OXIDE SEMICONDUCTOR STACKED FILM AND SEMICONDUCTOR DEVICE

ABSTRACT

An oxide semiconductor stacked film which does not easily cause a variation in electrical characteristics of a transistor and has high stability is provided. Further, a transistor which includes the oxide semiconductor stacked film in its channel formation region and has stable electrical characteristics is provided. An oxide semiconductor stacked film includes a first oxide semiconductor layer, a second oxide semiconductor layer, and a third oxide semiconductor layer which are sequentially stacked and each of which contains indium, gallium, and zinc. The content percentage of indium in the second oxide semiconductor layer is higher than that in the first oxide semiconductor layer and the third oxide semiconductor layer, and the absorption coefficient of the oxide semiconductor stacked film, which is measured by the CPM, is lower than or equal to 3 x 10^{-3}/cm in an energy range of 1.5 eV to 2.3 eV.

Fig. 4B