

CLAIMS

1. A method for manufacturing electronic apparatus comprising:

a step (A) of preparing a structure provided with an adhesive film and one or two or more electronic components affixed to an adhesive surface of the adhesive film;

a step (B) of disposing the structure in an electronic component testing apparatus such that the electronic component is positioned over an electronic component installation region of a sample stand of the electronic component testing apparatus with the adhesive film interposed between the electronic component and the electronic component installation region, the electronic component testing apparatus being provided with the sample stand including the electronic component installation region and a probe card that is provided at a position facing the sample stand and includes a probe terminal;

a step (C) of evaluating properties of the electronic component in a state of being affixed to the adhesive film with the probe terminal being in contact with a terminal of the electronic component; and

a step (D) of picking up the electronic component from the adhesive film after the step (C),

wherein, at least in the step (C),

the structure is disposed within a frame and an end portion of the adhesive film is fixed to the frame,

an upper surface of the frame is disposed below an upper surface of the electronic component installation region of the sample stand in a perpendicular direction of the sample stand, and

property evaluation of the electronic component is performed at a temperature of equal to or lower than 0°C or equal to or higher than 50°C and equal to or lower than 200°C.

2. The method for manufacturing electronic apparatus according to claim 1,

wherein, at least in the step (C),

the upper surface of the frame is disposed below the upper surface of the electronic component installation region of the sample stand in the perpendicular direction of the sample stand such that a wrinkle of the adhesive film does not come into contact with the probe terminal of the probe card.

3. The method for manufacturing electronic apparatus according to claim 1 or 2,

wherein, in the step (D), the electronic component is picked up from the adhesive film in a state where an interval between adjacent electronic components is enlarged by expanding a region of the adhesive film, to which the electronic components are affixed, in an in-plane direction of the film.

4. The method for manufacturing electronic apparatus according to any one of claims 1 to 3,

wherein the sample stand is provided with a first vacuum suction unit in at least the electronic component installation region, the first vacuum suction unit holding the structure by means of vacuum suction.

5. The method for manufacturing electronic apparatus according to claim 4,

wherein the sample stand is provided with a second vacuum suction unit in a region on an outer peripheral side which is different from the electronic component installation region, the second vacuum suction unit vacuum-sucking a region of the adhesive film to which no electronic component is affixed.

6. The method for manufacturing electronic apparatus according to claim 5,

wherein the second vacuum suction unit is a vacuum adsorption groove which is continuously closed over an outer periphery of the sample stand.

7. The method for manufacturing electronic apparatus according to any one of claims 4 to 6,

wherein an outer peripheral portion of the sample stand is provided with a vacuum seal portion.

8. The method for manufacturing electronic apparatus according to any one of claims 1 to 7,

wherein the adhesive film includes at least a flexible resin layer and an adhesive resin layer.

9. The method for manufacturing electronic apparatus according to claim 8,

wherein a flexible resin constituting the flexible resin layer contains one or two or more selected from the group consisting of polyester elastomer, polyamide elastomer, polyimide elastomer, and polybutylene terephthalate.

10. An adhesive film for manufacturing an electronic apparatus which is used in the method for manufacturing electronic apparatus according to any one of claims 1 to 9, the adhesive film comprising:

at least a flexible resin layer and an adhesive resin layer.

11. The adhesive film for manufacturing an electronic apparatus according to claim 10,

wherein a melting point of the flexible resin layer is equal to or higher than 100°C and equal to or lower than 250°C.

12. The adhesive film for manufacturing an electronic apparatus according to claim 10 or 11,

wherein a flexible resin constituting the flexible resin layer contains one or two or more selected from the group consisting of polyester elastomer, polyamide elastomer, polyimide elastomer, and polybutylene terephthalate.

13. The adhesive film for manufacturing an electronic apparatus according to any one of claims 10 to 12,

wherein an adhesive constituting the adhesive resin layer contains one or two or more selected from the group consisting of a (meth)acrylic adhesive, a silicone adhesive, a urethane adhesive, an olefin adhesive, and a styrene adhesive.

14. An electronic component testing apparatus which is used to evaluate properties of an electronic component, the electronic component testing apparatus comprising:

a sample stand including an electronic component installation region;

a probe card that is provided at a position facing the sample stand and includes a probe terminal; and

a frame within which the electronic component as a specimen and an adhesive film holding the electronic component are disposed and that fixes an end portion of the adhesive film,

wherein, when the properties of the electronic component are evaluated with the probe terminal being in contact with a terminal of the electronic component, an upper surface of the frame is disposed below an upper surface of the electronic component installation region of the sample stand in a perpendicular direction of the sample stand.

15. The electronic component testing apparatus according to claim 14,

wherein the sample stand is provided with a first vacuum suction unit in at least the electronic component installation region, the first vacuum suction unit holding the electronic component and the adhesive film by means of vacuum suction.

16. The electronic component testing apparatus according to claim 15,

wherein the sample stand is provided with a second vacuum suction unit in a region on an outer peripheral side which is different from the electronic component installation region,

the second vacuum suction unit vacuum-sucking a region of the adhesive film to which no electronic component is affixed.

17. The electronic component testing apparatus according to claim 16,

wherein the second vacuum suction unit is a vacuum adsorption groove which is continuously closed over an outer periphery of the sample stand.

18. The electronic component testing apparatus according to any one of claims 15 to 17,

wherein an outer peripheral portion of the sample stand is provided with a vacuum seal portion.