3/9/2015	9552006	1/24/2017	Wideband Low Dropout Voltage Regulator With Power Supply Rejection Boost
MP9097C1	US	15/374983	12/9/2016	9921593	3/20/2018	Wideband Low Dropout Voltage Regulator With Power Supply Rejection Boost

<u>MP No</u>	<u>Ctry</u>	<u>AppNo</u>	<u>FileDate</u>	<u>PatNo</u>	<u>IssDate</u>	<u>AppTitle</u>
MP9098	US	14/679934	4/6/2015	9325319	4/26/2016	Continuous Time Linear Equalization For Current-Mode Logic With Transformer
MP9098C1	US	15/074530	3/18/2016	9537685	1/3/2017	Continuous Time Linear Equalization For Current-Mode Logic With Transformer
MP9098C1C1	US	15/359338	11/22/2016	9853842	12/26/2017	Continuous Time Linear Equalization For Current-Mode Logic With Transformer
MP9099	US	14/681989	4/8/2015	9225560	12/29/2015	Data Rate Programming Using Source Degenerated CTLE
MP9099C1	US	14/949662	11/23/2015	9485122	11/1/2016	Data Rate Programming Using Source Degenerated CTLE
MP9100	US	14/706908	5/7/2015	9323128	4/26/2016	Off Quadrature Biasing Of Mach Zehnder Modulator For Improved OSNR Performance
MP9100C1	US	15/072866	3/17/2016	9523867	12/20/2016	Off Quadrature Biasing Of Mach Zehnder Modulator For Improved OSNR Performance
MP9100C1C1	US	15/348018	11/10/2016	9612457	4/4/2017	Off Quadrature Biasing Of Mach Zehnder Modulator For Improved OSNR Performance
MP9101	US	14/798322	7/13/2015	9553673	1/24/2017	Driver Module For Mach Zehnder Modulator
MP9101C1	US	15/406273	1/13/2017	9654221	5/16/2017	Driver Module For Mach Zehnder Modulator
MP9101C1C1	US	15/481920	4/7/2017	9876579	1/23/2018	Driver Module For Mach Zehnder Modulator
MP9101C1C1C1	US	15/832296	12/5/2017	9998231	6/12/2018	Driver Module For Mach Zehnder Modulator
MP9101C1C1C1	US	15/976659	5/10/2018	10116393	10/30/2018	Driver Module For Mach Zehnder Modulator
MP9102	US	14/745316	6/19/2015	9548817	1/17/2017	Small Form Factor Transmitting Device
MP9102C1	US	15/372524	12/8/2016	9887516	2/6/2018	Small Form Factor Transmitting Device
MP9102C1C1	US	15/855927	12/27/2017	10141717	11/27/2018	Small Form Factor Transmitting Device
MP9102C1C1C1	US	16/160817	10/15/2018	10559941	2/11/2020	Small Form Factor Transmitting Device
MP9102C1C1C1	US	16/679014	11/8/2019	10892598	1/12/2021	Small Form Factor Transmitting Device
MP9102C1C1C1	US	17/115296	12/8/2020			Small Form Factor Transmitting Device
MP9102CN	CN	20162.12841873	11/25/2016	ZL20162.12841	10/10/2018	A PACKAGED TRANSMITTER DEVICE

<u>MP No</u>	<u>Ctry</u>	<u>AppNo</u>	<u>FileDate</u>	<u>PatNo</u>	<u>IssDate</u>	<u>AppTitle</u>
MP9103	US	14/715494	5/18/2015	9209962	12/8/2015	High-Speed Clock Skew Correction For SERDES Receivers
MP9103C1	US	14/932194	11/4/2015	9461814	10/4/2016	High-Speed Clock Skew Correction For SERDES Receivers
MP9103C1C1	US	15/252057	8/30/2016	9548856	1/17/2017	High-Speed Clock Skew Correction For SERDES Receivers
MP9104	US	14/793636	7/7/2015	9553671	1/24/2017	Package Structure For Photonic Transceiving Device
MP9104C1	US	15/375042	12/9/2016	9759877	9/12/2017	Package Structure For Photonic Transceiving Device
MP9104C1C1	US	15/672693	8/9/2017	10025046	7/17/2018	Package Structure For Photonic Transceiving Device
MP9104C1C1C1	US	16/013737	6/20/2018	10274688	4/30/2019	Package Structure For Photonic Transceiving Device
MP9104C1C1C1	US	16/352054	3/13/2019	10466431	11/5/2019	Package Structure For Photonic Transceiving Device
MP9104C1C1C1	US	16/579671	9/23/2019	10605999	3/31/2020	Package Structure For Photonic Transceiving Device
MP9104C1C1C1	US	16/793550	2/18/2020	10908370	2/2/2021	Package Structure For Photonic Transceiving Device
MP9105	US	15/061874	3/4/2016	9559880	1/31/2017	Eye-Modulation For Pulse-Amplitude Modulation Communication Systems
MP9105C1	US	15/404091	1/11/2017	9755870	9/5/2017	Eye-Modulation For Pulse-Amplitude Modulation Communication Systems
MP9106	US	14/997961	1/18/2016	9548858	1/17/2017	Skew Management For PAM Communication Systems
MP9106C1	US	15/375059	12/9/2016	9825756	11/21/2017	Skew Management For PAM Communication Systems
MP9107	US	14/789290	7/1/2015	9496959	11/15/2016	Photonic Transceiving Device Package Structure
MP9107C1	US	15/289894	10/10/2016	9671581	6/6/2017	Photonic Transceiving Device Package Structure
MP9107I1	US	15/075021	3/18/2016	9671580	6/6/2017	Photonic Transceiving Device Package Structure
MP9108	US	15/061957	3/4/2016	9722822	8/1/2017	Method And System Using Driver Equalization In Transmission Line Channels With Power Or Ground Terminations
MP9108C1	US	15/630851	6/22/2017	9935795	4/3/2018	Method And System Using Driver Equalization In Transmission Line Channels With Power Or Ground Terminations
MP9109	US	14/959141	12/4/2015	9665289	5/30/2017	Eye Scan For Memory Channel

<u>MP No</u>	<u>Ctry</u>	<u>AppNo</u>	<u>FileDate</u>	<u>PatNo</u>	<u>IssDate</u>	<u>AppTitle</u>
MP9110	US	14/696326	4/24/2015	9413523	8/9/2016	Frequency Acquisition Of A SERDES Receivers
MP9110C1	US	15/214212	7/19/2016	9608799	3/28/2017	Frequency Acquisition Of A SERDES Receivers
MP9110C1C1	US	15/433601	2/15/2017	9705666	7/11/2017	Frequency Acquisition Of A SERDES Receivers
MP9111	US	14/855282	9/15/2015	9553742	1/24/2017	Method And Apparatus For Independent Rise And Fall Waveform Shaping
MP9112	US	14/798308	7/13/2015	9485119	11/1/2016	Offset Correction For Sense Amplifier
MP9112C1	US	15/277076	9/27/2016	9621176	4/11/2017	Offset Correction For Sense Amplifier
MP9113	US	14/929809	11/2/2015	9634611	4/25/2017	Method For Improving Stable Frequency Response Of Variable Gain Amplifier
MP9113C1	US	15/460750	3/16/2017	9966917	5/8/2018	Variable Gain Amplifier With Stable Frequency Response
MP9114	US	14/879461	10/9/2015	9728829	8/8/2017	Dc Blocking Circuit With Bias Control And Independent Cut-Off Frequency For Ac-Coupled Circuits
MP9114C1	US	15/639013	6/30/2017	10122056	11/6/2018	Dc Blocking Circuit With Bias Control And Independent Cut-Off Frequency For Ac-Coupled Circuits
MP9115	US	14/842699	9/1/2015	9515852	12/6/2016	Loss Of Signal Detection On CDR
MP9115C1	US	15/337072	10/28/2016	10044497	8/7/2018	Loss Of Signal Detection On CDR
MP9115C1C1	US	16/028229	7/5/2018	10129017	11/13/2018	Loss Of Signal Detection On CDR
MP9116	US	14/935356	11/6/2015	9366818	6/14/2016	Broadband Silicon Nitride Polarization Beam Splitter
MP9116C1	US	15/153658	5/12/2016	9547127	1/17/2017	Broadband Silicon Nitride Polarization Beam Splitter
MP9117	US	15/061918	3/4/2016	9742498	8/22/2017	56 Gbps PAM4 Driver Module For Mach Zehnder Modulator
MP9117C1	US	15/647188	7/11/2017	10014950	7/3/2018	56 Gbps PAM4 Driver Module For Mach Zehnder Modulator
MP9118	US	14/984849	12/30/2015	9838134	12/5/2017	Off-Quadrature Mach-Zehnder Modulator Biasing
MP9118C1	US	15/802338	11/2/2017	10116391	10/30/2018	Off-Quadrature Mach-Zehnder Modulator Biasing
MP9118C1C1	US	16/146936	9/28/2018	10425164	9/24/2019	Off-Quadrature Mach-Zehnder Modulator Biasing
MP9118C1C1C1	US	16/536162	8/8/2019	10715255	7/14/2020	Off-Quadrature Mach-Zehnder Modulator Biasing

<u>MP No</u>	<u>Ctry</u>	<u>AppNo</u>	<u>FileDate</u>	<u>PatNo</u>	<u>IssDate</u>	<u>AppTitle</u>
MP9119	US	14/881401	10/13/2015	9780881	10/3/2017	Enhanced Digital Diagnostics For Optical PAM Apparatus
MP9119C1	US	15/490555	4/18/2017	9780869	10/3/2017	Enhanced Digital Diagnostics For Optical PAM Apparatus
MP9119C1C1	US	15/688435	8/28/2017	10009109	6/26/2018	Enhanced Digital Diagnostics For Optical PAM Apparatus
MP9119C1C1C1	US	15/693856	9/1/2017	9900088	2/20/2018	Enhanced Digital Diagnostics For Optical PAM Apparatus
MP9119C1C1C1	US	15/990003	5/25/2018	10128955	11/13/2018	Enhanced Digital Diagnostics For Optical PAM Apparatus
MP9119I1	US	15/069702	3/14/2016	9660730	5/23/2017	Enhanced Digital Diagnostics For Optical PAM Apparatus
MP9120	US	15/067125	3/10/2016	9651751	5/16/2017	Compact Optical Transceiver By Hybrid Multichip Integration
MP9120C1	US	15/481994	4/7/2017	9921379	3/20/2018	Compact Optical Transceiver By Hybrid Multichip Integration
MP9120CN	CN	2017202285071	3/9/2017	ZL2017202285	11/7/2017	Compact Optical Transceivers Integrated By Mixing Multi-Chip
MP9121	US	15/061941	3/4/2016	10001611	6/19/2018	Optical Transceiver Architecture By FOWLIP And DOP Multichip Intergration
MP9121C1	US	15/985584	5/21/2018	10120150	11/6/2018	Optical Transceiver Architecture By FOWLIP And DOP Multichip Intergration
MP9121CN	CN	2017202001629	3/2/2017	ZL2017202001	10/10/2017	Optical Transceiver Architecture By FOWLIP And DOP Multichip Intergration
MP9122	US	14/853912	9/14/2015	9374217	6/21/2016	SERDES With High-Bandwidth Low-Latency Clock And Data Recovery
MP9122C1	US	15/162402	5/23/2016	9742551	8/22/2017	SERDES With High-Bandwidth Low-Latency Clock And Data Recovery
MP9122CN	CN	2016210591214	9/14/2016	ZL2016210591	6/13/2017	SERDES With High-Bandwidth Low-Latency Clock And Data Recovery
MP9123	US	15/061928	3/4/2016	9882532	1/30/2018	Linear Amplifier With Extended Linear Output Range
MP9124	US	15/061923	3/4/2016	9847839	12/19/2017	PAM4 Transceiver For High-Speed Communication
MP9124C1	US	15/809902	11/10/2017	10218444	2/26/2019	PAM4 Transceiver For High-Speed Communication
MP9124C1C1	US	16/249642	1/16/2019	10523328	12/31/2019	PAM4 Transceiver For High-Speed Communication
MP9124C1C1C1	US	16/696913	11/26/2019	10951318	3/16/2021	PAM4 Transceiver For High-Speed Communication

<u>MP No</u>	<u>Ctry</u>	<u>AppNo</u>	<u>FileDate</u>	<u>PatNo</u>	<u>IssDate</u>	<u>AppTitle</u>
MP9124C1C1C1	US	17/171801	2/9/2021			PAM4 Transceiver For High-Speed Communication
MP9124CN	CN	2017202069693	3/3/2017	ZL2017202069	9/5/2017	Transceiver System
MP9125	US	14/990309	1/7/2016	9602116	3/21/2017	Interleaved Successive Approximation Register Analog To Digital Converter
MP9125C1	US	15/426506	2/7/2017	9866231	1/9/2018	Interleaved Successive Approximation Register Analog To Digital Converter
MP9126	US	14/963082	12/8/2015	9460791	10/4/2016	Data Clock Synchronization In Hybrid Memory Modules
MP9126C1	US	15/267046	9/15/2016	9639281	5/2/2017	Data Clock Synchronization In Hybrid Memory Modules
MP9127	US	14/963148	12/8/2015	9817610	11/14/2017	Hybrid Memory Systems For Automomous Non-Volatile Memory Save And Restore Operations
MP9128	US	15/061946	3/4/2016	9671557	6/6/2017	Vertical Integration Of Hybrid Waveguide With Controlled Interlayer Thickness
MP9128C1	US	15/586179	5/3/2017	9885831	2/6/2018	Vertical Integration Of Hybrid Waveguide With Controlled Interlayer Thickness
MP9128C1C1	US	15/855655	12/27/2017	10107961	10/23/2018	Vertical Integration Of Hybrid Waveguide With Controlled Interlayer Thickness
MP9128CN	CN	2017201946880	3/1/2017	ZL2017201946	12/5/2017	Silicon Photonic Device With Hybrid Waveguide
MP9129	US	15/088862	4/1/2016	10031289	7/24/2018	Delay Line Interferometer With Polarization Compensation At Selective Frequency
MP9129C1	US	16/015854	6/22/2018	10274680	4/30/2019	Delay Line Interferometer With Polarization Compensation At Selective Frequency
MP9129CN	CN	2017203377441	3/31/2017	ZL2017203377	1/2/2018	Demultiplexing Apparatus Of Delay Line Interferometer
MP9130	US	15/148710	5/6/2016	9929814	3/27/2018	Temperature Insensitive Delay Line Interferometer
MP9130C1	US	15/890616	2/7/2018	10142032	11/27/2018	Temperature Insensitive Delay Line Interferometer
MP9130CN	CN	2017204996222	5/5/2017	ZL2017204996	2/23/2018	Photonics Device And A Delay Line Interferometer With Temperature-Insensitive Feature
MP9131	US	15/146815	5/4/2016	9819412	11/14/2017	Transmitter Gain Imbalance And Skew Optimization For Coherent Transmitters

<u>MP No</u>	<u>Ctry</u>	<u>AppNo</u>	<u>FileDate</u>	<u>PatNo</u>	<u>IssDate</u>	<u>AppTitle</u>
MP9132	US	15/133609	4/20/2016	9973355	5/15/2018	Decision Feedback Equalizer For Single-Ended Signals To Reduce Inter-Symbol Inteference
MP9132C1	US	15/951069	4/11/2018	10263812	4/16/2019	Decision Feedback Equalizer For Single-Ended Signals To Reduce Inter-Symbol Inteference
MP9133	US	15/160912	5/20/2016	9722555	8/1/2017	Differential Circuits With Constant Gm Bias
MP9133C1	US	15/633521	6/26/2017	10103698	10/16/2018	Differential Circuits With Constant Gm Bias
MP9134	US	15/148905	5/6/2016	10270628	4/23/2019	Method And System For Calibrating Equalizers
MP9134C1	US	16/295210	3/7/2019	10382236	8/13/2019	Method And System For Calibrating Equalizers
MP9135	US	15/147803	5/5/2016	9547131	1/17/2017	Broadband Restricted MMI-Based Polarization Beam Splitter
MP9135C1	US	15/375033	12/9/2016	9759865	9/12/2017	Broadband Restricted MMI-Based Polarization Beam Splitter
MP9135C1C1	US	15/671905	8/8/2017	9851507	12/26/2017	Broadband Restricted MMI-Based Polarization Beam Splitter
MP9136	US	15/261669	9/9/2016	9696604	7/4/2017	A Method For Forming A Self-Aligned Mach-Zehnder Interferometer
MP9136D1	US	15/609655	5/31/2017	9746744	8/29/2017	A Method For Forming A Self-Aligned Mach-Zehnder Interferometer
MP9137	US	15/208547	7/12/2016	9726841	8/8/2017	Integrated Photo Detector, Method Of Making The Same
MP9137C1	US	15/637889	6/29/2017	9997508	6/12/2018	Integrated Photo Detector, Method Of Making The Same
MP9137C1C1	US	15/979046	5/14/2018	10262983	4/16/2019	Integrated Photo Detector, Method Of Making The Same
MP9137CN	CN	2017206148105	5/27/2017	ZL2017206148	12/19/2017	integrated Photo Detector, Method Of Making The Same
MP9138	US	15/201295	7/1/2016	10230584	3/12/2019	Dynamic Multitone Simulation Scenario Planning
MP9139	US	15/201287	7/1/2016	9847762	12/19/2017	Low Voltage High Speed CMOS Line Driver Without Tail Current Source
MP9139C1	US	15/811036	11/13/2017	10122335	11/6/2018	Low Voltage High Speed CMOS Line Driver Without Tail Current Source
MP9140	US	15/272828	9/22/2016	9806686	10/31/2017	Linear Variable Gain Amplifier
MP9140C1	US	15/719043	9/28/2017	10153743	12/11/2018	Linear Variable Gain Amplifier

<u>MP No</u>	<u>Ctry</u>	<u>AppNo</u>	<u>FileDate</u>	<u>PatNo</u>	<u>IssDate</u>	<u>AppTitle</u>
MP9141	US	15/226814	8/2/2016	9774305	9/26/2017	Transimpedance Amplifier With Variable Inductance Input Reducing Peak Variation Over Gain
MP9141C1	US	15/683444	8/22/2017	9899969	2/20/2018	Transimpedance Amplifier With Variable Inductance Input Reducing Peak Variation Over Gain
MP9141C1C1	US	15/863440	1/5/2018	10181827	1/15/2019	Transimpedance Amplifier With Variable Inductance Input Reducing Peak Variation Over Gain
MP9141C1C1C1	US	16/158022	10/11/2018	10574195	2/25/2020	Transimpedance Amplifier With Variable Inductance Input Reducing Peak Variation Over Gain
MP9141CN	CN	2017207897483	6/30/2017	ZL2017207897	8/7/2018	Communication System And Trans-Impedance Amplifier
MP9142	US	15/343608	11/4/2016	10128827	11/13/2018	High-Speed Phase Interpolator
MP9142C1	US	16/153248	10/5/2018	10411684	9/10/2019	High-Speed Phase Interpolator
MP9143	US	15/343653	11/4/2016	10014965	7/3/2018	Offset-Compensated Loss Of Signal Detection Methods And Systems
MP9143C1	US	15/995042	5/31/2018	10193640	1/29/2019	Offset-Compensated Loss Of Signal Detection Methods And Systems
MP9144	US	15/337136	10/28/2016	9998146	6/12/2018	Forward Error Correction (FEC) Emulator
MP9144C1	US	15/981844	5/16/2018	10236907	3/19/2019	Forward Error Correction (FEC) Emulator
MP9144C1C1	US	16/262148	1/30/2019	10637501	4/28/2020	Forward Error Correction (FEC) Emulator
MP9144C1C1C1	US	16/828559	3/24/2020			Forward Error Correction (FEC) Emulator
MP9145	US	15/356438	11/18/2016	9864146	1/9/2018	Fiber Tray Apparatus And Method For Handling A Fiber-Array/Silicon-Photonics-Die Assembly
MP9146	US	15/418487	1/27/2017	10014836	7/3/2018	Open-Loop Linear VGA
MP9146C1	US	15/995008	5/31/2018	10411666	9/10/2019	Open-Loop Linear VGA
MP9146CN	CN	201810103158X	2/1/2018			VARIABLE GAIN AMPLIFIER DEVICE AND ELECTRICAL SYSTEM
MP9147	US	15/374472	12/9/2016	9864141	1/9/2018	Silicon-Waveguide-Based Broadband Polarization Beam Rotator

<u>MP No</u>	<u>Ctry</u>	<u>AppNo</u>	<u>FileDate</u>	<u>PatNo</u>	<u>IssDate</u>	<u>AppTitle</u>
MP9147C1	US	15/833937	12/6/2017	10133002	11/20/2018	Silicon-Waveguide-Based Broadband Polarization Beam Rotator
MP9148	US	15/389830	12/23/2016	9882570	1/30/2018	Compact High Speed Duty Cycle Corrector
MP9148C1	US	15/840984	12/13/2017	10122368	11/6/2018	Compact High Speed Duty Cycle Corrector
MP9148C1C1	US	16/154522	10/8/2018	10333527	6/25/2019	Compact High Speed Duty Cycle Corrector
MP9148CN	CN	2017113810462	12/20/2017			COMPACT DUTY CYCLE CORRECTOR AND COMMUNICATION SYSTEM
MP9149	US	15/411914	1/20/2017	10382125	8/13/2019	Closed Loop Module Control For Communication
MP9149C1	US	16/449159	6/21/2019	10841005	11/17/2020	Closed Loop Module Control For Communication
MP9149C1C1	US	17/071701	10/15/2020			Closed Loop Module Control For Communication
MP9149CN	CN	201810155268	2/13/2018			COMMUNICATION SYSTEM AND AN OPTICAL TRANSCEIVER APPARATUS
MP9149DE	DE	1020180004032	1/17/2018			Closed Loop Module Control For Communication
MP9150	US	15/403041	1/10/2017	9939841	4/10/2018	Clock Distribution Network For Integrated Circuit
MP9150C1	US	15/910875	3/2/2018	10234892	3/19/2019	Clock Distribution Network For Integrated Circuit
MP9150C1C1	US	16/263705	1/31/2019	10606306	3/31/2020	Method Of Reducing Power Dissipation in A Clock Distribution Network For Integrated Circuit
MP9151CN	CN	2017113628101	12/18/2017	ZL2017113628	4/14/2020	BROADBAND POLARIZATION BEAM SPLITTER
MP9152	US	15/582439	4/28/2017	9979358	5/22/2018	Differential Amplifier With Extended Bandwidth And Thd Reduction
MP9152C1	US	15/958984	4/20/2018	10116269	10/30/2018	Differential Amplifier With Extended Bandwidth And Thd Reduction
MP9153	US	15/453618	3/8/2017	10056733	8/21/2018	Wavelength Locker Integrated With A Silicon Photonics System
MP9153C1	US	16/039568	7/19/2018	10164405	12/25/2018	Wavelength Locker Integrated With A Silicon Photonics System
MP9154	US	15/453525	3/8/2017	10075141	9/11/2018	Continuous Time Linear Equalizer With Two Adaptive Zero Frequency Locations

<u>MP No</u>	<u>Ctry</u>	<u>AppNo</u>	<u>FileDate</u>	<u>PatNo</u>	<u>IssDate</u>	<u>AppTitle</u>
MP9154C1	US	16/101301	8/10/2018	10193515	1/29/2019	Continuous Time Linear Equalizer With Two Adaptive Zero Frequency Locations
MP9155	US	15/597077	5/16/2017	10116263	10/30/2018	Method And Device For TIA Overload Control In Low Power Applications
MP9156	US	15/604196	5/24/2017	10148357	12/4/2018	Configurable Laser Modulator Driver And Output Matching Network
MP9157	US	15/464805	3/21/2017	10036853	7/31/2018	Silicon-Based Multiplexer/Demultiplexer For O-Band
MP9157C1	US	16/025890	7/2/2018	10126507	11/13/2018	Silicon-Based Multiplexer/Demultiplexer
MP9158	US	15/472156	3/28/2017	9915781	3/13/2018	Silicon-Waveguide-Based Broadband Polarization Splitter-Rotator
MP9158C1	US	15/881428	1/26/2018	10101532	10/16/2018	Silicon-Waveguide-Based Broadband Polarization Splitter-Rotator
MP9159	US	15/605829	5/25/2017	10096964	10/9/2018	CMOS Externally Modulated Laser Driver
MP9159C1	US	16/109605	8/22/2018	10574023	2/25/2020	CMOS Externally Modulated Laser Driver
MP9159C1C1	US	16/743611	1/15/2020	10886692	1/5/2021	CMOS Externally Modulated Laser Driver
MP9160	US	15/488950	4/17/2017	9939667	4/10/2018	Mach-Zehnder Modulator Driver
MP9160D1	US	15/909672	3/1/2018	10048519	8/14/2018	Mach-Zehnder Modulator Driver
MP9160D1C1	US	16/032947	7/11/2018	10234705	3/19/2019	Mach-Zehnder Modulator Driver
MP9161	US	16/115291	8/28/2018	10659337	5/19/2020	Retimer Data Communication Modules
MP9161C1	US	16/848597	4/14/2020			Retimer Data Communication Modules
MP9161CN	CN	2019107986175	8/27/2019			Retimer Data Communication Apparatus
MP9162	US	15/691023	8/30/2017	10326550	6/18/2019	Soft FEC With Parity Check
MP9162H1	US	16/403408	5/3/2019	10749629	8/18/2020	Soft FEC With Parity Check
MP9162H1C1	US	16/928821	7/14/2020			Soft FEC With Parity Check
MP9162H1H1	US	16/824261	3/19/2020			Soft FEC With Parity Check
MP9163	US	15/597074	5/16/2017	10270409	4/23/2019	Variable Gain Amplifiers For Communication Systems
MP9163C1	US	16/294834	3/6/2019	10622955	4/14/2020	Variable Gain Amplifiers For Communication Systems
MP9163C1C1	US	16/810651	3/5/2020	10763810	9/1/2020	Variable Gain Amplifiers For Communication Systems

<u>MP No</u>	<u>Ctry</u>	<u>AppNo</u>	<u>FileDate</u>	<u>PatNo</u>	<u>IssDate</u>	<u>AppTitle</u>
MP9164	US	15/644342	7/7/2017	10469176	11/5/2019	Histogram Based Optimization For Optical Modulation
MP9164C1	US	16/582985	9/25/2019	10644803	5/5/2020	Histogram Based Optimization For Optical Modulation
MP9164C1C1	US	16/828820	3/24/2020	10862589	12/8/2020	Histogram Based Optimization For Optical Modulation
MP9164C1C1C1	US	17/090482	11/5/2020			Histogram Based Optimization For Optical Modulation
MP9164CN	CN	2018209114444	6/12/2018	ZL2018209114	2/15/2019	Optical Transceiver Apparatus And Communication System
MP9165	US	15/633353	6/26/2017	10333627	6/25/2019	Rx Delay Line Inteferometer Tracking In Closed-Loop Module Control For Communication
MP9165C1	US	16/408256	5/9/2019	10560198	2/11/2020	Rx Delay Line Inteferometer Tracking In Closed-Loop Module Control For Communication
MP9165C1C1	US	16/720472	12/19/2019	10826621	11/3/2020	Rx Delay Line Inteferometer Tracking In Closed-Loop Module Control For Communication
MP9165CN	CN	2018105517811	5/31/2018			Signal Of Communication Tracking System
MP9166	US	15/663419	7/28/2017	10243570	3/26/2019	Charge-Pump For Clock And Data Recovery
MP9166C1	US	16/271413	2/8/2019	10498526	12/3/2019	Charge-Pump For Clock And Data Recovery
MP9166C1C1	US	16/664666	10/25/2019	10771065	9/8/2020	Charge-Pump For Clock And Data Recovery
MP9167	US	15/659502	7/25/2017	9971378	5/15/2018	Method And Device For High-Speed Sub-Picosecond Linear Clock Phase Detector
MP9170	US	15/699882	9/8/2017	10187230	1/22/2019	Equalization For Transmitter Input Buffer Array
MP9170C1	US	16/212169	12/6/2018	10374842	8/6/2019	Equalization For Transmitter Input Buffer Array
MP9171	US	15/668584	8/3/2017	10126629	11/13/2018	Optical Dispersion Compensator On Silicon
MP917111	US	16/157409	10/11/2018	10527795	1/7/2020	Optical Dispersion Compensator On Silicon
MP917111C1	US	16/708172	12/9/2019	10641965	5/5/2020	Optical Dispersion Compensator On Silicon
MP917111C1C1	US	16/835093	3/30/2020			Optical Dispersion Compensator On Silicon

<u>MP No</u>	<u>Ctry</u>	<u>AppNo</u>	<u>FileDate</u>	<u>PatNo</u>	<u>IssDate</u>	<u>AppTitle</u>
MP9172	US	15/673352	8/9/2017	10009214	6/26/2018	Multiplexers With Protection Switching
MP9172C1	US	15/987808	5/23/2018	10205625	2/12/2019	Multiplexers With Protection Switching
MP9172C1C1	US	16/232821	12/26/2018	10587452	3/10/2020	Multiplexers With Protection Switching
MP9172C1C1C1	US	16/775130	1/28/2020	10749732	8/18/2020	Multiplexers With Protection Switching
MP9172C1C1C1	US	16/930114	7/15/2020	10944620	3/9/2021	Multiplexers With Protection Switching
MP9173	US	15/788553	10/19/2017	10365435	7/30/2019	Surface Gratings, Photonics Circuit, And Method For Wafer-Level Testing Thereof
MP9173C1	US	16/440814	6/13/2019	10935723	3/2/2021	Surface Gratings, Photonics Circuit, And Method For Wafer-Level Testing Thereof
MP9174	US	15/853422	12/22/2017	10274681	4/30/2019	Optical Equalizer For Photonics System
MP9174C1	US	16/352636	3/13/2019	10605991	3/31/2020	Optical Equalizer For Photonics System
MP9175	US	15/896955	2/14/2018	10615567	4/7/2020	Packaging Of A Directly Modulated Laser Chip In Photonics Module
MP9175C1	US	16/802438	2/26/2020			Packaging Of A Directly Modulated Laser Chip In Photonics Module
MP9176	US	15/693294	8/31/2017	10374752	8/6/2019	Methods And Systems For Data Transmission
MP9176C1	US	16/444421	6/18/2019	10887049	1/5/2021	Methods And Systems For Data Transmission
MP9176C1C1	US	17/108386	12/1/2020			Methods And Systems For Data Transmission
MP9176CN	CN	2018214196251	8/30/2018	ZL2018214196	6/7/2019	Data Sending Device
MP9177	US	16/127103	9/10/2018	10804913	10/13/2020	Clock And Data Recovery Devices With Fractional-N PLL
MP9177C1	US	17/013307	9/4/2020			Clock And Data Recovery Devices With Fractional-N PLL
MP9178	US	15/887758	2/2/2018	10566287	2/18/2020	Light Engine Based On Silicon Photonics TSV Interposer
MP9178C1	US	16/738844	1/9/2020			Light Engine Based On Silicon Photonics Tsv Interposer
MP9179	US	15/995036	5/31/2018	10404289	9/3/2019	Maximum Likelihood Error Detection For Decision Feedback Equalizers With PAM Modulation
MP9179C1	US	16/515895	7/18/2019	10637512	4/28/2020	Maximum Likelihood Error Detection For Decision Feedback Equalizers With PAM Modulation

<u>MP No</u>	<u>Ctry</u>	<u>AppNo</u>	<u>FileDate</u>	<u>PatNo</u>	<u>IssDate</u>	<u>AppTitle</u>
MP9179C1C1	US	16/827355	3/23/2020			Maximum Likelihood Error Detection For Decision Feedback Equalizers With PAM Modulation
MP9179C1C1C1	US	17/347,315	6/14/2021			Maximum Likelihood Error Detection For Decision Feedback Equalizers With PAM Modulation
MP9180	US	16/256971	1/24/2019	10608749	3/31/2020	Probabilistic Shaping And Impairment Compensation Techniques For High Performance Coherent Optical Transceivers
MP9180C1	US	16/797704	2/21/2020	10848249	11/24/2020	Probabilistic Shaping And Impairment Compensation Techniques For High Performance Coherent Optical Transceivers
MP9180C1C1	US	17/077755	10/22/2020			Probabilistic Shaping Techniques For High Performance Coherent Optical Transceivers
MP9180PR	US	62/621521	1/24/2018			Impairment Compensation Techniques For High Performance Coherent Optical Transceivers
MP9181	US	16/033074	7/11/2018	10310185	6/4/2019	TE Polarizer Based On SOI Platform
MP9181C1	US	16/389078	4/19/2019	10627574	4/21/2020	TE Polarizer Based On SOI Platform
MP9181C1C1	US	16/814825	3/10/2020			TE Polarizer Based On SOI Platform
MP9181CN	CN	2019210797649	7/10/2019	ZL2019210797	1/10/2020	Traverse Electric Polarizer
MP9182	US	16/101286	8/10/2018	10284394	5/7/2019	Input Termination Circuits For High Speed Receiver
MP9182C1	US	16/681525	11/12/2019	10764092	9/1/2020	Input Termination Circuits For High Speed Receivers
MP9182D1	US	16/359870	3/20/2019	10505766	12/10/2019	Input Termination Circuits For High Speed Receivers
MP9183	US	16/262387	1/30/2019	10862521	12/8/2020	Technique For Programmable Gain Attenuation In A Wideband Matching Network With Enhanced Bandwidth
MP9184	US	16/053715	8/2/2018	10924269	2/16/2021	Compact Optical Module Integrated For Communicating Cryptocurrency Transaction
MP9185	US	16/179651	11/2/2018	10637208	4/28/2020	Silicon Photonics Based Tunable Laser
MP9185C1	US	16/818801	3/13/2020			Silicon Photonics Based Tunable Laser

<u>MP No</u>	<u>Ctry</u>	<u>AppNo</u>	<u>FileDate</u>	<u>PatNo</u>	<u>IssDate</u>	<u>AppTitle</u>
MP9185CN	CN	2019110464753	10/30/2019			Tunable Laser Device Based On Silicon Photonics And its Package Structure Thereof
MP9185GB	GB	19132778	9/13/2019			Silicon Photonics Based Tunable Laser
MP9186	US	16/274826	2/13/2019			Silicon Based Polarization Beam Splitter
MP9186CN	CN	2020201513320	2/3/2020	ZL2020201513	9/8/2020	Polarization Beam Splitter Of Silicon-Based Multimode Interferometer
MP9187	US	16/245076	1/10/2019	10788638	9/29/2020	Silicon Photonics Based Fiber Coupler
MP9187C1	US	16/995120	8/17/2020			Silicon Photonics Based Fiber Coupler
MP9187CN	CN	201922494119X	12/31/2019	ZL2019224941	11/17/2020	Silicon-Based Edge Coupler, Silicon Photonic Device And Photoelectric Module In Silicon Photonic Platform
MP9188	US	16/357095	3/18/2019	10754091	8/25/2020	Integrated Coherent Optical Transceiver, Light Engine
MP9188C1	US	16/928845	7/14/2020			Integrated Coherent Optical Transceiver, Light Engine
MP9188CN	CN	2020101873689	3/17/2020			Integrated Coherent Optical Transceiver, Light Engine
MP9188D1	US	16/842115	4/7/2020			Integrated Coherent Optical Transceiver, Light Engine
MP9188D2	US	16/842138	4/7/2020	10838145	11/17/2020	Integrated Coherent Optical Transceiver, Light Engine
MP9188DE	DE	1020202034850	3/18/2020			Integrated Coherent Optical Transceiver, Light Engine
MP9189	US	16/229301	12/21/2018	10833643	11/10/2020	Method And Structure For Controlling Bandwidth And Peaking Over Gain In A Variable Gain Amplifier (VGA)
MP9189C1	US	17/065164	10/7/2020			Improved Method And Structure For Controlling Bandwidth And Peaking Over Gain In A Variable Gain Amplifier (VGA)
MP9190	US	16/284633	2/25/2019	10804797	10/13/2020	High-Speed Linear Charge Pump Circuits For Clock Data Recovery
MP9190C1	US	17/014268	9/8/2020			High-Speed Linear Charge Pump Circuits For Clock Data Recovery
MP9191	US	16/706450	12/6/2019	10826613	11/3/2020	Integrated Compact In-Package Light Engine
MP9191C1	US	17/033194	9/25/2020	10892830	1/12/2021	Integrated Compact In-Package Light Engine

<u>MP No</u>	<u>Ctry</u>	<u>AppNo</u>	<u>FileDate</u>	<u>PatNo</u>	<u>IssDate</u>	<u>AppTitle</u>
MP9191C1C1	US	17/116737	12/9/2020			Integrated Compact In-Package Light Engine
MP9191CN	CN	2020113969502	12/3/2020			INTEGRATED OPTICAL TRANSCEIVER, COMPACT LIGHT ENGINE AND MULTI-CHANNEL LIGHT ENGINE
MP9192	US	16/256637	1/24/2019	10715259	7/14/2020	Impairment Compensation Techniques For High Performance Coherent Optical Transceivers
MP9192C1	US	16/892146	6/3/2020			Impairment Compensation Techniques For High Performance Coherent Optical Transceivers
MP9193	US	16/676337	11/6/2019	10785068	9/22/2020	Systems And Methods For Relative Intensity Noise Cancellation
MP9193C1	US	16/991927	8/12/2020			Systems And Methods For Relative Intensity Noise Cancellation
MP9194	US	16/655090	10/16/2019	10852570	12/1/2020	Dual-Slab-Layer Low-Loss Silicon Optical Modulator
MP9194C1	US	17/094736	11/10/2020			Dual-Slab-Layer Low-Loss Silicon Optical Modulator
MP9195	US	16/578090	9/20/2019	10942323	3/9/2021	Apparatus And Method For Thermal Dissipation Of Photonic Transceiving Module
MP9195C1	US	17/095269	11/11/2020			Apparatus And Method For Thermal Dissipation Of Photonic Transceiving Module
MP9195CN2	CN	202022069242X	9/18/2020			Apparatus For Thermal Dissipation Of Photonic Transceiving Module
MP9195DSG	US	29/705640	9/13/2019			Heat Sink Cover
MP9195DSGCN	CN	2020300406755	1/20/2020	ZL 2020300406	6/26/2020	Heat Sink Cover
MP9196	US	16/778918	1/31/2020			Method And Device For Energy-Efficient Decoders
MP9197	US	16/730770	12/30/2019			In-Band DSP Management Interface
MP9198	US	16/739973	1/10/2020			Silicon Optical Modulator, Method For Making The Same
MP9199	US	16/776362	1/29/2020			Silicon Photonics Integration Circuit
MP9199CN	CN	2021202718977	1/29/2021			Silicon Photonics Integration Circuit
MP9200	US	16/777655	1/30/2020			Network Systems And Methods For CXL Standard
MP9201	US	16/800974	2/25/2020	10951003	3/16/2021	Light Source For Integrated Silicon Photonics

<u>MP No</u>	<u>Ctry</u>	<u>AppNo</u>	<u>FileDate</u>	<u>PatNo</u>	<u>IssDate</u>	<u>AppTitle</u>
MP9201C1	US	17/169037	2/5/2021			Light Source For Integrated Silicon Photonics
MP9201CN	CN	2021204081056	2/24/2021			Light Source Based On Integrated Silicon Photonics
MP9202	US	16/825637	3/20/2020			Method And Device For Digital Compensation Of Dynamic Distortion In High-Speed Transmitters
MP9202C1	US	17/224,835	4/7/2021			METHOD AND DEVICE FOR DIGITAL COMPENSATION OF DYNAMIC DISTORTION IN HIGH-SPEED TRANSMITTERS
MP9203	US	16/937070	7/23/2020			Adaptive Diagnostics For Communication Systems
MP9204	US	16/805526	2/28/2020			Thin-Film Filter For Tunable Laser
MP9205	US	16/811946	3/6/2020	10867735	12/15/2020	inductors With Compensated Electromagnetic Coupling
MP9205C1	US	17/096419	11/12/2020			inductors With Compensated Electromagnetic Coupling
MP9206	US	16/860403	4/28/2020			Systems And Methods For Timing Recovery With Bandwidth Extension
MP9207	US	17/097791	11/13/2020			Method And Device For Clock Generation And Synchronization For Time Interleaved Networks
MP9208	US	16/849197	4/15/2020			Colorless Splitter Based On SOI Platform
MP9208DE	DE	102021203724.0	4/15/2021			Colorless Splitter Based on SOI Platform
MP9209	US	16/894597	6/5/2020			In-Packaged Multi-Channel Light Engine On Single Substrate
MP9210	US	16/894611	6/5/2020			Co-Packaged Light Engine Chipllets On Switch Substrate
MP9211	US	16/894622	6/5/2020			Method For Co-Packaging Light Engine Chipllets On Switch Substrate
MP9212	US	16/894639	6/5/2020			Heatsink For Co-Packaged Optical Switch Rack Package
MP9213	US	16/898358	6/11/2020			Constant-Bandwidth Linear Variable Gain Amplifier
MP9214	US	16/878412	5/19/2020			Line Side Multiplexers With Protection Switching
MP9215	US	16/920069	7/2/2020			Method Of Manufacturing And Packaging Silicon Photonics Integrated Circuit Dies In Wafer Form

<u>MP No</u>	<u>Ctry</u>	<u>AppNo</u>	<u>FileDate</u>	<u>PatNo</u>	<u>IssDate</u>	<u>AppTitle</u>
MP9216	US	16/922622	7/7/2020			Side Mode Suppression For Extended C-Band Tunable Laser
MP9217	US	17/011373	9/3/2020			Germanium-On-Silicon Avalanche Photodetector In Silicon Photonics Platform, Method Of Making The Same
MP9218	US	17/186897	2/26/2021			Optimizing Host/Module Interface
MP9218PR	US	63/055259	7/22/2020			Optimizing Host/Module Interface
MP9219	US	17/024473	9/17/2020			Silicon-Photonics-Based Semiconductor Optical Amplifier With N-Doped Active Layer
MP9220	US	17/012629	9/4/2020			Method For Detecting Low-Power Optical Signal With High Sensitivity
MP9221	US	17/011941	9/3/2020			Networking Switching Devices And Methods Thereof
MP9222	US	17/037110	9/29/2020			Termination Circuits And Attenuation Methods Thereof
MP9223	US	17/076162	10/21/2020			Laser Chip For Flip-Chip Bonding On Silicon Photonic Chips
MP9224	US	17/113728	12/7/2020			Analog Receiver Equalizer Architectures For High-Speed Wireline And Optical Applications
MP9225	US	17/122583	12/15/2020			Gain Medium Structure For Semiconductor Optical Amplifier With High Saturation Power
MP9226	US	17/113463	12/7/2020			A Multi-Doped Slab Silicon Optical Modulator
MP9227	US	17/119429	12/11/2020			Methods To Improve Modulation Efficiency In Silicon Optical Modulator
MP9228	US	17/148368	1/13/2021			Method And Device For High Bandwidth Receiver For High Baud-Rate Communications
MP9229	US	17/183919	2/24/2021			Method And Device For Synchronization Of Large-Scale Systems With Multiple Time Interleaving Sub-Systems
MP9230	US	17/168916	2/5/2021			High-Power Tunable Laser On Silicon Photonics Platform
MP9231	US	10/290571	11/8/2002	6940898	9/6/2005	Decision Feedback Equalizer With Dynamic Feedback Control

<u>MP No</u>	<u>Ctry</u>	<u>AppNo</u>	<u>FileDate</u>	<u>PatNo</u>	<u>IssDate</u>	<u>AppTitle</u>
MP923111	US	10/322024	12/17/2002	7039104	5/2/2006	Decision Feedback Equalizer With Dynamic Feedback Control
MP92311111	US	10/768408	1/30/2004	7035330	4/25/2006	Decision Feedback Equalizer With Dynamic Feedback Control
MP9232D1	US	11/859649	9/21/2007	7561617	7/14/2009	Channel Monitoring And Identification And Performance Monitoring In A Flexible High Speed Signal Processor Engine
MP923311	US	10/290674	11/8/2002	7130366	10/31/2006	Compensation Circuit And Method For Reducing Intersymbol Interference Products Caused By Signal Transmission Via Dispersive Media
MP923311WO	PCT	PCT/US2003/010272	4/3/2003			Compensation Circuit And Method For Reducing Intersymbol Interference Products Caused By Signal Transmission Via Dispersive Media
MP9234	US	10/117293	4/5/2002	7031383	4/18/2006	Compensation Circuit For Reducing Intersymbol Interference Products Caused By Signal Transmission Via Dispersive Media
MP923511111	US	11/070485	3/2/2005	7120193	10/10/2006	Decision Feedback Equalizer With Dynamic Feedback Control
MP9236C1	US	10/244500	9/16/2002	7061978	6/13/2006	Compensation Method For Reducing Intersymbol Interference Products Caused By Signal Transmission Via Dispersive Media
MP9237	US	10/179689	6/24/2002	7020402	3/28/2006	Crosstalk Compensation Engine For Reducing Signal Crosstalk Effects Within A Data Signal
MP923811111D	US	11/539810	10/9/2006	7394849	7/1/2008	Decision Feedback Equalizer With Dynamic Feedback Control
MP9239	US	10/614587	7/3/2003	7339988	3/4/2008	Channel Monitoring And Identification And Performance Monitoring In A Flexible High Speed Signal Processor Engine

<u>MP No</u>	<u>Ctry</u>	<u>AppNo</u>	<u>FileDate</u>	<u>PatNo</u>	<u>IssDate</u>	<u>AppTitle</u>
MP924011C1	US	11/553019	10/26/2006	8050318	11/1/2011	Compensation Circuit And Method For Reducing Intersymbol Interference Products Caused By Signal Transmission Via Dispersive Media
MP924111C1	US	11/759720	6/7/2007	7421021	9/2/2008	Adaptive Signal Equalizer With Adaptive Error Timing And Precursor/Postcursor Configuration Control
MP9242	US	10/290993	11/8/2002			Adaptive Signal Equalizer With Adaptive Error Timing And Precursor/Postcursor Configuration Control
MP924211	US	10/321876	12/17/2002	7266145	9/4/2007	Adaptive Signal Equalizer With Adaptive Error Timing And Precursor/Postcursor Configuration Control
MP9243	US	11/115506	4/27/2005	7421022	9/2/2008	Method For Robust And Stable Convergence Of Blind LMS Based Adaptation Of Coefficients For A Continuous Time FFE-DFE
MP9244	US	11/188700	7/26/2005	7577357	8/18/2009	Optical Switch
MP9245	US	10/882265	7/2/2004	7502343	3/10/2009	Communication Terminal, System And Method For Connecting A Terminal With Unknown Id Information Via A Network
MP9246	US	10/642679	8/19/2003	7342909	3/11/2008	Cdma Transmitter, Cdma Multiplex Transmitter, Cdma Receiver And Cdma Communication System
MP9247	US	10/323911	12/20/2002	7356512	4/8/2008	Contents Mediating System And Contents Mediating Method
MP9248	US	10/050135	1/18/2002	7620557	11/17/2009	Charging System
MP9249	US	10/815981	4/2/2004	7242976	7/10/2007	Device And Method For Selecting Codes
MP9250	US	10/868918	6/17/2004	7324754	1/29/2008	Optical Code Division Multiplex Transmission Method And Optical Code Division Multiplex Transmission Device
MP9251	US	10/716709	11/20/2003	7174103	2/6/2007	Optical Signal Converter, Optical Encoder, Optical Decoder, And Optical Code Division Multiplexing Communication Apparatus
MP9252	US	10/752573	1/8/2004	7324753	1/29/2008	Optical Communication Network Using A Code Division Multiplexing Method

<u>MP No</u>	<u>Ctry</u>	<u>AppNo</u>	<u>FileDate</u>	<u>PatNo</u>	<u>IssDate</u>	<u>AppTitle</u>
MP9253	US	10/369499	2/21/2003	7180961	2/20/2007	Receiving Device
MP9254	US	10/673441	9/30/2003	7333729	2/19/2008	Optical Transmitter, Optical Receiver And Optical Transmission System Using Same
MP9255	US	10/133348	4/29/2002	7116684	10/3/2006	Cell Disassembly Unit
MP9256	US	10/183439	6/28/2002	7085397	8/1/2006	Unfair Contents Appropriation Detection System, Computer Program And Storage Medium
MP9257	US	10/098342	3/18/2002	6917761	7/12/2005	Optical Multiplexing Transmission Apparatus And System
MP9258	US	09/810481	3/19/2001	7197694	3/27/2007	Image Display System, image Registration Terminal Device And Image Reading Terminal Device Used In The image Display System
MP9259	US	09/817214	3/27/2001	7031906	4/18/2006	System And Method For Character-Based Conversation Through A Network Between Different Languages
MP9260	US	09/858886	5/17/2001	7206749	4/17/2007	Method And System For Selling Content
MP9261	US	09/808941	3/16/2001	6950486	9/27/2005	Delay Apparatus And Method
MP9262	US	09/973755	10/11/2001	6944400	9/13/2005	Optical Path Switching Device
MP9263D1	US	11/494462	7/28/2006	7489694	2/10/2009	Cell Disassembly Unit
MP9264	US	09/663923	9/18/2000	6977945	12/20/2005	Network Interface Apparatus For Controlling The Size, Coupling Or Transfer Rate Of Packets On The Basis Of An Ip Network Delay And A Method Therefor
MP9265	US	09/994814	11/28/2001	6826496	11/30/2004	Circuitry For And A Method Of Detecting Tonal Signals With The Processing Capacity Distributed With Weight To Frequency And Time Domains
MP9266	US	09/603622	6/26/2000	6931443	8/16/2005	Data Communication System
MP9267	US	09/588022	6/6/2000	6728410	4/27/2004	Picture Coding Method And Apparatus Reducing Size Of Critical Segments
MP9268C1	US	11/337540	1/24/2006	7227956	6/5/2007	Simple Encrypted Transmission System Suitable For Intermittent Signals
MP9269	US	09/900164	7/9/2001	6574392	6/3/2003	Wavelength Router
MP9270	US	09/879956	6/14/2001	6618001	9/9/2003	Apparatus For Detecting Signal

<u>MP No</u>	<u>Ctry</u>	<u>AppNo</u>	<u>FileDate</u>	<u>PatNo</u>	<u>IssDate</u>	<u>AppTitle</u>
MP9271	US	09/810160	3/19/2001	6591036	7/8/2003	Optical Multiplexing / Demultiplexing Device
MP9272	US	09/667698	9/22/2000	6507690	1/14/2003	Optical Device
MP9274D1	US	09/954,060	9/18/2001	6,624,255	9/23/2003	POLYMER MATERIAL FOR USE IN OPTICAL COMMUNICATION PARTS
MP9344	US	09/924443	8/9/2001	7082199	7/25/2006	Simple Encrypted Transmission System Suitable For Intermittent Signals
MP9346	US	10/373301	2/26/2003	7308060	12/11/2007	Self Correcting Data Re-Timing Circuit And Method
MP9346PR	US	60/359709	2/27/2002			Self Correcting Data Re-Timing Circuit And Method
MP9347111111	US	09/851565	5/8/2001	7342942	3/11/2008	Multi-Service Segmentation And Reassembly Device That Maintains Only One Reassembly Context Per Active Output Port
MP9347111111D	US	09/976206	10/12/2001	7298738	11/20/2007	Backpressuring Using A Serial Bus Interface And A Status Switch Cell
MP9347111111D	US	09/976212	10/12/2001	7369574	5/6/2008	Multi-Service Segmentation And Reassembly Device That is Operable In An Ingress Mode Or In An Egress Mode
MP9347111111D	US	09/976213	10/12/2001	7286566	10/23/2007	Multi-Service Segmentation And Reassembly Device That Maintains Reduced Number Of Segmentation Contexts
MP9347111111D	US	09/976310	10/12/2001	7327760	2/5/2008	Multi-Service Segmentation And Reassembly Device Operable With Either A Cell-Based Or A Packet-Based Switch Fabric
MP9347111111D	US	09/976499	10/12/2001	7139271	11/21/2006	Using An Embedded Indication Of Egress Application Type To Determine Which Type Of Egress Processing To Perform
MP9347111111D	US	09/976504	10/12/2001	7295574	11/13/2007	Multi Service Segmentation And Reassembly Device Involving Multiple Data Path Integrated Circuits
MP9347111111D	US	09/976522	10/12/2001	7142564	11/28/2006	Multi-Service Segmentation And Reassembly Device With A Single Data Path That Handles Both Cell And Packet Traffic

<u>MP No</u>	<u>Ctry</u>	<u>AppNo</u>	<u>FileDate</u>	<u>PatNo</u>	<u>IssDate</u>	<u>AppTitle</u>
MP9349C1	US	10/869,379	6/15/2004	7,145,910	12/5/2006	METHODS AND APPARATUS FOR DYNAMICALLY ALLOCATING BANDWIDTH BETWEEN ATM CELLS AND PACKETS
MP9352	US	11/477663	6/30/2006	7787502	8/31/2010	Port Multiplexing Apparatus And Methods
MP9353	US	11/651632	1/10/2007	8184686	5/22/2012	System And Method For Recovering Data Received Over A Communication Channel
MP9357D1	US	10/379,132	3/3/2003	7,081,775	7/25/2006	BIAS TECHNIQUE FOR OPERATING POINT CONTROL IN MULTISTAGE CIRCUITS
MP9357PR	US	60/135461	5/24/1999			Bias Technique For Operating Point Control In Multistage Circuits
MP9358	US	11/822725	7/9/2007	7848474	12/7/2010	Signal Timing Phase Selection And Timing Acquisition Apparatus And Techniques
MP9359	US	12/285357	10/2/2008	8902932	12/2/2014	Systems And Methods For A Network Device To Update Timing Packets To Reflect Delay
MP9360	US	12/285358	10/2/2008	8274998	9/25/2012	Systems And Methods For Packet Based Timing Offset Determination Using Timing Adjustment Information
MP9360C1	US	13/593370	8/23/2012	9344208	5/17/2016	Systems And Methods For Packet Based Timing Offset Determination Using Timing Adjustment Information
MP9361	US	12/401020	3/10/2009	8135972	3/13/2012	Data Interface Power Consumption Control
MP9361C1	US	13/363129	1/31/2012	8504859	8/6/2013	Data Interface Power Consumption Control
MP9361C1C1	US	13/935092	7/3/2013	9075607	7/7/2015	Data Interface Power Consumption Control
MP9361C1C1C1	US	14/791100	7/2/2015	9746906	8/29/2017	Data Interface Power Consumption Control
MP9361CN	CN	2010800191969	10/31/2011	ZL2010800191	1/21/2015	Data Interference Power Consumption Control
MP9361CND1	CN	2014107958863		ZL2014107958	12/12/2017	Data Interference Power Consumption Control
MP9361EP	EP	107512162	10/10/2011	2406896	7/17/2019	Data Interface Power Consumption Control
MP9361JP	JP	2011554095	9/8/2011	JP5670923	2/18/2015	Data Interface Power Consumption Control
MP9361WO	PCT	PCT/US2010/026335	3/5/2010			Data Interface Power Consumption Control

<u>MP No</u>	<u>Ctry</u>	<u>AppNo</u>	<u>FileDate</u>	<u>PatNo</u>	<u>IssDate</u>	<u>AppTitle</u>
MP9361WOEP	DE	10751216.2	3/5/2010	2406896	7/17/2019	Data Interface Power Consumption Control
MP9361WOEP	GB	10751216.2	3/5/2010	2406896	7/17/2019	Data Interface Power Consumption Control
MP9362	US	12/900424	10/7/2010	8390358	3/5/2013	Integrated Jitter Compliant Clock Signal Generation
MP9363	US	14/180315	2/13/2014	9083492	7/14/2015	Apparatus And Method For Communicating Data Over A Communication Channel
MP9363C1	US	14/744015	6/18/2015	9413493	8/9/2016	Apparatus And Method For Communicating Data Over A Communication Channel
MP9363C1C1	US	15/206011	7/8/2016	10033410	7/24/2018	Apparatus And Method For Communicating Data Over A Communication Channel
MP9363C1C1C1	US	16/011483	6/18/2018	10461781	10/29/2019	Apparatus And Method For Communicating Data Over A Communication Channel
MP9363C1C1C1	US	16/575236	9/18/2019	10601449	3/24/2020	Apparatus And Method For Communicating Data Over A Communication Channel
MP9363PR	US	61/765050	2/15/2013			Apparatus And Method For Communicating Data Over A Communication Channel
MP9363WO	PCT	PCT/US2014/016329	2/13/2014			Apparatus And Method For Communicating Data Over A Communication Channel
MP9364	US	13/231798	9/13/2011	8384452	2/26/2013	Integrated Jitter Compliant Low Bandwidth Phase Locked Loops
MP9365	US	13/091908	4/21/2011	8494363	7/23/2013	Signal Format Conversion Apparatus And Methods
MP9366	US	13/085810	4/13/2011	8751910	6/10/2014	Staircase Forward Error Correction Coding
MP9366C1	US	14/266299	4/30/2014	9397702	7/19/2016	Staircase Forward Error Correction Coding
MP9366C1C1	US	15/194432	6/27/2016	10320425	6/11/2019	Staircase Forward Error Correction Coding
MP9367	US	13/190194	7/25/2011	8601340	12/3/2013	Time Varying Data Permutation Apparatus And Methods
MP9367C1	US	14/066332	10/29/2013	8910016	12/9/2014	Time Varying Data Permutation Apparatus And Methods
MP9367C1C1	US	14/540907	11/13/2014	9564926	2/7/2017	Time Varying Data Permutation Apparatus And Methods
MP9367C1C1C1	US	15/378904	12/14/2016	10110252	10/23/2018	Time Varying Data Permutation Apparatus And Methods

<u>MP No</u>	<u>Ctry</u>	<u>AppNo</u>	<u>FileDate</u>	<u>PatNo</u>	<u>IssDate</u>	<u>AppTitle</u>
MP9367C1C1C1	US	16/134311	9/18/2018	10567005	2/18/2020	Time Varying Data Permutation Apparatus And Methods
MP9367C1C1C1	US	16/733815	1/3/2020	10944430	3/9/2021	Time Varying Data Permutation Apparatus And Methods
MP9367CN	CN	2012800352211		20128003522	5/30/2017	Time-Variable Data Displacement Apparatus And Method
MP9367WO	PCT	PCT/US2012/040020	5/30/2012			Time Varying Data Permutation Apparatus And Methods
MP9368	US	13/276308	10/18/2011	8862797	10/14/2014	Reducing Delay And Delay Variation In A Buffer In Network Communications
MP9369	US	14/295054	6/3/2014	9461764	10/4/2016	Apparatus And Method For Communicating Data Over A Communication Channel
MP9369PR	US	61/841703	7/1/2013			Apparatus And Method For Communicating Data Over A Communication Channel
MP9370	US	13/279043	10/21/2011	9252903	2/2/2016	System And Method For Accounting For Time That A Packet Spends In Transit Through A Transparent Clock
MP9371	US	13/706887	12/6/2012	8966332	2/24/2015	Apparatus And Method For Self-Testing A Component For Signal Recovery
MP9371C1	US	14/577829	12/19/2014	9231635	1/5/2016	Apparatus And Method For Self-Testing A Component For Signal Recovery
MP9372	US	13/706922	12/6/2012	9083574	7/14/2015	System And Method For AC Coupling
MP9372C1	US	14/754038	6/29/2015	9515854	12/6/2016	System And Method For AC Coupling
MP9372CN	CN	2013800721992	8/1/2015	CN10496947	9/26/2017	System And Method For AC Coupling
MP9372WO	PCT	PCT/US2013/073381	12/5/2013			System And Method For AC Coupling
MP9373	US	14/211938	3/14/2014	9438376	9/6/2016	Apparatus And Method For Forward Error Correction Over A Communication Channel
MP9373C1	US	15/230319	8/5/2016	9787431	10/10/2017	Apparatus And Method For Forward Error Correction Over A Communication Channel
MP9373PR	US	61/791697	3/15/2013			Apparatus And Method For Forward Error Correction Over A Communication Channel

<u>MP No</u>	<u>Ctry</u>	<u>AppNo</u>	<u>FileDate</u>	<u>PatNo</u>	<u>IssDate</u>	<u>AppTitle</u>
MP9374	US	14/806346	7/22/2015	9467315	10/11/2016	Circuit And Method For Performing Adaptation On All Receiver Branches
MP9374C1	US	15/260692	9/9/2016	9660841	5/23/2017	Circuit And Method For Performing Adaption On All Receiver Branches
MP9374PR	US	62/027520	7/22/2014			Adaptive Decision Feedback Equalizer With Integrated Error Computation Circuit
MP9375	US	14/628043	2/20/2015	9647761	5/9/2017	Flexible Rate Communication Signalling
MP9375PR	US	61/943009	2/21/2014			Flexible Rate Communication Signalling
MP9376	US	14/858347	9/18/2015	9647825	5/9/2017	Circuit And Method For Creating Additional Data Transitions
MP9376C1	US	15/474593	3/30/2017	9973329	5/15/2018	Circuit And Method For Creating Additional Data Transitions
MP9377	US	14/858494	9/18/2015	9461633	10/4/2016	Dual Mode Latch Circuit
MP9378	US	14/921251	10/23/2015	9559877	1/31/2017	System And Method For Adjusting Clock Phases In A Time-interleaved Receiver
MP9378C1	US	15/372051	12/7/2016	9742594	8/22/2017	System And Method For Adjusting Clock Phases In A Time-interleaved Receiver
MP9379	US	14/976100	12/21/2015	9654253	5/16/2017	Apparatus And Method For Communicating Data Over An Optical Channel
MP9379C1	US	15/494366	4/21/2017	10128980	11/13/2018	Apparatus And Method For Communicating Data Over An Optical Channel
MP9379C1C1	US	16/155610	10/9/2018	10374750	8/6/2019	Apparatus And Method For Communicating Data Over An Optical Channel
MP9379C1C1C1	US	16/451986	6/25/2019	10659192	5/19/2020	Apparatus And Method For Communicating Data Over An Optical Channel
MP9379C1C1C1	US	16/853514	4/20/2020	10903937	1/26/2021	Apparatus And Method For Communicating Data Over An Optical Channel
MP9379C1C1C1	US	17/127510	12/18/2020			Apparatus And Method For Communicating Data Over An Optical Channel
MP9379CN	CN	2016111913718	12/20/2016			Apparatus And Method For Communicating Data Over An Optical Channel
MP9379GB	GB	16217788	12/20/2016	2547321	8/28/2019	Apparatus And Method For Communicating Data Over An Optical Channel

<u>MP No</u>	<u>Ctry</u>	<u>AppNo</u>	<u>FileDate</u>	<u>PatNo</u>	<u>IssDate</u>	<u>AppTitle</u>
MP9381	US	11/551701	10/20/2006	7576676	8/18/2009	Analog-To-Digital Converter Using Lookahead Pipelined Architecture And Open-Loop Residue Amplifiers
MP9381PR	US	60/764866	2/2/2006			ADC Provisional Patent Application
MP9382	US	11/559850	11/14/2006	7852913	12/14/2010	High-Speed Receiver Architecture
MP9382PR	US	60/737103	11/15/2005			CL1010 EDC Transceiver System And Chip Architecture
MP9382WO	PCT	PCT/US2006/044679	11/15/2006			High-Speed Receiver Architecture
MP9382WOEP	EP	68498922	5/14/2008	1972054	1/7/2015	High-Speed Receiver Architecture
MP9382WOEPF	FR	68498922	11/15/2006	1972054	1/7/2015	HIGH-SPEED RECEIVER ARCHITECTURE
MP9383	US	11/832585	8/1/2007	8488726	7/16/2013	Receivers Based On Closed-Form Parametric Estimates Of The Probability Density Function For The Received Signal
MP9383PR	US	60/821137	8/2/2006			Parametric Estimation Of I _m /O _d Optical Channels Using New Closed-Form Approximations Of The Signal Pdf
MP9384	US	11/835418	8/7/2007	8229303	7/24/2012	Reducing Pulse Narrowing In The Transmitter Signal That Drives A Limiting E/O Converter For Optical Fiber Channels
MP9384PR	US	60/836295	8/7/2006			RX/EQ SNR By Overcompensation Of The TX Electrical Channel
MP9385	US	12/056084	3/26/2008	8483343	7/9/2013	High-Speed Receiver Architecture
MP9386	US	12/283788	9/15/2008	7808417	10/5/2010	Analog-To-Digital Converter
MP9386PR	US	60/972372	9/14/2007			10.3GS/s 6bit Interleaved/Pipelined ADC Using Open-Loop Amplifiers and Digital Calibration for a Maximum- Likelihood Sequence Detection Receiver in 90nm CMOS
MP9387CIP	US	12/283853	9/15/2008	8094056	1/10/2012	Analog-To-Digital Converter
MP9388CIP	US	12/335493	12/15/2008	8139630	3/20/2012	High-Speed Receiver Architecture

<u>MP No</u>	<u>Ctry</u>	<u>AppNo</u>	<u>FileDate</u>	<u>PatNo</u>	<u>IssDate</u>	<u>AppTitle</u>
MP9389C1	US	12/430892	4/27/2009	8111986	2/7/2012	Testing Of Transmitters For Communication Links By Software Simulation Of Reference Channel And/Or Reference Receiver
MP9390CIP	US	12/387142	4/27/2009	8254781	8/28/2012	Testing Of Receivers With Separate Linear O/E Module And Host Used In Communication Links
MP9391C1	US	12/651721	1/4/2010	8009981	8/30/2011	Testing Of Transmitters For Communication Links By Software Simulation Of Reference Channel And/Or Reference Receiver
MP9392C1	US	12/705973	2/15/2010	8498535	7/30/2013	Testing Of Elements Used In Communication Links
MP9393C1	US	12/839178	7/19/2010	8265134	9/11/2012	Multi-Channel Equalization To Compensate For Impairments Introduced By Interleaved Devices
MP9394	US	12/938040	11/2/2010	8761609	6/24/2014	High-Speed Optical Communications System
MP9394PR	US	61/257384	11/2/2009			Optical Communication System Architecture And Implementation
MP9395CIP	US	13/013149	1/25/2011	8831074	9/9/2014	High-Speed Receiver Architecture
MP9396C1	US	13/367234	2/6/2012	8639112	1/28/2014	Testing Of Transmitters For Communication Links By Software Simulation Of Reference Channel And/Or Reference Receiver
MP9397	US	13/406452	2/27/2012	8918694	12/23/2014	Non-Concatenated FEC Codes For Ultra-High Speed Optical Transport Networks
MP9397PR	US	61/447620	2/28/2011			Non-Concatenated FEC Codes For Ultra-High Speed Optical Transport Networks And LDPC Code For Optical Communication
MP9398	US	13/479147	5/23/2012	8886055	11/11/2014	Reduced Data Rate Operation Mode For High Speed Optical Communication Device
MP9398PR	US	61/489537	5/24/2011			40Gb/s Operation Modes For 100Gbps Receivers Based On QPSK And DQPSK Modulation
MP9399C1	US	13/555766	7/23/2012	8929747	1/6/2015	Reducing Pulse Narrowing In The Transmitter Signal That Drives A Limiting E/O Converter For Optical Fiber Channels

<u>MP No</u>	<u>Ctry</u>	<u>AppNo</u>	<u>FileDate</u>	<u>PatNo</u>	<u>IssDate</u>	<u>AppTitle</u>
MP9400	US	13/594644	8/24/2012	9225433	12/29/2015	Timing Recovery For Optical Coherent Receivers In The Presence Of Polarization Mode Dispersion
MP9400PR	US	61/527013	8/24/2011			Timing Recovery For Optical Coherent Receivers In The Presence Of Polarization Mode Dispersion (PMD)
MP9401	US	13/655302	10/18/2012	9071364	6/30/2015	Coherent Optical Transceiver With Programmable Application Modes
MP9401PR	US	61/548675	10/18/2011			16QAM Modulation For Coherent Optical Transmission With Low-Power Pluggable Optical Module
MP9402	US	13/744205	1/17/2013	9036751	5/19/2015	Skew Compensation Based On Equalizer Coefficients
MP9402PR	US	61/587572	1/17/2012			Automatic Skew Compensation Scheme Based On FFE Coefficients
MP9403	US	13/744235	1/17/2013	9077572	7/7/2015	Reset In A Receiver Using Center Of Gravity Of Equalizer Coefficients
MP9404	US	13/744211	1/17/2013	9094117	7/28/2015	Channel Diagnostics Based On Equalizer Coefficients
MP9405C1	US	13/952774	7/29/2013	9136942	9/15/2015	Testing Of Elements Used In Communication Links
MP9406	US	14/093306	11/29/2013	9337934	5/10/2016	Coherent Transceiver Architecture
MP9406PR	US	61/731392	11/29/2012			Clocking Architecture For Analog Front End And Digital Blocks Split Into Multiple Clock Domains
MP9407	US	14/095789	12/3/2013	9178625	11/3/2015	Timing Recovery For Optical Coherent Receivers In The Presence Of Polarization Mode Dispersion
MP9407PR	US	61/732885	12/3/2012			Timing Recovery For Optical Coherent Receivers In The Presence Of Polarization Mode Dispersion
MP9408	US	14/209867	3/13/2014	9306676	4/5/2016	Cycle Slip Compensation in Coherent Receiver
MP9408PR	US	61/784305	3/14/2013			Cycle Slip Compensation
MP9409C1	US	14/311019	6/20/2014	9391715	7/12/2016	High-Speed Optical Communications System
MP9410	US	14/581930	12/23/2014	9337993	5/10/2016	Timing Recovery In A High Speed Link
MP9411	US	14/581979	12/23/2014	9379878	6/28/2016	Deskew In A High Speed Link

<u>MP No</u>	<u>Ctry</u>	<u>AppNo</u>	<u>FileDate</u>	<u>PatNo</u>	<u>IssDate</u>	<u>AppTitle</u>
MP9412	US	14/581934	12/23/2014	9571308	2/14/2017	High Speed Transceiver
MP9413	US	14/316566	6/26/2014	9496962	11/15/2016	Systems And Methods For Biasing Optical Modulating Devices
MP9414	US	14/209725	3/13/2014	8947281	2/3/2015	Apparatus And Methods For Actively Terminated Digital-To-Analog Conversion
MP9415C1	US	14/575864	12/18/2014	9319061	4/19/2016	Apparatus And Methods For Active Termination Of Digital-To-Analog Converters
MP9416PR	US	61/921360	12/27/2013			Systems And Methods For High Speed Communication
MP9417C1	US	14/581879	12/23/2014	9742689	8/22/2017	Channel Negotiation For A High Speed Link
MP9418PR	US	61/927404	1/14/2014			Systems And Methods For High-Speed Communication Using A Breakout Cable
MP9419PR	US	61/982233	4/21/2014			Systems And Methods For High-Speed Communication Using A Breakout Cable
MP9420C1	US	15/172595	6/3/2016	9742550	8/22/2017	Deskew In A High Speed Link
MP9420C1C1	US	15/639741	6/30/2017	10148414	12/4/2018	Deskew In A High Speed Link
MP9421C1	US	15/392244	12/28/2016	9882706	1/30/2018	High Speed Transceiver
MP9422PR	US	61/757035	1/25/2013			Management Interface For Optical Communications Systems
MP9423PR	US	61/840260	6/27/2013			Automatic Modulator Bias Control For Spectrally Efficient Optical Modulation Format
MP9424PR	US	61/953531	3/14/2014			Systems And Methods For Biasing Optical Modulating Devices
MP9425C1	US	15/342855	11/3/2016	9998228	6/12/2018	Systems And Methods For Biasing Optical Modulating Devices
MP9425C1C1	US	15/980448	5/15/2018	10243663	3/26/2019	Systems And Methods For Biasing Optical Modulating Devices
MP9425C1C1C1	US	16/268702	2/6/2019	10530483	1/7/2020	Systems And Methods For Biasing Optical Modulating Devices
MP9426PR	US	61/791461	3/15/2013			Host Ingress Transmission Digital To Analog Converter
MP9427PR	US	61/947877	3/4/2014			Systems And Methods For Communicating Between A Host And Far-End Cable Without The Need For A Separate Or Dedicated Control Channel

<u>MP No</u>	<u>Ctry</u>	<u>AppNo</u>	<u>FileDate</u>	<u>PatNo</u>	<u>IssDate</u>	<u>AppTitle</u>
MP9428PR	US	62/148688	4/16/2015			Digital Constellation Transformation Algorithm For Compensating Drifting And Dithering Impairment Of Modulator Bias Controller
MP9429	US	15/130778	4/15/2016	9853734	12/26/2017	Apparatus And Methods For Digital Signal Constellation Transformation
MP9429C1	US	15/820304	11/21/2017	10038505	7/31/2018	Apparatus And Methods For Digital Signal Constellation Transformation
MP9429C1C1	US	16/022573	6/28/2018	10432313	10/1/2019	Apparatus And Methods For Digital Signal Constellation Transformation
MP9429C1C1C1	US	16/543298	8/16/2019	10651941	5/12/2020	Apparatus And Methods For Digital Signal Constellation Transformation
MP9429C1C1C1	US	16/850710	4/16/2020	10880011	12/29/2020	Apparatus And Methods For Digital Signal Constellation Transformation
MP9429C1C1C1	US	17/109778	12/2/2020			Apparatus And Methods For Digital Signal Constellation Transformation
MP9430PR	US	62/214404	9/4/2015			Transmitter Alignment In An Optical Communication System
MP9431PR	US	62/346296	6/6/2016			Flexible Coding And Modulation Techniques For Next Generation DSP-Based Coherent Systems
MP9432	US	15/256173	9/2/2016	10038498	7/31/2018	Apparatus And Methods For Timing Tone Based Transmitter Skew Alignment In An Optical Communication System
MP9432C1	US	16/024105	6/29/2018	10181899	1/15/2019	Apparatus And Methods For Timing Tone Based Transmitter Skew Alignment In An Optical Communication System
MP9433C1	US	15/256210	9/2/2016	10110317	10/23/2018	Apparatus And Methods For Transmitter Skew And Bias Error Compensation In An Optical Communication System
MP9434PR	US	60/541674	2/3/2004			Use Of Low-Speed Components In High-Speed Optical Fiber Transceivers
MP9434PR2	US	60/536148	1/12/2004			Use Of Low-Speed Components In High-Speed Optical Fiber Transceivers

<u>MP No</u>	<u>Ctry</u>	<u>AppNo</u>	<u>FileDate</u>	<u>PatNo</u>	<u>IssDate</u>	<u>AppTitle</u>
MP9434WO	PCT	PCT/US2005/000940	1/11/2005			Use Of Low-Speed Components In High-Speed Optical Fiber Transceivers
MP9435PR	US	60/677911	5/4/2005			New Approach To Measure Tx Signal Strength Penalty
MP9436PR	US	60/690190	6/13/2005			Transmit Wavetomform And Dispersion Penalty Algorithm
MP9437PR	US	60/698435	7/11/2005			Method To Accurately Measure Bias And Optical Modulation Amplitude For A Distorted Optical Waveform
MP9438PR	US	60/701637	7/21/2005			Method To Extract Square-Wave-Based Bias And Optical Modulation Amplitude For A Distorted Optical Waveform
MP9439PR	US	60/707282	8/10/2005			Method To Extract Square-Wave-Based Bias And Optical Modulation Amplitude For A Distorted Optical Waveform
MP9440PR	US	60/710512	8/22/2005			Computation Of Optimal Offset For A Transmitter Waveform And Dispersion Penalty Test
MP9441PR	US	60/713867	9/1/2005			Transmitter Waveform And Dispersion Penalty Test Using A Short Equalizer, Omsd Normalization, And Optimal Offset Computation
MP9442PR	US	60/779200	3/3/2006			Mimo/Mise Receiver For Electronic Dispersion Compensation Of Multimode Optical Fibers
MP9443PR	US	60/783344	3/16/2006			Mimo/Mise Receiver For Electronic Dispersion Compensation Of Multimode Optical Fibers
MP9444PR	US	60/747398	5/16/2006			Method For Tradeoff Between Linear Optical Module Rx Distortion And Noise
MP9446PR	US	60/908149	3/26/2007			Digital Timing Recovery For Multimode Fibers In The Presence Of Time Variations
MP9449PR	US	61/007779	12/14/2007			DSP-Based Transceivers For Electronic Dispersion Compensation Of Single-Mode And Multimode Fibers
MP9451PR	US	61/048063	4/25/2008			Alignment Of Square Waveform In T/WDP Code For A More Accurate Measure Of XMA

<u>MP No</u>	<u>Ctry</u>	<u>AppNo</u>	<u>FileDate</u>	<u>PatNo</u>	<u>IssDate</u>	<u>AppTitle</u>
MP9452PR	US	61/192194	9/15/2008			A 90nm CMOS DSP Maximum-Likelihood Sequence Detection Transceiver With Integrated Afe For Electronic Dispersion Compensation Of Multimode Optical Fibers At 10Gb/S
MP9454PR	US	61/298125	1/25/2010			Use Of The Offset Method And/Or The V-Method To Compensate For Nongaussian And Signal Dependent Noise
MP9455PR	US	61/320310	4/2/2010			Techniques To Improve CL101X Performance In Transmissions Over SMF Channels
MP9456PR	US	61/533016	9/9/2011			40nm CMOS Single-Chip 50Gb/S Dp-Qpsk/Bpsk Transceiver With Electronic Dispersion Compensation For Coherent Optical Channels
MP9457PR	US	61/589833	1/23/2012			High-Speed Optical Communications System
MP9458PR	US	61/589834	1/23/2012			Reset Synchronization For High-Speed Optical Communications System
MP9459PR	US	61/589835	1/23/2012			Duty Cycle Control For High-Speed Optical Communications System
MP9460PR	US	61/589836	1/23/2012			Flash Adc Reference For High-Speed Optical Communications System
MP9461PR	US	61/589838	1/23/2012			Half Flop Design For High-Speed Optical Communications System
MP9462PR	US	61/589839	1/23/2012			High-Speed Optical Communications System
MP9463PR	US	61/598611	2/14/2012			Coarse Carrier Recovery For High Speed Optical Communication
MP9465PR	US	61/676937	7/28/2012			CP-00001 Timing Recovery For Optical Coherent Receivers In The Presence Of Polarization Mode Dispersion (PMD)
MP9466PR	US	61/676940	7/28/2012			CP-00002 Timing Recovery For Optical Coherent Receivers In The Presence Of Polarization Mode Dispersion (PMD)

<u>MP No</u>	<u>Ctry</u>	<u>AppNo</u>	<u>FileDate</u>	<u>PatNo</u>	<u>IssDate</u>	<u>AppTitle</u>
MP9467PR	US	61/676941	7/28/2012			CP-00003 Timing Recovery For Optical Coherent Receivers In The Presence Of Polarization Mode Dispersion (PMD)
MP9468PR	US	61/676943	7/28/2012			Timing Recovery For Optical Coherent Receivers In The Presence Of Polarization Mode Dispersion (PMD)
MP9469PR	US	61/676945	7/29/2012			CP-00005 Timing Recovery For Optical Coherent Receivers In The Presence Of Polarization Mode Dispersion (PMD)
MP9470PR	US	61/677460	7/30/2012			Feed-Forward Equalizer Center-Of-Gravity Monitoring In High-Speed Optical Communications Networks
MP9471PR	US	61/677464	7/30/2012			CP-00007 Fiber Length Estimation Averaging In High Speed Fiber Optic Communications Systems
MP9472PR	US	61/683169	8/14/2012			Automatic Receiver Deskew Procedure
MP9473PR	US	61/699272	9/10/2012			CP-00009 Fiber Length Estimation Averaging In High Speed Fiber Optic Communications Systems
MP9474PR	US	61/704490	9/22/2012			Method Using Frequency Domain Averaging To Calculate Impairments In A Fiber-Optic Channel To Invert An FFE Matrix
MP9475PR	US	61/704545	9/23/2012			Method Using Frequency Domain Averaging To Calculate Impairments In A Fiber-Optic Channel To Invert An FFE Matrix
MP9476PR	US	61/731396	11/29/2012			Clocking Architecture For Analog Front End And Digital Blocks Split Into Multiple Clock Domains
MP9477PR	US	61/738284	12/17/2012			Coherent Optical Transceiver
MP9478PR	US	61/738293	12/17/2012			Coherent Optical Transceiver
MP9479PR	US	61/738298	12/17/2012			Coherent Optical Transceiver With 100G/200G Host-Side Selectable Line Card Architecture
MP9480	US	14/133552	12/18/2013	9502956	11/22/2016	Configuration Of Semiconductor Device Supply Voltage

<u>MP No</u>	<u>Ctry</u>	<u>AppNo</u>	<u>FileDate</u>	<u>PatNo</u>	<u>IssDate</u>	<u>AppTitle</u>
MP9480PR	US	61/739613	12/19/2012			Method For Selecting Semiconductor Device Supply Voltages
MP9481PR	US	61/745389	12/21/2012			Method Of Estimating Channel Performance Using Equalizer Tap Coefficients And Framing Information
MP9482PR	US	61/749149	1/4/2013			Timing Recovery For Optical Coherent Receivers In The Presence Of Polarization Mode Dispersion
MP9483PR	US	61/761054	2/5/2013			Architecture Of A Single-Chip High-Speed Dual Polarization Qpsk/Bpsk Transceiver With Electronic Dispersion Compensation For Coherent Optical Channels
MP9484PR	US	61/783627	3/14/2013			Non-Concatenated FEC Codes For Ultra-High Speed Optical Transport Networks
MP9485PR	US	61/789331	3/15/2013			Coherent Optical Transceiver
MP9486PR	US	61/789616	3/15/2013			Soft-Output Demapper
MP9487PR	US	61/832513	6/7/2013			Timing Recovery For Optical Coherent Receivers In The Presence Of Polarization Mode Dispersion
MP9488PR	US	61/832571	6/7/2013			Coherent Optical Transceiver
MP9489PR	US	61/832611	6/7/2013			Coherent Optical Transceiver
MP9490PR	US	61/832630	6/7/2013			Coherent Optical Transceiver
MP9492PR	US	61/883112	9/26/2013			Clocking Scheme For A Coherent Optical Transceiver
MP9493PR	US	61/893128	10/18/2013			Timing Recovery For Optical Coherent Receivers In The Presence Of Polarization Mode Dispersion
MP9495PR	US	61/974305	4/2/2014			Transceiver Architecture With Complex Volterra Filter
MP9496D1	US	14/226387	3/26/2014	9496967	11/15/2016	Cycle Slip Compensation in Coherent Receiver
MP9498D1	US	14/480085	9/8/2014	9531475	12/27/2016	High-Speed Receiver Architecture
MP9499PR	US	62/107171	1/23/2015			Non-Concatenated FEC Codes For Ultra-High Speed Optical Transport Networks
MP9500D1	US	14/561183	12/4/2014	9608666	3/28/2017	Non-Concatenated FEC Codes For Ultra-High Speed Optical Transport Networks

<u>MP No</u>	<u>Ctry</u>	<u>AppNo</u>	<u>FileDate</u>	<u>PatNo</u>	<u>IssDate</u>	<u>AppTitle</u>
MP9502CIP	US	14/629243	2/23/2015	9673910	6/6/2017	Single-Chip Transceiver With Electronic Dispersion Compensation For Coherent Optical Channels
MP9502I1C1	US	15/597120	5/16/2017	9838140	12/5/2017	Single-Chip Transceiver With Electronic Dispersion Compensation For Coherent Optical Channels
MP9502I1C1C1	US	15/800745	11/1/2017	10038506	7/31/2018	Single-Chip Transceiver With Electronic Dispersion Compensation For Coherent Optical Channels
MP9503C1	US	14/743660	6/18/2015	9838131	12/5/2017	Coherent Optical Transceiver With Programmable Application Modes
MP9503C1C1	US	15/797898	10/30/2017	10069571	9/4/2018	Coherent Optical Transceiver With Programmable Application Modes
MP9503C1C1C1	US	16/054818	8/3/2018	10880010	12/29/2020	Coherent Optical Transceiver With Programmable Application Modes
MP9503C1C1C1	US	17/109744	12/2/2020			Coherent Optical Transceiver With Programmable Application Modes
MP9505PR	US	62/183081	6/22/2015			Shift Ldpc Codes
MP9506PR	US	62/183084	6/22/2015			Adaptive Demapper
MP9509C1	US	14/798083	7/13/2015	9621382	4/11/2017	Channel Diagnostics Based On Equalizer Coefficients
MP9510C1	US	14/869676	9/29/2015	9712253	7/18/2017	Timing Recovery For Optical Coherent Receivers In The Presence Of Polarization Mode Dispersion
MP9510C1-2	US	15/623292	6/14/2017	9876583	1/23/2018	Timing Recovery For Optical Coherent Receivers In The Presence Of Polarization Mode Dispersion
MP9510C1C1	US	15/839698	12/12/2017	10181908	1/15/2019	Timing Recovery For Optical Coherent Receivers In The Presence Of Polarization Mode Dispersion
MP9510C1C1C1	US	16/212461	12/6/2018	10530493	1/7/2020	Timing Recovery For Optical Coherent Receivers In The Presence Of Polarization Mode Dispersion
MP9510C1C1C1	US	16/694391	11/25/2019	10763972	9/1/2020	Timing Recovery For Optical Coherent Receivers In The Presence Of Polarization Mode Dispersion

<u>MP No</u>	<u>Ctry</u>	<u>AppNo</u>	<u>FileDate</u>	<u>PatNo</u>	<u>IssDate</u>	<u>AppTitle</u>
MP9511	US	14/918,539	10/20/2015			Single-Chip Transceiver with Electronic Dispersion Compensation for Coherent Optical Channels
MP9512CIP	US	15/000978	1/19/2016	10063262	8/28/2018	Non-Concatenated FEC Codes For Ultra-High Speed Optical Transport Networks
MP951211C1	US	16/041642	7/20/2018	10727874	7/28/2020	Non-Concatenated FEC Codes For Ultra-High Speed Optical Transport Networks
MP951211C1C1	US	16/904381	6/17/2020			Non-Concatenated FEC Codes For Ultra-High Speed Optical Transport Networks
MP9513PR	US	62/304199	3/5/2016			Flexible Coding And Modulation Techniques For Next Generation DSP-Based Coherent Systems
MP9514C1	US	15/148645	5/6/2016	9735881	8/15/2017	Coherent Transceiver Architecture
MP9514C1C1	US	15/647765	7/12/2017	10177851	1/8/2019	Coherent Transceiver Architecture
MP9514C1C1C1	US	16/204909	11/29/2018	10491304	11/26/2019	Coherent Transceiver Architecture
MP9514C1C1C1	US	16/600328	10/11/2019	10742327	8/11/2020	Coherent Transceiver Architecture
MP9515PR	US	62/342035	5/26/2016			Timing Recovery Algorithms For Nyquist And Faster Than Nyquist Systems
MP9516	US	15/187711	6/20/2016	10027423	7/17/2018	Adaptive Demapper
MP9516C1	US	16/011470	6/18/2018	10164715	12/25/2018	Adaptive Demapper
MP9517	US	15/188957	6/21/2016	10103751	10/16/2018	Non-Concatenated FEC Codes For Ultra-High Speed Optical Transport Networks
MP9518C1	US	15/205929	7/8/2016	9825711	11/21/2017	High-Speed Optical Communications System
MP9518C1C1	US	15/786108	10/17/2017	9960855	5/1/2018	High-Speed Optical Communications System
MP9518C1C1C1	US	15/921496	3/14/2018	10056981	8/21/2018	High-Speed Optical Communications System
MP9519PR	US	62/412052	10/24/2016			FFE Adaptation Algorithm
MP9520	US	15/792396	10/24/2017	10110319	10/23/2018	Tap Stabilizer Method And Structure For Coherent Optical Receiver
MP9520C1	US	16/134722	9/18/2018	10476603	11/12/2019	Tap Stabilizer Method And Structure For Coherent Optical Receiver
MP9520C1C1	US	16/584674	9/26/2019	10944484	3/9/2021	Tap Stabilizer Method And Structure For Coherent Optical Receiver

<u>MP No</u>	<u>Ctry</u>	<u>AppNo</u>	<u>FileDate</u>	<u>PatNo</u>	<u>IssDate</u>	<u>AppTitle</u>
MP9520C1C1C1	US	17/162884	1/29/2021			Tap Stabilizer Method And Structure For Coherent Optical Receiver
MP9520PR	US	62/412071	10/24/2016			Asynchronous Equalization And Control Loop
MP9521	US	15/792582	10/24/2017	10128959	11/13/2018	Tap Stabilizer Method And Structure For Coherent Optical Receiver
MP9521C1	US	16/153341	10/5/2018	10498462	12/3/2019	Tap Stabilizer Method And Structure For Coherent Optical Receiver
MP9521C1C1	US	16/669239	10/30/2019	10944485	3/9/2021	Tap Stabilizer Method And Structure For Coherent Optical Receiver
MP9521C1C1C1	US	17/166900	2/3/2021			Tap Stabilizer Method And Structure For Coherent Optical Receiver
MP9521PR	US	62/412033	10/24/2016			Frequency-Domain Evaluation Of The Center Of Gravity Of The Equalizer impulse Response In Optical Coherent Receivers
MP9522	US	15/792597	10/24/2017	10128958	11/13/2018	Forward And Backward Propagation Methods And Structures For Coherent Optical Receiver
MP9522C1	US	16/151094	10/3/2018	10530492	1/7/2020	Forward And Backward Propagation Methods And Structures For Coherent Optical Receiver
MP9522C1C1	US	16/703637	12/4/2019	10958354	3/23/2021	Forward And Backward Propagation Methods And Structures For Coherent Optical Receiver
MP9522PR	US	62/412047	10/24/2016			Compensation Of The Rx I&Q Skew, Rx Gain Errors, And Rx Quadrature Errors In Coherent Optical Transceivers
MP9523	US	15/792416	10/24/2017	10326533	6/18/2019	Reduced Complexity Constrained Frequency-Domain Block LMS Adaptive Equalization For Coherent Optical Receivers
MP9523C1	US	16/404547	5/6/2019	10615880	4/7/2020	Reduced Complexity Constrained Frequency-Domain Block LMS Adaptive Equalization For Coherent Optical Receivers

<u>MP No</u>	<u>Ctry</u>	<u>AppNo</u>	<u>FileDate</u>	<u>PatNo</u>	<u>IssDate</u>	<u>AppTitle</u>
MP9523C1C1	US	16/808055	3/3/2020			Reduced Complexity Constrained Frequency-Domain Block LMS Adaptive Equalization For Coherent Optical Receivers
MP9523PR	US	62/412015	10/24/2016			Reduced Complexity Constrained Frequency-Domain Block LMS Adaptive Equalization For Coherent Optical Receivers
MP9524PR	US	62/412002	10/24/2016			Asynchronous Joint Equalization Of Cd And PMD In The Frequency Domain
MP9525PR	US	62/412039	10/24/2016			Rx DSP Architecture
MP9526C1	US	15/351173	11/14/2016	9806823	10/31/2017	Cycle Slip Compensation In A Coherent Receiver
MP9526C1C1	US	15/714990	9/25/2017	10341030	7/2/2019	Cycle Slip Compensation In A Coherent Receiver
MP9527C1	US	15/387246	12/21/2016	9882648	1/30/2018	High-Speed Receiver Architecture
MP9527C1C1	US	15/839380	12/12/2017	10097273	10/9/2018	High-Speed Receiver Architecture
MP9527C1C1C1	US	16/121293	9/4/2018	10505638	12/10/2019	High-Speed Receiver Architecture
MP9527C1C1C1	US	16/674957	11/5/2019	10841013	11/17/2020	High-Speed Receiver Architecture
MP9528C1	US	15/449884	3/3/2017	9871583	1/16/2018	Channel Diagnostics Based On Equalizer Coefficients
MP9528C1C1	US	15/838079	12/11/2017	10305589	5/28/2019	Channel Diagnostics Based On Equalizer Coefficients
MP9528C1C1C1	US	16/387209	4/17/2019	10651930	5/12/2020	Channel Diagnostics Based On Equalizer Coefficients
MP9528C1C1C1	US	16/843751	4/8/2020			Channel Diagnostics Based On Equalizer Coefficients
MP9542C1	US	14/678715	4/3/2015	9460257	10/4/2016	Scaling Of Integrated Circuit Design Including High-Level Logic Components
MP9543PR	US	60/985878	11/6/2007			Variability-Aware Asynchronous Scheme Based On Two-Phase Protocols And Delay Matching
MP9545PR	US	61/363593	7/12/2010			Network Of Tightly Coupled Performance Monitors For Determining The Frequency Of Operation Of A Semiconductor IC
MP9554PR	US	62/029759	7/28/2014			Communication Interface Architecture Using Serializer/Deserializer
MP9555PR	US	62/089095	12/8/2014			Elongated Pad Structure

<u>MP No</u>	<u>Ctry</u>	<u>AppNo</u>	<u>FileDate</u>	<u>PatNo</u>	<u>IssDate</u>	<u>AppTitle</u>
MP9556PR	US	62/089099	12/8/2014			Wireless Probes
MP9567	US	14/863864	9/24/2015	9628055	4/18/2017	SR Latch Circuit With Single Gate Delay
MP9567C1	US	15/451196	3/6/2017	10056883	8/21/2018	SR Latch Circuit With Single Gate Delay
MP9567CN	CN	2016108286970	9/18/2016			SR Latch Circuit, Integrated Circuit And Serializer Deserializer
MP9568	US	14/863880	9/24/2015	9350335	5/24/2016	Single Stage Latency Combined Multiplexer And Latch Circuit
MP9569	US	15/040812	2/10/2016	9876581	1/23/2018	Circuit For Multi-Path Interference Mitigation In An Optical Communication System
MP9569C1	US	15/836603	12/8/2017	10236994	3/19/2019	Circuit For Multi-Path Interference Mitigation In An Optical Communication System
MP9569C1C1	US	16/259760	1/28/2019	10601518	3/24/2020	Circuit For Multi-Path Interference Mitigation In An Optical Communication System
MP9569C1C1C1	US	16/790463	2/13/2020	10880015	12/29/2020	Circuit For Multi-Path Interference Mitigation In An Optical Communication System
MP9569C1C1C1	US	16/951653	11/18/2020			Circuit For Multi-Path Interference Mitigation In An Optical Communication System
MP9569CN	CN	2017100718237	2/9/2017			Method, Circuit Of Processing A Plurality Of Samples Of An Optical Signal, Optical Module And Optical Communications System
MP9569DE	DE	102016014266	11/30/2016			Circuit For Multi-Path Interference Mitigation In An Optical Communication System
MP9569GB	GB	2016198145	11/23/2016	2547301	5/15/2019	Circuit For Multi-Path Interference Mitigation In An Optical Communication System
MP9569JP	JP	JP2017006223	1/17/2017			Circuit For Multi-Path Interference Mitigation In An Optical Communication System
MP9570	US	15/073735	3/18/2016	9899973	2/20/2018	Split Cascode Circuits And Related Communication Receiver Architectures

<u>MP No</u>	<u>Ctry</u>	<u>AppNo</u>	<u>FileDate</u>	<u>PatNo</u>	<u>IssDate</u>	<u>AppTitle</u>
MP9570C1	US	15/863473	1/5/2018	10312873	6/4/2019	Split-Cascade Circuits And Related Communication Receiver Architectures
MP9571	US	15/195863	6/28/2016	10122472	11/6/2018	Apparatus And Method For Recovering Data At An Optical Receiver With Automatic Tuning
MP9579PR	US	60/434554	12/18/2002			Multi-Service Segmentation And Reassembly Device Having Integrated Scheduler And Advanced Multi-Timing Wheel Shaper
MP9580	US	10/316904	12/12/2002	6709925	3/23/2004	Split-Gate Flash Memory Cell And Manufacturing Method Thereof
MP9581	US	10/323329	12/18/2002	6709933	3/23/2004	Method Of Fabricating Mask Rom
MP9582	US	10/327858	12/26/2002	6716735	4/6/2004	Method For Forming Metal Lines Of Semiconductor Device
MP9583	US	10/329587	12/26/2002	6734058	5/11/2004	Method For Fabricating A Semiconductor Device
MP9584	US	10/322849	12/18/2002	6743665	6/1/2004	Method For Forming Isolation Layer In Semiconductor Device
MP9585	US	10/435270	5/7/2003	6759287	7/6/2004	Semiconductor Device And Fabrication Method Thereof
MP9586	US	10/325392	12/19/2002	6765263	7/20/2004	Semiconductor Device And Method For Fabricating The Same
MP9587	US	10/306491	11/27/2002	6790767	9/14/2004	Method For Formation Of Copper Diffusion Barrier Film Using Aluminum
MP9588	US	10/180760	6/26/2002	6800553	10/5/2004	Method For Manufacturing A Silicide Layer Of Semiconductor Device
MP9589	US	10/704966	11/12/2003	6803308	10/12/2004	Method Of Forming A Dual Damascene Pattern In A Semiconductor Device
MP9590	US	10/746802	12/26/2003	6806150	10/19/2004	Methods Of Manufacturing Semiconductor Memory Devices
MP9591	US	10/663412	9/16/2003	6830997	12/14/2004	Semiconductor Devices And Methods For Forming Semiconductor Devices
MP959211	US	10/338506	1/8/2003	6833232	12/21/2004	Micro-Pattern Forming Method For Semiconductor Device
MP9593	US	10/676147	10/2/2003	6841471	1/11/2005	Fabrication Method Of Semiconductor Device

<u>MP No</u>	<u>Ctry</u>	<u>AppNo</u>	<u>FileDate</u>	<u>PatNo</u>	<u>IssDate</u>	<u>AppTitle</u>
MP9594	US	10/329898	12/26/2002	6870214	3/22/2005	Method Of Fabricating Flash Eeprom
MP9595	US	10/747619	12/30/2003	6977201	12/20/2005	Method For Fabricating Flash Memory Device
MP9596	US	10/981164	11/4/2004	7154143	12/26/2006	Non-Volatile Memory Devices And Methods Of Fabricating The Same
MP9597	US	11/009470	12/10/2004	7186641	3/6/2007	Methods Of Forming Metal Interconnection Lines In Semiconductor Devices
MP9598	US	11/026984	12/30/2004	7186644	3/6/2007	Methods For Preventing Copper Oxidation In A Dual Damascene Process
MP9599	US	10/935662	9/7/2004	7192869	3/20/2007	Methods For Planarizing A Metal Layer
MP9600	US	11/027358	12/30/2004	7208384	4/24/2007	Transistors And Manufacturing Methods Thereof
MP9601	US	11/026287	12/30/2004	7211491	5/1/2007	Method Of Fabricating Gate Electrode Of Semiconductor Device
MP9602	US	10/960216	10/6/2004	7211495	5/1/2007	Semiconductor Devices Having A Capacitor And Methods Of Manufacturing The Same
MP9603	US	11/320580	12/30/2005	7211498	5/1/2007	Method Of Manufacturing An Isolation Layer Of A Flash Memory
MP9604	US	11/316633	12/20/2005	7211859	5/1/2007	Semiconductor Device And Manufacturing Method Thereof
MP9605	US	11/024746	12/30/2004	7214586	5/8/2007	Methods Of Fabricating Nonvolatile Memory Device
MP9606	US	10/891626	7/15/2004	7217602	5/15/2007	Semiconductor Device Employing SOI Substrate And Method Of Manufacturing The Same
MP9607	US	11/027516	12/30/2004	7217620	5/15/2007	Methods Of Forming Silicon Quantum Dots And Methods Of Fabricating Semiconductor Memory Device Using The Same
MP9608	US	11/027519	12/30/2004	7217633	5/15/2007	Methods For Fabricating An Sti Film Of A Semiconductor Device
MP9609	US	11/024312	12/29/2004	7223625	5/29/2007	CMOS Image Sensor And Method For Fabricating The Same
MP9610	US	11/022611	12/27/2004	7223663	5/29/2007	Mos Transistors And Methods Of Manufacturing The Same

<u>MP No</u>	<u>Ctry</u>	<u>AppNo</u>	<u>FileDate</u>	<u>PatNo</u>	<u>IssDate</u>	<u>AppTitle</u>
MP9611	US	11/026717	12/30/2004	7223686	5/29/2007	Semiconductor Interconnection Line And Method Of Forming The Same
MP9612	US	10/746499	12/29/2003	7223953	5/29/2007	Image Sensor And Method Of Manufacturing The Same
MP9613	US	11/025011	12/28/2004	7229894	6/12/2007	Active Cell Isolation Body Of A Semiconductor Device And Method For Forming The Same
MP9614	US	11/021072	12/22/2004	7229925	6/12/2007	Methods Of Forming A Pattern For A Semiconductor Device
MP9615	US	11/024661	12/30/2004	7232746	6/19/2007	Method For Forming Dual Damascene Interconnection In Semiconductor Device
MP9616	US	11/010157	12/10/2004	7235450	6/26/2007	Methods For Fabricating Semiconductor Devices
MP9617	US	10/748241	12/31/2003	7238573	7/3/2007	Method For Fabricating A Trench Transistor Of Semiconductor Device
MP9618	US	11/026941	12/30/2004	7238606	7/3/2007	Semiconductor Devices And Method For Fabricating The Same
MP9619	US	11/024631	12/30/2004	7241684	7/10/2007	Method Of Forming Metal Wiring Of Semiconductor Device
MP9620	US	10/901384	7/29/2004	7244632	7/17/2007	Complementary Metal Oxide Semiconductor Image Sensor And Method For Fabricating The Same
MP9621	US	10/914994	8/10/2004	7244679	7/17/2007	Methods Of Forming Silicon Quantum Dots And Methods Of Fabricating Semiconductor Memory Devices Using The Same
MP9622	US	10/925078	8/24/2004	7247565	7/24/2007	Methods For Fabricating A Copper Interconnect
MP9623	US	11/020238	12/27/2004	7253039	8/7/2007	Method Of Manufacturing CMOS Transistor By Using SOI Substrate
MP9624	US	10/946717	9/22/2004	7259053	8/21/2007	Methods For Forming A Device Isolation Structure In A Semiconductor Device
MP9625	US	11/019302	12/23/2004	7259074	8/21/2007	Trench Isolation Method in Flash Memory Device
MP9626	US	10/922756	8/20/2004	7259087	8/21/2007	Semiconductor Devices Having A VIA Hole And Methods For Forming A VIA Hole In A Semiconductor Device

<u>MP No</u>	<u>Ctry</u>	<u>AppNo</u>	<u>FileDate</u>	<u>PatNo</u>	<u>IssDate</u>	<u>AppTitle</u>
MP9627	US	10/930164	8/30/2004	7259092	8/21/2007	Semiconductor Device And Method For Fabricating The Same
MP9628	US	11/026937	12/30/2004	7259105	8/21/2007	Methods Of Fabricating Gate Spacers For Semiconductor Devices
MP9629	US	11/320592	12/30/2005	7262097	8/28/2007	Method For Forming Floating Gate In Flash Memory Device
MP9630	US	11/172190	6/29/2005	7271078	9/18/2007	Method For Fabricating Semiconductor Device And Semiconductor Device Using The Same
MP9631	US	11/024657	12/30/2004	7271087	9/18/2007	Dual Damascene Interconnection In Semiconductor Device And Method For Forming The Same
MP9632	US	11/024742	12/30/2004	7273792	9/25/2007	Semiconductor Device And Fabricating Method Thereof
MP9633	US	11/024847	12/30/2004	7276439	10/2/2007	Method For Forming Contact Hole For Dual Damascene Interconnection In Semiconductor Device
MP9634	US	11/179452	7/12/2005	7279381	10/9/2007	Method For Fabricating Cell Transistor Of Flash Memory
MP9635	US	11/317363	12/23/2005	7282758	10/16/2007	Method Of Fabricating A Floating Gate For A Nonvolatile Memory
MP9636	US	11/318502	12/28/2005	7294522	11/13/2007	CMOS Image Sensor And Method For Fabricating The Same
MP9637	US	11/125602	5/9/2005	7300862	11/27/2007	Method For Manufacturing Semiconductor Device
MP9638	US	11/177920	7/8/2005	7300866	11/27/2007	Method For Fabricating Metal Line In A
MP9639	US	11/027035	12/30/2004	7303988	12/4/2007	Methods Of Manufacturing Multi-Level Metal Lines In Semiconductor Devices
MP9640	US	11/320823	12/30/2005	7306989	12/11/2007	Fabricating Method Of Semiconductor Device
MP9641	US	10/747311	12/30/2003	7307024	12/11/2007	Flash Memory And Fabrication Method Thereof
MP9642	US	11/023277	12/27/2004	7312122	12/25/2007	Self-Aligned Element Isolation Film Structure In A Flash Cell And Forming Method Thereof
MP9643	US	10/924817	8/25/2004	7312132	12/25/2007	Field Insulator FET Device And Fabrication Method Thereof
MP9644	US	11/216270	8/30/2005	7315359	1/1/2008	Method For Monitoring Micro-Lens Curvature in-Line

<u>MP No</u>	<u>Ctry</u>	<u>AppNo</u>	<u>FileDate</u>	<u>PatNo</u>	<u>IssDate</u>	<u>AppTitle</u>
MP9645	US	11/025989	1/3/2005	7326632	2/5/2008	Method For Fabricating Metal Wirings Of Semiconductor Device
MP9646	US	11/024437	12/30/2004	7332421	2/19/2008	Method Of Fabricating Gate Electrode Of Semiconductor Device
MP9647	US	11/182252	7/14/2005	7335564	2/26/2008	Method For Forming Device Isolation Layer Of Semiconductor Device
MP9648	US	11/026715	12/30/2004	7338858	3/4/2008	Methods Of Fabricating Nonvolatile Memory Using A Quantum Dot
MP9649	US	11/024476	12/30/2004	7341940	3/11/2008	Method For Forming Metal Wirings Of Semiconductor Device
MP9650	US	11/021638	12/24/2004	7348243	3/25/2008	Semiconductor Device And Method For Fabricating The Same
MP9651	US	10/981987	11/5/2004	7348247	3/25/2008	Semiconductor Devices And Methods Of Manufacturing The Same
MP9652	US	11/320303	12/29/2005	7358574	4/15/2008	Semiconductor Device Having Silicide-Blocking Layer And Fabrication Method Thereof
MP9653	US	11/023844	12/27/2004	7361562	4/22/2008	Method Of Manufacturing Semiconductor Device
MP9654	US	11/473693	6/23/2006	7361580	4/22/2008	Semiconductor Device And Manufacturing Method Thereof
MP9655	US	11/473692	6/23/2006	7361597	4/22/2008	Semiconductor Device And Method Of Fabricating The Same
MP9656	US	11/024727	12/30/2004	7365020	4/29/2008	Method For Etching Upper Metal Of Capacitor
MP9657	US	10/879722	6/30/2004	7366026	4/29/2008	Flash Memory Device And Method For Fabricating The Same, And Programming And Erasing Method Thereof
MP9658	US	10/960377	10/6/2004	7368345	5/6/2008	Flash Memory Devices And Methods Of Fabricating The Same
MP9659	US	11/318433	12/28/2005	7371655	5/13/2008	Method Of Fabricating Low-Power CMOS Device
MP9660	US	11/024439	12/30/2004	7371656	5/13/2008	Method For Forming Sti Of Semiconductor Device
MP9661	US	11/176083	7/7/2005	7371665	5/13/2008	Method For Fabricating Shallow Trench Isolation Layer Of Semiconductor Device
MP9662D1	US	11/823321	6/26/2007	7374989	5/20/2008	Flash Memory And Methods Of Fabricating The Same

<u>MP No</u>	<u>Ctry</u>	<u>AppNo</u>	<u>FileDate</u>	<u>PatNo</u>	<u>IssDate</u>	<u>AppTitle</u>
MP9663	US	11/024594	12/28/2004	7393778	7/1/2008	Semiconductor Device And Method For Fabricating The Same
MP9664	US	11/613801	12/20/2006	7396723	7/8/2008	Method Of Manufacturing Eeprom Device
MP9665	US	11/615812	12/22/2006	7396727	7/8/2008	Transistor Of Semiconductor Device And Method For Fabricating The Same
MP9666	US	10/971590	10/22/2004	7397076	7/8/2008	CMOS Image Sensor With Dark Current Reduction
MP9667	US	11/027362	12/29/2004	7399669	7/15/2008	Semiconductor Devices And Methods For Fabricating The Same Including Forming An Amorphous Region In An Interface Between A Device Isolation Layer And A Source/Drain Diffusion Layer
MP9668	US	10/956311	9/30/2004	7402484	7/22/2008	Methods For Forming A Field Effect Transistor
MP9669	US	11/322882	12/29/2005	7402486	7/22/2008	Cylinder-Type Capacitor And Storage Device, And Method(S) For Fabricating The Same
MP9670	US	11/318577	12/28/2005	7405437	7/29/2008	CMOS Image Sensor And Method For Fabricating The Same
MP9671	US	11/320680	12/30/2005	7413944	8/19/2008	CMOS Image Sensor And Method Of Manufacturing The Same
MP9672	US	11/641034	12/19/2006	7413953	8/19/2008	Method Of Forming Floating Gate Array Of Flash Memory Device
MP9673	US	11/314347	12/22/2005	7419847	9/2/2008	Method For Forming Metal Interconnection Of Semiconductor Device
MP9674	US	11/442770	5/30/2006	7419899	9/2/2008	Method For Manufacturing Semiconductor Device
MP9675	US	11/504560	8/14/2006	7425494	9/16/2008	Method For Forming Void-Free Trench Isolation Layer
MP9676	US	11/518079	9/8/2006	7426073	9/16/2008	Digital Micromirror Device And Manufacturing Method Thereof
MP9677	US	11/615804	12/22/2006	7427546	9/23/2008	Transistor Device And Method For Manufacturing The Same
MP9678	US	11/617209	12/28/2006	7429518	9/30/2008	Method For Forming Shallow Trench Isolation Of Semiconductor Device
MP9679	US	11/640916	12/19/2006	7432193	10/7/2008	Method For Fabricating A Thin Film And A Metal Line Of A Semiconductor Device

<u>MP No</u>	<u>Ctry</u>	<u>AppNo</u>	<u>FileDate</u>	<u>PatNo</u>	<u>IssDate</u>	<u>AppTitle</u>
MP9680	US	11/147675	6/8/2005	7432203	10/7/2008	Methods For Fabricating A Metal Layer Pattern
MP9681	US	11/315294	12/23/2005	7435647	10/14/2008	Nor-Type Flash Memory Device And Manufacturing Method Thereof
MP9682	US	11/645533	12/27/2006	7439175	10/21/2008	Method For Fabricating A Thin Film And Metal Line Of Semiconductor Device
MP9684	US	11/319570	12/29/2005	7449359	11/11/2008	Fabricating Method Of CMOS Image Sensor
MP9685	US	11/882047	7/30/2007	7452806	11/18/2008	Method Of Forming Inductor In Semiconductor Device
MP9686	US	11/615143	12/22/2006	7453110	11/18/2008	CMOS Image Sensor And Method For Manufacturing The Same
MP9687C1	US	11/324760	1/3/2006	7459394	12/2/2008	Methods Of Manufacturing Semiconductor Devices
MP9688	US	11/314317	12/22/2005	7470592	12/30/2008	Method Of Manufacturing A Sonos Device
MP9689D1	US	11/766758	6/21/2007	7473601	1/6/2009	Method Of Fabricating Flash Memory Device Using Sidewall Process
MP968D1	US	11/713229	3/1/2007	7446377	11/4/2008	Transistors And Manufacturing Methods Thereof
MP9690	US	11/023845	12/27/2004	7482256	1/27/2009	Semiconductor Device And Method Of Manufacturing The Same
MP9691	US	11/559592	11/14/2006	7482262	1/27/2009	Method Of Manufacturing Semiconductor Device
MP9692	US	11/782698	7/25/2007	7482691	1/27/2009	Semiconductor Device And Method For Fabricating The Same
MP9693	US	11/121465	5/3/2005	7488634	2/10/2009	Method For Fabricating Flash Memory Device
MP9694	US	11/645739	12/27/2006	7488649	2/10/2009	Method Of Manufacturing Split Gate Type Non-Volatile Memory Device
MP9695	US	11/566034	12/1/2006	7498262	3/3/2009	Method Of Fabricating A Thin Film And Metal Wiring In A Semiconductor Device
MP9696	US	11/474202	6/23/2006	7507625	3/24/2009	Flash Memory Device And Method For Manufacturing The Same
MP9697	US	11/320408	12/29/2005	7517799	4/14/2009	Method For Forming A Plurality Of Metal Lines In A Semiconductor Device Using Dual Insulating Layer

<u>MP No</u>	<u>Ctry</u>	<u>AppNo</u>	<u>FileDate</u>	<u>PatNo</u>	<u>IssDate</u>	<u>AppTitle</u>
MP9698	US	11/129002	5/13/2005	7521311	4/21/2009	Semiconductor Device And Method For Fabricating The Same
MP9699	US	11/646727	12/27/2006	7528455	5/5/2009	Narrow Width Metal Oxide Semiconductor Transistor
MP9700	US	11/615787	12/22/2006	7531901	5/12/2009	Metal Interconnection Of Semiconductor Device And Method For Forming The Same
MP9701	US	11/454350	6/16/2006	7537992	5/26/2009	Method For Manufacturing Flash Memory Device
MP9702	US	11/225637	9/12/2005	7538374	5/26/2009	CMOS Image Sensor And Method For Fabricating The Same
MP9703	US	11/935070	11/5/2007	7538393	5/26/2009	Field Insulator FET Device And Fabrication Method Thereof
MP9704	US	11/559610	11/14/2006	7544601	6/9/2009	Semiconductor Device And A Method For Manufacturing The Same
MP9705	US	11/637705	12/13/2006	7550349	6/23/2009	Method For Forming Gate Dielectric Layers
MP9706	US	11/320677	12/30/2005	7553719	6/30/2009	Flash Memory Device And Method For Fabricating The Same
MP9707	US	11/950256	12/4/2007	7553721	6/30/2009	Flash Memory Devices And Methods Of Fabricating The Same
MP9708	US	11/319600	12/29/2005	7626157	12/1/2009	Image Sensor Including Microlens Having Sizes Differing According To Deposition Of Color Filter Array
MP9709	US	11/869408	10/9/2007	7683667	3/23/2010	Level Shifter Having Single Voltage Source
MP9710	US	12/002124	12/13/2007	7855407	12/21/2010	CMOS Image Sensor And Method For Manufacturing The Same
MP9711	US	12/255052	10/21/2008	7902669	3/8/2011	Semiconductor Device And Method For Manufacturing The Same
MP9712D1	US	12/416042	3/31/2009	7906399	3/15/2011	Narrow Width Metal Oxide Semiconductor Transistor
MP9713	US	11/929900	10/30/2007	7919370	4/5/2011	Flash Device And The Manufacturing Method
MP9714	US	12/211123	9/16/2008	7919375	4/5/2011	Semiconductor Device And Method For Manufacturing The Device
MP9715	US	12/478279	6/4/2009	7923324	4/12/2011	Method For Manufacturing Capacitor Of Semiconductor Device

<u>MP No</u>	<u>Ctry</u>	<u>AppNo</u>	<u>FileDate</u>	<u>PatNo</u>	<u>IssDate</u>	<u>AppTitle</u>
MP9716	US	11/981218	10/30/2007	7923768	4/12/2011	Semiconductor Device With Non-Volatile Memory Function And Method Of Manufacturing The Same
MP9717	US	11/998606	11/30/2007	7935551	5/3/2011	Image Sensor And Method For Manufacturing The Same
MP9718	US	11/609877	12/12/2006	7943448	5/17/2011	Semiconductor Device And Method Of Manufacturing The Same
MP9719	US	12/478328	6/4/2009	7943495	5/17/2011	Method Of Manufacturing Semiconductor Device
MP9720	US	11/869378	10/9/2007	7944001	5/17/2011	Power MOSFET Including Inter-Source Connection Pattern
MP9721D1	US	12/362465	1/29/2009	7948022	5/24/2011	Flash Memory Device And Method For Manufacturing The Same
MP9722	US	12/200969	8/29/2008	7951706	5/31/2011	Method Of Manufacturing Metal Interconnection
MP9723	US	11/935974	11/6/2007	7951713	5/31/2011	Method Of Forming Metal Wiring In Semiconductor Device
MP9724	US	12/244142	10/2/2008	7952120	5/31/2011	Semiconductor Device
MP9725	US	12/344502	12/27/2008	7956434	6/7/2011	Image Sensor And Method For Manufacturing The Same
MP9726D1	US	11/788794	4/20/2007	7960839	6/14/2011	Semiconductor Interconnection Line And Method Of Forming The Same
MP9727	US	12/344433	12/26/2008	7965576	6/21/2011	Apparatus For Testing Memory Device
MP9728	US	12/203971	9/4/2008	7968408	6/28/2011	Mim Capacitor And Method Of Fabricating The Same
MP9729	US	12/330640	12/9/2008	7972896	7/5/2011	Multi-Bit Memory Cell Structure And Method Of Manufacturing The Same
MP9730	US	12/252455	10/16/2008	7972929	7/5/2011	Method For Manufacturing Semiconductor Device
MP9731	US	12/330666	12/9/2008	7973374	7/5/2011	Semiconductor Device And Method For Fabricating The Same
MP9732D1	US	12/155903	6/11/2008	7977770	7/12/2011	Semiconductor Device And Method Of Manufacturing The Same
MP9733	US	11/873916	10/17/2007	7977792	7/12/2011	Semiconductor Device
MP9734	US	11/947514	11/29/2007	7981762	7/19/2011	Method Of Forming Pre-Metal Dielectric Layer Of Semiconductor Device

<u>MP No</u>	<u>Ctry</u>	<u>AppNo</u>	<u>FileDate</u>	<u>PatNo</u>	<u>IssDate</u>	<u>AppTitle</u>
MP9735	US	12/121818	5/16/2008	7985670	7/26/2011	Method Of Forming U-Shaped Floating Gate With A Poly Meta-Stable Polysilicon Layer
MP9736	US	12/344442	12/26/2008	7989860	8/2/2011	Image Sensor And Method For Manufacturing The Same
MP9737	US	12/001650	12/11/2007	7989908	8/2/2011	Image Sensor And Method For Manufacturing The Same
MP9738	US	12/582604	10/20/2009	7994018	8/9/2011	Method For Fabricating Semiconductor Device
MP9739	US	12/264285	11/4/2008	7994414	8/9/2011	Semiconductor Device
MP9740	US	12/326032	12/1/2008	7994591	8/9/2011	Semiconductor Device And Method For Manufacturing The Same
MP9741	US	12/204848	9/5/2008	7999292	8/16/2011	Image Sensor And Manufacturing Method Thereof
MP9742	US	12/568829	9/29/2009	8003531	8/23/2011	Method For Manufacturing Flash Memory Device
MP9743	US	12/204856	9/5/2008	8004027	8/23/2011	Image Sensor And Manufacturing Method Thereof
MP9744	US	12/253253	10/17/2008	8022476	9/20/2011	Semiconductor Device Having Vertical And Horizontal Type Gates And Method For Fabricating The Same
MP9745	US	12/122460	5/16/2008	8026167	9/27/2011	Semiconductor Device And Method Of Manufacturing The Same
MP9746	US	12/344383	12/26/2008	8028261	9/27/2011	Method Of Predicting Substrate Current In High Voltage Device
MP9747	US	12/245752	10/5/2008	8030149	10/4/2011	Method For Manufacturing Semiconductor Device
MP9748	US	12/330631	12/9/2008	8030653	10/4/2011	Image Sensor And Method For Manufacturing The Same
MP9749	US	12/102243	4/14/2008	8030705	10/4/2011	Semiconductor Device And Method Of Fabricating The Same
MP9750	US	12/632115	12/7/2009	8039355	10/18/2011	Method For Fabricating Pip Capacitor
MP9751	US	12/204902	9/5/2008	8044478	10/25/2011	Image Sensor Comprising A Photodiode In A Crystalline Semiconductor Layer And Manufacturing Method Thereof
MP9752	US	12/540681	8/13/2009	8048730	11/1/2011	Semiconductor Device And Method For Manufacturing The Same

<u>MP No</u>	<u>Ctry</u>	<u>AppNo</u>	<u>FileDate</u>	<u>PatNo</u>	<u>IssDate</u>	<u>AppTitle</u>
MP9753	US	12/635538	12/10/2009	8048799	11/1/2011	Method For Forming Copper Wiring In Semiconductor Device
MP9754	US	12/544043	8/19/2009	8067311	11/29/2011	Mask And Method For Fabricating Semiconductor Device Using The Same
MP9755	US	12/608055	10/29/2009	8071971	12/6/2011	Semiconductor Device Including Air Gap
MP9756	US	12/118123	5/9/2008	8074188	12/6/2011	Method For Designing Mask Including Forming A Mesh Dummy Pattern
MP9757	US	12/582983	10/21/2009	8076201	12/13/2011	Method Of Manufacturing Flash Memory Device
MP9758	US	12/122531	5/16/2008	8076729	12/13/2011	Semiconductor Device Having A Dual Gate Electrode And Methods Of Making The Same
MP9759	US	12/503815	7/15/2009	8084317	12/27/2011	Semiconductor Device And Method Of Manufacturing The Same
MP9760	US	12/344541	12/28/2008	8089106	1/3/2012	Image Sensor And Method For Manufacturing The Same
MP9761	US	12/330635	12/9/2008	8097540	1/17/2012	Method Of Opening Pad In Semiconductor Device
MP9762	US	12/553985	9/4/2009	8099842	1/24/2012	Method Of Manufacturing A Piezoelectric Transistor
MP9763	US	12/575338	10/7/2009	8120080	2/21/2012	Image Sensor And Manufacturing Method Of Image Sensor
MP9764	US	12/647502	12/27/2009	8138044	3/20/2012	Method For Manufacturing Semiconductor Flash Memory And Flash Memory Cell
MP9765	US	12/566788	9/25/2009	8154095	4/10/2012	Image Sensor And Method For Manufacturing The Same
MP9766	US	12/344565	12/28/2008	8168526	5/1/2012	Semiconductor Chip Package And Method For Manufacturing Thereof
MP9767	US	12/548997	8/27/2009	8169044	5/1/2012	Image Sensor And Method For Manufacturing The Same
MP9768	US	12/641223	12/17/2009	8169828	5/1/2012	Semiconductor Memory Cell, Method For Manufacturing The Same And Method For Operating The Same
MP9769	US	12/546259	8/24/2009	8173500	5/8/2012	Poly-Emitter Type Bipolar Junction Transistor, Bipolar CMOS Dmos Device, And Manufacturing Methods Of Poly-Emitter Type Bipolar Junction Transistor And Bipolar CMOS Dmos Device

<u>MP No</u>	<u>Ctry</u>	<u>AppNo</u>	<u>FileDate</u>	<u>PatNo</u>	<u>IssDate</u>	<u>AppTitle</u>
MP9770D1	US	12/199155	8/27/2008	8174121	5/8/2012	Semiconductor Device And Manufacturing Method Thereof
MP9771	US	12/244898	10/3/2008	8178912	5/15/2012	Image Sensor For Minimizing A Dark Current And Method For Manufacturing The Same
MP9772	US	12/471967	5/26/2009	8216900	7/10/2012	Nonvolatile Memory Device, Method Of Manufacturing The Nonvolatile Memory Device, And Method Of Manufacturing Flat Panel Display Device Provided With The Nonvolatile Memory Device
MP9773	US	12/113965	5/2/2008	8222068	7/17/2012	Method For Manufacturing Image Sensor
MP9774	US	12/508196	7/23/2009	8222711	7/17/2012	Image Sensor And Method For Manufacturing The Same
MP9775	US	12/634000	12/9/2009	8236649	8/7/2012	Semiconductor Memory Device With Spacer Shape Floating Gate And Manufacturing Method Of The Semiconductor Memory Device
MP9776	US	12/509548	7/27/2009	8237833	8/7/2012	Image Sensor And Method For Manufacturing The Same
MP9777	US	12/647499	12/27/2009	8248098	8/21/2012	Apparatus And Method For Measuring Characteristics Of Semiconductor Device
MP9778	US	10/167558	6/12/2002	6689637	2/10/2004	Method Of Manufacturing A Multi-Chip Semiconductor Package
MP9779	US	10/323330	12/18/2002	6689664	2/10/2004	Transistor Fabrication Method
MP9780	US	10/891876	7/14/2004	7580454	8/25/2009	Multidimensional Decision-Directed Trained Adaptive Equalization
MP9780C1	US	12/484972	6/15/2009	8116367	2/14/2012	Multidimensional Decision-Directed Trained Adaptive Equalization
MP9780C1C1	US	13/346628	1/9/2012	8565297	10/22/2013	Multidimensional Adaptively Trained Equalization
MP9781	US	10/892010	7/14/2004	7623797	11/24/2009	Compensating Impairments Of Optical Channel Using Adaptive Equalization
MP9782	US	10/891694	7/14/2004	8041233	10/18/2011	Adaptive Equalization In Coherent Fiber Optic Communication
MP9782C1	US	13/229528	9/9/2011	8457504	6/4/2013	Adaptive Equalization In Coherent Fiber Optic Communication

<u>MP No</u>	<u>Ctry</u>	<u>AppNo</u>	<u>FileDate</u>	<u>PatNo</u>	<u>IssDate</u>	<u>AppTitle</u>
MP9782C1D1	US	13/889210	5/7/2013	8873974	10/28/2014	Adaptive Equalization In Coherent Fiber Optic Communication
MP9783	US	11/316115	12/21/2005	7643752	1/5/2010	Testing Of Transmitters For Communication Links By Software Simulation Of Reference Channel And/Or Reference Receiver
MP9783PR	US	60/638788	12/22/2004			Proposed TP-2 Test Methodology
MP9783WO	PCT	PCT/US2005/047041	12/22/2005			Testing Of Transmitters For Communication Links By Software Simulation Of Reference Channel And/Or Reference Receiver
MP9783WOJP	JP	2007548579	6/15/2007	4728347	4/22/2011	Testing Of Transmitters For Communication Links By Software Simulation Of Reference Channel And/Or Reference Receiver
MP9784	US	11/370655	3/7/2006	7853149	12/14/2010	Transmitter Frequency Peaking For Optical Fiber Channels
MP9784PR	US	60/659924	3/8/2005			Transmitter Frequency Peaking For Dispersive Optical Fiber Channels
MP9784WO	PCT	PCT/US2006/008282	3/8/2006			Transmitter Frequency Peaking For Optical Fiber Channels
MP9784WOJP	JP	2008500876	9/4/2007	5178504	4/10/2013	Transmitter Frequency Peaking In Optical Fiber Channels
MP9785	US	11/427765	6/29/2006	7664394	2/16/2010	Testing Of Receivers With Separate Linear O/E Module And Host Used In Communication Links
MP9785PR	US	60/695926	6/30/2005			Sfp+ Linear Module Receiver Specifications And Test Methodology
MP9785WO	PCT	PCT/US2006/025687	6/30/2006			Testing Of Receivers With Separate Linear O/E Module And Host Used In Communication Links
MP9786	US	11/538025	10/2/2006	7778320	8/17/2010	Multi-Channel Equalization To Compensate For Impairments Introduced By Interleaved Devices

<u>MP No</u>	<u>Ctry</u>	<u>AppNo</u>	<u>FileDate</u>	<u>PatNo</u>	<u>IssDate</u>	<u>AppTitle</u>
MP9786PR	US	60/723357	10/3/2005			Compensation Of Track And Hold Frequency Response Mismatches In Interleaved Arrays Of Analog To Digital Converters For High-Speed Communications Receivers
MP9786WO	PCT	PCT/US2006/038690	10/3/2006			Multi-Channel Equalization To Compensate For Impairments Introduced By Interleaved Devices
MP9786WOEP	EP	68254234	5/1/2008	1941690	12/3/2014	Multi-Channel Equalization To Compensate For Impairments Introduced By Interleaved Devices
MP9818	US	17/205,881	3/18/2021			Line Side Multiplexers With Protection Switching
MP9820	US	17/229,491	4/13/2021			Electro-Optic Package Featuring Sputtered EMI Shield
MP9822	US	17/190,867	3/3/2021			Methods For Co-Packaging Optical Modules On Switch Package Substrate
MP9823	US	17/210,080	3/23/2021			Termination Circuits and Attenuation Methods Thereof
MP9824	US	17/334,281	5/28/2021			METHOD AND DEVICE FOR TIMING RECOVERY DECOUPLED FFE ADAPTATION IN SERDES RECEIVERS
MP9829	US	17/218,748	3/31/2021			Wide-Band Multimode Interference Coupler With Arbitrary Power Splitting Ratio And Method For Making The Same
MP9830	US	17/191,410	3/3/2021			Power Monitor For Silicon-Photonics-Based Laser
MP9831	US	17/244,259	4/29/2021			SYSTEMS AND METHODS FOR NYQUIST ERROR CORRECTION
MP9832	US	17/225,789	4/8/2021			RAM Block Allocator
MP9835	US	17/239327	4/23/2021			Semiconductor Package Inhibiting Viscous Material Spread
MP9836	US	16/158153	10/11/2018			Systems And Methods For Generating Clock Signals
MP9838	US	15/962906	4/25/2018			System And Method For Secure Transactions To Transmit Cryptocurrency
MP9840	US	16/818864	3/13/2020			Systems and Methods for interleaved Hamming Coding and Decoding

<u>MP No</u>	<u>Ctry</u>	<u>AppNo</u>	<u>FileDate</u>	<u>PatNo</u>	<u>IssDate</u>	<u>AppTitle</u>
MP9840CN	CN	2021102668277	3/11/2021			Systems and Methods for Interleaved Hamming Coding and Decoding