



Figure A-2:

First, solder down one pin on each of two opposite corners of a chip. The arrows on this diagram indicate the corners used in this example.

The next step is to apply a thin film of solder flux around the chip. This solder flux will enhance the wetting action of the solder on the chip pins and cause the solder to wick onto the component pads, instead of in between the leads causing a short. Figure A-3 illustrates this process.

Tip



When laying out a board, use extra-long pads for fine-pitched surface mount components. The extra length will make hand-soldering easier, at the trade-off of making routing a little bit more difficult and slightly growing the board size. The extra pad length acts to wick away excess solder from the chip leads, thus making solder bridges less likely.

Once all of the leads have been uniformly coated with the soldering flux, load the tip of a soldering iron with a tiny ball of solder, and press this ball up against the unsoldered leads. The ball of solder will wick into the space underneath and around the component leads. Repeat this process until all of the leads have been coated with solder. Do not worry at this point if excess solder bridges multiple pins. Once you are finished soldering all the pins, use a copper desoldering braid (solder-wick) to remove any solder bridges. This process is illustrated in Figure A-4.