ABSTRACT

A METHOD OF FORMING THROUGH-WAFER INTERCONNECTS FOR VERTICAL WAFER LEVEL PACKAGING

A wafer is provided having through-holes therein to form a through-hole via wafer. A substrate of a sacrificial wafer is provided. The substrate is coated with a polymer having low adhesion to metals. A conductive layer is deposited on the polymer. A photoresist layer is coated on the conductive layer. The through-hole via wafer is bonded to the sacrificial wafer wherein the photoresist layer provides the bonding. The photoresist exposed in the through-holes is developed away to expose the conductive layer. The through-holes are filled with a conductive material by electroplating the conductive layer. The photoresist is stripped in an ultrasonic bath wherein the photoresist separates from the through-hole wafer and wherein the filled through-holes separate from the polymer at an interface between the polymer and the conductive layer to complete separation of the through-hole via wafer from the sacrificial wafer.

Fig. 8