CLAIMS

Claim 1. A manufacturing method for a semiconductor device having a dolmen structure, including a substrate, a first chip disposed on the substrate, a plurality of support pieces disposed around the first chip, on the substrate, and a bonding adhesive piece-attached chip supported by the plurality of support pieces and disposed to cover the first chip, the bonding adhesive piece-attached chip including a second chip, and a bonding adhesive piece provided on one surface of the second chip, the method comprising:

(A) preparing a laminate film including an adhesive layer located between a base material film, and a support piece formation film, the support piece formation film including at least one thermosetting resin layer;

(B) forming support pieces on a surface of the adhesive layer by singulating the support piece formation film;

(C) picking up the support piece from the adhesive layer;

(D) disposing a first chip on a substrate;

(E) disposing the plurality of support pieces around the first chip, on the substrate;

(F) preparing a bonding adhesive piece-attached chip including a second chip, and a bonding adhesive piece provided on one surface of the second chip; and

(G) constructing a dolmen structure by disposing the bonding adhesive piece-attached chip on one or more surfaces of the plurality of support pieces,

wherein after the bonding adhesive piece of the bonding adhesive piece-attached chip is thermally compressed against the support piece formation film, and the support piece formation film and the bonding adhesive piece are cured at 170°C for 1 hour, a shear strength of the support piece formation film and the adhesive piece-attached chip at 250°C is 3.2 MPa or more.

Claim 2. The manufacturing method for a semiconductor device according to claim 1,

wherein the support piece formation film is a film including a thermosetting resin layer, or a three-layer film, the three-layer film comprising a resin layer or a metal layer located between a first thermosetting resin layer and a second thermosetting resin layer, and wherein the resin layer or the metal layer has a greater rigidity than either of the first thermosetting resin layer and the second thermosetting resin layer.