## Abstract

**SYSTEM-IN-PACKAGE HAVING INTEGRATED PASSIVE DEVICES AND METHOD THEREFOR**

A semiconductor device has a substrate, first passivation layer formed over the substrate, and integrated passive device formed over the substrate. The integrated passive device can include an inductor, capacitor, and resistor. A second passivation layer is formed over the integrated passive device. System components are mounted to the second passivation layer and electrically connect to the second conductive layer. A mold compound is formed over the integrated passive device. A coefficient of thermal expansion of the mold compound is approximately equal to a coefficient of thermal expansion of the system component. The substrate is removed. An opening is etched into the first passivation layer and solder bumps are deposited over the opening in the first passivation layer to electrically connect to the integrated passive device. A metal layer can be formed over the molding compound or first passivation layer for shielding. (Fig 2d)