Abstract

SEMICONDUCTOR DEVICE AND METHOD FOR FORMING A LOW PROFILE EMBEDDED WAFER LEVEL BALL GRID ARRAY MOLDED LASER PACKAGE (EWLB-MLP)

A semiconductor device has a semiconductor die with an encapsulant deposited over and around the semiconductor die. An interconnect structure is formed over a first surface of the encapsulant. An opening is formed from a second surface of the encapsulant to the first surface of the encapsulant to expose a surface of the interconnect structure. A bump is formed recessed within the opening and disposed over the surface of the interconnect structure. A semiconductor package is provided. The semiconductor package is disposed over the second surface of the encapsulant and electrically connected to the bump. A plurality of interconnect structures is formed over the semiconductor package to electrically connect the semiconductor package to the bump. The semiconductor package includes a memory device. The semiconductor device includes a height less than 1 millimeter. The opening includes a tapered sidewall formed by laser direct ablation.
(Fig. 4n)