

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

TAIWAN SEMICONDUCTOR
MANUFACTURING COMPANY LTD. and APPLE INC.
Petitioners

v.

MYW SEMITECH, LLC,
Patent Owner

U.S. Patent No. 11,538,763
Issue Date: December 27, 2022

Title: CHIP PACKAGE

Inter Partes Review No. IPR2026-00066

**PATENT OWNER'S AUTHORIZED RESPONSE TO PETITIONERS'
OPPOSITION TO DISCRETIONARY DENIAL**

TABLE OF AUTHORITIES

Page(s)

Cases

BASCOM Glob. Internet Servs. v. AT&T Mobility LLC,
827 F.3d 1341 (Fed. Cir. 2016) 1

Statutes

35 U.S.C. § 101 1

The Examiner did not err during prosecution of U.S. Patent No. 11,538,763 (“the ’763 patent” or Ex. 1001). In both Notices of Allowance cited by Petitioners, the Examiner stated that independent claims 1 and 21 are “allowable because the closest prior art does not appear to disclose, alone or in combination, the limitations of material and structure of the chip package in combination with the other required elements of claim 1 or 21.” Ex. 1002, 294, 367.

In both Notices, the next paragraph describes an inventive concept, not novelty or non-obviousness. *Id.* (“limitations are material to the **inventive concept** of the application in hand to forming a polymer interconnect with sufficient coefficient of expansion to enable holes and other features formed inside with improved chemical durability, strength and optical properties.”) (emphasis added). An “inventive concept” is relevant to patentable subject matter – *i.e.*, 35 U.S.C. § 101 – not novelty or non-obviousness. *See e.g., BASCOM Glob. Internet Servs. v. AT&T Mobility LLC*, 827 F.3d 1341, 1349 (Fed. Cir. 2016) (“An inventive concept that transforms the abstract idea into a patent-eligible invention must be significantly more than the abstract idea itself ...”). The Examiner’s statement was not directed to novelty or non-obviousness as argued by Petitioners.

While the application claims did not recite a CTE limitation, the independent claims did recite the use of a material made from silicon and oxygen such as glass. Ex. 1002, 267-268, 281-282, 352-353, 356-357. The paragraph describing the

“inventive concept” is pointing to benefits of the invention. Ex. 1002, 294, 367.

The features of the glass material are described in the specification. *See* Ex. 1001, 6:53-7:47. The reason the specification does not discuss a CTE range for glass is because glass was known to have a low CTE. *Id.*, 2:7-8 (“Glass has a CTE closely matched to silicon”). Polymers, on the other hand, had a much wider range of CTEs. If a polymer layer is used, it should have “a coefficient of expansion between 3 and 10 ppm/°C.” *Id.*, 7:46-48.

Even Petitioners’ prior art reference Ex. 1004 (“Sundaram”) shows in Table 1 that the CTE for Glass 1 was 3.8 and for Glass 2 was 8.5

TABLE 1

	Young's Modulus (GPA)	Poisson's Ratio	CTE (ppm/° C.)	Stress free Temp. (° C.)
Glass 1	77	0.22	3.8	25
Glass 2	71	0.24	8.5	25
Polymer 1	1.83	0.3	67	232
Polymer 2	6.9	0.3	31	120
Copper	121	0.3	17.3	25

Ex. 1004, 33 (Table 1). The claims did not need to recite a CTE range because the claimed “solid layer” is made of a compound of silicon and oxygen. Ex. 1001, 22:53-57, 24:34-36. But because the claims recite a silicon/oxygen material, the Examiner recognized the benefits of that material in his reasons for allowance.

Notwithstanding the fact that none of the independent application claims recited a CTE limitation, Petitioners argue that the Examiner erred by not finding

the Haba reference. Paper 10, 4-5. The Examiner used dozens of search terms while examining the '763 patent application. Ex. 1002, 379-397. Three of the search terms were “ppm/.degree.C”, “polymer same expansion adj coefficient” and “polymer near10 expansion adj coefficient”. *Id.*, 384-385. Collectively, just those three search terms returned over 2,200 hits. *Id.* Haba includes statements such as “coefficient of thermal expansion of less than 8 ppm/°C” (Ex. 1009, Abstract), “a coefficient of thermal expansion of less than 8 parts per million per degree Celsius (ppm/°C.)” (*Id.*, 1:53-55, 3:36-38), and “8 parts per million per degree Celsius (‘ppm/° C.’)” (*Id.*, 5:58-59). Petitioners do not explain why the search terms used by the Examiner did not return Haba.

Moreover, the Examiner was fully aware of other prior art that allegedly disclosed the CTE limitation. The parent application to the '763 patent application was U.S. Application No. 16/752,650 which issued as U.S. Patent No. 11,107,768 (“the ‘768 patent”). The '768 patent is the subject of IPR2026-00065 filed by Petitioners here. During prosecution of the '768 patent, the Examiner cited at least one reference other than Haba for disclosure of the CTE limitation. In the September 21, 2020 Rejection, the Examiner relied on Tiedtke 2011/0257716 as disclosing the CTE limitation. IPR2026-00065, Ex. 1002, 257. Even if the Examiner did not find Haba, Haba would only have been redundant of Tiedtke.

Dated: March 16, 2026

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that the foregoing PATENT OWNER'S
AUTHORIZED RESPONSE TO PETITIONERS' OPPOSITION TO
DISCRETIONARY DENIAL was served electronically via email on March 16,
2026, on the following counsel of record for Petitioners:

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