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(54) **SEMICONDUCTOR DEVICE AND METHOD OF FORMING VERTICAL INTERCONNECT STRUCTURE FOR POP MODULE**

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(57) **ABSTRACT**

A semiconductor device has a substrate and a first light sensitive material formed over the substrate. A plurality of first conductive posts is formed over the substrate by patterning the first light sensitive material and filling the pattern with a conductive material. A plurality of electrical contacts is formed over the substrate and the conductive posts are formed over the electrical contacts. A first electric component is disposed over the substrate between the first conductive posts. A plurality of second conductive posts is formed over the first electrical component by patterning a second light sensitive material and filling the pattern with conductive material. A first encapsulant is deposited over the first electrical component and conductive posts. A portion of the first encapsulant is removed to expose the first conductive posts. A second electrical component is disposed over the first electrical component and covered with a second encapsulant.