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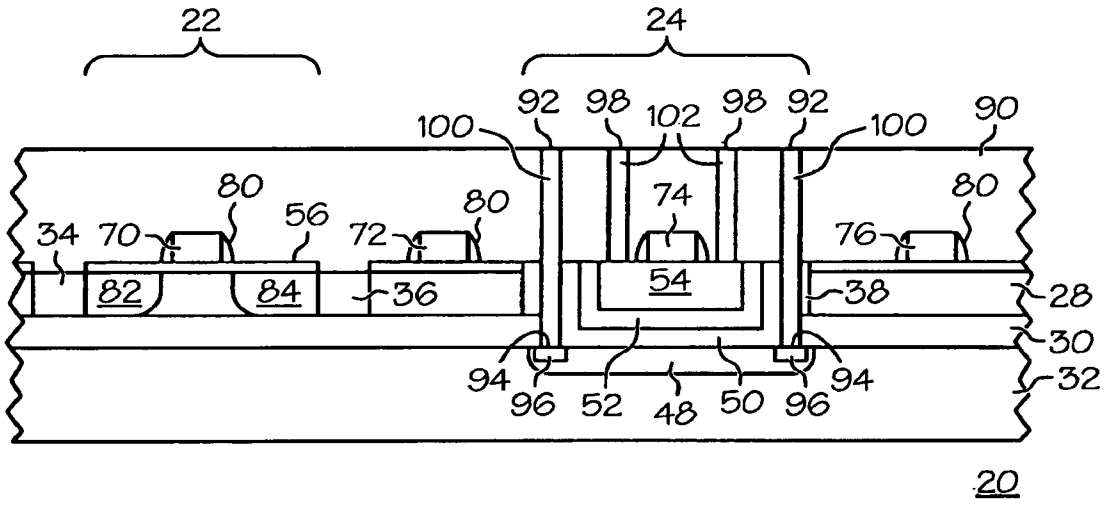
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(54) **Title:** METHOD FOR FABRICATING A SEMICONDUCTOR COMPONENT INCLUDING A HIGH CAPACITANCE PER UNIT AREA CAPACITOR



(57) **Abstract:** A method is provided for fabricating a semiconductor component (20) that includes a capacitor (24) having a high capacitance per unit area. The component is formed in and on a semiconductor on insulator (SOI) substrate (26) having a first semiconductor layer, a layer (32) of insulator (30) on the first semiconductor layer, and a second semiconductor layer (28) overlying the layer of insulator. The method comprises forming a first capacitor electrode (48) in the first semiconductor layer (32) and depositing a dielectric layer (52) comprising Bal.x CaxTi)-Y ZrxO] overlying the first capacitor electrode (48). A conductive material is deposited and patterned to form a second capacitor electrode (54) overlying the dielectric layer (52), thus forming a capacitor (24) having a high dielectric constant dielectric (52). An MOS transistor (22) in then formed in a portion of the second semiconductor layer (28), the MOS transistor, and especially the gate dielectric (56) of the MOS transistor, formed independently of forming the capacitor and electrically isolated (38) from the capacitor.

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