

**UNITED STATES DISTRICT COURT  
EASTERN DISTRICT OF TEXAS  
MARSHALL DIVISION**

GODO KAISHA IP BRIDGE 1,

Plaintiff,

v.

INTEL CORPORATION,

Defendant.

Case No. 2:17-cv-00676

**JURY TRIAL DEMANDED**

**COMPLAINT FOR PATENT INFRINGEMENT**

Plaintiff Godo Kaisha IP Bridge 1 (“IP Bridge” or “Plaintiff”) brings this Complaint for Patent Infringement (“Complaint”) against Intel Corporation (“Intel” or “Defendant”). Plaintiff alleges as follows:

**NATURE OF THE ACTION**

1. This is an action brought by IP Bridge against Intel for infringement of U.S. Patent Nos. 6,197,696 (“the ’696 Patent”), RE41,980 (“the RE’980 Patent”), 7,279,727 (“the ’727 Patent”), 6,709,950 (“the ’950 Patent”), 6,967,409 (“the ’409 Patent”), 6,346,736 (“the ’736 Patent”), 7,800,165 (“the ’165 Patent”), 6,387,824 (“the ’824 Patent”), and 6,602,802 (“the ’802 Patent”) (collectively, “the Asserted Patents”).

2. Two of the Asserted Patents, the ’696 Patent and the RE’980 Patent previously were asserted by IP Bridge in the Marshall Division of the Eastern District of Texas in *Godo Kaisha IP Bridge 1 v. Broadcom Ltd., et al.*, case no. 2:16-cv-00134 (E.D. Tex.) (the “Broadcom Action”).

### **THE PARTIES**

3. Plaintiff IP Bridge is a Japanese entity with its principal place of business located at c/o Sakura Sogo Jimusho, 1-11 Kanda Jimbocho, Chiyoda-ku, Tokyo, 101-0051, Japan. IP Bridge owns the Asserted Patents.

4. Upon information and belief, Defendant Intel is a Delaware corporation with its principal place of business at 2200 Mission College Boulevard, Santa Clara, California 95054.

### **JURISDICTION AND VENUE**

5. This is an action arising under the patent laws of the United States. Accordingly, this Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331 (federal question) and 1338(a) (action arising under an Act of Congress relating to patents).

6. This Court has general and specific personal jurisdiction over Intel at least in part because Intel is present and/or transacts and conducts business in, and with residents of, the State of Texas and this judicial District. IP Bridge's causes of action arise, at least in part, from Intel's contacts with and activities in the State of Texas and this judicial District. Upon information and belief, Intel has committed acts of infringement within the State of Texas and this judicial District by, *inter alia*, directly and/or indirectly making, selling, offering for sale, importing, and/or using products that infringe one or more claims of the Asserted Patents. Intel, directly and/or through intermediaries, uses, sells, ships, distributes, offers for sale, and/or advertises or otherwise promotes its products in the State of Texas and this judicial District. Also, Intel has a number of subsidiaries that upon information and belief are involved in making, selling, offering for sale, and/or importing into the U.S., Intel's semiconductor products and that on information and belief Intel directs and controls, including Intel Americas, Inc.

7. Venue is proper pursuant to 28 U.S.C. § 1400(b) because Intel "has committed acts of infringement and has a regular and established place of business" in this judicial District.

Indeed, Intel regularly conducts and solicits business in, engages in other persistent courses of conduct in, and/or derives substantial revenue from goods and services provided to, residents of the State of Texas and this judicial District. For example, Intel makes numerous external representations of its presence in the State of Texas and, more particularly, this District, by listing a Plano address (5000 Headquarters Dr.) on its U.S. offices webpage and posting online job listings for positions in Plano. Additionally, Intel advertises its significant operations in Texas on a dedicated section of its website entitled “Intel in Texas,” wherein Intel states, “Intel has more than 2,300 employees in Austin and Plano.” *See Intel in Texas, Intel, <https://www.intel.com/content/www/us/en/corporate-responsibility/intel-in-texas.html>* (last visited Sept. 21, 2017). Further, upon information and belief, Intel has an office in Richardson, Texas located at 3400 Waterview Parkway, within this judicial District, where Intel offers direct sales support consisting of Field Sales Engineers, Field Application Engineers and Inside Sales Teams for Intel’s field-programmable gate array products. Upon information and belief, Intel also benefits from its presence in this judicial District both directly and via the presence of third party distributors in Plano and elsewhere in this judicial District. Intel also has availed itself of the benefits and protections of the State’s laws by filing suit in this judicial District.

8. Furthermore, upon information and belief, Intel has purposefully and voluntarily placed one or more infringing products into the stream of commerce with the expectation that they will be purchased and/or used by residents of this judicial District and/or incorporated into downstream products purchased by consumers in this judicial District, including by directly and indirectly working with distributors, and other entities located in the State of Texas, to ensure its products reach the State of Texas and this judicial District.

9. Upon information and belief, Intel has official distributors located in Plano, Texas; Richardson, Texas; Irving, Texas; Austin, Texas; and Coppell, Texas. More particularly, Arrow Electronics (Electronic Components division) and SYNEX Corporation, which are Intel Authorized Distributors, have offices in Plano, Texas and Richardson, Texas, respectively.

10. In addition, Intel maintains highly interactive and commercial websites, accessible to residents of the State of Texas and this judicial District, through which Intel promotes and facilitates sales of its products and services, including products that infringe the Asserted Patents.

11. Upon information and belief, Intel sells its products directly to customers via its website at <https://www.intel.com/buy/us/en/>. Intel's website includes a link titled "How to Buy," which directs consumers in the United States, including those in the State of Texas and this judicial District, to purchase Intel products either directly from the website or through Intel Technology Providers, Intel Authorized Distributors, and/or Intel Approved Suppliers. Intel's website also includes a submission form that allows customers to input information in order to obtain technical or sales support from Intel.

12. Further, Intel is registered to do business in Texas as Intel Corporation and Intel Semiconductor (US) LLC.

### **INTEL'S INFRINGING PRODUCTS AND ACTIVITIES**

13. IP Bridge realleges and incorporates by reference the allegations of paragraphs 1-12 of this Complaint.

14. Intel is a global manufacturer and supplier of semiconductor components and products for use in consumer and enterprise products, systems, and services. Intel designs, makes, uses, sells, offers for sale, imports into the United States, and provides support for semiconductor chips, such as products with the part name or number i5-3550, E89459, QX9650, M 5Y70, and GT3e G82494, and other semiconductor products that have similar structures, features, or

functionalities, and/or are made by similar manufacturing processes, as the aforementioned products, including but not limited to Intel's 14nm, 22nm, 32nm, and 45nm process node semiconductor chips and products (collectively, "Accused Semiconductor Products").

15. The Accused Semiconductor Products are integrated into devices made, used, sold, offered for sale, and/or imported into the United States, by, among others, Intel, original equipment manufacturers, original design manufacturers, distributors, and other third parties. Intel's Accused Semiconductor Products are essential, non-trivial components of the products into which they are integrated. For example, the Core i5-3550 processor powers desktops such as the Dell OptiPlex 7010.

16. Upon information and belief, on Feb. 17, 2017, Intel filed with the United States Securities and Exchange Commission a Form 10-K. Relevant portions of the Form 10-K are attached hereto as Exhibit A.

17. Intel's Form 10-K states, "Our products are sold through sales offices throughout the world." Upon information and belief, said sales offices are located throughout the United States, including within the State of Texas and this judicial District.

18. Additionally, Intel's Form 10-K states, "We sell our products primarily to OEMs and ODMs[,] but also sell to "other manufacturers and service providers... who buy our products through distributor, reseller, retail, and OEM channels throughout the world." Upon information and belief, Intel sells its products to customers in the United States, including within the State of Texas and this judicial District.

19. Upon information and belief, Intel maintains a website that advertises the Accused Semiconductor Products, including identifying the applications for which the accused devices can be used and pricing for the Accused Semiconductor Products, as well as directions on how to

purchase the Accused Semiconductor Products, whether through the Intel Shop, Intel Technology Providers, Intel Authorized Distributors, or Intel Approved Suppliers. In addition, the website contains a hyperlink displaying “Email for Sales Inquiries” leading to a form for directly contacting Intel Customer Support regarding sales inquiries. Upon information and belief, Intel fields such sales inquiries from within the State of Texas and this judicial District, and provides responses to such inquiries within the State of Texas and this judicial District.

20. Upon information and belief, Intel’s sales, marketing, and manufacturing activities in the United States, including within the State of Texas and this judicial District, directly contributed to Intel’s net revenue in the United States (based on the billing location of the customer), which, according to Intel’s Form 10-K, was \$12,957,000,000 as of December 31, 2016.

**FIRST CLAIM FOR RELIEF**  
**INFRINGEMENT OF U.S. PATENT NO. 6,197,696**

21. IP Bridge realleges and incorporates by reference the allegations of paragraphs 1-20 of this Complaint.

22. On March 6, 2001, the United States Patent and Trademark Office (“USPTO”) duly and legally issued the ’696 Patent, entitled “Method for Forming Interconnection Structure.” A copy of the ’696 Patent is attached hereto as Exhibit B.

23. IP Bridge owns by assignment the entire right, title, and interest in and to the ’696 Patent, including the right to sue and recover damages, including damages for past infringement.

24. On information and belief, Intel has had knowledge of the ’696 Patent and its infringement thereof at least by virtue of the filing of this Complaint in this action. In addition, on information and belief, Intel had knowledge of the ’696 patent, which was asserted in the Broadcom Action, as a result of Intel’s knowledge of and participation (via at least the provision of third-party discovery) in the Broadcom Action.

25. Intel has infringed and is infringing, directly and/or indirectly, either literally or under the doctrine of equivalents, at least claims 13 and 15 of the '696 Patent in violation of at least 35 U.S.C. § 271(a), (b), and/or (g), by making, having made, using, selling, offering for sale, and/or importing into the United States, Intel's i5-3550 and M 5Y70 semiconductor products, and each and every product Intel makes and/or has made incorporating the same or equivalent structure or made using the same or equivalent processes, including without limitation Intel's 14nm and 22nm process node semiconductor products made using the patented process of at least claims 13 and 15 of the '696 Patent, which products are not materially changed by subsequent processes and do not become a trivial and nonessential component of another product ("the '696 Accused Products"). For example, on information and belief, with respect to the '696 Accused Products, Intel has infringed at least claim 13 of the '696 Patent because the steps to manufacture such products comprise the steps of, *inter alia*, forming a first insulating film over lower-level metal interconnects; forming a second insulating film, having a different composition than that of the first insulating film, over the first insulating film; forming a third insulating film, having a different composition than that of the second insulating film, over the second insulating film; forming a thin film over the third insulating film; forming a first resist pattern on the thin film, the first resist pattern having openings for forming wiring grooves; etching the thin film using the first resist pattern as a mask, thereby forming a mask pattern out of the thin film to have the openings for forming wiring grooves; removing the first resist pattern and then forming a second resist pattern on the third insulating film and the mask pattern, the second resist pattern having openings for forming contact holes; dry-etching the third insulating film using the second resist pattern and the mask pattern as a mask, thereby patterning the third insulating film to have the openings for forming contact holes; dry-etching the second insulating film using the patterned third insulating

film as a mask, thereby patterning the second insulating film to have the openings for forming contact holes; dry-etching the patterned third insulating film and the first insulating film using the mask pattern and the patterned second insulating film as respective masks, thereby forming wiring grooves and contact holes in the patterned third insulating film and the first insulating film, respectively; and filling in the wiring grooves and the contact holes with a metal film, thereby forming upper-level metal interconnects and contacts connecting the lower- and upper-level metal interconnects together.

26. Intel's actions alleged herein have actively induced and/or are continuing to actively induce infringement of at least claims 13 and 15 of the '696 Patent by actively encouraging acts of direct infringement (for example, using, selling, offering for sale, and importing into the United States the '696 Accused Products), and Intel knows (or believes that there is a high probability but is taking deliberate steps to avoid knowing) that it is inducing infringement by encouraging and instructing third parties, including OEMs, ODMs, distributors, and other third party customers, to use, import into the United States, and/or sell or offer for sale, the '696 Accused Products and products that incorporate the '696 Accused Products. For example, Intel's product literature for the '696 Accused Products instructs and encourages Intel's customers and other third parties to integrate the '696 Accused Products into products sold, offered for sale, and/or imported into the United States.

27. Intel's infringement of the '696 Patent is willful and deliberate, entitling IP Bridge to enhanced damages and attorneys' fees.

28. IP Bridge is entitled to recover from Intel all damages IP Bridge has sustained as a result of Intel's infringement of the '696 Patent, including without limitation not less than a reasonable royalty.



**SECOND CLAIM FOR RELIEF**  
**INFRINGEMENT OF U.S. PATENT NO. RE41,980**

29. IP Bridge realleges and incorporates paragraphs 1-28 of this Complaint.

30. On December 7, 2010, the USPTO duly and legally issued the RE'980 Patent, entitled "Semiconductor Interconnect Formed Over an Insulation and Having Moisture Resistant Material." A copy of the RE'980 Patent is attached hereto as Exhibit C.

31. The Patent Trial and Appeal Board has on four (4) occasions denied institution of *inter partes* review proceedings, determining in three instances that there was not a reasonable likelihood that the petitioner would prevail with respect to any challenged claim of the petition, and in the fourth instance that the same prior art and substantially the same arguments were presented previously.

32. IP Bridge owns by assignment the entire right, title, and interest in and to the RE'980 Patent, including the right to sue and recover damages, including damages for past infringement.

33. Intel has had knowledge of the RE'980 Patent and its infringement thereof since at least about December 17, 2014, when IP Bridge notified Intel of the RE'980 Patent and Intel's infringement thereof. In addition, on information and belief, Intel had knowledge of the RE'980 patent, which was asserted in the Broadcom Action, as a result of Intel's knowledge of and participation (via at least the provision of third-party discovery) in the Broadcom Action.

34. Intel infringed, either direct or indirectly, literally or under the doctrine of equivalents, at least claims 18, 19, 30-36, and 47-51 of the RE'980 Patent in violation of at least 35 U.S.C. § 271(a) and/or (b) by making, having made, using, selling, offering for sale, and/or importing into the United States, Intel's i5-3550, E89459, QX9650, and M 5Y70 semiconductor products, and each and every product Intel makes and/or has made incorporating the same or

equivalent processes and/or structures, including without limitation Intel's 14nm, 22nm, 32nm, and 45nm process node semiconductor products that meet every limitation of at least the above-identified claims ("the RE'980 Accused Products"). For example, on information and belief, the RE'980 Accused Products meet each and every limitation of claim 35 of the RE'980 Patent because they comprise a semiconductor substrate bearing semiconductor elements; an interlayer insulating film formed on said semiconductor substrate; a metal wire layer including plural metal wires formed on said interlayer insulating film; a surface protecting film including a first dielectric film with a small dielectric constant for filling at least a part of areas among said metal wires in said metal wire layer and a second dielectric film with a higher moisture absorption preventing function than said first dielectric film for covering said metal wire layer and said first dielectric film, said second dielectric film having a function of suppressing moisture absorption of said first dielectric film; an opening for a bonding pad formed in said surface protecting film; and a bonding pad formed in said opening for obtaining external electrical connection, wherein said bonding pad covers said opening and said second dielectric film of said surface protecting film completely covers said first dielectric film so as not to expose said first dielectric film, all of which are arranged in the manner recited in the above-identified claim.

35. Intel's actions alleged herein actively induced infringement of at least claims 18, 19, 30-36, and 47-51 of the RE'980 Patent by actively encouraging acts of direct infringement, and Intel knew (or believed that there was a high probability but took deliberate steps to avoid knowing) that it was inducing infringement by encouraging and instructing third parties, including OEMs, ODMs, distributors, and other third party customers, to make, use, sell, offer for sale, and/or import into the United States the RE'980 Accused Products and products that incorporate the RE'980 Accused Products. For example, Intel's product literature for the RE'980 Accused

Products instructs and encourages Intel's customers and other third parties to integrate the RE'980 Accused Products into products sold, offered for sale, and/or imported into the United States.

36. Intel's infringement of the RE'980 Patent was willful and deliberate, entitling IP Bridge to enhanced damages and attorneys' fees.

37. IP Bridge is entitled to recover from Intel all damages IP Bridge has sustained as a result of Intel's infringement of the RE'980 Patent, including without limitation not less than a reasonable royalty.

**THIRD CLAIM FOR RELIEF**  
**INFRINGEMENT OF U.S. PATENT NO. 7,279,727**

38. IP Bridge realleges and incorporates paragraphs 1-37 of this Complaint.

39. On October 9, 2007, the USPTO duly and legally issued the '727 Patent, entitled "Semiconductor Device." A copy of the '727 Patent is attached hereto as Exhibit D.

40. IP Bridge owns by assignment the entire right, title, and interest in and to the '727 Patent, including the right to sue and recover damages, including damages for past infringement.

41. On information and belief, Intel has had knowledge of the '727 Patent and its infringement thereof at least by virtue of the filing of the Complaint in this action.

42. Intel has infringed and is infringing, directly and/or indirectly, either literally or under the doctrine of equivalents, at least claims 1, 5, 10, and 11 of the '727 Patent in violation of at least 35 U.S.C. § 271(a) and/or (b) by making, having made, using, selling, offering for sale, and/or importing into the United States, Intel's i5-3550, E89459, QX9650, and M 5Y70 semiconductor products, and each and every product Intel makes and/or has made incorporating the same or equivalent processes and/or structures, including without limitation Intel's 14nm, 22nm, 32nm, and 45nm process node products that meet every limitation of at least the above-identified claims ("the '727 Accused Products"). For example, on information and belief, the '727

Accused Products meet each and every limitation of at least claim 1 of the '727 Patent because they comprise a semiconductor substrate; a diffusion region which is formed in the semiconductor substrate and serves as a region for the formation of a MIS transistor; an element isolation region surrounding the diffusion region; at least one gate conductor film which is formed across the diffusion region and the element isolation region, includes a gate electrode part located on the diffusion region and a gate interconnect part located on the element isolation region, and has a constant dimension in a gate length direction; an interlayer insulating film covering the gate electrode part; and a gate contact which passes through the interlayer insulating film, is connected to the gate interconnect part, and has a dimension in the gate length direction larger than the gate interconnect part, all of which are arranged in the manner recited in the above-identified claim.

43. Intel's actions alleged herein have actively induced and/or are continuing to actively induce infringement of at least claims 1, 5, 10, and 11 of the '727 Patent by actively encouraging acts of direct infringement, and Intel knows (or believes that there is a high probability but is taking deliberate steps to avoid knowing) that it is inducing infringement by encouraging and instructing third parties, including OEMs, ODMs, distributors, and other third party customers, to make, use, sell, offer for sale, and/or import into the United States the '727 Accused Products and products that incorporate the '727 Accused Products. For example, Intel's product literature for the '727 Accused Products instructs and encourages Intel's customers and other third parties to integrate the '727 Accused Products into products sold, offered for sale, and/or imported into the United States.

44. Intel's infringement of the '727 Patent is willful and deliberate, entitling IP Bridge to enhanced damages and attorneys' fees.

45. IP Bridge is entitled to recover from Intel all damages IP Bridge has sustained as a result of Intel's infringement of the '727 Patent, including without limitation not less than a reasonable royalty.

**FOURTH CLAIM FOR RELIEF**  
**INFRINGEMENT OF U.S. PATENT NO. 6,709,950**

46. IP Bridge realleges and incorporates paragraphs 1-45 of this Complaint.

47. On March 23, 2004, the USPTO duly and legally issued the '950 Patent, entitled "Semiconductor Device and Method of Manufacturing the Same." A copy of the '950 Patent is attached hereto as Exhibit E.

48. IP Bridge owns by assignment the entire right, title, and interest in and to the '950 Patent, including the right to sue and recover damages, including damages for past infringement.

49. On information and belief, Intel has had knowledge of the '950 Patent and its infringement thereof at least by virtue of the filing of the Complaint in this action.

50. Intel infringed, either literally or under the doctrine of equivalents, at least claims 17-19, 21, and 22 of the '950 Patent in violation of at least 35 U.S.C. § 271(a) and/or (g), by making, having made, using, selling, offering for sale, and/or importing into the United States, Intel's QX9650 semiconductor product, and each and every product Intel makes and/or has made incorporating the same or equivalent structure or made using the same or equivalent processes, including without limitation Intel's 45nm process node semiconductor products made using the patented process of at least claims 17-19, 21, and 22 of the '950 Patent, which products are not materially changed by subsequent processes and do not become a trivial and nonessential component of another product ("the '950 Accused Products"). For example, on information and belief, with respect to the '950 Accused Products, Intel has infringed at least claim 17 of the '950 Patent because the steps to manufacture such products comprised the steps of, *inter alia*, a first

step of forming a trench isolation on a semiconductor substrate, the trench isolation having a top surface at a higher level than a surface of the semiconductor substrate; a second step of forming a gate insulating film on an active area surrounded by the trench isolation on the semiconductor substrate; a third step of forming a gate electrode on the gate insulating film; after the third step, a fourth step of forming a laminated film made of a lower film and an upper film on the entire surface of the semiconductor substrate on which the trench isolation having a top surface at a higher level than a surface of the semiconductor substrate is formed; a fifth step of forming an interlayer insulating film on the upper film; a sixth step of selectively removing the interlayer film and the laminated film and forming a hole; and a seventh step of forming a buried conductive layer by filling the hole with a conductive material, wherein the upper film is made of an insulating material having high etching selectivity against the interlayer insulating film in dry etching.

51. IP Bridge is entitled to recover from Intel all damages IP Bridge has sustained as a result of Intel's infringement of the '950 Patent, including without limitation not less than a reasonable royalty.

**FIFTH CLAIM FOR RELIEF**  
**INFRINGEMENT OF U.S. PATENT NO. 6,967,409**

52. IP Bridge realleges and incorporates paragraphs 1-51 of this Complaint.

53. On November 22, 2005, the USPTO duly and legally issued the '409 Patent, entitled "Semiconductor Device and Method of Manufacturing the Same." A copy of the '409 Patent is attached hereto as Exhibit F.

54. IP Bridge owns by assignment the entire right, title, and interest in and to the '409 Patent, including the right to sue and recover damages, including damages for past infringement.

55. On information and belief, Intel has had knowledge of the '409 Patent and its infringement thereof at least by virtue of the filing of the Complaint in this action.

56. Intel infringed, either literally or under the doctrine of equivalents, at least claims 1, 2, 6-8, 12, 18, 25, 26, 28, 29, 44, 45, 47, 48, 49, 51, 52, 53, 59, 60, 64, 75, 76, 78, and 79 of the '409 Patent in violation of at least 35 U.S.C. § 271(a) by making, having made, using, selling, offering for sale, and/or importing into the United States, Intel's i5-3550 semiconductor product, and each and every product Intel makes and/or has made incorporating the same or equivalent processes and/or structures, including without limitation Intel's 22nm process node products that meet every limitation of at least the above-identified claims ("the '409 Accused Products"). For example, on information and belief, the '409 Accused Products meet each and every limitation of at least claim 1 of the '409 Patent because they comprise an isolation for surrounding an active region of a substrate; an interconnection formed on the isolation; an insulating film formed on a top surface of the interconnection; a hole formed on an area including at least part of the active region, at least part of the isolation and at least part of the interconnection; a conductive layer formed in the hole; and an interconnection member formed on, and connected to, the conductive layer; wherein the active region and the interconnection are connected to the conductive layer, and wherein at least part of a top surface of the isolation that is connected to the conductive layer is at a lower level than a top surface of the isolation that is provided below the interconnection, all of which are arranged in the manner recited in the above-identified claim.

57. IP Bridge is entitled to recover from Intel all damages IP Bridge has sustained as a result of Intel's infringement of the '409 Patent, including without limitation not less than a reasonable royalty.

**SIXTH CLAIM FOR RELIEF**  
**INFRINGEMENT OF U.S. PATENT NO. 6,346,736**

58. IP Bridge realleges and incorporates paragraphs 1-57 of this Complaint.

59. On February 12, 2002, the USPTO duly and legally issued the '736 Patent, entitled "Trench Isolated Semiconductor Device." A copy of the '736 Patent is attached hereto as Exhibit G.

60. IP Bridge owns by assignment the entire right, title, and interest in and to the '736 Patent, including the right to sue and recover damages, including damages for past infringement.

61. On information and belief, Intel has had knowledge of the '736 Patent and its infringement thereof at least by virtue of the filing of the Complaint in this action.

62. Intel has infringed and is infringing, directly and/or indirectly, either literally or under the doctrine of equivalents, at least claims 6, 7, 11, 13, 14, and 16 of the '736 Patent in violation of at least 35 U.S.C. § 271(a) and/or (b) by making, having made, using, selling, offering for sale, and/or importing into the United States, Intel's E89459, QX9650, and GT3e G82494 semiconductor products, and each and every product Intel makes and/or has made incorporating the same or equivalent processes and/or structures, including without limitation Intel's 22nm, 32nm, and 45nm process node products that meet every limitation of at least the above-identified claims ("the '736 Accused Products"). For example, on information and belief, the '736 Accused Products meet each and every limitation at least claim 6 of the '736 Patent because they comprise a semiconductor substrate having an active region and an isolation region surrounding said active region; a first trench portion filled with an insulating material formed to separate said active region from said isolation region; a second trench portion filled with an insulating material formed to separate a plurality of dummy semiconductor portions in said isolation region; an interlayer insulating film formed to extend continuously over said active region and said isolation region; a wire formed on said interlayer insulating film covering said dummy semiconductor portions and said second trench portion in said isolation region; and a dielectric film interposed between at least



said dummy semiconductor portions of said isolation region and said interlayer insulating film, all of which are arranged in the manner recited in the above-identified claim.

63. Intel's actions alleged herein have actively induced and/or are continuing to actively induce infringement of at least claims 6, 7, 11, 13, 14, and 16 of the '736 Patent by actively encouraging acts of direct infringement, and Intel knows (or believes that there is a high probability but is taking deliberate steps to avoid knowing) that it is inducing infringement by encouraging and instructing third parties, including OEMs, ODMs, distributors, and other third party customers, to make, use, sell, offer for sale, and/or import into the United States the '736 Accused Products and products that incorporate the '736 Accused Products. For example, Intel's product literature for the '736 Accused Products instructs and encourages Intel's customers and other third parties to integrate the '736 Accused Products into products sold, offered for sale, and/or imported into the United States.

64. Intel's infringement of the '736 Patent is willful and deliberate, entitling IP Bridge to enhanced damages and attorneys' fees.

65. IP Bridge is entitled to recover from Intel all damages IP Bridge has sustained as a result of Intel's infringement of the '736 Patent, including without limitation not less than a reasonable royalty.

**SEVENTH CLAIM FOR RELIEF**  
**INFRINGEMENT OF U.S. PATENT NO. 7,800,165**

66. IP Bridge realleges and incorporates paragraphs 1-65 of this Complaint.

67. On September 21, 2010, the USPTO duly and legally issued the '165 Patent, entitled "Semiconductor Device and Method for Producing the Same." A copy of the '165 Patent is attached hereto as Exhibit H.

68. IP Bridge owns by assignment the entire right, title, and interest in and to the '165 Patent, including the right to sue and recover damages, including damages for past infringement.

69. On information and belief, Intel has had knowledge of the '165 Patent and its infringement thereof at least by virtue of the filing of the Complaint in this action.

70. Intel has infringed and is infringing, directly and/or indirectly, either literally or under the doctrine of equivalents, at least claims 1, 3, 5, 6, 10, 11, 13, 14, 16, 18, and 19 of the '165 Patent in violation of at least 35 U.S.C. § 271(a) and/or (b) by making, having made, using, selling, offering for sale, and/or importing into the United States, Intel's i5-3550 and M 5Y70 semiconductor products, and each and every product Intel makes and/or has made incorporating the same or equivalent processes and/or structures, including without limitation Intel's 14nm and 22nm process node products that meet every limitation of at least the above-identified claims ("the '165 Accused Products"). For example, on information and belief, the '165 Accused Products meet each and every limitation of at least claim 1 of the '165 Patent because they comprise a first semiconductor region of a first conductivity type formed on a substrate and having an upper surface and a side surface; a first impurity region of a second conductivity type formed in an upper portion of the first semiconductor region and made of a semiconductor; and a second impurity region of a second conductivity type formed in a side portion of the first semiconductor region and made of a semiconductor, wherein a resistivity of the second impurity region is substantially equal to or smaller than that of the first impurity region, all of which are arranged in the manner recited in the above-identified claim.

71. Intel's actions alleged herein have actively induced and/or are continuing to actively induce infringement of at least claims 1, 3, 5, 6, 10, 11, 13, 14, 16, 18, and 19 of the '165 Patent by actively encouraging acts of direct infringement, and Intel knows (or believes that there

is a high probability but is taking deliberate steps to avoid knowing) that it is inducing infringement by encouraging and instructing third parties, including OEMs, ODMs, distributors, and other third party customers, to make, use, sell, offer for sale, and/or import into the United States the '165 Accused Products and products that incorporate the '165 Accused Products. For example, Intel's product literature for the '165 Accused Products instructs and encourages Intel's customers and other third parties to integrate the '165 Accused Products into products sold, offered for sale, and/or imported into the United States.

72. Intel's infringement of the '165 Patent is willful and deliberate, entitling IP Bridge to enhanced damages and attorneys' fees.

73. IP Bridge is entitled to recover from Intel all damages IP Bridge has sustained as a result of Intel's infringement of the '165 Patent, including without limitation not less than a reasonable royalty.

**EIGHTH CLAIM FOR RELIEF**  
**INFRINGEMENT OF U.S. PATENT NO. 6,387,824**

74. IP Bridge realleges and incorporates by reference the allegations of paragraphs 1-73 of this Complaint.

75. On May 14, 2002, the USPTO duly and legally issued the '824 Patent, entitled "Method for Forming Porous Forming Wiring Structure." A copy of the '824 Patent is attached hereto as Exhibit I.

76. IP Bridge owns by assignment the entire right, title, and interest in and to the '824 Patent, including the right to sue and recover damages, including damages for past infringement.

77. On information and belief, Intel has had knowledge of the '824 Patent and its infringement thereof at least by virtue of the filing of this Complaint in this action.

78. Intel has infringed and is infringing, directly and/or indirectly, either literally or under the doctrine of equivalents, at least claim 3 of the '824 Patent in violation of at least 35 U.S.C. § 271(a), (b), and/or (g), by making, having made, using, selling, offering for sale, and/or importing into the United States, Intel's i5-3550, GT3e G82494, E89459, and M 5Y70 semiconductor products, and each and every product Intel makes and/or has made incorporating the same or equivalent structure or made using the same or equivalent processes, including without limitation Intel's 14nm, 22nm, and 32nm process node semiconductor products made using the patented process of at least claim 3 of the '824 Patent, which products are not materially changed by subsequent processes and do not become a trivial and nonessential component of another product ("the '824 Accused Products"). For example, on information and belief, with respect to the '824 Accused Products, Intel has infringed at least claim 3 of the '824 Patent because the steps to manufacture such products comprise the steps of, *inter alia*, depositing, on a substrate, an organic-inorganic hybrid film having a siloxane skeleton; patterning said organic-inorganic hybrid film to form a wire groove in said organic-inorganic hybrid film; filling a metal film in said wire groove to form a buried wire composed of said metal film; and performing a plasma process using a plasma derived from a gas containing a reducing gas with respect to said organic-inorganic hybrid film to form an inter-layer dielectric which is a porous film composed of said organic-inorganic hybrid film.

79. Intel's actions alleged herein have actively induced and/or are continuing to actively induce infringement of at least claim 3 of the '824 Patent by actively encouraging acts of direct infringement (for example, using, selling, offering for sale, and importing into the United States the '824 Accused Products), and Intel knows (or believes that there is a high probability but is taking deliberate steps to avoid knowing) that it is inducing infringement by encouraging and

instructing third parties, including OEMs, ODMs, distributors, and other third party customers, to use, import into the United States, and/or sell or offer for sale, the '824 Accused Products and products that incorporate the '824 Accused Products. For example, Intel's product literature for the '824 Accused Products instructs and encourages Intel's customers and other third parties to integrate the '824 Accused Products into products sold, offered for sale, and/or imported into the United States.

80. Intel's infringement of the '824 Patent is willful and deliberate, entitling IP Bridge to enhanced damages and attorneys' fees.

81. IP Bridge is entitled to recover from Intel all damages IP Bridge has sustained as a result of Intel's infringement of the '824 Patent, including without limitation not less than a reasonable royalty.

**NINTH CLAIM FOR RELIEF**  
**INFRINGEMENT OF U.S. PATENT NO. 6,602,802**

82. IP Bridge realleges and incorporates by reference the allegations of paragraphs 1-81 of this Complaint.

83. On August 5, 2003, the USPTO duly and legally issued the '802 Patent, entitled "Method of Forming a Porous Film on a Substrate." A copy of the '802 Patent is attached hereto as Exhibit J.

84. IP Bridge owns by assignment the entire right, title, and interest in and to the '802 Patent, including the right to sue and recover damages, including damages for past infringement.

85. On information and belief, Intel has had knowledge of the '802 Patent and its infringement thereof at least by virtue of the filing of this Complaint in this action.

86. Intel has infringed and is infringing, directly and/or indirectly, either literally or under the doctrine of equivalents, at least claims 1, 2, and 4 of the '802 Patent in violation of at

least 35 U.S.C. § 271(a), (b), and/or (g), by making, having made, using, selling, offering for sale, and/or importing into the United States, Intel's i5-3550, GT3e G82494, E89459, and M 5Y70 semiconductor products, and each and every product Intel makes and/or has made incorporating the same or equivalent structure or made using the same or equivalent processes, including without limitation Intel's 14nm, 22nm, and 32nm process node semiconductor products made using the patented process of at least claims 1, 2, and 4 of the '802 Patent, which products are not materially changed by subsequent processes and do not become a trivial and nonessential component of another product ("the '802 Accused Products"). For example, on information and belief, with respect to the '802 Accused Products, Intel has infringed at least claim 1 of the '802 Patent because the steps to manufacture such products comprise the steps of, *inter alia*, depositing, on a substrate, an organic-inorganic hybrid film having a siloxane skeleton; and forming a porous film composed of said organic-inorganic hybrid film.

87. Intel's actions alleged herein have actively induced and/or are continuing to actively induce infringement of at least claims 1, 2, and 4 of the '802 Patent by actively encouraging acts of direct infringement (for example, using, selling, offering for sale, and importing into the United States the '802 Accused Products), and Intel knows (or believes that there is a high probability but is taking deliberate steps to avoid knowing) that it is inducing infringement by encouraging and instructing third parties, including OEMs, ODMs, distributors, and other third party customers, to use, import into the United States, and/or sell or offer for sale, the '802 Accused Products and products that incorporate the '802 Accused Products. For example, Intel's product literature for the '802 Accused Products instructs and encourages Intel's customers and other third parties to integrate the '802 Accused Products into products sold, offered for sale, and/or imported into the United States.

88. Intel's infringement of the '802 Patent is willful and deliberate, entitling IP Bridge to enhanced damages and attorneys' fees.

89. IP Bridge is entitled to recover from Intel all damages IP Bridge has sustained as a result of Intel's infringement of the '802 Patent, including without limitation not less than a reasonable royalty.

### **JURY DEMAND**

90. Plaintiff requests a trial by jury pursuant to Rule 38 of the Federal Rules of Civil Procedure on all issues so triable.

### **RELIEF REQUESTED**

IP Bridge requests judgment in its favor and against Intel and respectfully requests the following relief:

1. A judgment declaring that Intel has infringed one or more claims of each of the Asserted Patents in this litigation pursuant to 35 U.S.C. §§ 271(a), 271(b), and/or 271(g);
2. A judgment awarding IP Bridge its damages resulting from Intel's infringement of the Asserted Patents, and increasing such damages pursuant to 35 U.S.C. § 284 where appropriate because of the willful and deliberate nature of Intel's conduct;
3. A judgment requiring Intel to pay IP Bridge costs, expenses, and pre-judgment and post-judgment interest for Intel's infringement of each of the Asserted Patents;
4. A judgment finding that this is an exceptional case and awarding IP Bridge's attorneys' fees pursuant to 35 U.S.C. § 285; and
5. Such other relief as the Court deems just and proper.

Dated: September 29, 2017

Respectfully submitted,

/s/ Jennifer H. Doan

Jennifer H. Doan  
State Bar No. 08809050  
Joshua R. Thane  
State Bar No. 24060713  
J. Randy Roeser  
Texas Bar No. 24089377  
HALTOM & DOAN  
6500 Summerhill Road, Suite 100  
Texarkana, TX 75503  
Telephone: (903) 255-1000  
Facsimile: (903) 255-0800  
Email: jdoan@haltomdoan.com  
Email: jthane@haltomdoan.com  
Email: roeser@haltomdoan.com

James R. Batchelder  
(CA Bar No. 136347)  
(Eastern District of Texas Member)  
Andrew N. Thomases  
(CA Bar No. 177339)  
(Eastern District of Texas Member)  
Andrew T. Radsch  
(CA Bar No. 303665)  
(Eastern District of Texas Member)  
Christopher M. Bonny  
(CA Bar No. 280554)  
(Eastern District of Texas Member)  
ROPES & GRAY LLP  
1900 University Avenue, 6th Floor  
East Palo Alto, CA 94303-2284  
Telephone: (650) 617-4000  
Facsimile: (650) 617-4090  
James.Batchelder@ropesgray.com  
Andrew.Thomases@ropesgray.com  
Andrew.Radsch@ropesgray.com  
Christopher.Bonny@ropesgray.com



Alexander E. Middleton  
(NY Bar No. 4797114)  
(Eastern District of Texas Member)  
ROPES & GRAY LLP  
1211 Avenue of the Americas  
New York, NY 10036-8704  
Telephone: (212) 596-9000  
Facsimile: (212) 596-9090  
Alexander.Middleton@ropesgray.com

Michael J. Gershoni  
(CA Bar No. 311192)  
(Eastern District of Texas Member)  
2099 Pennsylvania Ave., NW  
Washington, D.C. 20006-6807  
Telephone: (202) 508-4727  
Facsimile: (202) 508-4650  
Michael.Gershoni@ropesgray.com

**ATTORNEYS FOR GODO KAISHA IP  
BRIDGE 1**