ABSTRACT

METHOD FOR FORMING A HIGH ASPECT RATIO VIA

A method for forming a high aspect ratio via. In one embodiment, the present method comprises providing a first material into which a high aspect ratio via is to be formed. The present embodiment then deposits a first layer of a second material above the first material. Next, the present method recites forming an opening in the first layer of the second material. A second layer of the second material is then deposited above the first layer of the second material and into the opening formed into the first layer of the second material. The present embodiment then etches the second layer of the second material such that the opening extends through the second layer of the second material and through the first layer of the second material. In so doing, the opening is configured to have a profile conducive to the adherence of overlying material thereto. Next, the method of the present embodiment recites etching the first material disposed at the base of the opening such that a portion of the opening extends into the first material. This etching of the first material is performed without substantially etching the second material. In so doing, the present embodiment creates a high aspect ratio via which allows for the formation of a metallized interconnect which is substantially free of voids.

(Figure 3)