

CLAIMS

1. A solder alloy, having an alloy composition consisting of, in mass%: Cu: 0.1% to 2.0%; Ni: 0.01% to 0.4 %; P: 0.001% to 0.08%; and Ge: 0.001% to 0.08%, with the balance
5 being Sn, wherein the alloy composition satisfies the following relations (1) to (3):
- $(\text{Cu} + 5\text{Ni}) \leq 0.945\%$ Relation (1)
- $(\text{P} + \text{Ge}) \leq 0.15\%$ Relation (2)
- $2.0 \leq (\text{Cu} + 5\text{Ni})/(\text{P} + \text{Ge}) \leq 1000$ Relation (3)
- wherein, in the above relations (1) to (3), Cu, Ni, P, and Ge each represents a
10 content (mass%) thereof in the solder alloy.
2. The solder alloy according to claim 1, wherein the alloy composition further contains at least one selected from at least one group of: the group consisting of at least one of Bi, In, Zn, and Ag in a total amount of 5% or less; and the group consisting of at least one of
15 Mn, Cr, Co, Fe, Si, Ti, and rare earth elements in a total amount of 1% or less.
3. A cast product comprising the solder alloy according to claim 1 or 2.
4. A formed product, formed from the cast product according to claim 3.
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5. A solder joint, obtained by using the cast product according to claim 3.