

IN THE UNITED STATES DISTRICT COURT  
FOR THE WESTERN DISTRICT OF TEXAS  
AUSTIN DIVISION

SILICON LABORATORIES INC.

*Plaintiff,*

v.

MAXLINEAR, INC.

*Defendant.*

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Civil Action No. 1:12cv692

JURY TRIAL DEMANDED

**COMPLAINT FOR DECLARATORY JUDGMENT OF PATENT NON-  
INFRINGEMENT AND/OR PATENT INVALIDITY**

Plaintiff Silicon Laboratories Inc. (“Silicon Labs”) hereby alleges as follows:

**NATURE OF THE ACTION**

1. This is an action for declaratory judgment of non-infringement and/or invalidity of United States Patent Nos. 7,362,178 (“the ’178 patent”); 7,778,613 (“the ’613 patent”), and 8,198,940 (“the ’940 patent”) (collectively referred to as the “MaxLinear Asserted Patents”).

**PARTIES**

2. Plaintiff Silicon Labs is a Delaware corporation with its principal place of business at 400 West Cesar Chavez, Austin, Texas 78701.

3. On information and belief, defendant MaxLinear, Inc. (“MaxLinear”) is a Delaware corporation with its principal place of business and corporate headquarters at 2051 Palomar Airport Road, Suite 100, Carlsbad, California 92011.

**JURISDICTION AND VENUE**

4. This Complaint arises under the patent laws of the United States, Title 35 of the United States Code. This Court has subject matter jurisdiction over this Complaint pursuant to 28 U.S.C. §§ 1331, 1338(a), and 2201–2202.

5. This Court may exercise personal jurisdiction over MaxLinear because acts that serve as the basis of this Complaint occurred in the State of Texas.

6. In addition, this Court may exercise personal jurisdiction over MaxLinear because MaxLinear has continuous and systematic contacts with the State of Texas and, on information and belief, does business in this District.

7. On information and belief, MaxLinear’s personnel have visited the district and conducted business in the district.

8. MaxLinear is represented by counsel for the purposes of negotiation with and litigation against Silicon Labs. This counsel includes Jose C. Villareal of the firm Wilson Sonsini Goodrich & Rosati P.C., who resides in this District and is licensed to practice law within the State of Texas. *See* Exhibits A & B.

9. On July 27, 2012 counsel for MaxLinear communicated to Silicon Labs’ counsel in this District that MaxLinear intends to assert the MaxLinear Asserted Patents against Silicon Labs.

10. Because MaxLinear has availed itself of the privileges of conducting activities in this District and has availed itself of the protections of the laws of the State of Texas, it is subject to personal jurisdiction in this Court. In addition, given that Silicon Labs is headquartered in Austin, this District and the State of Texas has a sufficient interest in resolving this dispute.

11. Venue is proper in this judicial district pursuant to 28 U.S.C. §§ 1391(b) and (c) because, among other reasons, MaxLinear is subject to personal jurisdiction in this District, the

Plaintiff Silicon Labs is headquartered in this District, a substantial part of the alleged events or omissions giving rise to the claim occurred in this District, and key witnesses reside in this District.

### **FACTUAL BACKGROUND**

12. Silicon Labs is a leading innovator in radio frequency (“RF”) technology and hybrid television tuners implemented in complementary metal-oxide-semiconductor (“CMOS”) integrated circuits. Silicon Labs holds over 200 U.S. patents related to fundamental RF and television technology.

13. MaxLinear makes and sells products that implement RF and hybrid television tuner technology in CMOS integrated circuits. MaxLinear’s products compete with those offered by Silicon Labs, including within the State of Texas and in this District.

14. Because of the potential overlap between the intellectual property developed by Silicon Labs and MaxLinear’s products, Silicon Labs sent MaxLinear an inquiry letter on March 26, 2012, highlighting Silicon Labs’ prior work in this area and requesting assurances that MaxLinear was not infringing Silicon Labs’ intellectual property.

15. In response, counsel for MaxLinear sent Silicon Labs a letter on April 2, 2012 requesting additional information. MaxLinear stated that, upon receipt of the information it would “review the information and schedule a time to meet with Silicon Labs’ representatives to address the patent(s) identified by Silicon Labs.”

16. On May 3, 2012 Silicon Labs sent MaxLinear a letter providing additional information about Silicon Labs’ patented technology. In this letter, Silicon Labs provided a list of 19 patents that are “exemplary” of Silicon Labs’ more than 200 issued U.S. RF and TV

patents. Silicon Labs also requested “assurances that MaxLinear products, in particular the MXL301 and MXL601 products, do not implement any of Silicon Labs’ patented technology.”

17. MaxLinear did not “schedule a time to meet with Silicon Labs’ representatives to address the patent(s) identified by Silicon Labs” as promised in its April 2 letter. Rather, just nine days after receiving Silicon Labs’ letter, MaxLinear filed a complaint in the Southern District of California on May 13, 2012 alleging that 658 claims from 19 patents that are owned by Silicon Labs are not infringed or are invalid. In its complaint, MaxLinear did not allege that any patents owned by MaxLinear were infringed. Nor did it allege that any of Silicon Labs’ products infringe any patent.

18. The complaint was filed as Case No. 3:12cv1161 in the Southern District of California and is attached as Exhibit A.

19. On July 27, 2012 counsel for MaxLinear communicated to Silicon Labs that it intended to seek leave to amend its May 13, 2012 complaint. Attached to its communication was a proposed amended complaint, which is attached as Exhibit B.

20. The proposed amended complaint purports to add three entirely new and unrelated causes of action alleging infringement of the MaxLinear Asserted Patents.

21. MaxLinear has not asserted claims related to the MaxLinear Asserted Patents in Case No. 3:12cv1161.

22. The MaxLinear Asserted Patents are related to technology that is distinct from the patents at issue in Case No. 3:12cv1161.

23. The MaxLinear Asserted Patents, which upon information and belief are assigned to MaxLinear, list inventors that are entirely separate from the patents at issue in Case No. 3:12cv1161, which are assigned to Silicon Labs.

24. The Silicon Labs products that MaxLinear alleges infringe the Asserted MaxLinear Patents are distinct from the MaxLinear products at issue in Case No. 3:12cv1161.

25. Further, MaxLinear has threatened classes of products that are not at issue in Case No. 3:12cv116, such as satellite tuners, FM radio tuners, and wireless products.

26. The products that MaxLinear accuses of infringing the MaxLinear Asserted Patents were developed in Austin, Texas. Thus, the majority of the witnesses and documents related to MaxLinear's claims of infringement are located in Austin, Texas.

### **COUNT I**

#### **(Declaratory Judgment of Invalidity of the '178 Patent)**

27. Silicon Labs incorporates by reference paragraphs 1 through 26 above as if fully set forth herein.

28. The '178 patent issued on April 22, 2008 to Raymond Montemayor and Curtis Ling and is titled "Wide Dynamic Range Amplifier Gain Control." Upon information and belief, the '178 patent is assigned to MaxLinear. A true and correct copy of the '178 patent is attached hereto as Exhibit C.

29. On July 27, 2012, MaxLinear wrote Silicon Labs asserting ownership of the '178 patent. MaxLinear asserted its intent to sue Silicon Labs for direct infringement of the '178 patent by making, using, selling, offering for sale, and/or importing into the United States products and systems including, but not limited to, Silicon Labs' Si2111/13/15 and Si2185 TV receivers, the Si2170/71/72, Si2173, Si2143, Si2136/46/55/56/76, and Si2128/38/48/58/78 TV Tuner ICs, the Si2107/08/09/10 Satellite Rx, the Si4320/22. Si44200, Si4312, Si4313, Si4355, Si4455, Si4060/61/63/64, Si4330, Si4430/31/32, and Si4460/61/63/64 EZRadioPRO products, Si1000/1/2/3/4/5, Si1010/1/2/3/4/5, Si1020/1/2/3/4/5/6/7, and Si1030/1/2/3/4/5/6/7 Wireless

MCUs, the Si4700/01, Si4702/03, Si4704/05, and Si4708/09 FM Receivers, the Si4706 and Si4749 Data Receivers, the Si4707, Si4730/31, Si4734/35, Si4736/37/38/39, Si4770/77, Si4830, Si4820/24/31/35, Si4822/26/40/44 Multi-Band Receivers, and the Si4720/21 Transceivers.

30. The claims of the '178 patent are invalid as anticipated and/or obvious under 35 U.S.C. §§ 102 and/or 103. For example, the claims of the '178 patent are anticipated and/or obvious in view of at least the following references: United States Patent No. 6,167,244 and United States Patent Publication No. US 2003/0207675. Further, one or more of the accused products were on sale and provided to customers well before the priority date of the '178 patent.

31. As a result of the acts described in this Complaint, there exists a substantial controversy of sufficient immediacy and reality to warrant the issuance of a declaratory judgment as to the validity of the '178 patent.

32. An actual and justiciable controversy exists between Silicon Labs and MaxLinear as to whether the claims of the '178 patent are valid. A judicial declaration is necessary and appropriate so that Silicon Labs may ascertain its rights regarding the '178 patent.

## **COUNT II**

### **(Declaratory Judgment of Invalidity of the '613 Patent)**

33. Silicon Labs incorporates by reference paragraphs 1 through 32 above as if fully set forth herein.

34. The '613 patent issued on August 17, 2010 to Kishore Seendripu, Raymond Montemayor, Curtis Ling, Glenn Chang, and Sheng Ye and is titled "Dual Conversion Receiver with Programmable Intermediate Frequency and Channel Selection." Upon information and belief, the '613 patent is assigned to MaxLinear. A true and correct copy of the '613 patent is attached hereto as Exhibit D.

35. On July 27, 2012, MaxLinear wrote Silicon Labs asserting ownership of the '613 patent. MaxLinear asserted its intent to sue Silicon Labs for direct infringement of the '613 patent by making, using, selling, offering for sale, and/or importing into the United States products and systems including, but not limited to, Silicon Labs' Si2111/13/15 and Si2185 TV receivers and the Si2170/71/72, Si2173, Si2143, Si2136/46/55/56/76, and Si2128/38/48/58/78 TV Tuner ICs.

36. The claims of the '613 patent are invalid under 35 U.S.C. §§ 102, 103, and/or 112. For example, the claims of the '613 patent are invalid under 35 U.S.C. § 112 because they are not described or enabled. For example, the '613 patent does not describe or enable "a calibration module configured to reduce a difference between gains of the in-phase signal path and the quadrature signal path without using a calibration signal external to the receiver." Further, the '613 patent does not describe or enable a "calibration module being further configured to maintain a quadrature relationship between phases of the in-phase signal path and the quadrature signal path without using a calibration signal external to the receiver." Additionally, one or more of the claims of the '613 patent are anticipated and/or obvious in view of at least the following references: Pub. No. US 2004/0038649 to Lin *et al.*; Pub. No. US 2003/0207674 to Hughes; and US Pat. No. 7,146,146 to Masenten *et al.* Further, any infringement allegation would be premised on architectural features that were included in Silicon Labs' products that were on sale and provided to customers well before the priority date of the '613 patent.

37. As a result of the acts described in this Complaint, there exists a substantial controversy of sufficient immediacy and reality to warrant the issuance of a declaratory judgment as to the validity of the '613 patent.

38. An actual and justiciable controversy exists between Silicon Labs and MaxLinear as to whether the claims of the '613 patent are valid. A judicial declaration is necessary and appropriate so that Silicon Labs may ascertain its rights regarding the '613 patent.

**COUNT III**

**(Declaratory Judgment of Invalidity of the '940 Patent)**

39. Silicon Labs incorporates by reference paragraphs 1 through 38 above as if fully set forth herein.

40. The '940 patent issued on June 12, 2012 to James Qui and Sridhar Ramesh and is titled "Self-Calibrating Gain Control System." Upon information and belief, the '940 patent is assigned to MaxLinear. A true and correct copy of the '940 patent is attached hereto as Exhibit E.

41. On July 27, 2012, MaxLinear wrote Silicon Labs asserting ownership of the '940 patent. MaxLinear asserted its intent to sue Silicon Labs for direct infringement of the '940 patent by making, using, selling, offering for sale, and/or importing into the United States products and systems including, but not limited to, Silicon Labs' Si2111/13/15 and Si2185 TV receivers and the Si2170/71/72, Si2173, Si2143, Si2136/46/55/56/76, and Si2128/38/48/58/78 TV Tuner ICs.

42. The claims of the '940 patent are invalid as anticipated and/or obvious under 35 U.S.C. §§ 102 and/or 103. For example, the claims of the '940 patent are anticipated and/or obvious in view of at least the following references: United States Patent Nos. 6,999,012 and 7,024,169. Further, one or more of the accused products were on sale and provided to customers well before the priority date of the '940 patent.



43. As a result of the acts described in this Complaint, there exists a substantial controversy of sufficient immediacy and reality to warrant the issuance of a declaratory judgment as to the validity of the '940 patent.

44. An actual and justiciable controversy exists between Silicon Labs and MaxLinear as to whether the claims of the '940 patent are valid. A judicial declaration is necessary and appropriate so that Silicon Labs may ascertain its rights regarding the '178 patent.

#### **COUNT IV**

##### **(Declaratory Judgment of Non-Infringement of the '178 Patent)**

45. Silicon Labs incorporates by reference paragraphs 1 through 44 above as if fully set forth herein.

46. The '178 patent issued on April 22, 2008 to Raymond Montemayor and Curtis Ling and is titled "Wide Dynamic Range Amplifier Gain Control." Upon information and belief, the '178 patent is assigned to MaxLinear. A true and correct copy of the '178 patent is attached hereto as Exhibit C.

47. On July 27, 2012, MaxLinear wrote Silicon Labs asserting ownership of the '178 patent. MaxLinear asserted its intent to sue Silicon Labs for direct infringement of the '178 patent by making, using, selling, offering for sale, and/or importing into the United States products and systems including, but not limited to, Silicon Labs' Si2111/13/15 and Si2185 TV receivers, the Si2170/71/72, Si2173, Si2143, Si2136/46/55/56/76, and Si2128/38/48/58/78 TV Tuner ICs, the Si2107/08/09/10 Satellite Rx, the Si4320/22, Si44200, Si4312, Si4313, Si4355, Si4455, Si4060/61/63/64, Si4330, Si4430/31/32, and Si4460/61/63/64 EZRadioPRO products, Si1000/1/2/3/4/5, Si1010/1/2/3/4/5, Si1020/1/2/3/4/5/6/7, and Si1030/1/2/3/4/5/6/7 Wireless MCUs, the Si4700/01, Si4702/03, Si4704/05, and Si4708/09 FM Receivers, the Si4706 and

Si4749 Data Receivers, the Si4707, Si4730/31, Si4734/35, Si4736/37/38/39, Si4770/77, Si4830, Si4820/24/31/35, Si4822/26/40/44 Multi-Band Receivers, and the Si4720/21 Transceivers.

48. The claims of the '178 patent are not infringed by Silicon Labs. For example, the claims of the '178 patent are not infringed by Silicon Labs' Si2111/13/15 and Si2185 TV receivers, the Si2170/71/72, Si2173, Si2143, Si2136/46/55/56/76, and Si2128/38/48/58/78 TV Tuner ICs, the Si2107/08/09/10 Satellite Rx, the Si4320/22. Si44200, Si4312, Si4313, Si4355, Si4455, Si4060/61/63/64, Si4330, Si4430/31/32, and Si4460/61/63/64 EZRadioPRO products, Si1000/1/2/3/4/5, Si1010/1/2/3/4/5, Si1020/1/2/3/4/5/6/7, and Si1030/1/2/3/4/5/6/7 Wireless MCUs, the Si4700/01, Si4702/03, Si4704/05, and Si4708/09 FM Receivers, the Si4706 and Si4749 Data Receivers, the Si4707, Si4730/31, Si4734/35, Si4736/37/38/39, Si4770/77, Si4830, Si4820/24/31/35, Si4822/26/40/44 Multi-Band Receivers, and the Si4720/21 Transceivers, either literally or under the doctrine of equivalents.

49. Silicon Labs' accused products do not infringe the claims of the '178 patent. For example, the products that MaxLinear has accused of infringing the '178 patent do not include overlapping gain control ranges. Nor do they include a variable gain amplifier stage that is continuously variable over a predetermined gain control range based on a gain control signal provided to the stage gain control input.

50. As a result of the acts described in this Complaint, there exists a substantial controversy of sufficient immediacy and reality to warrant the issuance of a declaratory judgment as to the infringement of the '178 patent by Silicon Labs.

51. An actual and justiciable controversy exists between Silicon Labs and MaxLinear as to whether the claims of the '178 patent are infringed by Silicon Labs' Si2111/13/15 and Si2185 TV receivers, the Si2170/71/72, Si2173, Si2143, Si2136/46/55/56/76, and

Si2128/38/48/58/78 TV Tuner ICs, the Si2107/08/09/10 Satellite Rx, the Si4320/22, Si44200, Si4312, Si4313, Si4355, Si4455, Si4060/61/63/64, Si4330, Si4430/31/32, and Si4460/61/63/64 EZRadioPRO products, Si1000/1/2/3/4/5, Si1010/1/2/3/4/5, Si1020/1/2/3/4/5/6/7, and Si1030/1/2/3/4/5/6/7 Wireless MCUs, the Si4700/01, Si4702/03, Si4704/05, and Si4708/09 FM Receivers, the Si4706 and Si4749 Data Receivers, the Si4707, Si4730/31, Si4734/35, Si4736/37/38/39, Si4770/77, Si4830, Si4820/24/31/35, Si4822/26/40/44 Multi-Band Receivers, and the Si4720/21 Transceivers. A judicial declaration is necessary and appropriate so that Silicon Labs may ascertain its rights regarding the '178 patent.

### **COUNT V**

#### **(Declaratory Judgment of Non-Infringement of the '613 Patent)**

52. Silicon Labs incorporates by reference paragraphs 1 through 51 above as if fully set forth herein.

53. The '613 patent issued on August 17, 2010 to Kishore Seendripu, Raymond Montemayor, Curtis Ling, Glenn Chang, and Sheng Ye and is titled "Dual Conversion Receiver with Programmable Intermediate Frequency and Channel Selection." Upon information and belief, the '613 patent is assigned to MaxLinear. A true and correct copy of the '613 patent is attached hereto as Exhibit D.

54. On July 27, 2012, MaxLinear wrote Silicon Labs asserting ownership of the '613 patent. MaxLinear asserted its intent to sue Silicon Labs for direct infringement of the '613 patent by making, using, selling, offering for sale, and/or importing into the United States products and systems including, but not limited to, Silicon Labs' Si2111/13/15 and Si2185 TV receivers and the Si2170/71/72, Si2173, Si2143, Si2136/46/55/56/76, and Si2128/38/48/58/78 TV Tuner ICs.

55. The claims of the '613 patent are not infringed by Silicon Labs. For example, the claims of the '613 patent are not infringed by Silicon Labs' Si2111/13/15 and Si2185 TV receivers and the Si2170/71/72, Si2173, Si2143, Si2136/46/55/56/76, and Si2128/38/48/58/78 TV Tuner ICs, either literally or under the doctrine of equivalents.

56. Silicon Labs' accused products do not infringe the claims of the '613 patent. For example, the products that MaxLinear has accused of infringing the '613 patent do not include a calibration module configured to reduce a difference between gains of the in-phase signal path and the quadrature signal path without using a calibration signal external to the receiver, said calibration module being further configured to maintain a quadrature relationship between phases of the in-phase signal path and the quadrature signal path without using a calibration signal external to the receiver.

57. As a result of the acts described in this Complaint, there exists a substantial controversy of sufficient immediacy and reality to warrant the issuance of a declaratory judgment as to the infringement of the '613 patent by Silicon Labs.

58. An actual and justiciable controversy exists between Silicon Labs and MaxLinear as to whether the claims of the '613 patent are infringed by Silicon Labs' Si2111/13/15 and Si2185 TV receivers and the Si2170/71/72, Si2173, Si2143, Si2136/46/55/56/76, and Si2128/38/48/58/78 TV Tuner ICs. A judicial declaration is necessary and appropriate so that Silicon Labs may ascertain its rights regarding the '613 patent.

## **COUNT VI**

### **(Declaratory Judgment of Non-Infringement of the '940 Patent)**

59. Silicon Labs incorporates by reference paragraphs 1 through 58 above as if fully set forth herein.

60. The '940 patent issued on June 12, 2012 to James Qui and Sridhar Ramesh and is titled "Self-Calibrating Gain Control System." Upon information and belief, the '940 patent is assigned to MaxLinear. A true and correct copy of the '940 patent is attached hereto as Exhibit E.

61. On July 27, 2012, MaxLinear wrote Silicon Labs asserting ownership of the '940 patent. MaxLinear asserted its intent to sue Silicon Labs for direct infringement of the '940 patent by making, using, selling, offering for sale, and/or importing into the United States products and systems including, but not limited to, Silicon Labs' Si2111/13/15 and Si2185 TV receivers and the Si2170/71/72, Si2173, Si2143, Si2136/46/55/56/76, and Si2128/38/48/58/78 TV Tuner ICs.

62. The claims of the '940 patent are not infringed by Silicon Labs. For example, the claims of the '940 patent are not infringed by Silicon Labs' Si2111/13/15 and Si2185 TV receivers and the Si2170/71/72, Si2173, Si2143, Si2136/46/55/56/76, and Si2128/38/48/58/78 TV Tuner ICs, either literally or under the doctrine of equivalents.

63. Silicon Labs' accused products do not infringe the claims of the '940 patent. For example, the products that MaxLinear has accused of infringing the '940 patent do not include a digital signal detector that controls the analog amplifier gain.

64. As a result of the acts described in this Complaint, there exists a substantial controversy of sufficient immediacy and reality to warrant the issuance of a declaratory judgment as to the infringement of the '940 patent by Silicon Labs.

65. An actual and justiciable controversy exists between Silicon Labs and MaxLinear as to whether the claims of the '940 patent are infringed by Silicon Labs' Si2111/13/15 and Si2185 TV receivers and the Si2170/71/72, Si2173, Si2143, Si2136/46/55/56/76, and

Si2128/38/48/58/78 TV Tuner ICs. A judicial declaration is necessary and appropriate so that Silicon Labs may ascertain its rights regarding the '940 patent.

**DEMAND FOR A JURY TRIAL**

Pursuant to Federal Rule of Civil Procedure 38, Silicon Labs demands a jury trial on all issues triable of right by a jury.

**PRAYER FOR RELIEF**

WHEREFORE PLAINTIFF Silicon Labs prays for a judgment as follows:

- a) a declaration that the claims of the '178 patent, the '613 patent, and the '940 patent are invalid;
- b) a declaration that Silicon Labs' products do not infringe any claims of the '178 patent, the '613 patent, or the '940 patent are not infringed;
- c) an order that Silicon Labs is the prevailing party and that this is an exceptional case and award Silicon Labs its attorneys' fees, expenses and costs in this action;  
and
- d) such other and further relief as the Court may deem just and fair.

Dated: July 30, 2012

Respectfully submitted,

VINSON & ELKINS LLP

By: /s/ David B. Weaver

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