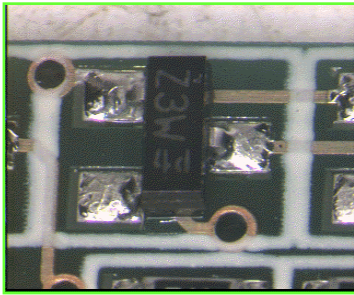


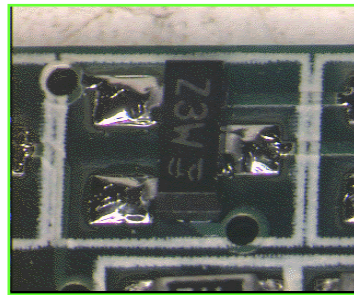


Solder Joint Inspection – The Photolibrary

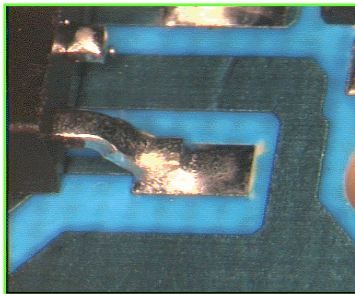
One of the key outputs from LEADOUT is a searchable photo-inspection library of solder joint images, taken during assembly and reliability trials carried out in the project. The photolibrary will be of particular use to company inspection and quality staff as a source of reference, training and technical material. Importantly, the images have associated joint information such as the solder alloy, assembly method, component/joint type, pcb board finish and where available, component finish. This extra data allows the library to be searchable, so that users can specify material and process combinations and locate the relevant pictures. In addition, because the assembly trials were designed to manufacture products with both lead-free and tin/lead solder, users of the library are also able to directly compare similar joints made with the different alloys under similar magnification and lighting conditions. Soldering defects will also be included, and where possible, reliability data related to the joints in the images will be stated. Below are examples of photolibrary content:



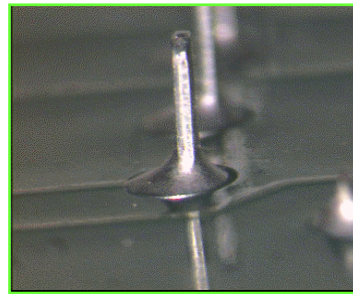
A SOT package with a tin termination finish, reflowed with SAC alloy onto an immersion tin pcb



A SOT package with a tin/lead termination finish, reflowed with tin/lead alloy onto a tin/lead HASL pcb



A DPAK package wave soldered with tin/copper/nickel alloy onto an OSP coated pcb



A leaded device with tin/lead plated leads wave soldered with tin/copper/nickel alloy onto an immersion gold/electroless nickel pcb

The photolibrary images will start to become available later this year via the Leadout website at: www.leadoutproject.com