

Re: SMD components for a hobbyist

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From: John Larkin (jjlarkin_at_highlandSNIPtechTHISnologyPLEASE.com)

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On Wed, 10 Nov 2004 03:02:42 GMT,
info_at_cabling-design_dot_com@foo.com (Dmitri(Cabling-Design.com))
wrote:

>John Larkin wrote:

>> *Small, sharp-point tweezers are fine for big parts like this. I like
>> the stainless ones with the curvy ends. I was just replacing an 0805
>> and remember thinking what a big part it seemed; 1206's are getting
>> rare these days, so skip them unless you really need the power
>> dissipation.*

>> John

>

>Hi John,

>

>Thank you for the insight! Do you think it may be practical to mount a
>small SMD part with some sort or semi-permanent clay-like glue (I forgot
>how they call it in the craft store) BEFORE actually soldering? I have a
>great interest in LEDs and all sorts of display technologies. So, the SMD
>LEDs are basically a piece of epoxy resin with metal contacts on the
>sides. How do they hold the heat while soldering? I guess, what I'm trying
>to say is: when you solder, the epoxy becomes softer, but this is the only
>place you can hold with the tweezers. So, chances are you can squeeze too
>hard and damage every other LED. Any tips you can give on soldering an SMD
>LEDs?

I did use some tiny edge-emitting surfmount LEDs a while back. They were OK for solder paste/reflow oven production, but if you tried to mount one with tweezers and an iron, it would melt in the tweezers like a tiny marshmallow. 0805-type (ceramic substrate) LEDs seem OK, but I think the clear epoxy they use on the SOT-23 and similar types melts easier than the black epoxy used on regular ICs. SOT-23 LEDs fail a lot if soldered by hand.

If you're doing quantities, solder paste the pads (syringe or better yet stencil), goosh down the parts, and reflow in an oven. Or buy a ceramic-base part.

John

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