

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 34

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte LAWRENCE A. GREENBERG and DAVID J. LANDO

Appeal No. 96-0380
Application No. 08/229,857¹

ON BRIEF

Before BARRETT, FLEMING and TORCZON, **Administrative Patent Judges.**

FLEMING, **Administrative Patent Judge.**

DECISION ON APPEAL

This is a decision on appeal from the final rejection of claims 1 through 20, all of the claims pending in the reissue.

¹ Application filed April 19, 1994 for reissue of U.S. Patent No. 4,774,635, issued September 27, 1988, based on Application 06/866,931, filed May 27, 1986. This application is a continuation of Application 08/062,689, filed May 17, 1993, abandoned; which is a continuation of Application 07/589,370, filed September 25, 1990, abandoned.

Appeal No. 96-0380
Application No. 08/229,857

The invention relates to semiconductor device packages.
In particular, Appellant disclose in column 2 of the
specification

Appeal No. 96-0380
Application No. 08/229,857

that Figure 1 illustrates a standard type of lead frame 10 including a first plurality of conductive fingers 11 and a paddle

13. A gap 15 is formed between the first plurality of conductive fingers 11 and the paddle 13. Appellants disclose in column 3 of the specification that in order to provide for the high density interconnection, an additional element is provided to bridge the gap between the lead frame and the paddle. Appellants further disclose that Figure 2 illustrates the additional element, a third plurality of conductive fingers 16, connecting to the ends of the first plurality of conductive fingers 11. The third plurality of conductive fingers 15 partially bridges the gap between the first plurality of conductive fingers 11 and the paddle 13.

The independent claim 1 is reproduced as follows:

1. A semiconductor device package comprising:
a mounting pad;
a plurality of first conductive
lead
frame fingers with one end of each in close lateral
proximity to the pad and defining a first gap
therebetween; and
a plurality of second conductive
fingers
formed on an insulating tape layer and extending
over the first gap, one end of said second
conductive

Appeal No. 96-0380
Application No. 08/229,857

fingers being bonded to corresponding first
conductive fingers and the opposite end of the second
conductive fingers terminating in close lateral proximity to
the pad to define a second gap therebetween which is
less than the first gap.

Appeal No. 96-0380
Application No. 08/229,857

Examiner to establish why one having ordinary skill in the art would have been led to the claimed invention by the express

teachings or suggestions found in the prior art, or by implications contained in such teachings or suggestions. **In re Sernaker**, 702 F.2d 989, 995, 217 USPQ 1, 6 (Fed. Cir. 1983). "Additionally, when determining obviousness, the claimed invention should be considered as a whole; there is no legally recognizable 'heart' of the invention." **Para-Ordnance Mfg. v. SGS Importers Int'l, Inc.**, 73 F.3d 1085, 1087, 37 USPQ2d 1237, 1239 (Fed. Cir. 1995), **cert. denied**, 117 S.Ct. 80 (1996) **citing W. L. Gore & Assocs., Inc. v. Garlock, Inc.**, 721 F.2d 1540, 1548, 220 USPQ 303, 309 (Fed. Cir. 1983), **cert. denied**, 469 U.S. 851 (1984).

Appellants argue on page 5 of the brief that Burn teaches away from Appellants' invention in that Burns teaches gang bonding the inner ends of leads 22 to intraconnect metalization on the semiconductor die, then gang bonding the

Appeal No. 96-0380
Application No. 08/229,857

outer ends of leads 22 to inner ends of outer lead frame 29 or 42. Appellants point out that Appellants' independent claims 1 and 11 set forth second conductive fingers that define a second gap, where the second gap is less than the first gap. Appellants argue that neither Burns nor the admitted prior art suggests or teaches this claimed structure.

The Federal Circuit states that "[t]he mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification." ***In re Fritch***, 972 F.2d 1260, 1266 n.14, 23 USPQ2d 1780, 1783-84 n.14 (Fed. Cir. 1992), ***citing In re Gordon***, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984).

Upon a closer review of Burns, we find that Burns does teach in column 6, line 52, through column 7, line 20, that lead 22 is first bonded to the bonding bumps 28 of the die and then bonded to the lead frame members 29. Thus, Burns does

Appeal No. 96-0380
Application No. 08/229,857

not suggest a second conductor finger to partially bridge the gap between the first conductive finger and the pad. In addition, Burns does not suggest or teach a second gap between the second conductive finger and the pad that is less than the first gap between the first conductive lead frame finger and the pad. The Examiner has failed to show that the prior art suggested the desirability of the Examiner's proposed modification. We are not inclined to dispense with proof by evidence when the proposition at issue is not supported by a teaching in a prior art reference or shown to be common knowledge of unquestionable demonstration. Our reviewing court requires this evidence in order to establish a

prima facie case. ***In re Knapp-Monarch Co.***, 296 F.2d 230, 232, 132 USPQ 6, 8 (CCPA 1961); ***In re Cofer***, 354 F.2d 664, 668, 148 USPQ 268, 271-72 (CCPA 1966). Therefore, we find that the Examiner has failed to establish why one having ordinary skill in the art would have been led to the claimed invention by teachings or suggestions found in the prior art.

Appeal No. 96-0380
Application No. 08/229,857

We have not sustained the rejection of claims 1 through 20 under 35 U.S.C. § 103. Accordingly, the Examiner's decision is reversed.

REVERSED

LEE E. BARRETT)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
MICHAEL R. FLEMING)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
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Appeal No. 96-0380
Application No. 08/229,857

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Appeal No. 96-0380
Application No. 08/229,857

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REVERSED

Prepared: November 16, 2000