METHOD FOR MAKING A SUBSTRATE STRUCTURE WITH IMPROVED HEAT DISSIPATION

Abstract of the Disclosure

A method for making a substrate structure with improved heat dissipation is provided. A semiconductor wafer (14) is provided. A diamond layer (12) is formed on the back (20) of the wafer (14). The diamond layer (12) provides structural support and heat dissipation. In certain embodiments, the diamond layer may be an amorphous diamond substrate (12) bonded to the semiconductor wafer (14). In certain other embodiments the diamond layer (12) may be a thin film layer (12) deposited on the back of the semiconductor wafer (14). The semiconductor wafer (14) is thinned to a minimum thickness necessary for forming an electronic device in a surface (22) of the wafer (14).

FIG. 1 accompanies this abstract.