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**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF NEW JERSEY**

TESSERA ADVANCED TECHNOLOGIES,
INC.,

Plaintiff,

v.

SAMSUNG ELECTRONICS AMERICA,
INC., and
SAMSUNG ELECTRONICS CO., LTD.,

Defendants.

Civil Action No.: _____

JURY TRIAL DEMANDED

Document Filed Electronically

COMPLAINT

Plaintiff Tessera Advanced Technologies, Inc. (“TATI” or “Plaintiff”) brings this patent infringement action against Defendants Samsung Electronics America, Inc. (“SEA”), with a principal place of business at 85 Challenger Road, Ridgefield Park, New Jersey 07660, and Samsung Electronics Co., Ltd. (“SEC”), with a principal place of business in the Republic of Korea (collectively, “Samsung”) as follows:

NATURE OF THE ACTION

1. This is a civil action for infringement of United States Patent Nos. 6,954,001 (the “001 patent”) and 6,784,557 (the “557 patent”) (collectively, the “Asserted Patents”) under the patent laws of the United States, 35 U.S.C. § 1 *et seq.*

THE PARTIES

2. Plaintiff Tessera Advanced Technologies, Inc. (“TATI”) is a Delaware corporation with its principal place of business at 3025 Orchard Parkway, San Jose, California, 95134.

3. Defendant SEA is a New York corporation with its principal place of business at 85 Challenger Road, Ridgefield Park, New Jersey 07660. SEA is a wholly-owned subsidiary of SEC. SEA’s registered agent, The Corporation Trust Company, is located at Corporation Trust Center, 111 Eighth Avenue, New York, New York, 10011.

4. Defendant SEC is a company organized under the laws of the Republic of Korea with its principal place of business located at 129 Samsung-ro, Maetan-3dong, Yeongtong-gu, Suwon-si, Gyeonggi-do, 443-742 in the Republic of Korea.

JURISDICTION AND VENUE

5. The Court has subject matter jurisdiction over these claims under 28 U.S.C. §§ 1331 and 1338(a) and the patent laws of the United States, 35 U.S.C. § 1 *et seq.*

6. The Court has personal jurisdiction over each of the Defendants consistent with the requirements of the Due Process Clause of the United States Constitution and the New Jersey Long Arm Statute. On information and belief, each Defendant has regularly and systematically transacted business in New Jersey, directly or through subsidiaries or intermediaries, and/or committed acts of patent infringement in New Jersey as alleged more particularly below. Each Defendant has also placed infringing products into the stream of commerce by shipping those products into New Jersey or knowing that the products would be shipped into New Jersey.

7. Venue is proper in this district under 28 U.S.C. § 1400(b) because SEA has committed acts of infringement in and has its principal place of business within this district. For instance, SEA's self-identified headquarters are located at 85 Challenger Road, Ridgefield Park, New Jersey 07660. Venue is proper for defendant SEC, a Korean company, because suits against foreign entities are proper in any judicial district.

THE ASSERTED PATENTS

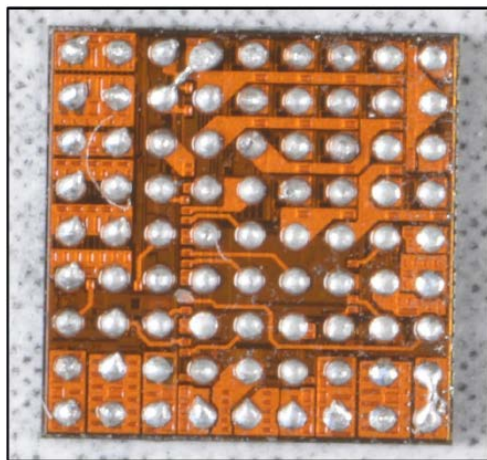
8. The '001 patent is entitled "Semiconductor Device Including a Diffusion Layer," and issued on October 11, 2005 to inventors Yoshifumi Nakamura, Ryuichi Sahara, Nozomi Shimoishizaka, Kazuyuki Kainou, Keiji Miki, Kazumi Watase, and Yasutake Yaguchi. TATI owns the entire right, title, and interest in and to the '001 patent.

9. The '557 patent is entitled "Semiconductor Device Including a Diffusion Layer Formed Between Electrode Portions," and issued on August 31, 2004 to inventors Yoshifumi Nakamura, Ryuichi Sahara, Nozomi Shimoishizaka, Kazuyuki Kainou, Keiji Miki, Kazumi Watase, and Yasutake Yaguchi. TATI owns the entire right, title, and interest in and to the '557 patent.

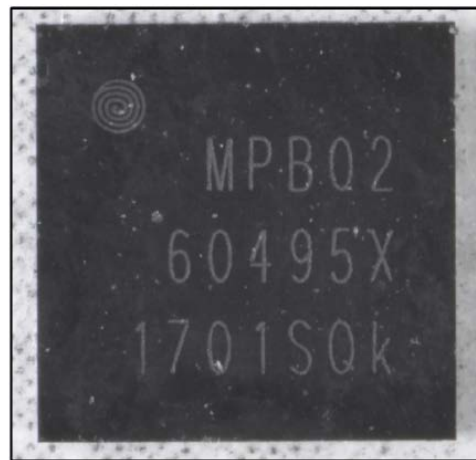
CLAIMS FOR PATENT INFRINGEMENT

10. The allegations provided below are exemplary and without prejudice to Plaintiff's infringement contentions provided pursuant to the Court's scheduling order and local civil rules. In providing these allegations, Plaintiff does not convey or imply any particular claim constructions or the precise scope of the claims. Plaintiff's claim construction contentions regarding the meaning and scope of the claim terms will be provided under the Court's scheduling order and local civil rules.

11. The accused products include, but are not limited to, Samsung's Galaxy S6, S7, and S8 devices (collectively, the "Accused Products"). On information and belief, the Accused Products include one or more infringing wafer-level packaging ("WLP") semiconductor devices, including at least the Samsung S2MPB02 power management integrated circuit ("PMIC"), present in the Galaxy S6, S7, and S8 devices. Photographs of the bottom and top of an S2MPB02 from a Galaxy S7 are shown below. On information and belief, the S2MPB02 in the Galaxy S6 and S8 devices is materially the same as the S2MPB02 in the Galaxy S7 devices.



Bottom



Top

12. As detailed below, including with reference to scanning electron microscope (SEM), energy dispersive x-ray spectrometry (EDS) point analysis, and die photograph images,

each element of at least one claim of each Asserted Patent is literally present in the Accused Products. To the extent that any element is not literally present, each such element is present under the doctrine of equivalents.

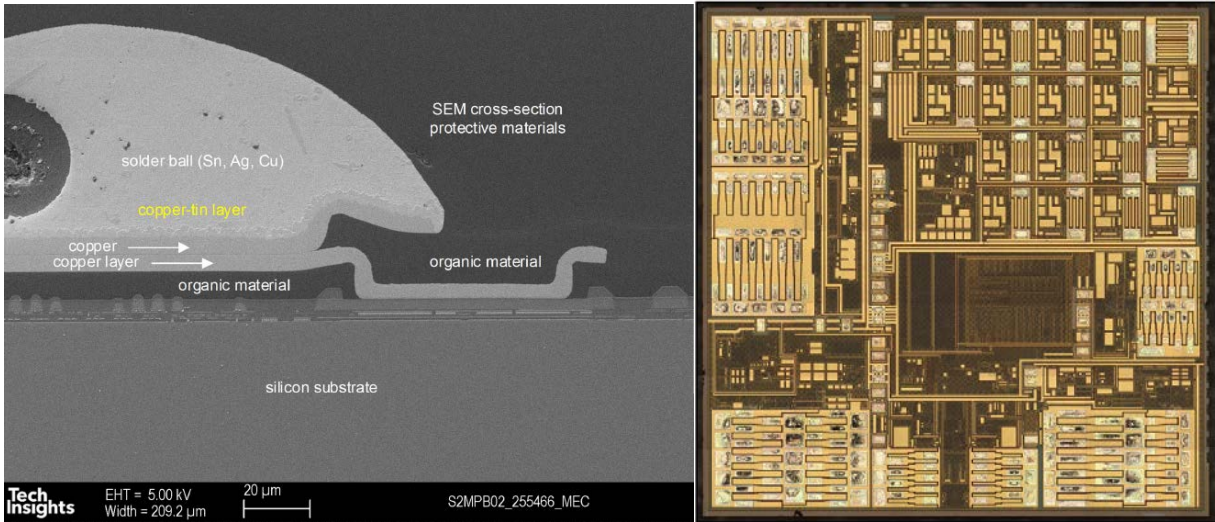
COUNT I
INFRINGEMENT OF THE '001 PATENT

13. Plaintiff incorporates by reference the allegations set forth in paragraphs 1 through 12 as though fully set forth herein.

14. On information and belief, Samsung has directly infringed and continues to infringe, and/or has induced the infringement of, one or more claims of the '001 patent, including claim 10, literally or under the doctrine of equivalents, by making, using, importing, selling, and/or offering to sell in the United States without authority, at least the Samsung Galaxy S6, S7, and S8, and other devices containing substantially similar WLP devices, in violation of 35 U.S.C. § 271.

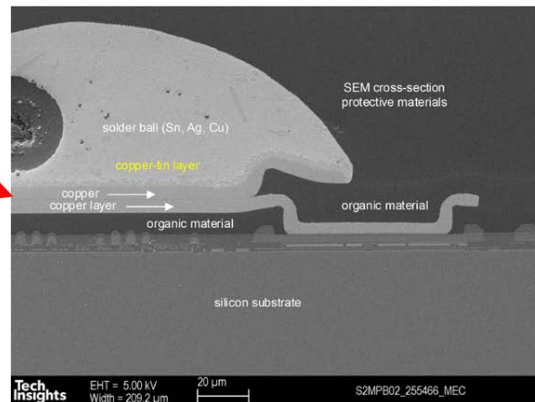
15. Claim 10 recites “a semiconductor device.” The Accused Products include a semiconductor device. For example, the Accused Products include the S2MPB02 shown in paragraph 11 above.

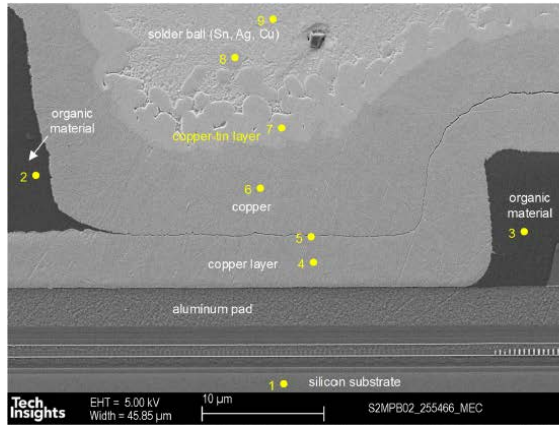
16. Claim 10 requires “a semiconductor element.” The Accused Products include a semiconductor element. For example, as shown in the scanning electron microscope (SEM) image below (left), and the die photograph below (right), the S2MPB02 includes a silicon substrate with an integrated circuit that includes transistors.



17. Claim 10 further requires “a first electrode portion formed on the semiconductor element, said first electrode portion comprising a first metal component.” The Accused Products include a first electrode portion formed on the semiconductor element, said first electrode portion comprising a first metal component. For example, as shown in the annotated SEM image below (top), and the energy dispersive x-ray spectrometry (EDS) point analysis below (bottom), the S2MPB02 includes a first electrode portion formed on the silicon substrate that comprises at least copper (Cu).

first electrode portion



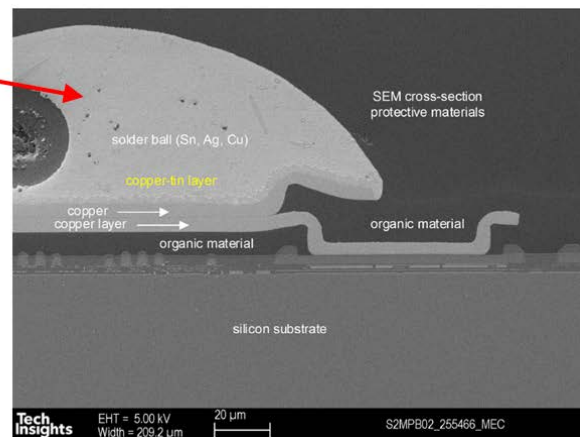


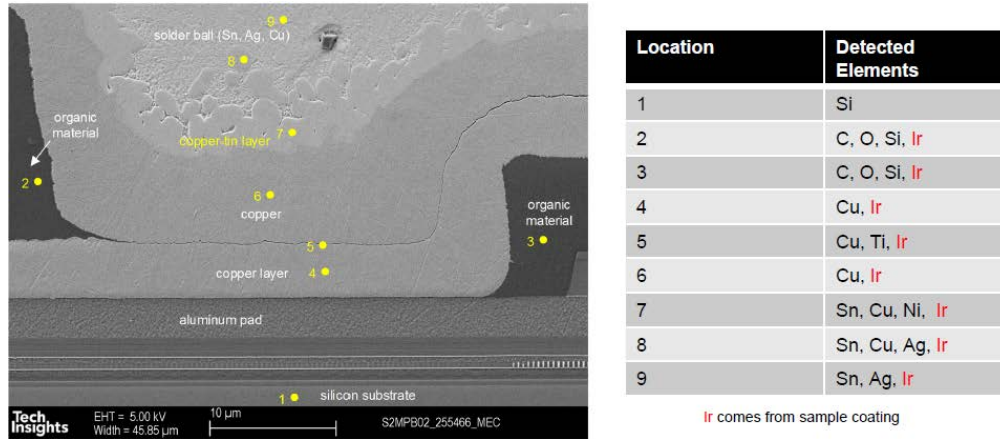
Location	Detected Elements
1	Si
2	C, O, Si, Ir
3	C, O, Si, Ir
4	Cu, Ir
5	Cu, Ti, Ir
6	Cu, Ir
7	Sn, Cu, Ni, Ir
8	Sn, Cu, Ag, Ir
9	Sn, Ag, Ir

Ir comes from sample coating

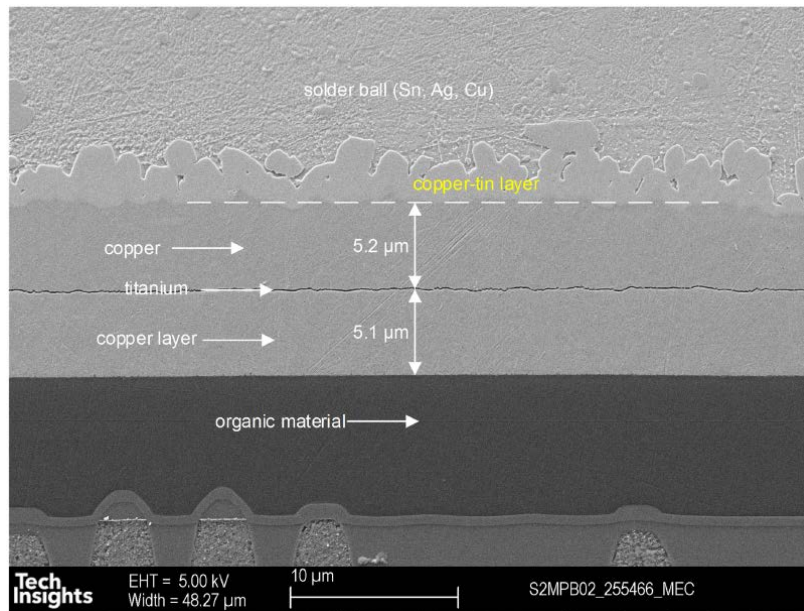
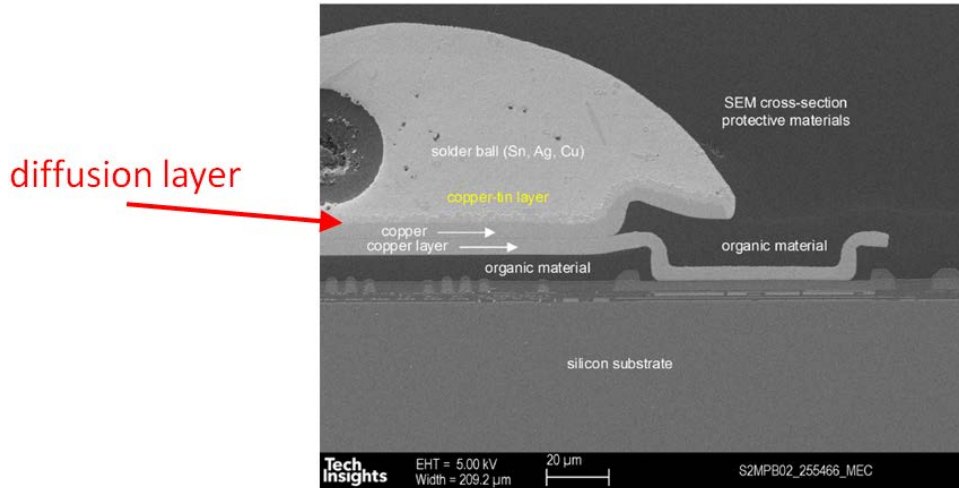
18. Claim 10 further requires “a second electrode portion formed on the semiconductor element and electrically connected to said first electrode portion, said second electrode portion comprising a second metal component different from said first metal component.” The Accused Products include a second electrode portion formed on the semiconductor element and electrically connected to said first electrode portion, said second electrode portion comprising a second metal component different from said first metal component. For example, as shown in the annotated SEM image below (top), and the energy dispersive x-ray spectrometry (EDS) point analysis below (bottom), the S2MPB02 includes a solder ball comprising tin (Sn) that is formed on the silicon substrate and is electrically connected to the first electrode portion.

second electrode portion





19. Claim 10 further requires “a diffusion layer formed between said first electrode portion and said second electrode portion, wherein said diffusion layer comprises said first metal component and said second metal component, and said first electrode portion and said diffusion layer have a combined thickness in the range of 10 μm to 20 μm .” The Accused Products include a diffusion layer formed between said first electrode portion and said second electrode portion, wherein said diffusion layer comprises said first metal component and said second metal component, and said first electrode portion and said diffusion layer have a combined thickness in the range of 10 μm to 20 μm . For example, as shown in the annotated SEM images below, the S2MPB02 includes a diffusion layer formed between the first electrode portion and the solder ball, where the diffusion layer includes at least copper and tin, and the first electrode portion and the diffusion layer have a combined thickness in the range of 10 μm to 20 μm .



20. On information and belief, Samsung also actively, knowingly, and intentionally induces infringement of one or more claims of the '001 patent under 35 U.S.C. § 271(b) by actively encouraging others to make, use, offer to sell, sell, and/or import the Accused Products in this judicial district and elsewhere in the United States. For example, Samsung actively promotes the sale, use, and importation of its infringing chips in marketing materials, technical specifications, data sheets, web pages on its website (*e.g.*, www.samsung.com), press releases, and user manuals, as well as at trade shows (*e.g.*, CES and Mobile World Congress) and through

its sales and distribution channels that encourage infringing sales, offers to sell, and importation of the Accused Products or products containing infringing chips in the Accused Products. *See, e.g., How-Tos, SAMSUNG GALAXY S8 | S8+, <http://www.samsung.com/global/galaxy/galaxy-s8/how-to/> (last visited Sept. 26, 2017); Buy Now SAMSUNG WEBSITE, <http://www.samsung.com/us/explore/galaxy-s8/buy/s/Device/> (last visited Sept. 26, 2017).* Samsung has been aware of the '001 patent at least since May 2, 2016. By continuing these actions, Samsung has had the specific intent to induce, or was willfully blind of inducing, infringement of the '001 patent.

21. Samsung's infringement of the '001 patent has been willful and deliberate. Samsung has had knowledge of the '001 patent and that its activities infringe the '001 patent since at least May 2, 2016. On that date, Plaintiff made a presentation to Samsung explaining the benefits of its patented technologies, and how Samsung was infringing them. That presentation specifically identified the '001 patent by name and title. With this knowledge, Samsung has continued to engage in the actions described above despite an objectively high likelihood that its actions constitute infringement. Samsung's actions have been objectively reckless.

22. Plaintiff has suffered and continues to suffer damages as a result of Samsung's infringement of the '001 patent.

COUNT II
INFRINGEMENT OF THE '557 PATENT

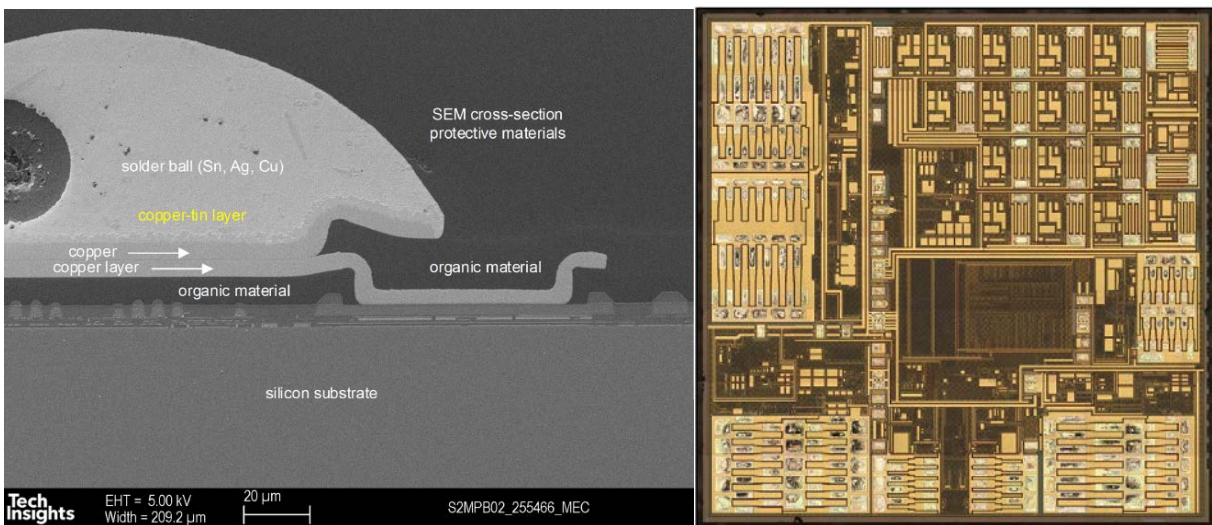
23. Plaintiff incorporates by reference the allegations set forth in paragraphs 1 through 22 as though fully set forth herein.

24. On information and belief, Samsung has directly infringed and continues to infringe, and/or has induced the infringement of, one or more claims of the '557 patent, including claim 10, literally or under the doctrine of equivalents, by making, using, importing, selling,

and/or offering to sell in the United States without authority, at least the Samsung Galaxy S6, S7, and S8, and other devices containing substantially similar WLP chips, in violation of 35 U.S.C. § 271.

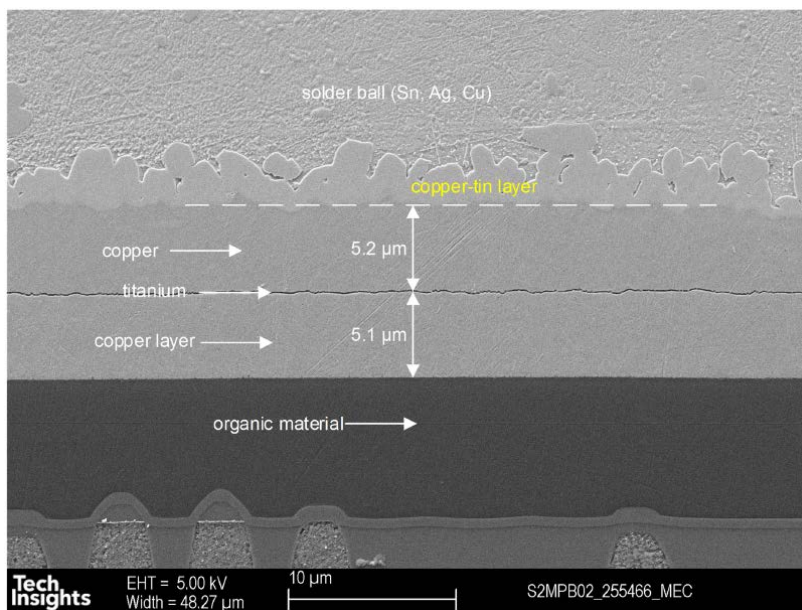
25. Claim 1 recites “a semiconductor device.” The Accused Products include a semiconductor device. For example, the Accused Products include the S2MPB02 shown in paragraph 11 above.

26. Claim 1 requires “a semiconductor element.” The Accused Products include a semiconductor element. For example, as shown in the scanning electron microscope (SEM) image below (left), and the die photograph below (right), the S2MPB02 includes a silicon substrate with an integrated circuit that includes transistors.



27. Claim 1 further requires “a first electrode portion formed on the semiconductor element, wherein said first electrode portion has a thickness in the range of 10 μm to 20 μm.” The Accused Products include a first electrode portion formed on the semiconductor element, wherein said first electrode portion has a thickness in the range of 10 μm to 20 μm. For example, as shown in the annotated SEM images of a cross section of the S2MPB02, the S2MPB02

includes a first electrode portion formed on the silicon substrate that has a thickness in the range of 10 μm to 20 μm .



28. On information and belief, Samsung also actively, knowingly, and intentionally induces infringement of one or more claims of the '557 patent under 35 U.S.C. § 271(b) by actively encouraging others to make, use, offer to sell, sell, and/or import the Accused Products in this judicial district and elsewhere in the United States. For example, Samsung actively promotes the sale, use, and importation of its infringing chips in marketing materials, technical specifications, data sheets, web pages on its website (*e.g.*, www.samsung.com), press releases, and user manuals, as well as at trade shows (*e.g.*, CES and Mobile World Congress) and through its sales and distribution channels that encourage infringing sales, offers to sell, and importation of the Accused Products or products containing infringing chips in the Accused Products. *See, e.g., How-Tos, SAMSUNG GALAXY S8 | S8+*, <http://www.samsung.com/global/galaxy/galaxy-s8/how-to/> (last visited Sept. 26, 2017); *Buy Now SAMSUNG WEBSITE*, <http://www.samsung.com/us/explore/galaxy-s8/buy/s/Device/> (last visited Sept. 26, 2017). Samsung has been aware of the '557 patent at least since May 2, 2016. By continuing these

actions, Samsung has had the specific intent to induce, or was willfully blind of inducing, infringement of the '557 patent.

29. Samsung's infringement of the '557 patent has been willful and deliberate. Samsung has had knowledge of the '557 patent and that its activities infringe the '557 patent since at least May 2, 2016. On that date, Plaintiff made a presentation to Samsung explaining the benefits of its patented technologies, and how Samsung was infringing them. That presentation specifically identified the '557 patent by name and title. With this knowledge, Samsung has continued to engage in the actions described above despite an objectively high likelihood that its actions constitute infringement. Samsung's actions have been objectively reckless.

30. Plaintiff has suffered and continues to suffer damages as a result of Samsung's infringement of the '557 patent.

JURY DEMAND

31. Plaintiff demands a jury trial as to all issues that are triable by a jury in this action.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff respectfully prays for relief as follows:

- (a) Judgment that each defendant is liable for infringement and/or inducing the infringement of one or more claims of each of the Asserted Patents;
- (b) Compensatory damages in an amount according to proof, and in any event no less than a reasonable royalty;
- (c) Treble damages for willful infringement pursuant to 35 U.S.C. § 284;
- (d) Attorneys' fees based on this being an exceptional case pursuant to 35 U.S.C. § 285, including pre-judgment interest on such fees;
- (e) Pre-judgment interest;
- (f) Post-judgment interest;

- (g) An accounting and/or supplemental damages for all damages occurring after any discovery cutoff and through final judgment;
- (h) Costs and expenses in this action; and
- (i) Any further relief that the Court deems just and proper.

Dated: September 28, 2017

Respectfully submitted,
SAIBER LLC

Attorneys for Plaintiff
TATI Technologies, Inc.

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CERTIFICATION PURSUANT TO LOCAL CIVIL RULE 11.2

Pursuant to Local Civil Rule 11.2, I hereby certify that the infringement of the patents at issue in the above-captioned action is also the subject of *In the Matter of Certain Wafer-Level Packaging Semiconductor Devices And Products Containing Same Including Cellular Phones and Components Thereof*, Inv. No. 337-TA-____, Docket Number 3____, which has been submitted to the United States International Trade Commission (ITC) concurrently with the above-captioned action, and which is currently awaiting institution. Plaintiff in this case is the Complainant in the ITC action, and Defendants in this case are Respondents in the ITC action.

I further certify that the infringement of the '001 patent at issue is the subject of a case pending in the District of Delaware, *Tessera, Inc. v. Broadcom Corp.*, 1-16-cv-00380 (DED). The Plaintiffs in that case are Tessera, Inc. and Tessera Advanced Technologies, Inc. The Defendant is Broadcom Corporation.

I further certify that Broadcom Corporation filed a petition for inter partes review of the '001 patent at issue in the Patent Trial and Appeal Board (PTAB). The PTAB has not yet issued a determination on whether it will institute the requested inter partes review.

I further certify that infringement of the patents at issue in the above-captioned action to the best of my knowledge is not the subject of any other action pending in any court, or of any other pending arbitration or administrative proceeding.

LOCAL CIVIL RULE 201.1 CERTIFICATION

Under Local Civil Rule 201.1, the undersigned counsel for Plaintiff hereby certifies that this action seeks damages in excess of \$150,000, exclusive of interest and costs and any claim for punitive damages, and therefore is not appropriate for compulsory arbitration.

Dated: September 28, 2017

Respectfully submitted,
SAIBER LLC

Attorneys for Plaintiff
TATI Technologies, Inc.

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