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(54) Title: METHOD FOR MANUFACTURING A THICK EPITAXIAL LAYER OF GALLIUM NITRIDE ON A SILICON OR SIMILAR SUBSTRATE AND LAYER OBTAINED USING SAID METHOD

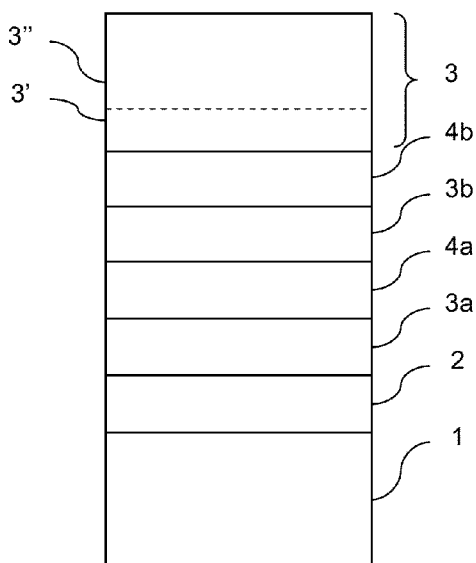


FIG. 4

(57) Abstract: The invention relates to a method for manufacturing, by means of epitaxy, a monocrystalline layer (3; 3', 3'') of GaN on a substrate (1) wherein the coefficient of thermal expansion is less than the coefficient of thermal expansion of GaN, comprising the following steps: (b) three-dimensional epitaxial growth of a layer (3a) of GaN relaxed at the epitaxial temperature, (c1) growth of an intermediate layer (4a) of $B_wAl_xGa_yIn_zN$, (c2) growth of a layer (3b) of $B_wAl_xGa_yIn_zN$, (c3) growth of an intermediate layer (4b) of $B_wAl_xGa_yIn_zN$, at least one of the layers (3b, 4a, 4b) formed in steps (c1) to (c3) being an at least ternary III-N alloy comprising aluminium and gallium, (d) growth of said layer (3; 3', 3'') of GaN.



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