

Abstract

A semiconductor device has a bridge die including a photonic circuit. An optical epoxy is deposited over the photonic circuit. The bridge die is disposed over a first interconnect structure. An encapsulant is deposited over the bridge die and first interconnect structure. A portion of the encapsulant is removed to expose the optical epoxy. A second interconnect structure is formed over the encapsulant with an opening in the second interconnect structure over the photonic circuit and optical epoxy. A first semiconductor die and second semiconductor die are disposed over the second interconnect structure. The first semiconductor die is electrically coupled to the second semiconductor die through the bridge die.

(Fig.3d)