IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MASSACHUSETTS

ANALOG DEVICES, INC. and HITTITE MICROWAVE LLC, Plaintiffs, v. MACOM TECHNOLOGY SOLUTIONS HOLDINGS, INC. and MACOM TECHNOLOGY SOLUTIONS INC., Defendants.	Civil Action No. _____ **JURY TRIAL DEMANDED**

COMPLAINT AND JURY DEMAND

Analog Devices, Inc. and its wholly owned subsidiary, Hittite Microwave LLC, (collectively, "Analog"), by their attorneys Proskauer Rose LLP, bring this action for patent infringement, trade secret misappropriation, and unfair and deceptive trade practices against defendants MACOM Technology Solutions Holdings, Inc. and MACOM Technology Solutions Inc. (collectively, "MACOM").

INTRODUCTION

1. Analog is the global market leader and innovator in the design and manufacture of analog, mixed signal, and power integrated circuit products. Such leadership was gained through hard work, a commitment to excellence, and substantial investments. Given the effort necessary to stay ahead of competitors, Analog makes sure to protect its confidential information and its innovations.

2. This case arises out of MACOM's recent attempts to compete with Analog, not by its own innovation, but instead by misappropriation of Analog's trade secrets improperly acquired from former Analog employees, and by its infringement of Analog's patent-protected inventions.

3. Since 2016, MACOM has released a stream of products bearing a striking resemblance to – indeed, in many cases these products are pin-to-pin compatible with – Analog's competing products which had been on the marketplace for years prior. MACOM released these products on the heels of the arrival at MACOM of various former Analog sales and engineering personnel – personnel with intimate knowledge concerning the design, development and marketing of such products, and who had in fact attempted to bring with them to their new employer, MACOM, more than a half terabyte of Analog confidential information including hundreds of thousands of Analog confidential documents on their way out the door.

4. At least three Analog employees departed Analog for MACOM in 2015 and 2016, attempting to take with them valuable Analog trade secrets. As these departing Analog employees were caught red-handed, some destroyed or returned to Analog certain of those materials. Unfortunately, it appears that confidential Analog trade secrets nonetheless made their way to MACOM. On information and belief, MACOM used Analog's trade secrets to accelerate development and release of products for direct competition with Analog's products, and to attack existing Analog customer relationships. Furthermore, despite knowledge at the highest levels of the systematic and repeated nature of new hires coming to MACOM with trade secrets, MACOM did not take any meaningful action to ensure the trade secrets would not be misappropriated.

5. Moreover, certain of MACOM's products infringe Analog's U.S. patent rights.

6. Analog now seeks remedy for MACOM's unfair competition, trade secret misappropriation, and patent infringement.

PARTIES

7. Analog Devices, Inc. is a Massachusetts corporation with its corporate headquarters located at One Technology Way, Norwood, Massachusetts 02062.

8. Analog is a leading global manufacturer of precision high-performance integrated circuits. Analog's products are embedded inside many different types of electronics, and used in industries around the world, including in aerospace and defense, computer networking, cellular and wireless infrastructure, automobiles, industrial process and control systems, medical imaging equipment, and consumer portable electronics.

9. Founded in 1965 by Ray Stata and Matthew Lorber, both graduates from Massachusetts Institute of Technology, Analog has fostered a culture of innovation. Stata's visionary leadership transformed Analog from its beginnings as a small Cambridge-based company specializing in operation amplifier (op amp) design into a prestigious enterprise that offers one of the most comprehensive and technologically sophisticated line of integrated circuits in the world. In 1969, Analog made its first foray into the semiconductor business and rose to the challenge of rivaling larger companies that already had a head start in the newly developing space. While still valuing its traditional customer base in op amps, Analog has since established itself as a leading supplier of high-performance amplifiers that emphasize speed and precision, and as a leading supplier of high-speed switches.

10. On July 22, 2014, Analog acquired Hittite Microwave Corporation ("Hittite"), an innovative designer and manufacturer of high performance integrated circuits, modules, subsystems and instrumentation for RF, microwave and millimeter wave applications. Founded

in 1985, Hittite was a highly successful small company that demonstrated the same drive to provide elegant solutions to complex problems and build strong customer relationships that formed the heart of Analog's business. Analog's acquisition of Hittite was synergistic; together, their efforts paved the way for technological advances in the fields of cellular and microwave communications infrastructure, automotive, industrial instrumentation, aerospace, and defense. Post-acquisition, Hittite Microwave Corporation became Hittite Microwave LLC, and now operates as a wholly-owned subsidiary of Analog Devices, Inc.

11. Hittite Microwave LLC is Delaware entity with a principal place of business at 2 Elizabeth Drive, Chelmsford, Massachusetts 01824.

12. On information and belief, defendant MACOM Technology Solutions Holdings, Inc. is a Delaware corporation, with its headquarters at 100 Chelmsford Street, Lowell, Massachusetts 01851.

13. On information and belief, defendant MACOM Technology Solutions Inc. is a Delaware corporation, with its headquarters at 100 Chelmsford Street, Lowell, Massachusetts 01851.

14. Defendants MACOM Technology Solutions Holdings, Inc. and MACOM Technology Solutions Inc. are charged here with unfair competition, trade secret misappropriation, and patent infringement.

JURISDICTION AND VENUE

15. This action arises under the patent laws of the United States, 35 U.S.C. § 1 *et seq.* Exclusive jurisdiction for any action arising under any Act of Congress relating to patents is conferred on this court by 28 U.S.C. § 1338(a), and under 28 U.S.C. § 1337. This action also arises under the federal Defend Trade Secrets Act of 2016, 18 U.S.C. § 1836 *et seq.*, the Massachusetts Trade Secrets Act, M.G.L. c. 93 § 42, the Massachusetts Consumer Protection Act, M.G.L. c.

93A, and state law claims of unjust enrichment, tortious interference with contractual relations, tortious interference with existing and prospective business relations, and aiding and abetting the employees' breach of fiduciary duty.

16. This Court has subject matter jurisdiction over this action pursuant to 28 U.S.C. §§ 1331, and 1338(a) & (b). This Court has supplemental jurisdiction over the state law claims pursuant to 28 U.S.C. § 1367(a), at least because these claims are so related to claims in the action within original jurisdiction that they form part of the same case or controversy.

17. This Court has personal jurisdiction over MACOM because MACOM, among other things, is headquartered in Massachusetts, transacts business in Massachusetts, and advertises, markets, demonstrates, offers to sell, and sells products infringing Analog's patents in Massachusetts.

18. Venue is proper in this District pursuant to 28 U.S.C. §§ 1391(b) & (c), and 1400(b) because MACOM resides and transacts business in the District of Massachusetts, and because a substantial part of the events giving rise to the claims occurred in the District of Massachusetts.

FACTUAL ALLEGATIONS

Relationship Between Analog and MACOM

19. MACOM holds itself out as competing with Analog across three markets – Networks, Aerospace and Defense, and Multi-market.

20. MACOM's President and Chief Executive Officer, John Croteau, worked for Analog from 1988 to 2007, holding numerous product management positions, including General Manager for Analog's Convergent Platforms and Services Group as well as Product Line Director for the Integrated Audio Group.

21. Attack on market share occupied by Analog/Hittite is a core aspect of MACOM's business strategy.

22. In a 2016 MACOM earnings call, Mr. Croteau stated that MACOM's "strategy is to regain preeminent [market] share from traditional competitors like [] Hittite, TriQuint, RFMD and Microsemi as they undergo consolidation."

23. The individuals specifically discussed herein – Frank Traut, Thomas Winslow, and George Papamitrou – were employed by Hittite at the time it was acquired by Analog in 2014, and remained Analog employees until their departure for MACOM as detailed below.

24. Over the last few years, Mr. Croteau was repeatedly notified in writing of misconduct, including attempts to misappropriate Analog's confidential and proprietary information by these and other former Analog employees that departed for MACOM. On information and belief, Mr. Croteau and MACOM failed to take the necessary precautions to ensure that Analog's proprietary information was not used by MACOM.

Frank Traut's Departure from Analog for MACOM

25. Frank Traut was employed by Hittite and/or Analog from 2003 until February 6, 2015.

26. Mr. Traut began his career with Hittite as a design engineer, but eventually acquired the position of Hittite Business Development Manager, in which he managed a team of designers and was responsible for reviewing design plans and decisions, setting strategy for development of various products, and meeting with Hittite's customers to understand their needs and requirements.

27. Mr. Traut was later promoted to Director of IC Engineering at Hittite; in that position, Mr. Traut supervised ongoing product design and development work by many Hittite

design engineers, and continued advising the company on strategy for product development, having significant interaction with customers to understand their product needs.

28. Mr. Traut also served as a member of the Hittite patent review committee, and he had unlimited access to Hittite's entire server system while employed by Hittite.

29. Mr. Traut's positions during his tenure at Hittite and Analog gained him access to knowledge about development processes for various products, including at least amplifier products and voltage controlled oscillators ("VCOs").

30. One particular category of products with which Mr. Traut was intimately familiar were Hittite's monolithic microwave integrated circuit ("MMIC") wideband distributed amplifiers first designed by Hittite engineer Keith Benson, including HMC797, HMC994, HMC998, HMC797A, HMC994A, HMC998A, and variants thereof.

31. Mr. Benson's work in developing these MMIC wideband distributed amplifier products spanned a number of years, during which time Mr. Traut was acutely aware of the design and development process, including how Mr. Benson and Hittite's other engineers overcame challenges to bring those products to market. Mr. Traut also had access to confidential Analog trade secrets concerning Analog's business with specific customers, including customer needs, requirements, and future supply demands.

32. Mr. Benson's developments in furtherance of those products resulted in issuance of several patents, including U.S. Patent No. 9,425,752, which is discussed in greater detail below.

33. Mr. Traut was also intimately familiar with the design, manufacture, and sales of various VCO products supplied to customers in the aerospace, defense, and instrumentation markets.

34. In his role as Director of IC Engineering, Mr. Traut supervised the company's VCO design team and was knowledgeable about all aspects of VCO product development and specific customer needs. With the VCO design team, Mr. Traut developed product roadmaps for VCOs, and routinely interacted with customers concerning VCO product offerings that might suit their needs.

35. After Analog's 2014 acquisition of Hittite, Mr. Traut was given the title of Product Line Director at Analog.

36. Mr. Traut's last day as an Analog employee was February 6, 2015.

37. On information and belief, Mr. Traut began work at MACOM in February of 2015.

38. On information and belief, Mr. Traut is currently Senior Director of Technology and Innovation at MACOM.

39. Prior to his departure from Analog, Mr. Traut had executed agreements with both Hittite and Analog concerning confidentiality obligations he owed the companies.

40. Specifically, in March 2003, Mr. Traut signed Hittite's Proprietary Information, Confidentiality and Inventions Agreement, which states in relevant part:

> 1. Confidentiality. I agree to keep confidential, except as the Company may otherwise consent in writing, and, as may be necessary in the ordinary course of performing my duties to the Company, not to disclose or make any use of at any time either during or subsequent to my employment, any Inventions (as hereinafter defined), trade secrets, confidential information, knowledge, data or other information of the Company relating to products, processes, know-how, designs, formulas, test data, customer lists, business plans, marketing plans and strategies, pricing strategies, or other subject matter pertaining to any business of the Company or any of its affiliates or confidential or proprietary information of any third parties subject to a duty on the part of the Company to maintain the confidentiality of such information, which I may produce, obtain, or otherwise acquire during the course of my employment, except as herein provided. I further agree not to deliver, reproduce or in any way allow any such trade secrets, confidential information, knowledge, data or other information or any documentation relating thereto, to be delivered to or used by any third parties without specific direction or consent of a duly authorized representative of the Company.

41. And, on September 3, 2014, Mr. Traut signed Analog's Employee Confidentiality and Developments Agreement, which stated, in part:

> 1. I will not, during or after the term of my employment, disclose to any person, firm, corporation, association or other entity for any reason or purpose whatsoever any Confidential Information or any information of any third party which ADI is under an obligation to keep confidential, except (i) as expressly directed by ADI, or (ii) as may be required in the ordinary course of performing my duties as an employee of ADI in accordance with ADI's policies. I will not make use of any Confidential Information for my own purposes or for the benefit of any person, firm, corporation or other entity under any circumstances during or after the term of my employment. These confidentiality obligations will remain in effect during the term of my employment and for as long as the information fits within the definition of Confidential Information, except as otherwise provided by applicable law. All Confidential Information is and will remain the sole and exclusive property of ADI or the third party supplier of such Confidential Information, and immediately upon the termination of my employment, I will return all Confidential Information and copies of Confidential Information in my possession or control to ADI. (References to "ADI" in this Agreement are to Analog Devices, Inc. and its subsidiaries, including Hittite from and after its acquisition (the "Acquisition"), except as otherwise specified below.)

* * *

> 8. Definitions.
>
> a. Confidential Information: Information as may be designated by ADI as confidential or that a reasonable person would understand from the circumstances of the disclosure to be confidential, including but not limited to: (a) all information acquired by me from ADI, its other employees, its suppliers or customers, its agents or consultants, or others, during my employment by ADI, that relates to the past, present or potential businesses, products or services of ADI; (b) all information created or acquired by me in the course of any Included Activity; (c) all Company Creations; and (d) all information derived from (a) - (c) above. Notwithstanding the foregoing, Confidential Information shall not include any information that is or becomes generally known to the public through no action by me.

42. Notwithstanding these obligations, before his departure, Mr. Traut – secretly and without authorization – downloaded approximately 3GB of confidential and proprietary information from the legacy Hittite and Analog systems to one or more removable devices. That information included, but was not limited to, documents related to product design and development strategy and market strategy. The products that were documented in those unauthorized data downloads include the MMIC wideband amplifier products discussed above.

43. Analog became aware of Mr. Traut's attempt to take Analog trade secrets in March of 2015, and immediately retained counsel, who contacted Mr. Traut concerning his

misconduct in a March 13, 2015 letter reminding him of his contractual obligations and seeking return or destruction of the files.

44. John Croteau, MACOM's CEO, was copied on that March 13, 2015 letter, and was also contacted directly concerning the situation in a follow-on March 18, 2015 letter from Analog.

45. On information and belief, MACOM misused (and continues to misuse) confidential and proprietary Hittite and Analog trade secret information brought to it by Mr. Traut (e.g., confidential design decisions, processes, know-how, and sales and marketing strategy, including specific customer information such as needs, requirements, opportunities and challenges communicated in confidence to Analog). On information and belief, MACOM's misuse of such information enabled MACOM to shortcut the development of products sold in competition with Analog's products, including but not limited to pin-to-pin compatible MMIC amplifier products and VCOs, and to target specific Analog customers for sales opportunities of which it would not otherwise have been aware.

Thomas Winslow's Departure from Analog for MACOM

46. Three weeks after Mr. Traut left Analog for MACOM, an engineer who had worked for Mr. Traut while at Analog – Thomas Winslow – followed him.

47. Mr. Winslow worked for Hittite and/or Analog from September 2011 until leaving Analog for MACOM on February 27, 2015.

48. On information and belief, Mr. Winslow is currently Senior Principal Engineer at MACOM.

49. While at Hittite and/or Analog, Mr. Winslow held various engineering positions, including but not limited to Consulting Engineer, Principal Designer of GaN HPA MMICs, and Principal Engineer (reporting to Frank Traut in that role).

50. In his various positions, Mr. Winslow – like Mr. Traut – had access to confidential and proprietary technical information of Hittite and Analog concerning product design and development.

51. And, like Mr. Traut, Mr. Winslow executed agreements with Hittite and Analog concerning his obligations to maintain the confidentiality of such information.

52. Specifically, on or about September 2011, Mr. Winslow executed Hittite's Proprietary Information, Confidentiality and Inventions Agreement, which states in relevant part:

> 1. Confidentiality. I agree to keep confidential, except as the Company may otherwise consent in writing, and, as may be necessary in the ordinary course of performing my duties to the Company, not to disclose or make any use of at any time either during or subsequent to my employment, any Inventions (as hereinafter defined), trade secrets, confidential information, knowledge, data or other information of the Company relating to products, processes, know-how, designs, formulas, test data, customer lists, business plans, marketing plans and strategies, pricing strategies, or other subject matter pertaining to any business of the Company or any of its affiliates or confidential or proprietary information of any third parties subject to a duty on the part of the Company to maintain the confidentiality of such information, which I may produce, obtain, or otherwise acquire during the course of my employment, except as herein provided. I further agree not to deliver, reproduce or in any way allow any such trade secrets, confidential information, knowledge, data or other information or any documentation relating thereto, to be delivered to or used by any third parties without specific direction or consent of a duly authorized representative of the Company.

53. Mr. Winslow also executed Analog's Employee Confidentiality and Developments Agreement on July 23, 2014, which states in relevant part:

1. I will not, during or after the term of my employment, disclose to any person, firm, corporation, association or other entity for any reason or purpose whatsoever any Confidential Information or any information of any third party which ADI is under an obligation to keep confidential, except (i) as expressly directed by ADI, or (ii) as may be required in the ordinary course of performing my duties as an employee of ADI in accordance with ADI's policies. I will not make use of any Confidential Information for my own purposes or for the benefit of any person, firm, corporation or other entity under any circumstances during or after the term of my employment. These confidentiality obligations will remain in effect during the term of my employment and for as long as the information fits within the definition of Confidential Information, except as otherwise provided by applicable law. All Confidential Information is and will remain the sole and exclusive property of ADI or the third party supplier of such Confidential Information, and immediately upon the termination of my employment, I will return all Confidential Information and copies of Confidential Information in my possession or control to ADI. (References to "ADI" in this Agreement are to Analog Devices, Inc. and its subsidiaries, including Hittite from and after its acquisition (the "Acquisition"), except as otherwise specified below.)

* * *

8. Definitions.

   a. Confidential Information: Information as may be designated by ADI as confidential or that a reasonable person would understand from the circumstances of the disclosure to be confidential, including but not limited to: (a) all information acquired by me from ADI, its other employees, its suppliers or customers, its agents or consultants, or others, during my employment by ADI, that relates to the past, present or potential businesses, products or services of ADI; (b) all information created or acquired by me in the course of any Included Activity; (c) all Company Creations; and (d) all information derived from (a) - (c) above. Notwithstanding the foregoing, Confidential Information shall not include any information that is or becomes generally known to the public through no action by me.

54. Notwithstanding these obligations, in the weeks prior to his departing Analog, Mr. Winslow secretly and without authorization downloaded approximately 500GB of data to at least 19 external devices (including 4 hard drives). That downloaded data included Analog's confidential and proprietary information, such as design and layout files, schematics and simulations related to various products, including but not limited to MMIC amplifier products.

55. Analog became aware of this activity in March of 2015, and immediately retained counsel, who contacted Mr. Winslow concerning his misconduct in a March 13, 2015 letter reminding him of his contractual obligations.

56. John Croteau, MACOM's CEO, was copied on that March 13, 2015 letter, and was also contacted directly concerning the situation in a follow-on March 18, 2015 letter from Analog, expressing the urgency of the situation.

57. At first, Mr. Winslow denied copying any of the downloaded materials to other computers – either personal computers, or computers issued to him by his new employer, MACOM.

58. However, on April 28, 2015, Mr. Winslow signed a document certifying that he had, indeed, copied Analog's confidential information to a variety of portable hard drives, some of which he took with him after leaving employ of Analog; he had, indeed, put certain of those Analog files onto his MACOM-issued laptop; and stating that he no longer had any Analog confidential information, and would not make use of any such information for the benefit of MACOM.

59. On April 10, 2015, Mr. Winslow also executed a Proprietary Rights Statement, again agreeing to maintain the confidentiality of Analog's proprietary information, including various categories of confidential technical and business information.

60. Despite Mr. Winslow's contractual obligations, and re-affirmation thereof after his departure, on information and belief, MACOM misused (and continues to misuse) confidential and proprietary Hittite and Analog trade secret information brought to it by Mr. Winslow (e.g., confidential design decisions, processes, and know-how). On information and belief, MACOM's misuse of such information enabled MACOM to speed the development of products sold in competition with Analog's products, including but not limited to pin-to-pin compatible MMIC amplifier products, and to target specific Analog customers for sales.

MACOM'S Launch of Products in Competition with Analog

61. In 2016, the year immediately following the defections of Messrs. Traut and Winslow to MACOM, MACOM released products the designs of which, on information and belief, were informed by Analog's trade secrets that those employees brought with them to MACOM.

62. On September 21, 2016, MACOM announced its release of new MMIC wideband distributed amplifier products, many of which were designed to be pin-to-pin compatible competition for Analog's products.

63. Specifically, MACOM released MAAP-011247 (versions of which are pin compatible with Analog's HMC998ACHIPS and HMC998APM5E products) and MAAP-011248 (versions of which are pin compatible with Analog's HMC797ACHIPS and HMC797APM5E), stating that these products were the first two of four new distributed amplifiers MACOM would be releasing, to be followed by release, over the next two quarters, of two additional distributed amplifier products having output power of ¼ W and ½ W.

64. In fact, it took MACOM another 16 months – until January 17, 2018 – to release its next such product, MAAP-011249 (versions of which are pin compatible with Analog's HMC994ACHIPS and HMC994APM5E products), which has output power of ½ W.

65. MACOM has not yet released its promised amplifier with a ¼ W power output.

66. Analog believes discovery will reveal use of Analog trade secret information shared with MACOM by Messrs. Traut and/or Winslow during the design process of these distributed amplifier products (e.g., confidential design decisions and product topology, processes, know-how as to how to overcome obstacles during the design cycle which Analog's engineers had worked for years to surmount), as well as use of other confidential and proprietary

Analog trade secrets concerning customers (e.g., specific customer identities, needs, requirements, opportunities and challenges communicated to Analog in confidence, product pricing, volume expectations, and customer purchase forecasts) in deciding which customers to target for sales of which products.

67. Similarly, on information and belief, MACOM used Analog trade secret information learned from Messrs. Traut and/or Winslow in developing and releasing VCO products in 2016.

68. On October 3, 2016, MACOM announced release of three broadband VCO products that cover the same frequency ranges as Analog's competing products – in fact, they (like the MMIC products discussed above) are pin-to-pin compatible with Analog's competing products.

69. Specifically, MACOM released its MAOC-409000 VCO, operating in the 6-12 GHz frequency range (which competes directly with Analog's HMC732LC4B VCO), its MAOC-410100, operating in the 7-14 GHz frequency range (which competes directly with an Analog custom-built and confidential VCO product), and its MAOC-415000, operating in the 10-20 GHz frequency range (which competes directly with Analog's HMC733LC4B VCO).

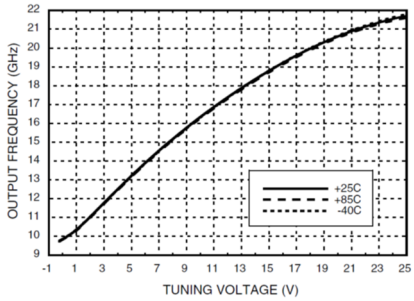
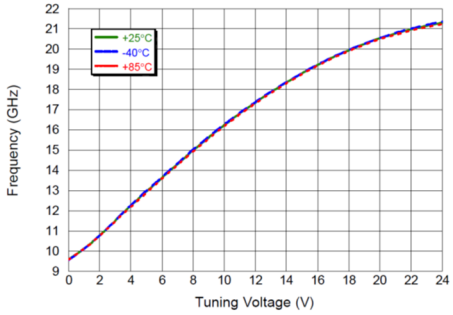
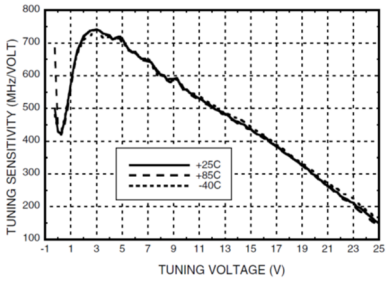
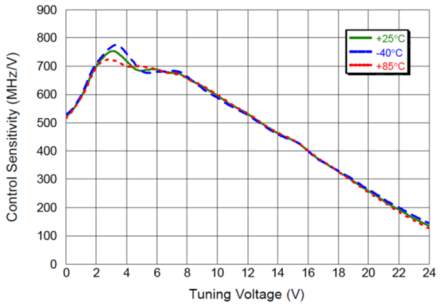
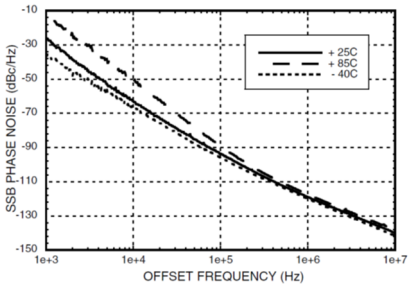
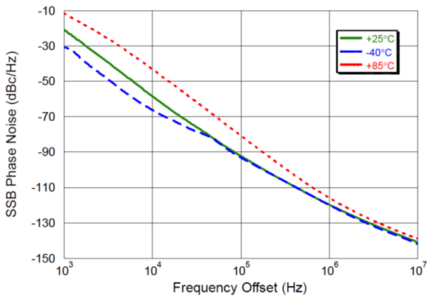
70. Tellingly, Analog's custom-built product offering at 7-14 GHz was not publicly released; Messrs. Traut and/or Winslow would only have known of Analog's confidential product offerings (and related customer requirements) from their access to confidential and proprietary Analog trade secret information while employed by Analog.

71. Moreover, the data sheets detailing the technical specifications and physical responses of the MACOM VCO products bear a striking resemblance to their counterpart Analog VCO products. By way of example, below is a table of certain features and specifications in the

Analog HMC732LC4B datasheet as compared to the data sheet for the MACOM MAOC-409000:

Specification	Analog HMC732LC4B Datasheet (Exhibit A, at 1)	MACOM MAOC-409000 Datasheet (Exhibit B, at 2)
Frequency Range	6 – 12 GHz	6 – 12 GHz
Power Output	1 dBm	1 dBm
Tune Voltage (max.)	23 V	23 V
SSB Phase Noise (10 KHz offset)	-65 dBc/Hz	-65 dBc/Hz
SSB Phase Noise (100 KHz offset)	-95 dBc/Hz	-95 dBc/Hz
Supply Current	57 mA (at +5V)	58 mA (at +5V)

72. Additionally, a comparison between the physical response data of the Analog HMC733LC4B and the MACOM MAOC-415000, reveals almost identical physical responses between products.

Analog HMC733LC4B Datasheet (Exhibit C, at 2)	MACOM MAOC-415000 Datasheet (Exhibit D, at 3)
Frequency vs. Tuning Voltage, Vcc = +5V 	***Output Frequency vs. Tune Voltage*** 
Sensitivity vs. Tuning Voltage, Vcc= +5V, T = +25 °C 	***Control Sensitivity vs. Tuning Voltage*** 
Typical SSB Phase Noise vs. Temperature Vtune = +10V 	***Phase Noise vs. Frequency Offset (V_{TUNE} = 10 V)*** 

73. Furthermore, on information and belief, MACOM used confidential and proprietary Analog trade secrets obtained from Messrs. Traut and/or Winslow in its development of these VCO products (e.g., confidential design decisions, processes, and know-how including how to overcome obstacles during the design cycle which Analog's engineers had invested

significant time to surmount, and the unique and confidential die stacking assemblies necessary for manufacture of the product).

74. On information and belief, MACOM's use of Analog's trade secrets as detailed above resulted in Analog losing business with certain customers, and erosion of Analog's profit margins for certain products.

George Papamitrou Departs Analog for MACOM

75. George Papamitrou was employed by Hittite and/or Analog from June 2009 through to March 25, 2016, and he held various positions including Director of Information Technology during his tenure with the companies.

76. For a period of approximately six months prior to his departure from Analog, Mr. Papamitrou took on the role of Director – Sales Enablement, reporting to Analog Global Sales Senior Director George Smalanskas.

77. In that position, Mr. Papamitrou was tasked with helping Mr. Smalanskas to build a customer enablement platform, Analog's Asset Management Program, to facilitate sales to customers, drawing from a wealth of confidential Analog information.

78. The platform is internally-facing, such that its design and operation are not public, and involve Analog confidential and proprietary information. Analog invested significant time and money developing the platform.

79. In 2016, Analog was given an award for Asset Management Program of the Year, as best in class out of 1,500 companies based on its capabilities.

80. On information and belief, Mr. Papamitrou is currently MACOM's Director of IT Business Services and Sales Enablement Technologies. On information and belief, Mr. Papamitrou is the first employee of MACOM to occupy this role, and is involved in providing

strategic direction and knowledge on technologies and processes in order to assist with sales force effectiveness.

81. In his MACOM position, Mr. Papamitrou holds himself out as having various job responsibilities which directly correlate to his work on Analog's customer enablement platform. For example, Mr. Papamitrou claims he has "[i]mplemented Salesforce and processes that helped measure Pipeline effectiveness and Sales Force results," occupied the role of "[h]ead of the Business Services group responsible for the Global Business Applications and for providing the overall strategy and operational leadership on Applications and Business Services," and "[w]orked with other Sales leaders to implement processes and tools." On information and belief, the development of these MACOM sales processes, applications and tools were informed by Mr. Papamitrou's sharing and use of Analog trade secrets.

82. On information and belief, Mr. Papamitrou is using Analog trade secret information drawn from his experience with Analog's proprietary Asset Management Program and the trade secrets used therein in executing his responsibilities in his new position at MACOM.

83. Mr. Papamitrou had executed agreements with both Hittite and Analog concerning confidentiality obligations he owed the companies, prior to his departure for MACOM.

84. Specifically, on June 16, 2009, Mr. Papamitrou signed Hittite's Proprietary Information, Confidentiality and Inventions Agreement, which states in relevant part:

1. Confidentiality. I agree to keep confidential, except as the Company may otherwise consent in writing, and, as may be necessary in the ordinary course of performing my duties to the Company, not to disclose or make any use of at any time either during or subsequent to my employment, any Inventions (as hereinafter defined), trade secrets, confidential information, knowledge, data or other information of the Company relating to products, processes, know-how, designs, formulas, test data, customer lists, business plans, marketing plans and strategies, pricing strategies, or other subject matter pertaining to any business of the Company or any of its affiliates or confidential or proprietary information of any third parties subject to a duty on the part of the Company to maintain the confidentiality of such information, which I may produce, obtain, or otherwise acquire during the course of my employment, except as herein provided. I further agree not to deliver, reproduce or in any way allow any such trade secrets, confidential information, knowledge, data or other information or any documentation relating thereto, to be delivered to or used by any third parties without specific direction or consent of a duly authorized representative of the Company.

85. And, on July 24, 2014, Mr. Papamitrou signed Analog's Employee Confidentiality and Developments Agreement, which states in relevant part:

1. I will not, during or after the term of my employment, disclose to any person, firm, corporation, association or other entity for any reason or purpose whatsoever any Confidential Information or any information of any third party which ADI is under an obligation to keep confidential, except (i) as expressly directed by ADI, or (ii) as may be required in the ordinary course of performing my duties as an employee of ADI in accordance with ADI's policies. I will not make use of any Confidential Information for my own purposes or for the benefit of any person, firm, corporation or other entity under any circumstances during or after the term of my employment. These confidentiality obligations will remain in effect during the term of my employment and for as long as the information fits within the definition of Confidential Information, except as otherwise provided by applicable law. All Confidential Information is and will remain the sole and exclusive property of ADI or the third party supplier of such Confidential Information, and immediately upon the termination of my employment, I will return all Confidential Information and copies of Confidential Information in my possession or control to ADI. (References to "ADI" in this Agreement are to Analog Devices, Inc. and its subsidiaries, including Hittite from and after its acquisition (the "Acquisition"), except as otherwise specified below.)

* * *

a. Confidential Information: Information as may be designated by ADI as confidential or that a reasonable person would understand from the circumstances of the disclosure to be confidential, including but not limited to: (a) all information acquired by me from ADI, its other employees, its suppliers or customers, its agents or consultants, or others, during my employment by ADI, that relates to the past, present or potential businesses, products or services of ADI; (b) all information created or acquired by me in the course of any Included Activity; (c) all Company Creations; and (d) all information derived from (a) - (c) above. Notwithstanding the foregoing, Confidential Information shall not include any information that is or becomes generally known to the public through no action by me.

86. Notwithstanding his contractual obligations, like Messrs. Traut and Winslow before him, Mr. Papamitrou attempted to take confidential Analog information with him on his way out the door.

87. Specifically, in the months prior to his departure from Analog, Mr. Papamitrou downloaded approximately 80GB of confidential and proprietary Analog information to external drives and cloud-based accounts, including technical information concerning products, information concerning the sales enablement platform, and other documents concerning confidential customer and sales information and other Analog trade secrets.

88. Analog became aware of this activity in April of 2016, and its Assistant General Counsel contacted Mr. Papamitrou concerning his misconduct in an April 6, 2016 letter, demanding immediate return of the misappropriated Analog confidential information, copying John Croteau, MACOM's CEO.

89. On April 13, 2016, Mr. Papamitrou executed a notarized document admitting that he had copied content from his Analog computer, Analog's networks, databases and customer and sales enablement platforms, but representing that he had returned, deleted or otherwise permanently destroying such information and all copies thereof, and further representing that he would abide by his contractual confidentiality obligations in the future.

90. Despite Mr. Papamitrou's contractual obligations and affirmation, on information and belief, MACOM has used Analog confidential and proprietary trade secret information obtained from Mr. Papamitrou, enabling sales by MACOM to Analog customers.

Analog's Protection of its Trade Secrets

91. Analog takes seriously the confidential and proprietary nature of its trade secrets.

92. Analog requires its employees to sign confidentiality agreements as part of their employment, as was true with respect to the each of the three individuals discussed above.

93. Analog also trains its employees concerning confidential information and trade secrets, and secures its facilities with security guards, cameras, access badges, and similar procedures to protect its information.

94. Similarly, Analog secures its networks and information with passwords, firewalls, limitations on access, encryption, and software and security personnel.

95. And, when Analog must share confidential information with third parties, it protects such disclosures by entering into agreements with those parties to ensure confidentiality is maintained in their possession as well.

Analog's Patents

96. On October 12, 2010, the United States Patent and Trademark Office duly and legally issued United States Patent No. 7,813,706, titled "Impedance Matched Lane Reversal Switching System," (the "'706 patent"). The '706 patent relates generally to a switching system and to an impedance matched lane reversal switching system that reverses the ingress and egress sides of a communications lane to provide connectivity to different types of devices. A copy of the '706 patent is attached as Exhibit E.

97. Analog Devices, Inc. is the assignee and owner of all rights, title, and interest in the '706 patent, now and for the entire period of and relevant to infringement, including the right to assert all causes of action arising under the patent and the right to any remedies for infringement of the patent.

98. On August 23, 2016, the United States Patent and Trademark Office duly and legally issued United States Patent No. 9,425,752, titled "Distributed Amplifier With Improved

Stabilization," (the, "'752 patent"). The '752 patent relates generally to distributed amplifiers, and more particularly to amplifiers that may include circuitry coupled to the gates of common-gate configured transistors for improving amplifier stability. A copy of the '752 patent is attached as Exhibit F.

99. Hittite Microwave LLC is the assignee and owner of all right, title, and interest in the '752 patent, now and for the entire period of and relevant to infringement, including the right to assert all causes of action arising under the patent and the right to any remedies for infringement of the patent.

COUNT I

(Infringement of U.S. Patent No. 7,813,706)

100. Analog incorporates the allegations contained in the preceding paragraphs as if fully set forth herein.

101. MACOM has infringed and continues to infringe, directly and/or indirectly, at least claims 1, 5, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17 and 18, of the '706 patent, by making, using, selling, offering for sale, and/or importing certain crosspoint switches, including at least the M21123 and M21163 digital crosspoint switches (collectively, the "'706 Accused Products").

102. For example, claim 1 of the '706 patent recites as follows:

> An impedance matched lane reversal switching system comprising:
>
> a first transceiver comprising a first transmitter and a first receiver, an output of the first transmitter being connected to an input of the first receiver and to a first transmission line, the first transceiver disposed at a near end of a lane comprising the first transmission line and a second transmission line;
>
> a first terminating resistance comprising a first node connected to the output of the first transmitter, to the input of the first receiver, and the first transmission line;

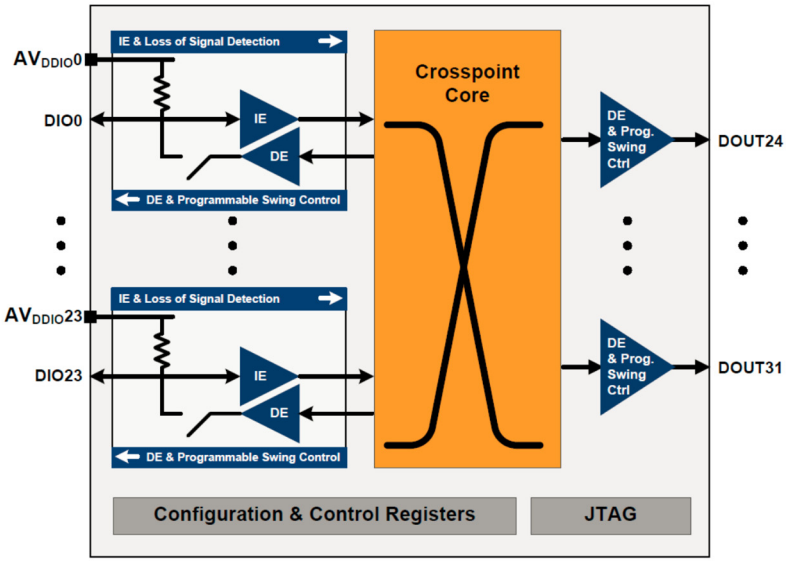
> a second transceiver comprising a second transmitter and a second receiver, an output of the second transmitter being connected to an input of the second receiver and to the second transmission line, the second transceiver disposed at the near end of the lane;
>
> a second terminating resistance comprising a second node connected to the output of the second transmitter, to the input of the second receiver, and the second transmission line;
>
> and a switching circuit for selectively enabling one of a first configuration comprising enabling the first transmitter, utilizing the second receiver, disabling the second transmitter, and not utilizing the first receiver and a second configuration comprising enabling the second transmitter, utilizing the first receiver, disabling the first transmitter, and not utilizing the second receiver, thereby selectively reversing an egress side and an ingress side of the near end of the lane while maintaining impedance matching between the first transceiver and the near end of the lane and between the second transceiver and the near end of the lane.

103. MACOM's product descriptions of the M21123 and M21163 are attached as Exhibits G and H, respectively. On information and belief, and based in part on the similarity of the product descriptions, the operation of the M21123 and M21163 are substantially the same. They differ in that the M21123 has 18 reconfigurable input/output ports and 6 dedicated output ports, while the M21163 has 24 reconfigurable input/output ports and 8 dedicated output ports; in each case, the product may be used to create any square and non-square matrix size. Ex. G, at 1; Ex. H, at 1.

104. On information and belief, further specifics on the structure, function, and operation of these products are described in U.S. Patent No. 9,356,591, titled, "Crosspoint Switch with Separate Voltage Sources for Input and Output Ports," assigned to MACOM Technology Solutions Holdings, Inc., and attached as Exhibit I. The earliest patent application to which the MACOM '591 patent seeks priority (a provisional application) was not filed until April 4, 2011, well after the '706 patent issued on October 12, 2010.

105. The '706 Accused Products include each and every element of claim 1 of the '706 patent.

106. For example, the '706 Accused Products are each an impedance matched lane reversal switching system. The '706 Accused Products operate at very high speeds of 3.2 Gigabits per second, and therefore employ impedance matching terminations on their input and output ports to allow for such high-speed serial transmissions. Ex. G, at 1; Ex. H, at 1. The impedance matched lane reversal system is illustrated in the block diagram in Exhibits G and H, showing a crosspoint core switch that is used as part of the system for lane reversal and impedance matching.



M21163 Block Diagram

(Ex. H, at 1.)

The impedance matched lane reversal system is also shown and described in the MACOM '591 patent at Figure 3, showing a switch core that is used as part of the system for lane reversal and impedance matching:

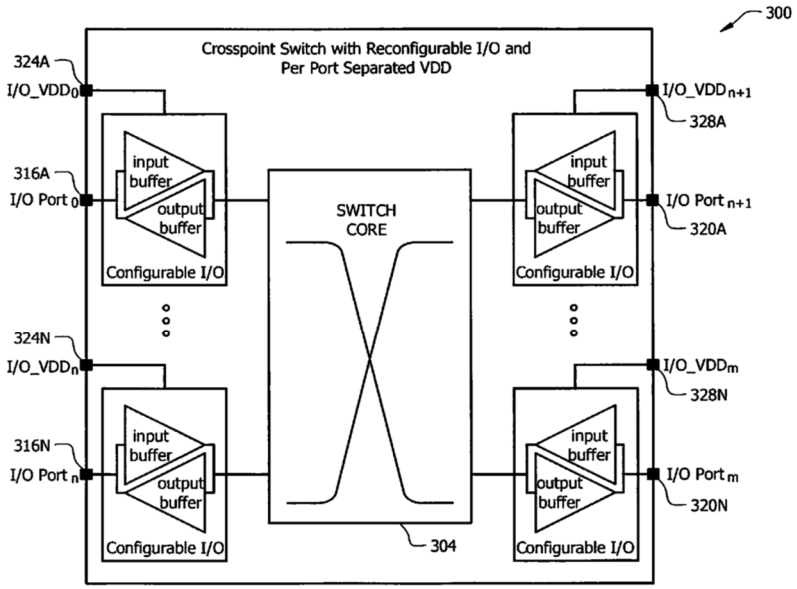
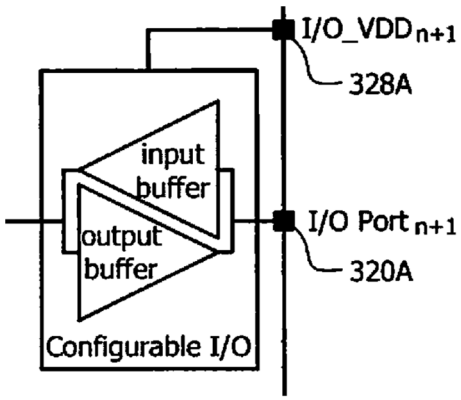


FIG. 3

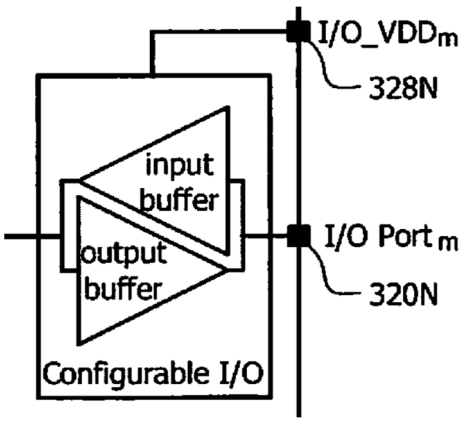
107. The '706 Accused Products each include a first transceiver that includes a transmitter and a receiver, where the output of the transmitter is connected to an input of the receiver and also connected to a first transmission line. For example, the below excerpt for Figure 3 of the MACOM '591 patent, shows a configurable I/O (transceiver) including an output buffer (transmitter), an input buffer (receiver), where the output of the output buffer is connected to the input of the input buffer, and where the output of the output buffer is also connected to a transmission line at I/O Port $_{n+1}$.



108. The '706 Accused Products each include at least a second transmission line at I/O Port $_{m,}$ shown in Figure 3 of the MACOM '591 patent, and the configurable I/O (transceiver) described above is located at or near the end of a lane; the lane may include the transmission lines at I/O Port $_{n+1}$ and I/O Port $_{m}$ in Figure 3 of Exhibit I.

109. Additionally, the '706 Accused Products each include a resistor, or another structure that produces a terminating resistance, that includes a node that is connected to the output of the output buffer (transmitter), the input of the input buffer (receiver) and to the first transmission line at I/O Port $_{n+1}$. For example, the product descriptions for the MACOM crosspoint switches each describe a "50Ω input and output termination" and note that "the input/output ports include on-chip 50Ω termination and are electrically isolated from one another, allowing each to be powered from and terminated to a different voltage rail." Ex. G, at 1, 2; Ex. H, at 1, 2.

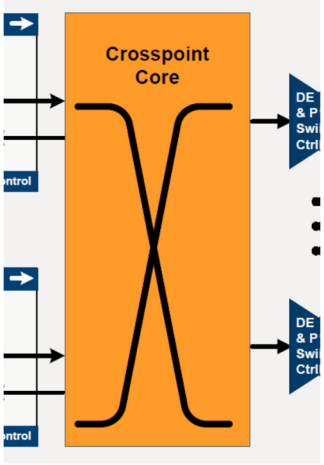
110. The '706 Accused Products each include a second transceiver that includes a transmitter and a receiver, where the output of the transmitter is connected to an input of the receiver and also connected to a first transmission line. For example, the below excerpt for Figure 3 of the MACOM '591 patent, shows a second configurable I/O (second transceiver) including an output buffer (transmitter), an input buffer (receiver), where the output of the output buffer is connected to the input of the input buffer, and where the output of the output buffer is also connected to a transmission line at I/O Port $_{m:}$



111. This configurable I/O (second transceiver) is located at or near the end of the lane that may include the transmission lines at I/O Port $_{n+1}$ and I/O Port $_{m}$ in Figure 3.

112. Additionally, the '706 Accused Products each include a second resistor, or a second structure that produces a terminating resistance, that includes a node that is connected to the output of the output buffer (second transmitter), the input of the input buffer (second receiver) and to the second transmission line at I/O Port $_{m}$. For example, the product description for the MACOM crosspoint switches describe a "50Ω input and output termination" and note that "the input/output ports include on-chip 50Ω termination and are electrically isolated from one another, allowing each to be powered from and terminated to a different voltage rail." Ex. G, at 1, 2; Ex. H, at 1, 2.

113. The '706 Accused Products each include a switching circuit for selectively enabling at least two different configurations:



Ex. G, at 1 ("Crosspoint Core"); Ex. H, at 1 ("Crosspoint Core"); *see also*, Ex. I, Figure 3 ("Switch Core 304"). One of the functions of the switching circuit is to reconfigure the crosspoint switch, by reconfiguring the input and output ports. For example, as the product description for the M21123 crosspoint switch notes, "[e]ach input/output port features individually programmable trace equalization when configured as an input, and individually programmable de-emphasis and output swing, when configured as an output." Ex. G, at 1; *see also* Ex. H, at 1.

114. As such, the '706 Accused Products include programmable reconfigurable input and output ports in that certain output ports can be reconfigured as input ports, and certain input ports can be reconfigured as output ports. Ex. G, at 2 ("18 reconfigurable IOs); Ex. H, at 2 ("24 reconfigurable IOs"). To perform this function of reconfiguring an input port as an output port or vice versa, the switching circuit in the '706 Accused Products performs either of two configurations: (1) enables the first output buffer (transmitter), utilizing the second input buffer (receiver), disabling the second output buffer (transmitter) and not utilizing the first input buffer (receiver); or (2) enables the second output buffer (transmitter), utilizing the first input buffer (receiver), disabling the first output buffer (transmitter) and not utilizing the second input buffer

(receiver). Ex. G, at 1 ("Each input/output port features individually programmable trace equalization when configured as an input, and individually programmable de-emphasis and output swing, when configured as an output."); *see also* Ex. H, at 1.

115. Additionally, in the '706 Accused Products, by switching between the first and second configurations each of the products reverses the outbound (egress) side of the lane and the inbound (ingress) side of the lane, while still maintaining the impedance match between the first configurable I/O and the second configurable I/O, as shown in Figure 3 of the MACOM '591 patent. Ex. I, at Fig. 3. Such impedance matching is necessary to operate at the high speeds of the '706 Accused Products, such as 3.2 Gigabits per second.

116. MACOM has actively and knowingly induced, and is actively and knowingly inducing, infringement of the '706 patent, at least by MACOM's customers' use of the '706 Accused Products. For example, MACOM instructs its customers by way of manuals or product documentation to infringe the asserted claims by using the '706 Accused Products. MACOM knew and knows that such use of the '706 Accused Products would infringe the '706 patent claims, at least as early as the filing date of this complaint.

117. MACOM's infringement of the '706 patent has been willful, and MACOM's continued infringement of the '706 patent continues to be willful. For example, on information and belief, MACOM knew of the '706 patent, and of Analog's products that practice the '706 patent, at least as early as the filing date of this complaint. MACOM nevertheless chose to manufacture and sell the '706 Accused Products, knowing that such products would infringe the '706 patent.

118. Analog has been, and is being, irreparably harmed, and has incurred, and will continue to incur, damages as a result of MACOM's infringement of the '706 patent.

COUNT II

(Infringement of U.S. Patent No. 9,425,752)

119. Analog incorporates the allegations contained in the preceding paragraphs as if fully set forth herein.

120. MACOM has infringed and continues to infringe, directly and/or indirectly, at least claims 15, 16, 17, 18, 20, and 23 of the '752 patent, by making, selling, using, offering for sale, and/or importing certain distributed power amplifiers, including at least the MAAP-011247 and MAAP-011248, and their various bare die and packaged variations (collectively, the "'752 Accused Products").

121. For example, claim 15 of the '752 patent recites as follows:

> A distributed amplifier comprising:
>
> an input transmission line; an output transmission line; and a plurality of cascode amplifiers each coupled between the input transmission line and the output transmission line, wherein a first cascode amplifier of the plurality of cascode amplifiers comprises:
>
> three or more field effect transistors (FETs) arranged in a stack, wherein the three or more FETs comprises a first FET, a second FET, and a third FET, wherein the first FET includes a gate coupled to the input transmission line, wherein the second FET is positioned between the first FET and the third FET in the stack, and wherein the third FET includes a drain coupled to the output transmission line; and
>
> a first stabilization circuit coupled to a gate of the third FET, wherein the first stabilization circuit comprises a first resistor and a first capacitor electrically connected in series, wherein the first FET is configured to generate an amplified signal by amplifying an input signal received at the gate of the first FET from the input transmission line, wherein the first FET is further configured to provide the amplified signal to the output transmission line through the second FET, from a source of the second FET to a drain of the second FET, and through the third FET, from a source of the third FET to the drain of the third FET.

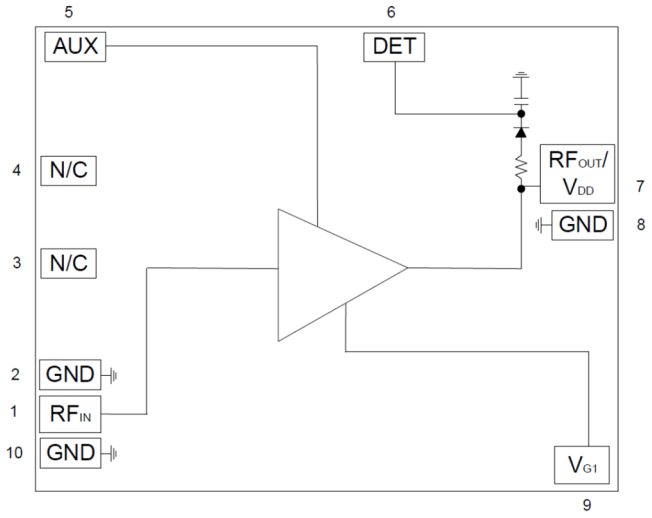
122. MACOM's datasheets for the MAAP-011247 and MAAP-011248 are attached as Exhibits J and K respectively. On information and belief, and based in part on experience of

Analog personnel with MAAP-011247 and MAAP-011248 in the marketplace, the topology of and chip used in the MAAP-011248 are the same as those used in MAAP-011247, and thus the products are not colorably different for purposes of infringement.

123. The '752 Accused Products include each and every element of claim 15 of the '752 patent.

124. For example, the '752 Accused Products are each distributed power amplifiers. Ex. J, at 1; Ex. K, at 1.

125. The '752 Accused Products each include an input transmission line and an output transmission line. *See e.g.*, Ex. J, at 3 ("RF input and output are 50 Ω transmission lines."). For example, the block diagrams in the data sheet show the input and output transmission lines as RF_{IN} and RF_{OUT}:



Ex. J, at 1.

126. The '752 Accused Products each include several cascode amplifiers that are each coupled between the input and output transmission lines.

127. The '752 Accused Products each include at least one cascode amplifier that includes three field effect transistors (FETs) that are arranged in a stack. The first of these three

FETs, includes a gate that is coupled to the input transmission line. The second FET, because it is arranged in a stack of the three FETs, is positioned in the stack of three between the first FET and the third FET. The third FET, includes a drain that is coupled to the output transmission line.

128. The '752 Accused Products each include a first stabilization circuit that is coupled to the gate of the third FET. The stabilization circuit is made up of a first resistor (either of two thin and long rectangular structures) and a first capacitor (either of two bulbous structures that are positioned near the gate of the third FET) that are electrically connected in series.

129. The configuration of the first FET, by way of its arrangement in the stack of three FETS, amplifies the input signal from the input transmission line that is received at the gate of the first FET. The first FET is also configured to provide the amplified signal to the output transmission line through the second FET from a source of the second FET to a drain of the second FET, and through the third FET from a source of the third FET to the drain of the third FET.

130. MACOM has actively and knowingly induced, and is actively and knowingly inducing, infringement of the '752 patent, at least by MACOM's customers' use of the '752 Accused Products. For example, MACOM instructs its customers by way of manuals or product documentation to practice and infringe the asserted claims by using the '752 Accused Products. On information and belief, at least by way of Mr. Traut's and MACOM's knowledge of the '752 patent and/or related patents from Mr. Traut's service on a Hittite patent committee, MACOM knew and knows that such use of the '752 Accused Products would infringe the '752 patent claims.

131. MACOM's infringement of the '752 patent has been willful, and MACOM's continued infringement of the '752 patent continues to be willful. For example, on information and belief, MACOM knew of the '752 patent, and of Analog's products that practice the '752 patent. MACOM nevertheless chose to manufacture and sell the '752 Accused Products, knowing that such products would infringe the '752 patent.

132. Analog has been, and is being, irreparably harmed, and has incurred, and will continue to incur, damages as a result of MACOM's infringement of the '752 patent.

COUNT III

(Misappropriation of Trade Secrets under the Defend Trade Secrets Act, 18 U.S.C. § 1836 *et seq*.)

133. Analog incorporates the allegations contained in the preceding paragraphs as if fully set forth herein.

134. The trade secret information, which is owned by Analog, comprises (i) confidential and proprietary product design information related to at least Analog's MMIC amplifier and VCO products, including information concerning product topology, design processes, decisions and know-how including how to overcome obstacles during the design cycle, and unique and confidential die stacking assembly information concerning product manufacture; and (ii) confidential customer and sales-related information, including customer identities, needs, requirements, opportunities, and challenges, product pricing, volume expectations, customer purchase forecasts, and design aspects of Analog's proprietary Asset Management Program.

135. The trade secret information misappropriated by MACOM satisfies the definition of "trade secret" under 18 U.S.C. § 1839(3).

136. Each of the trade secrets at issue is used in the development of or in connection with Analog's products, including the MMIC amplifiers and VCOs, all of which are sold in interstate commerce.

137. Analog has taken reasonable steps to ensure the confidentiality of its trade secrets such as disclosing such information only to necessary persons, requiring its employees to sign confidentiality agreements as part of their employment, requiring third parties to sign non-disclosure agreements in the course of business, securing its physical facilities, and protecting its networks and digital information with security protocols, passwords, firewalls, encryption, and software.

138. Upon information and belief, MACOM has knowingly obtained trade secrets taken from Analog by departing employees Mr. Traut, Mr. Winslow, and Mr. Papamitrou, who had access to the trade secrets by way of their employment at Analog.

139. To this day, MACOM continues to use Analog's trade secrets in bringing to market products that directly compete with Analog's products, and targeting specific Analog customers for sales based on such trade secret information.

140. As a direct and proximate result of MACOM's misappropriation, Analog has suffered substantial damages, which include but are not limited to loss of sales and price erosion.

141. Analog has suffered and will continue to suffer irreparable harm as a result of MACOM's misappropriation, if MACOM is left unrestrained.

COUNT IV

(Misappropriation of Trade Secrets under M.G.L. c. 93 § 42)

142. Analog incorporates the allegations contained in the preceding paragraphs as if fully set forth herein.

143. The trade secret information, which is owned by Analog, comprises (i) confidential and proprietary product design information related to at least Analog's MMIC amplifier and VCO products, including information concerning product topology, design processes, decisions and know-how including how to overcome obstacles during the design cycle, and unique and confidential die stacking assembly information concerning product manufacture; and (ii) confidential customer and sales-related information, including customer identities, needs, requirements, opportunities, and challenges, product pricing, volume expectations, customer purchase forecasts, and design aspects of Analog's proprietary Asset Management Program.

144. The trade secret information misappropriated by MACOM satisfies the definition of "trade secret" under M.G.L. c. 93 § 42 and M.G.L. c. 266 § 30.

145. Analog has taken reasonable steps to ensure the confidentiality of its trade secrets such as disclosing such information only to necessary persons, requiring its employees to sign confidentiality agreements as part of their employment, requiring third parties to sign non-disclosure agreements in the course of business, securing its physical facilities, and protecting its networks and digital information with security protocols, passwords, firewalls, encryption, and software.

146. Upon information and belief, MACOM has knowingly obtained trade secrets taken from Analog by departing employees Mr. Traut, Mr. Winslow, and Mr. Papamitrou, who had access to the trade secrets by way of their employment at Analog and had breached their confidentiality agreements with Analog by taking Analog's trade secrets.

147. To this day, MACOM continues to use the Analog trade secrets in bringing to market products that directly compete with Analog's products, and targeting specific Analog customers for sales based on such trade secret information.

148. As a direct and proximate result of MACOM's misappropriation, Analog has suffered substantial damages, which include but are not limited to loss of sales and price erosion.

149. Analog has suffered and will continue to suffer irreparable harm as a result of MACOM's misappropriation, if MACOM is left unrestrained.

COUNT V

(Violation of Massachusetts Consumer Protection Act, M.G.L. c. 93A)

150. Analog incorporates the allegations contained in the preceding paragraphs as if fully set forth herein.

151. At all times relevant hereto, MACOM was engaged in trade or commerce within the meaning of M.G.L. c. 93A, §§ 2, 11.

152. MACOM's conduct and misappropriation of Analog's trade secrets and confidential and proprietary information constitute unfair and deceptive acts and practices, and constitute a violation of M.G.L. c. 93A.

153. MACOM's unfair and deceptive acts and practices were committed knowingly and willfully.

154. MACOM's unfair and deceptive acts and practices occurred primarily and substantially within the Commonwealth of Massachusetts.

155. As a direct and proximate result of MACOM's unfair and deceptive acts and practices, Analog has suffered, and continues to suffer economic injury, which includes but is not limited to loss of sales and price erosion.

156. Analog has suffered and will continue to suffer irreparable harm as a result of MACOM's unfair and deceptive acts and practices, if MACOM is left unrestrained.

COUNT VI

(Unjust Enrichment)

157. Analog incorporates the allegations contained in the preceding paragraphs as if fully set forth herein.

158. As a result of MACOM's conduct and misappropriation of Analog's trade secrets and confidential and proprietary information, Analog has suffered economic detriment and MACOM has received and appreciated benefits, such as accelerated product development, new sales, and customer contracts, to which it would not otherwise be entitled.

159. MACOM possessed full knowledge that it would reap such benefits by misappropriating and subsequently using Analog's trade secrets and confidential and proprietary information to release MACOM products that directly competed with Analog's existing products in the market.

160. Under the circumstances and because Analog and MACOM are direct competitors, MACOM's acceptance and retention of such benefits without payment of value to Analog is inequitable.

161. Analog has suffered and will continue to suffer irreparable harm as a result of MACOM's conduct and misappropriation of Analog's trade secrets and confidential and proprietary information, if MACOM is left unrestrained.

COUNT VII

(Tortious Interference with Contractual Relations)

162. Analog incorporates the allegations contained in the preceding paragraphs as if fully set forth herein.

163. As standard practice, Analog required its employees to sign confidentiality agreements as part of their employment, and the departing employees Mr. Traut, Mr. Winslow, and Mr. Papamitrou were bound by the confidentiality provisions of the agreements even after their departure from Analog.

164. By having Mr. Traut, Mr. Winslow, and Mr. Papamitrou disclose Analog's trade secrets and other confidential and proprietary information during the course of their employment at MACOM, MACOM unlawfully induced these individuals to breach their confidentiality agreements with Analog.

165. MACOM's interference with the confidentiality agreements between the respective employees and Analog was improper in motive and means, as MACOM leveraged Analog's trade secrets to develop MACOM products that directly competed with Analog's products.

166. MACOM's conduct was and is willful, intentional, and calculated to cause damage to Analog.

167. As a direct and proximate result of MACOM's actions, Analog has suffered, and continues to suffer injury, which includes but is not limited to loss of sales and price erosion.

168. Analog has suffered and will continue to suffer irreparable harm as a result of MACOM's tortious interference with the confidentiality agreements between Analog and the departing employees, if MACOM is left unrestrained.

COUNT VIII

(Tortious Interference with Existing and Prospective Business Relations)

169. Analog incorporates the allegations contained in the preceding paragraphs as if fully set forth herein.

170. MACOM has engaged and continues to engage in the enticement of, solicitation of, and acceptance of business from Analog customers with whom Mr. Traut had contact and business dealings prior to leaving Analog.

171. MACOM knew of the relationship between Analog and its customers by way of at least Mr. Traut and the information he disclosed to MACOM.

172. After misappropriating Analog's trade secrets and other confidential and propriety information and using such information to develop its own competing products, MACOM has sold to these customers that had previously sourced such products from Analog.

173. MACOM's interference with the relationship between Analog and its customers was improper in motive and means, as MACOM leveraged Analog's trade secrets to develop MACOM products that directly competed with Analog's products and thereby targeted these customers with the purpose of taking business from Analog.

174. MACOM's conduct was and is willful, intentional, and calculated to cause damage to Analog.

175. As a direct and proximate result of MACOM's actions, Analog has suffered, and continues to suffer loss of advantage in the market, which is demonstrated through Analog's loss of sales and price erosion.

176. Analog has suffered and will continue to suffer irreparable harm as a result of MACOM's tortious interference with Analog's existing and prospective business relations, if MACOM is left unrestrained.

COUNT IX

(Aiding and Abetting the Employees' Breach of Fiduciary Duty)

177. The departing employees Mr. Traut, Mr. Winslow, and Mr. Papamitrou were aware of the fiduciary duty they owed to Analog by way of their status as at-will employees at Analog.

178. MACOM was aware that obtaining Analog's trade secrets and confidential and proprietary information from Mr. Traut, Mr. Winslow, and Mr. Papamitrou was a breach of the fiduciary duty they owed to Analog.

179. MACOM had substantially assisted and/or encouraged the employees to breach their fiduciary duty by encouraging them to leave Analog's employ and otherwise to participate in the schemes described above.

180. MACOM's awareness that Analog is a direct competitor demonstrates that MACOM could not reasonably be held to have acted in good faith in obtaining Analog's trade secrets from Mr. Traut, Mr. Winslow, and Mr. Papamitrou.

181. As a direct and proximate result of MACOM's actions, Analog has suffered, and continues to suffer damages, as well as irreparable harm and loss.

182. Analog has suffered and will continue to suffer irreparable harm as a result of MACOM substantially assisting and/or encouraging past Analog employees to breach their fiduciary duty to Analog, if MACOM is left unrestrained.

REQUEST FOR RELIEF

WHEREFORE, Plaintiff Analog respectfully requests that this Court enter judgment as follows:

1. Declaring that MACOM has infringed the '706 and '752 patents;

2. Granting a preliminary and permanent injunction, enjoining MACOM, its officers, agents, servants, employees, attorneys, and all persons acting in concert or participation with them, from further infringement of the '706 and '752 patents;

3. Awarding Analog damages adequate to compensate for MACOM's infringing activities, including supplemental damages for any post-verdict infringement up until entry of the final judgment with an accounting as needed, together with pre-judgment and post-judgment interest on the damages awarded; all of these damages to be enhanced in an amount up to treble the amount of compensatory damages as justified under 35 U.S.C. § 284;

4. For an injunction to issue, preliminarily until final hearing and permanently thereafter:

a. enjoining and restraining MACOM from misappropriating Analog's trade secrets and related confidential and proprietary information, including by acquiring, using, or disclosing the misappropriated trade secrets and related confidential and proprietary information;

b. restraining MACOM and its agents from destroying any and all files or documents wrongfully obtained from Analog that are currently in its possession;

c. ordering MACOM and its agents to return to Analog any and all documents, drawings, client or employee information and tangible or intangible records of Analog in MACOM's possession, including all copies and adaptations of such documents, data, information, and records;

d. ordering MACOM and its agents to return to Analog any and all confidential information pertaining to the clients or business operations of Analog, whether in original, copied, computerized, handwritten, or any other form, and to purge any such information from his possession, custody, or control, within 24 hours of notice to MACOM or their counsel of the terms of an order by the Court;

e. directing MACOM to file with the Court and serve on Analog within thirty (30) days after the service on MACOM of such injunction a report in writing, under oath, setting forth the manner and form in which MACOM has complied with the injunction and returned Analog's property;

f. enjoining and restraining MACOM from unfairly competing with Analog;

g. enjoining and restraining MACOM from tortiously interfering with the contractual relations of Analog;

h enjoining and restraining MACOM from tortiously interfering with the existing and prospective business relations of Analog;

5. For general and compensatory damages in an amount to be determined at trial;

6. For punitive and/or exemplary damages on all common law claims and as permitted by statute;

7. For disgorgement of all ill-gotten gains MACOM has unjustly attained by its illegal acts, and/or an order compelling MACOM to pay reasonable royalties to the extent that MACOM is not enjoined from the above violations and for the use of Analog's trade secrets;

8. For pre-judgment and post-judgment interest in an amount to be determined at trial;

9. For an order awarding Analog its attorneys' fees and costs;

10. Finding this to be an exceptional case and award Analog its attorneys' fees and costs; and

11. For an order awarding Analog such other and further relief as the Court deems just and proper.

JURY DEMAND

Analog hereby demands a trial by jury on all issues so triable.

Dated: May 21, 2018

Respectfully submitted,

ANALOG DEVICES, INC. and
HITTITE MICROWAVE LLC

By their attorneys,

/s/ Steven M. Bauer

Steven M. Bauer (BBO No. 542531)
Kimberly A. Mottley (BBO No. 651190)
Safraz W. Ishmael (BBO No. 657881)
Kimberly Q. Li (BBO No. 698488)
PROSKAUER ROSE LLP
One International Place
Boston, Massachusetts 02110-2600
(617) 526-9600 *telephone*
(617) 526-9899 *facsimile*
sbauer@proskauer.com
kmottley@proskauer.com
sishmael@proskauer.com
kli@proskauer.com