CLAIMS

[Claim 1]

A member connection method for connecting a first member and a second member by means of a copper sintered compact, the member connection method comprising:

a printing step of forming, by means of printing, a coating film of a copper paste for connection in a connection region between the first member and the second member into a predetermined print pattern;

a lamination step of laminating the first member and the second member with the coating film interposed therebetween; and

a sintering step of sintering the coating film to form the copper sintered compact that connects the first member and the second member,

wherein the print pattern formed in the printing step includes a coating film-formed region in which the coating film is formed, and a coating film non-formed region in which the coating film is not formed,

the coating film-formed region is divided into a plurality of regions by means of one or a plurality of the coating film non-formed regions provided so as to connect a first point and a second point, which are separated apart from each other in a marginal part of the connection region,

the plurality of regions in the coating film-formed region includes:

a plurality of radial regions that are arranged radially from a central side of the connection region toward the marginal part, and

a plurality of concentric regions that are arranged in a concentric circle form or a concentric polygon form around a center of the connection region,

each of the plurality of radial regions has a plurality of divided regions separated apart from one another along a radial line, each of the plurality of concentric regions has a plurality of divided regions separated apart from one another along a line of a concentric circle form or a concentric polygon form, and

at least a part of the plurality of divided regions in the plurality of radial regions is disposed between and spaced apart from the plurality of divided regions in the plurality of concentric regions.

[Claim 2]

The member connection method according to claim 1, wherein the connection region is a rectangular-shaped region, and

the coating film-formed region includes regions disposed correspondingly to the corners of the connection region.

[Claim 3]

The member connection method according to claim 1 or 2, wherein the plurality of regions in the coating film-formed region has larger areas as the regions are disposed at positions closer to the marginal part of the connection region.

[Claim 4]

The member connection method according to claims 1 to 3, wherein at least one of the first member and the second member is a semiconductor element.