

NON-MELT THIN-WAFER LASER THERMAL ANNEALING METHODS

Abstract

Methods of annealing a thin semiconductor wafer are disclosed. The methods allow for high-temperature annealing of one side of a thin semiconductor wafer without damaging or overheating heat-sensitive electronic device features that are either on the other side of the wafer or embedded within the wafer. The annealing is performed at a temperature below the melting point of the wafer so that no significant dopant redistribution occurs during the annealing process. The methods can be applied to activating dopants or to forming ohmic contacts.

(Figure 3)