

METHOD OF FABRICATING SEMICONDUCTOR STRUCTURE

Abstract of the Disclosure

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A method of fabricating a semiconductor structure includes forming a thermal oxide layer (12), a polysilicon layer (16) and a first dielectric layer (16,18) on a substrate (10) and using a mask (20) to form at least one opening (22) therein. Dielectric spacers (24) are then formed in the opening (22) and a trench (26) having a self-aligned reduction in width due to the dielectric spacers (24) is etched into the substrate (10) beneath the opening (22). A dielectric trench liner (28) is then formed prior to filling the trench with polysilicon (32). A second mask (36) is then used to form isolation element openings (38) in the first dielectric layer (16) in which shallow isolation elements (40) are formed.

(FIGs. 4 and 9 accompany this abstract)