

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

PRESIDIO COMPONENTS, INC.,
Petitioner,

v.

AMERICAN TECHNICAL CERAMICS CORP.,
Patent Owner.

Case IPR2015-01330
Patent 6,337,791 B1

Before MITCHELL G. WEATHERLY, MATTHEW R. CLEMENTS, and
CHRISTOPHER G. PAULRAJ, *Administrative Patent Judges*.

PAULRAJ, *Administrative Patent Judge*.

FINAL WRITTEN DECISION
35 U.S.C. § 318(a) and 37 C.F.R. § 42.73

I. INTRODUCTION

Presidio Components, Inc. (“Petitioner”) filed a Petition (Paper 1, “Pet.”), requesting institution of an *inter partes* review of claims 1 and 2 of U.S. Patent No. 6,337,791 B1 (Ex. 1001, “the ’791 patent”). Taking into account the Petition and Patent Owner’s Preliminary Response, we determined that there was a reasonable likelihood that claim 1 of the ’791 patent is unpatentable. Pursuant to 35 U.S.C. § 314, we instituted *inter partes* review, on December 3, 2015, as to claim 1 of the ’791 patent. Paper 11 (“Inst. Dec.”).

After institution, American Technical Ceramic Corp. (“Patent Owner”) filed a Patent Owner Response. Paper 17 (“PO Resp.”). Petitioner filed a Reply to the Patent Owner Response. Paper 19 (“Pet. Reply”). Additionally, Patent Owner filed a Motion to Exclude Evidence (Paper 28), to which Petitioner filed a Response (Paper 30). Patent Owner also filed a Motion for Observations of the Cross-Examination Testimony of Michael S. Randall, Ph.D. (Paper 26), to which Petitioner filed a Response (Paper 29). A hearing was held on August 10, 2016, a transcript of which appears in the record. Record of Oral Hearing, Paper 32 (“Tr.”).

We have jurisdiction under 35 U.S.C. § 6. This decision is a Final Written Decision under 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73 as to the patentability of the challenged claim. For the reasons discussed below, we determine that Petitioner has shown by a preponderance of the evidence that claim 1 is unpatentable.

A. *Related Proceedings*

The parties indicate that the ’791 patent is involved in a currently pending district court case, *American Technical Ceramics Corp. v. Presidio*

Components, Inc., Case 2:14-cv-06544-KAM-AKT (E.D.N.Y.). Pet. 2; Paper 4. Also, related U.S. Patent No. 6,992,879 is the subject of IPR2015-01331.

B. The '791 Patent (Ex. 1001)

The '791 patent relates to a monolithic, laminated capacitor with at least one dielectric ceramic layer sandwiched between electrode layers. Ex. 1001, 1:5–8. The Specification states that “[i]t is an object of the present invention to provide a capacitor that retains superior high frequency attributes of the capacitor taught in” prior art U.S. Patent 5,576,926 (“the Monsorno '926 Patent”), and that “[c]apacitors according to the present invention have more than four times the capacity of those taught in the '926 patent for the same size unit with the same dielectric thickness.” *Id.* at 1:19–25. The Specification further states that “[t]he crux of the present invention is to position the first electrode in the ceramic and to form the second electrode on the pad,” wherein “[c]onnection to the first electrode is either from an end cap or by way of a conductive via through the dielectric layer.” *Id.* at 1:52–56.

There are two embodiments depicted in the '791 patent. Figure 3 shows the first embodiment, and is reproduced below:

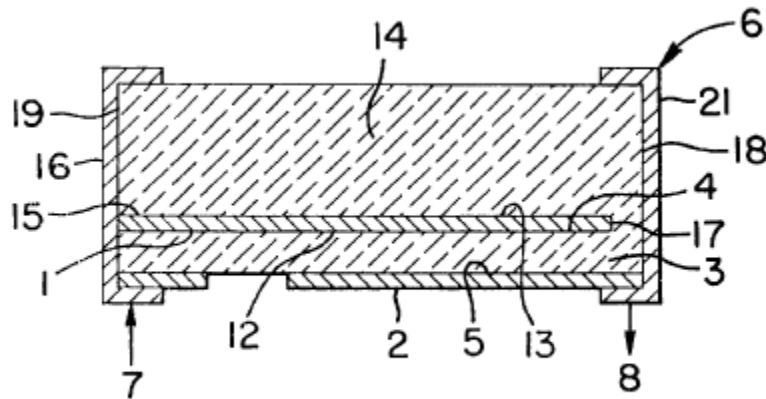


FIG. 3

Figure 3 depicts a multi-layered capacitor (MLC) with “a first internal electrode layer 1, and a second electrode layer 2 formed as a pad,” and “a first dielectric layer 3 having a first dielectric surface 4 and a second dielectric surface 5” sandwiched between the electrode layers. *Id.* at 2:47–51. “For operation of the capacitor generally designated 6 the first internal electrode layer 1 is connected to a source of electric current designated by arrow 7 so as to be operable at a different level of polarity from that of the second pad electrode 2.” *Id.* at 2:52–58.

Figure 5 shows the second embodiment of the '791 patent, and is reproduced below:

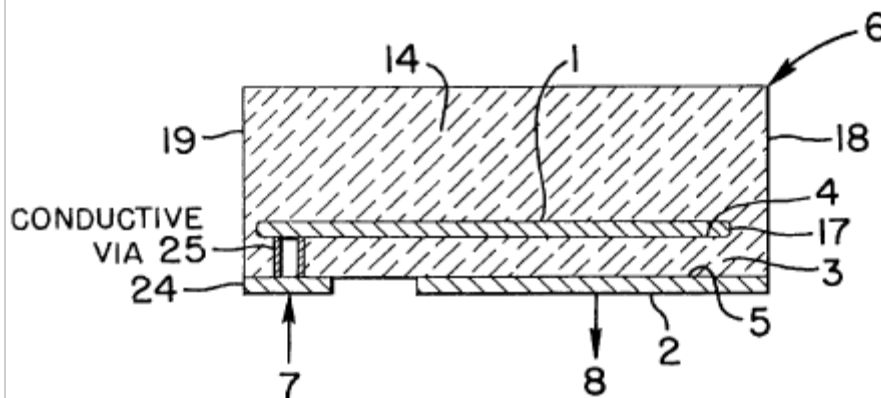


FIG. 5

Figure 5 depicts an alternate embodiment where “electric current 7 is accessed to the first internal electrode 1 by way of a conductor 24 arranged in series with a conductive via 25 which passes through the first dielectric layer 3.” *Id.* at 3:18–20.

C. Challenged Claim

Challenged claim 1 of the '791 patent is reproduced below:

1. A monolithic capacitor chip comprising:

a first electric layer, with the first dielectric layer having a first length dimension and a first width dimension, and with the first dielectric layer having a first dielectric surface and a second dielectric surface, and with the first dielectric layer having a first dielectric layer end and a second dielectric layer end;

a first electrode layer mounted on the first dielectric surface of the first dielectric layer, with the first electrode layer having a first electrode layer end aligned with the first dielectric layer end of the first dielectric layer, and with the first electrode layer having a second electrode layer end spaced inwardly from the second dielectric layer end of the first dielectric layer;

the first electrode layer having a first electrode surface and a second electrode surface on the obverse side from the first electrode surface;

a second dielectric layer, with the second dielectric layer having a second length dimension and a second width dimension, and with the second length and second width dimensions of the second dielectric layer co-extensive with the first length and the first width dimensions respectively of the first dielectric layer, and with the second dielectric layer on the second electrode surface so that the first and the second dielectric layers combine to enclose the first electrode layer and to describe a margin outward of the first electrode layer end;

a first electrically conductive single-layer cap member connected to the first end of the first electrode layer and enclosing an end formed by the first and the second dielectric layers;

a second single-layer cap member outward of the second end of the electrode further enclosing another end formed by the first and the second dielectric layers outwardly of the second end of the electrode layer;

a second electrode layer formed as a pad for contact with the second surface of the first dielectric layer;

the first electrode layer connectable to a source of electric current so as to be operable at to a different level of polarity from that of the second electrode layer.

D. Grounds of Unpatentability

We instituted *inter partes* review of the '791 patent based upon the following grounds of unpatentability:

- A. Claim 1 under 35 U.S.C. § 102(b) as anticipated by Horie¹,
- B. Claim 1 under 35 U.S.C. § 102(b) as anticipated by Coleman².

Inst. Dec. 25.

II. ANALYSIS

A. Claim Construction

In an *inter partes* review, claim terms in an unexpired patent are interpreted according to their broadest reasonable construction in light of the specification of the patent in which they appear. 37 C.F.R. § 42.100(b); *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2146 (2016). Under that standard, claim terms are given their ordinary and customary meaning, as would be understood by one of ordinary skill in the art in the context of the entire disclosure. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007).

¹ U.S. Patent 6,069,786, issued May 30, 2000 (Ex. 1002, “Horie”).

² U.S. Patent 4,193,106, issued Mar. 11, 1980 (Ex. 1005, “Coleman”).

1. “*Second Electrode Formed as a Pad*”

In our Decision on Institution, we construed the phrase “second electrode layer formed as a pad” to be an electrode layer formed on any external surface of the capacitor. Inst. Dec. 8. We disagreed with Patent Owner’s proposed construction requiring that the claimed second electrode layer is “an electrode layer arranged on the external bottom surface of the capacitor.” *Id.* We noted that “[t]here is nothing in the plain and ordinary meaning of ‘pad’ to suggest that it can only be formed on the bottom, as opposed to the top, of the capacitor,” and that “Patent Owner’s proposed construction is deficient insofar as it fails to provide a frame of reference to determine which side constitutes the ‘bottom.’” *Id.*

In its post-institution Patent Owner Response, Patent Owner now argues that “the second electrode layer” must be formed on the external capacitor surface that is mounted on the current source. PO Resp. 7–16. We disagree. Nothing in the claim language suggests that a second electrode layer must be positioned in relation to the current source. Rather, the claim specifies only “a second electrode layer formed as a pad for contact with the second surface of the first dielectric layer,” wherein the first dielectric layer is an internal layer of the monolithic capacitor chip. Patent Owner relies upon the opinion of its expert, Dr. Stanley R. Shanfield, Ph.D., to assert that “pad” ordinarily means “mat” or “cushion” and thus connotes a mounting or landing surface, such as against a printed circuit board. *Id.* at 8 (citing Ex. 2003 ¶ 38). In support of this opinion, Dr. Shanfield cites a) a general dictionary definition of “pad” from the Merriam-Webster’s Collegiate Dictionary (10th ed. 1993) , and b) a 2003 (post-filing date) document entitled “Microwave Office Element Catalog” describing a “multiplate

ceramic chip capacitor” with an indication that one can “set size and properties of contact pads.” Ex. 2003 ¶¶ 38–39, Exs. C and D. Neither extrinsic document, however, specifies that an electrode layer that is formed as a contact pad for a multilayer chip capacitor must necessarily be mounted on the printed circuit board or otherwise close to the current source. Moreover, during oral argument, Patent Owner acknowledged that the printed circuit board is not part of the claimed device. Tr. 80:1–4.

Patent Owner further asserts that its proposed construction is supported by the ’791 patent Specification’s teachings concerning the “invention” described therein. PO Resp. 10–16. We find that the cited portions of the Specification do not support Patent Owner’s proposed construction.

First, Patent Owner points to the Specification’s statement that the “crux of the present invention is to position the first electrode in the ceramic and to form the second electrode *on* the pad” as support (Ex. 1001, 1:52–54) (emphasis added), even though the claim recites “a second electrode formed *as* the pad” (emphasis added). Notwithstanding the difference in language, Patent Owner’s counsel indicated during oral argument that the Specification’s reference to a second electrode formed *on* the pad is meant to be the same as the claimed second electrode formed *as* the pad. Tr. 66:12–67:16. We find no support for that position. Moreover, nothing in this statement or elsewhere in the Specification suggests that the second electrode layer must be mounted on the current source in order to be considered as either being formed “as” or “on” the pad.

Second, Patent Owner relies on the Specification’s recitations of several “object[s] of the present invention,” including, *inter alia*, to provide

a capacitor that retains the “superior high frequency attributes” of the prior art capacitor taught by the ’926 Monsorno Patent, and one that is “particularly effective at very high frequencies,” as well as to “increase resonance frequency of capacitors having buried electrodes over resonance frequencies of prior art capacitors with plural-layered configurations.” PO Resp. 10–11 (citing Ex. 1001, 1:19–21, 1:26–30, 1:41–43). We are not persuaded. Claim 1 does not recite anything about frequency properties, and we find no basis to import any such requirement into the claimed capacitor. Indeed, Patent Owner disregards several other objects of the invention also recited in the ’791 patent that have nothing to do with frequency, capacitance, or inductance. For example, the recited objects of the “present invention” also include “optimiz[ing] board space utilization of capacitors,” “provid[ing] a capacitor which can be manufactured in quantity at a low unit cost with superior quality,” “provid[ing] a capacitor which performs well over a broad range of operating temperatures,” and “provid[ing] a capacitor which is highly reliable.” Ex. 1001, 1:30–40. *See Pacing Techs., LLC v. Garmin Int’l, Inc.*, 778 F.3d 1021, 1025 (Fed. Cir. 2015) (“[W]here the patent includes a long list of different ‘objects of the present invention’ that correspond to features positively recited in one or more claims, it seems unlikely that the inventor intended for each claim to be limited to all of the many objects of the invention.”). Furthermore, the Specification does not indicate that any or all of the objects of the invention can be achieved only by mounting the second electrode layer on the current source.

Patent Owner further relies upon the testimony of Dr. Shanfield to assert that positioning the second electrode layer adjacent to the current source will reduce inductance and achieve the stated objectives of the

invention. See PO Resp. 10–16 (citing Ex. 2003 ¶¶ 43–51). Contrary to this position, however, Petitioner’s expert, Dr. Randall, explains that “decreasing parasitic inductance and increasing resonance frequency can be achieved without forming a second electrode layer on a particular external surface closest to the current source.” Ex. 1013 ¶ 20. For example, “the second electrode could be trimmed, thereby decreasing capacitance . . . to ‘increase resonance frequency,’” and “[i]nductance could also be decreased by using an electrode design that is wider, or by using a design that has less overlap in electrode length, or by trimming the electrode so as to reduce electrode overlap length.” *Id.* To the extent that reduced inductance and/or increased resonance frequency is necessary for the claimed capacitor, Patent Owner and Dr. Shanfield do not explain why those objectives could not be achieved with any of these other design options. As such, we find that the “objects of the invention” discussed in the ’791 patent do not limit the external capacitor surface on which the second electrode layer must be formed.

We therefore maintain the construction of “second electrode layer” set forth in our Institution Decision, i.e., as an electrode layer formed on any external surface of the capacitor, and we do not impose a requirement that the second electrode layer must be formed on the external capacitor surface that is mounted on the current source.

2. Remaining Claim Terms

We determine that, for purpose of this Final Written Decision, none of the other terms in the challenged claim requires express construction.

B. Patentability Analysis

1. Anticipation by Horie

a. Horie (Ex. 1002)

Horie relates to “a laminated capacitor including external electrodes.”

Ex. 1002, 1:6–10. Figure 5 of Horie is reproduced below:

Fig. 5

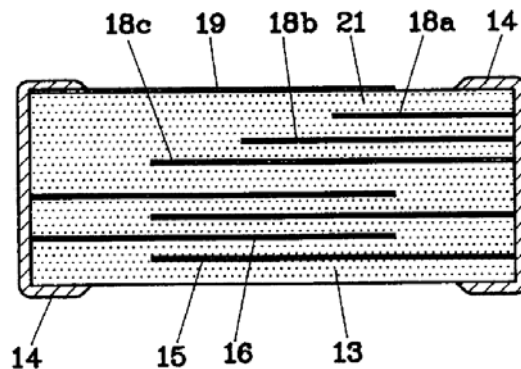


Figure 5 shows a laminated capacitor in which “internal electrodes 15 and 16 are provided in the naked laminated body 13, opposing each other through the dielectric ceramic layer thereof, and they extend outside onto the end surfaces of the naked laminated body 13 opposing each other, respectively, thereby connecting with the external electrodes 14 and 14.” *Id.* at 9:19–25. Figure 5 further shows a “trimming electrode 19” and a “plurality of internal adjusting electrodes 18a, 18b, 18c opposing it formed within the naked laminated body 13.” *Id.* at 3:4–10, 9:26–30.

According to Horie,

The naked laminated body 13 is constructed with ceramic layers 11, 11 . . . piled up in a plurality thereof, each of which is made of a dielectric material without the internal electrode shown in FIG. 3., and further thereon is piled ceramic layers 12a, 12b, 12c on which surfaces are printed internal electrodes 18a, 18b, 18c for adjusting. Further, on both sides of it, ceramic layers 17, 21 not having an internal electrode are piled up respectively.

Id. at 7:16 –23.

Horie further teaches that the dielectric layers are formed of a “ceramic slurry” that “is pasted on base film . . . and is dried to form a film-like ceramic green sheet therefrom. . . . The green sheets printed with the internal electrode pattern are piled on one another.” *Id.* at 6:65–7:11.

b. Analysis

Petitioner asserts that Horie teaches the claimed monolithic capacitor chip based on its disclosure of a laminated capacitor with internal electrodes 18a, 18b, 18c (i.e., the first electrode layer) layered between ceramic green sheets (i.e., the first and second dielectric layers) and a trimming electrode 19 (i.e., the second electrode layer formed as pad). Petitioner relies upon disclosures with respect to Figures 3 and 5 of Horie, and further includes a claim chart mapping Horie’s teachings to the claim elements. Pet. 10–16. Petitioner also relies upon the declaration of Dr. Randall. Pet. 14 (citing Ex. 1011 ¶¶ 41–50). In our Institution Decision, we determined that Petitioner demonstrated a reasonable likelihood of prevailing with respect to its anticipation challenge based on Horie. Inst. Dec. 9–12.

We have revisited the analysis set forth in our Institution Decision and considered the question of patentability anew in view of all the evidence and arguments presented in this proceeding. Based on the record developed during this proceeding, we determine that Petitioner has shown by a preponderance of the evidence that Horie anticipates claim 1. We have considered, but are unpersuaded by, Patent Owner’s arguments to the contrary regarding this challenge.

First, Patent Owner argues that Horie does not teach a “second electrode layer formed as a pad on the second surface of the first dielectric

layer” because Figure 5 of Horie only depicts electrode 19 along the “top” surface of laminated body 13. PO Resp. 17–18. As discussed above, we do not construe the claim language to require that the second electrode layer be positioned along the “bottom” surface or on the surface mounted on the current source. Because electrode 19 is plainly shown to be on an external surface of Horie’s capacitor, we find that it satisfies the requirement of a second electrode formed as a pad.

Second, Patent Owner argues that Horie does not disclose first and second electrode layers having “co-extensive” length and width dimensions. *Id.* at 18–26. In addition to Figure 5, Petitioner relies upon Figure 3 of Horie, reproduced below, to show that the length and width dimensions of the second dielectric layer 12a are co-extensive with the length and width dimensions of the first dielectric layer 21. Pet. 12.

Fig. 3

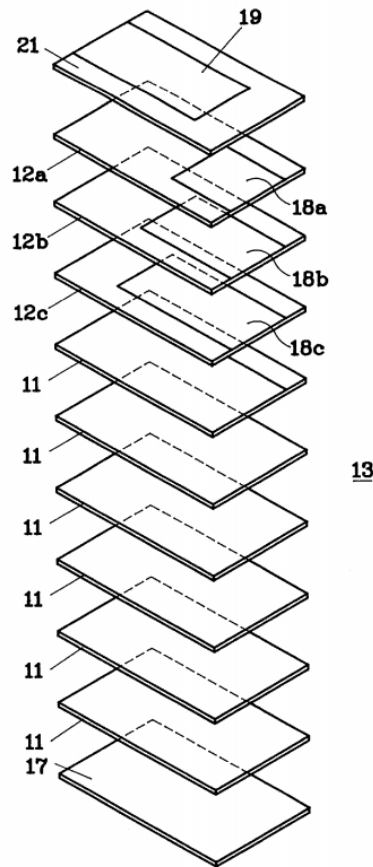


Figure 3 is an “exploded perspective view” of the laminated capacitor.
Ex. 1002, 6:14–16.

Patent Owner contends that “Federal Circuit law makes clear that the proportional size relationships between the layers shown in Fig. 3 cannot be relied upon to teach comparative sizes absent some indication they are drawn to scale relative to each other.” PO Resp. 21 (citing *Hockerson-Halberstadt, Inc. v. Avia Group Int’l, Inc.*, 222 F.3d 951, 956 (Fed. Cir. 2000)). In *Hockerson*, the court held that “patent drawings do not define the precise proportions of the elements and may not be relied on to show particular sizes if the specification is completely silent on the issue.” *Hockerson*, 222 F.3d at 956. That holding is not applicable here. Unlike

with the claim at issue in *Hockerson*, which was construed to require that the “central longitudinal groove” has a width that must be less than the combined width of the two peripheral fins, challenged claim 1 does not require any particular size or proportion. The requirement that the dielectric layers have co-extensive length and width dimensions can be assessed by simply viewing the figures of Horie, and no additional measurements are necessary to make that determination. It is well-established “that a claimed invention may be anticipated or rendered obvious by a drawing in a reference, whether the drawing disclosure be accidental or intentional.” *In re Meng*, 492 F.2d 843, 847 (CCPA 1974).

Moreover, the specification of Horie is *not* “completely silent on the issue” of whether the dielectric layers are co-extensive. *Cf. Hockerson*, 222 F.3d at 956. In particular, Horie discloses that “the laminated body obtained is cut in vertical and horizontal directions to obtain each chip-like laminated body.” Ex. 1002, 7:11–13.³ Although Patent Owner suggested that the use of the terms “vertical” and “horizontal” in Horie could nonetheless encompass cutting the layers at an angle (Tr. 95:15–97:4), we find no support for that position. We, thus, find that Horie’s teaching that each layer in the laminate comprising the capacitor body is cut to the same length and the same width dimensions, in combination with Figure 3, satisfies the “co-extensive” requirement. *See* Ex. 1013 ¶¶ 32–34.

³ Although Petitioner only identifies this portion of Horie in its Reply (Reply 12) rather than in the original Petition, we find that it properly responds to Patent Owner’s argument that the figures of Horie may not be relied upon to satisfy the “co-extensive” requirement. *See* 37 C.F.R. § 42.23(b) (“A reply may only respond to arguments raised in the corresponding opposition, patent owner preliminary response, or patent owner response.”).

Third, Patent Owner argues that the Petition fails to specify where the “different level of polarity” limitation is taught by Horie, and “relies instead on the Board to make this finding.” PO Resp. 26–29. We disagree. As stated in the Petition:

Horie also discloses, and as is apparent from Fig. 2, that electrode 19 is formed on the opposing end surface as internal electrodes 18a, 18b, 18c. [Ex. 1002,] 7:48-53. The first electrode layer 18a disclosed in Horie is connectable to a source of electric current so as to be operable at to a different level of polarity from that of the second electrode layer 19. *Id.* at 9:32-45; 7:62-67.

Pet. 13. Patent Owner does not otherwise substantively dispute this assertion by Petitioner. The final limitation of claim 1 requires the “first electrode layer” only to be “connectable to a source of electric current so as to be operable at to a different level of polarity from that of the second electrode layer.” Ex. 1001, 4:16–18 (emphasis added). Actual connection to a power source or operation at different polarity levels is not required to satisfy the claim. We, thus, find that Petitioner has shown sufficiently that Horie teaches a capacitor with the capability that is required by the claim.

Accordingly, we determine that Horie anticipates claim 1.

2. Anticipation by Coleman

a. Coleman (Ex. 1005)

Coleman relates to “[a] monolithic ceramic capacitor [having] a ceramic body with two sets of mutually parallel interdigitated electrodes buried therein.” Ex. 1005, Abstract. “The electrodes of one set extend to one end face of the body contacting a conductive terminal layer on the one end face,” while the “electrodes of the other set extend to a side face of the body contacting a second terminal layer intermediate the two end faces.” *Id.* Figures 5 and 6 of Coleman are reproduced below:

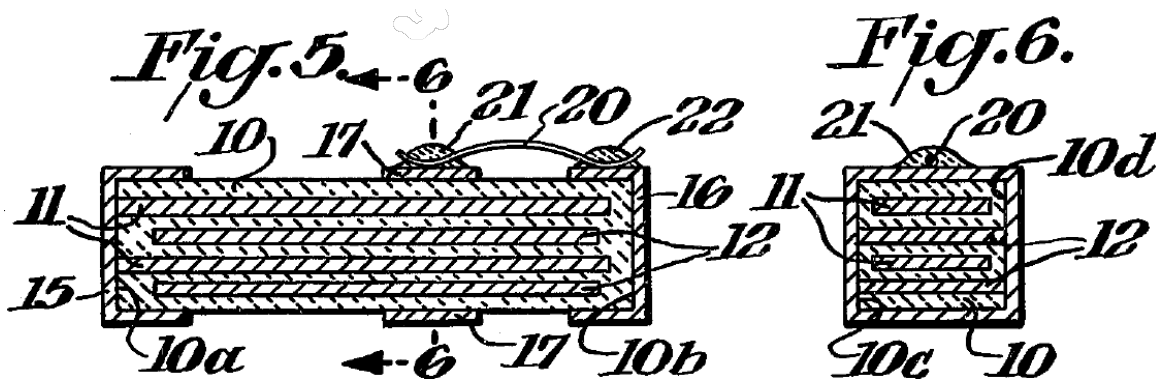


Figure 5 shows a side sectional view of the monolithic ceramic capacitor, while Figure 6 shows the end sectional view of the capacitor. *Id.* at 2:1–15. “A dielectric ceramic body 10 has two sets of interdigitated planar film electrodes 11 and 12 buried therein,” such that the “electrodes 11 extend in an X-axis direction to the left end face 10a but are recessed or spaced from the right end face 10b” and the “electrodes 12 are recessed in both X-axis directions from both end faces 10a and 10b.” *Id.* at 2:39–42.

Referring in particular to Figures 5 and 6, Coleman teaches that

the body 10 is shown having two conformal cup shaped conductive layers 15 and 16 formed over the opposite end faces 10a and 10b. . . . Layer 15 contacts electrodes 11 at end face 10a, but layer 16 at the other end 10b does not contact any of the recessed electrodes.

Id. at 46–61. Coleman further teaches that a “third termination layer 17 encircles and is bonded to the body in a region intermediate the end layers 15 and 16. . . . Generally, however, layer 17 need not encircle the body and may exist on only one body side face contacting electrodes 12.” *Id.* at 2:62–3:2.

b. Analysis

Petitioner asserts that claim 1 is anticipated by Coleman based on its disclosure of a monolithic capacitor that has a dielectric ceramic body (i.e., the first and second dielectric layers) with two sets of interdigitated planar film electrodes 11 and 12 buried therein (i.e., the first electrode layer), cup shaped conductive layers 15 and 16 formed over the opposite end faces (i.e., the first and second single-layer cap members), and a third termination layer 17 (i.e., the second electrode layer formed as a pad). Pet. 25–30. Petitioner relies upon disclosures with respect to Figures 5 and 6 of Coleman, and further includes a claim chart mapping Coleman’s teachings to the claim elements. *Id.* Petitioner also relies upon the Randall Declaration. *Id.* at 27 (citing Ex. 1011 ¶¶ 68–74). In our Institution Decision, we determined that Petitioner demonstrated a reasonable likelihood of prevailing with respect to its anticipation challenge based on Coleman. Inst. Dec. 12–15.

We have revisited the analysis set forth in our Institution Decision and considered the question of patentability anew in view of all the evidence and arguments presented in this proceeding. Based on record developed during this proceeding, we determine that Petitioner has shown by a preponderance of the evidence that Coleman anticipates claim 1. We have considered, but are unpersuaded by Patent Owner’s arguments to the contrary regarding this challenge.

Patent Owner argues that Coleman does not teach the “first dielectric layer,” “first electrode layer,” and “second electrode layer” arrangement recited in claim 1. PO Resp. 31–34.⁴ Specifically, with respect to the

⁴ Although the heading on page 31 of Patent Owner’s Response refers to “second dielectric layer,” Patent Owner’s arguments in that section focus on

monolithic capacitor shown in Figure 5 of Coleman, Patent Owner contends that “no portion of layer 17 – in conjunction with ceramic body 10 or any of electrodes 11 and 12 – teaches the claimed capacitor.” *Id.* at 32. More specifically, Patent Owner contends that “[t]he top and side portions of layer 17 (directly below) are not formed on the external capacitor surface that is mounted on the current source as required by claim 1 *properly construed.*” *Id.* We disagree. As discussed above, we do not construe the claim to require that the second electrode layer is formed on an external capacitor surface that is mounted on the current source. Thus, under our construction, we find that top layer 17 (as shown on the top of Figure 5 of Coleman) satisfies the requirements of the claimed “second electrode layer” because it is mounted on an external surface of the capacitor (i.e., “formed as a pad”) and has a surface in contact with the claimed “first dielectric layer,” (identified as the layer of ceramic body 10 immediately below top layer 17). *See* Ex. 1005, Fig. 5; Ex. 1013 ¶¶ 39–41. We further find that topmost electrode layer 11 satisfies the requirements of the claimed “first electrode layer,” and that the layer of ceramic body 10 immediately below layer 11 satisfies the requirements of the claimed “second dielectric layer.” *Id.* Petitioner identified these teachings of Coleman as satisfying the claim requirements in the original Petition. Pet. 26–27.

Patent Owner further argues that the Petition and Coleman are deficient with respect to the “co-extensive” length and width dimensions requirement for the first and second dielectric layers. PO Resp. 34–38. We

the second electrode layer instead. *See* PO Resp. 32 (“Coleman does not disclose the claimed ‘first dielectric layer,’ ‘first electrode layer’ and ‘second electrode layer’ arrangement, nor does the Petition contend otherwise.”).

again disagree. Petitioner identified in the original Petition that this limitation is satisfied by Coleman’s teaching that “[a] dielectric ceramic body 10 has two sets of interdigitated planar film electrodes 11 and 12 buried therein, as illustrated in FIGS. 1 through 6.” Pet. 28 (citing Ex. 1005, 2:32–36). Petitioner also noted that “[a]s seen in Fig. 5, each dielectric layer of ceramic body 10 has a length and a width, as well as a first and second end.” *Id.* at 26. We noted in our Institution Decision that “Figure 5 shows a side sectional view and Figure 6 shows an end sectional view,” and “[t]he combination of these two sectional views reveals that the ceramic body 10 is formed of multiple dielectric layers (with surfaces and ends) having coextensive length and width dimensions that define a margin outward of the interspersed electrode layers.” Inst. Dec. 15.⁵

Patent Owner argues that Coleman provides no discussion of ceramic layers—only references to “ceramic body 10”—and never mentions “length” or “width.” PO Resp. 36. However, Coleman teaches that the ceramic body has mutually perpendicular axes, X and Y, and a skilled artisan would understand from Figure 2 that the body has a rectangular shape with length and width dimensions when viewed from the top. *See* Ex. 1005, 2:35–38, Fig. 2. Furthermore, the combination of Figures 5 and 6 in Coleman show plainly that ceramic body 10 has several different dielectric “layers” with electrodes interspersed between them, and that those dielectric layers have the same length and width dimensions. Patent Owner argues “the

⁵ We disagree with Patent Owner’s assertion that “the Board *sua sponte* suggest[ed] that Coleman Figs. 5 and 6 in combination disclose the ‘co-extensive’ limitation,” as our conclusion was based on specific teachings identified by Petitioner. PO Resp. 36.

quantitative relationships between these many components as illustrated in Figs. 5 and 6 cannot alone be relied upon for teaching ‘co-extensive’ without some indication of being drawn to scale relative to each other.” PO Resp. 37–38 (citing *Hockerson*, 222 F.3d at 954). We disagree with Patent Owner’s reliance on *Hockerson* for reasons similar to those discussed above with respect to the challenge based on Horie. Here, no further knowledge about any “quantitative relationships” or the scale to which Coleman’s patent figures are drawn is necessary for us to reach our conclusion. There is no *per se* prohibition against relying upon patent drawings to find anticipation. *See Meng*, 492 F.2d at 847 (“[A] drawing is available as a reference *for all that it teaches* a person of ordinary skill in the art.”) (emphasis added). Moreover, in addition to the figures themselves, Coleman’s teaching of “end faces” (10a, 10b) and “side faces” (10c, 10d) of the ceramic body to which electrodes extend further suggests that the length and width of the ceramic body is uniform, thus satisfying the “co-extensive” requirement. *See* Ex. 1005, Abstract, 2:46–65.

Finally, Patent Owner argues that the Petition fails to specify where numerous claim elements are found in Coleman. PO Resp. 38–45. We disagree. As noted above, the Petition identifies specific teachings of Coleman, and includes a claim chart mapping Coleman’s teachings to the claim elements. Pet. 25–30. In particular, Patent Owner argues that the Petition does not specify what portion of ceramic body 10 in Coleman is the “first dielectric layer” and what portion is the “second dielectric layer.” PO Resp. 39–43. However, the Petition specifically noted that “[d]ielectric layer 10 located above electrode 11 is a first dielectric layer,” that “[d]ielectric layer 10 located below electrode 11 is a second dielectric

layer,” and that “the first and the second dielectric layers, which are located above and below first electrode layer 11 respectively, combine to enclose the first electrode layer 11 and to describe a margin outward of the first electrode layer end.” Pet. 26. Patent Owner also argues that the Petition does not specify which film electrode 11 in Coleman is the “first electrode layer.” PO Resp. 41–42. As recognized by Patent Owner, however, the Petition noted that “Coleman also discloses a first electrode layer 11 mounted on the first dielectric surface of the first dielectric layer 10, i.e., below first dielectric layer 10.” Pet. 26.

Patent Owner additionally asserts that Petitioner fails to specify where in Coleman “different level of polarity” is described. PO Resp. 44–45. We disagree, as Petitioner identified that “[t]he first electrode layer 11 disclosed in Coleman is connectable to a source of electric current so as to be operable at [] a different level of polarity from that of the second electrode layer 17.” Pet. 27 (citing Ex. 1005, 3:3–13). Petitioner’s claim chart for Coleman further notes with respect to this limitation that “[t]he opposite end face has a third terminal layer that does not contact any of the electrodes . . . layer 17 . . . may exist only on one body side facing contact electrodes.” *Id.* at 29–30 (citing Ex. 1005, 2:6–3:2). As noted above, actual connection to a power source or operation at different polarity levels is not required to satisfy the final limitation of claim1. We thus find that Petitioner has shown sufficiently that Coleman teaches a capacitor with the capability that is required by the claim.

We have taken into account those teachings of Coleman identified in the Petition, in connection with the arguments and evidence presented with Patent Owner’s Response and Petitioner’s Reply, in reaching our conclusion

that a preponderance of the evidence establishes that Coleman teaches each of the disputed elements arranged in the manner required by claim 1.

III. PATENT OWNER’S MOTION FOR OBSERVATIONS

Patent Owner filed a Motion for Observation on the cross-examination testimony of Petitioner’s expert, Dr. Randall. Paper 26 (“Obs.”). Petitioner, in turn, filed a Response. Paper 29 (“Obs.Resp .”). We have considered Patent Owner’s observations and Petitioner’s responses in rendering this Final Written Decision, and accorded Dr. Randall’s testimony appropriate weight where necessary.

IV. PATENT OWNER’S MOTION TO EXCLUDE

Patent Owner filed a motion to exclude certain evidence. Paper 28. Specifically, Patent Owner seeks to exclude certain exhibits and the portions of Dr. Randall’s testimony concerning patentability challenges that did not form the basis of our Institution Decision in this proceeding. *Id.* at 2–6. Petitioner filed a response indicating that it does not dispute Patent Owner’s motion to exclude for any reason. Paper 30. Because we did not rely upon any of the evidence sought to be excluded in our Final Written Decision, we dismiss Patent Owner’s motion to exclude as moot.

V. CONCLUSION

We conclude that Petitioner has demonstrated by a preponderance of the evidence that claim 1 of the ’791 patent is anticipated under 35 U.S.C. § 102 by Horie and by Coleman.

This is a final written decision of the Board under 35 U.S.C. § 318(a). Parties to the proceeding seeking judicial review of this decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

VI. ORDER

Accordingly, it is:

ORDERED that claim 1 of U.S. Patent 6,337,791 B1 is held to be unpatentable;

FURTHER ORDERED that Patent Owner's Motion for Observation is taken into consideration;

FURTHER ORDERED that Patent Owner's Motion to Exclude is dismissed as moot; and

FURTHER ORDERED that because this is a Final Written Decision, parties to the proceeding seeking judicial review of the decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

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