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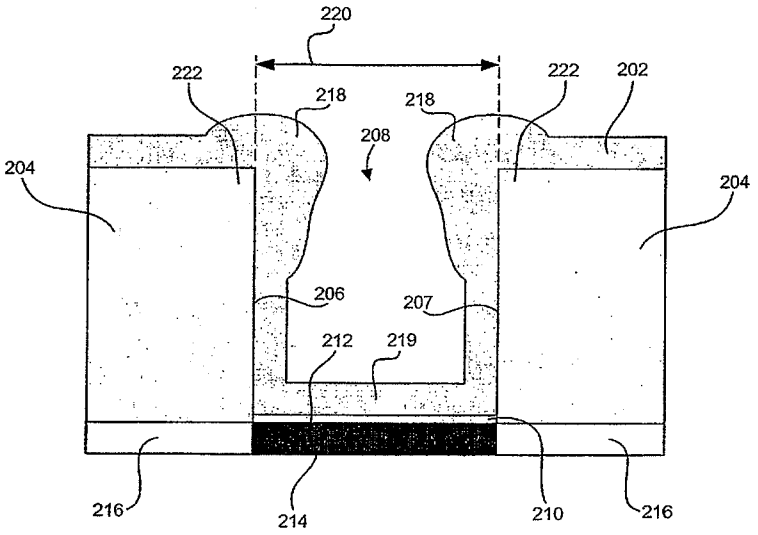
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(54) Title: METHOD FOR PREVENTING AN INCREASE IN CONTACT HOLE WIDTH DURING CONTACT FORMATION



(57) Abstract: According to one exemplary embodiment, a method for forming a contact over a silicide layer (214) situated in a semiconductor die comprises a step of depositing a barrier layer (202) on sidewalls (206,207) of a contact hole (208) and on a native oxide layer (210) situated at a bottom of the contact hole (208), where the sidewalls (206,207) are defined by the contact hole (208) in a dielectric layer (204). The step of depositing (150) the barrier layer (202) on the sidewalls (206,207) of the contact hole (208) and on the native oxide layer (210) can be optimized such that the barrier layer (202) has a greater thickness at a top of the contact hole (208) than a thickness at the bottom of the contact hole (208). According to this exemplary embodiment, the method further comprises a step of removing (152) a portion (219) of the barrier layer (202) and the native oxide layer (210) situated at the bottom of the contact hole (208) to expose the silicide layer (214).

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