

ABSTRACT

This disclosure relates to the technical field of semiconductors, and provides a semiconductor apparatus and a manufacturing method thereof, and a three-dimensional integrated circuit. The semiconductor apparatus includes a substrate and a TSV structure; a groove is disposed on the substrate; the TSV structure is disposed on the substrate; and a first end of the TSV structure is exposed in the groove, and a distance between an end surface of the first end and a bottom wall of the groove is smaller than the depth of the groove. The first end of the TSV structure is exposed so as to facilitate heat dissipation; the distance between the end surface of the first end and the bottom wall of the groove is smaller than the depth of the groove, i.e., the first end of the TSV structure is sunken in the groove, and other structures will not be affected.

Fig. 3