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ABSTRACT

The invention provides a mask sheet which can prevent oozing of a resin sealant and adhesive transfer of an adhesive upon fabrication of semiconductor devices to stably produce semiconductor packages such as QFNs. The mask sheet is releasably stuck to a lead frame and comprises a heat-resistant film having a glass transition temperature of at least 150°C and a coefficient of thermal expansion of 10 to 50 ppm/°C at 150 to 200°C and an adhesive layer formed of a silicone adhesive provided on one surface of the heat-resistant film. The adhesive layer has a percent loss on weight of at most 5% when heated at 180°C for 1 hour. The silicone adhesive is preferably an adhesive comprising polydimethylsiloxane as a main component or an adhesive comprising polyalkylalkenyl-siloxane and polyalkylhydrogensiloxane as main components. When the mask sheet is used in assembly of semiconductor devices, the mask sheet is first stuck to a lead frame and released after the semiconductor devices are fabricated.