

UNITED STATES INTERNATIONAL TRADE COMMISSION  
WASHINGTON, D.C.

In the Matter of

CERTAIN NON-VOLATILE  
MEMORY CHIPS AND PRODUCTS  
CONTAINING THE SAME

Investigation No. 337-TA-\_\_\_\_\_

**VERIFIED COMPLAINT UNDER SECTION 337  
OF THE TARIFF ACT OF 1930, AS AMENDED**

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San Jose, CA 95110

ADT Corporation  
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Boca Raton, FL 33431

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410 Terry Avenue North

Seattle, WA 98109

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Beitou District, Taipei City 112  
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Taiwan

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Fremont, CA 94539

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Playa Vista, CA 90094

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 Mooresville, NC 28117

Lowe's Home Centers, Inc.  
1605 Curtis Bridge Rd.  
Wilkesboro, NC 28117

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Redmond, WA 98052

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Nan Kang, Taipei 115  
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Holmdel, NJ 07733

Vonage America Inc.  
23 Main Street  
Holmdel, NJ 07733

Vonage Marketing LLC  
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## EXHIBIT & APPENDIX LIST

Public Exhibits	
Exh. No.	Description
1	Declaration of James Pak [REDACTED]
2	Certified Copy of U.S. Patent No. 6,246,611
3	Certified Copy of Assignment Records, U.S. Patent No. 6,246,611
4	Certified Copy of U.S. Patent No. 6,744,666
5	Certified Copy of Assignment Records, U.S. Patent No. 6,744,666
6	Copy of U.S. Patent No. 6,399,446
7	Copy of Assignment Records, U.S. Patent No. 6,399,446
8	Copy of U.S. Patent No. 6,436,766
9	Copy of Assignment Records, U.S. Patent No. 6,436,766
10	Macronix Product Selection Guide
11	Macronix's Website Naming DigiKey as Authorized Distributor
12	DigiKey - List of all Macronix Products Available For Sale
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14	DigiKey FedEx Tracking
15	List of Application Notes on Macronix Website
16	Macronix Application Note – “Replacing Spansion S25FL128S with Macronix MX25L12835F”
17	MX25L3206E Datasheet
18	MX25L6406E Datasheet
19	MX29GL128F Datasheet
20	MX29GL256E Datasheet
21	MX29LV640E Datasheet
22	Macronix U.S. Patent No. 8,030,166
23	Macronix U.S. Patent Pub. No. 2012/0129350
24	Spansion S29AS-J Datasheet
25	Spansion S29GL-N Datasheet
26	Spansion S29GL-P Datasheet
27	Spansion S29GL-S Datasheet
28	Spansion S29JL-J Datasheet
29	Spansion S29WS-P Datasheet
30	Spansion Product Selector Guide
31	Importation of Acer Aspire V5 Computer Containing Macronix Chip
32	Importation of ADT Pulse Video Encoder Containing Macronix Chip
33	Importation of Amazon.com Kindle Paperwhite Containing Macronix Chip
34	Importation of ASRock X79 Extreme11 motherboard Containing Macronix Chip
35	Importation of ASUS RT-N16 Router Containing Macronix Chip
36	Importation of ASUS RT-N56U Router Containing Macronix Chip

Public Exhibits	
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37	Importation of Belkin N600 DB Router Containing Macronix Chip
38	Importation of D-Link DIR-655 Xtreme N Gigabit Router Containing Macronix Chip
39	Importation of Leap Motion Wireless Controller Containing Macronix Chip
40	Importation of Lowe's Iris RC8221 Wireless Camera Containing Macronix Chip
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44	Importation of Nintendo Wii U Console Containing Macronix Chip
45	Importation of Vonage VDV23-VD Telephone Adapter Containing Macronix Chip
46	U.S. Patent No. 6,246,611 -- Infringement Claim Chart for Macronix 75 nm NOR Flash Memory Technology Node [REDACTED]
47	U.S. Patent No. 6,246,611 -- Infringement Claim Chart for Macronix 110 nm NOR Flash Memory Technology Node [REDACTED]
48	U.S. Patent No. 6,744,666 -- Infringement Claim Chart for Macronix 75 nm Parallel Page Mode NOR Flash Memory Technology Node [REDACTED]
49	U.S. Patent No. 6,744,666 -- Infringement Claim Chart for Macronix 110 nm Parallel Page Mode NOR Flash Memory Technology Node [REDACTED]
50	U.S. Patent No. 6,744,666 -- Infringement Claim Chart for Macronix 110 nm Serial NOR Flash Memory Technology Node [REDACTED]
51	U.S. Patent No. 6,399,446 -- Infringement Claim Chart for Macronix XtraROM Chip [REDACTED]
52	U.S. Patent No. 6,399,766 -- Infringement Claim Chart for Macronix XtraROM Chip [REDACTED]
53	U.S. Patent No. 6,246,611 -- Domestic Industry Claim Chart for Spansion Product In Development [REDACTED]
54	U.S. Patent No. 6,744,666 -- Domestic Industry Claim Chart for Spansion 110 nm NOR MirrorBit GL-N Technology Node [REDACTED]
55	U.S. Patent No. 6,744,666 -- Domestic Industry Claim Chart for Spansion 90 nm NOR MirrorBit GL-P Technology Node [REDACTED]
56	U.S. Patent No. 6,399,446 -- Domestic Industry Claim Chart for Spansion 65 nm NOR MirrorBit Technology Node [REDACTED]
57	U.S. Patent No. 6,436,766 -- Domestic Industry Claim Chart for Spansion 65 nm NOR MirrorBit Technology Node [REDACTED]
58	List of Licensees [REDACTED]
59	Spansion FL-S Serial NOR Flash Memory Overview

<b>Confidential Exhibits</b>	
<b>Exh. No.</b>	<b>Description</b>
1C	Declaration of James Pak
46C	U.S. Patent No. 6,246,611 -- Infringement Claim Chart for Macronix 75 nm NOR Flash Memory Technology Node
47C	U.S. Patent No. 6,246,611 -- Infringement Claim Chart for Macronix 110 nm NOR Flash Memory Technology Node
48C	U.S. Patent No. 6,744,666 -- Infringement Claim Chart for Macronix 75 nm Parallel Page Mode NOR Flash Memory Technology Node
49C	U.S. Patent No. 6,744,666 -- Infringement Claim Chart for Macronix 110 nm Parallel Page Mode NOR Flash Memory Technology Node
50C	U.S. Patent No. 6,744,666 -- Infringement Claim Chart for Macronix 110 nm Serial NOR Flash Memory Technology Node
51C	U.S. Patent No. 6,399,446 -- Infringement Claim Chart for Macronix XtraROM Chip
52C	U.S. Patent No. 6,399,766 -- Infringement Claim Chart for Macronix XtraROM Chip
53C	U.S. Patent No. 6,246,611 -- Domestic Industry Claim Chart for Spansion Product In Development
54C	U.S. Patent No. 6,744,666 -- Domestic Industry Claim Chart for Spansion 110 nm NOR MirrorBit GL-N Technology Node
55C	U.S. Patent No. 6,744,666 -- Domestic Industry Claim Chart for Spansion 90 nm NOR MirrorBit GL-P Technology Node
56C	U.S. Patent No. 6,399,446 -- Domestic Industry Claim Chart for Spansion 65 nm NOR MirrorBit Technology Node
57C	U.S. Patent No. 6,436,766 -- Domestic Industry Claim Chart for Spansion 65 nm NOR MirrorBit Technology Node
58C	List of Licensees

<b>Appendices</b>	
<b>Appendix</b>	<b>Description</b>
A	Certified Prosecution History of U.S. Patent No. 6,246,111 and copies of the technical references cited therein
B	Certified Prosecution History of U.S. Patent No. 6,246,111 and copies of the technical references cited therein
C	Prosecution History of U.S. Patent No. 6,399,446 and copies of the technical references cited therein
D	Prosecution History of U.S. Patent No. 6,436,766 and copies of the technical references cited therein



## I. INTRODUCTION

1. This Complaint is filed by Spansion LLC (“Spansion”) pursuant to Section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. § 1337 (“Section 337”). Spansion respectfully requests that the U.S. International Trade Commission (“Commission”) institute an investigation relating to the unlawful importation into the United States, the sale for importation, and/or the sale within the United States after importation of (a) certain Macronix non-volatile memory chips (“Macronix Chips”) that infringe Spansion’s valid patents and/or are made, produced, or processed under a process covered by the claims of one or more of the Spansion’s valid patents, and (b) products containing the Macronix Chips.

2. The Respondents, defined herein, have violated and continue to violate Section 337 through the importation, sale for importation, and/or the sale within the United States after importation of (a) certain Macronix Chips that infringe Spansion’s valid patents and/or are made, produced, or processed under a process covered by the claims of one or more of the Spansion’s valid patents, and (b) products containing the Macronix Chips. The proposed “Macronix Respondents” are identified in paragraphs 16(i)-(iii) below. The proposed “Downstream Respondents” are identified in paragraphs 26-39 below.

3. Through the manufacture, sale for importation into the United States, importation, and/or sale within the United States after importation of the Macronix Chips and downstream products containing such chips, Respondents are infringing the following United States Patents (collectively “the Spansion Patents”), all of which are owned by Spansion:

<b>Patent Number</b>	<b>Claims Infringed</b>	<b>Abbreviated Reference</b>	<b>Title</b>
6,246,611	1-7, 9-13	“the ’611 Patent”	System for erasing a memory cell
6,744,666	1, 3-5, 8, 10-13	“the ’666 Patent”	Method and system to minimize page programming time for flash memory devices

6,399,446	1, 5-12, 15-17, 20-21	“the ’446 Patent”	Process for Fabricating High Density Memory Cells Using a Metallic Hard Mask
6,436,766	1, 4-11, 13-15, 17-18, 22	“the ’766 Patent”	Process for Fabricating High Density Memory Cells Using a Polysilicon Hard Mask

4. The unlawful activities of the Respondents include the manufacture, sale for importation into the United States, importation, and/or sale within the United States after importation of (a) certain Macronix Chips that infringe the Spansion Patents and/or are made, produced, or processed under a process covered by the claims of one or more of the Spansion Patents, and (b) products containing the Macronix Chips.

5. An industry in the United States relating to articles protected by the ’666 Patent, ’446 Patent, and ’766 Patent exists within the meaning of 19 U.S.C. §§ 1337(a)(2) and 1337 (a)(3). Spansion makes significant domestic investments in plant and equipment and labor and capital, and likewise makes substantial domestic investments in research and development relating to articles protected by the ’666 Patent, ’446 Patent, and ’766 Patent. *See* Declaration of James Pak, Exhibit 1C to this Complaint (hereinafter “Pak Dec.”) at ¶¶ 71-86, 92-97.

6. Furthermore, an industry in the United States relating to articles protected by the ’611 Patent is in the process of being established within the meaning of 19 U.S.C. §§ 1337(a)(2) and 1337 (a)(3). Spansion is actively engaged in steps leading to the exploitation of the ’611 Patent, and there is a significant likelihood that a relevant domestic industry will be established in the future. *See* Declaration of James Pak, Exhibit 1C to this Complaint (hereinafter “Pak Dec.”) at ¶¶ 71-91.

7. Spansion has invested significant and substantial amounts of financial resources and human efforts in developing the technologies covered by the Spansion Patents. Instead of taking a license on these patents or developing their own alternative technologies, the Macronix

Respondents have engaged and continue to engage in activities aimed at diverting customers away from Spansion and hurting Spansion's non-volatile memory sales. These activities include offering infringing competing products at a much lower price and actively publishing and maintaining a series of Application Notes on Macronix's website teaching customers and potential customers how to replace Spansion memory chips with Macronix ones. For example, one of Macronix's Application Notes is entitled "Replacing Spansion S25FL128S with Macronix MX25L12835F." See Exhibit 16. The Application Note shows that the Macronix chip has similar "commands, functions, and features ... [and] identical footprints and nearly identical pin out definitions .... If common features are used in standard traditional modes, the replacement may need only minimal software modification ...." *Id.* at 9. A printout of Macronix's website containing links to similarly-titled Application Notes appears at Exhibit 15.

8. Spansion seeks, as permanent relief, a general exclusion order excluding from entry into the United States all Macronix Chips that infringe any claim of the Spansion Patents and/or are made, produced, or processed under a process covered by the claims of one or more of the Spansion Patents, and products containing such chips. In the alternative, Spansion seeks a permanent limited exclusion order, specifically directed to each named Respondent and its subsidiaries and affiliates, excluding from entry into the United States all Macronix Chips that infringe any claim of the Spansion Patents and/or are made, produced, or processed under a process covered by the claims of one or more of the Spansion Patents, and products containing such chips. Spansion also seeks a cease and desist order pursuant to 19 U.S.C. § 1337(f), prohibiting the importation, sale for importation, use, offering for sale, sale after importation, inventory for distribution, distribution, licensing, or otherwise transferring within the United States, of all Macronix Chips that infringe any claim of the Spansion Patents and/or are made,

produced, or processed under a process covered by the claims of one or more of the Spansion Patents, and downstream products containing those chips. Further, Spansion requests that the Commission impose a bond upon Respondents' importation of Macronix Chips that infringe any claim of the Spansion Patents and/or are made, produced, or processed under a process covered by the claims of one or more of the Spansion Patents, and downstream products containing such chips during the 60-day Presidential review period pursuant to 19 U.S.C. § 1337(j) to prevent further injury to Spansion's domestic industry relating to the Spansion Patents.

9. Based on currently available information, the accused Macronix Chips include, but are not limited to, the Macronix Chips identified below in paragraphs 23-25. Discovery will likely reveal additional Macronix Chips that infringe the asserted claims and/or are made, produced, or processed under a process covered by the claims of one or more of the Spansion Patents, and Spansion reserves the right to identify additional accused chips in the future. Based on currently available information, the accused products also include consumer electronic products that contain an accused Macronix Chip, including, but not limited to, laptop computers, tablet computers, digital cameras, telephone adapters, routers, wireless controllers, game cartridges, and game consoles. It is difficult at this time to identify all sources of accused Macronix Chips and all products or product types that contain an accused Macronix Chip and are imported into the United States. Additional categories of accused consumer electronic products will likely be revealed during discovery, and Spansion reserves all rights to identify additional accused products during the investigation.

## **II. THE PARTIES**

### **A. The Complainant**

10. Complainant Spansion LLC is a wholly owned operating subsidiary company of Spansion, Inc. Spansion LLC is incorporated in Delaware and its headquarters are located at 915

DeGuigne Drive, Sunnyvale, California 94085. Spansion LLC is the owner of the Spansion Patents. *See Exhibits 3, 5, 7, 9.*

11. Spansion is a leading provider of the non-volatile memory technology at the heart of the world's electronics systems. It is dedicated to designing, developing, manufacturing, marketing, and selling non-volatile memory solutions. Spansion designs, develops, and manufactures various types of non-volatile memory, including a type of electrically erasable programmable read-only memory commonly known as "flash memory." It is also one of the last major manufacturers of non-volatile memory remaining in the United States, with fabrication and testing facilities in Austin, Texas, and headquarters in Sunnyvale, California.

12. Spansion designs, develops, manufactures, markets, licenses, and sells non-volatile memory technology and solutions for retail, commercial, and institutional customers worldwide. Its non-volatile memory products primarily store data and software code for microprocessors, controllers and other programmable semiconductors which run applications in a broad range of electronics systems. These electronic systems include, for example, computing and communications, automotive and industrial, consumer and gaming, wireless and machine-to-machine devices. As described more fully herein, Spansion manufactures and is in the process of further developing non-volatile memory products that use the technology claimed in the Spansion Patents.

13. Spansion devotes substantial resources to its highly sophisticated research and development program in the United States, and as a result, is a leading innovator in the non-volatile memory technology industry. For example, Spansion has developed a revolutionary 2-bits-per-cell, charge-trapping non-volatile memory technology called MirrorBit®, which is designed to provide superior cell size and scalability. Using MirrorBit® technology, Spansion

introduced the industry's first 8Gb monolithic NOR product in early 2013. Charge trapping technology, including Spansion's MirrorBit® technology, is widely described as the next generation of flash memory. Spansion has also developed various technologies that make non-volatile memory manufacturing more efficient and help increase the density and capacity of non-volatile memory devices.

14. Spansion's ability to compete and its success as a company depend on its ability to innovate and to protect these innovations. To that end, Spansion spends substantial sums in the United States on research and development each year relating to current and future products protected by the Spansion Patents. Spansion has made significant investments in the manufacture of products covered by its patents. Spansion maintains fabrication and testing facilities in Austin, Texas that manufacture such products. Spansion also expects to invest even more relating to products that benefit from its ongoing research and development based on the technology covered by the Spansion Patents.

15. Spansion's ability to compete also depends on protecting its inventions through patents. Spansion's long-term financial success depends, in significant part, on its ability to establish, maintain, and protect its proprietary technology through enforcement of its patent rights. That ability has been significantly compromised by the acts complained of in this Complaint.

**B. The Proposed Respondents**

**(a) The Macronix Respondents And The Accused Macronix Chips**

16. The proposed "Macronix Respondents" include various Macronix entities that manufacture, sell for importation into the United States, import, and/or sell within the United States after importation Macronix non-volatile memory chips. With respect to the Macronix Respondents, Spansion alleges the following upon information and belief:

(i) Macronix International Co., Ltd. is a corporation organized under the laws of Taiwan and has its principal place of business at No. 16, Li-Hsin Road, Science Park, Hsin-chu, Taiwan. Macronix International Co., Ltd. manufactures, sells for importation into the United States, imports, and/or sells within the United States after importation Macronix Chips.

(ii) Macronix America, Inc. is a wholly owned subsidiary of Macronix International Co., Ltd. It is incorporated in the state of California and has its principal place of business at 680 North McCarthy Blvd., Suite 200, Milpitas, CA 95035. Macronix America, Inc. sells for importation into the United States, imports, and/or sells within the United States after importation Macronix Chips.

(iii) Macronix Asia Limited is a wholly owned subsidiary of Macronix International Co., Ltd. It is organized under the laws of Japan and has its principal place of business at NKF Bldg. 5F, 1-2 Higashida-cho, Kawasaki-ku, Kawasaki-shi, Kanagawa Pref. 210-0005, Japan. Macronix Asia Limited manufactures, sells for importation into the United States, imports, and/or sells within the United States after importation Macronix Chips.

(iv) Macronix (Hong Kong) Co., Ltd. is a wholly owned subsidiary of Macronix International Co., Ltd. It is organized under the laws of Hong Kong and has its principal place of business at 702-703, 7/F, Building 9, Hong Kong Science Park, 5 Science Park West Avenue, Sha Tin, N.T. Macronix (Hong Kong) Co., Ltd. sells for importation into the United States, imports, and/or sells within the United States after importation Macronix Chips.

17. Macronix's literature groups non-volatile memory products by family and generation. *See, e.g.,* Exhibit 10. Each Macronix NOR Chip is designated with the generation to which it belongs. *Id.* Further, upon information and belief, each "generation" of Macronix Chips refers to a different technology node. A "technology node" refers to the process used to fabricate the chip and each process generally results in the size of the features (individual elements such as transistors) that make up the structures on a non-volatile memory chip being a certain size (*e.g.,* 75 nm, 110 nm, 130 nm, etc., where "nm" means nanometer). Therefore, the process used to manufacture a 110 nm chip is known as a "110 nm process technology." It can also be referred to as a "110 nm technology node" or "110 nm process node."

18. Upon information and belief, all Macronix Chips within each of Macronix's respective generations, or technology nodes, are manufactured by similar processes and have substantially similar structure as well as electrical characteristics of individual components such as the core cell and periphery transistors. Within each technology node, Macronix's products can be further separated, *e.g.,* into Serial NOR Flash Memory and Parallel NOR Flash Memory categories based on the interface architecture. The Parallel NOR Flash Memory category can be subdivided into page-mode and standard-mode.

19. Upon information and belief, as to the technology at issue in the asserted '611 Patent, all Macronix NOR Flash Memory chips within a node operate in the same manner, as the '611 Patent relates to the operation of the core cell, which has substantially similar characteristics within a node. Any differences are not relevant to the '611 Patent.

20. Upon information and belief, as to the technology at issue in the asserted '666 Patent, all Macronix Page-Mode Parallel NOR Flash Memory chips within a node operate in the



same manner, and all Macronix Serial NOR Flash Memory chips within a node operate in the same manner. Any differences are not relevant to the '666 Patent.

21. Upon information and belief, as to the technology at issue in the asserted '446 and '766 Patents, all Macronix XtraROM chips are fabricated in the same manner. Any differences are not relevant to the '446 Patent or the '766 Patent.

22. The “Macronix Chips” at issue can be grouped into the following generations and families of non-volatile memory chips (although this list is not intended to be exhaustive):

Generation F — Macronix 75 nm NOR Flash Technology Node,

Generation E — Macronix 110 nm NOR Flash Technology Node, and

Macronix XtraROM Family.

23. On information and belief, the following is a non-exhaustive list of Macronix Chips in the Macronix 75 nm NOR Flash Technology Node:

<b>Macronix Chip Family – Generation F</b>		
MX25L12835F	MX66U51235F	MX29GA128FH/L
MX25L12873F	MX29VS128F	MX29GA129FH/L
MX25L25635F	MX29GL128FH/L	MX29GA256FH/L
MX25L25735F	MX29GL128FU/D	MX29GA257FH/L
MX66L51235F	MX29GL256FH/L	MX29GA512FH/L
MX25U1635F	MX29GL256FU/D	MX68GA1G0FH/L
MX25U3235F	MX29GL512FH/L	MX25L12855F
MX25U6435F	MX29GL512FU/D	MX25L25655F
MX25U12835F	MX29GL1G0FH/L	
MX25U25635F	MX29GL1G0FU/D	

24. On information and belief, the following is a non-exhaustive list of Macronix Chips in the Macronix 110 nm NOR Flash Technology Node:

<b>Macronix Chip Family – Generation E</b>		
MX25L512E	MX25L3235E	MX29GL640EH/L
MX25L5121E	MX25L3273E	MX29GL640ET/B
MX25L1006E	MX25L6435E	MX29GL128EH/L
MX25L1021E	MX25L6473E	MX29LA320EH/L

MX25L2006E	MX25V512E	MX29LA640EH/L
MX25L4006E	MX25V1006E	MX29GA320EH/L
MX25L8006E	MX25V2006E	MX29GA321EH/L
MX25L1606E	MX25V4006E	MX29GA640EH/L
MX25L3206E	MX25V8006E	MX29GA641EH/L
MX25L6406E	MX25U2033E	MX25L1608E
MX25L1026E	MX25U4033E	MX25L3208E
MX25L2026E	MX25U8033E	MX25L3255E
MX25L4026E	MX29LV320ET/B	MX25L6408E
MX25L8035E	MX29LV640ET/B	MX25L6456E
MX25L8036E	MX29NS320E	25L1001
MX25L8073E	MX29NS640E	25L4001
MX25L1633E	MX29NS128E	MX25L12845E
MX25L1635E	MX29GL256EH/L	
MX25L1636E	MX29GL320EH/L	
MX25L1673E	MX29GL320ET/B	

25. On information and belief, the following non-exhaustive list of Macronix Chips are in the Macronix XtraROM Family:

<b>Macronix Chip Family - XtraROM</b>			
MX23J512	MX23J1G	MX23J2G	MX23J4G

**(b) The Downstream Respondents**

26. The proposed “Downstream Respondents” are engaged in the importation, the sale for importation, and/or the sale within the United States after importation of certain products containing Macronix Chips that have been manufactured by (or for) Macronix.

**(1) The Acer Respondents**

27. The proposed “Acer Respondents” include various Acer entities that manufacture, sell for importation into the United States, import, and/or sell within the United States after importation various consumer electronic devices, including but not limited to laptop computers, containing infringing Macronix Chips. With respect to the Acer Respondents, Spansion alleges the following upon information and belief:

(i) Acer Inc. is a corporation organized under the laws of Taiwan and has its principal place of business at 8F, 88, Sec. 1, Xintai 5th Rd., Xizhi, New Taipei City 221, Taiwan. Acer Inc. manufactures, sells for importation into the United States, imports, and/or sells within the United States after importation various consumer electronic devices, including but not limited to laptop computers, containing infringing Macronix Chips. Upon information and belief, Acer Inc. is a manufacturer for the Acer Respondents.

(ii) Acer America Corporation is a corporation organized under the laws of the State of California and has its principal place of business at 333 West San Carlos Street, Suite 1500, San Jose, CA 95110. Acer America Corporation is a wholly-owned subsidiary of Acer Inc. Acer America Corporation sells for importation into the United States, imports, and/or sells within the United States after importation various consumer electronic devices, including but not limited to laptop computers, containing infringing Macronix Chips. Upon information and belief, Acer America Corporation is a United States-based sales agent for the Acer Respondents.

**(2) ADT Corporation**

28. Upon information and belief: ADT Corporation is a corporation organized under the laws of the State of Florida and has its principal place of business at 1501 Yamato Road, Boca Raton, FL 33431. ADT Corporation sells for importation into the United States, imports, and/or sells within the United States after importation various electronic devices, including but not limited to video encoders, containing infringing Macronix Chips.

**(3) Amazon.com, Inc.**

29. Upon information and belief: Amazon.com, Inc. (“Amazon”) is a corporation organized under the laws of the State of Delaware and has its principal place of business at 410 Terry Avenue North, Seattle, WA 98109. Amazon manufactures, sells for importation into the

United States, imports, and/or sells within the United States after importation various electronic devices, including but not limited to e-readers, containing infringing Macronix Chips.

**(4) The ASRock Respondents**

30. The proposed “ASRock Respondents” include various ASRock entities that manufacture, sell for importation into the United States, import, and/or sell within the United States after importation various consumer electronic devices, including but not limited to wireless routers, containing infringing Macronix Chips. With respect to the ASRock Respondents, Spansion alleges the following upon information and belief:

(i) ASRock Inc. is a corporation organized under the laws of Taiwan and has its principal place of business at 2F No. 37, Sec. 2, Jhongyang S. Rd., Beitou District, Taipei City 112, Taiwan. ASRock Inc. manufactures, sells for importation into the United States, imports, and/or sells within the United States after importation various consumer electronic devices, including but not limited to computer motherboards, containing infringing Macronix Chips. Upon information and belief, ASRock Inc. is a manufacturer for the ASRock Respondents.

(ii) ASRock America, Inc. is a corporation organized under the laws of the State of California and has its principal place of business at 13848 Magnolia Ave., Chino, CA 91710. ASRock America, Inc. is a wholly-owned subsidiary of ASRock Inc. ASRock America, Inc. sells for importation into the United States, imports, and/or sells within the United States after importation various consumer electronic devices, including but not limited to computer motherboards, containing infringing Macronix Chips. Upon information and belief, ASRock America, Inc. is a United States-based sales agent for the ASRock Respondents.

**(5) The Asus Respondents**

31. The proposed “Asus Respondents” include various Asus entities that manufacture, sell for importation into the United States, import, and/or sell within the United States after

importation various consumer electronic devices, including but not limited to wireless routers, containing infringing Macronix Chips. With respect to the Asus Respondents, Spansion alleges the following upon information and belief:

(i) ASUSTek Computer Inc. is a corporation organized under the laws of Taiwan and has its principal place of business at No. 15, Li-Te Rd., Beitou District, Taipei 112, Taiwan. ASUSTek Computer Inc. manufactures, sells for importation into the United States, imports, and/or sells within the United States after importation various consumer electronic devices, including but not limited to wireless routers, containing infringing Macronix Chips. Upon information and belief, ASUSTek Computer Inc. is a manufacturer for the Asus Respondents.

(ii) Asus Computer International (America) is a corporation organized under the laws of the State of California and has its principal place of business at 800 Corporate Way, Fremont, CA 94539. Asus Computer International (America) is a wholly-owned subsidiary of ASUSTek Computer Inc. Asus Computer International (America) sells for importation into the United States, imports, and/or sells within the United States after importation various consumer electronic devices, including but not limited to wireless routers, containing infringing Macronix Chips. Upon information and belief, Asus Computer International (America) is a United States-based sales agent for the Asus Respondents.

**(6) Belkin International, Inc.**

32. Upon information and belief, Belkin International, Inc. is a corporation organized under the laws of the State of Delaware and has its principal place of business at 12045 E. Waterfront Drive, Playa Vista, CA 90094. Belkin International, Inc. manufactures, sells for importation into the United States, imports, and/or sells within the United States after importation various consumer electronic devices, including but not limited to wireless routers, containing infringing Macronix Chips.

**(7) The D-Link Respondents**

33. The proposed “D-Link Respondents” include various D-Link entities that manufacture, sell for importation into the United States, import, and/or sell within the United States after importation various consumer electronic devices, including but not limited to wireless routers, containing infringing Macronix Chips. With respect to the D-Link Respondents, Spansion alleges the following upon information and belief:

(i) D-Link Corporation is a corporation organized under the laws of Taiwan and has its principal place of business at No. 289, Sinhu 3rd Road, Neihu District, Taipei City, 114 Taiwan. D-Link Corporation manufactures, sells for importation into the United States, imports, and/or sells within the United States after importation various consumer electronic devices, including but not limited to wireless routers, containing infringing Macronix Chips. Upon information and belief, D-Link Corp. is a manufacturer for the D-Link Respondents.

(ii) D-Link Systems, Inc. is a wholly owned subsidiary of D-Link Corporation. It is a corporation organized under the laws of California and has its principal place of business at 17595 Mt. Herrmann Street, Fountain Valley, California 92708. D-Link Systems, Inc. sells for importation into the United States, imports, and/or sells within the United States after importation various consumer electronic devices, including but not limited to wireless routers, containing infringing Macronix Chips. Upon information and belief, D-Link Systems, Inc. is a United States-based sales agent for the D-Link Respondents.

**(8) Leap Motion, Inc.**

34. Upon information and belief, Leap Motion, Inc. is a corporation organized under the laws of the State of Delaware and has its principal place of business at 333 Bryant Street, Suite LL150, San Francisco, CA 94107. Leap Motion manufactures, sells for importation into the United States, imports, and/or sells within the United States after importation various

electronic devices, including but not limited to computer input devices and controllers, containing infringing Macronix Chips.

**(9) The Lowe's Respondents**

35. The proposed "Lowe's Respondents" include various Lowe's entities that sell for importation into the United States, import, and/or sell within the United States after importation various consumer electronic and telephony devices, including but not limited to routers, telephone adapters and/or gateways, containing infringing Macronix Chips. With respect to the Lowe's Respondents, Spansion alleges the following upon information and belief:

(i) Lowe's Companies, Inc. is a corporation organized under the laws of the State of North Carolina and has its principal place of business at 1000 Lowes Blvd., Mooresville, NC 28117. Lowe's Companies, Inc. sells for importation into the United States, imports, and/or sells within the United States after importation certain electronic devices, including but not limited to the wireless cameras, containing infringing Macronix Chips. Upon information and belief, Lowe's Companies, Inc. is a United States-based sales agent for the Lowe's Respondents.

(ii) Lowe's Home Centers, Inc. is a corporation organized under the laws of the State of North Carolina and has its principal place of business at 1605 Curtis Bridge Rd., Wilkesboro, NC 28117. Lowe's Home Centers, Inc. sells for importation into the United States, imports, and/or sells within the United States after importation certain electronic devices, including but not limited to the wireless cameras, containing infringing Macronix Chips. Upon information and belief, Lowe's Home Centers, Inc. is a United States-based sales agent for the Lowe's Respondents.

**(10) Microsoft Corp.**

36. Upon information and belief, Microsoft Corp. is a corporation organized under the laws of the State of Washington and has its principal place of business at One Microsoft Way,

Redmond, WA 98052. Microsoft Corp. manufactures, sells for importation into the United States, imports, and/or sells within the United States after importation various consumer electronic devices, including but not limited to tablet computers, containing infringing Macronix Chips.

**(11) The Nintendo Respondents**

37. The proposed “Nintendo Respondents” include various Nintendo entities that manufacture, sell for importation into the United States, import, and/or sell within the United States after importation various consumer electronic devices, including but not limited to Nintendo Wii U game consoles, DS gaming devices, and DS game cartridges, containing infringing Macronix Chips. With respect to the Nintendo Respondents, Spansion alleges the following upon information and belief:

(i) Nintendo Co., Ltd. is a corporation organized under the laws of Japan and has its principal place of business at 11-1 Kamitobo-hokotate-cho, Minami-ku, Kyoto, Japan. Nintendo Co., Ltd. manufactures, sells for importation into the United States, imports, and/or sells within the United States after importation certain game consoles, handheld gaming devices, and game cartridges, including but not limited to Nintendo Wii U game consoles, DS gaming devices, and DS game cartridges, containing infringing Macronix Chips. Upon information and belief, Nintendo Co., Ltd. is a manufacturer for the Nintendo Respondents.

(ii) Nintendo of America, Inc. is a corporation organized under the laws of the State of Washington and has its principal place of business at 4600 150th Avenue NE, Redmond, Washington 98052. Nintendo of America, Inc. is a wholly-owned subsidiary of Nintendo Co., Ltd. Nintendo of America, Inc. sells for importation into the United States, imports, and/or sells within the United States after importation certain game consoles, handheld gaming devices, and game cartridges, including but not limited to Nintendo Wii U game consoles, DS gaming devices,



and DS game cartridges, containing infringing Macronix Chips. Upon information and belief, Nintendo of America, Inc. is a United States-based sales agent for the Nintendo Respondents.

**(12) Sercomm Corporation**

38. Upon information and belief, Sercomm Corporation is a corporation organized under the laws of Taiwan and has its principal place of business at 8F, No. 3-1, Yuan Qu St., Nan Kang, Taipei 115, Taiwan. Sercomm Corporation manufactures, sells for importation into the United States, imports, and/or sells within the United States after importation various electronic devices, including but not limited to video encoders, containing infringing Macronix Chips. Upon information and belief, Sercomm is a manufacturer for at least ADT Corporation and the Lowe's Respondents.

**(13) The Vonage Respondents**

39. The proposed "Vonage Respondents" include various Vonage entities that manufacture, sell for importation into the United States, import, and/or sell within the United States after importation various consumer electronic and telephony devices, including but not limited to routers, telephone adapters and/or gateways, containing infringing Macronix Chips. With respect to the Vonage Respondents, Spansion alleges the following upon information and belief:

(i) Vonage Holdings Corp. is a corporation organized under the laws of the State of Delaware and has its principal place of business at 23 Main Street, Holmdel, NJ 07733. Vonage Holdings Corp. manufactures, sells for importation into the United States, imports, and/or sells within the United States after importation certain telephone adapters and/or gateways, including but not limited to the Vonage V-Portal devices, containing infringing Macronix Chips. Upon information and belief, Vonage Holdings Corp. is a manufacturer for the Vonage Respondents.

(ii) Vonage America Inc. is a corporation organized under the laws of the State of Delaware and has its principal place of business at 23 Main Street, Holmdel, NJ 07733. Vonage America Inc. manufactures, sells for importation into the United States, imports, and/or sells within the United States after importation certain telephone adapters and/or gateways, including but not limited to the Vonage V-Portal devices, containing infringing Macronix Chips. Upon information and belief, Vonage America, Inc. is a United States-based sales agent for the Vonage Respondents.

(iii) Vonage Marketing LLC is a limited liability company organized under the laws of the State of Delaware and has its principal place of business at 23 Main Street, Holmdel, NJ 07733. Vonage Marketing LLC manufactures, sells for importation into the United States, imports, and/or sells within the United States after importation certain telephone adapters and/or gateways, including but not limited to the Vonage V-Portal devices, containing infringing Macronix Chips. Upon information and belief, Vonage Marketing LLC is a United States-based sales agent for the Vonage Respondents.

### **III. THE TECHNOLOGY AND PRODUCTS AT ISSUE<sup>1</sup>**

40. In general, the Spansion Patents cover various aspects of a type of electronic memory known as “non-volatile memory,” which retains information even in the absence of a power source. Even without power, a single non-volatile memory “cell” can retain information for many years. For example, in cell phones, personal information such as names and telephone numbers and multimedia such as music, video, and photos can be stored in the phone’s non-volatile memory and will remain in that memory even when the phone is turned off. In contrast,

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<sup>1</sup> The description of the technology at issue is provided for purpose of general information and understanding and is not meant to be a position with respect to claim construction and/or other technical aspects of patent law.

other types of computer memory, such as dynamic random-access memory (“DRAM”), lose data if electrical power is removed.

41. Certain types of electrically erasable and programmable non-volatile memory cells, commonly known as “flash memory,” store information in the form of electrical charge(s). Thus, conventional flash memory cells are programmed by injecting electrons (the charge) into the cell. Conversely, a flash memory cell is erased by removing the electrons. A flash memory cell can be read to determine the presence or absence of electrical charge(s).

42. Each flash memory cell includes a charge-storage element and special circuitry that allows a charge to be injected into and taken out of the charge-storage element. In conventional flash memory products, the charge-storage element is a conductive “floating gate,” which is a conducting material surrounded by an insulator. The insulator prevents the electrical charge from escaping, allowing the cell to retain information for long periods of time. In newer flash memory products, the charge-storage element may be a material such as silicon nitride that is known to “trap” a charge. One of the advantages of “charge trapping” or MirrorBit® technology is that the charge-storage element is thinner and easier to shrink in physical size as newer products employ smaller and smaller memory cells.

43. When evaluating electrically erasable and programmable non-volatile memory solutions such as flash memory, manufacturers consider cost (typically expressed in cost per bit of information), read/write access time, endurance (i.e., number of read/write cycles that a product can tolerate before malfunctioning), and long-term data retention.

44. The technologies described in the Spansion Patents relate generally to systems and methods for programming erasing, and fabricating non-volatile memory devices, enabling the devices to operate in a faster, less expensive, and more reliable manner.

45. Pursuant to Commission Rule 210.12(a)(12), Spansion states that the products accused in this Investigation include non-volatile memory chips and electronic devices containing non-volatile memory chips. These electronic devices include commonly-used consumer electronic devices such as laptop computers, tablet computers, digital cameras, telephone adapters, routers, wireless controllers, video game cartridges, and video game consoles.

#### **IV. THE PATENTS AT ISSUE AND NON-TECHNICAL DESCRIPTION OF THE PATENTS<sup>2</sup>**

##### **A. The '611 Patent**

46. United States Patent No. 6,246,611 is entitled "System for Erasing a Memory Cell" and issued on June 12, 2001. The '611 Patent expires on February 28, 2020, and is based on United States Patent Application No. 09/514,560, filed on February 28, 2000.

47. Spansion owns, by assignment, all right, title, and interest in and to the '611 Patent. Certified copies of the assignments of the '611 Patent from the inventors to Advanced Micro Devices ("AMD") and from AMD to Spansion are attached as Exhibit 3. No patents or patent applications have ever been filed outside the United States corresponding to this patent.

48. A certified copy of the '611 Patent has been submitted as Exhibit 2. A certified copy of the U.S. Patent and Trademark Office file history for the '611 Patent, as well as three (3) copies, are submitted with this Complaint as Appendix A1, and four (4) copies of the patents and applicable pages of each technical reference mentioned in the file history are submitted with this Complaint as Appendices A2-A25.

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<sup>2</sup> The non-technical description of the asserted patents is provided for purpose of general information and understanding and is not meant to be a position with respect to claim construction and/or other technical aspects of patent law.

49. In order to erase data stored in a memory cell within a non-volatile memory device, a voltage is applied to the memory cell. Prior to the invention of the '611 Patent, a fixed voltage was used to erase all memory cells in a memory device. However, in a memory device such as non-volatile memory, a certain voltage may be sufficient to successfully erase some memory cells, but insufficient to erase other cells within the memory. The invention of the '611 Patent solves this problem by periodically checking to see whether certain memory cells have been successfully erased, and applying an increased erase voltage upon verifying that the previous erase voltage did not successfully erase a memory cell.

50. The '611 Patent includes multiple embodiments of the invention. In one embodiment, an erase control circuit applies a stored erase signal to memory cells, verifies whether the cells successfully erased, and increases the erase signal if the cells did not successfully erase. One embodiment is described as follows:

[A]n erase control circuit that erases a memory cell comprises a signal storage device, a signal output circuit, and a verification circuit. The signal storage device stores an erase signal value. The signal output circuit is coupled to the signal storage device to receive the erase signal value. The signal output circuit converts the erase signal value into an erase signal and outputs the erase signal to the memory cell. The verification circuit determines whether the memory cell is successfully erased. If the memory cell is not successfully erased, the erase control circuit increases the erase signal value.

('611 Patent at 1:63-2:7.)

51. In another embodiment of the '611 Patent, the circuit increases the erase signal in “non-linear, decreasing steps.” ('611 Patent at 13:66-67.)

52. The '611 Patent has five (5) independent claims and nine (9) dependent claims. A claim chart showing how an exemplary Spansion product in development practices an exemplary independent claim of the '611 Patent, thereby providing the basis for the domestic industry relating to the asserted claims of the '611 Patent, is attached hereto as Confidential Exhibit 53C.

53. The '611 Patent is the subject of certain licenses. A list of licensees under the '611 Patent is included in Confidential Exhibit 58C. There are no other known licenses relating to the '611 Patent.

**B. The '666 Patent**

54. United States Patent No. 6,744,666 is entitled "Method and System to Minimize Page Programming Time for Flash Memory Devices" and issued on June 1, 2004. The '666 Patent expires on September 12, 2022, and is based on United States Patent Application No. 10/243,792, filed on September 12, 2002.

55. Spansion owns, by assignment, all right, title, and interest in and to the '666 Patent. Certified copies of the assignments of the '666 Patent from the inventors to AMD and from AMD to Spansion are attached as Exhibit 7. No patents or patent applications have ever been filed outside the United States corresponding to this patent.

56. A certified copy of the '666 Patent has been submitted as Exhibit 6. A certified copy of the U.S. Patent and Trademark Office file history for the '666 Patent, as well as three (3) copies of the file history are submitted with this Complaint as Appendix B1, and four (4) copies of each patent and applicable pages of each technical reference mentioned in the file history are submitted with this Complaint as Appendices B2-B3.

57. The invention of the '666 Patent relates to reducing the programming time of a page mode memory device. One common group of memory cells is called a "word." A small group of words is called a "page." In a "page mode" device, the memory words in a page are accessed in parallel for improved performance in reading the values stored in the memory cells. The invention of the '666 Patent improves the programming performance of a page mode device by reducing the amount of time required to program a page.

58. In general, a memory word must be in the erased state before it can be programmed. This ensures that each cell in the word is blank, and can be programmed with new data. Erasing a memory word typically gives each cell in the word a value of '1.'

59. The '666 Patent addresses a potential inefficiency that exists when the user of the memory device seeks to program a word with a value comprising of all '1's. In such a scenario, the memory cells to be programmed already have values of '1', because they are already in the erased state. Therefore, those memory cells in the word do not need to be programmed. The invention of the '666 Patent calls for using a detector to identify such words that do not require programming. The detector enables the device to reduce the time dedicated to programming those words which do not actually require programming. Therefore, the total programming time is reduced, and the performance of the page mode device is improved.

60. The '666 Patent has three (3) independent claims and seventeen (17) dependent claims. Claim charts showing how Spansion's products practice an exemplary independent claim of the '666 Patent, thereby providing the basis for the domestic industry relating to the asserted claims of the '666 Patent, are attached hereto as Confidential Exhibits 54C-55C.

61. The '666 Patent is the subject of certain licenses. A list of licensees under the '666 Patent is included in Confidential Exhibit 58C. There are no other known licenses relating to the '666 Patent.

### **C. The '446 Patent**

62. United States Patent No. 6,399,446 is entitled "Process for Fabricating High Density Memory Cells Using a Metallic Hard Mask" and issued on June 2, 2002. The '446 Patent expires on October 29, 2019, and is based on United States Patent Application No. 09/429,772, filed on October 29, 1999.

63. Spansion owns, by assignment, all right, title, and interest in and to the '446 Patent. Records of the assignments of the '446 Patent from the inventors to AMD and from AMD to Spansion are attached as Exhibit 7.<sup>3</sup> No patents or patent applications have ever been filed outside the United States corresponding to this patent.

64. A copy of the '446 Patent has been submitted as Exhibit 6.<sup>4</sup> A copy of the U.S. Patent and Trademark Office file history for the '446 Patent,<sup>5</sup> as well as three (3) copies of the file history are submitted with this Complaint as Appendix C1 and four (4) copies of each patent and applicable pages of each technical reference mentioned in the file history are submitted with this Complaint as Appendices C2-C8.

65. Prior to the invention of the '446 Patent, it was difficult to fabricate patterns in high density non-volatile memory and simultaneously exercise good dimensional control over critical patterns and area of contacts to these patterns. Prior non-volatile memory fabrication technologies led to unwanted structures, such as "bird's beak" structures, that limit the amount of memory that can be placed on a non-volatile memory device. Additionally, it was also difficult to accurately control the creation of regions rich in positively/negatively charged ions. The '446 Patent overcomes this problem by teaching a process for fabricating a memory cell that includes depositing and patterning a hard mask, and using the hard mask to implant different ions in the semiconductor. In the invention of the '446 Patent, the hard mask may comprise a number of materials such as a metal, polysilicon, silicon, silicon compound, etc.

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<sup>3</sup> Spansion has ordered a certified copy of the assignment records associated with the '446 Patent and will submit them immediately upon receipt.

<sup>4</sup> Spansion has ordered a certified copy of the '446 Patent and will submit it immediately upon receipt.

<sup>5</sup> Spansion has ordered a certified copy of the file history associated with the '446 Patent and will submit them immediately upon receipt.



66. The '446 Patent has four (4) independent claims and twenty (20) dependent claims. Claim charts showing how Spansion's products practice an exemplary independent claim of the '446 Patent, thereby providing the basis for the domestic industry relating to the asserted claims of the '446 Patent, are attached hereto as Confidential Exhibit 56C.

67. The '446 Patent is the subject of certain licenses. A list of licensees under the '446 Patent is included in Confidential Exhibit 58C. There are no other known licenses relating to the '446 Patent.

**D. The '766 Patent**

68. United States Patent No. 6,436,766 is entitled "Process for Fabricating High Density Memory Cells Using a Polysilicon Hard Mask" and issued on August 20, 2002. The '766 Patent expires on October 29, 2019, and is based on United States Patent Application No. 09/430,493, filed on October 29., 1999.

69. Spansion owns, by assignment, all right, title, and interest in and to the '446 Patent. Records of the assignments of the '766 Patent from the inventors to AMD and from AMD to Spansion are attached as Exhibit 9.<sup>6</sup> No patents or patent applications have ever been filed outside the United States corresponding to this patent.

70. A copy of the '766 Patent has been submitted as Exhibit 8.<sup>7</sup> A copy of the U.S. Patent and Trademark Office file history for the '766 Patent,<sup>8</sup> as well as three (3) copies of the file history are submitted with this Complaint as Appendix D1 and four (4) copies of each patent

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<sup>6</sup> Spansion has ordered a certified copy of the assignment records associated with the '766 Patent and will submit them immediately upon receipt.

<sup>7</sup> Spansion has ordered a certified copy of the '766 Patent and will submit it immediately upon receipt.

<sup>8</sup> Spansion has ordered a certified copy of the file history associated with the '766 Patent and will submit them immediately upon receipt.

and applicable pages of each technical reference mentioned in the file history are submitted with this Complaint as Appendices D2-D6.

71. Prior to the invention of the '766 Patent, it was difficult to fabricate patterns in high density non-volatile memory and simultaneously exercise good dimensional control over critical patterns and area of contacts to these patterns. Prior non-volatile memory fabrication technologies led to unwanted structures, such as "bird's beak" structures, that limit the amount of memory that can be placed on a non-volatile memory device. Additionally, it was also difficult to accurately control the creation of regions rich in positively/negatively charged ions. The '766 Patent overcomes this problem by teaching a process for fabricating a memory cell that includes depositing and patterning a hard mask, and using the hard mask to implant different ions in the semiconductor. In the invention of the '766 Patent, the hard mask comprises a polysilicon or silicon-based compound.

72. The '766 Patent has four (4) independent claims and eighteen (18) dependent claims. Claim charts showing how Spansion's products practice an exemplary independent claim of the '766 Patent, thereby providing the basis for the domestic industry relating to the asserted claims of the '766 Patent, are attached hereto as Confidential Exhibits 57C.

73. The '766 Patent is the subject of certain licenses. A list of licensees under the '766 Patent is included in Confidential Exhibit 58C. There are no other known licenses relating to the '766 Patent.

## **V. INSTANCES OF UNFAIR IMPORTATION AND SALE**

74. Upon information and belief, the Macronix Respondents do not manufacture the Macronix Chips inside the United States. Instead, the Macronix Respondents design, manufacture, test, and assemble the Macronix Chips at their foreign facilities. The Macronix Respondents then sell for importation into the United States, import, and/or sell within the

United States after importation Macronix Chips. Imported Macronix Chips are available for purchase in the United States. *See* Exhibits 11-12. On Spansion's behalf, Macronix Chips were acquired in the United States from U.S. retailer DigiKey. Pak Dec. at ¶¶ 8, 15-17; Exhibits 13-14.

75. Additionally, upon information and belief, the Macronix Respondents sell Macronix Chips to Downstream Respondents and other third parties for assembly into downstream products, including video game consoles and cartridges, wireless routers, laptop computers, digital cameras, and many other devices. Such devices are sold for importation into the United States, imported, and/or sold within the United States after importation, and, on information and belief, the Macronix Respondents are aware of and encourage such activities.

76. For example, Spansion acquired an Acer Aspire V5 laptop computer on July 17, 2013, at Office Depot in San Carlos, California. Pak Dec. at ¶ 19; Exhibit 31. The box and labeling for the Acer Aspire V5 laptop computer states that the product was "Made in China." Pak Dec. at ¶ 20; Exhibit 31. One Macronix Chip (MX25L6406EMZI-12G) was found inside the Acer Aspire V5 laptop computer. Pak Dec. at ¶ 20; Exhibit 31. Thus, Macronix Chips have been imported into the United States, and will likely continue to be imported into the U.S., within Acer Aspire V5 laptop computers.

77. Spansion acquired an ADT Pulse Video Encoder, Model No. NV412A-ADT on September 11, 2013 via order from Surveillant, LLC in Sparks, NV. Pak Dec. at ¶ 22; Exhibit 32. The ADT Pulse Video Encoder was found to have been manufactured outside the United States by Sercomm Corporation. *See* Exhibit 32. The box and labeling for the ADT Pulse Video Encoder states that the product was "Made in Taiwan." Pak Dec. at ¶ 23; Exhibit 32. A Macronix Chip (MX29LV320EBTI-70G) was found inside the ADT Pulse Video Encoder. Pak

Dec. at ¶ 23; Exhibit 32. Thus, Macronix Chips have been imported into the United States, and will likely continue to be imported in the U.S., within ADT Pulse Video Encoders.

78. Spansion acquired an Amazon Kindle Paperwhite E-Reader on November 25, 2013 at Best Buy in Sunnyvale, California. Pak Dec. at ¶ 25; Exhibit 33. The box and labeling for the Amazon Kindle Paperwhite E-Reader states that the product was “Made in China.” Pak Dec. at ¶ 26; Exhibit 33. A Macronix Chip (MX25U4033E) was found inside the Amazon Kindle Paperwhite E-Reader. Pak Dec. at ¶ 26; Exhibit 33. Thus, Macronix Chips have been imported into the United States, and will likely continue to be imported in the U.S., within Amazon Kindle Paperwhite E-Readers.

79. Spansion acquired an ASRock X79 Extreme11 computer motherboard from Newegg.com on October 18, 2013. Pak Dec. at ¶ 28; Exhibit 34. The box and labeling for the ASRock X79 Extreme11 computer motherboard states that the product was “Made in China.” Pak Dec. at ¶ 29; Exhibit 34. A Macronix Chip (MX29GL128FDT2I-11G) was found inside the ASRock X79 Extreme11 computer motherboard. Pak Dec. at ¶ 29; Exhibit 34. Thus, Macronix Chips have been imported into the United States, and will likely continue to be imported in the U.S., within ASRock computer motherboards.

80. Spansion acquired an Asus RT-N56U wireless router on July 13, 2013, at Fry’s Electronics in Sunnyvale, California, and an Asus RT-N16 wireless router on July 21, 2013, at Fry’s Electronics in Palo Alto, California. Pak Dec. at ¶ 31; Exhibits 35-36. The boxes and labeling for the Asus RT-N56U and RT-N16 wireless routers state that the products were “Made in China.” Pak Dec. at ¶¶ 32-33; Exhibits 35-36. A Macronix Chip (MX29LV640EBTI-70G) was found inside the Asus RT-N56U wireless router. Pak Dec. at ¶ 33; Exhibit 36. A Macronix Chip (MX29GL256EHI2I-90G) was found inside the Asus RT-N16 wireless router. Pak Dec. at

¶ 32; Exhibit 35. Thus, Macronix Chips have been imported into the United States, and will likely continue to be imported into the U.S., within Asus RT-N56U and RT-N16 wireless routers.

81. Spansion acquired a Belkin N600 DB wireless router on July 13, 2013, at Fry's Electronics in Sunnyvale, California. Pak Dec. at ¶ 35; Exhibit 37. The box and labeling for the Belkin N600 DB wireless router states that the product was "Made in China." Pak Dec. at ¶ 36; Exhibit 37. A Macronix Chip (MX25L6406EM2I) was found inside the Belkin N600 DB wireless router. Pak Dec. at ¶ 36; Exhibit 37. Thus, Macronix Chips have been imported into the United States, and will likely continue to be imported into the U.S., within Belkin N600 DB wireless routers.

82. Spansion acquired a D-Link DIR-655 Xtreme N Gigabit wireless router on July 21, 2013, at Fry's Electronics in Palo Alto, California. Pak Dec. at ¶ 38; Exhibit 38. The box and labeling for the D-Link DIR-655 Xtreme N Gigabit wireless router states that the product was "Made in China." Pak Dec. at ¶ 39; Exhibit 38. A Macronix Chip (MX25L6406EM2I) was found inside the D-Link DIR-655 Xtreme N Gigabit wireless router. Pak Dec. at ¶ 39; Exhibit 38. Thus, Macronix Chips have been imported into the United States, and will likely continue to be imported into the U.S., within D-Link DIR-655 Xtreme N Gigabit wireless routers.

83. Spansion acquired a Leap Motion Wireless Controller on January 15, 2014 at Best Buy in Mountain View, California. Pak Dec. at ¶ 41; Exhibit 39. The box and labeling for the Leap Motion Wireless Controller states that the product was "Made in China." Pak Dec. at ¶ 42; Exhibit 39. A Macronix Chip (MX25L3206EM2I-12G) was found inside the Leap Motion Wireless Controller. Pak Dec. at ¶ 42; Exhibit 39. Thus, Macronix Chips have been imported into the United States, and will likely continue to be imported in the U.S., within Leap Motion Wireless Controllers.

84. Spansion acquired an Iris brand wireless camera, Model No. RC8221, on September 27, 2013 at Lowe's in Sunnyvale, California. Pak Dec. at ¶ 44; Exhibit 40. The Iris RC8221 Wireless Camera was sold within the United States by Lowe's Home Centers, which upon information and belief is a subsidiary of Lowe's Companies, Inc. See Exhibit 40. The box and labeling for the Iris RC8221 Wireless Camera states that the product was "Made in Taiwan." Pak Dec. at ¶ 45; Exhibit 40. A Macronix Chip (MX25L12845EMI-10G) was found inside the Iris RC8221 Wireless Camera. Pak Dec. at ¶ 45; Exhibit 40. Thus, Macronix Chips have been imported into the United States, and will likely continue to be imported in the U.S., within the Iris RC8221 Wireless Cameras sold by the Lowe's Respondents.

85. Spansion acquired a Microsoft Surface Pro 2 tablet computer on December 2, 2013 at Best Buy in Sunnyvale, California. Pak Dec. at ¶ 47; Exhibit 41. The box and labeling for the Microsoft Surface Pro 2 states that the product was "Made in China." Pak Dec. at ¶ 48; Exhibit 41. A Macronix Chip (MX25L4006E) was found inside the Microsoft Surface Pro 2. Pak Dec. at ¶ 48; Exhibit 41. Thus, Macronix Chips have been imported into the United States, and will likely continue to be imported into the U.S., within at least Microsoft Surface Pro 2 tablets.

86. Spansion acquired a Nintendo 3DS Game Cartridge ("Mario Tennis Open") on July 13, 2013, at Best Buy in Mountain View, California. Pak Dec. at ¶ 50; Exhibit 42. The box and labeling for this Nintendo 3DS Game Cartridge states that the product was "Made in Japan." Pak Dec. at ¶ 51; Exhibit 42. Two Macronix Chips (including the MX25L4001) were found inside the game cartridge. Pak Dec. at ¶ 51; Exhibit 42. Thus, Macronix Chips have been imported into the United States, and will likely continue to be imported into the U.S., within Nintendo 3DS Game Cartridge products.

87. Spansion acquired another Nintendo 3DS Game Cartridge (“Legend of Zelda”) on July 16, 2013, at Fry’s in Sunnyvale, California. Pak Dec. at ¶ 50; Exhibit 43. The box and labeling for this Nintendo 3DS Game Cartridge states that the product was “Made in Japan.” Pak Dec. at ¶ 52; Exhibit 53. A Macronix XtraROM Chip (MX23J4GC0) was found inside the game cartridge. Pak Dec. at ¶ 52; Exhibit 43. Thus, Macronix Chips have been imported into the United States, and will likely continue to be imported into the U.S., within Nintendo 3DS Game Cartridge products.

88. Spansion also acquired a Nintendo Wii U console on July 13, 2013, at Best Buy in Mountain View, California. Pak Dec. at ¶ 50; Exhibit 44. The box and labeling for the Nintendo Wii U states that the product was “Made in China.” Pak Dec. at ¶ 53; Exhibit 44. A Macronix Chip (MX25L4006EZNI) was found inside the game controller of this Wii U product. Pak Dec. at ¶ 53; Exhibit 44. Thus, Macronix Chips have been imported into the United States, and will likely continue to be imported into the U.S., within the Wii U product.

89. As stated above, Spansion acquired a Lowe’s Iris brand wireless camera, Model No. RC8221, on September 27, 2013 at Lowe’s in Sunnyvale, California, and also acquired an ADT Pulse Video Encoder, Model No. NV412A-ADT on September 11, 2013 via order from Surveillant, LLC in Sparks, NV. *See* ¶¶ 77, 84; Exhibits 32, 40. Both the Iris RC8221 Wireless Camera and the ADT Pulse Video Encoder, Model No. NV412A-ADT, were found to have been manufactured outside the United States by Sercomm Corporation. *See* ¶¶ 77, 84; Exhibits 32, 40. As stated above, Macronix Chips were found inside both the Lowe’s Iris RC8221 Wireless Camera and the ADT Pulse Video Encoder, Model No. NV412A-ADT. *See* ¶¶ 77, 84; Exhibits 32, 40. Thus, Macronix Chips have been imported into the United States, and will likely

continue to be imported in the U.S., within at least the Lowe's Iris RC8221 Wireless Camera and ADT Pulse Video Encoder manufactured by Sercomm.

90. Spansion acquired a Vonage Box Telephone Adapter, Model No. VDV23-VD, on December 2, 2013 at Best Buy in Sunnyvale, California. Pak Dec. at ¶ 58; Exhibit 45. The box and labeling for the Vonage VDV23-VD Telephone Adapter states that the product was "Made in Vietnam." Pak Dec. at ¶ 59; Exhibit 45. A Macronix Chip (MX29LV640EBTI-70G) was found inside the Vonage VDV23-VD Telephone Adapter. Pak Dec. at ¶ 59; Exhibit 45. Thus, Macronix Chips have been imported into the United States, and will likely continue to be imported in the U.S., within Vonage Telephone Adapters.

91. Spansion cannot identify all devices sold for importation into the United States, imported, and/or sold within the United States after importation that contain infringing Macronix Chips. Macronix continues to market its infringing chips worldwide via the Internet and other means to prospective importers of infringing downstream products, and continues to provide instructions via the Internet and other means to encourage such manufacturers to substitute infringing Macronix Chips for Spansion chips in their products. Spansion reserves its right to supplement its allegations, to amend the Complaint, and to add respondents in the future.

## **VI. UNLAWFUL AND UNFAIR ACTS OF PROPOSED RESPONDENTS — PATENT INFRINGEMENT**

92. Upon information and belief, Respondents are engaged in the manufacture, importation, sale for importation, and/or sale within the United States after importation of the Macronix Chips and/or downstream products containing such chips that infringe the Spansion Patents either literally or under the doctrine of equivalents, or are made, produced, or processed under, or by means of, the inventions claimed in the Spansion Patents. These activities by Respondents constitute a violation of Section 337.



93. Upon information and belief, Respondents were aware of the Spansion Patents or will have knowledge of the Spansion Patents and their infringing activity based on the public filing of this Complaint. At a minimum, the Notice of Investigation that will be published by the Commission in the Federal Register, should the Commission institute an investigation, will serve as notice to the Respondents of the Spansion Patents and their infringing activities, should the Respondents contend that they did not previously have knowledge of the Spansion Patents or their infringing activity.

94. Upon information and belief, the Macronix Respondents are encouraging and/or inducing downstream companies worldwide to switch from Spansion chips to the infringing Macronix Chips by, for example, publicly publishing and maintaining a series of Application Notes explaining and directing how to do so. For example, one of Macronix's Application Notes is entitled "Replacing Spansion S25FL128S with Macronix MX25L12835F". *See* Exhibit 16.

95. Upon information and belief, the Macronix Respondents manufacture, sell for importation, import, and/or sell within the United States after importation of the Macronix Chips that constitute a material part of the inventions claimed in the Spansion Patents, knowing the same to be especially made and/or adapted for use in an infringement of the Spansion Patents, and not staple articles of commerce suitable for substantial non-infringing use. The Macronix Respondents are contributory infringers of the Spansion Patents.

96. Upon information and belief, the Macronix Respondents specifically intend that others use the Macronix Chips to infringe the Spansion Patents. For example, Macronix includes instructions with the Macronix Chips and on its web site teaching users of the Macronix Chips to use them in a manner that infringes the Spansion patents. *See* Exhibits 17-21; Confidential

Exhibits 46C-50C. The Macronix Respondents therefore actively induce infringement of the Spansion Patents by others, including the Downstream Respondents and their customers.

**A. Infringement of the '611 Patent**

97. The Macronix Chips that are sold for importation, imported, and/or sold after importation by the Macronix Respondents and/or the Downstream Respondents infringe claims 1-7 and 9-13 of the '611 Patent, either literally or under the doctrine of equivalents.

98. For example, Claim charts applying independent claims 1, 9, 12, and 13 of the '611 Patent to the Macronix Generation F NOR Parallel Flash Memory (75 nm Technology Node) family of products illustrate how the claims cover the Macronix Chips (and products containing those chips). These charts can be found at Confidential Exhibit 46C.

99. Claim charts applying independent claims 1, 9, 12, and 13 of the '611 Patent to an exemplary Macronix product—the Macronix Generation E NOR Serial Flash Memory (110 nm Technology Node) family of products—illustrate how the claims cover the Macronix Chips (and products containing those chips). These charts can be found at Confidential Exhibit 47C.

100. Upon information and belief and as described above, each of the Downstream Respondents sells for importation, imports, and/or sells after importation products which contain a Macronix Chip from either the Generation E NOR Flash Memory (110 nm Technology Node) or the Generation F NOR Flash Memory (75 nm Technology Node) families of products. *See* Exhs. 31-45. The claim charts attached at Confidential Exhibits 46C-47C thus also apply independent claims 1, 9, 12, and 13 of the '611 Patent to the following exemplary products of the Downstream Respondents:

<b>Downstream Respondent</b>	<b>Exemplary Product</b>	<b>Macronix Chip Family</b>	<b>Claim Chart</b>
Acer Respondents	Aspire V5 Laptop	Generation E NOR Flash	Conf. Exh. 47C

<b>Downstream Respondent</b>	<b>Exemplary Product</b>	<b>Macronix Chip Family</b>	<b>Claim Chart</b>
		Memory	
ADT	NV412A-ADT Pulse Video Encoder	Generation E NOR Flash Memory	Conf. Exh. 47C
Amazon	Kindle Paperwhite E-reader	Generation E NOR Flash Memory	Conf. Exh. 47C
ASRock Respondents	X79 Extreme 11 Motherboard	Generation F NOR Flash Memory	Conf. Exh. 46C
Asus Respondents	RT-56U Router	Generation E NOR Flash Memory	Conf. Exh. 47C
Asus Respondents	RT-N16 Router	Generation E NOR Flash Memory	Conf. Exh. 47C
Belkin	N600 DC Router	Generation E NOR Flash Memory	Conf. Exh. 47C
D-Link	DIR-655 Xtreme N Gigabit Router	Generation E NOR Flash Memory	Conf. Exh. 47C
Leap Motion	Leap Motion Wireless Controller	Generation E NOR Flash Memory	Conf. Exh. 47C
Lowe's Respondents	RC8221 Wireless Camera	Generation E NOR Flash Memory	Conf. Exh. 47C
Microsoft	Surface Pro 2 Tablet	Generation E NOR Flash Memory	Conf. Exh. 47C
Nintendo Respondents	3DS Mario Tennis Open Game Cartridge	Generation E NOR Flash Memory	Conf. Exh. 47C
Nintendo Respondents	Wii U Console	Generation E NOR Flash Memory	Conf. Exh. 47C
Sercomm	NV412A-ADT Pulse Video Encoder	Generation E NOR Flash Memory	Conf. Exh. 47C
Sercomm	RC8221 Wireless Camera	Generation E NOR Flash Memory	Conf. Exh. 47C
Vonage	VDV23-VD	Generation E	Conf. Exh.

<b>Downstream Respondent</b>	<b>Exemplary Product</b>	<b>Macronix Chip Family</b>	<b>Claim Chart</b>
	Telephone Adapter	NOR Flash Memory	47C

101. Thus, all named Respondents, including both the Macronix Respondents and the Downstream Respondents, have violated Section 337 with respect to the '611 Patent. However, because it is difficult to identify all sources of infringing Macronix Chips, and discovery may reveal additional violations of Section 337 with respect to the '611 Patent, Spansion reserves all rights to supplement its allegations to identify additional respondents that have violated Section 337 with respect to this patent.

102. The Macronix Respondents induce infringement of the asserted claims of the '611 Patent because they have had knowledge of the '611 Patent and the Macronix Chips' infringement thereof since at least the April 28, 2014 filing of a patent infringement complaint against Macronix in the United States District Court for the Northern District of California (No. 5:14-cv-01946) and Macronix's receipt thereof, as well as the filing of this Complaint and, upon information and belief, continue to sell, offer for sale, import, and/or sell for importation Macronix Chips with the intent that their customers, including the Downstream Respondents, will use the Macronix Chips in an infringing manner. As set forth in Confidential Exhibits 46C-47C, when Macronix's customers use Macronix Chips in their intended manner, the Macronix customers directly infringe the asserted claims of the '611 Patent. By providing the Macronix Chips to their customers and instructions to use the Macronix Chips in an infringing manner while being on notice of the '611 Patent and Spansion's infringement theories, the Macronix Respondents have demonstrated specific intent that its customers infringe the '611 Patent.

103. The Macronix Respondents contributorily infringe the asserted claims of the '611 Patent because they have had knowledge of the '611 Patent and the Macronix Chips' infringement thereof since at least the April 28, 2014 filing of a patent infringement complaint against Macronix in the United States District Court for the Northern District of California (No. 5:14-cv-01946) and Macronix's receipt thereof, as well as the filing of this Complaint and, upon information and belief, continue to sell, offer for sale, import, and/or sell for importation Macronix Chips that embody a material part of the claimed invention of the '611 Patent, that are known by the Macronix Respondents to be specially made or adapted for use in an infringing manner, and are not staple articles with substantial non-infringing uses. As set forth in Confidential Exhibits 46C-47C, when Macronix's customers use Macronix Chips in their intended manner, the Macronix customers directly infringe the asserted claims of the '611 Patent. The Macronix Chips are specially designed to infringe the asserted claims of the '611 Patent and have no substantial non-infringing uses.

**B. Infringement of the '666 Patent**

104. The Macronix Chips that are sold for importation, imported, and/or sold after importation by the Macronix Respondents and/or the Downstream Respondents infringe claims 1, 3-5, 8, and 10-13 of the '666 Patent, either literally or under the doctrine of equivalents.

105. For example, claim charts applying independent claims 1 and 8 of the '666 Patent to the Macronix Generation F NOR Page Mode Parallel Flash Memory (75 nm Technology Node) family of products illustrate how the claims cover the Macronix Chips (and products containing those chips). These charts can be found at Confidential Exhibit 48C.

106. Claim charts applying independent claims 1 and 8 of the '666 Patent to the Macronix Generation E NOR Page Mode Parallel Flash Memory (110 nm Technology Node)

family of products illustrate how the claims cover the Macronix Chips (and products containing those chips). These charts can be found at Confidential Exhibit 49C.

107. Claim charts applying independent claims 1 and 8 of the '666 Patent to the Macronix Generation E NOR Serial Flash Memory (110 nm Technology Node) family of products illustrate how the claims cover the Macronix Chips (and products containing those chips). These charts can be found at Confidential Exhibit 50C.

108. Upon information and belief and as described above, each of Acer, Amazon, the ASRock Respondents, the Asus Respondents, Belkin, D-Link, Leap Motion, Lowe's, Microsoft, the Nintendo Respondents, and Sercomm sells for importation, import, and/or sell after importation products which contain a Macronix Chip from either the Generation E Serial NOR Flash Memory (110 nm Technology Node), the Generation E Page Mode Parallel NOR Flash Memory (110 nm Technology Node), or the Generation F Page Mode Parallel NOR Flash Memory (75 nm Technology Node) families of products. *See* Exhs. 31, 33-35, 37-42, 44. The claim charts attached at Confidential Exhibits 48C-50C thus also apply independent claims 1 and 8 of the '666 Patent to the following exemplary products of the Downstream Respondents:

<b>Downstream Respondent</b>	<b>Exemplary Product</b>	<b>Macronix Chip Family</b>	<b>Claim Chart</b>
Acer Respondents	Aspire V5 Laptop	Generation E Serial NOR Flash Memory	Conf. Exh. 50C
Amazon	Kindle Paperwhite E-reader	Generation E Serial NOR Flash Memory	Conf. Exh. 50C
ASRock Respondents	X79 Extreme 11 Motherboard	Generation F Page Mode Parallel NOR Flash Memory	Conf. Exh. 48C
Asus Respondents	RT-N16 Router	Generation E Page Mode Parallel NOR Flash Memory	Conf. Exh. 49C

<b>Downstream Respondent</b>	<b>Exemplary Product</b>	<b>Macronix Chip Family</b>	<b>Claim Chart</b>
Belkin	N600 DC Router	Generation E Serial NOR Flash Memory	Conf. Exh. 50C
D-Link	DIR-655 Xtreme N Gigabit Router	Generation E Serial NOR Flash Memory	Conf. Exh. 50C
Leap Motion	Leap Motion Wireless Controller	Generation E Serial NOR Flash Memory	Conf. Exh. 50C
Lowe's Respondents	RC8221 Wireless Camera	Generation E Serial NOR Flash Memory	Conf. Exh. 50C
Microsoft	Surface Pro 2 Tablet	Generation E Serial NOR Flash Memory	Conf. Exh. 50C
Nintendo Respondents	3DS Mario Tennis Open Game Cartridge	Generation E Serial NOR Flash Memory	Conf. Exh. 50C
Nintendo Respondents	Wii U Console	Generation E Serial NOR Flash Memory	Conf. Exh. 50C
Sercomm	RC8221 Wireless Camera	Generation E Serial NOR Flash Memory	Conf. Exh. 50C

109. Thus, at present, Spansion has identified the Macronix Respondents and Acer, Amazon, the ASRock Respondents, the Asus Respondents, Belkin, D-Link, Leap Motion, Lowe's, Microsoft, the Nintendo Respondents, and Sercomm as respondents that have violated Section 337 with respect to the '666 Patent. However, because it is difficult to identify all sources of infringing Macronix Chips, and discovery may reveal that additional Downstream Respondents also have violated Section 337 with respect to the '666 Patent, Spansion reserves all rights to supplement its allegations to identify additional respondents that have violated Section 337 with respect to this patent.

110. The Macronix Respondents induce infringement of the asserted claims of the '666 Patent because they have had knowledge of the '666 Patent and the Macronix Chips' infringement thereof since at least the April 28, 2014 filing of a patent infringement complaint against Macronix in the United States District Court for the Northern District of California (No. 5:14-cv-01946) and Macronix's receipt thereof, as well as the filing of this Complaint and, upon information and belief, continue to sell, offer for sale, import, and/or sell for importation Macronix Chips with the intent that their customers, including the Downstream Respondents, will use the Macronix Chips in an infringing manner. As set forth in Confidential Exhibits 48C-50C, when Macronix's customers use Macronix Chips in their intended manner, the Macronix customers directly infringe the asserted claims of the '666 Patent. By providing the Macronix Chips to their customers and instructions to use the Macronix Chips in an infringing manner while being on notice of the '666 Patent and Spansion's infringement theories, the Macronix Respondents have demonstrated specific intent that its customers infringe the '666 Patent.

111. The Macronix Respondents contributorily infringe the asserted claims of the '666 Patent because they have had knowledge of the '666 Patent and the Macronix Chips' infringement thereof since at least the April 28, 2014 filing of a patent infringement complaint against Macronix in the United States District Court for the Northern District of California (No. 5:14-cv-01946) and Macronix's receipt thereof, as well as the filing of this Complaint and, upon information and belief, continue to sell, offer for sale, import, and/or sell for importation Macronix Chips that embody a material part of the claimed invention of the '666 Patent, that are known by the Macronix Respondents to be specially made or adapted for use in an infringing manner, and are not staple articles with substantial non-infringing uses. As set forth in Confidential Exhibits 48C-50C, when Macronix's customers use Macronix Chips in their



intended manner, the Macronix customers directly infringe the asserted claims of the '666 Patent. The Macronix Chips are specially designed to infringe the asserted claims of the '666 Patent and have no substantial non-infringing uses.

112. As noted above, upon information and belief, Respondents were aware of the Spansion Patents or will have knowledge of the Spansion Patents and their infringing activity based on the April 28, 2014 filing of a patent infringement complaint against Macronix in the United States District Court for the Northern District of California (No. 5:14-cv-01946) and Macronix's receipt thereof, as well as the public filing of this Complaint. At a minimum, the Notice of Investigation that will be published by the Commission in the Federal Register, should the Commission initiate an investigation, will serve as notice to the Respondents of the Spansion Patents and their infringing activities, should the Respondents contend that they did not previously have knowledge of the Spansion Patents or their infringing activity.

113. Additionally, upon information and belief, the Macronix Respondents manufacture, sell for importation, import, and/or sell within the United States after importation of the Macronix Chips that constitute a material part of the inventions claimed in the Spansion Patents, knowing the same to be especially made and/or adapted for use in an infringement of the Spansion Patents, and not staple articles of commerce suitable for substantial non-infringing use.

### **C. Infringement of the '446 Patent**

114. The Macronix Chips that are sold for importation, imported, and/or sold after importation by the Macronix Respondents and/or the Downstream Respondents are made, produced, or processed under a process covered by claims 1, 5-12, 15-17, and 20-21 of the '446 Patent, and thereby infringe the '446 Patent either literally or under the doctrine of equivalents.

115. For example, claim charts applying independent claims 1, 5, and 15 of the '446 Patent to the Macronix XtraROM family of products illustrate how the claims cover the

Macronix Chips (and products containing those chips). These charts can be found at Confidential Exhibit 51C.

116. Upon information and belief and as described above, each of the Nintendo Respondents manufactures, sells for importation, import, and/or sell after importation products which contain a Macronix XtraROM Chip. *See* Exh. 43. The claim charts attached at Confidential Exhibit 51C thus also apply independent claims 1, 5, and 13 of the '446 Patent to the following exemplary products of the Downstream Respondents:

<b>Downstream Respondent</b>	<b>Exemplary Product</b>	<b>Macronix Chip Family</b>	<b>Claim Chart</b>
Nintendo Respondents	3DS Legend of Zelda Game Cartridge	XtraROM	Conf. Exh. 51C

117. Thus, at present, Spansion has identified the Macronix Respondents and the Nintendo Respondents as respondents that have violated Section 337 with respect to the '446 Patent. However, because it is difficult to identify all sources of infringing Macronix Chips, and discovery may reveal that additional Downstream Respondents also have violated Section 337 with respect to the '446 Patent, Spansion reserves all rights to supplement its allegations to identify additional respondents that have violated Section 337 with respect to this patent.

118. Furthermore, the Macronix Respondents induce infringement of the asserted claim of the '446 Patent because they have had knowledge of the '446 Patent and the Macronix Chips' infringement thereof since at least the April 28, 2014 filing of a patent infringement complaint against Macronix in the United States District Court for the Northern District of California (No. 5:14-cv-01946), as well as the filing of this Complaint and, upon information and belief, continue to manufacture, sell, offer for sale, import, and/or sell for importation Macronix Chips with the intent that their customers, including at least the Nintendo Respondents, will

directly infringe the '446 Patent. As set forth in Confidential Exhibit 51C, the Macronix XtraROM chips are made, produced, or processed under a process covered by the '446 Patent; when Macronix's customers import into and/or sell products containing such chips in the United States, the Macronix customers directly infringe the asserted claim of the '446 Patent. By providing the Macronix Chips to their customers with the intent and knowledge that their customers would incorporate these chips into products for importation into and/or sale within the United States, while being on notice of the '446 Patent and Spansion's infringement theories, the Macronix Respondents have demonstrated specific intent that its customers infringe the '446 Patent.

119. As noted above, upon information and belief, the Macronix Respondents were aware of the '446 Patent or will have knowledge of the '446 Patent and their infringing activity based on the April 28, 2014 filing of a patent infringement complaint against Macronix in the United States District Court for the Northern District of California (No. 5:14-cv-01946) and Macronix's receipt thereof, as well as the public filing of this Complaint and receipt by the Macronix Respondents thereof. At a minimum, the Notice of Investigation that will be published by the Commission in the Federal Register, should the Commission initiate an investigation, will serve as notice to the Respondents of the '446 Patent and their infringing activities, should the Respondents contend that they did not previously have knowledge of the '446 Patent or their infringing activity.

#### **D. Infringement of the '766 Patent**

120. The Macronix Chips that are sold for importation, imported, and/or sold after importation by the Macronix Respondents and/or the Downstream Respondents are made, produced, or processed under a process covered by claims 1, 4-11, 13-15, 17-18, and 22 of

the '766 Patent, and thereby infringe the '766 Patent either literally or under the doctrine of equivalents.

121. For example, claim charts applying independent claims 1, 13, and 22 of the '766 Patent to the Macronix XtraROM family of products illustrate how these claims covers the Macronix Chips (and products containing those chips). These charts can be found at Confidential Exhibit 52C.

122. Upon information and belief and as described above, each of the Nintendo Respondents manufactures, sells for importation, import, and/or sell after importation products which contain a Macronix XtraROM Chip. *See* Exh. 43. The claim charts attached at Confidential Exhibit 52C thus also apply independent claims 1, 13, and 22 of the '766 Patent to the following exemplary products of the Downstream Respondents:

<b>Downstream Respondent</b>	<b>Exemplary Product</b>	<b>Macronix Chip Family</b>	<b>Claim Chart</b>
Nintendo Respondents	3DS Legend of Zelda Game Cartridge	XtraROM	Conf. Exh. 52C

123. Thus, at present, Spansion has identified the Macronix Respondents and the Nintendo Respondents as respondents that have violated Section 337 with respect to the '766 Patent. However, because it is difficult to identify all sources of infringing Macronix Chips, and discovery may reveal that additional Downstream Respondents also have violated Section 337 with respect to the '766 Patent, Spansion reserves all rights to supplement its allegations to identify additional respondents that have violated Section 337 with respect to this patent.

124. Furthermore, the Macronix Respondents induce infringement of the asserted claim of the '766 Patent because they have had knowledge of the '766 Patent and the Macronix Chips' infringement thereof since at least the April 28, 2014 filing of a patent infringement

complaint against Macronix in the United States District Court for the Northern District of California (No. 5:14-cv-01946) and Macronix's receipt thereof, as well as the filing of this Complaint and, upon information and belief, continue to manufacture, sell, offer for sale, import, and/or sell for importation Macronix Chips with the intent that their customers, including at least the Nintendo Respondents, will directly infringe the '766 Patent. As set forth in Confidential Exhibit 52C, the Macronix XtraROM chips are made, produced, or processed under a process covered by the '766 Patent; when Macronix's customers import into and/or sell products containing such chips in the United States, the Macronix customers directly infringe the asserted claim of the '766 Patent. By providing the Macronix Chips to their customers with the intent and knowledge that their customers would incorporate these chips into products for importation into and/or sale within the United States, while being on notice of the '766 Patent and Spansion's infringement theories, the Macronix Respondents have demonstrated specific intent that its customers infringe the '766 Patent.

125. As noted above, upon information and belief, the Macronix Respondents were aware of the '766 Patent or will have knowledge of the '766 Patent and their infringing activity based on the April 28, 2014 filing of a patent infringement complaint against Macronix in the United States District Court for the Northern District of California (No. 5:14-cv-01946) and Macronix's receipt thereof, as well as the public filing of this Complaint and receipt by the Macronix Respondents thereof. At a minimum, the Notice of Investigation that will be published by the Commission in the Federal Register, should the Commission initiate an investigation, will serve as notice to the Respondents of the '766 Patent and their infringing activities, should the Respondents contend that they did not previously have knowledge of the '766 Patent or their infringing activity.

## VII. HARMONIZED TARIFF SCHEDULE INFORMATION

126. These Macronix Chips and products containing those chips are believed to fall within, at least, Heading Nos. 8523 (solid-state non-volatile storage devices), 8542 (electronic integrated circuits; parts thereof), 8517 (telephone sets, including apparatus for communication in a wired or wireless network), 8519 (sound recording or reproducing apparatus), 8521 (video recording or reproducing apparatus), 8525 (transmission apparatus; television cameras, digital cameras, and video camera records), 9504 (video game consoles and machines; parts and accessories thereof), and 8471 (automatic data processing machines and units thereof) of the Harmonized Tariff Schedule of the United States (“HTS”).

127. More specifically, the non-volatile memory chips and/or products containing same may be classified under Subheading Nos. 8523.51.00 (Semiconductor media: solid-state non-volatile storage devices); 8523.52.00 (Semiconductor media: “Smart cards”); 8523.59.00 (Semiconductor media: other); 8542.31.00 (Electronic integrated circuits: processors and controllers, whether or not combined with memories, converters, logic circuits, amplifiers, clock and timing circuits, or other circuits); and/or 8542.32.00 (Electronic integrated circuits: Memories); 8517.62.00 (Machines for the reception, conversion and transmission or regeneration of voice, images or other data, including switching and routing apparatus); 8519.81.4050 (sound recording or reproducing apparatus: using magnetic, optical, or semiconductor media); 8521.90.00 (video recording or reproducing apparatus, whether or not including a video tuner); 8525.80.40 (Digital still image video camera); 9504.50.00 (Video game consoles and machines, other than those of subheading 9504.30, and parts and accessories thereof); and/or 8471.30.01 00 (automatic data processing machines and units thereof; magnetic or optical readers, machines for transcribing data onto data media in coded form and machines for processing such data, not elsewhere specified or included: portable automatic data processing machines, weighing not

more than 10 kg, consisting of at least a central processing unit, a keyboard, and a display). These HTS numbers are intended for illustration only and are not intended to be restrictive of the devices or products accused.

## **VIII. DOMESTIC INDUSTRY**

### **A. Technical Prong**

128. The '611 Patent has five (5) independent claims and nine (9) dependent claims. A claim chart showing how an exemplary Spansion product in development practices an exemplary independent claim of the '611 Patent, thereby providing the basis for the domestic industry relating to the asserted claims of the '611 Patent, is attached hereto as Confidential Exhibit 53C.

129. The '666 Patent has three (3) independent claims and seventeen (17) dependent claims. Claim charts showing how an exemplary Spansion's products practice an exemplary independent claim of the '666 Patent, thereby providing the basis for the domestic industry relating to the asserted claims of the '666 Patent, are attached hereto as Confidential Exhibits 54C-55C.

130. The '446 Patent has four (4) independent claims and twenty (20) dependent claims. Claim charts showing how Spansion's products practice an exemplary independent claim of the '446 Patent, thereby providing the basis for the domestic industry relating to the asserted claims of the '446 Patent, are attached hereto as Confidential Exhibit 56C.

131. The '766 Patent has four (4) independent claims and eighteen (18) dependent claims. Claim charts showing how Spansion's products practice an exemplary independent claim of the '766 Patent, thereby providing the basis for the domestic industry relating to the asserted claims of the '766 Patent, are attached hereto as Confidential Exhibit 57C.

**B. Economic Prong**

132. In accordance with 19 U.S.C. §§ 1337(a)(2) and 1337(a)(3), an industry currently exists in the United States with respect to each of the '666 Patent, '446 Patent, and '766 Patent. Spansion has made significant investments in plant and equipment and in labor or capital in the United States relating to products that are or will be covered by the '666 Patent, '446 Patent, and '766 Patent. Spansion has likewise made substantial and ongoing domestic investments in engineering and research and development dedicated to the exploitation of the '666 Patent, '446 Patent, and '766 Patent.

133. Spansion has a facility in Austin, Texas that manufactures and tests wafers used to make chips that are sold commercially. The Spansion products that practice the claimed inventions of the Spansion Patents make up the majority of the production output at those facilities. Spansion has invested and continues to invest substantial amounts of capital into those facilities. Spansion employs numerous persons at these facilities and incurs significant expenses in yearly salary and operational expenses associated with these facilities. Spansion products that practice the claims of the Spansion Patents are manufactured and tested at those facilities.

134. In addition to its domestic manufacturing and testing operations, Spansion also invests substantial amounts of money in domestic research and development and engineering activities relating to products that practice the Spansion Patents. These R&D and engineering activities take place both at Spansion's Austin, Texas facility and at a Spansion facility in Sunnyvale, CA.

135. Furthermore, in accordance with 19 U.S.C. §§ 1337(a)(2) and 1337(a)(3), an industry currently in the process of being established in the United States with respect to the asserted '611 Patent. As described in the Pak Declaration, Exhibit 1C, Spansion is actively



engaged in activities leading to the exploitation of the '611 Patent, and there is a significant likelihood that a domestic industry relating to the '611 Patent will be established in the future.

136. Facts and information relating to the domestic industry for each Spansion Patent are set forth in the Pak Declaration, Confidential Exhibit 1C, at ¶¶ 71-97 and in Confidential Exhibits 53C-57C. Pursuant to Rule 210.12(a)(9)(x), visual representations of the involved domestic articles and processes are included in Confidential Exhibits 53C-57C.

## **IX. RELATED LITIGATION**

137. On April 28, 2014, Spansion filed a complaint against Respondents in the United States District Court for the Northern District of California (case No. 5:14-cv-01946) alleging infringement of the Spansion Patents in a similar manner to that alleged herein.

138. Other than the pending litigation based on Spansion's April 28, 2014 complaint, there are no current or past litigations involving the Spansion Patents. Spansion and Macronix are currently involved in additional patent infringement litigation in the U.S. International Trade Commission (Inv. Nos. 337-TA-893 and 337-TA-909), the U.S. District Court for the Northern District of California (No. 4:14-cv-01890) (formerly case No. 3:13-cv-00679 in the U.S. District Court for the Eastern District of Virginia), and the U.S. District Court for the Northern District of California (No. 3:13-cv-03566).

## **X. REQUESTED EXCLUSION ORDERS**

### **A. General Exclusion Order**

139. Pursuant to 19 U.S.C. § 1337(d)(2)(A) and (B), Spansion seeks a general exclusion order to exclude all infringing Macronix Chips and downstream products containing such chips. Issuance of a general exclusion order is appropriate because (i) it is necessary to prevent circumvention of an exclusion order limited to products of the named Respondents, and (ii) there is a pattern of violation of Section 337 through the manufacture, sale for importation

into the United States, importation, and/or sale within the United States after importation of a broad range of infringing products, and it is difficult to identify the source of those infringing products.

**(a) Prevention of Circumvention of a Limited Exclusion Order**

140. Non-volatile memory chips have been widely used in a broad range of electronic devices, including but not limited to cell phones, wireless routers, digital cameras and camcorders, laptop and tablet computers, and GPS systems. Wherever there is a need for data storage on a non-volatile basis, there is a demand for non-volatile memory chips.

141. Largely due to the low labor costs in certain areas of Asia (such as China, Taiwan, Korea, and Malaysia), companies often choose to manufacture their products in those areas and then import them into the United States for distribution and sale. Various marketing and distribution networks have been established in the United States for exploitation by foreign companies, including a large number of foreign manufacturers that make electronic devices for importation into the United States.

142. Upon information and belief, the Macronix Respondents are trying to get as many companies as possible to incorporate infringing Macronix Chips into such products, knowing these products will be sold for importation or imported into the United States.

143. In fact, by publishing and maintaining a series of Application Notes on their website, the Macronix Respondents actively encourage companies to migrate away from Spansion chips and use infringing Macronix Chips in their products. *See* Exhibits 13-14. As those Application Notes teach, companies may be capable of replacing Spansion chips with Macronix Chips in their products at minimal effort and/or expense.

144. Also, entry into the market for downstream products containing Macronix Chips is relatively easy. Some of the downstream products require relatively simple and inexpensive

manufacturing. There are a large number of downstream product manufacturers in Asia that are using non-Macronix Chips, but can easily switch to Macronix Chips.

145. Thus, in the absence of a general exclusion order, the Macronix Respondents may succeed in having many of their infringing chips imported into the United States in downstream products from companies not named, including companies that do not use Macronix Chips at present.

146. In addition, the Downstream Respondents, as well as other existing and potential manufacturers of downstream products containing Macronix Chips, can readily change importers. Similarly, importers can readily switch between foreign suppliers. As a result, foreign manufacturers and importers could easily circumvent a limited exclusion order directed against only named manufacturers and importers.

**(b) There is a Pattern of Violation of Section 337 and it is Difficult to Identify the Source of Infringing Downstream Products**

147. Upon information or belief, a substantial number of companies worldwide purchase infringing Macronix Chips and incorporate those chips into downstream products, or purchase such downstream products containing infringing Macronix Chips. These companies cause such goods to be sold for importation into the United States, imported, and/or sold after importation into the United States. Spansion has identified in this Complaint companies for which it has evidence of sale for importation, importation, and/or sale after importation into the United States of infringing Macronix Chips and products containing such chips, establishing a pattern of violation. Upon information and belief, other companies are capable of shifting, at minimal effort and/or expense, a substantial amount of their production to downstream products containing Macronix Chips and then selling them for importation, importing them, or selling them after importation into the United States.

148. Upon information and belief, there is a worldwide supply of downstream products containing Macronix Chips. A substantial number of underutilized downstream product manufacturing facilities exist worldwide. As a result, downstream products can be made in numerous locations around the world.

149. Marketing and distribution networks for downstream products containing Macronix Chips are available to foreign manufacturers. Many large distributors in the United States can and already do handle downstream products containing Macronix Chips.

150. In addition, downstream products containing Macronix Chips, including those of Respondents, are regularly offered for sale and sold online through numerous Internet sources. In addition to Respondents' websites, products containing Macronix Chips are offered for sale and sold via the websites of distributors and retailers.

151. As can be seen, the sales for importation into the United States, importation, and/or importation for sales within the United States of infringing Macronix Chips and the downstream products containing infringing Macronix Chips create a pattern of violation of Section 337. It is difficult to identify all the sources of infringing Macronix Chips and downstream products containing infringing Macronix Chips due to the number and constant turnover of the distributors and retailers of infringing Macronix Chips and manufacturers, distributors, and retailers of downstream products containing such chips.

152. At least for the foregoing reasons, the issuance of a general exclusion order excluding all infringing Macronix Chips and products containing such chips is appropriate in this case.

**B. Limited Exclusion Order**

153. At a minimum, pursuant to Section 337(d), if a general exclusion order is not issued in this matter, Spansion respectfully requests that a limited exclusion order be entered

against each named Respondent and its subsidiaries and affiliates in order to remedy the Respondents' violation of Section 337 and to prevent such future violations by Respondents.

**C. Cease & Desist Order**

154. Cease and desist orders against all named Respondents are appropriate under Section 337(f), which provides that the Commission may issue a cease and desist order against any person violating Section 337 in addition to exclusion orders issued under Section 337(d). On information and belief, the Macronix Respondents and the Downstream Respondents maintain domestic inventory of Macronix Chips and/or downstream products containing Macronix Chips. Moreover, where, as here, the infringing chips are easily concealed, and it is difficult to identify the source of infringing products, a cease and desist order is necessary to ensure compliance with the requested exclusion orders. At least for the foregoing reasons, cease and desist orders are appropriate to remedy, and prevent, the widespread violation of Spansion's patent rights.

**XI. RELIEF**

WHEREFORE, by reason of the foregoing, Spansion respectfully requests that the United States International Trade Commission:

A. Institute an immediate investigation pursuant to Section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. § 1337, to determine that Respondents have violated Section 337 based on the sale for importation into the United States, importation, and/or sale within the United States after importation of Macronix Chips that infringe one or more claims of Spansion's Patents and/or are made, produced, or processed under a process covered by the claims of one or more of the Spansion Patents, and downstream products containing those chips;

B. Schedule and conduct a hearing on permanent relief pursuant to 19 U.S.C. § 1337(d) and (f);

C. Issue a permanent general exclusion order, pursuant to 19 U.S.C. § 1337(d), excluding from entry into the United States all Macronix Chips and downstream products containing Macronix Chips that infringe any claim of the Spansion Patents and/or are made, produced, or processed under a process covered by the claims of one or more of the Spansion Patents, or, in the alternative, issue a permanent limited exclusion order specifically directed to each named Respondent and its subsidiaries and affiliates, excluding from entry into the United States Macronix Chips that infringe any claim of the Spansion Patents and/or are made, produced, or processed under a process covered by the claims of one or more of the Spansion Patents and all of Respondents' downstream products containing such Macronix Chips;

D. Issue permanent cease and desist orders against each named respondent, pursuant to 19 U.S.C. § 1337(f), prohibiting the importation, sale for importation, use, offering for sale, sale after importation, inventory for distribution, distribution, licensing, or otherwise transferring within the United States, Macronix Chips that infringe any claim of the Spansion Patents and/or are made, produced, or processed under a process covered by the claims of one or more of the Spansion Patents, and downstream products containing such Macronix Chips;

E. Impose a bond upon Respondents' importation of infringing non-volatile memory chips and downstream products containing such chips during the 60-day Presidential review period pursuant to 19 U.S.C. § 1337(j) to prevent further injury to Spansion's domestic industry relating to the Spansion Patents; and

F. Issue such other and further relief as the Commission deems just and proper under the law, based upon the facts determined by the investigation and the authority of the Commission.

Respectfully submitted,

Dated: April 29, 2014

A handwritten signature in black ink, appearing to read "Stephen J. Rosenman", is written over a horizontal line.

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