Abstract

SEMICONDUCTOR DEVICE AND METHOD OF USING A STANDARDIZED CARRIER TO FORM EMBEDDED WAFER LEVEL CHIP SCALE PACKAGES

A semiconductor device includes a standardized carrier. A semiconductor wafer includes a plurality of semiconductor die and a base semiconductor material. The semiconductor wafer is singulated through a first portion of the base semiconductor material to separate the semiconductor die. The semiconductor die are disposed over the standardized carrier. A size of the standardized carrier is independent from a size of the semiconductor die. An encapsulant is deposited over the standardized carrier and around the semiconductor die. An interconnect structure is formed over the semiconductor die while leaving the encapsulant devoid of the interconnect structure. The semiconductor device is singulated through the encapsulant. Encapsulant remains disposed on a side of the semiconductor die. Alternatively, the semiconductor device is singulated through a second portion of the base semiconductor and through the encapsulant to remove the second portion of the base semiconductor and encapsulant from the side of the semiconductor die.
(Fig.7i)