

CLAIMS:

[Claim 1] A measurement device for performing measurement on an electronic component mounted on a main surface of a substrate, the measurement device comprising:

a measurement part measuring a component height position, which is a height position of an upper surface of the electronic component, and a substrate height position, which is a height position of a non-mount region of the main surface of the substrate where the electronic component is not mounted; and

an estimation part estimating position information between a lower surface of the electronic component and the main surface of the substrate in a mount region based on the component height position and the substrate height position measured by the measurement part,

wherein the position information comprises information related to inclination of the electronic component with respect to the substrate in the mount region.

[Claim 2] The measurement device according to claim 1, wherein the measurement part measures the component height position and the substrate height position respectively at a plurality of measurement points along a first direction in a plan view of the main surface of the substrate, and

the estimation part estimates the position information in a direction along the first direction based on the plurality of measurement points of each of the component height position and the substrate height position measured by the measurement part.

[Claim 3] The measurement device according to claim 2, wherein the measurement part respectively measures the component height position and the substrate height position at a plurality of measurement points along a direction of each of the first direction and a second direction intersecting the first direction in the plan view, and

the estimation part estimates the position information in a direction along each of the first direction and the second direction based on the plurality of measurement points of each of the component height position and the substrate height position measured by the measurement part.

[Claim 4] The measurement device according to claim 2 or 3, wherein the plurality of measurement points of the substrate height position are located at positions extending along an edge of the mount region.

[Claim 5] The measurement device according to any one of claims 1 to 4, wherein the
5 measurement part measures the component height position by irradiating the upper surface of the electronic component with light and detecting reflected light from the upper surface of the electronic component, and measures the substrate height position by irradiating the non-mount region with light and detecting reflected light from the non-mount region.

[Claim 6] A bonding system, comprising:

10 the measurement device according to any one of claims 1 to 5; and
a bonding apparatus acquiring the position information estimated by the measurement device, adjusting inclination between the electronic component and the substrate based on the position information acquired, and bonding the electronic component and the substrate.

[Claim 7] A measurement method for performing measurement on an electronic component
15 mounted on a main surface of a substrate, the measurement method comprising:

measuring a component height position, which is a height position of an upper surface of the electronic component, and a substrate height position, which is a height position of a non-mount region of the main surface of the substrate where the electronic component is not mounted; and

estimating position information between a lower surface of the electronic component and the
20 main surface of the substrate in a mount region based on the component height position and the substrate height position measured,

wherein the position information comprises information related to inclination of the electronic component with respect to the substrate in the mount region.