Claims

[Claim 1]

A pressure-sensitive adhesive tape, comprising a base material and a pressure-sensitive adhesive layer, wherein the pressure-sensitive adhesive layer is a pressure-sensitive adhesive film,

wherein the pressure-sensitive adhesive film is;

(a) the pressure-sensitive adhesive film formed from a pressure-sensitive adhesive composition containing an acrylic polymer formed from monomer components including a (meth)acrylic acid alkyl ester and a polar group-containing monomer, and an isocyanate-based cross-linking agent and/or an epoxy-based cross-linking agent,

(b) the pressure-sensitive adhesive film formed from a pressure-sensitive adhesive composition containing an acrylic polymer containing 80 wt% or more of a (meth)acrylic acid alkyl ester having a glass transition temperature when turned into a homopolymer of -20°C or less with respect to the total amount of the monomer components forming the acrylic polymer and a UV-curable oligomer, or

(c) the pressure-sensitive adhesive film formed from a pressure-sensitive adhesive composition containing a (meth)acryloyl group-terminated urethane-based polymer, an acrylic monomer having an amide group and an isobornyl (meth)acrylate,

wherein the pressure-sensitive adhesive film has an

adhesive strength to a surface of a polyimide film of 5 N or more,

wherein the pressure-sensitive adhesive film has a storage modulus of elasticity G' at 160°C of 1×10^4 Pa or more,

wherein the thickness of the pressure-sensitive adhesive film is 20 μm or less,

wherein the measurement of the adhesive strength is performed as follows; first, a tape piece having a width of 25 mm was obtained from a pressure-sensitive adhesive film, then the tape piece was compression-bonded onto the polyimide film substrate for measurement by reciprocating a 2-kilogram roller once under an atmosphere at 23°C and 50%RH, and after the resultant had been left to stand under the atmosphere at 23°C and 50%RH for 30 minutes, the measurement is performed under the atmosphere at 23°C and 50%RH, and under the conditions of a peel angle of 180° and a tensile rate of 300 mm/min.

[Claim 2]

The pressure-sensitive adhesive tape according to claim 1, wherein the thickness of the pressure-sensitive adhesive film is 15 μm or less.

[Claim 3]

The pressure-sensitive adhesive tape according to claims 1 or 2, wherein the UV-curable oligomer comprises at least one kind selected from a UV-curable urethane-based oligomer, a UV-

curable acrylic oligomer, and a UV-curable urethane-acrylic oligomer.

[Claim 4]

The pressure-sensitive adhesive tape according to any one of claims 1 to 3, which is bonded to the substrate of a semiconductor element.