

UNITED STATES FEDERAL DISTRICT COURT  
FOR THE EASTERN DISTRICT OF TEXAS  
MARSHALL DIVISION

AVAGO TECHNOLOGIES GENERAL IP  
(SINGAPORE) PTE. LTD.,

Plaintiff,

v.

MAXIM INTEGRATED PRODUCTS, INC.,

Defendants.

Civil Action No. 2:15-cv-539

**JURY TRIAL DEMANDED**

**FIRST AMENDED COMPLAINT FOR PATENT INFRINGEMENT**

Plaintiff Avago Technologies General IP (Singapore) Pte. Ltd. (“Avago”) files this First Amended Complaint for Patent Infringement of several United States patents as identified below (collectively, the “Patents-in-Suit”) and alleges as follows:

**PARTIES**

1. Plaintiff Avago is a corporation formed under the laws of Singapore with its principal place of business at 1 Yishun Avenue 7, Singapore 768923.
2. Defendant Maxim Integrated Products, Inc. is a Delaware corporation having its principal place of business at 160 Rio Robles, San Jose, California 95134. Maxim is registered to do business in the State of Texas and may be served through its registered agent CSC – Lawyers Incorporating Service Co., 211 E. 7<sup>th</sup> Street, Suite 620, Austin, Texas 78701.

**JURISDICTION AND VENUE**

3. Avago brings this civil action for patent infringement under the Patent Laws of the United States, 35 U.S.C. § 1 *et. seq.*, including 35 U.S.C. §§ 271, 281-285. This Court has subject matter jurisdiction over this action under 28 U.S.C. §§ 1331 and 1338.
4. Maxim transacts and conducts business in this District and the State of Texas.

Maxim has significant operations in Texas, including operations associated with its acquisition of Texas-based Dallas Semiconductor in 2001 as a wholly owned subsidiary. Maxim strongly identifies itself with Texas, including maintaining trademarks in “Dallas Semiconductor” and selling products under the “DS” designation. Maxim has substantial operations in Texas, including facilities in Dallas, Austin, and San Antonio. Maxim’s Texas facilities employ approximately 1,400 people.

5. Avago would show this District to be the proper forum for this litigation for at least the following additional reasons: Maxim has availed itself of the privilege of the courts in this District by filing 18 different patent infringement lawsuits here. Maxim has taken the position that the Eastern District of Texas would be the proper venue for multidistrict litigation based on Maxim’s strong presence in Texas. Maxim has previously sought to transfer multiple patent cases from other jurisdictions , to this District based upon its arguments that this District would be the most appropriate forum for such litigation.

6. Avago’s causes of action arise, at least in part, from Maxim’s business contacts and other activities in the State of Texas and in this District. Upon information and belief, Maxim has committed acts of infringement within this District and the State of Texas by, *inter alia*, making, selling, offering for sale, importing, and/or using products that infringe one or more claims of the Patents-in-Suit. More specifically, Maxim, directly and/or through intermediaries, uses, sells, ships, distributes, offers for sale, or advertises and otherwise promotes its products in the United States, the State of Texas, and this District.

7. Upon information and belief, Maxim solicits customers in the State of Texas and this District, and has many customers who are residents of the State of Texas and this District who use Maxim’s products here.

8. Venue is proper in this district under 28 U.S.C. §§ 1391 and 1400(b).

**THE PATENTS-IN-SUIT**

9. On February 4, 1997, the United States Patent and Trademark Office (“USPTO”) duly and legally issued, after a full and fair examination, U.S. Patent No. 5,599,739, titled “Barrier Layer Treatments for Tungsten Plug,” to inventors Sailesh M. Merchant, Arun K. Nanda, and Pradip K. Roy (“the ’739 Patent”). A true and correct copy of the ’739 Patent is attached as Exhibit A to this Complaint.

10. On June 4, 1996, the USPTO duly and legally issued, after a full and fair examination, U.S. Patent No. 5,523,259, titled “Method of Forming Metal Layers Formed as a Composite of Sub-Layers Using Ti Texture Control Layer,” to Sailesh M. Merchant, Arun K. Nanda, and Pradip K. Roy (“the ’259 Patent”). A true and correct copy of the ’259 Patent is attached as Exhibit B to this Complaint.

11. On July 4, 2000, the USPTO duly and legally issued, after a full and fair examination, U.S. Patent No. 6,083,271, titled “Method and Apparatus for Specifying Multiple Power Domains in Electronic Circuit Designs,” to David Allen Morgan (“the ’271 Patent”). A true and correct copy of the ’271 Patent is attached as Exhibit C to this Complaint.

12. On March 21, 2000, the USPTO duly and legally issued, after a full and fair examination, U.S. Patent No. 6,040,616, titled “Device and Method of Forming a Metal to Metal Capacitor Within an Integrated Circuit,” to Donald C. Dennis, Joseph R. Radosevich, and Ranbir Singh (“the ’616 Patent”). A true and correct copy of the ’616 Patent is attached as Exhibit D to this Complaint.

13. On February 27, 2001, the USPTO duly and legally issued, after a full and fair examination, U.S. Patent No. 6,194,323, titled “Deep Sub-Micron Metal Etch with In-Situ Hard

Mask Etch,” to Stephen Ward Downey and Alan Yen (“the ’323 Patent”). A true and correct copy of the ’323 Patent is attached as Exhibit E to this Complaint.

14. By assignment, Avago owns all right, title, and interest in and to the Patents-in-Suit, including but not limited to the right to enforce the Patents-in-Suit and collect damages for past and future infringements.

### **BACKGROUND**

15. In 2014, Avago acquired LSI Corporation, including its substantial patent portfolio. The patent portfolio covers innovative technologies developed by LSI as well as cutting-edge technologies invented by its predecessor companies, such as Agere Systems, Inc., Lucent Technologies, AT&T Corporation, and Bell Laboratories. These companies were preeminent in the semiconductor industry and at the forefront of technological innovations in this area.

16. Maxim has already recognized the value and importance of the LSI patent portfolio. Maxim has taken a license to various semiconductor manufacturing technologies embodied in the LSI patent portfolio for nearly two decades.

17. Maxim’s license to these technologies lapsed on December 31, 2011. Despite continuing to use the various technological advancements provided by the LSI patent portfolio, Maxim has failed to compensate Avago for these critical technologies. Avago has made numerous attempts to resolve Maxim’s continued infringement amicably and has engaged in extensive licensing negotiations with Maxim. But Avago’s efforts have thus far been unsuccessful. Accordingly, Avago has now filed this lawsuit.

**COUNT 1**  
**(Infringement of U.S. Patent No. 5,599,739)**

18. Avago incorporates by reference each and every allegation in the preceding paragraphs.

19. Upon information and belief, Maxim practiced each and every step of one or more claims of the '739 Patent. For example, Maxim practiced one or more of the claimed methods when manufacturing at least its MAX6946, MAX2634, MAX7356, MAX17126, DS28E10, and similar semiconductor devices.

20. Maxim had actual knowledge of the '739 Patent at least as early as April 17, 2007, and at least since that date has had actual knowledge that one or more of its processes would infringe the claims of the '739 Patent, if not licensed.

21. Maxim's infringement was willful and deliberate, and caused substantial damage to Avago.

**COUNT 2**  
**(Infringement of U.S. Patent No. 5,523,259)**

22. Avago incorporates by reference each and every allegation in the preceding paragraphs.

23. Upon information and belief, Maxim practiced each and every step of one or more claims of the '259 Patent. For example, Maxim practiced one or more of the methods claimed by the '259 Patent when manufacturing at least its MAX1305 and similar semiconductor devices.

24. Maxim had actual knowledge of the '259 Patent at least as early as August 23, 2012, and at least since that date has had actual knowledge that one or more of its processes infringe the claims of the '259 Patent.

25. Maxim's infringement was willful and deliberate, and caused substantial damage

to Avago.

**COUNT 3**  
**(Infringement of U.S. Patent No. 6,083,271)**

26. Avago incorporates by reference each and every allegation in the preceding paragraphs.

27. Upon information and belief, Maxim practices each and every step of one or more claims of the '271 Patent. For example, Maxim infringes one or more of the claimed methods when using the Unified Power Format ("UPF") and/or Common Power Format ("CPF") during the design of its semiconductor devices.

28. Maxim had actual knowledge of the '271 Patent at least as early as October 4, 2011, and at least since that date has had actual knowledge that its design processes infringe the claims of the '271 Patent.

29. Maxim's infringement has been, and continues to be, willful and deliberate, and has caused substantial damage to Avago.

**COUNT 4**  
**(Infringement of U.S. Patent No. 6,040,616)**

30. Avago incorporates by reference each and every allegation in the preceding paragraphs.

31. Maxim has made, used, offered to sell, sold and/or imported into the United States products, including but not limited to MAX2634, that infringe one or more claims of the '616 Patent.

32. Maxim had actual knowledge of the '616 Patent at least as early as October 4, 2011, and at least since that date has had actual knowledge that one or more of its products infringe the claims of the '616 Patent.

33. Maxim's infringement has been willful and deliberate, and caused substantial damage to Avago.

**COUNT 5**  
**(Infringement of U.S. Patent No. 6,194,323)**

34. Avago incorporates by reference each and every allegation in the preceding paragraphs.

35. Upon information and belief, Maxim practices each and every step of one or more claims of the '323 Patent. For example, Maxim practices one or more of the methods claimed by the '323 Patent when manufacturing at least its MAX2634, DS28E10 and similar semiconductor devices.

36. Maxim had actual knowledge of the '323 Patent at least as early as the filing and service of the instant lawsuit, and has had actual knowledge that one or more of its products infringe the claims of the '323 Patent since that time.

37. Maxim's infringement of the '323 Patent will continue unless enjoined by this Court.

38. The infringing activities by Maxim have caused and will continue to cause irreparable injury to Avago for which there exists no adequate remedy at law.

**PRAYER FOR RELIEF**

WHEREFORE, Avago requests that judgment be entered in its favor and against Maxim as follows:

- a. Entering judgment declaring that Maxim has infringed one or more claims of the Patents-in-Suit in violation of 35 U.S.C. § 271;
- b. Enjoining Maxim, its officers, agents, subsidiaries and employees, and those in privity or in active concert with them, from further activities that constitute infringement of U.S. Pat. No. 6,194,323 within the United States;

- c. Declaring that Maxim's infringement of the Patents-in-Suit is willful and deliberate pursuant to 35 U.S.C. § 284;
- d. Ordering that Avago be awarded damages in an amount no less than a reasonable royalty for each asserted patent arising out of Maxim's infringement of the Patents-in-Suit, together with any other monetary amounts recoverable by Avago;
- e. Declaring this an exceptional case under 35 U.S.C. § 285 and awarding attorneys' fees and trebling of damages; and
- f. Awarding Avago such other costs and further relief as the Court deems just and proper.

**DEMAND FOR JURY TRIAL**

Pursuant to Rule 38 of the Federal Rules of Civil Procedure, Avago demands a trial by jury on all issues so triable.



Dated: June 12, 2015

Respectfully submitted by:

/s/ Bruce S. Sostek w/ permission

---

Bruce S. Sostek

State Bar No. 18855700

Bruce.Sostek@tklaw.com

Jane Politz Brandt

State Bar No. 02882090

Richard L. Wynne, Jr.

State Bar No. 24003214

Richard.Wynne@tklaw.com

Vishal Patel

State Bar No. 24065885

Vishal.Patel@tklaw.com

THOMPSON & KNIGHT LLP

One Arts Plaza

1722 Routh St., Suite 1500

Dallas, Texas 75201

214.969.1700

214.969.1751 (Fax)

J. Mark Mann

State Bar No. 12926150

Mark@themannfirm.com

MT2 LAW GROUP

300 West Main St.

Henderson, TX 75652

903.657.8540

903.657.6003 (Fax)

**Attorneys for Plaintiff:**

**AVAGO TECHNOLOGIES**

**GENERAL IP (SINGAPORE) PTE. LTD.**

**CERTIFICATE OF SERVICE**

The undersigned certifies that the foregoing document was filed electronically on the 11th day of June, 2015, in compliance with Local Rule CV-5(a) and has been served on all counsel who have consented to electronic service and all other counsel by regular mail.

/s/ Vishal Patel  
\_\_\_\_\_  
Vishal Patel