

[CLAIMS]

[Claim 1]

A manufacturing method of a mounting structure, the method comprising:

a step of preparing a mounting member including a first circuit member and a plurality of second circuit members placed on the first circuit member;

a disposing step of disposing a thermosetting sheet and a thermoplastic sheet on the mounting member, with the thermosetting sheet interposed between the thermoplastic sheet and the first circuit member;

a first sealing step of pressing a stack of the thermosetting sheet and the thermoplastic sheet against the first circuit member, and heating the stack, to seal the second circuit members and to cure the thermosetting sheet into a cured layer; and

a removal step of removing the thermoplastic sheet from the cured layer, wherein

at least one of the plurality of the second circuit members is a hollow member having a space from the first circuit member, and

in the first sealing step, the plurality of the second circuit members are sealed so as to maintain the space.

[Claim 2]

The manufacturing method of claim 1, further comprising a step of preparing a sheet comprising the thermosetting sheet and the thermoplastic sheet integrated with each other, prior to the disposing step, wherein

in the disposing step, the sheet is disposed on the mounting member.

[Claim 3]

The manufacturing method of claim 1 or 2, wherein in the first sealing step, the stack is

pressed under heating against the first circuit member.

[Claim 4]

The manufacturing method of any one of claims 1 to 3, wherein a thermoplastic material constituting the thermoplastic sheet has a 50% modulus of 3 MPa or more and 13.0 MPa or less, as measured in a form of 100- μ m-thick sheet formed of the thermoplastic material.

[Claim 5]

The manufacturing method of any one of claims 1 to 4, wherein a thermoplastic material constituting the thermoplastic sheet has an elongation at break of 200% or more and 1000% or less, as measured in a form of 100- μ m-thick sheet formed of the thermoplastic material.

[Claim 6]

The manufacturing method of any one of claims 1 to 5, wherein a thermoplastic material constituting the thermoplastic sheet has a breaking strength of 10 MPa or more and 30 MPa or less, as measured in a form of 100- μ m-thick sheet formed of the thermoplastic material.

[Claim 7]

The manufacturing method of any one of claims 1 to 6, wherein a thermoplastic material constituting the thermoplastic sheet has a melting point or glass transition temperature t_m of 50 °C or more and 130 °C or less, and of being lower than a temperature t when the second circuit members are sealed.

[Claim 8]

The manufacturing method of any one of claims 1 to 7, wherein a thermosetting material constituting the thermosetting sheet exhibits a loss tangent $\tan\delta$ of 0.1 or more and 0.8 or less, and a

storage shear modulus of 1×10^4 Pa or more and 1×10^7 Pa or less, at the temperature t when the second circuit members are sealed.

[Claim 9]

The manufacturing method of any one of claims 1 to 8, wherein at least one separation distance between the second circuit members adjacent to each other is $150\text{ }\mu\text{m}$ or less.

[Claim 10]

The manufacturing method of any one of claims 1 to 9, wherein
the second circuit members include a reference member, and a first adjacent member and a second adjacent member each adjacent to the reference member, and
a separation distance $D1$ between the reference member and the first adjacent member is different from a separation distance $D2$ between the reference member and the second adjacent member.

[Claim 11]

The manufacturing method of any one of claims 1 to 10, wherein
the second circuit members include a reference member, and a first adjacent member and a second adjacent member each adjacent to the reference member, and
a height $\Delta H1$ from the reference member of the first adjacent member is different from a height $\Delta H2$ from the reference member of the second adjacent member.

[Claim 12]

The manufacturing method of any one of claims 1 to 11, wherein in the first sealing step, the second circuit members are sealed with the stack, and the thermoplastic sheet is deformed to conform to contours of the second circuit members.

[Claim 13]

A sheet for sealing a mounting member including a first circuit member and a plurality of second circuit members placed on the first circuit member,

at least one of the plurality of the second circuit members being a hollow member having a space from the first circuit member,

the sheet comprising a thermosetting sheet and a thermoplastic sheet integrated with each other, wherein

a thermosetting material constituting the thermosetting sheet exhibits a loss tangent $\tan\delta$ of 0.1 or more and 0.8 or less, and a storage shear modulus of 1×10^4 Pa or more and 1×10^7 Pa or less, at a temperature t when the second circuit members are sealed.

[Claim 14]

The sheet of claim 13, wherein a thermoplastic material constituting the thermoplastic sheet has a 50% modulus of 3 MPa or more and 13.0 MPa or less, as measured in a form of 100- μ m-thick sheet formed of the thermoplastic material.

[Claim 15]

The sheet of claim 13 or 14, wherein a thermoplastic material constituting the thermoplastic sheet has an elongation at break of 200% or more and 1000% or less, as measured in a form of 100- μ m-thick sheet formed of the thermoplastic material.

[Claim 16]

The sheet of any one of claims 13 to 15, wherein a thermoplastic material constituting the thermoplastic sheet has a breaking strength of 10 MPa or more and 30 MPa or less, as measured in a form of 100- μ m-thick sheet formed of the thermoplastic material.