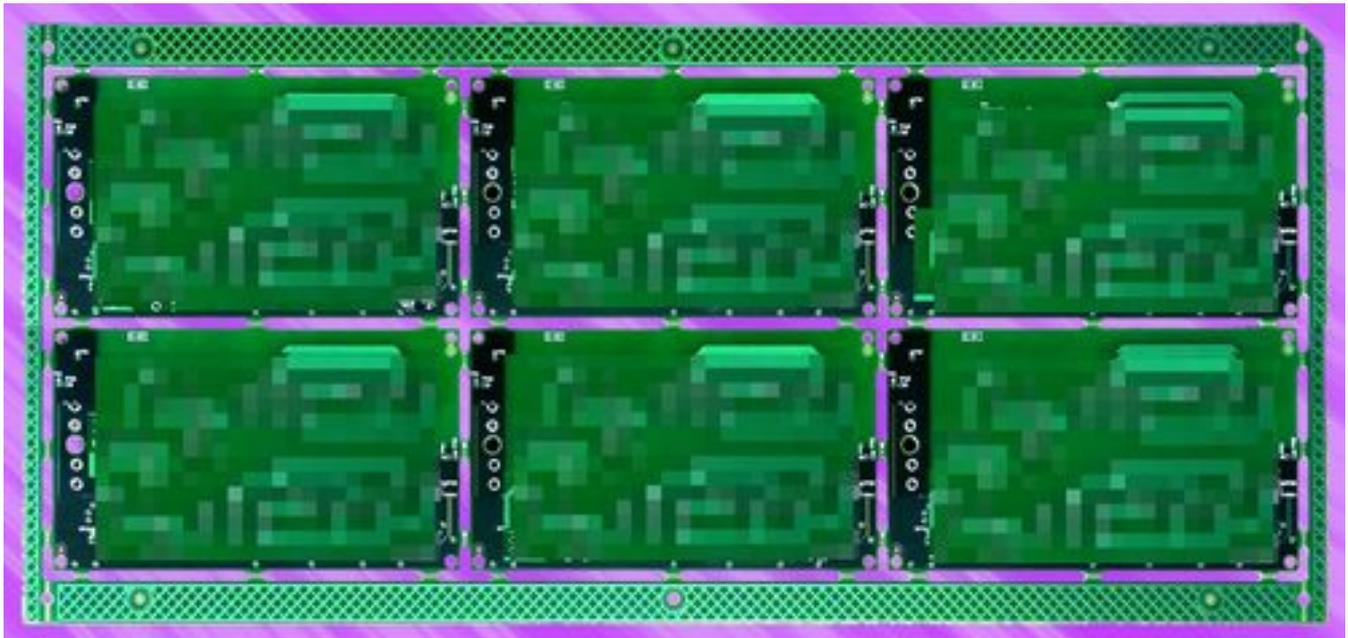


Tab Routing panelization

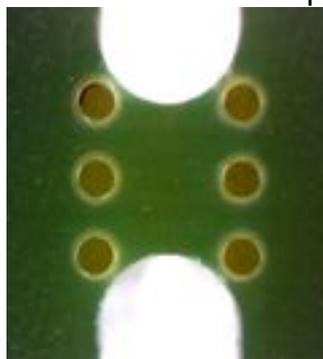
Screaming Circuits

In my [prior post](#) [1], I covered V-score panelization. The other very common panelization method is called tab-routing, as in routed, but with tabs. (That's "routed" like using a router, not as in Napoleon being chased out of Russia.) Following this paragraph, we have a tab-routed panel. I've obscured the detail of the PCB to protect the innocent.



[2]

You can get it without the perforations, but if you're separating them yourself, you'll most likely be glad to have the perfs there. We use a special tool to avoid putting bending stress on the boards, but if



[3]you're separating them manually, it can make a big difference. Next, on the right, is a close up of a actual tab. The three holes make it "Tab Routed with Perforations."

A big advantage to tab routing is the ability to make boards in shapes other than rectangles. On the down side, it takes a bit more PCB material and can put a lot of stress on the area near the tab. That being the case, we recommend that you not

Tab Routing panelization

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put components too close to the tabs.

Now, the definition of "too close" is an interesting one. The IPC doesn't seem to have a specific standard covering the subject. 100 mils, or therabout's, is a reasonable target. Larger or stiffer parts might require a little more space.

When you purchase your PCBs in panels, you can separate them before assembly or after. Generally, the reason for panelization is for ease of assembly, so post assembly is the most common approach. Post assembly separation also requires the most care.

As I said, we have a special tool to avoid stressing the boards. If you're separating them and don't have a tool, resist the temptation to just snap them apart like a Saltine cracker. The boards will bend a bit and parts can break off. Sometimes the solder joint will just crack, leading to intermittent problems or later field failures. Use a saw or some sort of cutting instrument that won't bend the boards.

Duane Benson

Have no fear; Underdog is here!

Source URL (retrieved on 10/21/2014 - 12:18am):

<http://www.ecnmag.com/blogs/2014/06/tab-routing-panelization>

Links:

[1] <http://blog.screamingcircuits.com/2014/05/v-score-panelization.html>

[2] <http://screamingcircuits.typepad.com/.a/6a00d8341c008a53ef01a3fd15cfab970b-popup>

[3] <http://screamingcircuits.typepad.com/.a/6a00d8341c008a53ef01a73dd09047970d-popup>