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MURPHY, BILAK & HOMILLER/INFINEON TECHNOLOGIES 1255 CRESCENT GREEN SUITE 200 CARY, NC 27518			YANCHUK, STEPHEN J	
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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte RAVI KESHAV JOSHI, ALEXANDER BREYMESSER,
BERNHARD GOLLER, KAMIL KARLOVSKY,
FRANCISCO JAVIER SANTOS RODRIGUEZ, and PETER ZORN

Appeal 2019-001960
Application 14/230,056
Technology Center 1700

Before ROMULO H. DELMENDO, BEVERLY A. FRANKLIN, and
MERRELL C. CASHION, JR., *Administrative Patent Judges*.

DELMENDO, *Administrative Patent Judge*.

DECISION ON APPEAL

The Appellant¹ appeals under 35 U.S.C. § 134(a) from the Primary Examiner’s final decision to reject claims 1–4, 6–12, and 14–22.² We have jurisdiction under 35 U.S.C. § 6(b).

We reverse.

¹ We use the word “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42—namely, Infineon Technologies AG (Application Data Sheet filed March 31, 2014 at 6), which is also identified as the real party in interest (Appeal Brief filed March 7, 2018 (“Appeal Br.”) at 2).

² See Appeal Br. 4–24; Reply Brief filed December 28, 2018 (“Reply Br.”) at 2–4; Final Office Action entered September 22, 2017 (“Final Act.”) at 2–15; Examiner’s Answer entered November 9, 2018 (“Ans.”) at 3–8.

I. BACKGROUND

The subject matter on appeal relates to a battery, an integrated circuit including a battery, and a method of manufacturing a battery (Specification filed March 31, 2014 (“Spec.”) ¶¶ 5–7). Representative claim 8 is reproduced from the Claims Appendix to the Appeal Brief, as follows:

8. An integrated circuit including a lithium ion battery comprising:
 - a first substrate having a first main surface;
 - a second substrate made of a conducting or semiconductor material, an anode of the lithium ion battery being an integral constituent part of the first or second substrate;
 - a carrier of an insulating material***, having a first and a second main surfaces, the second substrate being attached to the carrier;
 - an opening in the second main surface of the carrier to uncover a portion of a second main surface of the second substrate, the second main surface of the carrier being attached to the first main surface of the first substrate, thereby forming a cavity; and
 - an electrolyte disposed in the cavity.

(Appeal Br. 26 (emphasis added)).

II. REJECTIONS ON APPEAL

The claims on appeal stand rejected under AIA 35 U.S.C. § 103, as follows:

- A. Claims 8–10 as unpatentable over Salot et al.³ (“Salot”);
- B. Claim 1–4, 6, and 7 as unpatentable over Salot in view of Klootwijk et al.⁴ (“Klootwijk”);

³ US 2007/0275300 A1, published November 29, 2007.

⁴ US 2011/0183186 A1, published July 28, 2011.

- C. Claims 11, 12, and 14–20 as unpatentable over Salot in view of Dziurla et al.⁵ (“Dziurla”);
- D. Claim 21 as unpatentable over Salot in view of Kejha;⁶ and
- E. Claim 22 as unpatentable over Salot in view of Klootwijk and further in view of Kejha.

(Ans. 3–8; Final Act. 2–15).

III. DISCUSSION

The Examiner finds that Salot describes an integrated circuit comprising a lithium ion battery having most of the limitations recited in claim 8, including “a carrier of an insulating material,” as required by the claim (Final Act. 2–3). Specifically, the Examiner finds that Salot’s anisotropic conductive film **18** (Fig. 3) or seal **38** (Fig. 4) is “a carrier of an insulating material” (*id.* at 3). The Examiner finds that Salot does not disclose “an anode of the lithium ion battery being an integral constituent part of the first or second substrate,” as recited in claim 8, but concludes:

[I]t would have been obvious to one of ordinary skill in the art . . . to arrange the anode of the lithium ion battery to be an integral constituent part of the first or second substrate, since it has been held that constructing various elements into an integral structure involves only routine skill in the art and would be an obvious engineering choice. *In re Larson*, 340 F.2d 965, 968, 144 USPQ 347, 349 (CCPA)[.]

(*Id.* at 3–4).

The Appellant argues that the Examiner’s rejection is flawed because the finding that Salot’s anisotropic conductive film **18** as shown in Figure 3

⁵ US 4,859,263, issued August 22, 1989.

⁶ US 6,251,540 B1, issued June 26, 2001.

or seal **38** as shown in Figure 4 meets “a carrier of an insulating material,” as recited in claim 8, is based on an unreasonable claim construction (Appeal Br. 5–7; Reply Br. 2–4). According to the Appellant, neither Salot’s anisotropic conductive film **18** nor seal **38** is an insulating material (Appeal Br. 5). In addition, the Appellant argues that neither anisotropic conductive film **18** nor seal **38** is a “carrier” as that term would be interpreted in light of the Specification (*id.* at 5–7).

We agree with the Appellant. Although claims are given their broadest reasonable interpretation during examination, the interpretation must not be unreasonably broad. *In re Suitco Surface, Inc.*, 603 F.3d 1255, 1260 (Fed. Cir. 2010) (“[T]his court has instructed that any such construction be “consistent with the specification, . . . and that claim language should be read in light of the specification as it would be interpreted by one of ordinary skill in the art.”); *In re Smith Int’l, Inc.*, 871 F.3d 1375, 1382 (Fed. Cir. 2017) (“[T]he protocol of giving claims their broadest reasonable interpretation . . . does not include giving claims a legally incorrect interpretation’ ‘divorced from the specification and the record evidence.’”) (internal citation omitted).

The Examiner’s position is that “[t]he claims do not read ‘a carrier is made of an insulating material’” and that “[t]he argument that the elemental feature must be an insulating material is not supported by the verbiage of the claim as presented” (Ans. 3–4). According to the Examiner, “[t]he phrasing of the instant claim to say ‘a carrier of an insulating material’ defines the carrier by what is carried thereon” (*id.* at 5).

As the Appellant points out (Reply Br. 3), the Examiner’s proffered claim construction is inconsistent with the description in the Specification

and the Drawings. The Specification states that the “carrier” (e.g., element **150** in Figure 1) “may be made of an insulating material such as glass” and that it “is provided so as to insulate the second substrate **155** and the first substrate **100**” (Spec. ¶ 34–35 (bolding added)). Contrary to the Examiner’s proposed claim interpretation, nothing in the Specification and/or Drawings indicates that the “carrier” may be a material that is not, in and of itself, insulating but merely carries or supports an insulating material (*id.* ¶¶ 48, 56; Figs. 3, 5).⁷ Indeed, at one point, the Examiner appears to concede as much (Ans. 5 (“It is persuasive that element **150** is [described as] a carrier and is insulating, but element **150** does not carry an insulating material.”) (bolding added)). Reading the phrase “carrier of an insulating material” in claim 8 in light of the Specification and Drawings, we conclude that a person of ordinary skill in the art would interpret the phrase to mean that the carrier is made of an insulating material.

Because the Examiner’s rejection is based on an unreasonable claim construction, we cannot sustain the rejection as maintained against claim 8. *Suitco*, 603 F.3d at 1261.

The other two independent claims on appeal (namely, claims 1 and 11) also recite “a carrier of an insulating material” (Appeal Br. 25, 27), and, therefore, the Examiner’s rejection as to these claims suffers from the same deficiency as for claim 8. Accordingly, we do not sustain the rejection as to these claims and claims dependent thereon.

⁷ The Examiner does not explain how Salot’s seal **38** or anisotropic conductive film **18** can properly be considered as carrying an insulating material when, in fact, it contacts first substrate **21** and conductive layer **35** or first silicon substrate **1** and second silicon substrate **10** (Salot Figs. 3–4).

IV. CONCLUSION

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/ Basis	Affirmed	Reversed
8–10	103	Salot		8–10
1–4, 6, 7	103	Salot, Klootwijk		1–4, 6, 7
11, 12, 14–20	103	Salot, Dziurla		11, 12, 14–20
21	103	Salot, Kejha		21
22	103	Salot, Klootwijk, Kejha		22
Overall Outcome				1–4, 6–12, and 14–22

REVERSED