

SOLDER ALLOY, SOLDER BALL AND SOLDER
JOINT USING SAME

ABSTRACT

Disclosed is a Pb-free solder alloy consisting of, in mass%, 0.1-1.5% of Ag, 0.5-0.75% of Cu, Ni in an amount satisfying $12.5 \leq \text{Cu/Ni} \leq 100$, and the balance of Sn and unavoidable impurities. The solder alloy preferably contains, in mass%, 0.3-1.2% of Ag and 0.01-0.04% of Ni. Also disclosed is a solder ball obtained by spheroidizing the solder alloy. In addition, the solder alloy is suitable for a solder joint onto an Ni electrode. The solder alloy has excellent drop impact resistance, while being suppressed in decrease of joining strength under high temperature conditions for a long time.

Fig. 1