PROCESS FOR SELF–ALIGNMENT OF SUB-CRITICAL CONTACTS TO WIRING

ABSTRACT

A method for forming contacts on an intergrated circuit that are self-aligned with the wiring patterns of the intergrated circuit. In the method a thicker lower layer (12) of a first material and a thinner upper layer (14) of a second material are formed (step 104) on a substrate (10) . The feaures of the metal wiring is patterned (step 106) first on the upper layer. The wiring pattern trenches are etched (step 108) through the thinner surface layer, and partially through the second , thicker layer. After the wiring pattern is etched, the contacts for the wiring layer are printed (step 112) as line/space patterns which intersect the wiring pattern. The contact pattern is etched (step 114) into the lower, thicker layer with an etch process that is selective to the upper thinner layer. The contact is only formed at the intersection point of the wiring image with the contact image, therefore the contact is self-aligned to the metal.

FIG 1