507152489 02/28/2022

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT7199333

| SUBMISSION TYPE: | | NEW ASSIGNMENT | |
|-------------------------------|-------------|------------------------------|----------------|
| ATURE OF CONVEYANCE: | | RELEASE OF SECURITY INTEREST | |
| CONVEYING PARTY | / DATA | | |
| | | Name | Execution Date |
| JPMORGAN CHASE | BANK, N.A., | AS ADMINISTRATIVE AGENT | 02/18/2022 |
| | | | |
| RECEIVING PARTY | DATA | | |
| Name: | SILICON | STORAGE TECHNOLOGY, INC. | |
| Street Address: | 2355 W 0 | HANDLER BLVD | |
| City: | CHANDL | ER | |
| State/Country: | ARIZONA | 4 | |
| Postal Code: | 85224 | | |
| | | | |
| | | | 1 |
| Property Ty | · | Number | - |
| Patent Number: | | 091104 | - |
| Patent Number: | | 097636 | - |
| Patent Number: | | 08236 | - |
| Patent Number: | | 40182 | - |
| Patent Number: | | 45020 | - |
| Patent Number: Patent Number: | | 57979 | - |
| Patent Number: | | 73419 | - |
| Patent Number: | | 84554 84668 | - |
| Patent Number: | | 91642 | - |
| Patent Number: | | 219291 | - |
| Patent Number: | | 222227 | - |
| Patent Number: | | 222765 | - |
| Patent Number: | | 229290 | - |
| Patent Number: | | 242972 | - |
| Patent Number: | | 246634 | - |
| Patent Number: | | 268762 | 4 |
| Patent Number: | | 282145 | - |
| Patent Number: | | 285598 | - |
| Patent Number: | | | 1 |

| Property Type | Number |
|----------------|---------|
| Patent Number: | 6292391 |
| Patent Number: | 6292874 |
| Patent Number: | 6313498 |
| Patent Number: | 6329685 |
| Patent Number: | 6369420 |
| Patent Number: | 6381181 |
| Patent Number: | 6396742 |
| Patent Number: | 6396743 |
| Patent Number: | 6400603 |
| Patent Number: | 6414522 |
| Patent Number: | 6421213 |
| Patent Number: | 6426896 |
| Patent Number: | 6429075 |
| Patent Number: | 6456539 |
| Patent Number: | 6455942 |
| Patent Number: | 6466488 |
| Patent Number: | 6477103 |
| Patent Number: | 6487116 |
| Patent Number: | 6490212 |
| Patent Number: | 6503785 |
| Patent Number: | 6504754 |
| Patent Number: | 6510081 |
| Patent Number: | 6519180 |
| Patent Number: | 6525371 |
| Patent Number: | 6529409 |
| Patent Number: | 6541324 |
| Patent Number: | 6548995 |
| Patent Number: | 6560730 |
| Patent Number: | 6563167 |
| Patent Number: | 6566706 |
| Patent Number: | 6566919 |
| Patent Number: | 6580642 |
| Patent Number: | 6590253 |
| Patent Number: | 6590453 |
| Patent Number: | 6590825 |
| Patent Number: | 6591327 |
| Patent Number: | 6593177 |
| Patent Number: | 6608361 |

| Property Type | Number |
|----------------|---------|
| Patent Number: | 6617935 |
| Patent Number: | 6627942 |
| Patent Number: | 6627946 |
| Patent Number: | 6639428 |
| Patent Number: | 6639818 |
| Patent Number: | 6639842 |
| Patent Number: | 6670845 |
| Patent Number: | 6691055 |
| Patent Number: | 6699772 |
| Patent Number: | 6703318 |
| Patent Number: | 6706592 |
| Patent Number: | 6727545 |
| Patent Number: | 6735139 |
| Patent Number: | 6743674 |
| Patent Number: | 6747310 |
| Patent Number: | 6750090 |
| Patent Number: | 6751118 |
| Patent Number: | 6754103 |
| Patent Number: | 6756284 |
| Patent Number: | 6756632 |
| Patent Number: | 6756633 |
| Patent Number: | 6773974 |
| Patent Number: | 6773989 |
| Patent Number: | 6775171 |
| Patent Number: | 6775197 |
| Patent Number: | 6777260 |
| Patent Number: | 6788595 |
| Patent Number: | 6788608 |
| Patent Number: | 6806531 |
| Patent Number: | 6807610 |
| Patent Number: | 6809425 |
| Patent Number: | 6813194 |
| Patent Number: | 6815704 |
| Patent Number: | 6816427 |
| Patent Number: | 6822287 |
| Patent Number: | 6834009 |
| Patent Number: | 6839277 |
| Patent Number: | 6841982 |

| Property Type | Number |
|----------------|---------|
| Patent Number: | 6853584 |
| Patent Number: | 6855980 |
| Patent Number: | 6856788 |
| Patent Number: | 6861315 |
| Patent Number: | 6861698 |
| Patent Number: | 6865099 |
| Patent Number: | 6867638 |
| Patent Number: | 6868015 |
| Patent Number: | 6870233 |
| Patent Number: | 6873006 |
| Patent Number: | 6878591 |
| Patent Number: | 6882572 |
| Patent Number: | 6885586 |
| Patent Number: | 6885600 |
| Patent Number: | 6891220 |
| Patent Number: | 6894339 |
| Patent Number: | 6906379 |
| Patent Number: | 6913975 |
| Patent Number: | 6917069 |
| Patent Number: | 6927410 |
| Patent Number: | 6927993 |
| Patent Number: | 6936883 |
| Patent Number: | 6937507 |
| Patent Number: | 6940125 |
| Patent Number: | 6943617 |
| Patent Number: | 6952034 |
| Patent Number: | 6952033 |
| Patent Number: | 6956779 |
| Patent Number: | 6958273 |
| Patent Number: | 6960803 |
| Patent Number: | 6967372 |
| Patent Number: | 6967524 |
| Patent Number: | 6969687 |
| Patent Number: | 6970386 |
| Patent Number: | 6972994 |
| Patent Number: | 6975539 |
| Patent Number: | 6988231 |
| Patent Number: | 6992909 |

| Property Type | Number |
|----------------|---------|
| Patent Number: | 6992929 |
| Patent Number: | 6992934 |
| Patent Number: | 6992937 |
| Patent Number: | 7008846 |
| Patent Number: | 7009886 |
| Patent Number: | 7012273 |
| Patent Number: | 7012310 |
| Patent Number: | 7015537 |
| Patent Number: | 7018897 |
| Patent Number: | 7019998 |
| Patent Number: | 7027348 |
| Patent Number: | 7031214 |
| Patent Number: | 7032064 |
| Patent Number: | 7035151 |
| Patent Number: | 7037787 |
| Patent Number: | 7038538 |
| Patent Number: | 7038960 |
| Patent Number: | 7046552 |
| Patent Number: | 7050316 |
| Patent Number: | 7061295 |
| Patent Number: | 7074672 |
| Patent Number: | 7084453 |
| Patent Number: | 7102930 |
| Patent Number: | 7116088 |
| Patent Number: | 7119396 |
| Patent Number: | 7129536 |
| Patent Number: | 7139196 |
| Patent Number: | 7144778 |
| Patent Number: | 7149110 |
| Patent Number: | 7151021 |
| Patent Number: | 7155357 |
| Patent Number: | 7158431 |
| Patent Number: | 7161844 |
| Patent Number: | 7180127 |
| Patent Number: | 7183163 |
| Patent Number: | 7184345 |
| Patent Number: | 7190018 |
| Patent Number: | 7196921 |

| Property Type | Number |
|----------------|---------|
| Patent Number: | 7196927 |
| Patent Number: | 7205198 |
| Patent Number: | 7208376 |
| Patent Number: | 7212459 |
| Patent Number: | 7215573 |
| Patent Number: | 7217621 |
| Patent Number: | 7227217 |
| Patent Number: | 7236054 |
| Patent Number: | 7238959 |
| Patent Number: | 7239550 |
| Patent Number: | 7242050 |
| Patent Number: | 7242051 |
| Patent Number: | 7245529 |
| Patent Number: | 7247907 |
| Patent Number: | 7249213 |
| Patent Number: | 7263005 |
| Patent Number: | 7263148 |
| Patent Number: | 7276971 |
| Patent Number: | 7307308 |
| Patent Number: | 7315056 |
| Patent Number: | 7325177 |
| Patent Number: | 7326614 |
| Patent Number: | 7336516 |
| Patent Number: | 7342840 |
| Patent Number: | 7345512 |
| Patent Number: | 7351613 |
| Patent Number: | 7358559 |
| Patent Number: | 7362084 |
| Patent Number: | 7403418 |
| Patent Number: | 7405988 |
| Patent Number: | 7411246 |
| Patent Number: | 7423895 |
| Patent Number: | 7434092 |
| Patent Number: | 7436258 |
| Patent Number: | 7439572 |
| Patent Number: | 7447073 |
| Patent Number: | 7464192 |
| Patent Number: | 7470949 |

| Property Type | Number |
|----------------|---------|
| Patent Number: | 7471581 |
| Patent Number: | 7501321 |
| Patent Number: | 7537996 |
| Patent Number: | 7544569 |
| Patent Number: | 7547603 |
| Patent Number: | 7567458 |
| Patent Number: | 7592705 |
| Patent Number: | 7596037 |
| Patent Number: | 7598561 |
| Patent Number: | 7605092 |
| Patent Number: | 7616028 |
| Patent Number: | 7626863 |
| Patent Number: | 7631231 |
| Patent Number: | 7646641 |
| Patent Number: | 7660177 |
| Patent Number: | 7661041 |
| Patent Number: | 7660161 |
| Patent Number: | 7663921 |
| Patent Number: | 7668013 |
| Patent Number: | 7697365 |
| Patent Number: | 7701248 |
| Patent Number: | 7718488 |
| Patent Number: | 7723774 |
| Patent Number: | 7728563 |
| Patent Number: | 7729150 |
| Patent Number: | 7737765 |
| Patent Number: | 7749779 |
| Patent Number: | 7763492 |
| Patent Number: | 7778080 |
| Patent Number: | 7784693 |
| Patent Number: | 7786749 |
| Patent Number: | 7790518 |
| Patent Number: | 7800159 |
| Patent Number: | 7808839 |
| Patent Number: | 7816723 |
| Patent Number: | 7825698 |
| Patent Number: | 7826267 |
| Patent Number: | 7829404 |

| Property Type | Number |
|----------------|---------|
| Patent Number: | 7829459 |
| Patent Number: | 7831872 |
| Patent Number: | 7839682 |
| Patent Number: | 7848140 |
| Patent Number: | 7848159 |
| Patent Number: | 7851273 |
| Patent Number: | 7851846 |
| Patent Number: | 7852679 |
| Patent Number: | 7855583 |
| Patent Number: | 7865141 |
| Patent Number: | 7868375 |
| Patent Number: | 7868604 |
| Patent Number: | 7927994 |
| Patent Number: | 7939892 |
| Patent Number: | 7969239 |
| Patent Number: | 7974136 |
| Patent Number: | 8018773 |
| Patent Number: | 8020055 |
| Patent Number: | 8049535 |
| Patent Number: | 8067931 |
| Patent Number: | 8072815 |
| Patent Number: | 8094511 |
| Patent Number: | 8134859 |
| Patent Number: | 8138524 |
| Patent Number: | 8148768 |
| Patent Number: | 8154928 |
| Patent Number: | 8164135 |
| Patent Number: | 8199590 |
| Patent Number: | 8208312 |
| Patent Number: | 8232833 |
| Patent Number: | 8258065 |
| Patent Number: | 8270213 |
| Patent Number: | 8300494 |
| Patent Number: | 8339187 |
| Patent Number: | 8354864 |
| Patent Number: | 8384147 |
| Patent Number: | 8385147 |
| Patent Number: | 8432750 |

| Property Type | Number |
|----------------|---------|
| Patent Number: | 8435837 |
| Patent Number: | 8456904 |
| Patent Number: | 8461640 |
| Patent Number: | 8488388 |
| Patent Number: | 8497667 |
| Patent Number: | 8513728 |
| Patent Number: | 8559228 |
| Patent Number: | 8565038 |
| Patent Number: | 8576630 |
| Patent Number: | 8576648 |
| Patent Number: | 8614924 |
| Patent Number: | 8674749 |
| Patent Number: | 8693274 |
| Patent Number: | 8705282 |
| Patent Number: | 8711636 |
| Patent Number: | 8773934 |
| Patent Number: | 8780639 |
| Patent Number: | 8780642 |
| Patent Number: | 8785307 |
| Patent Number: | 8804429 |
| Patent Number: | 8811093 |
| Patent Number: | 8836411 |
| Patent Number: | 8846538 |
| Patent Number: | 8867281 |
| Patent Number: | 8883592 |
| Patent Number: | 8975131 |
| Patent Number: | 9018690 |
| Patent Number: | 9092044 |
| Patent Number: | 9093161 |
| Patent Number: | 9123401 |
| Patent Number: | 9123822 |
| Patent Number: | 9190532 |
| Patent Number: | 9245638 |
| Patent Number: | 9268899 |
| Patent Number: | 9275748 |
| Patent Number: | 9276005 |
| Patent Number: | 9276006 |
| Patent Number: | 9286982 |

| Property Type | Number |
|---------------------|----------|
| Patent Number: | 9293204 |
| Patent Number: | 9293358 |
| Patent Number: | 9293359 |
| Patent Number: | 9306039 |
| Patent Number: | 9330922 |
| Patent Number: | 9355734 |
| Patent Number: | 9361995 |
| Patent Number: | 9373407 |
| Patent Number: | 9378834 |
| Patent Number: | 9378838 |
| Patent Number: | 9379121 |
| Patent Number: | 9379255 |
| Patent Number: | 9417675 |
| Patent Number: | 9418744 |
| Patent Number: | 9431072 |
| Patent Number: | 9431126 |
| Patent Number: | 9431407 |
| Patent Number: | 9449693 |
| Patent Number: | 9466732 |
| Patent Number: | 9472284 |
| Patent Number: | 9484261 |
| Patent Number: | 9496369 |
| Patent Number: | 9508443 |
| Patent Number: | 9548087 |
| Patent Number: | 9548380 |
| Application Number: | 13830246 |
| Application Number: | 14386814 |
| Application Number: | 13958415 |
| Application Number: | 14435251 |
| Application Number: | 14094595 |
| Application Number: | 14133821 |
| Application Number: | 14449926 |
| Application Number: | 14486687 |
| Application Number: | 14486694 |
| Application Number: | 14506433 |
| Application Number: | 14582089 |
| Application Number: | 14624476 |
| Application Number: | 14639063 |

| Property Type | | Number | |
|--|--|--|---------------|
| Application Number: | 1472 | | - |
| Application Number: | 1479 | | - |
| Application Number: | 1479 | | - |
| Application Number: | 1493 | | |
| Application Number: | 1500 | | - |
| Application Number: | 1500 | | - |
| Application Number: | 1500 | | - |
| Application Number: | 1504 | | - |
| Application Number: | 1504 | | _ |
| | 1505 | | _ |
| Application Number: | 1505 | | _ |
| Application Number: | | | _ |
| Application Number: | 1508 | | _ |
| Application Number: | 1508 | | _ |
| Application Number: | 1509 | | |
| Application Number: | 1513 | | |
| Application Number: | 1516 | | |
| Application Number: | 1518 | | |
| Application Number: | 1518 | | |
| Application Number: | 15249 | 9306 | |
| Application Number: | 1525 | 8069 | |
| Application Number: | 1527: | 2417 | |
| Application Number: | 1528 | 7672 | |
| | to the o ed; if th 41594 | 947-2099 e-mail address first; if that is u nat is unsuccessful, it will be s 472169 od@wsgr.com | |
| Correspondent Name: | WILSON SONSINI GOODRICH & ROSATI, P.C. | | SATI, P.C. |
| Address Line 1: | ONE | MARKET PLAZA, SPEAR TOW | ER, SUITE 330 |
| Address Line 4: | SAN | FRANCISCO, CALIFORNIA 941 | 05 |
| ATTORNEY DOCKET NUMBER | ł: | 15286.092 | |
| NAME OF SUBMITTER: | | QUI LU FLOOD | |
| SIGNATURE: | | /Qui Lu Flood/ | |
| DATE SIGNED: | | 02/28/2022 | |
| Total Attachments: 34 source=MCHP - Patent Release source=MCHP - Patent Release | • • • | | |

| source=MCHP - Patent Release (SST) (Executed) (041675_0316)#page3.tif |
|--|
| source=MCHP - Patent Release (SST) (Executed) (041675_0316)#page4.tif |
| source=MCHP - Patent Release (SST) (Executed) (041675_0316)#page5.tif |
| source=MCHP - Patent Release (SST) (Executed) (041675_0316)#page6.tif |
| source=MCHP - Patent Release (SST) (Executed) (041675_0316)#page7.tif |
| source=MCHP - Patent Release (SST) (Executed) (041675_0316)#page8.tif |
| source=MCHP - Patent Release (SST) (Executed) (041675_0316)#page9.tif |
| source=MCHP - Patent Release (SST) (Executed) (041675_0316)#page10.tif |
| source=MCHP - Patent Release (SST) (Executed) (041675_0316)#page11.tif |
| source=MCHP - Patent Release (SST) (Executed) (041675_0316)#page12.tif |
| source=MCHP - Patent Release (SST) (Executed) (041675_0316)#page13.tif |
| source=MCHP - Patent Release (SST) (Executed) (041675_0316)#page14.tif |
| source=MCHP - Patent Release (SST) (Executed) (041675_0316)#page15.tif |
| source=MCHP - Patent Release (SST) (Executed) (041675_0316)#page16.tif |
| source=MCHP - Patent Release (SST) (Executed) (041675_0316)#page17.tif |
| source=MCHP - Patent Release (SST) (Executed) (041675_0316)#page18.tif |
| source=MCHP - Patent Release (SST) (Executed) (041675_0316)#page19.tif |
| source=MCHP - Patent Release (SST) (Executed) (041675_0316)#page20.tif |
| source=MCHP - Patent Release (SST) (Executed) (041675_0316)#page21.tif |
| source=MCHP - Patent Release (SST) (Executed) (041675_0316)#page22.tif |
| source=MCHP - Patent Release (SST) (Executed) (041675_0316)#page23.tif |
| source=MCHP - Patent Release (SST) (Executed) (041675_0316)#page24.tif |
| source=MCHP - Patent Release (SST) (Executed) (041675_0316)#page25.tif |
| source=MCHP - Patent Release (SST) (Executed) (041675_0316)#page26.tif |
| source=MCHP - Patent Release (SST) (Executed) (041675_0316)#page27.tif |
| source=MCHP - Patent Release (SST) (Executed) (041675_0316)#page28.tif |
| source=MCHP - Patent Release (SST) (Executed) (041675_0316)#page29.tif |
| source=MCHP - Patent Release (SST) (Executed) (041675_0316)#page30.tif |
| source=MCHP - Patent Release (SST) (Executed) (041675_0316)#page31.tif |
| source=MCHP - Patent Release (SST) (Executed) (041675_0316)#page32.tif |
| source=MCHP - Patent Release (SST) (Executed) (041675_0316)#page33.tif |
| source=MCHP - Patent Release (SST) (Executed) (041675_0316)#page34.tif |
| |

RELEASE OF SECURITY INTEREST IN PATENT RIGHTS

THIS RELEASE OF SECURITY INTEREST IN PATENT RIGHTS ("<u>Release</u>") is dated as of February 18, 2022 by JPMorgan Chase Bank, N.A, as Administrative Agent for the Secured Parties (in such capacity, the "<u>Administrative Agent</u>"), in favor of SILICON STORAGE TECHNOLOGY, INC. (the "<u>Grantor</u>").

WHEREAS, Administrative Agent and Grantor were parties to that certain Pledge and Security Agreement, dated as of February 8, 2017 (as may be amended, restated, supplemented or otherwise modified from time to time, the "<u>Security Agreement</u>") and that certain Grant of Security Interest in Patent Rights, dated as of February 8, 2017 (the "<u>Patent Security Agreement</u>"), in each case entered into in connection with that certain Amended and Restated Credit Agreement, dated as of June 27, 2013, as amended and restated as of February 4, 2015 (as may be amended, restated, supplemented or otherwise modified from time to time, the "<u>Credit Agreement</u>") among Microchip Technology Incorporated, the lenders from time to time party thereto and Administrative Agent;

WHEREAS, pursuant to the Patent Security Agreement, the Grantor granted to the Administrative Agent a security interest in (1) all of such Grantor's right, title and interest in and to the Patents then owned or from time to time thereafter owned or acquired by the Grantor, together with (2) all proceeds and products of the Patents, and (3) all causes of action arising prior to or after the date thereof for infringement of the Patents or unfair competition regarding the same (including, without limitation, those items listed on <u>Schedule A</u> attached hereto) (the "<u>Patent Collateral</u>");

WHEREAS, the Patent Security Agreement was recorded with the United States Patent and Trademark Office on February 10, 2017 at Reel 041675 and Frame 0316; and

WHEREAS, the Grantors have requested that the Administrative Agent execute and deliver this Release in order to evidence the release of its security interest in the Patent Collateral for recordation with the United States Patent and Trademark Office.

NOW THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Administrative Agent hereby states as follows:

Section 1. <u>Definitions</u>. Unless otherwise defined herein, terms used herein shall have the meaning given to them in the Credit Agreement, Security Agreement or Patent Security Agreement, as applicable.

Section 2. <u>Release of Security Interest.</u> Administrative Agent, without recourse, representation or warranty of any kind, hereby releases, discharges, terminates and cancels all of its security interest in and to the Patent Collateral arising under the Security Agreement or the Patent Security Agreement, and any right, title or interest of Administrative Agent in such Patent Collateral shall hereby cease and become void. Administrative Agent hereby authorizes and requests that the Commissioner for Patents of the United States Patent and Trademark Office record this Release.

[Signatures on following page]

PATENT REEL: 059687 FRAME: 0356 IN WITNESS WHEREOF, the undersigned has executed this Release by its duly authorized officer as of the date first written above.

| | JPMORG | GAN CHASE BANK, N.A. |
|------|--------|-------------------------|
| | Same 1 | as Administrative Agent |
| an i | | |
| By: | | |
| | | |
| | á | and the second second |

Name: Timotity D. Loo Executive Diractor

Title:

SCHEDULE A

(i) U.S. registered Patents:

| Grantor | Patent Number | Country of Registration | Issue Date | Brief Description of Patent Subject Matter |
|-------------------------------------|------------------|-------------------------|---------------|--|
| Silicon Storage Technology, Inc. | 6091104 | US | 7/18/2000 | Flash memory cell with self-aligned gates and fabrication process |
| Silicon Storage Technology, Inc. | 6097636 | US | 8/1/2000 | Word line and source line driver circuitries |
| Silicon Storage Technology, Inc. | 6108236 | US | 8/22/2000 | Smart card comprising integrated circuitry including eprom and error check and correction system |
| Silicon Storage Technology, Inc. | 6140182 | US | 10/31/2000 | Nonvolatile memory with self- aligned floating gate and fabrication process |
| Silicon Storage Technology, Inc. | 6145020 | US | 11/7/2000 | Microcontroller incorporating an enhanced peripheral controller for automatic updating the configuration date of multiple peripherals by using a ferroelectric memory array |
| Silicon Storage Technology, Inc. | 6157979 | US | 12/5/2000 | Programmable controlling device with non- volatile ferroelectric state-machines for restarting processor when power is restored with execution states retained in said non-volatile state-machines on power down |
| Silicon Storage Technology, Inc. | 6173419 | US | 1/9/2001 | Field programmable gate array (fpga) emulator for debugging software |
| Silicon Storage Technology, Inc. | 6184554 | US | 2/6/2001 | Memory cell with self-aligned floating gate and separate select gate, and fabrication process |
| Silicon Storage Technology, Inc. | 6184668 | US | 2/6/2001 | Voltage sensing circuit and method for preventing a low-voltage from being inadvertently sensed as a high-voltage during power-up or power-down |
| Silicon Storage Technology, Inc. | 6191642 | US | 2/20/2001 | Charge pump circuit |

| Grantor | Patent Number | Country of Registration | Issue Date | Brief Description of Patent Subject Matter |
|-------------------------------------|------------------|----------------------------|---------------|---|
| Silicon Storage Technology, Inc. | 6219291 | US | 4/17/2001 | Reduction of data dependent power supply noise when sensing the state of a memory cell |
| Silicon Storage Technology, Inc. | 6222227 | US | 4/24/2001 | Memory cell with self-aligned floating gate and separate select gate, and fabrication process |
| Silicon Storage Technology, Inc. | 6222765 | US | 4/24/2001 | Non-volatile flip-flop circuit |
| Silicon Storage Technology, Inc. | 6229290 | US | 5/8/2001 | Voltage regulating circuit with a clamp up circuit and a clamp down circuit operating in tandem |
| Silicon Storage Technology, Inc. | 6242972 | US | 6/5/2001 | Clamp circuit using pmos- transistors with a weak temperature dependency |
| Silicon Storage Technology, Inc. | 6246634 | US | 6/12/2001 | Integrated memory circuit having a flash memory array and at least one sram memory array with internal address and data bus for transfer of signals there between |
| Silicon Storage Technology, Inc. | 6268762 | US | 7/31/2001 | Output stage for a charge pump and a charge pump made thereby |
| Silicon Storage Technology, Inc. | 6282145 | US | 8/28/2001 | Array architecture and operating methods for digital multilevel nonvolatile memory integrated circuit system |
| Silicon Storage Technology, Inc. | 6285598 | US | 9/4/2001 | Precision programming of nonvolatile memory cells |
| Silicon Storage Technology, Inc. | 6291297 | US | 9/18/2001 | Flash memory cell with self-aligned gates and fabrication process |
| Silicon Storage Technology, Inc. | 6292391 | US | 9/18/2001 | Isolation circuit and method for controlling discharge of high- voltage in a flash eeprom |
| Silicon Storage Technology, Inc. | 6292874 | US | 9/18/2001 | Memory management method and apparatus for partitioning homogeneous memory and restricting access of installed applications to predetermined memory ranges |

| Grantor | Patent Number | Country of Registration | Issue Date | Brief Description of Patent Subject Matter |
|-------------------------------------|------------------|-------------------------|---------------|--|
| Silicon Storage Technology, Inc. | 6313498 | US | 11/6/2001 | Flash memory cell with thin floating gate with rounded side wall, and fabrication process |
| Silicon Storage Technology, Inc. | 6329685 | US | 12/11/2001 | Self aligned method of forming a semiconductor memory array of floating gate memory cells and a memory array made thereby |
| Silicon Storage Technology, Inc. | 6369420 | US | 4/9/2002 | Method of self-aligning a floating gate to a control gate and to an isolation in an electrically erasable and programmable memory cell, and a cell made thereby |
| Silicon Storage Technology, Inc. | 6381181 | US | 4/30/2002 | Timing independent current comparison and self-latching data circuit |
| Silicon Storage Technology, Inc. | 6396742 | US | 5/28/2002 | Testing of multilevel semiconductor memory |
| Silicon Storage Technology, Inc. | 6396743 | US | 5/28/2002 | Control circuit for a non-volatile memory array for controlling the ramp rate of high voltage applied to the memory cells and to limit the current drawn therefrom |
| Silicon Storage Technology, Inc. | 6400603 | US | 6/4/2002 | Electrically-eraseable programmable read-only memory having reduced-page-size program and erase |
| Silicon Storage Technology, Inc. | 6414522 | US | 7/2/2002 | Bias generating circuit for use with an oscillating circuit in an integrated circuit chargepump |
| Silicon Storage Technology, Inc. | 6421213 | US | 7/16/2002 | Method and apparatus for detecting a tamper condition and isolating a circuit therefrom |
| Silicon Storage Technology, Inc. | 6426896 | US | 7/30/2002 | Flash memory cell with contactless bit line, and process of fabrication |
| Silicon Storage Technology, Inc. | 6429075 | US | 8/6/2002 | Method of self-aligning a floating gate to a control gate and to an isolation in an electrically erasable and programmable memory cell, and a cell made thereby |

| Grantor | Patent Number | Country of Registration | Issue Date | Brief Description of Patent Subject Matter |
|-------------------------------------|------------------|----------------------------|---------------|---|
| Silicon Storage Technology, Inc. | 6456539 | US | 9/24/2002 | Method and apparatus for sensing a memory signal from a selected memory cell of a memory device |
| Silicon Storage Technology, Inc. | 6455942 | US | 9/24/2002 | Method and apparatus for strapping a plurality of polysilicon lines in a semiconductor integrated circuit device |
| Silicon Storage Technology, Inc. | 6466488 | US | 10/15/2002 | Reduction of data dependent power supply noise when sensing the state of a memory cell |
| Silicon Storage Technology, Inc. | 6477103 | US | 11/5/2002 | Reprogrammable fuse and method of operating |
| Silicon Storage Technology, Inc. | 6487116 | US | 11/26/2002 | Precision programming of nonvolatile memory cells |
| Silicon Storage Technology, Inc. | 6490212 | US | 12/3/2002 | Bitline precharge matching |
| Silicon Storage Technology, Inc. | 6503785 | US | 1/7/2003 | Flash memory cell with contactless bit line, and process of fabrication |
| Silicon Storage Technology, Inc. | 6504754 | US | 1/7/2003 | Array architecture and operating methods for digital multilevel nonvolatile memory integrated circuit system |
| Silicon Storage Technology, Inc. | 6510081 | US | 1/21/2003 | Electrically-eraseable programmable read-only memory having reduced-page-size program and erase |
| Silicon Storage Technology, Inc. | 6519180 | US | 2/11/2003 | Array architecture and operating methods for digital multilevel nonvolatile memory integrated circuit system |
| Silicon Storage Technology, Inc. | 6525371 | US | 2/25/2003 | Self-aligned non-volatile random access memory cell and process to make the same |
| Silicon Storage Technology, Inc. | 6529409 | US | 3/4/2003 | Integrated circuit for concurrent flash memory with uneven array architecture |
| Silicon Storage Technology, Inc. | 6541324 | US | 4/1/2003 | Method of forming a semiconductor array of floating gate memory cells having strap |

| Grantor | Patent Number | Country of Registration | Issue Date | Brief Description of Patent Subject Matter |
|-------------------------------------|------------------|----------------------------|---------------|---|
| | | | | regions and a peripheral logic device region |
| Silicon Storage Technology, Inc. | 6548995 | US | 4/15/2003 | High speed bias voltage generating circuit |
| Silicon Storage Technology, Inc. | 6560730 | US | 5/6/2003 | Method and apparatus for testing a non-volatile memory array having a low number of output pins |
| Silicon Storage Technology, Inc. | 6563167 | US | 5/13/2003 | Semiconductor memory array of floating gate memory cells with floating gates having multiple sharp edges |
| Silicon Storage Technology, Inc. | 6566706 | US | 5/20/2003 | Semiconductor array of floating gate memory cells and strap regions |
| Silicon Storage Technology, Inc. | 6566919 | US | 5/20/2003 | Power on circuit for generating reset signal |
| Silicon Storage Technology, Inc. | 6580642 | US | 6/17/2003 | Method of erasing nonvolatile tunneling injector memory cell |
| Silicon Storage Technology, Inc. | 6590253 | US | 7/8/2003 | Memory cell with self-aligned floating gate and separate select gate, and fabrication process |
| Silicon Storage Technology, Inc. | 6590453 | US | 7/8/2003 | Folded cascode high voltage operational amplifier with class ab source follower output stage |
| Silicon Storage Technology, Inc. | 6590825 | US | 7/8/2003 | Non-volatile flash fuse element |
| Silicon Storage Technology, Inc. | 6591327 | US | 7/8/2003 | Flash memory with alterable erase sector size |
| Silicon Storage Technology, Inc. | 6593177 | US | 7/15/2003 | Self aligned method of forming a semiconductor memory array of floating gate memory cells, and a memory array made thereby |
| Silicon Storage Technology, Inc. | 6608361 | US | 8/19/2003 | On-chip inductor using active magnetic energy recovery |
| Silicon Storage Technology, Inc. | 6617935 | US | 9/9/2003 | Oscillator and current source |
| Silicon Storage Technology, Inc. | 6627942 | US | 9/30/2003 | Self-aligned floating gate poly for a flash e2prom cell |

| Grantor | Patent Number | Country of Registration | Issue Date | Brief Description of Patent Subject Matter |
|-------------------------------------|------------------|-------------------------|---------------|--|
| Silicon Storage Technology, Inc. | 6627946 | US | 9/30/2003 | Semiconductor memory array of floating gate memory cells with control gates protruding portions |
| Silicon Storage Technology, Inc. | 6639428 | US | 10/28/2003 | Method and system for dynamically clocking digital systems based on power usage |
| Silicon Storage Technology, Inc. | 6639818 | US | 10/28/2003 | Differential non-volatile content addressable memory cell and array |
| Silicon Storage Technology, Inc. | 6639842 | US | 10/28/2003 | Method and apparatus for programming non- volatile memory cells |
| Silicon Storage Technology, Inc. | 6670845 | US | 12/30/2003 | High d.c. voltage to low d.c. voltage circuit converter |
| Silicon Storage Technology, Inc. | 6691055 | US | 2/10/2004 | Integrated circuit provided with means for calibrating an electronic module and method for calibrating an electronic module of an integrated circuit |
| Silicon Storage Technology, Inc. | 6699772 | US | 3/2/2004 | Hybrid trench isolation technology for high voltage isolation using thin field oxide in a semiconductor process |
| Silicon Storage Technology, Inc. | 6703318 | US | 3/9/2004 | Method of planarizing a semiconductor die |
| Silicon Storage Technology, Inc. | 6706592 | US | 3/16/2004 | Self aligned method of forming a semiconductor array of non-volatile memory cells |
| Silicon Storage Technology, Inc. | 6727545 | US | 4/27/2004 | Semiconductor memory array of floating gate memory cells with low resistance source regions and high source coupling |
| Silicon Storage Technology, Inc. | 6735139 | US | 5/11/2004 | System and method for providing asynchronous sram functionality with a dram array |
| Silicon Storage Technology, Inc. | 6743674 | US | 6/1/2004 | Method of forming a semiconductor array of floating gate memory cells and strap regions, and a memory array and strap regions made thereby |

| Grantor | Patent Number | Country of Registration | lssue Date | Brief Description of Patent Subject Matter |
|-------------------------------------|------------------|----------------------------|---------------|---|
| Silicon Storage Technology, Inc. | 6747310 | US | 6/8/2004 | Flash memory cells with separated self-aligned select and erase gates, and process of fabrication |
| Silicon Storage Technology, Inc. | 6750090 | US | 6/15/2004 | Self aligned method of forming a semiconductor memory array of floating gate memory cells with floating gates having multiple sharp edges, and a memory array made thereby |
| Silicon Storage Technology, Inc. | 6751118 | US | 6/15/2004 | Array architecture and operating methods for digital multilevel nonvolatile memory integrated circuit system |
| Silicon Storage Technology, Inc. | 6754103 | US | 6/22/2004 | Method and apparatus for programming and testing a non- volatile memory cell for storing multibit states |
| Silicon Storage Technology, Inc. | 6756284 | US | 6/29/2004 | Method for forming a sublithographic opening in a semiconductor process |
| Silicon Storage Technology, Inc. | 6756632 | US | 6/29/2004 | Integrated circuit with a reprogrammable nonvolatile switch for selectively connecting a source for a signal to a circuit |
| Silicon Storage Technology, Inc. | 6756633 | US | 6/29/2004 | Semiconductor memory array of floating gate memory cells with horizontally oriented floating gate edges |
| Silicon Storage Technology, Inc. | 6773974 | US | 8/10/2004 | Method of forming a semiconductor array of floating gate memory cells and strap regions |
| Silicon Storage Technology, Inc. | 6773989 | US | 8/10/2004 | Self aligned method of forming a semiconductor memory array of floating gate memory cells with control gate protruding portions |
| Silicon Storage Technology, Inc. | 6775171 | US | 8/10/2004 | Method of utilizing voltage gradients to guide dielectric breakdowns for non-volatile |

| Grantor | Patent Number | Country of Registration | lssue Date | Brief Description of Patent Subject Matter |
|-------------------------------------|------------------|----------------------------|---------------|--|
| | | | | memory elements and related embedded memories |
| Silicon Storage Technology, Inc. | 6775197 | US | 8/10/2004 | Non-volatile memory element integratable with standard cmos circuitry and related programming methods and embedded memories |
| Silicon Storage Technology, Inc. | 6777260 | US | 8/17/2004 | Method of making sub-lithographic sized contact holes |
| Silicon Storage Technology, Inc. | 6788595 | US | 9/7/2004 | Embedded recall apparatus and method in nonvolatile memory |
| Silicon Storage Technology, Inc. | 6788608 | US | 9/7/2004 | High voltage pulse method and apparatus for digital multilevel non- volatile memory integrated system |
| Silicon Storage Technology, Inc. | 6806531 | US | 10/19/2004 | Non-volatile floating gate memory cell with floating gates formed in cavities, and array thereof, and method of formation |
| Silicon Storage Technology, Inc. | 6807610 | US | 10/19/2004 | Method and apparatus for virtually partitioning an integrated multilevel nonvolatile memory circuit |
| Silicon Storage Technology, Inc. | 6809425 | US | 10/26/2004 | Integrated circuit with a reprogrammable nonvolatile switch having a dynamic threshold voltage (vth) for selectively connecting a source for a signal to a circuit |
| Silicon Storage Technology, Inc. | 6813194 | US | 11/2/2004 | Bias distribution network for digital multilevel nonvolatile flash memory |
| Silicon Storage Technology, Inc. | 6815704 | US | 11/9/2004 | Phase change memory device employing thermally insulating voids |
| Silicon Storage Technology, Inc. | 6816427 | US | 11/9/2004 | Method of utilizing a plurality of voltage pulses to program non- volatile memory elements and related embedded memories |
| Silicon Storage Technology, Inc. | 6822287 | US | 11/23/2004 | Array of integrated circuit units with strapping lines to prevent punch through |

| Grantor | Patent Number | Country of Registration | Issue Date | Brief Description of Patent Subject Matter |
|-------------------------------------|------------------|-------------------------|---------------|--|
| Silicon Storage Technology, Inc. | 6834009 | US | 12/21/2004 | Integrated circuit with a three transistor reprogrammable nonvolatile switch for selectively connecting a source for a signal to a circuit |
| Silicon Storage Technology, Inc. | 6839277 | US | 1/4/2005 | User identification for multi- purpose flash memory |
| Silicon Storage Technology, Inc. | 6841982 | US | 1/11/2005 | Curved fractional cmos bandgap reference |
| Silicon Storage Technology, Inc. | 6853584 | US | 2/8/2005 | Circuit for compensating programming current required, depending upon programming state |
| Silicon Storage Technology, Inc. | 6855980 | US | 2/15/2005 | Semiconductor memory array of floating gate memory cells with low resistance source regions and high source coupling |
| Silicon Storage Technology, Inc. | 6856788 | US | 2/15/2005 | Wireless ic interconnection method and system |
| Silicon Storage Technology, Inc. | 6861315 | US | 3/1/2005 | Method of manufacturing an array of bi- directional nonvolatile memory cells |
| Silicon Storage Technology, Inc. | 6861698 | US | 3/1/2005 | Array of floating gate memory cells having strap regions and a peripheral logic device region |
| Silicon Storage Technology, Inc. | 6865099 | US | 3/8/2005 | Wide dynamic range and high speed voltage mode sensing for a multilevel digital non- volatile memory |
| Silicon Storage Technology Inc. | 6867638 | US | 3/15/2005 | High voltage generation and regulation system for digital multilevel nonvolatile memory |
| Silicon Storage Technology, Inc. | 6868015 | US | 3/15/2005 | Semiconductor memory array of floating gate memory cells with control gate spacer portions |
| Silicon Storage Technology, Inc. | 6870233 | US | 3/22/2005 | Multi-bit rom cell with bi- directional read and a method for making thereof |

| Grantor | Patent Number | Country of Registration | lssue Date | Brief Description of Patent Subject Matter |
|-------------------------------------|------------------|----------------------------|---------------|--|
| Silicon Storage Technology, Inc. | 6873006 | US | 3/29/2005 | Semiconductor memory array of floating gate memory cells with burried floating gate and pointed channel region |
| Silicon Storage Technology, Inc. | 6878591 | US | 4/12/2005 | Self aligned method of forming non-volatile memory cells with flat word line |
| Silicon Storage Technology, Inc. | 6882572 | US | 4/19/2005 | Method of operating a semiconductor memory array of floating gate memory cells with horizontally oriented edges |
| Silicon Storage Technology, Inc. | 6885586 | US | 4/26/2005 | Self-aligned split-gate nand flash memory and fabrication process |
| Silicon Storage Technology, Inc. | 6885600 | US | 4/26/2005 | Differential sense amplifier for multilevel non- volatile memory |
| Silicon Storage Technology, Inc. | 6891220 | US | 5/10/2005 | Method of programming electrons onto a floating gate of a non- volatile memory cell |
| Silicon Storage Technology, Inc. | 6894339 | US | 5/17/2005 | Flash memory with trench select gate and fabrication process |
| Silicon Storage Technology, Inc. | 6906379 | US | 6/14/2005 | Semiconductor memory array of floating gate memory cells with buried floating gate |
| Silicon Storage Technology, Inc. | 6913975 | US | 7/5/2005 | Non-volatile floating gate memory cell with floating gates formed in cavities, and array thereof, and method of formation |
| Silicon Storage Technology, Inc. | 6917069 | US | 7/12/2005 | Semiconductor memory array of floating gate memory cells with buried bit-line and vertical word line transistor |
| Silicon Storage Technology, Inc. | 6927410 | US | 8/9/2005 | Memory device with discrete layers of phase change memory material |
| Silicon Storage Technology, Inc. | 6927993 | US | 8/9/2005 | Multi-bit rom cell, for storing on of n>4 possible states and having bi- directional read, an array of such cells |
| Silicon Storage Technology, Inc. | 6936883 | US | 8/30/2005 | Bi-directional read/program non- volatile floating gate memory cell |

| Grantor | Patent Number | Country of Registration | lssue Date | Brief Description of Patent Subject Matter |
|-------------------------------------|------------------|----------------------------|---------------|--|
| Crantor | | | | and array thereof, and method of formation |
| Silicon Storage Technology, Inc. | 6937507 | US | 8/30/2005 | Memory device and method of operating same |
| Silicon Storage Technology, Inc. | 6940125 | US | 9/6/2005 | Vertical nrom and methods for making thereof |
| Silicon Storage Technology, Inc. | 6943617 | US | 9/13/2005 | Low voltage cmos bandgap reference |
| Silicon Storage Technology Inc. | 6952034 | US | 10/4/2005 | Semiconductor memory array of floating gate memory cells with buried source line and floating gate |
| Silicon Storage Technology, Inc. | 6952033 | US | 10/4/2005 | Semiconductor memory array of floating gate memory cells with buried bit-line and raised source line |
| Silicon Storage Technology, Inc. | 6956779 | US | 10/18/2005 | Multistage autozero sensing for a multilevel non-volatile memory integrated circuit system |
| Silicon Storage Technology, Inc. | 6958273 | US | 10/25/2005 | Self-aligned method of forming a semiconductor memory array of floating gate memory cells with buried floating gate, pointed floating gate and pointed channel region, and a memory array made thereby |
| Silicon Storage Technology, Inc. | 6960803 | US | 11/1/2005 | Landing pad for use as a contact to a conductive spacer |
| Silicon Storage Technology, Inc. | 6967372 | US | 11/22/2005 | Semiconductor memory array of floating gate memory cells with vertical control gate sidewalls and insulation spacers |
| Silicon Storage Technology, Inc. | 6967524 | US | 11/22/2005 | High voltage generation and regulation system for digital multilevel nonvolatile memory |
| Silicon Storage Technology, Inc. | 6969687 | US | 11/29/2005 | Method of planarizing a semiconductor die |
| Silicon Storage Technology, Inc. | 6970386 | US | 11/29/2005 | Method and apparatus for detecting exposure of a |

| Grantor | Patent Number | Country of Registration | Issue Date | Brief Description of Patent Subject Matter |
|-------------------------------------|------------------|-------------------------|---------------|--|
| | | | | semiconductor circuit to ultra-violet light |
| Silicon Storage Technology, Inc. | 6972994 | US | 12/6/2005 | Circuit and a method to screen for defects in an addressable line in a non-volatile memory |
| Silicon Storage Technology, Inc. | 6975539 | US | 12/13/2005 | Digital multilevel non-volatile memory system |
| Silicon Storage Technology, Inc. | 6988231 | US | 1/17/2006 | On-chip method and apparatus for testing semiconductor circuits |
| Silicon Storage Technology, Inc. | 6992909 | US | 1/31/2006 | Multi-bit rom cell, for storing one of n>4 possible states and having bi- directional read, an array of such cells, and a method for making the array |
| Silicon Storage Technology, Inc. | 6992929 | US | 1/31/2006 | Self-aligned split-gate nand flash memory and fabrication process |
| Silicon Storage Technology, Inc. | 6992934 | US | 1/31/2006 | Read bitline inhibit method and apparatus for voltage mode sensing |
| Silicon Storage Technology, Inc. | 6992937 | US | 1/31/2006 | Column redundancy for digital multilevel nonvolatile memory |
| Silicon Storage Technology, Inc. | 7008846 | US | 3/7/2006 | Non-volatile floating gate memory cell with floating gates formed as spacers, and an array thereof, and a method of manufacturing |
| Silicon Storage Technology, Inc. | 7009886 | US | 3/7/2006 | Integrated circuit memory device with bit line pre-charging based upon partial address decoding |
| Silicon Storage Technology, Inc. | 7012273 | US | 3/14/2006 | Phase change memory device employing thermal-electrical contacts with narrowing electrical current paths |
| Silicon Storage Technology, Inc. | 7012310 | US | 3/14/2006 | Array of multi-bit rom cells with each cell having bi-directional read and a method for making the array |
| Silicon Storage Technology, Inc. | 7015537 | US | 3/21/2006 | Isolation-less, contact-less array of nonvolatile memory cells each having a floating gate for storage of charges, and methods of |

| Grantor | Patent Number | Country of Registration | Issue Date | Brief Description of Patent Subject Matter |
|-------------------------------------|------------------|----------------------------|---------------|---|
| | | | | manufacturing, and operating therefor |
| Silicon Storage Technology, Inc. | 7018897 | US | 3/28/2006 | Self aligned method of forming a semiconductor memory array of floating gate memory cells with control gate spacers |
| Silicon Storage Technology, Inc. | 7019998 | US | 3/28/2006 | Unified multilevel cell memory |
| Silicon Storage Technology, Inc. | 7027348 | US | 4/11/2006 | Power efficient read circuit for a serial output memory device and method |
| Silicon Storage Technology, Inc. | 7031214 | US | 4/18/2006 | Digital multilevel memory system having multistage autozero sensing |
| Silicon Storage Technology, Inc. | 7032064 | US | 4/18/2006 | Single chip embedded microcontroller having multiple non-volatile erasable proms sharing a single high voltage generator |
| Silicon Storage Technology, Inc. | 7035151 | US | 4/25/2006 | Array architecture and operating methods for digital multilevel nonvolatile memory integrated circuit system |
| Silicon Storage Technology, Inc. | 7037787 | US | 5/2/2006 | Flash memory with trench select gate and fabrication process |
| Silicon Storage Technology, Inc. | 7038538 | US | 5/2/2006 | Folded cascode high voltage operational amplifier with class ab source follower output stage |
| Silicon Storage Technology, Inc. | 7038960 | US | 5/2/2006 | High speed and high precision sensing for digital multilevel non- volatile memory system |
| Silicon Storage Technology, Inc. | 7046552 | US | 5/16/2006 | Flash memory with enhanced program and erase coupling and process of fabricating the same |
| Silicon Storage Technology Inc. | 7050316 | US | 5/23/2006 | Differential non-volatile content addressable memory cell and array using phase changing resistor storage elements |
| Silicon Storage Technology, Inc. | 7061295 | US | 6/13/2006 | Ring oscillator for digital multilevel non- volatile memory |

| Grantor | Patent Number | Country of Registration | Issue Date | Brief Description of Patent Subject Matter |
|-------------------------------------|------------------|-------------------------|---------------|--|
| Silicon Storage Technology, Inc. | 7074672 | US | 7/11/2006 | Self aligned method of forming a semiconductor memory array of floating gate memory cells with buried bit-line and vertical word line transistor |
| Silicon Storage Technology, Inc. | 7084453 | US | 8/1/2006 | Method of forming different oxide thickness for high voltage transistor and memory cell tunnel dielectric |
| Silicon Storage Technology, Inc. | 7102930 | US | 9/5/2006 | Method of programming a non- volatile memory cell to eliminate or to minimize program deceleration |
| Silicon Storage Technology, Inc. | 7116088 | US | 10/3/2006 | High voltage shunt regulator for flash memory |
| Silicon Storage Technology, Inc. | 7119396 | US | 10/10/2006 | Nrom device |
| Silicon Storage Technology, Inc. | 7129536 | US | 10/31/2006 | Non-planar non-volatile memory cell with an erase gate, an array therefor, and a method of making same |
| Silicon Storage Technology, Inc. | 7139196 | US | 11/21/2006 | Sub-volt sensing for digital multilevel flash memory |
| Silicon Storage Technology, Inc. | 7144778 | US | 12/5/2006 | Self aligned method of forming a semiconductor memory array of floating gate memory cells with buried bit-line and raised source line |
| Silicon Storage Technology, Inc. | 7149110 | US | 12/12/2006 | Seek window verify program system and method for a multilevel non-volatile memory integrated circuit system |
| Silicon Storage Technology, Inc. | 7151021 | US | 12/19/2006 | Bi-directional read/program non- volatile floating gate memory cell and array thereof, and method of formation |
| Silicon Storage Technology, Inc. | 7155357 | US | 12/26/2006 | Method and apparatus for detecting an unused state in a semiconductor circuit |
| Silicon Storage Technology, Inc. | 7158431 | US | 1/2/2007 | Single transistor sensing and double transistor sensing for flash memory |

| Grantor | Patent Number | Country of Registration | Issue Date | Brief Description of Patent Subject Matter |
|-------------------------------------|------------------|----------------------------|---------------|--|
| Silicon Storage Technology, Inc. | 7161844 | US | 1/9/2007 | Method and apparatus for compensating for bitline leakage current |
| Silicon Storage Technology, Inc. | 7180127 | US | 2/20/2007 | Semiconductor memory array of floating gate memory cells with buried floating gate, pointed floating gate and pointed channel region |
| Silicon Storage Technology, Inc. | 7183163 | US | 2/27/2007 | Method of manufacturing an isolation-less, contact-less array of bi-directional read/program non- volatile floating gate memory cells with independent controllable control gates |
| Silicon Storage Technology, Inc. | 7184345 | US | 2/27/2007 | High speed and high precision sensing for digital multilevel non- volatile memory system |
| Silicon Storage Technology, Inc. | 7190018 | US | 3/13/2007 | Bi-directional read/program non- volatile floating gate memory cell with independent controllable control gates, and array thereof, and method of formation |
| Silicon Storage Technology Inc. | 7196921 | US | 3/27/2007 | High-speed and low-power differential non- volatile content addressable memory cell and array |
| Silicon Storage Technology, Inc. | 7196927 | US | 3/27/2007 | Wide dynamic range and high speed voltage mode sensing for a multilevel digital non- volatile memory |
| Silicon Storage Technology, Inc. | 7205198 | US | 4/17/2007 | Method of making a bi-directional read/program non-volatile floating gate memory cell |
| Silicon Storage Technology, Inc. | 7208376 | US | 4/24/2007 | Self aligned method of forming a semiconductor memory array of floating gate memory cells with buried floating gate and pointed channel region |
| Silicon Storage Technology, Inc. | 7212459 | US | 5/1/2007 | Unified multilevel cell memory |

| Grantor | Patent Number | Country of Registration | Issue Date | Brief Description of Patent Subject Matter |
|-------------------------------------|------------------|----------------------------|---------------|---|
| Silicon Storage Technology, Inc. | 7215573 | US | 5/8/2007 | Method and apparatus for reducing operation disturbance |
| Silicon Storage Technology, Inc. | 7217621 | US | 5/15/2007 | Self-aligned split-gate nand flash memory and fabrication process |
| Silicon Storage Technology, Inc. | 7227217 | US | 6/5/2007 | Nonvolatile memory cell having floating gate, control gate and separate erase gate, an array of such memory cells, and method of manufacturing |
| Silicon Storage Technology, Inc. | 7236054 | US | 6/26/2007 | Multi-operational amplifier system |
| Silicon Storage Technology, Inc. | 7238959 | US | 7/3/2007 | Phase change memory device employing thermally insulating voids and sloped trench, and a method of making same |
| Silicon Storage Technology, Inc. | 7239550 | US | 7/3/2007 | Method of programming a non- volatile memory cell |
| Silicon Storage Technology, Inc. | 7242050 | US | 7/10/2007 | Stacked gate memory cell with erase to gate, array, and method of manufacturing |
| Silicon Storage Technology, Inc. | 7242051 | US | 7/10/2007 | Split gate nand flash memory structure and array, method of programming, erasing and reading thereof, and method of manufacturing |
| Silicon Storage Technology, Inc. | 7245529 | US | 7/17/2007 | Dynamically tunable resistor or capacitor using a non-volatile floating gate memory cell |
| Silicon Storage Technology, Inc. | 7247907 | US | 7/24/2007 | Bidirectional split gate nand flash memory structure and array, method of programming, erasing and reading thereof, and method of manufacturing |
| Silicon Storage Technology, Inc. | 7249213 | US | 7/24/2007 | Memory device operable with a plurality of protocols with configuration data stored in non- volatile storage elements |
| Silicon Storage Technology, Inc. | 7263005 | US | 8/28/2007 | Method of programming a non- volatile memory cell by controlling |

| Grantor | Patent Number | Country of Registration | lssue Date | Brief Description of Patent Subject Matter |
|-------------------------------------|------------------|----------------------------|---------------|---|
| | | | | the channel current during the rise period |
| Silicon Storage Technology, Inc. | 7263148 | US | 8/28/2007 | Source synchronous cdma bus interface |
| Silicon Storage Technology, Inc. | 7276971 | US | 10/2/2007 | Multi-operational amplifier system |
| Silicon Storage Technology, Inc. | 7307308 | US | 12/11/2007 | Buried bit line non-volatile floating gate memory cell with independent controllable control gate in a trench, and array thereof, and method of formation |
| Silicon Storage Technology, Inc. | 7315056 | US | 1/1/2008 | Semiconductor memory array of floating gate memory cells with program/erase and select gates |
| Silicon Storage Technology, Inc. | 7325177 | US | 1/29/2008 | Test circuit and method for multilevel cell flash memory |
| Silicon Storage Technology, Inc. | 7326614 | US | 2/5/2008 | Self aligned method of forming a semiconductor memory array of floating gate memory cells with buried bit-line and raised source line, and a memory array made thereby |
| Silicon Storage Technology, Inc. | 7336516 | US | 2/26/2008 | Unified multilevel memory systems and methods |
| Silicon Storage Technology, Inc. | 7342840 | US | 3/11/2008 | Single transistor sensing and double transistor sensing for flash memory |
| Silicon Storage Technology, Inc. | 7345512 | US | 3/18/2008 | Sense amplifier for low voltage high speed sensing |
| Silicon Storage Technology, Inc. | 7351613 | US | 4/1/2008 | Method of trimming semiconductor elements with electrical resistance feedback |
| Silicon Storage Technology, Inc. | 7358559 | US | 4/15/2008 | Bi-directional read/program non- volatile floating gate memory array, and method of formation |
| Silicon Storage Technology, Inc. | 7362084 | US | 4/22/2008 | Fast voltage regulators for charge pumps |

| Grantor | Patent Number | Country of Registration | Issue Date | Brief Description of Patent Subject Matter |
|-------------------------------------|------------------|----------------------------|---------------|---|
| Silicon Storage Technology, Inc. | 7403418 | US | 7/22/2008 | Word line voltage boosting circuit and a memory array incorporating same |
| Silicon Storage Technology, Inc. | 7405988 | US | 7/29/2008 | Method and apparatus for systematic and random variation and mismatch compensation for multilevel flash memory operation |
| Silicon Storage Technology, Inc. | 7411246 | US | 8/12/2008 | Self aligned method of forming a semiconductor memory array of floating gate memory cells with buried bit-line and raised source line, and a memory array made thereby |
| Silicon Storage Technology, Inc. | 7423895 | US | 9/9/2008 | High-speed and low-power differential non- volatile content addressable memory cell and array |
| Silicon Storage Technology, Inc. | 7434092 | US | 10/7/2008 | Semiconductor memory and method of storing configuration data |
| Silicon Storage Technology, Inc. | 7436258 | US | 10/14/2008 | Multi-operational amplifier system |
| Silicon Storage Technology, Inc. | 7439572 | US | 10/21/2008 | Stacked gate memory cell with erase to gate, array, and method of manufacturing |
| Silicon Storage Technology, Inc. | 7447073 | US | 11/4/2008 | Method for handling a defective top gate of a source-side injection flash memory array |
| Silicon Storage Technology, Inc. | 7464192 | US | 12/9/2008 | Programmable serial interface for a semiconductor circuit |
| Silicon Storage Technology, Inc. | 7470949 | US | 12/30/2008 | Bidirectional nonvolatile memory cell having charge trapping layer in trench and an array of such memory cells, and method of manufacturing |
| Silicon Storage Technology, Inc. | 7471581 | US | 12/30/2008 | Wide dynamic range and high speed voltage mode sensing for a multilevel digital non- volatile memory |

| Grantor | Patent Number | Country of Registration | lssue Date | Brief Description of Patent Subject Matter |
|--------------------------------------|------------------|----------------------------|---------------|---|
| Silicon Storage Technology, Inc. | 7501321 | US | 3/10/2009 | Nand flash memory with densely packed memory gates and fabrication process |
| Silicon Storage Technology, Inc. | 7537996 | US | 5/26/2009 | Self-aligned method of forming a semiconductor memory array of floating gate memory cells with buried source line and floating gate |
| Silicon Storage Technology, Inc. | 7544569 | US | 6/9/2009 | Bidirectional split gate nand flash memory structure and array, method of programming, erasing and reading thereof, and method of manufacturing |
| Silicon Storage Technology, Inc. | 7547603 | US | 6/16/2009 | Non-planar non-volatile memory cell with an erase gate, an array therefor, and a method of making same |
| Silicon Storage Technology, Inc. | 7567458 | US | 7/28/2009 | Flash memory array having control/decode circuitry for disabling top gates of defective memory cells |
| Silicon Storage Technology, Inc. | 7592705 | US | 9/22/2009 | Method and apparatus for strapping two polysilicon lines in a semiconductor integrated circuit device |
| Silicon Storage Technology, Inc. | 7596037 | US | 9/29/2009 | Independent bi-directional margin control per level and independently expandable reference cell levels for flash memory sensing |
| Silicon Storage Technology, Inc. | 7598561 | US | 10/6/2009 | Nor flash memory |
| Silicon Storage Technology, Inc., | 7605092 | US | 10/20/2009 | Passive elements, articles, packages, semiconductor composites, and methods of manufacturing same |
| Silicon Storage Technology, Inc. | 7616028 | US | 11/10/2009 | Sense amplifier for low voltage high speed sensing |
| Silicon Storage Technology, Inc. | 7626863 | US | 12/1/2009 | Flash memory array system including a top gate memory cell |

PATENT REEL: 059687 FRAME: 0376

| Grantor | Patent Number | Country of Registration | Issue Date | Brief Description of Patent Subject Matter |
|--------------------------------------|------------------|----------------------------|---------------|---|
| Silicon Storage Technology, Inc. | 7631231 | US | 12/8/2009 | Method and apparatus for testing the connectivity of a flash memory chip |
| Silicon Storage Technology, Inc. | 7646641 | US | 1/12/2010 | Nand flash memory with nitride charge storage gates and fabrication process |
| Silicon Storage Technology, Inc. | 7660177 | US | 2/9/2010 | Non-volatile memory device having high speed serial interface |
| Silicon Storage Technology, Inc. | 7661041 | US | 2/9/2010 | Test circuit and method for multilevel cell flash memory |
| Silicon Storage Technology, Inc., | 7660161 | US | 2/9/2010 | Integrated flash memory systems and methods for load compensation |
| Silicon Storage Technology, Inc. | 7663921 | US | 2/16/2010 | Flash memory array with a top gate line dynamically coupled to a word line |
| Silicon Storage Technology, Inc. | 7668013 | US | 2/23/2010 | Method for erasing a flash memory cell or an array of such cells having improved erase coupling ratio |
| Silicon Storage Technology, Inc. | 7697365 | US | 4/13/2010 | Sub volt flash memory system |
| Silicon Storage Technology, Inc. | 7701248 | US | 4/20/2010 | Storage element for controlling a logic circuit, and a logic device having an array of such storage elements |
| Silicon Storage Technology, Inc. | 7718488 | US | 5/18/2010 | Process of fabricating flash memory with enhanced program and erase coupling |
| Silicon Storage Technology, Inc. | 7723774 | US | 5/25/2010 | Non-diffusion junction split-gate nonvolatile memory cells and arrays, methods of programming, erasing, and reading thereof, and methods of manufacture |
| Silicon Storage Technology, Inc. | 7728563 | US | 6/1/2010 | Fast voltage regulators for charge pumps |
| Silicon Storage Technology, Inc. | 7729150 | US | 6/1/2010 | High-speed and low-power differential non- volatile content addressable memory cell and array |

| Grantor | Patent Number | Country of Registration | lssue Date | Brief Description of Patent Subject Matter |
|-------------------------------------|------------------|----------------------------|---------------|---|
| Silicon Storage Technology, Inc. | 7737765 | US | 6/15/2010 | Fast start charge pump for voltage regulators |
| Silicon Storage Technology, Inc. | 7749779 | US | 7/6/2010 | Landing pad for use as a contact to a conductive spacer |
| Silicon Storage Technology, Inc. | 7763492 | US | 7/27/2010 | Method of making phase change memory device employing thermally insulating voids and sloped trench |
| Silicon Storage Technology, Inc. | 7778080 | US | 8/17/2010 | Flash memory array system including a top gate memory cell |
| Silicon Storage Technology, Inc. | 7784693 | US | 8/31/2010 | Assembly of sim card and rfid antenna |
| Silicon Storage Technology, Inc. | 7786749 | US | 8/31/2010 | Programmable integrated circuit having built in test circuit |
| Silicon Storage Technology, Inc. | 7790518 | US | 9/7/2010 | Method of trimming semiconductor elements with electrical resistance feedback |
| Silicon Storage Technology, Inc. | 7800159 | US | 9/21/2010 | Array of contactless non-volatile memory cells |
| Silicon Storage Technology, Inc. | 7808839 | US | 10/5/2010 | Split gate nand flash memory structure and array, method of programming, erasing and reading thereof, and method of manufacturing |
| Silicon Storage Technology, Inc. | 7816723 | US | 10/19/2010 | Semiconductor memory array of floating gate memory cells with program/erase and select gates |
| Silicon Storage Technology, Inc. | 7825698 | US | 11/2/2010 | Method and apparatus for systematic and random variation and mismatch compensation for multilevel flash memory operation |
| Silicon Storage Technology, Inc. | 7826267 | US | 11/2/2010 | Method and apparatus for reading and programming a non-volatile memory cell in a virtual ground array |
| Silicon Storage Technology, Inc. | 7829404 | US | 11/9/2010 | Method of making a semiconductor memory array of floating gate memory cells with program/erase and select gates |

| Grantor | Patent Number | Country of Registration | Issue Date | Brief Description of Patent Subject Matter |
|-------------------------------------|------------------|-------------------------|---------------|---|
| Silicon Storage Technology, Inc. | 7829459 | US | 11/9/2010 | Method and apparatus for strapping two polysilicon lines in a semiconductor integrated circuit device |
| Silicon Storage Technology, Inc. | 7831872 | US | 11/9/2010 | Test circuit and method for multilevel cell flash memory |
| Silicon Storage Technology, Inc. | 7839682 | US | 11/23/2010 | Array and pitch of non-volatile memory cells |
| Silicon Storage Technology, Inc. | 7848140 | US | 12/7/2010 | Flash memory array system including a top gate memory cell |
| Silicon Storage Technology, Inc. | 7848159 | US | 12/7/2010 | Non-volatile memory systems and methods including page read and/or configuration features |
| Silicon Storage Technology, Inc. | 7851273 | US | 12/14/2010 | Method of testing an integrated circuit die, and an integrated circuit die |
| Silicon Storage Technology, Inc. | 7851846 | US | 12/14/2010 | Non-volatile memory cell with buried select gate, and method of making same |
| Silicon Storage Technology, Inc. | 7852679 | US | 12/14/2010 | Integrated flash memory systems and methods for load compensation |
| Silicon Storage Technology, Inc. | 7855583 | US | 12/21/2010 | Sense amplifier for low voltage high speed sensing |
| Silicon Storage Technology, Inc. | 7865141 | US | 1/4/2011 | Chipset for mobile wallet system |
| Silicon Storage Technology, Inc. | 7868375 | US | 1/11/2011 | Split gate non-volatile flash memory cell having a floating gate, control gate, select gate and an erase gate with an overhang over the floating gate, array and method of manufacturing |
| Silicon Storage Technology, Inc. | 7868604 | US | 1/11/2011 | Fast voltage regulators for charge pumps |
| Silicon Storage Technology, Inc. | 7927994 | US | 4/19/2011 | Split gate non-volatile flash memory cell having a floating gate, control gate, select gate and an erase gate with an overhang over |

| Grantor | Patent Number | Country of Registration | Issue Date | Brief Description of Patent Subject Matter |
|-------------------------------------|------------------|-------------------------|---------------|--|
| | | | | the floating gate, array and method of manufacturing |
| Silicon Storage Technology, Inc. | 7939892 | US | 5/10/2011 | Test circuit and method for multilevel cell flash memory |
| Silicon Storage Technology, Inc. | 7969239 | US | 6/28/2011 | Charge pump circuit and a novel capacitor for a memory integrated circuit |
| Silicon Storage Technology, Inc. | 7974136 | US | 7/5/2011 | Method for erasing a flash memory cell or an array of such cells having improved erase coupling ratio |
| Silicon Storage Technology, Inc. | 8018773 | US | 9/13/2011 | Array of non-volatile memory cells including embedded local and global reference cells and system |
| Silicon Storage Technology, Inc. | 8020055 | US | 9/13/2011 | Method and apparatus for testing the connectivity of a flash memory chip |
| Silicon Storage Technology, Inc. | 8049535 | US | 11/1/2011 | Sense amplifier for low voltage high speed sensing |
| Silicon Storage Technology, Inc. | 8067931 | US | 11/29/2011 | Fast voltage regulators for charge pumps |
| Silicon Storage Technology, Inc. | 8072815 | US | 12/6/2011 | Array of non-volatile memory cells including embedded local and global reference cells and system |
| Silicon Storage Technology, Inc. | 8094511 | US | 1/10/2012 | Non-volatile memory device having high speed serial interface |
| Silicon Storage Technology, Inc. | 8134859 | US | 3/13/2012 | Method of sensing a programmable non-volatile memory element |
| Silicon Storage Technology, Inc. | 8138524 | US | 3/20/2012 | Self-aligned method of forming a semiconductor memory array of floating memory cells with source side erase, and a memory array made thereby |
| Silicon Storage Technology, Inc. | 8148768 | US | 4/3/2012 | Non-volatile memory cell with self aligned floating and erase gates, and method of making same |
| Silicon Storage Technology, Inc. | 8154928 | US | 4/10/2012 | Integrated flash memory systems and methods for load compensation |

| Grantor | Patent Number | Country of Registration | lssue Date | Brief Description of Patent Subject Matter |
|--------------------------------------|------------------|-------------------------|---------------|---|
| Silicon Storage Technology, Inc. | 8164135 | US | 4/24/2012 | Non-diffusion junction split-gate nonvolatile memory cells and arrays, methods of programming, erasing, and reading thereof, and methods of manufacture |
| Silicon Storage Technology, Inc. | 8199590 | US | 6/12/2012 | Multiple time programmable non- volatile memory element |
| Silicon Storage Technology, Inc. | 8208312 | US | 6/26/2012 | Non-volatile memory element integratable with standard cmos circuitry |
| Silicon Storage Technology, Inc., | 8232833 | US | 7/31/2012 | Charge pump systems and methods |
| Silicon Storage Technology, Inc. | 8258065 | US | 9/4/2012 | Passive elements, articles, packages, semiconductor composites, and methods of manufacturing same |
| Silicon Storage Technology, Inc. | 8270213 | US | 9/18/2012 | Flash memory array system including a top gate memory cell |
| Silicon Storage Technology, Inc. | 8300494 | US | 10/30/2012 | Sub volt flash memory system |
| Silicon Storage Technology, Inc. | 8339187 | US | 12/25/2012 | Charge pump systems and methods |
| Silicon Storage Technology, Inc.; | 8354864 | US | 1/15/2013 | Sense amplifier for low voltage high speed sensing |
| Silicon Storage Technology, Inc. | 8384147 | US | 2/26/2013 | High endurance non-volatile memory cell and array |
| Silicon Storage Technology, Inc. | 8385147 | US | 2/26/2013 | Systems and methods of non- volatile memory sensing including selective/differential threshold voltage features |
| Silicon Storage Technology, Inc. | 8432750 | US | 4/30/2013 | Non-volatile memory systems and methods including page read and/or configuration features |
| Silicon Storage Technology, Inc. | 8435837 | US | 5/7/2013 | Panel based lead frame packaging method and device |
| Silicon Storage Technology, Inc. | 8456904 | US | 6/4/2013 | Sub volt flash memory system |

| Grantor | Patent Number | Country of Registration | lssue Date | Brief Description of Patent Subject Matter |
|-------------------------------------|------------------|----------------------------|---------------|--|
| Silicon Storage Technology, Inc. | 8461640 | US | 6/11/2013 | Fin-fet non-volatile memory cell, and an array and method of manufacturing |
| Silicon Storage Technology, Inc. | 8488388 | US | 7/16/2013 | Method of programming a split gate non- volatile floating gate memory cell having a separate erase gate |
| Silicon Storage Technology, Inc. | 8497667 | US | 7/30/2013 | Fast voltage regulators for charge pumps |
| Silicon Storage Technology, Inc. | 8513728 | US | 8/20/2013 | Array of split gate non-volatile floating gate memory cells having improved strapping of the coupling gates |
| Silicon Storage Technology, Inc. | 8559228 | US | 10/15/2013 | Non-volatile memory device with plural reference cells, and method of setting the reference cells |
| Silicon Storage Technology, Inc. | 8565038 | US | 10/22/2013 | Power line compensation for flash memory sense amplifiers |
| Silicon Storage Technology, Inc. | 8576630 | US | 11/5/2013 | Non-volatile memory device with plural reference cells, and method of setting the reference cells |
| Silicon Storage Technology, Inc. | 8576648 | US | 11/5/2013 | Method of testing data retention of a non- volatile memory cell having a floating gate |
| Silicon Storage Technology, Inc. | 8614924 | US | 12/24/2013 | Non-volatile memory systems and methods |
| Silicon Storage Technology, Inc. | 8674749 | US | 3/18/2014 | Fast start charge pump for voltage regulators |
| Silicon Storage Technology, Inc. | 8693274 | US | 4/8/2014 | Systems and methods of non- volatile memory sensing including selective/differential threshold voltage features |
| Silicon Storage Technology, Inc. | 8705282 | US | 4/22/2014 | Mixed voltage non-volatile memory integrated circuit with power saving |
| Silicon Storage Technology, Inc. | 8711636 | US | 4/29/2014 | Method of operating a split gate flash memory cell with coupling gate |

| Grantor | Patent Number | Country of Registration | Issue Date | Brief Description of Patent Subject Matter |
|-------------------------------------|------------------|-------------------------|---------------|---|
| Silicon Storage Technology, Inc. | 8773934 | US | 7/8/2014 | Power line compensation for flash memory sense amplifiers |
| Silicon Storage Technology, Inc. | 8780639 | US | 7/15/2014 | Non-volatile memory device with plural reference cells, and method of setting the reference cells |
| Silicon Storage Technology, Inc. | 8780642 | US | 7/15/2014 | Split gate nand flash memory structure and array, method of programming, erasing and reading thereof, and method of manufacturing |
| Silicon Storage Technology, Inc. | 8785307 | US | 7/22/2014 | Method of forming a memory cell by reducing diffusion of dopants under a gate |
| Silicon Storage Technology, Inc. | 8804429 | US | 8/12/2014 | Non-volatile memory device and a method of programming such device |
| Silicon Storage Technology, Inc. | 8811093 | US | 8/19/2014 | Non-volatile memory device and a method of operating same |
| Silicon Storage Technology, Inc. | 8836411 | US | 9/16/2014 | Charge pump systems and methods |
| Silicon Storage Technology, Inc. | 8846538 | US | 9/30/2014 | Passive elements, articles, packages, semiconductor composites, and methods of manufacturing same |
| Silicon Storage Technology, Inc. | 8867281 | US | 10/21/2014 | Hybrid chargepump and regulation means and method for flash memory device |
| Silicon Storage Technology, Inc. | 8883592 | US | 11/11/2014 | Non-volatile memory cell having a high k dielectric and metal gate |
| Silicon Storage Technology, Inc. | 8975131 | US | 3/10/2015 | Self-aligned method of forming a semiconductor memory array of floating gate memory cells with single poly layer |
| Silicon Storage Technology, Inc. | 9018690 | US | 4/28/2015 | Split-gate memory cell with substrate stressor region, and method of making same |
| Silicon Storage Technology, Inc. | 9092044 | US | 7/28/2015 | Low voltage, low power bandgap circuit |

| Grantor | Patent Number | Country of Registration | lssue Date | Brief Description of Patent Subject Matter |
|-------------------------------------|------------------|----------------------------|---------------|---|
| Silicon Storage Technology, Inc. | 9093161 | US | 7/28/2015 | Dynamic programming of advanced nanometer flash memory |
| Silicon Storage Technology, Inc. | 9123401 | US | 9/1/2015 | Non-volatile memory array and method of using same for fractional word programming |
| Silicon Storage Technology, Inc. | 9123822 | US | 9/1/2015 | Split gate non-volatile flash memory cell having a silicon-metal floating gate and method of making same |
| Silicon Storage Technology, Inc. | 9190532 | US | 11/17/2015 | Method of making a split gate non- volatile floating gate memory cell having a separate erase gate, and a memory cell made thereby |
| Silicon Storage Technology, Inc. | 9245638 | US | 1/26/2016 | Method of operating a split gate flash memory cell with coupling gate |
| Silicon Storage Technology, Inc. | 9268899 | US | 2/23/2016 | Transistor design for use in advanced nanometer flash memory devices |
| Silicon Storage Technology, Inc. | 9275748 | US | 3/1/2016 | Low leakage, low threshold voltage, split-gate flash cell operation |
| Silicon Storage Technology, Inc. | 9276005 | US | 3/1/2016 | Non-volatile memory array with concurrently formed low and high voltage logic devices |
| Silicon Storage Technology, Inc. | 9276006 | US | 3/1/2016 | Split gate non-volatile flash memory cell having metal- enhanced gates and method of making same |
| Silicon Storage Technology, Inc. | 9286982 | US | 3/15/2016 | Flash memory system with eeprom functionality |
| Silicon Storage Technology, Inc. | 9293204 | US | 3/22/2016 | Non-volatile memory cell with self aligned floating and erase gates, and method of making same |
| Silicon Storage Technology, Inc. | 9293358 | US | 3/22/2016 | Double patterning method of forming semiconductor active areas and isolation regions |
| Silicon Storage Technology, Inc. | 9293359 | US | 3/22/2016 | Non-volatile memory cells with enhanced channel region effective width, and method of making same |

| Grantor | Patent Number | Country of Registration | Issue Date | Brief Description of Patent Subject Matter |
|-------------------------------------|------------------|----------------------------|---------------|--|
| Silicon Storage Technology, Inc. | 9306039 | US | 4/5/2016 | Method of making split-gate memory cell with substrate stressor region |
| Silicon Storage Technology, Inc. | 9330922 | US | 5/3/2016 | Self-aligned stack gate structure for use in a non-volatile memory array and a method of forming such structure |
| Silicon Storage Technology, Inc. | 9355734 | US | 5/31/2016 | Sensing circuits for use in low power nanometer flash memory devices |
| Silicon Storage Technology, Inc. | 9361995 | US | 6/7/2016 | Flash memory system using complementary voltage supplies |
| Silicon Storage Technology, Inc. | 9373407 | US | 6/21/2016 | Non-volatile memory device with current injection sensing amplifier |
| Silicon Storage Technology, Inc. | 9378834 | US | 6/28/2016 | Bitline regulator for high speed flash memory system |
| Silicon Storage Technology, Inc. | 9378838 | US | 6/28/2016 | Mixed voltage non-volatile memory integrated circuit with power saving |
| Silicon Storage Technology, Inc. | 9379121 | US | 6/28/2016 | Split gate non-volatile flash memory cell having metal gates and method of making same |
| Silicon Storage Technology, Inc. | 9379255 | US | 6/28/2016 | Non-volatile memory cell having a floating gate and a coupling gate with improved coupling ratio there between |
| Silicon Storage Technology, Inc. | 9417675 | US | 8/16/2016 | Power sequencing for embedded flash memory devices |
| Silicon Storage Technology, Inc. | 9418744 | US | 8/16/2016 | System and method to reduce disturbances during programming of flash memory cells |
| Silicon Storage Technology, Inc. | 9431072 | US | 8/30/2016 | On-the-fly trimmable sense amplifier |
| Silicon Storage Technology, Inc. | 9431126 | US | 8/30/2016 | Non-volatile memory program algorithm device and method |
| Silicon Storage Technology, Inc. | 9431407 | US | 8/30/2016 | Method of making embedded memory device with silicon-on- insulator substrate |

| Grantor | Patent Number | Country of Registration | lssue Date | Brief Description of Patent Subject Matter |
|-------------------------------------|------------------|----------------------------|---------------|---|
| Silicon Storage Technology, Inc. | 9449693 | US | 9/20/2016 | Split gate nand flash memory structure and array, method of programming, erasing and reading thereof, and method of manufacturing |
| Silicon Storage Technology, Inc. | 9466732 | US | 10/11/2016 | Split-gate memory cell with depletion-mode floating gate channel, and method of making same |
| Silicon Storage Technology, Inc. | 9472284 | US | 10/18/2016 | Three-dimensional flash memory system |
| Silicon Storage Technology, Inc. | 9484261 | US | 11/1/2016 | Formation of self-aligned source for split-gate non-volatile memory cell |
| Silicon Storage Technology, Inc. | 9496369 | US | 11/15/2016 | Method of forming split-gate memory cell array along with low and high voltage logic devices |
| Silicon Storage Technology, Inc. | 9508443 | US | 11/29/2016 | Flash memory system using complementary voltage supplies |
| Silicon Storage Technology, Inc. | 9548087 | US | 1/17/2017 | Systems and methods of non- volatile memory sensing including selective/differential threshold voltage features |
| Silicon Storage Technology, Inc. | 9548380 | US | 1/17/2017 | Non-volatile memory cell having a trapping charge layer in a trench and an array and a method of manufacturing therefor |

U.S. Patent applications:

| Grantor | Application Serial Number | Country of Application | Filing Date | Brief Description of Patent Subject Matter |
|-------------------------------------|---------------------------------|---------------------------|-------------|---|
| Silicon Storage Technology, Inc. | 13/830246 | US | 3/14/2013 | Power management for a memory device |
| Silicon Storage Technology, Inc. | 14/386814 | US | 3/15/2013 | Trimmable reference generator for sense amplifier |
| Silicon Storage Technology, Inc. | 13/958415 | US | 8/2/2013 | High speed sensing for advanced nanometer flash memory device |

| Grantor | Patent Number | Country of Registration | Issue Date | Brief Description of Patent Subject Matter |
|-------------------------------------|------------------|----------------------------|---------------|---|
| Silicon Storage Technology, Inc. | 14/435251 | US | 10/3/2013 | Low voltage current reference generator for a sensing amplifier |
| Silicon Storage Technology, Inc. | 14/094595 | US | 12/2/2013 | Three-dimensional flash nor memory system with configurable pins |
| Silicon Storage Technology | 14/133821 | US | 12/19/2013 | Non-volatile memory cell with self aligned floating and erase gates, and method of making same |
| Silicon Storage Technology, Inc. | 14/449926 | US | 8/1/2014 | Non-volatile memory device and a method of programming such device |
| Silicon Storage Technology, Inc. | 14/486687 | US | 9/15/2014 | System and method to inhibit erasing of portion of sector of split gate flash memory cells |
| Silicon Storage Technology, Inc. | 14/486694 | US | 9/15/2014 | Digitally controlled delay-locked loop reference generator |
| Silicon Storage Technology, Inc. | 14/506433 | US | 10/3/2014 | Non-volatile split gate memory device and a method of operating same |
| Silicon Storage Technology, Inc. | 14/582089 | US | 12/23/2014 | Geometrically enhanced resistive random access memory (rram) cell and method of forming same |
| Silicon Storage Technology, Inc. | 14/624476 | US | 2/17/2015 | Flash memory device configurable to provide read only memory functionality |
| Silicon Storage Technology, Inc. | 14/639063 | US | 3/4/2015 | Array of non-volatile memory cells with rom cells |
| Silicon Storage Technology, Inc. | 14/726124 | US | 5/29/2015 | Low power operation for flash memory system |
| Silicon Storage Technology, Inc. | 14/790540 | US | 7/2/2015 | Split-gate flash memory cell with improved scaling using enhanced lateral control gate to floating gate coupling |
| Silicon Storage Technology, Inc. | 14/791213 | US | 7/2/2015 | Dynamic programming of advanced nanometer flash memory |
| Silicon Storage Technology, Inc. | 14/935201 | US | 11/6/2015 | Virtual ground non-volatile memory array |

| Grantar | Patent Number | Country of | Issue | Brief Description of Patent Subject Matter |
|-------------------------------------|------------------|--------------|-----------|---|
| Grantor | | Registration | Date | |
| Silicon Storage Technology, Inc. | 15/002302 | US | 1/20/2016 | High density split-gate memory cell |
| Silicon Storage Technology, Inc. | 15/003659 | US | 1/21/2016 | Method of forming self-aligned split-gate memory cell array with metal gates and logic devices |
| Silicon Storage Technology, Inc. | 15/003811 | US | 1/22/2016 | Transistor design for use in advanced nanometer flash memory devices |
| Silicon Storage Technology, Inc. | 15/048707 | US | 2/19/2016 | Method and apparatus for inhibiting the programming of unselected bitlines in a flash memory system |
| Silicon Storage Technology, Inc. | 15/050309 | US | 2/22/2016 | Split gate non-volatile memory cell with 3d finfet structure, and method of making same |
| Silicon Storage Technology, Inc. | 15/057590 | US | 3/1/2016 | Integration of split gate flash memory array and logic devices |
| Silicon Storage Technology, Inc. | 15/084955 | US | 3/30/2016 | System and method for programming split-gate, non- volatile memory cells |
| Silicon Storage Technology, Inc. | 15/085835 | US | 3/30/2016 | Non-volatile split gate memory device and a method of operating same |
| Silicon Storage Technology, Inc. | 15/088038 | US | 3/31/2016 | Power sequencing for embedded flash memory devices |
| Silicon Storage Technology, Inc. | 15/091202 | US | 4/5/2016 | Method of forming a self-aligned stack gate structure for use in a non-volatile memory array |
| Silicon Storage Technology, Inc. | 15/135445 | US | 4/21/2016 | Low power operation for flash memory system |
| Silicon Storage Technology, Inc. | 15/164796 | US | 5/25/2016 | Method of forming split gate memory cells with 5 volt logic devices |
| Silicon Storage Technology, Inc. | 15/180376 | US | 6/13/2016 | Non-volatile split gate memory cells with integrated high k metal gate logic device and metal-free erase gate, and method of making same |

| Grantor | Patent Number | Country of Registration | lssue Date | Brief Description of Patent Subject Matter |
|-------------------------------------|------------------|----------------------------|---------------|---|
| Silicon Storage Technology, Inc. | 15/182527 | US | 6/14/2016 | Split gate non-volatile memory cell having a floating gate, word line, erase gate, and method of manufacturing |
| Silicon Storage Technology, Inc. | 15/249306 | US | 8/26/2016 | Split gate nand flash memory structure and array, method of programming, erasing and reading thereof, and method of manufacturing |
| Silicon Storage Technology, Inc. | 15/258069 | US | 9/7/2016 | Array of non-volatile memory cells with rom cells |
| Silicon Storage Technology, Inc. | 15/272417 | US | 9/21/2016 | Three-dimensional flash memory system |
| Silicon Storage Technology, Inc. | 15/287672 | US | 10/6/2016 | Self-aligned source for split-gate non- volatile memory cell |