Comparison of structural changes in SAC305 and SAC108 lead-free solders alloyed with gallium

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The aim of the work is to study structural changes in SAC305 and SAC108 lead-free solders alloyed with gallium and to compare the experimental results. In the experimental investigation, scanning electron microscopy, energy-dispersive X-ray spectroscopy, X-ray diffraction and differential scanning calorimetry were used. Influence of addition of gallium in the SAC305 and SAC108 solders on their microstructure and thermal properties will be observed. The main emphasis will be placed on the evaluation of structural changes in Ag-rich and Cu-rich intermetallic phases with respect to the Ga content.

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