SEMICONDUCTOR DEVICE

ABSTRACT

A semiconductor device 100 has a BGA substrate 110, a semiconductor chip 101, a bump 106 and an underfill 108 filling the periphery of the bump. An interlayer dielectric 104 in the semiconductor chip 101 contains a low dielectric constant film. The bump 106 is comprised of a lead-free solder. The underfill 108 is comprised of a resin material having an elastic modulus of 150 MPa to 800 MPa both inclusive, and a linear expansion coefficient of the BGA substrate 110 in an in-plane direction of the substrate is less than 14 ppm/°C.

Figure 1 accompanies the abstract