

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

TAIWAN SEMICONDUCTOR MANUFACTURING COMPANY LTD.,
Petitioner,

v.

ADVANCED INTEGRATED CIRCUIT PROCESS LLC,
Patent Owner.

IPR2025-01302
U.S. Patent 8,884,373

**PETITIONER'S SUR-REPLY IN OPPOSITION TO PATENT
OWNER'S DISCRETIONARY DENIAL REQUEST
[PUBLIC REDACTED VERSION]**

Mail Stop PATENT BOARD
Patent Trial and Appeal Board
U.S. Patent & Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

AICP's Reply again attempts to lump all 5 IPR proceedings together, hoping the Director will ignore the specific facts which justify institution of each individual IPR. Here, AICP does not and cannot dispute that the Examiner erred when allowing the claims over Tamaki. AICP also ignores TSMC's extraordinarily broad stipulation (eliminating all overlap with district court proceeding) and TSMC's offered stipulation to withdraw all non-asserted claims if AICP covenants not to sue. Holistic review of all considerations and TSMC's petition's strong merits justify institution.

The Examiner's Error Justifies Institution. The Examiner erred in issuing the '373 patent. Paper-11, 3-12. AICP does not dispute Tamaki discloses the limitation Applicant misrepresented to the Examiner as missing from all prior art of record, including Tamaki ("*second dual-gate electrode being separated from the first dual-gate electrode*"). See Paper-11, 5 (citing Pet., 26-29, 43-45). Indeed, the '373 patent elsewhere admits this structure was known. See Paper-11, 5 (citing Pet., 6-12). To minimize Applicant's unfair dealings, AICP argues "the examiner was free to reach his own conclusions and accept or reject [the applicants'] arguments." Paper 14, 2 (citing *Young v. Lumenis, Inc.*, 492 F.3d 1336, 1349 (Fed. Cir. 1997)). But AICP does not dispute Applicant's "arguments" misrepresented the art, or that the Examiner's subsequent conclusion, particularly related to Tamaki, was in error. AICP cannot reap the benefit of Applicant's actions while avoiding their consequences.

The Director should reject AICP's feigned confusion regarding the single-

reference §103 Tamaki ground presented in TSMC’s petition. As the Petition explains, Tamaki explicitly discloses most or all limitations of the ’373 patent; for impurity limitation [1G], to the extent Tamaki does not explicitly disclose the limitation, it renders the limitation obvious. Specifically, the Petition explains the disclosed implant conditions (e.g., energy of **5 keV** and e.g, a dosage of **3×10^{15} atoms/cm²**) determine the p-type and n-type impurity concentrations in Tamaki. *See* Pet., 18-20. It further states that, e.g., for the PMIS gate electrode, “because the implantation ... is carried out at the same energy” with the same “dopant dosage of the entire gate electrode of logic PMIS higher than that of the entire gate electrode of SRAM PMIS, the resulting impurity concentration in the gate electrode of logic PMIS is greater than the gate electrode of the SRAM PMIS.” *Id.*, citing Lee Decl., ¶¶105-107. Thus, Tamaki teaches limitation [1G] (whether explicitly or by rendering it obvious) and Petitioner is not precluded from presenting it as single reference §103. *See Realtime Data, LLC. v. Iancu*, 912 F.3d 1368, 1373, 1376 (Fed. Cir. 2019) (rejecting PO argument single reference §103 should have been raised as §102 because “it is well settled that a disclosure that anticipates under §102 also renders the claim invalid under §103, for anticipation is the epitome of obviousness”).

AICP’s “Settled Expectations” Arguments Fail. TSMC’s own settled expectations outweigh any of AICP’s alleged “expectations”—including TSMC’s reasonable, settled expectation that the challenged ’373 patent, directed to devices with

polysilicon gate electrodes, would not be asserted against fundamentally different **metal gate** devices (which AICP’s Reply ignores). Paper-11, 13-14. Nor should AICP’s wholly speculative arguments regarding purported “licenses” or “commercialization” be credited. Paper-14, 4. AICP has produced no supporting evidence—indeed, per AICP’s own discovery response, it has no such “licenses” in its possession. TSMC-1064, 1. Nor can AICP identify a single instance of actual “commercialization.” The weakness of its argument is underscored by [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Other *Fintiv* Factors Weigh Against Discretionary Denial. AICP’s myopic reliance on the currently scheduled trial date wholly ignores current time-to-trial statistics showing the projected FWD will likely predate trial, a fact pattern which indisputably renders this factor neutral. Paper-11, 19-20. AICP’s argument that it requires international discovery ignores that the ’373 patent relies on §102(b) prior art, rendering its position moot. Paper-11, 18-19, 22.

National Security and the Public Interest Justify Review. TSMC has provided specific examples of products critical to the public interest that contain AICP-targeted chips. Paper-11, 24 (citing TSMC-1060, 4; TSMC-1061, 1; TSMC-1062). Despite its assertion, AICP has not dropped its injunction request. Paper-11, 23.

Date: November 12, 2025

Respectfully submitted,

/Lori A. Gordon/

Lori A. Gordon
(Reg. No. 50,633)
GOODWIN PROCTER LLP
1900 N Street, N.W.
Washington, D.C. 20036
Tel: (202) 346-4000
Fax: (202) 346-4444

Lead Counsel for Petitioner

CERTIFICATE OF SERVICE

The undersigned hereby certifies, in accordance with 37 C.F.R. § 42.6(e), that the foregoing **Petitioner's Sur-Reply in Opposition to Patent Owner's Discretionary Denial Request [Public Redacted Version]** was served on December 3, 2025, via e-mail directed to counsel of record for Patent Owner at the following:

Russell A. Chorush
Michael F. Heim
Christopher L. Limbacher
Lily R. Glick
Kyle Friesen
HEIM, PAYNE & CHORUSH, LLP
609 Main Street, Suite 3200
Houston, TX 77002
rchorush@hpcllp.com
mheim@hpcllp.com
climbacher@hpcllp.com
lglick@hpcllp.com
kfriesen@hpcllp.com
aicppllit@hpcllip.com

Patent Owner has consented to electronic service via email.

Date: December 3, 2025

Respectfully submitted,

/Lori A. Gordon/

Lori A. Gordon
(Reg. No. 50,633)
GOODWIN PROCTER LLP
1900 N Street, N.W.
Washington, D.C. 20036
Tel: (202) 346-4000
Fax: (202) 346-4444