

ABSTRACT**SEMICONDUCTOR STRUCTURE FOR DIGITAL AND RADIOFREQUENCY APPLICATIONS**

5

The present invention relates to a semiconductor-on-insulator multilayer structure (1), comprising:

10 - a stack, called the back stack, of the following layers from a back side to a front side of the structure:

 a semiconductor carrier substrate (2) the electrical resistivity of which is comprised between 500 Ω .cm and 30 k Ω .cm,

 a first electrically insulating layer (3),

15 a first semiconductor layer (4),

 - at least one trench isolation (8) that extends through the back stack at least down to the first electrically insulating layer (3), and that electrically isolates two adjacent regions of the multilayer structure,

 the multilayer structure (1) being mainly characterised in that it furthermore
20 comprises at least one FD-SOI first region, and at least one RF-SOI second region.

Fig. 1

25