diameter (size) of the probe card, and there is a problem in that it is difficult to reduce a diameter (size) of the probe card in view of ease of handling.

[0009]

The present invention has been made in consideration of the situation in the related art, and an object of the present invention is to provide a probe card case and a probe card transfer method which may easily handle a probe card, and may also be applied to a probe card having a small diameter (size).

**Means to Solve the Problems**

[0010]

According to the present disclosure, there is provided a probe card case for accommodating a probe card. The probe card case including: a first case member configured to mount the probe card at a predetermined position therein; a second case member configured to be fitted to a top side of the first case member, in which the second case member includes a card fixing mechanism for fixing the probe card; and a case fixing mechanism configured to fix the first case member and the second case member. The probe card is capable of being transferred in a state where the probe card is accommodated in the probe card case and the first case member and the second case member are fixed, and the probe card is capable of being transferred only with the second case member in a state where the probe card is fixed to the second case member.

[0011]

In the present disclosure, the probe card is capable of being fixed by the card fixing mechanism from the outside of the second case member, and the fixed probe card is capable of being released from the second case member.

[0012]

In the present disclosure, at least a part of the second case member is transparent so that the probe card accommodated in the probe card case is visible from the outside.

[0013]

In the present disclosure, a plurality of transfer handles is provided on the second case member.

[0014]

In the present disclosure, fitting portions are disposed on an top surface of the second case member and a bottom surface of the first case member, respectively, in which the fitting portions are fitted to each other when a plurality of probe card cases is superimposed.

[0015]

According to the present disclosure, there is provided a method of transfer a probe card which includes an insulating substrate, a probe disposed on a bottom surface of the substrate, an electrical connecting portion disposed on a top surface of the substrate and connected to an electrical measuring device when electrically connected with the probe, and a frame configured to surround the substrate. The probe card transfer method including: causing the probe card to be accommodated in the probe card case according to claim 1; and transferring the probe card only with the second case member in a state where the probe card is fixed to the second case member.

[0015a]

In one aspect, there is provided a tool for transferring a probe card comprising: a top plate having a first surface facing the probe card and a second surface opposite to said first surface, and a card fixing mechanism disposed on said top plate and fixing said probe card, wherein said card fixing mechanism is capable to make the probe card being fixed to and released from said top plate by operations from a side of the second surface.

**Advantageous Effects of Invention**

[0016]

According to the present invention, it is possible to easily handle the probe card, and it is possible to be applied to the probe card having a small diameter (size).

FIGS. 6A and 6B illustrate a state in which the probe card case 100 is configured by combining the upper case 200 and the lower case 300, in which FIG. 6A illustrates a bottom configuration of the probe card case 100, and FIG. 6B illustrates a cross-sectional configuration taken along line A-A of FIGS. 5 and 6A. As illustrated in FIG. 6A, two ring-shaped protrusions 305 protruding in the form of a ring and two half ring-shaped protrusions 306 protruding in the form of a half ring are formed outside the bottom plate 301 of the lower case 300. When probe card cases 100 are superimposed, the ring-shaped protrusions 305 and the half ring-shaped protrusions 306 are fitted to the outer circumferential portions of the frame portions 206a of the upper fixing mechanism 206 arranged on the upper case 200 such that when the plurality of probe card cases 100 is superimposed, the probe card cases 100 can be stably maintained.

[0033] As illustrated in FIG. 6B, an upper stepped portion 202a, in which an outer side more protrudes than an inner side, is formed on the tip end of each side wall 202 of the upper case 200, and a lower stepped portion 302a, in which an inner side more protrudes than an outer side, is formed on the tip end of each side wall 302 of the lower case 300. Further, the upper case 200 and the lower case 300 are combined in a state in which the upper stepped portions 202a and the lower stepped portions 302a are fitted to each other.

[0034] Accordingly, when the probe card 400 accommodated in the probe card case 100 is taken out of the probe card case 100 and mounted on, for example, a wafer inspection apparatus to be used, the upper case 200 and the lower case 300 are separated by rotating the knobs 206b of the upper fixing mechanisms 206 disposed at the four corners of the upper case 200. In this case, the probe card 400 is fixed to the upper case 200 as it is. Accordingly, the probe card 400 may be transferred together with the

**WHAT IS CLAIMED IS:**

1. A tool for transferring a probe card comprising:

a top plate having a first surface facing the probe card and a second surface opposite to said first surface, and

a card fixing mechanism disposed on said top plate and fixing said probe card,

wherein said card fixing mechanism is capable to make the probe card being fixed to and released from said top plate by operations from a side of the second surface.

2. The tool according to claim 1, wherein said top plate has a side wall extending from a circumferential edge on a side of the first surface and surrounding said probe card.

3. The tool according to claim 1, wherein said card fixing mechanism comprises a handle screw which passes through said top plate and includes a screw screw-coupled with said probe card on a side of the first surface, and a handle portion disposed on the side of the second surface.

4. The tool according to claim 2 further comprises a handle for transferring on said side wall.

5. The tool according to any of claims 1 to 4, wherein at least a part of said tool is transparent so that said probe card is visible through said tool.