Claims

1. An anisotropic conductive film, comprising:

a crystalline resin;

an amorphous resin; and

conductive particles,

wherein the anisotropic conductive film is an anisotropic conductive film configured to anisotropic conductively connect a terminal of a first electronic part and a terminal of a second electronic part,

wherein the crystalline resin contains a crystalline resin containing a bond characterizing a resin, which is identical to a bond characterizing a resin contained in the amorphous resin, and

wherein the anisotropic conductive film is an anisotropic conductive film which shows an endothermic peak at the time of heating and an exothermic peak at the time of cooling when measured by differential scanning calorimetry,

wherein the conductive particles include at least metal particles and metal-coated resin particles.

2. The anisotropic conductive film according to claim 1, wherein the anisotropic conductive film satisfies the following formula:

$\Delta T1 > \Delta T2$

where $\Delta T1$ is an absolute value of a difference between melting onset temperature and endothermic peak temperature at the time of heating, and $\Delta T2$ is an absolute value of a difference between crystallization onset temperature and exothermic peak temperature at the time of cooling, as the anisotropic conductive film is measured by differential scanning calorimetry with the following measuring temperature range, the following heating speed, and the following cooling speed:

Measuring temperature range: 30ºC to 250ºC;

Heating speed: 10 ºC/min; and

Cooling speed: 20 ºC/min.

3. The anisotropic conductive film according to claim 1 or 2, wherein a mass ratio (crystalline resin:amorphous resin) of the crystalline resin to the amorphous resin is 25:75 to 75:25.

4. The anisotropic conductive film according to any one of claims 1 to 3, wherein the crystalline resin contains a crystalline polyester resin, and the amorphous resin contains an amorphous polyester resin.

5. The anisotropic conductive film according to any one of claims 1 to 4, further comprising an elastomer.

6. The anisotropic conductive film according to claim 5, wherein a mass ratio (X:Y) of a sum (X) of an amount of the crystalline resin and an amount of the amorphous resin to an amount (Y) of the elastomer is 160:40 to 60:140.

7. The anisotropic conductive film according to any one of claims 1 to 6,

wherein the conductive particles have an average particle diameter of 2 μm to 40 μm.

8. The anisotropic conductive film according to any one of claims 1 to 7, wherein the anisotropic conductive film satisfies a relationship that a difference (P1−P2) is 11.0ºC or greater, where P1 is the endothermic peak temperature at the time of heating, and P2 is the exothermic peak temperature at the time of cooling, as the anisotropic conductive film is measured by differential scanning calorimetry with the following measuring temperature range, the following heating speed, and the following cooling speed:
Measuring temperature range: 30ºC to 250ºC;
Heating speed: 10 ºC/min; and
Cooling speed: 20 ºC/min.

9. The anisotropic conductive film according to any one of claims 1 to 8, wherein the anisotropic conductive film gives an endothermic value of 1.0 J/g to 12 J/g at the time of heating, and an exothermic value of 1.0 J/g to 6.0 J/g at the time of cooling, as the anisotropic conductive film is measured by differential scanning calorimetry with the following measuring temperature range, the following heating speed, and the following cooling speed:
Measuring temperature range: 30ºC to 250ºC;
Heating speed: 10 ºC/min; and
Cooling speed: 20 ºC/min.

10. The anisotropic conductive film according to any one of claims 1 to 9, wherein the endothermic peak temperature is 70ºC to 115ºC.

11. The anisotropic conductive film according to any one of claims 1 to 10, wherein the anisotropic conductive film does not contain a crosslinked resin.

12. A connecting method, comprising:

arranging the anisotropic conductive film according to any one of claims 1 to 11 on a terminal of a second electronic part;

arranging a first electronic part on the anisotropic conductive film in a manner that a terminal of the first electronic part is in contact with the anisotropic conductive film; and

heating and pressing the first electronic part with a heat-press member, to thereby anisotropic conductively connect the terminal of the first electronic part to the terminal of the second electronic part.

13. A bonded structure, comprising:

a first electronic part containing a terminal;

a second electronic part containing a terminal; and

an anisotropic conductive film, which is present between the first electronic part and the second electronic part, and is configured to electrically connect the terminal of the first electronic part and the terminal of the second electronic part,

wherein the anisotropic conductive film is the anisotropic conductive film according to any one of claims 1 to 11.