ABSTRACT

The semiconductor device 1 includes a substrate 3, a semiconductor chip 4 mounted on the substrate 3, the substrate 3, a bump 5 connecting the substrate 3 and the semiconductor chip 4, and an underfill 6 filling in around the bump 5. In the case of a bump 5 composed of a high-melting-point solder having a melting point of 230°C or more, the underfill 6 is composed of a resin material having an elastic modulus in the range of 30 MPa to 3000 MPa. In the case of a bump 5 composed of a lead-free solder, the underfill 6 is composed of a resin material having an elastic modulus in the range of 150 MPa to 800 MPa. An insulating layer 311 of buildup layers 31 of the substrate 3 has a linear expansion coefficient of 35 ppm/°C or less in the in-plane direction of the substrate at temperatures in the range of 25°C to the glass transition temperature.