PRIOR ART LITERATURE

Patent Literatures

[0005] PLT 1: Japanese Unexamined Patent Application Publication No. 2010-272545

SUMMARY

[0006] In view of such conventional circumstances, the present disclosure provides a method for manufacturing a mounting body and an anisotropic conductive film which facilitate easy rework and in which a high connection reliability can be achieved.

[0007] In one aspect, a method for manufacturing a mounting body according to the present disclosure comprises a mounting step of mounting an electronic component onto a wiring board via an anisotropic conductive film containing a binder having an epoxy resin as a primary constituent and conductive particles having a compressive hardness K of 500 kgf / mm^2 or more when compressively deformed by 10%, wherein a relation between a thickness A of the binder and an average particle diameter B is $0.6 \leqq B / A \leqq 1.5$ and an elastic modulus of the binder after curing is 50 MPa or more at 100°C; wherein the mounting step includes heating the binder at a temperature equal to or higher than the curing temperature of the binder, pressurizing the binder at a pressure at which the conductive particles are deformed, and curing the binder, and wherein in the case of no problem occurring in the mounting step, the method is completed by the mounting step, and in the case of a problem occurring in the mounting step, the method further comprises a remounting step of mechanically peeling to detach the electronic component and the wiring board and reusing the wiring board to perform the mounting step again.

[0007a] In another aspect, there is provided an anisotropic conductive film which anisotropically connects each terminal portion of a wiring board and an electronic member, comprising:

a binder containing an epoxy resin as a primary constituent and conductive particles having a compressive hardness K of 500 kgf / mm2 or more when compressively deformed by 10%;

wherein a relation between a thickness A of the binder and an average particle diameter B of the conductive particles is $0.6 \leqq B / A \leqq 1.5$,

wherein the binder has an elastic modulus after curing of 50 MPa or more at 100°C, and

the total thickness of the anisotropic conductive film is the thickness A of the binder.

[0007b] In an aspect, there is provided mounting body comprising:

a wiring board and an electronic component mounted to the wiring board via an anisotropic conductive film,

wherein the anisotropic conductive film comprises a binder containing an epoxy resin as a primary constituent and conductive particles having a compressive hardness K of 500 kgf / mm2 25 or more when compressively deformed by 10%,

wherein a relation between a thickness A of the binder and an average particle diameter B of the conductive particles is $0.6 \leqq B / A \leqq 1.5$,

wherein an elastic modulus of the binder after curing is 50 MPa or more at 100°C,

wherein the total thickness of the anisotropic conductive film is the thickness A of the binder.

[0008] Furthermore, in an another embodiment an anisotropic conductive film according to the present disclosure comprises an epoxy resin as a primary constituent and conductive particles having a compressive hardness K of 500 kgf / mm^2 or more when compressively deformed by 10%; wherein a relation between a thickness A of the binder and an average particle diameter B is $0.6 \leqq B / A \leqq 1.5$; and wherein the binder has an elastic modulus after curing of 50 MPa or more at 100°C and wherein, after curing the binder and peeling

CLAIMS

1. A method for manufacturing a mounting body comprising:

a mounting step of mounting an electronic component onto a wiring board via an anisotropic conductive film containing a binder having an epoxy resin as a primary constituent and conductive particles having a compressive hardness K of 500 kgf / mm^2 or more when compressively deformed by 10%, wherein a relation between a thickness A of the binder and an average particle diameter B is $0.6 \leqq B / A \leqq 1.5$ and an elastic modulus of the binder after curing is 50 MPa or more at 100°C;

wherein the mounting step includes heating the binder at a temperature equal to or higher than the curing temperature of the binder, pressurizing the binder at a pressure at which the conductive particles are deformed, and curing the binder, and

wherein in the case of no problem occurring in the mounting step, the method is completed by the mounting step, and in the case of a problem occurring in the mounting step, the method further comprises a remounting step of mechanically peeling to detach the electronic component and the wiring board and reusing the wiring board to perform the mounting step again.

2. The method for manufacturing a mounting body according to claim 1, wherein in the remounting step, the mounting step is performed in a state in which a residue of the anisotropic conductive film remains on the wiring board.
3. The method for manufacturing a mounting body according to claim 1 or 2, wherein the binder has a thickness of 15 μm or less.
4. The method for manufacturing a mounting body according to claim 1 or 2, wherein the binder has a thickness thinner than the total thickness of each terminals of the

wiring board and the electronic component and the average particle diameter B is 0.6 ≦ B / A ≦ 1.0.

5. The method for manufacturing a mounting body according to claim 3, wherein the relation between the thickness A of the binder and the average particle diameter B is 0.6 ≦ B / A ≦ 1.0.
6. The method for manufacturing a mounting body according to claim 1 or 2, wherein the binder has an elastic modulus after curing of 80 to 800 MPa at 100°C.
7. The method for manufacturing a mounting body according to claim 1 or 2, wherein the binder contains an elastomer made from an acrylic rubber.
8. The method for manufacturing a mounting body according to claim 1 or 2, wherein the wiring board and the electronic component have a peel strength of 5.0 N/cm to 9.0 N/cm.
9. An anisotropic conductive film which anisotropically connects each terminal portion of a wiring board and an electronic member, comprising:

   a binder containing an epoxy resin as a primary constituent and conductive particles having a compressive hardness K of 500 kgf / mm^2 or more when compressively deformed by 10%;

   wherein a relation between a thickness A of the binder and an average particle diameter B of the conductive particles is 0.6 ≦ B / A ≦ 1.5; and

   wherein the binder has an elastic modulus after curing of 50 MPa or more at 100°C, and the total thickness of the anisotropic conductive film is the thickness A of the binder.

10. The anisotropic conductive film according to claim 9, wherein the thickness of the binder is smaller than the total thickness of each terminal of the wiring board and the electronic member.
11. The anisotropic conductive film according to claim 9, wherein the thickness of the binder is 15 μm or less.
12. The anisotropic conductive film according to claim 9, wherein the relation between the thickness A of the binder and the average particle diameter B is $0.6 \leqq B / A \leqq 1.0$.
13. The anisotropic conductive film according to claim 9, wherein the binder has an elastic modulus after curing of 80 to 800 MPa at 100°C.
14. The anisotropic conductive film according to claim 9, wherein the binder contains an elastomer made from an acrylic rubber.
15. A mounting body comprising:

a wiring board and an electronic component mounted to the wiring board via an anisotropic conductive film, wherein the anisotropic conductive film comprises a binder containing an epoxy resin as a primary constituent and conductive particles having a compressive hardness K of 500 kgf / mm^2 or more when compressively deformed by 10%, wherein a relation between a thickness A of the binder and an average particle diameter B of the conductive particles is $0.6 \leqq B / A \leqq 1.5$, wherein an elastic modulus of the binder after curing is 50 MPa or more at 100°C, wherein the total thickness of the anisotropic conductive film is the thickness A of the binder.

16. A mounting body comprising a wiring board and an electronic component mounted on the wiring board via a cured product of the anisotropic conductive film according to claim 9 or 10.

17. The mounting body according to claim 16, wherein the thickness of the binder of the anisotropic conductive film is smaller than the total thickness of the terminals of the wiring board and the electronic member.