

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

MICRON TECHNOLOGY, INC.,  
Petitioner,

v.

YANGTZE MEMORY TECHNOLOGIES COMPANY, LTD.,  
Patent Owner.

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IPR2025-00119  
Patent 10,879,254 B2

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Before JO-ANNE M. KOKOSKI, KIMBERLY McGRAW, and  
MICHAEL T. CYGAN, *Administrative Patent Judges*.

CYGAN, *Administrative Patent Judge*.

DECISION  
Denying Institution of *Inter Partes* Review  
35 U.S.C. § 314

## I. INTRODUCTION

### A. *Background and Summary*

Micron Technology, Inc. (“Petitioner”) filed a Petition requesting an *inter partes* review of claims 1–15, 17, 18, and 20 of U.S. Patent No. 10,879,254 B2 (Ex. 1001, “the ’254 patent”). Paper 1 (“Pet.”). The Petition is supported by a Declaration from Dr. Jack C. Lee. Ex. 1003 (“Lee Declaration”). Petitioner also filed an Explanation of Multiple Petitions Challenging [the ’254 patent] and Ranking of Petitions. Paper 4. Yangtze Memory Technologies Company, Ltd. (“Patent Owner”) filed a Preliminary Response to the Petition. Paper 12 (“Prelim. Resp.”). The Preliminary Response is supported by a Declaration by Dr. Stephen Campbell. Ex. 2007. Patent Owner also filed a Response to Petitioner’s Ranking and Explanation for Two Petitions Challenging the ’254 patent. Paper 11. On February 21, 2025, Patent Owner filed a Statutory Disclaimer of claims 1, 5, and 6. Ex. 2005.

Petitioner acknowledges that this is the second petition challenging the same claims of the ’254 patent, and ranks this petition lower than the prior-filed petition. Paper 4. Patent Owner argues that instituting trial on both petitions is not warranted. Paper 11. We instituted trial on the prior-filed petition. IPR2025-00034, Paper 19 (May 16, 2025). Because institution in this proceeding would result in instituting two *inter partes* reviews on the same patent, we determine below whether such is warranted.

We have authority to determine whether to institute an *inter partes* review. *See* 35 U.S.C. § 314; 37 C.F.R. § 42.4(a). The standard for instituting an *inter partes* review is set forth in 35 U.S.C. § 314(a), which provides that an *inter partes* review may not be instituted “unless . . . there is a reasonable likelihood that the petitioner would prevail with respect to at

least 1 of the claims challenged in the petition.” Institution of *inter partes* review, however, is discretionary. *See Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1367 (Fed. Cir. 2016) (“[T]he PTO is permitted, but never compelled, to institute an IPR proceeding.”). For the reasons discussed below, we determine that Petitioner has not shown that this second petition on the ’254 patent is warranted. Accordingly, we exercise our authority under 35 U.S.C § 314(a), and do not institute an *inter partes* review of the ’254 patent in this proceeding.

*B. Patent Owner’s Disclaimer of Claims 1, 5, and 6*

As indicated above, Patent Owner filed a statutory disclaimer of claims 1, 5, and 6 of the ’254 patent. *See* Ex. 2005. In view of Patent Owner’s statutory disclaimer, we treat claims 1, 5, and 6 as having never been part of the ’254 patent. *See Vectra Fitness, Inc. v. TNWK Corp.*, 162 F.3d 1379, 1383 (Fed. Cir. 1998) (“This court has interpreted the term ‘considered as part of the original patent’ in [35 U.S.C.] § 253 to mean that the patent is treated as though the disclaimed claims never existed.”). Because *inter partes* review cannot be instituted based on disclaimed claims, claims 1, 5, and 6 are outside the scope of this proceeding. 37 C.F.R. § 42.107(e) (“No *inter partes* review will be instituted based on disclaimed claims.”); *General Elec. Co. v. United Techs. Corp.*, IPR2017-00491, Paper 9 (PTAB July 6, 2017) (precedential) (denying institution in view of a statutory disclaimer of all the challenged claims). Thus, we confine our analysis in this Decision to claims 2–4, 7–15, 17, 18, and 20, the challenged claims that have not been disclaimed.

*C. Real Parties-in-Interest*

Petitioner identifies itself and its subsidiaries, including Micron Consumer Products Group LLC, as real parties-in-interest. Pet. 5. Patent Owner identifies itself as the real party-in-interest. Paper 6, 1.

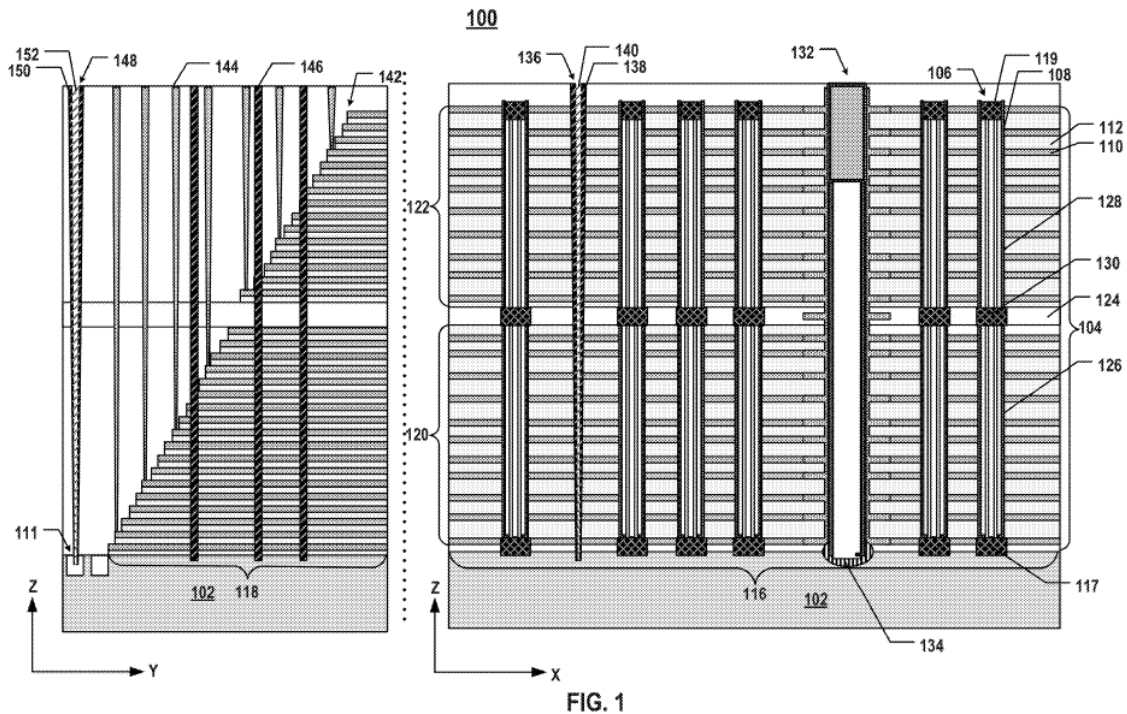
*D. Related Matters*

The parties represent that the '254 patent is involved in *Yangtze Memory Technologies Company, Ltd. v. Micron Technology, Inc. and Micron Consumer Products Group, LLC*, Case No. 3:23-cv-05792-RFL (N.D. Cal., filed November 9, 2023). Paper 6, 1; Pet. 5. Petitioner also filed IPRs challenging each patent asserted in the district court case. Pet. 5–7. We instituted trial on a prior-filed *inter partes* review petition challenging the '254 patent. IPR2025-00034, Paper 19 (May 16, 2025).

*E. The '254 Patent*

The '254 patent is titled “Three-Dimensional Memory Devices Having Through Array Contacts and Methods for Forming the Same.” Ex. 1001, code (54). The '254 patent issued on December 29, 2020, from Application No. 16/745,343, filed on January 17, 2020, and is a continuation of U.S. Application Number 16/149,103, filed on October 1, 2018, which in turn is a continuation of Application Number PCT/CN2018/101482, filed on August 21, 2018. *Id.* at codes (21), (22), (63).

The '254 patent relates to a staircase structure for a 3D memory device including a dielectric stack, including a plurality of dielectric/sacrificial layer pairs, having a channel structure extending vertically therethrough. *Id.* at code (57). A through-array contact is formed vertically in an opening in the dielectric stack, separated by a spacer from a sidewall of the opening. *Id.* Figure 1 of the '254 patent illustrates the structure:



Ex. 1001, Fig. 1. Figure 1 depicts memory device 100 having memory stack 104 including interleaved conductor layers 110 and dielectric layers 111, which includes channel structure 108 filled with semiconductor, and through array contacts 136 having conductive material 140 and spacer 138. *Id.* at 5:20–8:60.

#### F. Illustrative Claim

Claims 1 (disclaimed), 11, and 18 are independent. Claim 2 is illustrative, and depends on claim 1, which recites as follows:<sup>1</sup>

[1.PRE] A method for forming a three-dimensional (3D) memory device, comprising:

[1.A] forming a stack comprising a plurality of dielectric/sacrificial layer pairs on a substrate;

[1.B] forming a channel structure extending vertically through the stack;

<sup>1</sup> Bracketed organization added as per the Petition.

[1.C] forming a first opening extending vertically through the stack;

[1.D] forming a spacer on a sidewall of the first opening;

[1.E] forming a through array contact (TAC) extending vertically through the stack by depositing a conductor layer over the spacer in the first opening; and

[1.F] after forming the TAC, forming a slit extending vertically through the stack.

Claim 2 recites:

[2] The method of claim 1, further comprising prior to forming the first opening, forming a dummy channel structure extending vertically through the stack.

*G. Evidence*

Petitioner relies on the following patent document evidence.

| <b>Name</b>               | <b>Patent Document</b> | <b>Exhibit</b> |
|---------------------------|------------------------|----------------|
| Fujiki et al.<br>“Fujiki” | US 2019/0198524 A1     | 1006           |

*H. Prior Art and Asserted Grounds*

Petitioner asserts that claims 2–4, 7–15, 17, 18, and 20 are unpatentable on the following ground:<sup>2</sup>

| <b>Claim(s) Challenged</b> | <b>35 U.S.C. §</b> | <b>Reference(s)/Basis</b> |
|----------------------------|--------------------|---------------------------|
| 2–4, 7–15, 17, 18, 20      | 103 <sup>3</sup>   | Fujiki <sup>4</sup>       |

**II. DISCRETION UNDER 35 U.S.C. § 314(a)**

Patent Owner argues that the Board should exercise its discretion to deny institution under 35 U.S.C. § 314(a) because it is the second petition filed on the '254 patent. Paper 11. Based on the following analysis, we agree.

This is the second-ranked Petition filed by the same Petitioner on the '254 Patent. Paper 4, 3. Multiple petitions filed against the same patent at or about the same time “may place a substantial and unnecessary burden on the Board and the patent owner and could raise fairness, timing, and

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<sup>2</sup> Although Petitioner initially challenged claims 1–15, 17–18, and 20, subsequent to the disclaimer, this proceeding no longer includes disclaimed claims 1, 5, and 6.

<sup>3</sup> We apply AIA 35 U.S.C. § 103 to the '254 patent because it was filed after, and never claimed the benefit of an effective filing date before, March 16, 2013. Ex. 1001, codes (22), (63); Pet. 6.

<sup>4</sup> Petitioner styles this ground as also being based on “the knowledge of a POSITA [Person of Ordinary Skill In The Art].” However, an *inter partes* review may be requested “only on the basis of prior art consisting of patents or printed publications,” although it may “rely on evidence beyond prior art documents.” 35 U.S.C. § 311(b); *Qualcomm Inc. v. Apple, Inc.*, 24 F.4th 1367, 1374–75 (Fed. Cir. 2022); *see also Koninklijke Philips N.V. v. Google LLC*, 948 F.3d 1330, 1337 (Fed. Cir. 2020) (“[T]he inquiry into whether any ‘differences’ between the invention and the prior art would have rendered the invention obvious to a skilled artisan necessarily depends on such artisan’s knowledge.”).

efficiency concerns.” Consolidated Trial Practice Guide at 59 (2019), <https://www.uspto.gov/TrialPracticeGuideConsolidated>. However, “there may be circumstances in which more than one petition may be necessary.” *Id.*

Petitioner asserts that a second Petition is necessary here due to (1) potential priority date issues for the Fujiki reference relied upon in the present proceeding, (2) numerous claims, and (3) complex technological limitations in dependent claims. Paper 4, 1–2. Petitioner further asserts that any additional burden on Patent Owner and the Board would be negligible because neither Petition approaches the 14,000 word limit, and because both Petitions present a single ground and the same declarant. *Id.* at 2.

With respect to point (1), the priority date of Fujiki is not a disputed issue for institution, thereby negating Petitioner’s rationale for requiring an additional Petition. Even if it were to be contested during trial,<sup>5</sup> the priority dispute is in the second-ranked Petition, not the first-ranked Petition. Moreover, we have already instituted trial on the first, higher-ranked Petition. As such, Petitioner fails to provide sufficient explanation as to why a potential priority dispute as to asserted art in a second, lower ranked petition would require institution of multiple petitions on the same patent.

With respect to point (2), we agree with Patent Owner that 18 (now 15 due to disclaimer) claims are not unusually numerous. Prelim. Resp. 3 (citing *Fitbit, Inc. v. Koninklijke Philips N.V.*, IPR2020-00772, Paper 14 at 26 n.8 (PTAB Oct. 19, 2020) (noting that in fiscal year 2019, there were about 16 challenged claims per challenged patent)).

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<sup>5</sup> While not contesting the priority date at this stage, Patent Owner does not offer a stipulation that Fujiki qualifies as prior art, which would moot the priority date issue. *See* Consolidated Trial Practice Guide at 61.

We further agree with Patent Owner on point (3). Patent Owner argues that Petitioner relies on the same knowledge in the prior art for both Petitions; i.e., for dummy channels in claims 2, 11–15 and 17; for simultaneously etching channels inside and outside of the semiconductor stack in claims 3, 4, 9, 10, 18, and 20; and for forming shallow recesses in claims 7, 8, 14, and 15. Paper 11, 4. The records of the proceedings supports Patent Owner. *Compare* Pet. 43–54, 62–66 with IPR2025-00034, Paper 1, 39–43, 49–52 (indicating Petitioner is relying on the same knowledge in the prior art in both petitions). Petitioner’s reliance on overlapping, asserted knowledge in the art for both Petitions demonstrates that the second Petition does not raise any separate technological issue in the dependent claims requiring additional technological explanation. Paper 11, 4.

Petitioner admits that additional burden will be placed on the Board and on Patent Owner if both Petitions are instituted. Paper 4, 2. Petitioner argues that this additional burden will be negligible because “[n]either Petition approaches the limit of 14,000 words,” and relies upon testimony from the same declarant. *Id.* Although the similarity of issues in both proceedings minimizes the burden on Patent Owner and the Board, that similarity raises questions as to why both challenges could not have been made in a single Petition. To a large extent, Petitioner’s Fujiki-based assertions here overlap with its Nakajima-based assertions in the prior-filed Petition, both of which rely upon asserted knowledge of a POSITA, and Patent Owner disputes Petitioner’s reliance on the prior art in both, rather than contesting specific teachings in Fujiki or Nakajima. *Compare* Pet. and Prelim. Resp. with IPR2025-00034, Paper 19 § III(D) (PTAB May 16, 2025) (demonstrating the similarity of assertions between petitions). Petitioner’s

indication that both Petitions together consume only 21,679 words does not sufficiently show that both issues could not have been raised in a single Petition for which 14,000 words are permitted.

The issue of multiple petitions resolves against Petitioner because Petitioner, not Patent Owner, bears the burden to show that an additional petition is “necessary.” *See* Consolidated Trial Practice Guide at 59. Institution of a second petition may be avoided where differences between the issues in two petitions are “not material or in dispute.” *Id.* at 60–61. In view of the overlap of assertions that are at issue in the prior-instituted trial and in the Petition in this proceeding, discussed above, we agree with Patent Owner that Petitioner has not explained why the issues in this second-filed petition differ from those in the prior-instituted proceeding in a material manner such that a second petition is necessary. Consequently, the factual record supports exercising our discretion to deny the second-filed petition under consideration in this proceeding.

### III. CONCLUSION

Based on the foregoing, we exercise our discretion to deny institution of *inter partes* review of the Petition under 35 U.S.C. § 314(a).

### IV. ORDER

For the foregoing reasons, it is:

ORDERED that no *inter partes* review is instituted on the Petition filed in this proceeding.

IPR2025-00119  
Patent 10,879,254 B2

For PETITIONER:

Jeremy Jason Lang  
Thomas James  
Jared Bobrow  
ORRICK, HERRINGTON & SUTCLIFFE LLP  
ptabdocketjjl2@orrick.com  
ptabdockett6jl@orrick.com  
ptabdocketj3b3@orrick.com

For PATENT OWNER:

Inge A. Osman  
Brenda L. Danek  
Amit Makker  
Charles Sanders  
Richard Lowry  
LATHAM & WATKINS LLP  
inge.osman@lw.com  
brenda.danek@lw.com  
amit.makker@lw.com  
charles.sanders@lw.com  
richard.lowry@lw.com