FORMATION OF A METAL VIA USING A RAISED METAL PLUG STRUCTURE

ABSTRACT

A process has been developed which allows contact between levels of interconnect metallization structures, to occur without the use of via holes, etched in interlevel insulator layers. The process features creation of a raised tungsten plug structure, used to provide contact between underlying active device regions and an overlying interconnect metallization structure. The tungsten plug structure is formed by photolithographic masking and dry etching procedures, thus avoiding increasing the size of a tungsten seam, in the center of the plug structure. In addition the tungsten definition process, also results in a raised plug structure, allowing subsequent contact of interconnect metallization levels to proceed without the use of etched via holes in interlevel insulator layers.

(FIGURE 1 IS SUGGESTED FOR PUBLICATION)