

Re: Future: 0603 versus 0402 parts

Source: <http://sci.tech-archive.net/Archive/sci.electronics.design/2007-03/msg03611.html>

- *From:* Joerg <notthisjoergsch@xxxxxxxxxxxxxxxxxxxxxxxxxxxx>
 - *Date:* Tue, 13 Mar 2007 16:52:23 -0800
-

Spehro Pefhany wrote:

On Tue, 13 Mar 2007 22:51:16 GMT, the renowned Joerg <notthisjoergsch@xxxxxxxxxxxxxxxxxxxxxxxxxxxx> wrote:

John Larkin wrote:

On Tue, 13 Mar 2007 21:01:41 GMT, Joerg <notthisjoergsch@xxxxxxxxxxxxxxxxxxxxxxxxxxxx> wrote:

Ok, have to decide whether to default to 0603 or 0402 for resistors and stuff on a new design. Wow, this time I am not size constrained.

Looking at Digikey it comes up with 143 pages (has risen) for 0402 resistors and 218 pages for 0603. Looking at prices 0603 still has a leg up, around \$0.003 for a 10K while its 0402 counterpart runs about twice that. Is 0603 going to be a good choice for the next years? Or better stick to 0402?

Of course from a debug point of view I hate to deal with 0402. With chips the situation seems to be more clear cut. Things definitely seem to be going TSSOP there.

My production people hate 0402's... they tombstone a lot.

Re: Future: 0603 versus 0402 parts

We still use
0805's when there's plenty of room, 0603's for tight stuff,
occasional
0402's for picosecond stuff where it matters.

Hmm, I never had tombstoning with those. OTOH nearly all my clients contract out circuit board stuffing so they don't have to bother with that. Sometimes even the whole production. Sometimes I have a chat with the contract producers and they'd tell me if they weren't happy with parts of a design. Like when zeners began to miss data sheet limits I had an instant email from China about it.

I saw some 0402 tombstoning on a fairly recent batch of boards from a China assembly facility (SnPb process). Zero problems with the 0805s (no 0603s on that design).

One of the problems with a mixed design (where there are also some large devices on the PCB) seems to be the paste. Too much and you get tombstoning, too little and the big parts won't solder reliably. Like those pellet stoves where they haven't figured out how to automate intake air. Throttle too high and it'll go out on "1". Throttle too low and it'll smoke on "3" or higher.

You can still buy lots of 1206's and 2010's and such. They're
not
going away.

Good to know, thanks.

You may not like the price, though.

Actually a 1ohm 1206 costs roughly the same as a 10K in 0402, around \$0.007. A 2010 size can pop to several cents. Still, I don't see a reason for anything larger than 0603 unless it is in a current sense path or RF bridge.

[...]

—

Re: Future: 0603 versus 0402 parts

Regards, Joerg

<http://www.analogconsultants.com>

.