Let's Get Small - 0.3mm pitch BGA

Screaming Circuits Screaming Circuits

I recently got an email from Practical Components [1] about their new 0.3mm pitch evaluation board and dummy 0.3mm pitch BGA. Now, we've been assembling 0.5mm and 0.4mm pitch BGAs for years. Those sizes are kind of not really anything special anymore. We've even been putting together POP (package on package) for a couple of years. But we've yet to see anything smaller.

[2]Just looking at the numbers, 0.3 may not look all that much smaller than 0.4, but that's 25% down. Thinking of it in those terms makes it much more intimidating. I haven't found the pad dimensions yet, but just using rough estimates, a 3 mil trace would have about 1.5 mils on either side for a between the pads trace. That's getting pretty dangerous. Likely, you'd have to do every thing with filled and plated-over vias in the pads. (NO OPEN VIAS! Not one. Don't do it.)

I can see a lot of good future use for this size in miniature devices; more processing power in hearing aids and embedded medical devices, for a start. I don't know how necessary 0.3mm pitch will be for phones. They seem to have stabilized in size and the trend is more toward system in chip than it is toward more shrinking. Regardless, I would expect that in a year, we'll be seeing mainstream parts in this form factor.

Duane Benson
Go ask Alice
I think she'll know
How to run your escape routing

SOURCE [3]

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http://www.ecnmag.com/news/2012/01/lets-get-small-03mm-pitch-bga?qt-recent_content=0

Links:
[1] http://www.practicalcomponents.com/
[2] http://screamingcircuits.typepad.com/.a/6a00d8341c008a53ef0168e51624a1970c-popup
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