

ABSTRACT

A through-via substrate includes a substrate having a first surface, a second surface located opposite to the first surface, and a plurality of through holes extending from the first surface to the second surface, and a plurality of through vias extending from the first surface to the second surface through the through holes. Each of the plurality of through vias includes a plurality of internal portions located inside a respective plurality of the through holes, a first portion located at the first surface and connected to the plurality of internal portions, and a second portion located at the second surface and connected to the plurality of internal portions. Each of the first portions of the plurality of through vias has an outline surrounding the respective plurality of through holes in plan view.