CRACK STOP STRUCTURE ENHANCEMENT OF THE INTEGRATED CIRCUIT SEAL RING

ABSTRACT

An improved crack stop structure (and method of forming) is provided within a die seal ring of an integrated circuit die to increase crack resistance during the dicing of a semiconductor wafer. The crack stop structure includes a stack layer (of alternating insulating and conductive layers) and an anchor system extending from the stack layer to a predetermined point below the surface of the substrate. A crack stop trench is formed in the substrate and filled with material having good crack resistance to anchor the stack layer to the substrate.

Fig. 1