CLAIMS

1. A bonding tool cooling apparatus comprising:

a base portion; and

a cooling member comprising a ground plate having a ground surface on which a front edge surface of a bonding tool is grounded, and a radiation ~~member~~ fin attached to the ground plate, and

a cooling fan for cooling the radiation fin, wherein

the cooling member is supported on the base portion by a support mechanism that makes a direction of the ground surface variable depending on a direction of the front edge surface of the bonding tool.

~~2. The bonding tool cooling apparatus according to Claim 1, wherein a heat capacity of the cooling member is larger than a heat capacity of the bonding tool.~~

~~3~~2. The bonding tool cooling apparatus according to Claim 1, wherein the radiation ~~member~~ fin is attached to an opposite surface of the ground plate to the ground surface.

~~4. The bonding tool cooling apparatus according to any one of Claims 1 to 3, wherein~~

~~the radiation member is a radiation fin, and~~

~~the bonding tool cooling apparatus comprises a cooling fan for cooling the radiation fin.~~

~~5~~3. The bonding tool cooling apparatus according to ~~any one of~~ Claims 1

~~to~~or ~~3~~2, wherein the support mechanism supports the ground plate on the base portion, so that the ground plate is rotatable about two axes, the two axes being a first axis extending along the ground surface and a second axis extending along the ground surface and orthogonal to the first axis.

~~6~~4. The bonding tool cooling apparatus according to ~~any one of~~ Claims 1 ~~to~~or ~~3~~2, comprising a cooling nozzle provided on the base portion for blowing out cooling air to the bonding tool having the front edge surface grounded on the ground surface.

~~7~~5. The bonding tool cooling apparatus according to ~~any one of~~ Claims 1 ~~to~~or ~~3~~2, wherein heat transfer occurs from the bonding tool to the ground plate when the front edge surface of the bonding tool is grounded on the ground surface of the ground plate.

~~8~~6. A method for cooling a bonding tool comprising:

preparing a bonding tool cooling apparatus comprising a base portion; ~~and~~ a cooling member comprising a ground plate having a ground surface on which a front edge surface of a bonding tool for suctioning an electronic component is grounded, and a radiation ~~member~~ fin attached to the ground plate~~,~~; and a cooling fan for cooling the radiation fin, wherein the cooling member is supported on the base portion by a support mechanism that makes a direction of the ground surface variable depending on a direction of the front edge surface of the bonding tool~~,~~; ~~wherein a heat capacity of the cooling member is larger than a heat capacity of the bonding tool, and wherein the bonding tool cooling apparatus comprising a cooling fan for cooling the~~

~~radiation member;~~

cooling the cooling member by the cooling fan while the bonding tool is heated to carry out bonding of ~~an~~ the electronic component; and

after the bonding, cooling the bonding tool by closely attaching the front edge surface of the bonding tool that is at a high temperature by being heated to the ground surface of the cooling member at a decreased temperature.