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

CONTINENTAL CIRCUITS LLC and CONTINENTAL CIRCUITS OF TEXAS LLC, Plaintiffs, v. MEDIATEK INC., Defendant.	§ § § § § § § § § § § § § § §	Case No. **JURY TRIAL DEMANDED**

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiffs Continental Circuits LLC ("Continental LLC") and Continental Circuits of Texas LLC ("Continental Texas") (collectively, "Continental Circuits" or "Plaintiffs") file this Complaint against Defendant MediaTek Inc. ("MediaTek" or "Defendant"), for patent infringement under 35 U.S.C. § 271 and allege as follows:

THE PARTIES

1. Plaintiff Continental Circuits LLC is a limited liability company organized and existing under the laws of the State of Arizona, with its principal place of business located at 16800 East El Lago Boulevard, Unit 2042, Fountain Hills, Arizona 85268.

2. Plaintiff Continental Circuits of Texas LLC is a limited liability company organized and existing under the laws of the State of Texas, with its principal place of business located at 100 W. Houston Street, Marshall, Texas 75670.

3. Upon information and belief, MediaTek is a Taiwanese corporation with its principal place of business located at No. 1, Dusing 1st Road, Hsinchu Science Park, Hsinchu City

30078 Taiwan, Republic of China. Upon information and belief, MediaTek does business in Texas and in the Eastern District of Texas, directly or through intermediaries.

JURISDICTION

4. This Court has personal jurisdiction over Defendant. Defendant conducts business and has committed acts of patent infringement in this Judicial District, the State of Texas, and elsewhere in the United States.

5. Defendant is subject to this Court's jurisdiction pursuant to due process and/or the Texas Long Arm Statute due at least to its substantial business in this State and District, including (a) at least part of its past infringing activities, (b) regularly doing or soliciting business in Texas, and/or (c) engaging in persistent conduct and/or deriving substantial revenue from goods and services provided to customers in Texas. Upon information and belief, Defendant, directly or indirectly, participates in the stream of commerce that results and resulted in products, including the accused products, being made, used, offered for sale, and/or sold in the State of Texas and/or imported into the United States to the State of Texas.

6. Venue is proper in this Judicial District pursuant to 28 U.S.C. § 1391 because, among other things, Defendant is not a resident in the United States, and thus may be sued in any judicial district pursuant to 28 U.S.C. § 1391(c)(3).

PATENTS-IN-SUIT

7. On March 10, 2009, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 7,501,582 (the "'582 Patent") entitled "Electrical Device and Method for Making Same." A true and correct copy of the '582 Patent is available at: https://pdfpiw.uspto.gov/.piw?Docid=07501582.

8. On October 2, 2012, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 8,278,560 (the "'560 Patent") entitled "Electrical Device with Teeth

Joining Layers and Method for Making the Same." A true and correct copy of the '560 Patent is available at: https://pdfpiw.uspto.gov/.piw?Docid=08278560.

9. On November 12, 2013, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 8,581,105 (the "'105 Patent") entitled "Electrical Device with Teeth Joining Layers and Method for Making the Same." A true and correct copy of the '105 Patent is available at: https://pdfpiw.uspto.gov/.piw?Docid=08581105.

10. On June 21, 2016, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 9,374,912 (the "'912 Patent") entitled "Electrical Device with Teeth Joining Layers and Method for Making the Same." A true and correct copy of the '912 Patent is available at: https://pdfpiw.uspto.gov/.piw?Docid=09374912.

11. Continental LLC is the sole and exclusive owner of all right, title, and interest of the '582, '560, '105, and '912 Patents (collectively, the "Patents-in-Suit"). Continental Texas is the exclusive licensee with respect to the Patents-in-Suit in Texas and holds the exclusive right to take all actions necessary to enforce its rights to the Patents-in-Suit in Texas, including the filing of this patent infringement lawsuit. Continental Texas has the right to recover all damages for past infringement of the Patents-in-Suit in the State of Texas as appropriate under the law. Continental LLC has the right to recover all damages for past infringement of the Patents-in-Suit except in the State of Texas as appropriate under the law.

12. Continental Circuits has at all times complied with the marking provisions of 35 U.S.C. § 287 with respect to the Patents-in-Suit. On information and belief, prior assignees and licensees have also complied with the marking provisions of 35 U.S.C. § 287.

FACTUAL ALLEGATIONS

13. The Patents-in-Suit generally cover systems and methods for multilayer electrical devices, such as a circuit board, having a roughened surface structure for joining at least one of the layers. The inventions described in the Patents-in-Suit were developed by Brian McDermott, Daniel McGown, Ralph Leo Spotts, Jr., and Sid Tryzbiak, employees of Continental Circuits Inc. For example, this technology is implemented in processors. Infringing products include processors and/or associated methods of making processors for use in smartphones and similar devices including, but not limited to, the MT6XXX series SoCs, such as the MT5327, the MT6XXX series SoCs, such as the MT6737, the MT7XXX series SoCs, such as the MT7697, the MT8XXX series SoCs, such as the MT8165, and the Helio series SoCs, such as the Helio X10 and Helio P10 (the "Accused Products").

14. MediaTek is a fabless semiconductor company and does not manufacture its own products.[1] MediaTek outsources and outsourced manufacturing of its products to TSMC during the terms of the Patents-in-Suit.[2] Upon information and belief, MediaTek uses and used TSMC's standard processes to manufacture its semiconductors, including the Accused Products, during the terms of the Patents-in-Suit.[3]

15. Upon information and belief, all products made by TSMC, including the Accused Products, are and were made using the same processes with respect to removing dielectric material, depositing or building up conductive layers, and roughening surfaces to create cavities or teeth.

[1] https://i.mediatek.com/about-mediatek

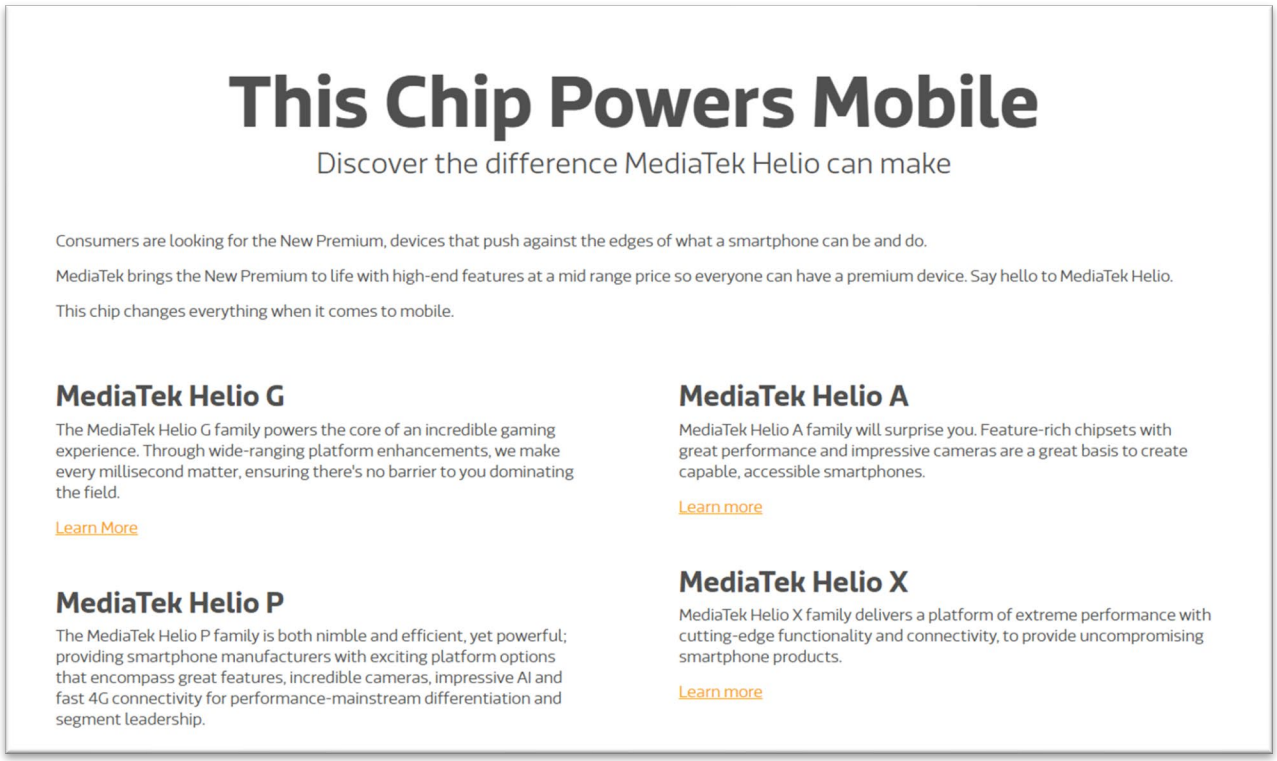
[2] https://www.mediatek.com/innovations/fabrication-process-technology

[3] *E.g.*, *id.* ("For volume Android smartphone products, MediaTek has developed a range of entry-through-mainstream smartphone products that use a variety of the cost efficient, yet high performance 28nm processes offered by TSMC.")

TSMC-manufactured products are thus representative of the Accused Products for purposes of determining whether they infringe the Patents-in-Suit.

16. MediaTek has infringed the Patents-in-Suit by making, using, selling, offering to sell, and/or importing, and by actively inducing others to make, use, sell, offer to sell, and/or import processors, such as SoCs, that infringe the Patents-in-Suit. Upon information and belief, MediaTek chips were used in cellphones, laptops, computers, tablets, and televisions during the terms of the Patents-in-Suit.

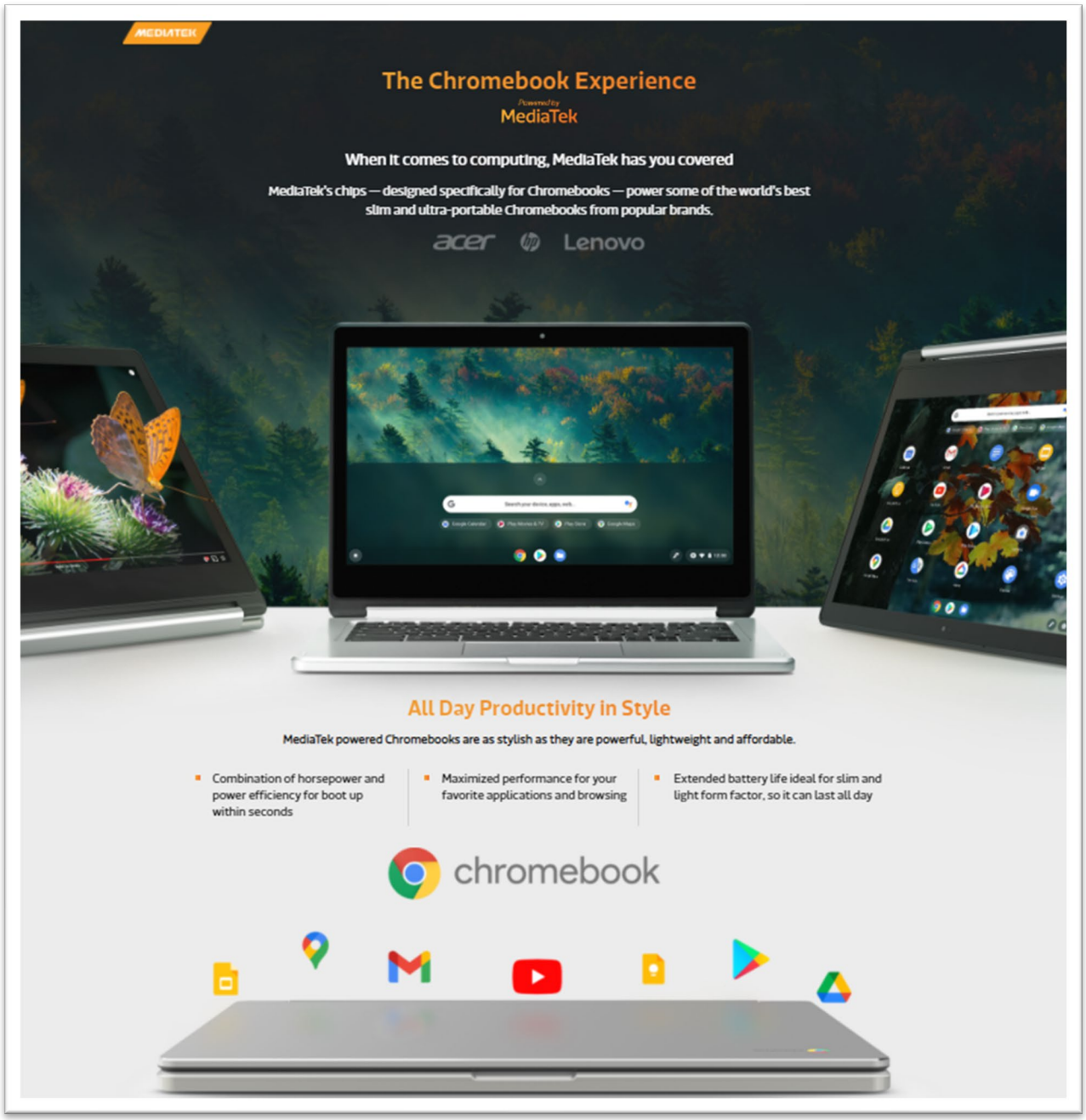
17. For example, infringing MediaTek Helio Series P and X series chips were used in Android cellphones during the terms of the Patents-in-Suit:[4]



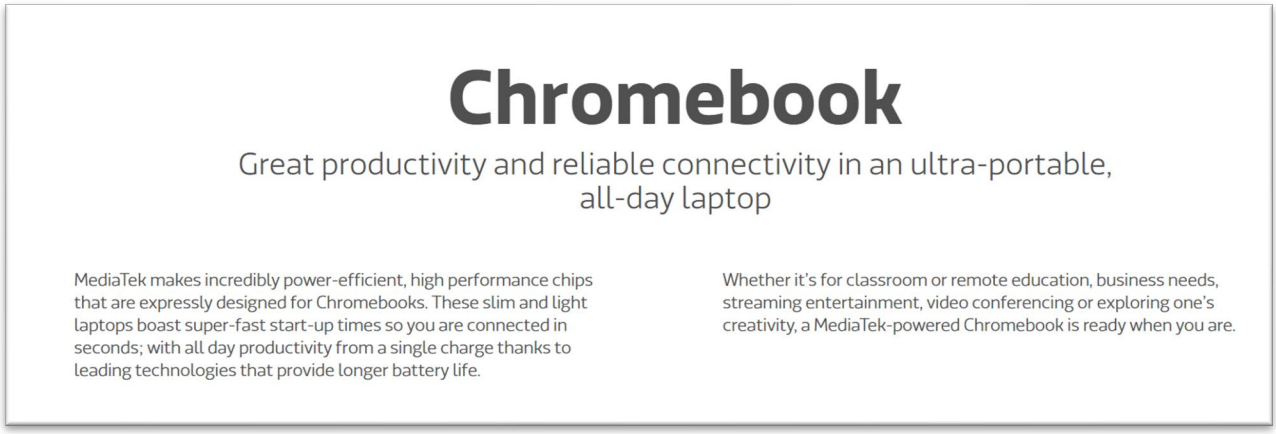
18. Upon information and belief, infringing MediaTek chips were used in

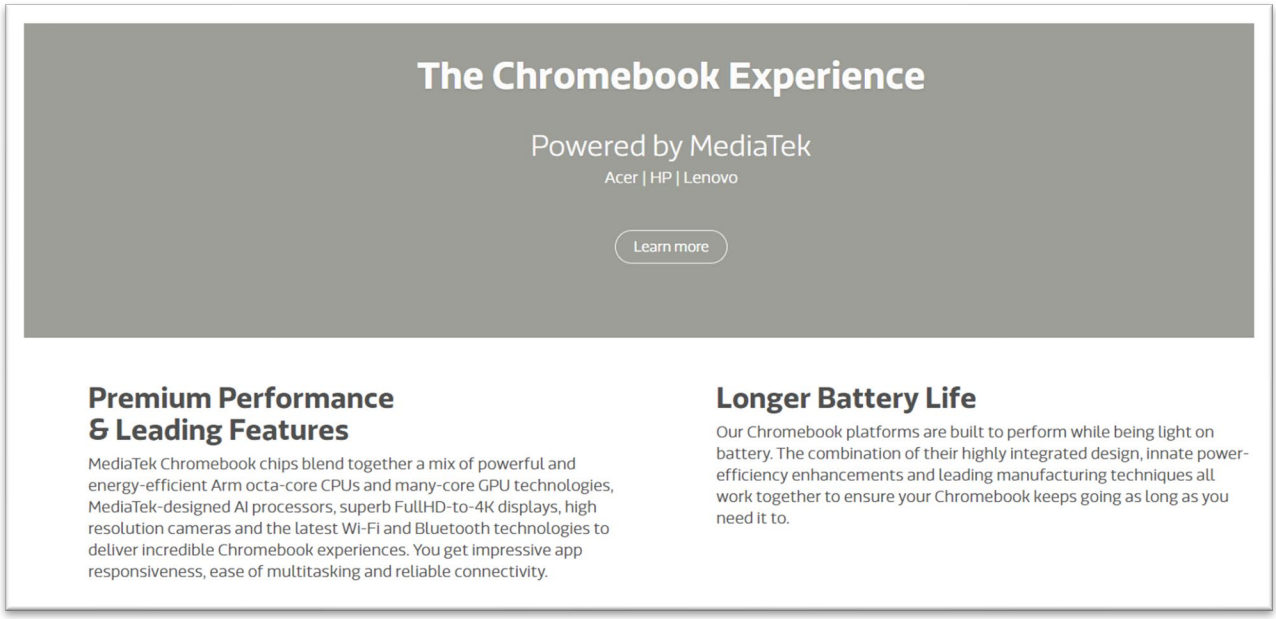
[4] https://www.mediatek.com/products/smartphones

Chromebook, HP, Acer, and Lenovo laptops during the terms of the Patents-in-Suit:[5]



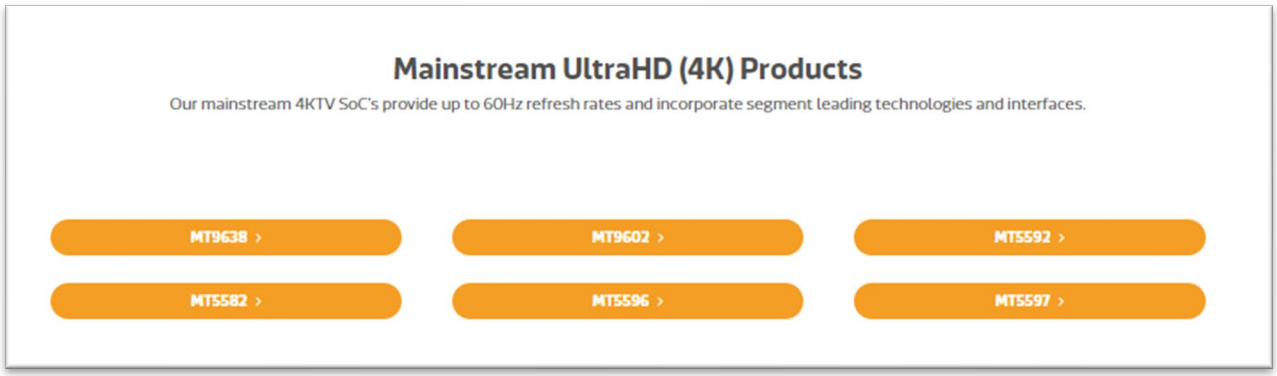
[5] https://www.mediatek.com/products/laptops-and-tablets/chromebook





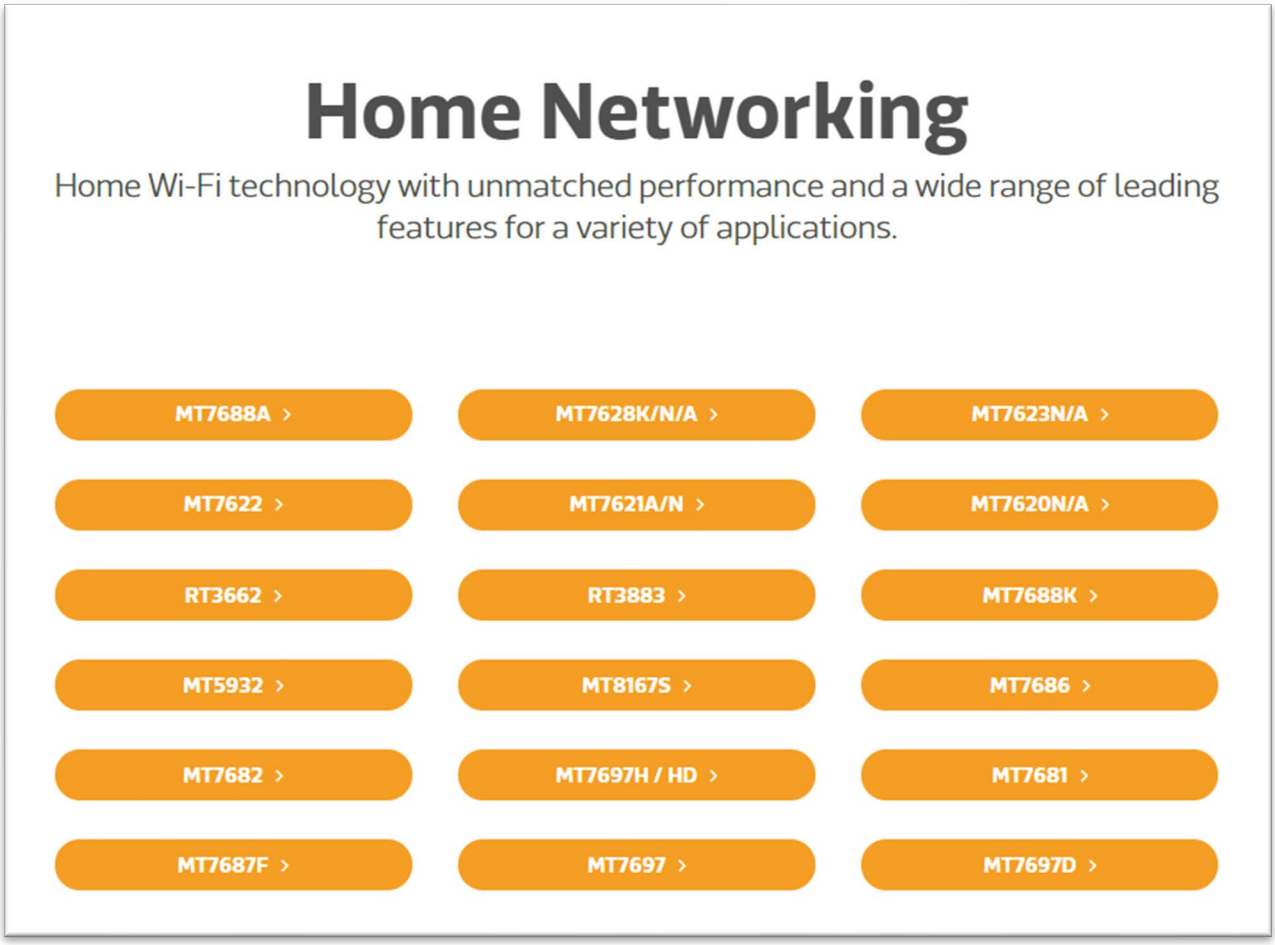
19. Upon information and belief, MediaTek 5XXX series chips were used in digital televisions, such as Samsung televisions, during the terms of the Patents-in-Suit:[6]

[6]https://www.mediatek.com/products/entertainment/digital-tv; https://i.mediatek.com/chromebook?__hstc=153516580.cc844df03ca8a34f2e0ed2318297bcac.1617818475453.1617818475453.1617818475453.1&__hssc=153516580.10.1617818475454&__hsfp=1897580854



20. Upon information and belief, MediaTek MT7XXX series chips were used in home networking solutions during the terms of the Patents-in-Suit:[7]

[7] https://www.mediatek.com/products/connectivity-and-networking/home-networking



21. Upon information and belief, MediaTek MT8XXX series chips were used in tablets during the terms of the Patents-in-Suit:[8]

[8] https://www.mediatek.com/products/laptops-and-tablets/tablets

COUNT I
(Infringement of the '582 Patent)

22. Paragraphs 1 through 21 are incorporated by reference as if fully set forth herein.

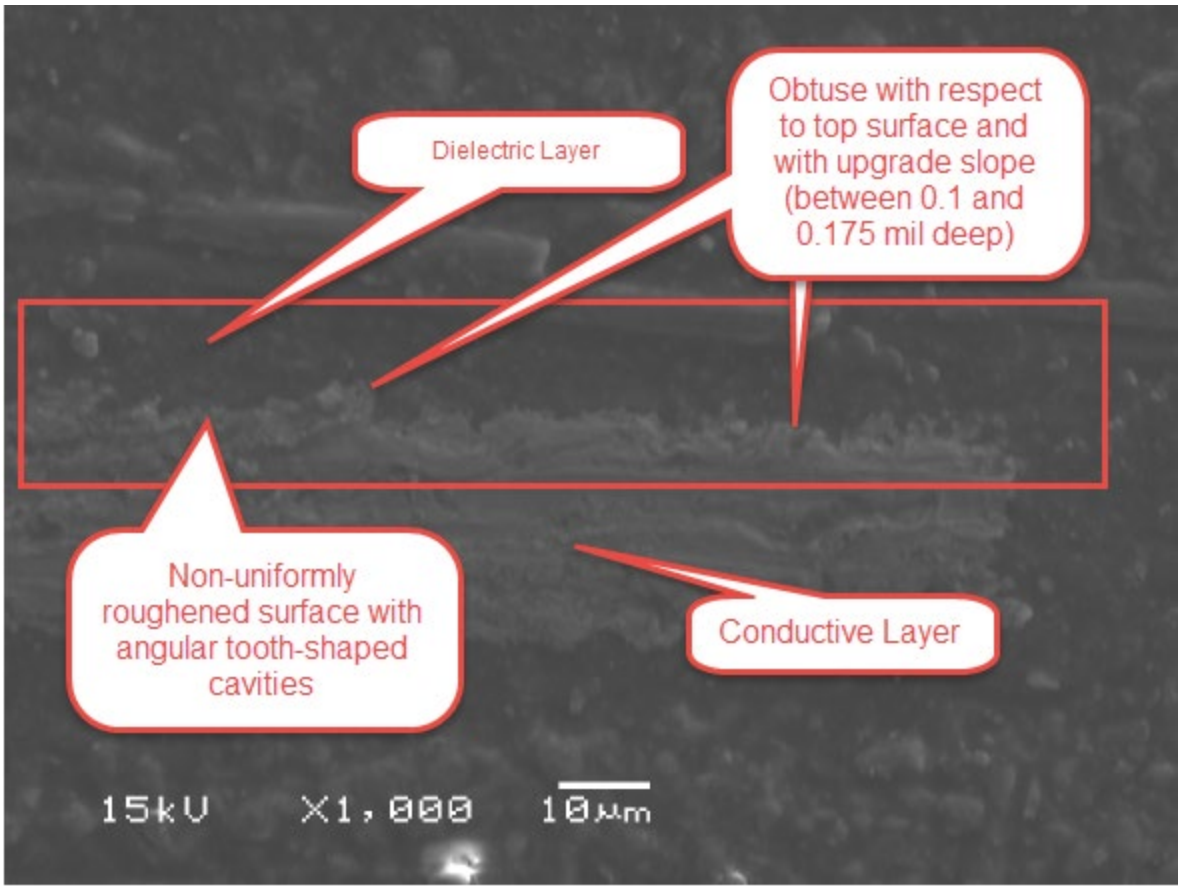
23. Continental Circuits has not licensed or otherwise authorized Defendant to make, use, offer for sale, sell, or import any products that embody the inventions of the '582 Patent.

24. Defendant has directly infringed the ’582 Patent, either literally or under the doctrine of equivalents, without authority and in violation of 35 U.S.C. § 271, by making, using, offering to sell, selling, and/or importing into the United States products that satisfy each and every limitation of one or more claims of the ’582 Patent. Such products include but are not limited to processors and SoCs manufactured by TSMC for Defendant, that were included in multilayer electric devices, products, and/or a circuit board.

25. For example, Defendant has infringed at least claim 83 of the ’582 Patent by making, using, offering to sell, selling, and/or importing into the United States the Accused Products which comprise electrical devices included in multilayer electric devices, products, and/or circuit boards.

26. Upon information and belief, each Accused Product comprises a dielectric material comprising a surface with cavities remaining from removal of a portion of the dielectric material.

27. Upon information and belief, each Accused Product comprises a conductive layer built up on the dielectric material that fills the cavities and forms teeth set in and under the surface of the dielectric material.



SEM image of example TSMC-manufactured product with exemplary annotations

28. Upon information and belief, the conductive layer comprises a portion of the circuitry of an electrical device, and a plurality of the cavities are obtuse with respect to the top surface and are at least 1 tenth of a mil deep to 1.75 tenths of a mil deep.

29. Upon information and belief at least one of the cavities includes an upgrade slope with respect to the surface of the dielectric material, and one of the teeth engages a portion of the dielectric material at the slope.

30. Because of Defendant's infringement of the '582 Patent, Continental Circuits has suffered damages in an amount to be proved at trial.

COUNT II
(Infringement of the '560 Patent)

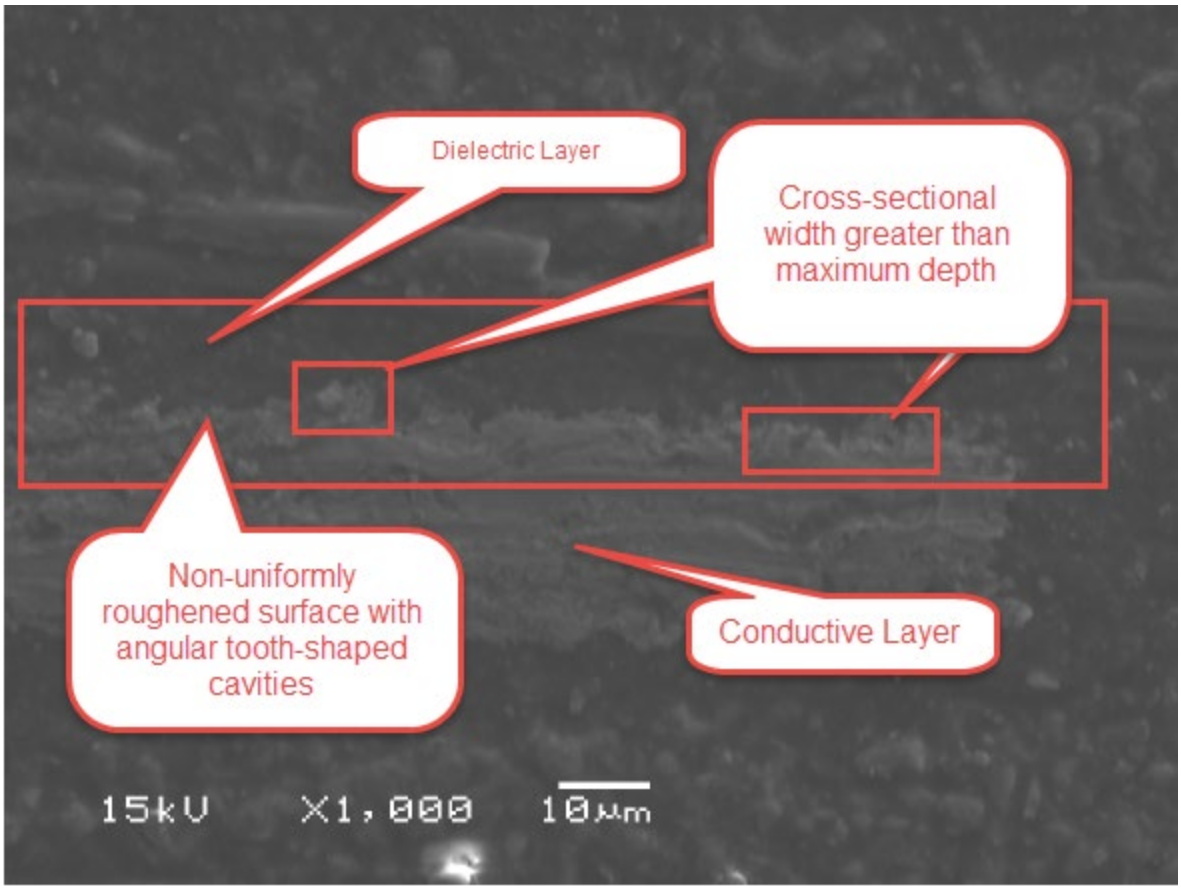
31. Paragraphs 1 through 21 are incorporated by reference as if fully set forth herein.

32. Continental Circuits has not licensed or otherwise authorized Defendant to make, use, offer for sale, sell, or import any products that embody the inventions of the '560 Patent.

33. Defendant has directly infringed the '560 Patent, either literally or under the doctrine of equivalents, without authority and in violation of 35 U.S.C. § 271, by making, using, offering to sell, selling, and/or importing into the United States products that satisfy each and every limitation of one or more claims of the '560 Patent. Such products include but are not limited to processors and SoCs manufactured by TSMC for Defendant, that were included in multilayer electric devices, products, and/or a circuit board.

34. For example, Defendant has directly infringed at least claim 1 of the '560 Patent by making, using, offering to sell, selling, and/or importing into the United States the Accused Products which comprise an article of manufacture.

35. Upon information and belief, the Accused Products comprise an epoxy dielectric material delivered with solid content sufficient that etching the epoxy forms a non-uniformly roughened surface of angular tooth-shaped cavities located in and underneath an initial surface of the dielectric material, sufficient that the etching of the epoxy uses non-homogeneity with the solid content in bringing about formation of the non-uniformly roughened surface of the angular tooth-shaped cavities and sufficient that the etching of the epoxy is such that a plurality of the cavities have a cross-sectional width that is greater than a maximum depth with respect to the initial surface, wherein the etching forms the non-uniformly roughened surface of angular tooth-shaped cavities, and a conductive material, a portion of the conductive material in the cavities thereby forming angular teeth in the cavities, and wherein the conductive material forms a portion of circuitry of an electrical device.



SEM image of example TSMC-manufactured product with exemplary annotations

36. Because of Defendant's infringement of the '560 Patent, Continental Circuits has suffered damages in an amount to be proved at trial.

COUNT III
(Infringement of the '105 Patent)

37. Paragraphs 1 through 21 are incorporated by reference as if fully set forth herein.

38. Continental Circuits has not licensed or otherwise authorized Defendant to make, use, offer for sale, sell, or import any products that embody the inventions of the '105 Patent.

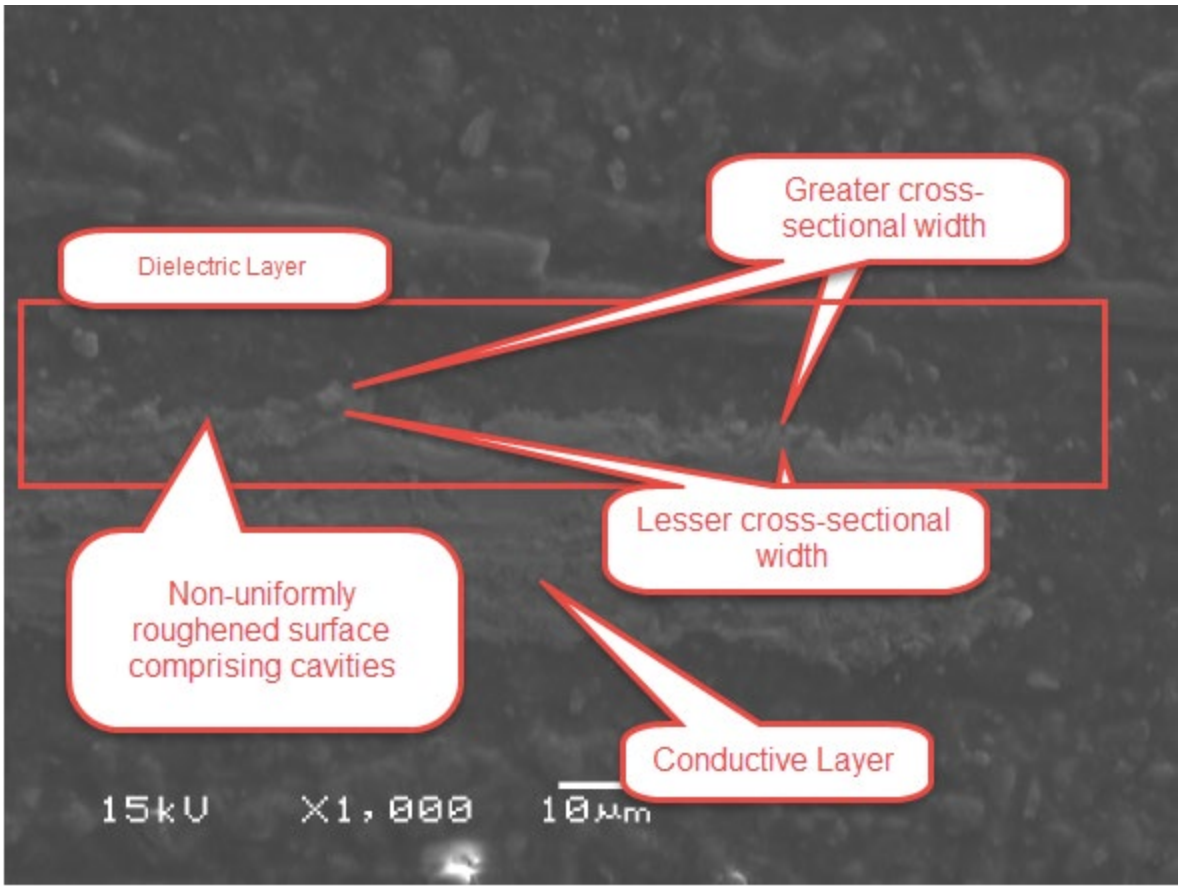
39. Defendant has directly infringed the '105 Patent, either literally or under the doctrine of equivalents, without authority and in violation of 35 U.S.C. § 271, by making, using, offering to sell, selling, and/or importing into the United States products that satisfy each and every

limitation of one or more claims of the ’105 Patent. Such products include but are not limited to processors and SoCs manufactured by TSMC for Defendant, that were included in multilayer electric devices, products, and/or a circuit board.

40. For example, Defendant has directly infringed at least claim 80 of the ’105 Patent by making, using, offering to sell, selling, and/or importing into the United States the Accused Products which are multilayer electric devices, products, and/or circuit boards.

41. Upon information and belief, the Accused Products comprise circuitry with conductive material being part of the circuitry and configured as angular teeth in filling cavities.

42. Upon information and belief, the Accused Products comprise an epoxy dielectric material disposed in combination with the circuitry and coupled with the conductive material in a configuration where the dielectric material comprises a non-uniformly roughened surface comprising cavities located in and underneath an initial surface of the dielectric material delivered with solid content being non-homogeneous and configured to bring about the formation of the non-uniformly roughened surface by etching of the epoxy.



SEM image of example TSMC-manufactured product with exemplary annotations

43. Upon information and belief, at least some of the cavities of the Accused Products have a first cross-sectional distance proximate the initial surface, and a substantially greater cross-sectional distance distant from the initial surface.

44. Because of Defendant's infringement of the '105 Patent, Continental Circuits has suffered damages in an amount to be proved at trial.

COUNT IV
(Infringement of the '912 Patent)

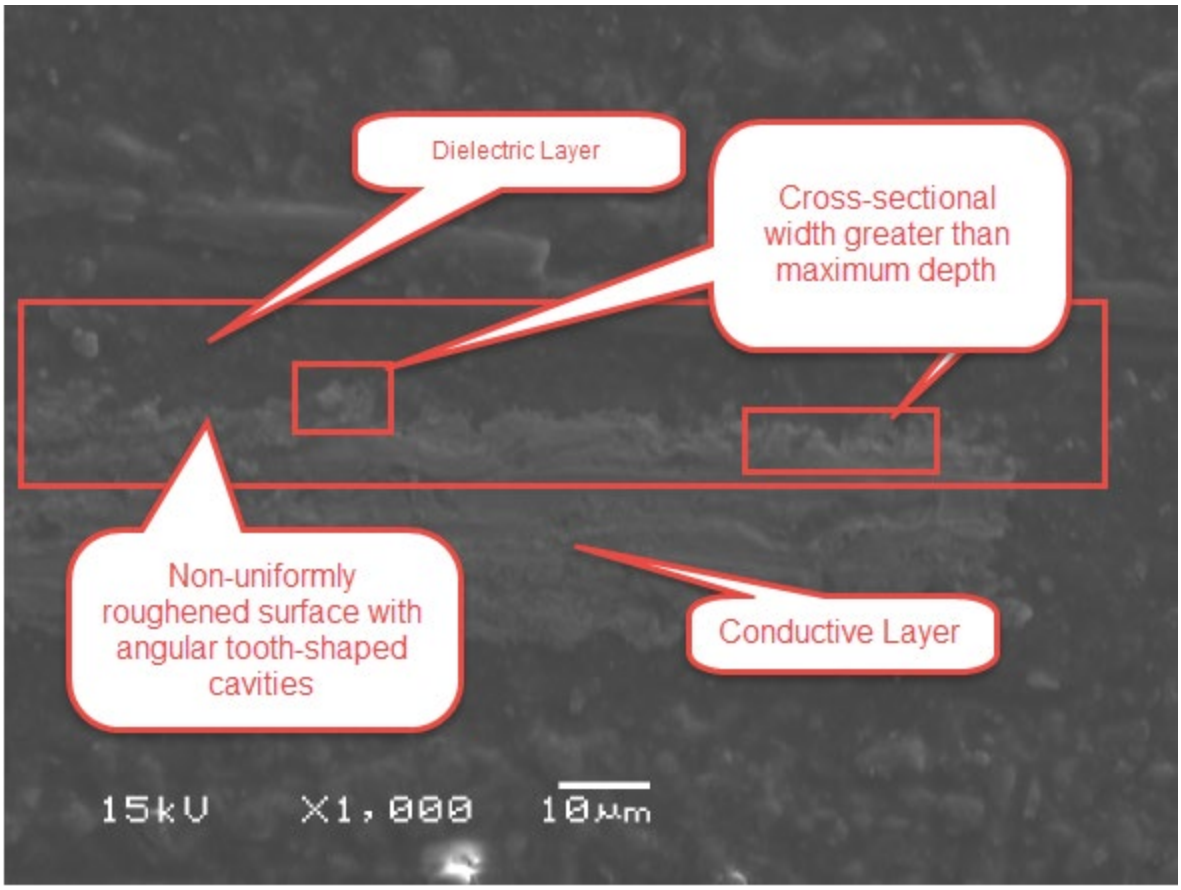
45. Paragraphs 1 through 21 are incorporated by reference as if fully set forth herein.

46. Continental Circuits has not licensed or otherwise authorized Defendant to make, use, offer for sale, sell, or import any products that embody the inventions of the '912 Patent.

47. Defendant has directly infringed the ’912 Patent, either literally or under the doctrine of equivalents, without authority and in violation of 35 U.S.C. § 271, by making, using, offering to sell, selling, and/or importing into the United States products that satisfy each and every limitation of one or more claims of the ’912 Patent. Such products include but are not limited to processors and SoCs manufactured by TSMC for Defendant, that were included in multilayer electric devices, products, and/or a circuit board.

48. For example, Defendant has directly infringed at least claim 17 of the ’912 Patent by making, using, offering to sell, selling, and/or importing into the United States the Accused Products which are products produced by the process of claim 1 of the ’912 Patent.

49. Upon information and belief, the Accused Products are made by implementing a circuit design for an electrical device by coupling a dielectric material delivered with solid content, the dielectric material and the solid content being non-homogeneous materials sufficient that etching the dielectric material forms a non-uniformly roughened surface of cavities located in, and underneath an initial surface of, the dielectric material, sufficient that the etching of the dielectric material uses non-homogeneity with the solid content in bringing about formation of the non-uniformly roughened surface of the cavities and sufficient that the etching of the dielectric material is such that a plurality of the cavities have a cross-sectional width that is greater than a maximum depth with respect to the initial surface, wherein the etching forms the non-uniformly roughened surface of cavities, with a conductive material, a portion of the conductive material in the cavities thereby forming numerous sized and shaped teeth in the cavities, in circuitry of the electrical device.



SEM image of example TSMC-manufactured product with exemplary annotations

50. Because of Defendant's infringement of the '912 Patent, Continental Circuits has suffered damages in an amount to be proved at trial.

DEMAND FOR JURY TRIAL

Plaintiff hereby demands a jury for all issues so triable.

PRAYER FOR RELIEF

WHEREFORE, Continental Circuits prays for relief against Defendant as follows:

a. Entry of judgment declaring that Defendant infringed one or more claims of each of the Patents-in-Suit;

b. An order awarding damages sufficient to compensate Continental Circuits for Defendant's infringement of the Patents-in-Suit, but in no event less than a

reasonable royalty, together with pre-judgment and post-judgment interest and costs;

c. Enhanced damages pursuant to 35 U.S.C. § 284;

d. Entry of judgment declaring that this case is exceptional and awarding Continental Circuits its costs and reasonable attorney fees under 35 U.S.C. § 285;

e. An accounting for acts of infringement;

f. Such other equitable relief which may be requested and to which Plaintiff is entitled; and

g. Such other and further relief as the Court deems just and proper.

Dated: May 28, 2021

Respectfully submitted,

/s/ Alfred R. Fabricant

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CONTINENTAL CIRCUITS OF TEXAS LLC