

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

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

Petitioners,

v.

HARBOR ISLAND DYNAMIC, LLC,

Patent Owner.

Patent No. 9,245,826

Filing Date: January 27, 2014

Issue Date: January 26, 2016

Inventors: Hadi Jebory, David J. Howard, and Scott B. Stetson
Title: ANCHOR VIAS FOR IMPROVED BACKSIDE METAL
ADHESION TO SEMICONDUCTOR SUBSTRATE

PATENT OWNER'S NOTICE OF APPEAL

Case No. IPR2024-01405

Pursuant to 35 U.S.C. §§ 141 and 142 and 37 C.F.R. §§ 90.2 and 90.3, Patent Owner Harbor Island Dynamic LLC (“HID” or “Patent Owner”) hereby provides notice that it appeals to the United States Court of Appeals for the Federal Circuit from the Order Denying the Request for Director Review entered June 29, 2026 (Paper 45); the Final Written Decision entered March 13, 2026 (Paper 42, attached hereto as Exhibits A and B, respectively); and from all underlying orders, decisions, rulings, and opinions regarding U.S. Patent No. 9,245,826 (the “’826 patent”) in Case No. IPR2024-01405. This notice is timely under 37 C.F.R. § 90.3 and 37 C.F.R. § 42.75(e)(3) having been filed within 63 days after the date of the Order Denying the Request for Director Review. For the limited purpose of providing the Director with the information requested in 37 C.F.R. § 90.2(a)(3)(ii), Patent Owner anticipates that the issues on appeal may include, but are not limited to: the Board’s claim constructions; its application of those constructions; any implied claim constructions; its invalidity determinations including that Claims 1-9, 11-13, and 18-20 of the ’826 patent are unpatentable under 35 U.S.C. § 102; Claims 1, 2, 4-7, 10-12, and 14-17 of the ’826 patent are unpatentable under 35 U.S.C. § 103; any findings related to secondary considerations of non-obviousness; the findings, rulings, and conclusions supporting or relating to those determinations; and any

other issues decided adversely to Patent Owner in any orders, decisions, rulings, or opinions in IPR2024-01405.

Simultaneous with this submission, a copy of this Notice of Appeal is being filed with the Clerk of the United States Court of Appeals for the Federal Circuit through the Court's CM/ECF system, together with the requisite fee in the amount of \$600.00. In addition, a copy of this Notice of Appeal is being filed with the Patent Trial and Appeal Board and served upon counsel of record for Samsung Electronics Co., Ltd. and Samsung Electronics America, Inc.

Respectfully submitted,

Dated: August 31, 2026

By: /Joseph M. Mercadante /
Joseph M. Mercadante (Reg. No. 64,077)
Fabricant, Rubino & Lambrianakos LLP
411 Theodore Fremd Avenue,
Suite 206 South
Rye, New York 10580
Tel. 212-257-5797
Fax. 212-257-5796
Email: jmercadante@frlip.com

EXHIBIT A

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE OFFICE OF THE UNDER SECRETARY OF COMMERCE
FOR INTELLECTUAL PROPERTY AND DIRECTOR OF THE
UNITED STATES PATENT AND TRADEMARK OFFICE

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

v.

HARBOR ISLAND DYNAMIC, LLC,
Patent Owner.

IPR2024-01405
Patent 9,245,826 B2

Before JOHN A. SQUIRES, *Under Secretary of Commerce for Intellectual
Property and Director of the United States Patent and Trademark Office.*

ORDER

The Office received a request for Director Review of the Final Written Decision in the above-captioned case and an authorized response to the request. *See* Papers 43, 44.

Having reviewed the request and response, it is:

ORDERED that the request for Director Review is denied.

IPR2024-01405
Patent 9,245,826 B2

FOR PETITIONER:

Joshua L. Goldberg
Abhay A. Watwe
Chen Zang
Biju I. Chandran
Shawn S. Chang
Benjamin A. Saidman
FINNEGAN, HENDERSON, FARABOW,
GARRETT & DUNNER, LLP
joshua.goldberg@finnegan.com
abhay.watwe@finnegan.com
chen.zang@finnegan.com
biju.chandran@finnegan.com
shawn.chang@finnegan.com
benjamin.saidman@finnegan.com

FOR PATENT OWNER:

Joseph M. Mercadante
Richard Cowell
FABRICANT LLP
jmercadante@fabricantllp.com
rcowell@fabricantllp.com

EXHIBIT B

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

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

Petitioners,

v.

HARBOR ISLAND DYNAMIC, LLC

Patent Owner.

Patent No. 9,245,826

Filing Date: January 27, 2014

Issue Date: January 26, 2016

Inventors: Hadi Jebory, David J. Howard, and Scott B. Stetson
Title: ANCHOR VIAS FOR IMPROVED BACKSIDE METAL
ADHESION TO SEMICONDUCTOR SUBSTRATE

PATENT OWNER'S REQUEST FOR DIRECTOR REVIEW

Case No. IPR2024-01405

TABLE OF CONTENTS

	<u>Page(s)</u>
I. INTRODUCTION	1
II. BACKGROUND	3
III. LEGAL STANDARD	6
IV. DISCUSSION	7
A. The Board’s Decision as to Grounds 4 and 5 as Based on an Erroneous Conclusion of Law as to Claim Construction.....	7
B. The Board’s Decision as to Ground 3 Rests on Clearly Erroneous Fact Finding and a Theory Not Presented in the Petition.....	11
V. CONCLUSION.....	15

TABLE OF AUTHORITIES

	Page(s)
Cases	
<i>Bicon, Inc. v. Straumann Co.</i> , 441 F.3d 945 (Fed. Cir. 2006)	10
<i>Bilstad v. Wakalopulos</i> , 386 F.3d 1116 (Fed. Cir. 2004)	6
<i>Intelligent Bio-Sys., Inc. v. Illumina Cambridge Ltd.</i> , 821 F.3d 1359 (Fed. Cir. 2016)	6
<i>McRO, Inc. v. Bandai Namco Games Am. Inc.</i> , 959 F.3d 1091 (Fed. Cir. 2020)	8
<i>Medrad, Inc. v. MRI Devices Corp.</i> , 401 F.3d 1313 (Fed. Cir. 2005)	7
<i>Nystrom v. TREX Co.</i> , 424 F.3d 1136 (Fed. Cir. 2005)	8, 9
<i>Phillips v. AWH Corp.</i> , 415 F.3d 1303 (Fed. Cir. 2005) (<i>en banc</i>)	7
<i>United States v. Arthrex, Inc.</i> , 141 S. Ct. 1970 (2021).....	6
<i>V-Formation, Inc. v. Benetton Grp. SpA</i> , 401 F.3d 1307 (Fed. Cir. 2005)	9
Statutes	
35 U.S.C. § 135	6
35 U.S.C. § 311	6
35 U.S.C. § 318.....	6
35 U.S.C. § 321	6
35 U.S.C. § 328.....	6

EXHIBIT LIST

Exhibit No.	Description of Document
2001	Docket Control Order, Dkt. 38, in <i>Harbor Island Dynamic, LLC v. Samsung Elecs. Co.</i> , Case No. 2:24-cv-00140-JRG-RSP (E.D. Tex. Aug. 5, 2024)
2002	Order Denying Samsung’s Motion to Stay Pending <i>Inter Partes</i> Review, Dkt. 62, in <i>Harbor Island Dynamic, LLC v. Samsung Elecs. Co.</i> , Case No. 2:24-cv-00140-JRG-RSP (E.D. Tex. Dec. 19, 2024)
2003	Defendants’ Invalidity Contentions, served on September 26, 2024, in <i>Harbor Island Dynamic, LLC v. Samsung Elecs. Co.</i> , Case No. 2:24-cv-00140-JRG-RSP (E.D. Tex.)
2004	Declaration of John Berg
2005	CV of John Berg
2006	“Die Singulation Technologies for Advanced Packaging: A Critical Review” (Lei 2012)
2007	“3D vs 2D Modeling of the Effect of Die Size on Delamination in Encapsulated IC Packages” (Ho et al., 2013)
2008	“Optimizing Die Corner and Optical Groove Corner Crackstop Support Structures for Mitigating Dicing and CPI Risks” (Rabie et al., 2021)
2009	Deposition of Scott E. Thompson, taken June 9, 2025
2010	Patent Owner’s Demonstrative Exhibits

I. INTRODUCTION

Patent Owner respectfully requests that the Director reverse the recently-issued Final Written Decision because that decision is based on erroneous conclusions of law and findings of fact. In particular, the Panel’s decision is based on an improper claim construction that ignored the intrinsic evidence in favor of extrinsic sources, and on a modification that was shown to be impossible.

This is the second request for Director review in this proceeding. Patent Owner previously sought Director Review of the Institution Decision, which ignored the trial schedule and settled expectations relating to the patent-at-issue. Paper 11. Acting director Coke Morgan Stewart recused herself from that decision and review was denied. Paper 13.

During the trial phase, the Director issued the *Revvo* decisions. Recognizing that Petitioner in this case had offered inconsistent claim constructions (indefinite in the District Court, and “no construction necessary” in this proceeding) with no explanation, the Panel requested additional briefing. Petitioner’s briefing laid clear that it had no explanation for its differing positions; it simply asserted that the “outer boundary” of the allegedly indefinite corner limitation was indefinite but there was no dispute that the prior art references disclosed the limitation. Paper 28. As Patent Owner explained, the outer boundary of the corner was critical to analyze whether Petitioner’s primary reference was anticipatory. Paper 34.

On January 6, 2026, the Panel conducted oral argument. The Panel issued its Final Written Decision on March 13, 2026, finding all Challenged Claims had been shown to be unpatentable. In so doing, the Panel confirmed that Grounds 1 and 2 did not show any claims to be unpatentable, but the combination of Grounds 3 through 5 showed some claims obvious and others anticipated.

With respect to Grounds 4 and 5, the Panel rejected Patent Owner's proposed claim construction for the limitation "backside metal layer on a bottom surface of said substrate" which, as demonstrated by reading the specification, requires the metal layer to be in contact with the substrate. The Board, however, started by determining that the phrase did not require contact, and *only afterward* considering the specification. The Board's mistake in ignoring the intrinsic evidence constitutes legal error and an abuse of discretion.

The Board further made a material factual error with respect to Ground 3. It was undisputed that Samsung's Ground 3 combination used Gambino's via etching and filling process without modification. Indeed, Samsung relied on that unmodified use to support its argument that a POSITA could successfully make the combination. Patent Owner showed during the trial that the Gambino process could not make vias that did not extend to the frontside. Samsung did not controvert or even disagree with Patent Owner's evidence regarding Gambino's process. Nevertheless, the Panel ignored Patent Owner's evidence and accepted Samsung unsupported

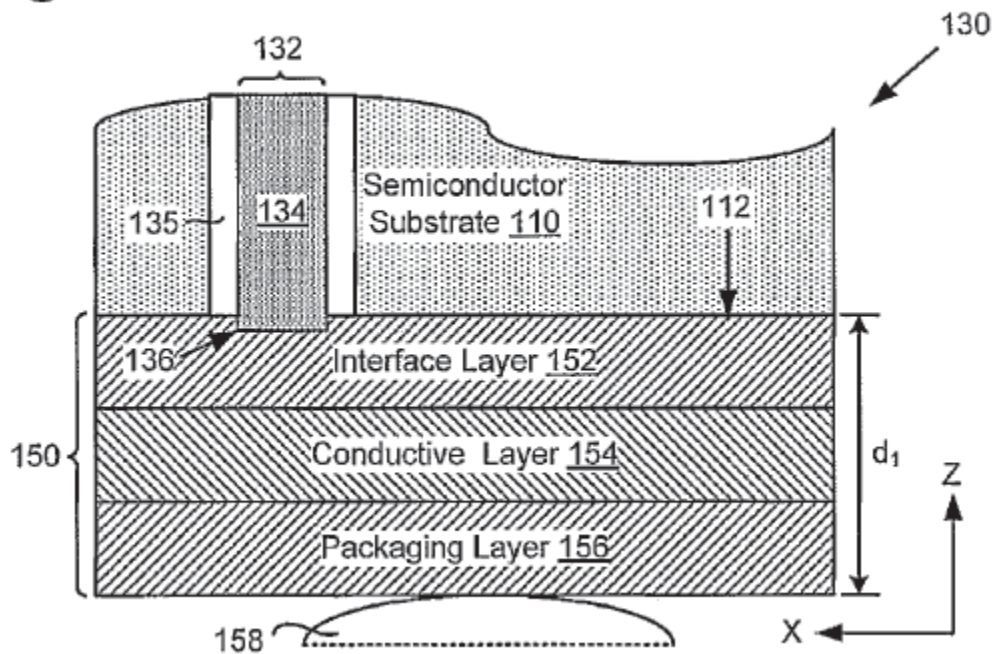
assertion that Gambino's process could produce the claimed vias.

Patent Owner, therefore, respectfully requests Director Review and reversal of the panel's Final Written Decision.

II. BACKGROUND

The '826 Patent describes and claims "anchor vias for improved backside metal adhesion to a semiconductor substrate." '826 Patent, 1:42-46. When a backside metal layer is attached to a semiconductor substrate using an adhesive layer, as conventionally done, "unacceptably low yields are often achieved during fabrication due to the backside metal layer peeling from the semiconductor substrate." *Id.*, 1:36-38. The inventors of the '826 Patent overcame this problem by placing one or more through-silicon vias, called an "anchor via," in the corner of the semiconductor die where these stresses are the greatest, and using those anchor vias "to improve backside metal adhesion." *Id.*, 2:44-47. This anchor via contains a protrusion 136 that extends into the metal layer, "such that when interface layer 152 is deposited on bottom side 112 of semiconductor substrate 110 the additional contact between metal filler 134 and interface layer 152 form a very strong physical, metal-on-metal bond." *Id.* 3:43-48.

Fig. 1B



Paper 17, 3-7.

Each Challenged Claim recites or requires at least one anchor via (e.g., 132 in Fig. 1b above)—that does not provide a ground connection—in the corner of a semiconductor substrate 110 where the anchor via filler (134) protrudes from the backside of the substrate. *E.g.*, '826 Patent, Cls. 1, 11. The claims further recite “a backside metal layer on a bottom surface of said semiconductor substrate.” *Id.* The backside layer is bonded to the protruding portion of the metal filler. *Id.*

Petitioner raised *five* Grounds in its Petition using five references. Pet., 23. The Board found that Grounds 3, 4, and 5, in sum, invalidated every Challenged

Claim. Paper 42, 73. For Ground 3, the Board found obviousness based on two references, Gambino and Conn. Grounds 4 and 5 are each anticipation grounds based on Torii and Ide, respectively.

Torii and Ide suffer from the same deficiency; they each have an intervening layer between the substrate and the backside metal layer. Paper 17, 56-62. The Petition acknowledges as much. Pet., 84 n.12, 94 n.15. However, the Panel improperly construed the claim to allow for an intervening layer. As the Patent Owner explained in its briefing, the proper construction, consistent with the plain meaning of the term as used in the specification, requires direct contact between the substrate and the backside metal layer. Paper 17, 25-29. As discussed below, the Board improperly relied on extrinsic evidence and misunderstood the claims to determine that an intervening layer could exist between the substrate and backside metal layer.

The Gambino/Conn combination presents a different issue. There, the Petition presented a combination of using Gambino's via-creating process, without modification, to create Conn's version of anchor vias. As Patent Owner explained, using Gambino's process could only result in vias that are exposed to the frontside of the substrate. Paper 17, 45-54. The Board, without explanation, however, simply credited the Petition's assertion as to Gambino's process.

III. LEGAL STANDARD

The Director “may review final PTAB decisions and . . . issue decisions . . . on behalf of the Board.” *United States v. Arthrex, Inc.*, 141 S. Ct. 1970, 1987 (2021). “Requests for Director Review of a Board’s final decision under 35 U.S.C. §§ 135, 318, or 328, decisions granting rehearing of such a decision, or any other decision concluding a proceeding brought under 35 U.S.C. §§ 135, 311, or 321, shall be limited to decisions presenting (a) an abuse of discretion, (b) important issues of law or policy, (c) erroneous findings of material fact, or (d) erroneous conclusions of law.” *See* USPTO, Revised Interim Director Review Process at 2.B, Availability of Director Review: AIA Trial Proceedings (last modified March 18, 2025), <https://www.uspto.gov/patents/ptab/decisions/director-review-process>. ““An abuse of discretion is found if [a] decision: (1) is clearly unreasonable, arbitrary, or fanciful; (2) is based on an erroneous conclusion of law; (3) rests on clearly erroneous fact finding; or (4) involves a record that contains no evidence on which the Board could rationally base its decision.”” *Intelligent Bio-Sys., Inc. v. Illumina Cambridge Ltd.*, 821 F.3d 1359, 1367 (Fed. Cir. 2016) (quoting *Bilstad v. Wakalopulos*, 386 F.3d 1116, 1121 (Fed. Cir. 2004) (citations omitted)).

IV. DISCUSSION

A. The Board’s Decision as to Grounds 4 and 5 as Based on an Erroneous Conclusion of Law as to Claim Construction

The Board committed legal error when it construed “backside metal layer on a bottom surface of said semiconductor substrate” as not requiring the backside metal layer to be in direct contact with the substrate. FWD, 17-19. The Board began by concluding, in a vacuum, that “on a bottom surface” did not require direct contact. Then, it faulted Patent Owner for not finding any disclaimer or disavowal of the **Board’s** understanding of “on a bottom surface.” *Id.* Indeed, the Board explicitly did not consider the specification until *after* it had construed the term. *Id.* at 17-18 (stating, after defining “on a bottom surface” that “We **now** turn to the Specification” (emphasis added)).

The Board’s analysis is in error. The starting point for claim construction is not the meaning of a term divorced from its context, but the meaning of the term in context of the patent. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005) (“the person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification.”) (*en banc*); *see also Medrad, Inc. v. MRI Devices Corp.*, 401 F.3d 1313, 1319 (Fed. Cir. 2005) (“We cannot look at the ordinary meaning of the term . . . in a vacuum. Rather, we must

look at the ordinary meaning in the context of the written description and the prosecution history.”).

The Board therefore should have determined the meaning of “on a bottom surface” in view of the entire patent, and not chosen a meaning before “turn[ing] to the Specification.” FWD, 18. As the Federal Circuit has explained, “the existence of one broader meaning in the field is not controlling. What matters is the *meaning most appropriate in the context of the particular patent.*”) *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 959 F.3d 1091, 1099 (Fed. Cir. 2020) (emphasis added).

Considering the language in context, it is clear that direct contact is required. Indeed, the claims use different language when contact is required and when contact is not required. Claim 1, which requires contact, uses the phrase “on a bottom surface of [the] semiconductor substrate.” Alternatively, Claim 9, which does not require contact, uses the different and broader phrase “*overlying* [the] semiconductor substrate.” (emphasis added.) Claim 1’s use of a different term (“on”) and addition of “surface” leads to the two phrases having different scopes. *Nystrom v. TREX Co.*, 424 F.3d 1136, 1143 (Fed. Cir. 2005) (“When different words or phrases are used in separate claims, a difference in meaning is presumed.”).

The Board ignored this difference entirely and found, instead, that the only way for a claim to require contact is to include the magic formula “*directly* on” or “formed on.” FWD, 17-18. The Board’s only reasoning was that using the

transitional phrase “comprising” allowed for unclaimed elements. *Id.* But this explanation *assumes* that “on a bottom surface” allows the backside metal layer to not be in contact with the substrate. As Patent Owner explained, an intervening layer *negates* the claimed metal layer on a bottom surface. The question therefore is not whether an additional layer can be added; the question is whether adding a new layer results in *no layer meeting the “on a bottom surface” limitation*.

The Board never addressed this question. It simply stated that, since the metal layer in Claim 9 is a different metal layer than the backside metal layer of Claim 1, the use of different language is irrelevant. *Id.* at 18. It further stated that the patent’s specific description of all layers being formed directly on the preceding layer (as claimed) was merely an embodiment. This is error. The Board was required to consider the term *in context with the specification* and other intrinsic evidence.

The intrinsic record in a patent case is the primary tool to supply the context for interpretation of disputed claim terms. *This tool usually provides the technological and temporal context to enable the court to ascertain the meaning of the claim to one of ordinary skill in the art at the time of invention.* In most cases, the best source for discerning this proper context is the patent specification wherein the patent applicant describes the invention.”

V-Formation, Inc. v. Benetton Grp. SpA, 401 F.3d 1307, 1310-11 (Fed. Cir. 2005) (citations and quotations omitted) (emphasis added).

As Patent Owner explained, the purpose of the '826 Patent's invention is to improve the adhesion of a metal layer to a substrate. '826 Patent, 1:16-39, 1:40-46 (“The present disclosure is directed to anchor vias for improved backside metal adhesion *to a semiconductor substrate*.”) (emphasis added). A key problem the inventors sought to overcome was the reliance “on the adhesive qualities between the substrate and the interface layer.” *Id.*, 1:33-36. Failure of those qualities resulted in “the backside metal layer peeling from the semiconductor substrate.” *Id.*, 1:36-39.

The '826 Patent's example embodiment shows that direct contact is required. As the specification explains, the interface layer is “deposited on bottom side 112 of semiconductor substrate.” *Id.*, 3:43-48. Critically, the conduction layer is “then [] formed *on interface layer* 152.” *Id.*, 3:51-53 (emphasis added). Similarly, the packaging layer is then “formed *on conduction layer* 154.” *Id.*, 3:53-55 (emphasis added). Each layer is in direct contact with the layer which it is “formed on.”

Finally, the use of “bottom *surface*” indicates direct contact is necessary. The Board's construction reads “surface” out of the claims entirely. *Bicon, Inc. v. Straumann Co.*, 441 F.3d 945, 950-51 (Fed. Cir. 2006) (rejecting construction that rendered claim terms meaningless and noting that “claims are interpreted with an eye toward giving effect to all terms in the claim”).

Samsung was unable to provide any intrinsic evidence to support its construction. Instead, it relied on court cases construing completely unrelated patents. *See* Reply, 9-15; Pet., 84 n.12; Pet., 94 n.15. It further relied on extrinsic evidence, such as other references, none of which had any bearing on the '826 Patent. Reply, 10-12. Patent Owner explained how these references and cases were irrelevant; the Board did not rely on them as support for its construction. Sur-Reply, 3-9; FWD, 14-19.

Accordingly, the language of Claims 1 and 9, the specification, and the Figures all show that “on a bottom surface” as read in the context of the '826 Patent requires direct contact. The Board’s finding otherwise was legal error, and its decision on Grounds 4 and 5 is thus based on an erroneous legal conclusion. There was no dispute that anticipation could not be found under Patent Owner’s construction. The Director should reverse the decision as to those grounds. That reversal would restore Claims 8-9, 13, 18, and 19. *See* FWD, 73.

B. The Board’s Decision as to Ground 3 Rests on Clearly Erroneous Fact Finding and a Theory Not Presented in the Petition

Ground 3 presents a combination of Gambino and Conn. The Petition explicitly and exclusively relied on Gambino’s process—with no modifications—for creating vias. Pet., 64 (“the same process used for manufacturing *Gambino’s* electrical TSVs can be used to manufacture the anchor vias”). During the trial phase,

Patent Owner presented uncontroverted (and undisputed) evidence that Gambino's process was not capable of creating vias that reached the backside metal while not reaching the wiring layer, and therefore could not meet the limitation "wherein said metal filler within said at least one anchor via does not provide ground connection to one or more active devices in said semiconductor substrate." The Board's Final Written Decision, however, relied on modifying Gambino's process, in some unspecified fashion, so that the vias would not extend entirely through the substrate to the front side/wiring layer:

[T]he Petition does not propose that when Conn's anchor vias are applied to Gambino's metal pads 16a that the anchor vias would extend through to the front side of the substrate but, rather the anchor vias "form[] protruding portions connected to corner-located dummy metal pad(s) 16a" on the backside.

FWD, 40-41 (quoting Pet., 68).

As Patent Owner explained, Gambino creates its TSVs by etching holes from the front side of the substrate. Ex. 1005, [0020]; *see also* POR 45-54. The etched holes extend partially through the unfinished die or substrate. *Id.* The via is then filled with metal from the front side. *Id.* After the via is filled, the backside is polished (or otherwise removed) to expose the filled via. *Id.* In other words, the Gambino's process does not allow for a hole that reaches the backside without extending to the frontside. POR, 45-48. Samsung did not disagree with this analysis

of the Gambino process. Reply, 24-26. Patent Owner further presented uncontroverted evidence that any modification of the Gambino process to allow for anchor vias that do not reach the front side would be beyond the abilities of one of ordinary skill in the art. POR, 53-54.

Utilizing Gambino's method to create *Conn* anchor vias that reached the backside metal layer would thus result in the anchor vias being entirely filled like Gambino's TSVs. POR, 47-48. Thus, any anchor via created using Gambino's process would be filled from the backside to the surface of the front side. *Id.*, 48; Ex. 1005, [0020]. As Patent Owner explained in the POR, such a via would connect from the wiring level to the ground plane and therefore provide a ground connection. POR, 48-50.

In its Reply, Samsung contended that a POSITA would alter Gambino such that there would simply be no wiring layer over alleged anchor vias by either "patterning the wiring layer or recess etching the metal filler from the front side." Reply, 24-26. Samsung acknowledged that this alteration is not in the Petition by providing a new motivation to make it. *Id.*, 26 ("A POSITA would have found it desirable to prevent the metal filler from providing ground connection to active devices because . . . providing the ground connection would unfavorably disturb and require redesign of *Gambino's* existing active device circuitry"). Gambino does not

disclose manipulating the wiring layers to avoid contact with an “anchor via” nor recess etching the frontside. Sur-Reply, 21.

The Board credited Samsung’s Reply argument and determined that it did not need to consider Patent Owner’s argument as “an attack on Gambino in isolation because Gambino does not disclose anchor vias.” FWD, 41. The Board further misunderstood Patent Owner’s argument by stating, “the Petition does not propose that when Conn’s anchor vias are applied to Gambino’s metal pads 16a that the anchor vias would extend through to the front side of the substrate but, rather the anchor vias ‘form[] protruding portions connected to corner-located dummy metal pad(s) 16a’ on the backside.” *Id.* at 41-42.

But as explained above, and in the POR, the uncontroverted evidence showed that it was not possible to create vias that did not extend through the front side because the Gambino process required vias to be drilled from the front side and then filled. POR, 47-49; Ex. 1005, [0020]. Samsung never contended otherwise or disagreed with Patent Owner as to this aspect of Gambino’s process; indeed, that is why it needed to invent a new combination on Reply. *See* Reply 26-27. By expressly relying on a modification that was neither disclosed nor possible, the Board abused its discretion.

V. CONCLUSION

For the foregoing reasons, Patent Owner respectfully requests Director Review and reversal of the Final Written Decision.

Respectfully submitted,

Dated: April 6, 2026

By: /Joseph M. Mercadante /
Joseph M. Mercadante (Reg. No. 64,077)
Lead Counsel for Patent Owner
Fabricant, Rubino & Lambrianakos LLP
411 Theodore Fremd Avenue,
Suite 206 South
Rye, New York 10580
Tel. 212-257-5797
Fax. 212-257-5796
Email: jmercadante@frlip.com

CERTIFICATE OF SERVICE

In accordance with 37 C.F.R. §§42.6(e) and 42.105, the undersigned certifies that on April 6, 2026, a complete and entire copy of the foregoing was served on Petitioner's counsel of record as follows:

Joshua L. Goldberg
Email: joshua.goldberg@finnegan.com
Alexander E. Harding
Email: alexander.harding@finnegan.com
Chen Zang
Email: chen.zang@finnegan.com
**FINNEGAN, HENDERSON, FARABOW,
GARRETT & DUNNER, LLP**
901 New York Avenue NW
Washington, DC 20001-4413

Abhay A. Watwe
Email: abhay.watwe@finnegan.com
Biju I. Chandran
Email: biju.chandran@finnegan.com
**FINNEGAN, HENDERSON, FARABOW,
GARRETT & DUNNER, LLP**
1875 Explorer Street, Suite 800
Reston, VA 20190-6023

Shawn S. Chang
Email: shawn.chang@finnegan.com
**FINNEGAN, HENDERSON, FARABOW,
GARRETT & DUNNER, LLP**
271 17th Street, NW, Suite 1400
Atlanta, GA, 30363-6209

*Attorneys for Samsung Electronics Co., Ltd.;
Samsung Electronics America, Inc.*

April 6, 2026

By: /Joseph M. Mercadante /
Joseph M. Mercadante (Reg. No. 64,077)
Lead Counsel for Patent Owner
Fabricant, Rubino & Lambrianakos LLP
411 Theodore Fremd Avenue,
Suite 206 South
Rye, New York 10580
Tel. 212-257-5797
Fax. 212-257-5796

CERTIFICATE OF SERVICE

A copy of Patent Owner's Notice of Appeal is being served via email on Petitioner's attorneys of record on the 31st day of August, 2026, the same day as the filing of the above-identified document in the United States Patent and Trademark Office/Patent Trial and Appeal Board, by serving Petitioners' correspondence address of record with the USPTO as follows:

Joshua L. Goldberg
Email: joshua.goldberg@finnegan.com
Alexander E. Harding
Email: alexander.harding@finnegan.com
Chen Zang
Email: chen.zang@finnegan.com
**FINNEGAN, HENDERSON, FARABOW,
GARRETT & DUNNER, LLP**
901 New York Avenue NW
Washington, DC 20001-4413

Abhay A. Watwe
Email: abhay.watwe@finnegan.com
Biju I. Chandran
Email: biju.chandran@finnegan.com
**FINNEGAN, HENDERSON, FARABOW,
GARRETT & DUNNER, LLP**
1875 Explorer Street, Suite 800
Reston, VA 20190-6023

IPR2024-01405
PATENT NO. 9,245,826

Shawn S. Chang
Email: shawn.chang@finnegan.com
**FINNEGAN, HENDERSON, FARABOW,
GARRETT & DUNNER, LLP**
271 17th Street, NW, Suite 1400
Atlanta, GA, 30363-6209

*Attorneys for Samsung Electronics Co., Ltd.;
Samsung Electronics America, Inc.*

August 31, 2026

By: /Joseph M. Mercadante
Joseph M. Mercadante (Reg. No. 64,077)
Lead Counsel for Patent Owner