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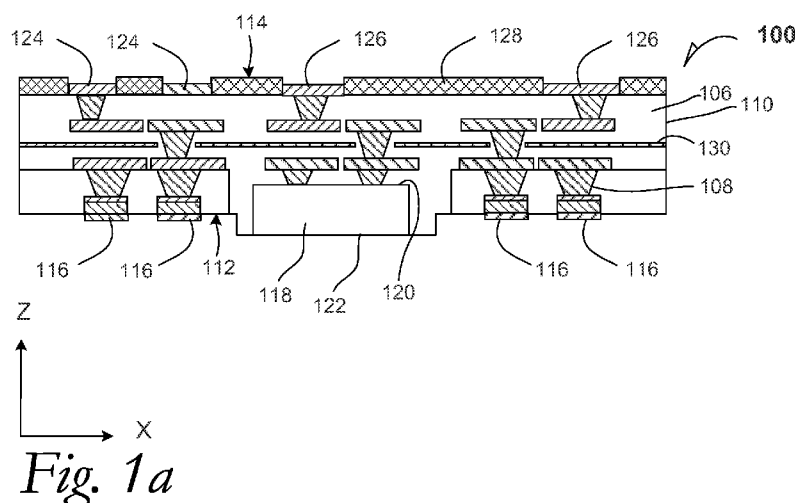


Fig. 1a

(57) Abstract: An apparatus includes a coreless substrate with an embedded die that is integral to the coreless substrate, and at least one device assembled on a surface that is opposite to a ball-grid array disposed on the coreless substrate. The apparatus may include an over-mold layer to protect the at least one device assembled on the surface.