

ABSTRACT**Fabrication of Semiconductor Devices**

5

A method of fabricating semiconductor devices is disclosed. The method comprises providing a wafer comprising a substrate with a plurality of epitaxial layers mounted on the substrate. Patterns are formed above the plurality of epitaxial layers remote from the substrate. A second substrate of a conductive metal is formed on the plurality of epitaxial layers remote from the substrate and between the patterns. The second substrate, the plurality of epitaxial layers and the substrate are at least partially encapsulated with a soft buffer material. The substrate is separated from the plurality of epitaxial layers at the wafer level and while the plurality of epitaxial layers are intact while preserving electrical and mechanical properties of the plurality of epitaxial layers by applying a laser beam through the substrate to an interface of the substrate and the plurality of epitaxial layers, the laser beam having well defined edges.

Figure 16

162162



G00002