This Sheet Has Been Replaced

FLIP CHIP TYPE SEMICONDUCTOR DEVICE AND METHOD OF MANUFACTURING THE SAME

ABSTRACT

A flip chip type semiconductor device is provided with a semiconductor chip (10) with a plurality of pad electrodes (31) on one surface. A solder electrode (9) is connected to each pad electrode (31) and a metallic post (8) is connected to each solder electrode (9). The surface of the semiconductor chip (10) on a side on which the pad electrodes (31) are provided is coated with an insulating resin layer (11) and whole the pad electrode (31) and solder electrode (9) and part of the metallic post (8) are buried in the insulating resin layer (11). The remaining portion of the metallic post (8) is projected from the insulating resin layer (11) to form a protrusion (12). Then, an outer solder electrode (13) is formed so as to cover this protrusion (12). The outer solder electrodes (13) are arranged in a matrix on the insulating resin layer (11). The height of the protrusion (12) is made 7 to 50% of the distance between an end of the outer solder electrode (13) and the surface of the insulating resin layer (11).

Fig. 3