

Non-metal reinforced lead-free composite solder fabrication methods and its reinforcing effects to the suppression of intermetallic formation: short review

Abstract

To increase the solder joint robustness, researches and studies on composite solder carried out by many researchers in an effort to develop viable lead-free solders which can replace the conventional lead-based solders. This paper reviews the fabrication processes of the lead free composite solder and its non-metal reinforcing effects to the suppression of intermetallic formation. Most researchers using different solder fabrication methods have found that by additions of non metal reinforcement from micron up to nano particle size had suppressed the intermetallic compound formations of lead-free composite solders.

Keywords — Intermetallic, lead-free solder, mechanical mixing, powder metallurgy.