# CLAIMS

1. A film for manufacturing semiconductor component which is used in a method for manufacturing a semiconductor component, the film comprising:

a base layer; and an adhesive layer provided on one surface side of the base layer,

wherein the arithmetic average roughness (Ra) of the surface of one side of the base layer on which the adhesive layer is not provided is 0.1 μm or more and 2.0 μm or less and the maximum height (Rz) is 1.0 μm or more and 15 μm or less, and

wherein the ratio $R_{E1}$ (= E'(100)/E'(25)) of the elastic modulus E'(100) of the base layer at 100°C to the elastic modulus E'(25) of the base layer at 25°C is such that $0.2 \leq R_{E1} \leq 1$, and the elastic modulus E'(25) is 35 MPa or more and 3500 MPa or less.

2. The film for manufacturing semiconductor component according to claim 1, wherein the ratio $R_{E2}$ (= E'(160)/E'(-40)) of the elastic modulus E'(160) of the base layer at 160°C to the elastic modulus E'(-40) of the base layer at -40°C is such that $0.01 \leq R_{E2} \leq 1$.

3. The film for manufacturing semiconductor component according to claim 1 or 2, wherein the base layer contains at least one of a thermoplastic polyester-based elastomer, a thermoplastic polyamide-based elastomer, and polybutylene terephthalate.

4. The film for manufacturing semiconductor component according to any one of claims 1 to 3,

wherein the method for manufacturing a semiconductor component includes a segmenting step of separating a semiconductor wafer into segments in a state in which the adhesive layer is bonded to a back surface of the semiconductor wafer having circuits formed thereon to obtain semiconductor components;

a pickup step of separating the semiconductor components from the adhesive

layer; and

an evaluation step of evaluating the semiconductor wafer or the semiconductor components in a temperature region of 25°C or lower, or 75°C or higher prior to the pickup step.

5. A method for manufacturing a semiconductor component comprising:

a segmenting step of separating a semiconductor wafer into segments in a state in which an adhesive layer of a film for manufacturing semiconductor component is bonded to a back surface of the semiconductor wafer having circuits formed thereon to obtain semiconductor components;

a pickup step of separating the semiconductor components from the adhesive layer; and

an evaluation step of evaluating the semiconductor wafer or the semiconductor components in a temperature region of 25°C or lower, or 75°C or higher prior to the pickup step,

wherein the arithmetic average roughness (Ra) of the surface of one side of the base layer on which the adhesive layer is not provided is 0.1 μm or more and 2.0 μm or less and the maximum height (Rz) is 1.0 μm or more and 15 μm or less, and

wherein the ratio $R_{E1}$ (= E'(100)/E'(25)) of the elastic modulus E'(100) of the base layer at 100°C to the elastic modulus E'(25) of the base layer at 25°C is such that $0.2 \leq R_{E1} \leq 1$, and the elastic modulus E'(25) is 35 MPa or more and 3500 MPa or less.

6. The method for manufacturing a semiconductor component according to claim 5, wherein the ratio $R_{E2}$ (= E'(160)/E'(-40)) of the elastic modulus E'(160) of the base layer at 160°C to the elastic modulus E'(-40) of the base layer at -40°C is such that $0.01 \leq R_{E2} \leq 1$.

7. The method for manufacturing a semiconductor component according to

claim 5 or 6, wherein the base layer contains at least one of a thermoplastic polyester-based elastomer, a thermoplastic polyamide-based elastomer, and polybutylene terephthalate.

8. A film for electronic component manufacture used in a method for manufacturing an electronic component, the film comprising:

a base layer, and an adhesive layer provided on one surface side of the base layer,

wherein the arithmetic average roughness (Ra) of the surface of one side of the base layer on which the adhesive layer is not provided is 0.1 μm or more and 2.0 μm or less, and the maximum height (Rz) is 1.0 μm or more and 15 μm or less, and

wherein the ratio $R_{E1}$ (= E'(100)/E'(25)) of the elastic modulus E'(100) of the base layer at 100°C to the elastic modulus E'(25) of the base layer at 25°C is such that $0.2 \leq R_{E1} \leq 1$, and the elastic modulus E'(25) is 35 MPa or more and 3500 MPa or less.

9. The film for electronic component manufacture according to claim 8, wherein the ratio $R_{E2}$ (= E'(160)/E'(-40)) of the elastic modulus E'(160) of the base layer at 160°C to the elastic modulus E'(-40) of the base layer at -40°C is such that $0.01 \leq R_{E2} \leq 1$.

10. The film for electronic component manufacture according to claim 8 or 9, wherein the base layer contains at least one of a thermoplastic polyester-based elastomer, a thermoplastic polyamide-based elastomer, and polybutylene terephthalate.

11. The film for electronic component manufacture according to any one of claims 8 to 10, wherein the method for manufacturing an electronic component includes:

a segmenting step of separating an array-shaped electronic component, in which semiconductor components are sealed in an array configuration, into segments

in a state in which the adhesive layer is bonded to a back surface of the array-shaped electronic component to obtain electronic components,

a pickup step of separating the electronic component from the adhesive layer; and

an evaluation step of evaluating the array-shaped electronic component or the electronic components in a temperature region of 25°C or lower, or 75°C or higher prior to the pickup step.

12. A method for manufacturing an electronic component comprising:

a segmenting step of separating an array-shaped electronic component, in which semiconductor components are sealed in an array configuration, into segments in a state in which an adhesive layer of a film for electronic component manufacture is bonded to a back surface of the array-shaped electronic component to obtain electronic components;

a pickup step of separating the electronic component from the adhesive layer; and

an evaluation step of evaluating the array-shaped electronic component or the electronic components in a temperature region of 25°C or lower, or 75°C or higher prior to the pickup step,

wherein the film for electronic component manufacture has a base layer and an adhesive layer provided on one surface side of the base layer, and

the arithmetic average roughness (Ra) of the surface of one side of the base layer on which the adhesive layer is not provided is 0.1 μm or more and 2.0 μm or less and the maximum height (Rz) is 1.0 μm or more and 15 μm or less, and

wherein the ratio $R_{E1}$ (= E'(100)/E'(25)) of the elastic modulus E'(100) of the base layer at 100°C to the elastic modulus E'(25) of the base layer at 25°C is such that

$0.2 \leq R_{E1} \leq 1$, and the elastic modulus E'(25) is 35 MPa or more and 3500 MPa or less.

13. The method for manufacturing an electronic component according to claim 12, wherein the ratio $R_{E2}$ (= E'(160)/E'(-40)) of the elastic modulus E'(160) of the base layer at 160°C to the elastic modulus E'(-40) of the base layer at -40°C is such that $0.01 \leq R_{E2} \leq 1$.

14. The method for manufacturing an electronic component according to claim 12 or 13, wherein the base layer contains at least one of a thermoplastic polyester-based elastomer, a thermoplastic polyamide-based elastomer, and polybutylene terephthalate.