

Re: 320pin BGA Pin Layout suggestions

Source: <http://sci.tech-archive.net/Archive/sci.electronics.design/2007-03/msg05286.html>

- *From:* "Brian" <w3gate@xxxxxxxxxx>
 - *Date:* 19 Mar 2007 23:27:41 -0700
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On Mar 19, 10:17 pm, krw <k...@xxxxxxxxxx> wrote:

In article <1174349279.008603.302...@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx>, w3g...@xxxxxxxxxx says...

On Mar 19, 3:35 am, "Joe G \ (Home\)" <j...@xxxxxxxxxxxxxxxxxx> wrote:

Hi All,

I am looing at laying out 320pin BGA on a PCB like this one.

<http://www.standardics.nxp.com/packaging/package.outlines/pdf/sot824-...>

The pitch between balls is 0.5mm. The internal cpu speed is 220MHz but the external I think is ~60MHz.

It has a JTAG port

Questions
Q1

How many PCB layers would you recommend and why

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Q2

Is there anything else I should watch out for?

Any other pointers on this beast would be appreciated.

Regards

Joseph

My suggestion will be a bit more practical than others. Absolutely use no less than 6 layers. Being new to it, you will end up chewing up your ground/power planes and will have EMI issues if you try 4. Even an experienced layout guy would most likely use 6, I know I probably would unless I was using very few pins. The reason is simple: it ends up a better design. For you, it will be a less frustrating experience to learn with 6 layers and you will definitely have a better design. Don't think I am calling you incompetent, most times parts like these just aren't good candidates for 4 layer boards.

Use a stack up as in Figure 6
here...<http://www.hottconsultants.com/techtips/pcb-stack-up-3.html>

That's my advice.

Got a reason, other than some hand waiving? I don't see any reason for more than five. Four might be simple, depending on the power ball layout.

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Keith— Hide quoted text —

— Show quoted text —

First, let me ask for some help....

SED participants, how do I answer a guy that just said this was realistic to put on a five layer PCB?????

Re: 320pin BGA Pin Layout suggestions

Do you ever purchase PCB's AT ALL!?!?!
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