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CRACKSTOP AND OXYGEN BARRIER FOR LOW-K DIELECTRIC INTEGRATED CIRCUITS

ABSTRACT

A copper-interconnect, low-K dielectric integrated circuit has reduced corrosion of the interconnect when the crackstop (2) next to the kerf is also used as the primary barrier to oxygen diffusion through the dielectric (6), with corresponding elements of the crackstop (2) being constructed simultaneously with the circuit interconnect elements; e.g. horizontal interconnect elements have a corresponding structure in the crackstop (2) and vias between interconnect layers have corresponding structures in the crackstop (2).

Fig 1.

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