DAMASCENE CONTACT STRUCTURE FOR INTEGRATED CIRCUITS

ABSTRACT

Interconnects for integrated circuits, such as damascene structures are formed using a hard mask. The hard mask is formed from, for example, high-k dielectric material such as hafnium oxide or other materials having high etch selectivity to the interconnect dielectric material. This enables a thin mask to etch vias and trenches in the interconnect dielectric layer, avoiding the problems associated with the use of thick mask layers, such as contact hole striations and small depth of focus, which can result in shorts or opens.

Fig. 15