

Research Development of Solder Materials and its Intermetallic Compound (IMC) Study

Abstract

Nowadays, the formation and the subsequent growth of the intermetallic compounds (IMCs) and the development of new lead-free solder systems is a major issue in soldering. The excessive growth formation of intermetallic compounds will increase the brittleness of solder joints and detrimentally affects its mechanical properties. This paper reviews the latest fabrication method for solder materials and the literatures of bulk IMCs study in most solder materials by other researchers. Explanation on solder fabrication by using powder metallurgy method to produce solder materials and IMCs study were explained in detail in this paper.

Keywords: Composite, Intermetallic Compound, Lead-Free Solder, Solder Fabrication