SEMICONDUCTOR PACKAGE AND METHOD OF MOUNTING SEMICONDUCTOR DIE TO OPPOSITE SIDES OF TSV SUBSTRATE

Field of the Invention

The present invention relates in general to semiconductor devices and, more particularly, to a semiconductor package and method of forming a through silicon vias (TSV) substrate and mounting semiconductor die to opposite sides of the TSV substrate.

Background of the Invention

Semiconductor devices are commonly found in modern electronic products. Semiconductor devices vary in the number and density of electrical components. Discrete semiconductor devices generally contain one type of electrical component, e.g., light emitting diode (LED), small signal transistor, resistor, capacitor, inductor, and power metal oxide semiconductor field effect transistor (MOSFET). Integrated semiconductor devices typically contain hundreds to millions of electrical components. Examples of integrated semiconductor devices include microcontrollers, microprocessors, charged-coupled devices (CCDs), solar cells, and digital micro-mirror devices (DMDs).

Semiconductor devices perform a wide range of