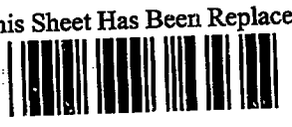
METHOD FOR REDUCTION OF POLYCIDE RESIDUES

ABSTRACT

An improved method of plasma-activated reactive subtractive etching of polycide layers by mixtures of sulfur hexafluoride, hydrogen bromide, and oxygen gases is achieved. After the subtractive etching of the polycide layer is performed, a purging operation of the reaction chamber by admission of a non-reactive gas such as nitrogen followed by evacuation results in the removal of water vapor and other residual species. This purging step inhibits the formation of needle-like crystals of residual compounds thought to form by chemical reaction between hydrogen bromide and water vapor and other species. Such needle-like crystalline residues can be construed as defects in the etched polycide patterns, and their minimization results in increased manufacturing yields after visual inspection. Additionally, the reduced incidence of residual crystalline residues is beneficial in helping to improve subsequent integrated circuit reliability.

(FIGURE 1 IS SUGGESTED FOR PUBLICATION)

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