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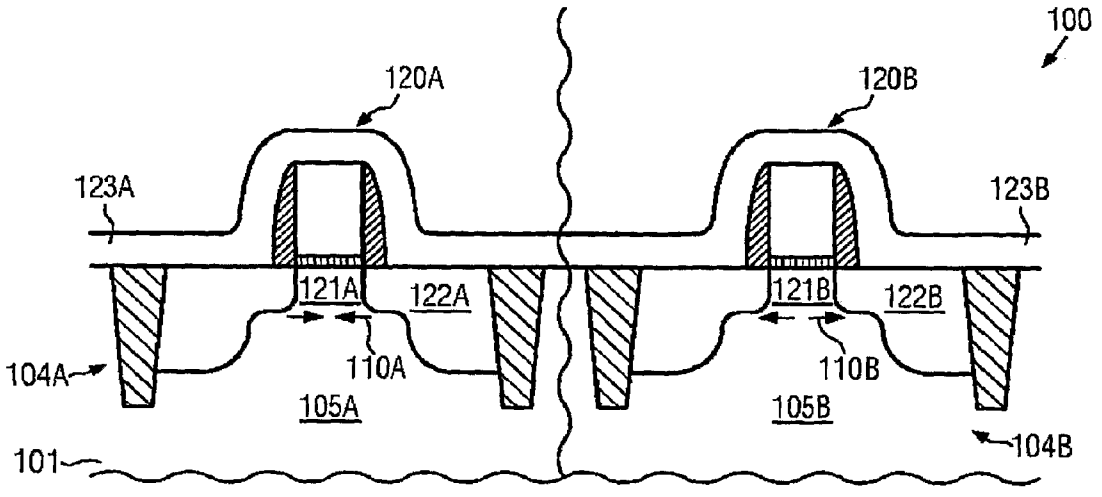
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(54) Title: A SEMICONDUCTOR DEVICE COMPRISING ISOLATION TRENCHES INDUCING DIFFERENT TYPES OF STRAIN



(57) Abstract: By forming isolation trenches (102 A, 102B) of different types of intrinsic stress on the basis of separate process sequences, the strain characteristics of adjacent active semiconductor regions (105A, 105B) may be adjusted so as to obtain overall device performance. For example, highly stressed dielectric fill material (107A, 107B) including compressive and tensile stress may be appropriately provided in the respective isolation trenches (102A, 102B) in order to correspondingly adapt the charge carrier mobility of respective channel regions (121 A, 121B).

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