

ABSTRACT**FABRICATION PROCESS OF A HYBRID SEMICONDUCTOR SUBSTRATE**

The present invention relates to a method for manufacturing a hybrid semiconductor substrate comprising the steps of (a) providing a hybrid semiconductor substrate comprising a semiconductor-on-insulator (SeOI) region, that comprises an insulating layer over a base substrate and a SeOI layer over the insulating layer, and a bulk semiconductor region, wherein the SeOI region and the bulk semiconductor region share the same base substrate; (b) providing a mask layer over the SeOI region; and (c) forming a first impurity level by doping the SeOI region and the bulk semiconductor region simultaneously such that the first impurity level in the SeOI region is contained within the mask. Thereby avoiding higher number of process steps involved in the manufacturing process of hybrid semiconductor substrate.

Fig. 3f