

ABSTRACT

A semiconductor device is provided. The semiconductor device includes: a lower line structure; an upper interlayer insulating film provided on the lower line structure and having a trench formed therein, wherein the trench includes a wiring line trench and a via trench extending from the wiring line trench to the lower line structure; and an upper line structure provided in the line trench, wherein the upper line structure includes an upper barrier film and an upper filling film. The upper filling film includes a first sub-filling film in contact with the upper interlayer insulating film, and a second sub-filling film provided on the first sub-filling film. The first sub-filling film fills an entirety of the upper via trench and covers at least a portion of a bottom surface of the upper wiring line trench.

FIG. 2