CHIP QUIK
SMD REMOVAL KIT

The Chip Quik® SMD Removal Method

The Chip Quik® SMD Removal Kit lists the instructions in four simple steps. For learning purposes, I will explain the procedure in full detail. First, apply tack flux generously to all the pins of the SMD to be removed. Flux is important because it removes oxidation and enhances wetting. Secondly, use a solder iron set at 500 to 600Deg. F with a flat chisel tip. The size of the tip will depend on the size of the chip leads. With a solder iron, melt Chip Quik® low temperature alloy (136Deg.F) along the pins on all sides of the SMD. Thirdly, continue running the iron along pins until a bead of alloy is formed all around the chip. Maintain the alloy in a molten state long enough to combine with the interconnect solder (melts at 361deg.F) between the pin and the pads. Once the applied Chip Quik® alloy mixes with the interconnect solder, we now have a molten mass of a new alloy with a low melting temperature below 200deg.F. At this new low melting temperature the pins stay in a molten state long enough to easily remove the Chip. In most cases the chip will easily slide off the pads when it is fully molten. Finally, when the SMD is held down with an adhesive, applying pressure with a dental pick will pop off the chip. As long as all the pins are released, you will not lift any pads. This procedure will eliminate all potential damage to the PCB.

CLEAN THE PADS

It is of the utmost importance to thoroughly clean all of the pads prior to installing the new SMD. In order for the new chip to seat correctly on the pads, we need coplanarity. This means that the adjacent pads are of equal height. This is very important for the resolder procedure.

All remaining alloy should be removed from the pads in order not to allow any foreign material to remain. This will insure the integrity of the new solder joint.

To clean pads, run a soldering iron with a wide tip along all pads while polishing them with a swab dipped in Chip Quik® tack flux. This procedure does an excellent clean up job. I do not recommend solder braid in this application because the high temperature required increases the risk of lifting pads. Clean up all of the remaining residue with isopropyl alcohol or a good flux cleaner. You are now ready to solder on the new SMD.