

This Sheet Has Been Replaced



ABSTRACT

A method for dry etching metal films, specifically aluminum, is described. This process uses photoresist as a mask with a gas mixture of BCl_3 , Cl_2 and N_2 used for the RIE. The addition of specific amounts of N_2 to the etching chemistry results in non-tapered or non-undercut aluminum shapes. These desired shapes are attributed to the creation of polymer on the sidewall of the aluminum during the etching procedure, thus protecting against the isotropic components of RIE process, which cause the tapering. This RIE process can also be conducted at high enough temperatures, needed to avoid deleterious microloading effects.