

ABSTRACT

The microstructure study of eutectic Sn-Ag-Cu (SAC) and Sn-Ag solders during isothermal annealing has been investigated. Isothermal annealing temperatures were from 60°C, to 150°C for 24 up to 1008 hours of anneal time. Infinite Focus Measurement System (IFM®) and Scanning Electron Microscopy- Energy Dispersive Spectrometry (SEM-EDS) are used for microscopy and elemental analysis. Results showed that Sn-rich phases and eutectic phases appear immediately after reflow. However, the diffusion of eutectic component into Sn-rich phases has altered the microstructure and the growth kinetic of the SAC and Sn-Ag solder, as will be discussed further.

Keywords: Sn-rich phase, Sn-Ag-Cu, Sn-Ag, annealing, diffusion.