The opinion in support of the decision being entered today is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte THOMAS STEINECKE and FRANZ LOHMAIR

Appeal 2007-1711
Application 10/657,898
Technology Center 2800

Decided: July 31, 2007

Before LEE E. BARRETT, ANITA PELLMAN GROSS, and
MARC S. HOFF, *Administrative Patent Judges*.

GROSS, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Steinecke and Lohmair (Appellants) appeal under 35 U.S.C. § 134 from the Examiner's Final Rejection of claims 1 through 3, 6 through 13, 16, and 17.

Appellants' invention generally relates to a semiconductor wafer in which the metallization layers are optimized such that automatic wiring can

be done with "place+route" programs. See Specification page 3, lines 11-16.

Claim 1 is illustrative of the claimed invention, and it reads as follows:

1. An electronic device, comprising:

a semiconductor chip having an active top side with a plurality of contact areas;

said semiconductor chip having a plurality of metallization layers and a plurality of insulation layers configured alternately one above another on said active top side;

said plurality of metallization layers including topmost metallization layers having a plurality of voltage supply structures and lower metallization layers disposed underneath said topmost metallization layers and having a plurality of signal line structures;

said plurality of insulation layers formed with a plurality of passage contacts connecting said plurality of voltage supply structures and/or said plurality of signal line structures to said plurality of contact areas of said active top side;

said topmost metallization layers having ones of said plurality of passage contacts connected to said plurality of contact areas;

said topmost metallization layers having at least a first one of said plurality of voltage supply structures for a low supply potential and a second one of said plurality of voltage supply structures for a high supply potential;

said first one of said plurality of voltage supply structures being insulated from said second one of said plurality of voltage supply structures;

said first one of said plurality of voltage supply structures of said topmost metallization layers having a grid of supply interconnects configured parallel to one another;

said second one of said plurality of voltage supply structures of said topmost metallization layers having a grid of supply interconnects configured parallel to one another; and

said grid of supply interconnects of said first one of said plurality of voltage supply structures being rotated relative to said grid of supply interconnects of said second one of said plurality of voltage supply structures.

The prior art references of record relied upon by the Examiner in rejecting the appealed claims are:

Mori	US 5,949,098	Sep. 07, 1999
Yonesaka	US 6,696,712 B1	Feb. 24, 2004 (filed Aug. 21, 2000)
Chua	US 6,825,553 B2	Nov. 30, 2004 (filed Sep. 05, 3003)

Claims 1 through 3 and 6 through 10 stand rejected under 35 U.S.C. § 103 as being unpatentable over Mori in view of Yonesaka.

Claims 11 through 13, 16, and 17 stand rejected under 35 U.S.C. § 103 as being unpatentable over Mori in view of Yonesaka and Chua.

We refer to the Examiner's Answer (mailed May 15, 2006) and to Appellants' Brief (filed March 3, 2006) for the respective arguments.

SUMMARY OF DECISION

As a consequence of our review, we will sustain the obviousness rejections of claims 1 through 3, 6 through 13, 16, and 17.

OPINION

Appellants contend (Br. 9 and 10) that Mori fails to show the grid of supply interconnects of a first one of the voltage supply structures being rotated relative to the grid of supply interconnects of a second one of the voltage supply structures. Appellants further contend (Br. 9 and 10) that

Yonesaka and Chua, respectively, do not cure the deficiency of Mori. Appellants present no further arguments. The Examiner (Answer 3-4) asserts that Figure 3 of Mori shows the claimed supply interconnect grids being rotated relative to each other. The issue, therefore, is whether for claims 1 through 3 and 6 through 10 the combination of Mori and Yonesaka and for claims 11 through 13, 16, and 17 the combination of Mori, Yonesaka, and Chua discloses the grid of supply interconnects of a first one of the plurality of voltage supply structures being rotated relative to the grid of supply interconnects of a second one of the voltage supply structures.

Mori discloses (col. 4, l. 39-col. 5, l. 6) a power wiring layer 310 for power conductive line 311, an insulating layer 320, a power/ground wiring layer 330 for power conductive lines 331 and ground conductive lines 332, another insulating layer 340, ground wiring layer 350 for ground conductive lines 352, a third insulating layer 360, and signal wiring layer 370 for signal conductive lines 371-373. Thus, the three topmost metallization layers have voltage supply structures and the lower metallization layers have signal line structures. As shown in Figure 3, power conductive lines 331 (the claimed second one of the voltage supply structures for a high supply potential) are parallel to each other and perpendicular to ground conductive lines 352 (the claimed first one of the voltage supply structures for a low supply potential). Thus, Mori shows "said grid of supply interconnects of said first one of said plurality of voltage supply structures being rotated relative to said gird of supply interconnects of said second one of said plurality of voltage supply structures," as recited in independent claims 1 and 11. Since Appellants presented no further arguments, we will sustain the obviousness rejection of

claims 1 through 3 and 6 through 10 over Mori and Yonesaka and of claims 11 through 13, 16, and 17 over Mori, Yonesaka, and Chua.

ORDER

The decision of the Examiner rejecting claims 1 through 3, 6 through 13, 16, and 17 under 35 U.S.C. § 103 is affirmed.

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

AFFIRMED

KIS

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