Inverted QFN Land Pattern

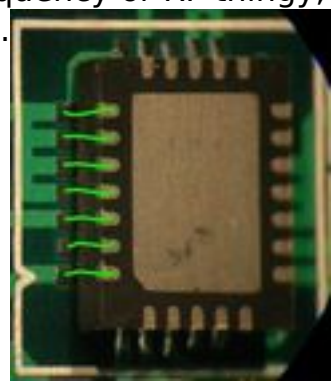
Screaming Circuits

Have you ever experienced the heartbreak of inverted land pattern? It's not supposed to happen, but every now

[1]and then, it does. Maybe something happened when creating a custom footprint. Maybe, somehow it got inverted in the CAD software and then placed on the wrong surface layer.

Maybe it was a subliminal attempt to make up for those giant open vias in the thermal pad. Who knows. But, it happened, so now what?

You could re-spin the whole board. Ugh. That's, like, wasteful and stuff. Certainly, if this is a production build, you'll have to re-spin. For some prototype applications - like if it's a high frequency or RF thingy, you may very well have to get a new set of PCBs fabbed up too.



[2]

But, sometimes in the prototype world, you may be able to salvage the board run. We used to do stuff like this all the time with thru-hole parts - need an extra chip, just dead bug hang it on up there.

Flip the chip over and use some small gauge wire - maybe wire-wrap wire - and hand wire to the upside down chip. Gluing it down first may be helpful. Just keep in mind that since the thermal pad isn't soldered to the board, you will lose some of your thermal performance. Maybe solder a small heat sink on it or something. And don't forget to wire that pad to ground too (if it's supposed to be grounded).

Duane Benson
Just put it on the seventh surface of your tesseract and it will fit right.

SOURCE [3]

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http://www.ecnmag.com/news/2010/01/inverted-qfn-land-pattern

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