CONTROLLED-SHAPED SOLDER RESERVOIRS FOR INCREASING THE VOLUME OF SOLDER BUMPS, AND STRUCTURES FORMED THEREBY

ABSTRACT OF THE DISCLOSURE

A controlled-shaped solder reservoir provides additional solder to a bump in the flow step for increasing the volume of solder forming the solder bump. The controlled shaped reservoirs can be shaped and sized to provide predetermined amounts of solder to the solder bump. Thus, the height of the resulting solder bump can be predetermined. The solder reservoirs can be shaped to take a minimum amount of space, such as by at least partially wrapping around the solder bump. Consequently, the solder bumps may have increased height without adding to the space requirements of the solder bump, or without increasing the fabrication cost. In addition, due to the finite time required for solder flow, a means of sequencing events during soldering is provided.

Figure 5

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