METHODS OF FORMING BUMP STRUCTURES THAT INCLUDE A PROTECTION LAYER

ABSTRACT OF THE DISCLOSURE

One illustrative method disclosed herein includes forming a conductive pad in a layer of insulating material, forming a passivation layer above the conductive pad, performing at least one etching process on the passivation layer to define an opening in the passivation layer that exposes at least a portion of the conductive pad, forming a protective layer on the passivation layer, in the opening and on the exposed portion of the conductive pad, forming a heat-curable material layer above the protective layer, performing an etching process to define a patterned heat-curable material layer having an opening that exposes a portion of the protective layer, performing an etching process on protective layer to thereby expose at least a portion of the conductive pad and forming a conductive bump that is conductively coupled to the conductive pad.

Figure 2G