Abstract

SEMICONDUCTOR WAFER HAVING THROUGH-HOLE VIAS ON SAW STREETS WITH BACKSIDE REDISTRIBUTION LAYER

A semiconductor wafer contains a plurality of die with contact pads disposed on a first surface of each die. Metal vias are formed in trenches in the saw street guides and are surrounded by organic material. Traces connect the contact pads and metal vias. The metal vias can be half-circle vias or full-circle vias. The metal vias are surrounded by organic material. Redistribution layers (RDL) are formed on a second surface of the die opposite the first surface. The RDL and THV provide expanded interconnect flexibility to adjacent die. Repassivation layers are formed between the RDL on the second surface of the die for electrical isolation. The die are stackable and can be placed in a semiconductor package with other die. The RDL provide electrical interconnect to the adjacent die. Bond wires and solder bumps also provide electrical connection to the semiconductor die.
(Fig. 10b)