Thin-Wall Heat Glue Potting

By R. G. Sparber

Limitation

This technique should only be used on low-voltage circuits that will not be exposed to heat capable of melting the glue.

The Problem

How do I apply a thin, even layer of heat glue over a rough and or cylindrical surface?

My Solution

Make paper-thin sheets of heat glue, which I can cut into strips. A strip is wrapped around the feature to be potted. Then heat is applied. Surface tension does the rest.

In the case of a wire splice, applying the strip before the joint fully cools causes it to stick in place, making it easier to manage before applying heat.

Making Sheets of Heat Glue

You can find Parchment Paper in the baking section of your supermarket. Heat glue barely sticks to it, yet the paper doesn't leave a residue.

I cut off a 4" strip of Parchment Paper.

I cut off about ¼ inch of heat glue stick and place it on the Parchment Paper about 4" from one end.

Then I use a sharp, pointed tool to hold down the puck while I start to heat it with my heat gun. After a few seconds, I can remove the tool, and the puck won't blow away.

When the glue has fully melted, fold the paper over and use a metal rod as a rolling pin to flatten the glue.

Be careful to keep this rod away from the heat gun while heating the glue, or it will be too hot to hold (yup, I did that *once*).

Let the glue and paper cool for a few minutes. The glue sheet will then easily peel off the paper.

Use scissors to cut the sheet of glue into the desired width strips.

The process is very forgiving.

Here, I've used an irregularly shaped piece of glue sheet.

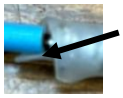
After wrapping the warm solder joint with the glue, I cut off the excess, and the strip of glue sticks to the joint.

And finally, I played the heat gun over the joint, and the glue reflowed into position.

Taking a closer look,

notice that the right end of the unheated glue was almost square and

the resulting melted glue looks neat.



The left end of the unheated glue was a partial wrap, and

the resulting melted glue has a blob of excess glue.

For the best results, start with a strip that is rectangular and the same width as the joint, and make a little more than a single wrap.

Acknowledgments

I welcome your comments and questions.

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