

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

NORTH STAR INNOVATIONS
INC.,

Plaintiff

v.

INTEGRATED SILICON
SOLUTION, INC.,

Defendant

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C.A. No.

JURY TRIAL DEMANDED

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff North Star Innovations Inc. ("Plaintiff" or "North Star"), by and through its attorneys, files this Complaint for Patent Infringement against Defendant Integrated Silicon Solution, Inc. ("ISSI"), and alleges as follows:

PARTIES

1. Plaintiff North Star is a corporation organized and existing under the laws of the State of Delaware, with a place of business at 600 Anton Blvd., Costa Mesa, California 92626. Plaintiff is the owner of seminal patents in the fields of integrated circuits, semiconductor memory architecture, and semiconductor memory devices, including patents that address volatile memory, such as DRAM and SRAM. Plaintiff's portfolio includes patents that teach valuable innovations and improvements related to speed, power consumption, density, reliability, and cost. Plaintiff is actively engaged in licensing efforts with respect to such technologies.

2. Defendant ISSI is a corporation organized and existing under the laws of the State of Delaware, with a place of business at 1623 Buckeye Drive, Milpitas, California 95035.

Defendant may be served with process in this judicial district by serving its registered agent for service of process: The Corporation Trust Company, Corporation Trust Center, 1209 Orange Street, Wilmington, DE 19801. Defendant designs, develops, markets, and sells integrated circuits to various markets, including the following: (i) automotive, (ii) communications, (iii) digital consumer, (iv) industrial, and (v) medical. Its primary products are high speed and low power SRAM and low and medium density DRAM.

JURISDICTION AND VENUE

3. This action arises under the patent laws of the United States, 35 U.S.C. § 1 *et seq.*, including §§ 271, 281, 282, 283, 284, and 285. This Court has subject matter jurisdiction over this patent infringement action pursuant to 28 U.S.C. §§ 1331, and 1338(a).

4. This Court has personal jurisdiction over ISSI. Upon information and belief, Defendant has regularly conducted and continues to conduct business in the State of Delaware and in this judicial district. Defendant, directly or indirectly through its agents, has committed infringing activities in Delaware by using, marketing, offering for sale, selling, and/or importing products and systems that infringe the Patents-In-Suit (as defined below) or by placing such infringing products and systems into the stream of commerce with the awareness, knowledge, and intent that they would be used, offered for sale, or sold by others in this judicial district and/or purchased by consumers in this judicial district. Further, this Court has personal jurisdiction over Defendant because Defendant is incorporated under the laws of the State of Delaware. Defendant has thereby availed itself of the privileges of conducting business in the State of Delaware and has sought protection and benefit from the laws of the State of Delaware. This Court's exercise of personal jurisdiction over Defendant would therefore comport with due process.

5. Venue is proper pursuant to 28 U.S.C. §§ 1391(b) and 1400(b).

THE PATENTS-IN-SUIT

6. On February 23, 1999, U.S. Patent No. 5,875,143 (“the ’143 Patent”) – entitled “Dynamic Memory Device with Refresh Circuit and Refresh Method” – was lawfully and properly issued by the United States Patent and Trademark Office (“USPTO”), after a full and fair examination. The named inventor on the ’143 Patent is Jacob Ben-Svi. A true and correct copy of the ’143 Patent is attached hereto as Exhibit A and incorporated by reference.

7. Generally speaking, the ’143 Patent teaches, among other things, an optimized, flexible, programmable refresh circuit that reduces size and power consumption in a DRAM or SDRAM memory device by allowing for partial refresh of a memory array.

8. On April 6, 1999, U.S. Patent No. 5,892,777 (“the ’777 Patent”) – entitled “Apparatus and Method for Observing the Mode of a Memory Device” – was lawfully and properly issued by the USPTO, after a full and fair examination. The named inventors on the ’777 Patent are Michael Nesheiwat, Roger Grass, and Arthur O’Donnell. A true and correct copy of the ’777 Patent is attached hereto as Exhibit B and incorporated by reference.

9. Generally speaking, the ’777 Patent teaches, among other things, an improved circuit design for SDRAM that includes additional circuitry for the mode register. The patented design facilitates observation and testing of the value or state of the mode register without affecting the operation of the device and in a way that uses minimum silicon area.

10. On September 28, 2004, U.S. Patent No. 6,798,074 (“the ’074 Patent”) – entitled “Method of Attaching a Die to a Substrate” – was lawfully and properly issued by the USPTO, after a full and fair examination. The named inventors on the ’074 Patent are Man Hon

Cheng, Wai Wong Chow, and Wai Keung Ho. A true and correct copy of the '074 Patent is attached hereto as Exhibit C and incorporated by reference.

11. Generally speaking, the '074 Patent teaches, among other things, a semiconductor device in which the adhesive material extends beyond the edges of the die to enhance delamination resistance at the interface of the die and the substrate.

12. On April 5, 2005, U.S. Patent No. 6,875,635 (the '635 Patent) – entitled “Method of Attaching a Die to a Substrate” – was lawfully and properly issued by the USPTO, after a full and fair examination. The named inventors on the '635 Patent are Man Hon Cheng, Wai Wong Chow, and Wai Keung Ho. A true and correct copy of the '635 Patent is attached hereto as Exhibit D.

13. Generally speaking, the '635 Patent teaches, among other things, a method for attaching a die to a substrate, wherein the adhesive material extends beyond the edges of the die to enhance delamination resistance at the interface of the die and the substrate.

14. The '143 Patent, the '777 Patent, the '074 Patent, and the '635 Patent may be referred to individually as a “Patent-in-Suit” or collectively as the “Patents-in-Suit.”

15. By way of assignment, Plaintiff is the owner of all right, title, and interest in and to the Patents-in-Suit, including the rights to prosecute this action and to collect and receive damages for all past, present, and future infringements.

COUNT ONE: INFRINGEMENT OF THE '143 PATENT

16. Plaintiff incorporates the above allegations as if set forth here in full.

17. The '143 Patent is valid and enforceable. Defendant does not have a license to practice the patented inventions of the '143 Patent.

18. Defendant has infringed and is currently infringing, either literally or under the doctrine of equivalents, the '143 Patent by, among other things, making, using, offering for sale, selling, and/or importing within this judicial district and elsewhere in the United States – without license or authority – products, devices, or systems falling within the scope of one or more claims of the '143 Patent. For example, Defendant's 1Gb Mobile LPDDR2 SDRAM, Part No. IS43LD16640A ("Accused Product No. 1" or "Mobile DRAM") directly infringes at least Claim 2 of the '143 Patent, either literally or under the doctrine of equivalents.

19. More specifically, the Mobile DRAM infringes at least Claim 2 because it meets each and every limitation of Claim 2, either literally or under the doctrine of equivalents. For example, the Mobile DRAM includes, among other things, "a reference register for storing a reference address and control logic coupled to said reference register, to said address generator, and to said decoder, wherein said control logic uses said addresses generated by said address generator and said reference address to determine which storage elements are in said first sub-set and which storage elements are in said second sub-set."

20. On information and belief, additional, similar models of Defendant's memory products are believed to infringe one or more claims of the '143 Patent. Plaintiff expressly reserves the right to assert additional claims and to identify additional infringing products in accordance with the Court's scheduling order and local rules.

21. Plaintiff has been damaged by Defendant's infringing conduct and will continue to be damaged unless Defendant is enjoined from further infringement. Accordingly, upon finding for Plaintiff, the Court should award to Plaintiff damages adequate to compensate for the infringement, in an amount to be determined at trial, but in no event less than a reasonable royalty for the use made of the invention by the infringer, together with interest and

costs as fixed by the Court. Further, upon judgment in favor of Plaintiff, the Court should permanently enjoin Defendant from committing the infringing acts.

COUNT TWO: INFRINGEMENT OF THE '777 PATENT

22. Plaintiff incorporates the above allegations as if set forth here in full.

23. The '777 Patent is valid and enforceable. Defendant does not have a license to practice the patented inventions of the '777 Patent.

24. Defendant has infringed and is currently infringing, either literally or under the doctrine of equivalents, the '777 Patent by, among other things, making, using, offering for sale, selling, and/or importing within this judicial district and elsewhere in the United States – without license or authority – products, devices, and/or systems falling within the scope of one or more claims of the '777 Patent. For example, and on information and belief, Defendant, through its use and testing of the Mobile DRAM, directly infringes at least Claim 1 of the '777 Patent.

25. More specifically, Defendant's use and testing of the Mobile DRAM constitutes direct infringement of at least Claim 1 because such use and testing satisfies each and every limitation of Claim 1, either literally or under the doctrine of equivalents. For example, any use or testing of the Mobile DRAM would involve the step of “outputting [from the control register a] received value responsive to a second control signal when no output is expected from the memory device.”

26. Various end users of the Mobile DRAM are also believed to be directly infringing one or more claims of the '777 Patent. Further, additional, similar models of Defendant's memory products are believed to infringe one or more claims of the '777 Patent.

Plaintiff expressly reserves the right to assert additional claims, to identify additional infringing products, and to add specific allegations of indirect infringement in accordance with the Court's scheduling order and local rules.

27. Plaintiff has been damaged by Defendant's infringing conduct and will continue to be damaged unless Defendant is enjoined from further infringement. Accordingly, upon finding for Plaintiff, the Court should award to Plaintiff damages adequate to compensate for the infringement, in an amount to be determined at trial, but in no event less than a reasonable royalty for the use made of the invention by the infringer, together with interest and costs as fixed by the Court. Further, upon judgment in favor of Plaintiff, the Court should permanently enjoin Defendant from committing the infringing acts.

COUNT THREE: INFRINGEMENT OF THE '074 PATENT

28. Plaintiff incorporates the above allegations as if set forth here in full.

29. The '074 Patent is valid and enforceable. Defendant does not have a license to practice the patented inventions of the '074 Patent.

30. Defendant has infringed and is currently infringing the '074 Patent by, among other things, making, using, offering for sale, selling, and/or importing within this judicial district and elsewhere in the United States – without license or authority – products, devices, and/or systems falling within the scope of one or more claims of the '074 Patent. For example, Defendant's 1Gb DDR3 SDRAM, Part No. IS43TR16640B (“Accused Product No. 2” or “DDR3 SDRAM”) directly infringes at least Claim 1 of the '074 Patent, either literally or under the doctrine of equivalents.

31. More specifically, the DDR3 SDRAM infringes at least Claim 1 because it meets each and every limitation of Claim 1, either literally or under the doctrine of equivalents.

For example, the DDR3 SDRAM includes, among other things, “adhesive material [that] extends beyond [the] edges of the die a distance greater than about two times a thickness of the die.”

32. On information and belief, additional, similar models of Defendant’s memory products are believed to infringe one or more claims of the ’074 Patent. Plaintiff expressly reserves the right to assert additional claims and to identify additional infringing products in accordance with the Court’s scheduling order and local rules.

33. Plaintiff has been damaged by Defendant’s infringing conduct and will continue to be damaged unless Defendant is enjoined from further infringement. Accordingly, upon finding for Plaintiff, the Court should award to Plaintiff damages adequate to compensate for the infringement, in an amount to be determined at trial, but in no event less than a reasonable royalty for the use made of the invention by the infringer, together with interest and costs as fixed by the Court. Further, upon judgment in favor of Plaintiff, the Court should permanently enjoin Defendant from committing the infringing acts.

COUNT FOUR: INFRINGEMENT OF THE ’635 PATENT

34. Plaintiff incorporates the above allegations as if set forth here in full.

35. The ’635 Patent is valid and enforceable. Defendant does not have a license to practice the patented inventions of the ’635 Patent.

36. Defendant has infringed and is currently infringing the ’635 Patent by, among other things, importing, offering for sale, or selling within this judicial district and elsewhere in the United States – without license or authority – one or more products that are made by a process patented in the United States, namely, the process taught by one or more claims of the

'635 Patent, in violation of, at a minimum, 35 U.S.C. § 271(g). Such infringing products include, for example, the DDR3 SDRAM.

37. On information and belief, additional, similar models of Defendant's memory products are believed to infringe one or more claims of the '635 Patent by virtue of being made by the patented process. Plaintiff expressly reserves the right to assert additional claims and to identify additional infringing products in accordance with the Court's scheduling order and local rules.

38. Plaintiff has been damaged by Defendant's infringing conduct and will continue to be damaged unless Defendant is enjoined from further infringement. Accordingly, upon finding for Plaintiff, the Court should award to Plaintiff damages adequate to compensate for the infringement, in an amount to be determined at trial, but in no event less than a reasonable royalty for the use made of the invention by the infringer, together with interest and costs as fixed by the Court. Further, upon judgment in favor of Plaintiff, the Court should permanently enjoin Defendant from committing the infringing acts.

DEMAND FOR JURY TRIAL

39. Plaintiff hereby demands a trial by jury on all issues.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff respectfully prays for entry of judgment as follows:

40. That Defendant has directly infringed, either literally or under the doctrine of equivalents, one or more claims of each of the Patents-In-Suit;

41. That Plaintiff is entitled to, and should recover, all damages to which Plaintiff is entitled under 35 U.S.C. § 284, but in no event less than a reasonable royalty;

42. That Defendant be ordered to provide an accounting;

43. That Plaintiff, as the prevailing party, shall recover from Defendant all taxable costs of court;

44. That Plaintiff shall recover from Defendant all pre- and post-judgment interest on the damages award, calculated at the highest interest rates allowed by law;

45. That Plaintiff is entitled to enhanced damages of up to three times the amount found by the jury or ordered by the Court, pursuant to 35 U.S.C. § 284;

46. That this case is exceptional and that Plaintiff therefore shall recover its attorney's fees and other recoverable expenses, under 35 U.S.C. § 285; and

47. That Plaintiff shall recover from Defendant such other and further relief as the Court may deem appropriate.

Dated: March 1, 2016

Respectfully submitted,

Of Counsel:

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