

Title (en)

METHOD OF MANUFACTURING SEMICONDUCTOR DEVICES COMPRISING RECESSED SILICON OXIDE REGIONS

Publication

EP 0000316 B1 19810429 (FR)

Application

EP 78430001 A 19780601

Priority

US 80318277 A 19770603

Abstract (en)

[origin: US4098618A] A method of manufacturing semiconductor devices of the type wherein regions of oxide such as silicon oxide recessed or inset in a silicon substrate are formed by oxidation of the silicon with the use of a masking layer protecting locally against the oxidation. In order to prevent the formation of a projecting oxide beak under the masking layer a nitride oxidation mask is applied directly to the substrate which has been previously ion-implanted to a controlled depth and then annealed to generate a dense dislocation network array on the substrate surface to prevent mechanical stress defects which normally would occur when a nitride mask is applied directly to a substrate.

IPC 1-7

H01L 21/76; H01L 21/265; H01L 21/316

IPC 8 full level

H01L 21/265 (2006.01); **H01L 21/306** (2006.01); **H01L 21/316** (2006.01); **H01L 21/76** (2006.01); **H01L 21/318** (2006.01); **H01L 21/32** (2006.01); **H01L 21/322** (2006.01); **H01L 21/762** (2006.01)

CPC (source: EP US)

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Cited by

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Designated contracting state (EPC)

DE FR GB

DOCDB simple family (publication)

US 4098618 A 19780704; CA 1088217 A 19801021; DE 2860635 D1 19810806; EP 0000316 A1 19790110; EP 0000316 B1 19810429; IT 1158723 B 19870225; IT 7823833 A0 19780526; JP S542671 A 19790110; JP S6141139 B2 19860912

DOCDB simple family (application)

US 80318277 A 19770603; CA 300719 A 19780407; DE 2860635 T 19780601; EP 78430001 A 19780601; IT 2383378 A 19780526; JP 6181278 A 19780525