

Abstract

METHOD OF ETCHING SEMICONDUCTOR STRUCTURES WITH ETCH GASES

Disclosed are sulfur-containing compounds for plasma etching channel holes,
5 gate trenches, staircase contacts, capacitor holes, contact holes, etc., in Si-
containing layers on a substrate and plasma etching methods of using the same.
The plasma etching compounds may provide improved selectivity between the Si-
containing layers and mask material, less damage to channel region, a straight
vertical profile, and reduced bowing in pattern high aspect ratio structures.

10 [FIG 10]