

NOTE: This disposition is nonprecedential.

**United States Court of Appeals  
for the Federal Circuit**

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**NICHIA CORPORATION,**  
*Appellant*

v.

**DSS, INC., FKA DOCUMENT SECURITY SYSTEMS,  
INC.,**  
*Appellee*

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2022-1704

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Appeal from the United States Patent and Trademark  
Office, Patent Trial and Appeal Board in No. IPR2020-  
00908.

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Decided: November 2, 2023

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ERIC SEBASTIAN LUCAS, Shearman & Sterling LLP,  
New York, NY, argued for appellant. Also represented by  
DAVID JEFFREY COOPERBERG, THOMAS R. MAKIN.

MATTHEW J. SMITH, Remenick PLLC, Washington, DC,  
argued for appellee. Also represented by JAMES REMENICK;  
PAUL ANTHONY KROEGER, BRIAN DAVID LEDAHL, Russ Au-  
gust & Kabat, Los Angeles, CA.

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Before MOORE, *Chief Judge*, STOLL and CUNNINGHAM, *Circuit Judges*.

MOORE, *Chief Judge*.

Nichia Corporation appeals a Patent Trial and Appeal Board final written decision holding claims 1–4, 8, and 11 of the U.S. Patent No. 6,879,040 are not unpatentable. We affirm.

#### BACKGROUND

The '040 patent, which is owned by DSS, Inc., relates to improvements in surface mount technology, wherein devices are mounted directly on a surface without being plugged into it. '040 patent at 1:10–12. The patent addresses the need for surface mounted opto-electronics, such as light emitting diodes (LEDs), to have a small footprint, while maintaining low thermal resistance. *Id.* at 2:48–53. The '040 patent solves this problem by disclosing surface mountable electronic devices with electrical connections in recesses to allow solder to connect the device to the surface. *Id.* at 1:4–7. The disclosed surface mountable device includes at least two electrically conductive members in the underside that bend upwards at an angle to form a recess. *Id.* at 3:40–59.

Claim 1 is the sole independent claim at issue and recites:

1. A surface mountable electronic device, comprising:

a packaged body having *a mounting surface, the mounting surface having a plurality of recesses at side edges of the body* and

*a plurality of electrical contacts, each of which extends from an interior portion of the mounting surface and terminates in one of said recesses, and each of which conforms to one of said recesses, wherein said recesses and electrical contacts are*

*sized to provide offsets between said mounting surface and said electrical contacts.*

*Id.* at claim 1 (emphases added).

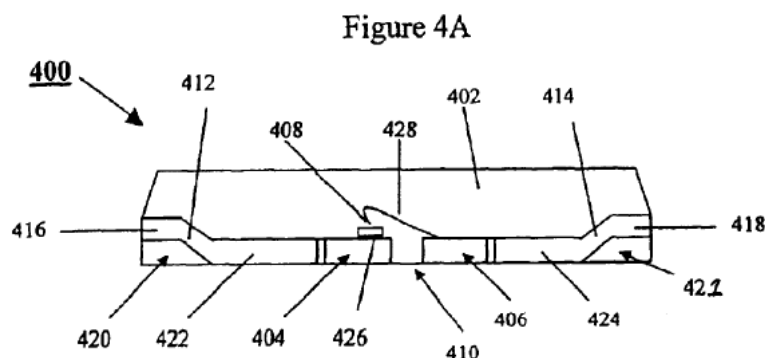
Nichia filed a petition for *inter partes* review challenging claims 1–4, 8, and 11 of the '040 patent. In its petition, Nichia proposed constructions for several terms, including “mounting surface” to mean “planar surface at which the device is mounted, which surface is essentially co-planar with the planar bottom surface of the body, and which surface does not follow the contours of its recesses.” J.A. 115. The Board instituted the petition and requested the parties address “the proper construction of the claim terms ‘mounting surface’ and ‘recesses.’” J.A. 674. DSS did not provide a construction for “mounting surface.” J.A. 1182 n.1. The Board issued a final written decision holding Nichia had not met its burden to show the challenged claims were unpatentable. *Nichia Corp. v. Document Security Systems, Inc.*, IPR2020-00908, 2021 WL 6335708 (P.T.A.B. Nov. 16, 2021) (*Decision*). In reaching its conclusion, the Board construed “mounting surface” as including the recesses in the mounting surface itself such that a single planar surface cannot satisfy the limitation. *Id.* at \*4. The Board also concluded the embodiment shown in Figure 4A does not fall within the scope of claim 1. *Id.* Nichia appeals. We have jurisdiction under 28 U.S.C. § 1295(a)(4)(A).

#### DISCUSSION

We review the Board’s claim construction de novo and review any necessary subsidiary factual findings based on extrinsic evidence for substantial evidence. *HTC Corp. v. Cellular Commc’ns Equip., LLC*, 877 F.3d 1361, 1367 (Fed. Cir. 2017). Claim terms are generally given their plain and ordinary meaning, i.e., the meaning the terms would have to a person of ordinary skill in the art when read in the context of the claim, specification, and prosecution history. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–13 (Fed. Cir. 2005) (en banc).

The Board construed “mounting surface” to mean a mounting surface with recesses in the surface itself and concluded the claim term does not encompass a single planar surface. *Decision*, at \*4. Nichia appealed arguing that the Board’s partial construction creates a logical impossibility such that the claims cannot be compared to the prior art. We do not agree. The claim language and written description support the Board’s construction requiring a mounting surface having recesses. Claim 1 expressly requires “the mounting surface *having a plurality of recesses* at the side edges of the body.” ’040 patent at claim 1 (emphasis added). Additionally, the ’040 patent repeatedly describes the invention as having a mounting surface with recessed portions in it. For example, the patent describes a surface mountable electronic device with “a body with a first, mounting surface,” wherein the “first surface is recessed with recessed portions in it.” *Id.* at 3:60–67; *see also id.* at 2:54–57, 5:1–15, 5:48–65, 8:24–33.

The written description, specifically Figure 4A, also supports the Board’s conclusion that the claimed mounting surface does not encompass a single planar surface. Figure 4A illustrates an embodiment of the invention:



As shown in Figure 4A, the surface mountable opto-electronic device 400 includes an optically transparent body 402, two electrical contacts, 404, 406, and a LED 408. *Id.* at 4:60–63. The two electrical contacts are mounted in the

underside 410, which is the mounting surface of the device. *Id.* at 5:1–4. Each electrical contact includes a first portion containing a diagonally upward extending portion 412, 414 and a horizontal portion 416, 418. *Id.* at 5:7–11. Recesses 420, 421 are formed between the first portions of the electrical contacts and a flat surface on which the device is mounted. *Id.* at 5:11–15.

As the Board explained, the embodiment in Figure 4A describes both a mounting surface and a separate flat surface on which the device is mounted. *Decision*, at \*4 (citing '040 patent at 5:3–14). The electrical contacts are mounted in the underside of the device—i.e., the mounting surface—and follow a zigzag configuration that creates recesses between the contacts and “a flat surface on which the device is mounted.” '040 patent at 5:3–14; *see also Decision*, at \*4–5. Because Figure 4A includes *both* a non-planar mounting surface and a separate planar surface on which the device is mounted, the claimed mounting surface cannot be a single planar surface. *Decision*, at \*4–6; *see also J.A.* 1287–89 (explaining why Figure 4A cannot support Nichia's contention that mounting surface should be construed as a plane). Therefore, the Board's construction follows the ordinary meaning of “mounting surface” in light of the intrinsic evidence as would have been understood by a skilled artisan.

Nichia argues the Board's construction is incomplete as it fails to resolve an apparent logical impossibility in claim 1 requiring the electrical contacts to both conform to the recesses in the mounting surface and be offset from the mounting surface. Appellant's Br. at 56–63. According to Nichia, the Board erroneously relied on this requirement to find the prior art lacks an element of the claim. *Id.* at 62–63. We do not agree.

First, the Board is required to construe “only those terms . . . that are in controversy, and *only to the extent necessary* to resolve the controversy.” *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)

(emphasis added). This is exactly what the Board did. Nichia’s petition asserted five different grounds of unpatentability. *Decision*, at \*2. For each ground, Nichia relied on a prior art reference’s disclosure of a single planar surface as teaching the claimed mounting surface. *See* J.A. 137–41 (Kim), J.A. 157–60 (Adachi), J.A. 170–73 (Nagayama), J.A. 181–84 (Okazaki). Nichia also relied on Figure 4A of the ’040 patent to demonstrate the prior art references teach the claimed mounting surface. *Decision*, at \*6–9. To resolve this matter, the Board only needed to determine whether the claimed mounting surface encompassed a single planar surface. *See Decision*, at \*6–9; *see also* J.A. 1287 (Board explaining it need not “determine . . . the precise relationship between the recited ‘mounting surface’ and the contacts”). As discussed above, the Board properly concluded it does not.

Second, we have held the Board can render prior art patentability determinations even if claims are indefinite. *Samsung Elecs. Am. Inc. v. Priusa Eng’g Corp.*, 948 F.3d 1342, 1355 (Fed. Cir. 2020) (explaining indefiniteness does not “necessarily preclude the Board from addressing patentability” on other grounds). In *Intel Corp. v. Qualcomm Inc.*, we explained “indefiniteness of a limitation . . . precludes a patentability determination *only when* the indefiniteness renders it logically impossible for the Board to reach such a decision.” 21 F.4th 801, 813 (Fed. Cir. 2021) (emphasis added). We further explained that “it is not always impossible to adjudicate a prior-art challenge” because of alleged indefiniteness of one limitation. *Id.* Here, the Board properly rendered a patentability determination because it did not conclude such determination was logically impossible based on any alleged indefiniteness.

The Board proceeded exactly as our case law prescribes—deciding only the issues necessary to resolve the dispute before it. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (affirming the Board’s decision not to construe the

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preamble because it was not material to the dispute). The Board was not required to reach Nichia's arguments about any alleged indefiniteness because its construction was sufficient to apply the asserted prior art in this dispute. The Board was also correct in rendering its patentability determination because it was not impossible to do so. We affirm the Board's construction of "mounting surface" and its final written decision on patentability.

#### CONCLUSION

For the reasons given, we affirm the Board's conclusion that Nichia did not meet its burden to show claims 1-4, 8, and 11 are unpatentable.

**AFFIRMED**