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 and connectingthat connects the first member and the second member by means of this copper sintered compact,

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 are formed in the print pattern,

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 thea marginal part of the connection region, and

a plurality of the plurality of regions in the coating film-formed region includes at least one:

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

a plurality of regions that are arranged concentricallyin a concentric circle form or a concentric polygon form around thea 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 a plurality of the regions in the coating film-formed region includes both the regions that are arranged radially and the regions that are arranged concentrically.~~

~~3. The member connection method according to claim 2, wherein a plurality of the regions in the coating film-formed region includes portions in which the regions that are arranged radially and the regions that are arranged concentrically are alternately disposed radially from the central side of the connection region toward the marginal part.~~

~~4. The member connection method according to any one of claims 1 to 3, wherein the connection region has a plurality of edges, and~~

~~the coating film non-formed region is provided so as to connect the first point and the second point, which are positioned at edges that are different from each other.~~

~~5. The member connection method according to any one of claims 1 to 4~~, 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.

~~6.~~[Claim 3]

The member connection method according to ~~any one of~~ claim 1 ~~to 5~~or 2, wherein ~~a~~the plurality of ~~the~~ 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.

~~7.~~[Claim 4]

The member connection method according to ~~any one of~~ claims 1 to ~~6~~3, wherein at least one of the first member and the second member is a semiconductor element.