ABSTRACT OF THE DISCLOSURE

INTERPOSER SUBSTRATE AND WAFER SCALE INTERPOSER SUBSTRATE MEMBER FOR USE WITH FLIP-CHIP CONFIGURED SEMICONDUCTOR DICE

A method and apparatus for increasing the integrated circuit density in a flip chip semiconductor device assembly and decreasing the time for dielectrically filling such assembly using less dielectric material. The semiconductor device assembly includes a conductively bumped semiconductor die and an interposer substrate having multiple recesses formed therein. The semiconductor die is mounted to the interposer substrate with the bumps disposed in the multiple recesses so that the die face is directly adjacent a surface of the interposer substrate. One or more openings may be provided in an opposing lower surface of the interposer substrate or a periphery thereof which extends to the multiple recesses and the conductive bumps disposed therein. Dielectric filler material may then be provided through the one or more openings to the recesses.

[Fig.1]