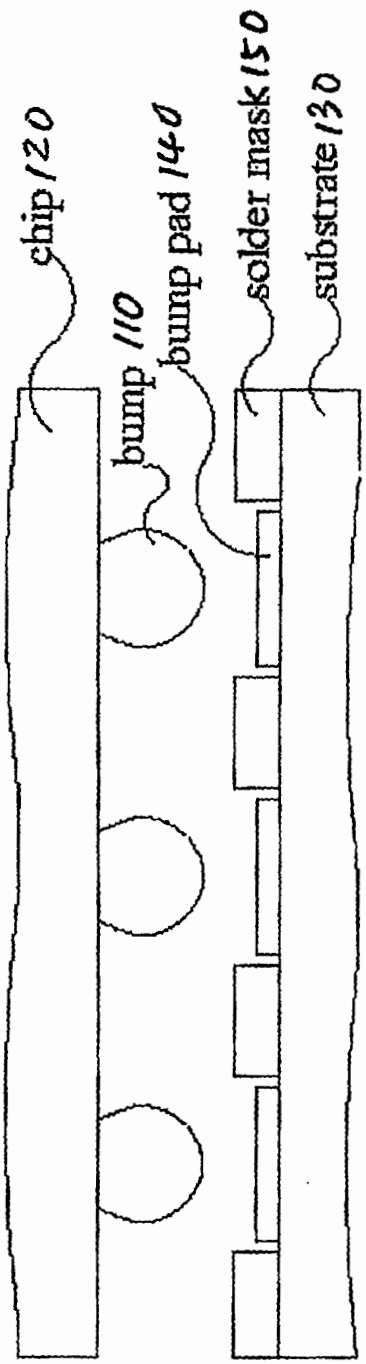


FIG. 1

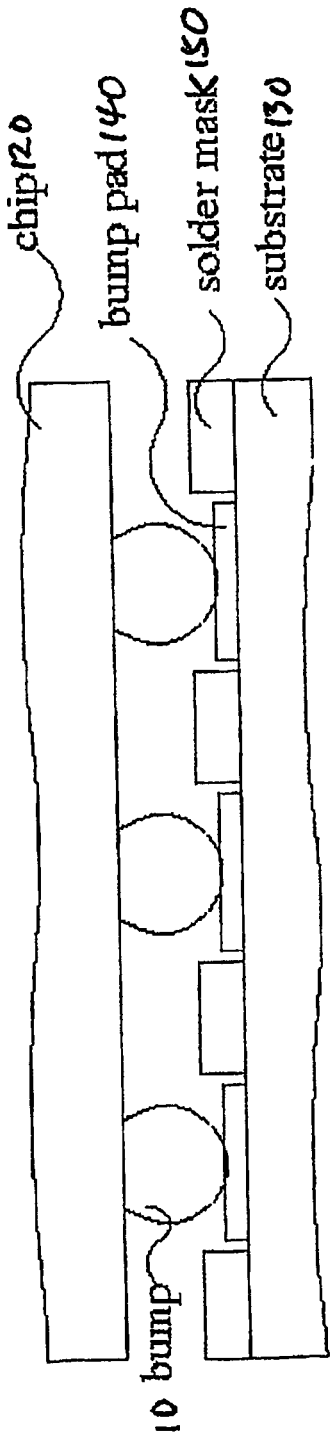


FIG. 2

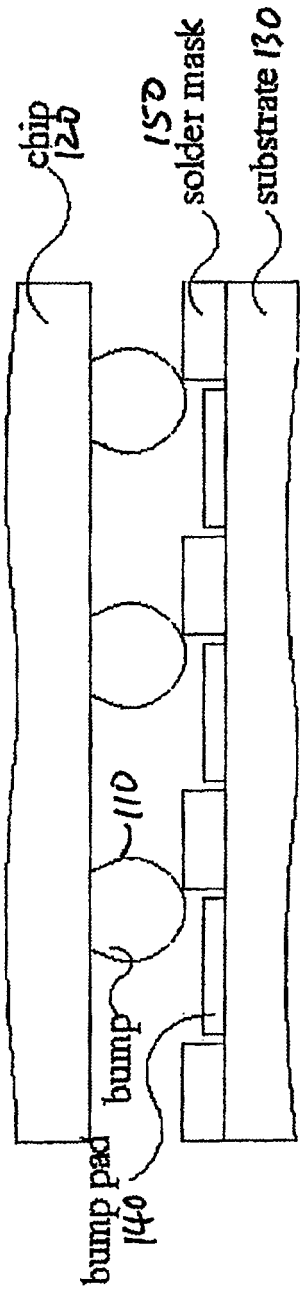


FIG. 3

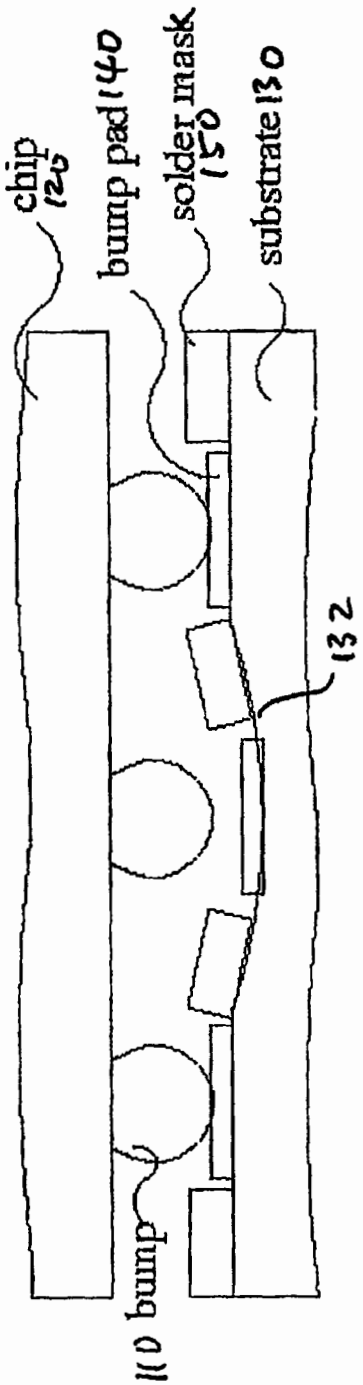

chip
125
bump pad 140
solder mask
150
substrate 130
132
110 bump

FIG. 4

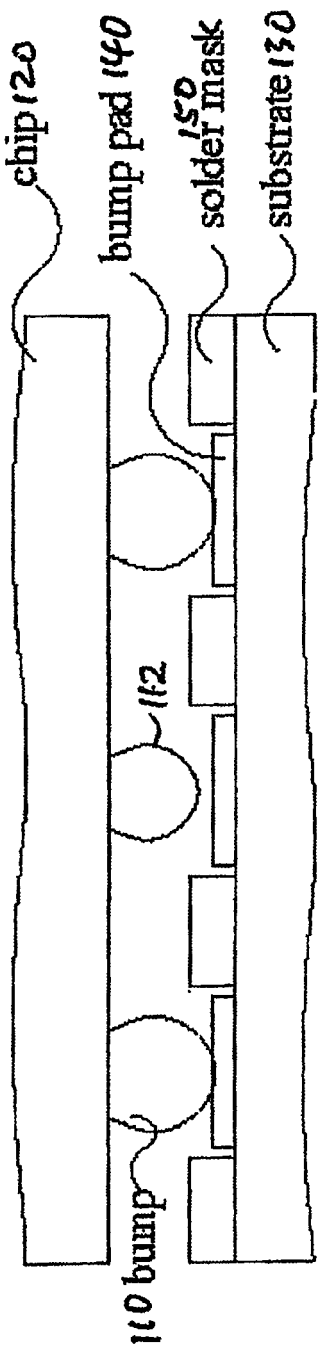

chip 120
bump pad 140
solder mask 150
substrate 130
112
110 bump

FIG. 5

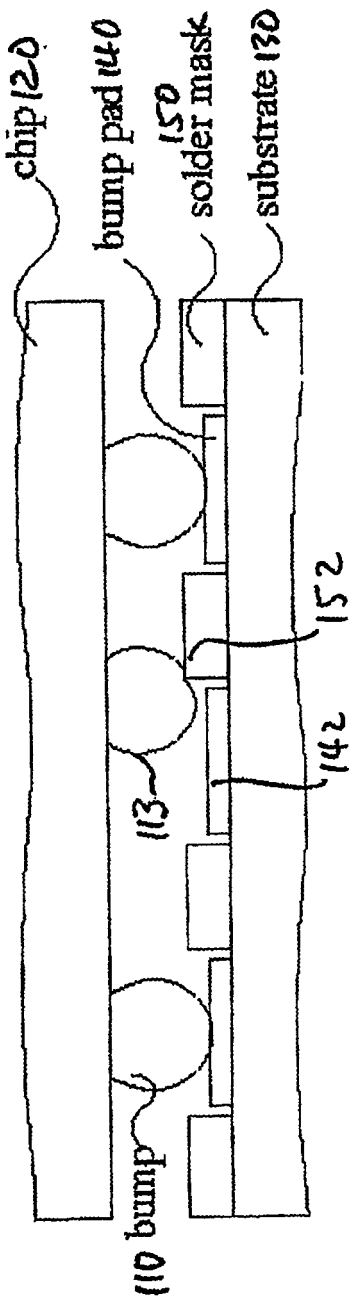

chip 120
bump pad 140
150
solder mask
substrate 130
152
142
113
110 bump

FIG. 6

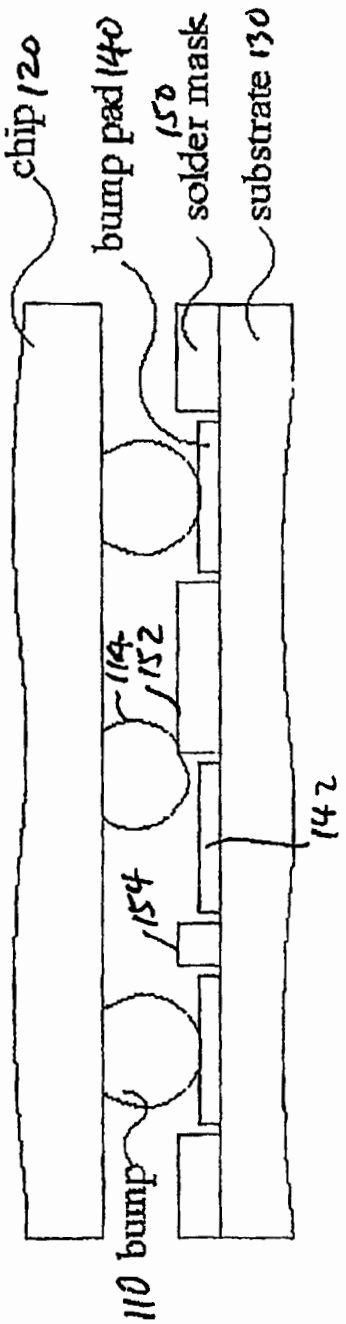

chip 120
bump pad 140
150
solder mask
substrate 130
114
152
142
154
110 bump

FIG. 7

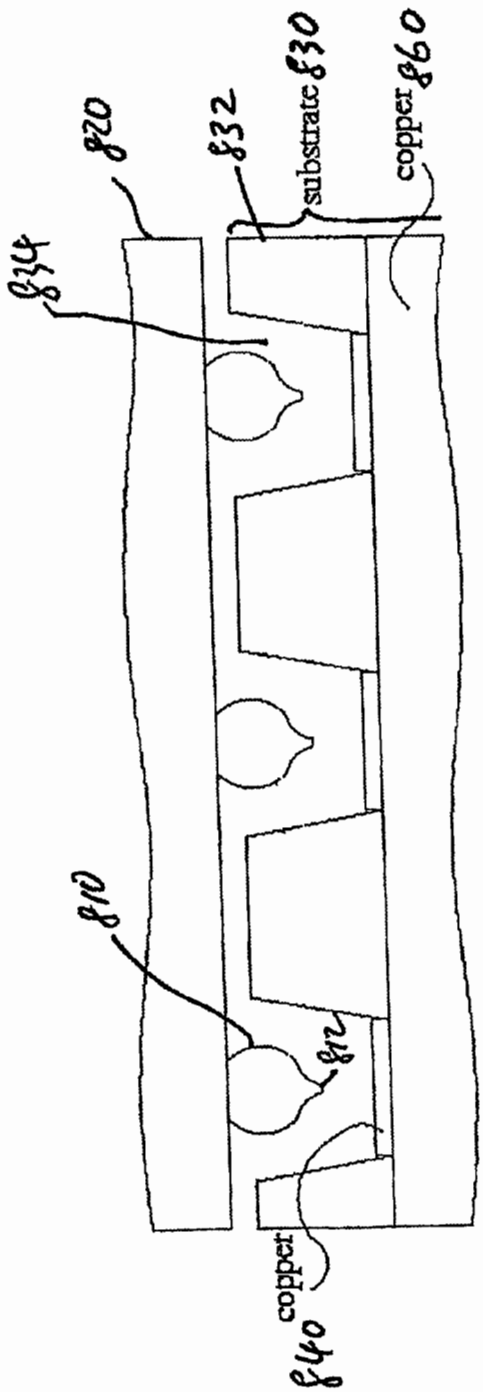


FIG. 8

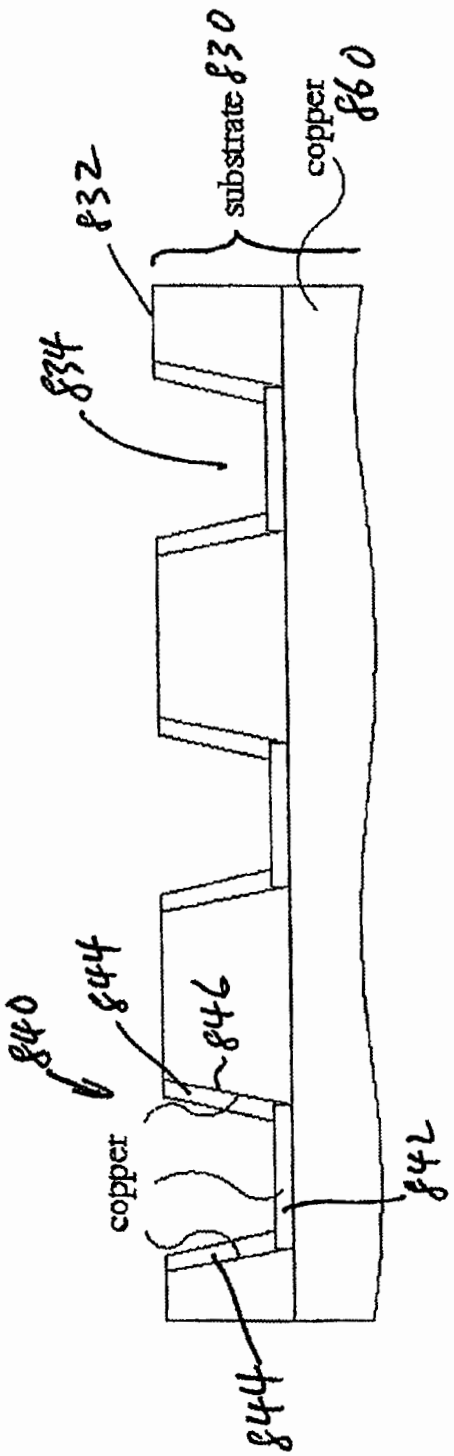


FIG. 9

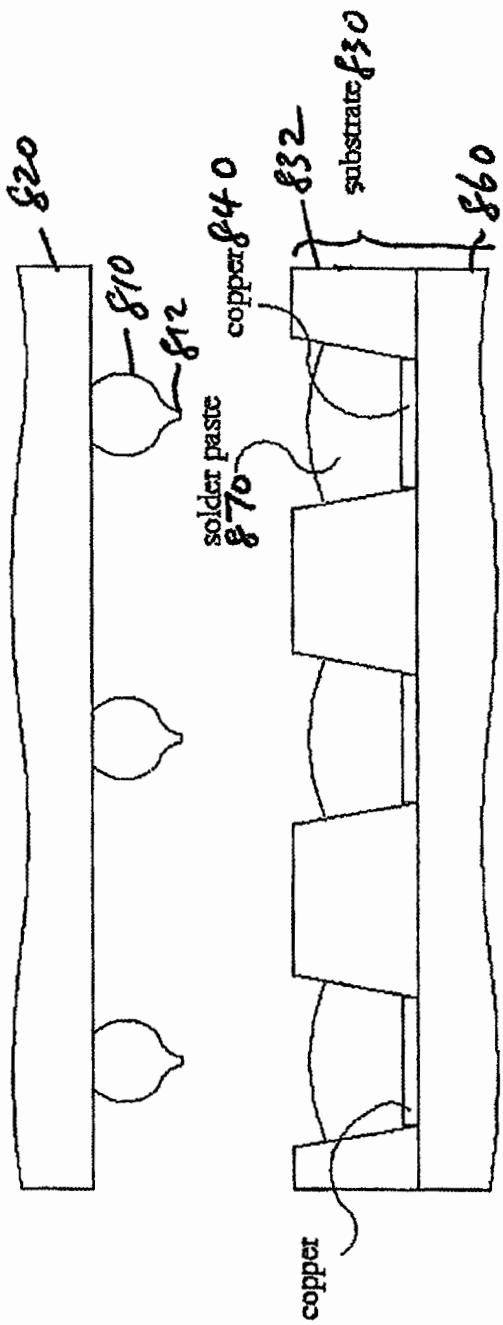

820
810
812
copper 840
832
substrate 830
860
solder paste 870
copper

FIG. 10

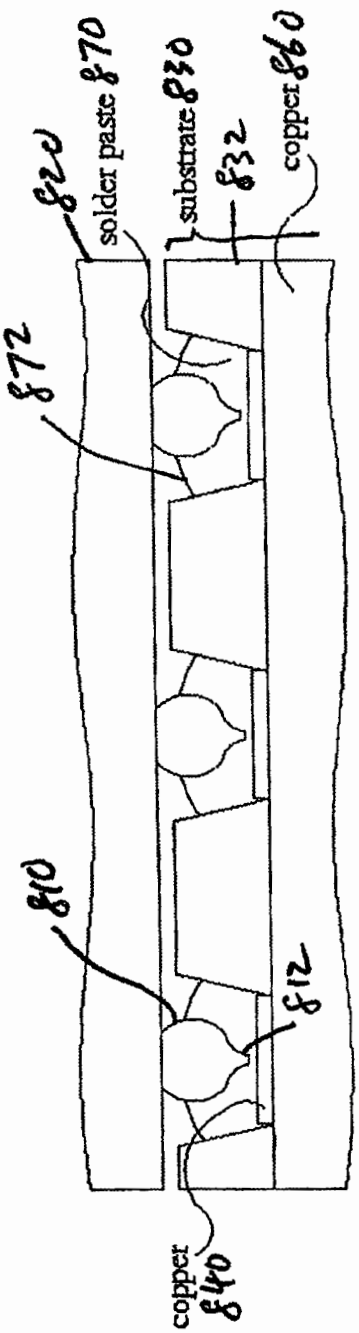

820
solder paste 870
substrate 830
832
copper 860
872
810
812
copper 840

FIG. 11

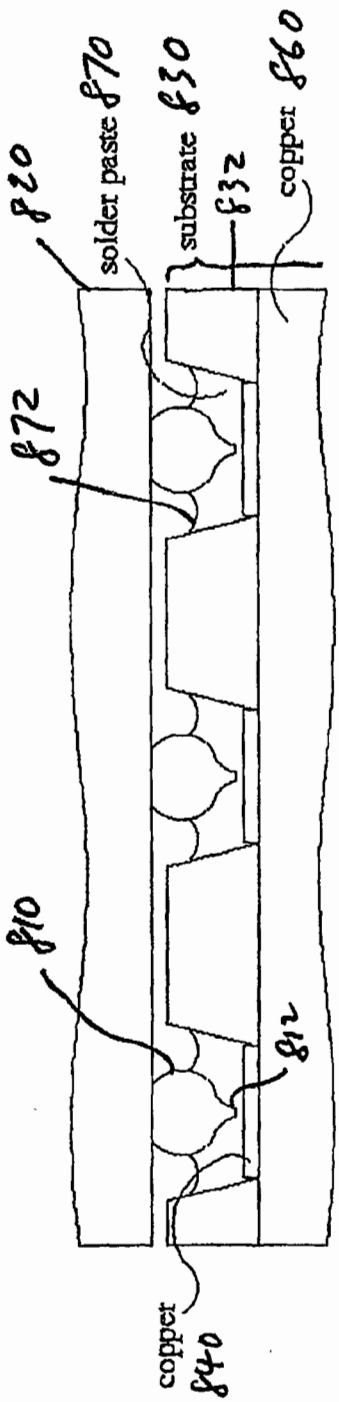

820
solder paste
870
830
substrate
832
copper
860
872
810
812
copper
840

FIG. 12

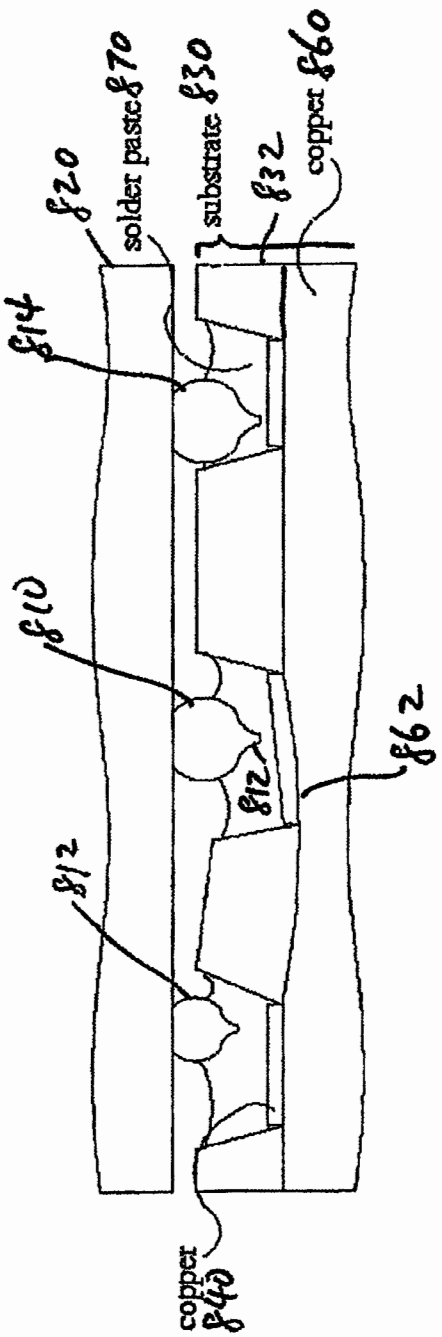
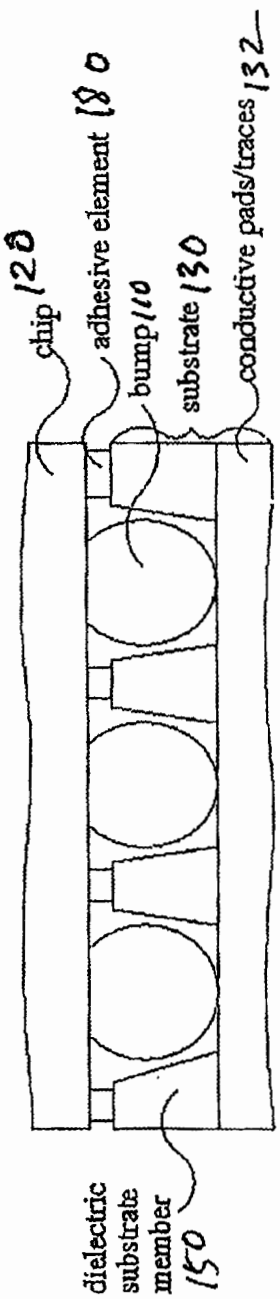
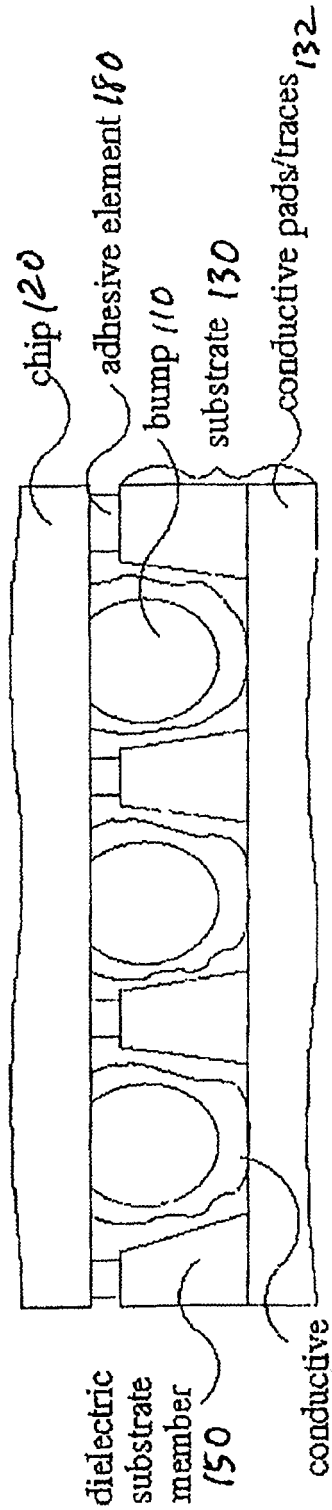

820
solder paste 870
substrate 830
832
copper 860
814
810
862
812
812
copper
840

FIG. 13



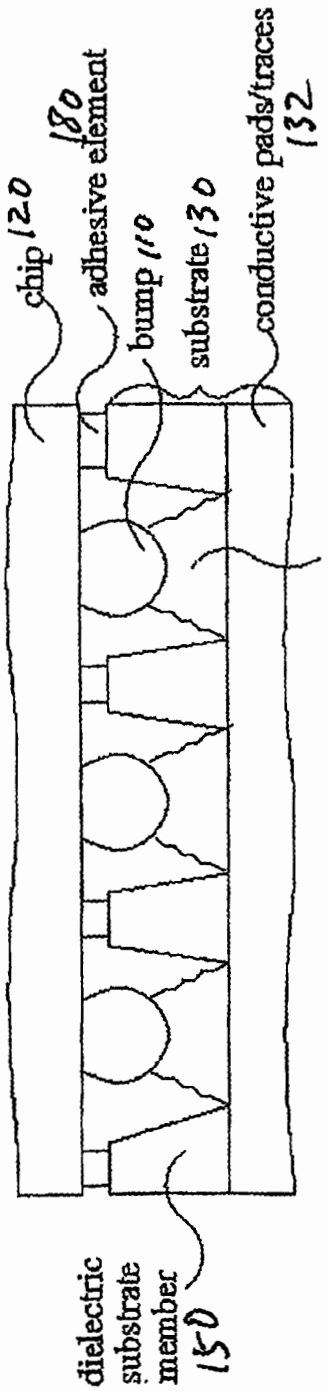
Prior Art

FIG. 14



Prior Art

FIG. 15



Prior Art

FIG. 16

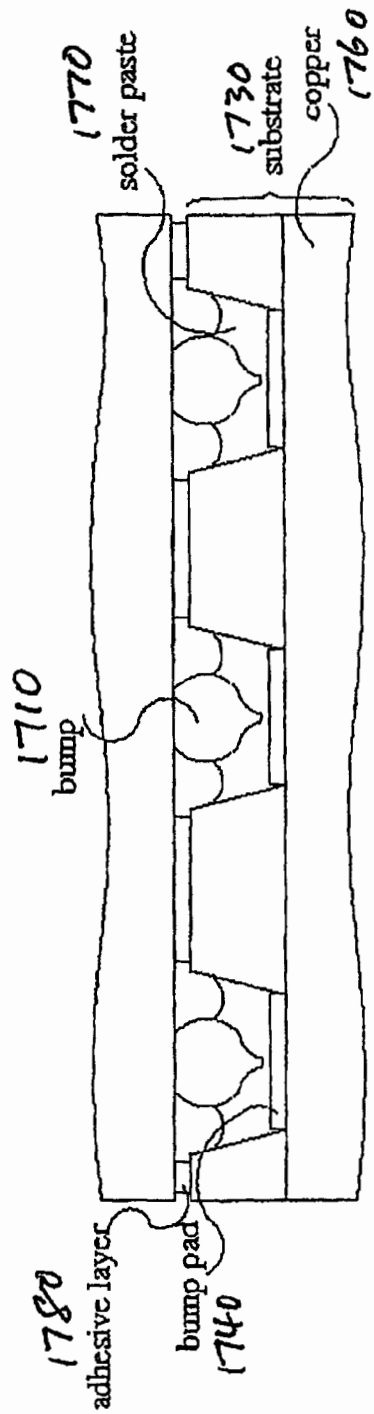

1770
solder paste
1730
substrate
copper
1760
1710
bump
1780
adhesive layer
bump pad
1740

FIG. 17