

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 17

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ROBERT J. CHRONEOS and KOUSHIK BANERJEE

Appeal No. 1998-3130
Application No. 08/626,174

ON BRIEF

Before KRASS, DIXON, and BARRY, Administrative Patent Judges.
BARRY, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 from the rejection of claims 6-18. We reverse.

BACKGROUND

The invention at issue in this appeal relates to packages for integrated circuits (ICs). ICs are typically housed within a package soldered to a printed circuit board (PCB). A conventional package contains a heat slug to remove heat generated by the IC. The package features through hole vias

to interconnect to a plurality of lands on the bottom surface of the package. The lands are typically soldered to an external PCB.

The package may also contain discrete capacitors mounted to surface pads on the top surface of the package. The capacitors and accompanying pads occupy valuable space on the top of the package. Some vias must be eliminated to provide room for the capacitors. Eliminating vias, however, reduces the number of lands and the pin throughput of the package.

The appellants' IC package features a polygonal shaped heat slug. The slug extends from a top surface of a package, which has a plurality of vias. Capacitors are mounted to the top surface of the package. Some capacitors are between the heat slug and the vias. The polygonal shape of the heat slug provides additional space on the top surface so that capacitors can be added without eliminating vias from the package.

In deciding this appeal, we considered the subject matter on appeal and the rejection advanced by the examiner. Furthermore, we duly considered the arguments and evidence of the appellants and examiner. After considering the record, we are persuaded that the examiner erred in rejecting claims 6-18. Accordingly, we reverse.

We begin by noting the following principles from In re Rijckaert, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993).

In rejecting claims under 35 U.S.C. Section 103, the examiner bears the initial burden of presenting a prima facie case of obviousness. In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992).... "A prima facie case of obviousness is established when the teachings from the prior art itself would appear to have suggested the claimed subject matter to a person of ordinary skill in the art." In re Bell, 991 F.2d 781, 782, 26 USPQ2d 1529, 1531 (Fed. Cir. 1993) (quoting In re Rinehart, 531 F.2d 1048, 1051, 189 USPQ 143, 147 (CCPA 1976)).

With these principles in mind, we consider the examiner's rejection and appellants' argument.

Admitting that Banerjee does not disclose a heat slug having at least five sides, the examiner concludes, "[i]t is also a matter of design choice to have a heat slug with at least five sides, absent persuasive evidence that the particular configuration of the heat slug was significant." (Examiner's Answer at 5.) The appellants reply, "using a heat slug having at least five sides does solve a specific design problem." (Appeal Br. at 8.)

"Obviousness may not be established using hindsight or in view of the teachings or suggestions of the inventor." Para-Ordnance Mfg. v. SGS Importers Int'l, 73 F.3d 1085, 1087, 37 USPQ2d 1237, 1239 (Fed. Cir. 1995)(citing W.L. Gore & Assocs., Inc. v. Garlock, Inc., 721 F.2d 1540, 1551, 1553, 220 USPQ 303, 311, 312-13 (Fed. Cir. 1983)). "It is impermissible to use the claimed invention as an instruction manual or 'template' to piece together the teachings of the prior art so that the claimed invention is rendered obvious." In re Fritch, 972 F.2d 1260, 1266, 23 USPQ2d 1780, 1784 (Fed. Cir. 1992)(citing In re Gorman, 933 F.2d 982, 987, 18 USPQ2d 1885, 1888 (Fed. Cir. 1991)).

We note the following principles from In re Dembiczak, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999)(exemplary citations omitted).

The range of sources available, however, does not diminish the requirement for actual evidence. That is, the showing must be clear and particular. See, e.g., C.R. Bard, 157 F.3d at 1352, 48 USPQ2d at 1232. Broad conclusory statements regarding the teaching of multiple references, standing alone, are not "evidence."

Although couched in terms of combining prior art references, the same requirement applies in the context of modifying such a single prior art reference. Here, the examiner's broad, conclusory opinion of obviousness does not meet the requirement for actual evidence.

The record, moreover, belies the examiner's allegation about the absence of persuasive evidence that the particular configuration of the heat slug was significant. The specification reveals that "[t]he polygonal shape of the heat slug provides additional space on the top surface so that capacitors can be added without eliminating vias from the package." (Spec. at 4.) It further reveals that "[t]he polygonal shaped heat slug 22 thus provides a package that

will support additional capacitors without eliminating vias 28 and corresponding land pads 32." (Id. at 7.)

Because Banerjee merely teaches a four-sided heat slug, Fig. 2, no. 54, we are not persuaded that teachings from the applied prior art would have suggested the claimed limitations of a heat slug having at least five sides. The examiner fails to establish a prima facie case of obviousness. Therefore, we reverse the rejections of claims 6-18 as obvious over Banerjee.

CONCLUSION

In summary, the rejection of claims 6-18 under 35 U.S.C. §103(a) is reversed.

REVERSED

ERROL A. KRASS)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
JOSEPH L. DIXON)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
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LANCE LEONARD BARRY)	
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