UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/427,123	02/08/2017	Hirotaka NAKAZAWA	36856.3746	7154

54066 7590 08/26/2020

MURATA MANUFACTURING COMPANY, LTD.
C/O KEATING & BENNETT, LLP
1800 ALEXANDER BELL DRIVE
SUITE 200
RESTON, VA 20191

EXAMINER	
MCFADDEN, MICHAEL P	

ART UNIT	PAPER NUMBER
2848	

NOTIFICATION DATE	DELIVERY MODE
08/26/2020	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

JKEATING@KBIPLAW.COM
cbennett@kbiplaw.com
uspto@kbiplaw.com

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte HIROTAKA NAKAZAWA and TAKASHI SAWADA

Appeal 2019-004937
Application 15/427,123
Technology Center 2800

Before JEFFREY T. SMITH, JAMES C. HOUSEL, and MERRELL C. CASHION, JR., *Administrative Patent Judges*.

CASHION, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), Appellant[1] appeals from a final rejection of claims 1–15. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

---

[1] We use the word "Appellant" to refer to "applicant" as defined in 37 C.F.R. § 1.42. Appellant identifies the real party in interest as Murata Manufacturing Co., Ltd. Appeal Br. 2.

The invention generally relates to a multilayer ceramic capacitor. Spec. ¶ 2. Claim 1 is illustrative of the subject matter claimed and is reproduced below from the Claims Appendix to the Appeal Brief (formatting added):

> 1. A multilayer ceramic capacitor comprising:
>
> a capacitor body including first and second principal surfaces extending in a length direction and a width direction, first and second lateral surfaces extending in the length direction and a laminating direction, and first and second end surfaces extending in the width direction and the laminating direction;
>
> a first external electrode disposed on at least one surface of the first and second lateral surfaces and the first and second end surfaces;
>
> a second external electrode disposed on at least one surface of the first and second lateral surfaces and the first and second end surfaces, the second external electrode being disposed at a position different from a position where the first external electrode is disposed;
>
> a first internal electrode disposed inside the capacitor body and connected with the first external electrode; and
>
> a second internal electrode disposed inside the capacitor body and connected with the second external electrode;
>
> wherein the capacitor body includes:
>
> a first internal electrode laminated portion in which three or more first internal electrodes are sequentially laminated in the laminating direction; and

> a second internal electrode laminated portion in which three or more second internal electrodes are sequentially laminated in the laminating direction;
>
> wherein the second internal electrode laminated portion is opposite to the first internal electrode laminated portion in the laminating direction; and
>
> one of the first principal surface and the second principal surface is a mounting surface of the multilayer ceramic capacitor.

Appellant requests review of the Examiner's rejection of claims 1–15 under 35 U.S.C. § 103 as unpatentable over Iwama (US 2016/0163455 A1, published June 9, 2016) and Park (US 2016/0050759 A1, published February 18, 2016). Appeal Br. 5; Final Act. 2.[2]

Appellant presents arguments for independent claim 1 and relies on the same arguments to address the rejection of the remaining claims. Appeal Br. 21. We select claim 1 as representative of the subject matter claimed and decide the appealed ground of rejection based on the arguments Appellant makes in support of the patentability of claim 1.

[2] The statement of the rejection on page 2 of the Final Office Action only includes claims 10–12 as the claims rejected. However, the discussion of the rejection on pages 2–10 of the Final Office Action addresses each of claims 1–15. Given that Appellant does not raise this matter in the Appeal Brief, we find the omission of claims 1–9 and 13–15 to be harmless error. We modified the rejection statement in the Decision to reflect that all of claims 1–15 stand rejected by the Examiner.

OPINION

After review of the respective positions Appellant provides in the Appeal and Reply Briefs and the Examiner provides in the Final Office Action and the Answer, we AFFIRM the Examiner's prior art rejection of claims 1–15 under 35 U.S.C. § 103 for essentially the reasons the Examiner presents in the Final Office Action and the Answer. We add the following for emphasis.

Claim 1

The Examiner finds that Iwama discloses a capacitor that differs from the claimed invention in that Iwama does not disclose that one of the first and second principal surfaces is a mounting surface of the multilayer ceramic capacitor. Final Act. 2–3. The Examiner finds that Park teaches the missing feature. *Id*. at 3–4. The Examiner determines that it would have been obvious to one having ordinary skill in the art to combine the mounting techniques of Park with the invention of Iwana to mount the capacitor on a circuit board so it can be used as intended. Final Act. 4; Park ¶ 97. In addition, the Examiner notes that the recitation "one of the first principal surface and the second principal surface is a mounting surface of the multilayer ceramic capacitor" does not structurally distinguish the present invention over the prior art of Iwama. Final Act. 4.

Appellant argues that the claim language reciting "one of the first principal surface and the second principal surface is a mounting surface of the multilayer ceramic capacitor" is not a statement of intended use, but instead defines a structural feature that is not taught or suggested by Iwama. Appeal Br. 24. According to Appellant, the Specification teaches that the mounting surface(s) of a ceramic capacitor is not arbitrarily chosen, and that

the mounting surface(s) of a ceramic capacitor are provided as a consequence of the structural arrangement and configuration of a ceramic capacitor. Appeal Br. 14 (citing Spec. ¶¶ 12, 13, 70).

Appellant's arguments do not point to reversible error in the Examiner's determination of obviousness.

The subject matter of claim 1 is directed to a capacitor and not a mounted capacitor. In addition, claim 1 associates the claim term "mounting surface" with a recited principal surface having the claimed first external electrodes and second external electrodes disposed at different positions. That is, as the Examiner notes, the claim term "mounting surface" is an alternate nomenclature for a surface used to mount the capacitor that does not add any additional structure. *Id.* Indeed, claim 1 does not recite any structural or functional limitation for "a mounting surface" other than that one of the first and second principal surfaces "is a mounting surface."

Moreover, the Specification fails to define or limit "a mounting surface." Paragraphs 12, 13, and 70 of the Specification disclose preferred embodiments where the capacitor is placed using either a first or a second principal surface as the mounting surface according to how the capacitance is to be generated. That is, these paragraphs discuss placement of a capacitor according to how the capacitor is operated. Further, claim 1 recites neither a manner of operating the capacitor, nor any limitation with regard to equivalent series inductance. Therefore, based on these disclosures in the Specification, we agree with the Examiner that the language reciting the mounting surface does not impart any structure in itself to the claimed invention. Final Act. 4. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1323 (Fed. Cir. 2005) ("[A]lthough the specification often describes very specific

embodiments of the invention, we have repeatedly warned against confining the claims to those embodiments.").

With respect to Iwama, Appellant does not contest the Examiner's finding that Iwama teaches a surface having first and second external electrodes as claimed. *See generally* Appeal Br. Nor does Appellant contest persuasively that Iwama's capacitor would not or could not perform as such if mounted using the surfaces (3c, 3d) the Examiner designates. *Id*. Instead, Appellant contends that Iwama designates specific "principal surfaces" 3a and 3b instead of the surfaces designated by the Examiner to serve as the mounting surfaces for the capacitor to maintain a low profile. Appeal Br. 6–7; Iwama ¶ 50. According to Appellant, Iwama's capacitor would not maintain a low profile as intended if one of the side surfaces 3c and 3d of the capacitor was used as the mounting surface because turning the capacitor sideways would have necessarily increased the height of the profile of the capacitor. Appeal Br. 13; Iwama ¶ 51. As a result, Appellant asserts that using any of the other surfaces, such as surfaces 3c or 3d, as a mounting surface would have rendered Iwama's capacitor unsatisfactory for its intended purpose of maintaining a low profile even when the number of layers is increased. Appeal Br. 7. In addition, Appellant contends that the Examiner's proposed modification of Iwama would result in undesirable effects, such as chip toppling and/or mounting instability, due to the capacitor including a narrow length L relative to the much wider lengths W and T to provide the low profile required by Iwama and that the center of gravity of Iwama's capacitor would be raised as opposed to when one of the first and second main surfaces 3a or 3b serves as a mounting surface. Appeal Br. 10.

Appellant further contends that Park does not teach or suggest that a side surface of a multilayer ceramic capacitor (MLCC), including the side surfaces of either Park or Iwama, should or could possibly have been a mounting surface of the MLCC. Appeal Br. 9. Appellant asserts Park merely teaches that an MLCC having the configuration of Figure 9 should be structurally configured such that at least one of the first and second main surfaces is a mounting surface of the MLCC. Appeal Br. 9; Park ¶ 97.

Appellant's arguments do not identify error in the Examiner's determination of obviousness because they do not address adequately the rejection the Examiner presents. *In re Merck & Co*., 800 F.2d 1091, 1097 (Fed. Cir. 1986); *In re Keller*, 642 F.2d 413, 425–426 (CCPA 1981) ("The test [for obviousness] is what the combined teachings of the references would have suggested to those of ordinary skill in the art."); *KSR Int'l Co. v. Teleflex Inc*., 550 U.S. 398, 418 (2007) ("the [obviousness] analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ").

The central premise of Appellant's arguments is that mounting Iwama's capacitor using Park's techniques would make Iwama's capacitor unsatisfactory for its intended purpose of maintaining a low profile. Appeal Br. 7, 13. Contrary to Appellant's arguments, Iwama discloses the intended use of its capacitor is to suppress the occurrence of cracks while ensuring desired capacitance. Iwama ¶ 6. While Iwama also discloses that the element body of the capacitor can have a low profile, this disclosure relates to a specific embodiment, perhaps a preferred embodiment. *Id*. ¶¶ 8 ("In the multilayer ceramic capacitor *according to an aspect the present invention*,

…, the element body has a low profile.")(emphasis added), 31 ("First Embodiment"). Iwama discloses that, if a capacitor having a low profile is desirable, then surfaces 3a and 3b should be used as mounting surfaces. *Id*. ¶¶ 8, 51.

It is well settled that a reference may be relied upon for all that it discloses and not merely the preferred embodiments as suggested by Appellant. *See Merck & Co. v. Biocraft Labs., Inc.*, 874 F.2d 804, 807 (Fed. Cir. 1989) ("[A]ll disclosures of the prior art, including unpreferred embodiments, must be considered." (quoting *In re Lamberti*, 545 F.2d 747, 750 (CCPA 1976))); *In re Fracalossi*, 681 F.2d 792, 794 n.1 (CCPA 1982) (explaining that a prior art reference's disclosure is not limited to its examples).

Based on the disclosures we note above, Iwama does not expressly limit mounting its capacitor as Appellant argues. Further, Appellant does not explain adequately why Iwama's "First Embodiment" limits Iwama's broader disclosure. *See Merck*, 874 F.2d at 807; *Fracalossi*, 681 F.2d at 794.

Regarding Park, the Examiner explains this reference teaches it was known to use a plurality of electrodes to mount a capacitor to an electronic device. Final Act. 3. Park's Figure 9 also teaches providing an external electrode placed between two end cap electrodes. Park's Figure 15 shows how such a capacitor is mounted on a surface. Given that Iwama's disclosure does not expressly limit how the capacitor can be mounted, as we discuss above, Appellant has not explained adequately why one skilled in the art, using no more than ordinary creativity, would not have been capable of mounting Iwama's capacitor using surfaces 3c or 3d as the mounting

surface via Park's mounting technique and still reasonably expect that Iwama's capacitor would perform as a capacitor. *See KSR Int'l Co. v. Teleflex Inc*., 550 U.S. 398, 421 (2007) ("A person of ordinary skill is also a person of ordinary creativity, not an automaton."); *see also In re Sovish*, 769 F.2d 738, 743 (Fed. Cir. 1985) (presuming skill on the part of one of ordinary skill in the art). *See also In re O'Farrell*, 853 F.2d 894, 904 (Fed. Cir. 1988) ("For obviousness under § 103, all that is required is a reasonable expectation of success.").

While Appellant argues that mounting a capacitor having the dimensions taught by Iwama using the surfaces the Examiner designates raises "mounting" issues (Appeal Br. 10), this argument is unsupported by objective evidence and such an argument cannot take the place of evidence. *See In re De Blauwe*, 736 F.2d 699, 705 (Fed. Cir. 1984); *In re Payne*, 606 F.2d 303, 315 (CCPA 1979).

Accordingly, we AFFIRM the Examiner's prior art rejection of claims 1–15 under 35 U.S.C. § 103 for the reasons the Examiner presents and we give above.

Arguments not specifically addressed are deemed not persuasive for the reasons the Examiner presents.

CONCLUSION

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1–15	103	Iwama, Park	1–15	

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED