ABSTRACT OF THE DISCLOSURE

ASSEMBLIES AND MULTI-CHIP MODULES INCLUDING STACKED SEMICONDUCTOR DICE HAVING CENTRALLY LOCATED, WIRE BONDED BOND PADS

An assembly method that includes providing a first semiconductor device and positioning a second semiconductor device at least partially over the first semiconductor device is disclosed. Spacers space the active surface of the first semiconductor device substantially a predetermined distance apart from the back side of the second semiconductor device. Discrete conductive elements are extended between the active surface of the first semiconductor device and the substrate prior to positioning of the second semiconductor device. Intermediate portions of the discrete conductive elements pass through an aperture formed between the active surface of the first semiconductor chip, the back side of the second semiconductor chip, and two of the spacers positioned therebetween. Assemblies and packaged semiconductor devices that are formed in accordance with the method are also disclosed.

[FIG. 3E]