ABSTRACT

DEVICE SUBSTRATE WITH HIGH THERMAL CONDUCTIVITY AND METHOD OF MANUFACTURING THE SAME

Provided are a device substrate with high thermal conductivity, with high heat dissipation, and with a small loss at high frequencies, and a method of manufacturing the device substrate. A device substrate 1 of the present invention can be manufactured by: provisionally bonding a Si device layer side of an SOI device substrate 10 to a support substrate 20 using a provisional bonding adhesive 31, the SOI device substrate including a Si base substrate 11, a Box layer 12 formed on the Si base substrate, having high thermal conductivity, and being an electrical insulator, and a Si device layer 13 formed on the Box layer; removing the Si base substrate 11 of the provisionally bonded SOI device substrate until the Box layer is exposed, thereby obtaining a thinned device wafer 10a; transfer-bonding the Box layer side of the thinned device wafer and a transfer substrate 40 to each other using a transfer adhesive 32 having a heat-resistant temperature of at least 150°C by applying heat and pressure, the transfer substrate having high thermal conductivity and being an electrical insulator; and separating the support substrate 20.

FIG. 1A to 1H