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(54) Title: A SOLDER BUMP STRUCTURE FOR A MICROELECTRONIC SUBSTRATE

(57) Abstract

A method for forming integrated redistribution routing conductors (17) and solder bumps (21) on a microelectronic substrate (15) comprises the steps of forming an under bump metallurgy layer (16) on the substrate and forming a solder structure on the under bump metallurgy layer wherein the solder structure includes an elongate portion (22B) and an enlarged width portion (22A). The portions of the under bump metallurgy layer not covered by the solder structure can be selectively removed using the solder structure as a mask. In addition, the solder is caused to flow from the elongate portion of the solder structure to the enlarged width solder portion thereby forming a raised solder bump. This step is preferably performed by heating the solder structure above its liquidus temperature allowing surface tension induced internal pressures to affect the flow. Various solder structures are also disclosed.

