ABSTRACT

POLYIMIDE PROCESS FOR PROTECTING INTEGRATED CIRCUITS

A process for forming a protective polyimide layer over a semiconductor substrate includes the steps of curing a deposited polyamic acid layer at a temperature which is sufficient to reduce the etch rate of the acid layer when subsequently exposed to a developer. After formation of a photoresist masking layer over the polyamic acid, the substrate is exposed to a developer to define a plurality of bonding pad openings therein. The developer permeates into the acid layer to form a salt in the regions beneath the openings. Subsequent hardbaking imidizes the polyamic acid, but not the salt regions. Removing the photoresist layer also develops the polyimide which removes the salt regions to expose the underlying bonding pads.

(Fig. 2)