

Figure 1

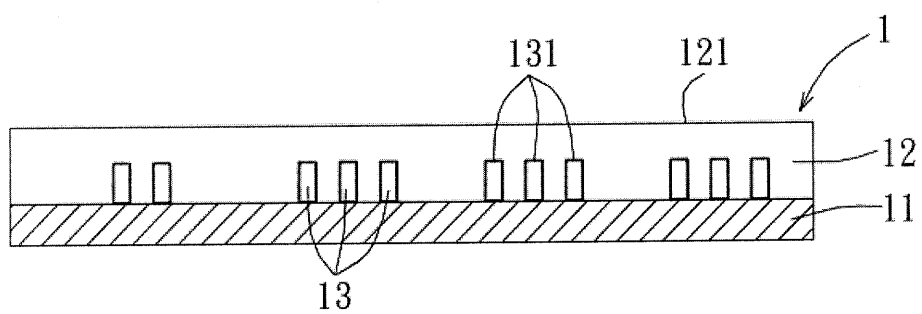


Figure 2

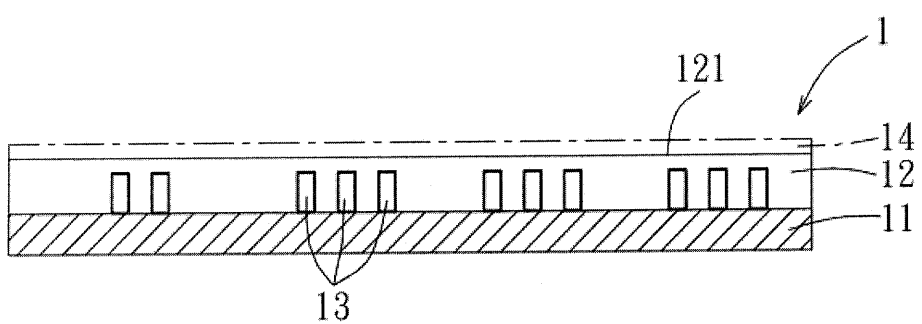


Figure 3

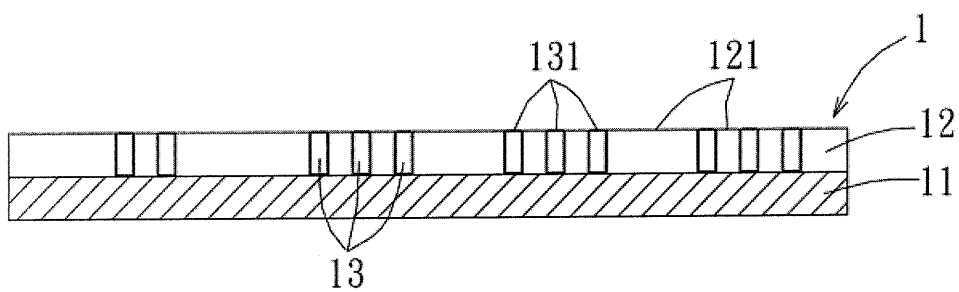
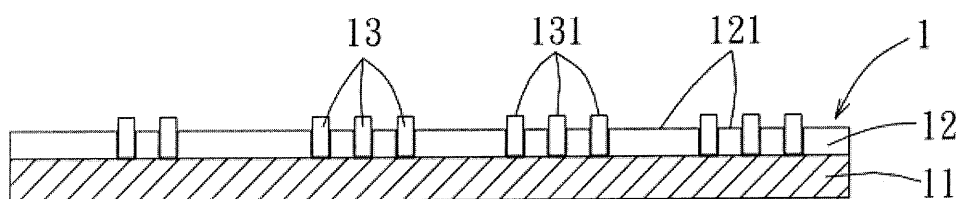


Figure 4



BRIEF DESCRIPTION OF NUMERICAL

1. TSV wafer
11. integrated circuit layer
- 5 12. silicon wafer layer
121. surface of silicon wafer layer
13. conductive material
131. surface of conductive material
14. damaged layer