BARRIER METAL CAP STRUCTURE ON COPPER LINES AND VIAS

ABSTRACT

A new method is provided for the creation of damascene copper interconnects. A method is provided whereby created copper surfaces are capped with a layer of barrier material. With the cap structure of barrier material, the surface of the created copper interconnect is shielded against outside influences such as effects of processing chemicals. As a result of the creation of a cap of barrier material, conventional concerns of copper oxidation, copper back-sputtering and the like are eliminated.

(Figure 7)