Title (en)
METHOD OF FORMING TSV-LAST INTERCONNECT IN WAFER ASSEMBLY AND METHOD OF FORMING THE WAFER ASSEMBLY

Title (de)
VERFAHREN ZUR HERSTELLUNG EINER TSV-LAST-VERBINDUNG IN EINER WAFERANORDNUNG UND VERFAHREN ZUR HERSTELLUNG DER WAFERANORDNUNG

Title (fr)
PROCÉDÉ DE FORMATION D'INTERCONNEXION À DERNIER TSV DANS UN ENSEMBLE TRANCHE ET PROCÉDÉ DE FORMATION DE L'ENSEMBLE TRANCHE

Publication
EP 4233090 A1 20230830 (EN)

Application
EP 20966336 A 20201223

Priority
CN 2020138451 W 20201223

Abstract (en)
[origin: WO2022133756A1] A method of forming a through-substrate-via in a wafer assembly with a bottom and a top wafer. Each of the bottom wafer and the top wafer comprises a backside and a frontside. The backside comprises a substrate, and the frontside comprises a plurality of layers and a top layer. The frontside of the bottom wafer comprises one or more metal pads and are bonded to the substrate of the top wafer through a dielectric bonding layer. The method comprises forming an opening from the frontside of the top wafer to the dielectric bonding layer. The method further comprises cladding the opening with an electrically non-conductive material, extending the opening and filling the extended opening with a metal, the metal of the opening being different from the metal of a landing pad. The method avoids the Cu resputtering and diffusion of the resputtered Cu into the substrate of the top wafer.

IPC 8 full level
H01L 21/46 (2006.01)

CPC (source: EP)
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DOCDB simple family (publication)
WO 2022133756 A1 20220630; EP 4233090 A1 20230830; EP 4233090 A4 20231206

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